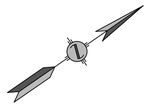
RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

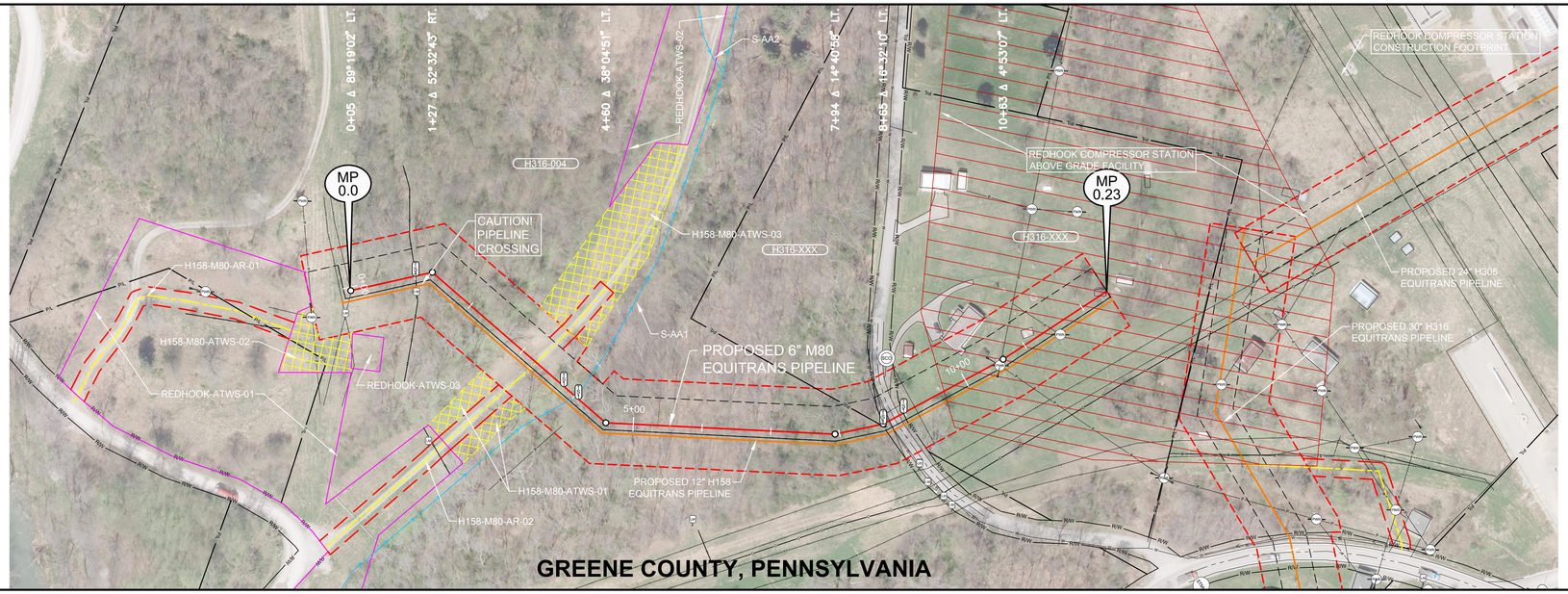
RIGHT-OF-WAY & OWNERSHIP DATA

		0+00	7+62	8+65	8+75	8+97	9+17	12+43
		H316-004 762 LF 795 SLOPE	H316-XXX / H316-004 103 LF 106 SLOPE	BRADEN RUN RD / H316-XXX 10 LF 10 SLOPE	BRADEN RUN RD 32°21'53"RT	H316-XXX / BRADEN RUN RD 20 LF 20 SLOPE	H316-XXX 324 LF 326 SLOPE	
DESIGN	PIPE / COATING	1			2		1	
	SLOPE DISTANCE	885'			80'		314'	
	CLASS LOCATION / HCA	1						
ENVIRONMENTAL	CONSTRUCTION EXCLUSION							
	WETLAND / STREAM	S-AA1 27 LF						
	SEDIMENT BARRIER LEFT							
	SEDIMENT BARRIER RIGHT							



0' 50' 100' 200'

PLAN VIEW



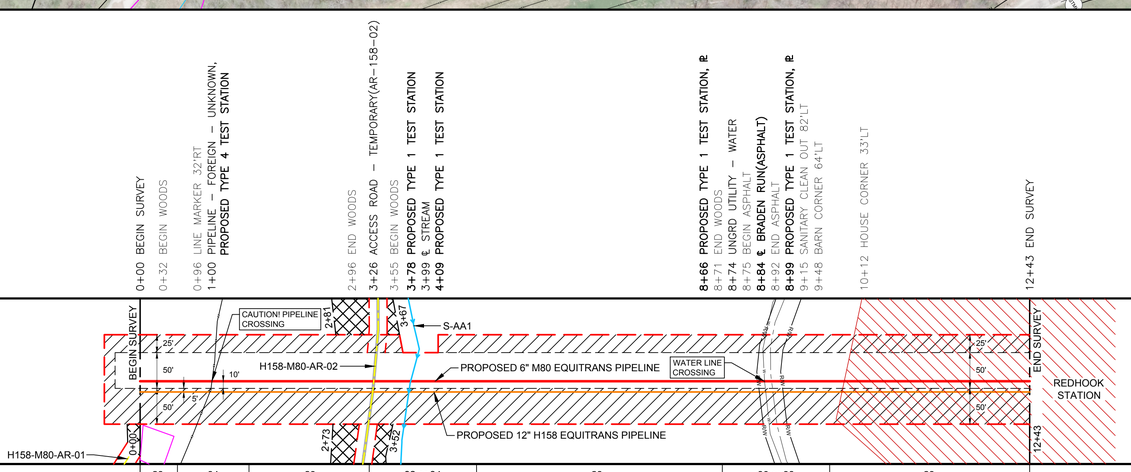
LEGEND

- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- LAYDOWN CONTRACTOR YARD
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM (PROVIDED BY OTHERS)
- DELINEATED WETLAND (PROVIDED BY OTHERS)
- PI SYMBOL
- PROPOSED TEST STATION
- LINE MARKER
- POWER/TELE POLE
- TREE / GUY ANCHOR
- TANK / GAS VALVE
- GAS/OIL/WATER WELL
- GATE POST
- ELEC/GAS/WTR METER
- CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING



WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

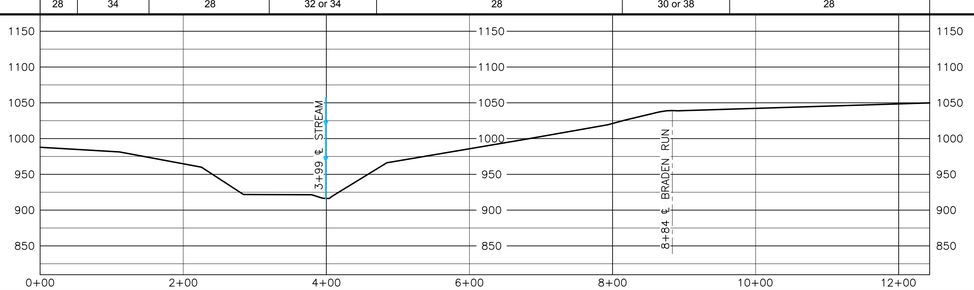
CONSTRUCTION METHOD

28	34	28	32 or 34	28	30 or 38	28

CONSTRUCTION METHOD KEY

27 - 6" M-80 PARALLEL CONSTRUCTION
28 - 12" H-158 PARALLEL CONSTRUCTION
29 - 6" M-80 OPEN CUT ROAD CROSSING
30 - 12" H-158 OPEN CUT ROAD CROSSING
31 - 6" M-80 OPEN CUT - DAM AND PUMP
32 - 12" H-158 OPEN CUT - DAM AND PUMP
33 - 6" M-80 OPEN CUT - FLUME
34 - 12" H-158 OPEN CUT - FLUME
33 - 6" M-80 PIPELINE CROSSING
34 - 12" H-158 PIPELINE CROSSING
35 -
36 -
37 - 6" M-80 BORED ROAD CROSSING
38 - 12" H-158 BORED ROAD CROSSING
39 - 24" H-305 OPEN CUT PIPELINE CROSSING
40 - 24" H-305 PARALLEL CONSTRUCTION

PROFILE



ISSUED TO FERC

HOLLAND ENGINEERING

220 Hoover Boulevard, Suite 2 | 26555 Evergreen Rd, Suite 430
Holland, Michigan 49423-3790 | Southfield, Michigan 48076
t 616.546.6681 f 616.546.6682 | t 248.827.4373 f 248.827.7049
www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC

AERIAL PHOTOGRAPHY DATE: UNKNOWN

MATERIAL SUMMARY

MK NO.	QTY	DESCRIPTION
1	1199'	6.625"O.D. X 0.280"W.T., X42, FUSION BOND EPOXY
2	80'	6.625"O.D. X 0.280"W.T., X42, FBE & ARO
-	-	SEDIMENT BARRIER
-	4	TYPE 1 TEST STATION - PIPELINE
-	1	TYPE 4 TEST STATION - FOREIGN CROSSING

APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	-	-	-	-	-	-

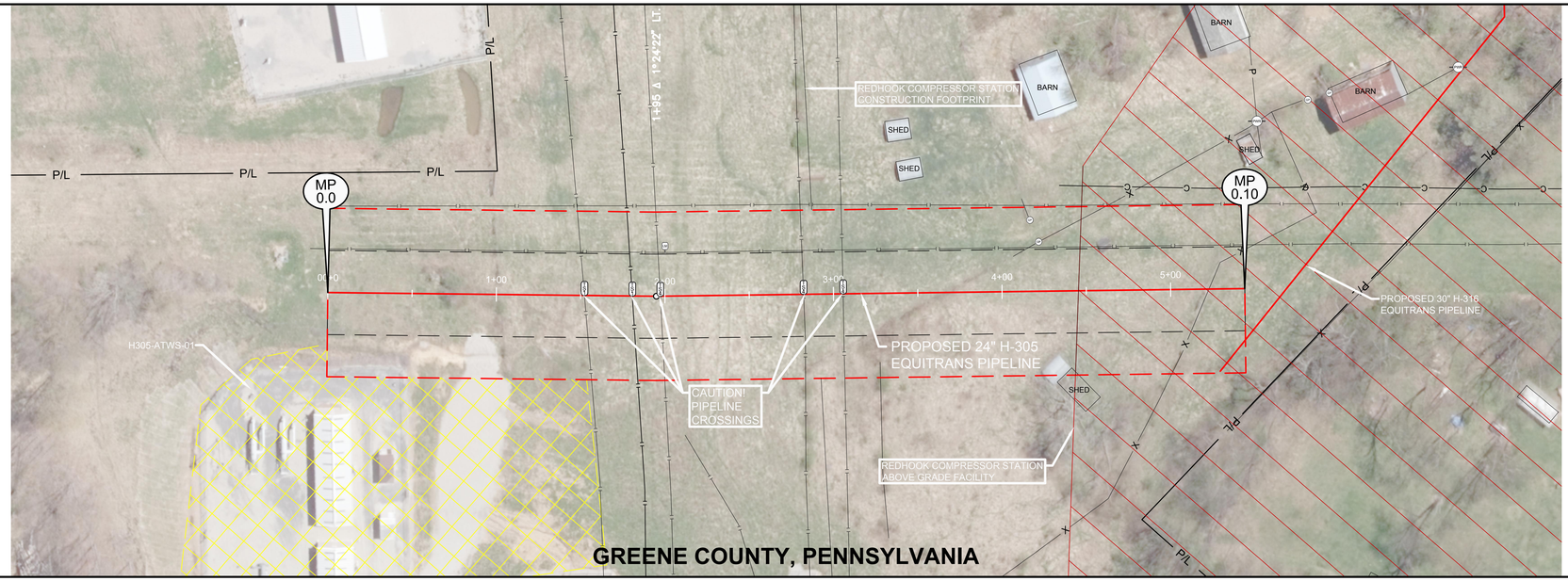
EQUITRANS

PIPELINE ALIGNMENT
EQUITRANS EXPANSION PROJECT - M80 LINE
FRANKLIN TWP, GREENE CO., PA.
STA. 0+00 TO STA. 12+33

HORZ. SCALE: 1" = 100'	
DRAWN BY: HEI(JDB)	8/31/2015
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-GRPA-M80-01	
SHEET 1 OF 1	REV. 0
DATE OF PLOT: 10/23/2015 9:38 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

		0+00	H316-XXX 544 LF 552 SLOPE	5+44
DESIGN	PIPE / COATING	0+00	1	5+44
	SLOPE DISTANCE		552'	
	CLASS LOCATION / HCA		1	
ENVIRONMENTAL	CONSTRUCTION EXCLUSION			
	WETLAND / STREAM			
	SEDIMENT BARRIER LEFT			
	SEDIMENT BARRIER RIGHT			



0' 20' 40' 80'

PLAN VIEW

LEGEND

- PROPOSED PIPELINE
- 50' TICK MARK
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- LAYDOWN CONTRACTOR YARD
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM (PROVIDED BY OTHERS)
- DELINEATED WETLAND (PROVIDED BY OTHERS)
- PI SYMBOL
- PROPOSED TEST STATION
- LINE MARKER
- POWER/TELE POLE
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- GAS/OIL/WATER WELL
- GATE POST
- ELEC/GAS/WTR METER
- CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

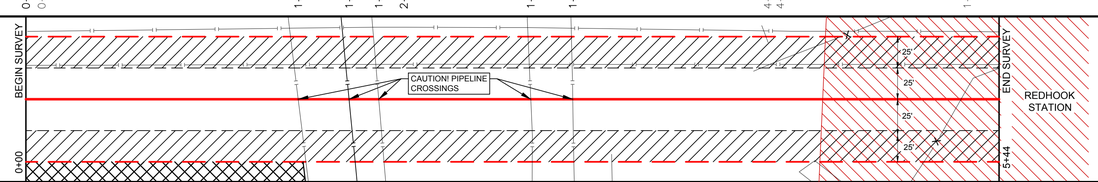
ISSUED TO FERC

HORIZONTAL STATIONING

0+00 BEGIN SURVEY
0+28 BEGIN WOODS
1+52 FOREIGN PIPELINE – TEXAS EASTERN, PROPOSED TYPE 4 TEST STATION
1+81 FOREIGN PIPELINE – UNKNOWN PROPOSED TYPE 4 TEST STATION
1+97 FOREIGN PIPELINE – TEXAS EASTERN 2, PROPOSED TYPE 4 TEST STATION
2+00 LINE MARKER 25'LT
1+52 FOREIGN PIPELINE – TEXAS EASTERN 15, PROPOSED TYPE 4 TEST STATION
1+52 FOREIGN PIPELINE – TEXAS EASTERN 10, PROPOSED TYPE 4 TEST STATION
4+17 GATE POST 42'LT
4+22 GATE POST 29'LT
1+52 FENCE

WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

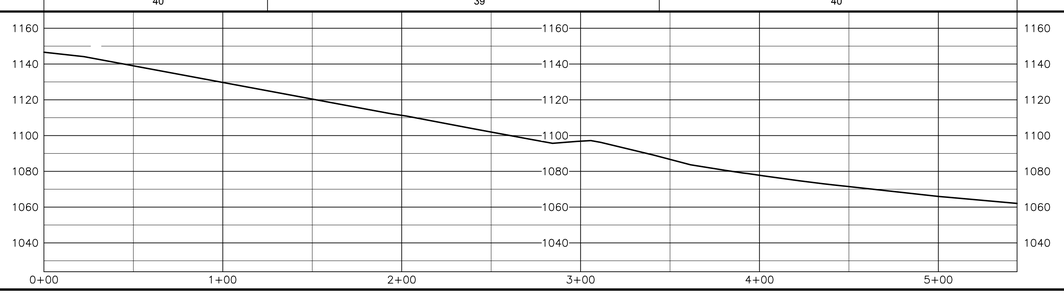


CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY

27 - 6" M-80 PARALLEL CONSTRUCTION
28 - 12" H-158 PARALLEL CONSTRUCTION
29 - 6" M-80 OPEN CUT ROAD CROSSING
30 - 12" H-158 OPEN CUT ROAD CROSSING
31 - 6" M-80 OPEN CUT - DAM AND PUMP
32 - 12" H-158 OPEN CUT - DAM AND PUMP
33 - 6" M-80 OPEN CUT - FLUME
34 - 12" H-158 OPEN CUT - FLUME
33 - 6" M-80 PIPELINE CROSSING
34 - 12" H-158 PIPELINE CROSSING
35 -
36 -
37 - 6" M-80 BORED ROAD CROSSING
38 - 12" H-158 BORED ROAD CROSSING
39 - 24" H-305 OPEN CUT PIPELINE CROSSING
40 - 24" H-305 PARALLEL CONSTRUCTION

PROFILE



HOLLAND ENGINEERING
220 Hoover Boulevard, Suite 2 | 26500 Evergreen Rd, Suite 430
Holland, Michigan 49423-3780 | Southfield, Michigan 48075
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www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	552'	24"O.D. X 0.412"W.T. X70, FUSION BOND EPOXY
		SEDIMENT BARRIER
	5	TYPE 4 TEST STATION - FOREIGN CROSSING

AERIAL PHOTOGRAPHY DATE: UNKNOWN

APPROVED FOR CONSTRUCTION			APPROVED FOR BIDDING			APPROVED FOR FERC		
MK. NO.	DATE		REV.	BY	DATE	REV.	BY	DATE
			-	-	-	0	JSW	10/23/15

EQUITRANS

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H305 LINE
FRANKLIN TWP, GREENE CO., PA.
STA. 0+00 TO STA. 5+44

HORZ. SCALE: 1" = 40'	
DRAWN BY: HEI(JDB)	9/17/2015
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-GRPA-H305-01	
SHEET 1 OF 1	REV. 0
DATE OF PLOT: 10/23/2015 11:26 AM	

RIGHT-OF-WAY & OWNERSHIP DATA

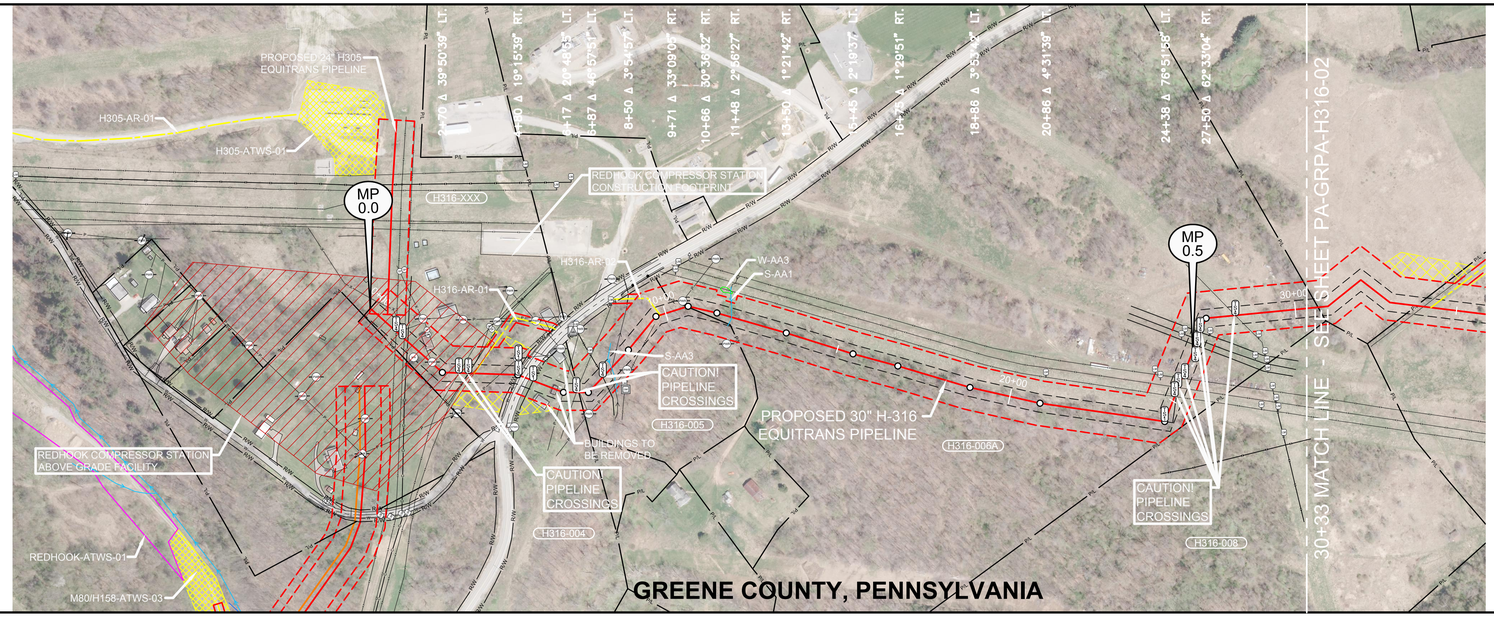
		0+00	2+69	4+53	4+64	5+22	5+44	6+41	6+73	10+10	12+29	30+33
		H316-XXX / H316-XXX	H316-XXX	H316-XXX / STATE HWY 188	STATE HWY 188 (SR1018 HWY 188 / SR1018 SEGMENT 0020) / H316-004	STATE HWY 188 / H316-004	H316-004	H316-005 / H316-004	H316-005	H316-006A / H316-005	H316-006A	
		269 LF 270 SLOPE	184 LF 186 SLOPE	36 LF 36 SLOPE		22 LF 22 SLOPE	97 LF 98 SLOPE	32 LF 32 SLOPE	337 LF 339 SLOPE	219 LF 220 SLOPE	1804 LF 1811 SLOPE	
DESIGN	PIPE / COATING	1		3			1					
DESIGN	SLOPE DISTANCE	467'		80'			2520'					
DESIGN	CLASS LOCATION / HCA	2								1		
ENVIRONMENTAL	CONSTRUCTION EXCLUSION											
ENVIRONMENTAL	WETLAND / STREAM	S-AA3 4 LF				S-AA1 4 LF						
ENVIRONMENTAL	SEDIMENT BARRIER LEFT											
ENVIRONMENTAL	SEDIMENT BARRIER RIGHT											

0' 100' 200' 400'

PLAN VIEW

LEGEND

- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- LAYDOWN CONTRACTOR YARD
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM (PROVIDED BY OTHERS)
- DELINEATED WETLAND (PROVIDED BY OTHERS)
- PI SYMBOL
- PROPOSED TEST STATION
- LINE MARKER
- POWER/TELE POLE
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- GAS/OIL/WATER WELL
- GATE POST
- ELEC/GAS/WTR METER
- CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY



REFERENCE DRAWINGS

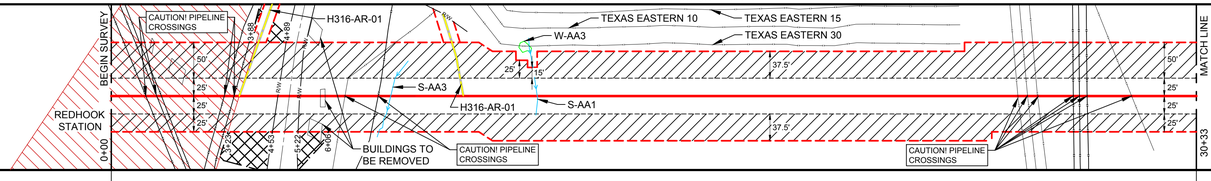
DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING

0+00 BEGIN SURVEY
0+97 PIPELINE – EOT – H148
PROPOSED TYPE 4 TEST STATION
1+14 BUILDING – BARN 59'LT
1+27 PIPELINE – EOT – H136
PROPOSED TYPE 4 TEST STATION
1+29 POWER POLE 76'LT
1+40 UNGRD UTILITY – CATHODIC PROTECTION
1+50 R
1+59 WELL – WATER 22'RT
1+98 BUILDING – BARN 161'LT
2+17 BEGIN WOODS
2+29 POWER POLE 3'LT
2+16 PIPELINE – EOT – H138
PROPOSED TYPE 4 TEST STATION
3+17 END WOODS
3+42 FENCE – EOT – GSF360
3+43 PROPOSED TYPE 4 TEST STATION
9+84 ACCESS RD – TEMPORARY(H316-AR-01)
3+71 BEGIN WOODS
3+99 END WOODS
4+11 OHP LINE
4+63 BEGIN WOODS
4+76 RIGHT-OF-WAY, R, END WOODS,
PROPOSED TYPE 4 TEST STATION
4+79 PIPELINE – EOT – H137
4+83 UNGRD UTILITY – WATER SIGN
PROPOSED TYPE 4 TEST STATION
4+00 BEGIN ASPHALT
5+04 ℄ STATE HWY 188(JEFFERSON RD)
5+27 RIGHT-OF-WAY, R,
PROPOSED TYPE 1 TEST STATION
5+41 VALVE – WATER 77'LT
5+45 BUILDING – BARN 31'RT
5+79 BUILDING – HOUSE 70'LT
5+85 BUILDING – BARN
5+90 BUILDING – BARN 39'RT
6+08 BUILDING – BARN
6+16 OHP LINE
6+53 PIPELINE – FOREIGN – DOMINION
PROPOSED TYPE 4 TEST STATION
6+60 R
6+64 OHP LINE
6+79 BEGIN WOODS
6+87 POWER POLE 60'RT
7+46 PIPELINE – EOT – H135
PROPOSED TYPE 4 TEST STATION
7+63 LINE MARKER 67'RT
7+65 METER – GAS 68'RT
7+83 ℄ STREAM(S–AA3)(EPH)
8+02 METER – GAS 75'RT
9+46 CULVERT 84'LT
9+71 CULVERT 99'LT
9+84 ACCESS RD – TEMPORARY(H316-AR-02)
10+59 PIPELINE – FOREIGN – BEGIN WOODS
10+62 R
11+91 ℄ STREAM(S–AA1)(EPH)
11+98 POWER POLE 76'RT
20+93 LINE MARKER 73'LT
24+38 PROPOSED TYPE 1 TEST STATION
24+52 END WOODS
25+14 PIPELINE – FOREIGN – TEXAS EASTERN 30
PROPOSED TYPE 1 TEST STATION
25+41 PIPELINE – FOREIGN – TEXAS EASTERN 10
PROPOSED TYPE 4 TEST STATION
25+42 LINE MARKER 54'LT
25+45 LINE MARKER 74'LT
25+69 PIPELINE – FOREIGN – TEXAS EASTERN 15
PROPOSED TYPE 4 TEST STATION
26+37 BEGIN WOODS
26+69 PIPELINE – FOREIGN – UNKNOWN
PROPOSED TYPE 4 TEST STATION
26+70 METER – GAS 71'LT
26+86 PIPELINE – FOREIGN – UNKNOWN
PROPOSED TYPE 1 TEST STATION
26+87 LINE MARKER 75'LT
27+08 PIPELINE – FOREIGN – UNKNOWN,
PROPOSED TYPE 4 TEST STATION
27+38 BEGIN WOODS
28+32 LINE MARKER 51'LT
28+32 PIPELINE – FOREIGN – DOMINION
PROPOSED TYPE 4 TEST STATION
28+91 LINE MARKER 73'RT
29+44 LINE MARKER 51'LT
29+96 BEGIN WOODS
30+33 MATCH LINE TOWNSHIP LINE

WORK SPACE

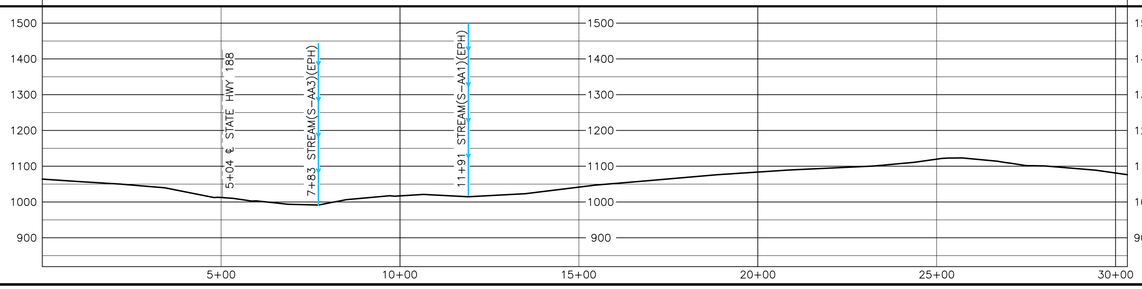
- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)



CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY
1 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
2 - PARALLEL CONSTRUCTION
3 - PARALLEL TO POWER LINES
4 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
5 - SIDE HILL CONSTRUCTION
6 - TWO TONE METHOD
7 - NON-PARALLEL CONSTRUCTION EXTRA DEEP DITCH (5' COVER)
8 - OPEN CUT ROAD CROSSING
9 - BORED ROAD CROSSING
10A - OPEN CUT - DAM AND PUMP
10B - OPEN CUT - FLUME
11 - PIPELINE CROSSING
12 - PIPELINE CROSSING FROM PARALLEL
13 - WETLAND CROSSING
25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE



ISSUED TO FERC

HOLLAND ENGINEERING
220 Hoover Boulevard, Suite 2 | 26555 Evergreen Rd, Suite 430
Holland, Michigan 49423-3780 | Southfield, Michigan 48076
t (616) 494-0400 | f (616) 494-0401 | t (248) 827-7049 | f (248) 827-7049
www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	ISSUED FOR REVIEW

AERIAL PHOTOGRAPHY DATE: UNKNOWN

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	32'/0'	36"O.D. X 0.438"W.T. X70_FUSION BOND EPOXY
3	80'	36"O.D. X 0.962"W.T. X70_FBE & ARO
-	-	SEDIMENT BARRIER
-	3	TYPE 1 TEST STATION - PIPELINE
-	15	TYPE 4 TEST STATION - FOREIGN CROSSING

APPROVED FOR CONSTRUCTION		
REV.	BY	DATE
-	-	-

APPROVED FOR BIDDING		
REV.	BY	DATE
-	-	-

APPROVED FOR FERC		
REV.	BY	DATE
0	JSW	10-25-15

EQUITRANS

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H316 LINE
FRANKLIN TWP, GREENE CO., PA.
STA. 0+00 TO STA. 30+33

HORZ. SCALE: 1" = 200'		
DRAWN BY: HEI(JDB)	7/30/2015	
DRAFTING CK:		
ENGINEERING CK:		
CONSTRUCTION CK:		
ENVIRONMENTAL CK:		
AFE/P.O.NO.:		
HEI PROJECT NO.: 15-03-071		
DRAWING NO.: PA-GRPA-H316-01		
SHEET 1 OF 6	REV. 0	
DATE OF PLOT: 10/23/2015 10:26 AM		

RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

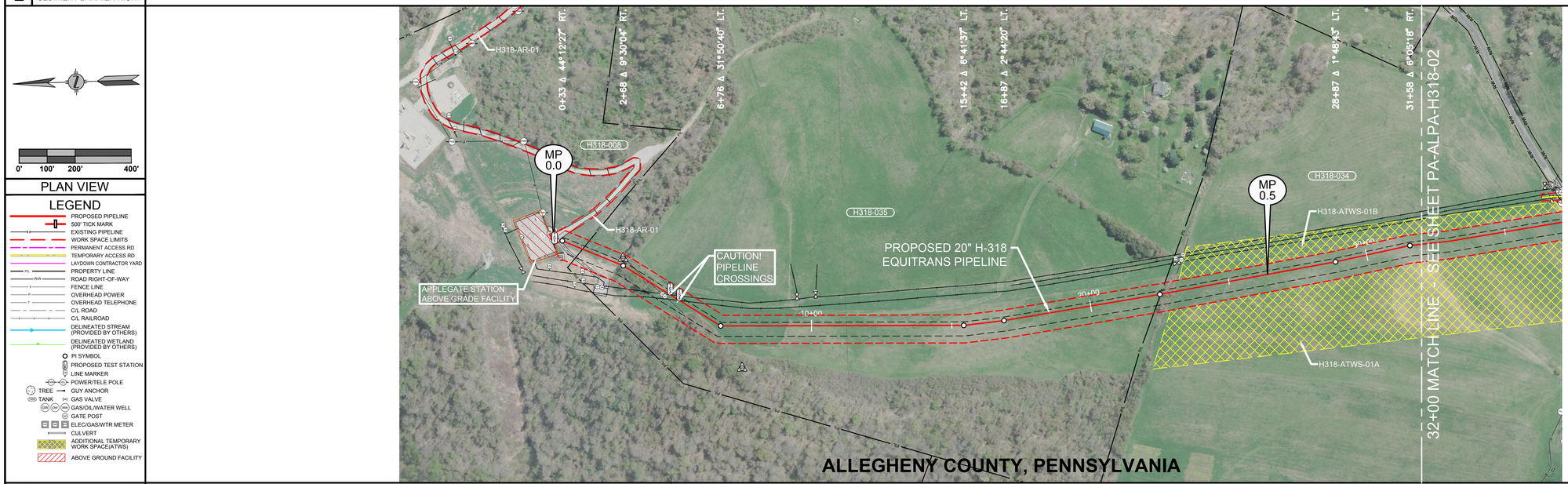
| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

		0+00	H318-008 93 LF 93 SLOPE 0+93	H318-008 / H318-035 30 LF 30 SLOPE 1+23	H318-035 2094 LF 2100 SLOPE 22+17	H318-035 / H318-034 58 LF 58 SLOPE 22+75	H318-034 925 LF 927 SLOPE 32+00
DESIGN	PIPE / COATING	0+00	1				32+00
	SLOPE DISTANCE		3208'				
	CLASS LOCATION / HCA		1				
ENVIRONMENTAL	CONSTRUCTION EXCLUSION						
	WETLAND / STREAM						
	SEDIMENT BARRIER LEFT						
	SEDIMENT BARRIER RIGHT						



0' 100' 200' 400'

PLAN VIEW

LEGEND

- PROPOSED PIPELINE
- 500' TICK MARK
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- LAYDOWN CONTRACTOR YARD
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM (PROVIDED BY OTHERS)
- DELINEATED WETLAND (PROVIDED BY OTHERS)
- PI SYMBOL
- PROPOSED TEST STATION
- LINE MARKER
- POWER/TELE POLE
- GUY ANCHOR
- TREE
- GAS VALVE
- TANK
- GAS/OIL/WATER WELL
- GATE POST
- ELEC/GAS/WTR METER
- CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING

WORK SPACE

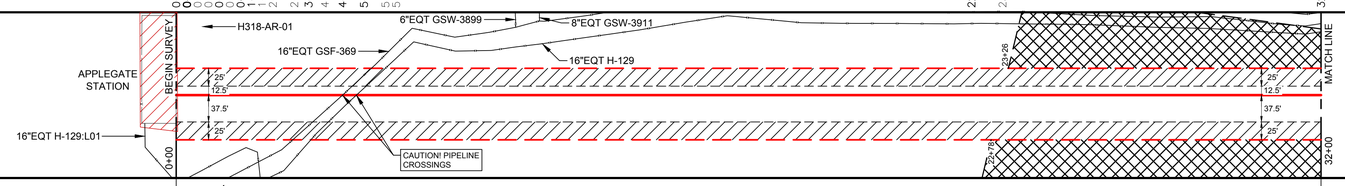
- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

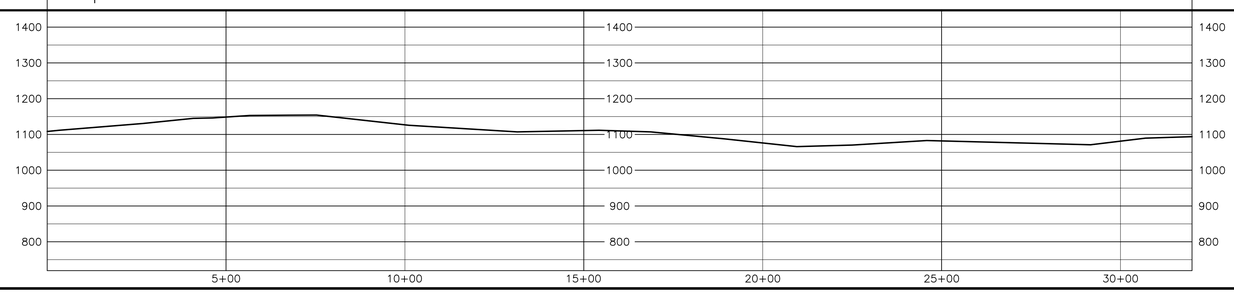
CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY:
14 - NON-PARALLEL CONSTRUCTION WITH TOP SOIL SEGREGATION
15 - WETLAND CONSTRUCTION WORKING AREA NON-SATURATED
16 - SIDE HILL CONSTRUCTION
17 - TWO TONE METHOD
18 - NON-PARALLEL CONSTRUCTION EXTRA DEEP DITCH (5' COVER)
19 - OPEN CUT ROAD CROSSING
20 - BORED ROAD CROSSING
21 - BORED RAIL ROAD CROSSING
22A - OPEN CUT - DAM AND PUMP
22B - OPEN CUT - FLUME
23 - PIPELINE CROSSING
24 - WETLAND CROSSING
25 - TYPICAL DIRECTIONAL DRILL ENTRY SITE PLAN & PROFILE
26 - TYPICAL DIRECTIONAL DRILL EXIT SITE PLAN & PROFILE

PROFILE

0+00 BEGIN SURVEY - FENCE
0+05 PROPOSED TYPE 1 TEST STATION
0+06 PEDESTAL - CATHODIC 5.5'RT
0+19 BEGIN ROCK
0+26 TIED ROAD(ROCK)
0+31 END ROCK
0+41 ACCESS RD - PERMANENT(H318-AR-01)25'LT
1+12 P.I.
1+47 LINE MARKER 87'RT
2+55 PROPERTY CORNER 29'LT
2+71 BEGIN WOODS
3+70 FENCE
4+16 END WOODS
4+65 PIPELINE - EQT - 16"GSF-369(5.3'COVER).
PROPOSED TYPE 4 TEST STATION
5+04 PIPELINE - EQT - 16"H-129(4.9'COVER).
PROPOSED TYPE 4 TEST STATION
5+83 BEGIN WOODS
5+97 END WOODS
22+53 P.I.
23+30 VALVE - GAS 98'LT
32+00 MATCH LINE





ISSUED TO FERC

HOLLAND ENGINEERING
220 Hoover Boulevard, Suite 2 | 26555 Evergreen Rd, Suite 430
Holland, Michigan 49423-3780 | Southfield, Michigan 48076
T 616.546.3780 F 616.546.3781 | T 248.827.7849
www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC

MATERIAL SUMMARY

MK NO.	QTY	DESCRIPTION
1	3208'	20"O.D. X 0.312"W.T. X70, FUSION BOND EPOXY
	-	SEDIMENT BARRIER
	2	TYPE 4 TEST STATION - FOREIGN CROSSING

AERIAL PHOTOGRAPHY DATE: MAY 2015

APPROVED FOR CONSTRUCTION			APPROVED FOR BIDDING			APPROVED FOR FERC		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
						0	JSW	10/23/15

EQUITRANS

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H318 LINE
FORWARD TWP, ALLEGHENY CO., PA.
STA. 0+00 TO STA. 32+00

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(JDB)	8/3/2015
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.: PA-ALPA-H318-01	
SHEET 1 OF 6	REV. 0
DATE OF PLOT: 10/23/2015 10:31 AM	

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

| | | |

RIGHT-OF-WAY & OWNERSHIP DATA

		0+00		0+17		0+47		2+00
		WV-WE-004				WV-WE-004		
		17 LF 17 SLOPE		SHUMAN HILL RD (COUNTY ROUTE 80) 20' ROW		17 LF 17 SLOPE		
DESIGN	PIPE / COATING	0+00	2		0+80	1		2+00
	SLOPE DISTANCE		80'			120'		
	CLASS LOCATION / HCA		1					
ENVIRONMENTAL	CONSTRUCTION EXCLUSION							
	WETLAND / STREAM							
	SEDIMENT BARRIER LEFT							
	SEDIMENT BARRIER RIGHT							

0' 20' 40' 80'

PLAN VIEW

LEGEND

- PROPOSED PIPELINE
- 50' TICK MARK
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- LAYDOWN CONTRACTOR YARD
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM (PROVIDED BY OTHERS)
- DELINEATED WETLAND (PROVIDED BY OTHERS)
- PI SYMBOL
- PROPOSED TEST STATION
- LINE MARKER
- POWER/TELE POLE
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- GAS/OIL/WATER WELL
- GATE POST
- ELEC/GAS/WTR METER
- CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

HORIZONTAL STATIONING

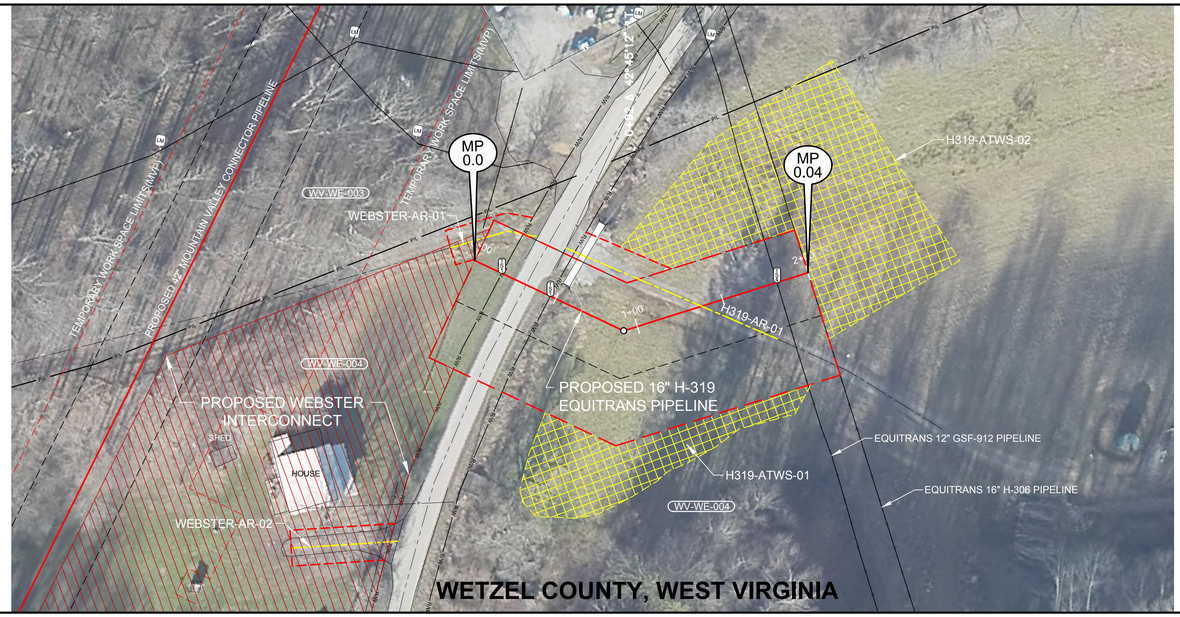
WORK SPACE

- PROPOSED PIPELINE
- EXISTING PIPELINE
- WORK SPACE LIMITS
- PERMANENT EASEMENT
- TEMPORARY WORK SPACE(TWS)
- ADD. TEMPORARY WORK SPACE(ATWS)

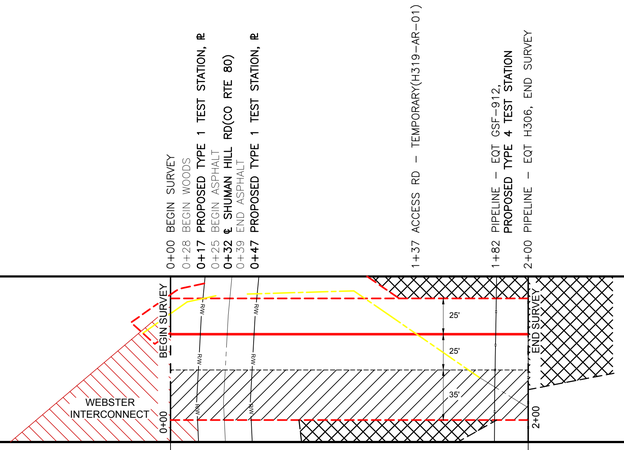
CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY
XX - XX" H-319 TYPICAL CONSTRUCTION
XX - XX H-319 BORE ROAD CROSSING

PROFILE



ISSUED TO FERC



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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10/23/15	ISSUED TO FERC

AERIAL PHOTOGRAPHY DATE: DECEMBER 2014

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	120'	16"O.D. X 0.375"W.T., X65, FUSION BOND EPOXY
2	80'	16"O.D. X 0.375"W.T., X65, FBE & ARO
	-	SEDIMENT BARRIER
	2	TYPE 1 TEST STATION - PIPELINE
	1	TYPE 4 TEST STATION - FOREIGN CROSSING

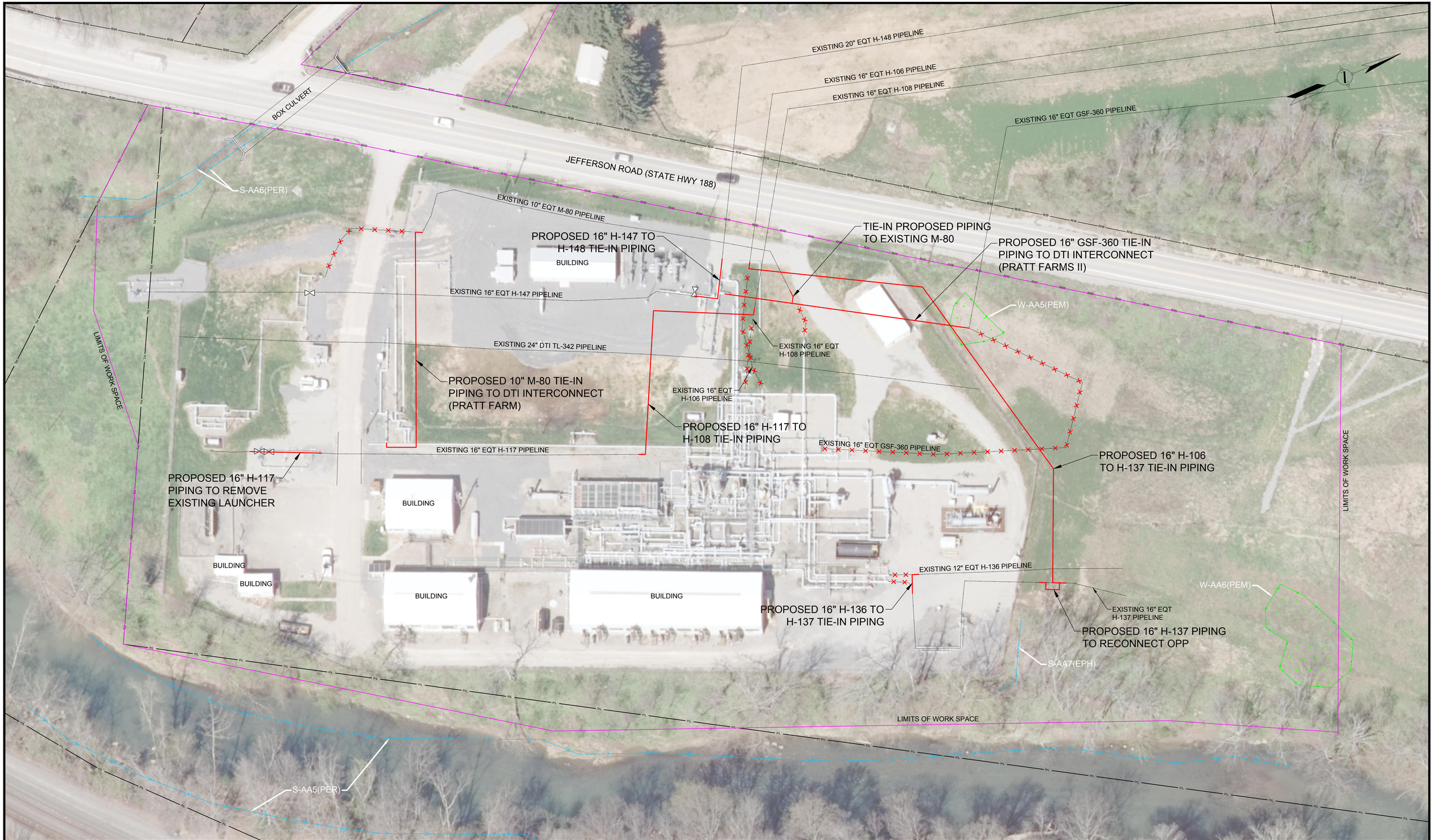
APPROVED FOR CONSTRUCTION			APPROVED FOR BIDDING			APPROVED FOR FERC		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
-	-	-	-	-	-	0	JSW	10/23/15

EQUITRANS

PIPELINE ALIGNMENT

EQUITRANS EXPANSION PROJECT - H319 LINE
GRANT DISTRICT, WETZEL CO., W.V.
STA. 0+00 TO STA. 2+00

HORZ. SCALE: 1" = 40'	
DRAWN BY: HEI(JDB)	9/2/2015
DRAFTING CK:	
ENGINEERING CK:	
CONSTRUCTION CK:	
ENVIRONMENTAL CK:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
DRAWING NO.:	
PA-WEWV-H319-01	
SHEET 1 OF 1	REV. 0
DATE OF PLOT: 10/23/2015 11:30 AM	



LEGEND

- PROPOSED PIPELINE
- EXISTING PIPELINE TO REMAIN
- EXISTING PIPELINE TO BE REMOVED
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- LAYDOWN CONTRACTOR YARD
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM (PROVIDED BY OTHERS)
- DELINEATED WETLAND (PROVIDED BY OTHERS)
- ABOVE GROUND FACILITY
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- LINE MARKER
- POWER/TELE POLE
- TANK
- TREE
- GUY ANCHOR
- GAS VALVE
- GAS/OIL/WATER WELL
- GATE POST
- ELEC/GAS/WTR METER
- CULVERT

PROJECTION: UTM ZONE 17 HORIZONTAL DATUM: NAD 83 US SURVEY FEET VERTICAL DATUM: NAVD88

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
-	....

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

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APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	.	....	../../..	.	....	../../..

HORZ. SCALE: 1" = 30'	
DRAWN BY: HEI(JDB)	09/24/15
DRAFTING CK:	
ENGINEERING CK:	
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
UEI FILE NO.	
DRAWING NO.: SITE-PRATT-01	
SHEET 1 OF 1	REV. 0
DATE OF PLOT: 10/23/15 10:41 AM	

EQUITRANS

PRATT COMPRESSOR STATION MODIFACTIONS
EQUITRANS EXTENSION PROJECT
GREENE COUNTY, PENNSYLVANIA

MATCH LINE - SEE BELOW LEFT

MATCH LINE - SEE ABOVE RIGHT

PROJECTION: UTM ZONE 17
HORIZONTAL DATUM: NAD 83 US SURVEY FEET
VERTICAL DATUM: NAVD88

LEGEND

REFERENCE DRAWINGS	
DRAWING NUMBER	TITLE
-	....

REVISIONS			
REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

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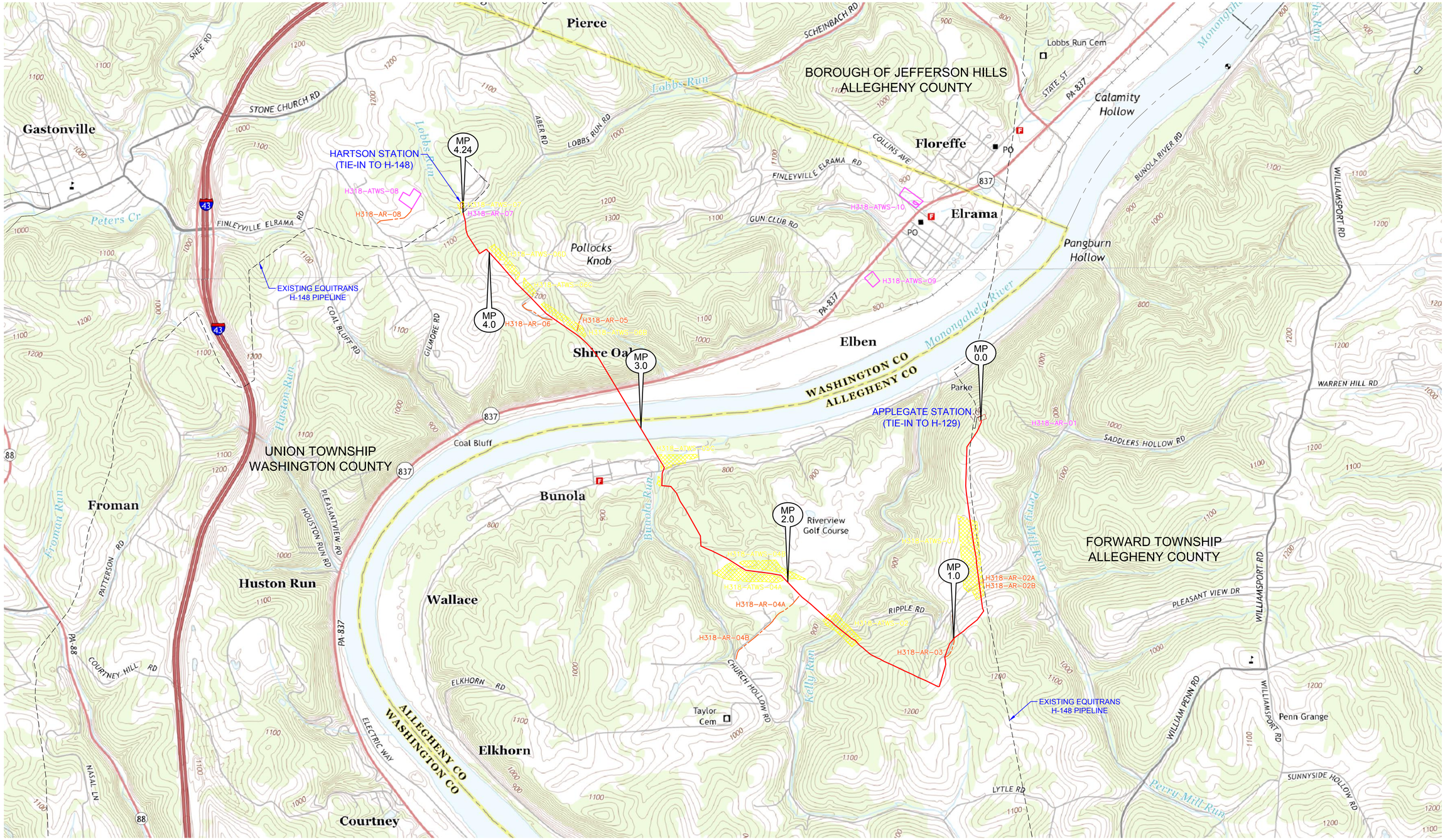
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APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	.	....	../../..	.	....	../../..

HORZ. SCALE: 1" = 1000'	
DRAWN BY: HEI(JDB)	09/01/15
DRAFTING CK:	.
ENGINEERING CK:	
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
UEI FILE NO.	
DRAWING NO.:	AR-H316-01
SHEET 1 OF 3	REV. 0
DATE OF PLOT: 10/23/15 8:30 AM	

EQUITRANS

PROPOSED ACCESS ROADS & ANCILLARY SITES
EQUITRANS EXPENSION PROJECT
H158, H305, H316, M80, PRATT & REDHOOK
GREENE COUNTY, PENNSYLVANIA



PROJECTION: UTM ZONE 17
HORIZONTAL DATUM: NAD 83 US SURVEY FEET
VERTICAL DATUM: NAVD88

LEGEND

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
-	....

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

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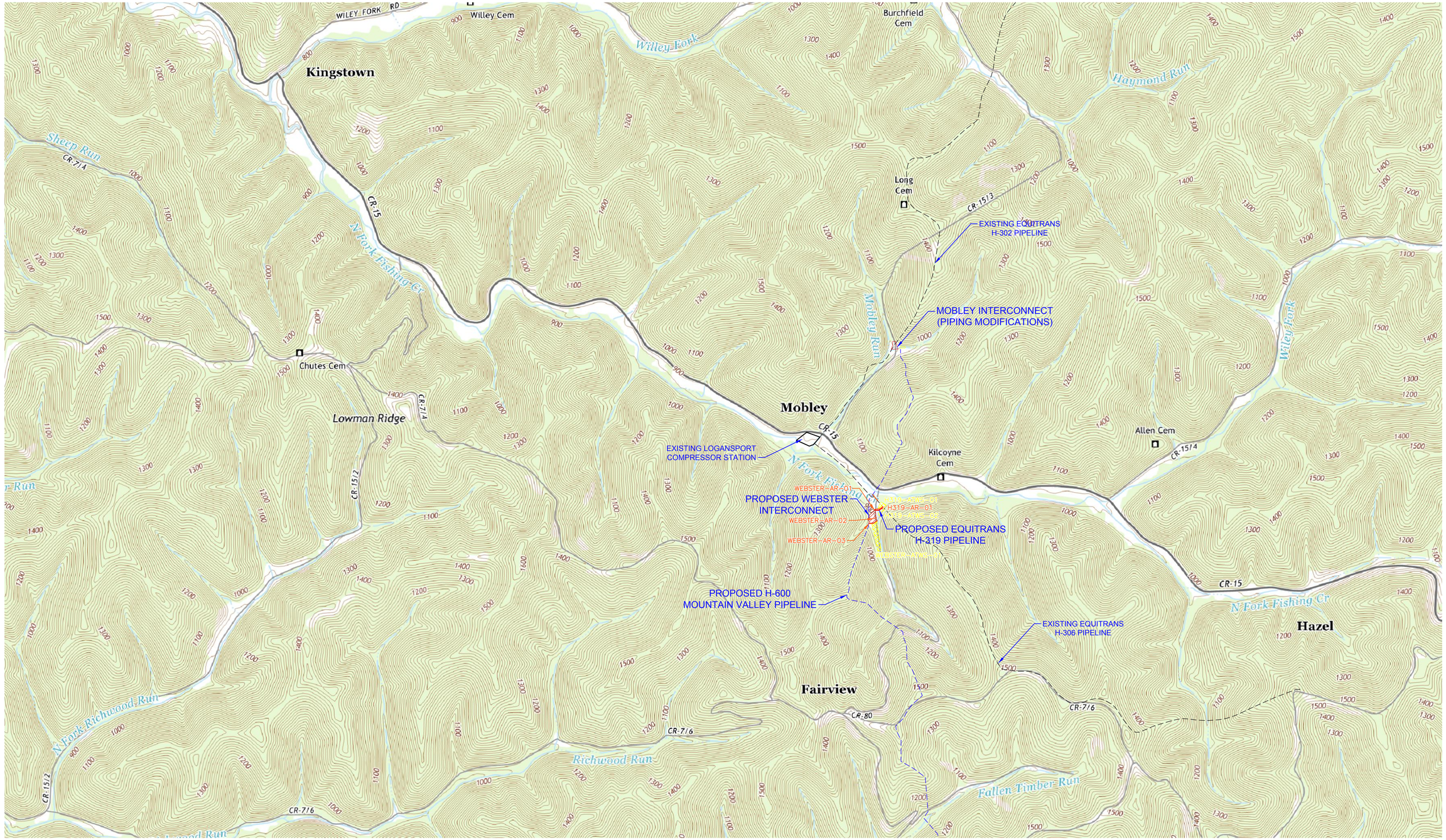
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APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	.	....	../../..	.	....	../../..

HORZ. SCALE: 1" = 1000'	
DRAWN BY: HEI(JDB)	09/01/15
DRAFTING CK:	
ENGINEERING CK:	
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
UEI FILE NO.	
DRAWING NO.: AR-H318-01	
SHEET 2 OF 3	REV. 0
DATE OF PLOT: 10/23/15 8:30 AM	

EQUITRANS

PROPOSED ACCESS ROADS & ANCILLARY SITES
EQUITRANS EXTENSION PROJECT - H318
ALLEGHENY & WASHINGTON COUNTIES, PENNSYLVANIA



PROJECTION: UTM ZONE 17
HORIZONTAL DATUM: NAD 83 US SURVEY FEET
VERTICAL DATUM: NAVD88

LEGEND

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
-	....

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

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REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	-	....	../../..	-	....	../../..

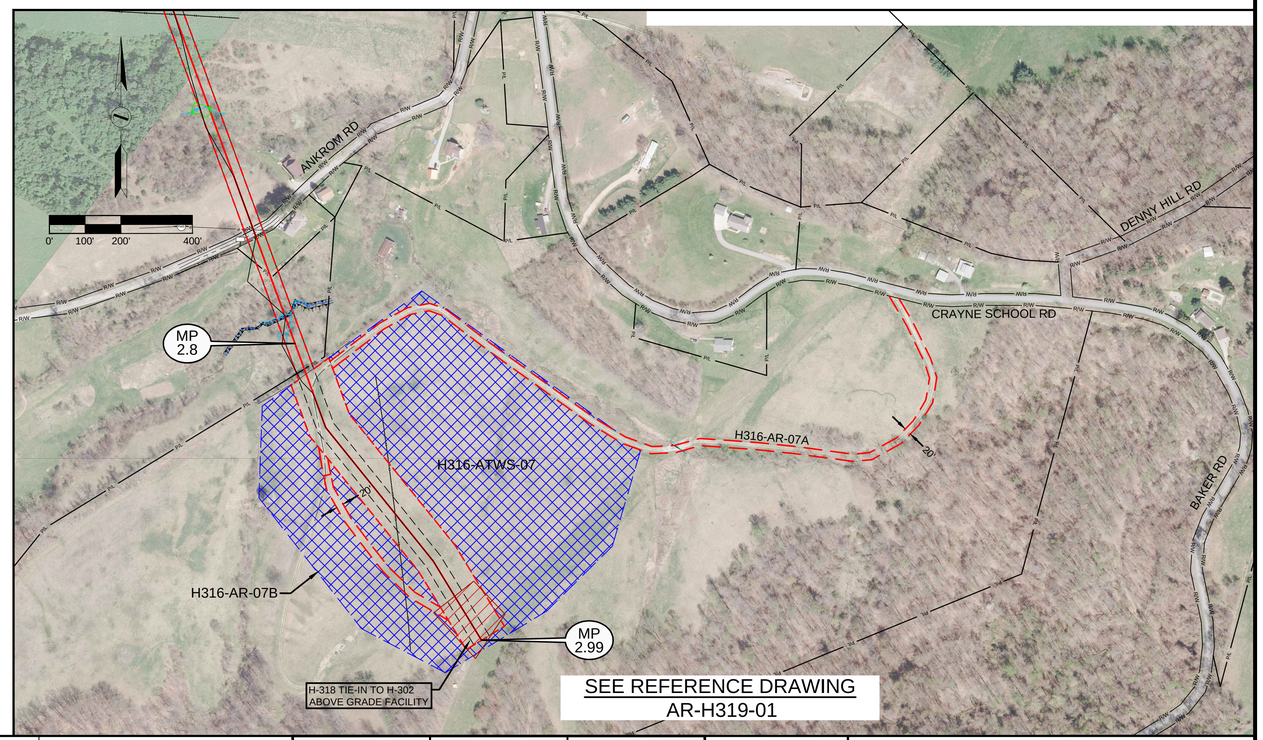
HORZ. SCALE: 1" = 1000'	
DRAWN BY: HEI(JDB)	09/01/15
DRAFTING CK:	
ENGINEERING CK:	
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.: 15-03-071	
UEI FILE NO.	
DRAWING NO.: AR-H319-01	
SHEET 3 OF 3	REV. 0
DATE OF PLOT: 10/23/15 8:30 AM	

EQUITRANS

PROPOSED ACCESS ROADS & ANCILLARY SITES
EQUITRANS EXTENSION PROJECT - H319 & WEBSTER AND MOBLEY INTERCONNECTS
WETZEL COUNTY, WEST VIRGINIA







LEGEND

- ANCILLARY SITE
- PERMANENT ACCESS ROAD
- TEMPORARY ACCESS ROAD
- PROPOSED H600 PIPELINE
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORK SPACE
- ADDITIONAL TEMPORARY WORK SPACE
- GATE - GATE POST
- CULVERT
- PIPELINE MARKER
- POWER/TELEPHONE POLE
- ELEC/GAS/WTR METER
- FIRE HYDRANT & VALVE
- PEDESTAL - UTILITY
- PIPELINE
- FENCE
- WATER LINE
- OHP LINE
- ROAD RIGHT-OF-WAY LINE
- UNKNOWN UNDERGROUND UTILITY
- BUILDING
- WETLAND
- STREAM
- WELL - GAS/OIL/WATER/MONITORING

PROJECTION: UTM ZONE 17
HORIZONTAL DATUM: NAD 83 US SURVEY FEET
VERTICAL DATUM: NAVD88

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
.	....

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

HOLLAND ENGINEERING
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Holland, Michigan 49423-3766
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APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	.	....	../../..	.	....	../../..

HORZ. SCALE: AS SHOWN	
DRAWN BY: HEI(JDB)	10/07/15
DRAFTING CK:	.
ENGINEERING CK:	.
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.:	14-10-052
UEI FILE NO.	
DRAWING NO.:	EEP-ADAR-02
SHEET 1 OF 3	REV. 0
DATE OF PLOT: 10/23/15 9:28 AM	

EQUITRANS

AERIAL DETAILS
PROPOSED ANCILLARY SITES & ACCESS ROADS
EQUITRANS EXPANSION PROJECT
GREENE COUNTY, PENNSYLVANIA

WASHINGTON COUNTY

APPLEGATE STATION
ABOVE GRADE FACILITY

MP
0.0

H318-AR-01

SADDLERS HOLLOW RD

DANGBURN HOLLOW RD

TEMPORARY WORK SPACE
PROPOSED H318 PIPELINE
TEMPORARY WORK SPACE

SEE REFERENCE DRAWINGS
AR-H318-01
& PA-ALPA-H318-01

WASHINGTON COUNTY

W-BB1-WP

H318-ATWS-08

H318-AR-08

FINLEYVILLE ELRAMA RD

SEE REFERENCE DRAWING
AR-H318-01

ALLEGHENY COUNTY

H318-AR-04A

TEMPORARY WORK SPACE
PROPOSED H318 PIPELINE
TEMPORARY WORK SPACE

MP
1.8

CHURCH HOLLOW RD

McVICKER LANE / H318-AR-04B

RACOON RUN RD

RIPPEL RD

MP
1.6

BERRY LANE

H318-ATWS-03

SEE REFERENCE DRAWINGS
AR-H318-01
& PA-ALPA-H318-03

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WASHINGTON COUNTY

OLD STATE HWY 837

STATE ROUTE 837

H318-ATWS-09

W-BB5-WP

SEE REFERENCE DRAWING
AR-H318-01

WASHINGTON COUNTY

H318-ATWS-10

W-BB4

FINLEY ELRAMA ROAD

STATE ROUTE 837

SEE REFERENCE DRAWING
AR-H318-01

LEGEND

- ANCILLARY SITE
- PERMANENT ACCESS ROAD
- TEMPORARY ACCESS ROAD
- PROPOSED H600 PIPELINE
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORK SPACE
- ADDITIONAL TEMPORARY WORK SPACE
- GATE - GATE POST
- CULVERT
- PIPELINE MARKER
- POWER/TELEPHONE POLE
- ELEC/GAS/WTR METER
- FIRE HYDRANT & VALVE
- PEDESTAL - UTILITY
- PIPELINE
- FENCE
- WATER LINE
- OHP LINE
- ROAD RIGHT-OF-WAY LINE
- UNKNOWN UNDERGROUND UTILITY
- BUILDING
- WETLAND
- STREAM
- WELL - GAS/OIL/WATER/MONITORING

PROJECTION: UTM ZONE 17
HORIZONTAL DATUM: NAD 83 US SURVEY FEET
VERTICAL DATUM: NAVD88

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
-	....

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

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Holland, Michigan 49423-3766
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26555 Evergreen Rd. Suite. 430
Southfield, Michigan 48076
T 248-827-7322 F 248-827-7549

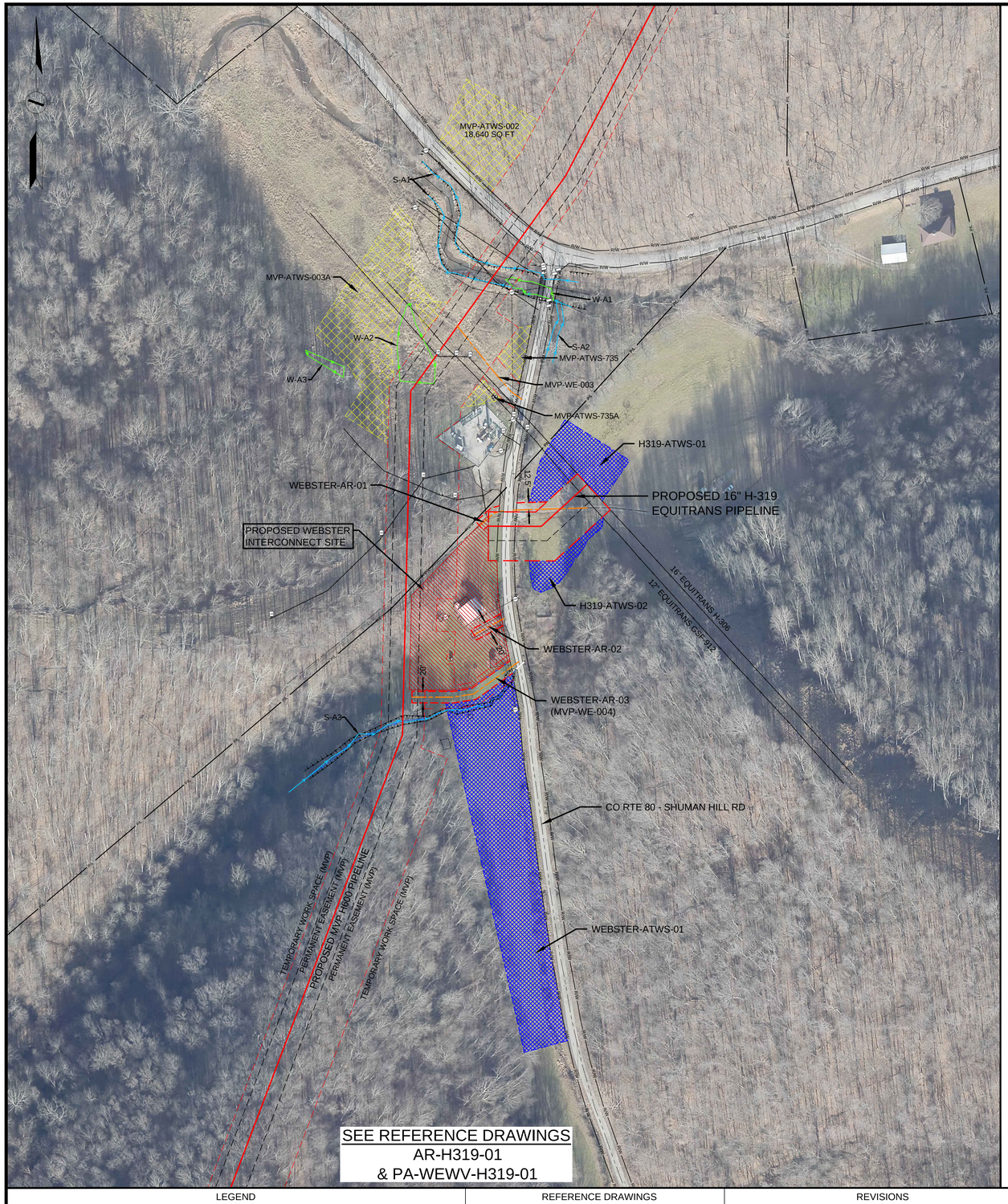
www.hollandengineering.com

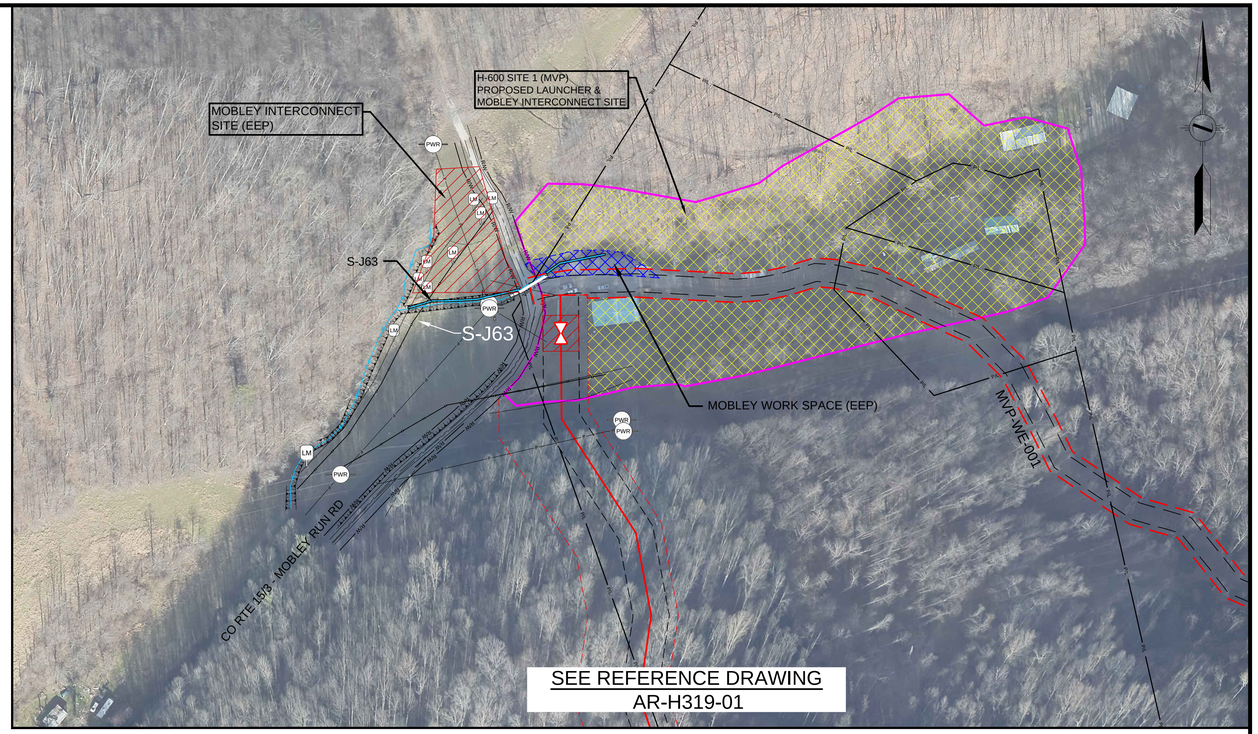
APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	-	....	../../..	-	....	../../..

HORZ. SCALE: AS SHOWN	
DRAWN BY: HEI(JDB)	10/07/15
DRAFTING CK:	
ENGINEERING CK:	
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.:	15-03-071
UEI FILE NO.	
DRAWING NO.:	EEP-ADAR-02
SHEET 2 OF 3	REV. 0
DATE OF PLOT: 10/23/15	9:15 AM

EQUITRANS

AERIAL DETAILS
PROPOSED ANCILLARY SITES & ACCESS ROADS
EQUITRANS EXPANSION PROJECT
ALLEGHENY COUNTY, PENNSYLVANIA





ABBREVATIONS USED:
MVP = MOUNTAIN VALLEY PIPELINE
EEP = EQUITRANS EXPANSION PROJECT

LEGEND

- ANCILLARY SITE
- PERMANENT ACCESS ROAD
- TEMPORARY ACCESS ROAD
- PROPOSED EEP PIPELINE
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORK SPACE
- ADDITIONAL TEMPORARY WORK SPACE (EEP)
- ADDITIONAL TEMPORARY WORK SPACE (MVP)
- GATE - GATE POST
- CULVERT
- PIPELINE MARKER
- POWER/TELEPHONE POLE
- PIPELINE
- FENCE
- WATER LINE
- OHP LINE
- ROAD RIGHT-OF-WAY LINE
- UNKNOWN UNDERGROUND UTILITY
- BUILDING
- WETLAND
- STREAM
- WELL - GAS/OIL/WATER/MONITORING
- FIRE HYDRANT & VALVE
- PEDESTAL - UTILITY
- ELEC/GAS/WTR METER

PROJECTION: UTM ZONE 17 HORIZONTAL DATUM: NAD 83 US SURVEY FEET VERTICAL DATUM: NAVD88

REFERENCE DRAWINGS

DRAWING NUMBER	TITLE
.	....

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	JDB	10/23/15	ISSUED TO FERC

HOLLAND ENGINEERING
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APPROVED FOR FERC			APPROVED FOR BIDDING			APPROVED FOR CONSTRUCTION		
REV.	BY	DATE	REV.	BY	DATE	REV.	BY	DATE
0	JSW	10/23/15	.	....	../../..	.	....	../../..

HORZ. SCALE: 1"=100'	
DRAWN BY: HEI(JDB)	10/07/15
DRAFTING CK:	.
ENGINEERING CK:	
UEI JOB NO.:	
AFE/P.O.NO.:	
HEI PROJECT NO.:	15-03-071
UEI FILE NO.	
DRAWING NO.:	EEP-ADAR-03
SHEET 1 OF 3	REV. 0
DATE OF PLOT: 10/23/15 9:03 AM	

EQUITRANS

AERIAL DETAILS
PROPOSED ANCILLARY SITES & ACCESS ROADS
EQUITRANS EXPANSION PROJECT
WETZEL COUNTY, WEST VIRGINIA