

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 07/07/2019 to 07/13/2019

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). 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 was also listed on the National Register of Historic Places, 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 streetlight poles on the bridge.
5. Removing and resetting a 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 encasement 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 the following: 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 a 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. Concrete repair work is still in progress at Pier 2, East Ramp and Span H. (3 shifts a day from 7am to 3:30 pm, 3pm to 11pm and from 7pm to 5am)
2. CM inspection team checked Navigation lights and it was functional except at Pier 3.
3. Contractor continued dismantling scaffold system at Rosslyn Approach and Span H.
4. Contractor continued installing the security fences at South Abutment.
5. Contractor continued repair procedure for the bearing at North Abutment.

1. CM Community Outreach Activities

- 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:

- Technopref was notified on August 2, 2018 that the navigation light on the bridge were out. Electrical crew were on site same day and navigation light were back working on the same day August 2, 2018. Inspection team continued to monitor the Bridge Navigation lights daily.
- Technopref has been notified with the issue of transporting scaffolding materials with the SKYTRAK at the C & O Canal which while in process resulted in damaging C & O Canal South side trail leaving tire tracks that will need repair. NPS, Technopref and DDOT met to discuss the issue. Technopref claimed responsibility for the damage and requested to fix the damage after finishing with work over C&O Canal. NPS agreed and requested that the work with manlift would only be happening on night shift from 7Pm to 5Am. NPS also requested to be notified with the work schedule.

- Action Items: N/A

- **New Issues / Items:** Navigational light on Pier 3 West side was observed not working.

4. MEETINGS / PROJECT COORDINATION

- No meeting.

5. DAILY WORK PERFORMED

Sunday 07/07/19

1. No Work.

Monday 07/08/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Light work due to inclement weather. At Night work, continued scaffold removal at Span H, continued sounding activity by manlift over Span H.
2. Brocks (Sub) was on site and continued dismantling scaffold at Rosslyn approach.

Tuesday 07/09/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At East Ramp continued power washing. At night work, continued scaffold removal at Span H, continued sounding activity by manlift over Span H. continued concrete repair at Span H, Also, provided support for their subcontractors on site.
2. Suburban (Sub) was on site and continued security fence installation at South Abutment.
3. Brocks (Sub) was on site and continued dismantling scaffold at Rosslyn approach.

Wednesday 07/10/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At Pier 2 continued concrete repair At East ramp continued working on cracks repair. At night work, continued building containment for Span H. continued concrete repair at Span H, Also, provided support for their subcontractors on site.
2. Suburban (Sub) was on site and continued security fence installation at South Abutment.
3. Brocks (Sub) was on site and continued dismantling scaffold at Rosslyn approach.

Thursday 07/11/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At Pier 2 continued concrete repair At East ramp continued working on cracks repair. Also, provided support for their subcontractors on site.
2. Suburban (Sub) was on site and continued security fence installation at Rosslyn Abutment.
3. Brocks (Sub) was on site and continued dismantling scaffold at Rosslyn approach.

Friday 07/12/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued the work for the bearing replacement at North Abutment. At East ramp continued working

on cracks repair. At Span D for Water main support beam replacement for DC Water Also, provided support for their subcontractors on site.

2. Suburban (Sub) was on site and continued security fence installation at Rosslyn Abutment.
3. Brocks (Sub) was on site and continued dismantling scaffold at Rosslyn approach.

Saturday 07/13/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Continued working on deficiency list for PCC barrier pockets. At East Ramp continued working on crack repairs, Also, provided support for their subcontractors on site.

6. INSPECTION & MATERIAL TESTS PERFORMED

- Performed sounding for concrete demo.
- Tested bag-mixed concrete and obtained the following results:

Date	Location	Material	Ambient Temp °F	Concrete Temp °F	Slump (Inches)	Air Content %	Concrete Specimens
No testing for this period							

7. RFIs / SUBMITTALS

- **Requests for Information:**
Except as noted below, there are no current unresolved/uncompleted RFIs or Submittals.
- **Submittals:**
 - SUB-287B - DOEE - Fascia Cleaning Water Collecting and Sampling Plan
 - Under review by office. CM is holding submittal until receiving test results from Technopref in order to be reviewed by DDOE.
 - SUB-288A - NPS - C& O Canal Under the Whitehurst Bridge Touch up Material and Means & Methods
 - Under review by JMT.
 - SUB- 289 - Rosslyn Approach - Door Replacement - Shop Drawings
 - Under review by JMT.
- **RFIs:**
 - N/A

8. CHANGE ORDERS/TASK ORDERS

- Change Order # 1 was executed on June 12, 2017.
- Change Order # 2 was executed on November 13, 2017.
- Change Order # 3 was executed on August 17, 2017.
- Change Order # 4 was executed on February 22, 2018.
- Change Order # 5 was executed on May 07, 2018.
- Change Order # 6 was executed on June 15, 2018.
- Change Order # 7 was executed on April 17, 2019.

9. DBE or CBE PARTICIPATION SUMMARIES

- **AECOM DBE Activity:**
 - o CSMI (subcontractor for AECOM) activity on the project is to provide project public outreach.
 - o CKI (subcontractor for AECOM) activity on the project is aide to construction management and inspection services.

- **Technopref DBE Activity:**
 - o Ribeiro activity on the project is Concrete demolition and repairs
 - o 3D Building supply activity on the project is to supply all the concrete materials

10. ACCIDENTS / INCIDENTS

- No incidents

11. PHOTOS OF WORK PERFORMED THIS PERIOD



Barges spudded at shore as Key Bridge and Potomac River flood condition at high tide



Barges spudded at shore as Key Bridge and Potomac River flood condition at high tide. Also square barge spudded at Span C



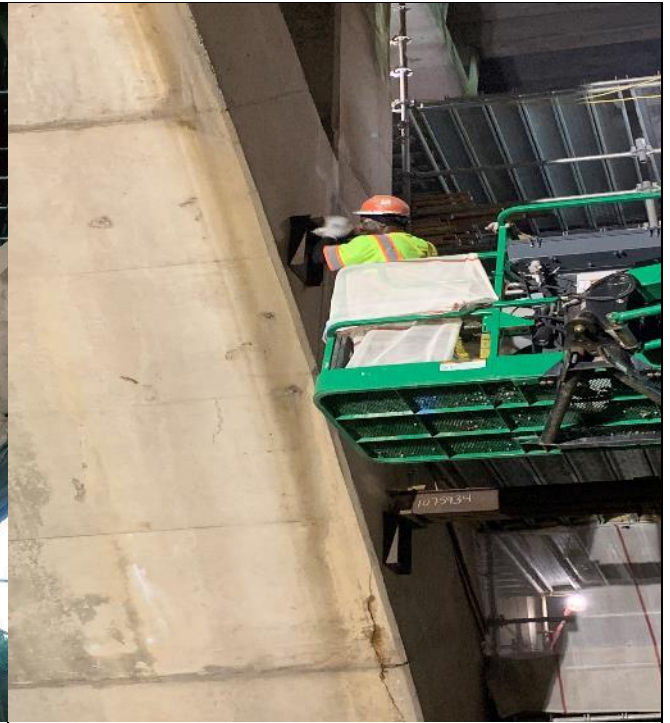
Suburban installed 16' tall Security Fence at South Abutment Bay 2 completed & measured



Technopref post strip touch up on Bearing Replacement at N Abut on Row EE, W Elev at Span B



Rosslyn Abutment E Elev at Span H Row EE dismantling scaffolding & spall for repair



Technopref Dismantling the Beam chairs



New Pavement Marking Crossing East Ramp exit on Key Bridge recently installed



Technopref on East Ramp surfaces power washing post shotcrete surface residue