

PROJECT LOCATION

BUTLER COUNTY,
PENNSYLVANIA

LEGEND

- PROPOSED PIPELINE REPLACEMENT
- EXISTING PIPELINE
- PROPOSED ACCESS ROAD

0 1,000 2,000 4,000 Feet

PROJECT LOCATION MAP

LINE PM21 2016
REPLACEMENT PROJECT
NATIONAL FUEL GAS
DISTRIBUTION CORPORATION

gdc consultants

DRAWN BY: SWW DATE: 4/22/2016
CHECKED: EFJ APPROVED: WGW

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: EAU CLAIRE (1980) AND EMLENTON (1979), PENNSYLVANIA, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 04/2016.

2016-84

Match Line →

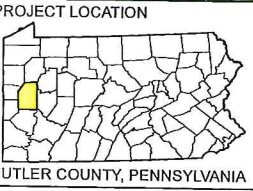
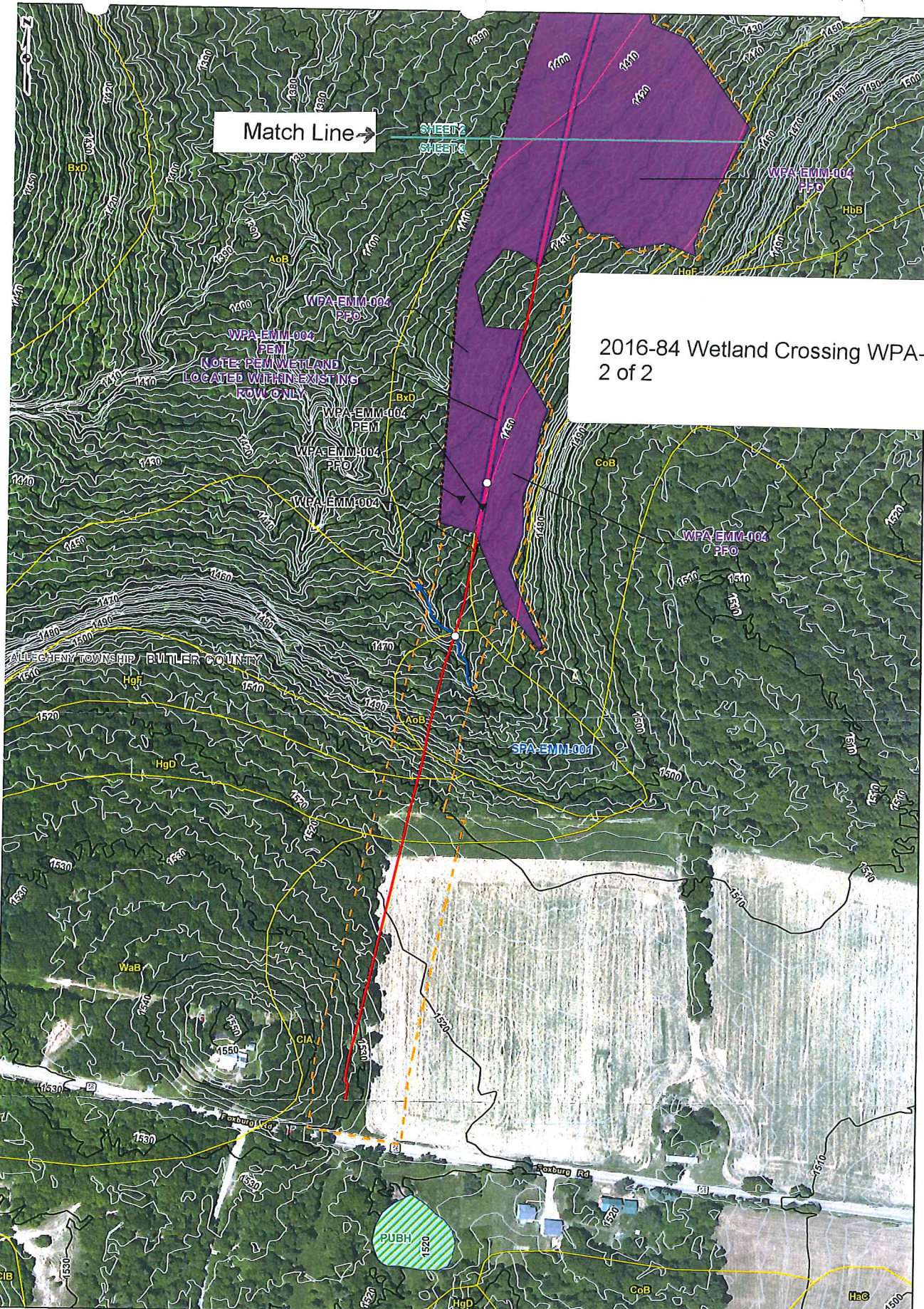
SHEET 2
SHEET 3

WPA-EMM-004
PFO

HBB

2016-84 Wetland Crossing WPA-EMM-004
2 of 2

NOTE: PEN WETLAND
LOCATED WITHIN EXISTING
ROW ONLY



REFERENCES:
NATIONAL AGRICULTURAL
MAGERY PROGRAM (NAP)
ORTHOPHOTOGRAHY, BUTLER
COUNTY, PENNSYLVANIA, USDA/FSA, 2013
NATIONAL WETLAND INVENTORY (NWI)
WETLANDS, USFWS, 2015. SOIL SURVEY
FOR BUTLER COUNTY, PENNSYLVANIA
USDA/NRCS, 2015. NATIONAL FLOOD
HAZARD LAYER, FEDERAL EMERGENCY
MANAGEMENT AGENCY (FEMA)
PENNSYLVANIA, 2015. PAMAP PROGRAM
CONTOURS, PA DCNR, 2006.

LEGEND

- ◆ UPLAND DATA POINT
- WETLAND DATA POINT
- PHOTO LOCATION
- PROPOSED PIPELINE REPLACEMENT
- EXISTING PIPELINE
- PROPOSED ACCESS ROAD
- STREAM
- 2-FT CONTOURS
- 10-FT CONTOURS
- OPEN ENDED WETLAND
- WETLAND
- STUDY AREA
- NM WETLAND
- LIMIT OF DISTURBANCE
- SOIL TYPE BOUNDARY
- MUNICIPAL BOUNDARY
- COUNTY BOUNDARY

0 100 200 400 Feet

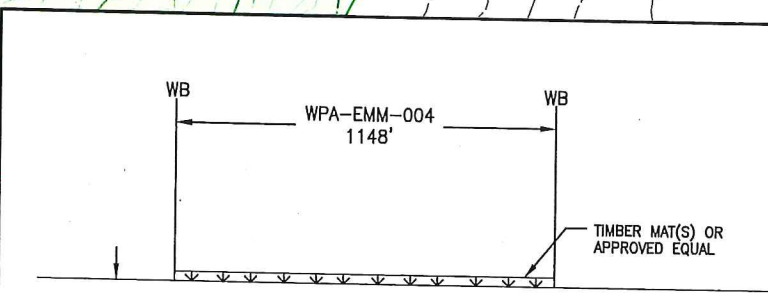
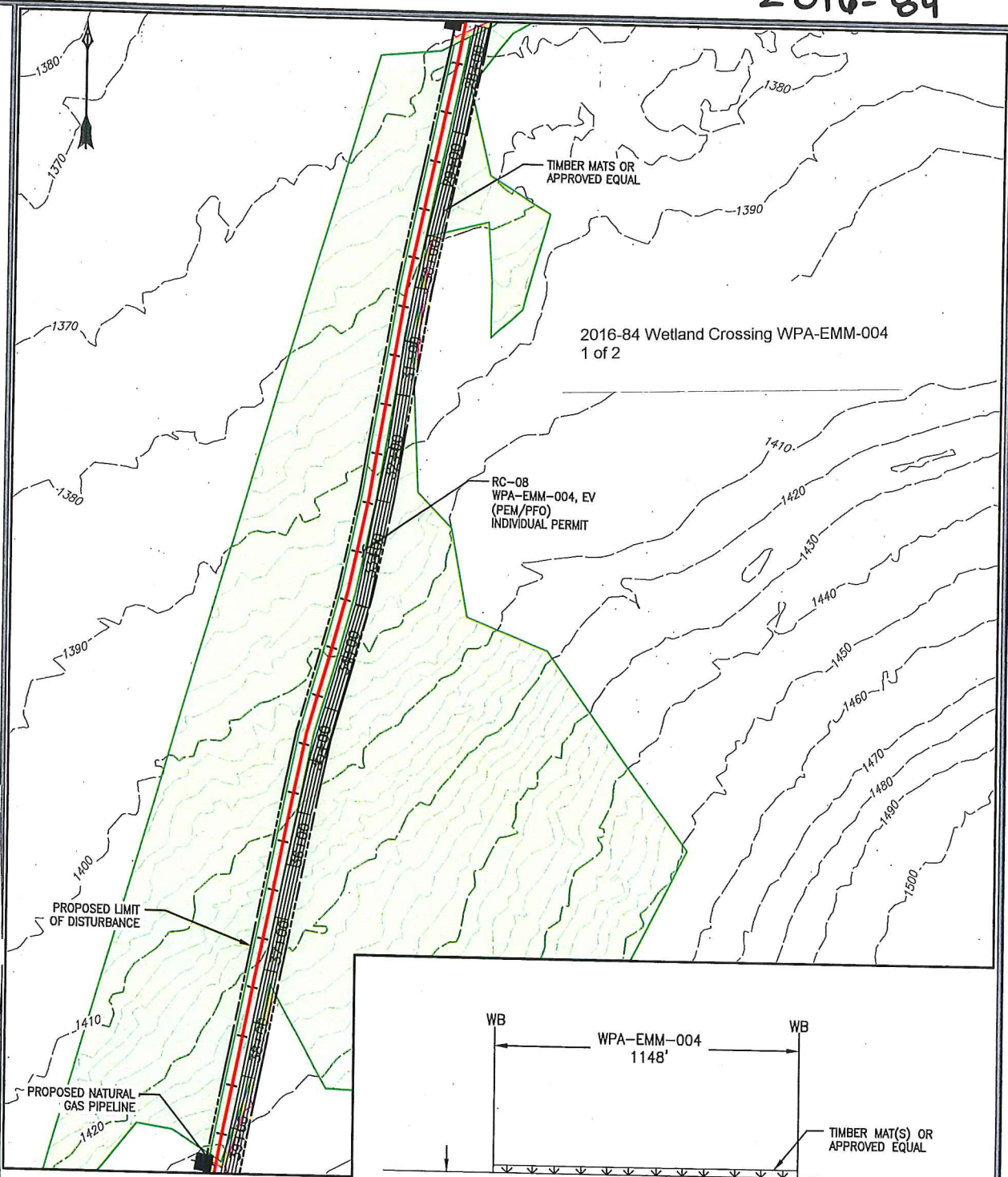
FIGURE 2
RESOURCE LOCATION AND SOILS MAP
SHEET 3 OF 3

LINE PM21 2016
REPLACEMENT PROJECT
NATIONAL FUEL GAS
DISTRIBUTION CORPORATION

gal consultants

DRAWN BY: SWW
CHECKED: EFJ

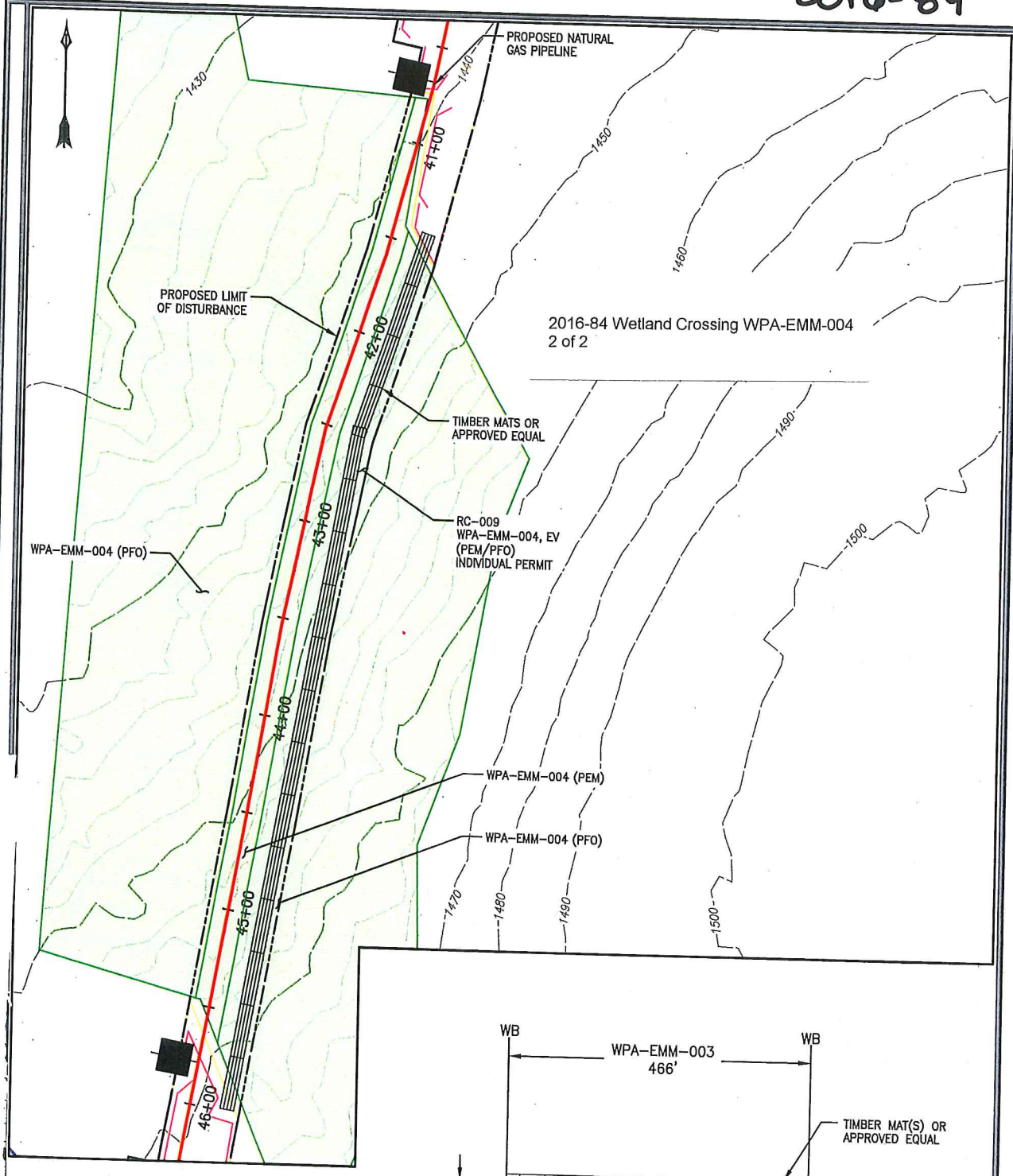
DATE: 4/22/2016
APPROVED: RDW



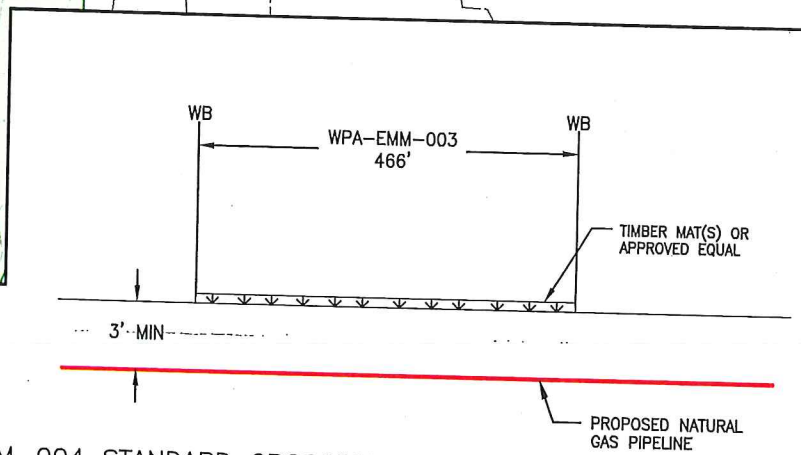
WPA-EMM-004 STANDARD CROSSING DETAIL
N.T.S.

DRAWING TITLE RC-08 WPA-EMM-004		DRAWN BY: DIMASZL	CHECKED BY: MATTHEM	APPROVED BY: WOLFWG
PROJECT LINE PM-21 2016 REPLACEMENT PROJECT BUTLER COUNTY, PENNSYLVANIA		CLIENT NATIONAL FUEL GAS DISTRIBUTION CORPORATION 1100 STATE STREET ERIE, PENNSYLVANIA 16501	DWG TYPE: AS SHOWN	SCALE: 4/8/2016
This drawing was produced with computer aided drafting technology and is supported by electronic drawing files. Do not revise this drawing via manual drafting methods.		SHEET NO.: 9 OF 11	GAI FILE NUMBER: F151550-00-002-01-A2-006 thru 011	
ISSUING OFFICE: Pittsburgh 385 E. Waterfront Drive, Homestead, PA 15120		GAI DRAWING NUMBER: F151550-00-002-01-B2-009		© 2016 GAI Consultants, Inc.

2016-84




2016-84 Wetland Crossing WPA-EMM-004
2 of 2



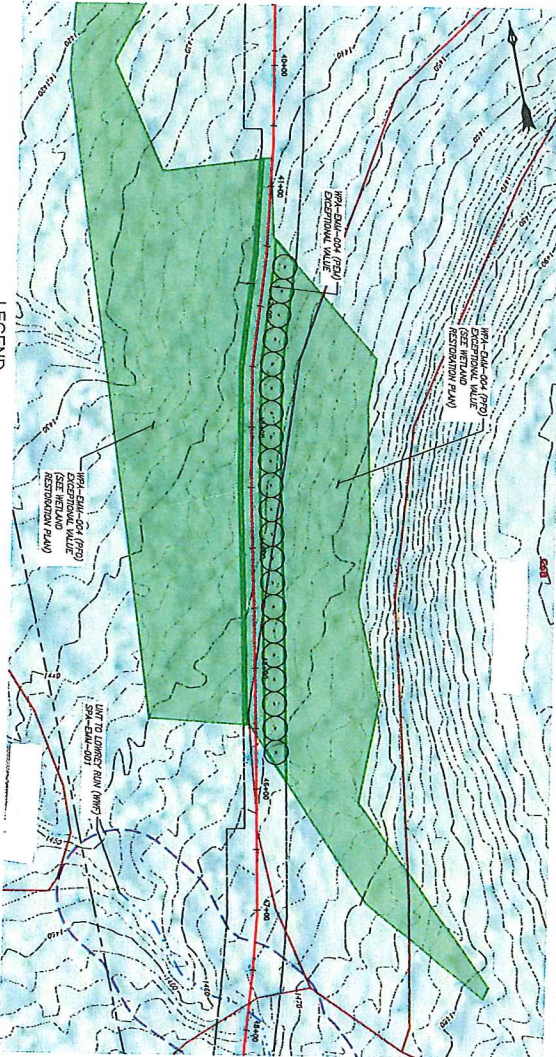
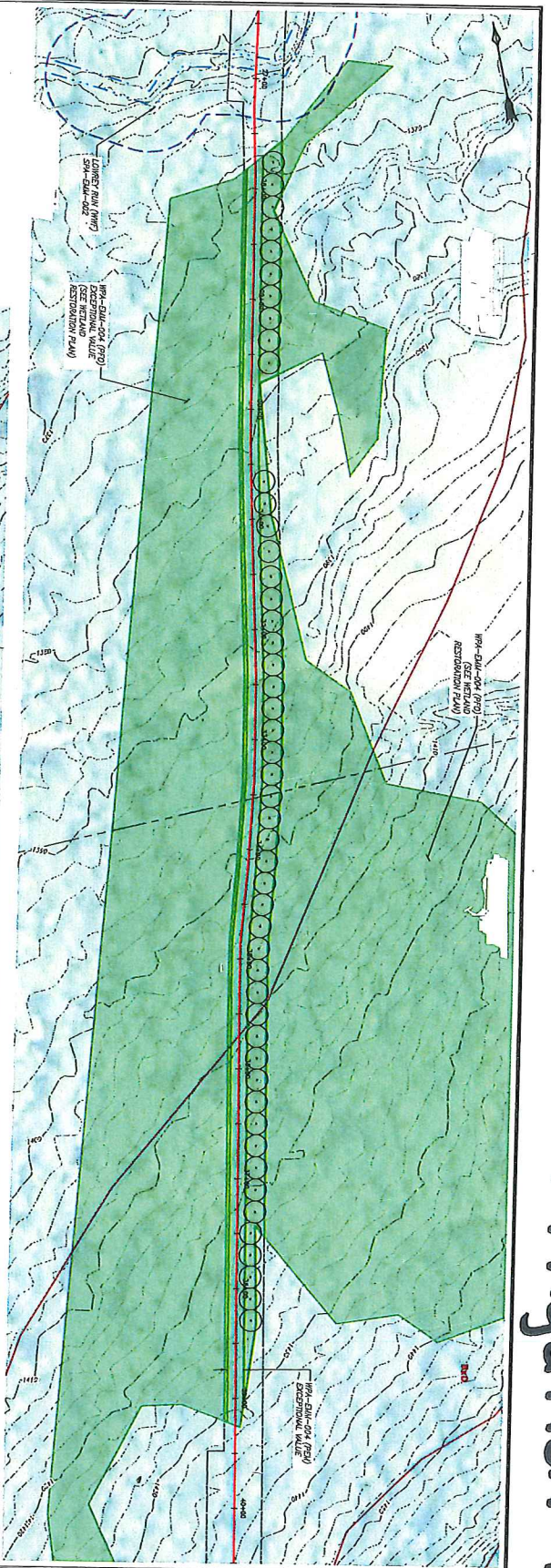
SCALE: 1"=50'

WPA-EMM-004 STANDARD CROSSING DETAIL
N.T.S.

DRAWING TITLE RC-09 WPA-EMM-004		DRAWN BY: DIMASZL	CHECKED BY: MATTHEM	APPROVED BY: WOLFWG
PROJECT LINE PM-21 2016 REPLACEMENT PROJECT BUTLER COUNTY, PENNSYLVANIA		CLIENT NATIONAL FUEL GAS DISTRIBUTION CORPORATION 1100 STATE STREET ERIE, PENNSYLVANIA 16501	DWG TYPE: AS SHOWN	SCALE: 4/8/2016
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ISSUING OFFICE: Pittsburgh 385 E. Waterfront Drive, Homestead, PA 15120		GAI DRAWING NUMBER: F151550-00-002-01-B2-010	© 2016 GAI Consultants, Inc.	

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2016-84 Mitigation Plan



- PROJECT: PM21 2016
REPLACEMENT
PROPOSED LIMIT OF RESTORANCE/
ESCOP-2 PERMIT BOUNDARY
- EXISTING CONTOUR (MANS)
EXISTING CONTOUR (MANS)
- PROPERTY BOUNDARY
LIMIT OF ASSUMED SO ROADWAY
BOUNDARY
EXISTING STRIP
- EXISTING WETLAND
SOIL TYPE AND SOIL BOUNDARY
TREE PLANTINGS

LEGEND



REFERENCES:
ATLANTA NATIONAL AGRICULTURAL LABORATORY (ANL) REPORT, "WETLAND RESTORATION: A GUIDE TO BEST MANAGEMENT PRACTICES FOR RESTORING WETLANDS IN THE EASTERN UNITED STATES", 2008.
CONTOUR: PHASE PROGRAM TOPOGRAPHIC CONTOUR (2'-FOOT INTERVAL) OF PENNSYLVANIA, PA CORP, 2008
SOILS: SOIL SURVEY GEOPHYSICAL DATA CENTER FOR BUTLER COUNTY, PENNSYLVANIA, USA/ANLSS, 2015
CORPORATE SYSTEM: PENNSYLVANIA STATE PLANT SOCIETY, 2015
PAPER: DARK, BUTLER COUNTY HERBARIUM, PENNSYLVANIA, BUTLER COUNTY HERBARIUM DEPARTMENT, PENN, 2010

ESCOP-2 OF DETERMINATION:
1. TO HERESTY TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THE INFORMATION AND SERVICES SHOWN ARE TRUE AND CORRECT, REPRESENT ACCURATE AND SUFFICIENT DATA AND INFORMATION TO SUPPORT THE DESIGN AND CONSTRUCTION OF THE PROJECT. I AM AWARE THAT THERE ARE SIGNIFICANT FACTORS FOR SOLUTIONS IN ALL AREAS THAT THERE ARE THE POSSIBILITY OF FINE AND IMPROVEMENT.

DRAWING TITLE		CLIENT		REVISION RECORD	
WETLAND RESTORATION PLAN		NATIONAL FUEL GAS DISTRIBUTION CORPORATION		NO.	DATE
PROJECT: LINE PM21 2016 REPLACEMENT PROJECT BUTLER COUNTY PENNSYLVANIA		1100 STATE STREET ERIE, PENNSYLVANIA 16501		DATE	DESCRIPTION
ISSUING OFFICE: Pittsburgh 385 E. Waterford Drive, Homestead, PA 15120		gal consultants		CHK	APY
DRAWN BY: [Name]		CHECKED BY: [Name]		SHEET NO.: 1 OF 2	
DATE: [Date]		SCALE: [Scale]		GAI FILE NUMBER: WETLAND RESTORATION PLAN	

DATE	BY	DESCRIPTION

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