

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 12/11/2016 to 12/17/2016

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.

2. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

Progress Summary:

1. Continued efforts to setup coordination meetings with Pepco relating to ongoing issues with their existing facilities.
2. Continued to update the RFI and submittal logs.
3. Continued to document and generate project meeting minutes.
4. Continued to receive and transmit RFI's and submittals to the appropriate discipline for review.
5. Continued to maintain project filing and document management systems (electronics).
6. Continued to maintain and manage the Project SharePoint.
7. Contractor is in the process of redesigning the suspended portion of the scaffold system and changing the design safety factor from 4 to 6.
8. Contractor continued erection of the scaffolding system at the North abutment for the non-suspended (ground bearing) portion.
9. Contractor worked on color matching samples
10. Contractor started installation/assembly of chutes for use in the concrete demolition and removal process.
11. Completed PCO-01 package. Package has been under review by Neil at DDOT.
12. Continued to update the project website.
13. Contractor continued working on setting up the barges.
14. Next partnering meeting to be determined during the next level 2 (management level) partners meeting.
15. The team waits to review Contractor's submittal on means and method of an access point they had proposed to provide from the top of the bridge to the scaffolding.
16. Subcontractor fibwrap continued utilizing the scaffold and started the concrete removal/repair work.
17. CM with Technopref and sub-contractor fibwrap met to start sounding and marking the locations for the concrete repair work.
18. Performed a walkthrough for the scaffold after the approval letter from the PE designer as well as the inspection checklist from the competent person. However deficiencies were found and were communicated to Technopref to be fixed. Scaffold sub-contractor acknowledged and has started working on the list to address the noted deficiencies.

CM Community Outreach Activities

The team visited and 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 Contacts made during this period:

- Sean corresponded with Darla Jackson at CAG on 12/12 regarding the presentation at their 1/24/2017 meeting
- Sean and Joyce spoke with Darla Jackson on 12/14 and discussed plans and ideas for the CAG meeting presentation
- Joyce corresponded with Garrett Hennigan of WABA on 12/14 and 12/16 to follow up with WABA on any construction impacts from scaffolding and let them know that no impacts on the sidewalks are anticipated

Key Takeaways:

- Communications team will continue to develop and strengthen relationships with key businesses near the bridge that can assist to distribute project information to their customers
- PEPCO and DDOT coordination is still important as problems created by PEPCO's work may have negative repercussions for DDOT as opposed to PEPCO even though they may be at fault.

3. ISSUES / ACTION ITEMS

- **Ongoing Issues / Items:**
- Pepco Cable on the East Ramp Concrete Bent Columns still unresolved; Pepco confirmed the ownership of top overhead wire overhanging East Ramp piers as being theirs. DDOT is working with Pepco to determine the appropriate solutions to accommodate proposed work at the bent columns.
- **Action Items:** NPS issued Limited Special Use permit, and verbally provided access to the river.
- **New Issues / Items:** None, except as noted elsewhere in this report.

4. MEETINGS / PROJECT COORDINATION

- Weekly coordination meeting continues with DDOT team, utility (Pepco) meetings and updates, project progress meeting with DDOT and the contractor.
- Conference call utilized to communicate with the contractor when a physical meeting is not possible.

5. DAILY WORK PERFORMED

Monday 12/12/16

1. Technopref was on-site and continued working on their site staging area, and the water access ramp. Also Technopref started removing existing fence for the proposed NPS 8-foot-tall wood lattice and chain-link fence to screen the staging area at 34th Street and Water Street. Also worked on barge's safety lines. Hosted the weekly safety meeting.
2. Fibrwrap was on-site and utilized scaffolding to start sounding and marking areas for repair of deteriorated concrete as per plan at North Abutment. The saw cutting and demolition will be on a later date.

Tuesday 12/13/16

1. Technopref was on-site and continued working on their site staging area, and the water access ramp. Also worked on barge's safety lines. Also Technopref's electrician was on site working on connection to Pepco line.
2. Handon services working on limited schedule and awaiting the redesign of the suspended portion of the scaffold system. Continued erecting scaffolding system at North abutment east and Westside. Also installed the trash chute from 1st level to ground skip (dumpster).
3. Fibrwrap was on-site and started the demolition process for the concrete repairs at North abutment, West elevation

Wednesday 12/14/16

1. Technopref was on-site and continued working on their site staging area, and the water access ramp. Continued working on barge's safety lines. Also Technopref's electrician was on site working on connection to Pepco line.
2. Handon services working on limited schedule and awaiting the redesign of the suspended portion of the scaffold system. Continued erecting scaffolding system at North abutment Northside and between west chamber. Also worked on correcting some scaffold deficiencies noted during Monday's inspection by the team. Also continued installing the trash chute from 1st level to ground skip (dumpster).

3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment, West elevation

Thursday 12/15/16

1. Technopref was on-site and continued working on their site staging area, and the water access ramp. Continued working on barge's safety lines.
2. Handon services working on limited schedule and awaiting the redesign of the suspended portion of the scaffold system. Continued erecting scaffolding system at North abutment Northside and between west chamber. Also continued working on correcting deficiencies noted on scaffold system during Monday's inspection by the team. Also continued installing the trash chute from 1st level to ground skip (dumpster).
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment, east elevation

Friday 12/16/16

1. Technopref was on-site and continued working on their site staging area, and the water access ramp. Continued working on barge, welding anchoring plates, secured man lift (Manitou). The contractor's crew then moved barge to Pier 4 for spudding.
2. Handon services working on limited schedule and awaiting the redesign of the suspended portion of the scaffold system. Continued erecting scaffolding system at North abutment Northside and between west chambers. Also continued working on correcting deficiencies noted on scaffold system during Monday's inspection by the team. Also installed the trash chute from 1st level to ground skip (dumpster).
3. Fibrwrap was on-site and continued the demolition process for the concrete repairs at North abutment, east elevation

6. INSPECTION & MATERIAL TESTS PERFORMED

- Pay items worked this week are:
 - 000 003 Employee Training. We were on site to observe Employee Training.
- Contractor has been working on full schedule.

7. RFI's / SUBMITTALS

- **Requests For Information:**
 - None
- **Submittals:**
 - o Submittal No.059 – MasterKure CC 200 WB.
 - Forwarded to QA/QC DDOT.
 - o Submittal No. 062 – Primavera Schedule Update No.01 (November 2016)
 - Forwarded to OC&L
 - o Submittal No. 063 – Site Specific Safety Plan Addendum 2: Fall Rescue Plan
 - Forwarded to AECOM
 - o Submittal No. 064 – Glass fiber materials
 - Forwarded to JMT

- Submittal No. 065 – #3 Suspended Scaffolding and Protection Shield
 - Forwarded to JMT

8. CHANGE ORDERS/TASK ORDERS

- Negotiations were completed on November 02, 2016 with contractor for CO #1 items. Completed PCO-01 package. Under review by Neil from DDOT.

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
 - Scaffolding erection
 - Handon Diving Services Inc.
 - Capsulation of the piers

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



Sounding and layout on North abutment.



Sounding and layout on North abutment.



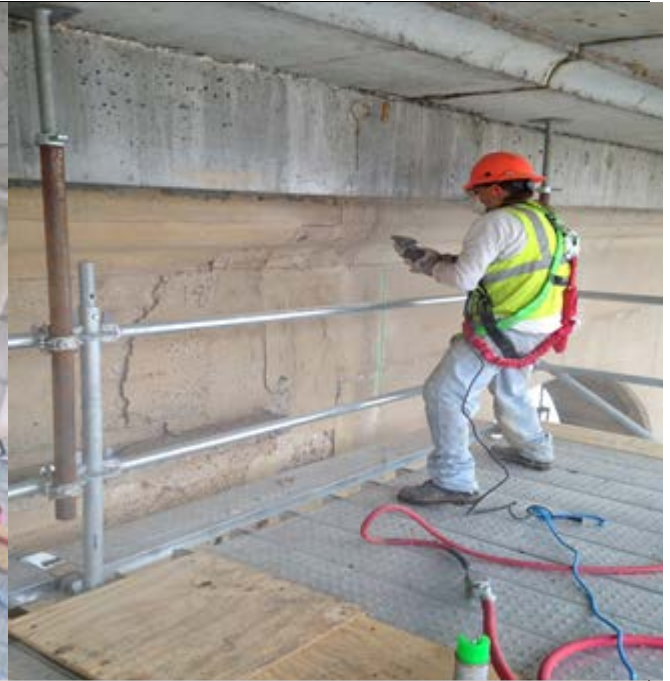
Removing existing fence for the NPS 8 ft. tall wood lattice and chain link fence



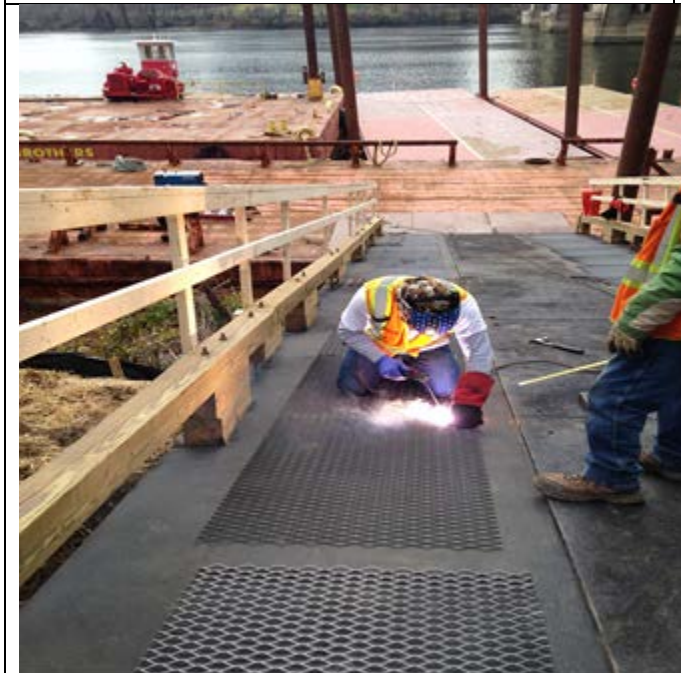
Removing existing fence for the NPS 8 ft. tall wood lattice and chain link fence



Fibrwrap saw cutting at scaffold level 1 for repairs on West of North Abutment



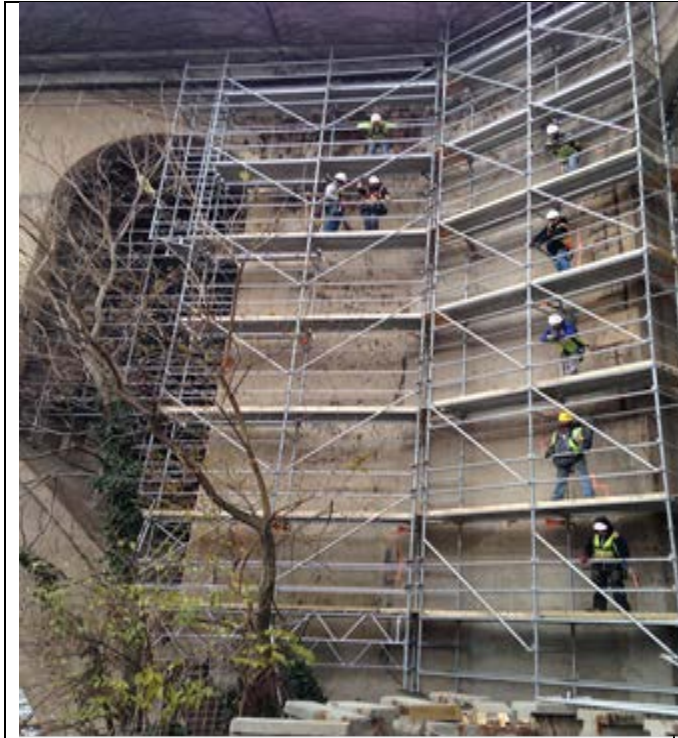
Fibrwrap saw cutting at scaffold level 1 for repairs on West of North Abutment



Technopref: Welding wire mesh for to the bridge.



Technopref testing machines movement on and to the barge



Erecting scaffold system at North abutment



Installation of waste chutes



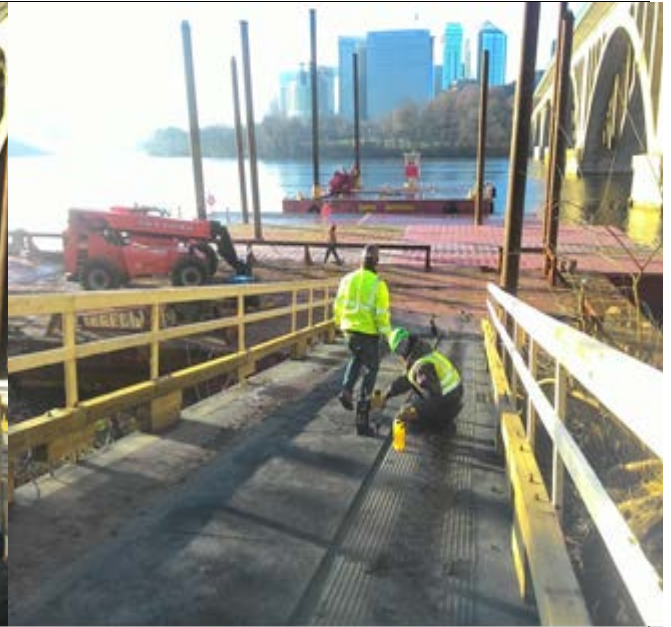
Fibrwrap demolition of marked concrete repair area on N Abut westside level 1 SW corner.(unfinished work)



Fibrwrap demolition of marked concrete repair area on N Abut west side level 1 SW corner. (unfinished work)



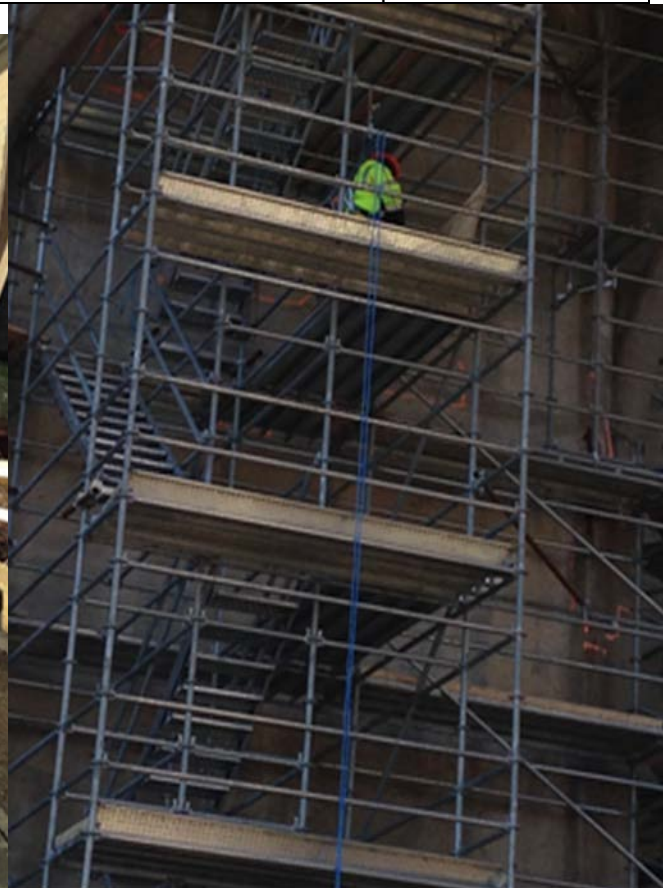
Setting up barges



installation of water access ramp



loading barge with scaffolds preparing for pier 4 scaffold installation



Laying out area for concrete repair at the north abutment



Moving stockpile scaffolding Material onto barges from staging area



Moving stockpile scaffolding Material onto barges from staging area



moving Barges to Pier 4 and spudding



moving Barges to Pier 4 and spudding