

REHABILITATION OF FRANCIS SCOTT KEY BRIDGE

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

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

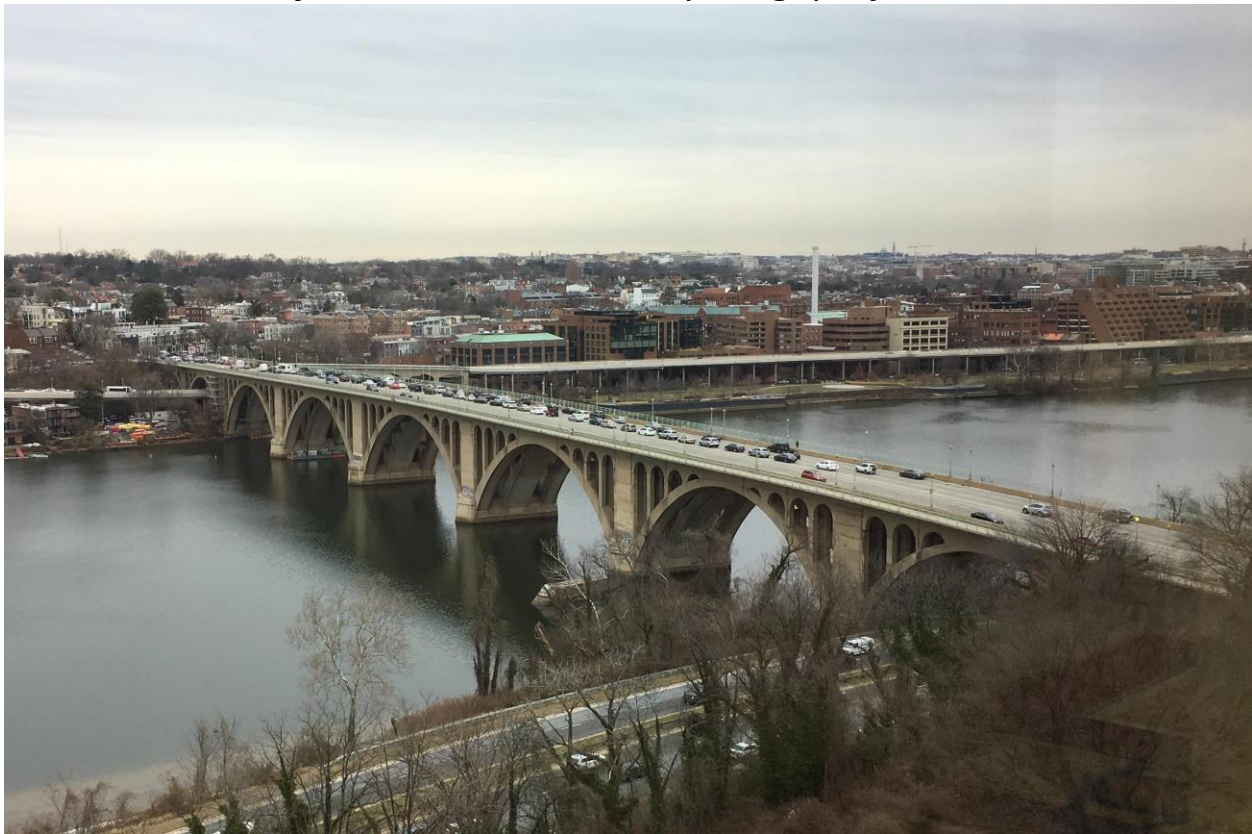
FAP No.: BH-1104 (013)

CONSTRUCTION MANAGER'S

WEEKLY PROGRESS REPORT

From 04/14/2019 to 04/20/2019

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 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:

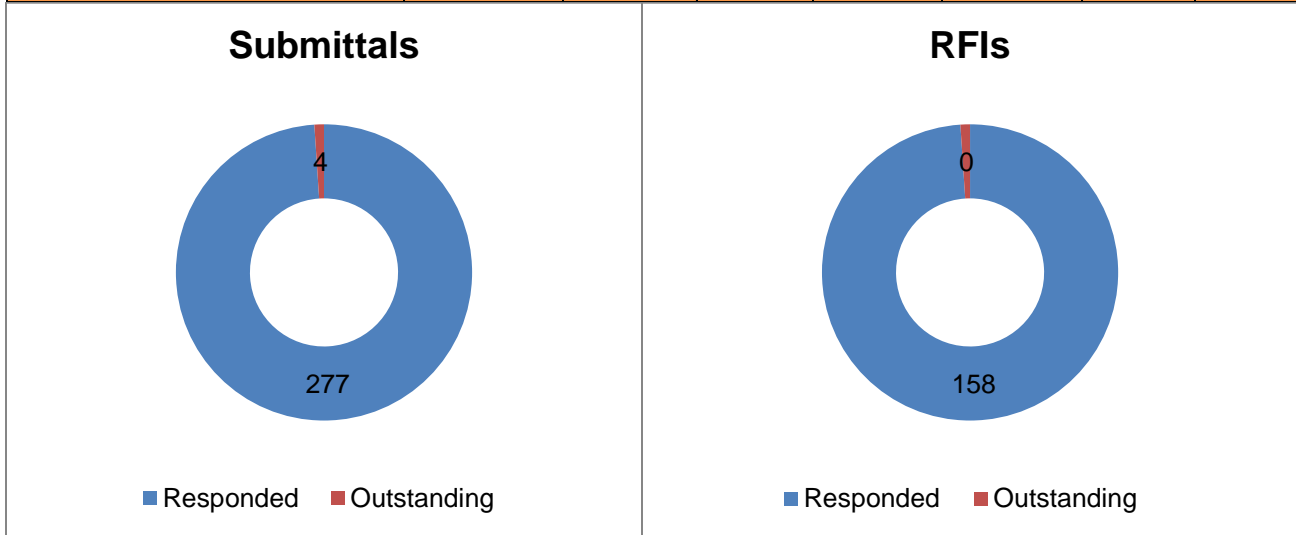
1. Installing pedestrian/bicycle detection loops and warning flashers on the bridge at the ramp to eastbound Whitehurst Freeway.
2. Cleaning and painting the existing steel pedestrian railing on the bridge.
3. Removing the concrete bollards from the east sidewalk at the east ramp exit.
4. Removing and 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:	working under Liquidated Damages	Consultant Contract Expiration Date:	6/15/2017
Weekly Report End Date:	4/20/2019	Consultant Contract Mod Expiration Date:	6/1/2019

	Total Value	Planned % DBE	Previous Applications for Payment	Current Application	Previous + Current Applications	\$ Remaining in Contract	Complete to Date		% of Budget Used
							Per Total Earnings To Date	Per Planned Total Budget	
Contractor									
Technopref	\$14,471,254.00		\$13,654,151.59	\$131,713.83	\$13,785,865.42	\$685,388.58			95.26%
Handon	\$1,012,987.78	7.00%	\$475,212.20	\$0.00	\$475,212.20	\$537,775.58	\$475,212.20	\$1,012,987.78	46.91%
Technopref Current Contract Total	\$15,610,922.73		\$13,654,151.59	\$131,713.83	\$13,785,865.42	\$1,825,057.31		\$0.00	88.31%
CONTRACTOR'S DBE GOAL		7.00%							

Construction Management									
AECOM (Prime)	\$3,589,180.54	62.96%	\$3,362,103.20	\$102,395.48	\$3,464,498.68	\$124,681.86	\$3,464,498.68	\$3,589,180.54	60.78%
CSMI	\$259,312.34	4.55%	\$135,756.85	\$0.00	\$135,756.85	\$123,555.49	\$135,756.85	\$259,312.34	2.38%
CKI	\$1,399,053.29	24.54%	\$1,245,274.13	\$28,475.12	\$1,273,749.25	\$125,304.04	\$1,273,749.25	\$1,399,053.29	22.34%
OC&L	\$365,219.00	6.41%	\$315,545.17	\$13,090.80	\$328,635.97	\$36,583.03	\$328,635.97	\$365,219.00	5.77%
Roenker Bates Group	\$10,000.00	0.18%	\$9,587.50	\$0.00	\$9,587.50	\$412.50	\$9,587.50	\$10,000.00	0.17%
Direct expenses	\$77,764.22	1.36%	\$8,404.13	\$0.00	\$8,404.13	\$69,360.09	\$8,404.13	\$77,764.22	0.15%
CM-Total	\$5,700,529.39	100.00%	\$5,068,266.85	\$143,961.40	\$5,212,228.25	\$488,301.14			91.43%
CONSTRUCTION MANAGEMENT DBE GOAL		10.00%							



Number of Submittals to Date	Number of RFIs to Date	Number of Change Orders to Date	Number of Letters Received to Date	Invoice # - Payment by DDOT to AECOM	Invoice # - Payment by DDOT to Technopref
281	159	8	51	#29	#29
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 #
277	159	7	33	#31	#30
Number of Submittals Outstanding	Number of RFIs Outstanding	Percent Completed from Resource Loaded Schedule	Number of Letters Outstanding	Technopref Original Contract Amount:	
4	0	88.31%	18	\$14,471,254.00	

3. STATUS OF CONSTRUCTION / PROGRESS SUMMARY

Progress Summary:

1. Demolition work is still in progress for the concrete repairs from South Abutment to Mid-Span H, Span F at East and West fascia and at Rosslyn Abutment.
2. CM inspection team checked Navigation lights and it was functional.
3. Contractor dismantle scaffold system at pier 5.
4. Contractor continued installing the security fences at Georgetown abutment, North Abutment and Pier 5.
5. Contractor continued working on the Anti-graffiti application at South Abutment and North Abutment
6. Contractor continued the Pier encapsulation at Pier 3.
7. Contractor continued remedy work for non – armored deck joints and concrete barriers at night work.
8. Contractor continued shotcrete operation at Rosslyn Abutment.
9. Contractor continued the installation of the temporary support for the bearing replacement at North abutment
10. Contractor continued the touch up deficiency list for the light pole paint.
11. Contractor started the ladder installation at South 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

4. ISSUES / ACTION ITEMS

- Ongoing Issues / Items:

- Technopref continues to be reminded of its obligations under the Contract. DDOT issued unilateral Change Order No. 05 to Technopref.
- 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 on a daily basis.
- 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.
- Technopref has been notified about the safety hazard where scaffold at Pier 5 is very close to Pepco 60KWV High Power transmission line

- Action Items: N/A

- **New Issues / Items:** There was an incident of Epoxy grout leakage into the river while pumping grout for the pier encapsulation at Pier 3, NCR # 038 was issued to the contractor and immediate remediation was done by the contractor and the divers collected the epoxy lost in the river. A meeting with the contractor is scheduled in order to resume the encapsulation work

5. MEETINGS / PROJECT COORDINATION

- Meeting with Washington gas regarding the work at 29 parking lot.
- Meeting regarding NCR 038.

6. DAILY WORK PERFORMED

Sunday 04/14/19

1. No work

Monday 04/15/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Modified scaffold system at Staging area. Continued the installation of the temporary support at North Abutment bearing replacement. Also, provided support for their subcontractors on site. At Night work, worked on deficiency list for deck joint repair and concrete barriers.
2. Ribeiro (Sub) was on-site and continued concrete demolition at South Abutment to Mid-Span H and at Rosslyn Abutment. Continued working on deck soffit repairs at Rosslyn approach.
3. Brock services was on site and continued dismantling scaffolding system at Pier 5.
4. Suburban (Sub) was on site and continued the installation of the security fence at Georgetown Abutment.
5. Blastech (Sub) was on site and continued Power washing at South Abutment, North Abutment and Georgetown Abutment in preparation for Anti-graffiti application. Also continued working on deficiency list for light pole touch up paint over the deck.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Rosslyn Abutment.

Tuesday 04/16/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Modified scaffold system at Staging area. Continued the installation of the temporary support at North Abutment bearing replacement. Also, provided support for their subcontractors on site. At Night work, worked on deficiency list for deck joint repair and concrete barriers.
2. Ribeiro (Sub) was on-site and continued concrete demolition at South Abutment to Mid-Span H and at Rosslyn Abutment. Continued working on deck soffit repairs at Rosslyn approach.
3. Brock services was on site and continued dismantling scaffolding system at Pier 5.
4. Suburban (Sub) was on site and continued the installation of the security fence at Pier 5
5. Blastech (Sub) was on site and continued Power washing at South Abutment and North Abutment in preparation for Anti-graffiti application.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Rosslyn Abutment.

Wednesday 04/17/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Modified scaffold system at Staging area. Continued the installation of the temporary support at North Abutment bearing replacement. Also, provided support for their subcontractors on site. At Night work, worked on deficiency list for deck joint repair and concrete barriers.
2. Ribeiro (Sub) was on-site and continued concrete demolition at South Abutment to Mid-Span H and at Rosslyn Abutment. Continued working on deck soffit repairs at Rosslyn approach.
3. Brock services was on site and continued dismantling scaffolding system at Pier 5.
4. Suburban (Sub) was on site and continued the installation of the security fence at Georgetown Abutment.
5. Blastech (Sub) was on site and continued working on deficiency list for light pole touch up paint over the deck.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Rosslyn Abutment to Mid Span H.
7. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation work at Pier 3.

Thursday 04/18/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Modified scaffold system at Staging area. Also, provided support for their subcontractors on site. At Night work, worked on deficiency list for deck joint repair and concrete barriers.
2. Ribeiro (Sub) was on-site and continued concrete demolition at South Abutment to Mid-Span H and at Rosslyn Abutment. Continued working on deck soffit repairs at Rosslyn approach.
3. Brock services was on site and continued dismantling scaffolding system at Pier 5.
4. Suburban (Sub) was on site and continued the installation of the security fence at Georgetown Abutment.
5. Blastech (Sub) was on site and continued working on deficiency list for light pole touch up paint over the deck.
6. Ward and Associates (Sub) was on site and continued shotcrete operation at Rosslyn Abutment to Mid Span H.
7. Anderson Industrials (Sub) was on site and started the installation of the ladder at South Abutment.
8. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation work at Pier 3.

Friday 04/19/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. Modified scaffold system at Staging area. Also, provided support for their subcontractors on site.
2. Ribeiro (Sub) was on-site and continued concrete demolition at South Abutment to Mid-Span H and at Rosslyn Abutment. Continued working on deck soffit repairs at Rosslyn approach.
3. Brock services was on site and continued dismantling scaffolding system at Pier 5.
4. Blastech (Sub) was on site and continued working on deficiency list for light pole touch up paint over the deck.

5. Ward and Associates (Sub) was on site and continued shotcrete operation at Rosslyn Abutment to Mid Span H.
6. Anderson Industrials (Sub) was on site and started the installation of the ladder at South Abutment.

Saturday 04/20/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities and provided support for their subcontractors on site.
2. Ward and Associates (Sub) was on site and continued shotcrete operation at Rosslyn Abutment.

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
04/15/19	Level 2-7 betw Roselyn Abutment and Mid Span H and level 6-7 bay 4	USCP 7000-7001	71	71	.5	8	24*24*6
04/16/19	Level 5-7 bay 3 Roselyn Abutment	USCP 7000-7001	57	60	1	6	24*24*6
04/17/19	Level 2-5 Row AA-A North and West elevation of Roselyn Abutment.	USCP 7000-7001	60	63	1	8.2	24*24*6
04/18/19	Level 2-7 Row E-E North and East elevation of Roselyn Abutment.	USCP 7000-7001	65	74	1	9	24*24*6
04/19/19	Level 2-7 Row E-EE North and East elevation of Roselyn Abutment.	USCP 7000-7001	66	75	1	9	24*24*6

8. RFIs / SUBMITTALS

- **Requests for Information:**
Except as noted below, there are no current unresolved/uncompleted RFIs or Submittals.
- **Submittals:**
 - Submittal No.276C - FRP Encapsulation - contractor experience MISTRAS - specialty underwater services
 - Submittal under review by office
 - Submittal No.277C - ADD ON security fences.
 - Submittal Fwd to JMT for review
 - Submittal No.280 - DDOE - Request to Draft Water from Potomac River for Fascia Cleaning
 - Submittal Fwd to DOEE for review
 - Submittal No.281 - ADD ON security fences #2
 - Submittal JMT to DOEE for review
- **RFIs:**
 - N/A

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 was executed on May 07, 2018.
- Change Order # 6 was executed on June 15, 2018.

10. DBE or CBE PARTICIPATION SUMMARIES

- AECOM DBE Activity:
 - CSMI (subcontractor for AECOM) activity on the project is to provide project public outreach.
 - CKI (subcontractor for AECOM) activity on the project is aide to construction management and inspection services.
- Technopref DBE Activity:
 - Ribero activity on the project is Concrete demolition and repairs
 - Sysnet America activity on the project is the installation of the light poles
 - 3D Building supply activity on the project is to supply all the concrete materials

11. ACCIDENTS / INCIDENTS

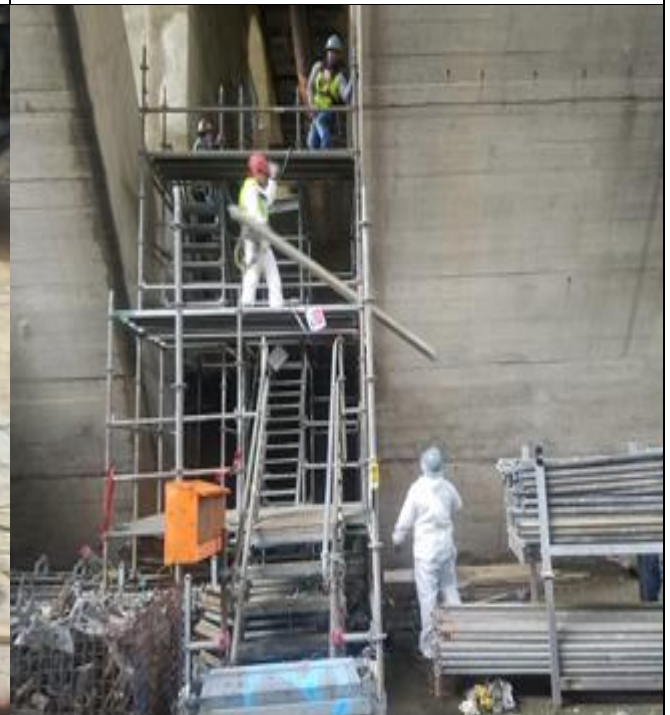
- No incidents

12. PHOTOS OF WORK PERFORMED THIS PERIOD



Pier Encapsulation at Pier 3

Pier Encapsulation at Pier 3



Technopref fabricating jacket for Pier Footing Encapsulation on floating dock

Brock Services at Pier 5 continued dismantling scaffolding



Concrete repairs and demo at Pier 1



CM & Technopref visit to Rosslyn Approach inspect underpinning & Gallery Floor Slab concerns



Night work - Working on traffic barrier grout placement



Night work - Working on traffic barrier grout placement