Columbus West, Ohio, Flood Risk Reduction Project

Floodwall/Levee Temporary Construction Emergency Action Plan

Prepared by the Ohio Department of Transportation in Cooperation with the City of Columbus and U.S. Army Corps of Engineers

FRA-70-13.10 /FRA-71-14.36

Project 6A/6R

PID: 89464/105588

DATE: 10/21/2020

Statement of Purpose

Within the project work limits the City of Columbus owns and operates a flood protection system that provides protection from flooding for up to a 500 year river event. The City of Columbus maintains an Emergency Action Plan, updated January 2017, outlining roles, responsibilities, and actions to be taken relating to the normal operation and maintenance of the project during a flood event. Attachment A outlines key features of the floodwall/levee system in the project limits and the river elevation that triggers action within that plan.

This plan has been produced at the request of the City of Columbus and ODOT and outlines the Contractor's roles and responsibilities as they relate to the original plan and the Contractor's interim measures to protect the flood protection system. During any and all work in and around the floodwall/levee system the contractor shall comply with the following:

Notifications

At least 2 weeks prior to beginning work in an area adjacent to the floodwall/levee system, Contractor shall notify the people listed on the Notification List below of the work. The notification will include work to be accomplished, plan layout of anticipated work, schedule for accomplishing the work, and 24 hour contact information for primary and secondary contact individuals. Contractor shall allow 6 weeks for review and coordination of the work plan outlining the proposed sequence of construction within the existing floodwall right-of-way. Contractor will also notify all on the Notification List when work actually begins and again when it is complete. Contractor's designated contacts are responsible for ensuring the appropriate provisions are in place prior to commencement of work and in the event of an emergency, the appropriate actions are completed at the designated time including notifications at the prescribed action levels.

City of Columbus shall notify ODOT's designated personnel when an emergency arises at the action levels included under the Emergency Provisions (based on Attachment A). ODOT will notify Contractor's designated personnel when action levels identified in this plan are reached. Contractor shall confirm actions taken in an emergency situation to all on the Notification List.

Work schedule related notifications may be by email. Emergency notifications shall be by email and phone. Confirmation notifications will be by email.

City will be responsible to communicate emergency actions with the public, other agencies and emergency service providers as specified in their emergency action plan.

Contractor shall also contact the people on the Notification List in the event any damage occurs to a flood protection feature that is not part of the contract or scope of work.

Notification List

Emergency notification shall be made to:

Primary

James Howdyshell, City of Columbus
Division of Sewerage and Drainage
Project Manager
(614) 645-7075
JRHowdyshell@columbus.gov
24/7/365 (614) 645-7102

Secondary

Kevin Wood, City of Columbus
Division of Sewerage and Drainage
(614) 645-7503
KHWood@columbus.gov

Melissa Hoffman ODOT
(614) 507-5059
Melissa.Hoffman@dot.ohio.gov

Informational notifications shall be made to:

John Ferguson, P.G., USACE
Levee Safety Program Manager
Office: 304-399-5072
Cell: 304-402-8992
John.R.Ferguson.II@usace.army.mil

Steven Spagna, P.G., USACE
Chief, Dam & Levee Safety
Office: 304-399-5805
Cell: 304-360-2228
Steven.S.Spagna@usace.army.mil

August W. Martin, P.E., PMP, USACE
Chief, Engineering & Construction
Office: 304-399-5254
Cell: 304-544-4463
August.W.Martin@usace.army.mil

Clyde "Randy" Campbell, USACE
Civil Emergency Planner
Office: 304-399-5825
Cell: 304-960-0640
Clyde.R.Campbell@usace.army.mil

Jason Freeman, P.E., USACE
Section 408 Technical Lead
Office: 304-399-5171
Cell: 304-563-1083
Jason.B.Freeman@usace.army.mil

Contractor's designated contacts are:

To be Determined
Phone # TBD

To be Determined
Phone # TBD

Emergency Provisions by Contractor

A) **Phase 6R: Sanitary 36”, 18” and 10” Force main Relocation, West of the Scioto River**

To relocate the 36”, 18” and 10” force mains, it is anticipated that the contractor will access the area along the western side of the Scioto River across the existing high ground flood protection located between the existing floodwall from C/L LOP Sta. 214+33 and C/L LOP Sta. 215+82. Contractor shall minimize impacts to the area within the floodwall right-of-way. Temporary access location and treatment including, but not limited to, restoration, earthwork and erosion/slope protection shall be included in the work plan.

To facilitate the timely construction of this step, a stockpile of 224 CY of Item 203 Embankment material will be placed near the excavation for the forcemain trench. It is anticipated that backfilling the trench will require approximately 4 hours of work.

In general, the proposed forcemains are offset from the existing forcemains such that a majority of the proposed pipe can be constructed without impacting the operation of the existing forcemains. Once Pier 9L (north pier) is constructed, the contractor shall perform the 18-inch forcemain relocation during dry-weather as the 18-inch forcemain conveys overflows during wet weather. Downtime for the 18—inch forcemain shall last no longer than 8 hours to make the connections.

Once the relocation of the 18-inch forcemain is completed, the contractor shall perform the 10-inch forcemain relocation and reconnection. The existing 36-inch pipe shall be supported during reconnection as it shares a trench with the existing 10-inch pipe. The reconnection of the 10-inch forcemain shall last no longer than 4 hours and coordination with City of Columbus DOSD is required regarding outages for the 10-inch forcemain as it conveys dry-weather flows.

Finally, the contractor shall perform the relocation of the 36-inch forcemain. The downtime for the 36-inch forcemain shall last no longer than 8 hours. The connections to the existing 36-inch forcemain shall occur during dry-weather conditions as the 36-inch forcemain conveys wet-weather flows.

The contractor shall provide bypass pumping of the 10-inch forcemain. The contractor shall supply a pump meeting the design criteria for the pumps for the 10-inch forcemain. The operating condition required is 1,200 gpm at 56.5 TDH.

All testing shall be completed prior to the reconnections being made to each existing forcemain. Testing refers to the hydrostatic and leakage testing as required by the City of Columbus CMS.

The air-vacuum release valve shall be constructed concurrently with the 10-inch and 36-inch forcemain relocations. The air-vacuum release valves utilize a blind tap into a tee on each forcemain. The valves can remain shut during the reconnections of the forcemains and opened upon completion.

All abandoned pipeline shall conform to the USACE standard operating procedure for abandoning and sealing existing pipe within the levee system. The existing pipe shall be cleaned and completed filled with a shrinkage-compensating grout. Small quantity applications shall meet the requirements of ASTM C-1107 such as SIKA 212, Edoco Grout, or approvel equal. Large quantity applications shall be filled using 3000 psi sanded grout with a shrinkage compensating admixture such as SIKA Intraplast N, BASF Tetraguard AS20, or approved equal. The pipe shall be completely filled and the quantity of grout required to fill the pipe should be determined in advance to equal the volume of the inside of the pipe for its full length between restrained caps. The abandoned pipes shall be plugged with restrained, watertight caps.

Relocation of 10-inch and 36-inch diameter sanitary force mains east of the Scioto River: The construction of FRA-070-1373B rear abutment requires the relocation of the existing 10-inch and 36-inch diameter force mains that run along the south side of Mound Street along with reconnecting them to the City’s OSIS. These force mains are components of the WCLPP. This will work consist of an additional outage separate from the west side of the Scioto River for both the 10-inch and 36-inch forcemain. The previous downtimes for both forcemains still apply, respectively.

The Contractor shall begin constructing the proposed sanitary vault and proposed 36-inch and 10-inch forcemains from STA 0+25 to 0+47. The Contractor will then construct the proposed 42-inch gravity sewer from the sanitary vault and connect the 42-inch sewer into the existing O.S.I.S. Once connected, the 36-inch forcemain from STA 0+00 to 0+25 can occur during dry-weather conditions only. Downtime of the 36-inch forcemain shall last no longer than 8 hours.

Once the 36-inch forcemain is operational, the contractor may construct the 10-inch forcemain from STA 0+00 to 0+25. One forcemain must be operational at all points in time. Contractor to coordinate with City of

Columbus DOSD regarding outages for the 10-inch forcemain since it conveys dry-weather flows. Downtime of the 10-inch forcemain shall last no longer than 4 hours.

Once proposed work is complete, contractor shall remove and dispose of existing 36-inch forcemain, 10-inch forcemain, and existing sanitary vault. Excavated areas shall be properly backfilled per City of Columbus CMS 901.

B) **Phase 6R: Construction of FRA-71-1503L (I-71 Southbound over the Scioto River)**

The FRA-71-1503L bridge structure carries relocated I-71 Southbound over the Scioto River, as well as numerous features including two railroads and the State Route 315 Interchange. The new structure will consist of a 23-span bridge with a total length of approximately 4,683 feet. Impacts to the Scioto River are limited to Spans 10 through 14, located from approximately ODOT Station 251+00 to 262+00. The piers located within this area are supported directly on drilled shafts.

To construct and access the causeway for the bridge construction, it is anticipated that the contractor will access the area along the western side of the Scioto River across the existing high ground flood protection located between the existing floodwall between C/L LOP Sta. 213+67 and C/L LOP Sta. 214+89. Contractor shall minimize impacts to the area within the floodwall right-of-way. Temporary access location and treatment including, but not limited to, restoration, earthwork and erosion/slope protection shall be included in the work plan.

The location of Bridge Pier 9L requires vehicle access modification to the Dodge Park Storm Water Pumping Station as necessary for continued Operations & Maintenance activities. ODOT is developing a plan to maintain the non-federal sponsor's requisite access.

Piers 9L and 9R are within the flood protection easement and construction is below the required protection elevation of 723.40. The work for construction of new drilled shaft foundations and a new footing result in the temporary excavation of material on the landside of the sheet pile flood wall. The drilled shaft construction shall be performed when water is below ordinary high water elevation. For footing construction, the excavated material or other suitable material shall be stored on site adjacent to the excavation until the footing concrete is placed and backfill material is placed up to a minimum of the required flood protection elevation. In the event flood waters are projected to rise above elevation 715, fill the footing excavation with the on-site material and compact in accordance with ODOT CMS Section 203.

C) Phase 6A: Construction of FRA-70-1322L (I-70 Westbound over the Scioto River)

The FRA-70-1322L bridge structure carries relocated I-70 Westbound over the Scioto River. The new structure will consist of a five-span steel bridge with a total length of 1,018 feet. The bridge begins at the top of the west bank of the Scioto River at ODOT Station 149+13.68, approximately 15-feet behind the existing I-70 bridge abutment. The structure ends at the east bank of the Scioto River at ODOT Station 159+22.02, approximately 60 feet behind the existing abutment. All piers will be supported directly on drilled shafts. The West abutment is within the existing floodwall right-of-way and will be part of the review plan. Construction of the new abutment and removal methods for the existing abutment will be evaluated for possible temporary flood risk reduction measures to be implemented during construction.

To construct and access the causeway for the bridge construction, it is anticipated that the contractor will access the existing high ground flood protection area along the western side of the Scioto River between the existing floodwall (C/L LOP Sta. 217+20) and the existing levee (C/L LOP Sta. 217+75). Contractor shall minimize impacts to the area within the floodwall right-of-way. Temporary access location and treatment including, but not limited to, restoration, earthwork and erosion/slope protection shall be included in the work plan.

The proposed abutment is to be built behind the existing abutment, which forms a portion of the existing flood wall. The existing abutment shall be left in place until the new abutment is constructed. Maintain sufficient backfill material on site to backfill the abutment excavation. In the event flood waters are projected to rise above elevation 714, backfill any open excavation and the space between the proposed abutment and existing abutment with on-site material up to a minimum of elevation 723.4.

D) Phase 6A: Construction of FRA-70-1323C (Ramp D3 over the Scioto River)

The FRA-70-1323C bridge structure carries Ramp D3 over the Scioto River. The new structure will consist of a five-span steel bridge with a total length of 1,020 feet. The bridge begins at the top of the west bank of the Scioto River at ODOT Station 3042+28.79, approximately 15 feet behind the existing I-70 bridge abutment. The structure ends at the east bank of the Scioto River at ODOT Station 3052+44.77. All piers will be supported directly on drilled shafts. The west abutment is within the existing floodwall right-of-way and will be part of the review plan. Construction of the new abutment will be evaluated for possible temporary flood risk reduction measures to be implemented during construction.

To construct and access the causeway for the bridge construction, it is anticipated that the contractor will access the existing high ground flood protection area along the western side of the Scioto River between the existing floodwall (C/L LOP Sta. 216+35) and the existing levee (C/L LOP Sta. 216+99). Contractor shall minimize impacts to the area within the floodwall right-of-way. Temporary access location and treatment including, but not limited to, restoration, earthwork and erosion/slope protection shall be included in the work plan.

The proposed abutment is to be built behind the existing abutment, which forms a portion of the existing flood wall. The existing abutment shall be left in place until the new abutment is constructed. Maintain sufficient backfill material on site to backfill the abutment excavation. In the event flood waters are projected to rise above elevation 714, backfill any open excavation and the space between the proposed abutment and existing abutment with on-site material up to a minimum of elevation 723.4.

Emergency Notification Process

ODOT's contact personnel will be notified by the City of Columbus of an emergency by phone, text or email based on the trigger elevations and/or river stage levels listed above. Notifications will be specific as to the level of potential flooding. ODOT shall send acknowledgement of the notice to James Howdyshell by text or email within 15 minutes of receiving notification and take immediate action to protect any breach in the floodwall/levee system as outlined above. Mr. Howdyshell, and/or the City of Columbus, shall provide acknowledgement/confirmation that they have received ODOT's acknowledgement.

ATTACHMENT A

WCLPP Features found on FRA-70/71-12.89/14.93				
Floodwall Feature	**Closed/Start River Gage Reading**	**Completed River Gage Reading**	**Plan page number**	
Gatewell #4	**24.8**		**5, 320, 321**	
Gatewell #5	**11.8**		**5, 318**	
Gatewell #7	**17.2**		**5, 315, 316**	
Gatewell #8	**25.8**		**5, 313**	
Gatewell #9	**21.5**		**5, 312**	
approximate 1 year river elevation	**19.2**			
All river gage readings are based on measurements taken at the Frank Rd. USGS/Corps Scioto river gauge south of SR104 **Frank Road Gauge Level 0 ft = El. 679.18** **OHW El. = 698.3**				
current river gage readings and prediction can be found at:				
http://water.weather.gov/ahps2/river.php?wfo=iln&wfoid=18787&riverid=204340&pt%5B%5D=142904&allpoints=142945%2C144958%2C149007%2C142407%2C151775%2C142904%2C146317%2C141505%2C143018%2C144593&data%5B%5D=all				
Surcharging in the collection system upstream of the gatewells will occur when the gates are closed **The construction work area and access may be flooded as a result of surcharging in the collection system during a flood event** **Anticipated rate at which the river rises is 0.8 ft/hr** **Q(10) = 36,800 cfs (10% annual chance)** **Q(50) = 62,100 cfs (2% annual chance)** **Q(100) = 75,000 cfs (1% annual chance)** **Q(500) = 114,000 cfs (0.2% annual chance)**				