

*Atlantic Sunrise Project – PA DEP Chapter 105 Joint Permit Application
Transcontinental Gas Pipe Line Company, LLC
Susquehanna County*

**ATTACHMENT O -1
FLOODPLAIN ANALYSIS AND CONSISTENCY**

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Transcontinental Gas Pipe Line Company, LLC
Susquehanna County*

Please refer to Attachment C of this application for copies of the letters and consistency requests which have been sent to each County and Municipality. Floodplain management analysis letters that have been provided to the County / Municipality, as well as any concurrence letters received at the time of the application submittal, have been included in this section. Additional concurrence letters will be provided upon receipt; however, because this Project is subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act, FERC has exclusive jurisdiction over siting. Therefore, local zoning is preempted.

October 12, 2016

Lenox Township
Floodplain Administrator
222 S.R. 2016
Nicholson, PA 18446

Re: Atlantic Sunrise Project
Central Penn Line North
Lenox Township, Susquehanna County
Floodplain Management Analysis

Dear Sir or Madam:

Transcontinental Gas Pipeline Company, LLC (Transco) proposes to construct and operate the Atlantic Sunrise Project (Project) to provide 1.7 million dekatherms per day of incremental firm transportation of natural gas from the Marcellus Shale production areas in northern Pennsylvania (PA) to its existing market areas, extending to as far south as the Station 85 Pooling Point in Choctaw County, Alabama. The Project includes modifications to the existing Transco Mainline System to reverse the direction of flow, enabling new north-to-south capabilities (bi-directional flow) to transport this new source of natural gas to existing markets. The Project consists of the following primary components within PA:

- Installing greenfield pipeline facilities of approximately 58.6 miles of new 30-inch-diameter pipe from Susquehanna County, PA to Columbia County, PA.
- Installing greenfield pipeline facilities of approximately 127.3 miles of 42-inch-diameter pipe from Columbia County, PA to Lancaster County, PA.;
- Installing two pipeline loops (pipeline laid parallel to existing facilities):
 - 8.56 miles of 42-inch pipeline loop located in Lycoming County, PA known as the Unity Loop;
 - 2.50 miles of 36-inch pipeline in Clinton County, PA, known as the Chapman Loop;
- Constructing two new compressor stations, one in Wyoming County and one in Columbia County, PA;
- Additional ancillary facilities, such as mainline valves, cathodic protection, communication facilities, and internal inspection device (e.g., pig) launchers and receivers;
- Two new meter stations and three new regulator stations with interconnecting piping;
- Additional compression and related modifications to one existing compressor station; and,
- Modification to an existing meter station for use of shared facilities with a new meter station.

Transco's consultants, BL Companies and TRC Solutions (TRC), have completed an analysis of potential impacts on FEMA delineated floodways from the Project in accordance with 25 Pa. Code § 105.13. The analysis for Lenox Township is provided below for your review and comment.

**ATLANTIC SUNRISE PROJECT
FEMA FLOODPLAIN CROSSINGS
LENOX TOWNSHIP, SUSQUEHANNA COUNTY, PENNSYLVANIA**

Description of Impact	Structure Type and Dimensions	Resource ID	Resource Name	Chapter 93 Classification, Wetland Classification (EV or Other), or Floodway Type	Floodway Fill (cu. yds.)	Impact area (acres)		Latitude	Longitude
						Temporary	Permanent		
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T12-21001	Floodway to Willow Brook	FEMA Detailed	N/A	0.0193	0.0041	41.66190	-75.74886
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T50-21002	Floodway to Millard Creek	FEMA Detailed	N/A	0.1442	0.0201	41.68174	-75.3312
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T92-21009A	Floodway to UNT to Tower Branch	FEMA Detailed ¹	N/A	0.0079	0.0015	41.69599	-75.71742
Utility Pipeline Crossing	Equipment Access and E&S Controls	WW-T48-21001	Floodway to UNT to Tower Branch	FEMA Detailed ¹	N/A	0.0301	0.0029	41.71033	-75.70767

Notes:

¹ Multiple streams are included in these calculations as the floodways overlap.

The floodway crossings listed above are depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity, as all pre-construction surface elevations will be re-established during restoration. The temporary and permanent impacts noted above are associated with vegetation management and underground pipe installation only, and do not represent a permanent modification of ground elevation or loss of flood storage capacity or hydraulic capacity. No structures are proposed within the FEMA 100-year floodplain, no fill will be placed in the floodways, and no increase in 100-year flood elevation is anticipated as a result of the proposed Project.

On behalf of Transco, BL and TRC respectfully request that Lenox Township review this analysis and, if applicable, provide comments to:

Steve Crescenzo
TRC Environmental Corporation
2200 Liberty Avenue, Suite 100
Pittsburgh, PA 15222

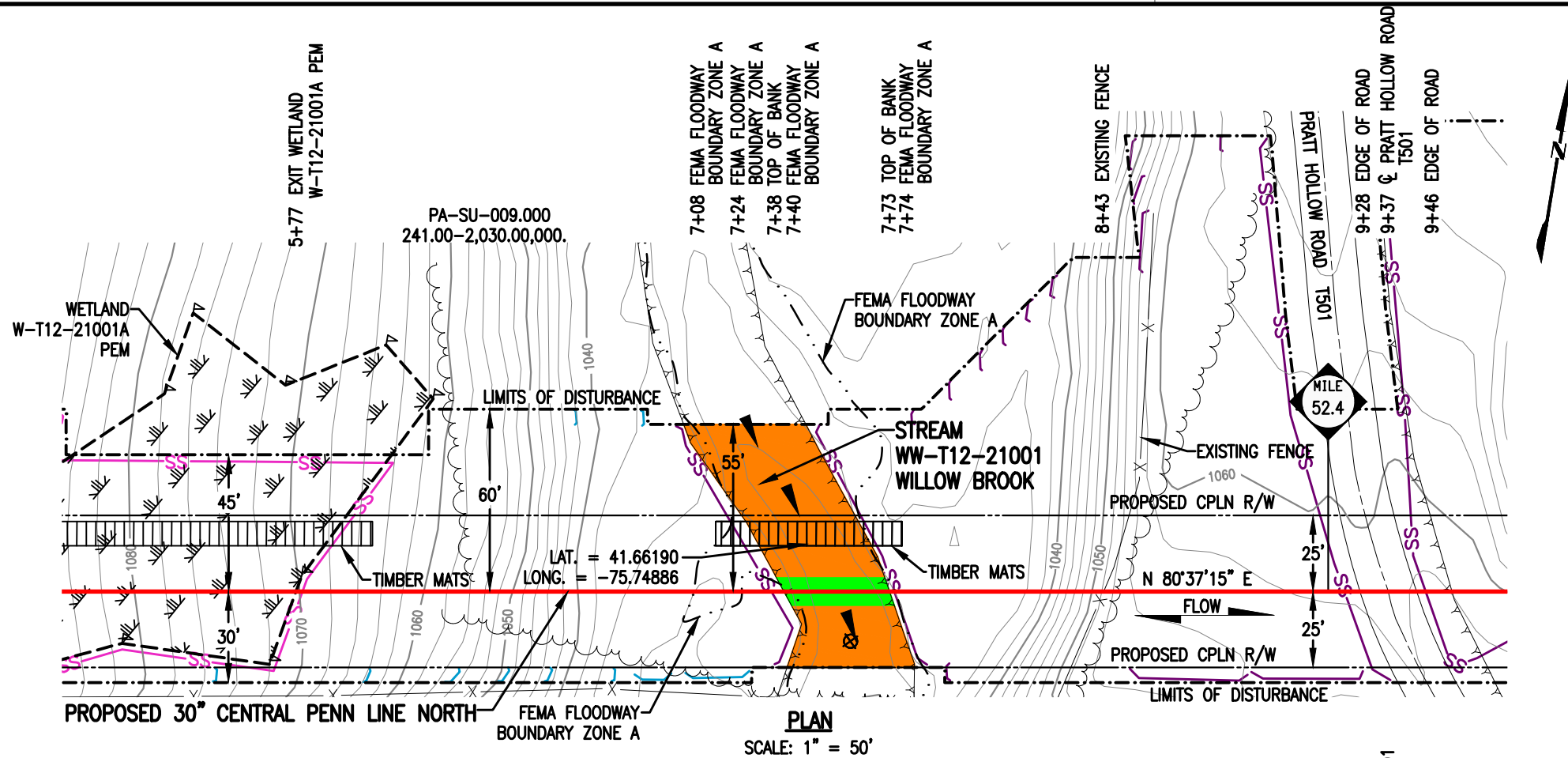
Please do not send comments directly to the PADEP, as we must include them with our permit application. Should you have any questions or concerns regarding this notification, please contact Al Buser at (717) 651-9850 or via email at abuser@blcompanies.com.

Sincerely,



Alaric J. Buser, PE
Senior Engineer

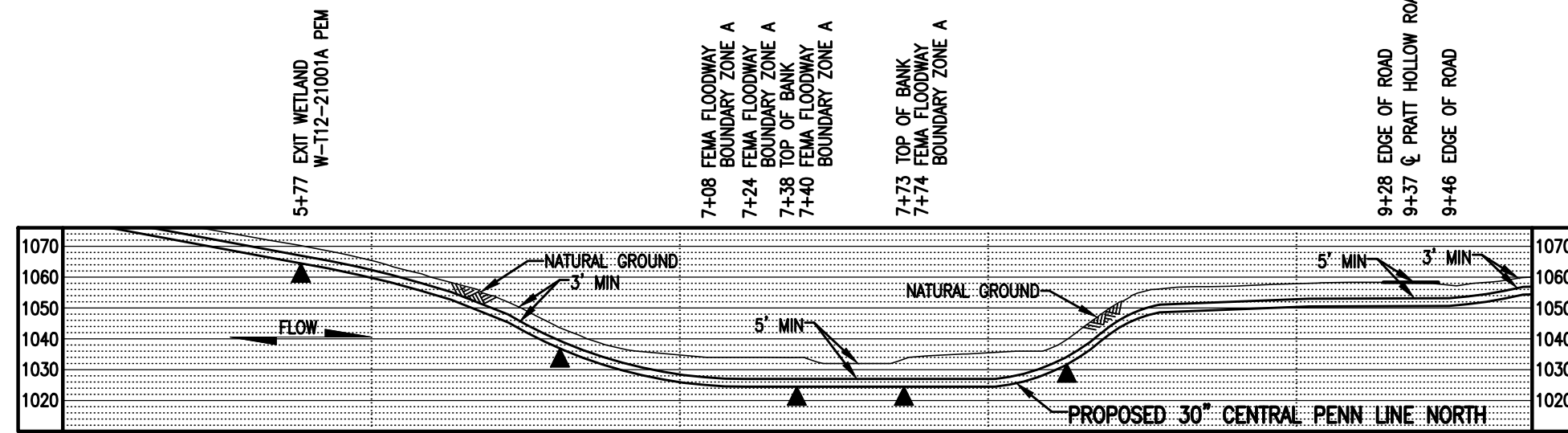
Enclosures: Water Obstruction and Encroachment Permit Impact Maps



STREAM DISTURBANCE:

STREAM WW-T12-21001	ACRE
TEMPORARY STREAM DISTURBANCE	0.0607
PERMANENT STREAM DISTURBANCE	0.0080
TOTAL STREAM DISTURBANCE	0.0687
TEMPORARY FLOODWAY DISTURBANCE	0.0193
PERMANENT FLOODWAY DISTURBANCE	0.0041
TOTAL FLOODWAY DISTURBANCE	0.0234

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	34.75
STREAM LENGTH	87.96



GENERAL NOTES:

1. STREAM CROSSING METHOD SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
3. STATION 6+00 SHOWN IS EQUAL TO STATION 2763+54 ON THE EROSION AND SEDIMENT CONTROL PLAN.

SURVEY NOTES:

1. T.B.M. SURVEY CONTROL POINT - 72' RT. OF M.P. 52.37, ELEV. = 1033.71' (NAVD88).



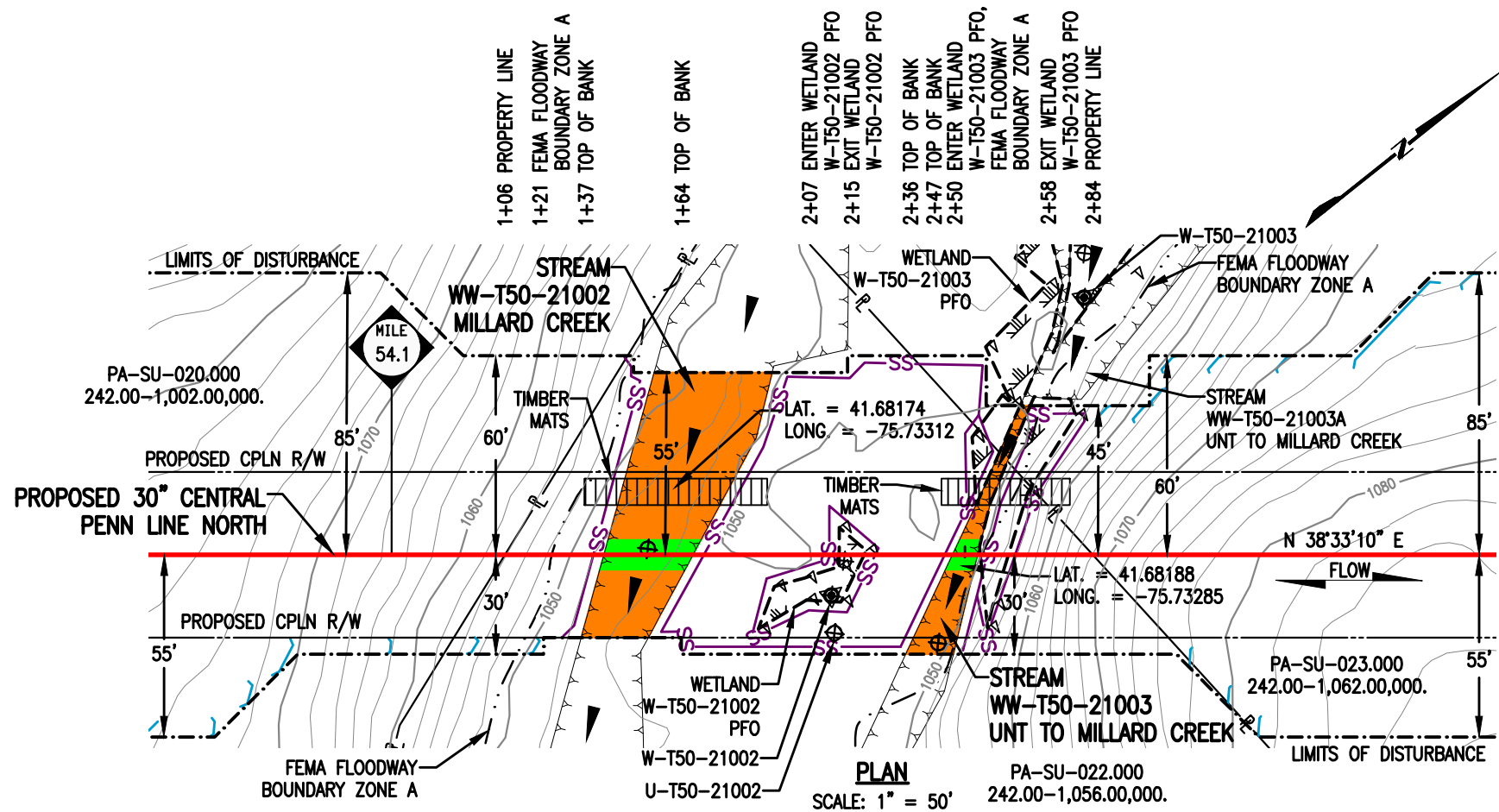
THIS DRAWING SUPERCEDES 24-1601-70-09-A/52.37-01

LEGEND

	PROPOSED 30" CENTRAL PENN LINE NORTH		WETLAND FLAGS		WOOD GROUP MUSTANG, INC.
	EXISTING PIPELINES		PHOTO DATA POINT		12" SEDIMENT BARRIER
	EXISTING TGPL R/W		WETLAND DATA POINT		18" SEDIMENT BARRIER
	LIMITS OF DISTURBANCE		UPLAND DATA POINT		24" SEDIMENT BARRIER
	PROPOSED C/PLN R/W		WELL POINT		32" SEDIMENT BARRIER
	PROPERTY LINE		TRENCH PLUG		TOP OF BANK
	FOREIGN PIPELINE		WATERBODY		PERMANENT STREAM IMPACT
	WETLAND AREA		TREE LINE		TEMPORARY STREAM IMPACT
	STREAM FLOW		FLOODWAY BOUNDARY		
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY		
	EXISTING FENCE				

DRAWING NO.			REFERENCE TITLE							
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: LL	DATE: 01/05/15	ISSUED FOR BID:	SCALE: 1" = 50'
0	07/31/15	TL	ISSUED FOR PADEP 105 PERMIT	1161481	CLR	MJH	CHECKED BY: ML	DATE: 03/07/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
1	02/03/16	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH	APPROVED BY: MJH	DATE: 04/17/15	DRAWING NUMBER: 24-1601-70-09-A/52.37-02	SHEET 1
2	10/06/16	JJB	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	IWO: 1161481	DATE: 9/27/2016	1161481	OF 1

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
 WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS
 ATLANTIC SUNRISE PROJECT
 PROPOSED 30" CENTRAL PENN LINE NORTH
 STREAM CROSSING WW-T12-21001
 © M.P. 52.37
 LENOX TOWNSHIP, SUSQUEHANNA COUNTY, PENNSYLVANIA



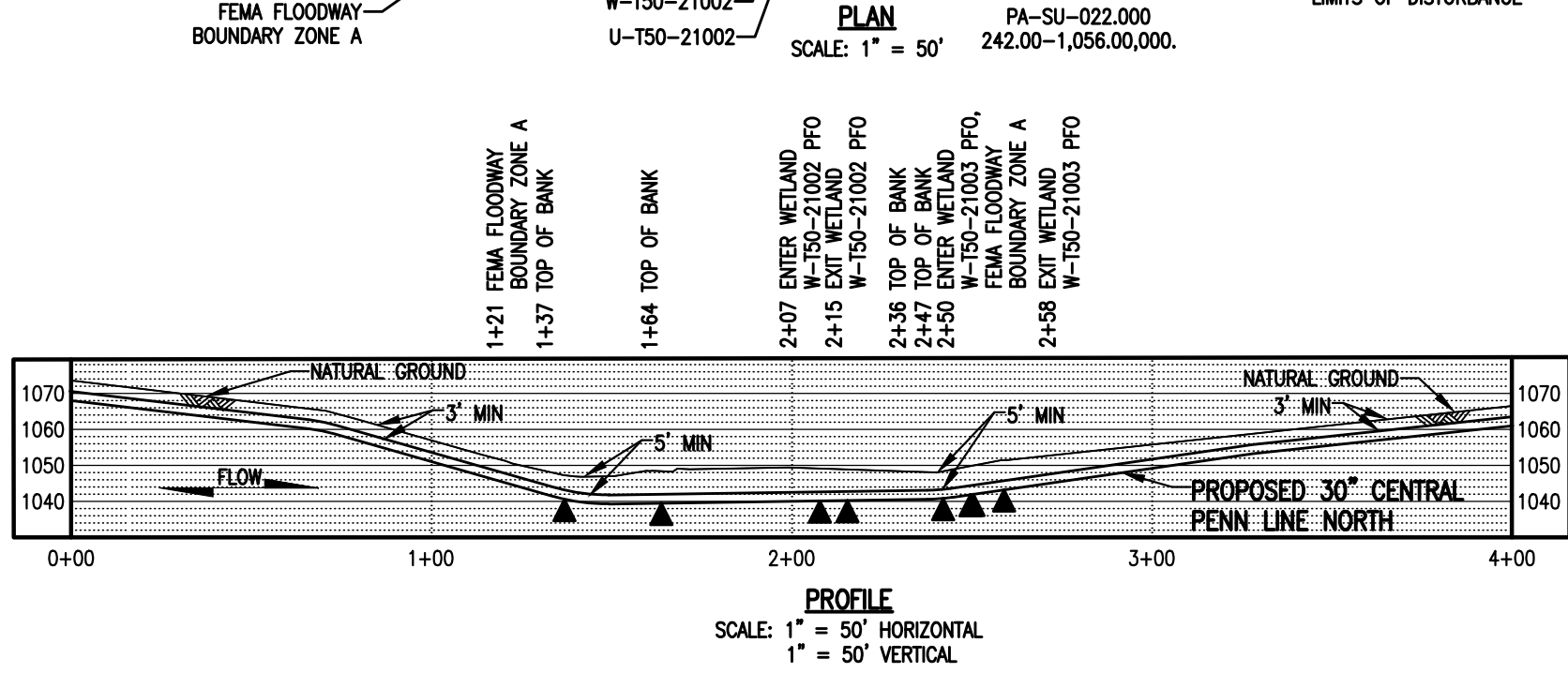
STREAM DISTURBANCE:

STREAM WW-T50-21002	ACRE
TEMPORARY STREAM DISTURBANCE	0.0492
PERMANENT STREAM DISTURBANCE	0.0062
TOTAL STREAM DISTURBANCE	0.0554
TEMPORARY FLOODWAY DISTURBANCE	0.1442
PERMANENT FLOODWAY DISTURBANCE	0.0201
TOTAL FLOODWAY DISTURBANCE	0.1643

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	26.87
STREAM LENGTH	84.08

STREAM WW-T50-21003	ACRE
TEMPORARY STREAM DISTURBANCE	0.0103
PERMANENT STREAM DISTURBANCE	0.0017
TOTAL STREAM DISTURBANCE	0.0120
TEMPORARY FLOODWAY DISTURBANCE	0.0000
PERMANENT FLOODWAY DISTURBANCE	0.0000
TOTAL FLOODWAY DISTURBANCE	0.0000

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	7.57
STREAM LENGTH	80.76



GENERAL NOTES:

1. STREAM CROSSING METHOD SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
2. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
3. STATION 0+00 SHOWN IS EQUAL TO STATION 2855+75 ON THE EROSION AND SEDIMENT CONTROL PLAN.

SURVEY NOTES:

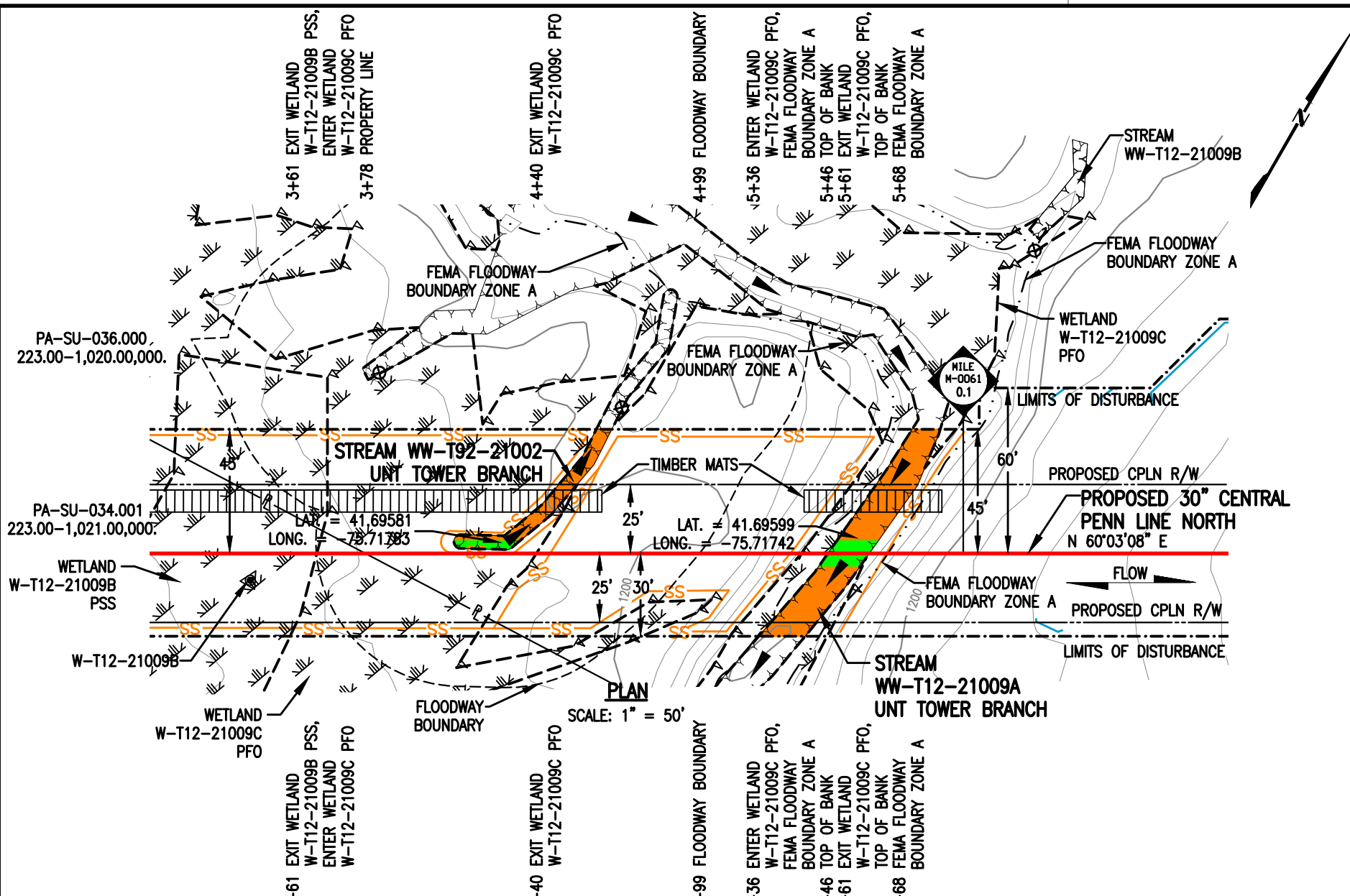
T.B.M. FND. IRON ROD - 78' RT. OF M.P. 54.12, ELEV. = 1059.98' (NAVD88).



LEGEND

	PROPOSED 30" CENTRAL PENN LINE NORTH		WETLAND FLAGS		WOOD GROUP MUSTANG, INC.
	EXISTING PIPELINES		PHOTO DATA POINT		12" SEDIMENT BARRIER
	EXISTING TGPL R/W		WETLAND DATA POINT		18" SEDIMENT BARRIER
	LIMITS OF DISTURBANCE		UPLAND DATA POINT		24" SEDIMENT BARRIER
	PROPOSED CPLN R/W		WELL POINT		32" SEDIMENT BARRIER
	PROPERTY LINE		TRENCH PLUG		TOP OF BANK
	FOREIGN PIPELINE		WATERBODY		PERMANENT STREAM IMPACT
	WETLAND AREA		TREE LINE		TEMPORARY STREAM IMPACT
	STREAM FLOW		FLOODWAY BOUNDARY		
	EXISTING POWER LINE		FEMA FLOODWAY BOUNDARY		
	EXISTING FENCE				

DRAWING NO.		REFERENCE TITLE		<p>TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS ATLANTIC SUNRISE PROJECT PROPOSED 30" CENTRAL PENN LINE NORTH STREAM CROSSINGS WW-T50-21002 @ M.P. 54.11, & WW-T50-21003 M.P. 54.13 LENOX TOWNSHIP, SUSQUEHANNA COUNTY, PENNSYLVANIA</p>						
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.	DRAWN BY: JB	DATE: 06/16/16	ISSUED FOR BID:	SCALE: 1" = 50'
0	10/06/16	JB	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH	CHECKED BY: CLR	DATE: 07/15/16	ISSUED FOR CONSTRUCTION:	REVISION: 0
							APPROVED BY: MJH	DATE: 07/06/16	DRAWING NUMBER: 24-1601-70-09-A/54.11-01	SHEET 1
							W.O. NUMBER: 1161481	DATE: 9/27/2016	FILE: 1161481.dwg	OF 1



STREAMS DISTURBANCE:

STREAM WW-T92-21002	ACRE
TEMPORARY STREAM DISTURBANCE	0.0067
PERMANENT STREAM DISTURBANCE	0.0017
TOTAL STREAM DISTURBANCE	0.0084
TEMPORARY FLOODWAY DISTURBANCE	0.0847
PERMANENT FLOODWAY DISTURBANCE	0.0135
TOTAL FLOODWAY DISTURBANCE	0.0982

STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	15.27
STREAM LENGTH	71.47

STREAM WW-T12-21009A	ACRE
TEMPORARY STREAM DISTURBANCE	0.0219
PERMANENT STREAM DISTURBANCE	0.0034
TOTAL STREAM DISTURBANCE	0.0253
TEMPORARY FLOODWAY DISTURBANCE	0.0079
PERMANENT FLOODWAY DISTURBANCE	0.0015
TOTAL FLOODWAY DISTURBANCE	0.0094

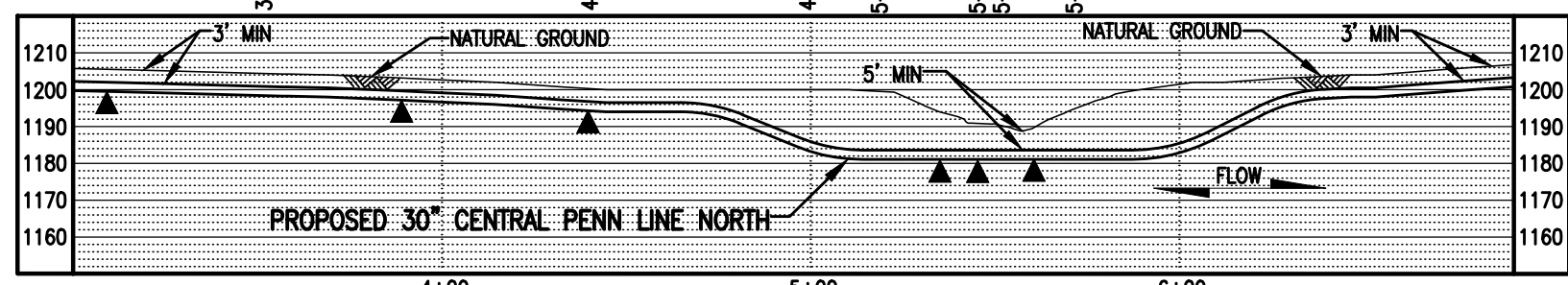
STREAM DIMENSION	FT.
STREAM WIDTH (TOB TO TOB)	15.00
STREAM LENGTH	86.20

GENERAL NOTES:

1. STREAM WW-T92-21002 DOES NOT CROSS PROPOSED PIPELINE. STREAM WILL BE MATTED DURING CONSTRUCTION.
2. STREAM CROSSING METHOD FOR WW-T12-21009A SHALL BE DAM AND PUMP (DPX). EQUIPMENT TO CROSS STREAM UTILIZING A BRIDGE EQUIPMENT CROSSING (BEC).
3. THIS SITE IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD MAP DATA.
4. STATION 5+00 SHOWN IS EQUAL TO M-0061 STATION 4+33 ON THE EROSION AND SEDIMENT CONTROL PLAN.

SURVEY NOTES:

1. T.B.M. SURVEY CONTROL POINT - 14' LT. OF M-0061 M.P. 0.06, ELEV. = 1204.31' (NAVD88).



PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL

THIS DRAWING SUPERCEDES 24-1601-70-09-A/M-0061-0.09-01



LEGEND

- PROPOSED 30" CENTRAL PENN LINE NORTH
- EXISTING PIPELINES
- EXISTING TGPL R/W
- - - LIMITS OF DISTURBANCE
- - - PROPOSED CPLN R/W
- - - PROPERTY LINE
- - - FOREIGN PIPELINE
- WETLAND AREA
- ▲ STREAM FLOW
- P EXISTING POWER LINE
- X EXISTING FENCE

- ▽ WETLAND FLAGS
- ⊗ PHOTO DATA POINT
- ⊠ WETLAND DATA POINT
- ⊡ UPLAND DATA POINT
- ☼ WELL POINT
- ▲ TRENCH PLUG
- WATERBODY
- TREE LINE
- - - FLOODWAY BOUNDARY
- - - FEMA FLOODWAY BOUNDARY

WOOD GROUP MUSTANG, INC.

- SS 12" SEDIMENT BARRIER
- SS 18" SEDIMENT BARRIER
- SS 24" SEDIMENT BARRIER
- SS 32" SEDIMENT BARRIER
- TOP OF BANK
- PERMANENT STREAM IMPACT
- TEMPORARY STREAM IMPACT

DRAWING NO. _____ REFERENCE TITLE _____

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
0	07/31/15	TL	ISSUED FOR PADEP 105 PERMIT	1161481	CLR	MJH
1	02/03/16	TL	ISSUED FOR INTERNAL USE	1161481	CLR	MJH
2	10/06/16	KB	ISSUED FOR PADEP SUBMITTAL #2	1161481	CLR	MJH

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
WATER OBSTRUCTION AND ENCROACHMENT PERMIT IMPACT MAPS
ATLANTIC SUNRISE PROJECT
PROPOSED 30" CENTRAL PENN LINE NORTH
STREAM CROSSINGS WW-T92-21002 @ M-0061 M.P. 0.07
& WW-T12-21009A @ M-0061 M.P. 0.09
LENOX TOWNSHIP, SUSQUEHANNA COUNTY, PENNSYLVANIA

Williams

DRAWN BY: PGM	DATE: 03/06/15	ISSUED FOR BID:	SCALE: 1" = 50'
CHECKED BY: ML	DATE: 04/13/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: MJH	DATE: 04/07/15	DRAWING NUMBER: 24-1601-70-09-A/M-0061-0.09-02	SHEET 1
IWC: 1161481		9/27/2016	1161481



October 17, 2016

Dear Customer:

The following is the proof-of-delivery for tracking number **690511408512**.

Delivery Information:

Status:	Delivered	Delivered to:	Residence
Signed for by:	Signature not required	Delivery location:	222 STATE ROUTE 2016 NICHOLSON, PA 18446
Service type:	FedEx Priority Overnight	Delivery date:	Oct 14, 2016 14:59
Special Handling:	Deliver Weekday Residential Delivery		

NO SIGNATURE REQUIRED

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment because a signature was not required.

Shipping Information:

Tracking number:	690511408512	Ship date:	Oct 13, 2016
		Weight:	0.5 lbs/0.2 kg

Recipient:

FLOODPLAIN ADMINISTRATOR
LENOX TOWNSHIP MUNICIPAL BLDG
222 STATE ROUTE 2016
NICHOLSON, PA 18446 US

Reference

Purchase order number:
Department number

Shipper:

SUSAN MCDOWELL
BLCOMPANIES, INC.
355 RESEARCH PARKWAY
Meriden, CT 06450 US

14C4909-B

BUSHER/FLOODPLAIN MNGT ANALYSI
CIVIL

Thank you for choosing FedEx.