

**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)**

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**CONSTRUCTION MANAGER'S**  
**WEEKLY PROGRESS REPORT**  
**From 03/05/2017 to 03/11/2017**

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**Project Website:** [www.keybridgeproject.com](http://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.

## 2. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

### Progress Summary:

1. Contractor continued installation of suspended scaffold system from pier 4 to North abutment and at pier 3.
2. Completed PCO-01 package. Package has been reviewed by DDOT, signed by Technopref and uploaded to DDOT package tracker, awaits approval.
3. Continued to update the project website.
4. Contractor continued the demolition work for the concrete repairs at pier 4 and North abutment.
5. Continue to follow up on the concrete color matching efforts with the contractor.
6. Contractor prepared/casted test panels for dry mix shotcrete samples.
7. Contractor cored test panels for specimen samples for concrete compressive testing.
8. Contractor performed mockup samples for dry mix shotcrete to be inspected and evaluated by DDOT.
9. Contractor repaired location at pier 4 regarding NCR 001
10. Coordinating and planning meeting with DC Water and Washington Aqueduct regarding the work associated with the 30 inch Water Main and the 16 inch water pipe at the east gallery.

### 11. 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:

- Sean followed up with Greg King, Thompson's Boat Center on 3/7 to discuss follow up items from the 3/1 meeting
- Sean distributed minutes of 3/1 meeting regarding spring rowing season on the Potomac. To meeting attendees Greg King, Thompson's Boat Center; Tim Staples, Marine Solutions; Kevin Burns, DDOT; Sean Moore, CSMI; Joseph Chukwueke, AECOM; Bemen Amin, CKI; Ali Soltani, Technopref; Mathieu Delanoe, Technopref

#### Notes:

- Project collateral submitted to DDOT on 2/24 is awaiting review by DDOT. Items including e-blast text and FAQs document, provided content and project rack card
- Reminded Technopref that any inquiries from the public need to be directed through Sean

#### 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

## 3. ISSUES / ACTION ITEMS

- **Ongoing Issues / Items:**
- Pepco Cable on the East Ramp Concrete Bent Columns still unresolved although Pepco confirmed the ownership of overhead wires overhanging East Ramp piers as being theirs for some weeks now. DDOT continues to work with Pepco to determine the appropriate solutions to safely accommodate proposed work at the bent columns. On-site meeting on Monday February 06, 2017 and Pepco indicated that cables cannot be relocated until the new underground cables are in place.

- Technopref of its obligations under the Contract and asked to summarize and submit its "additional" costs, in an amount not to exceed \$35,000 as stipulated in the January 24, 2017 letter.
- **Action Items:** NPS issued Limited Special Use permit, and verbally provided access to the river. Contractor has since had access and been working on barges on the river unimpeded. Hardcopy permit still awaited although does not impact progress of contractor's operations on site.
- **New Issues / Items:** None, except as noted elsewhere in this report.

#### 4. MEETINGS / PROJECT COORDINATION

- Conference call continued to be utilized to communicate with the contractor when a physical meeting is not possible.
- Weekly coordination meeting continues with DDOT team, project progress meeting with DDOT and the contractor.

#### 5. DAILY WORK PERFORMED

##### Monday 03/06/17

1. Technopref was on-site and continued cleaning at the staging area. Continued working on air and water lines (for construction purposes). Performed trial for the power washing operation on the West face of North Abutment at level 1 of scaffolding system
2. Handon services continued erecting scaffolding system from pier 4 to North abutment. Continued loading scaffold materials on barge.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4. Resumed the demolition process at North abutment.
4. Handon Services sub for Fibrwrap was on site and performed mock up samples for dry mix shotcrete to be inspected by DDOT.

##### Tuesday 03/07/17

1. Technopref was on-site and continued cleaning at the staging area. Continued working on air and water lines (for construction purposes). Performed trial for the power washing operation on the West face of North Abutment at level 1 of scaffolding system.
2. Handon services started erecting scaffolding system at pier 3.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at pier 4. Continued the demolition process at North abutment.

##### Wednesday 03/08/17

1. Technopref was on-site and continued cleaning at the staging area. Continued working on air, electrical and water lines (for construction purposes).
2. Handon services continued erecting scaffolding system at pier 3.
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment

4. Handon Services sub for Fibrwrap was on site and repaired location at pier 4 regarding NCR 001 (The restriction on concrete removal limits as specified on our drawing sheet 132 to prevent structural issue)

**Thursday 03/09/17**

1. Technopref was on-site and continued cleaning at the staging area. Continued and concluded sounding at span C. Started sounding at span E Continued working on air, electrical and water lines (for construction purposes). Installed protection nets at pier 4.
2. Handon services continued erecting scaffolding system at pier 3. .
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment and pier 4.
4. Handon Services sub for Fibrwrap was on site and repaired location at pier 4 (Pier 4-Pilaster 1) regarding NCR 001 (The restriction on concrete removal limits as specified on our drawing sheet 132 to prevent structural issue)

**Friday 03/10/17**

1. Technopref was on-site and continued cleaning at the staging area. Continued working on air, electrical and water lines (for construction purposes).
2. Handon services continued erecting scaffolding system at pier 3. .

**6. INSPECTION & MATERIAL TESTS PERFORMED**

- Pay items worked this week are:
  - 000 003 Employee Training. We were on site to observe Employee Training.

**7. RFI's / SUBMITTALS**

- **Requests For Information:**
  - o RFI No. 034 – Area of Concern - East Ramp Bent 16A - Top of Wall deterioration
    - Forwarded to JMT
  - o RFI No. 039 – Exterior chamber wall
    - Forwarded to JMT
  - o RFI No. 040 – Deterioration Between Faces
    - Forwarded to JMT
  - o RFI No. 041 – Pier 2 Encapsulation
    - Forwarded to JMT
  - o RFI No. 042 – Alternative Means and Methods for demolition
    - Forwarded to JMT
- **Submittals:**
  - o Submittal No. 070A – MOT - George Washington Parkway
    - Forwarded to NPS
  - o Submittal No. 088 – Temporary fence for existing railing
    - Forwarded to JMT

- Submittal No. 089 – Alternative design for scaffolding at mid-span
  - Forwarded to JMT
- Submittal No. 090 – Water main support - Threaded rods
  - Forwarded to Washington Aqueduct and DC Water
- Submittal No. 091 – Pea Gravel
  - Forwarded to DDOT/QAQC
- Submittal No. 092 – Anti-graffiti PSX700
  - Forwarded to DDOT/QAQC

## 8. CHANGE ORDERS/TASK ORDERS

- Negotiations were completed as of November 02, 2016 with contractor for CO #1 items. Completed PCO-01 package. Package has been reviewed by DDOT and sent to Technopref for signature. Technopref objects to the standard language and requested language adjustment. DDOT responded and rejected the request for language change/revision from the standard. Contractor however, proceeded and submitted a signed document and included a hand-written non-standard language contrary to DDOT's directive which DDOT again rejected and asked the contractor to remove and submit. DDOT informed the contractor that it was willing to proceed with a unilateral change should they refuse to comply. Contractor signed PCO and it been uploaded to DDOT package tracker.

## 9. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
  - CSMI
    - Project Public out Reach.
  - CKI
    - Aid to Construction Management and Inspection Services
- Technopref
  - Intellect Corporation
  - Handon Diving Services Inc.

## 10. ACCIDENTS / INCIDENTS

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

## 11. PHOTOS OF WORK PERFORMED THIS PERIOD



Mock ups location for dry mix shotcrete



Dry mix shotcrete application



Mock up panels preparation



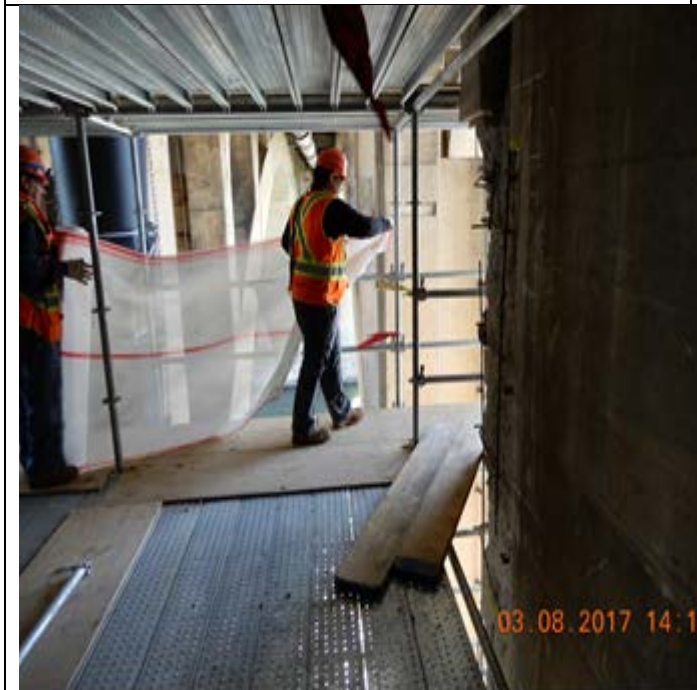
Concrete demolishing and saw-cutting at pier 4



Concrete demolishing and saw-cutting at North abutment



Concrete demolishing and saw-cutting at pier 3



Installation dust netting at Pier 4



Installation of scaffolding system at pier 3





Loading scaffold material



Cleaning and switching concrete skips



Loading scaffold material to barges



Installing scaffold at pier 3



NCR 001 repair preparation



NCR 001 repair preparation (installing rebar, bonding agent and wire mesh)



NCR 001 repair preparation (form work)



NCR 001 repair (pouring concrete)