

PROJECT CONTACTS:

PROJECT LEADER:
HEATH BRICKNER
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 EMAIL: hrbrickner@marathonpetroleum.com

CONSULTING / ASSISTANT PROJECT LEADER:
DAVE WOODSMALL
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 CELL: 219-508-1701
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NOTES:

1. PROJECT SPECIFIC DETAILS ARE OUTLINED IN THE SCOPE OF WORK (SOW) WRITTEN SPECIFICALLY FOR THIS PROJECT. SEE SOW FOR COMPLETE PROJECT DETAILS.
2. ALL WORK MUST BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE MARATHON STANDARDS. SEE MPL STANDARD BOOK.

GENERAL NOTES:

1. INFORMATION CONTAINED ON THESE DRAWINGS MUST BE CONSIDERED PROJECT SPECIFIC AND MUST NOT BE USED FOR ANY OTHER PURPOSE.
2. INFORMATION PERTAINING TO NEW ROADWAYS, EXISTING LINE LOCATIONS, RIGHT-OF-WAY BOUNDARIES, AND ALL ELEVATION DATA MUST BE CONSIDERED AS APPROXIMATE ONLY.
3. CONTRACTOR MUST FIELD-VERIFY ALL INFORMATION SHOWN PRIOR TO CONSTRUCTION.
4. COMPANY TO FURNISH SUBCONTRACTOR TO PERFORM NON-DESTRUCTIVE TESTING OF ALL WELDS, PER COMPANY STANDARDS.
5. COMPANY TO FURNISH SUBCONTRACTOR TO GPS SURVEY ALL NEW GIRTH WELDS AS REQUIRED PER COMPANY STANDARDS.
6. CONTRACTOR TO FURNISH AND MAINTAIN SAFETY AND SECURITY MEASURES AS NECESSARY TO ENSURE PUBLIC SAFETY.

UTILITY NOTES:

1. THE LOCATIONS OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE COMPANY, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE.
2. BURIED AND ABOVE GROUND UTILITY LOCATION, IDENTIFICATION, MARKING, AND PROTECTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. ROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND COMPANY. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR MUST CONTACT OHIO 811 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION. OHIO ONE CALL NUMBER 811.

HDD NOTES:

1. MINIMUM ALLOWABLE COMBINED RADIUS = 600 FEET.
2. MAXIMUM ALLOWABLE PULLBACK FORCE = 168,000 LBS. PER PULL.
3. THEORETICAL PULLBACK FORCE REQUIRED = 5,800 LBS.
4. MAXIMUM ROTATIONAL TORQUE = 0 IN-LBS PER PULL.
5. MAXIMUM PIPE SUPPORT SPACING: HYDROTEST= 40 FEET; STRINGING/PULLBACK = 40 FEET;
6. PRE-PULLBACK HYDROTESTING SHALL BE IN ACCORDANCE WITH THE PROJECT-SPECIFIC HYDROTEST PLAN.
7. CONTRACTOR SHALL VERIFY THAT SOIL BORE HOLES HAVE BEEN ADEQUATELY SEALED TO PREVENT LOSS OF DRILLING FLUID.
8. SOIL BORE INFORMATION PROVIDED BY:
 CARDNO ATC
 11121 CANAL ROAD
 CINCINNATI, OH 45241
 PHONE: 513-771-2112
 CONTACT: JOHN KERR, john.kerr@cardno.com
9. REFERENCE MARATHON STANDARD MPL-CON-00448-PRS FOR DIRECTIONALLY DRILLED CROSSING INSTALLATION REQUIREMENTS.

CONSTRUCTION NOTES:

1. ALL WORK PERFORMED BY CONTRACTOR/SUBCONTRACTOR, INCLUDING TASKS THAT AFFECT THE OPERATIONS OR INTEGRITY OF THE PIPELINE (COVERED TASKS) PER THE DEFINITIONS SET FORTH IN DOT REGULATIONS 49 CFR PART 195 (OPERATOR QUALIFICATIONS REQUIREMENTS), MUST BE PERFORMED OR SUPERVISED BY QUALIFIED INDIVIDUALS AS DEFINED IN SUCH OO REQUIREMENTS. CONTRACTOR AGREES TO FURNISH COMPANY REPRESENTATIVE WITH ALL OO DOCUMENTATION PRIOR TO START OF WORK.
2. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH ALL COMPANY STANDARDS AND SHALL CONFORM TO ANSI B31.4 LATEST EDITION.
3. THE EXCAVATIONS FOR THIS PROJECT SHALL BE CARRIED OUT IN ACCORDANCE WITH O.S.H.A. REGULATIONS. PROVISIONS FOR WORKER PROTECTION WITHIN EXCAVATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR TO EXCAVATE AND RESTORE DISTURBED AREAS PER MPL-CON-00036-PRS TO ORIGINAL CONDITIONS, INCLUDING TOPSOIL CONSERVATION, DOUBLE DITCHING PROVISIONS, ETC. SEE SCOPE OF WORK AND SWPPP FOR PROJECT-SPECIFIC REQUIREMENTS.
5. REMOVAL, RELOCATION, OR REPAIR OF FENCING SHALL BE PERFORMED BY CONTRACTOR.
6. ALL PRODUCT HYDROTEST TO BE IN ACCORDANCE WITH PROJECT SPECIFIC HYDROTEST PLAN EXCUTED PER MPLCON021.
7. GIRTH WELD COATING SHALL BE PER MPL-CON-00042-SPE, HOWEVER HEAT SHRINK SLEEVES ARE PROHIBITED.
8. THE EXISTING PIPELINE WILL BE MARKED BY COMPANY. VEHICLE AND EQUIPMENT CROSSINGS OF THE PIPELINE SHALL BE KEPT TO A MINIMUM AND SHALL ONLY BE IN THE DESIGNATED AREAS(S).
9. MINIMUM DEPTH OF PIPE COVER IS 4 FEET, UNLESS OTHERWISE NOTED.
10. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION.
11. CONTRACTOR TO MAKE 1 TO 1 1/2" FIELD BENDS WITH ONE PIPE DIAMETER MINIMUM SPACING BETWEEN BENDS AS REQUIRED FOR FINAL ALIGNMENT. PER MPL-CON-0014-SPE, FIELD BENDS SHALL BE COMPLETED FOR ALL PIPE BENDS LESS THAN 30' UNLESS OTHERWISE NOTED.

CONSTRUCTION NOTES CONT.:

13. CONTRACTOR TO EXPOSE EXISTING LINE(S) AS REQUIRED FOR TIE-IN OR FIELD BEND(S) FOR FINAL ALIGNMENT.
14. CONTRACTOR TO REMOVE AND PROPERLY DISPOSE OF THE CARRIER/CASING PIPE THAT IS RECLAIMED BY THIS PROJECT AS SPECIFIED. BILL OF SALE WILL NEED TO BE EXECUTED BETWEEN COMPANY AND CONTRACTOR FOR ALL PIPE REMOVED AND DISPOSED OF.
15. CONTRACTOR TO REMOVE PIPE BETWEEN PROPOSED TIE-INS, CUT / CAP AND FILL ANY PIPE TO BE ABANDONED IN PLACE WITH APPROVED FILL (60 PSI MIN TEST AT 28 DAYS) AS SPECIFIED.
16. CONTRACTOR TO BACK BEVEL PIPE FOR BUTT WELDING PER MPLCON016, AS NECESSARY.
17. CONTRACTOR TO PERFORM ALL PIPELINE CLEANING, DEWATERING, GAUGING, AND DRYING PER MPLCON011.
18. CONTRACTOR TO CUT, PALLETIZE, AND SHIP A 2 FOOT SECTION OF EXISTING CARRIER PIPE FROM EACH TIE-IN POINT TO TEST LAB, AS DIRECTED BY A COMPANY REPRESENTATIVE.
19. CONTRACTOR TO TRANSPORT ALL EXCESS NEW PIPE (FULL JOINTS ONLY) AND MTRS TO COMPANY DESIGNATED FACILITY.
20. CONTRACTOR TO DISPOSE OF ALL NEW AND USED PIPE SCRAPS AT AN APPROVED NON-COMPANY FACILITY.
21. AVAILABLE PIPELINE DATA INDICATES EXISTING PIPE MAY BE COATED WITH COAL TAR COATING. CONTRACTOR TO FIELD VERIFY COATING ON EXISTING PIPE AND INSTALL CORRESPONDING TIE-IN GIRTH WELD COATING PER MPL-CON-00042-SPE. CONTRACTOR SHALL ASSUME ALL COAL TAR COATING TO BE ASBESTOS-CONTAINING AND TREAT PER COMPANY STANDARD TMHES414. CONTRACTOR MUST BE CERTIFIED TO REMOVE ASBESTOS COATING. COATING SAMPLES SHOULD BE KEPT & SENT IN FOR TESTING FOR INCLUSION IN MPL DATABASE.
22. CONTRACTOR SHALL MAINTAIN, ON SITE, A SPILL CLEAN UP KIT IN THE EVENT OF A CONTAMINANT RELEASE FROM THE EQUIPMENT.
23. CONTRACTOR TO FURNISH WELDER NAMES FOR VERIFICATION OF QUALIFICATIONS BY COMPANY. OR WELDERS SHALL BE TESTED, PRIOR TO CONSTRUCTION. WELDER TESTING/QUALIFICATIONS SHALL BE PER COMPANY STANDARD MPL-CON-032.
24. CONTRACTOR SHALL INSTALL TEMPORARY STORM WATER STRUCTURES THAT CONFORM TO MPL BEST MANAGEMENT PRACTICES (BMP). CONTRACTOR SHALL AS SPECIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).



**MARATHON PIPELINE LLC
 HEFI 8" PRODUCTS
 I-75/LIMA AVENUE REROUTE
 PROJECT ID: 78117**

*I-75/LIMA AVENUE REROUTE
 PIPE REPLACEMENT
 HANCOCK COUNTY, OHIO
 SEC. 23,24,25, T1N, R10E*

TABLE OF CONTENTS

SHEET NO.	DESCRIPTION
HEFIC002	COVER SHEET
HEFIM003	PLAN AND PROFILE
HEFIM004	PLAN AND PROFILE
HEFIM005	PLAN AND PROFILE
HEFIM006	PLAN AND PROFILE
HEFIC003	FINDLAY-NATIONAL JUNCTION 6" PIPE REMOVAL
HEFIC004	HEATH-FINDLAY 8" LIMA AVENUE PIPE REMOVAL
HEFIM007	BILL OF MATERIALS
HEFIM008	BILL OF MATERIALS

SURVEYING PARAMETERS

This project used information supplied by Ohio Department of Transportation, District 1 office and is based on ODOT project HAN-75-14.39 (PID 87005). USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS from HAN-75-14.39 (PID 87005) FOR ALL SURVEYING:

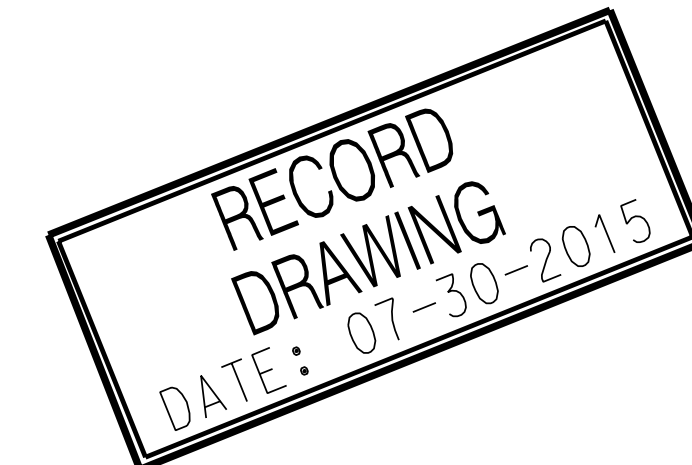
VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
 GEOID: Geoid12A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011: EPOCH 2010)
 ELLIPSOID: Geodetic Reference System 1980
 MAP PROJECTION: Lambert Conic Conformal
 COORDINATE SYSTEM: Ohio State Plane, North Zone (FIPS 3401)
 COMBINED SCALE FACTOR: 1.00009818

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.



GENERAL NOTES

APPROVER DATE

DCNR/CDFR DATE

REVISIONS

NO.

HEATH - FINDLAY 8" PRODUCTS LINE

I-75/LIMA AVENUE REROUTE
 COVER SHEET

HANCOCK COUNTY, OHIO

SCALE DATE

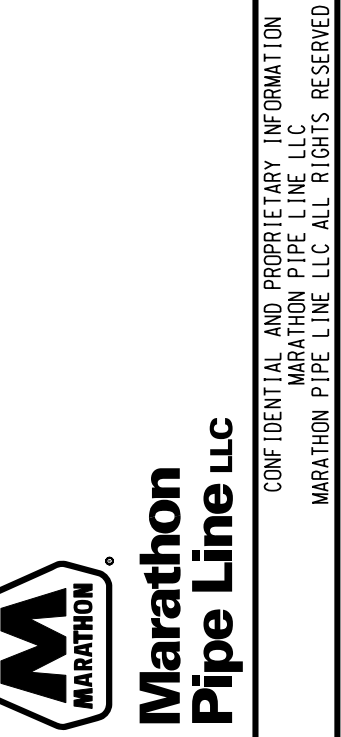
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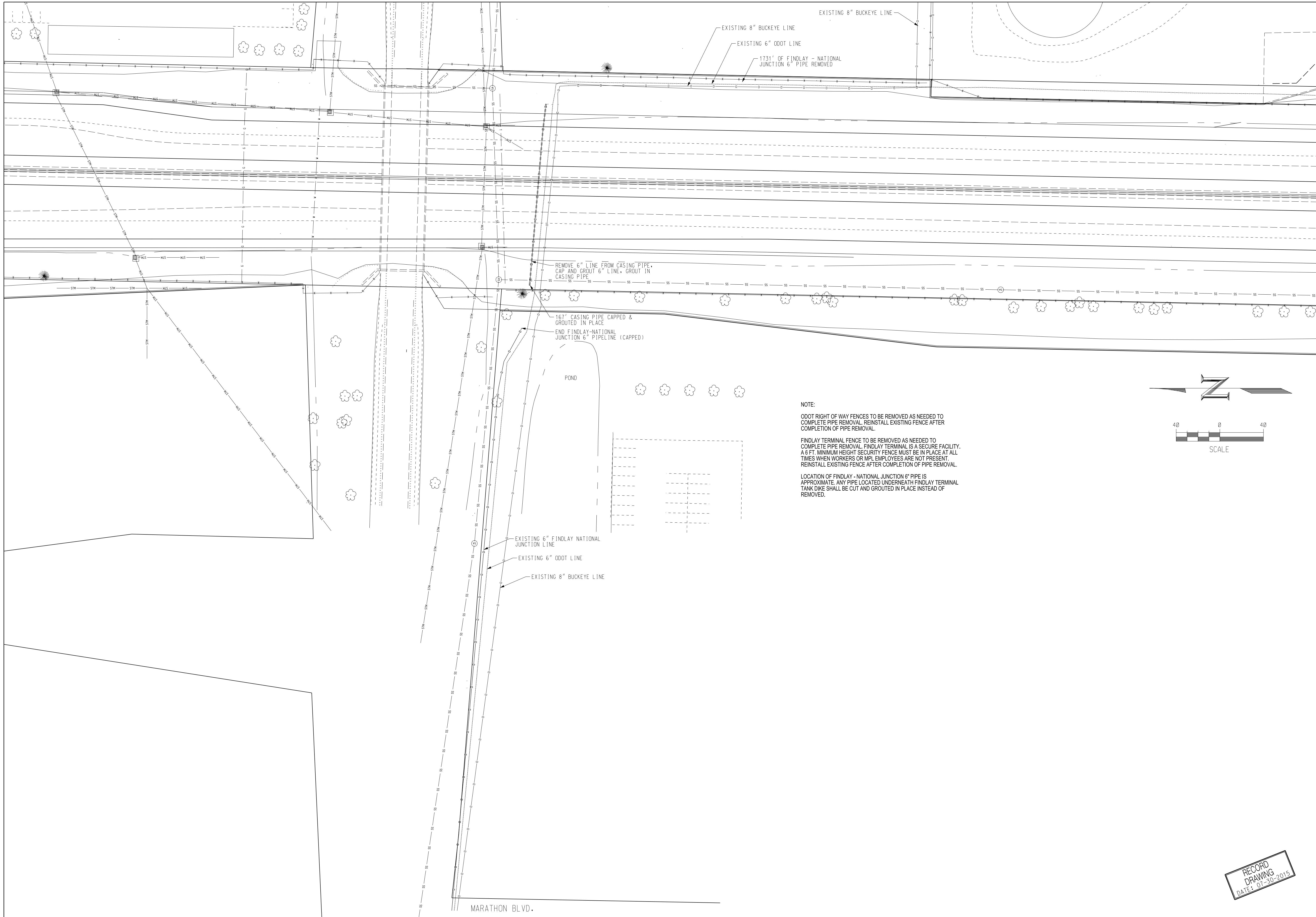
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FILE NO.

AFE/ESR 78117

DRAWING NO. HEFIC002



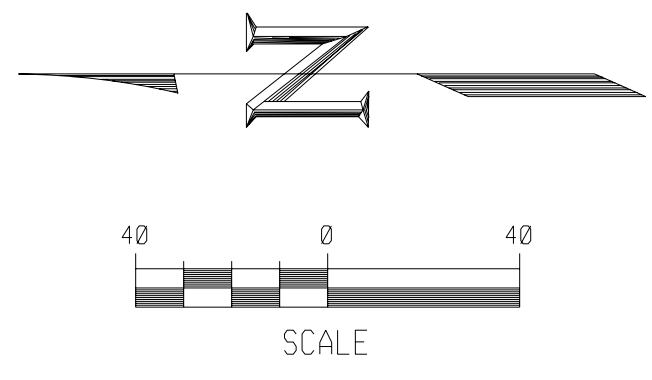


NOTE:

ODOT RIGHT OF WAY FENCES TO BE REMOVED AS NEEDED TO COMPLETE PIPE REMOVAL. REINSTALL EXISTING FENCE AFTER COMPLETION OF PIPE REMOVAL.

FINDLAY TERMINAL FENCE TO BE REMOVED AS NEEDED TO COMPLETE PIPE REMOVAL. FINDLAY TERMINAL IS A SECURE FACILITY. A 6 FT. MINIMUM HEIGHT SECURITY FENCE MUST BE IN PLACE AT ALL TIMES WHEN WORKERS OR MPL EMPLOYEES ARE NOT PRESENT. REINSTALL EXISTING FENCE AFTER COMPLETION OF PIPE REMOVAL.

LOCATION OF FINDLAY - NATIONAL JUNCTION 6" PIPE IS APPROXIMATE. ANY PIPE LOCATED UNDERNEATH FINDLAY TERMINAL TANK DIKE SHALL BE CUT AND GROUTED IN PLACE INSTEAD OF REMOVED.



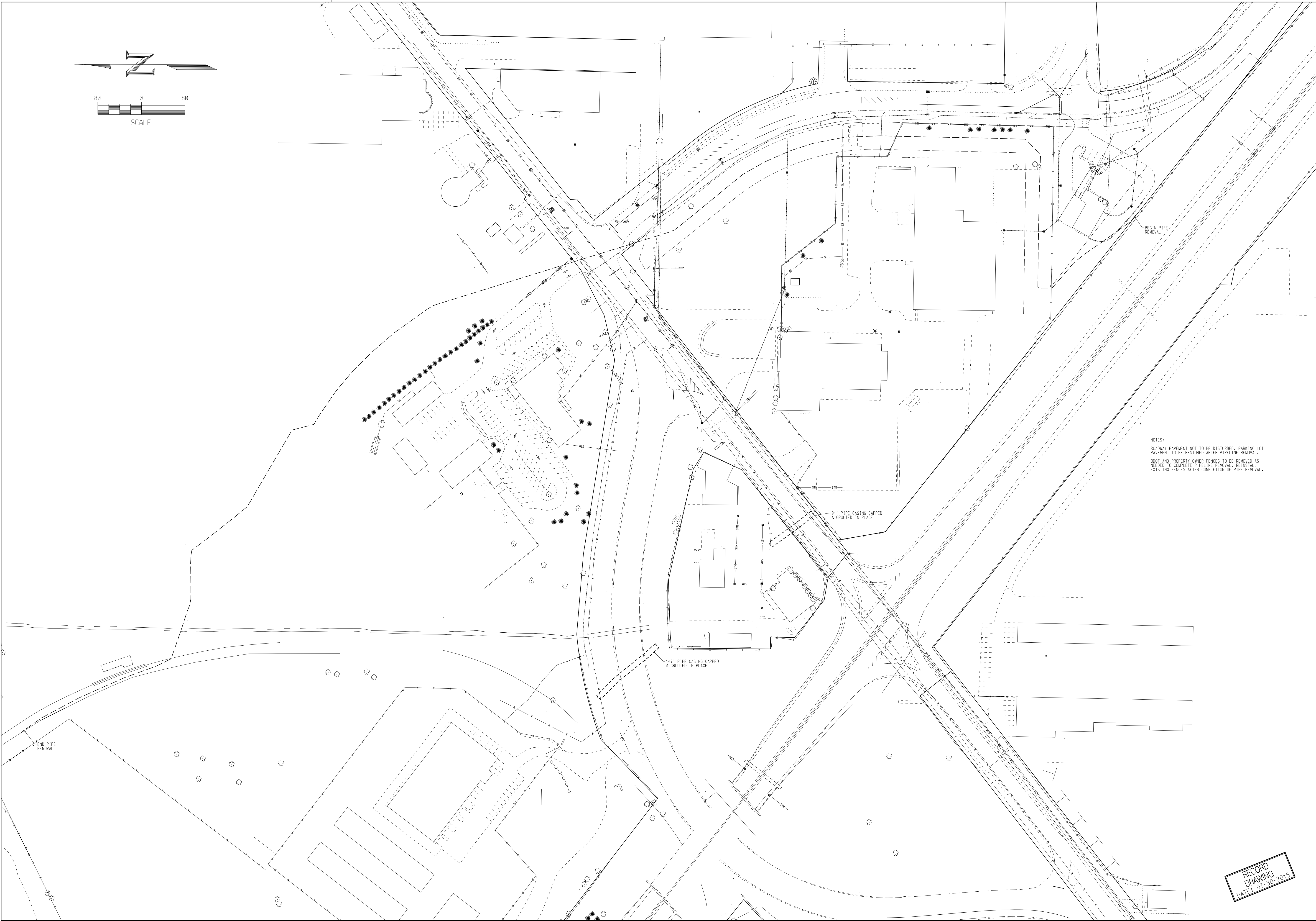
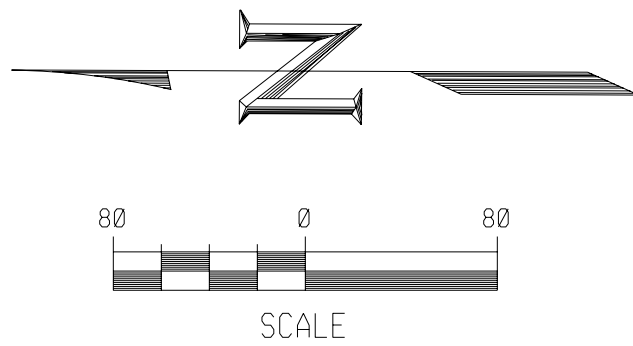
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GENERAL NOTES
DATE
APPROVER
DATE
INDICATED
DATE
NO.

HEFI 8" PRODUCTS
I-75/LIMA AVENUE REROUTE
FINDLAY - NATIONAL JCT. 6"
PIPE REMOVAL
HANCOCK COUNTY, OHIO

SCALE	1" = 40'	DATE
DICNR/ DRFTR	FGI	03-03-15
APRVR	JPF	03-03-15
FILE NO.		
AFE/ESR	78117	
DRAWING NO.	HEFIC003	

**RECORD
DRAWING**
DATE: 07-30-2015



NOTES:
 ROADWAY PAVEMENT NOT TO BE DISTURBED. PARKING LOT PAVEMENT TO BE RESTORED AFTER PIPELINE REMOVAL.
 ODDT AND PROPERTY OWNER FENCES TO BE REMOVED AS NEEDED TO COMPLETE PIPELINE REMOVAL. REINSTALL EXISTING FENCES AFTER COMPLETION OF PIPE REMOVAL.

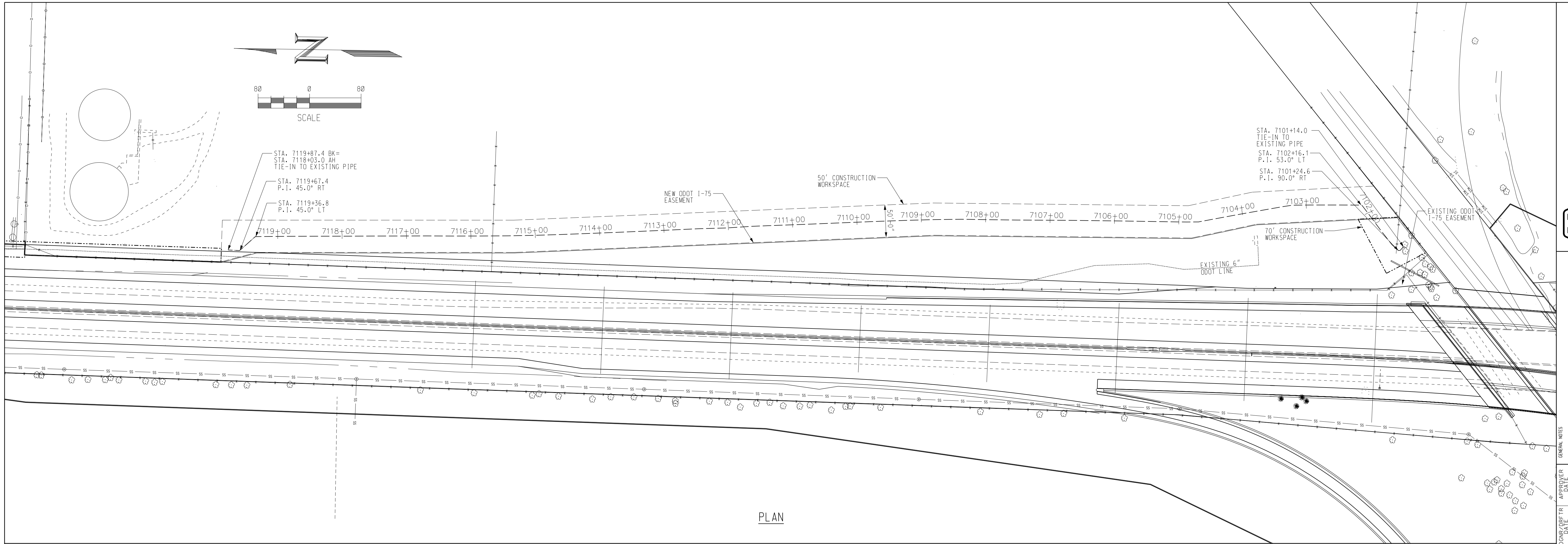
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NO.	REVISIONS	DATE	APPROVER	GENERAL NOTES

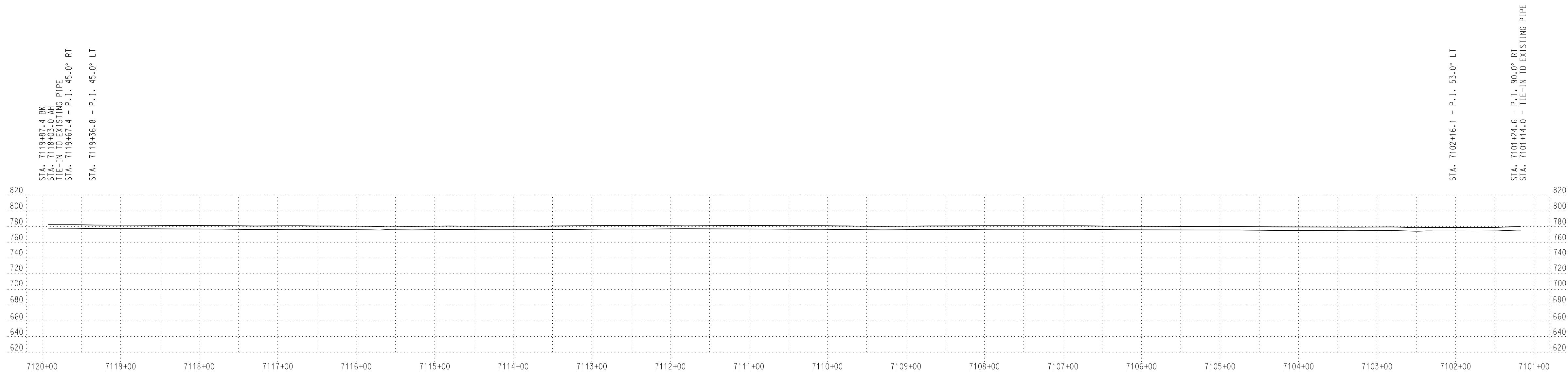
HEATH - FINDLAY 8" PRODUCTS LINE
8" LIMA AVENUE
PIPE REMOVAL
 HANCOCK COUNTY, OHIO

SCALE 1" = 40' DATE
 DGNR/FGI 03-03-15
 DRFTR 03-03-15
 APRVR JPF 03-03-15
 FILE NO.
 AFE/ESR 78117
 DRAWING NO. HEFIC004

RECORD DRAWING
 DATE: 07-30-2015



PLAN



PROFILE
SCALE: 1" = 80'



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NO. DATE

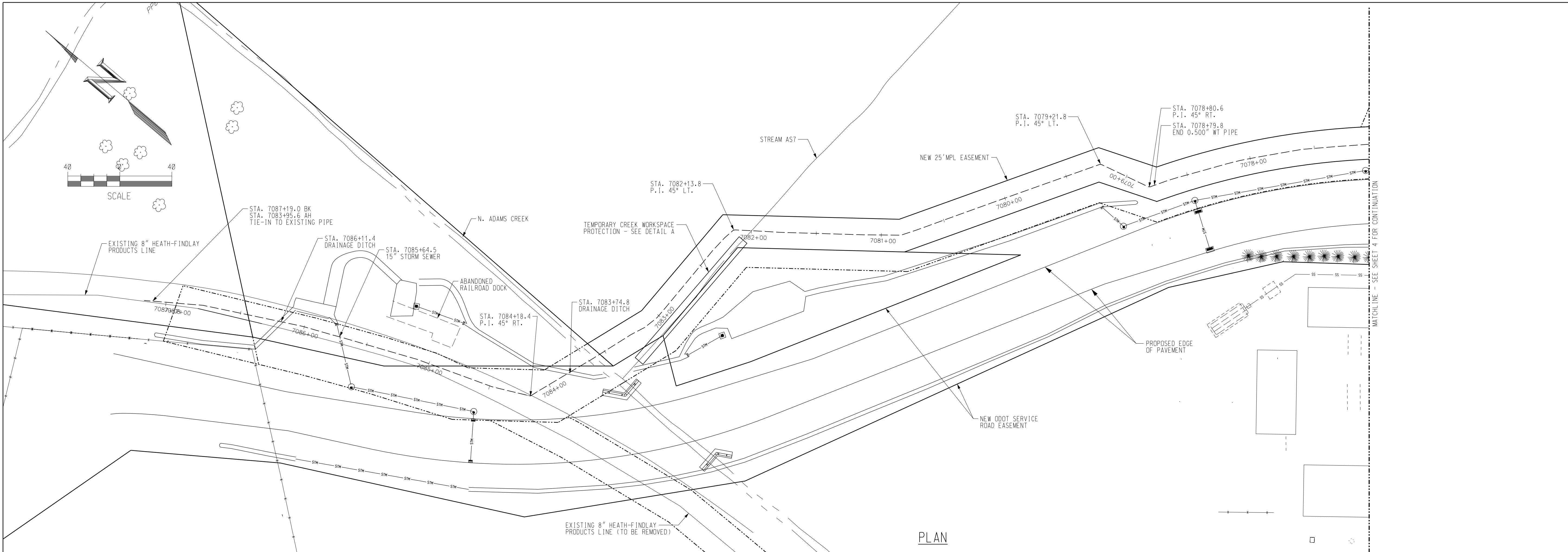
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NO.

HEATH - FINDLAY 8" PRODUCTS LINE
I-75/LIMA AVENUE REROUTE
PLAN & PROFILE
HANCOCK COUNTY, OHIO

SCALE	1" = 80'	DATE	
DICNR/ DRFTR	FG1	03-03-15	
APRVR	JPF	03-03-15	
FILE NO.			
AFE/ESR	78117		
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RECORD
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DATE: 07-30-2015



PLAN



PROFILE
SCALE: 1" = 40'

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NO.	DATE	DESCRIPTION

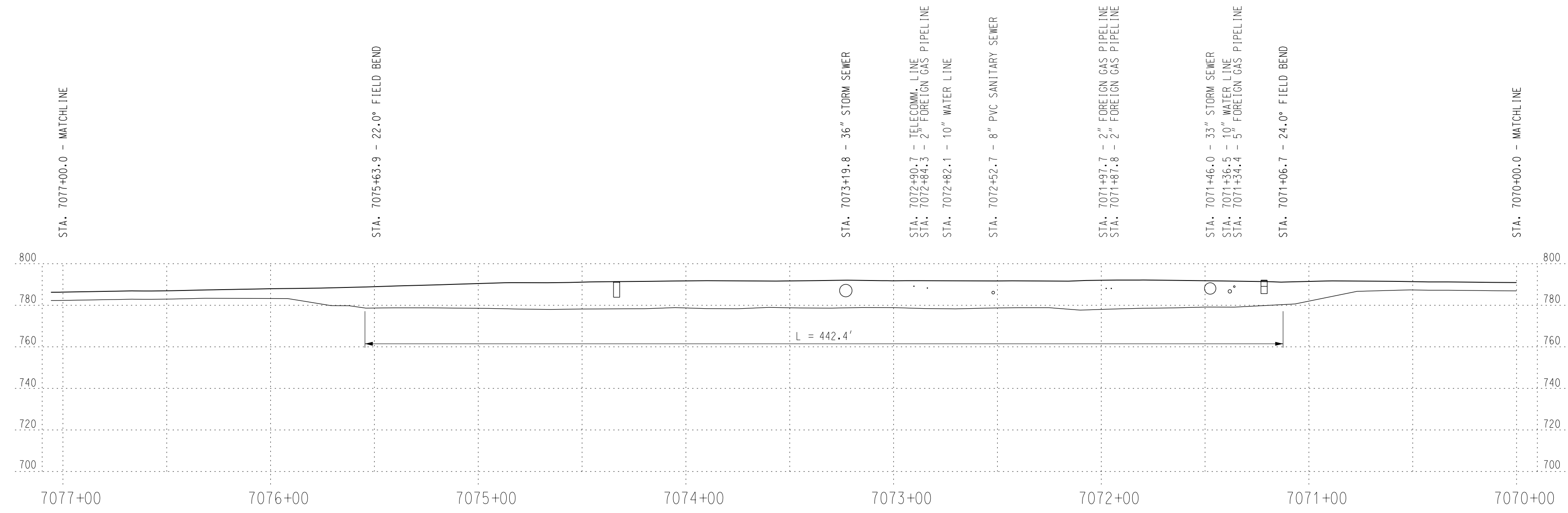
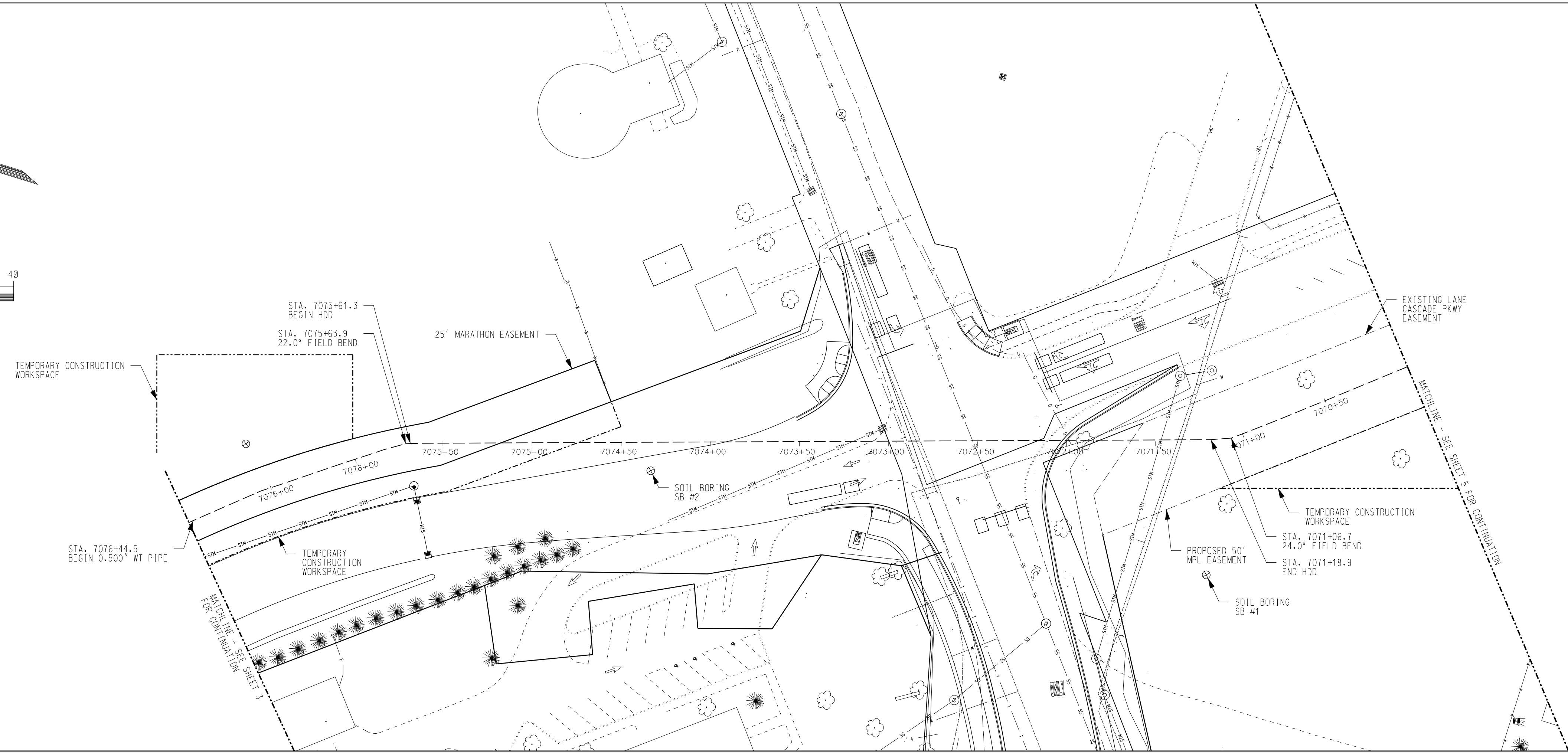
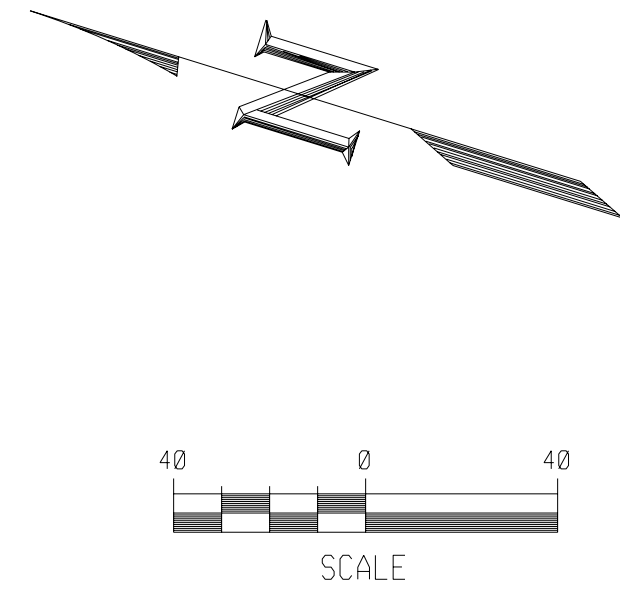
REVISIONS

NO.	DATE	DESCRIPTION

HEATH - FINDLAY 8" PRODUCTS LINE
I-75/LIMA AVENUE REROUTE
PLAN & PROFILE
HANCOCK COUNTY, OHIO

SCALE	1" = 40'	DATE
DGNR/ DRFTR	FGI	03-03-15
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FILE NO.		
AFE/ESR	78117	
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PROFILE
SCALE: 1" = 40'

Marathon Pipe Line LLC

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NO.	REVISIONS	APPROVER	DATE	GENERAL NOTES

HEATH - FINDLAY 8" PRODUCTS LINE

I-75/LIMA AVENUE REROUTE

PLAN & PROFILE

HANCOCK COUNTY, OHIO

SCALE: 1" = 40'

DATE: 03-03-15

DRW/DRF TR: FGI

APRVR: JPF

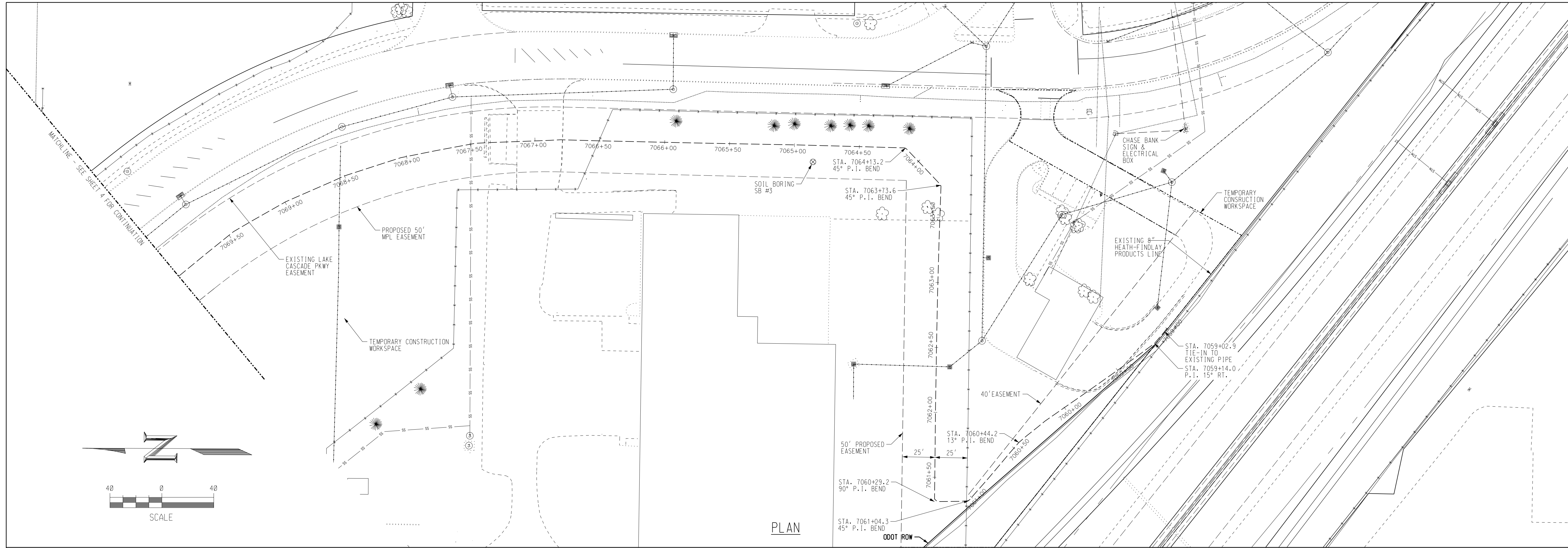
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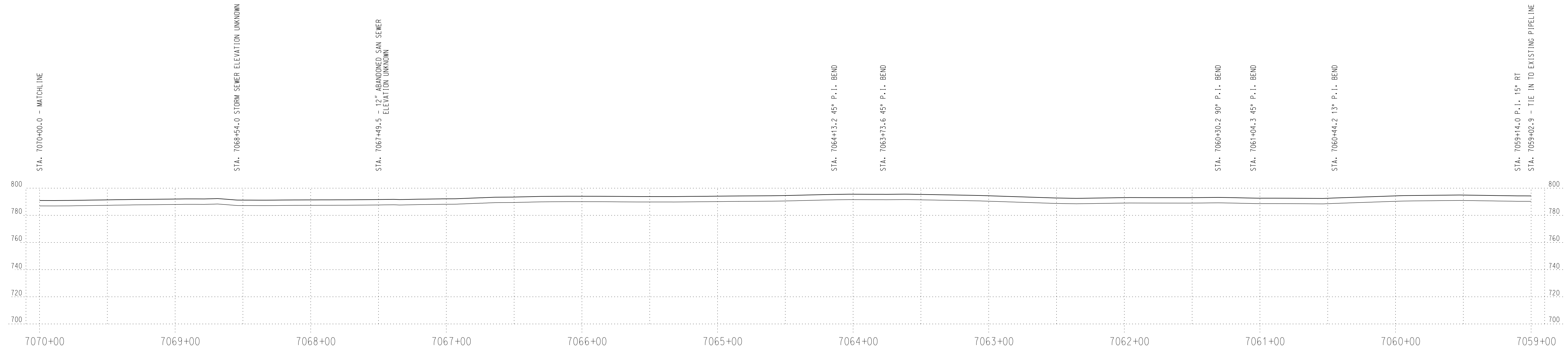
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DATE: 07-30-2015

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PLAN



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Marathon
Pipe Line LLC

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HEATH - FINDLAY 8" PRODUCTS LINE
I-75/LIMA AVENUE REROUTE
PLAN & PROFILE
HANCOCK COUNTY, OHIO

SCALE 1" = 40'

DGNR/DRFTR FGI 03-03-15

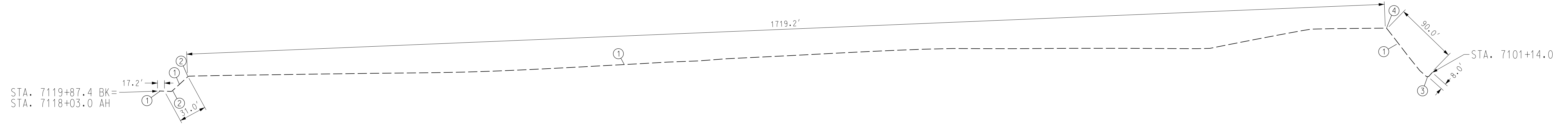
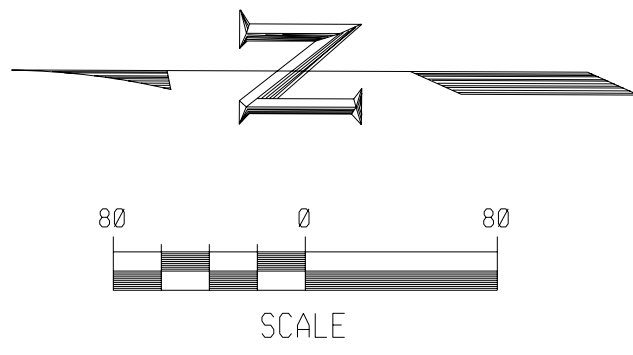
APRVR JPF 03-03-15

FILE NO.

APR/ESR 78117

DRAWING NO. HEFIM006

RECORD DRAWING
DATE: 07-30-2015



MATERIAL LIST			
NUMBER	QUANTITY	SIZE	DESCRIPTION
1	1865.4	8"	PIPE, 8 NPS (8.625" O.D.), STD (0.322" W.T.), API 5L/PSL-2, X-52 (OR BETTER), DRL PEB 30°, 14 MILS MIN DFT FBE PER MPL_CON00093-SPE
2	2	8"	ELL, WELD, 8 NPS (8.625" O.D.), 45° 3R, SEGMENTABLE, STD (0.322" W.T.), ASME B16.9, ASTM A234 Y-52
3	1	8"	ELL, WELD, 8 NPS (8.625" O.D.), 90° 3R, SEGMENTABLE, STD (0.322" W.T.), ASME B16.9, ASTM A234 Y-52
4	1	8"	ELL, WELD, 8 NPS (8.625" O.D.), 90° 3R, SEGMENTABLE, STD (0.322" W.T.), ASME B16.9, ASTM A234 Y-52, CUT TO 53"

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GENERAL NOTES

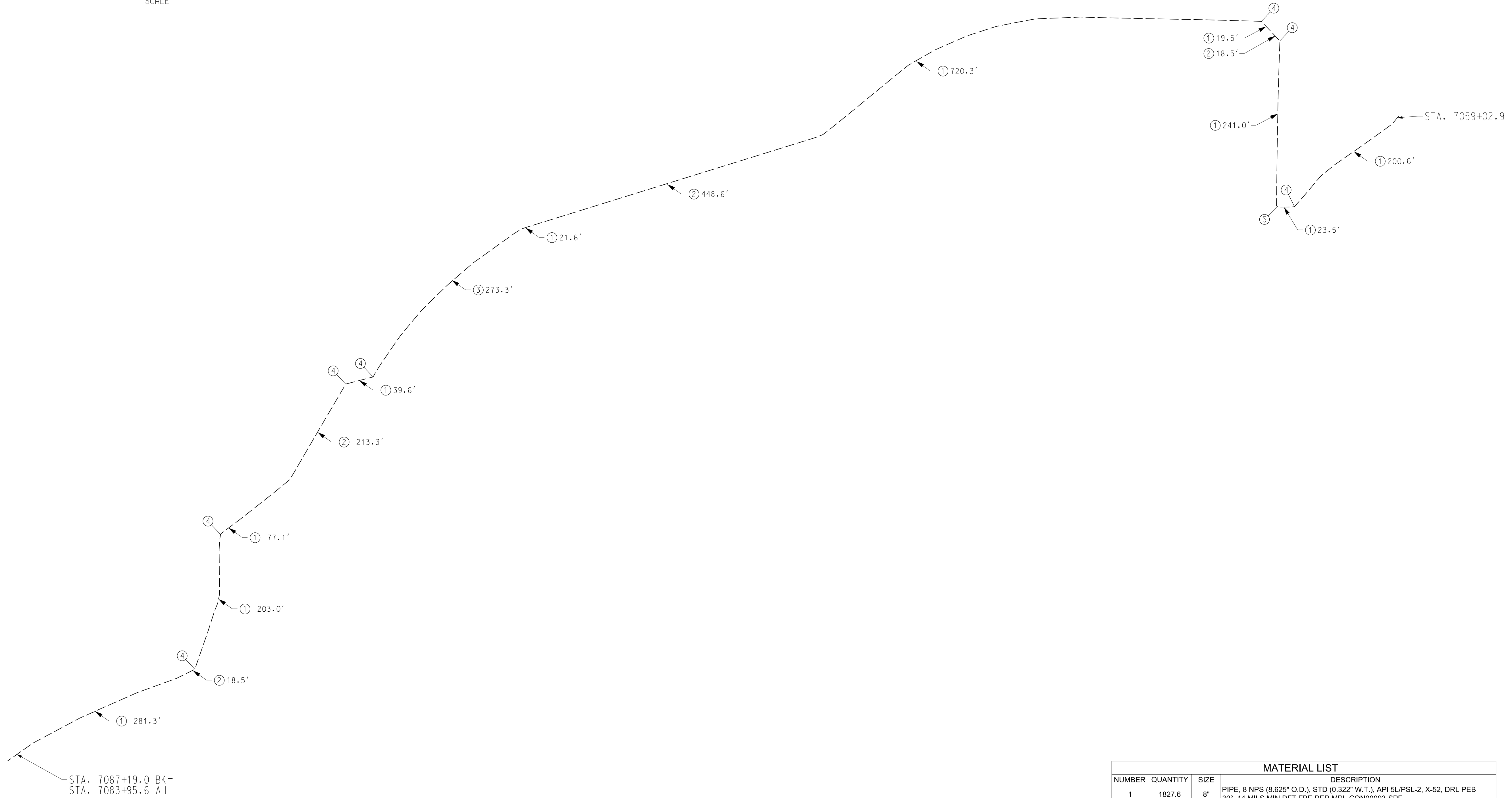
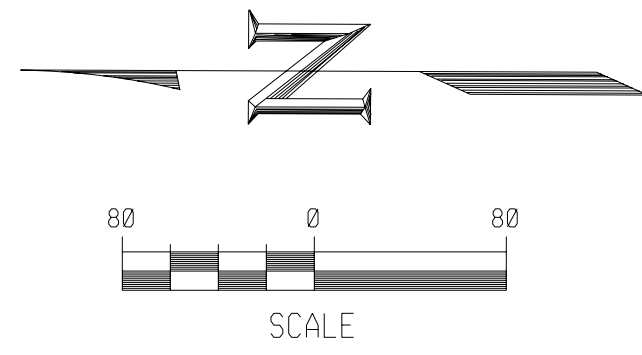
NO.	REVISIONS	DATE	APPROVER

HEATH - FINDLAY 8" PRODUCTS LINE
 8" I-75
 BILL OF MATERIALS
 HANCOCK COUNTY, OHIO

SCALE	1" = 40'	DATE	
DCNR/ DRFTR	FGI		03-03-15
APRVR	JPF		03-03-15
FILE NO.			
AFE/ESR	78117		
DRAWING NO.	HEFIM007		



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MATERIAL LIST			
NUMBER	QUANTITY	SIZE	DESCRIPTION
1	1827.6	8"	PIPE, 8 NPS (8.625" O.D.), STD (0.322" W.T.), API 5L/PSL-2, X-52, DRL PEB 30°, 14 MILS MIN DFT FBE PER MPL-CON00093-SPE
2	698.9	8"	PIPE, 8 NPS (8.625" O.D.), STD (0.322" W.T.), API 5L/PSL-2, X-52, DRL PEB 30°, 14 MILS MIN DFT FBE AND 40 MILS MIN DFT ARO PER MPL-CON00093-SPE
3	273.3	8"	PIPE, 8 NPS (8.625" O.D.), XS (0.500" W.T.), API 5L/PSL-2, X-52, DRL PEB 30°, 14 MILS MIN DFT FBE PER MPL-CON00093-SPE
4	7	8"	ELL, WELD, 8 NPS, 0.322" W.T., 45° 3R, ASME B16.9 MSS SP-75 WPHY-52, SEGMENTABLE
5	1	8"	ELL, WELD, 8 NPS, 0.322" W.T., 90° 3R, ASME B16.9 MSS SP-75 WPHY-52, SEGMENTABLE

RECORD
 DRAWING
 DATE: 07-30-2015

GENERAL NOTES

NO.	REVISIONS	DATE	APPROVER

HEATH - FINDLAY 8" PRODUCTS LINE
8" LIMA AVENUE
BILL OF MATERIALS
 HANCOCK COUNTY, OHIO

SCALE	1" = 80'	DATE	
DICNR/ DRF TR	FGI		03-03-15
APRVR	JPF		03-03-15
FILE NO.			
AFE/ESR	78117		
DRAWING NO.	HEFIM008		



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