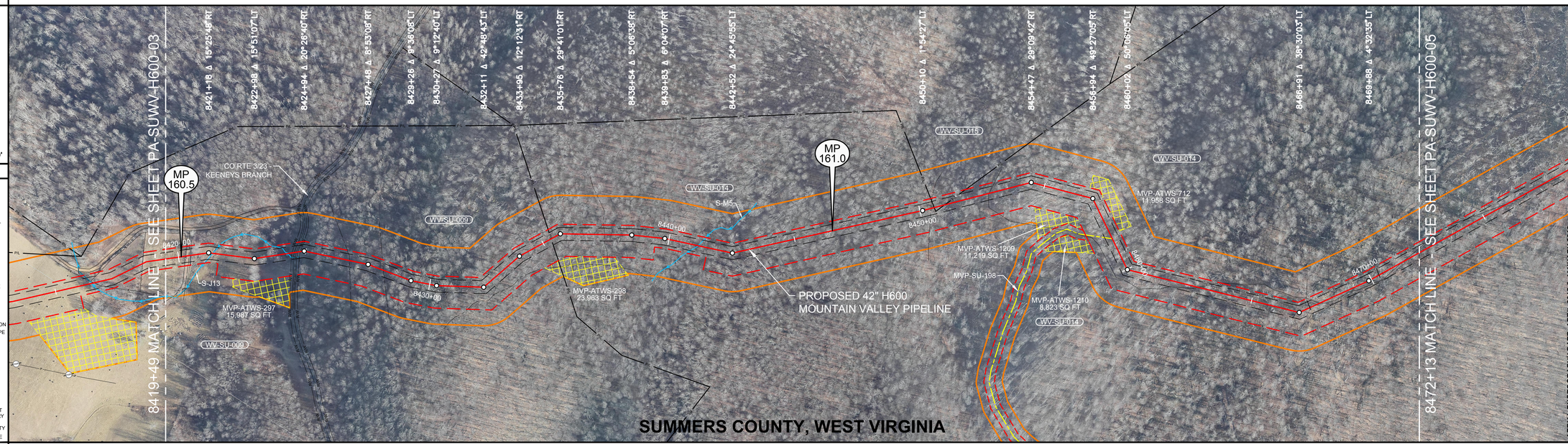
RIGHT-OF-WAY & OWNERSHIP DATA		WV-SU-009 497 LF 502 SLOPE; COUNTY ROUTE 3/23 497 LF 35 SLOPE; WV-SU-009 1056 LF 1101 SLOPE; WV-SU-014 1517 LF 1524 SLOPE; WV-SU-015 / WV-SU-014 142 LF 147 SLOPE; WV-SU-014 2019 LF 2040 SLOPE
DESIGN	PIPE / COATING	8419+49: 1; 8424+42: 4; 8424+62; 8440+96: 6; 8441+36: 1; 8472+13
	SLOPE DISTANCE	482'; 40'; 1669'; 40'; 3102'
	CLASS LOCATION / HCA	1
ENVIRONMENTAL	CONSTRUCTION EXCLUSION	
	WETLAND / STREAM	S-J13 4 LF; S-J13 4 LF; S-M5 6 LF
	.	
	.	



0' 100' 200' 400'

PLAN VIEW LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
- PROPERTY LINE
- ROAD RIGHT-OF-WAY
- FENCE LINE
- OVERHEAD POWER
- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
- SIGN
- TOWER LEG
- TREE
- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

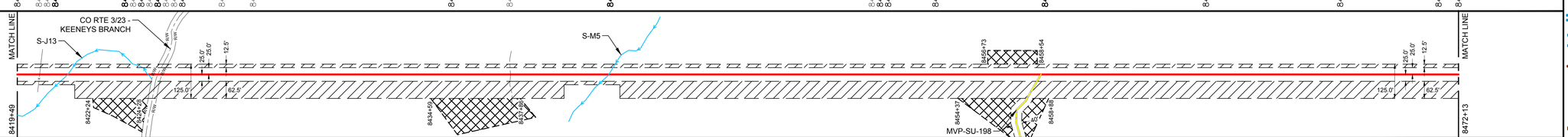
DRAWING NO.	DESCRIPTION
MVP-AR-H600-09	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-67	ACCESS ROAD DETAIL MAP

HORIZONTAL STATIONING

8419+49 MATCH LINE; 8420+28 FENCE – BARBED WIRE; 8420+41 ℄ FIELD ROAD(DIRT); 8421+34 ℄ STREAM(S–J13); 8424+27 ℄ STREAM(S–J13); 8424+44 CULVERT OPEN END 13'RT; 8424+46 RIGHT–OF–WAY; 8424+62 EDGE OF GRAVEL – CO RTE 3/23 – KEENEYS BRANCH; 8424+65 CULVERT OPEN END 21'RT; 8424+69 EDGE OF GRAVEL; 8424+79 RIGHT–OF–WAY; 8426+73 ℄ FIELD ROAD(DIRT); 8428+11 ℄ FIELD ROAD(DIRT); 8435+35 PROPERTY LINE; 8437+49 ℄ TRAIL(DIRT); 8441+16 ℄ STREAM(S–M5); 8450+43 ℄ TRAIL(DIRT); 8450+57 PROPERTY LINE; 8450+98 PROPERTY LINE; 8452+77 CL TRAIL(DIRT); 8458+68 ACCESS RoaD – TEMPORARY (MVP–SU–198); 8462+87 CL TRAIL(DIRT); 8467+78 CL TRAIL(DIRT); 8471+37 CL TRAIL(DIRT); 8472+13 MATCH LINE

WORK SPACE

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



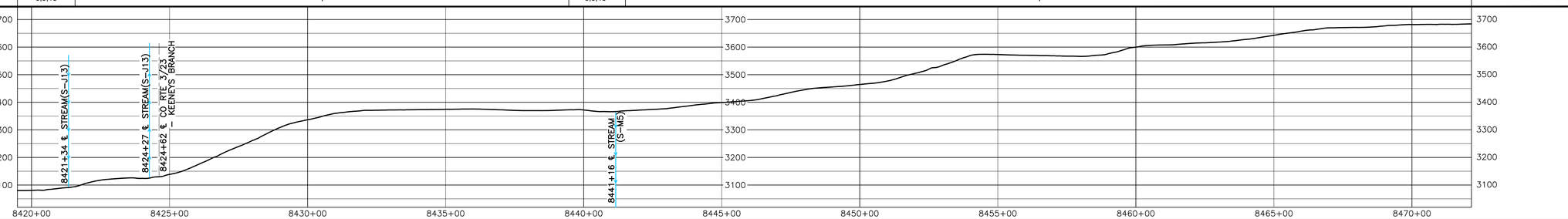
CONSTRUCTION METHOD

6,9,15 | 1 | 6,9,15 | 1

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
9 - WATERBODY X-ING OPEN CUT - WET DITCH
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION

PROFILE



OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

HOLLAND ENGINEERING
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Holland, Michigan 49423-3786 | Southfield, Michigan 48076
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REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	FERC DATA REQUEST No.3
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	5235	42"O.D. X 0.617"W.T. X-70 FBE BONDED EPOXY
4	40	42"O.D. X 0.740"W.T. X-70, FBE & ARO
6	40	42"O.D. X 0.617"W.T. X-70, FBE & ARO
	1	TYPE 1 TEST STATION - PIPELINE

APPROVED FOR CONSTRUCTION		
REV.	BY	DATE
-		

APPROVED FOR BIDDING		
REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC		
REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16

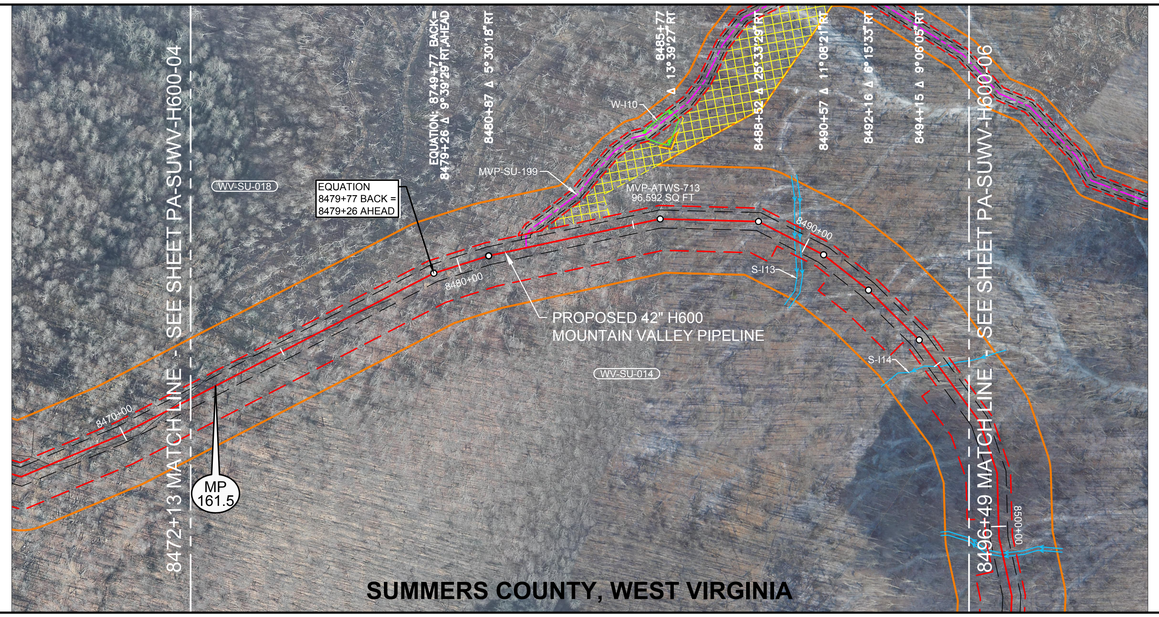
Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
GREEN SULPHUR DIST., SUMMERS CO.,W.V.
STA. 8419+49 TO STA. 8472+13

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/17/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.:	14-10-052
DRAWING NO.:	PA-SUWV-H600 -04
SHEET 177 OF 329	REV. 4
DATE OF PLOT: 10/11/16 8:26 AM	

RIGHT-OF-WAY & OWNERSHIP DATA		8472+13 · WV-SU-014 · EQUATION: 8479+77 BACK = 8479+26 AHEAD · 2487 LF 2490 SLOPE · 8496+49
DESIGN	PIPE / COATING	8472+13 · 1 · 8489+55 · 4 · 8489+95 · 1 · 8494+88 · 6 · 8495+28 · 1 · 8496+49
	SLOPE DISTANCE	1850' · 40' · 493' · 40' · 121'
	CLASS LOCATION / HCA	1
ENVIRONMENTAL	CONSTRUCTION EXCLUSION	
	WETLAND / STREAM	S-I13 17 LF · S-I14 7 LF
	.	
	.	



0' 100' 200' 400'

PLAN VIEW

LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
- COUNTY LINE
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- OVERHEAD TELEPHONE
- C/L ROAD
- C/L RAILROAD
- DELINEATED STREAM
- DELINEATED WETLAND
- BARRACADE FENCE
- PI SYMBOL
- PROPOSED TEST STATION
- MAILBOX
- LINE MARKER - VENT PIPE
- POWER/TELE POLE
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- GUY ANCHOR
- TANK
- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
- POST - GATE/FENCE
- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

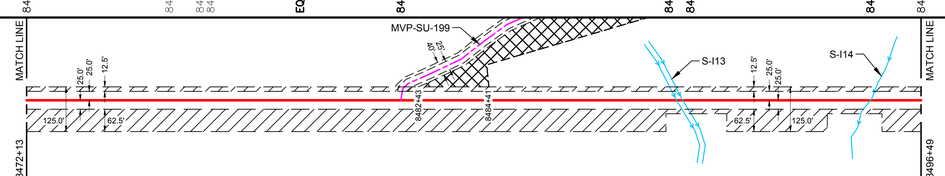
DRAWING NO.	DESCRIPTION
MVP-AR-H600-09	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES
MVP-QDAR-H600-68	ACCESS ROAD DETAIL MAP

HORIZONTAL STATIONING

8472+13 MATCH LINE · 8476+12 CL TRAIL(DIRT) · 8476+98 CL TRAIL(DIRT) · 8477+17 CL TRAIL(DIRT) · EQUATION: 8479+77 BACK = 8479+26 AHEAD · 8481+95 ACCESS RooD – PERMANENT (MVP–SU–199) · 8489+66 STREAM BANK(S–I13) · 8489+83 STREAM BANK(S–I13) · 8495+08 ℄ STREAM(S–I14) · 8496+49 MATCH LINE

WORK SPACE

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



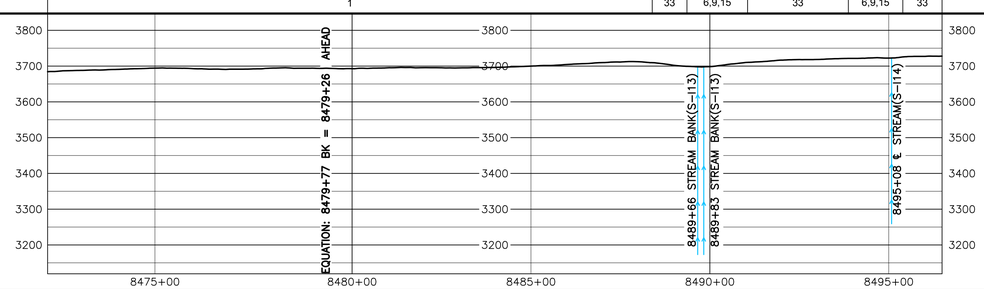
CONSTRUCTION METHOD

1 · 33 · 6,9,15 · 33 · 6,9,15 · 33

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
9 - WATERBODY X-ING OPEN CUT - WET DITCH
10 - HDD ENTRY PLAN
11 - HDD EXIT PLAN
12 - HDD CONSTRUCTION
13 - PARALLEL TO POWER LINE
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION

PROFILE



OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY			
MK. NO.	QTY.	DESCRIPTION	
2	2490	42"O.D. X 0.617"W.T. X-70, FBE BONDED EPOXY	
4	40	42"O.D. X 0.740"W.T. X-70, FBE & ARO	
6	40	42"O.D. X 0.617"W.T. X-70, FBE & ARO	
	1	TYPE 1 TEST STATION	
	1	TYPE 1 TEST STATION - PIPELINE	

REVISIONS			
REV.	BY	DATE	DESCRIPTION
0	HEI	10-14-15	REV. 4.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	05-27-16	REV. 4.1 ISSUED TO FERC
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

APPROVED FOR CONSTRUCTION		
REV.	BY	DATE
.	.	.

APPROVED FOR BIDDING		
REV.	BY	DATE
3	RRR	09-05-16

APPROVED FOR FERC		
REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16

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www.hollandengineering.com

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
GREEN SULPHUR DIST., SUMMERS CO.,W.V.
STA. 8472+13 TO STA. 8496+49

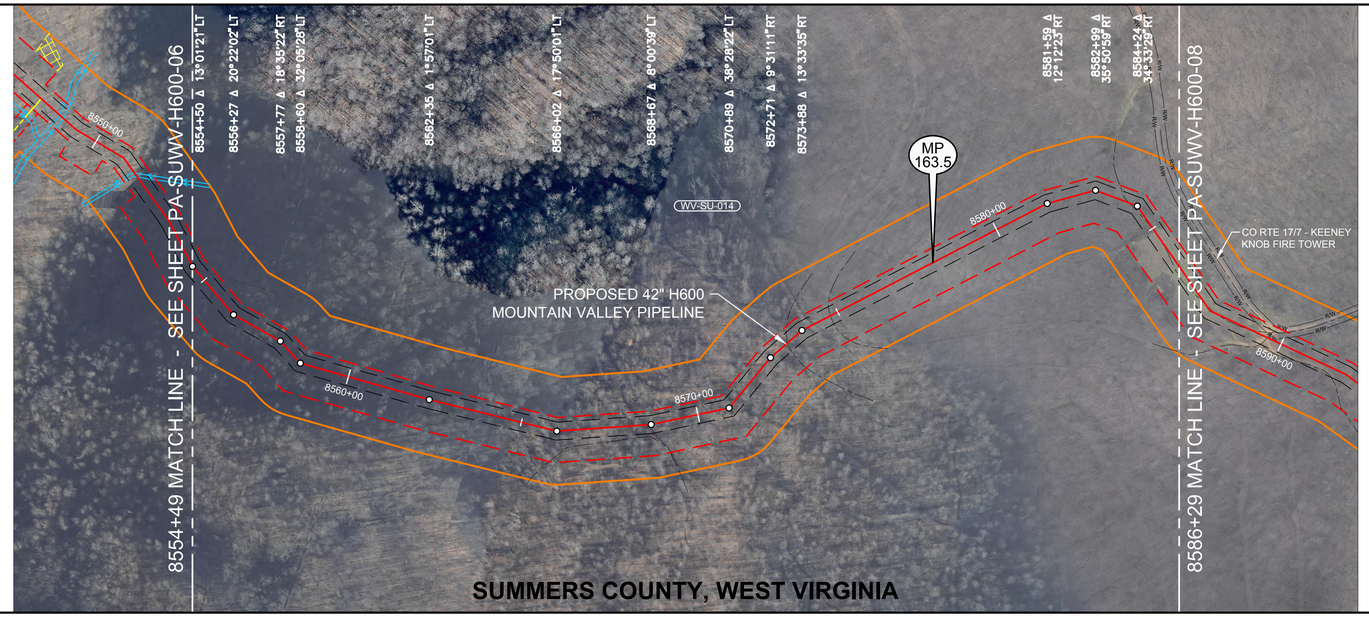
HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/17/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.:	14-10-052
DRAWING NO.:	PA-SUWV-H600 -05
SHEET 178 OF 329	REV. 4
DATE OF PLOT: 10/11/16 8:26 AM	

| RIGHT-OF-WAY & OWNERSHIP DATA | | |

		8554+49	WV-SU-014 3180 LF 3310' SLOPE	8586+29
RIGHT-OF-WAY & OWNERSHIP DATA				
DESIGN	PIPE / COATING	8554+49	1	8586+29
	SLOPE DISTANCE		3310'	
	CLASS LOCATION / HCA		1	
ENVIRONMENTAL	CONSTRUCTION EXCLUSION			
	WETLAND / STREAM			
	.			
	.			

0' 100' 200' 400'

PLAN VIEW



LEGEND

- STUDY CORRIDOR
- PROPOSED 42"PIPELINE
- NON-SURVEYED C/L
- 500' TICK MARK
- EXISTING PIPELINE
- PERMANENT EASEMENT
- WORK SPACE LIMITS
- PERMANENT ACCESS RD
- TEMPORARY ACCESS RD
- ANCILLARY SITE
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- FENCE LINE
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- C/L ROAD
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- PI SYMBOL
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- TOWER LEG
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- GAS VALVE
- WELL - GAS/OIL/WATER/ MONITORING
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- ELEC/GAS/WTR METER
- PEDESTAL - UTILITY
- MH - SANITARY/WATER
- CATCH BASIN - CULVERT
- ADDITIONAL TEMPORARY WORK SPACE(ATWS)
- ABOVE GROUND FACILITY
- LIMITS OF DISTURBANCE

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
MVP-AR-H600-09	ACCESS ROADS, ANCILLARY SITES, MAINLINE VALVES & LAUNCHER/RECEIVER SITES

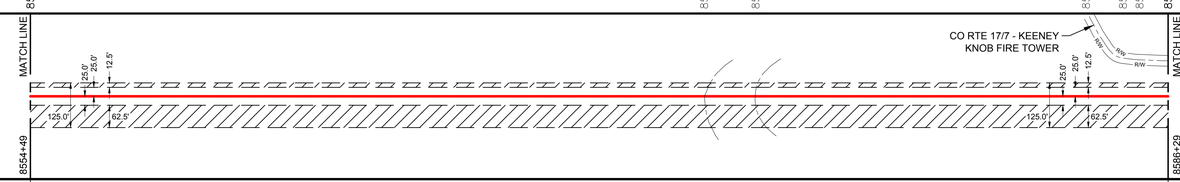
OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

HORIZONTAL STATIONING

8554+49 MATCH LINE | 8573+33 ℄ TRAIL(DIRT) | 8574+77 ℄ TRAIL(DIRT) | 8584+00 ℄ FIELD ROAD(DIRT) | 8585+03 ℄ FIELD ROAD(DIRT) | 8585+50 ℄ FIELD ROAD(DIRT) | 8586+29 MATCH LINE

WORK SPACE

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



CONSTRUCTION METHOD

CONSTRUCTION METHOD KEY

1 - TYPICAL R/W WORKING SIDE RIGHT
1.1 - TYPICAL R/W WORKING SIDE RIGHT
2 - TYPICAL R/W WORKING SIDE LEFT
2.1 - TYPICAL R/W WORKING SIDE LEFT
3 - TYPICAL WETLAND X-ING
4 - ROAD X-ING - BORE
5 - RAILROAD X-ING - BORE
6 - WATERBODY X-ING OPEN CUT - FLUME
7 - PARALLEL TO POWER LINE
8 - RIDGE CONSTRUCTION
9 - WATERBODY X-ING OPEN CUT - WET DITCH
10 - HDD ENTRY PLAN
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12 - HDD CONSTRUCTION
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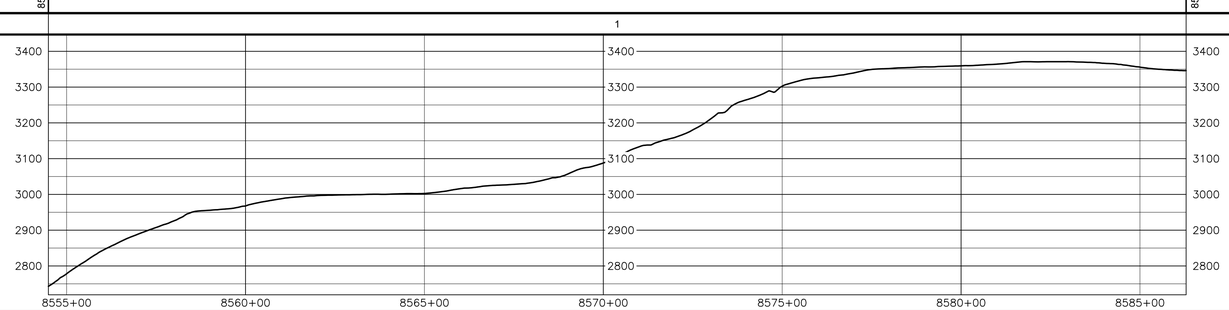
14 - PARALLEL TO POWER LINE
15 - WATERBODY X-ING OPEN CUT - DRY/DAM & PUMP
33 - SIDE HILL CONSTRUCTION
34 - 2-TONE SIDE HILL CONSTRUCTION

PROFILE



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26555 Evergreen Rd. Suite 430
Southfield, Michigan 48076
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www.hollandengineering.com

REVISIONS

REV.	BY	DATE	DESCRIPTION
0	HEI	10-15-15	REV. 4.0 ISSUED TO FERC
1	HEI	01-11-16	FERC DATA REQUEST No.1
2	HEI	04-14-16	FERC DATA REQUEST No.2
3	HEI	09-03-16	REV. 4.1 ISSUED TO FERC
4	HEI	10-14-16	OCTOBER 2016 PROPOSED ROUTE - ISSUED TO FERC

AERIAL PHOTOGRAPHY DATE: APRIL 2015 & JANUARY 2016

MATERIAL SUMMARY

MK. NO.	QTY.	DESCRIPTION
1	3310	42"O.D. X 0.617"W.T. X-70 FUSION BONDED EPOXY TYPE 1 TEST STATION - PIPELINE

APPROVED FOR CONSTRUCTION		
REV.	BY	DATE
-		-

APPROVED FOR BIDDING		
REV.	BY	DATE
3	RRR	09-03-16

APPROVED FOR FERC		
REV.	BY	DATE
0	RRR	10-15-15
4	RRR	10-14-16

Mountain Valley PIPELINE

PIPELINE ALIGNMENT

MOUNTAIN VALLEY PROJECT - H600 LINE
GREEN SULPHUR DIST., SUMMERS CO.,W.V.
STA. 8554+49 TO STA. 8586+29

HORZ. SCALE: 1" = 200'	
DRAWN BY: HEI(DRF)	02/17/15
DRAFTING CK:	.
ENGINEERING CK:	.
CONSTRUCTION CK:	.
ENVIRONMENTAL CK:	.
AFE/P.O.NO.:	
HEI PROJECT NO.:	14-10-052
DRAWING NO.:	PA-SUWV-H600 -07
SHEET 180 OF 329	REV. 4
DATE OF PLOT: 10/11/16 8:27 AM	