



GANNETT FLEMING, INC.
P.O. Box 67100
Harrisburg, PA 17106-7100

Location:
207 Senate Avenue
Camp Hill, PA 17011

Office: (717) 763-7211
Fax: (717) 763-8150
www.gannettfleming.com

August 21, 2014

Ohio EPA – Northeast District Office
Division of Surface Water
Attn: Todd Surrena, 401 Coordinator
2110 East Aurora Road
Twinsburg, OH 44087

**RE: Mountain Gathering, LLC
Buckeye Compressor Station to Monroe North Meter Site Natural Gas Pipeline
York and Switzerland Townships, Belmont and Monroe Counties, Ohio
Administrative Completeness Review for Section 401, Water Quality Certification
Application
Ohio EPA ID No. 144455**

Dear Todd:

We have addressed each of the comments in the letter from Maggie Corder dated July 30, 2014, and have provided responses below.

1. *A copy of the United States Army Corps of Engineers' jurisdictional determination letter;*
 - *While Ohio EPA is in receipt of an email from Tyler Bintrim at the Pittsburgh District of the Army Corps of Engineers dated June 30, 2014 stating that a Preliminary JD will be utilized for this project, Ohio EPA requires documentation that the Corps is willing to authorize the project under a specific Nationwide Permit that includes the issuance of the Preliminary JD.*

Please see most recent correspondence from Tyler Bintrim of USACE (July 31, 2014), attached.

2. *A specific and detailed mitigation proposal, including the location and proposed legal mechanism for protecting the property in perpetuity;*
 - *The applicant has proposed mitigation for impacts to the streams that exceeded Ohio EPA's thresholds for Nationwide Permit 12 and not all stream impacts within the project footprint. Please revise to include a mitigation plan that includes all stream and wetland impacts.*

Please see revised Mitigation Plan, Stream Impacts table, and Wetland Impacts table, attached.

3. *Applicable permit fees;*

- *Upon submittal of the application, half of the fees for the review of the streams that triggered the requirement for an individual 401 Water Quality Certification were included. However, all streams proposed for impact should be included in Section 3: Fees. This is in accordance with ORC section 3745.114. The linear feet of impact under the minimal degradation alternative was utilized to calculate fees. Fees are based on the preferred alternative. The correct calculation for total fees due is below. Perennial Stream Impacts: 377 LF*\$15.00= \$5,655.00. Intermittent Stream Impacts: 60 LF*\$10.00=\$600.00. Review Fee: = \$6,255.00. Due at time of 401 WQC Application (App. Fee and 1/2 of review fee) = \$3,327.50 Due at time of 401 WQC Issuance (1/2 of review fee)= \$3,127.50.*

The revised application fee was calculated according to the following:

Wetland acres impacted (0.06 ac * \$500/ac):	\$30
Intermittent stream linear feet impacted (21 LF * \$10/LF):	\$210
Perennial stream linear feet impacted (100 LF * \$15/LF):	\$1,500
Total review fees:	\$1,740
Total fees (\$200 application fee + total review fees):	\$1,940
Due at time of 401 WQC application submittal:	\$1,070
Due at time of 401 WQC issuance:	\$870

Please see the enclosed check as payment of the application fee.

The ORAMs associated with the wetland impacts for this project were included in Appendix VIII of the original application submission. Construction would begin October 2014 and be completed by October 2015.

4. *Descriptions, schematics, and appropriate economic information of the applicant's preferred, non-degradation and minimal degradation alternatives for design and operation of the activity;*

- *All streams proposed for impact are required to be included in the alternatives analysis. They do not have to be analyzed individually, but the project as a whole should have a Preferred, Minimal and Non-Degradation Alternative. When preparing alternatives analysis please provide a total cost estimate for each alternative.*

Please see revised Alternatives Analysis and Project Mapping, attached.

5. *A copy of the United States Army Corps of Engineers' public notice regarding the 404 permit application. If no public notice is to be issued by the Corps, notification that the project is to be authorized under a general permit will fulfill this requirement.*

- *Ohio EPA is aware that the applicant has applied to the Pittsburgh District of the Army Corps of Engineers' for coverage under Nationwide Permit 12. To fulfill this requirement when seeking coverage under a Nationwide Permit the applicant is required to submit either a Provisional Nationwide Permit from the Army Corps of*

Engineers or correspondence from the Army Corps of Engineers stating that issuance of a specific Nationwide Permit is imminent.

Please see most recent correspondence from Tyler Bintrim of USACE (July 31, 2014), attached.

Enclosed with this transmittal letter are one hard copy and one electronic copy of the information requested, including the following:

- USACE correspondence dated July 31, 2014
- Revised Mitigation Plan with impacts tables
- Check as payment for revised application fee
- Revised Alternatives Analysis and Project Mapping

If you have any questions, please do not hesitate to contact me at (717) 763-7211, extension 2638.

Very truly yours,



Jillian Arnold
Environmental Resources Division
Gannett Fleming, Inc.

Attachments

Copies Furnished (electronically): Dewey Chalos, Mountain Gathering, LLC
Cy Whitson, Gannett Fleming, Inc.
Brent Ramsey, Gannett Fleming, Inc.

Gannett Fleming Companies

(Gannett Fleming, Inc. as paying agent for subsidiaries and affiliates)
Harrisburg, Pennsylvania

PNC Bank, N.A. Jeannette, PA
Payable if desired at PNC Bank, Delaware

60-162
433

250121

DATE
08/15/14

AMOUNT
****\$1,070.00****

PAY
EXACTLY ***One Thousand Seventy And 00/100 US Dollars***

COPY

Void After 90 Days

TO THE
ORDER
OF

TREASURER, STATE OF OHIO
OHIO EPA, DIV OF SURFACE WATER
ATTN:401/IWP/MITIGATION SECTION MGR
P.O. BOX 1049
COLUMBUS, OH 43216-1049

William M. Stout



⑈ 250 1 2 1 ⑈ ⑆ 04330 16 2 7 ⑆ 10 1 36 36 7 1 5 ⑈

Mountain Gathering, LLC

BUCKEYE COMPRESSOR STATION TO MONROE NORTH METER SITE NATURAL GAS PIPELINE

York and Switzerland Townships,
Belmont and Monroe Counties, Ohio

REVISED APPLICATION FOR SECTION 401 WATER QUALITY CERTIFICATION

Prepared for:



810 Houston Street
Fort Worth, TX 76102

Prepared by:



Gannett Fleming, Inc.
207 Senate Avenue
Camp Hill, PA 17011
(717) 763 – 7211

August 2014

CONTENTS

- II.** Revised Stream and Wetland Impacts Tables
- IV.** Agency Correspondence
 - a. USACE JD – July 31, 2014
- V.** Revised Alternatives Analysis
- VI.** Revised Project Mapping
 - a. Preferred Alternative
 - b. Minimal-Degradation Alternative
 - c. Non-Degradation Alternative
- VII.** Revised Mitigation Plan

NOT INCLUDED (submitted to OEPA with original 401 WQC application on July 15, 2014)

- I.** Application Form
- III.** Relevant Excerpts from Wetland Delineation Report
- VIII.** Pre-Construction Notification submitted June 13, 2014

II

REVISED STREAM AND WETLAND IMPACTS



Application for Section 401 Water Quality Certification — Proposed Stream Impacts and Mitigation

Division of Surface Water 401 Water Quality Certification and Isolated Wetland Permitting Unit

Section 1: Streams Onsite and Proposed Impacts									
Stream ID	Jurisdictional?	Flow	Aquatic Life Use Designation in 3745-1	Existing Use?	Length Onsite (linear ft.)	Preferred Alternative		Minimal Degradation Alternative	
						Impact Length (linear ft.)	Impact Type	Impact Length (linear ft.)	Impact Type
Stream 4	YES	Perennial	Undesignated	CWH	80.00	20.00	Utility Line Crossing	0.00	Choose an item.
Stream 8	YES	Perennial	Undesignated	CWH	71.00	20.00	Utility Line Crossing	20.00	Utility Line Crossing
Stream 12	YES	Perennial	Undesignated	CWH	75.00	20.00	Utility Line Crossing	0.00	Choose an item.
Stream 6	YES	Intermittent	Undesignated	Choose an item.	60.00	21.00	Utility Line Crossing	21.00	Utility Line Crossing
Stream 5	YES	Perennial	Undesignated	Choose an item.	77.00	20.00	Utility Line Crossing	20.00	Utility Line Crossing
Stream 14	YES	Perennial	Undesignated	Choose an item.	74.00	20.00	Utility Line Crossing	20.00	Utility Line Crossing
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Click here to enter text.	Choose an item.	Choose an item.	Choose an item.	Choose an item.			Choose an item.		Choose an item.
Stream Length Totals					437.00	121.00		81.00	

Section 2: Proposed Stream Mitigation (Check All That Apply) Preferred Alternative				
<input checked="" type="checkbox"/> In-Lieu Fee Program	ILF Sponsor: The Nature Conservancy	Number of Stream Credits: 60.5	Number of Buffer Credits:	Proof of Reservation? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
<input type="checkbox"/> On-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item. linear feet <input type="checkbox"/> Preservation of Choose an item. linear feet with Choose an item. foot buffers		<input type="checkbox"/> Enhancement of linear feet of a Choose an item. to a Choose an item. through Choose an item. <input type="checkbox"/> Other Click here to enter text.	
<input type="checkbox"/> Off-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item. linear feet <input type="checkbox"/> Preservation of Choose an item. linear feet with Choose an item. foot buffers		<input type="checkbox"/> Enhancement of linear feet of a Choose an item. to a Choose an item. through Choose an item. <input type="checkbox"/> Other	
Section 3: Proposed Stream Mitigation (Check All That Apply) Minimal Degradation Alternative				
<input checked="" type="checkbox"/> In-Lieu Fee Program	ILF Sponsor: The Nature Conservancy	Number of Stream Credits: 40.5	Number of Buffer Credits:	Proof of Reservation? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
<input type="checkbox"/> On-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item. linear feet <input type="checkbox"/> Preservation of Choose an item. linear feet with Choose an item. foot buffers		<input type="checkbox"/> Enhancement of linear feet of a Choose an item. to a Choose an item. through Choose an item. <input type="checkbox"/> Other Click here to enter text.	
<input type="checkbox"/> Off-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item. linear feet <input type="checkbox"/> Preservation of Choose an item. linear feet with Choose an item. foot buffers		<input type="checkbox"/> Enhancement of linear feet of a Choose an item. to a Choose an item. through Choose an item. <input type="checkbox"/> Other Click here to enter text.	



Application for Section 401 Water Quality Certification — Proposed Wetland Impacts and Mitigation

Division of Surface Water 401 Water Quality Certification and Isolated Wetland Permitting Unit

Wetlands Onsite and Proposed Impacts											
Wetland ID	ORAM Score	Category	Cat. Verified by Ohio EPA?	Ohio EPA Reviewer who Verified	Acreage Onsite	Preferred Alternative			Minimal Degradation Alternative		
						Impact Acreage		Impact Type	Impact Acreage		Impact Type
						Forested	Non		Forested	Non	
Wetland 1	17.00	1	<input type="checkbox"/>	Choose an item.	0.01	0.00	0.01	Utility Line Crossing	0.00	0.01	Utility Line Crossing
Wetland 2	33.00	2	<input type="checkbox"/>	Choose an item.	0.01	0.00	0.00	Utility Line Crossing	0.00	0.00	Utility Line Crossing
Wetland 4	13.00	1	<input type="checkbox"/>	Choose an item.	0.02	0.00	0.00	Utility Line Crossing	0.00	0.00	Utility Line Crossing
Wetland 7	14.00	1	<input type="checkbox"/>	Choose an item.	0.01	0.00	0.00	Utility Line Crossing	0.00	0.00	Utility Line Crossing
Wetland 8	14.00	1	<input type="checkbox"/>	Choose an item.	0.05	0.00	0.01	Utility Line Crossing	0.00	0.01	Utility Line Crossing
Wetland 9	14.00	1	<input type="checkbox"/>	Choose an item.	0.02	0.00	0.02	Utility Line Crossing	0.00	0.02	Utility Line Crossing
Wetland 5	22.00	1	<input type="checkbox"/>	Choose an item.	0.05	0.00	0.02	Utility Line Crossing	0.00	0.02	Utility Line Crossing
Wetland 10	14.00	1	<input type="checkbox"/>	Choose an item.	0.00	0.00	0.00	Choose an item.	0.00	0.00	Choose an item.
Wetland 11	14.00	1	<input type="checkbox"/>	Choose an item.	0.00	0.00	0.00	Choose an item.	0.00	0.00	Choose an item.
Wetland 6	15.00	1	<input type="checkbox"/>	Choose an item.	0.00	0.00	0.00	Choose an item.	0.00	0.00	Choose an item.
Click here to enter text.		1	<input type="checkbox"/>	Choose an item.				Choose an item.			Choose an item.
Click here to enter text.		1	<input type="checkbox"/>	Choose an item.				Choose an item.			Choose an item.
Wetland Acreage Totals						0.17	0.00	0.06		0.00	0.06
Totals – Category 1 Wetlands						0.16	0.00	0.06		0.00	0.06
Totals – Category 2 Wetlands						0.01	0.00	0.00		0.00	0.00
Totals – Category 3 Wetlands						0.00	0.00	0.00		0.00	0.00

Proposed Wetland Mitigation (Check All That Apply) Preferred Alternative					
<input type="checkbox"/> Wetland Mitigation Bank Mitigation Bank: Choose an item.	Number of Forested Credits: Number of Non-Forested Credits: Number of Buffer Credits:	Type of Credits (if applicable): Choose an item. Type of Credits (if applicable): Choose an item. Type of Credits (if applicable): Choose an item.	Proof of Reservation? <input type="checkbox"/>		
<input checked="" type="checkbox"/> In-Lieu Fee Program	ILF Sponsor: The Nature Conservancy	Number of Wetland Credits: 0.03 Number of Buffer Credits:			
<input type="checkbox"/> On-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item.	Acres	<input type="checkbox"/> Enhancement Choose an item.	Acres	
	<input type="checkbox"/> Preservation Choose an item.	Acres	<input type="checkbox"/> Other Click here to enter text.		
<input type="checkbox"/> Off-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item.	Acres	<input type="checkbox"/> Enhancement Choose an item.	Acres	
	<input type="checkbox"/> Preservation Choose an item.	Acres	<input type="checkbox"/> Other Click here to enter text.		
Proposed Wetland Mitigation (Check All That Apply) Minimal Degradation Alternative					
<input type="checkbox"/> Wetland Mitigation Bank Mitigation Bank: Choose an item.	Number of Forested Credits: Number of Non-Forested Credits: Number of Upland Buffer Credits:	Type of Credits (if applicable): Choose an item. Type of Credits (if applicable): Choose an item. Type of Credits (if applicable): Choose an item.	Proof of Reservation? <input type="checkbox"/>		
<input checked="" type="checkbox"/> In-Lieu Fee Program	ILF Sponsor: The Nature Conservancy	Number of Wetland Credits: 0.03 Number of Buffer Credits:			
<input type="checkbox"/> On-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item.	Acres	<input type="checkbox"/> Enhancement Choose an item.	Acres	
	<input type="checkbox"/> Preservation Choose an item.	Acres	<input type="checkbox"/> Other Click here to enter text.		
<input type="checkbox"/> Off-Site Permittee-Responsible Mitigation	<input type="checkbox"/> Restoration/Creation Choose an item.	Acres	<input type="checkbox"/> Enhancement Choose an item.	Acres	
	<input type="checkbox"/> Preservation Choose an item.	Acres	<input type="checkbox"/> Other Click here to enter text.		

IV

AGENCY CORRESPONDENCE

A. USACE JD – July 31, 2014



Iulucci, Danielle <diulucci@gfnet.com>

**RE: Corps Public Notice No. 2014-459_Incomplete Notification
(UNCLASSIFIED)**

Bintrim, Tyler J LRP <tyler.j.bintrim@usace.army.mil>

Thu, Jul 31, 2014 at 1:39 PM

To: "Arnold, Jillian" <jarnold@gfnet.com>

Cc: "Corder, Margaret" <Maggie.Corder@epa.ohio.gov>, "Dewey_Chalos@xtoenergy.com" <Dewey_Chalos@xtoenergy.com>, Cyrille Whitson <cwhitson@gfnet.com>, "Iulucci, Danielle" <diulucci@gfnet.com>

Classification: UNCLASSIFIED

Caveats: NONE

Jill and Maggie,

The Corps anticipates being able to issue a Nationwide Permit 12 for this project though I have not conducted my final review yet. We were not going to issue a preliminary JD letter or anything for this project though for database documentation purposes that is what we're utilizing. This is in an effort to focus on review of the application rather than spend the time issuing a pre JD first.

Any questions please let me know. Maggie in the past the Corps has informed OEPA that we would be assuming jurisdiction of all resources and moving on to application review. This sufficed in the past.

Thank you,

Tyler J. Bintrim
Regulatory Project Manager
U.S. Army Corps of Engineers Pittsburgh District
Federal Building, 20th Floor
1000 Liberty Avenue
Pittsburgh, PA 15222

www.lrp.usace.army.mil

P: 412-395-7115

-----Original Message-----

From: Arnold, Jillian [mailto:jarnold@gfnet.com]

Sent: Wednesday, July 30, 2014 4:07 PM

To: Bintrim, Tyler J LRP

Cc: Corder, Margaret; Dewey_Chalos@xtoenergy.com; Cyrille Whitson; Iulucci, Danielle

Subject: [EXTERNAL] Re: Corps Public Notice No. 2014-459_Incomplete Notification (UNCLASSIFIED)

Ty,

I have attached a copy of the original impact table found within the PCN provided to USACE and OEPA for review with the 404 and 401, respectively. The Buckeye Discharge alignment has a total of 7 Wetland Impacts that total 0.15 acres to Category 1 & 2 wetlands. Stream impacts total 437 linear feet as they were submitted with the Preferred Alternative (PA) for the 401, as well as with the PCN and 404.

Since we were offering the Minimal Degradation Alternative (MDA) for the 401, I updated impacts to 3 of the streams (Streams 4, 8 & 12) to 20' per crossing. This would reduce the amount of total impacts to streams from

437 LF to 271 LF.

Are you anticipating issuing a preliminary JD for this project?

Thank you,
Jill

Jillian Arnold, CFM | Environmental Scientist
Gannett Fleming Inc. | 207 Senate Avenue, Camp Hill, PA 17011

t 717.763.7211 x2638 | jarnold@gfnet.com <mailto:jarnold@gfnet.com>

Excellence Delivered As Promised

Gannett Fleming is ISO 9001:2008 Certified.

www.gannettfleming.com <<http://www.gannettfleming.com/>> | Stay connected: Twitter <<http://www.twitter.com/gannettfleming>> | Facebook <<http://www.facebook.com/GannettFleming>> | LinkedIn <<http://www.linkedin.com/company/gannett-fleming>> | YouTube <<http://www.youtube.com/user/GannettFleming?blend=3&ob=5>>

[Quoted text hidden]

Classification: UNCLASSIFIED

Caveats: NONE

V

REVISED ALTERNATIVES ANALYSIS

REVISED ALTERNATIVES ANALYSIS

This Alternatives Analysis discusses preferred, minimal-degradation, and non-degradation alternatives. The preferred alternative was selected based on achieving minimal stream impact while maintaining project constructability. Project mapping for each alternative can be found in **Appendix VI**.

Preferred Alternative

Project Description

Standard operating procedure for the installation of natural gas pipeline includes the potential disturbance of 70 feet of right-of-way (ROW). The permanent ROW extends 25 feet in width on either side of the center line of the pipeline for a total width of 50 feet. The temporary ROW extends 10 feet beyond the permanent ROW on either side, for a total width of 20 feet.

Mountain Gathering, LLC, will reduce the permanent ROW from 50 feet to 20 feet for streams and to 30 feet for wetlands under the preferred alternative in order to minimize impact to each surface water feature being crossed by the pipeline. There will be no impacts within the temporary ROW, which will be increased from 20 feet to 50 feet in width for streams and 40 feet in width for wetlands.

The proposed alignment crosses six (6) streams and seven (7) wetlands. Specific size of impact within the ROW differs by feature, with cumulative impact totaling 121 linear feet; 3,590 square feet; 0.083 acre (rounded up to 0.095 acre for calculation using Impacts and Mitigation tables). Stream and wetland impacts were calculated using ArcMAP and may differ from dimensions measured in the field. All impacts are temporary due to immediate post-construction restoration, described below.

Construction is scheduled to start in the fall of 2014. Installation will be completed within one year of the start date. Mitigation information can be found in the Revised Mitigation Plan included in **Appendix VII**.

This project will convey natural gas from the Buckeye Compressor Station, which will collect natural gas from several well pads upon the completion of construction in 2015, to market at the Monroe North Meter Site.

Avoidance

Mountain Gathering, LLC, considered several possible routes between the Buckeye Compressor Station and the Monroe North Meter Site for this project. Route choice is limited by the topography in the area, property access constraints, and surface water impacts. The nature of linear construction projects limits the ability to avoid crossing surface water features that occur in an area.

If this project is not constructed, natural gas cannot be conveyed from the Buckeye Compressor Station. The proposed pipeline is critical to conveying the natural gas to market.

Surface water runoff from on-site wetlands will not be affected by the proposed work.

Minimization

For streams, best management practices include placing a timber mat bridge (16' x 20') with side guards above the ordinary high water mark to permit the passage of equipment and vehicles during pipeline installation. Sediment-filtering material will be installed beneath the timber mat bridge to prevent sediment from entering the water due to travel across the bridge. Erosion and sediment controls will be installed along both sides of each stream to prevent the flow of sediment into the water. Minor grading may occur to permit safe passage during pipeline installation. Any removed soil will be stored nearby and protected from erosion with additional erosion controls.

For streams, sand bags will be placed within the water, immediately upstream of the proposed pipeline location, to act as a temporary dam redirecting any flowing water into a flume pipe (15' to 20' long) within the center of the stream. Sand bags will be similarly placed at the downstream end of the flume pipe to maintain its position in the streambed. Streams will be open-cut for pipeline installation after surface water has been temporarily redirected. An excavator stationed on the timber mat bridge will dig the 5-foot-wide, 8-foot-deep trench through the streambed without disturbing the flume pipe.

For wetlands, best management practices include placing temporary timber mats (4' x 20' or 4' x 40' based on wetland size) to permit the passage of equipment and vehicles during pipeline installation. Wetlands outside of the work area will be protected with erosion and sediment controls as appropriate. Minor grading may occur to permit safe passage during pipeline installation. Any removed soil will be stored near the work area and protected from erosion with additional erosion controls. An excavator stationed on the timber mats will dig the 5-foot-wide, 8-foot-deep trench through the wetland. Any flowing water will be redirected via the installation of a floor pipe or pump-around.

Trench excavation will result in the temporary stockpiling of substrate materials from within each surface water feature. The dredged material will be stored nearby, protected by erosion controls.

Upon completion of the pipeline installation, the excavated area within each surface water feature will be backfilled with the materials removed from the substrate. For streams, the flume pipe and sand bags will be removed and the flow of water will be restored. For wetlands, the floor pipe or pump-around will be removed and the flow of water will be restored. Altered bed and banks will be fully restored to their original form and the site will be restored to original grade. Restored topsoil will be stabilized against erosion with the installation of additional erosion controls as necessary. The timber mat bridge or timber mats will be removed after work in the area is completed; there will be no further impact.

Once the work area is stabilized and vegetative growth has reached 70%, all erosion controls will be removed. All best management practices will be included in the Erosion and Sediment Control Plan being designed in compliance with ODNR-DSWR standards dated November 26, 2013.

Magnitude of the Proposed Lowering of Water Quality

Temporary impacts to 121 linear feet (1,555 square feet; 0.035 acre) of streams (five perennial streams and one intermittent stream) include installing erosion and sediment controls as necessary, redirecting

water around the pipeline trench, excavating substrate materials, and backfilling the excavated materials back into the streambed.

Temporary impacts to 2,035 square feet (0.048 acre, rounded up to 0.06 acre for calculation using the Wetlands Impacts and Mitigation table) of wetlands (seven palustrine emergent wetlands) include installation erosion and sediment controls as necessary, excavating substrate materials, moving water via a floor pipe or pump-around if necessary, and backfilling the excavated materials back into the wetland.

The temporary nature of this work as well as the continuous, unimpeded flow of water around the work area should result in negligible impacts to stream and wetland biota as described in the Wetland Delineation Report included in **Appendix VIII, Attachment E** of the original 401 application submission dated July 15, 2014. The proposed project will not impact Existing Use Designations of any of the streams to be impacted. There will be no impacts to the economic value of any surface water feature.

Technical Feasibility and Cost Effectiveness

The above-described open-cut procedures and best management practices are feasible according to current technology and available resources. The approximate construction cost is \$4,650,000 under the preferred alternative. The cost for mitigation associated with the six (6) streams and six (6) wetlands is described in the Revised Mitigation Plan included in **Appendix VII**.

Economic Considerations

The proposed project will have no effect on the local economy, jobs, or tax revenue. Unemployment rates, poverty rates, household income information, major employment sectors, and employers in the area will also not be affected by this work.

Cumulative Impact

The minor and temporary nature of the impacts to the surface water features along this alignment should not adversely impact water quality within this watershed.

Indirect Impacts

By maintaining the flow of water during pipeline installation, neither the physical habitat nor aquatic species within the herein-discussed surface water features will be adversely affected by the work. Erosion and sediment controls will be implemented to prevent sediment from entering the water and ensure the area is stable post-construction. Post-construction grade will be the same as pre-construction grade.

Construction Storm Water Management Plans

Each surface water crossing work will be initiated and completed within one day and work will not take place during a storm event, eliminating the possibility of peak storm water flowing through the work area. Normal stream flow will be maintained by following best management practices.

Post-Construction Storm Water Management Plans

Post-construction erosion controls will be left in place until the work area has stabilized. These controls should prevent any post-construction storm events from adversely impacting surface water features.

Minimal-Degradation Alternative

Project Description

The proposed alignment will cross three streams evaluated to be Class III (see stream data in **Appendix III** of the original 401 application submitted July 15, 2014). Impacts to two of these streams (Streams 4 and 12) can be avoided by the construction of horizontal directional drill (HDD) bores. The HDD bores would be installed at least 10 feet below the surface. Upon installing pipeline through the HDD bores, flowable fill compound would be installed around the pipeline.

The remainder of surface water features to be crossed by the proposed alignment, four (4) streams and six (6) wetlands, would be impacted as described under the preferred alternative. Cumulative impact would be minimized to 81 linear feet; 1,161 square feet; 0.026 acre. Stream and wetland impacts were calculated using ArcMAP and may differ from dimensions measured in the field. All impacts are temporary due to immediate post-construction restoration, described under the preferred alternative.

Construction is scheduled to start in the fall of 2014. Installation will be completed within one year of the start date. Mitigation information can be found in the Revised Mitigation Plan included in **Appendix VII**.

This project will convey natural gas from the Buckeye Compressor Station, which will collect natural gas from several well pads upon the completion of construction in 2015, to market at the Monroe North Meter Site.

Avoidance

Mountain Gathering, LLC, considered several possible routes between the Buckeye Compressor Station and the Monroe North Meter Site for this project. Route choice is limited by the topography in the area, property access constraints, and surface water impacts. The nature of linear construction projects limits the ability to avoid crossing surface water features that occur in an area.

If this project is not constructed, natural gas cannot be conveyed from the Buckeye Compressor Station. The proposed pipeline is critical to conveying the natural gas to market.

Surface water runoff from on-site wetlands will not be affected by the proposed work.

Minimization

There would be a reduced risk of impact to the flow of water or water quality for the two (2) HDD bores. The remaining risk of impacts to water quality would be related to an inadvertent return (IR), whereby drilling liquids could infiltrate stream substrate from below. A plan would be required to address, in detail, how the contractor directing the work would handle an IR.

Best management practices for the remaining stream and wetland crossings include those discussed under the preferred alternative.

Magnitude of the Proposed Lowering of Water Quality

The avoidance of impact to the bored streams would result in negligible impacts to stream biota or water quality as described in **Appendix VIII, Attachment E** of the original 401 application submission. The proposed project will not impact the Existing Use Designation of the two (2) streams to be HDD bored.

Temporary impacts to 81 linear feet (1,161 square feet; 0.026 acre) of streams (three perennial streams and one intermittent stream) include installing erosion and sediment controls as necessary, redirecting water around the pipeline trench, excavating substrate materials, and backfilling the excavated materials back into the streambed.

Temporary impacts to wetlands remain the same as described under the preferred alternative.

There will be no impacts to the economic value of any surface water feature.

Technical Feasibility and Cost Effectiveness

Using HDD technology beneath streams is feasible according to current technology, but it requires a substantial amount of equipment and resources, is dependent on the composition of below-grade materials and topography in the area, and is very expensive. To HDD bore a stream crossing would also take much longer than the one day open-cutting a stream requires. The steep topography in the area may further increase construction time.

The HDD bores for Streams 4 and 12 would need to be 800 linear feet in length each to achieve the depth required for a 20-inch-diameter pipeline. The cost for a bore in this area would start at \$575 per linear foot, increasing if the pipeline gets stuck during installation or if bedrock is encountered. The steep topography along the proposed alignment may increase the cost to HDD bore. Approximate construction cost under the minimal-degradation alternative is \$5,200,000.

The cost for mitigation associated with the four (4) streams and six (6) wetlands to be open-cut is described in the Revised Mitigation Plan included in **Appendix VII**.

Economic Considerations

The proposed project will have no effect on the local economy, jobs, or tax revenue. Unemployment rates, poverty rates, household income information, major employment sectors, and employers in the area will also not be affected by this work.

Cumulative Impact

The minor and temporary nature of any impacts to the surface water features along this alignment should not adversely impact water quality within this watershed.

Indirect Impacts

For the HDD bores, neither the physical habitat nor aquatic species within the two (2) streams will be adversely affected.

For the remaining streams and wetlands, the flow of water will be maintained during pipeline installation and neither the physical habitat nor aquatic species within the surface water features will be adversely affected by the work.

Erosion and sediment controls will be implemented to prevent sediment from entering the water and ensure the area is stable post-construction. Post-construction grade will be the same as pre-construction grade.

Construction Storm Water Management Plans

Water flow would not be impacted by the HDD bores beneath the two (2) Class III streams.

Each surface water crossing work will be initiated and completed within one day and work will not take place during a storm event, eliminating the possibility of peak storm water flowing through the work area. Normal stream flow will be maintained by following best management practices.

Post-Construction Storm Water Management Plans

Water flow would not be impacted by the HDD bores beneath the two (2) Class III streams.

Post-construction erosion controls will be left in place until the work area has stabilized. These controls should prevent any post-construction storm events from adversely impacting surface water features.

Non-Degradation Alternative

Project Description

Impacts to all three (3) Class III streams can be avoided by the construction of HDD bores. This alternative would remove the proposed project from OEPA jurisdiction and 401 Water Quality Certification would not be required.

The HDD bores would be installed at least 10 feet below the surface. Upon installing pipeline through the HDD bores, flowable fill compound would be installed around the pipeline.

Construction would be scheduled to start in the fall of 2014. Installation will be completed within one year of the start date. No mitigation would be necessary under this alternative.

This project will convey natural gas from the Buckeye Compressor Station, which will collect natural gas from several well pads upon the completion of construction in 2015, to market at the Monroe North Meter Site.

Avoidance

Mountain Gathering, LLC, considered several possible routes between the Buckeye Compressor Station and the Monroe North Meter Site for this project. Route choice is limited by the topography in the area, property access constraints, and surface water impacts. The nature of linear construction projects limits the ability to avoid crossing surface water features that occur in an area.

If this project is not constructed, natural gas cannot be conveyed from the Buckeye Compressor Station. The proposed pipeline is critical to conveying the natural gas to market.

Surface water runoff from on-site wetlands will not be affected by the proposed work.

Minimization

There would be a reduced risk of impact to the flow of water or water quality. The remaining risk of impacts to water quality would be related to an inadvertent return (IR), whereby drilling liquids could infiltrate stream substrate from below. A plan would be required to address, in detail, how the contractor directing the work would handle an IR.

Magnitude of the Proposed Lowering of Water Quality

The avoidance of impact to the bored streams would result in negligible impacts to stream biota or water quality as described in **Appendix VIII, Attachment E** of the original 401 application submission. The proposed project will not impact the Existing Use Designation of the three (3) Class III streams.

Temporary impacts to 61 linear feet (854 square feet; 0.019 acre) of streams (two perennial streams and one intermittent stream) include installing erosion and sediment controls as necessary, redirecting water around the pipeline trench, excavating substrate materials, and backfilling the excavated materials back into the streambed.

Temporary impacts to wetlands remain the same as described under the preferred alternative.

There will be no impacts to the economic value of any surface water feature.

Technical Feasibility and Cost Effectiveness

Using HDD technology beneath streams is feasible according to current technology, but it requires a substantial amount of equipment and resources, is dependent on the composition of below-grade materials and topography in the area, and is very expensive. To HDD bore a stream crossing would also take much longer than the one day open-cutting a stream requires. The steep topography in the area may further increase construction time.

Streams 4 and 12 would be HDD bored as described under the minimal-degradation alternative.

Stream 8 is in an area of particularly steep topography; the risks to the timeliness and cost of the proposed project as well as the risk to human safety would be increased to HDD bore beneath Stream 8. In order to

achieve the depth required for a 20-inch-diameter pipeline, the HDD bore for Stream 8 would need to be 900 linear feet in length. Approximate construction cost under the non-degradation alternative is \$5,600,000.

Mitigation for the three (3) streams and six (6) wetlands to be open-cut would not be required under this alternative because the project would no longer fall under the jurisdiction of the OEPA and 401 Water Quality Certification would not be required.

Economic Considerations

The proposed project will have no effect on the local economy, jobs, or tax revenue. Unemployment rates, poverty rates, household income information, major employment sectors, and employers in the area will also not be affected by this work.

Cumulative Impact

The minor and temporary nature of any impacts to the surface water features along this alignment should not adversely impact water quality within this watershed.

Indirect Impacts

For the HDD bores, neither the physical habitat nor aquatic species within the three (3) Class III streams will be adversely affected.

For the remaining streams and wetlands, the flow of water will be maintained during pipeline installation and neither the physical habitat nor aquatic species within the surface water features will be adversely affected by the work.

Erosion and sediment controls will be implemented to prevent sediment from entering the water and ensure the area is stable post-construction. Post-construction grade will be the same as pre-construction grade.

Construction Storm Water Management Plans

Water flow would not be impacted by the HDD bores beneath the three (3) Class III streams.

Each surface water crossing work will be initiated and completed within one day and work will not take place during a storm event, eliminating the possibility of peak storm water flowing through the work area. Normal stream flow will be maintained by following best management practices.

Post-Construction Storm Water Management Plans

Water flow would not be impacted by the HDD bores beneath the three (3) Class III streams.

Post-construction erosion controls will be left in place until the work area has stabilized. These controls should prevent any post-construction storm events from adversely impacting surface water features.

VI

REVISED PROJECT MAPPING

- A. *Preferred Alternative*
- B. *Minimal-Degradation Alternative*
- C. *Non-Degradation Alternative*

A

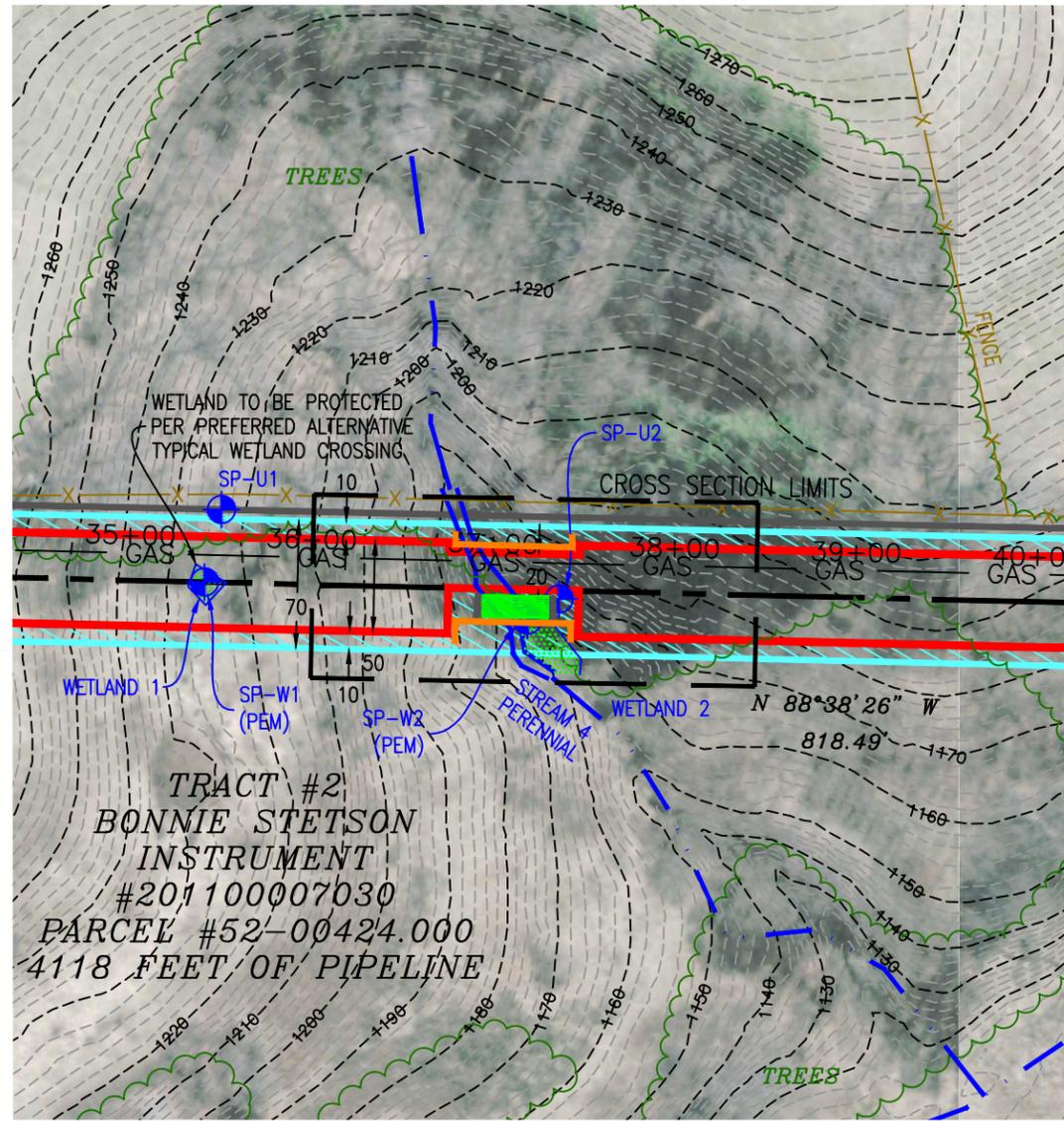
Preferred Alternative

1. *Typical Stream Crossing*
2. *Typical Wetland Crossing*

PREFERRED ALTERNATIVE TYPICAL STREAM CROSSING

ONE PIPELINE TO BE OPEN-CUT
EXAMPLE: STREAM 4 (PERENNIAL)
TEMPORARY STREAM IMPACT: 20 LF / 231 SF / 0.005 ACRE

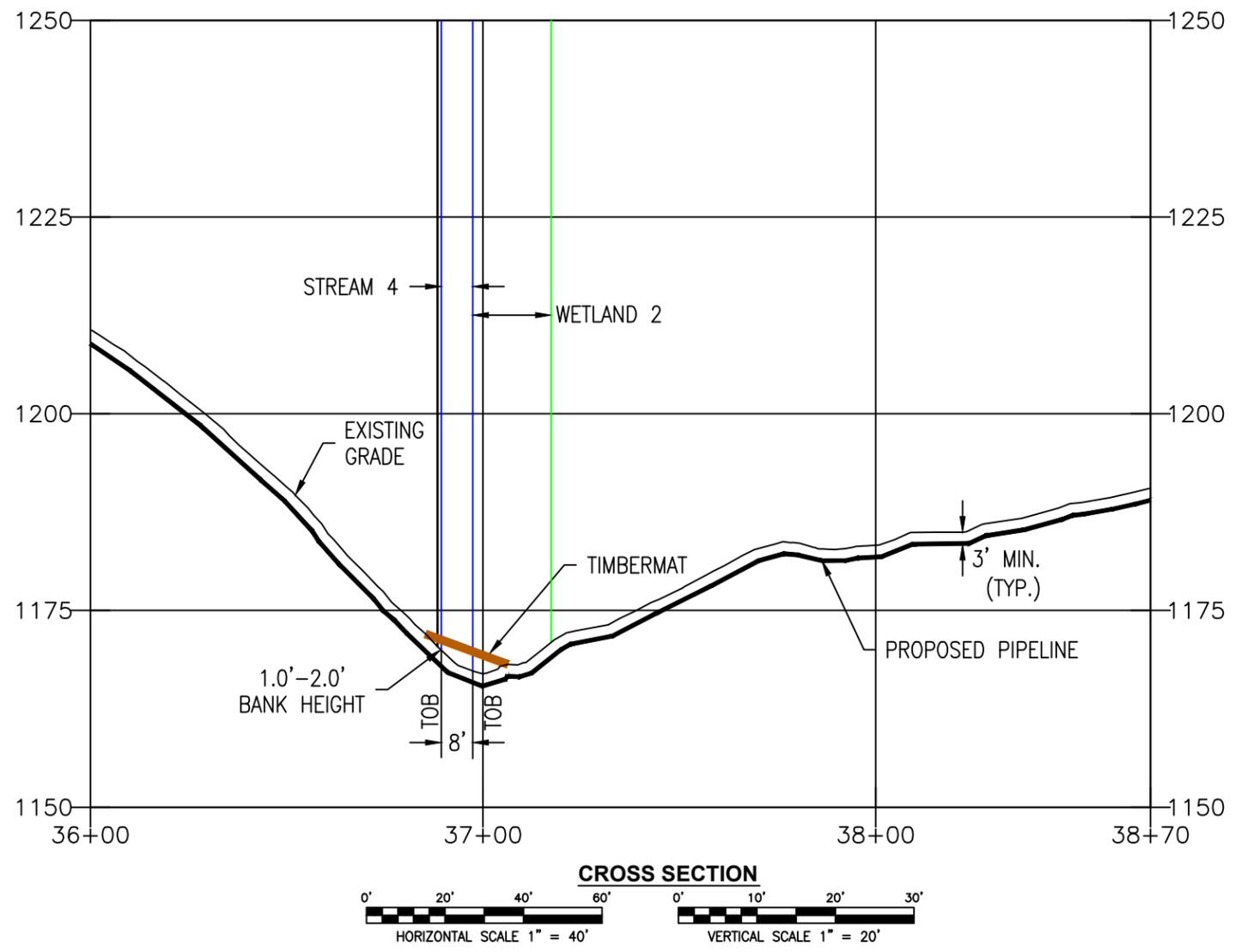
ON SOUTH ZONE
SPCS GRID NORTH
BEARINGS AND COORDINATES SHOWN
ARE IN NAD 83 US SURVEY FEET
ELEVATIONS ARE NAVD 88



SITE SPECIFIC DRAWING
GRAPHIC SCALE 1" = 100'

GENERAL NOTES:

1. TEMPORARY ROAD CROSSING WILL BE INSTALLED USING PROPER EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES.
2. TEMPORARY ROAD CROSSING WILL BE INSTALLED PERPENDICULAR TO FLOW WHERE RIGHT OF WAY WIDTH CAN ACCOMMODATE. SLIGHT SKEWS MAY BE UNAVOIDABLE.
3. TEMPORARY ROAD CROSSING LENGTH WILL VARY ACCORDING TO SPECIFIC STREAM BANK CHARACTERISTICS AT THE TIME OF CONSTRUCTION. TIMBER MAT BRIDGES WILL SPAN TOP OF BANK TO TOP OF BANK TO REMAIN ABOVE ORDINARY HIGH WATER.
4. CLEAN ROCK MATERIAL WILL BE USED AT ENDS OF TEMPORARY TIMBER MATS AS NEEDED.
5. THE APPROACHES TO HIGH TRAFFIC TEMPORARY CROSSING MAY BE INSTALLED USING GEOTEXTILE AND CLEAN ROCK MATERIAL TO A DISTANCE UP TO 100 FEET FROM TOP OF BANK AS NECESSARY.
6. MINIMUM OF 3' OF COVER OVER UTILITY LINE EXCEPT IN ROCK WHERE 1' OF COVER SHALL BE PROVIDED.
7. UTILITY LINE SHALL BE INSTALLED WITH SUFFICIENT HORIZONTAL LENGTH TO ALLOW FOR FUTURE CHANNEL EXPANSION.
8. IMPACTS AT STREAM CROSSINGS WILL BE MINIMIZED TO NO MORE THAN 20' FOR PURPOSES OF TRENCH EXCAVATION AND WATER MANAGEMENT. TIMBER MAT BRIDGES WILL BE INSTALLED IN TEMPORARY ROW. NO OTHER WORK WITHIN TEMPORARY ROW AT STREAM CROSSINGS.



LEGEND

- PERMANENT R/W
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- WORK SPACE / LAYDOWN
- PROPOSED GAS PIPELINE
- P.I. = PIPE ANGLE POINT
- Δ = DEFLECTION ANGLE
- (R) = DEF. ANGLE RIGHT
- (L) = DEF. ANGLE LEFT
- CONTOUR-2' INTERVAL
- EXISTING GAS LINE
- OVERHEAD UTILITY LINE
- UNDERGROUND WATERLINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- PROPERTY LINE
- FENCE LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- EDGE OF DIRT
- DELIMITED WETLAND
- STREAM
- LIMIT OF DISTURBANCE
- PROJECT AREA= 38.0 AC
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- STANDARD SILT FENCE
- REINFORCED SILT FENCE
- 24" COMPOST FILTER SOCK
- TOP-OF-SLOPE BERM
- PROTECTIVE FENCE
- EROSION CONTROL BLANKET
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED BORE LOCATION
- TIMBERMAT CROSSING
- FLOODWAY
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- TRENCH PLUG

THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. ANY MISUSE, REUSE, ALTERATIONS, ADDITIONS AND/OR DELETIONS OF THESE DRAWINGS ON PROJECT EXTENSIONS OR OTHER PROJECTS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. IN THE EVENT THAT A CONFLICT ARISES BETWEEN THE SEALED DRAWINGS AND THE ELECTRONIC FILES, THE SEALED DRAWINGS WILL GOVERN.

THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

ALTHOUGH TIES TO PROPERTY LINES HAVE BEEN MADE, THIS PLAN DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY.

NO.	MATERIAL DESCRIPTION	QUANTITY	
①	20" X 0.375" DIA X-52	19,654'	
MAOP=1200 PSIG HYDROTEST AT 1800 PSIG FOR 8 HRS			
REV.No.	DESCRIPTION	DATE	BY
1	-	-	-

STOP - CALL BEFORE YOU DIG!
Ohio Utilities Protection Service
1-800-362-2764

OHIO UTILITIES PROTECTION SERVICE LOCATE REQUEST
TICKET NUMBER: A409203249-00A
DATE OF NOTIFICATION: 4/2/2014

NOTICE REGARDING UNDERGROUND UTILITIES: NO WARRANTY IS MADE THAT THIS PLAN SHOWS ALL EXISTING UNDERGROUND UTILITIES OR THAT THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE THE CORRECT LOCATIONS. THE DEPICTION OF UTILITIES HEREIN DOES NOT RELIEVE THE CONTRACTOR(S) WHO WILL BE PERFORMING EXCAVATIONS FROM COMPLYING WITH PENNSYLVANIA LAW REGARDING EXCAVATIONS. SAID REQUIREMENTS CAN BE SATISFIED, IN PART, BY CONTACTING THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764.

Gannett Fleming
Excellence Delivered As Promised
(717) 763 - 7211
207 SENATE AVENUE
CAMP HILL, PA 17011
www.gannettfleming.com

JONES CONSULTANTS
SURVEYING & MAPPING
LAND • GAS WELL • PIPELINE
(724) 757 - 2417
2402 PENNSYLVANIA 66
DELMONT, PA 15626
www.jonesconsultant.com

MOUNTAIN GATHERING, LLC
(A SUBSIDIARY OF XTO ENERGY, INC.)
610 HOUSTON STREET
FORT WORTH, TX 76102

MOUNTAIN GATHERING, LLC.
A SUBSIDIARY OF XTO ENERGY, INC.

401 WQC

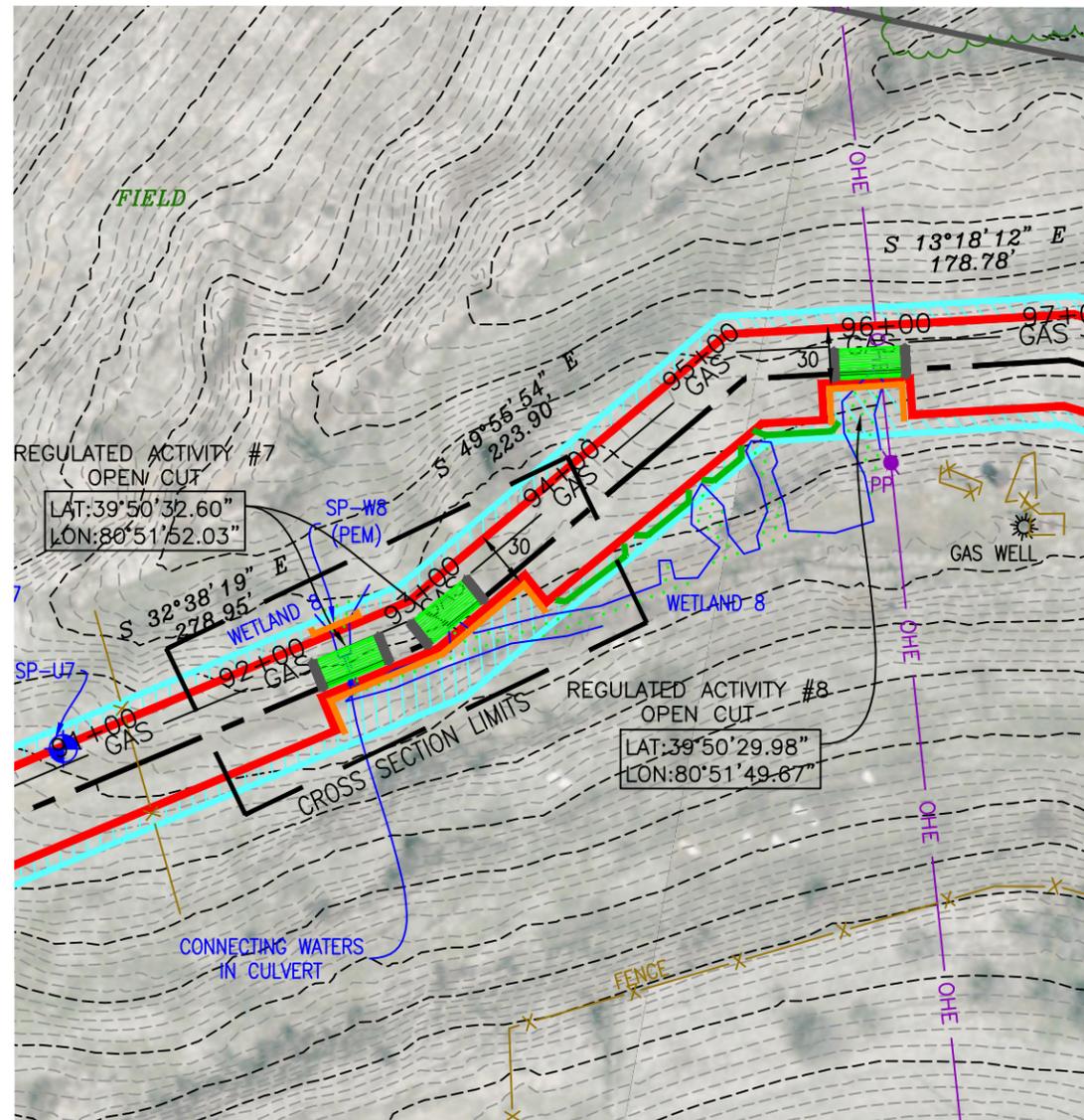
SCALE: AS NOTED	TYPICAL STREAM CROSSING
AFE # 1305911	YORK TWP., BELMONT CO., OHIO
JC GAS OADR	SWITZERLAND TWP., MONROE CO., OHIO
MRG	SURVEY BY JONES CONSULTANTS, LLC
WCH	E&S/PCSM BY GANNETT FLEMING, INC.
CHECKED: MBR	APPROVED: CWH
DATE: 8/5/14	JC JOB No. JC2013-78
	OF JOB No. 55562.219
	SHEET No. 1

PREFERRED ALTERNATIVE TYPICAL WETLAND CROSSING

ONE PIPELINE TO BE OPEN-CUT
EXAMPLE: WETLAND 8 (PEM)
TEMPORARY WETLAND IMPACT: 201 SF / 0.005 ACRE

OH SOUTH ZONE
SPCS GRID NORTH

BEARINGS AND COORDINATES SHOWN
ARE IN NAD 83 US SURVEY FEET
ELEVATIONS ARE NAVD 88

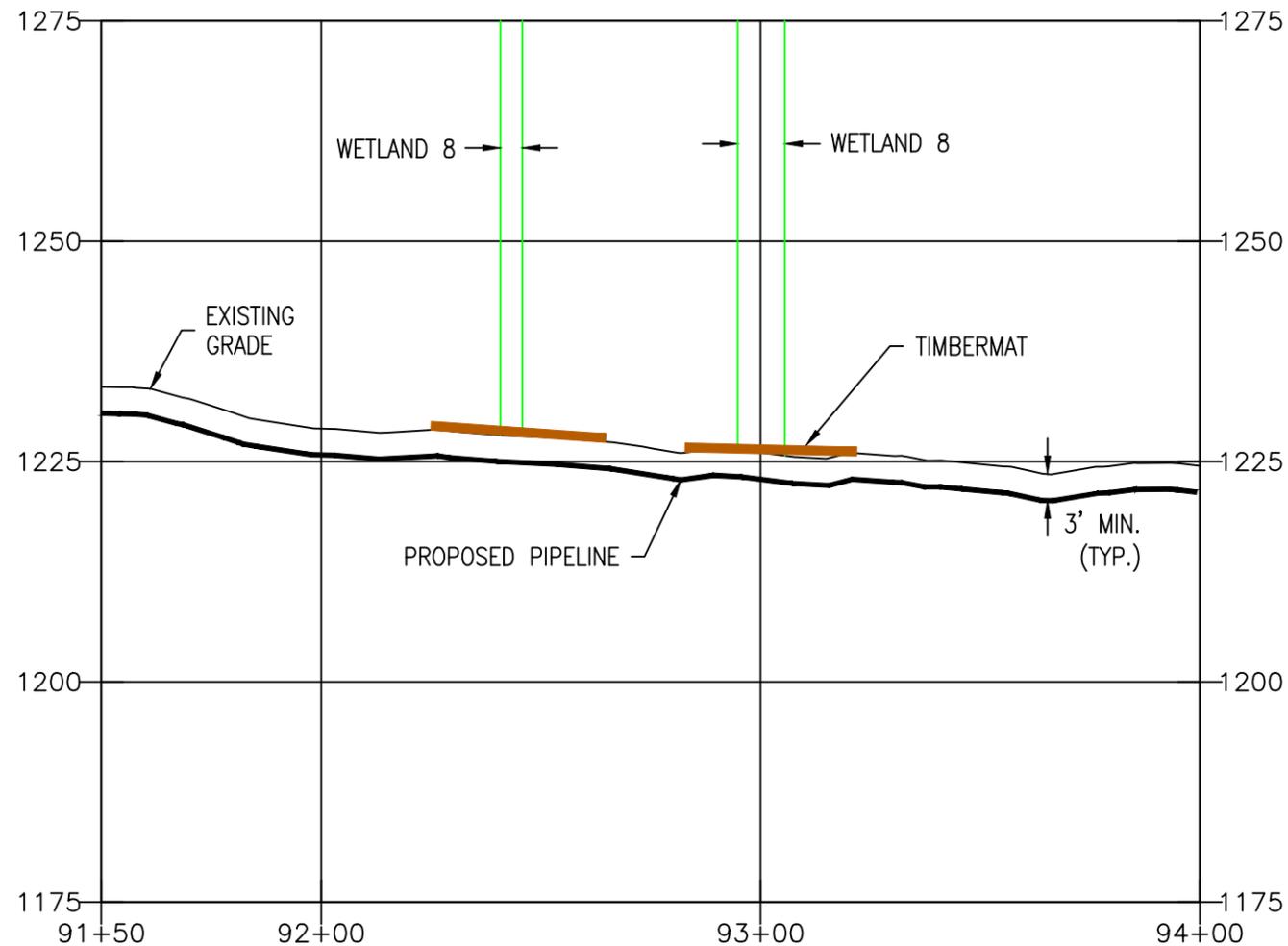


SITE SPECIFIC DRAWING

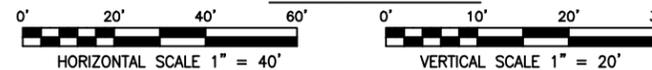


GENERAL NOTES:

- TEMPORARY ROAD CROSSING WILL BE INSTALLED USING PROPER EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES.
- MINIMUM OF 3' OF COVER OVER UTILITY LINE EXCEPT IN ROCK WHERE 1' OF COVER SHALL BE PROVIDED.
- UTILITY LINE SHALL BE INSTALLED WITH SUFFICIENT HORIZONTAL LENGTH TO ALLOW FOR FUTURE CHANNEL EXPANSION.
- IMPACTS AT WETLAND CROSSINGS WILL BE MINIMIZED TO NO MORE THAN 30' FOR PURPOSES OF TRENCH EXCAVATION, WATER MANAGEMENT, AND THE PASSAGE OF VEHICLES AND EQUIPMENT.
- PROTECTIVE FENCING WILL BE PLACED ALONG THE 30' WORK AREA AS NECESSARY TO LIMIT THE IMPACT TO ADJACENT WETLANDS.
- THE PREFERRED ALTERNATIVE TYPICAL WETLAND CROSSING ALSO APPLIES TO THE MINIMAL DEGRADATION ALTERNATIVE AND NON-DEGRADATION ALTERNATIVE.



CROSS SECTION



LEGEND

- PERMANENT R/W
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- WORK SPACE / LAYDOWN
- PROPOSED GAS PIPELINE
- P.I. = PIPE ANGLE POINT
- Δ = DEFLECTION ANGLE
- (R) = DEF. ANGLE RIGHT
- (L) = DEF. ANGLE LEFT
- CONTOUR-2' INTERVAL
- EXISTING GAS LINE
- OVERHEAD UTILITY LINE
- UNDERGROUND WATERLINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- PROPERTY LINE
- FENCE LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- EDGE OF DIRT
- DELINEATED WETLAND
- STREAM
- LIMIT OF DISTURBANCE
- PROJECT AREA= 38.0 AC
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- STANDARD SILT FENCE
- REINFORCED SILT FENCE
- 24" COMPOST FILTER SOCK
- TOP-OF-SLOPE BERM
- PROTECTIVE FENCE
- EROSION CONTROL BLANKET
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED BORE LOCATION
- TIMBERMAT CROSSING
- FLOODWAY
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- TRENCH PLUG

THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. ANY MISUSE, REUSE, ALTERATIONS, ADDITIONS AND/OR DELETIONS OF THESE DRAWINGS ON PROJECT EXTENSIONS OR OTHER PROJECTS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. IN THE EVENT THAT A CONFLICT ARISES BETWEEN THE SEALED DRAWINGS AND THE ELECTRONIC FILES, THE SEALED DRAWINGS WILL GOVERN.

THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

ALTHOUGH TIES TO PROPERTY LINES HAVE BEEN MADE, THIS PLAN DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY.

NO.	MATERIAL DESCRIPTION	QUANTITY	
①	20" X 0.375" DIA X-52	19,654'	
MAOP=1200 PSIG HYDROTEST AT 1800 PSIG FOR 8 HRS			
REV.No.	DESCRIPTION	DATE	BY
1	-	-	-

STOP - CALL BEFORE YOU DIG!
Ohio Utilities Protection Service
1-800-362-2764

OHIO UTILITIES PROTECTION SERVICE LOCATE REQUEST
TICKET NUMBER: A409203249-00A
DATE OF NOTIFICATION: 4/2/2014

NOTICE REGARDING UNDERGROUND UTILITIES: NO WARRANTY IS MADE THAT THIS PLAN SHOWS ALL EXISTING UNDERGROUND UTILITIES OR THAT THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE THE CORRECT LOCATIONS. THE DEPICTION OF UTILITIES HEREIN DOES NOT RELIEVE THE CONTRACTOR(S) WHO WILL BE PERFORMING EXCAVATIONS FROM COMPLYING WITH PENNSYLVANIA LAW REGARDING EXCAVATIONS. SAID REQUIREMENTS CAN BE SATISFIED, IN PART, BY CONTACTING THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764.

Gannett Fleming
Excellence Delivered As Promised

(717) 763 - 7211

207 SENATE AVENUE
CAMP HILL, PA 17011
www.gannettfleming.com

JONES CONSULTANTS

SURVEYING & MAPPING
LAND • GAS WELL • PIPELINE

(724) 757 - 2417

2402 PENNSYLVANIA 66
DELMONT, PA 15626
www.jonesconsultant.com

MOUNTAIN GATHERING, LLC
(A SUBSIDIARY OF XTO ENERGY, INC.)
610 HOUSTON STREET
FORT WORTH, TX 76102

MOUNTAIN GATHERING, LLC.
A SUBSIDIARY OF XTO ENERGY, INC.

401 WQC

SCALE: AS NOTED	TYPICAL WETLAND CROSSING
PROJECT # 1305911	YORK TWP., BELMONT CO., OHIO
JC GAS OADR	SWITZERLAND TWP., MONROE CO., OHIO
MRG	WCH
SURVEY BY JONES CONSULTANTS, LLC E&S/PCSM BY GANNETT FLEMING, INC.	
CHECKED: MBR	APPROVED: CWH
DATE: 8/5/14	JC JOB No. JC2013-78
	OF JOB No. 55562.219
	SHEET No. 2

B

Minimal-Degradation Alternative

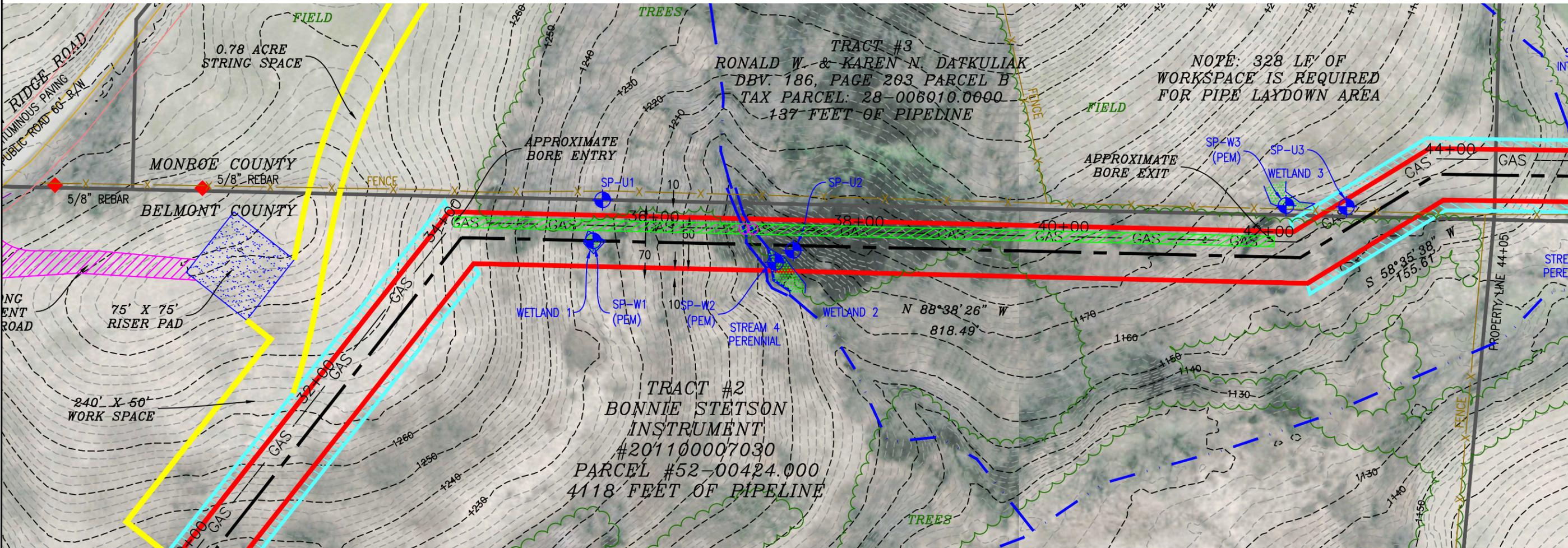
1. *Typical Stream Crossing*
2. *Typical Wetland Crossing – see Attachment A*

MINIMAL DEGRADATION ALTERNATIVE TYPICAL STREAM CROSSING

ONE PIPELINE TO BE BORED
EXAMPLE: PERENNIAL STREAM 4
NO PROPOSED STREAM / WETLAND IMPACTS

GENERAL NOTES:

1. TEMPORARY ROAD CROSSING WILL BE INSTALLED USING PROPER EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES.
2. TEMPORARY ROAD CROSSING WILL BE INSTALLED PERPENDICULAR TO FLOW WHERE RIGHT OF WAY WIDTH CAN ACCOMMODATE. SLIGHT SKEWS MAY BE UNAVOIDABLE.
3. TEMPORARY ROAD CROSSING LENGTH WILL VARY ACCORDING TO SPECIFIC STREAM BANK CHARACTERISTICS AT THE TIME OF CONSTRUCTION. TIMBER MAT BRIDGES WILL SPAN TOP OF BANK TO TOP OF BANK TO REMAIN ABOVE ORDINARY HIGH WATER.
4. CLEAN ROCK MATERIAL WILL BE USED AT ENDS OF TEMPORARY TIMBER MATS AS NEEDED.
5. THE APPROACHES TO HIGH TRAFFIC TEMPORARY CROSSING MAY BE INSTALLED USING GEOTEXTILE AND CLEAN ROCK MATERIAL TO A DISTANCE UP TO 100 FEET FROM TOP OF BANK AS NECESSARY.
6. MINIMUM OF 3' OF COVER OVER UTILITY LINE EXCEPT IN ROCK WHERE 1' OF COVER SHALL BE PROVIDED.
7. UTILITY LINE SHALL BE INSTALLED WITH SUFFICIENT HORIZONTAL LENGTH TO ALLOW FOR FUTURE CHANNEL EXPANSION.
8. THE HDD BORE APPLIES TO STREAMS 4 AND 12 FOR THE MINIMAL DEGRADATION ALTERNATIVE. IT ALSO APPLIES TO STREAMS 4, 8, AND 12 FOR THE NON-DEGRADATION ALTERNATIVE.
9. **HDD BORE DESIGN IS ONLY A CONCEPTUAL DESIGN AND SHOULD NOT BE USED FOR CONSTRUCTION.**



LEGEND

- PERMANENT R/W @
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- WORK SPACE / LAYDOWN
- PROPOSED GAS PIPELINE
- P.I. = PIPE ANGLE POINT
- Δ = DEFLECTION ANGLE
- (R) = DEF. ANGLE RIGHT
- (L) = DEF. ANGLE LEFT
- CONTOUR-2' INTERVAL
- EXISTING GAS LINE
- OVERHEAD UTILITY LINE
- UNDERGROUND WATERLINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- PROPERTY LINE
- FENCE LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- EDGE OF DIRT
- DELINEATED WETLAND
- STREAM
- LIMIT OF DISTURBANCE
- PROJECT AREA= 38.0 AC
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- STANDARD SILT FENCE
- REINFORCED SILT FENCE
- 24" COMPOST FILTER SOCK
- TOP-OF-SLOPE BERM
- EROSION CONTROL BLANKET
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED BORE LOCATION
- TIMBERMAT CROSSING
- FLOODWAY
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- TRENCH PLUG

SITE SPECIFIC DRAWING



THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. ANY MISUSE, REUSE, ALTERATIONS, ADDITIONS AND/OR DELETIONS OF THESE DRAWINGS ON PROJECT EXTENSIONS OR OTHER PROJECTS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. IN THE EVENT THAT A CONFLICT ARISES BETWEEN THE SEALED DRAWINGS AND THE ELECTRONIC FILES, THE SEALED DRAWINGS WILL GOVERN.

THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

ALTHOUGH TIES TO PROPERTY LINES HAVE BEEN MADE, THIS PLAN DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY.

NO.	MATERIAL DESCRIPTION	QUANTITY	
①	20" X 0.375" DIA X-52	19,654'	
MAOP=1200 PSIG HYDROTEST AT 1800 PSIG FOR 8 HRS			
REV.No.	DESCRIPTION	DATE	BY
1	-	-	-

STOP - CALL BEFORE YOU DIG!
Ohio Utilities Protection Service
1-800-362-2764

OHIO UTILITIES PROTECTION SERVICE LOCATE REQUEST
TICKET NUMBER: A409203249-00A
DATE OF NOTIFICATION: 4/2/2014

NOTICE REGARDING UNDERGROUND UTILITIES: NO WARRANTY IS MADE THAT THIS PLAN SHOWS ALL EXISTING UNDERGROUND UTILITIES OR THAT THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE THE CORRECT LOCATIONS. THE DEPICTION OF UTILITIES HEREIN DOES NOT RELIEVE THE CONTRACTOR(S) WHO WILL BE PERFORMING EXCAVATIONS FROM COMPLYING WITH PENNSYLVANIA LAW REGARDING EXCAVATIONS. SAID REQUIREMENTS CAN BE SATISFIED, IN PART, BY CONTACTING THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764.

Gannett Fleming
Excellence Delivered As Promised
(717) 763 - 7211
207 SENATE AVENUE
CAMP HILL, PA 17011
www.gannettfleming.com

JONES CONSULTANTS
SURVEYING & MAPPING
LAND • GAS WELL • PIPELINE
(724) 757 - 2417
2402 PENNSYLVANIA 66
DELMONT, PA 15626
www.jonesconsultant.com

MOUNTAIN GATHERING, LLC
(A SUBSIDIARY OF XTO ENERGY, INC.)
810 HOUSTON STREET
FORT WORTH, TX 76102

MOUNTAIN GATHERING, LLC.
A SUBSIDIARY OF XTO ENERGY, INC.

401 WQC

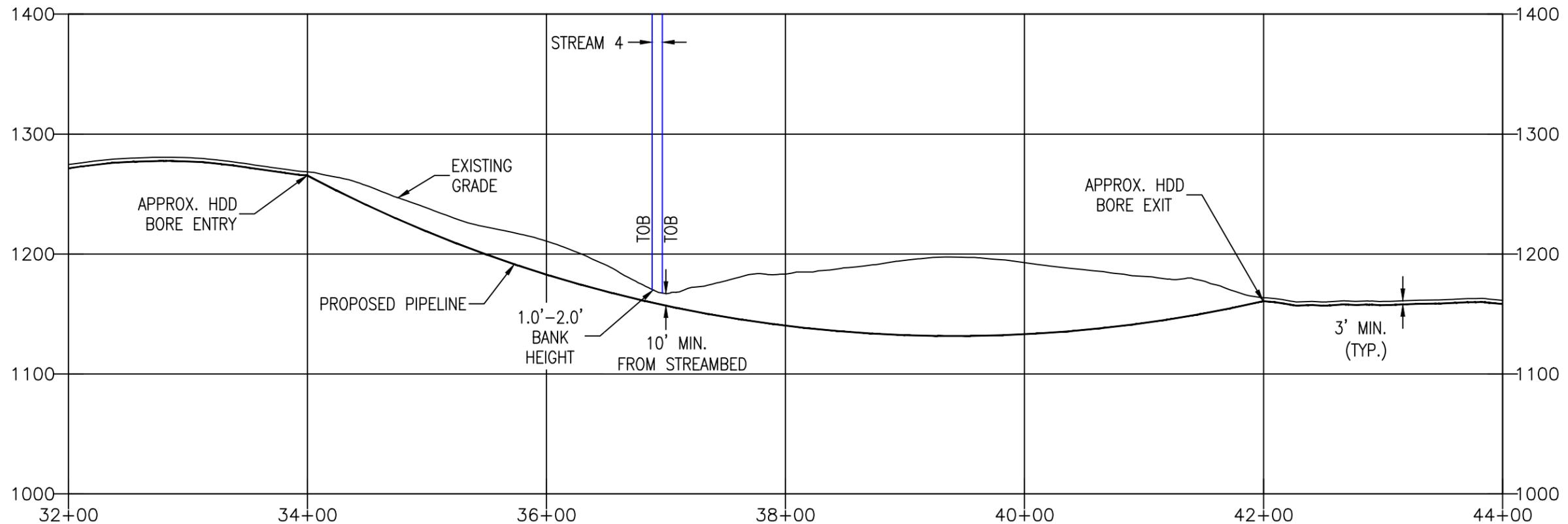
SCALE: AS NOTED	TYPICAL STREAM CROSSING
PROJECT # 1305911	YORK TWP., BELMONT CO., OHIO
JC GAS OADR	SWITZERLAND TWP., MONROE CO., OHIO
MRG	SURVEY BY JONES CONSULTANTS, LLC
WCH	E&S/PCSM BY GANNETT FLEMING, INC.
CHECKED: MBR	APPROVED: CWH
DATE: 8/5/14	JC JOB No. JC2013-78
of JOB No. 55562.219	SHEET No. 1

MINIMAL DEGRADATION ALTERNATIVE TYPICAL STREAM CROSSING

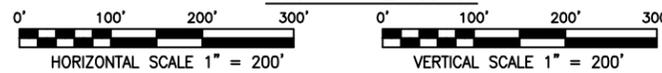
ONE PIPELINE TO BE BORED
EXAMPLE: PERENNIAL STREAM 4
NO PROPOSED STREAM / WETLAND IMPACTS

GENERAL NOTES:

1. TEMPORARY ROAD CROSSING WILL BE INSTALLED USING PROPER EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES.
2. TEMPORARY ROAD CROSSING WILL BE INSTALLED PERPENDICULAR TO FLOW WHERE RIGHT OF WAY WIDTH CAN ACCOMMODATE. SLIGHT SKEWS MAY BE UNAVOIDABLE.
3. TEMPORARY ROAD CROSSING LENGTH WILL VARY ACCORDING TO SPECIFIC STREAM BANK CHARACTERISTICS AT THE TIME OF CONSTRUCTION. TIMBER MAT BRIDGES WILL SPAN TOP OF BANK TO TOP OF BANK TO REMAIN ABOVE ORDINARY HIGH WATER.
4. CLEAN ROCK MATERIAL WILL BE USED AT ENDS OF TEMPORARY TIMBER MATS AS NEEDED.
5. THE APPROACHES TO HIGH TRAFFIC TEMPORARY CROSSING MAY BE INSTALLED USING GEOTEXTILE AND CLEAN ROCK MATERIAL TO A DISTANCE UP TO 100 FEET FROM TOP OF BANK AS NECESSARY.
6. MINIMUM OF 3' OF COVER OVER UTILITY LINE EXCEPT IN ROCK WHERE 1' OF COVER SHALL BE PROVIDED.
7. UTILITY LINE SHALL BE INSTALLED WITH SUFFICIENT HORIZONTAL LENGTH TO ALLOW FOR FUTURE CHANNEL EXPANSION.
8. THE HDD BORE APPLIES TO STREAMS 4 AND 12 FOR THE MINIMAL DEGRADATION ALTERNATIVE. IT ALSO APPLIES TO STREAMS 4, 8, AND 12 FOR THE NON-DEGRADATION ALTERNATIVE.
9. **HDD BORE DESIGN IS ONLY A CONCEPTUAL DESIGN AND SHOULD NOT BE USED FOR CONSTRUCTION.**



CROSS SECTION



LEGEND

- PERMANENT R/W @
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TEMPORARY ACCESS ROAD
- PERMANENT ACCESS ROAD
- WORK SPACE / LAYDOWN
- PROPOSED GAS PIPELINE
- P.I. = PIPE ANGLE POINT
- Δ = DEFLECTION ANGLE
- (R) = DEF. ANGLE RIGHT
- (L) = DEF. ANGLE LEFT
- CONTOUR-2' INTERVAL
- EXISTING GAS LINE
- OVERHEAD UTILITY LINE
- UNDERGROUND WATERLINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- PROPERTY LINE
- FENCE LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- EDGE OF DIRT
- DELINEATED WETLAND
- STREAM
- LIMIT OF DISTURBANCE
- PROJECT AREA= 38.0 AC
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- STANDARD SILT FENCE
- REINFORCED SILT FENCE
- 24" COMPOST FILTER SOCK
- TOP-OF-SLOPE BERM
- EROSION CONTROL BLANKET
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED BORE LOCATION
- TIMBERMAT CROSSING
- FLOODWAY
- PERMANENT WATERBAR
- TEMPORARY WATERBAR
- TRENCH PLUG

THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. ANY MISUSE, REUSE, ALTERATIONS, ADDITIONS AND/OR DELETIONS OF THESE DRAWINGS ON PROJECT EXTENSIONS OR OTHER PROJECTS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO GANNETT FLEMING, INC AND JONES CONSULTANTS, LLC. IN THE EVENT THAT A CONFLICT ARISES BETWEEN THE SEALED DRAWINGS AND THE ELECTRONIC FILES, THE SEALED DRAWINGS WILL GOVERN.

THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

ALTHOUGH TIES TO PROPERTY LINES HAVE BEEN MADE, THIS PLAN DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY.

NO.	MATERIAL DESCRIPTION	QUANTITY	
①	20" X 0.375" DIA X-52	19,654'	
MAOP=1200 PSIG HYDROTEST AT 1800 PSIG FOR 8 HRS			
REV.No.	DESCRIPTION	DATE	BY
1	-	-	-

STOP - CALL BEFORE YOU DIG!
Ohio Utilities Protection Service
1-800-362-2764

OHIO UTILITIES PROTECTION SERVICE LOCATE REQUEST
TICKET NUMBER: A409203249-00A
DATE OF NOTIFICATION: 4/2/2014

NOTICE REGARDING UNDERGROUND UTILITIES: NO WARRANTY IS MADE THAT THIS PLAN SHOWS ALL EXISTING UNDERGROUND UTILITIES OR THAT THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE THE CORRECT LOCATIONS. THE DEPICTION OF UTILITIES HEREIN DOES NOT RELIEVE THE CONTRACTOR(S) WHO WILL BE PERFORMING EXCAVATIONS FROM COMPLYING WITH PENNSYLVANIA LAW REGARDING EXCAVATIONS. SAID REQUIREMENTS CAN BE SATISFIED, IN PART, BY CONTACTING THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764.

(717) 763 - 7211
207 SENATE AVENUE
CAMP HILL, PA 17011
www.gannettfleming.com

SURVEYING & MAPPING
LAND • GAS WELL • PIPELINE
(724) 757 - 2417
2402 PENNSYLVANIA 66
DELMONT, PA 15626
www.jonesconsultant.com

(A SUBSIDIARY OF XTO ENERGY, INC.)
610 HOUSTON STREET
FORT WORTH, TX 76102

MOUNTAIN GATHERING, LLC.
A SUBSIDIARY OF XTO ENERGY, INC.

401 WQC

SCALE: AS NOTED	TYPICAL STREAM CROSSING
AFE # 1305911	YORK TWP., BELMONT CO., OHIO
JC GAS OADR	SWITZERLAND TWP., MONROE CO., OHIO
MRG	SURVEY BY JONES CONSULTANTS, LLC
WCH	E&S/PCSM BY GANNETT FLEMING, INC.
CHECKED: MBR	APPROVED: CWH
DATE: 8/5/14	JC JOB No. JC2013-78
of JOB No. 55562.219	SHEET No. 2

C

Non-Degradation Alternative

1. *Typical Stream Crossing – see Attachment B*
2. *Typical Wetland Crossing – see Attachment A*

VII
REVISED MITIGATION PLAN

REVISED MITIGATION PLAN

This Mitigation Plan includes all streams and wetlands to be impacted by the proposed work. For the Preferred Alternative (PA), all impacts are calculated within the reduced 20 feet of right-of-way (ROW) width for streams and 30 feet of ROW width for wetlands; for the Minimal-Degradation Alternative (MDA), the impacts associated with Streams 4 and 12 are not included since the proposed pipeline would be bored beneath them. Under the PA, temporary stream impact will be 121 linear feet and temporary wetland impact will be 0.06 acre. Under the MDA, temporary stream impact will be 81 linear feet and temporary wetland impact will remain 0.06 acre. These stream and wetland impacts will occur in the Cat Run-Captina Creek (HUC 050301060906) and Big Run-Ohio River (HUC 050301061208) subwatersheds, which are part of the Upper Ohio-Wheeling watershed (HUC 05030106).

Mitigation Requirements

According to the Ohio Environmental Protection Agency (OEPA), all stream impacts must be mitigated at 1.5:1, Category 1 wetlands must be mitigated at 1.5:1, and Category 2 wetlands must be mitigated at 2.0:1. Post-construction restoration to pre-existing conditions as described in the Alternatives Analysis included in this 401 WQC application package will account for 1:1 of the required mitigation ratio.

Preferred Alternative

The remaining 0.5:1 mitigation requirement for streams is 60.5 linear feet (i.e. 121 LF * 0.5). The remaining 0.5:1 mitigation requirement for Category 1 wetlands is 0.03 acre (i.e. 0.06 ac * 0.5). The remaining 1:1 mitigation requirement for Category 2 wetlands is 0 acre (i.e. 0 ac * 1). Total mitigation requirements include 60.5 linear feet of stream impact and 0.03 acre of wetland impact.

Minimal-Degradation Alternative

The remaining 0.5:1 mitigation requirement for streams is 40.5 linear feet (i.e. 81 LF * 0.5). The remaining 0.5:1 mitigation requirement for Category 1 wetlands is 0.03 acre (i.e. 0.06 ac * 0.5). The remaining 1:1 mitigation requirement for Category 2 wetlands is 0 acre (i.e. 0 ac * 1). Total mitigation requirements include 40.5 linear feet of stream impact and 0.03 acre of wetland impact.

In order to mitigate for impacts under Section 401 WQC, the OEPA requires the purchase of credits from a mitigation bank. However, credits can be purchased through the In-Lieu Fee (ILF) program when there are no mitigation banks available, which is the case for streams and wetlands in Ohio. According to the OEPA, the ILF program is not yet available for use in the Pittsburgh U.S. Army Corps of Engineers (USACE) District, but it should become active within 90 days.

ILF credit cost is not regulated by the OEPA, but is instead sensitive to property values associated with the 8-digit HUC watershed of the proposed mitigation site. The Nature Conservancy (TNC), an ILF sponsor, stated that the current proposed mitigation rate for stream impacts in the ILF program is \$240/stream credit and \$52,000/wetland credit for the Upper Ohio-Wheeling watershed. One stream credit is equivalent to one linear foot of stream impact and one wetland credit is equivalent to one acre of wetland impact. Since the ILF program has yet to be approved

in this USACE District, permittee-responsible mitigation may be used; the OEPA suggested working with the Captina Conservancy to meet the mitigation requirement.

Preferred Alternative

Mountain Gathering, LLC, needs to purchase 60.5 stream credits for mitigation, which amounts to \$14,520 (i.e. \$240/credit * 60.5 credits). Category 1 and 2 wetland credits must also be purchased; 0.03 wetland credits amounts to \$1,560 (i.e. \$52,000/credit * 0.03 credits). Total credit cost amounts to \$16,080.

Minimal-Degradation Alternative

Mountain Gathering, LLC, needs to purchase 40.5 stream credits for mitigation, which amounts to \$9,720 (i.e. \$240/credit * 40.5 credits). Category 1 and 2 wetland credits must also be purchased; 0.03 wetland credits amounts to \$1,560 (i.e. \$52,000/credit * 0.03 credits). Total credit cost amounts to \$11,280.

The Captina Conservancy

The Captina Conservancy is a non-profit land trust actively engaged in the conservation and restoration of the Captina Creek watershed (HUC 0503010609), part of the Upper Ohio-Wheeling watershed. The Captina Creek watershed coordinator, who works for the Belmont Soil and Water Conservation District (Belmont SWCD), indicated the need for financial assistance to implement two stream crossing projects that are currently in the design phase, which is being funded by the U.S. Fish and Wildlife Service. Belmont SWCD expects the projects to be ready for construction within a few months.

Belmont SWCD estimated that each of the stream crossing projects will cost \$100,000 to \$150,000 and there are not currently any other organizations looking to fund projects through the Captina Conservancy. Belmont SWCD does not have a clear timeline for when the remaining funds for these projects will be secured. As a result, Belmont SWCD suggested funding a riparian enhancement project that has a budget closer to that of the PA and MDA.

Stream Crossing Project – Joy Fork

The first project involves a road crossing through Joy Fork in the Bend Fork subwatershed (HUC 050103060903) of the Captina Creek watershed. The OEPA indicated Joy Fork is in excellent biological condition and recommended an aquatic life use designation of Cold Water Habitat based on baseline biological monitoring conducted in 2008 and 2009. Township Road 194 in Goshen Township, Belmont County, Ohio, crosses directly through Joy Fork; there is no bridge. This crossing causes at least 2.6 tons of sediment to erode into Joy Fork each year. One solution being considered to reduce this erosion is to install a box culvert with a high vent-to-area ratio, which should minimally obstruct the flow of water.

Stream Crossing Project – Crabapple Creek

The second project involves a road crossing through Crabapple Creek in the Piney Creek subwatershed (HUC 050103060904) of the Captina Creek watershed. The OEPA indicated Crabapple Creek is in excellent biological condition and recommended aquatic life use designations of Excellent Warm Water Habitat and Cold Water Habitat based on baseline biological monitoring conducted in 2008 and 2009. Township Road 84 in Washington

Township, Belmont County, Ohio, crosses Crabapple Creek over a submarine bridge with a low vent-to-area ratio; this type of bridge can contribute to the buildup of debris, increase the susceptibility of the area to flooding, and impede upstream fish migration. One solution being considered is to install a box culvert with a high vent-to-area ratio that should minimize impacts to Crabapple Creek.

Riparian Enhancement Project – Bend Fork

The riparian enhancement project involves stabilizing the stream bank of Bend Fork within the Captina Creek watershed. The OEPA indicated Bend Fork is in excellent biological condition and recommended an aquatic life use designation of Excellent Warm Water Habitat based on baseline biological monitoring conducted in 2008 and 2009. Widespread erosion is occurring along 250' of stream bank, generating sediment in downstream areas of Bend Fork along Township Road 101 in Washington Township, Belmont County, Ohio. Recommended restoration work includes planting vegetation and installing best management practices to stabilize the banks and reduce erosion. The design phase of this project has not yet been initiated and Belmont SWCD does not have a clear timeline for when this riparian enhancement project will be ready for implementation.

Discussion

Preferred Alternative

The ILF sponsor program should be in place within 90 days of the approval of this 401 WQC application package. If this is the case, Mountain Gathering, LLC, will purchase 60.5 stream credits and 0.03 wetland credits for a total amount of \$16,080 from TNC as an ILF sponsor. The Captina Conservancy intends to work with TNC to direct a portion of the ILF funds to their projects. If TNC has not been approved as an ILF sponsor within the timeframe of 401 WQC approval, Mountain Gathering, LLC, will develop an alternative Mitigation Plan or request an extension of time in which the stakeholders would identify a viable alternative. The work associated with the Buckeye Compressor Station to Monroe North Meter Site natural gas pipeline installation will not proceed until all stream and wetland credits are purchased and this compensatory mitigation plan is accepted by the OEPA.

Minimal-Degradation Alternative

The ILF sponsor program should be in place within 90 days of the approval of this 401 WQC application package. If this is the case, Mountain Gathering, LLC, will purchase 40.5 stream credits and 0.03 wetland credits for a total amount of \$11,280 from TNC as an ILF sponsor. The Captina Conservancy intends to work with TNC to direct a portion of the ILF funds to their projects. If TNC has not been approved as an ILF sponsor within the timeframe of 401 WQC approval, Mountain Gathering, LLC, will develop an alternative Mitigation Plan or request an extension of time in which the stakeholders would identify a viable alternative. The work associated with the Buckeye Compressor Station to Monroe North Meter Site natural gas pipeline installation will not proceed until all stream and wetland credits are purchased and this compensatory mitigation plan is accepted by the OEPA.