

REHABILITATION OF FRANCIS SCOTT KEY BRIDGE
FROM ROSSLYN, ARLINGTON, VIRGINIA TO GEORGETOWN WASHINGTON, DC
DC Contract No.: DCKA-2014-C-0074

FAP No.: BH-1104 (013)

CONSTRUCTION MANAGER'S
WEEKLY PROGRESS REPORT
From 05/28/2017 to 06/03/2017

Project Website: www.keybridgeproject.com



1. EXECUTIVE SUMMARY

Project Description:

The AECOM Construction Management and Inspection team is providing construction and inspection services for the Rehabilitation of the Francis Scott Key Bridge over the Potomac River (Bridge No. 0007). This Francis Scott Key Bridge, built in 1929 is a historic 1,781-foot long reinforced concrete, open-spandrel arch bridge consisting of eight spans over the George Washington Parkway, Potomac River, Whitehurst Freeway and C&O Canal. The bridge not only served as a major commuter route into Washington, DC, but it also was listed on the National Register of Historic Place, which required coordination with the National Park Service since it spanned the C&O Canal and George Washington Parkway. This rehabilitation project is to restore the deteriorated portions of the structure, improving its structural integrity for another 30 years while maintaining those architectural features which contribute to its historical significance. The repair plans include conventional concrete patching repairs as well as strengthening with carbon fiber reinforced polymer reinforcing bars and sheeting materials. The construction cost is estimated to be approximately \$14.5 million.

The scope of the construction work includes the following:

1. Installing pedestrian/bicycle detection loops and warning flashers on the Bridge at the ramp to eastbound Whitehurst Freeway.
2. Cleaning and painting the existing steel pedestrian railing on the bridge.
3. Removing the concrete bollards from the east sidewalk at the east ramp exit.
4. Removing and installing new street light poles on the bridge.
5. Removing and resetting portion of the precast concrete traffic barrier on the Bridge.
6. Repairing the precast concrete traffic barrier and grout pads and the northwest concrete traffic barrier end post.
7. Strengthening the deck overhangs with carbon fiber reinforced polymer bars.
8. Repairing the concrete wearing surface on the bridge.
9. Repairing grout pockets at the post-tensioned deck hold down bolts.
10. Replacing the non-armored expansion joint seal (B-0007 and East Ramp).
11. Replacing the armored expansion joint seals (B-0007 and East Ramp)
12. Overlaying the right lanes (inbound and outbound directions) on the bridge with a high molecular weight methacrylate resin (HMWM) overlay; Milling and overlaying the Rosslyn approach structure with a very high early strength latex-modified concrete (LMC-VE).
13. Cleaning debris from all bridge deck drainage scuppers and pier chambers and Removing and replacing the Bridge deck drainage downspout.
14. Rehabilitating the support for a 30-inch Washington Aqueduct water main on the bridge.
15. Repairing portions of the concrete encased and the reinforced concrete floor beams; Cleaning and painting the exposed end of the steel floor beams.
16. Replacing failed concrete deck pedestals and Replacing portions of the utility gallery floor slabs full depth.
17. Repairing portions of the concrete superstructure, including but not limited to: deck soffit, deck pedestals, spandrel arches, spandrel columns, main arches, diaphragm walls, deck slab, and arch struts.
18. Repairing portions of the concrete substructure, including the piers, abutments, abutment chambers, and wing walls and encapsulating the pier footings with fiber reinforced polymer jackets at the waterline.
19. Removing and replacing the fixed steel access ladder at North abutment and installing a new fixed steel access ladder at the South abutment.
20. Removing and replacing portion of chain link fencing (bridge access deterrent) on the main arches.
21. Cleaning the Bridge fascia with pressurized water and Applying an anti-graffiti treatment to portions of the piers.
22. Removing and applying new pavement markings (B-0007 and East Ramp).
23. Maintenance of pedestrian and vehicular traffic during construction of the project, including temporary lane and sidewalk closures necessary to perform the work.

3. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

Progress Summary:

1. Installation still in progress for the suspended scaffold and protection shield system at span D.
2. CO #1 has been completed and awaits execution by the Contracting Officer. Review continues for the processing of PCO-02.
3. Continued to update the project website.
4. Demolition work still in progress for the concrete repairs at North abutment and from North abutment to mid span C.
5. Sandblasting of existing reinforcing steel, installation of anchors and wire mesh for concrete repairs continues in sections prepared or demolished during the winter months.
6. The contractor's shotcrete contractor continued shotcrete work at the North Abutment.
7. Contractor continued working on remove and reset permanent precast concrete traffic barriers on the deck.
8. Contractor continued working on Deck pedestal repair and replacement activities in spans C.
9. Continued coordination with Pepco regarding their work schedule on Water St.
10. Contractor started working on sandblasting and painting Water main support beams.
11. Ongoing coordination with Greg King, Thompson's Boat Center

12. CM Community Outreach Activities

The team communicated with the key stakeholders during the week to give them project status updates and identify any concerns that they might have about the project.

Stakeholder Contact:

- Prepared traffic advisories for Key Bridge Lane closures Monday June 12, 2017 - Friday, July 7, 2017
- Spoke with Michael B. Aghajanian of Guest Services on Thursday, June 1 regarding safety concerns caused by construction activity at the Key Bridge Boathouse.
- Coordinated with project management team to develop a response and communicated back to Mr. Aghajanian via email
- Met onsite with NPS staff, including Sean McCabe and Jon Crichfield, and project management team on Friday, June 2 to follow up on safety concerns at the Key Bridge Boathouse and review project safety plan and procedures
- Worked with project management team and contractor to develop response to concerns raised by NPS Staff
- Visited Key Bridge Boathouse on Friday, June 2 to follow up with staff and identify any issues or concerns from the staff

Notes:

- Received Rack Card from printer on 6/2
- Continued PEPCO and DDOT coordination as PEPCO's contractor Joy Construction is working on the west end of Water St in order to mitigate any community and Capitol Crescent Trail user concerns about construction.
- Updated website including posting weekly reports and updated two week look ahead schedule

Key Takeaways:

- Communications team will continue to develop relationships with key businesses near the bridge that can help us distribute project information to their customers

4. ISSUES / ACTION ITEMS

- **Ongoing Issues / Items:**
- Pepco Cable on the East Ramp Concrete Bent Columns has now been resolved but the actual work is yet to be completed. Pepco is to bury the overhead cable underground. The work to relocate the overhead cable underground began and is currently in progress on Water St.
- Technopref continues to be reminded of its obligations under the Contract. Official DDOT action still pending on Technopref's claimed "additional" costs submitted based on DDOT's January 24, 2017 letter. A draft response is currently under review to close this issue with the contractor.
- **Action Items:** NPS issued Limited Special Use permit, and verbally provided access to the river. Contractor has since had access and to continue working on barges on the river unimpeded. Hardcopy permit still awaited although does not impact progress of contractor's operations on site. No new actions on this item at this time.
- **New Issues / Items:** NPS directed a partial Shutdown of activities under the bridge until satisfactory completion of review and approval of the safety measures in place for safety mitigation from falling debris due to an incident of falling concrete debris over Key Bridge boat rental dock, However all safety measures were taken to mitigate the failure in protection shield.

5. MEETINGS / PROJECT COORDINATION

- Conference call continued to be utilized to communicate with the contractor and engineer of record when a physical meeting is not possible.
- Coordination meetings continue with the DDOT team; and Bi-Weekly project progress meetings continue to be held with DDOT and the contractor.
- Coordination continues with Pepco regarding their work on Water St.
- Considerations and meetings currently underway for the additional DC Water MOU (with DDOT) work for the 30" Water mainline repair; CM team participation is minimal. DC Water to directly have oversight of this work.

6. DAILY WORK PERFORMED

Monday 05/29/17

1. No Work due to Memorial Day holiday.

Tuesday 05/30/17

1. Technopref was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued loading scaffold materials on barge. Continued to sound with DDOT inspectors at North abutment. Started installing pedestal support system at spandrel pedestal column 56 row B
2. Handon services continued erecting scaffolding system and protection shield at Span D and pier 2.
3. Fibwrap was on-site and continued the demolition process and sandblasting rebars for the concrete repairs at North abutment and span C. replaced deteriorated rebars and installed wire mesh and anchor bolts for type 1 concrete repair.
4. Wards and associates Continued placing shotcrete for the concrete repairs at North abutment.
5. Handon Concrete was on site and continued demolition process, form work installation and concrete placement for deck pedestals repairs

6. Ionion paint was on site and started preparing for the work on the Water Main.

Wednesday 05/31/17

1. Technopref was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued loading scaffold materials on barge. Continued to sound with DDOT inspectors at North abutment. Continued working on remove and reset permanent precast concrete traffic barrier
2. Handon services continued erecting scaffolding system and protection shield at Span D.
3. Fibrwrap was on-site and continued the demolition process and sandblasting rebars for the concrete repairs at North abutment and span C. replaced deteriorated rebars and installed wire mesh and anchor bolts for type 1 concrete repair.
4. Wards and associates continued placing shotcrete for the concrete repairs at North abutment.
5. Handon Concrete was on site and continued demolition process, form work installation and concrete placement for deck pedestals repairs
6. Ionion paint was on site and continued blasting for the Water Main supporting beam in span C

Thursday 06/01/17

1. Technopref was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued loading scaffold materials on barge. Continued to sound with DDOT inspectors at North abutment. Continued working on remove and reset permanent precast concrete traffic barrier
2. Handon services continued erecting scaffolding system and protection shield at Span D.
3. Fibrwrap was on-site and continued the demolition process and sandblasting rebars for the concrete repairs at North abutment and span C. replaced deteriorated rebars and installed wire mesh and anchor bolts for type 1 concrete repair.
4. Wards and associates continued placing shotcrete for the concrete repairs at North abutment.
5. Handon Concrete was on site and continued demolition process, form work installation and concrete placement for deck pedestals repairs
6. Ionion paint was on site and continued blasting and applying primer paint for the Water Main supporting beam in span C.

Friday 05/26/17

1. Technopref was on-site and continued cleaning at the staging area. Miscellaneous work around staging area. Continued loading scaffold materials on barge. Continued to sound with DDOT inspectors at North abutment. Continued working on remove and reset permanent precast concrete traffic barrier
2. Handon services continued erecting scaffolding system and protection shield at Span D.
3. Fibrwrap was on-site and continued the demolition process and sandblasting rebars for the concrete repairs at North abutment and span C. replaced deteriorated rebars and installed wire mesh and anchor bolts for type 1 concrete repair.
4. Wards and associates continued placing shotcrete for the concrete repairs at North abutment.
5. Handon Concrete was on site and continued demolition process, form work installation and concrete placement for deck pedestals repairs
6. Ionion paint was on site and continued blasting and applying primer paint for the Water Main supporting beam in span C.

7. INSPECTION & MATERIAL TESTS PERFORMED

- 36" X 36" X 6" Test Panels for Compressive Strength Test for each day of shotcrete.
- Temperature, Slump and Air content was tested for the shotcrete.
- SP10 and the anchor profile test for the Water Main support beam.

8. RFI's / SUBMITTALS

- **Requests For Information:**
Except as noted below, there are no current unresolved/uncompleted RFI's or Submittals:
- **Submittals:**
 - o Submittal No.133 – Sikacrete 211 Slump
 - Forwarded to DDOT/QAQC
 - o Submittal No.134 – Supplement Submittal 74A - MOT Right Lane Closure
 - Forwarded to MOT

9. CHANGE ORDERS/TASK ORDERS

- Change Order #1 only processed to date. Package completed on the field level and currently awaits final execution by the Contracting Office.
- Review in progress by DDOT for possible processing of a change order relating 'eminent spalls' cost and also the additional DC Water work on the 30" Watermain repair.
- Change Order # 2 in process.

10. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
 - o CSMI
 - Project Public Out Reach.

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- CKI
 - Aid to Construction Management and Inspection Services
 - Technopref
 - Handon Diving Services Inc.

11. ACCIDENTS / INCIDENTS

There were no reported personnel or safety accidents within the limits of the project during this reporting period.

12. PHOTOS OF WORK PERFORMED THIS PERIOD



Concrete demolition at span C.



Concrete demolition and installation of containment.



Installation of anchors and wire mesh for type 1 repair at North abutment



Installation of anchors and wire mesh for type 1 repair at North abutment



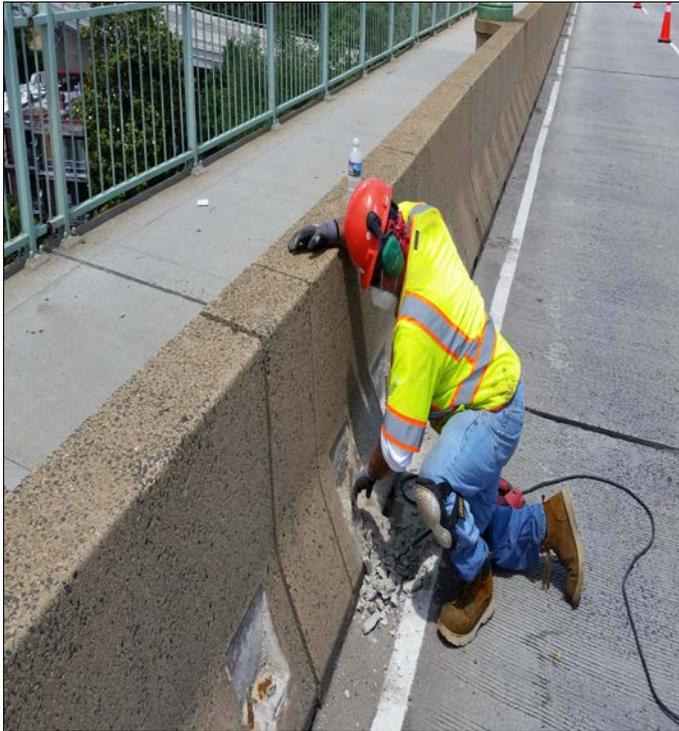
Installation of scaffold at span D

Installation of scaffold at Span D



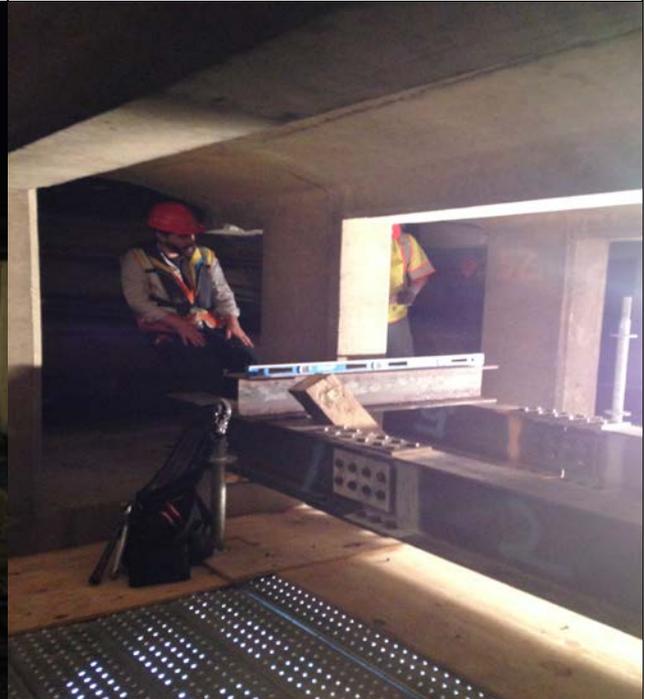
Shotcrete placement

Shotcrete placement



Remove and reset permanent precast concrete traffic barrier

Remove and reset permanent precast concrete traffic barrier



Deck pedestal repair

Installing temporary pedestal support for the deck pedestal replacement