

**REHABILITATION OF FRANCIS SCOTT KEY BRIDGE**

**FROM ROSSLYN, ARLINGTON, VIRGINIA TO GEORGETOWN, WASHINGTON, DC.**

**DC Contract No.: DCKA-2014-C-0074**

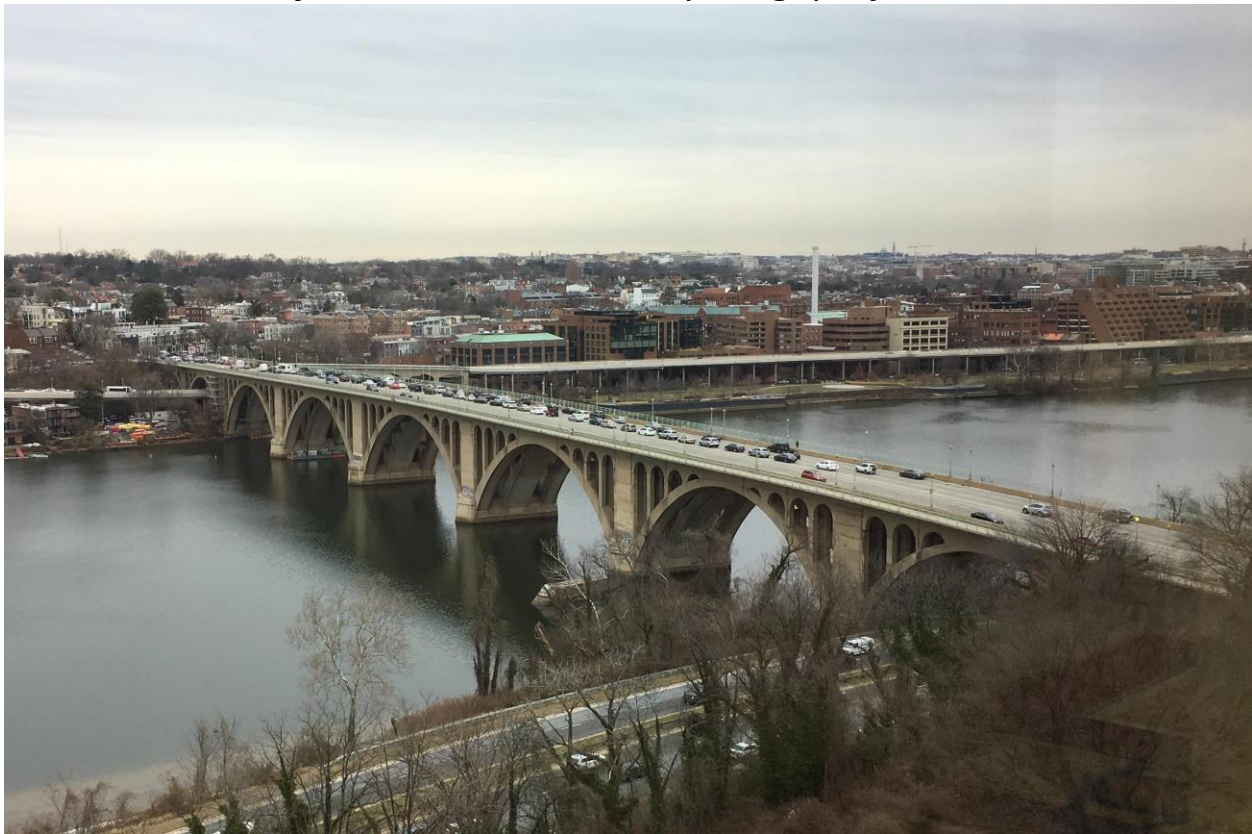
**FAP No.: BH-1104 (013)**

**CONSTRUCTION MANAGER'S**

**WEEKLY PROGRESS REPORT**

**From 03/04/2018 to 03/10/2018**

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



## 1. EXECUTIVE SUMMARY

### Project Description:

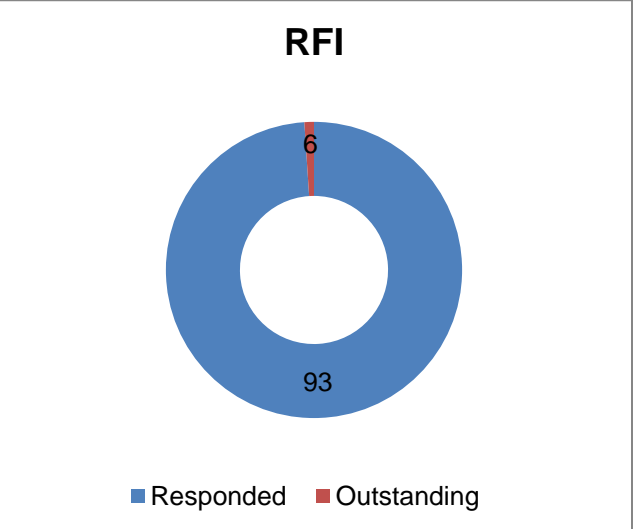
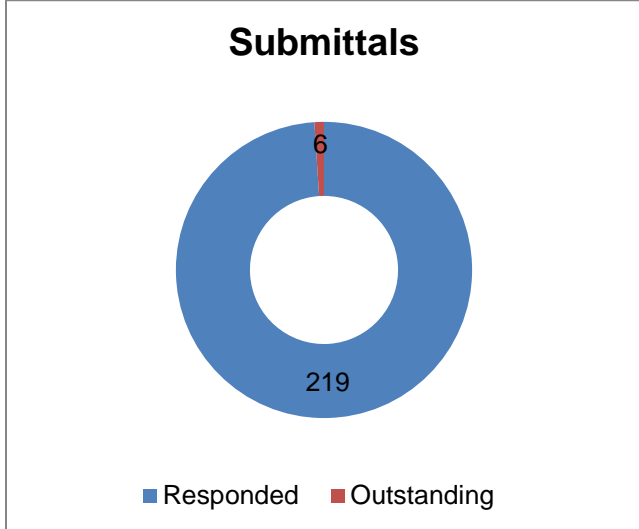
The AECOM Construction Management and Inspection team is providing construction and inspection services for the Rehabilitation of the Francis Scott Key Bridge over the Potomac River (Bridge No. 0007). Francis Scott Key Bridge, built in 1929, is a historic 1,781-foot long reinforced concrete, open-spandrel 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 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 street light 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 PROJECT FUNDING AND SCHEDULE**

Contractor NTP Date:		9/27/2016	Consultant NTP Date:		6/16/2016					
Contractor Contract Expiration Date:		8/18/2018	Consultant Contract Expiration Date:		6/15/2017					
Weekly Report End Date:		3/10/2018	Consultant Contract Mod -#5 Expiration Date:		11/30/2018					
Contractor	Total Value	Planned % DBE	Previous Applications for Payment	Current Application	Previous + Current Applications	\$ Remaining in Contract	Complete to Date		% of Budget Used	% of Time Used
							To Date DBE Utilisation	Per Total Earnings To Date		
Technopref	\$14,062,766.83		\$7,971,890.18	\$438,622.34	\$8,410,512.52	\$5,652,254.31			59.81%	
Intelect Corporation	\$400,000.00	2.76%	\$0.00	\$0.00	\$0.00	\$400,000.00	\$0.00	\$400,000.00	0.00%	
Handon Diving Services Inc	\$650,000.00	4.50%	\$564,954.64	\$0.00	\$564,954.64	\$85,045.36	\$564,954.64	\$650,000.00	86.92%	
Technopref Current Contract Total	\$15,112,766.83	7.26%	\$7,971,890.18	\$438,622.34	\$8,410,512.52	\$6,702,254.31			55.65%	55.65%
<b>CONTRACTOR'S DBE GOAL</b>		<b>7.00%</b>								
<b>Construction Management</b>										
AECOM (Prime)	\$2,771,040.63		\$1,344,147.71	\$168,752.58	\$1,512,900.29	\$1,258,140.34			33.72%	
CSMI	\$238,969.02	3.89%	\$119,417.24	\$3,471.55	\$122,888.79	\$116,080.23	\$122,888.79	\$238,969.02	2.74%	
CKI	\$1,147,877.93	10.59%	\$558,318.97	\$79,895.62	\$638,214.59	\$509,663.34	\$638,214.59	\$1,147,877.93	14.23%	
OC&L	\$270,141.00		\$123,491.55	\$19,362.24	\$142,853.79	\$127,287.21			3.18%	
Roenker Bates Group	\$10,000.00		\$9,587.50	\$0.00	\$9,587.50	\$412.50			0.21%	
Direct expenses	\$48,443.82		\$5,136.40	\$0.00	\$5,136.40	\$43,307.42			0.11%	
CM-Total	\$4,486,472.40	14.48%	\$2,154,962.97	\$271,481.99	\$2,426,444.96	\$2,060,027.44			54.08%	54.08%
<b>CONSTRUCTION MANAGEMENT DBE GOAL</b>		<b>10.00%</b>								



Number of Submittals to Date	Number of RFIs	Number of Change Orders to Date	Number of Letters Received to Date	Invoice # - Payment by DDOT to AECOM	Invoice # - Payment by DDOT to Technopref:
225	99	5	29	#16	#14
Number of Submittals Responded To	Number of RFIs Responded To	Number of Change Orders Executed to Date	Number of Letters Responded To	Submitted AECOM Invoice #	Submitted Technopref Invoice #
219	93	4	23	#18	#16
Number of Submittals Outstanding	Number of RFIs Outstanding	Percent Completed from Resource Loaded Schedule	Number of Letters Outstanding	Technopref Original Contract Amount:	
6	6	55.56%	6	\$14,471,254.00	

### 3. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

#### Progress Summary:

1. Demolition work still in progress for the concrete repairs at Pier 2.
2. Contractor continued working on deck pedestal, floor beam, and gallery floor repairs at Span D.
3. Contractor continued placing concrete at Span D.
4. Contractor continued adjusting and installing the scaffold and protection shield system at Span E and Span F.
5. PCO-05 is in process.

#### 6. 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.

### 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. Excavation and trench work have been completed. Pepco has started running the new underground cable. Work is underway.
- Technopref continues to be reminded of its obligations under the Contract. DDOT processed Change Order No. 05 for Technopref's claimed "additional" costs submitted based on DDOT's January 24, 2017 letter. DDOT sent Change Order No. 05 to Technopref for its signature.
- **Action Items:** None
- **New Issues / Items:** None.

### 5. MEETINGS / PROJECT COORDINATION

- Key Bridge team meeting with Key Bridge Boathouse.

## 6. DAILY WORK PERFORMED

### Sunday 03/04/18

1. No work.

### Monday 03/05/18

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work supporting subcontractors. Continued installing and modifying scaffolding and protection shield at Span E and Span F. Continued working on deck pedestals and floor beams at Span D.

### Tuesday 03/06/18

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work supporting subcontractors. Continued installing and modifying scaffolding and protection shield at Span E and Span F. Continued working on deck pedestals and floor beams at Span D.
2. Ribeiro (Sub) was on-site and continued setting forms at Pier 2 chambers. Continued installing rebar and setting forms at the Pier 4 East Gallery floor. Continued cleaning debris from drainage trenches in the East Chamber, Middle Chamber, and West Chamber of North Abutment.

### Wednesday 03/07/18

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work supporting subcontractors. Continued installing and modifying scaffolding and protection shield at Span E and Span F. Continued working on deck pedestals and floor beams at Span D.
2. Ribeiro (Sub) was on-site and continued setting forms and placing concrete at Pier 2 chambers. Continued installing rebar and setting forms at the Pier 4 East Gallery floor. Continued cleaning debris from drainage trenches in the East Chamber, Middle Chamber, and West Chamber of North Abutment. Continued concrete demolition from Mid-Span F to Pier 2.

### Thursday 03/08/18

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work supporting subcontractors. Continued installing and modifying scaffolding and protection shield at Span E and Span F. Continued working on deck pedestals and floor beams at Span D.
2. Ribeiro (Sub) was on-site and continued setting forms and placing concrete at Pier 2 chambers. Continued installing rebar and setting forms at the Pier 4 East Gallery floor. Continued cleaning debris from drainage trenches in the East Chamber, Middle Chamber, and West Chamber of North Abutment. Continued concrete demolition from Mid-Span F to Pier 2.

**Friday 03/09/18**

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work supporting subcontractors. Continued working on deck pedestals and floor beams at Span D.
2. Ribeiro (Sub) was on-site and continued setting forms at Pier 2 chambers. Continued installing rebar and setting forms at the Pier 4 East Gallery floor.

**Saturday 03/10/18**

1. Technopref (General Contractor) was on-site and continued cleaning at the staging area. Miscellaneous work supporting subcontractors. Continued working on deck pedestals and floor beams at Span D.
2. Ribeiro (Sub) was on-site and continued setting forms at Pier 2 chambers. Continued installing rebar and setting forms at the Pier 4 East Gallery floor.

**7. 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
3/7/2018	Pier 2 East Chamber	USCP Deck Mix SCC	60	61	N/A	N/A	6 cylinders Set # A
3/8/2018	Span D Deck Pedestal A48	Sika 211	60	53	7	N/A	6 cylinders Set #A

**8. RFIs / SUBMITTALS**

- **Requests for Information:**  
Except as noted below, there are no current unresolved/uncompleted RFIs or Submittals:
- **Submittals:**
  - Submittal No.077C - Site-Specific Safety Plan
    - Forwarded to Street Lights
  - Submittal No.023B - Cast Iron Light Pole (awaiting samples from Contractor)
    - Forwarded to Street Lights
  - Submittal No.196 - Additional Staging Area for the South Abutment Work
    - Forwarded to NPS
  - Submittal No.203A - Anti-Graffiti - Application Certification, Spill Plan, and Respirator Fit Test
    - Under review by office
  - Submittal No.218A - C&O Canal - Pedestrian Covered Walkway

- Forwarded to NPS & JMT
- Submittal No.223 - GW Parkway MOT - Rosslyn Approach - Narrow Ramp Water Barrier Modification
  - Forwarded to NPS

- **RFIs:**

- RFI No.082 - Deteriorated Steel Beam in Floor Beam (RFI generated by CM team)
  - Forwarded to JMT
- RFI No.089 - Request to Close Public Access Under Northside Span B
  - Forwarded to JMT and NPS
- RFI No.096 - Security Fence
  - Under review by the office
- RFI No.097 - Pier 3 Middle Chamber Extensive Crack
  - Forwarded to JMT
- RFI No.098 - Early Strength Tests
  - Forwarded to QAQC
- RFI No.099 - Rosslyn Underpinning - Phasing of Concrete Footings
  - Forwarded to JMT

## 9. 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 is in process.

## 10. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
  - CSMI (subcontractor for AECOM) activity on the project is to project public outreach.
  - CKI (subcontractor for AECOM) activity on the project is aide to construction management and inspection services.
- Technopref DBE Activity:
  - No DBE activity for this period.

## 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



Installing scaffold system and protection shield at Span E



Demolition work for Span D Deck Pedestal A49, which is a full replacement



Demo at Span D Deck Pedestal C57



Span D B57 demo and prep approved

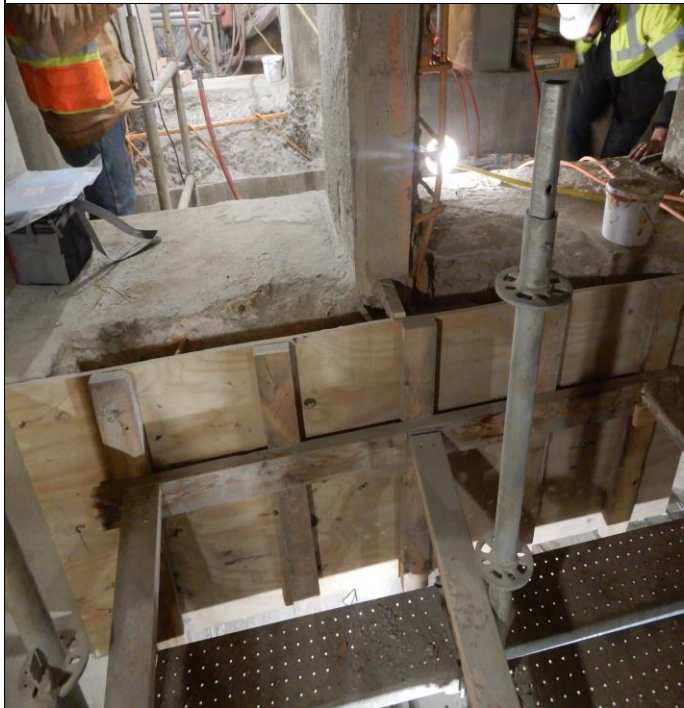
Span D Deck Pedestal B57: demo and prep approved





Installing rebar and forming the East Gallery floor slab at Pier 4

Formwork for Span D Deck Pedestal A49, which is a full replacement



Formwork on spandrel arch at Span D, Level 1, Row C, W Elev between Floor Beams 57 & 58

Concrete testing cylinders for testing compressive strength