

Progress Report

Link Light Rail Program



The "Cloud" Artwork at the Angle Lake Station

December | 2015



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 Lake Washington Ship Canal to an underground station on the University of Washington campus, near Husky Stadium. Revenue Service is projected in the 1st QTR 2016. The Sound Transit Board adopted the baseline capital budget of \$1.76B in July 2008.

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 (deleted LRV and added the UW TOD Overbuild).

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 \$1.89B.

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 is being developed through a design-build (DB) delivery strategy and the anticipated service launch is September 2016. The Sound Transit Board adopted the baseline capital budget of \$383M in 2011.

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 \$41.8M.

Tacoma Link Expansion: In partnership with the City of Tacoma and Pierce Transit, Sound Transit is studying the potential of expanding Tacoma Link in the context of the City and Pierce Transit service and capital plans.

Link Operations and Maintenance Satellite Facility: Sound Transit is reviewing and evaluating current and future light rail storage and maintenance requirements to support the development, design, and construction of a future light rail operations and maintenance facility for proposed system expansion.

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

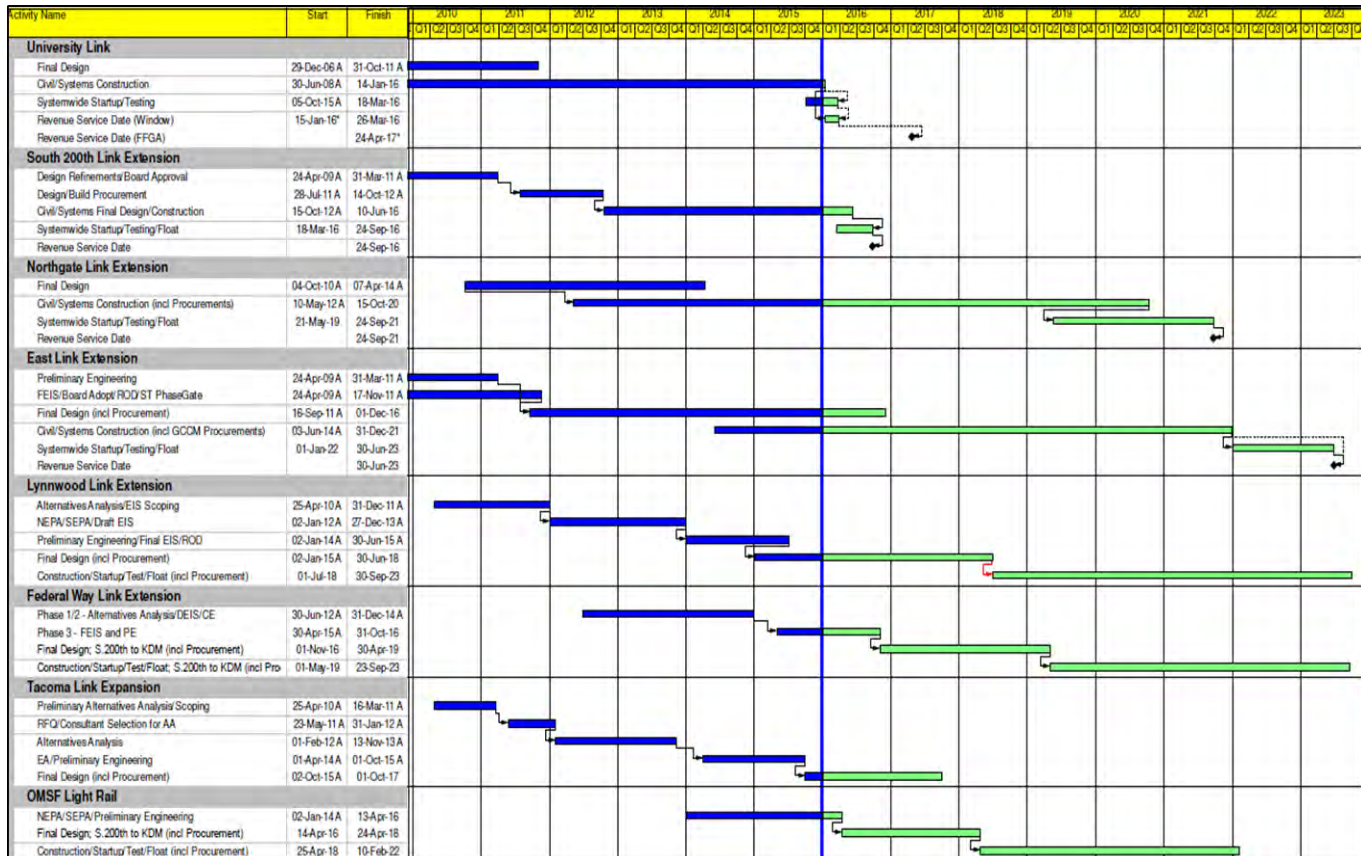
Project	Adopted Budget	Committed to Date	Incurred to Date	Estimated Final Cost	Adopted Budget vs. EFC
University Link	\$1,756.0	\$1,490.8	\$1,463.8	\$1,605.5	\$150.5
Northgate Link Extension	\$1,899.8	\$819.8	\$620.8	\$1,899.8	0
Lynnwood Link Extension*	\$487.9	\$54.6	\$51.8	\$487.9	0
East Link Extension	\$3,677.2	\$579.4	\$405.8	\$3,677.2	0
South 200th Link Extension	\$383.2	\$317.9	\$283.5	\$343.8	\$39.4
Federal Way Extension	\$42.9	\$32.9	\$20.0	\$42.9	0
Tacoma Link Expansion	\$33.0	\$7.4	\$7.0	\$33.0	0
Link O & M Satellite Facility	\$133.6	\$33.1	\$30.7	\$133.6	0
ST2 LRV Expansion	\$733.0	\$4.8	\$1.1	\$733.0	0
Total Link	\$9,146.5	\$3,340.7	\$2,884.4	\$8,956.6	\$189.9

Table in millions.

*This period, the ST Board amended Tacoma Link Expansion's lifetime capital budget to \$33M.

Program Schedule

Schedules for active projects are summarized below.



Changes this period: None.

Link Light Rail University Link Extension

Scope

- Limits:** 3.15-mile extension of the Initial Segment light rail transit (LRT) system from the Pine Street Stub Tunnel (PSST) in downtown Seattle to University of Washington (UW) campus near Husky Stadium.
- Tunnels:** Two twin bored tunnels. Two contract segments: U220 starts at Husky Stadium, continues beneath SR 520 and the Lake Washington Ship Canal and 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:** Project completion in the 1st QTR 2016



Key Project Issues

- **U830 Systems** - SCADA software development continues to be the highest risk critical path in Systems—now in the commissioning and integration testing phases. Repaired 26kV splice continue to be problematic. As of writing, ST has now directed to the Contractor to use a new splice kits. Contractor will be finish repairing one tunnel but not the other by Revenue Service. Only one redundant cable is required for operations.
- **U240 Capitol Hill Station / U250 UW Station** - Level 3 inter-station testing on the Emergency Ventilation System seems to be challenging. Modification to the fan modes and installation of additional stair and elevator dampers, power door operators is progressing. As of this writing, this mitigation work seems to be working, buy off from the Seattle Fire Department is pending their witnessing the test. Substantial Completion was achieved on December 31, 2015.
- **LRV Fleet Wide Repairs** - Fleet wide defect was discovered in the LRVs' traction motor/gearbox unit. Priority are given to repair the older LRV. Without sufficient reliable LRVs by Revenue Service or Pre-Revenue Service, U-Link will be challenged to operate with six- minute headways. Cost is tracked and isolated from ULINK project. The goal is to complete all repairs by Opening Day or at minimum, sufficient LRV with required spares to operate six- minute headways. As of this writing, 39 repaired car sets has been put into service and is being monitored for performance. All the higher mileage LRV which were the most unreliable are now repaired. This risk is subsiding.
- **Advance Opening:** Projection for Revenue Service continues to be 1st QTR 2016, ahead of the original target of September 2016. Testing and Start-Up Period is compressed - any impact or delay will be day for day. Coordination with regional stakeholders continues. Link Operation has initiated 6 minutes peak headways in the DSTT. Newly imposed new federal requirement for additional safety oversight responsibilities -“System Safety Readiness Review” for U-Link alignment took place in November 2015, with Pre-revenue Phase starting in January 14, 2016. As of this writing, Revenue Opening has been announced for the weekend of March 19, 2016.

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	\$ 75.97	\$ 74.59	\$ 103.55	\$ 10.00
PRELIMINARY ENGINEERING	\$ 24.39	\$ 24.26	\$ 24.26	\$ 24.26	\$ 24.26	\$ -
FINAL DESIGN	\$ 77.94	\$ 89.31	\$ 86.74	\$ 84.74	\$ 89.31	\$ (0.00)
CONSTRUCTION SERVICES	\$ 68.53	\$ 95.81	\$ 84.20	\$ 83.01	\$ 93.80	\$ 2.01
3rd PARTY AGREEMENTS	\$ 18.65	\$ 18.65	\$ 11.91	\$ 10.99	\$ 17.61	\$ 1.03
CONSTRUCTION	\$ 1,180.00	\$ 1,158.18	\$ 982.94	\$ 961.45	\$ 1,047.77	\$ 110.41
VEHICLES	\$ 103.91	\$ 103.91	\$ 99.20	\$ 99.19	\$ 101.91	\$ 2.00
ROW	\$ 167.33	\$ 152.33	\$ 125.61	\$ 125.60	\$ 127.29	\$ 25.04
Capital Total	\$ 1,755.97	\$ 1,756.01	\$ 1,490.82	\$ 1,463.83	\$ 1,605.50	\$ 150.50
FINANCE COST	\$ 191.71	\$ 191.71	\$ 191.71	\$ 162.15	\$ 191.71	\$ -
Project Total	\$ 1,947.68	\$ 1,947.72	\$ 1,682.52	\$ 1,625.98	\$ 1,797.21	\$ 150.50

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

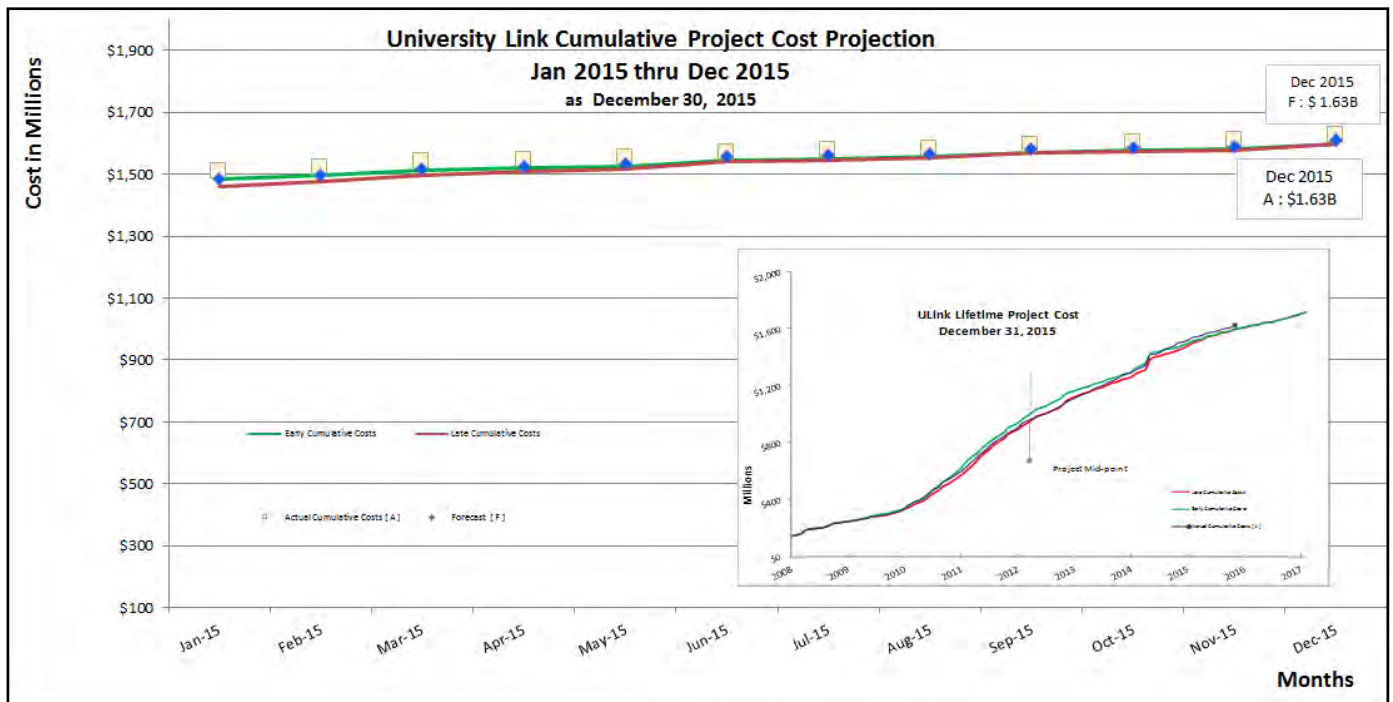
In December, the projected Estimated Final Cost (EFC) including Finance Cost continues to be about \$1.8B. This period, approximately \$8M was incurred, increasing the project Incurred to Date amount to approaching \$1.5B (Finance Cost excluded). Direct construction cost accounted for about 72% of the cost incurred in December at \$5.56M with the majority of the cost largely in Systems work. The direct construction EFC trends approximately \$1B. This trend continues to be intact as both the high risk tunnel scope and all excavation are now completed. The Capitol Hill Station (U240) Contractor achieved their Substantial Completion on December 31, 2015 and continues on supporting commissioning testing and completing their punch list work, the Systems (U830) Contractor continues end device installations, system integration and testing. Maintenance of Way continues on building finishes. The Total Incurred to Date for the Construction Phase is about \$961M with a current commitments about \$982M. Cost for LRV is at about \$99.2M and repairs to the traction motor and gear unit continues. 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 phase expenditures in December 2015 is at approximately \$6.2M. This period, the bulk of U-Link construction cost is attributed Station finishes and Systems work at \$3.1M. U240 station continues station finishes and commissioning testing, mechanical and electrical work.

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	\$ 455.71	\$ 456.20	\$ 463.22	\$ (12.76)
20 Stations	\$ 366.33	\$ 350.75	\$ 340.61	\$ 337.70	\$ 353.37	\$ (2.62)
30 Support Facilities: Yards, Shops	\$ 7.01	\$ 24.83	\$ 22.71	\$ 20.73	\$ 24.83	\$ 0.00
40 Sitemork & Special Conditions	\$ 59.03	\$ 67.49	\$ 56.25	\$ 52.33	\$ 60.91	\$ 6.58
50 Systems	\$ 69.63	\$ 116.42	\$ 98.37	\$ 87.27	\$ 104.09	\$ 12.33
Construction Subtotal (SCC 10-50)	\$ 1,128.82	\$ 1,009.95	\$ 973.64	\$ 954.23	\$ 1,006.41	\$ 3.54
60 Row, Land, Existing Improvements	\$ 167.33	\$ 125.77	\$ 125.61	\$ 125.60	\$ 125.77	\$ (0.00)
70 Vehicles	\$ 99.76	\$ 100.06	\$ 99.87	\$ 99.32	\$ 100.16	\$ (0.10)
80 Professional Services	\$ 306.41	\$ 346.18	\$ 291.70	\$ 284.68	\$ 342.56	\$ 3.62
90 Unallocated Contingency	\$ 53.65	\$ 174.04	\$ -	\$ -	\$ 30.59	\$ 143.45
Capital Cost Total (SCC 10-90)	\$ 1,755.97	\$ 1,756.01	\$ 1,490.82	\$ 1,463.83	\$ 1,605.50	\$ 150.50
100 Finance Cost	\$ 191.71	\$ 191.71	\$ 191.71	\$ 162.15	\$ 191.71	\$ -
Project Total	\$ 1,947.68	\$ 1,947.72	\$ 1,682.52	\$ 1,625.98	\$ 1,797.21	\$ 150.50

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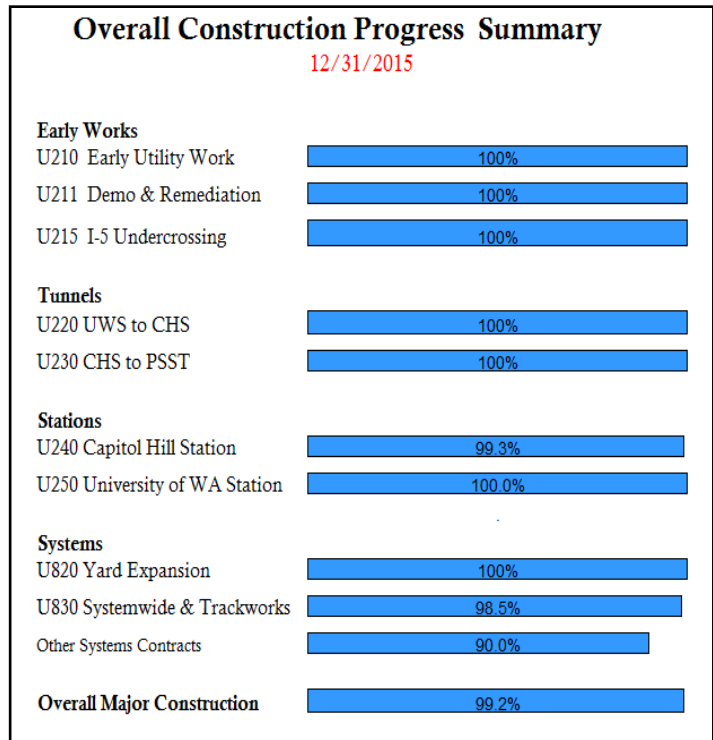
Link Light Rail University Link Extension



Incurred to Date for Construction under the SCC is over \$954M. Total capital cost incurred to date including non-construction cost (SCC 60 thru 90) now exceeds \$1.45B or about 83% of total project budget scoped (excluding Finance Cost).

Total cost incurred at the end of December 2015 including Finance Cost is nearing \$1.63B. The project financing cost incurred to date about \$162.2M. In the 4th QTR 2015, \$10.38M of interest cost was recorded. The next finance cost update will be for the end of 1st QTR 2016. Overall, University Link cost to date is projection of approximately \$1.63B by December 2015 was met.

The EFC for project Finance Cost continues to be projected at \$191.7 million. This cost represents booked financing cost and is generated based on allocation of appropriate level of financing cost to each capital project at Sound Transit. Despite an earlier than anticipated release of \$44 million of the FFGA funds due to the American Recovery Reinvestment Act that was used to pay down finance charges, it is premature to project any savings at this time.



Note: The overall construction progress above is based on a weighted combination of duration, schedule and cost % complete for individual construction contracts as compared to the overall U-Link construction contracts.

Cost Contingency Management

Project contingencies continue to remain at a healthy level of a little over \$270M due to the favorable construction bidding climate, ROW acquisition cost trends, diligent project risk management practices and excellent tunneling conditions. December's overall contingency notched down by about \$3M due to change orders and some administrative adjustments due to the budget transition from the previous fiscal year to the current. Contingency level continues to trend well above the Planned Contingency Drawdown; the projected planned balance between the end of 3rd QTR and the end of 4th QTR 2015 ranges from \$78M and \$74M. Both the Contingency Buffer the planned Reserved Contingency balance is now officially removed (see contingency curve at the bottom of page). Construction has now surpassed 99% complete. Barring any catastrophic event, there is a high likelihood that this contingency trend will remain intact.

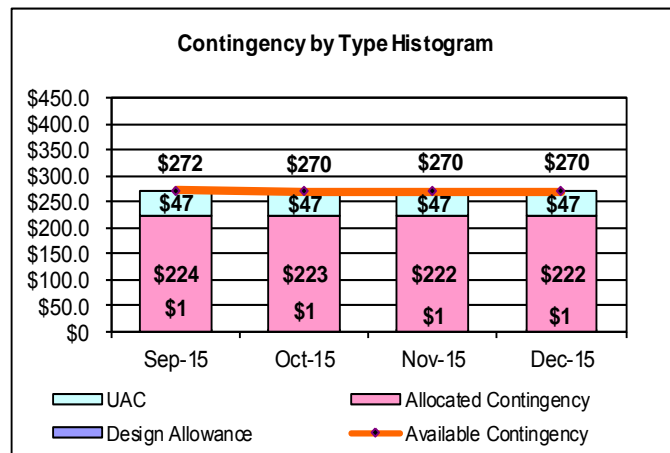
Design Allowance: The balance of design allowance has been reduced to less than \$1M and is consistent with the project cycle as all the major design has been completed. The level of design allowance currently represents less than one-half percent of the total remaining scope in the project that has not been procured and is probably an inadvertent accounting anomaly in the system.

Allocated Contingency: Allocated Contingency continues to remain stable approximately at \$222M.

Unallocated Contingency (UAC): The total UAC balance is at \$47M and continues to remain stable compared to the Baseline Cost Estimate amount of \$53.7M considering that the construction is now surpassed 99% complete.

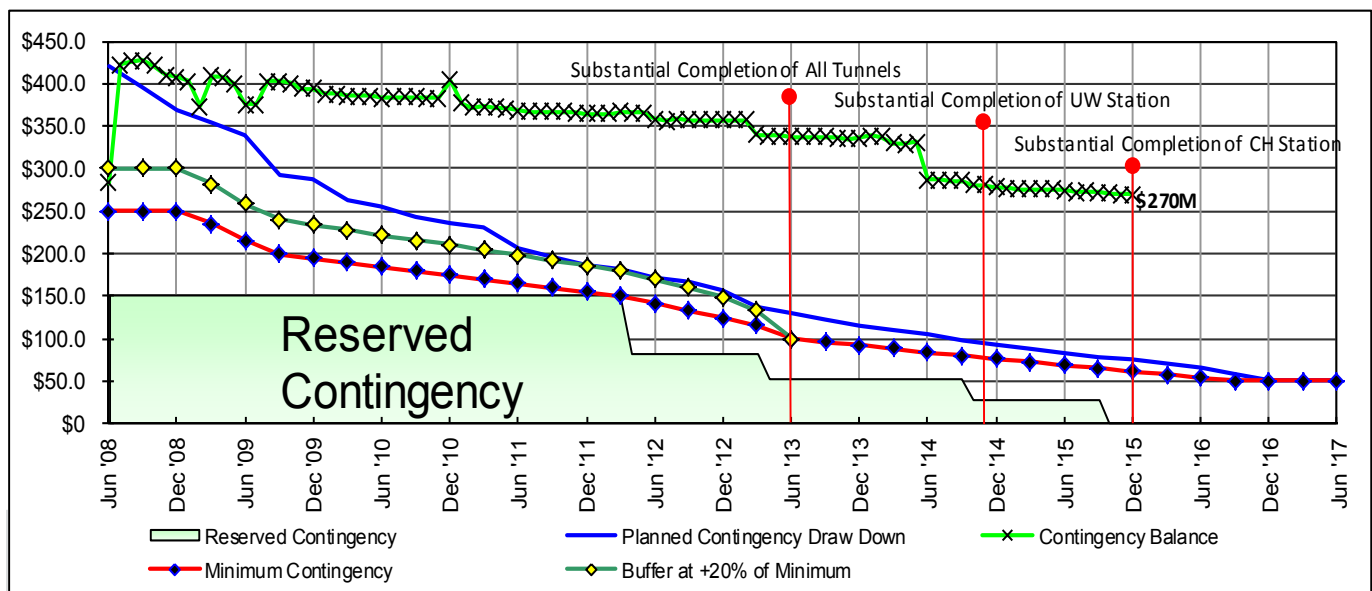
Contingency Status	BCE		Current Status	
	Amount	% of Total	Remaining Amount	% Remaining Work
Design Allowance	\$103.9	7.8%	\$0.9	4.1%
Allocated Contingency	\$264.3	19.8%	\$222.3	1009.6%
Unallocated Contingency	\$53.7	4.0%	\$46.8	212.6%
Total:	\$421.9	31.6%	\$270.0	1226.3%

Percentage = Contingency \$ / (EFC or Remain. Work \$ ex-Contingencies)



MINIMUM CONTINGENCY CURVES as of December 31, 2015

\$ in millions



Risk Management

The University Link Risk Management Plan (RMP) established a risk management and oversight process for identifying, assessing, and monitoring risks and develop risk reduction/mitigation plans. On a quarterly basis, the risk register is reviewed and risks are updated to reflect condition at the end of the current quarter. The RMP is also executed in compliance to the Federal Transit Administration's (FTA) guidance laid out as part of FTA's Program Guidelines sub-task 40E.

Project Risk Overview:

At the end of the 4th QTR 2015, U-Link project represents about 99% construction completion with U220 and U230 Tunnels at Acceptance; U240 Station is about 98% complete. U250 achieved substantial completion, and is now working on punch list and level 3 and 4 commissioning. U830 Systems approaches 97% complete with continued work on the SCADA development and installation as well as ongoing verification for current communication and signaling elements before the full system integration. Rail Activation phase is now in full swing. Sound Transit continues to identify and update risks on the register that were both within the current management time horizon and posed considerable risk to project objectives by having both relatively high probability and impact. Currently, the register contained a total of 659 risks, of which 122 were active (537 closed). Closed risks were those that no longer presents a potential impact, e.g., risks associated with surface and tunnel excavation at the stations and design risks that have been resolved since the last update. The risks items remaining in the register continues to be high is due to activities relating to Rail Activation phase and specifically the interfaces due to the commission of the extension system. University Link team will continue to manage the Rail Activation phase with careful deliberation to avoid any "down stream effect" as these are follow-on work and some of the risk may have already been captured upstream in the current active construction and rail activation phase.

The top remaining risk subjects that will require at least partial mitigating action in the upcoming quarter are provided below along with their planned risk management strategies:

- **Systems Software Development**
Development of the software systems to operate U-Link and the integration of the current operating system
- **Systems Final Design, Installation, and Testing (U830, U835, System-wide Testing)**
All phases U-Link systems integration between the cut over of the current operating systems through to the commissioning and occupancy of the U-Link program
- **Rail Activation**
As the project moves closer towards the transition from construction to rail activation, identification of new risks and its potential to impact cost and schedule needs to be more visible.
- **LRV Fleet wide Repair**
A defect was discovered in the Traction Motor/Gear Unit in the LRVs. Repairs require long lead materials and careful coordination to minimize any impacts to current operations. If there are insufficient reliable LRVs by Revenue Start, the six-minute headways promised for U-Link will be at risk. As of writing (January), all the older vehicles that require immediate attention has been repaired. As it stands today, Operations are running with recommended spares and the six minutes headways plan are intact. The goal is now to complete all repair by May 2016. While this risk has been largely mitigated, it will continue to be monitored closely.
- **FTA's System Safety Readiness Review**
Late recommendations and findings of the FTA's Safety and Security Readiness Review team allows insufficient time to respond and/or mitigate findings, delaying Revenue Service date. As of writing (January), the draft report was issued with no findings but has eight recommendations. Sound Transit will have 14 days to response to this report. The recommendations will be implemented hence this risk will be fully mitigated.

Link Light Rail University Link Extension



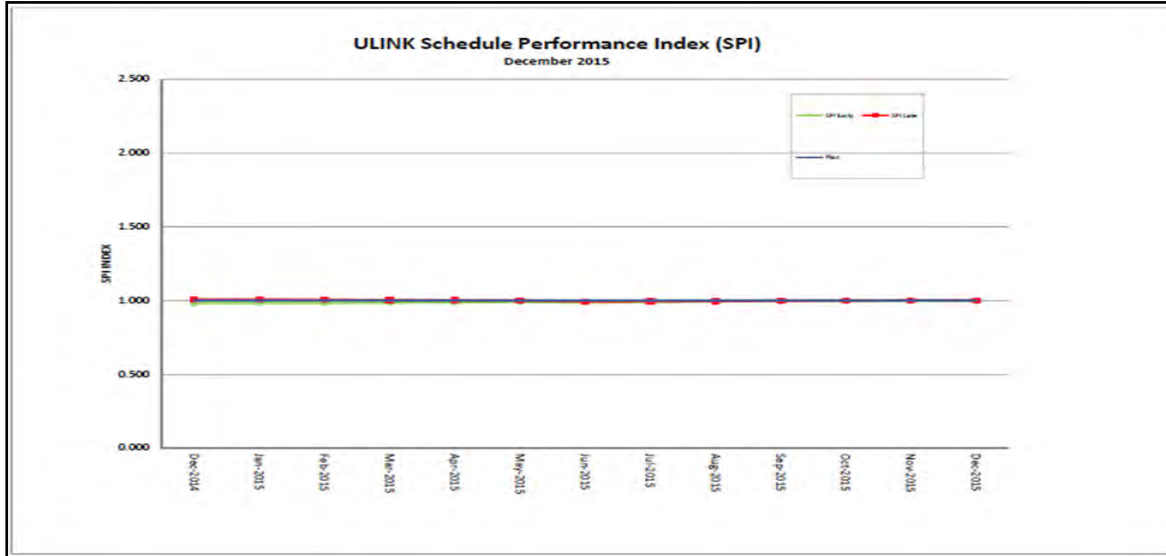
Progress and Critical Path Analysis

The U-Link Master Schedule update contains the tunnel contractors' schedules and interfaces with the stations and U830 (Track, Signal, Traction power and Communications System) schedules. The critical path, this period, is tracking through the Door and Damper modifications in the stations and System Integration Testing by U830 and to the commencement of Pre-Revenue Service and Revenue Service for U-Link. Pre-Revenue is expected to commence in January 2016.

Activity Name	Remaining Duration	Start	Finish	2015				2016				2017				2018			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Rail Activation Schedule	152d	23-Feb-15 A	31-May-16																
Rail Activation	152d	23-Feb-15 A	31-May-16																
Pre-Revenue Service - U-LINK - University Link	76d	19-Dec-15 A	18-Mar-16																
Pre-Revenue Service - U-LINK	76d	19-Dec-15 A	18-Mar-16																
Pre-Revenue Service - Commencement - U-LINK	0d	14-Jan-16																	
Pre-Revenue Service - U-LINK	65d	14-Jan-16	18-Mar-16																
Pre-Revenue Service - Complete - U-LINK	0d		18-Mar-16																
Phasegate 7 - U-LINK	56d	19-Dec-15 A	25-Feb-16																
Readiness Review - U-LINK	1d	11-Jan-16	11-Jan-16																
U-LINK Operator Qualification	30d	14-Jan-16	12-Feb-16																
U-LINK Simulate Revenue Service	35d	13-Feb-16	18-Mar-16																
Revenue Service - U-LINK	15d	04-Mar-16	19-Mar-16																
Readiness Review - U-LINK - Revenue Service	1d	04-Mar-16	04-Mar-16																
Readiness Certified - U-LINK	0d	04-Mar-16																	
U-LINK Station Handover to Operations - Commence Re-Keying	1d	04-Mar-16	04-Mar-16																
Revenue Service Start - U-LINK - (March 19, 2016)	0d		19-Mar-16																
Project Delivery	53d	01-Jul-15 A	21-Mar-16																
University Link	53d	01-Jul-15 A	21-Mar-16																
U240 Capitol Hill Station	15d	01-Jul-15 A	08-Mar-16																
U240 Milestones	10d	27-Feb-16	08-Mar-16																
Temporary Certificate of Occupancy - U240	1d	27-Feb-16	27-Feb-16																
U240 - Final Acceptance	0d		08-Mar-16																
U240 Training	1d	01-Jul-15 A	19-Feb-16																
U830 Track and Systems	53d	29-Jan-16	21-Mar-16																
U830 Milestones	53d	29-Jan-16	21-Mar-16																
Task Group 3.0 - System Testing and Commissioning	61d	23-Feb-15 A	04-Mar-16																
3.2 - System Testing and Commissioning - Testing	61d	23-Feb-15 A	04-Mar-16																
Operations Verification Testing	9d	02-Dec-15 A	14-Jan-16																
U-LINK - System Integration and Testing	61d	23-Feb-15 A	04-Mar-16																
Task Group 4.0 - Rail Operations	105d	29-Dec-15 A	31-May-16																
4.3 - Rail Operations - Plans and Procedures	105d	29-Dec-15 A	31-May-16																
Rail Operations - Procedures	105d	29-Dec-15 A	31-May-16																
4.4 - Rail Operations - Equipment and Materials	16d	20-Jan-16	10-Feb-16																
Task Group 7.0 - Safety & Security	127d	01-Apr-15 A	06-May-16																
7.1 - Safety & Security - Staffing	30d	14-Jan-16	25-Feb-16																
7.2 - Safety & Security - Certification	127d	01-Apr-15 A	06-May-16																
U-LINK Safety Certification	123d	05-Jan-16	06-May-16																
Safety Certification	123d	05-Jan-16	06-May-16																
Operation Hazard Analysis	54d	07-Jul-15 A	04-Mar-16																
Preliminary Hazard Analysis	60d	01-Apr-15 A	29-Feb-16																
7.3 - Safety & Security - Plans and Procedures	74d	27-Aug-15 A	14-Mar-16																
7.4 - Safety & Security - Insurance	10d	19-Mar-16	29-Mar-16																
U-LINK Emergency Ventilation and Fire Protect	37d	12-Oct-15 A	24-Feb-16																
Milestones	34d	07-Jan-16	24-Feb-16																
Level 3 Commissioning - Emergency Fan Ventilation - U-LINK	1d	29-Jan-16	29-Jan-16																
U-LINK Pretest Prior to Fire Department	5d	29-Jan-16	04-Feb-16																
Level 3 Commissioning Complete - 12/11/2015	0d		29-Jan-16																
Seattle Fire Department	34d	07-Jan-16	24-Feb-16																
#3 Meeting w/SFD - Share Final Design Resolution and Draft Ventilation Report	1d	07-Jan-16	07-Jan-16																
Fire Dept. Witness - Emergency Modes	5d	16-Feb-16	20-Feb-16																
EVS - C of O Documentation Complete and Submitted to SFD	1d	24-Feb-16	24-Feb-16																
Emergency Ventilation	36d	12-Oct-15 A	23-Feb-16																

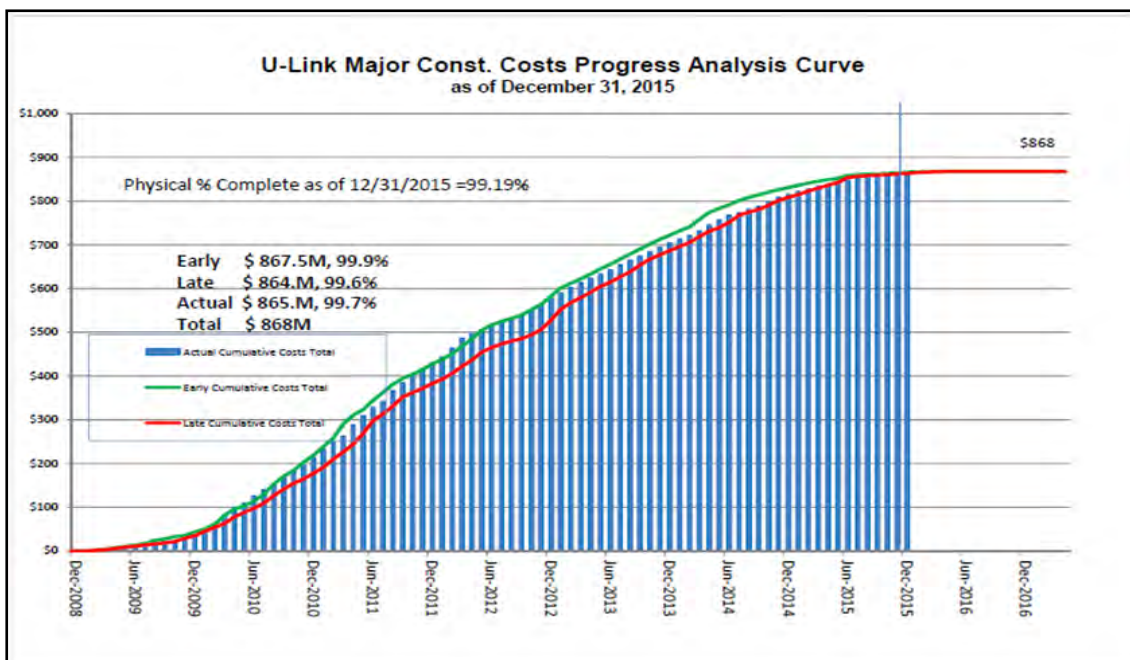
Schedule Performance Index

The Schedule Performance Index (SPI) for U-Link remains at 0.99 this period. The U240 Contractor achieved Substantial Completion this period. Punchlist and Final Inspections are ongoing. The U830 Contractor is working through System Integration Testing. (See details on individual contract sections.) Progress will continue to be monitored closely.



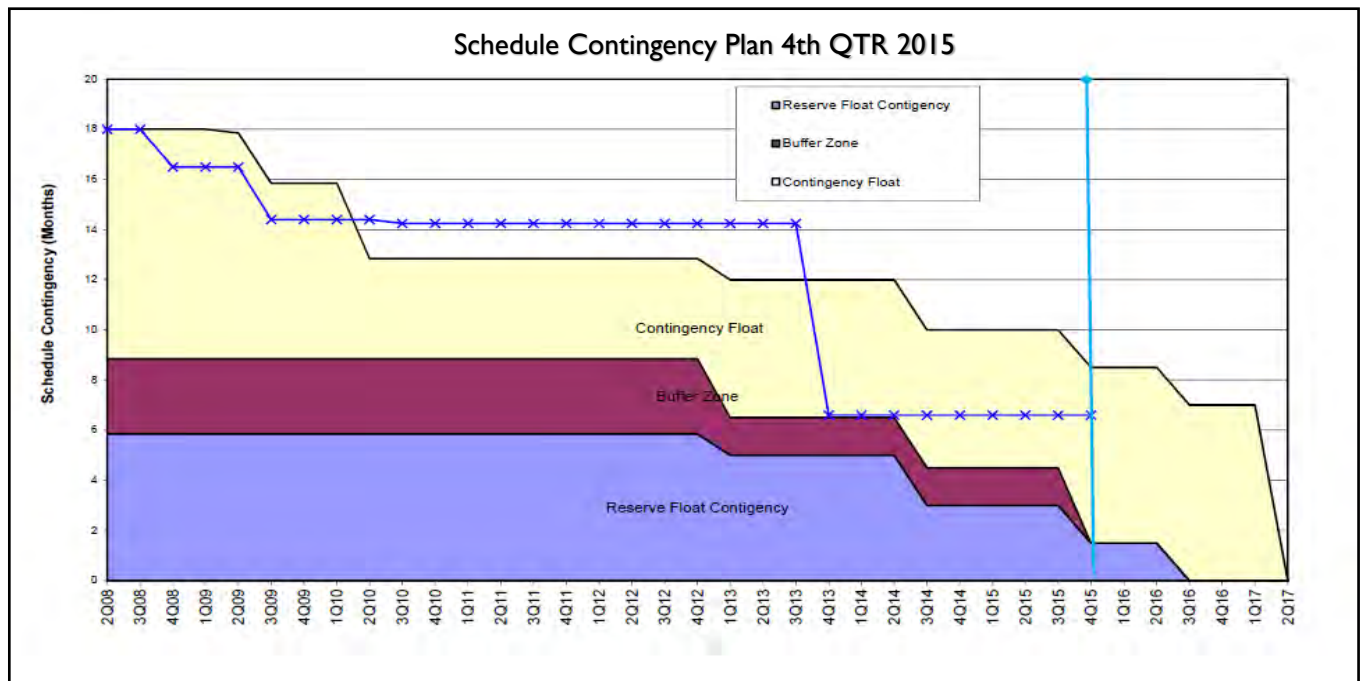
Cost Progress Analysis

U220 and U230 are complete. U250 is complete with punchlist and final inspections outstanding. U240 CHS Station achieved Substantial Completion. U830 is nearing Substantial Completion. Overall U-Link physical percent complete is at 99% against 99% of contract time expended. The graph below shows the progress of major construction contracts cost compared to the early/late projections.



Schedule Contingency Management

The “Minimum Schedule Contingency Curves” were established in the Project Execution Plan (PEP). The PEP segregated Schedule Contingency into “Forced Lag,” which is a built-in float on the Critical Path; “Buffer Float,” which is the duration between Sound Transit’s targeted Revenue Operation Date and the Schedule Revenue Operation Date; “Contingency Float,” which is the duration between Sound Transit targeted Revenue Operation Date and the FFGA Revenue Operation Date, and “Desired Minimum Float” which is the amount of schedule float the FTA requires Sound Transit to maintain. The current schedule contingency balance was reduced by six months in November 2013. All contingency float was removed based on the completion of the tunneling contracts in the 3rd QTR 2013.



Right-of-Way

The U-Link project involved the acquisition of a range of property interests, including fee takings for stations and staging areas, tunnel easements for the running tunnels, acquisitions from the University of Washington and airspace leases with the Washington Department of Transportation. These acquisitions required relocation of 141 owners and tenants. The right-of-way program status is summarized below.

Line Section	Total Parcels Certified	Offers Made	Signed Agreements	Admin. Settlements	Possession and Use	Closings to date	Relocations Required	Relocations Completed
Capitol Hill Station	19	19				19	140	140
Tunnel Easements	223	222				222	1	1
TOTAL	242	241				241	141	141

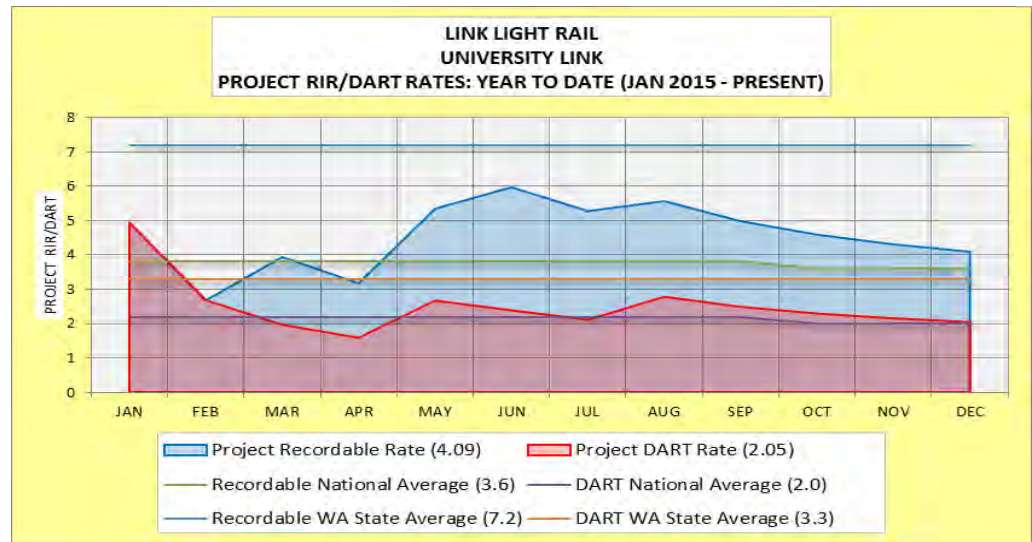
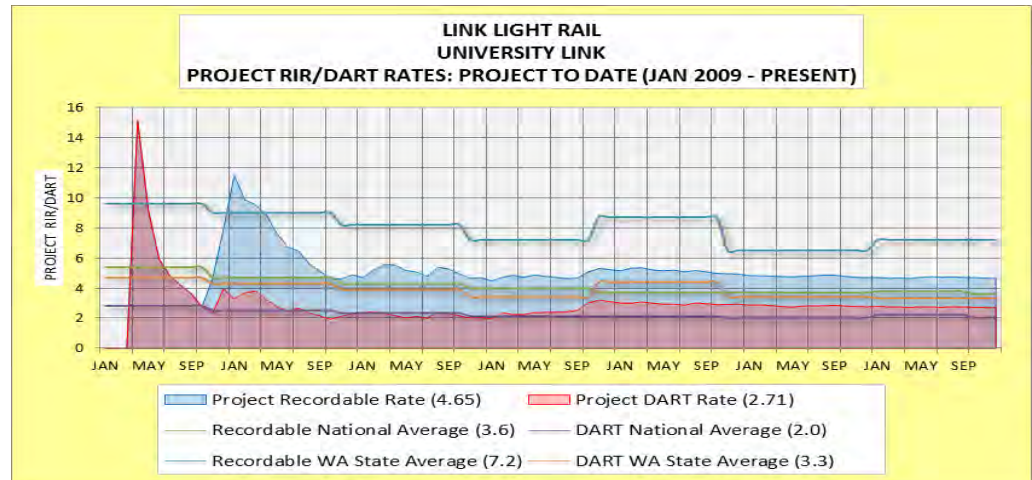
Capitol Hill Station: The acquisitions and relocations for the station site are complete.

Construction Safety

Safety statistics for the reporting period and year-to-date are summarized in the table and charts.

Data/Measure	December 2015	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	6	91
Days Away From Work Cases	0	2	19
Total Days Away From Work	0	210	922
Restricted or Modified Work Cases	0	1	34
Total Days Restricted or Modified Work	0	3	1561
First Aid Cases	0	6	152
Reported Near Mishaps	2	15	243
Ave. Nos. of Employees on Worksite	78	-	-
Total # of Hours (GC & Subs)	14,500	293,137	3,912,087
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	4.09	4.65
DART Rate	0.00	2.05	2.71
Recordable National Average	3.60	3.60	3.60
DART National Average	2.00	2.00	2.00
Recordable WA State Average	7.20	7.20	7.20
DART WA State Average	3.30	3.30	3.30

The charts to the right show University Link's Recordable Injury Rates (RIR) and University Link's Days Away, Restricted or Modified (DART) Injury Rate as compared to the national average.



Quality Assurance Activities

Activities

- U240: Material Review Board has dispositioned as Acceptable three Notification of Change Reports.

Issues

- *None to report.*

Summary

Description	Dec 2015	Notes
No. of Audits Planned	0	None
No. of Audits Completed	0	None
Reports in Progress	0	None
No. of Audits Postponed	0	None

Environmental

- Continued Environmental Oversight of construction.

Sound Transit Board Actions

Board motions and resolutions directly related to University Link are summarized in the table below.

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

Community Outreach

- Notified stakeholders of planned fire alarm testing at both the UWS and CHS in early December.
- Emailed project newsletter to more than 5,300 subscribers.

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Link Light Rail University Link Extension– Tunnels



U220 Contract - TBM Tunnel (UWS to CHS)

The U220 contract achieved Substantial Completion on June 7, 2013. All work is done.

U230 Contract - TBM Tunnel (CHS to PSST)

Substantial Completion was achieved in March 2013. All work is done.

Cost Summary

Present Financial Status	Amount
U220 Contractor— Traylor Frontier-Kemper Joint Venture (TFK)	
Original Contract Value	\$309,175,274
Change Order Value	\$12,067,459
Current Contract Value	\$ 321,408,334
Total Actual Cost (Incurred to date)	\$ 315,071,655
Financial Percent Complete	100%
Physical Percent Complete:	100%
Authorized Contingency	\$30,917,527
Contingency Drawdown	\$12,233,060
Contingency Index*	2.53

*Physical % complete / % contingency drawn down

Cost Summary

Present Financial Status	Amount
U230 Contractor— JCM Joint Venture	
Original Contract Value	\$153,556,000
Change Order Value	\$9,866,998
Current Contract Value	\$163,452,998
Total Actual Cost (Incurred to date)	\$156,979,939
Financial Percent Complete	100%
Physical Percent Complete	100%
Authorized Contingency	\$15,355,600
Contingency Drawdown	\$9,896,998
Contingency Index*	1.56

*Physical % complete / % contingency drawn down

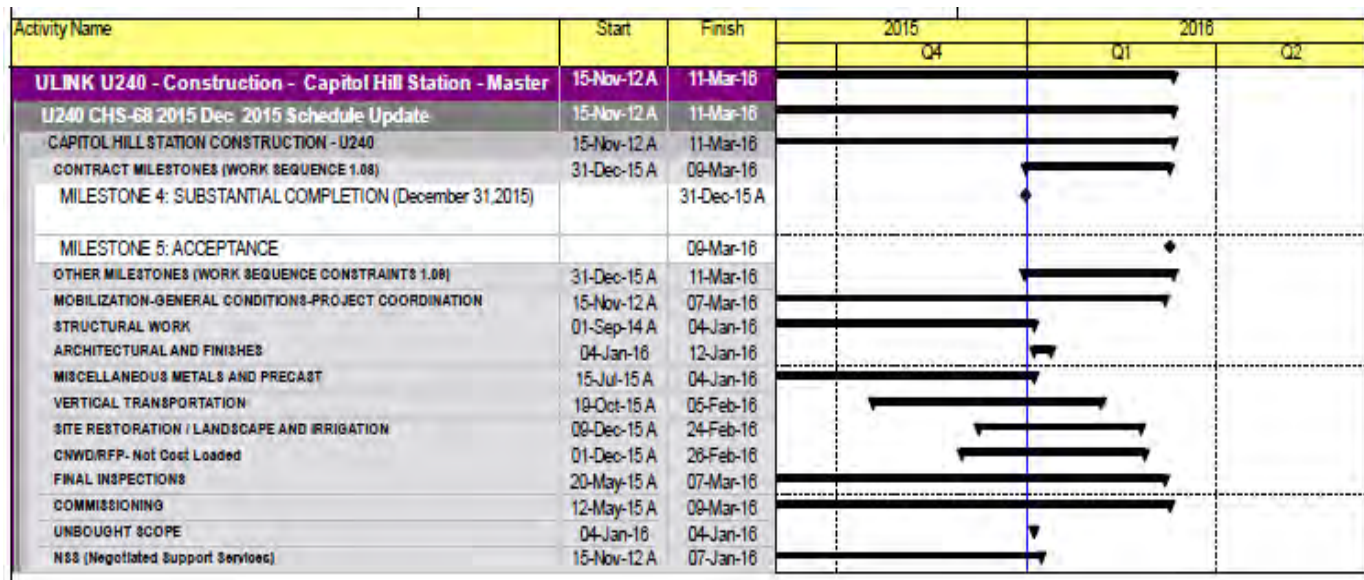
U240 Contract – Capitol Hill Station

Current Progress

The U240 Contractor achieved Substantial Completion on December 31, 2015. Punchlist work is underway. Final Inspections are expected to be complete in February 2016. Elevator/Escalator work continue along with late design changes. Hardscape and Landscape work is nearing completion.

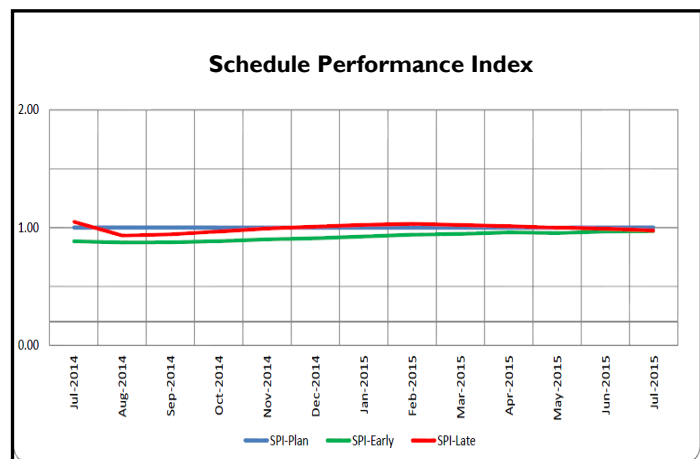
Schedule/Critical Path

Milestone #4, Substantial Completion, was achieved this period. Punchlist work and final inspections are underway.



Schedule Performance Index

At U240, work directives and change orders are now driving the work at U240. No updates to SPI.



Key Activities

Current Period

- Substantial completion was achieved end of December 2015. The Contractor will continue working on completing the remaining punch list within the next 60 days.
- Continued finalizing escalators and elevators in preparation for final inspections.
- Continued working on installing emergency lighting modifications in various areas including escalator lighting prior to final signoff by DPD.
- Continued cleaning throughout the station in preparation for punch walk through.
- Continued working off preliminary punch list items on the platform, basement, mezzanine and grade levels.
- Site work continued, including installation of permanent fencing around site, finalized mulch and sod install around scholar tree, and final saw cutting of sidewalk joints at Denny and Broadway sidewalks.

Next Period

- Continue working off all punch list and work directive items on the platform, basement, mezzanine, and grade levels.
- Electrical subcontractor will continue working on all of the emergency lighting in the escalators and receive final inspection approval.
- Signage subcontractor to commence station sign installation.

- Continue to inject grout into the North mezzanine lobby and horizontal plenum ceiling area waterproofing grout pipes to stop water leaks.
- Contractor to finalize street restoration and schedule final inspection walks with SDOT.

Closely Monitored Issues

- Multiple commercial issues remain open. This includes various notice of intents to claim and actual claims. These claims continue to be reviewed and assessed by Sound Transit.
- Inspection of elevators and escalators continues. There are minor modifications that are still needed before L&I can fully sign off. Emergency lighting issues remain open before L&I provides the final sign off.
- Installation of door assists and guides was completed. Door operators operated successfully during level 3 tunnel pressure tests. Final wiring to be completed and doors tested with CCTV, speakers, audible alarms, etc.

Cost Summary

Present Financial Status	Amount
U240 Contractor - Turner Construction Co	
Original Contract Value	\$104,850,276
Change Order Value	\$8,803,050
Current Contract Value	\$113,653,326
Total Actual Cost (Incurred to date)	\$110,019,045
Financial Percent Complete:	97%
Physical Percent Complete:	97%
Authorized Contingency	\$11,742,514
Contingency Drawdown	\$8,803,050
Contingency Index	1.29



Overview of the west entry of the CHS as seen from Broadway.

U250 Contract – *University of Washington Station*

Current Progress

Milestone #7, Substantial Completion, was granted in November 2014. U250 continued punchlist work and is expected to be complete by end of January 2016, subject to final inspections by L&I .

Work progress continued with approximately 100% physical completion against 100% contract time expended.

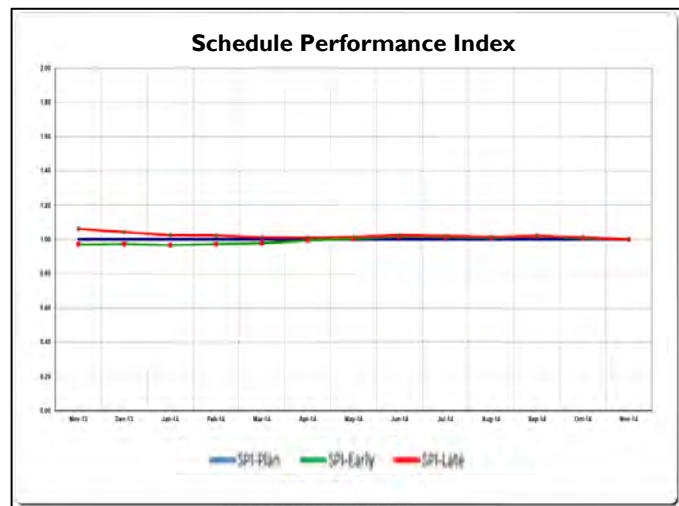
Schedule/Critical Path

Punchlist and commissioning work is ongoing and is expected to be completed next period.

Activity Name	Start	Finish	2015								2016	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
ULINK U250 - Construction - UW Station	05-Apr-11 A	19-Jan-15	[Gantt bar spanning from Q3 2015 to Q1 2016]									
MILESTONES	01-Apr-13 A	14-Nov-14 A	[Gantt bar spanning from Q4 2015 to Q4 2015]									
MILESTONE 1 (727d FROM NTP) (31 Mar 13) ACHIEVE BASIC STRUCTURE COMPLETION OF STATION		01-Apr-13 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
MILESTONE 2 (60d FROM OCC OF EAST BOUNDARY F3) (01 Apr 13)		06-May-13 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
MILESTONE 3 (880d FROM NTP) (31 Aug 13) UWS ROOM ACCESS COMPLETION		30-Aug-13 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
MILESTONE 4 (1031d FROM NTP) (29 Jan 14) BASIC STRUCTURE COMPLETION OF ENTIRE UWS FOR USE BY SYSTEM WIDE		29-Jan-14 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
MILESTONE 5 (1033d FROM NTP) (31 Jan 14) UWS ROOM ACCESS COMPLETION FOR ALL SYSTEM ROOMS		29-Jan-14 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
MILESTONE 6 (1160d FROM NTP) (07 Jun 14) RESTORATION OF THE SITE OUTSIDE OF THE CONSTRUCTION WORK AREA		06-Jun-14 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
MILESTONE 7 SUBSTANTIAL COMPLETION OF ALL WORK (1320d FROM NTP) (14 Nov 14) SUBSTANTIAL COMPLETION OF ALL WORK		14-Nov-14 A	[Gantt bar spanning from Q3 2015 to Q3 2015]									
CONSTRUCTION	05-Apr-11 A	19-Jan-15	[Gantt bar spanning from Q3 2015 to Q1 2016]									
STATION	05-Apr-11 A	19-Jan-15	[Gantt bar spanning from Q3 2015 to Q1 2016]									
CROSSOVER	01-Aug-12 A	12-Dec-14	[Gantt bar spanning from Q4 2015 to Q4 2015]									
ABOVE GRADE ENTRY	31-Aug-12 A	12-Dec-14	[Gantt bar spanning from Q4 2015 to Q4 2015]									
PEDESTRIAN BRIDGE	29-Feb-12 A	12-Dec-14	[Gantt bar spanning from Q4 2015 to Q4 2015]									

Schedule Performance Index

Substantial Completion was granted in November 2014. Punchlist and handrail are expected to be completed next period.



Key Activities

Current Period

- Continued commissioning Levels 1 & 2; scheduled to be completed at the end of January 2016, subject to completion of L&I escalator inspections.
- Continued Level 3 inter-station commissioning. The GC/CM, MC/CM, and EC/CM continue to provide support as requested.
- Continued closing out of all remaining commercial issues.
- Continued installation of the “One Bus Away” dynamic signage.
- Continued installation of door operator hardware, wiring, and interface with the U830 access control system.
- Continued station signage installation.

Next Period

- Complete installation of dampers and door assist operators necessary to mitigate the tunnel ventilation issue.
- Complete installation of the “One Bus Away” dynamic signage.
- Complete commission test demonstrations, Levels 1 & 2.

- Complete final inspections for elevator and escalator operation.
- Continue closing out of all remaining commercial issues.
- Continue Level 3 inter-station commissioning.

Closely Monitored Issues

- All four U250 elevators have now received operating permits. ST is seeking alteration permits from L&I to install the final systems-activated equipment.
- Sound Transit continues to review and assess multiple commercial issues that remain unresolved.
- Three Notices of Intent to Claim have been filed by the GC/CM which were denied at the Resident Engineer level based on merit. Appeals have been received for all three claims.
- Level 3 inter-station testing performed to date has identified excessive egress door opening forces while tunnel ventilation modes are active. The Engineer of Record has produced recommendations for additional stair and elevator dampers as well as power door operators to mitigate the issue. Final installation of door operator hardware, wiring, and interface with the U830 access control system may extend into late January 2016.

Cost Summary

Present Financial Status	Amount
U250 Contractor - Hoffman Construction Co.	
Original Contract Value	141,745,898
Change Order Value	7,346,409
Current Contract Value	149,092,307
Total Actual Cost (Incurred to date)	148,667,706
Financial Percent Complete:	99%
Physical Percent Complete:	99%
Authorized Contingency	8,452,295
Contingency Drawdown	7,346,409
Contingency Index	1.14



UWS at night.

U810 Contract – Maintenance of Way

Current Progress

The U830 MOW structural steel erection and roofing are complete. Exterior siding is nearing completion. MEP rough-in and interior framing are continuing. Interior finishes continue.

Work progress continued with approximately 83% physically complete against 94% contract time expended.

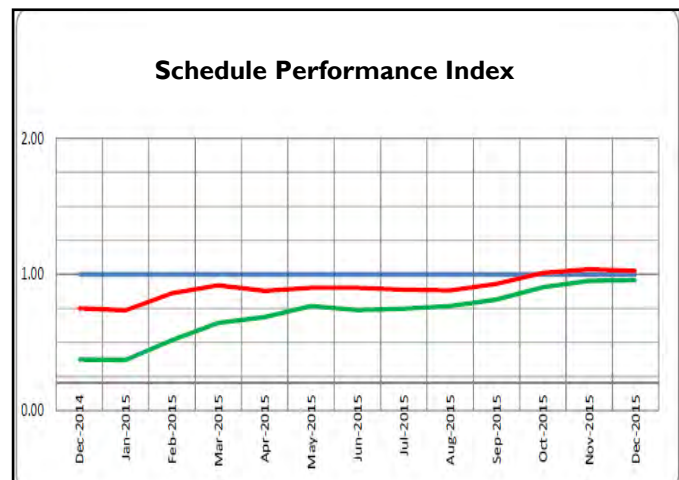
Schedule/Critical Path

Milestone revisions are expected to be negotiated with the U810 Contractor due to permit issuance delays. Milestone #2 is currently reporting 48 days of negative float.

Activity ID	Activity Name	Remaining Duration	Start	Finish	2015		2016	
					Q4	Q1	Q2	
ULINK U810 - Maintenance of Way Facility D/B								
DESIGN & PRECONSTRUCTION								
CONSTRUCTION								
MILESTONES / GC's								
131	General Conditions	74d	15-Dec-14A	17-Feb-16				
132	Final Cleaning & Punchlist Items	5d	11-Feb-16	17-Feb-16				
133	Final Inspections	5d	11-Feb-16	17-Feb-16				
136	60 CD (TCO to SC)	60d	11-Feb-16	11-Apr-16				
136	Owner Move-out & Move-in	5d	12-Feb-16	18-Feb-16				
134	MS#1 - TCO for Move-in (REVISED DATE = 12/31/15)	0d	18-Feb-16	18-Feb-16*				
137	MS#2 - Substantial Completion (TCO + 60 CD = 2/29/16)	0d	15-Apr-16	15-Apr-16*				
SITWORK								
MOW/POLICE BUILDING "A"								
ACCESSORY/STORAGE BUILDING "B"								

Schedule Performance Index

The SPI based on early forecasts is reporting below 1.00 this period to 0.95 but continues to rise as the Contractor recovers from earlier project delays. The Contractor has improved the schedule by working concurrently on MEP rough-in and exterior and interior finishes.



Key Activities

Current Period

- Continued work on the LEED certification.
- Continued interior finishes throughout the main building. Including bathroom tiling and fixtures, carpeting, and continue handrail installations.
- Continued painting the walls on the first and second levels of Adm. Building, and commenced painting the walls in the High Bay.
- Completed metal siding of the main building and continued metal siding of building B.
- Continued installing gutters and trim on the exterior of the building A.
- Began interior framing and drywall installation in building B.
- Continued MEP rough-in throughout building B.
- Continued placing curbs, sidewalks, and asphalt around the exterior of the site.

Next Period

- Complete interior finishes of main building and begin pre-punch activities.
- Install the main gas line to the main building.
- Complete elevator installation in main building.
- Begin main building office furniture installation.
- Drywall and texture activities will continue throughout building B.
- MEP will continue throughout building B.

- Continue interior finishes throughout building B.
- Continue placing curbs, sidewalks, and asphalt around the exterior of the site.
- Commence landscaping activities.

Closely Monitored Issues

- Contractor submitted a claim for the removal of hazardous and contaminated material, which ST continues to review for possible merit.
- The elevator subcontractor has given notice that the delivery of the elevator has been delayed and could potentially impact the schedule.
- The installation of the permanent gas line to the building is going to be installed later than anticipated which could potentially impact substantial completion. ST is working with Puget Sound Energy and the Contractor to try and mitigate any delays.

Cost Summary

Present Financial Status	Amount
U810– Forma Construction (Design/Build)	
Original Contract Value	\$11,998,725
Change Order Value	\$231,154
Current Contract Value	\$12,229,879
Total Actual Cost (Incurred to date)	\$11,489,775
Financial Percent Complete	94%
Physical Percent Complete:	94%
Authorized Contingency	\$959,898
Contingency Drawdown	\$231,154
Contingency Index	3.92



Continuing installation of sun shades.

U830 Contract – Track, Signal, Traction Power and Communications

Current Progress

System Integration Testing is well underway. The contractor is currently working through 26 kv splicing issues and SCADA programming items. Coordination between station contractors continues. Work progress continued with approximately 99.5% physically complete against 98% contract time expended.

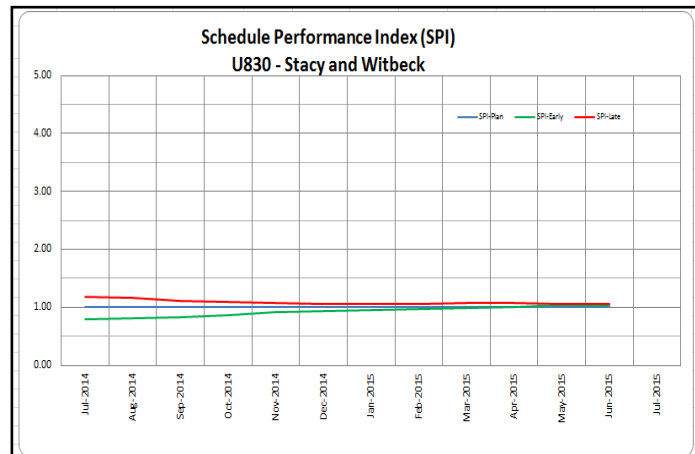
Schedule/Critical Path

A December 2015 schedule update was not received from the contractor this period. The schedule below is the November 2015 update. System Integration Testing is well underway. Milestone revisions were made the schedule but Milestone 6 Substantial Completion may not be met next period. The proposed milestone revisions identify critical System Integration Testing and U830 start up and commissioning activities that are critical to Pre-Revenue Service and Revenue Service.

Activity Name	Start	Finish	2016							
			Q3	Q4	Q1	Q2	Q3	Q4		
ULINK U830 - Construction - Track and Systems - Master	01-Nov-12 A	17-Jun-16	[Gantt bar spanning from Nov 2012 to Jun 2016]							
Construction	01-Nov-12 A	17-Jun-16	[Gantt bar spanning from Nov 2012 to Jun 2016]							
Major Milestones	18-Dec-15	01-Feb-16	[Gantt bar spanning from Dec 2015 to Feb 2016]							
Milestone 6A: Emergency Ventilation System Modification and FACP Integration (U-Link and DSTT) incl. system integration		18-Dec-15*	[Gantt bar ending at Dec 2015]							
Milestone 6: Signals, Radio, Traction Power, SCADA TCS Incl System Integration Testing		19-Dec-15*	[Gantt bar ending at Dec 2015]							
Milestone 6 Safety Certification		24-Dec-15*	[Gantt bar ending at Dec 2015]							
Milestone 6B: All Other Work Excluding South 200th St Extension		27-Jan-16*	[Gantt bar ending at Jan 2016]							
Milestone 6A&B Safety Certification		01-Feb-16*	[Gantt bar ending at Feb 2016]							
Submittals	01-Nov-12 A	18-Jun-14 A	[Gantt bar spanning from Nov 2012 to Jun 2014]							
Trackwork	11-Dec-12 A	01-Oct-15 A	[Gantt bar spanning from Dec 2012 to Oct 2015]							
OCS	11-Dec-12 A	01-Dec-15	[Gantt bar spanning from Dec 2012 to Dec 2015]							
Traction Power / Substations	11-Dec-12 A	10-Dec-15	[Gantt bar spanning from Dec 2012 to Dec 2015]							
Signals	11-Dec-12 A	29-Jan-16	[Gantt bar spanning from Dec 2012 to Jan 2016]							
Communication	01-Nov-12 A	17-Jun-16	[Gantt bar spanning from Nov 2012 to Jun 2016]							
Testing and Commissioning	02-Feb-15 A	01-Feb-16	[Gantt bar spanning from Feb 2015 to Feb 2016]							

Schedule Performance Index

No application for payment has been formally submitted this period. SPI has not been updated.



Key Activities

Current Period

Trackwork

- Ongoing repair of tunnel leaks and cross passages.

Traction Power/Signal/Com-SCADA Systems

- Continued terminating and testing cables.
- Continued installing communication devices at stations.
- Continued installing and terminating cables and devices at stations.
- Continued system signal testing.
- Ongoing OCS punchlist.
- Continued systems integration tests.
- Continued O&M training for Operations staff.

Next Period

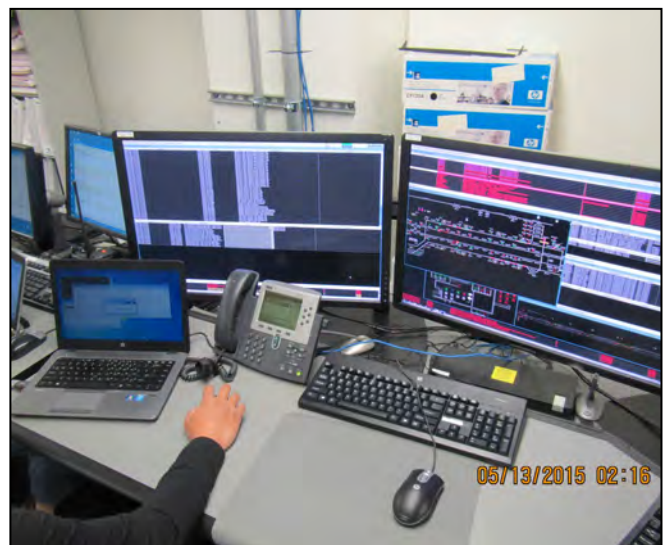
- Continue terminating and testing cables.
- Continue installing communication devices at stations.
- Continue installing and terminating cables and devices at stations.
- Continue signal systems testing.
- Ongoing OCS punchlist.
- Continue systems integration testing.
- Ongoing O&M training for Operations staff.

Closely Monitored Issues

- Current focus is on the completion of the communications systems installation at stations.
- Closely monitoring ongoing systems testing and commissioning to ensure 1st QTR 2016 Opening Date.

Cost Summary

Present Financial Status	Amount
U830 GCICM Contractor - Stacy & Witbeck	
Original Contract Value	\$119,167,433
Change Order Value	\$3,555,861
Current Contract Value	\$122,723,294
Total Actual Cost (Incurred to date)	\$110,597,366
Financial Percent Complete	90.1%
Physical Percent Complete:	97.0%
Authorized Contingency	\$5,958,373
Contingency Drawdown	\$3,555,861
Contingency Index	1.6



BMS testing at the OMF.

U820 Contract - LRV Storage and Yard Expansion

P821 Contract - Light Rail Vehicles

C802 Contract - Signals Systems (Yard Expansion)

Other Systems - Radio Console, Fare Collection.

Key Activities

Closed Contracts

- C802 Signals Yard Expansion
- U820 LRV Storage and Yard Expansion
- U826 Radio Console Upgrade
- U860 Network Fiber
- U820- LRV Storage and Yard Expansion

Current Period

P821 – Light Rail Vehicles

- Contract Close Out on hold until the completion of the Traction Motor/Gear Unit repairs.
- Completed 24 car sets of TM/GU.

Other Systems

- U835 EMI/Vibration & Wheel Flat Monitoring – continue installation and testing and submit functional installation test results.
- U829 Fare Collection Contracts – TVM work continues.

Next Period

P821 – Light Rail Vehicles

- Contract Close Out on hold until the completion of the Traction Motor/Gear Unit repairs.
- Continue with repair collaboration with manufacturer on the TM/GU fleet.

Other Systems

- U835 EMI/Vibration & Wheel Flat Monitoring – Continue testing and submit test results
- U829 Fare Collection Contracts – TVM work continues.

Closely Monitored Issues

- Timely repair of the TM/GU is critical to provide sufficient LRV units to adequately support a 6-minute headways operation when University Link commences.

P821 Cost Summary

Present Financial Status	Amount
P821 Manufacturer — Kinkisharyo Intl.*	
Original Contract Value (U-Link Option)	\$94,576,095
Change Order Value	\$4,598,480
Current Contract Value	\$99,174,575
Total Actual Cost (Incurred To Date)	\$99,174,575
Financial Percent Complete:	100%
Physical Percent Complete:	100%
Authorized Contingency	\$4,608,904
Contingency Drawdown	\$4,598,480
Contingency Index	N/A

*Change Order to Initial Segment LRV Contract

C802 Cost Summary

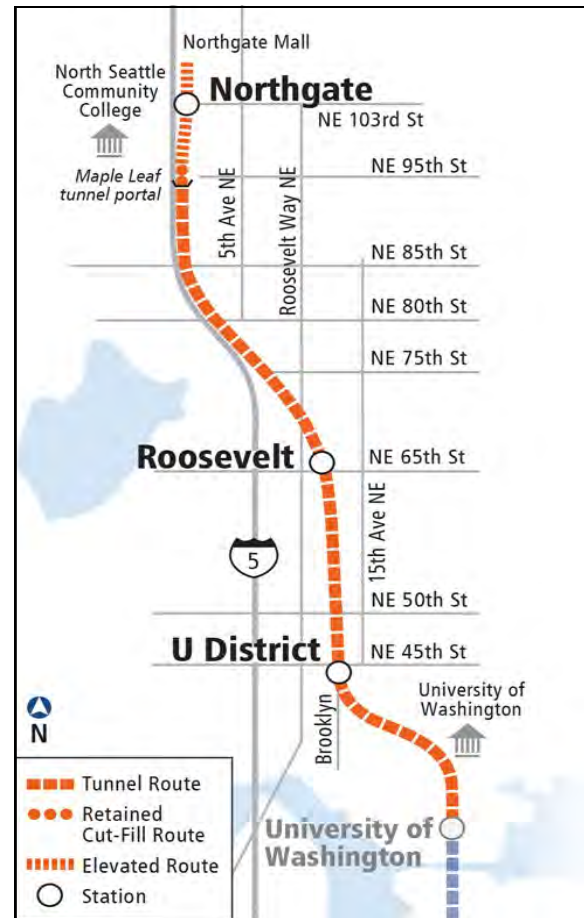
Present Financial Status	Amount
C802 Train Control —GETS Global Signaling, LLC*	
Original Contract Value (U-Link Option)	\$1,996,269
Change Order Value	\$15,390
Current Contract Value	\$2,011,659
Total Actual Cost (Incurred To Date)	\$2,011,659
Financial Percent Complete:	100%
Physical Percent Complete:	100%
Authorized Contingency	\$103,731
Contingency Drawdown	\$15,390
Contingency Index	N/A

*Change Order to Initial Segment Train Control Contract.
55% of contract costs are assigned to U-Link 45% Northgate Link.

Link Light Rail Northgate Link Extension

Scope

- Limits:** The Northgate Link Extension consists of 4.3 miles of light rail extending from the University of Washington to Northgate.
- Alignment:** The extension begins at the UW Station, boring tunnels under campus then continues north to a portal located north of NE 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
- Phase:** Final Design and Construction



Map of Northgate Link Extension route and stations.

Key Project Activities

- Capital Committee approved N830 GC/CM pre-construction services with Mass Electric for both Northgate and East Link systems installation.
- On Safety Certification tasks, the SSMP is now completed and signed by the SQA Director and Executive Project Director.
- Progressing various Final Design contract packages. (*See Final Design section for details.*)
- For N125 TBM Tunnels, TBM No. 1 completed cutter head refurbishment. Southbound TBM No. 2 has mined 12,930 ft. to-date using 10-hr shifts per day. Crews continued dewatering well operations.
- For N165 Northgate Parking Garage, DPD issued MUP approval decision for Nordstrom parking deck project.

Closely Monitored Issues

- On December 28, 2015, TBM No. 2 mining stopped approx. 650 feet from the U District Station due to damage to the gear box of drive motor #1. Damage assessment is ongoing with the TBM manufacturer on site and repairs are underway. The extended repair period would mean further delay in crossover conveyor installation at UDS. As of this writing, TBM No. 2 repairs continue.
- Several tunnel cross passages have registered much higher ground water levels than anticipated; Contractor is implementing ground freezing at several cross passages sites to reduce risk and minimize water to be pumped.
- Ground water freezing activities at several cross passages sites may require extensive site preparation which might generate community complaints. Sound Transit continues to meet with residents to notify them of upcoming activities and address concerns.
- Cost estimates for N140, N150, and N160 are trending over the baseline budget. Value Engineering (VE) efforts are underway to mitigate costs.

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	\$35.2	\$35.1	\$147.9	\$0.0
PRELIMINARY ENGINEERING	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$0.0
FINAL DESIGN	\$129.2	\$129.2	\$107.2	\$93.2	\$129.2	\$0.0
CONSTRUCTION SERVICES	\$118.3	\$118.3	\$80.1	\$29.5	\$118.3	\$0.0
3rd PARTY AGREEMENTS	\$11.8	\$11.8	\$9.9	\$5.1	\$11.8	\$0.0
CONSTRUCTION	\$1,328.0	\$1,328.0	\$480.0	\$350.6	\$1,328.0	\$0.0
ROW	\$127.3	\$127.3	\$92.3	\$91.9	\$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	\$819.8	\$620.5	\$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 \$16.7M was incurred, of which \$7.4M was for the N125 tunneling contract, the N111 Utility Relocation project at Northgate and other miscellaneous construction, \$0.9M was incurred for Civil and Systems Final Design and Design Support During Construction, and \$1.5M was for Construction Management. The remaining expenditures were for third party coordination, permits, staff, legal, right-of-way and other direct charges.

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	\$598.0	\$328.2	\$238.2	\$598.0	\$0.0
20 STATIONS	\$376.1	\$375.6	\$40.8	\$30.0	\$375.6	\$0.0
30 SUPPORT FACILITIES: YARD, SHOP	\$5.3	\$5.3	\$5.2	\$5.2	\$5.2	\$0.1
40 SITEWORK & SPECIAL CONDITIONS	\$140.8	\$140.8	\$99.8	\$72.3	\$140.9	(\$0.1)
50 SYSTEMS	\$110.9	\$108.7	\$0.9	\$0.9	\$108.7	\$0.0
Construction Subtotal (SCC 10 - 50)	\$1,228.7	\$1,228.4	\$474.9	\$346.6	\$1,228.4	\$0.0
60 ROW, LAND, EXISTING IMPROVEMENTS	\$119.9	\$119.9	\$92.3	\$91.9	\$119.9	\$0.0
80 PROFESSIONAL SERVICES	\$420.7	\$420.8	\$252.6	\$182.3	\$420.8	\$0.1
90 CONTINGENCY	\$130.4	\$130.6	\$0.0	\$0.0	\$130.7	(\$0.1)
Capital Total (SCC 10 - 90)	\$1,899.8	\$1,899.8	\$819.8	\$620.8	\$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. The current adopted budget values have been updated to reflect the removal of the LRV procurement in September 2015 and the addition of the UW TOD Overbuild scope at UDS in October 2015.

Cost Contingency Status

Compared to the baseline amount of \$396.2M, the Total Contingency has decreased by \$66.0M to \$330.2M, which is 25.8% of project work remaining. During this reporting period, a net decrease of \$1.8M in the overall project contingency occurred. Detailed information is provided below.

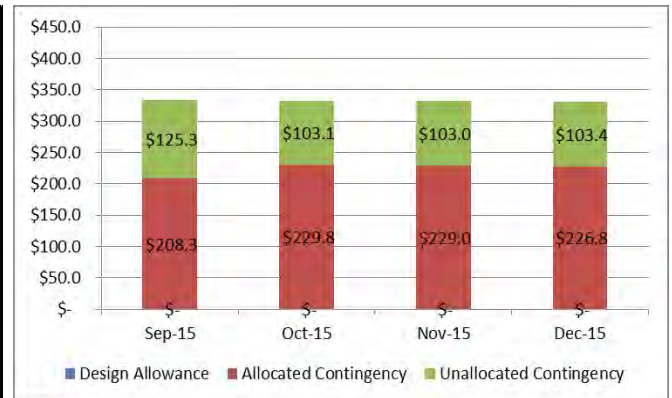
Design Allowance (DA)– The baseline Design Allowance of \$113.9M has been fully depleted following the receipt of updated construction cost estimates on the N140, N150, and N160 Station Finishes contracts. DA has been utilized as scope development has progressed to 60% on N140, and 90% on N150 and N160. No changes to DA occurred during this period.

Cost Contingency Status, continued

Allocated Contingency (AC) – Compared to the baseline amount of \$184.0M, Allocated Contingency has increased by \$42.8M to \$226.8M. During this reporting period, a decrease in AC of \$2.2M occurred due to the issuance of change orders on the N125 Tunneling contract, the N111 Advanced Utility Relocation contract and the construction management services contract.

Unallocated Contingency (UAC)– Compared to the baseline amount of \$98.3M, Unallocated Contingency has increased by \$5.1M to \$103.4M. During this reporting period, UAC increased by \$0.4M following deletion of the EMI Monitoring scope from the N835 contract and subsequent reallocation of the value of the deleted work back into the UAC.

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%	\$ 226.8	17.7%
Unallocated Contingency	\$ 98.3	4.6%	\$ 103.4	8.1%
Total	\$ 396.2	18.6%	\$ 330.2	25.8%



Project Schedule

The N105 Key Bank Site Demolition schedule slipped this period due to revision of the Division 00 Specifications. The IFB Package including specifications is now scheduled for early January 2016. Bid Advertisement has moved out to February 2016 absorbing the float in the bid process. NTP is still scheduled in May 2016. Construction completion is anticipated by mid-November 2016.

The N111 Advanced Utilities Relocation contractor continues to encounter conflicts and difficulties in completing the ductbanks. Substantial Completion slipped from mid-February 2016 to mid-March 2016 according to the December 2015 update. ST has requested Walsh to provide a revised schedule reforecasting the remaining work and documenting the issues that have been encountered. Given the magnitude of the issues to be resolved, it is possible that work will not complete until March 2016.

The N113 115kV Relocation project team is awaiting final comments from WSDOT on the 100% design. Lack of these comments is impacting the schedule with the bid date now pushed back to one month later to Feb. 12, 2016. This will set back the scheduled Capital Committee approval to April 14, 2016 effectively pushing the start of construction back another month. NTP has moved to May 5, 2016. The team is currently working with the pole manufacturer to schedule the delivery of Anchor Bolt Frames and Poles, and working with SCL to reschedule the outages needed on the existing line. Construction completion is now forecast to be in mid-December 2016, not including ST controlled float.

The N125 Contractor is continuing tunneling operations in the southbound bore between Roosevelt Station and U District Station. TBM No. 1 completed refurbishment and is set to launch from UDS in early January. TBM No. 2 mined a total of 1,015 feet through December 28, 2015 when tunneling stopped (approx. 650 feet from UDS) due to damage to the drive motor gearing and main bull gear. The TBM manufacturer is on site assessing problems. The extended repair period would mean further delay in crossover conveyor installation at UDS, which in turn would delay removal of the conveyor from the NB tunnel between RVS and UDS. This would have the follow-on effect of delaying the start of cross passage construction between RVS and UDS. As of this writing, repairs are being conducted with no exact timeline on when mining will resume on the bore.

The invert concrete in the northbound bore was completed Dec. 22, 2015. Eleven cross passages are now in construction. JCM's November schedule update forecasts a late completion of negative 14 days for Milestone 2 – RVS Turnover. Milestone 5 – UDS Turnover is now 14 days late, and Milestone 6 – Substantial Completion is now three days late.

Project Schedule, continued

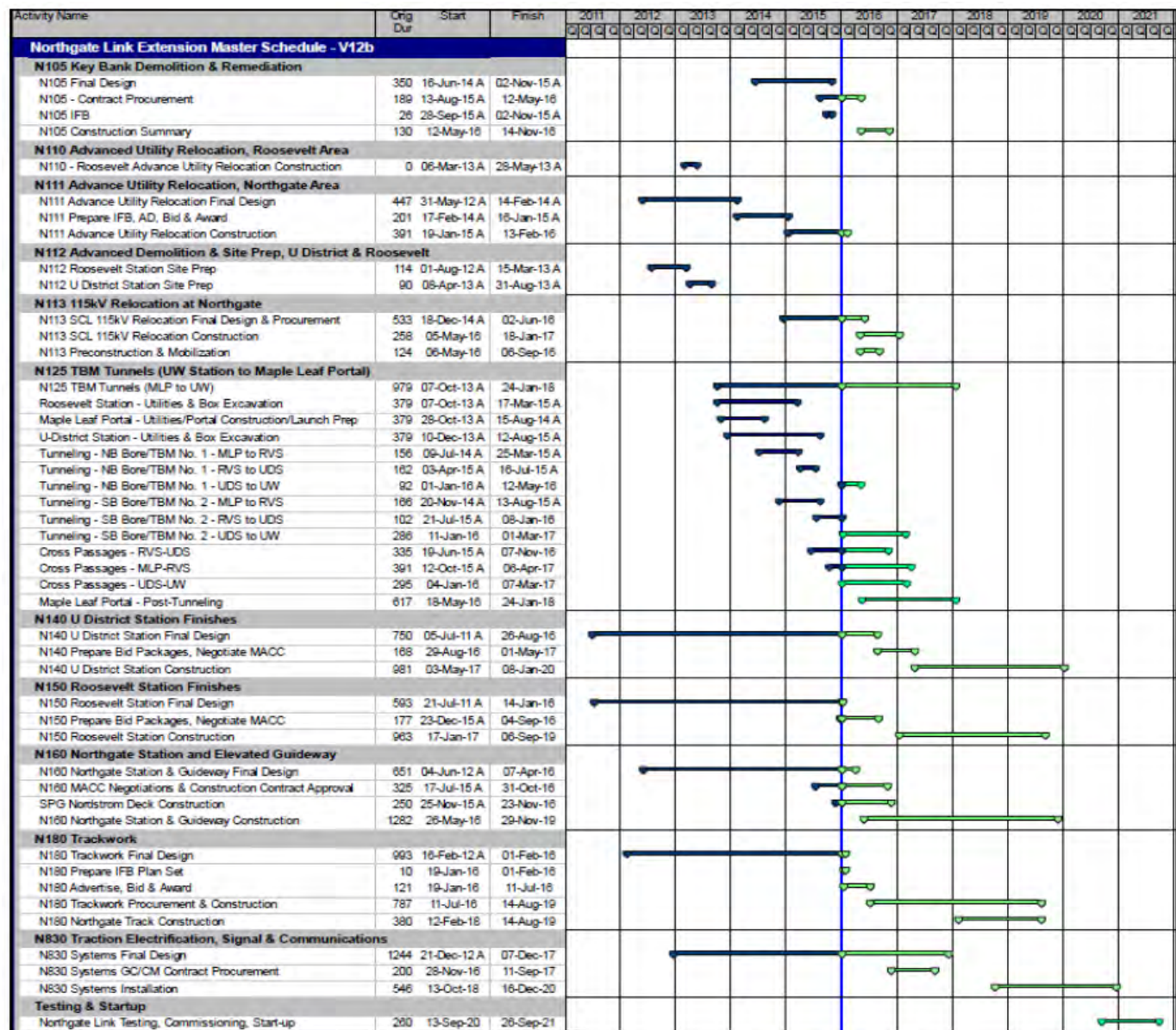
The N140 U District Station 90% was submitted on December 11, 2015 and is currently in review. The GC/CM, Hoffman Construction, has proposed a number of cost saving measures that ST and the Designers are reviewing. The MUP submittal has been pushed back to mid-February 2016. Preparation of appraisals for the permanent Tie-Back easements is scheduled to be completed in mid-January 2016.

The N150 Roosevelt Station 100% design was submitted last period and currently working with the pricing set of plans and specs to develop the MACC. The Notice of Decision for the MUP is still forecast for early January 2016.

Delivery of the N160 100% design package submittal has been pushed back to February 2016. The GC/CM, M.A. Mortenson Construction has submitted their MACC level schedule and ST is reviewing it. Mortenson is preparing their MACC and bid packages. Mortenson has selected a subcontractor for the Advanced Work Package at the strip mall property. ST is preparing to issue NTP for early February 2016.

The N180 100% Design Package was submitted on December 18, 2015 but could be jeopardized by the ability of ST and the UW to agree on the "Ultra Straight Rail" composition. NTP is currently scheduled for June 2016.

The 90% design effort for N830 contract continues with the 90% design submittal expected in February 2016.



Construction Safety

Data/ Measure	December 2015	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	6	91
Days Away From Work Cases	0	2	19
Total Days Away From Work	0	210	922
Restricted or Modified Work Cases	0	1	34
Total Days Restricted or Modified Work	0	3	1561
First Aid Cases	0	6	152
Reported Near Mishaps	2	15	243
Average Number of Employees on Worksite	78	-	-
Total # of Hours (GC & Subs)	14,500	293,137	3,912,087
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	4.09	4.65
DART Rate	0.00	2.05	2.71
<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.

U District Station – All parcels have been acquired.

Northgate Station - Condemnation on hold for two parcels; Two parcels in condemnation; payment for 2nd Amendment to the TCE sent; FTA concurrence received for two parcels and one parcel negotiations near conclusion; pending owner review of final documents.

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	16	15	0	0	0	15	4	3
Roosevelt Station	20	19	0	0	0	18	26	26
Tunnel Easements	190	188	0	0	0	188	0	0
Northgate Station	11	11	0	0	2	3	13	12
Total	237	233	0	0	2	224	43	41

Quality Assurance Activities

Activities

- None to report.

Issues

- None to report.

Summary

Description	Dec 2015	Notes
No. of Audits Planned	0	NI40 & NI50 Audit report
No. of Audits Completed	0	None
Reports in Progress	0	None
No. of Audits Post-poned	0	None

Community Outreach

- Distributed 25 alerts to residents in the Maple Leaf neighborhood ahead of cross passage construction. Distributed 20 alerts in the University District Neighborhood regarding tunnel boring machine progress.
- Provided quarterly project briefing to UW and monthly briefings to UW Tower floor coordinators.
- Emailed project newsletter to more than 4,100 subscribers.

Environmental

- None to report.

Sound Transit Board Actions

Board Action	Description	Date
	<i>None to report.</i>	

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

Contract Package N105 – Key Bank Demo and Remediation:

- Completed preparation of IFB package including Division 1 specs.

Contract Package N113 – 115kV Relocation at Northgate Station:

- Revised final IFB package.

Contract Package N140 - U District Station Civil and Finishes:

- Completed and submitted 90% design effort.
- Continued preconstruction phase activities and coordination with the GC/CM contractor.
- Continued Green Street and TOD 240-ft overbuild design effort.
- Continued research support/product research for cost reduction effort in conjunction with GC/CM.

Contract Package N150 - Roosevelt Station Civil and Finishes:

- Continued research support/product research for cost reduction effort in conjunction with GC/CM.

Contract Package N160 - Northgate Station, Aerial Guideway and Parking Garage Civil and Finishes:

- Continued 100% design effort for station, guideway and garage.
- Continued final specification coordination.

Contract Package N180 – Trackwork:

- Continued coordination with structures and systems for incorporation into 100% design package.
- Continued QC checking of the 100% design package.

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

- Completed QC for the N830/E730 90% design package and prepared for the QA check to take place in January.
- Completed N125 and N160 Hazard Analysis workshops.

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	7/30/16
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	1/22/16
N180 Trackwork	8/23/2012	8/23/2012A	5/22/2013	4/8/2013A	8/26/2013	1/15/16
N830 Traction Electrification, Signals, Communications	12/12/2012	12/20/2012A	4/10/2014	2/15/16	12/9/2014	7/21/16

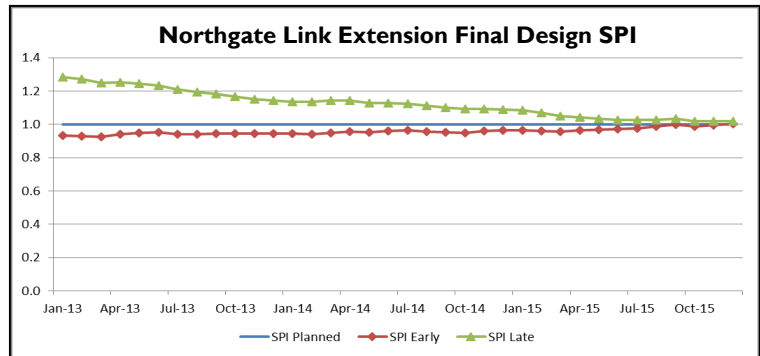
F/A* = Forecast/Actual

Link Light Rail Northgate Link Extension - Final Design



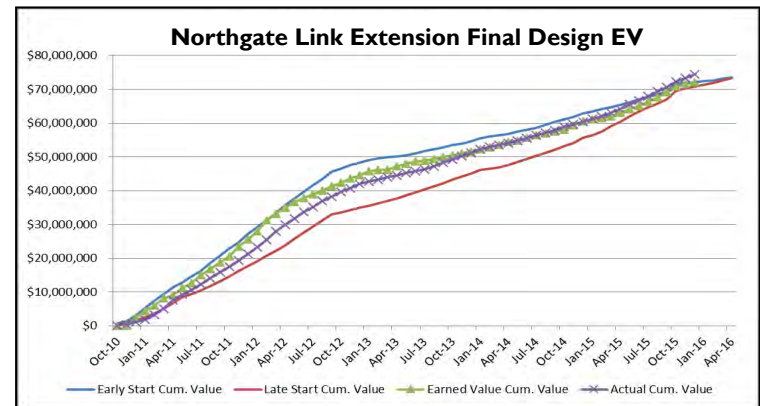
Final Design Schedule Performance

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 1.02. Deliverable schedule remains on track as adjusted for approved scope changes.



Final Design Cost Performance

Through this period, the total amount spent for civil final design is \$80.0M, which is approximately 85.8% of the total contract amount including change orders. For final design activities only, the total amount spent is \$74.4M, which is approximately 99.8%. The consultant reported 96.8% complete for final design activities, resulting in an Earned Value of \$72.1M. The current period Cost Performance Index (CPI) is reported at 0.6 which reflects the planned earnings had the final contract packages been delivered per the original schedule, and does not reflect incorporation of unexecuted change order funds. The cumulative CPI remains 1.0, which indicates that overall expenditures are in line with planned cost.



Performance	Previous Period	Current Period	Cumulative To Date
Amount Invoiced	\$73,304,998	\$1,053,673	\$74,358,671
Spent	98.3%	1.4%	99.8%
Earned Value	\$71,483,874	\$665,022	\$72,148,896
% Complete	95.9%	0.9%	96.8%
CPI	1.0	0.6	1.0

Other Key Final Design Activities

Geotechnical Investigation

- Continued geotechnical support as required.

Surveying and ROW

- Conducted potholing as needed for N113.
- Continued control sheets and ROW sheets for N140 submittal.
- Continued updating N180 control sheets for submittal.

Traffic Engineering Report

- Continued traffic engineering support for Maintenance of Traffic efforts and final design traffic elements as needed.
- Submitted Traffic Engineering Report update for submission with N140 90% design.

Permits

- Completed N140 60% SIP resubmittal.
- Continued coordination support and integration of City of Seattle comments on 90% SIP applications for N150, and N160.
- Completed draft of N150 100% ROD matrix and began review of the N140 90% ROD matrix.

Noise Mitigation for At Grade and Elevated Guideway

- None to report.

Ground Borne Noise and Vibration

- Completed drawing updates related to floating track slabs for inclusion in the N180 100% submittal.
- Continued updating UW vibration prediction findings and made revisions to rail undulation specifications.

Construction Cost Estimating

- Completed and submitted N150 100% cost estimate.

Illustrative Graphics

- Continued graphics for the N140 90% LRRP presentation.

Quality Assurance

- Continued QC tasks on active design packages and conducted the N140 90% and N150 100% QA Audits.

Design and Project Integration

- Provided coordination and integration between all contracts in the Northgate area.
- Integration and coordination with Systems Consultant (LTK), Art Consultant and Station Artists continued as required.

Major Construction Contract Packages

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

N105 Key Bank Demolition and Remediation - Demo of Key Bank Building, remove underground storage tanks and remediate contaminated soil.

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.

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-Key Bank Remediation/Demo	Jan 2016	May 2016	Dec 2016
N111-Advanced Utility Relocation	Sept 2014A	Jan 2015A	Jan 2016
N113-SCL 115kV Relocate	Jan 2016	May 2016	Jan 2017
N125-Station Box Exc. & TBM Tunnels	Jan 2013A	Sep 2013A	Feb 2018
N140-U District Station Finishes	Oct 2013A (GC/CM-Precon)	Mar 2017 (construction)	Jan 2020
N150-Roosevelt Station Finishes	Apr 2013A (GC/CM-Precon)	Jan 2017 (construction)	Sep 2019
N160-Northgate Station & Guideway & Parking Garage	Feb 2015A (GC/CM –Precon)	Feb 2016	Nov 2019
N180-Trackwork to Northgate Station	Feb 2016	Jun 2016	Jul 2019
N830-Traction Power, Signals & Com	May 2015 (GC/CM-RFQ)	Jan 2018 (construction)	Oct 2020

A = Actual

Link Light Rail Northgate Link Extension - Construction



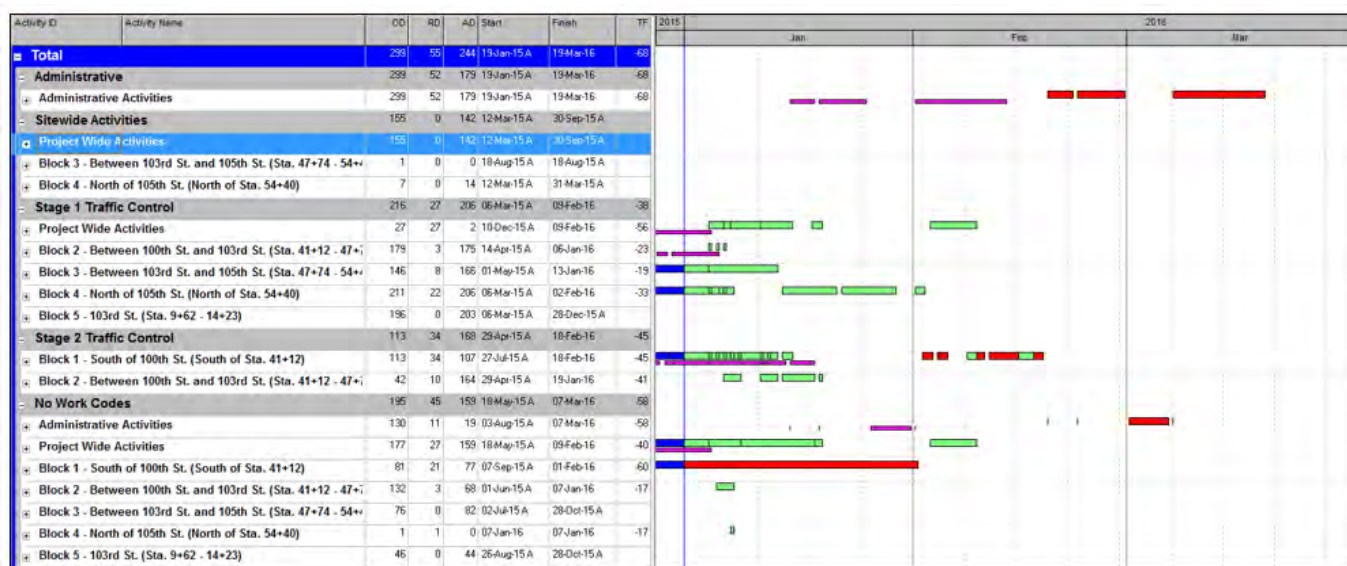
Contract N111 – Advanced Utility Relocation

Current Progress

Vault & Ductbank Installation- SCL Ductbank and Communications ductbank installation has slowed due to conflicts with existing utilities, and some unknown utilities. Currently work to install ductbank into the existing SCL Vault 756 is in progress, but has encountered differences between the plans and actual configuration of the vault. Several handholes already installed may need to be moved. The impact of these field issues has prompted ST to request a revised schedule from Walsh Construction, rather than a simple update, that will reflect a re-planning of the remaining work. Currently the December update forecasts completion of the construction in mid-February 2016 with Substantial Completion in March 2016.

Storm Sewer & Water Line –Storm Sewer/Ductbank work in Block 4 is delayed due to conflicts.

Schedule Summary



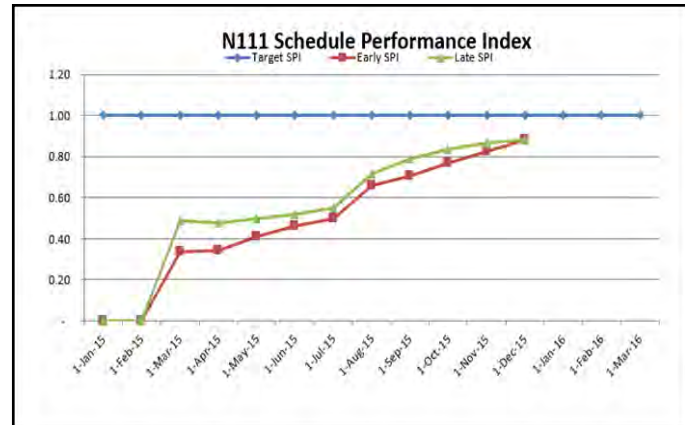
The December schedule submitted by Walsh Construction forecasts Substantial Completion on March 19, 2016, with construction ending February 18, 2016. It is the RE's opinion that given delays and conflict in the field, work will complete in March. As a result, ST has reviewed and commented on the submission, requesting Walsh re-plan and submit a completely revised schedule for the remaining work.

Critical Path



Schedule Performance Index

Based on the submitted (but not yet approved) pay estimate from the Contractor, the SPI for December 2015 is 0.9, up from the 0.8 reported in November 2015. The increase reflects completion of Storm Sewer work in Blocks 4 & 5, ductbanks leading to SCL Vault 756, and curb and sidewalk work in Block 1.



Key Activities

Current Period

- Completed storm sewer; adjusted and channeled man-holes north of NE 105th St along 1st Ave NE (Block 5).
- Pressure tested the storm sewer system (Blocks 4 & 5).
- SCL ductbank in the NE 100th St intersection with 1st Ave NE connecting ductbanks to the existing SCL Vault (Block 2) is in progress.
- Continued to adjust, clean, and grout SCL vaults along NE 103rd St and along 1st Ave NE (Blocks 2, 3 & 4).
- Resumed demolition of sidewalks and curbs along 1st Ave NE south of NE 100th St in preparation for communications ductbank work (Block 1).
- SCL relocated the south terminal pole allowing completion of the SCL ductbank per plans (Block 1).

Next Period

- Excavate and grade for temporary retaining walls north of NE 105th St along 1st Ave NE (Block 5).
- Work on communications ductbanks along 1st Ave NE north of NE 105th St (Block 5) and south of NE 100th St (Block 1).
- Construct ductbank to the south terminal pole #2 south of NE 100th St (Block 1).
- Continue to adjust, clean, and grout SCL vaults along NE 103rd St and along 1st Ave NE (Block 4 & 5).
- Continue to mandrel SCL ductbanks throughout the project. Continue curb and gutter work along 1st Avenue NE/.

Closely Monitored Issues

- SCL has begun preparations for mobilizing their forces, with work orders being issued and coordination meetings being scheduled to begin cabling installations in February 2016.

Cost Summary

Present Financial Status	Amount
N111 Contractor - Walsh Construction	
Original Contract Value	\$9,370,000
Change Order Value	\$478,557
Current Contract Value	\$9,848,557
Total Actual Cost (Incurred to date)	\$9,226,105
Financial Percent Complete:	93.7%
Physical Percent Complete:	79.4%
Authorized Contingency	\$937,000
Contingency Drawdown	\$478,557
Contingency Index	1.55



Duct bank work continues.

Link Light Rail Northgate Link Extension - Construction



Contract N125 – TBM Tunnels

Current Progress

The schedule update for December 2015 continues to forecast a late completion for Milestone 2 RVS Turnover, Milestone 5 UDS & Tunnels, and Milestone 6 Substantial Completion. Tunnel mining in the north and south bound bores drive the critical path. Cross passage work continues to drive the achievement of Milestone 5. Cross Passages 34-38 remain logically disconnected from other tasks.

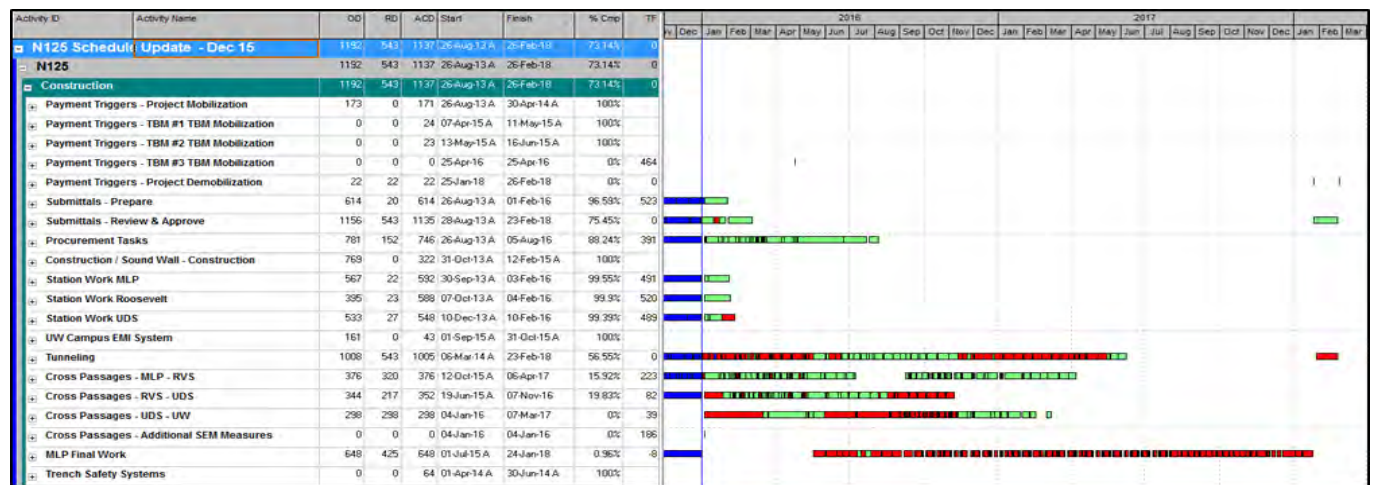
Tunneling Operations - As of end of December 2015, TBM No. 1 neared completion of refurbishment at U District Station (UDS). Launch from UDS is planned for early January 2016. TBM No. 2 had mined 1,015 feet in December, averaging 203 feet/week. On December 28, TBM No. 2 has stopped due to damage in the drive motor gearing and main bull gear. Crews have been on-site to assess the extent of the damage and repairs are underway.

Maple Leaf Portal (MLP)- Construction of Cross Passages 42 and 43 are currently underway.

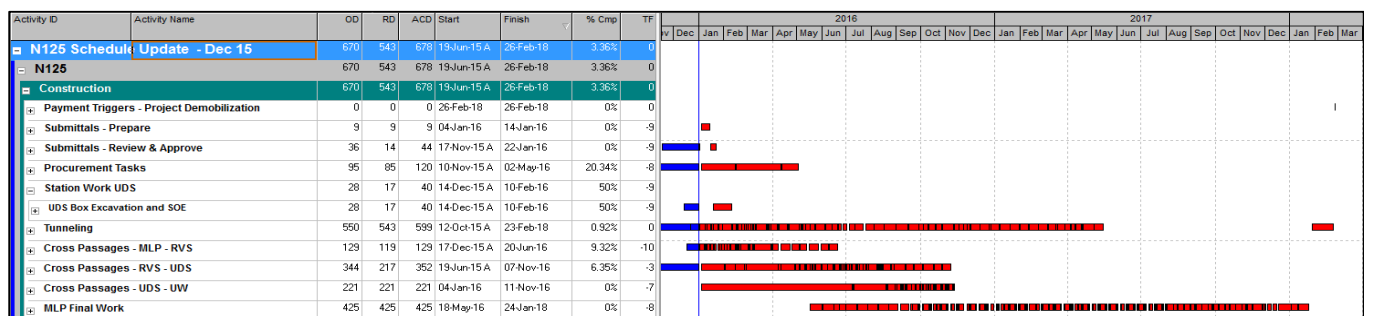
Roosevelt Station (RVS) - JCM completed the invert slab concrete in the northbound.

U-District Station (UDS) -JCM is currently refurbishing TBM No. 1 and preparing the north headwall for reception of TBM No. 2. Ground freezing continues at the south headwall. TBM No. 1 is scheduled to re-launch toward the University of Washington Station in early January 2016.

Schedule Summary

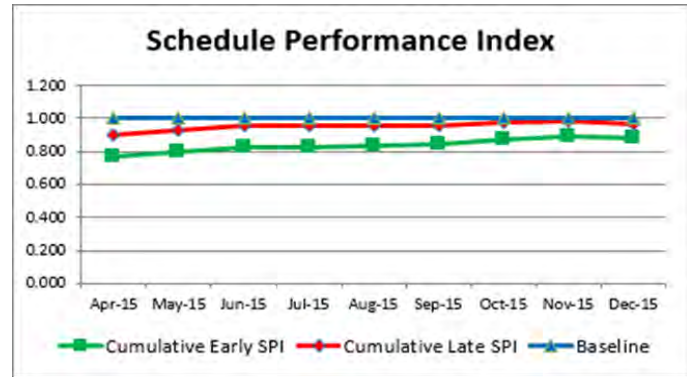


The longest path through the schedule is still driven by the southbound tunneling, followed by cross passages, and completion of the Maple Leaf Portal. ST is currently awaiting the damage assessment and possible solutions for TBM No. 2. ST has analyzed recovery strategies including completing the tunneling using only the one remaining TBM or implementing the third TBM. The best case scenario has TBM No. 2 sufficiently repaired to complete the remaining 680 feet to UDS, where more extensive repairs could take place before continuing on to UWS. Should TBM No. 2 not be able to complete mining to UWS and be extracted prior to the start of the Fall Quarter 2016 of UW, the machine could remain in place until Spring 2017, while the trailing gear and conveyor are removed via UDS.



Schedule Performance Index

The SPI for December 2015 remains at 0.9. The refurbishment of TBM No. 1 and breakdown of TBM No. 2 slowed progress this period. Cross Passage construction is underway at 11 cross passages. The Contractor's estimated Performance Percent Complete is 72.6% with a Cost Percent Complete of 72.6% based on the December update.



Key Activities

Current Period

Tunnels & Cross Passages (CPs)

- Electricians installed 15kV switch panel and connected to UW power panel at CP21.
- Continued installing ground freeze pipes at CP29; completed ground freeze pipes at CP32.
- Completed installation of tunnel propping CP39 (SB) and CP40 (NB).
- Completed installation of propping for the SB tunnel breakthrough segments at CP41.
- Completed excavation/support from NB tunnel, installation of SB tunnel propping and began saw cutting SB segments for breakout at CP42.
- Completed advancing TBM No. 1 towards launching seal, completed installation of blind rings/launching frame for early January 2016 re-launch.
- TBM No. 2 total to-date tunneling progress is 2,586 rings.
- Completed installation of NB tunnel invert drain and invert pour from UDS to RVS.

Next Period

- Continue damage assessment and repairs of SB TBM No. 2 drive motor 1 & bull gearing.
- Re-launch NB TBM No. 1 from UDS to UWS.
- Continue install of freeze pipes at CP29 and complete installation of in-tunnel freeze pipe system at CP32.
- Complete installation of propping for the SB tunnel breakthrough segments at CP40.
- Complete saw-cutting and breakout of NB tunnel segments to begin CP41 excavation.
- Complete breaking through SB tunnel segments, smoothing shotcrete and begin invert waterproofing at CP42.
- Begin invert waterproofing at CP43.

Closely Monitored Issues

- New damage to SB TBM No. 2 occurred in late December, delaying its arrival at UDS. The repair period would mean further delay in crossover conveyor installation at UDS, which in turn would delay removal of the conveyor from the NB tunnel between RVS and UDS. This would have the follow-on effect of delaying the start of cross passage construction between RVS and UDS.

Cost Summary

Present Financial Status	Amount
NI25 Contractor - JCM Northlink	
Original Contract Value	\$440,321,000
Change Order Value	\$ 4,359,467
Current Contract Value	\$444,680,467
Total Actual Cost (Incurred to date)	\$315,225,667
Financial Percent Complete:	70.9%
Physical Percent Complete:	71.2%
Authorized Contingency	\$22,016,050
Contingency Drawdown	\$4,357,467
Contingency Index	3.60



Pouring invert concrete for the NB tunnel from UDS to RVS.

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

Final Design

- Procuring consultants for civil/architectural and systems final design. Anticipate starting civil final design work in 2nd QTR 2016 and systems final design work in 3rd QTR 2016.

Pre-Construction Services

- Procuring construction management consultant and GC/CM contractors for pre-construction services. Anticipate starting civil pre-construction services in 2nd QTR 2016 and systems pre-construction services in 4th QTR 2016.

Third Parties

- Advancing various agreements with WSDOT, City of Seattle, City of Shoreline, City of Mountlake Terrace, City of Lynnwood, and utility providers.

Right of Way

- Beginning early right-of-way acquisition activities.

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

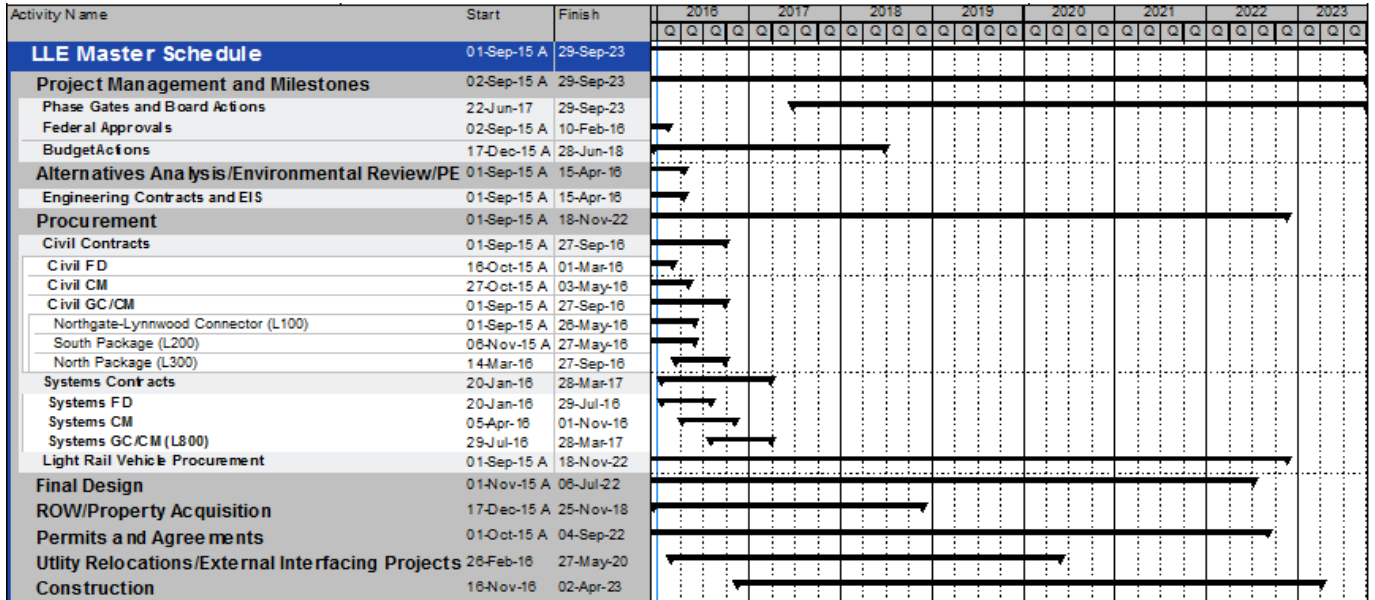
Project Phase	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$88.3	\$7.4	\$7.3	\$88.3	\$0.0
Preliminary Engineering	\$42.0	\$40.2	\$37.6	\$42.0	\$0.0
Final Design	\$111.5	\$0.0	\$0.0	\$111.5	\$0.0
Construction Services	\$104.9	\$0.0	\$0.0	\$104.9	\$0.0
3rd Party Agreements	\$17.4	\$82.2	\$0.3	\$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	\$6.2	\$6.1	\$123.8	\$0.0
Total	\$487.9	\$136.1	\$51.3	\$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	\$6.1	\$123.8	\$123.8	\$0.0
70 Vehicles (non-revenue)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
80 Professional Services	\$364.1	\$45.2	\$364.1	\$364.1	\$0.0
90 Unallocated Contingency	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total (10 - 90)	\$487.9	\$51.3	\$487.9	\$487.9	\$0.0

Project Schedule

The project schedule is shown below. The schedule is at high risk; delays to permitting, right-of-way acquisition, or final design completion could push the anticipated revenue service date into 2024.



Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Community Outreach

- Posted fliers at the North and South Park & Ride in advance of geotechnical boring work which took place in early December; also posted fliers around Shoreline in advance of potholing work.
- Coordinated with a property owner prior to topographic survey work.

Environmental

- FTA issued environmental Record of Decision (ROD) in July 2015.

Quality Assurance Activities

Activities/Issues

- None to report.

Summary

Description	Dec 2015	Notes
No. of Audits Planned	0	None
No. of Audits Completed	0	None
Reports in Progress	0	None
No. of Audits Postponed	0	None

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Phase 3 Preliminary Engineering and Final EIS

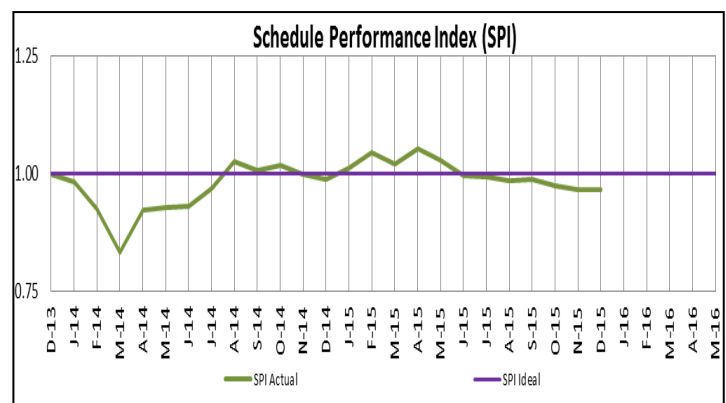
Sound Transit executed a contract amendment for Phase 3, Preliminary Engineering and Final EIS for Lynnwood Link, in December 2013.

Phase 3 Key Activities

- Continuing final Preliminary Engineering documentation in preparation for the start of the Final Design Phase.

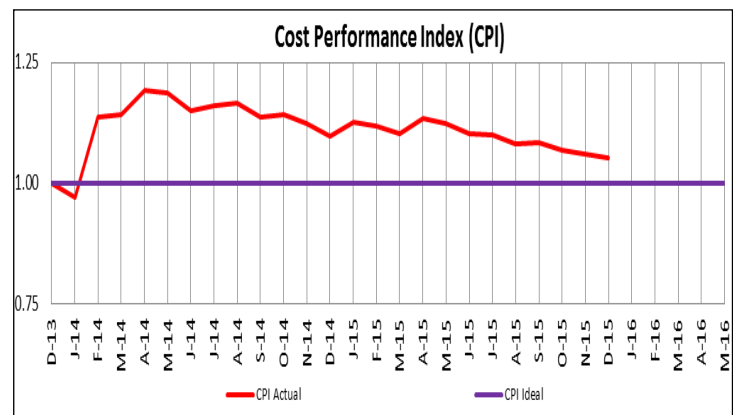
Phase 3 Schedule Performance

The cumulative Schedule Performance Index (SPI) for the Phase 3 contract is 0.96 through December 2015 indicating overall the work performed to date is close to the amount originally planned. Sound Transit requests that the consultant report percent complete at the task level in 5% increments, and some tasks previously reported at 95% complete are not yet 100% complete. As a result, these tasks did not earn value in the December period, resulting in a low monthly SPI of 0.81. However, the Phase 3 work is nearly finished (97% complete overall), and the overall SPI will trend toward a value of 1.00 upon completion. Sound Transit executed a no-cost change order in December to extend the completion date into 2nd QTR 2016.



Phase 3 Cost Performance

\$37.0M of the total contract amount, approximately 95%, has been spent through December 2015. Phase 3 contract expenditures through December totaled \$20.6M, approximately 92% of the Phase 3 contract total. The Phase 3 contract percent complete reported at the end of December is 97%, with an earned value of \$21.7 M. The cumulative Cost Performance Index (CPI) through December is 1.05; indicating costs are lower than the budget planned for work accomplished. The monthly CPI is low at 0.46 due to only a small increase in earned value, as discussed under “Phase 3 Schedule Performance”. An independent Estimate at Completion indicates that the consultant will finish the current Phase 3 work under budget.



Phase 3 Performance	Previous Period	Current Period	Cumulative To-date
Amount Invoiced	\$20,352,624	\$236,168	\$20,588,792
% Spent	91%	1%	92%
Earned Value	\$21,579,781	\$109,103	\$22,688,884
% Complete	96%	1%	97%
SPI	0.97	0.81	0.96
CPI	1.06	0.46	1.05

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



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

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

- Continued working on submittals and procurement for fans and SCADA implementation. Began site acceptance testing for SCADA. Began panel production and delivery, network equipment installation, and on-site testing. Began preparations for the Site Acceptance Test.
- Mount Baker Ridge Tunnel – Completed tank room modifications and foam tank installation; began installation of racks, conduits and pull wires; made louver modifications; ongoing emergency egress construction, exhaust plenum modifications, and jet fan and electrical room modification.
- The December 12, 2015 weekend closure of Eastbound I-90 was executed per plan; all contractor-planned work performed.

Project Cost Summary

Total Project Costs expended in December were \$5.8M. The following tables summarize the cost information for the I-90 Two-way Transit and HOV Operations (Stage 3) project. Tables in millions.

Cost Summary by Phase

Project Elements by Phase	Baseline Budget	Current Adopted Budget	Commitment to Date*	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
Administration	\$3.6	\$3.6	\$1.5	\$1.5	\$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	\$53.3	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$187.9	\$74.2	\$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	\$53.3	\$180.6	\$0.0
80 Professional Services	\$26.3	\$26.3	\$21.6	\$20.9	\$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	\$187.9	\$74.2	\$225.6	\$0.0

Cost Contingency Management

All unallocated contingencies are budgeted and controlled by Sound Transit. Allocated Contingencies include \$7.7M in WSDOT-controlled construction contingencies that are part of the ST-WSDOT Task Order. WSDOT reports the monthly status of any change orders that will be drawn upon the WSDOT-controlled contingency, as well as any pending changes.

In the table, the Current Status Remaining allocated contingency amount is based on adding the combined WSDOT-controlled construction contingency & the total ST-controlled remaining allocated contingencies; the unallocated total is solely the remaining ST unallocated contingency amount. These amounts are then compared to the current remaining authorized budget to develop the Percent of Work Remaining figures:

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%	\$16.2	10.7%
Unallocated Contingency	\$18.7	8.3%	\$18.7	12.3%
Total	\$35.7	15.8%	\$34.9	23.1%

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

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

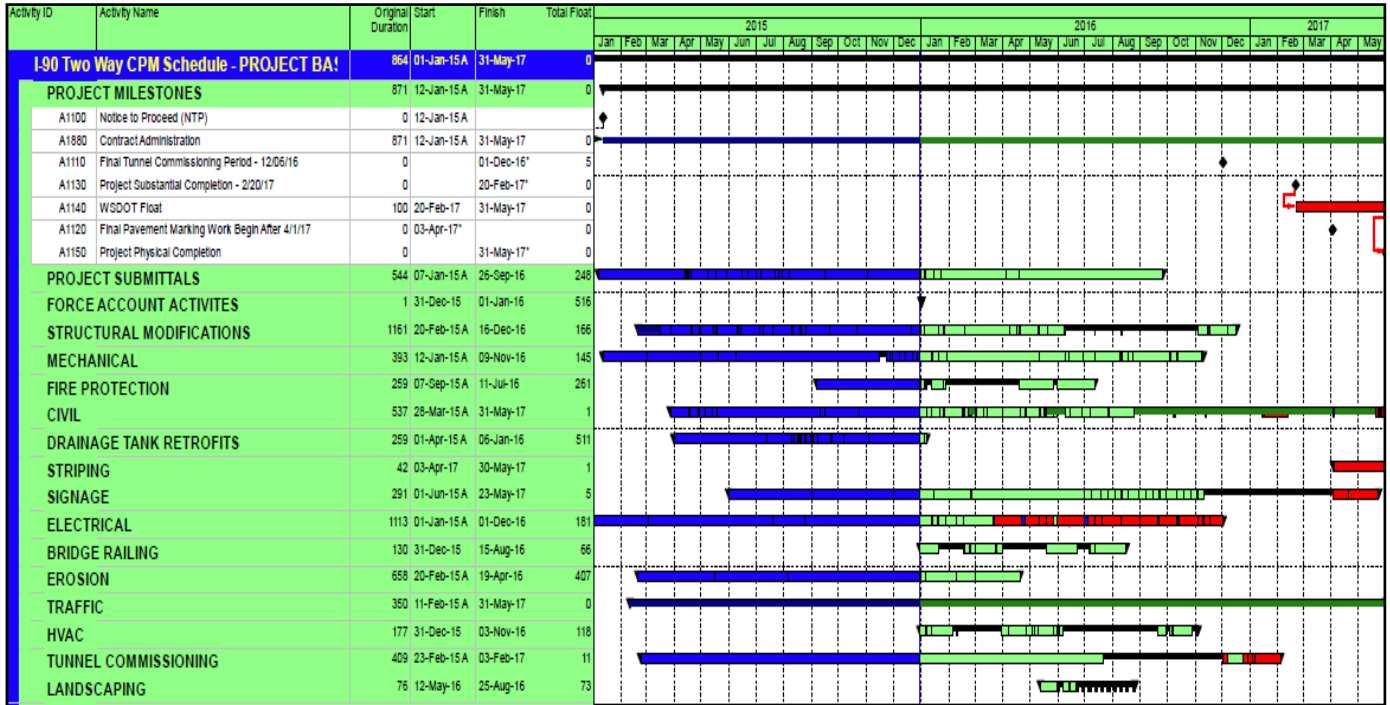
Allocated contingency includes WSDOT-controlled contingency & ST-controlled Contingency.

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



Project Schedule

Current project schedule and milestones are shown below. In conjunction with WSDOT, the schedule is being closely monitored, particularly the milestones for delivery and installation of fans, and the installation and testing of SCADA equipment. WSDOT's oversight and coordination with the Contractor on these issues is occurring more frequently with an emphasis on identifying any potential schedule impacts as early as possible such that they can be mitigated.



Contract	Final Tunnel Commissioning		Substantial Completion		Final Pavement Marking		Physical Completion & Center Roadway Turnover	
	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual
I-90 Two-Way Transit & HOV Operations Stage 3	12/6/2016	12/6/2016	2/20/2017	2/20/2017	4/3/2017	4/3/2017	5/31/2017	5/31/2017

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Link Light Rail East Link Extension



Map of East Link Extension Alignment.

Scope

Limits:	Downtown Seattle to Mercer Island, Bellevue and the Overlake area of Redmond.
Alignment:	East Link extends light rail 14 miles to East King County from Downtown Seattle serving Mercer Island via I-90, Bellevue and the Overlake area of Redmond, with ten new light rail stations. The alignment configuration includes 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 power, and communications (SCADA).
Budget:	\$3.677 Billion Baseline Budget (Year of Expenditure Dollars)
Phase:	Final Design transitioning to Construction
Construction Starts:	2016
Service:	June 2023

Key Project Activities

- Held the monthly ST/FTA/PMOC meeting.

Seattle to South Bellevue

- Conducted tour of Mercer Island with PMOC.
- Independent Review Team (IRT): Received WSDOT concurrence on issue's B and W. Twenty IRT issues are closed with WSDOT, with three remaining. Public comment period for the Mercer Island Shoreline Permit is underway.
- Received comments on the draft of the MOA amendment with the City of Seattle.

South Bellevue to Redmond

- Continued working with the City of Bellevue to address interface issues between E335, E340, and E750 (NE Spring Blvd. Zone 1, 120th Avenue NE, and 124th Avenue NE).
- Updated the draft Collaborative Construction Plan (CCP has been provided to the City of Bellevue for review)
- Met with Microsoft Commuter Team contact to discuss future East Link Overlake project presence at Microsoft's series of Mixer a Commons Events at the Microsoft Campus.

South Bellevue to Redmond (continued)

- E320: Reviewing 100% submittal; Building updated construction schedule and reviewing private utility interfaces; preparing special conditions; review of draft noise report. Developed plan to investigate settlement in the vicinity of City of Bellevue pump station project.
- E330: Issued LNTP to Contractor on December 15; working with Contractor on earlier submittals and tunneling approach; preparing for construction open house; working on field office set up.
- E335: Preparing change order to GC/CM preconstruction contract to reflect changed pricing set date; coordinating with the City of Bellevue on Zone 1.
- E340: Reviewing draft CPM by CMC; Constructability Review of Utilities along 136th Place and NE 20th Street; Working with engineering on private utility work coordination.
- E360: Continued working with Microsoft on TCE requirements; working with WSDOT on ASL O&M terms; ASL/Trail leases for pedestrian bridges have been approved, Redmond to sign and notarize leases per WSDOT direction; Reviewing ATC's; ATC deadline 1/7/16; proposal due 2/12 /2016.

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 \$6.3M 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	\$41.4	\$41.1	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.4	\$54.3	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$183.3	\$152.3	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$11.7	\$4.9	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$10.0	\$5.5	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$144.4	\$17.9	\$2,544.3	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$298.2	\$298.2	\$134.2	\$129.7	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$579.4	\$405.8	\$3,677.2	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Current Adopted Budget	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$744.6	\$744.6	\$108.5	\$0.0	\$744.6	\$0.5
20 Stations	\$397.7	\$397.7	\$0.0	\$0.0	\$397.7	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$808.5	\$808.5	\$34.5	\$17.9	\$809.0	(\$0.5)
50 Systems	\$353.8	\$353.8	\$1.4	\$0.0	\$353.8	\$0.0
Construction Subtotal (10 - 50)	\$2,304.6	\$2,304.6	\$144.4	\$17.9	\$2,305.1	\$0.0
60 Row, Land	\$288.5	\$288.5	\$134.2	\$129.7	\$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	\$898.4	\$300.8	\$258.2	\$900.2	(\$1.8)
90 Unallocated Contingency	\$182.9	\$182.9	\$0.0	\$0.0	\$181.0	\$1.8
Total (10 - 90)	\$3,677.2	\$3,677.2	\$579.4	\$405.8	\$3,677.6	\$0.0

Risk and Contingency Management

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, contains a total of \$795.9M Total Contingency. This period, total contingency decreased by the amount of \$4.6M, when compared to the previous period, to a new total amount of \$823.4M. Total Contingency is made up of the following:

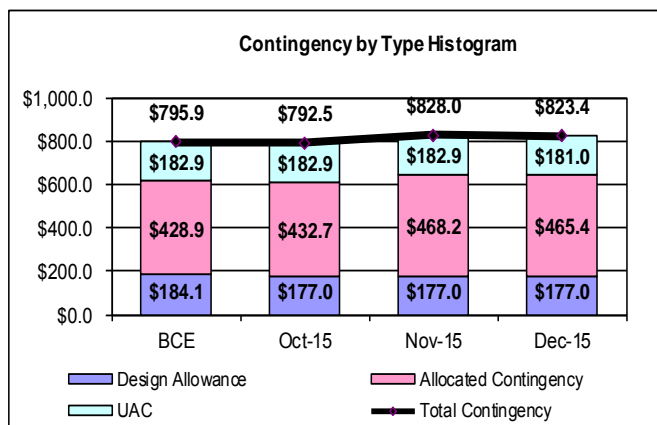
Design Allowance is used to account for scope that could not be quantified at the time of the cost estimate. The total amount of design allowance in the baseline cost estimate is \$184.1M. Design allowance remained the same as the previous period, which was \$177.0M. In the next coming period, as the designs are progressed to 100% level 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. The total amount of allocated contingency has a net decrease of \$2.8M. This was largely due to the execution of change orders on South Bellevue to RTC final design contract to address the extension of the design period and to address design changes in South Bellevue. Total allocated contingency balance is now \$465.4M.

Unallocated Contingency is used to address general project-wide cost risks and uncertainties. The total amount of unallocated contingency in the baseline cost estimate is \$182.9M. This period, \$1.8M of unallocated contingency was drawn down to help offset the higher than anticipated E130 GC/CM Pre-construction Services contract amount.

Contingency Status	BCE		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$184.1	5.0%	\$177.0	5.4%
Allocated Contingency	\$428.9	11.7%	\$465.4	14.2%
Unallocated Contingency	\$182.9	5.0%	\$181.0	5.5%
Total:	\$795.9	21.6%	\$823.4	25.2%

Dollar figures on this page are displayed in millions.



Risk Management

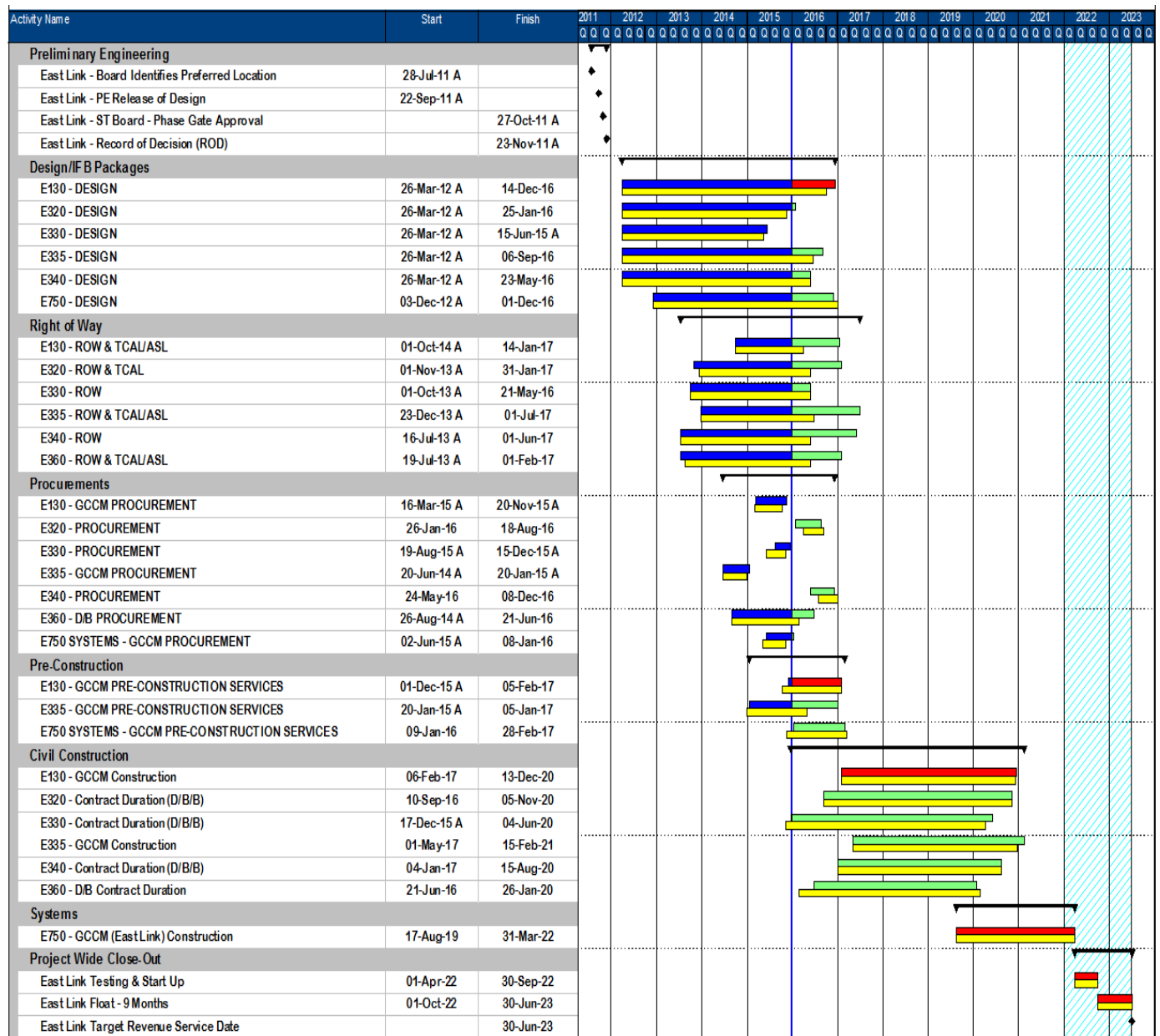
The RCMP established a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring 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 conducted Quarterly Risks Review Meetings for 4th QTR 2015, some of which were attended by the PMOC.

Project Schedule

The East Link Extension (EL) is in Final Design transitioning to Construction. Sound Transit Board baselined EL on April 23, 2015. The first early construction contract, early utilities for E340 Bel Red started in May 2015. The first major EL construction contract E330 Downtown Tunnel was issued Limited Notice to Proceed on December 15, 2015 with planned Notice to Proceed (NTP) in early February 2016. Contract procurement continues: E130 GC/CM (I-90 Heavy Civil) and I-90 Segment Construction Management Consultant (CMC) were awarded in December 2015; E360 D/B (SR520 to Overlake Transit Center) currently in procurement and scheduled to be awarded 2nd QTR 2016; and E750 GC/CM (East Link Systems) now scheduled to be awarded 1st QTR 2016.

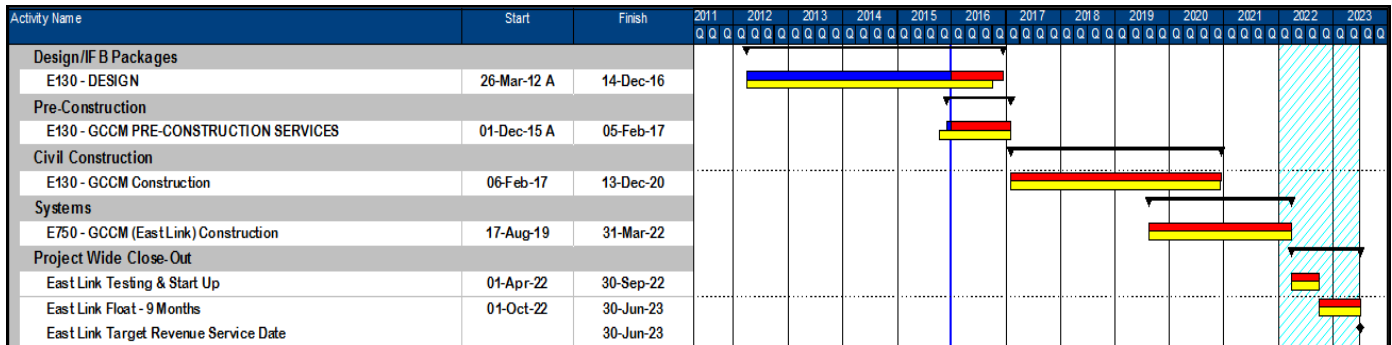
Revenue Service is forecasted for June 2023.



*Note: This schedule represents East Link Schedule Progress. EL Baseline Schedule is represented by lower bar (yellow).

Critical Path Analysis

The East Link critical path runs through completion of E130 design and MACC negotiations, which then drives E130 NTP for construction. Issuance of the I-90 TCAL/ASL is on the near critical path with only three weeks of float before becoming the critical driver for E130 NTP for construction. The EL critical path schedule is shown below. ASL coordination with WSDOT is recognized as a high priority.



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. Appraisals are being adjusted to reflect this increasing trend in the market. The overall impact on the Right-of-Way 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 is receiving the appropriate level of attention from the management team.

East Link Extension Property Acquisition Status							
Line Section	Board Approved	Offers Made	Signed Agreements	Possession and Use	Closings to date	Baseline Relocations Required	Relocations Completed
Seattle to S. Bellevue	2	1	0	0	0	0	0
S. Bellevue to OTC	240	168	6	5	90	230	140
Bellevue Mile	1	1	1	0	1	0	0
Total	243	164	7	5	85	230	140

Seattle to S. Bellevue

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

S. Bellevue to OTC parcels

E320 S. Bellevue- Two offers made, two agreements signed, and one parcel closed . Air Space Lease discussions with WSDOT continue.

E330 Downtown Bellevue – One parcel closed.

E335 – Two offers made, one agreement signed, and three parcels closed.

E340 Bel-Red - Two offers made, one parcel closed.

E360 SR 520 to OTC – Air Space Lease discussions with WSDOT continue.

Quality Assurance Activities

Activities

- None to report.

Issues

- None to report.

Summary

Description	Dec 2015	Notes
No. of Audits Planned	1	E335 90% Design Submittal Audit
No. of Audits Completed	0	None
Reports in Progress	1	E335 90% Design Submittal Audit
No. of Audits Postponed	0	None

Sound Transit Board Actions

Board Action	Description	Date
M2015-123	<i>Execute a contract amendment with HDR Engineering, Inc. to provide construction management consultant services for the construction phase of the Bellevue segment of the East Link Extension in the amount of \$97,409,091, with a 10% contingency, for a new total authorized contract amount not to exceed \$110,940,000.</i>	Dec 17

Community Outreach

- Published an E-newsletter (with an audience of approx. 7,000) focused on weekend I-90 Two Way Transit project work with a “Paving the way for East Link” focus.
- Distributed 65 flyers notifying homeowners in the Mt. Baker neighborhood of upcoming geotechnical field work in three locations.
- Downtown Bellevue tunnel construction kickoff public meeting with approximately 75 attendees.

Environmental

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

Link Light Rail East Link Extension Final Design - S. Bellevue to RTC



Final Design Scope

Final Design for the East Link Extension includes three major design contracts: two for civil improvements and one for systems improvements. This contract is for civil and architectural design services from South Bellevue to the Redmond Technology Center (RTC). The contract was awarded to H-J-H Final Design Partners, a joint venture of HNTB Corporation, Jacobs Engineering Group, Inc., and Hatch Mott MacDonald.

The scope of H-J-H services includes detailed designs of the corridor, preparation of comprehensive construction contract documents, permitting support, surveying, geotechnical investigations, right-of-way planning, third party coordination, systems coordination, cost estimating, scheduling, sustainability report, bid support, Preliminary Hazards Analysis, and community outreach.

The design is grouped into five Contract Packages: (1) E320 South Bellevue; (2) E330 Downtown Bellevue Tunnel; (3) E335 Downtown Bellevue to Spring District; (4) E340 Bel-Red, and (5) E360 SR-520 to Redmond Technology Center.



Map of South Bellevue to Redmond Technology Center.

Final Design Key Activities

E320 So. Bellevue

- Initiated QC process on the revised IFB drawings and specifications.
- Provided on-going support and updates to materials for WSDOT and the City of Bellevue approvals of maintenance of traffic special conditions including allowable shoulder, lane, ramp, and roadway closures.
- Incorporated planters at the South Bellevue Station Garage's roof and other updates in response to Sound Transit and City of Bellevue plans review comments.

E330 Downtown Bellevue Tunnel

- Design of the E330 contract package is complete. Provided Bid Support Services. Prepared to commence Design Services During Construction.

E335 Downtown Bellevue to Spring District

- Progressed the project toward 100% design plans, specifications and reports.
- Continued to work on WSDOT Project Development Approval (PDA) memorandum and Design Documentation Package (DDP) documents, and support for Air Space Lease (ASL) and Temporary Construction Air Space Lease (TCAL) agreements.

- Continued design coordination with Sound Transit and the City of Bellevue for Spring Blvd, 120th Avenue NE and 124th Ave NE projects.
- Continued to advance the design of the East Main, Bellevue Downtown, Hospital and Spring District 120th Avenue Stations.

E340 Bel-Red

- Began addressing 100% design comments, and comments resolution process.

E360 SR 520 to Redmond Technology Center

- Preparation of procurement documents for the E360 contract package is complete. Provided procurement support.

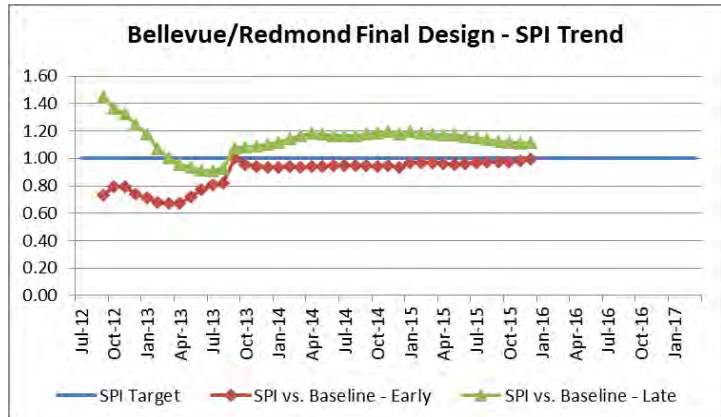
Final Design Schedule

The table below shows the design submittal dates for each of the contract.

Contract Packages	60% Submittal		90% Submittal		100% Submittal		IFB Submittal	
	Baseline*	Forecast/ Actual	Baseline*	Forecast/ Actual	Baseline*	Forecast/ Actual	Baseline*	Forecast/ Actual
E320 So. Bellevue	12/6/2013	12/6/2013	9/19/2014	9/19/2014	4/3/2015	4/3/2015	8/14/2015	1/25/2016
E330 Downtown Bellevue Tunnel	11/18/2013	11/18/2013	6/2/2014	6/2/2014	10/20/2014	10/20/2014	5/11/2015	5/11/2015 6/15/2015 (2 nd IFB)
E335 Downtown Bellevue to Spring District	12/20/2013	12/20/2013	10/19/2015	10/19/2015	3/8/2016	3/8/2016	6/13/2016	6/13/2016 9/6/2016 (120 th Sta.)
E340 Bel-Red	7/15/2013	7/15/2013	4/04/2014	7/21/2014	12/8/2014	12/8/2014	5/23/2016	5/23/2016
	Draft RFP Submittal		Final RFP Submittal		*Baseline schedule dates revised to reflect final contract packaging and construction delivery methods.			
	Baseline*	Forecast/ Actual	Baseline*	Forecast/ Actual				
E360 SR-520 to RTC	2/18/2014	2/18/2014	1/19/2015	8/14/2015				

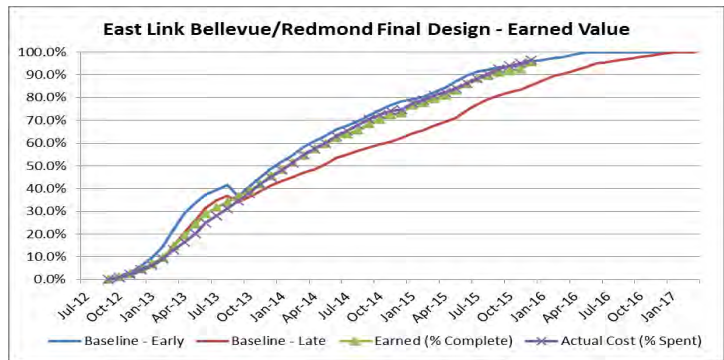
Final Design Schedule Performance

Excluding Other Direct Expenses (ODC's), Profits and DSDC, the Schedule Performance Index (SPI) reported this period is at 0.99 when measuring against the Early Schedule Baseline, and 1.12 when measuring against the Late Schedule Baseline. Execution of change orders impacted the SPIs.



Final Design Cost Performance

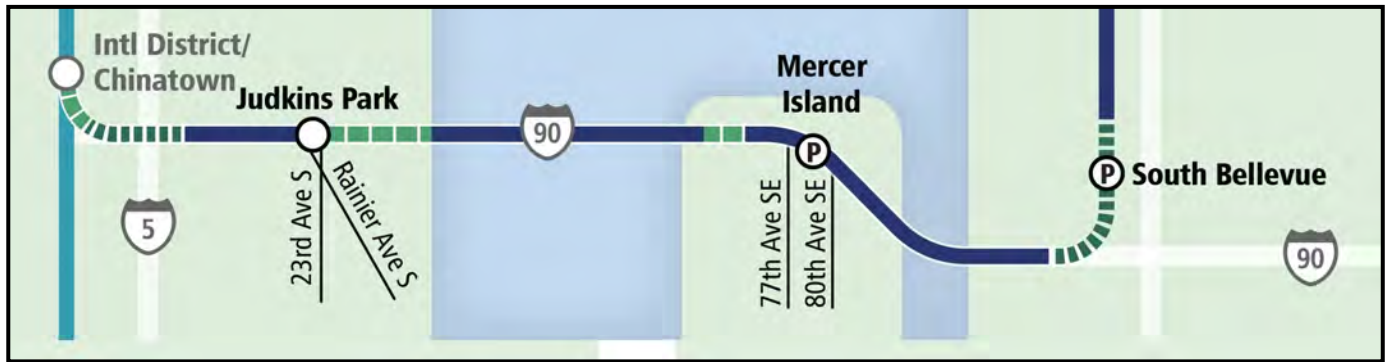
Labor cost (for Phase 2 Final Design) to-date is \$77.0 million, or 93.4%* of the budget. Progress earned through the same period is approximately 92.4%* or \$76.2 million of earned value. This yields a cumulative Cost Performance Index (CPI) of 0.98, which indicates approximately on-budget cost efficiency of the current contract budget, including executed change orders. There are upward cost pressures in several areas due to refinements to the design and potentially extension of the contract time. With the additional contracting authority approved by ST Board, change orders are being negotiated and executed to address these issues. Estimate At Completion (EAC) is within the approved budget.



* Please note – due to recent execution of multiple change orders for this contract, the contract value (budget) has increased. Therefore, while the \$ expenditure and \$ value earned have gone up compared to last period, the % expenditures and % earned have gone down.

Performance	Previous Period	Current Period	Cumulative To Date
Labor Amt. Invoiced	\$75,759,172	\$1,263,051	\$77,022,223
% Spent	95.0%	-1.6%	93.4%
Earned Value	\$73,880,000	\$2,327,985	\$76,207,985
% Complete	92.6%	-0.2%	92.4%
CPI	0.98	1.84	0.99

Link Light Rail East Link Extension Final Design - Seattle to S. Bellevue



Map of International District Station to South Bellevue.

Final Design Scope

Final Design for the East Link Extension is delivered by three major design contracts: two for civil improvements and one for systems improvements. This Contract is for the civil and architectural design services from International District Station (IDS) to South Bellevue. The contract was awarded to Parsons Brinkerhoff, Inc. (PB).

The scope of the services includes detailed design of the corridor, preparation of comprehensive construction contract documents, permitting support, surveying, geotechnical investigation, right-of-way planning, third party coordination, systems coordination, cost estimating, scheduling, sustainability report, bid support, preliminary hazards analysis, and community outreach support.

The project in this segment has been aggregated into one Contract Package: E130 Rail Connection and Upgrades at IDS; seismic Retrofits of WSDOT Structures; and I-90 Civil/Architectural, which also includes the two at-grade stations, and Electrical/Mechanical Upgrades to existing Tunnels.

Final Design Key Activities

The I-90 civil final design team is fully engaged in advancing the design toward the 90% milestone (2nd QTR 2016). The Consultant has supplemented the Design Team with additional staff and expertise. The Sound Transit and Consultant management teams are actively monitoring progress, quality and deliverables to ensure contract requirements and expectations are met. The team is effectively executing the scope of work consistent with the needs of the project.

I-90 Corridor

- Fixed Structures: Continued Level 2 Analysis for East and West Approach. WSDOT Review comments received on E120 60% Package.
- Judkins Park Station: Advanced re-design with emphasis on west entrance; LRRP meeting set for Jan 7.
- Floating Bridge: Finished field work for Flood Assessment and Post Tensioning design.
- Permits: Public comment period for the Mercer Island Shoreline Permit is underway.

Third Party, Agreements, & Permits

- Working with Bellevue toward issuance of the E320 DMP.
- Hosted tour of existing Link stations to the Mercer Island Fire Department and staff; also gave tour of Mercer Island to PMOC.
- Received WSDOT Concurrence on Two IRT Issues. Issue B - Basis of evaluation for the floating bridge, and Issue W - Incorporation of the Blue Ribbon Panel recommendations into plans. Letter for Issue K has been drafted. IRT technical meeting occurred with FHWA; 20 IRT issues are closed with WSDOT, 3 remain.

Construction & Construction Management

- E130 – Granted NTP to Kiewit-Hoffman for preconstruction services.

Final Design Schedule

Contract Packages	60% Submittal		90% Submittal		100% Submittal		IFB Submittal	
	Baseline	Actual	Baseline	Forecast/ Actual	Baseline	Forecast/ Actual	Baseline	Forecast/ Actual
EI30 – Rail connection & IDS upgrades; Seismic retrofits; and I-90 Civil/Arch./Elect. & Mech. Upgrades	4/4/2014	7/11/2014	2nd QTR 2016	2nd QTR 2016	4th QTR 2016	4th QTR 2016	TBD	TBD

Final Design Schedule Performance

Schedule information was not reported by the Consultant for the current reporting period. A revised baseline schedule was re-submitted by the Consultant, but still not fully in compliance with Sound Transit’s guidelines and was subsequently rejected; it is currently under revision. Once accepted, baseline milestones above will be revised by an administrative change order, and Earned Value reporting will commence.

Final Design Cost Performance

Because the baseline schedule has not been accepted, Cost Performance data was not submitted by the consultant for the current reporting period. The current budget includes \$25.8M in executed change orders, including a change order for \$17.9M for budget to complete Final Design (the negotiated Cost to Complete). A change order for \$482K to include Post Tension Design in the contract has been authorized and is pending execution; this change includes a \$399.7K credit from the Bolt Testing Program, which is replaced by the Post Tension design. Including professional fee, total Labor and Other Direct Costs for Final Design invoiced to-date is \$36.9M, or 67.14% of the current authorized budget. Upon acceptance of the revised baseline schedule, a revised baseline cash flow for all remaining work will be submitted by the consultant and monthly cost performance reporting will resume. Cost performance is being closely monitored to ensure project completion in a cost-effective and successful manner.

Final Design Scope

Final Design for the East Link Extension is delivered by three major design contracts: two for civil improvements and one for systems improvements. This contract is for the systems design services for the entire alignment. The contract was awarded to LTK Engineering Services, Inc. The scope of the services include detailed design of the corridor, preparation of comprehensive construction contract documents, 3rd party coordination, cost estimating, scheduling, and bid support.

Final Design Key Activities

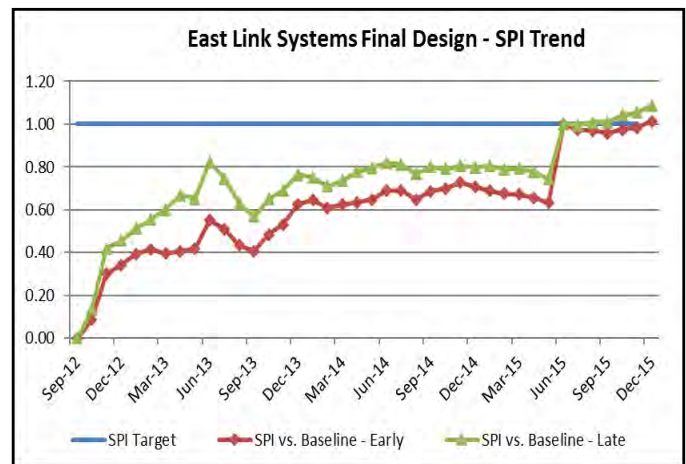
- Sound Transit capital Committee approved proceeding with the GC/CM preconstruction services with Mass Electric Construction Company.
- The quality control for the N830/E750 Systems 90% submittal is complete. The QA is planned for the first two weeks in January in support of a February 1, 2016 submittal.
- Systems team attended and supported the I-90 Segment Preliminary Hazard Analysis workshops.

Final Design Schedule

	60% Submittal		90% Submittal		100% Submittal		IFB Submittal	
	Baseline	Actual	Baseline	Forecast/ Actual	Baseline	Forecast/ Actual	Baseline	Forecast/ Actual
E750– LRT Systems	10/24/2014	10/24/2014 Actual	2/1/2016	02/1/2016	8/1/2016	8/1/2016	12/1/2016	12/1/2016

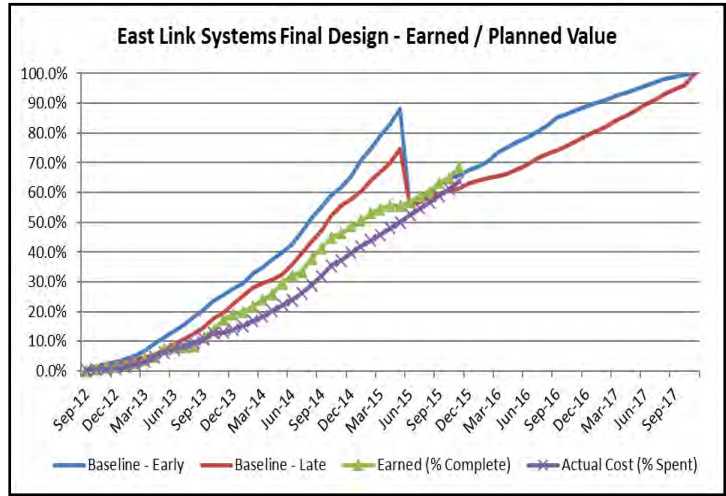
Final Design Schedule Performance

In December 2015, the project is 68.5% complete resulting in an Earned Value of \$12.1M. The project has an early SPI of 1.01 and a late SPI of 1.09 which indicates that the contract is on schedule.



Final Design Cost Performance

Through the end of December 2015 the project has spent approximately 63.9% of the budget resulting in CPI of 1.07. The current Estimate at Completion (EAC) is expected to be less than the current budget of \$17.9M.



Performance	Previous Period	Current Period	Cumulative To Date
Labor Amt. Invoiced	\$10,769,798	\$482,499	\$11,252,297
% Spent	61.1%	2.8%	63.9%
Earned Value	\$11,435,790	\$635,709	\$12,071,499
% Complete	64.9%	3.6%	68.5%
CPI	1.1	1.3	1.1

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: Substantial Completion.

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: Pre-construction services contract awarded.

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: Prototype Design, Fabrication, and testing complete

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: IFB submittal expected in January 2016. Advertisement in 1st QTR 2016.

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

Status: ST Board approved the award of the contract. LNTP issued in December 2015.

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: Preconstruction Services contract awarded

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

Status: Advertise 3rd QTR 2016

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: Procurement underway, scheduled to be awarded 2nd QTR 2016.

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: Procurement Underway. Pre-construction contract award and NTP will be issued January 19, 2016.

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Link Light Rail S. 200th Link Extension

Scope

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



Map of S. 200th Link Extension.

Key Project Activities

- *Design Build Guideway and Station (S440):* Major construction activities continue for Station and Plaza; OCS poles & wiring, handrail, guardrail, and handrail & drainage installations on the guideway; need to reconcile various cost issues (existing crack street panels, 54-inch storm repairs, and fee-in-lieu agreement with the City of SeaTac. Discussions with City Planning Director continues.
- *Design Build Parking Garage (S445):* Construction continues with garage structure/plaza area; revised BMS system design continues.
- *Military Road/South 200th (S446):*) Preparing staff report for January 2016 Capital Committee meeting. WSDOT's bid ad date is currently set for January 2016. This work to be managed by WSDOT and is not necessary to complete prior to the start of revenue service.

Closely Monitored Issues

- *Project-wide:* Issue of delayed permit issuance to the Contractors was elevated to City of SeaTac management. There is a disagreement between Sound Transit and City of SeaTac over jurisdictional permitting and inspection responsibilities over railway systems electrical installation. ST proposed a division of COS/L&I/ST permitting responsibilities for COS and L&I acceptance.
- *S445 DB Parking Garage:* Concern of late delivery and installation of elevator impacting critical path.
- *S445 Roadway Improvements :* Wall design and utility issues are some major items impeding Contractor performance. Contract contingency is nearly depleted. Approval to increase contract contingency will be requested at the Sound Transit Board in January 2016.

Project Cost Summary

The S. 200th Link Extension project cost is summarized in two cost tables. The current Adopted Budget column reflects the 2015 Adopted Budget approved by the ST Board in December 2014. However next period, the adopted budget will be adjusted to reflect 2016 figures. The first table is 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	\$16.1	\$15.9	\$12.4	\$12.2	\$16.8	-\$0.9
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	\$15.0	\$11.2	\$16.9	\$0.5
3rd Party Agreements	\$6.9	\$7.1	\$5.6	\$3.4	\$5.9	\$1.2
Construction	\$275.7	\$283.8	\$227.8	\$204.5	\$246.1	\$37.7
Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$43.5	\$43.5	\$42.6	\$37.8	\$43.5	\$0.0
Capital Total	\$383.2	\$383.2	\$317.9	\$283.5	\$343.8	\$39.5
Finance Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Project Total	\$383.2	\$383.2	\$317.9	\$283.5	\$343.8	\$39.5

The overall project Estimated Final Cost (EFC) for this period continues to reflect \$344M, a savings projection of \$39.M. This period incurred cost increased by approximately \$6.9M, of this \$6.1M was for construction activities. S440 Guideway & Station Design Build contract was \$4M, S445 Parking Garage Design Build contract was \$1.7M, S447 was \$0.7M, and other construction cost (startup and permitting) was \$0.02M. Construction services were \$0.3M and the remaining expenditures for \$0.3M were related to administrative, third party, and ROW charges.

The EFC grouped by SCC is also reflecting \$344M, a savings projection of \$39M. The work remaining can be achieved under the adopted budget.

Project Elements by SCC	Baseline Budget	Current Adopted Budget	Commitment to Date*	Incurred to Date	Estimated Final Cost	Adopted Budget vs. EFC
10 Guideway & Track Elements	\$144.8	\$133.0	\$98.5	\$94.8	\$108.3	\$24.7
20 Stations	\$46.4	\$51.3	\$39.0	\$32.9	\$39.7	\$11.7
30 Support Facilities: Yards, Shops	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$34.6	\$51.1	\$51.1	\$39.0	\$58.1	-\$7.0
50 Systems	\$30.8	\$19.9	\$19.2	\$18.2	\$19.5	\$0.4
Construction Subtotal (SCC 10-50)	\$256.6	\$255.3	\$207.8	\$184.9	\$225.6	\$29.8
60 Row, Land, Existing Improvements	\$43.5	\$43.5	\$42.6	\$37.8	\$43.5	\$0.0
70 Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
80 Professional Services	\$64.1	\$70.5	\$67.5	\$60.7	\$67.9	\$2.7
90 Unallocated Contingency	\$19.0	\$13.8	\$0.0	\$0.0	\$6.8	\$7.0
Project Total (SCC 10-90)	\$383.2	\$383.2	\$317.9	\$283.5	\$343.8	\$39.5
100 Finance Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Project Total (SCC 10-90)	\$383.2	\$383.2	\$316.6	\$276.5	\$343.9	\$39.4

Cost Contingency Management

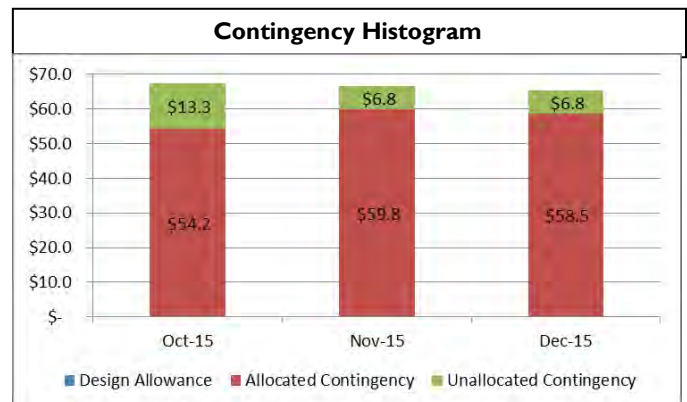
The overall project contingency balance as of this period is \$65.3M.

Design Allowance (DA): After baselining the project the design allowance of \$26.7M was added to the base estimate for the design build work package. There will be no future reporting of DA.

Allocated Contingency (AC): This period the AC shows a current balance of \$58.5M, a decrease of \$1.3M from the previous period. The reduction was primarily due to change orders from S440, S445 and S447 construction contracts, Startup commitments, and administration commitments.

Unallocated Contingency (UAC): This period the UAC balance remains unchanged from last period at \$6.8M.

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%	\$58.5	97.0%
Unallocated Contingency	\$19.0	5.0%	\$ 6.8	11.3%
Total	\$75.5	20.0%	\$65.3	108.2%



Risk Management

The South 200th Link Extension Risk Management Plan (RMP) established a risk management and oversight process for assessing and monitoring risks to determine how risks have been reduced or mitigated. RMP captures scope growth, schedule delay, and cost growth risks that could arise during any phase of the project and potentially affect parts of the project scope. On a quarterly basis, the South 200th Link Extension team reviews and updates risk to reflect conditions. Below is a list of the top five major risk review items identified through 4th QTR 2015:

- **Construction:** Delays due to City of SeaTac electrical inspections (S440).
- **Third Party:** City of SeaTac permit approval of crucial elements of work at times is a hindrance (S440, S445).
- **Construction:** Delays due to L&I inspections and Certificate of Occupancy for elevators (S440 and S445).
- **Construction:** Contract documents with design errors could impact cost and schedule (S447).
- **Construction:** Poor engineering and limited involvement of Engineer of Record during Design Support During Construction lead to additional delays and cost (S447).

Project Schedule

S440 Guideway is complete and the System Contractor continues to install OCS poles. S445 DB Parking Garage Design/Builder continues construction of the parking garage structure. The S. 200th Master Schedule has been tied to the Rail Activation Schedule but commissioning activities in the S440 schedule require more detail and logic to be tied properly. The S. 200th Link Extension anticipated service launch is September 2016. (See Project Schedule Summary below).

Activity Name	Start	Finish	2016							
			Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Sound Transit	01-Nov-12 A	27-Mar-17	[Timeline bar spanning from Q4 2015 to Q2 2017]							
University Link (UL)	01-Mar-16	24-Sep-16	[Timeline bar from Q1 2016 to Q3 2016]							
Rail Activation on Schedule	01-Mar-16	24-Sep-16	[Timeline bar from Q1 2016 to Q3 2016]							
Rail Activation	01-Mar-16	24-Sep-16	[Timeline bar from Q1 2016 to Q3 2016]							
Pre-Revenue Service - S. 200th Link	14-Jun-16	24-Sep-16	[Timeline bar from Q2 2016 to Q3 2016]							
Pre-Revenue Service - S. 200th	14-Jun-16	26-Jul-16	[Timeline bar from Q2 2016 to Q3 2016]							
Revenue Service Window - S. 200th	28-Jul-16	24-Sep-16	[Timeline bar from Q3 2016 to Q3 2016]							
Task Group 4.0 - Rail Operations	23-Jun-16	27-Jul-16	[Timeline bar from Q2 2016 to Q3 2016]							
4.6 - Rail Operations - Pre - Revenue Service	23-Jun-16	27-Jul-16	[Timeline bar from Q2 2016 to Q3 2016]							
Task Group 7.0 - Safety & Security	01-Mar-16	22-Aug-16	[Timeline bar from Q1 2016 to Q4 2016]							
7.2 - Safety & Security - Certification	01-Mar-16	22-Aug-16	[Timeline bar from Q1 2016 to Q4 2016]							
LRT Extension - South	01-Nov-12 A	27-Mar-17	[Timeline bar spanning from Q4 2015 to Q2 2017]							
S440 - Guideway and Station - Design/Build	06-May-13 A	17-May-16	[Timeline bar from Q2 2013 to Q1 2016]							
S445 - Parking Garage - Design/Build	03-Mar-14 A	16-Aug-16	[Timeline bar from Q4 2013 to Q3 2016]							
SL 446 - S. 200th/I-5 Interchange Impr (WSDOT)	01-Nov-12 A	27-Mar-17	[Timeline bar spanning from Q4 2015 to Q2 2017]							
S447 - Station Area Roadway Improvements	21-Jan-15 A	12-Jul-16	[Timeline bar from Q4 2015 to Q3 2016]							



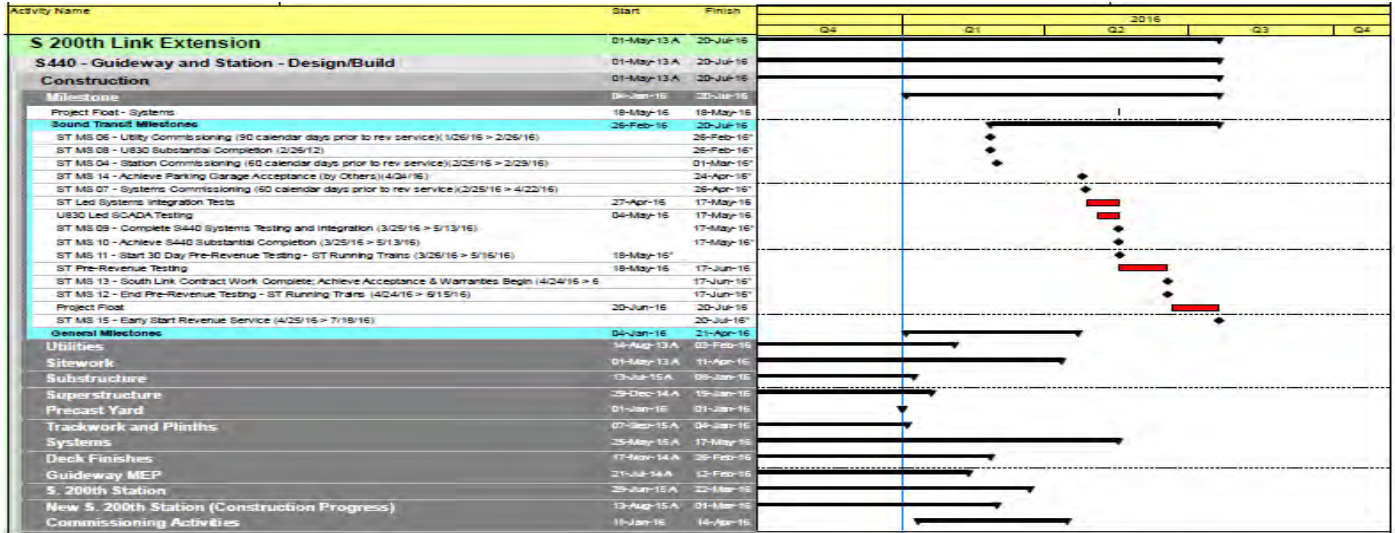
Progress north of Angle Lake Station.



Guideway alignment looking south of Hampton Inn.

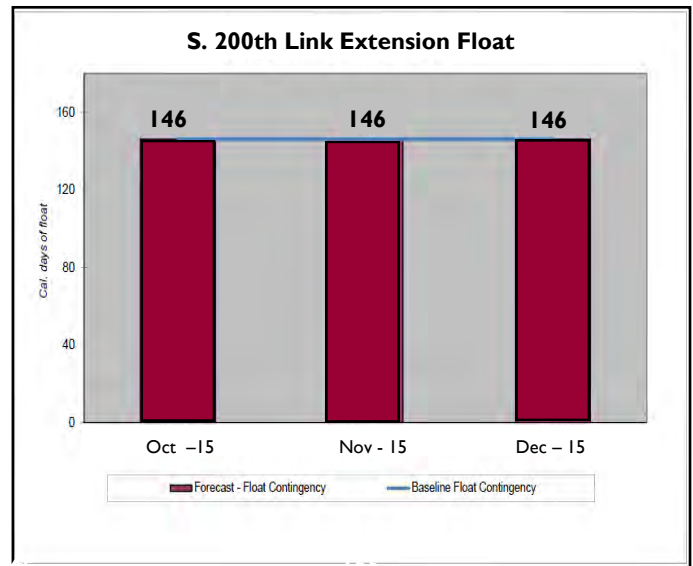
Critical Path Analysis

The critical path this period runs through procurement of OCS and Communications equipment through installation and commissioning and system wide testing and integration and Pre-Revenue Service. Near critical path activities include the completion of trackwork and procurement of signal equipment. U830 SCADA programming is also being monitored closely this period. The S445 Parking Garage is being monitored closely due to its impacts to Revenue Service this period. The Contractor is assessing the late elevator cab delivery and expects an update from the supplier next period.



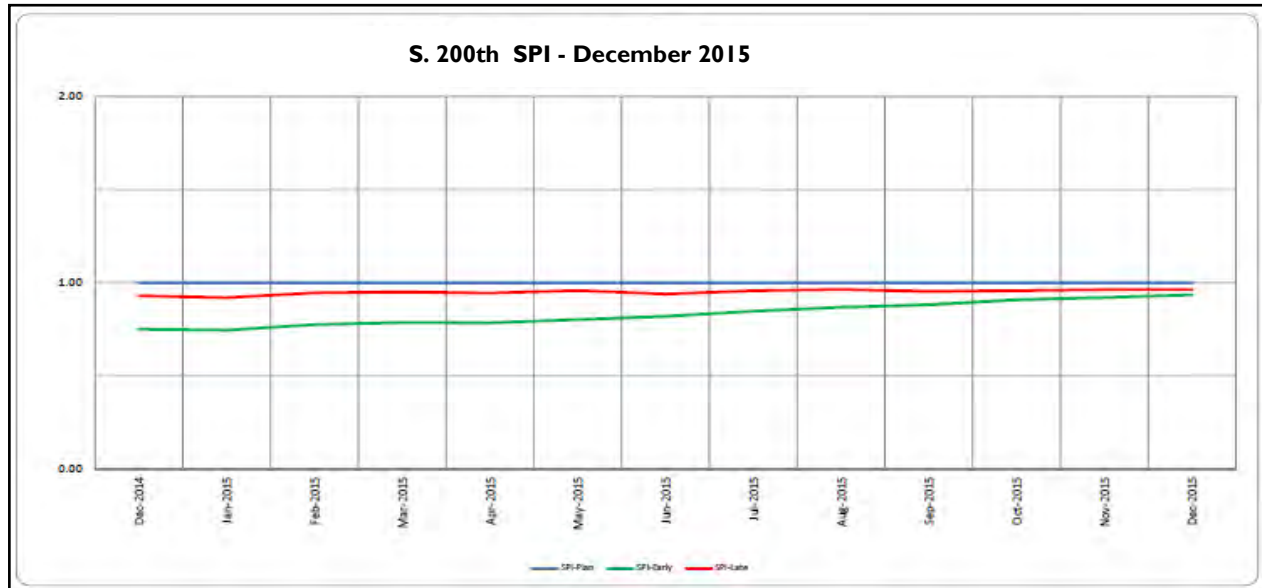
Critical Path Float

The float contingency for S. 200th Link Extension remains at 146 days but may require some float to be utilized for System Integration Testing and the late completion of elevators at the S445 parking garage. The Rail Activation Schedule is reporting 64 days of float.



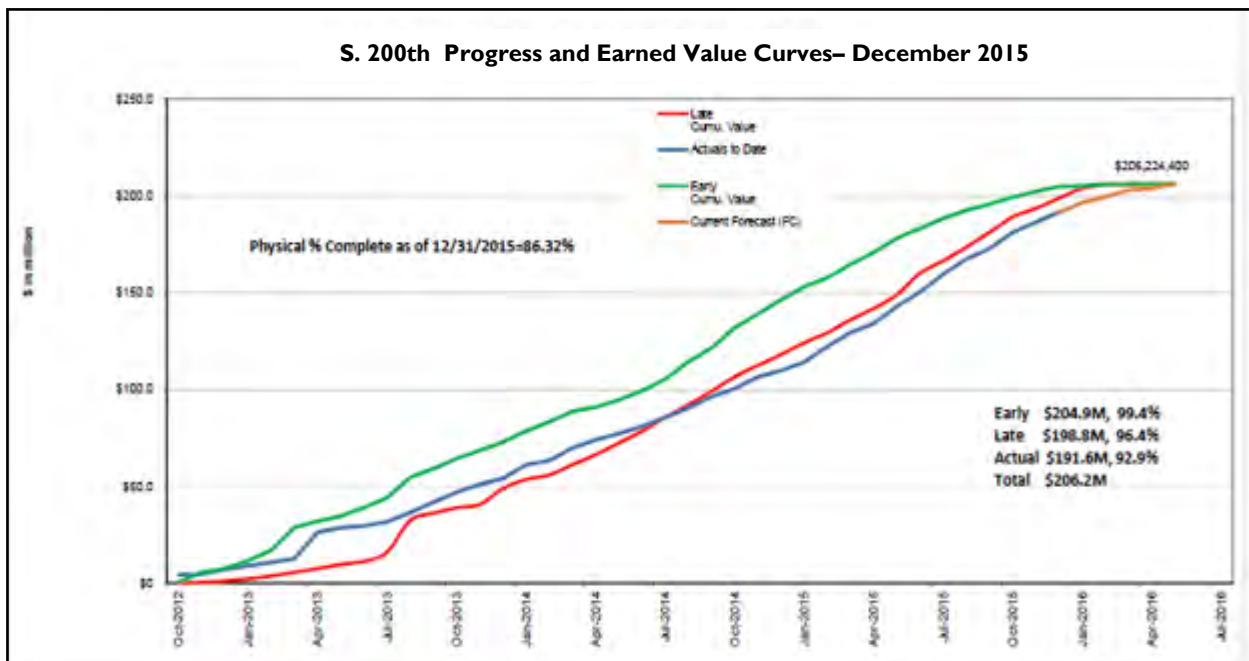
Schedule Performance Index

The Schedule Performance Index (SPI) for S.200th has risen slightly this period to 0.94 as work focuses on the train systems this period. Systems installers are on site and OCS pole installation has commenced and station work is nearing completion. (See details on individual contract sections.) Progress will continue to be monitored closely.



Cost Progress Analysis

Overall S. 200th physical % complete is at 86.3%. Graphic below is a representation of the progress of major construction contracts cost compared to the early/late projections. S440 will be the main driver for performance levels for S. 200th.



Right-of-Way

The South 200th Link Extension (S440) will extend from the SeaTac Airport Station along an elevated guideway to a station combined with a park and ride garage at South 200th Street. The South 200th Link Extension involves the acquisition of a range of property interests, including fee acquisitions, permanent and temporary easements, and both business and residential relocations. S447 covers road and utility improvements necessary as a result of the increased traffic that is anticipated with the new station. S447 initially covered 28 parcels of which 10 were previously certified for S440. Six (6) parcels that had ST acquisitions on S440 will also have acquisitions on S447. The right-of-way program is summarized below.

Line Section	Total Parcels Certi- fied*	Offers Made	Signed Agree- ments	Admin. Settle- ments	Posses- sion and Use	Closings to date	Baseline Relocations Required	Relocations Completed
S440	64	59	0	0	0	56	8	8
S445	1	1	0	0	0	1	0	0
S447	27	16	0	0	0	16	0	0
Total	92	76	0	0	0	73	8	8

Note: *Seven of these parcels are in two different contracts and three parcels are in the S440 contract twice. These 10 parcels are counted twice as they have 2 different milestones.

S440 DB Guideway and Station - TCE letters for 3 parcels sent to owner. One utility easement signed and send to closing.

S445 Parking Garage and Plaza– Completed.

S447 Station Area Roadways - No new activity.

Construction Safety

Safety Statistics for the reporting period and year-to-date are summarized in the table below.

Data/Measure	Dec 2015	Year to Date	Project to Date
Recordable Injury/Illness Cases	1	8	12
Days Away From Work Cases	0	2	2
Total Days Away From Work	0	14	14
Restricted or Modified Work Cases	1	5	8
Total Days Restricted or Modified Work	32	225	420
First Aid Cases	0	5	33
Reported Near Mishaps	1	7	20
Average Number of Employees on Worksite	312	-	-
Total # of Hours (GC & Subs)	26,584	376,122	853,372
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	7.52	4.25	2.81
DART Rate	7.52	3.72	2.34
<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

Summary

Activities

- S440: MRB has dispositioned as Acceptable 5 NCRs.

Issues

- None to report.

Description	Dec 2015	Notes
No. of Audits Planned	0	None
No. of Audits Completed	0	None
Reports in Progress	1	S440 Audit
No. of Audits Postponed	0	None

Community Outreach

- Continued coordination with affected businesses for landscaping and driveway restoration.
- Met with businesses and provided construction updates/alerts.
- Coordinated with La Quinta Inn regarding light pole removal, electrical system installations, parking lot paving and retaining wall.
- Met with City of SeaTac to discuss project banners.

Sound Transit Board Actions

Board Actions	Description	Date
	<i>None to report.</i>	

Contract Packages

The South 200th Link Extension consists of two major contract packages, both by Design Build methods, and two minor contracts. Below is a brief scope description of each package.

- **S440 Design Build Guideway and Station** - This contract involves the design and construction of an elevated guideway (1.6 miles) and station, site work, civil /roadwork, and systems. See S440 contract page for detailed information on the following page.
- **S445 Design Build – Parking Garage and Plaza** – This contract involves the design and construction of a parking garage (700 space structure), passenger pick-up and drop-off lot, plaza area, retail space and surface parking. See S445 contract page for details.
- **S446 Military Road & South 200th Street Improvements** – This contract package consists of construction of roadway and traffic signals work.
- **S447 Station Area Roadways & Surface Parking**- This contract package consists of station area roadway, surface parking, and non-motorized Improvements (sidewalks, traffic signals, pedestrian/bicycle connection, roadwork).

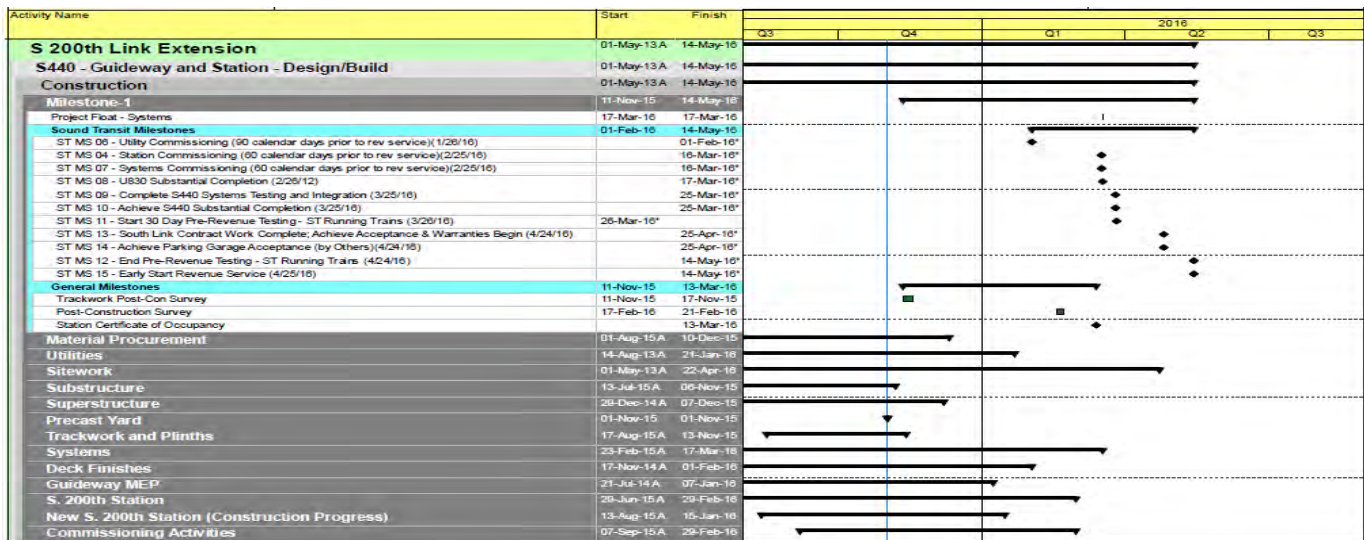
S440 Contract—Design -Build (Guideway and Station)

Current Progress

Drainage and handrail installation continues underway. OCS pole erection is complete. Register Wire installation will continue through February 2016. OCS is expected to be energized in early 2016. Station is nearing completion. Overall the progress of this contract represents 92% physical completion as compared to 93% time to date.

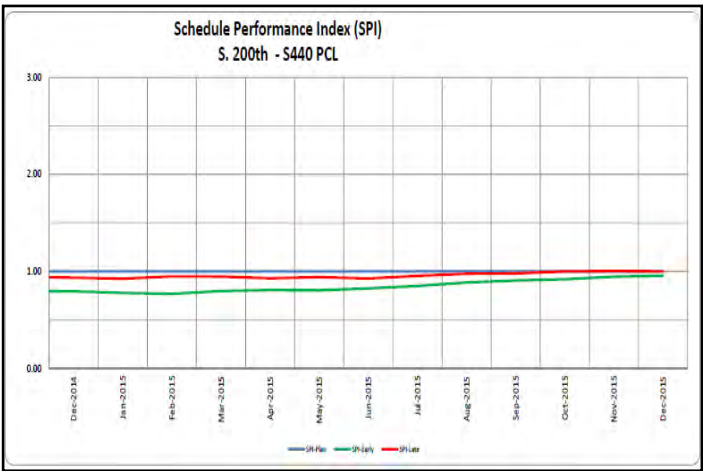
Schedule/Critical Path

The schedule update for November has been received and is expected to be rejected due to the negative float on Milestone #7 (Systems Commissioning) which is reporting 43 days of negative float as the Contractor prepares to understand the commissioning requirements for the train systems and coordination with the System Integration Testing. Milestone #5 (Guideway Commissioning) is reported to be complete. Milestone #10 (Substantial Completion) is reporting no days of negative float. The critical path this period runs through the Communications activities and System Testing and Integration. Schedule coordination with the System Integration Testing Plan is expected to continue. U830 SCADA programming is being monitored closely due to delays in providing the necessary points to commence work. Production rates will also be monitored closely.



Schedule Performance Index

The SPI has risen slightly this period with guideway complete, plinth and rail nearing completion, and OCS pole installation commencement but remains below 1.0 at 0.97. Delays to the commencement of station construction, span erection, and an aggressive baseline schedule continue to plague S440. The Contractor has been able to absorb these delays by shifting the various work sequences. Testing and Commissioning Activities for the station have been added to the schedule. Train Systems commissioning activities durations seem to be underrepresented in this schedule update.



Link Light Rail S. 200th Link Extension – Design-Build



Key Activities

Current Period

- *Angle Lake Station/Plaza activities:* Station permanent power established; continue elevator installation; escalator work resumes; continue ancillary building interior finishes; platform cowling; install tiling, canopy ceiling and lights, fire alarm, speakers, VMS signs and sprinklers; communication lines pulled to rooms; continue Building Management System (BMS) design, continue Artwork cloud installation, and completed vandalized copper wire in electrical room.
- *Guideway activities:* Completed track grinding; continue track punchlist, inside and on top of guideway; switch pads at double crossover & pocket track; continue hand-rail and noise wall installation; continue OCS pole, guy wires, cantilever arms, messenger wire and contact wire installations; continue drainage installation; cable tray and grounding; continue expansion joints and hatch installation; continue miscellaneous cleanup and minor repairs, and began bird netting. Continue painting columns with pigment sealer.
- Continue painting columns with pigment sealer.
- Continue throughout the alignment: form and place PT pour backs and permanent bearings, closure pours, shock transmission unit (STU) and seismic buffers.
- Continue site work: restoration, irrigation, drainage, and concrete panel replacement.
- I/O points list for SCADA programming are nearing completion.

Next Period

- Continue guideway work.
- Continue Station work.
- Continue Artwork work.
- Continue various site work.
- Continue other miscellaneous work: post tensioning, grouting, seismic buffers/shear keys.
- TPSS repairs of damaged parts.

Closely Monitored Issues

- ST and RE team reviewing all points list prior to formal submittal to U830. TPSS, Train Control (Signals), and Communications have been accepted. BMS and Fire Panel points list for SCADA programming are being revised.
- The Contractor needs to complete a number of safety certification analysis. Performance under evaluation by CM. Also improvement to Quality Assurance management for Systems work is needed per recent audit findings. Contractor commits to bringing additional QA expertise to address issues.
- Time extension of 30 to 60 days to contract is under discussion due to vandalism, weather and late delivery of signal houses.

Cost Summary

Present Financial Status	Amount
S440 Contractor—PCL Civil Contractors, Inc.	
Original Contract Value	\$169,000,000
Change Order Value	\$4,242,939
Current Contract Value	\$173,242,939
Total Actual Cost (Amount Billed)	\$164,482,333
Financial Percent Complete:	95%
Physical Percent Complete:	92%
Authorized Contingency	\$13,520,000
Contingency Drawdown	\$4,242,939
Contingency Index*	3.0



Looking west to the Angle Lake Station at the installed artwork.

S445 Contract—Design -Build Parking Garage

Current Progress

At S445, elevated slab construction proceeding well and is expected to be completed in early 1st QTR 2016. Milestone #1 has been deleted because it was not defined in the contract and Milestone #2 (Substantial Completion) has been revised due to weather delays and contaminated soil issues. Twenty-five calendar days have now been added to the schedule in this update but delays continue for S445. Elevator procurement impacts are currently being negotiated with ST but are not recognized fully in the schedule update received. Production will be watched closely. Overall progress of this contract: construction is 71% physical completion and against 86% duration complete.

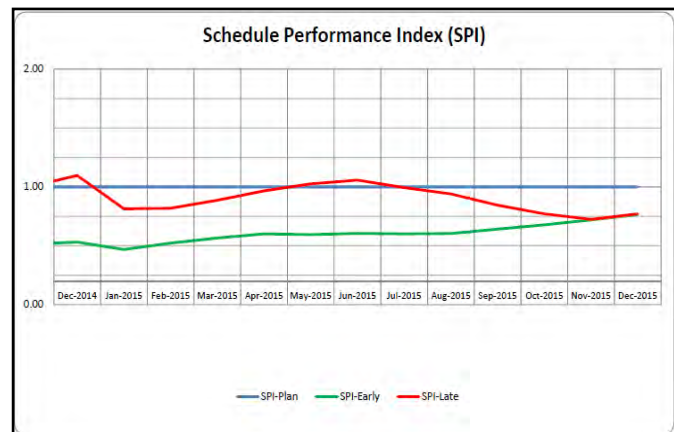
Schedule/Critical Path

The December 2015 schedule update has been submitted. The critical path this period runs through submittal review and elevator installation which was expected based on discussions this month. Milestone #2 Substantial Completion, is reporting 98 days of negative float with 5 days of owner controlled float intact. Delays persist in procurement of elevator and near critical slab construction. It is expected that a recovery schedule will submitted next period.

Activity Name	Start	Finish	2016				
			Q4	Q1	Q2	Q3	Q4
S 200th Link Extension	04-Aug-14 A	16-Aug-16	[Gantt Bar]				
S445 - Parking Garage - Design/Build	04-Aug-14 A	16-Aug-16	[Gantt Bar]				
DESIGN	04-Aug-14 A	31-Jul-16	[Gantt Bar]				
DESIGN MILESTONES	04-Aug-14 A	31-Jul-16	[Gantt Bar]				
CONSTRUCTION DESIGN SUPPORT	04-Aug-14 A	26-Jul-16	[Gantt Bar]				
AS-BUILT DRAWINGS	22-Jul-16	31-Jul-16	[Gantt Bar]				
CONSTRUCTION	16-Jan-15 A	16-Aug-16	[Gantt Bar]				
CONSTRUCTION MILESTONES	22-Jul-16	09-Aug-16	[Gantt Bar]				
SOUND TRANSIT CONTROLLED FLOAT	22-Jul-16	25-Jul-16	[Gantt Bar]				
MS2 C OF O AND SUBSTANTIAL COMPLETION		26-Jul-16*	[Gantt Bar]				
PUNCH LIST	27-Jul-16	09-Aug-16	[Gantt Bar]				
SUBMITTALS/PRELIMINARY ACTIVITIES	01-Apr-15 A	04-Mar-16	[Gantt Bar]				
STRUCTURES	19-Oct-15 A	03-Mar-16	[Gantt Bar]				
ARCHITECTURAL FINISHES	07-Oct-15 A	21-Jul-16	[Gantt Bar]				
DEMOBE	10-Aug-15	16-Aug-16	[Gantt Bar]				
ELECTRICAL	01-May-15 A	07-Apr-16	[Gantt Bar]				
MECHANICAL	01-Oct-15 A	11-Apr-16	[Gantt Bar]				
FIRE SUPPRESSION SYSTEM	21-Sep-15 A	04-Feb-16	[Gantt Bar]				
TOWER CRANE	16-Jan-15 A	03-May-16	[Gantt Bar]				
CIVIL UTILITIES	28-Apr-15 A	07-Jan-16	[Gantt Bar]				
CIVIL FINISHES	21-Dec-15 A	12-Apr-16	[Gantt Bar]				

Schedule Performance Index

The SPI has risen slightly this period to 0.79 based on early forecasts. Elevator procurement delays may hamper any recovery efforts.



Key Activities

Current Period

- Continue design package development and coordination meetings with ST, RE team and other third party agencies.
- Building permit associated with IFC Package 3 was approved and issued by the City on 11/20/15. DB Contractor has issued a conformed construction document consisting of consolidated plans and specification set (packages 1B, 2, and 3). Addendum will be issued.
- Continued design and construction interface coordination meetings with S440 DB Contractor, and continue construction coordination with S447 contractor.
- Continue BMS design.
- Completed formwork activities in various levels.
- Continued installation of fire sprinkler room and electrical room installation.
- Continued installation of underground and elevated electrical and plumbing.
- Continued prepping and staining of garage ceilings.
- Continued MEP rough-in at retail space within garage structure.
- Poured pedestrian tunnel overhang south of plaza area.
- Began field painting of transom and wind post.

Next Period

- Continue design and coordination meetings.
- Continue BMS design.
- Continue building elevated deck and beam formwork.
- Continue formwork, rebar, pour and stressing of post tensioned deck.
- Continue installation of fire sprinkler room and electrical room installation.
- Continue installation of underground and elevated electrical and plumbing.
- Continue prepping and staining of garage ceilings.
- Continue MEP rough-in at retail space within garage structure.
- Continue field painting and begin installation of transom and wind post.
- Begin installing door frames at various locations.

Closely Monitored Issues

- The fabrication, delivery and installation of the elevator as well as the façade installation remain on the critical path. The initial delivery of the propulsion and guidance equipment for the elevator is scheduled to occur mid-January 2016. Contractor is working with the elevator manufacturer to identify efficiencies and potential mitigation measures to reduce the current timeframe.

Cost Summary

Present Financial Status	Amount
S445 Contractor—Harbor Pacific/Graham	
Original Contract Value	\$29,978,000
Change Order Value	\$1,656,261
Current Contract Value	\$31,634,261
Total Actual Cost (Amount Billed)	\$24,939,971
Financial Percent Complete:	79%
Physical Percent Complete:	75%
Authorized Contingency	\$2,398,240
Contingency Drawdown	\$1,656,261
Contingency Index*	1.1



Parking garage structure as viewed from S. 200th.

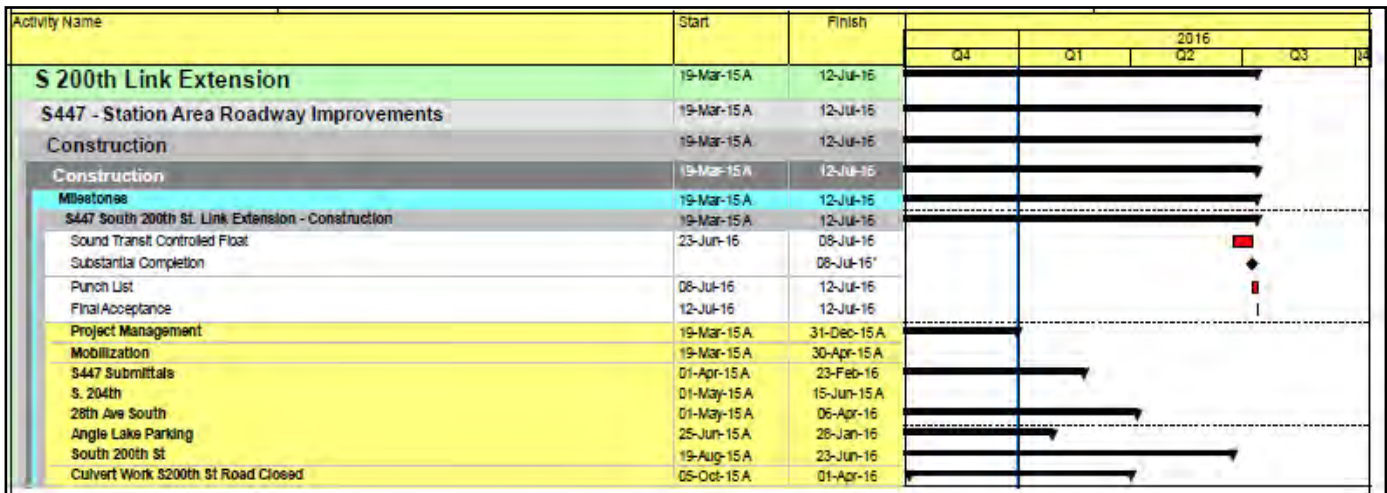
S447 Contract – Station Area Roadway Improvements and Surface Parking

Current Progress

In December, S447 Contractor continues to mitigate for continued constructability issues. Overall this contract is 69% physical completion and 71% schedule complete.

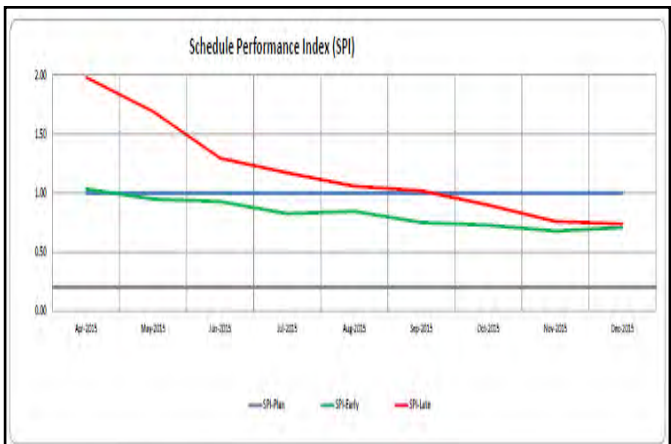
Schedule/Critical Path

The December 2015 schedule update has been submitted but contract milestones have not been recognized in this update due to the ongoing negotiations between the Contractor and ST. It is expected that this schedule will be rejected to due logic revisions that need to be made to represent progress in the field. Substantial completion is now forecast for July 8, 2016 as design revisions to work on S. 200th continue. Meetings with the Contractor have been scheduled to determine the extent of delays. The Contractor will continue to focus efforts on adjacent Contractor interfaces.



Schedule Performance Index

The SPI for S447 has risen slightly to 0.74 this period as the Contractor continues to adjust their work due to delays. It is expected that the schedule will be rejected and logic revisions will be made to represent actual progress in the field.



Link Light Rail S. 200th Link Extension – Design-Build



Key Activities

Current Period

- Continue weekly construction progress meetings.
- Continue coordination meetings with S440 and S445 Contractors.
- *South 200th St activities:* Continue grading, sidewalk and curbs, electrical conduit installation; completed bus shelter pad.
- *28th Ave activities:* replace curb and gutter; forming driveways; conduit installation; adjusting utilities.
- Continued parking lot improvements –grading and curbs.
- PSE continue pole removal.

Next Period

- Continue roadwork, sidewalk, curb and retaining wall work.
- Continue parking lot work.
- Continue installing transportation system work on roadway.
- Continue utility work.
- Project wide erosion control.

Closely Monitored Issues

- Multiple design errors and omissions are impacting schedule and cost. Resequencing work activity is helping to reduce-not eliminate-delays. The culvert design at Des Moines creek is one of the main design problems causing schedule and cost impacts. Contractor has submitted notices associated with specific work delayed and are under evaluation.

Cost Summary

Present Financial Status	Amount
S447 Contractor – Johansen Excavating, Inc	
Original Contract Value	\$8,426,400
Change Order Value	\$568,713
Current Contract Value	\$8,995,113
Total Actual Cost (Amount Billed)	\$5,995,440
Financial Percent Complete:	67%
Physical Percent Complete:	67%
Authorized Contingency	\$842,640
Contingency Drawdown	\$221,853
Contingency Index*	1.0



S. 200th Street activities ongoing-sidewalk and bus pull out work.

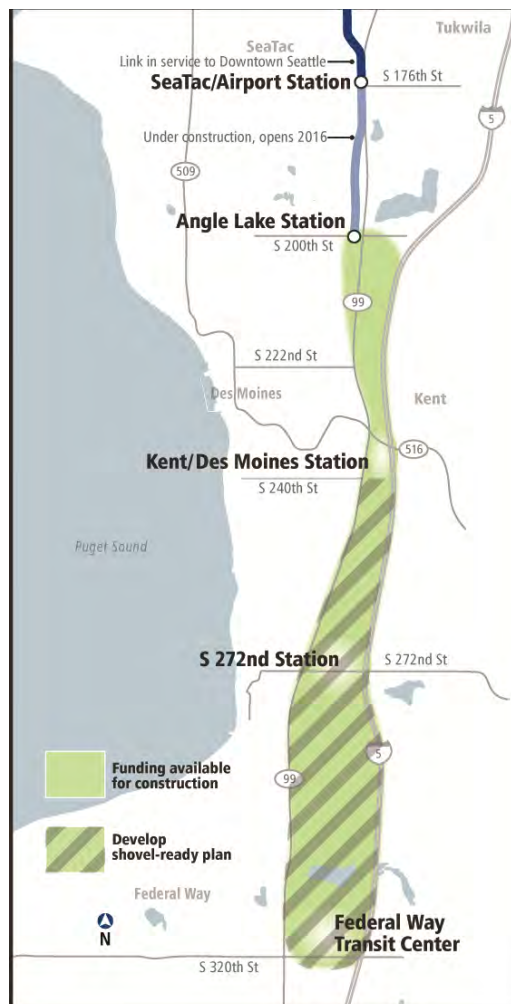
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Scope

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 only for the segment from S. 200th St. to Kent/Des Moines (in the vicinity of High-line College).

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.



Map of Federal Way Link Extension.

Project Cost Summary

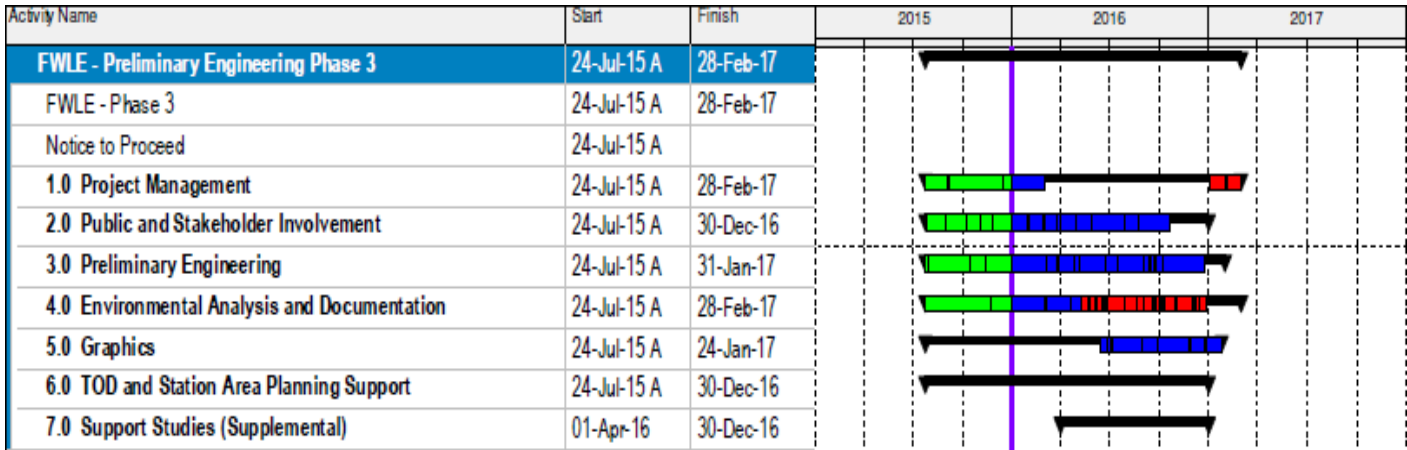
In July 2015, the Sound Transit Board identified the preferred alternative and station locations and approved the Federal Way Link Extension Phase 3 (PE and Final EIS) contract amendment.

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	\$3.2	\$3.3	\$6.2	\$9.4	\$0.0
Preliminary Engineering	\$30.9	\$28.5	\$16.2	\$2.3	\$30.9	\$0.0
Third Parties	\$1.6	\$0.2	\$0.2	\$1.4	\$1.6	\$0.0
Right of Way	\$1.0	\$1.0	\$0.3	\$0.1	\$1.0	\$0.0
Total	\$42.9	\$32.9	\$20.0	\$10.0	\$42.9	\$0.0

Project Schedule

The Final EIS and Preliminary Engineering will run through 4th QTR 2016. It is anticipated that the Board will adopt the project and the FTA will issue the ROD in late 2016.



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 a stakeholder workshop for station planning and 39 people attended.
- Met with property owner and had briefing of the potential impact of the project.

Environmental

- Closed Draft EIS comment period.

Phase 3 Preliminary Engineering (PE)

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

Phase 3 Key Activities

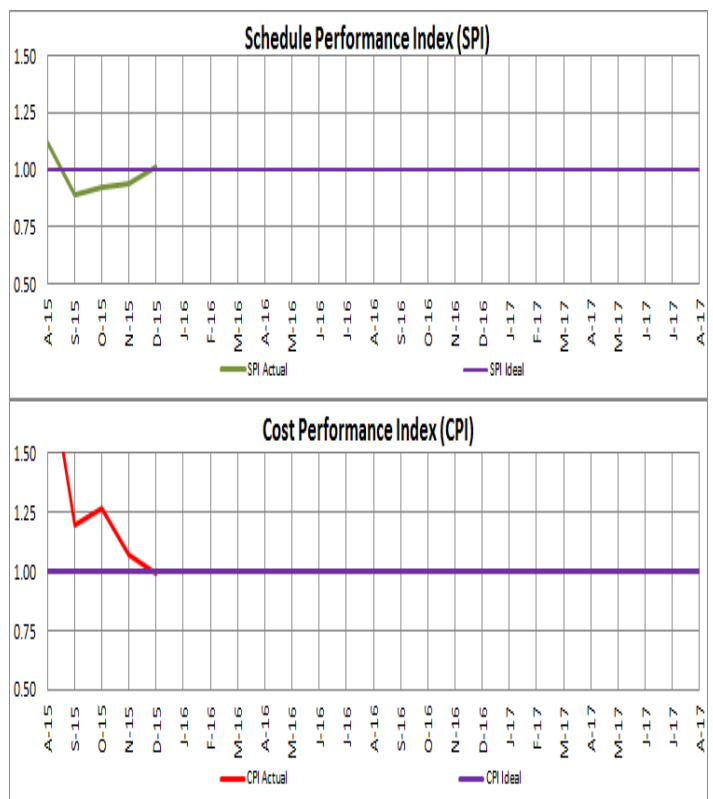
- Continued field survey activities including geotechnical borings, wetland surveys, noise monitoring and tree surveys.
- Continued coordination with key stakeholders to refine the design of the Kent/Des Moines, S. 272nd and Federal Way Transit Center station concepts.
- Continued engineering activities associated with advancing the design of the preferred alternative.
- Continued development of the Final EIS.

Phase 3 Schedule Performance

The cumulative Schedule Performance Index (SPI) is 1.01 through December 2015, indicating the overall amount of work accomplished is more than planned. Review of the consultants draft Phase 3 schedule indicates that completion of the FEIS document is currently on the critical path.

Phase 3 Cost Performance

\$15.9M of the total contract amount, approximately 56%, has been spent through December 2015. Phase 3 expenditures through December totaled \$4.0M, approximately 25% of the Phase 3 contract total. The Phase 3 percent complete reported at the end of November is 25%, with an earned value of \$4.0M. The cumulative Cost Performance Index (CPI) through November is 0.99, indicating costs are slightly more than 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	\$2,793,710	\$1,266,324	\$4,060,034
% Spent	17%	8%	25%
Earned Value	\$2,989,434	\$1,035,237	\$4,024,671
% Complete	18%	7%	25%
SPI	0.94	1.28	1.01
CPI	1.07	0.82	0.99

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Link Light Rail Tacoma Link Expansion



Scope

In cooperation with the City of Tacoma and Pierce Transit, Sound Transit is studying the potential of expanding the Tacoma Link light rail system in the context of the City and Pierce Transit service and capital plans. A technical advisory committee comprised of the City, Pierce Transit and Sound Transit staff convened to provide technical feedback and guidance throughout the Alternative Analysis (AA) process. Sound Transit, the City of Tacoma and Pierce Transit signed a cooperative agreement term sheet. In February 2014, the Tacoma City Council unanimously recommended and the Sound Transit Board unanimously identified one alignment to undergo environmental review. In December 2015, the Board authorized the project to advance to Final Design.



Tacoma Link

Key Project Activities

- Environmental: The FTA made a preliminary decision to proceed with DCE. The environmental review process was completed in August 2015.
- Preliminary Engineering (PE): Final PE plans were submitted in November 2015.
- On December 9, 2015, the Sound Transit Board authorized the project to advance through Phase Gate 4: Final Design and increased the lifetime capital budget to \$33M.

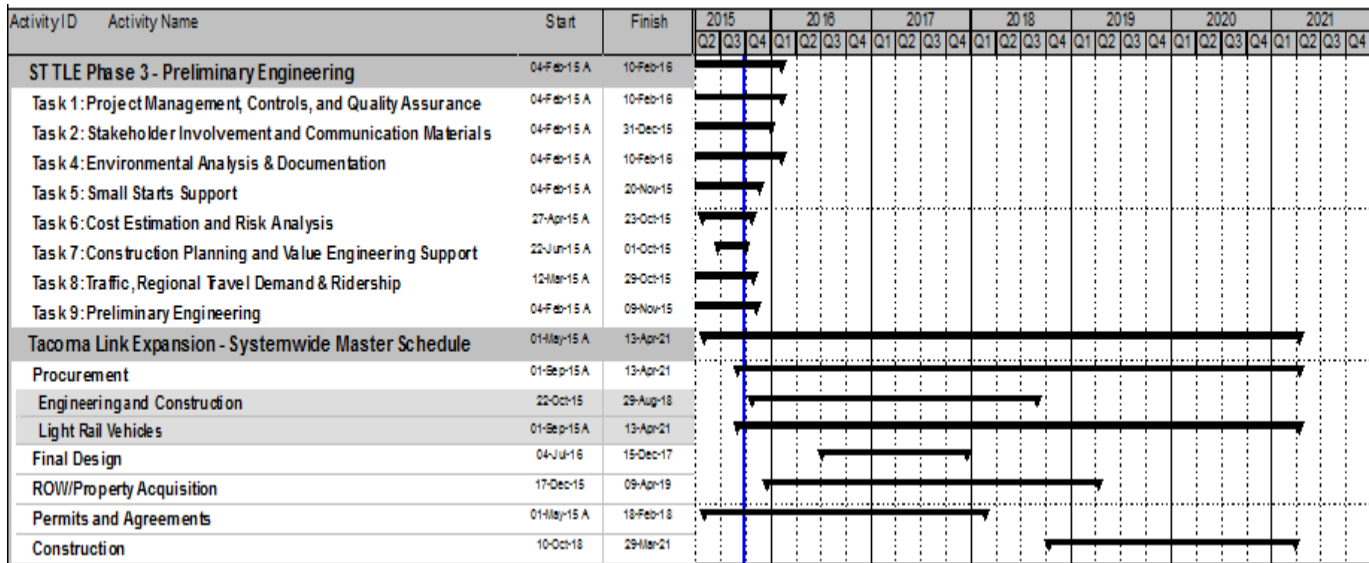
Project Cost Summary

On December 17, 2015, a resolution was passed by the Sound Transit Board to amend the Adopted 2015 Lifetime Budget for Tacoma Link Expansion to \$33M and authorized the project to advance through Gate 4 with the Phase Gate Process. (Table in millions.)

Phase	Adopted Budget	Commitment to Date	Incurred to Date	Forecasts and Trends	Estimated Final Cost (EFC)	Budget Versus EFC
Administration	\$10.6	\$1.8	\$1.9	\$8.7	\$10.6	\$0.0
Preliminary Engineering	\$5.9	\$5.5	\$5.0	\$0.4	\$5.9	\$0.0
Final Design	\$10.8	\$0.0	\$0.0	\$10.8	\$10.8	\$0.0
Vehicles	\$2.0	\$0.0	\$0.0	\$2.0	\$2.0	\$0.0
Right of Way	\$3.2	\$0.0	\$0.0	\$3.2	\$3.2	\$0.0
Total	\$33.0	\$7.3	\$7.0	\$25.6	\$33.0	\$0.0

Project Schedule

The project schedule is presented below.



Sound Transit Board Actions

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

Motion Number	Description	Date
R2015-33	A resolution of the ST Board (1) amending the Adopted 2015 Budget by (a) increasing the lifetime capital budget for the Tacoma Link Expansion by \$25,216,229 from \$7,785,771 to \$33,002,000 and (b) increasing the 2015 Annual Budget by \$478,257 from \$3,225,500 to \$3,703,757; and (2) authorizing the project to advance through Gate 4 within Sound Transit's Phase Gate Process.	

Environmental

- The environmental review process was completed in August 2015.

Community Outreach

- Hosted the Stakeholder Roundtable and 12 members attended.
- Hosted the Tacoma Link Open House and 80 people attended.
- Launched the online open house and to date 1,398 page views and 475 people visited the website for info and comments.
- Sent out boring notifications to businesses and residences.

Phase 3 Conceptual Engineering

In February 2015 Sound Transit executed an amendment to the professional services agreement with CH2M Hill, Inc. for Phase 3 professional services, including preliminary engineering and environmental work.

Phase 3 Key Activities

- Continued public outreach efforts.
 - Prepared detailed Phase 3 work plan and schedule.
 - Updated design criteria and various conceptual engineering technical memos.
 - Geotechnical, Structural, Drainage, Utility, and Safety & Security Certification Analysis ongoing.
-

Phase 3 Schedule and Cost Performance

This project will begin reporting earned value data for the Phase 3 contract soon.

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Scope

Sound Transit is reviewing and evaluating current and future light rail storage and maintenance requirements to support the development, design, and construction of a future light rail operations and maintenance facility for proposed system expansion. Sound Transit Board identified Draft Environmental Impact Statement (DEIS) alternatives in 2012 and identified the preferred alternative on July 24, 2014.

Key Project Activities

- MOU with the City of Bellevue approved by the Bellevue City Council and Sound Transit Board in April 2015.
- FEIS was published on October 2, 2015 and the ST Board selected the project to be built on October 22, 2015.
- FTA signed the project Record of Decision on November 4, 2015.
- ST Board approved Phase Gate 4: Entry to Final Design on December 17, 2015.
- ST Board approved property acquisition on December 17, 2015. The property needed for the OMSF includes multiple relocations and the purchase cost and schedule is one of the top risks for the project.
- The City of Bellevue initiated a code amendment process to provide an administrative permitting process for land use approvals.
- Renegotiated consultant scope of work to support developing design build procurement documents.
- Consultant commenced work on procurement documents.
- ST is negotiating task orders with consultants to produce a market and TOD feasibility study as required by the MOU with Bellevue.

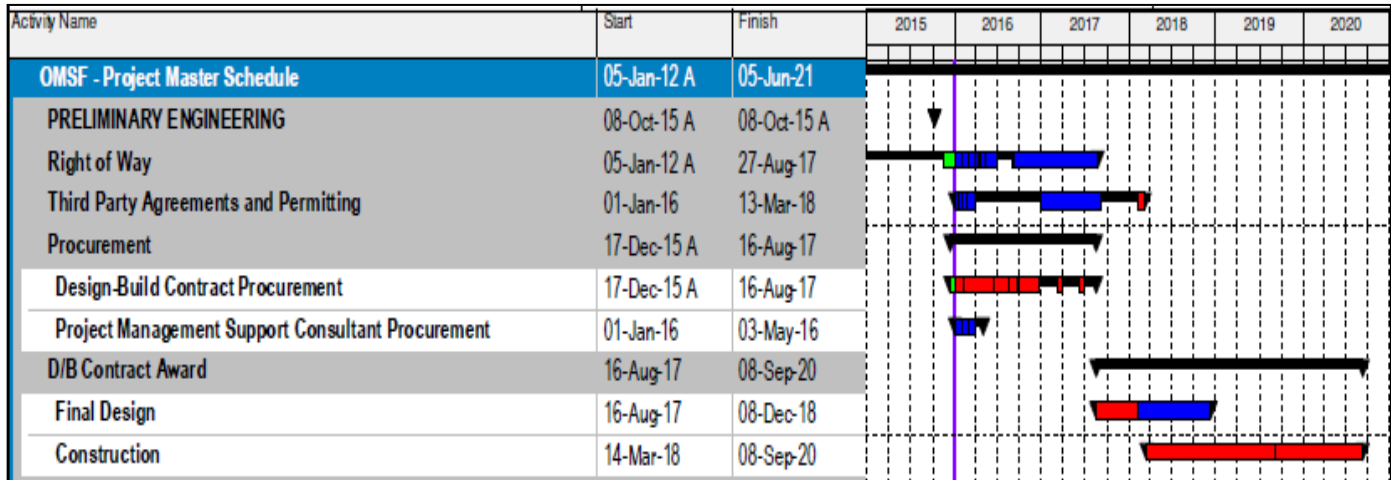
Program Cost

In December 2015, the Sound Transit Board authorized the project to advance through Phase Gate 4 Final Design and increased the lifetime capital budget for the OMSF from \$36.8M to \$133.6M. Table shown in millions.

Phase	Adopted Budget	Commitment to Date	Incurred to Date	Forecasts and Trends	Estimated Final Cost (EFC)	Budget Versus EFC
Administration	\$3.2	\$1.2	\$1.3	\$2.0	\$3.2	\$0.0
Preliminary Engineering	\$10.2	\$8.7	\$6.3	\$1.5	\$10.2	\$0.0
Construction Services	\$0.6	\$0.0	\$0.0	\$0.6	\$0.6	\$0.0
3rd Party Agreements	\$1.7	\$0.0	\$0.0	\$1.7	\$1.7	\$0.0
ROW	\$118.0	\$23.2	\$23.2	\$94.8	\$117.9	\$0.0
Total	\$133.6	\$33.1	\$30.7	\$100.5	\$133.6	\$0.0

Program Schedule

The project schedule is presented below. The schedule reflects the current Design Build approach that has been determined through multiple project delivery workshops. Sound Transit is preparing a conceptual schedule to show the remaining preliminary engineering duration to support the design build procurement.



Sound Transit Board Actions

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

Motion Number	Description	Date
R2015-34	A Resolution of the ST Board (1) amending the 2015 Adopted Budget by (a) increasing the lifetime capital budget for the OMSF Project by \$96,799,895 from \$36,828,105 to \$133,628,000, and (b) decreasing the 2015 Annual budget by \$2,182,397 from \$6,672,645 to \$4,490,248; and (2) authorizing the project to advance through Gate 4 within Sound Transit's Phase Gate Process.	Dec 17
R2015-35	Authorized the ST CEO to acquire or lease 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 OMSF Project.	Dec 17

Environmental

- Environmental publication of the FEIS on October 2, 2015.

Community Outreach

- Provided advance notification calls and emails to all affected property owners prior to them receiving certified Board notification letter, and then follow-up conversations with affected property owners and property management.

Phase 2 Preliminary Engineering and FEIS

Sound Transit executed a professional services agreement with Huitt-Zollars, Inc. for civil engineering and architectural design services and issued NTP for Phase 2, Preliminary Engineering and FEIS for the Link Operations and Maintenance Satellite Facility (OMSF) project in September 2014. Delivered Final Phase 2 Baseline Schedule December 2014.

Phase 2 Key Activities

- Completed Value Engineering & Constructability Review July 2015.
- Issued a request for expression of interest (RFEI) to the contracting community to explore opportunities for long-term maintenance and transit oriented development.
- Sound Transit TOD staff developing TOD market study scope of work for the OMSF site.
- Final EIS published on October 2, 2015.
- The ST Board selected the project to be built on October 22, 2015.
- FTA signed the Record of Decision for the project on November 4, 2015.
- A change order is in development to direct the PE consultant to support the project's design-build procurement.
- Consultant initiated work on the procurement documents.

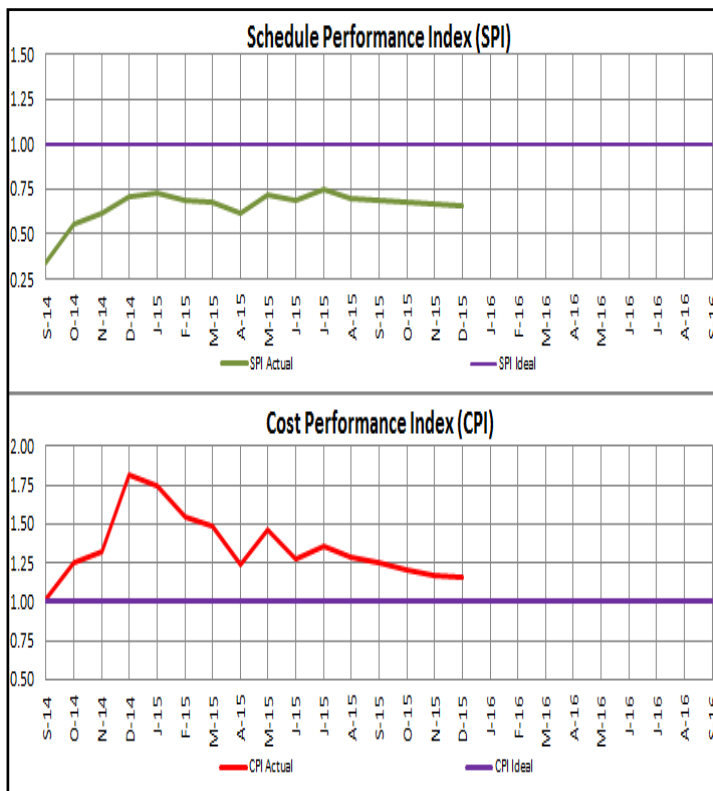
Phase 2 Schedule Performance

The cumulative Schedule Performance Index (SPI) trends at 0.65 through December 2015, which means that cumulative work accomplished is less than the planned work. The monthly SPI in December is low because several work tasks are on hold pending a change order to re-scope remaining contract work.

The remaining Phase 2 scope is currently being 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.

Phase 2 Cost Performance

\$2.8M of the total Phase 2 contract amount, approximately 53%, was spent through November 2015. The Phase 2 percent complete is 62%, with an earned value of \$3.3M. The cumulative Cost Performance Index (CPI) is 1.17, meaning that expenditures are less than the earned value. Based on these trends, the final cost is expected to be under the contract budget of \$5.3M.



Phase 2 Performance	Previous Period	Current Period	Cumulative To Date
Amount Invoiced	\$2,848,333	\$50,304	\$2,898,637
% Spent	53%	1%	54%
Earned Value	\$3,332,239	\$28,658	\$3,360,897
% Complete	62%	1%	63%
SPI	0.66	0.25	0.65
CPI	1.17	0.57	1.16

Link Light Rail ST2 LRV Fleet Expansion

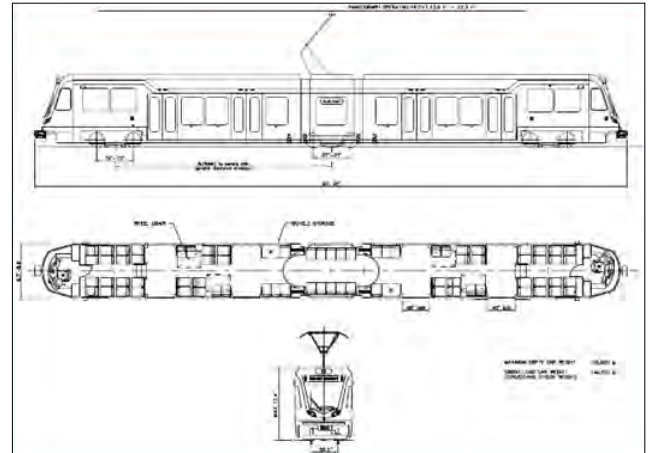


Project Summary

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

Budget: \$733 Million (Baseline September 2015)

Schedule: Project completion 3rd QTR 2024



Key Activities

- Request For Proposals was issued on November 6, 2015. Contractor proposals are due by February 18, 2016.

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 \$1.1M has been expended. This period saw expenditures for drafting RFI responses and addenda coordination.

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	\$0.0	\$0.0	\$4.7	\$0.0
Construction Services	\$14.1	\$14.1	\$4.8	\$1.1	\$14.1	\$0.0
Vehicles	\$714.2	\$714.2	\$0.0	\$0.0	\$714.2	\$0.0
Total	\$733.0	\$733.0	\$4.8	\$1.1	\$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	\$4.8	\$1.1	\$696.7	\$0.0
80 Professional Services	\$4.5	\$4.5	\$0.0	\$0.0	\$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	\$4.8	\$1.1	\$733.0	\$0.0

Cost Contingency Management

Contingency Status

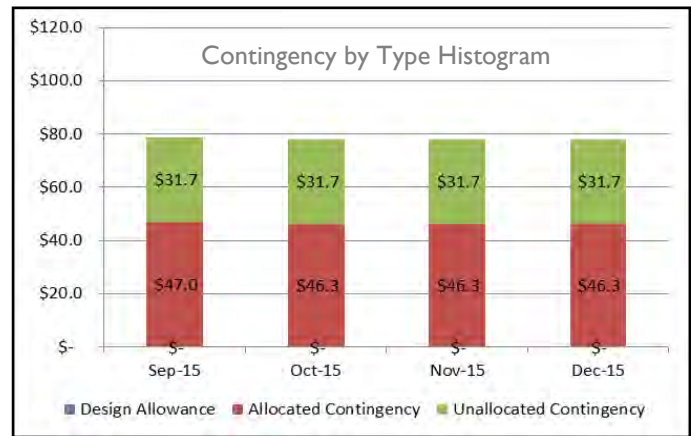
The project's baseline budget, which was approved by the Sound Transit Board in September 2015 and includes a total of \$78.0M of Total Contingency. Overall contingency is currently 10.7% of remaining work.

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

Allocated Contingency – The project baseline contains \$46.3M of allocated contingency. There was no change in allocated contingency this period.

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%	\$ 46.3	6.3%
Unallocated Contingency	\$ 31.7	4.3%	\$ 31.7	4.3%
Total	\$ 78.0	10.7%	\$ 78.0	10.7%



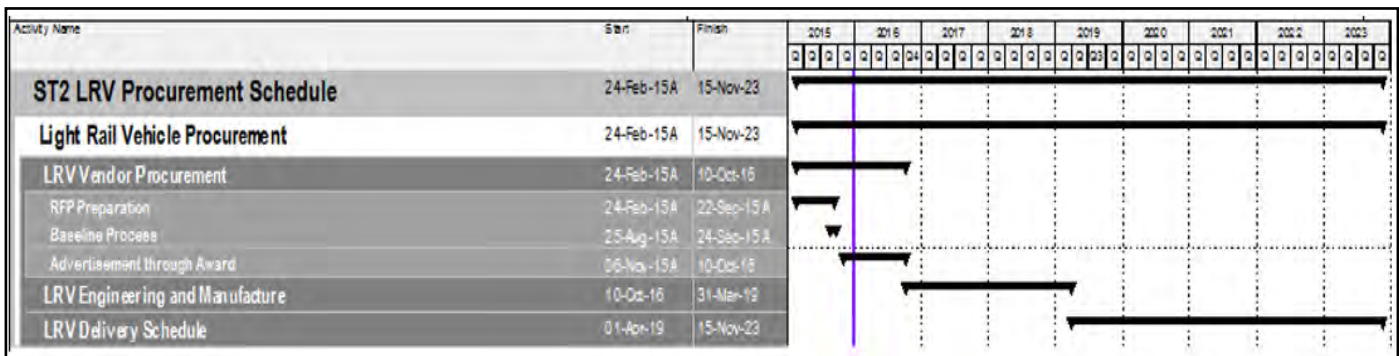
Risk Management

The ST2 LRV Expansion project currently has 24 active risks that are being monitored. The top five risks are as follows:

- Buy America Requirements
- Sub-Supplier Performance Issues
- Commissioning Requirements
- Bid Selection Issues
- Availabilities of Spare Parts

Project Schedule

The ST2 LRV Expansion project schedule is shown below.



Staffing Variance Report

Recruiting Activity

During November 2015, the following positions the following positions were filled to support the Link capital program:

Position	Project Assignment	Planned Hire Date
Construction Manager	East Link Extension	April 2014
Deputy Project Director	OMSF/Federal Way Extension	2015 Reclassification
Assistant Permit Administrator	East Link Extension	May 2015
Community Outreach Specialist	South Corridor	2015 Attrition*
Community Outreach Specialist	North Corridor	2015 Attrition*
Community Outreach Coordinator	South Corridor	2015 Attrition
Principal Architect	Northgate Link Extension	2015 Attrition
Principal Architect	OMSF, S. 200 th Link Extension	2015 Attrition*

*Attrition resulting from internal promotion

Recruiting continued during the reporting period for the following design, engineering and construction management positions:

Position	Project Assignment	Planned Hire Date
Sr. Systems Engineer	Traction Power	2013 Attrition
Construction Manager	Systems	April 2014
Systems Engineer	Link	2014 Attrition
Architect	East Link Extension	2014 Attrition
Sr. Real Property Agent	East/Lynnwood Extension	June 2015
Construction Manager	East Link Extension	2015 Reclassification
Real Property Agent	Lynnwood Link Extension	2015 Reclassification
Sr. Project Manager	O&M Satellite Facility	2015 Reclassification
Corridor Design Manager	Lynnwood Link Extension	2015 Attrition *
Mechanical Engineer	Systems	2015 Attrition*
Sr. Project Control Specialist	Northgate Link Extension	2015 Attrition
Real Property Agent	East/Lynnwood Extension	2015 Attrition
Deputy Executive Director	Design and Engineering	2015 Attrition

*Attrition resulting from internal promotion

Project Staffing– Link Light Rail Program– November 2015

Consistent with staffing for October, 466.1 (98% of plan) consultant and internal staff full time equivalents (FTE) participated in the on-going planning, design and construction of Link light rail extensions. Average year-to-date staffing remains at 471.6 FTE/mo. and is 9% (39.4 FTE/mo.) above plan. November staffing for the University, Northgate and S. 200th Link Extensions exceeded plan; staffing for the East Link and Lynnwood Link Extensions was 92% and 39% of plan respectively. Staffing variance to plan for the month by project follows.

Project	November 2015 Staffing Plan Variance Summary								YTD Staffing (FTE/mo.)			
	Consultant Staff				Sound Transit Staff				Total Project Staffing			
	FTE		Variance		FTE		Variance		FTE		Variance	
	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan
University Link Extension	36.9	44.5	7.6	121%	39.5	44.4	4.9	112%	69.5	86.1	16.7	124%
Northgate Link Extension	73.6	125.5	51.9	170%	48.7	29.5	-19.2	61%	111.2	147.0	35.8	132%
South 200th Extension	20.1	19.7	-0.4	98%	20.6	14.5	-6.1	70%	37.0	40.5	3.5	109%
East Link Extension	109.2	110.6	1.4	101%	73.2	56.5	-16.7	77%	165.8	162.7	-3.1	98%
Lynnwood Link Extension	27.0	7.3	-19.7	27%	26.6	13.8	-12.8	52%	48.7	35.5	-13.2	73%
Total	266.8	307.4	40.6	115%	208.6	158.6	-50.0	76%	432.2	471.6	39.4	109%

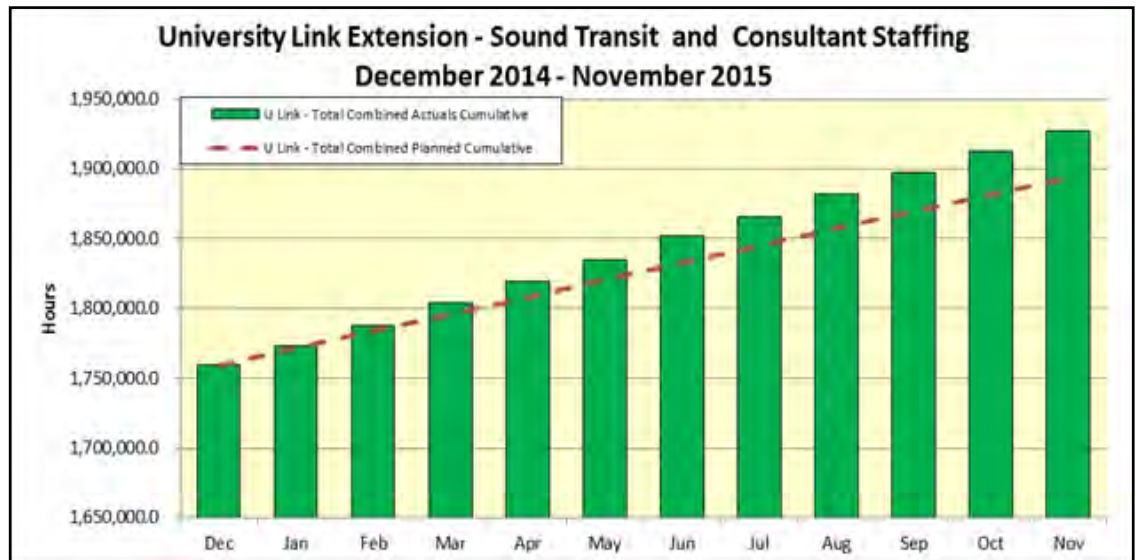
Link Light Rail Staffing Report



University Link Extension Staffing

Total Internal and External Staffing – University Link Extension

There were 88.8 FTE assigned to the University Link Extension in November including 44.5 consultant and 44.4 internal FTE. Staffing for the month decreased 9% (8.4 FTE) from October and was above plan by 16% (12.4 FTE). Average year to date staffing of 86.1 FTE/mo. is trending above plan by 24% (16.7 FTE). Cumulatively, since August 2006, average monthly project staffing is consistent with plan.

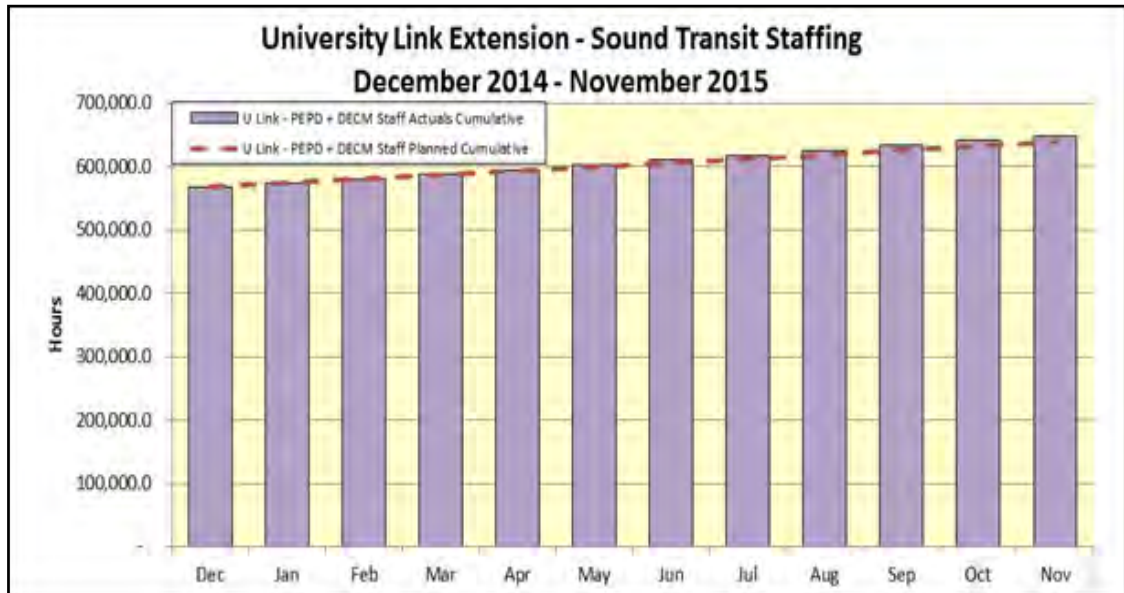


	Labor Hours to Date				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,893,949.7	1,927,030.2	33,080.5	101.7%	12,224.0	14,212.5	1,988.5	116.3%
Monthly Average	16,910.3	17,205.6	295.4					
Monthly FTE	105.7	107.5	1.8		76.4	88.8	12.4	

University Link Extension Staffing

Internal Resource Commitments to University Link Extension

There were 44.4 internal FTE assigned to the University Link Extension in November. Internal staffing was 12% (4.9 FTE) above plan and 14% (7.3 FTE) below October staffing. Cumulatively, since August 2006, average monthly internal staffing is trending with plan.



Labor Hours to Date				Current Period Nov 2015			
Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
638,083.6	648,367.6	10,284.0	101.6%	6,320.0	7,097.5	777.5	112.3%
Monthly Average	5,697.2	5,789.0	91.8				
Monthly FTE	35.6	36.2	0.6	39.5	44.4	4.9	

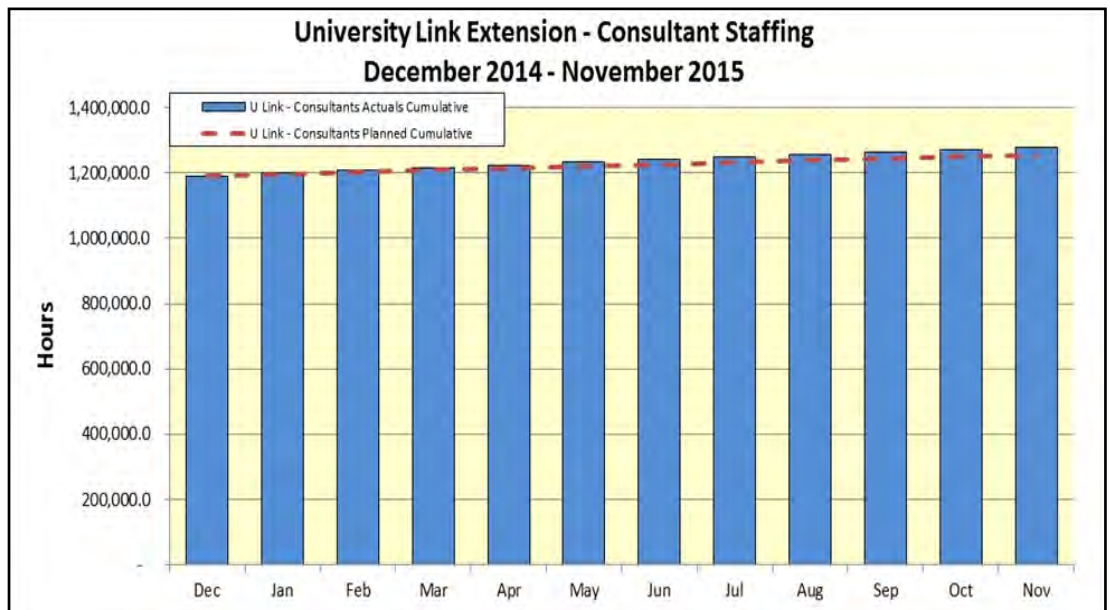
Link Light Rail Staffing Report



University Link Extension Staffing

Consultant Resource Commitments to University Link Extension

During November, 44.5 consultant FTE were assigned to the University Link Extension; consultant staffing was 21% (7.6 FTE) above plan and 3% (1.2 FTE) below October staffing. Cumulatively, since August 2006, average monthly consultant staffing is trending with plan.



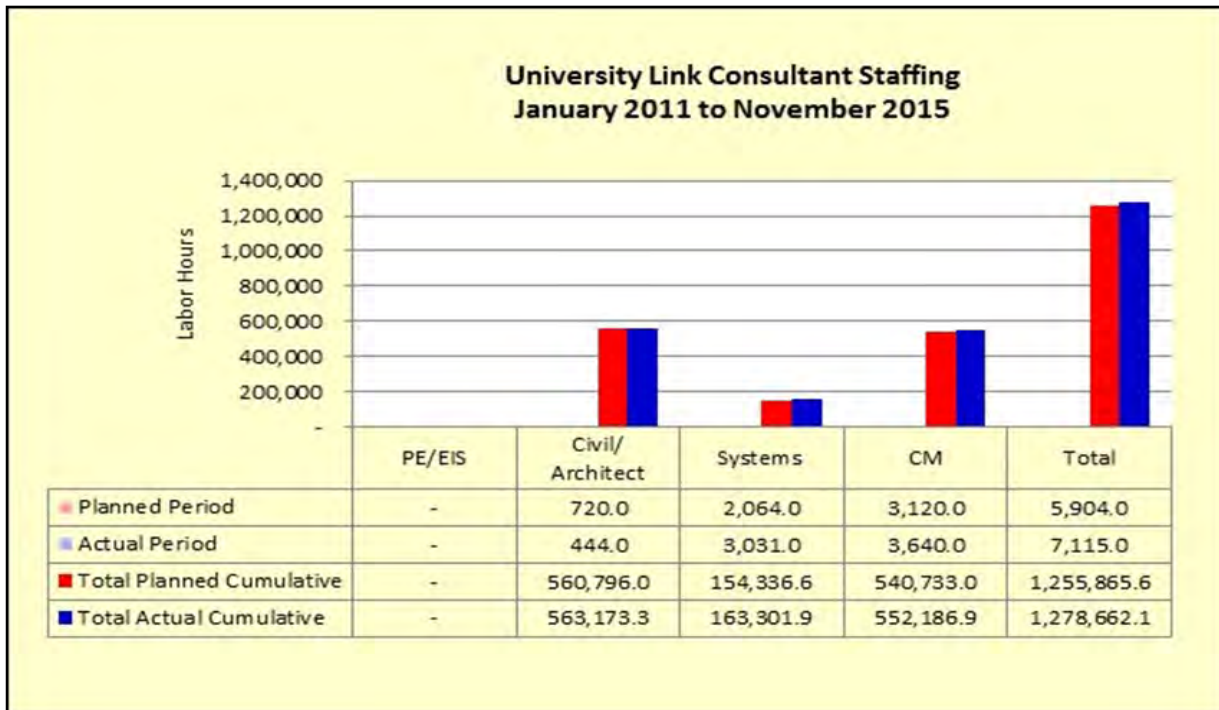
	Labor Hours to Date				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,255,866.1	1,278,662.5	22,796.5	101.8%	5,904.0	7,115.0	1,211.0	120.5%
Monthly Average	11,213.1	11,416.6	203.5					
Monthly FTE	70.1	71.4	1.3		36.9	44.5	7.6	

University Link Extension Staffing

Consultant Resource Commitments to University Link Extension, continued

Consultant utilization by discipline for the University Link Extension since January 2011 is illustrated below.

In November civil engineering consultant staffing (2.8 FTE) was 38% (1.7 FTE) below plan and was 40.2% (1.9 FTE) below October staffing. Systems consultant staffing (18.9 FTE) was 47% (6 FTE) above plan and 3.5% (0.6 FTE) above Systems consultant staffing in October. Construction management consultant staffing (22.8 FTE) was consistent with staffing for October. Cumulative staffing levels for civil and systems consultants are trending 0.42% (0.2 FTE/mo.), and 5.8% (0.5 FTE/mo.) above plan respectively. Cumulative construction management consultant staffing is trending 3.3% (1 FTE/mo.) below plan.



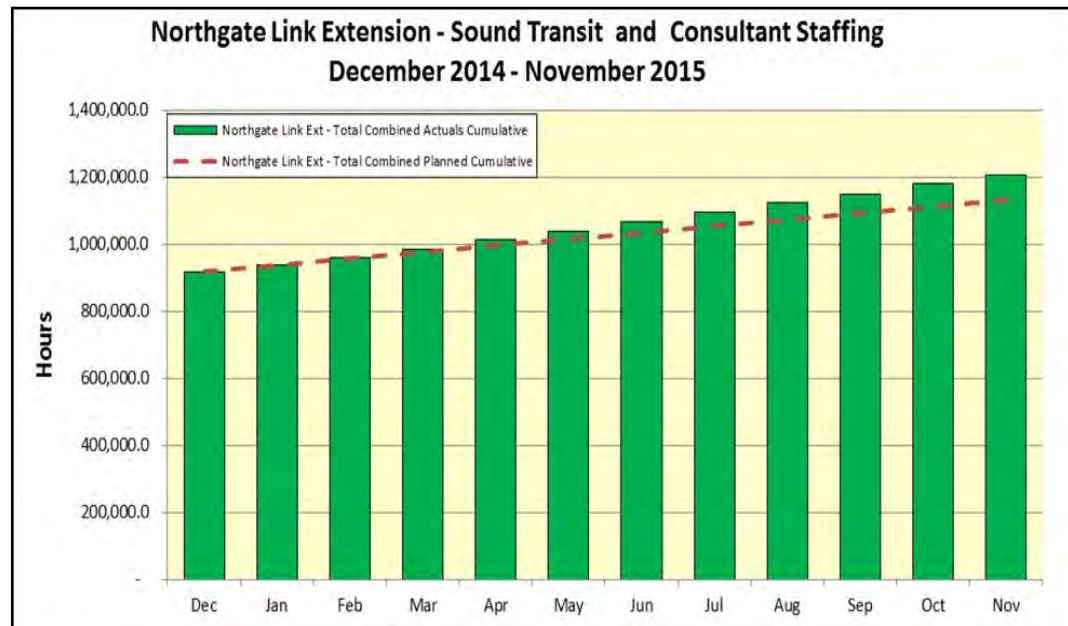
Link Light Rail Staffing Report



Northgate Link Extension Staffing

Total Internal and External Staffing – Northgate Link Extension

During November, 29.5 internal and 125.5 consultant FTE were assigned to the Northgate Link Extension. This is a 17% (32.6 FTE) decrease from October but is 27% (32.6 FTE) above plan. Average year to date staffing of 147 FTE/mo. is 32% (35.8 FTE/mo.) above plan; cumulatively since January 2011 average monthly staffing is 6% (7.3 FTE/mo.) above plan.

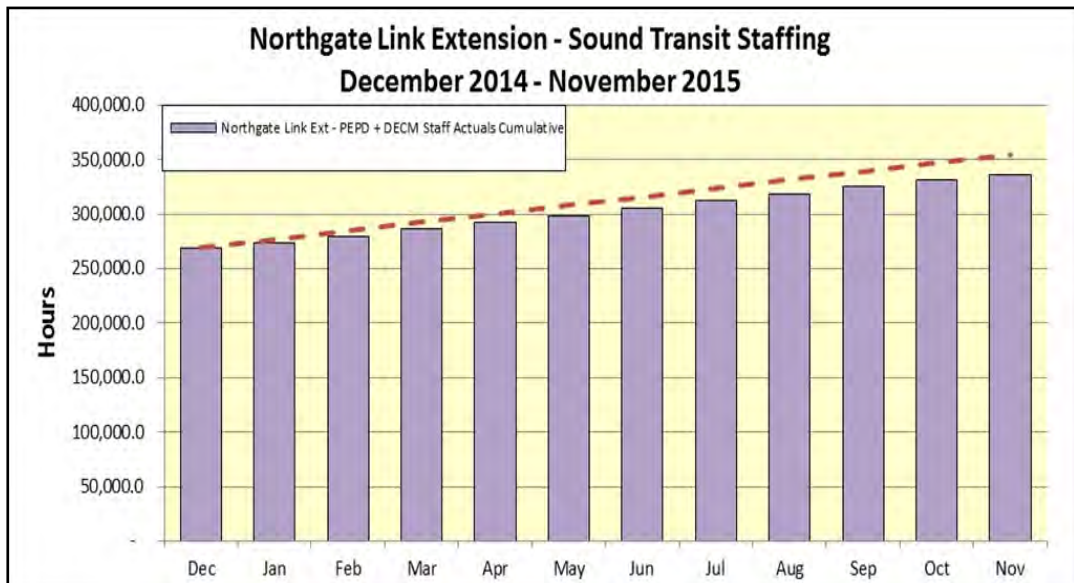


	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,133,251.3	1,205,918.3	72,667.0	106.4%	19,568.0	24,788.6	5,220.6	126.7%
Monthly Average	19,207.6	20,439.3	1,231.6					
Monthly FTE	120.0	127.7	7.7		122.3	154.9	32.6	

Northgate Link Extension Staffing

Internal Resource Commitments to Northgate Link Extension

Internal staffing in October (39 FTE) decreased 1% (0.2 FTE) from September and was 20% (9.5 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing is 4.6% (1.7 FTE) below plan.



	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	354,965.4	335,938.3	-19,027.1	94.6%	7,792.0	4,717.0	-3,075.0	60.5%
Monthly Average	6,016.4	5,693.9	-322.5					
Monthly FTE	37.6	35.6	-2.0		48.7	29.5	-19.2	

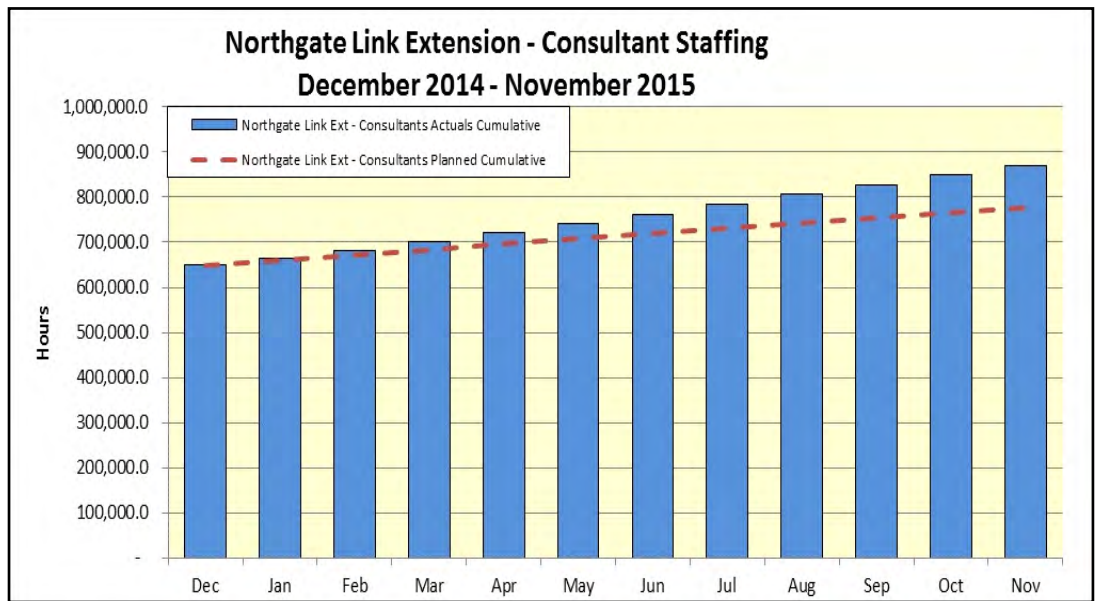
Link Light Rail Staffing Report



Northgate Link Extension Staffing

Consultant Resource Commitments to Northgate Link Extension

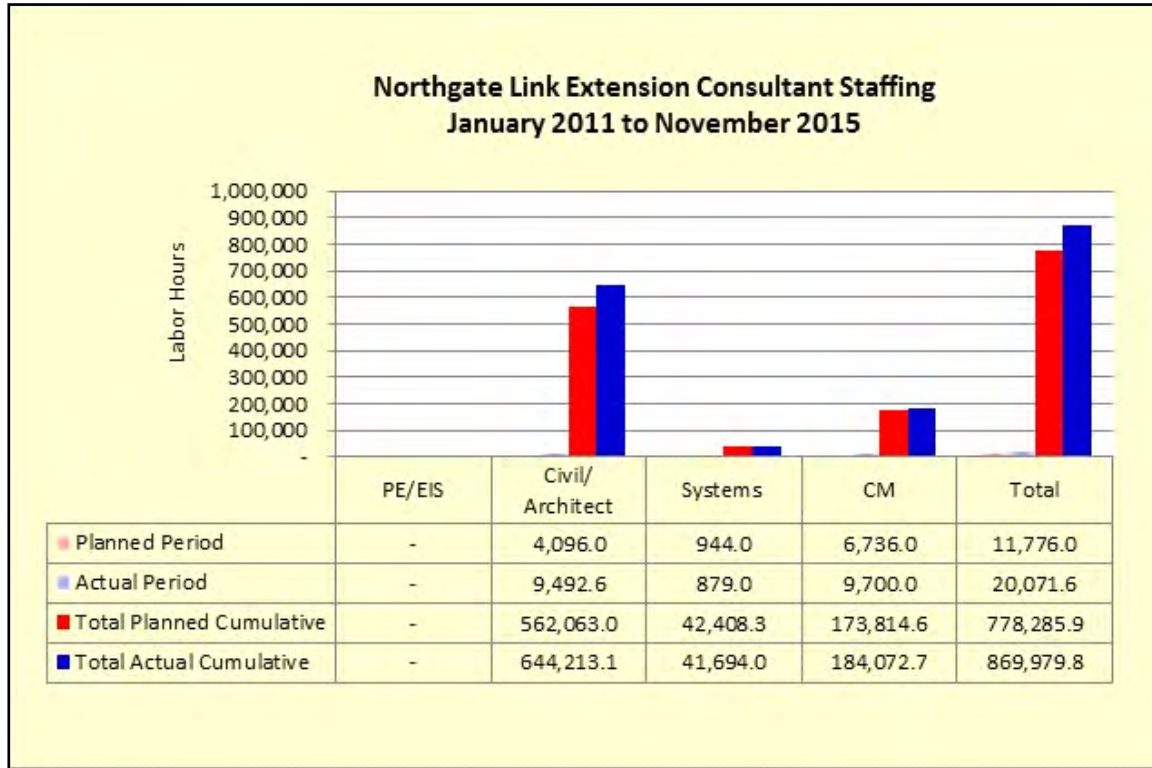
In November 125.5 consultant FTE were assigned to the Northgate Link Extension; consultant staffing was above plan by 70% (51.9 FTE) and was 15% (22.8 FTE) below October staffing. Cumulatively, since January 2011, average consultant utilization is trending 12% (9.7 FTE/mo.) above plan.



	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	778,285.9	869,980.0	91,694.1	111.8%	11,776.0	20,071.6	8,295.6	170.4%
Monthly Average	13,191.3	14,745.4	1,554.1					
Monthly FTE	82.4	92.2	9.7		73.6	125.4	51.8	

Northgate Link Extension Staffing

Consultant Resource Commitments to Northgate Link Extension



Consultant utilization by discipline follows:

- Civil/architecture consultant utilization in November (59.3 FTE) decreased 37% (35.2 FTE) from October but was 132% (33.7 FTE) above plan. Cumulatively since January 2011, civil engineering/architecture consultant staffing of 68.2 FTE/mo. is 15% (8.7 FTE/mo.) above plan.
- Systems consultant utilization (5.5 FTE) was 7% (.04 FTE) below plan and 22.8 % (1.7 FTE) below October staffing. Since January 2011, average monthly Systems consultant staffing (4.4 FTE/mo.) is trending 2% (0.1 FTE/mo.) below plan.
- CM consultant staffing in November (60.6 FTE) was 30% (14.1 FTE) above October staffing and 44% (18.5 FTE) above plan. Cumulatively, since January 2011, average monthly CM consultant staffing (19.5 FTE/mo.) is trending 6% (1.1 FTE/mo.) above plan.

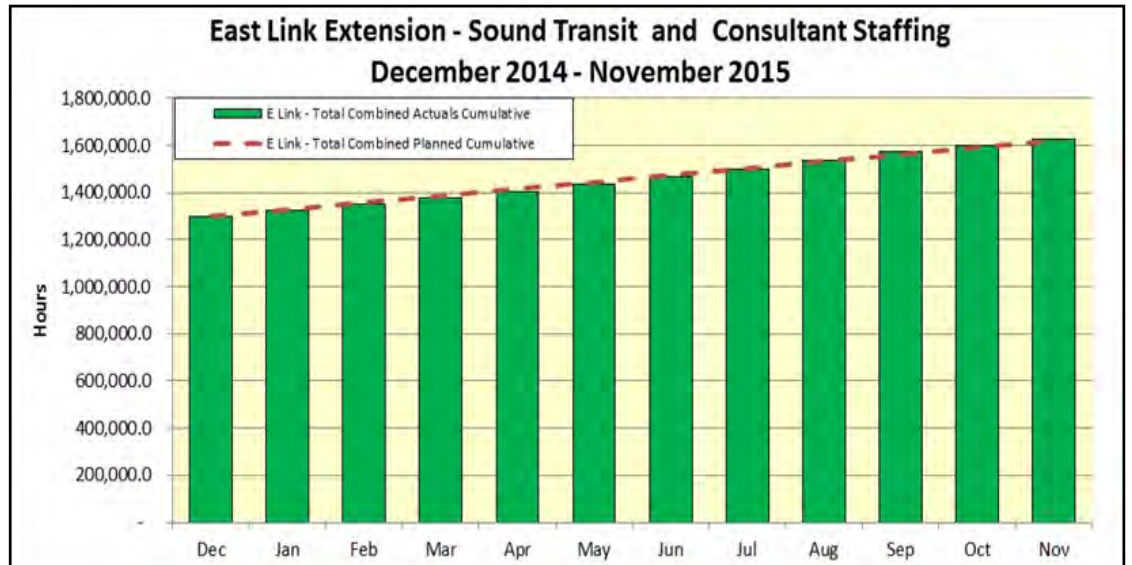
Link Light Rail Staffing Report



East Link Extension Staffing

Total Internal and External Staffing – East Link Extension

Staffing for the East Link Extension in November (167.2 FTE) decreased 8% (13.8 FTE) from October and was 8% (15.3 FTE) below plan. Average year to date staffing of 162.7 FTE/mo. is 2% (3.1 FTE/mo.) below plan; cumulatively since January 2011, average monthly staffing is trending with plan.

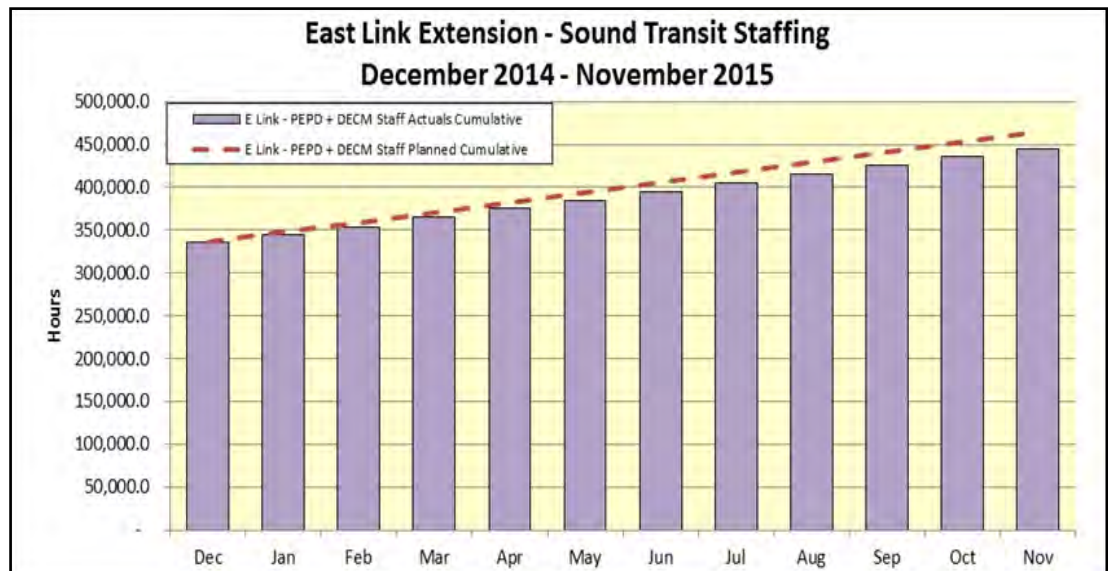


	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,621,306.7	1,627,238.0	5,931.3	100.4%	29,184.0	26,744.8	-2,439.2	91.6%
Monthly Average	27,479.8	27,580.3	100.5					
Monthly FTE	171.7	172.4	0.6		182.4	167.2	-15.2	

East Link Extension Staffing

Internal Resource Commitments to East Link Extension

During November internal staffing for the East Link Extension (56.5 FTE) was 16% (10.5 FTE) below October staffing and was 23% (16.7 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing is trending 4.3% (2.1 FTE/mo.) below plan.



	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	464,789.4	444,801.5	-19,988.0	95.7%	11,712.0	9,042.5	-2,669.5	77.2%
Monthly Average	7,877.8	7,539.0	-338.8					
Monthly FTE	49.2	47.1	-2.1		73.2	56.5	-16.7	

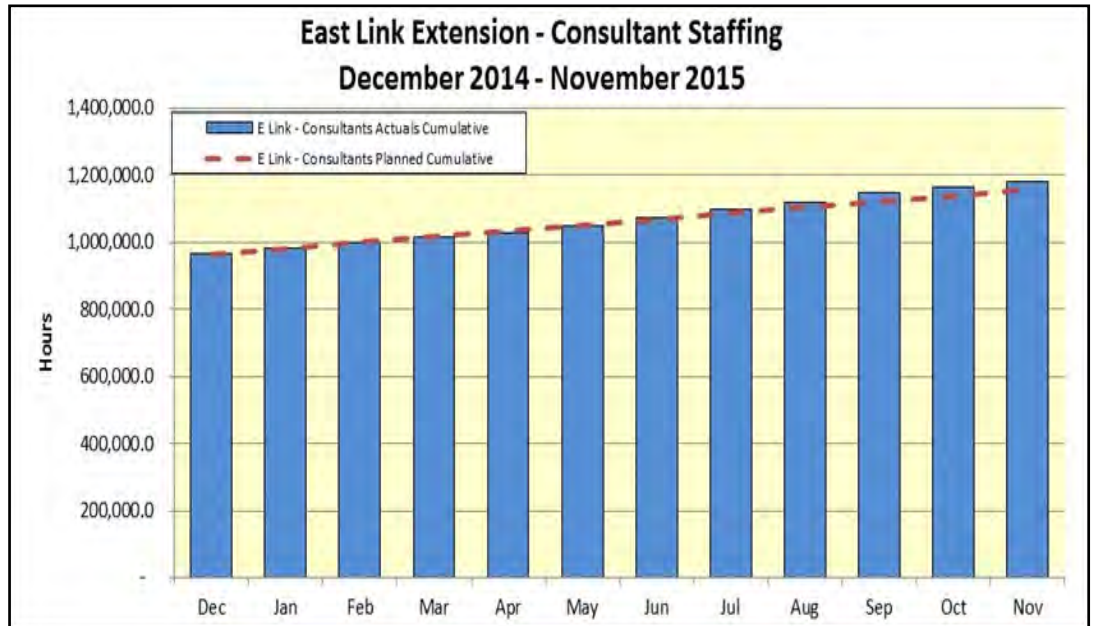
Link Light Rail Staffing Report



East Link Extension Staffing

Consultant Resource Commitments to East Link Extension

There were 110.6 consultant FTE assigned to the East Link Extension during November. Consultant staffing decreased 3% (3.3 FTE) from October and was 1% (1.4 FTE) above plan. Cumulatively since January 2011, average monthly consultant staffing is trending 2% (2.7 FTE/mo.) above plan.

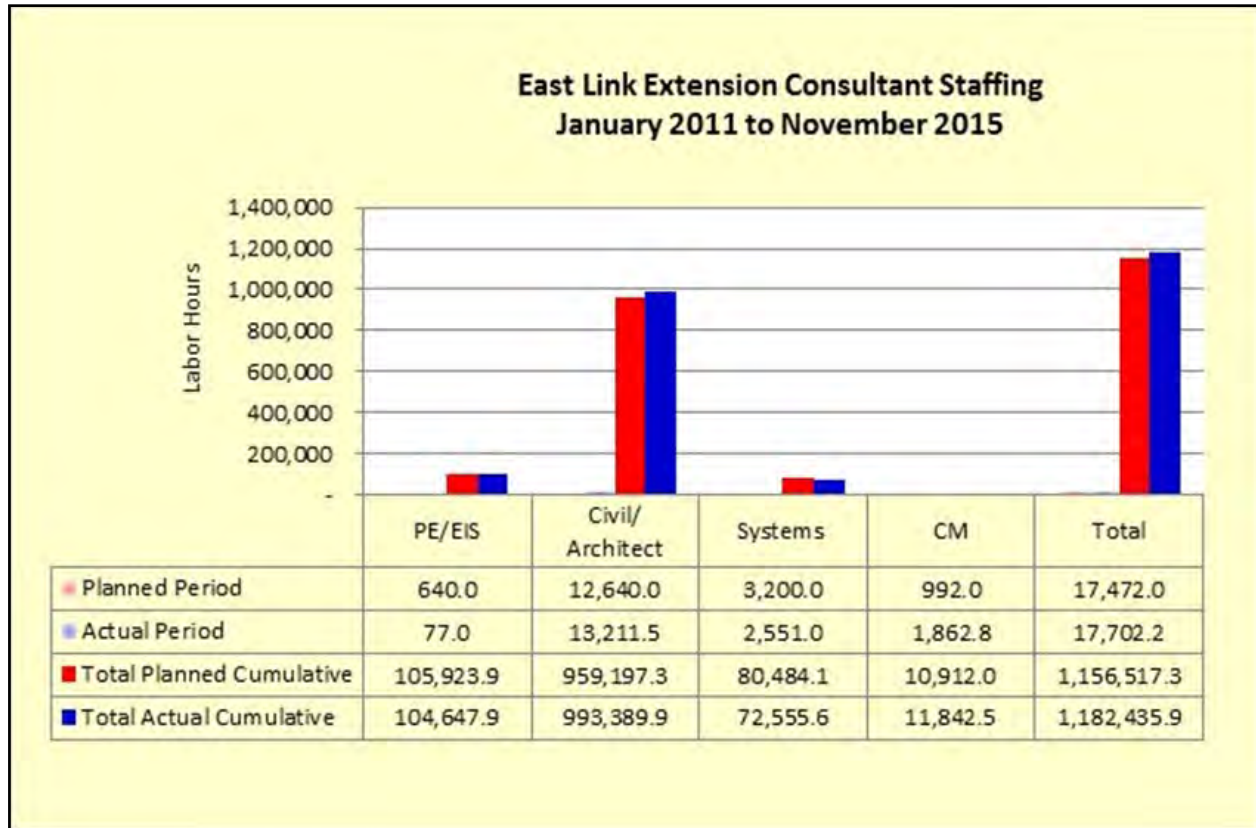


	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	1,156,517.3	1,182,436.6	25,919.3	102.2%	17,472.0	17,702.3	230.3	101.3%
Monthly Average	19,602.0	20,041.3	439.3					
Monthly FTE	122.5	125.3	2.7		109.2	110.6	1.4	

East Link Staffing

Consultant Resource Commitments to East Link, continued

In November, civil engineering consultant staffing (82.6 FTE) was 75% of consultant staffing and 5% (3.6 FTE) above plan. Systems consultant staffing (15.9 FTE) was consistent with October staffing and was below plan by 20% (4.1 FTE). There was minimal Preliminary Engineering (PE) consultant staffing (0.5 FTE) for November and Construction Management consultant staffing for November (11.6 FTE) was 88% (5.4 FTE) over plan.



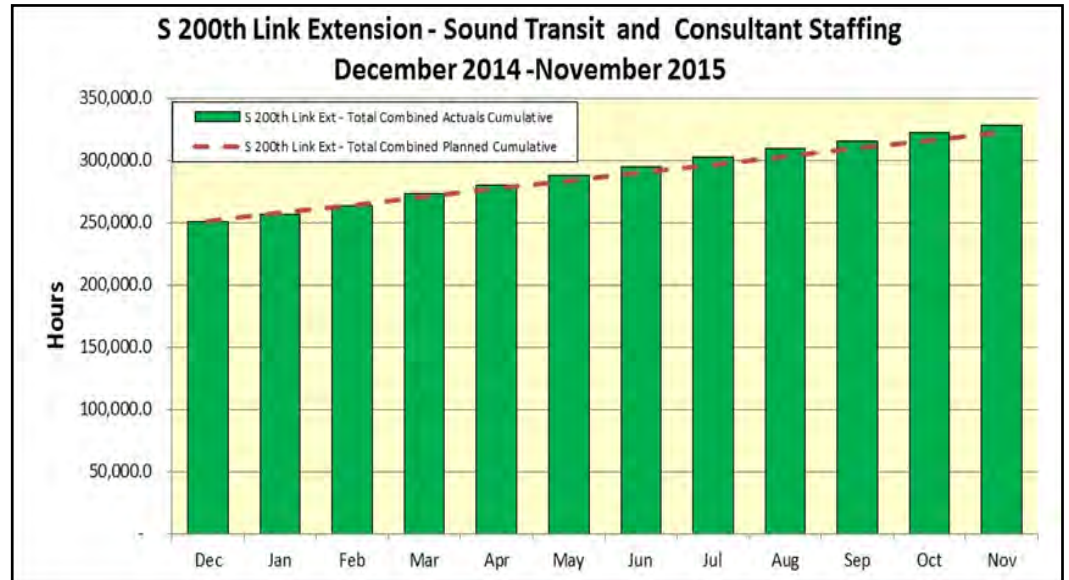
Link Light Rail Staffing Report



S. 200th Link Extension Staffing

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

Staffing for the South 200th Link Extension in November (34.1 FTE) was 16% (6.6 FTE) below plan and 22% (9.7 FTE) below October staffing; average year to date staffing of 40.5 FTE/mo. is 9% (3.5 FTE/mo.) above plan. Since January 2011, average monthly internal and consultant staffing is trending with plan.

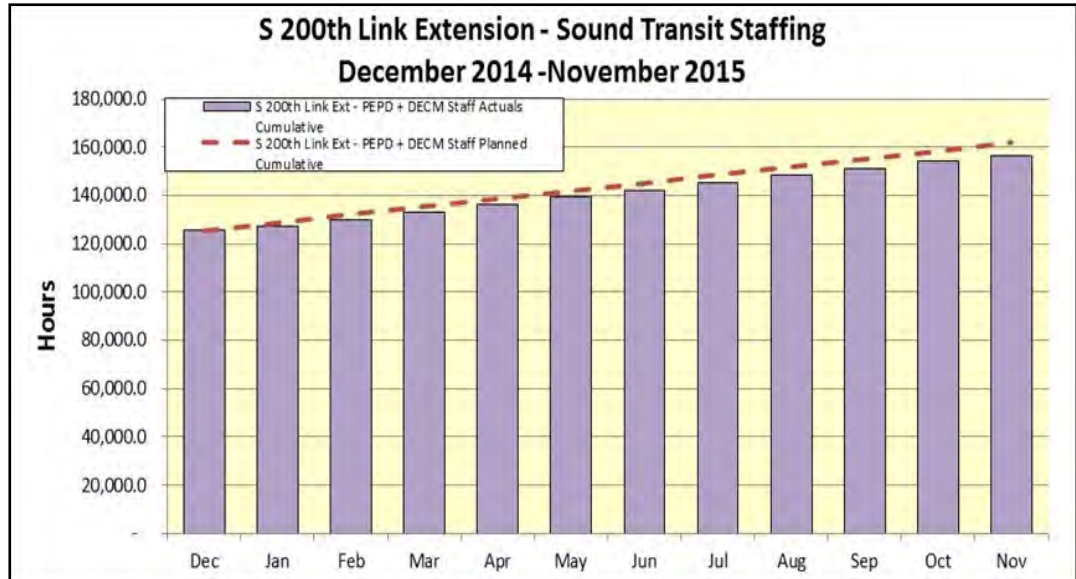


	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	323,049.6	328,455.0	5,405.4	101.7%	6,512.0	5,462.0	-1,050.0	83.9%
Monthly Average	5,475.4	5,567.0	91.6					
Monthly FTE	34.2	34.8	0.6		40.7	34.1	-6.6	

S. 200th Link Extension Staffing

Internal Resource Commitments South Link to S.200th Link Extension

Internal staffing in November (14.5 FTE) decreased 19% (3.4 FTE) from October staffing and was 30% (6.1 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing is trending 3.3% (0.6 FTE/mo.) below plan.



	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	161,760.9	156,416.0	-5,345.0	96.7%	3,296.0	2,316.5	-979.5	70.3%
Monthly Average	2,741.7	2,651.1	-90.6					
Monthly FTE	17.1	16.6	-0.6		20.6	14.5	-6.1	

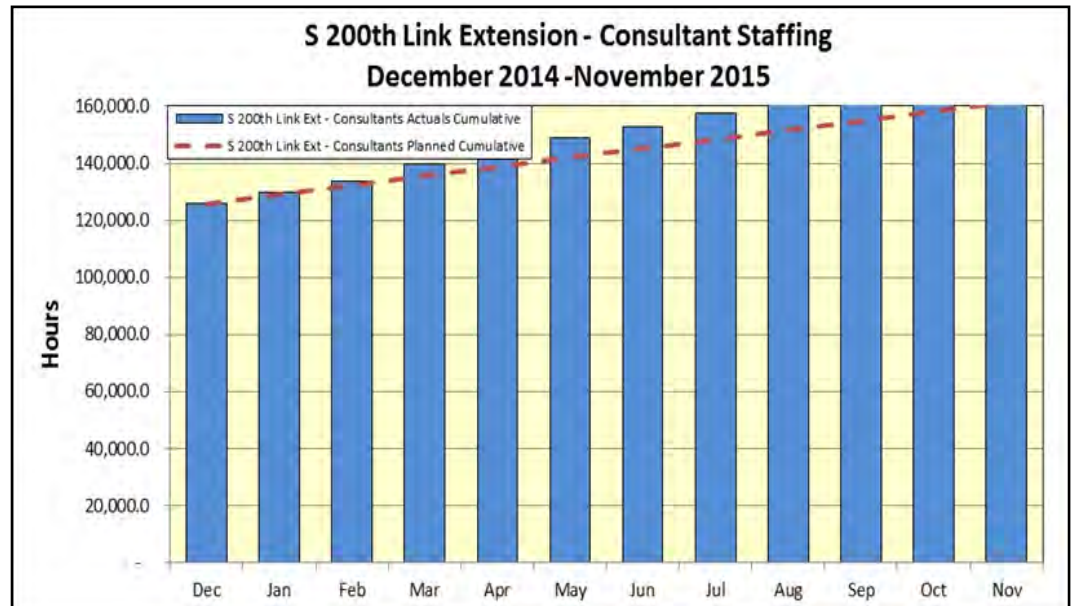
Link Light Rail Staffing Report



S. 200th Link Extension Staffing

Consultant Resource Commitments to S. 200th Link Extension

Consultant staffing on the S. 200th Link Extension in November (19.7 FTE) decreased 24% (6.3 FTE) from October and was 2% (0.4 FTE) below plan. Cumulatively since January 2011, average consultant staffing is trending 7% (1.1 FTE/mo.) above plan.

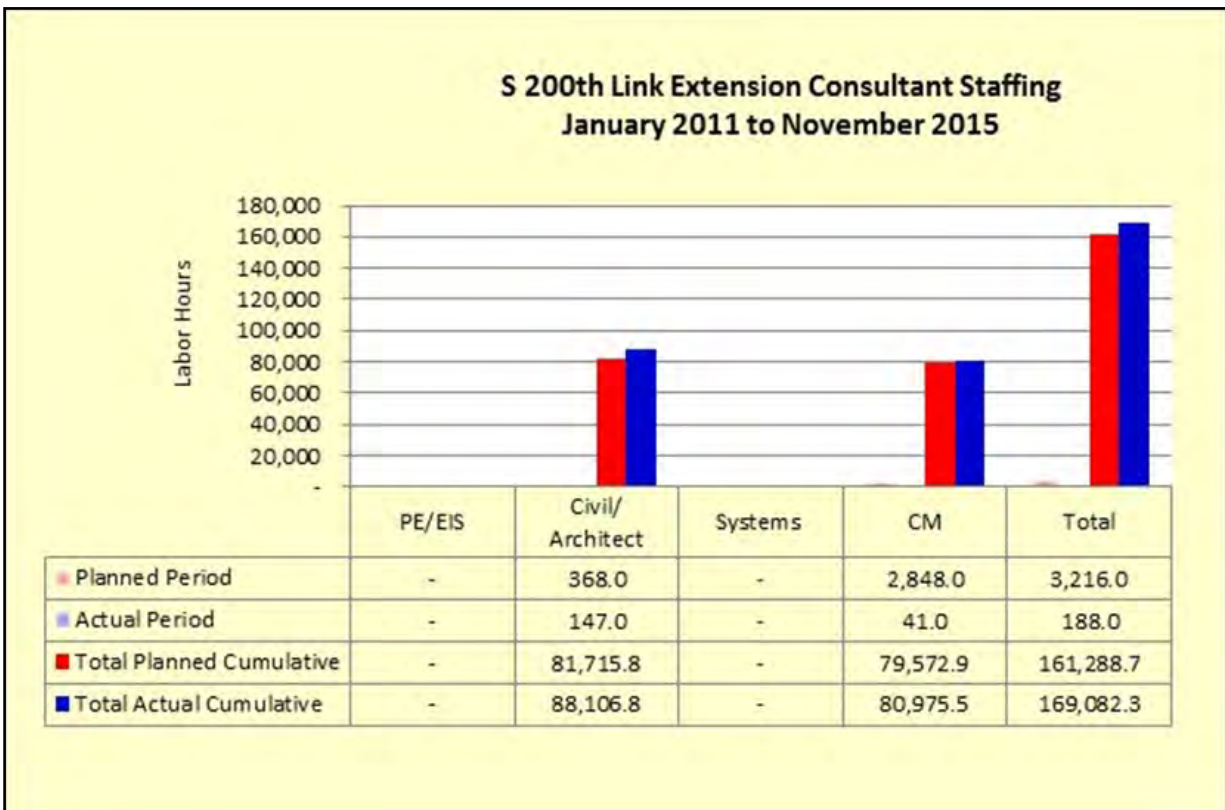


	Labor Hours Jan 2011 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	161,288.7	172,039.1	10,750.4	106.7%	3,216.0	3,145.5	-70.5	97.8%
Monthly Average	2,733.7	2,915.9	182.2					
Monthly FTE	17.1	18.2	1.1		20.1	19.7	-0.4	

S. 200th Link Extension Staffing

Consultant Resource Commitments to S. 200th Link Extension

Design/build project management consultants (18.7 FTE) accounted for 95% of consultant staffing in November; additional consultant staff (0.9 FTE) provided civil engineering support.



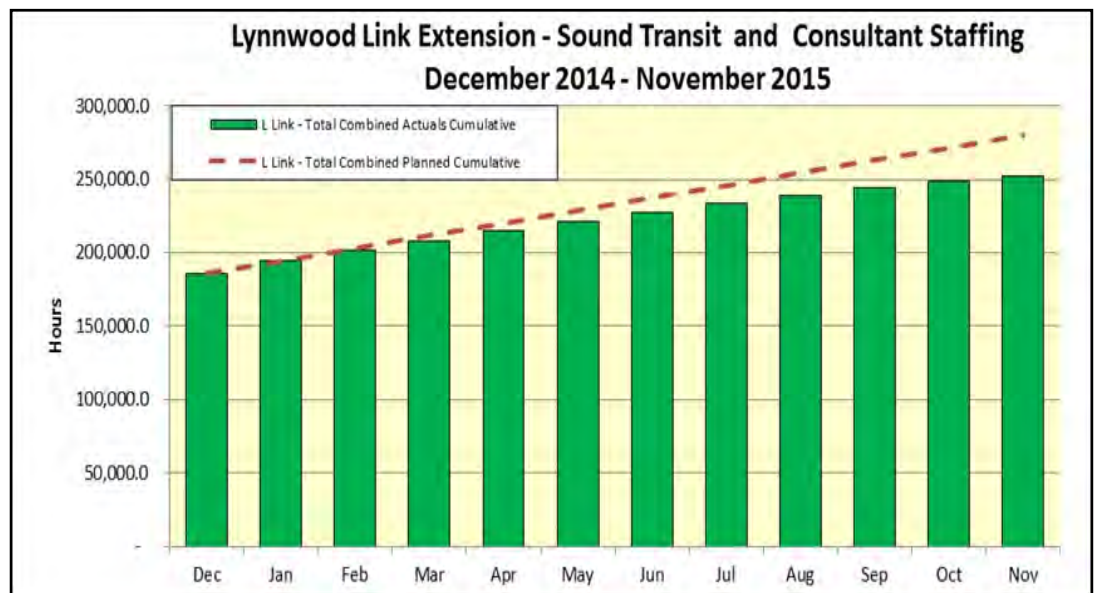
Link Light Rail Staffing Report



Lynnwood Link Extension Staffing

Total Internal and Consultant Staffing – Lynnwood Link Extension

During November there were 7.3 consultant and 13.8 internal FTE (40% of plan) assigned to the Lynnwood Link Extension. Internal staffing for November was 14% (2.2 FTE) below October staffing and 48% (12.8 FTE) below plan. Consultant staffing (7.3 FTE) was 47% (6.3 FTE) below October staffing and 73% (19.7 FTE) below plan. All consultant staff assigned to the project were supporting preliminary engineering. Average year to date project staffing (35.5 FTE/mo.) is 27% (13.2 FTE/mo) below plan; cumulatively since January 2013, staffing for the Lynnwood Link Extension (45.7 FTE/mo.) is 10% (5 FTE/mo.) below plan.



	Labor Hours Jan 2013 - Nov 2015				Current Period Nov 2015			
	Total Planned	Total Actual	Total Variance	Percent Expended	Period Planned	Period Actual	Period Variance	Percent Expended
No. of Hours	280,224.1	252,011.5	-28,212.6	89.9%	8,576.0	3,369.5	-5,206.5	39.3%
Monthly Average	8,006.4	7,200.3	-806.1					
Monthly FTE	50.0	45.0	-5.0		53.6	21.1	-32.5	

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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
UWS	University of Washington Station
VE	Value Engineering
VECP	Value Engineering Cost Proposal
WBS	Work Breakdown Structure
WSDOT	Washington Department of Transportation

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