

**REHABILITATION OF FRANCIS SCOTT KEY BRIDGE**

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

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

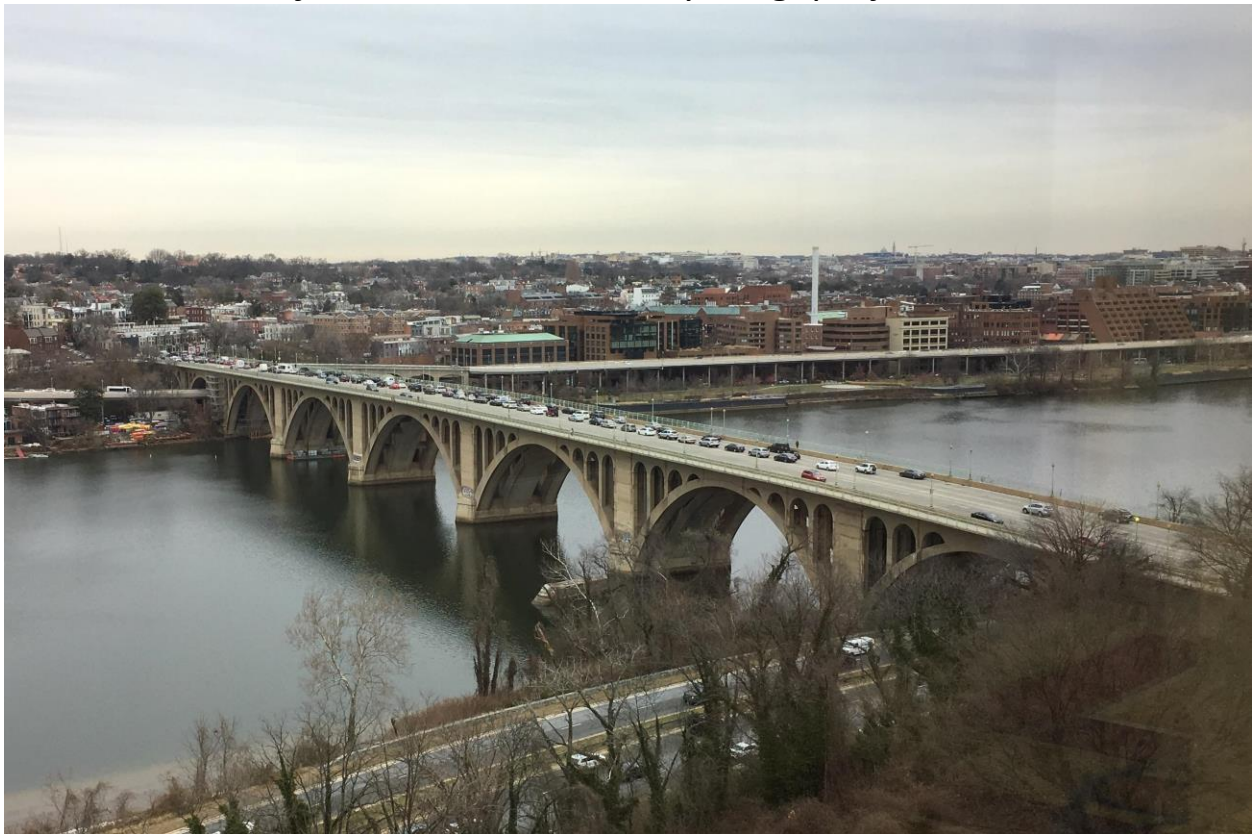
**FAP No.: BH-1104 (013)**

**CONSTRUCTION MANAGER'S**

**WEEKLY PROGRESS REPORT**

**From 03/10/2019 to 03/16/2019**

**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:

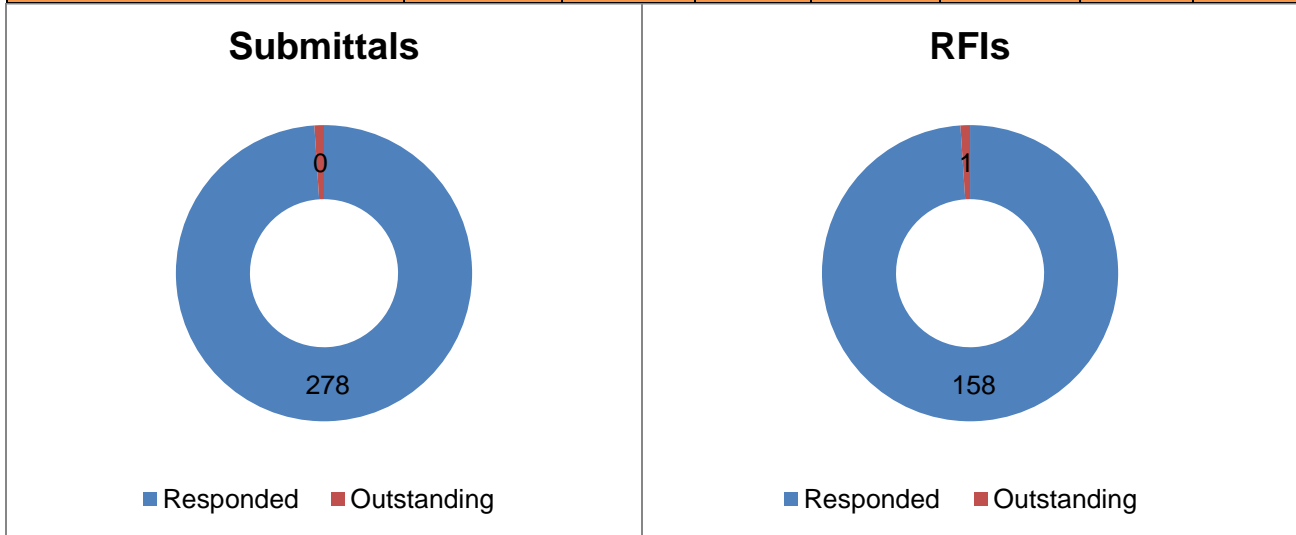
1. Installing pedestrian/bicycle detection loops and warning flashers on the bridge at the ramp to eastbound Whitehurst Freeway.
2. Cleaning and painting the existing steel pedestrian railing on the bridge.
3. Removing the concrete bollards from the east sidewalk at the east ramp exit.
4. Removing and 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:	working under Liquidated Damages	Consultant Contract Expiration Date:	6/15/2017
Weekly Report End Date:	3/16/2019	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
							To Date DBE Utilisation	Per Total Earnings To Date	
<b>Contractor</b>									
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%
<b>CONTRACTOR'S DBE GOAL</b>		<b>7.00%</b>							

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%
<b>CONSTRUCTION MANAGEMENT DBE GOAL</b>		<b>10.00%</b>							



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
278	159	7	51	#26	#27
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 #
278	158	6	33	#29	#29
Number of Submittals Outstanding	Number of RFIs Outstanding	Percent Completed from Resource Loaded Schedule	Number of Letters Outstanding	Technopref Original Contract Amount:	
0	1	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 at Span H.
2. CM inspection team checked Navigation lights and it was on.
3. Contractor dismantle scaffold system from Span B to Pier 5 and also at Pier 1.
4. Contractor continued shotcrete operation from South Abutment to Mid-Span H
5. Contractor continued working on applying CFRP wrap at Rosslyn approach.
6. Contractor starting installing the security fences at North abutment.
7. Contractor starting working on the Anti-graffiti application at Georgetown Abutment.
8. Contractor continued the painting operation for the 30-inch Water Main.
9. Contractor continued the Pier encapsulation at Pier 3.

#### 10. 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: N/A

### 5. MEETINGS / PROJECT COORDINATION

- Meeting with Technopref regarding Anti-graffiti application.

## 6. DAILY WORK PERFORMED

### Sunday 03/10/19

1. No work

### Monday 03/11/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. At Pier 5 to Span B dismantle scaffolding system. At Rosslyn Approach performing CFRP Wrap. 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.
3. Brock services was on site and continued dismantling scaffolding system at Pier 1.
4. Ward and associates (Sub) was on site and continued shotcrete operation from South Abutment to Mid-Span H
5. Suburban (Sub) was on site and started the installation of the security fence at North Abutment.
6. Blastech (Sub) was on site and started the Anti-graffiti work at Georgetown Abutment. Also continued working on the deficiency list for the paint application of the 30-inch Water Main at Span C and Span D

### Tuesday 03/12/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. At Pier 5 to Span B dismantle scaffolding system. At Rosslyn Approach performing CFRP Wrap. 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.
3. Brock services was on site and continued dismantling scaffolding system at Pier 1.
4. Ward and associates (Sub) was on site and continued shotcrete operation from South Abutment to Mid-Span H
5. Suburban (Sub) was on site and started the installation of the security fence at North Abutment.
6. Blastech (Sub) was on site and started the Anti-graffiti work at Georgetown Abutment. Also continued working on the deficiency list for the paint application of the 30-inch Water Main at Span D and Span D and Span F.

### Wednesday 03/13/19

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. At Pier 5 to Span B dismantle scaffolding system. At Rosslyn Approach performing CFRP Wrap. 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.
3. Brock services was on site and continued dismantling scaffolding system at Pier 1.
4. Ward and associates (Sub) was on site and continued shotcrete operation from South Abutment to Mid-Span H
5. Suburban (Sub) was on site and started the installation of the security fence at North Abutment.
6. Blastech (Sub) was on site and started the Anti-graffiti work at Georgetown Abutment. Also continued working on the deficiency list for the paint application of the 30-inch Water Main at Span C and Span D.

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**Thursday 03/14/19**

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. At Pier 5 to Span B dismantle scaffolding system. At Rosslyn Approach performing CFRP Wrap. 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.
3. Brock services was on site and continued dismantling scaffolding system at Pier 1.
4. Ward and associates (Sub) was on site and continued shotcrete operation from South Abutment to Mid-Span H
5. Suburban (Sub) was on site and started the installation of the security fence at North Abutment.
6. Blastech (Sub) was on site and started the Anti-graffiti work at Georgetown Abutment. Also continued working on the deficiency list for the paint application of the 30-inch Water Main at Span C, Span D and Span E.

**Friday 03/15/19**

1. Technopref (General Contractor) was on-site and continued miscellaneous cleaning activities. At Pier 5 to Span B dismantle scaffolding system. At Rosslyn Approach performing CFRP Wrap. 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.
3. Brock services was on site and continued dismantling scaffolding system at Pier 1.
4. Ward and associates (Sub) was on site and continued shotcrete operation from South Abutment to Mid-Span H
5. Suburban (Sub) was on site and started the installation of the security fence at North Abutment.
6. Blastech (Sub) was on site and started the Anti-graffiti work at Georgetown Abutment. Also continued working on the paint application of the 30-inch Water Main at Span A, C, D, E, G and F.
7. Specialty Underwater Services (Sub) was on site and continued Pier Encapsulation work at Pier 3 performing surface cleaning.

**Saturday 03/16/19**

1. Technopref (General Contractor) was on-site and continued fascia cleaning at Span D. Also provided support for their subcontractors on site.
2. Ribeiro (Sub) was on-site and continued concrete crack repair at Rosslyn approach.
3. Ward and associates (Sub) was on site and continued shotcrete operation from South Abutment to Mid-Span G

## 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
03/11/19	Level 1-2 between Mid Span H and South abutment	USCP 7000-7001	74	74	0.5	8	24*24*6
03/12/19	Level 1-3 between Mid Span H and South abutment	USCP 7000-7001	74	74	0.5	8	24*24*6
03/13/19	Level 2-5 between Mid Span H and South abutment	USCP 7000-7001	64	65	0.5	8	24*24*6
03/14/19	Level 3-5 row B-C, South abutment	USCP 7000-7001	66	71	0.5	8	24*24*6
03/15/19	Span E East Chamber Deficiency list soffit repair hand patch	Sika Grout 328	69	66			6 (2"x2"x2") Cubes
03/15/19	East and West chamber South abutment	USCP 7000-7001	67	68	1	7.8	24*24*6
03/16/19	Level 1-2 Mid chamber South abutment	USCP 7000-7001	54	56	0.5	7.8	24*24*6

## 8. RFIs / SUBMITTALS

- **Requests for Information:**  
Except as noted below, there are no current unresolved/uncompleted RFIs or Submittals.
- **Submittals:**
  - N/A
- **RFIs:**
  - RFI No.159 - Application of the anti-graffiti for all piers on the land
    - RFI under review by office
  -

## 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



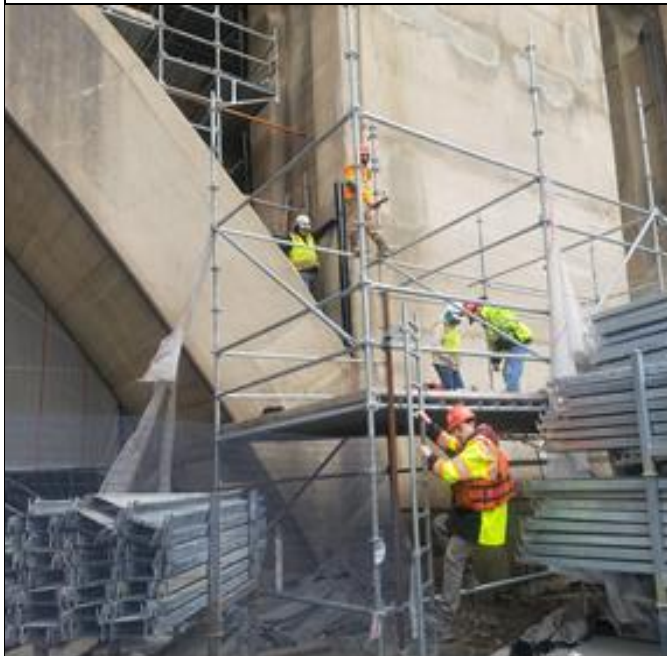
12. PHOTOS OF WORK PERFORMED THIS PERIOD



Site Condition from East Elevation view



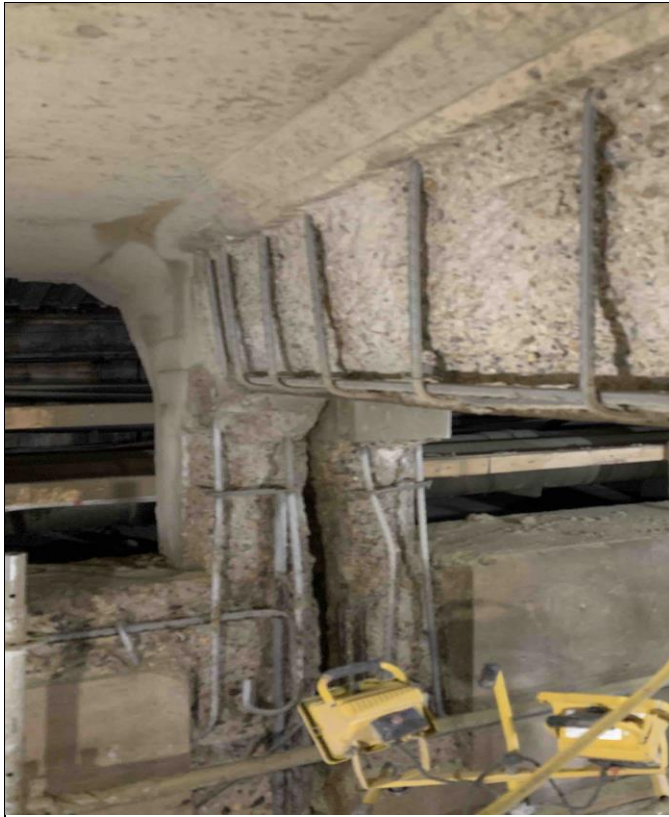
At Georgetown Abut power washing to eradicate graffiti to apply anti-graffiti



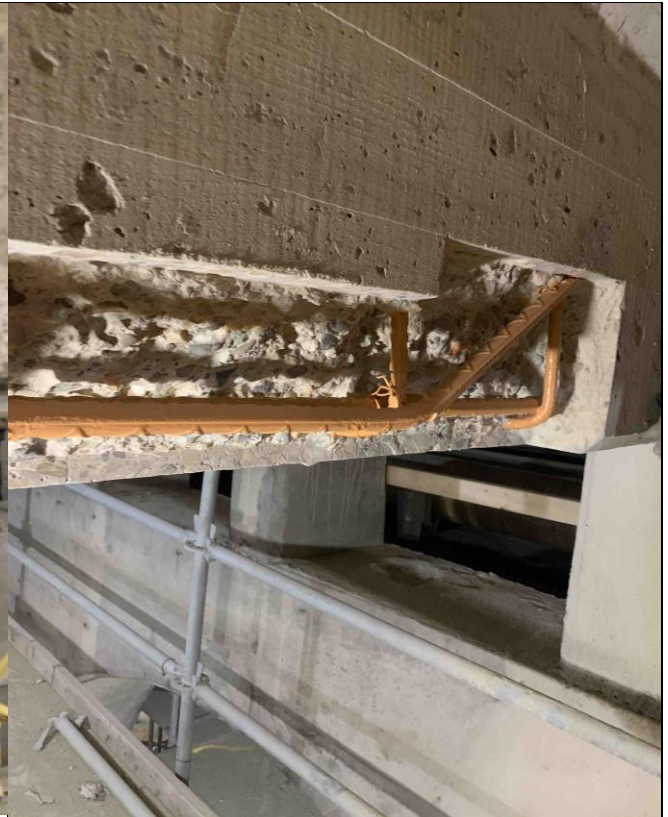
Subcontractor at N Abut started installation of Security Fence



Subcontractor at N Abut started installation of Security Fence



Span H Bay 2 FB 14 sand blast approved



Span H bay 2 FB 13 demo and prep approved



Span E Diaphragm beams sounding



Concrete testing for P5 East chamber deficiency list soffit area