Appendix A

Exhibits
Water Line Replacement
Village of Crooksville, Perry County

General Features
- Water Tank
- Water Lines
- Road Centerlines
- Perry Townships

Map Created by Jason Pyles, October, 2016
For questions about data sources, contact a GIS Specialist at Buckeye Hills

http://www.buckeyehills.org | 740.374.9436
PIPING QUANTITY DOES NOT INCLUDE D.I.P. UNDER AND IN/OUT OF TANK. INLET/OUTLET PIPING SHALL BE INCLUDED IN VARIOUS BID ITEMS.

PROPRIETARY PVC C900 (OR 18)
PROPRIETARY CAST VALVE & BOX
PROPRIETARY 8" GATE VALVE & BOX

DETAIL #1

END TANK LINE
STA. 0+95

BEGIN TANK LINE
STA. 0+00

SITE PLAN
SCALE: 1"=20'

PROFILE:
TANK SITE PIPING
SCALE: 1"=20'

GRADING PLAN
SCALE: 1"=20'

WATER FOR TANK CONTRACTOR
1. Access drive to the proposed tank shall be constructed as detailed. Contractor shall maintain the drive during construction and restore with use materials at construction completion. Contractor access prior to main street to the village property shall be gated, seeded, and mulched at project completion.

2. Contractor shall grade site as shown in the grading plan and as necessary for final contractor grading or for contractor’s final grading. Contractor should coordinate grading plans with the Village and provide necessary approval from village fire department.

3. Contractor shall provide any necessary erosion control for the duration of construction activities.

4. Contractor shall install drive area disturbed by construction with seed and mulch.

5. Contractor shall be responsible for obtaining building permits for tank and all associated.

6. Tank contractor shall coordinate his site piping with the mainline contractor.

7. Soil, excavated for construction of proposed tank shall be stockpiled and utilized to fill existing tank. Contractor shall install temporary stormwater runoff protection around stockpiled.

VILLAGE OF CROOKSVILLE
WATER SYSTEM IMPROVEMENTS
WATER STORAGE TANK

DESIGN DRAFT
OFFICE

GRAPHIC SCALE
1 - 1 IN.
1'-0" N/A

NOTE:

1. ACCESS DRIVE TO THE PROPOSED TANK SHALL BE CONSTRUCTED AS DETAILED. CONTRACTOR SHALL MAINTAIN THE DRIVE DURING CONSTRUCTION AND RESTORE WITH USE MATERIALS AT CONSTRUCTION COMPLETION. CONTRACTOR ACCESS PRIOR TO MAIN STREET TO THE VILLAGE PROPERTY SHALL BE GATED, SEeded, AND MULCHED AT PROJECT COMPLETION.

2. CONTRACTOR SHALL GRADE SITE AS SHOWN IN THE GRADING PLAN AND AS NECESSARY FOR FINAL CONTRACTOR GRADING OR FOR CONTRACTOR'S FINAL GRADING. CONTRACTOR SHOULD COORDINATE GRADING PLANS WITH THE VILLAGE AND PROVIDE NECESSARY APPROVAL FROM VILLAGE FIRE DEPARTMENT.

3. CONTRACTOR SHALL PROVIDE ANY NECESSARY EROSION CONTROL FOR THE DURATION OF CONSTRUCTION ACTIVITIES.

4. CONTRACTOR SHALL INSTALL DRIVE AREA DISTURBED BY CONSTRUCTION WITH SEED AND MULCH.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING BUILDING PERMITS FOR TANK AND ALL ASSOCIATED.

6. TANK CONTRACTOR SHALL COORDINATE HIS SITE PIPING WITH THE MAINLINE CONTRACTOR.

7. SOIL, EXCAVATED FOR CONSTRUCTION OF PROPOSED TANK SHALL BE STOCKPILED AND UTILIZED TO FILL EXISTING TANK. CONTRACTOR SHALL INSTALL TEMPORARY STORMWATER RUNOFF PROTECTION AROUND STOCKPILED.
Appendix B
Agency Correspondence
September 2, 2016

Dear Mr. Halterman:

**Re: Crooksville Water System Improvements, Perry County, Crooksville, Ohio.**

This is in response to correspondence, received on August 8, regarding the Crooksville Water System Improvements project. My comments are in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended and the associated regulations at 36 CFR Part 800.

The project consists of the construction of 60,000 feet of waterline replacement and a new water storage tank. Included with the correspondence was the report, *A Phase I Archaeological Survey for the Village of Crooksville’s Water System Improvements Project in Harrison Township, Perry County, Ohio* (Weller 2016). The report only documents 4,435 ft for the water lines and 0.15 acre for the proposed storage tank. The remainder of the project area was not surveyed due to the location within the street right-of-ways. No archaeological deposits were identified during this investigation.

Based on the information submitted, it is my opinion that the proposed undertaking will have no adverse effect on properties listed or eligible for listing on the National Register of Historic Places. No further coordination is necessary unless the project changes or archaeological remains are discovered during the course of the project. In such a situation, this office should be contacted as per 36 CFR 800.13. Thank you for your cooperation.

If you have any questions, please contact me at (614) 298-2000, or via email at jbellvillemarrion@ohiohistory.org.

Sincerely,

Jennifer Bellville-Marrion, Project Reviews Coordinator
Resource Protection and Review

Ser. 1064707
February 23, 2016

Daniel Halterman
Ohio Environmental Protection Agency - DEFA
50 West Town Street, Suite 700
Columbus, Ohio 43216-1049

Re: Crooksville Water System Improvements, FS390292-0002, Perry County, Ohio

Dear Mr. Halterman,

We have received your recent correspondence regarding the above-referenced project. You have requested concurrence with your determination of effects to federally listed species, pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (ESA).

In order to minimize impacts to the federally endangered Indiana bat (Myotis sodalis) and the federally threatened northern long-eared bat (Myotis septentrionalis), the project proponent will conduct clearing of trees ≥3 inches diameter at breast height only from October 1 – March 31. The Service has reviewed your project description and concurs with your determination that the project, as proposed, is not likely to adversely affect the Indiana bat or northern long-eared bat.

This concludes consultation on this action as required by section 7(a)(2) of the ESA. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Dan Everson
Field Supervisor
Sept 12, 2016

Alan Brown, PE  
Project Manager  
IBI GROUP  
5085 Tile Plant Road  
New Lexington OH 43783

Re: Village of Crooksville (IBI project #14-057)

Mr. Brown,

With the information you provided on the IBI Project #14-057, Village of Crooksville, Water Systems Improvement Project, and its identified location of the project being located and having portions within the 100 year flood plain as determined by FEMA.

Even though the project does have components within the FEMA identified regulated flood plain, the proposed activity of waterline installation will not adversely impact the flood fringe area of the floodplain, and will not adversely reduce the capacity of the Flood Plain or create public safety issues in the event of a flood. Therefore, as the local Designated Floodplain Administrator, for Perry County and the village of Crooksville, I find your project to be in compliance with our regulations, and there is no need to submit a flood plain development permit.

If you have any questions or need additional information, feel free to contact me at our local office.

Thank you,

Benjamin Carpenter, CFM  
Program Administrator, Perry SWCD  
Flood Plain Administrator, Crooksville
Appendix C

Surface Water Determination Study
April 7, 2017

Mayor Fred Redfern
Village of Crooksville
98 S. Buckeye Street
Crooksville, Ohio 43731

RE: Surface Water Determination for the Village of Crooksville Waterline Project Located in Crooksville, Perry County, Ohio; VCR003.0001.

Dear Mr. Redfern:

Jobes Henderson & Associates, Inc. (JHA, a wholly-owned subsidiary of Hull & Associates, Inc.) is pleased to present the results of a surface water determination study performed for the Village of Crooksville Water System Improvement Project along three segments of a proposed pipeline corridor in Perry County, Ohio (Project Corridor; Figure 1). On April 3, 2017, an Ecologist from JHA conducted fieldwork associated with the surface water determination within the proposed Project Corridor. The purpose of this surface water determination is to map the approximate location and extent of wetlands, streams and other potentially jurisdictional surface waters identified through a desktop analysis of readily available secondary source data, supplemented by a brief but thorough field investigation. Impacts to identified jurisdictional resources may be regulated under federal and state law.

The Project Corridor extends a total of approximately 4,435 feet in length and 30 feet in width and is comprised of three (3) separate corridor segments (Project Corridors A, B and C), as presented in Figure 1. Project Corridor A (Line W-26) begins on the northern side of Crooksville on the eastern side of China Street and extends to the southeast, crosses Moxahala Creek, and ends on the northwestern corner of Mohican Drive. Project Corridor B (Line E-27 and the Tank and Tank Line), located south of Project Corridor A, begins at the eastern end of Grant Street and extends to the east near the existing water tank. Project Corridor C (Line S-1), located south of Project Corridor B, begins on the northwestern side of the State Route 93/669 north of the railroad bridge and extends to the south along the western side of Tunnel Hill Road, and terminates on a private drive, southwest of the intersection of School Drive and Tunnel Hill Road. The approximate center points of the Project Corridors are located at the following latitude/longitude coordinates, Project Corridor A: 39.777144°N/-82.093671°, Project Corridor B: 39.767464°N/-82.088657°W, and Project Corridor C - 39.754234°N/-82.09383°W (Figure 1).

Methods

Prior to conducting the field investigation, JHA compiled and reviewed secondary source information that was used for screening and planning purposes. Secondary source information included, but was not limited to, the following: U.S. Geological Survey (USGS) topographic maps, recent aerial photography; National Wetlands Inventory (NWI) map, and the Natural Resources Conservation Service (NRCS) soils map (Figure 2). On April 3, 2017, a JHA Ecologist performed an on-Site determination of surface waters, including wetlands and streams.

The surface water determination survey consisted of walking the Project Corridors to verify areas where secondary source information and general field conditions suggested the possible presence of wetlands and streams. JHA preliminarily tested for the presence of field indicators of wetland hydrology, hydric soils, and wetland plant communities pursuant to the methods outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (Manual) and the 2012 Regional Supplement to the Manual for the Eastern Mountains Piedmont; upland data forms are presented in Attachment B. JHA also visually inspected the periphery of the Project Corridor.

Professional judgment (without quantification) was used to determine the presence of surface waters within
the Project Corridors. The locations of identified surface water features are presented in Figure 3; photographs are included in Attachment A.

**Results**

JHA’s Ecologist identified the following surface water resources, NRCS Perry County, Ohio soil survey soil map units, and habitat features within each of the respective Project Corridors:

**Project Corridor A**

One wetland (Wetland JA) and Moxahala Creek were identified within Project Corridor A. Wetland JA is a potentially jurisdictional Palustrine Forested (PFO) wetland, dominated by pin oak (*Quercus palustris*, FACW) and American sycamore (*Platanus occidentalis*, FACW).

Moxahala Creek is located to the east of the railroad tracks and Project Corridor A and crosses the creek at a right angle. Moxahala Creek is a perennial Relatively Permanent Waterway that flows to the northeast with clay and silt substrates.

The three soil map units located within Project Corridor A include: Newark silt loam, frequently flooded (Ne); Nolin silt loam, occasionally flooded (No); and Wellston silt loam, 8 to 15% slopes (WhC). Soil units Ne and Na are classified as non-hydric soils with hydric inclusions and soil unit WhC is classified as non-hydric.

The terrain of Project Corridor A includes a floodplain terrace on the western side of the corridor and it extends up a hill on the east side of the corridor. Upland habitats were characterized by facultative upland (FACU) and upland (UPL) plant species, comprising a plant community atypical of wetlands. The park and yard habitat type is located in the western portion of Project Corridor A, west of Moxahala Creek and the railroad tracks, and is dominated by red fescue (*Festuca rubra*, FACU). The eastern side of Project Corridor A, adjacent to the eastern side of Moxahala Creek, is an upland riparian forested community dominated by black cherry (*Prunus serotina*, FACU) and silver maple (*Acer saccharinum*, FACW) in the overstory and multiflora rose (*Rosa multiflora*, FACU) in the understory. A riparian depressional area is located south of the existing Columbia Gas line, adjacent to Moxahala Creek and JHA observed standing water in this forested area. This portion of Project Corridor A has been identified as Wetland JA. The area east of Wetland JA exhibits a steep grade increase through an upland wooded area.

**Project Corridor B**

No surface water features were identified within Project Corridor B.

The two soil map units located within Project Corridor B include: Guernsey-Westmoreland silt loams 10 to 25% slopes (GwD) and Guernsey-Westmoreland silt loams (GwE), 25 to 40% slopes. Soil units GwD and GwE are classified as non-hydric soils.

The terrain of Project Corridor B includes a steep grade on the east side of the corridor which levels-off at the top of the hill into an open park and yard habitat type near the existing municipal water tank on the western side. The open park and yard habitat type is dominated by red fescue. The upland forested community is located along an existing access path on a steep grade within the western portion of the Project Area and is dominated by American beech (*Fagus grandifolia*, FACU) in the overstory and multiflora rose in the understory.

**Project Corridor C**

One unnamed tributary of Moxahala Creek (Stream J1) was identified within Project Corridor C. Stream J1, located in the southern portion of Project Corridor C, crosses the corridor at a right angle and flows to the east, with gravel and artificial (concrete conglomerate and asphalt) substrates.
The five soil map units located within Project Corridor C include: Alford silt loam, 1 to 8% slopes (AfB); Alford silt loam, 8 to 15% slopes (AfC); Enoch shaly clay loam, 20 to 40% slopes (EnE); Euclid silt loam, rarely flooded (EuA); Glenford silt loam, 1 to 8% slopes (GnB); and Newark silt loam, frequently flooded (Ne). Soil units EnA, EuE, GnB and Ne are classified as non-hydric soils with hydric inclusions and soil units AfB, AfC are classified as non-hydric soils.

The terrain of Project Corridor C includes areas of low relief in the southern portion of the corridor and steep grades in the northern portion. The park and yard habitat type is located in the northern portion of Project Corridor C. This area is dominated by red fescue. The southern portion of Project Corridor C exhibits upland forested habitat dominated by oak and maple species.

Wetland and stream locations are presented in Figure 3 and soil map unit boundaries and are depicted in Figure 2.

**Summary**

One wetland (Wetland JA) and two streams (Moxahala Creek and Stream J1) are located within the Project Corridor and could be impacted by the development of these Project Corridors. Wetland JA and Moxahala Creek are located within Project Corridor A and Stream J1 is located within Project Corridor C. No surface water features were identified within Project Corridor B.

Thank you for the opportunity to provide this information. Please feel free to contact me with any questions.

Sincerely,

Jaclyn T. Haynal, WPIT, AWB®
Scientist II
Jobes Henderson & Associates, Inc.


Attachments: Figures
Attachment A: Photo Log
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Source: The topographic map was acquired through the USGS Topographic Map web service. The aerial photo in the inset was acquired through the ESRI Imagery web service. Aerial photography dated 2015.
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The aerial photo was acquired through the Ohio Statewide Imagery Program Service Imagery web service. Aerial photography dated 2013.

Notes:
The aerial photo was acquired through the Ohio Statewide Imagery Program Service Imagery web service. Aerial photography dated 2013.

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April 2017

59 Grant Street
Newark, Ohio 43055
Phone: (740) 344-5451
Fax: (740) 344-8659
www.hullinc.com

Notes:
The aerial photo was acquired through the Ohio Statewide Imagery Program Service. Aerial photography dated 2013.
The aerial photo was acquired through the Ohio Statewide Imagery Program Service Imagery web service. Aerial photography dated 2013.

**Notes:**

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Stream J1
Railroad Tracks
Corridor C Study Area

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ATTACHMENT A

PHOTO LOG
PHOTO 1: Representative view of the park habitat in the western portion of Project Corridor A.

PHOTO 2: Representative view of the upland forested area east of Moxahala Creek, facing west, within Project Corridor A.
PHOTO 3:  View of Wetland JA, facing southwest, showing the forested wetland habitat within Project Corridor A.

PHOTO 4:  View of Wetland JA, facing west, showing the forested wetland habitat within Project Corridor A.
PHOTO 5: Moxahala Creek from the western side of Project Corridor A.

PHOTO 6: Upland forested habitat and grass path within Project Corridor B.
PHOTO 7: Mowed lawn habitat within the eastern portion of Project Corridor B.

PHOTO 8: Mowed lawn habitat along Project Corridor C.
PHOTO 9: View of Stream J1, facing upstream.

PHOTO 10: View of Stream J1, facing downstream.
PHOTO 11:  View of Stream J1, substrate.
Appendix D
Mailing List