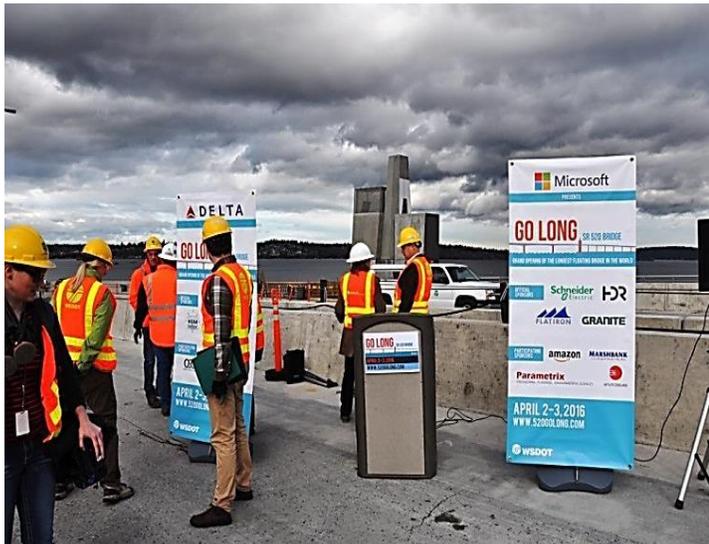




STATE ROUTE 520

CONSTRUCTION PROGRESS REPORT

FEBRUARY 2016



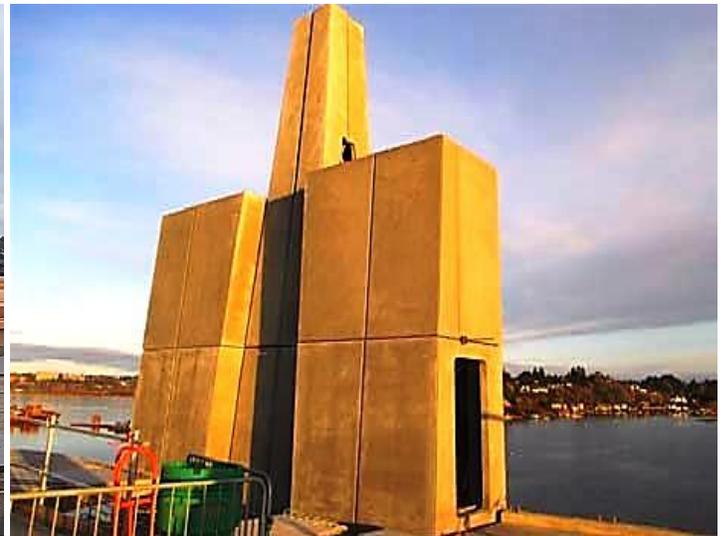
Floating Bridge and Landings (FB&L): Preparations for Grand Opening announcement



West Approach Bridge North (WABN): Construction, looking east



WABN: Concrete pour at column 27B



FB&L: Pontoon A north sentinel





FB&L: Installation of electronic signage on new floating bridge



WABN: Looking east over marine casings

Executive Summary3

ACTIVE CONSTRUCTION PROJECT REPORTS*

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* Note: The *State Route 520 Construction Progress Report* is no longer publishing monthly updates for the Pontoon Construction Project and the Eastside Transit and HOV Project as major construction work on those two projects has ended. Please see the April 2015 *Construction Progress Report* for the final updates on those two projects.

Executive Summary

EXECUTIVE OVERVIEW

The SR 520 Bridge Replacement and HOV Program will improve safety and reliability throughout the SR 520 corridor, from I-5 in Seattle to the Eastside. Projects currently under construction include the new six-lane SR 520 floating bridge, the new six-lane Eastside corridor that includes culverts, improved transit facilities and lids, pontoon construction in Aberdeen, and the new west approach bridge for westbound traffic. Future work includes replacing the Portage Bay Bridge, building a new west approach bridge for eastbound traffic, building lids in Seattle, and connecting a bicycle/pedestrian path from the floating bridge to local and regional trails in Seattle.



FB&L: Installation of barrier along expansion joint



Map of SR 520 Bridge Replacement and HOV Program

CURRENTLY FUNDED PROGRAM

We are currently funded to move forward with:

- Constructing a new, safer floating bridge.
- Building the north half of the new west approach bridge, and connecting six lanes of traffic and the regional shared-use path from the Montlake interchange to the new floating bridge.
- Continuing to design the remaining elements of the west side of the corridor in Seattle, and then proceeding with construction.

PROGRAM STATUS

Floating Bridge and Landings (FB&L):

At the east approach, crews worked on dry finish of curb and barrier on the bicycle and pedestrian path. On Lake Washington, longitudinal pontoon anchor testing continued, crews conducted the rock ballasting, fire protection installation and pre-functional testing. Pontoon and bridge electrical construction activities continued. Crews conducted the bridge control system (BCS) integral functional test from pontoons W to L. Crews conducted pontoon deck and underdeck electrical punch list walkthroughs.

West Approach Bridge North (WABN):

Extension and widening work continued at 24th Avenue East, and concrete placement was completed at wall 2. Crews completed demolition of span W22 of the closed westbound off-ramps to Lake Washington Boulevard. Work continued on substructure with the installation of stainless steel rings and the fabrication of column rebar cages. Crews continued foundation work, which included fabricating shaft reinforcement, drilling and concrete placement at shaft 41A.



FB&L: Fire protection pump testing

MAJOR RISKS

Notable major risks that could delay the program or increase costs include:

- Inflation costs for labor, materials and equipment.
- New requirements or contract changes required by local communities, regulatory groups or agencies.
- FB&L coordination with the WABN project at pier 36 and the west side staging area.
- Geotechnical difficulties.
- A lengthy commissioning process that impacts the open-to-traffic date.
- Potential for damage to the new bridge during the demolition of the old bridge.

UPCOMING MILESTONES

Floating Bridge and Landings:

Pontoon and bridge electrical work will continue. Crews will install light poles, light fixtures on the shared-use path, lane control signs (LCS), side-mount dynamic message signs (SDMS) and variable message signs (VMS). At the bridge maintenance facility, crews will install lockers, signage and blinds. On Lake Washington, crews will continue longitudinal pontoon anchor testing, final rock ballasting, and drainage installation testing.

WABN:

Crews will continue demolition of the closed westbound off-ramp to Lake Washington Boulevard, and removal of W26, 27 and 28 spans and columns. Crews will continue constructing columns, building superstructure falsework, setting seismic isolation bearings, and delivering and setting girders. In addition, with the ramps demolished, crews will build the work trestle fingers for bridge frames 1 and 2, in Union Bay.

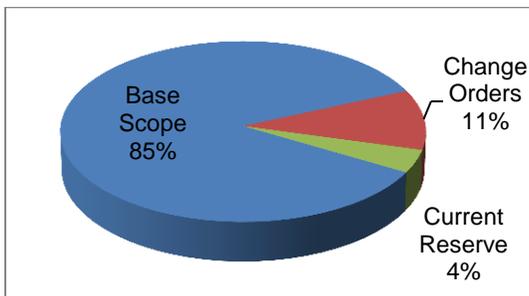
Total Program

	Total Budget	Actuals to Date	Remaining
SR520 Program Totals*	\$4,561,210,704	\$2,404,250,467	\$2,156,960,237
Federal	\$498,134,693	\$374,943,911	\$123,190,781
FEDERAL GRANT FUNDS	\$3,000,000	\$3,000,000	\$0
FEDERAL FORMULA FUNDS	\$176,125,892	\$160,535,046	\$15,590,846
NATIONAL HIGHWAY PERFORMANCE PROGRAM	\$3,826,918	\$1,027,619	\$2,799,299
HIGHWAY SAFETY IMPROVEMENT	\$14,015,000	\$14,015,000	\$0
OUTDOOR ADVERTISING-INTERSTATE	\$855,000	\$855,000	\$0
STATE MATCHING (FUND 880)	\$311,883	\$311,883	\$0
TIFIA (USDOT - TIFIA LOAN)	\$300,000,000	\$195,199,364	\$104,800,636
Local	\$2,303,701	\$2,071,979	\$231,722
LOCAL PROJECT(CURRENT)	\$2,303,701	\$2,071,979	\$231,722
State	\$3,901,372,310	\$2,027,234,577	\$1,874,137,733
TRANSPORTATION PARTNERSHIP ACCOUNT (TPA)**	\$535,732,598	\$448,072,873	\$87,659,725
NICKEL ACCOUNT STATE DOLLARS	\$52,243,840	\$52,244,156	(\$316)
CONNECTING WASHINGTON	\$1,642,000,000	\$0	\$1,642,000,000
SR520 CORRIDOR	\$549,032,022	\$549,032,022	\$0
SR520 GARVEE	\$924,612,501	\$924,612,501	\$0
SR520 TRIPLE BACKED BOND SECOND SALE	\$110,906,800	\$0	\$110,906,800
Toll Revenue	\$70,271,057	\$45,984,118	\$24,286,939
SR520 Civil Penalties Account***	\$14,000,000	\$4,715,414	\$9,284,586
STATE FUNDS	\$2,573,492	\$2,573,492	\$0
Deferred Sales Tax	\$159,400,000		\$159,400,000
DEFERRED SALES TAX	\$159,400,000		\$159,400,000

* In January 2015, WSDOT announced an updated cost estimate of \$4.47 billion to reconstruct the SR 520 corridor. The updated estimate later was adjusted to \$4.56 billion to reflect a \$1.64 billion cost to construct SR 520's then-unfunded western segment. (A 2012 estimate put that latter cost at \$1.40 billion.)

**TPA includes \$10M from ESSB 6001 for west side design development

*** \$14M included for civil penalties



Cumulative Reserve	\$434,100,000
February Change Orders	(\$2,511,824)
Previous Change Orders	(\$312,825,355)
Right of Way Settlements	(\$3,777,010)
Current Reserve	\$114,985,811

Floating Bridge and Landings Project

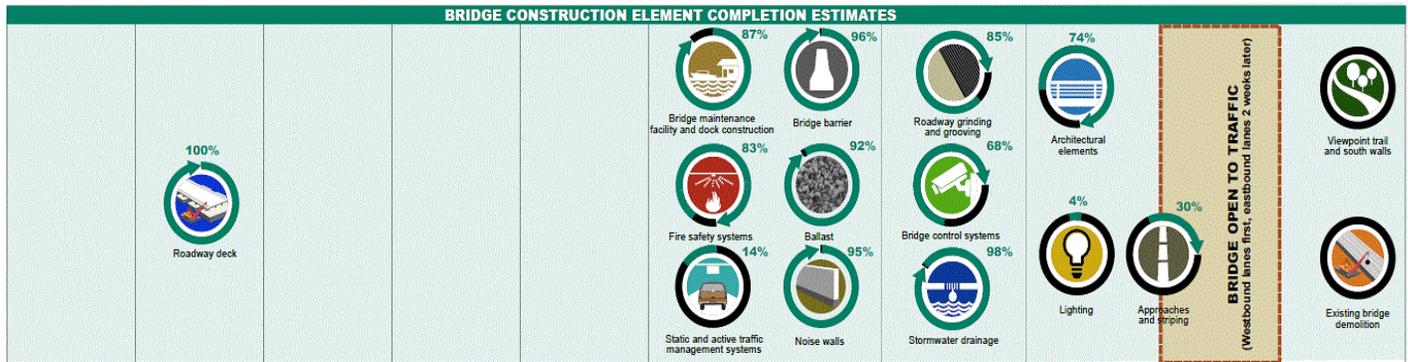
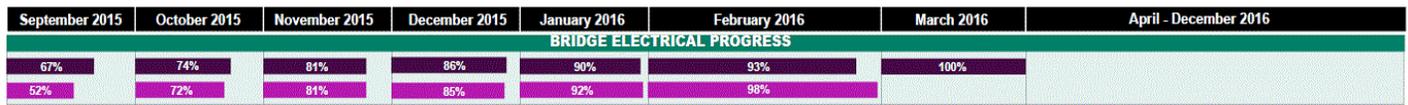
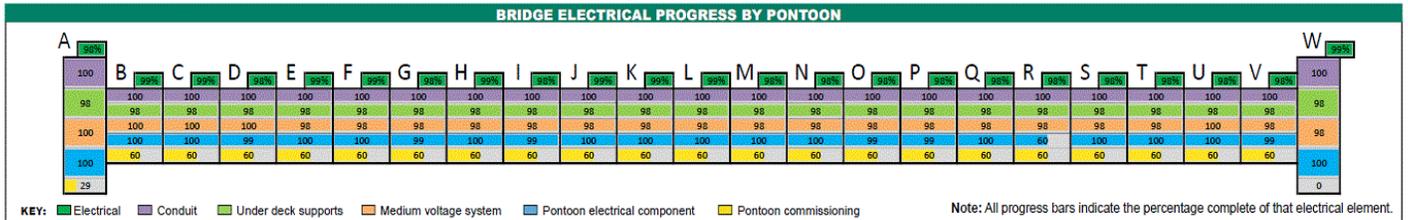
FLOATING BRIDGE AND LANDINGS

The SR 520 Floating Bridge and Landings (FB&L) Project will replace the existing, vulnerable four-lane structure with a new six-lane bridge that can withstand windstorms of up to 89 miles per hour. The new six-lane facility will include a bicycle/pedestrian path and a bridge maintenance facility on the east end. The project includes construction of 44 supplemental stability pontoons in Tacoma.



FB&L: Looking west from Medina at Evergreen Point Road lid and new floating bridge

Original Engineers Estimate	\$640,769,000
Bid Price	\$586,561,000
Change Orders to date	\$171,108,718
Current Contract Value	\$757,669,718



Floating Bridge Electrical Progress and Commissioning milestones

FEBRUARY ACCOMPLISHMENTS

At the east approach, crews worked on dry finish of curb and barrier on the bicycle and pedestrian path. On Lake Washington, longitudinal-pontoon anchor testing continued. Crews conducted the rock ballasting, fire protection installation and prefunctional testing. Pontoon and bridge electrical construction activities continued. Crews conducted the bridge control system (BCS) integral functional test from pontoons W to L. Crews conducted pontoon deck and underdeck electrical punch list walks.

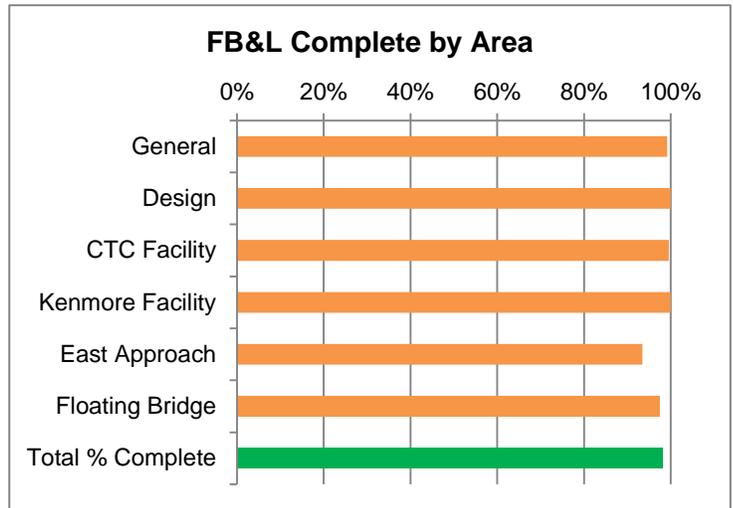
RISK

Several anchor cables were found to have been compromised during the installation process. A thorough review will be performed to ensure the anchor cables do not pose a risk to opening the bridge to traffic in April 2016. Based on an initial analysis, the cables are considered structurally adequate and can be replaced under traffic conditions. Replacement of the cables will be performed by the design-builder during spring/summer 2016.

There is a project interface between the Eastside and the FB&L projects. The work – such as paving and installation of drainage, lighting, electrical, intelligent transportation system (ITS), and barrier as part of the Eastside project – needs to be verified that it was completed as designed.

A review of the design-builder’s compliance with the “Buy America” requirement is being performed. If the design-builder is found to be out of compliance, they may need to replace noncompliant materials or WSDOT could be at risk of losing federal funding.

Commissioning of the new floating bridge is a complex and potentially time-consuming process and is on the critical path to switching traffic to the new bridge. Traffic cannot be switched to the new bridge until commissioning is completed to ensure all systems are in working order and safe for public use.



The Design-Builder continues performing major work on the Lake Washington. This includes demolition of the existing bridge. Spills of oil, concrete or soils from the project may cause work stoppage or fines. Permits are tied to all projects working on the lake. Other project violations could impact permits on this project



FB&L: Modular-joint concrete pour

FEBRUARY COSTS

Preliminary engineering is complete. The total actual cost to date from the contractor is 94 percent of the budget.

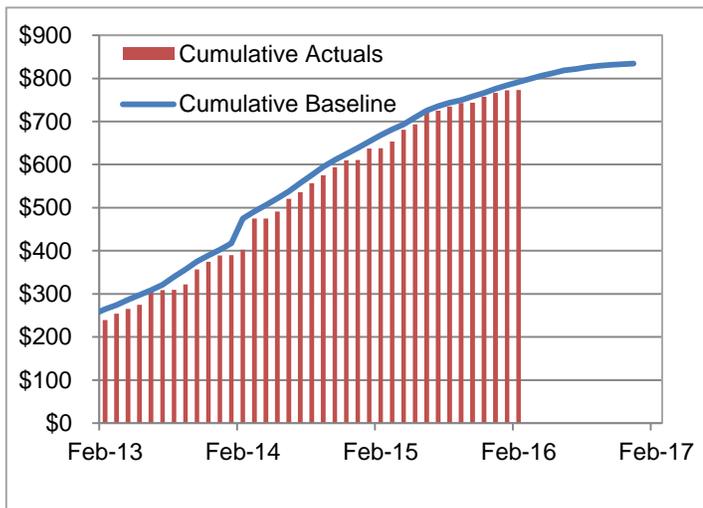
	Current Budget	Actuals to Date	Remaining Budget
Floating Bridge and Landings Construction Project Totals	\$839,427,175	\$792,281,268	\$47,145,907
Preliminary Engineering	\$10,659,063	\$10,659,063	\$0
Right of Way	\$4,046,033	\$3,866,054	\$179,979
Construction	\$824,722,079	\$777,756,151	\$46,965,928
<i>Current Contract Value</i>	<i>\$757,669,718</i>	<i>\$717,760,040</i>	<i>\$39,909,678</i>
<i>Agreements</i>	<i>\$38,241,225</i>	<i>\$34,025,221</i>	<i>\$4,216,004</i>
<i>Construction Engineering</i>	<i>\$21,071,136</i>	<i>\$19,262,288</i>	<i>\$1,808,848</i>
<i>State Force Work</i>	<i>\$60,000</i>	<i>\$3,745</i>	<i>\$56,255</i>
<i>State Materials</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>
<i>Vendor Supplied Materials</i>	<i>\$7,680,000</i>	<i>\$6,704,857</i>	<i>\$975,143</i>

Cost information through Feb. 29, 2015

FEBRUARY CHANGE ORDER SUMMARY

There was one change order executed in February for zero cost. Change orders total \$171,108,718 for the FB&L project at the time of this report.

FEBRUARY PERFORMANCE



Monthly actuals are trending down as the project nears substantial completion.



FB&L: Barrier pour at East Approach

SCHEDULE SUMMARY

Milestone	Revised Contract Date	Actual/Trend
Notice to Proceed 1 - Design Initiated	9/1/2011	9/1/2011
Notice to Proceed 2 - Site Construction Start	9/1/2011	9/1/2011
Pier 36 Construction	11/15/13	11/14/2013
Substantial Completion	4/28/2016	On Time
Physical Completion	2/22/2017	On Time

The contractor's current schedule submittal is showing on-time substantial completion by April 28, 2016, consistent with the revised contract date.

FEBRUARY QUALITY SUMMARY

“Audits – Actual” are audits performed by WSDOT Quality Verification staff on the design-builder's compliance with contract requirements.

“Nonconformance Reports” are incidents recorded by the design-builder's quality inspection staffs that do not appear to be constructed in accordance with the approved drawings and specifications.

	Previous Total	Current Period	Project Total	Open	Closed
Audits - Actual	3828	22	3850	15	3835

	Previous Total	Open	Current Period	Avg. Time Open
Nonconformance Reports (NCR)	378*	33	0	258 days
Nonconformance Issues (NCI)	918	15	4	282 days

* Includes two nonconformance reports not reported in the January 2016 construction update.

FEBRUARY SAFETY SUMMARY

“Recordable Incidents” are job-related safety incidents that have been recorded.

“Lost Time Incidents” are job-related safety incidents that result in personnel not being able to work.

“Contract Days without an Incident” are the number of days since a lost-time incident has occurred.

Design-Builder	Previous Total	Current Period	Project Total
Recordable Incidents	41	0	41
Lost Time Incidents	4	0	4
Contract Days without an Incident	15	28	43

FEBRUARY ENVIRONMENTAL SUMMARY

“**Noncompliance Event (ECAP)**” is an action not in compliance with environmental standards, permits or laws.

“**Minor Environmental Event**” is an environmental impact that does not meet the requirements to become an ECAP.

	Previous Total	Current Period	Total
Noncompliance Event (ECAP)	60	2	62
Minor Environmental Event	58	2	60

On 2/3/2016, a Minor Environmental Event occurred. A WSDOT inspector noticed that hydraulic fluid had leaked from a man lift on the lower deck of Pontoon B. The estimated volume of hydraulic fluid discharged was approximately one-half gallon. None of the hydraulic fluid entered the lake. WSDOT notified KGM of the incident and the fluid was cleaned up.

On 2/5/2016, a Noncompliance Event occurred. While the dry-finish and repair crew was pouring back some bolt holes along the bicycle-pedestrian path, some process and rain water collected along the curb. As they were preparing the holes, some turbid water slowly leached from one of the plugged bolt holes, creating a small plume in the water. Approximately one cup of process water was discharged to the lake. The crew’s work was shut down, the work area was vacuumed dry, swept clean and the hole was plugged. For secondary containment, KGM crews will stage Flexifloats under the bolt holes on future pours. The areas around the holes will be cleaned to prevent contaminated water from entering the holes, and the seals around the holes will be checked prior to pouring. All the resource agencies were notified.

On 2/8/2016, a Noncompliance Event occurred. A WSDOT inspector was observing a subcontractor preparing to coat the interior of a catch basin. The inspector noticed that some of the water being used to clean the area entered the catch basin. It travelled through the stormwater system, discharging into the drainage lagoon on Pontoon LSW. A small plume of turbid water was observed at the discharge location for a short duration. WSDOT notified KGM of the incident and discussed containment protocols for future operations associated with this work. All the appropriate resource agencies have been notified.

On 2/12/2016, a Minor Environmental Event occurred. A truck driving on the top deck of the bridge had a motor oil leak. It occurred during heavy rain, creating a sheen approximately 20 x 30 feet on the bridge deck. The quantity of spilled oil was estimated to be less than one-quarter cup. None of it entered the catch basins or waters of the state.

West Approach Bridge North Project

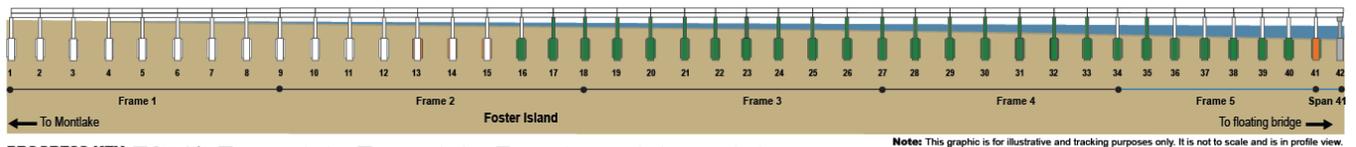
CONSTRUCTION OVERVIEW

The West Approach Bridge North Project (WABN), the first stage of western landings for the new SR 520 floating bridge, continues WSDOT's commitment to replace vulnerable structures and improve mobility for motorists. The new approach bridge, more than 6,000 feet long, will support a six-lane highway corridor and a regional shared-use path for bicyclists and pedestrians between the new floating bridge and Montlake. The WABN project will also greatly benefit the local built and natural environment by improving stormwater treatment, employing noise reduction measures, mitigating for wetland and aquatic impacts, and improving the Arboretum and local parks.

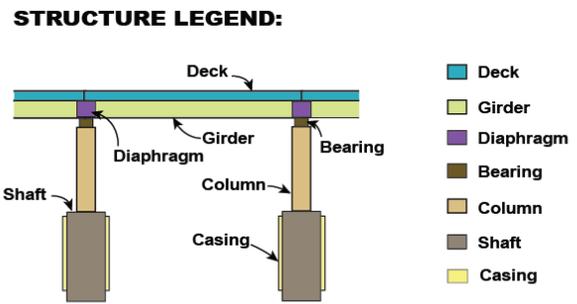


WABN: Falsework for pier 20

Original Engineers Estimate	\$209,905,587
Bid Price	\$199,537,371
Change Orders to date	\$2,328,405
Current Contract Value	\$201,865,776



WABN PROGRESS	
	0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Ramp demolition	52%
Casing installation	59%
Shaft installation	53%
Column installation	38%
Bearing installation	
Girder installation	
Diaphragm installation	
Deck installation	

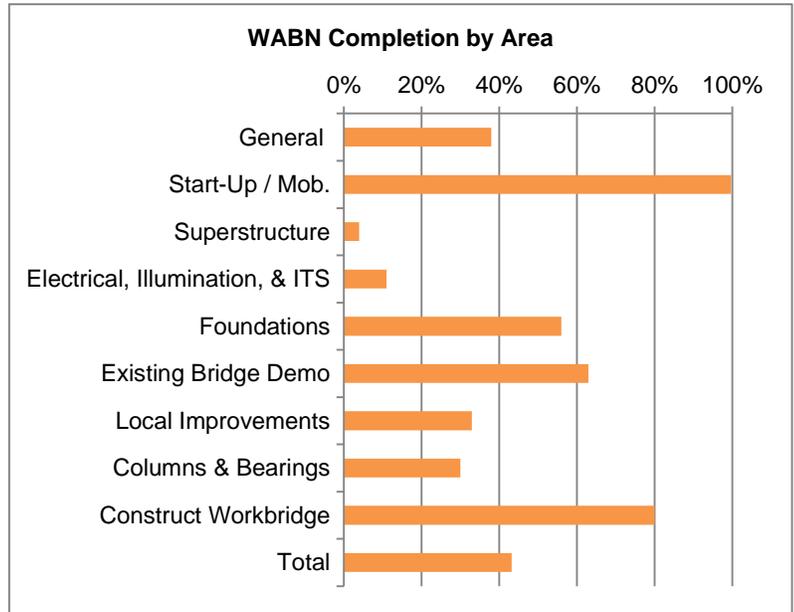


BY THE NUMBERS:			
• 58 of 99 casings complete	• 0 of 47 diaphragms complete	• 0 of 41 sections of roadway deck complete	
• 52 of 99 shafts complete	• 0 of 104 bearings complete		
• 36 of 95 columns complete	• 0 of 353 girders complete		

West Approach Bridge North progress tracker as of Feb. 29, 2016

FEBRUARY ACCOMPLISHMENTS

Through February 29, the contractor has installed 58 bridge casings at 29 pier locations, constructed 52 drilled shafts at piers 13-41, and completed 36 of 95 columns. The contractor continued demolition of the 520/6 W-S spans, commenced removal of 520/6 W-W columns, and continued marine work for piers east of 33.



RISK

- Environmental noncompliance events
- Procurement of seismic isolation bearings
- Procurement of expansion joints
- Geotechnical obstructions or complications during foundation construction
- New requirements or contract changes required by local communities, regulatory groups or agencies.



WABN: Setting rebar cage for column 18B

FEBRUARY COSTS

The preliminary engineering is complete; final right-of-way costs are being recorded. There have been 19 payments made to the contractor through February 2016.

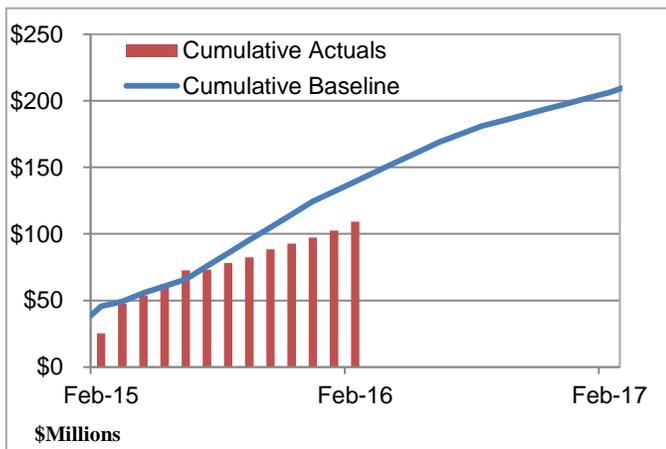
	Current Budget	Actuals to Date	Remaining Budget
West Approach Bridge North Project Construction Totals	\$255,952,821	\$144,091,948	\$111,860,873
Preliminary Engineering	\$26,485,353	\$26,485,353	\$0
Right of Way	\$4,730,000	\$4,231,036	\$498,964
Construction	\$224,737,468	\$113,375,559	\$111,361,909
Current Contract Value	\$201,865,776	\$101,177,026	\$100,688,750
Agreements	\$9,226,954	\$6,168,457	\$3,058,497
Construction Engineering	\$13,478,157	\$5,926,401	\$7,551,756
State Force Work	\$10,301	\$10,301	\$0
State Materials	\$0	\$0	\$0
Vendor Supplied Materials	\$156,280	\$93,374	\$62,906

Cost information through Feb. 29, 2016

FEBRUARY CHANGE ORDER SUMMARY

There were eight change orders executed in February for \$2,511,824. Change orders total \$2,328,405 for the WABN project at the time of this report.

FEBRUARY PERFORMANCE



Cumulative actuals are running below the baseline projection through February.



WABN: Removing girders from the old off-ramp to Lake Washington Boulevard.

SUMMARY SCHEDULE

The thirteenth progress schedule update (February) has been submitted and is under review.

Milestone	Contract Date	Actual/Trend
First Charged Working Day	9/11/2014	9/11/2014
Begin Access East of Pier 33	9/1/2015	9/1/2015
Begin Access to Floating Bridge	9/1/2016	9/1/2016
Bridge Open to Traffic	7/11/2017	6/21/2017
End of Working Days	11/29/2017	11/6/2017

FEBRUARY SAFETY SUMMARY

	Previous Total	Current Period	Project Total
Work-related injuries requiring first aid only	6	0	6
Work-related injuries resulting in transfers or restrictions	3	2	5
Work-related injuries resulting in days away from work	0	0	0

On 2/12/2016, a Recordable Incident occurred. A Flatiron employee sprained a thumb while handling materials. The injury resulted in restricted work duty.

On 2/19/2016, a Recordable Incident occurred. A Flatiron employee stepped onto an uneven surface on the temporary trestle, resulting in a sprained ankle. The injury resulted in restricted work duties.

FEBRUARY ENVIRONMENTAL SUMMARY

“**Noncompliance Event (ECAP)**” is an action not in compliance with environmental standards, permits or laws.

“**Minor Environmental Event**” is an environmental impact that does not meet the requirements to become an ECAP.

	Previous Total	Current Period	Project Total
Noncompliance Event (ECAP)	77	2	79
Minor Environmental Event	0	0	0

On 2/10/2016, a Noncompliance Event occurred. The Department of Ecology conducted a site inspection of the WABN project. During the inspection, numerous five-gallon buckets of Detector Loop Sealant Black 5000 were discovered on a shelf, not in secondary containment. Ecology stated a violation would be issued for this incident.

On 2/23/2016, a Noncompliance Event occurred. A WSDOT inspector noticed debris falling into Lake Washington from the seam of a crane mat being lifted from a temporary work trestle. The crew was notified of the incident and operations were halted for the day. A work boat immediately responded and personnel retrieved the floating debris within the boom and around the floating crane mat.

GLOSSARY OF FREQUENTLY USED PROJECT AND INDUSTRY ACRONYMS

ATM	Active Traffic Management
CCMP	Community Construction Management Plan
CIP	Cast-in-Place
CTC	Concrete Technology Corporation (SSP production site)
D-B	Design-Builder
DBIC	Design-Builder Initiated Change
Eastside	Eastside Transit and HOV Project
ECAP	Environmental Compliance Assurance Procedure
ECC	Eastside Corridor Constructors (Eastside Design-Builder)
ESA	Endangered Species Act
FB&L	Floating Bridge & Landings
FONSI	Finding of No Significant Impact
GH	Grays Harbor (Pontoon construction site)
HQ	WSDOT Headquarters
ITS	Intelligent Transportation System
K-G	Kiewit General, A Joint Venture (PCP Design-Builder)
KGM	Kiewit General Manson, A Joint Venture (FB&L Design-Builder)
M-A	Mowat American, A Joint Venture (WCB Contractor)
NCI	Non-Conformance Incident
NCR	Non-Conformance Report
NEPA	National Environmental Policy Act
NTP	Notice to Proceed
NWR	WSDOT Northwest Region
PCI	Potential Change Issue
PCO	Potential Change Order
PCP	Pontoon Construction Project
PT	Post-Tensioning
QA	Quality Assurance
QC	Quality Control
RFI	Request for Information
RFP	Request for Proposal
ROD	Record of Decision
SPI	Schedule Performance Index is a performance index which equals
SSP	Supplemental Stability Pontoon
TCE	Temporary Construction Easement
TIFIA	Transportation Infrastructure Finance and Innovation Act
WABN	West Approach Bridge North
WCB	West Connection Bridge

For more information

Visit: www.wsdot.wa.gov/projects/SR520Bridge
E-mail: SR520Bridge@wsdot.wa.gov
Call: 1-888-520-NEWS (6397)
Mail: Washington State Department of Transportation
SR 520 Bridge Replacement and HOV Program
999 3rd Avenue, Suite 2200
Seattle, WA 98104

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