## ATLANTIC COAST PIPELINE, LLC ATLANTIC COAST PIPELINE

and

### DOMINION ENERGY TRANSMISSION, INC. SUPPLY HEADER PROJECT

**Implementation Plan** 

EC30 Attachment 1

**Site-Specific Crossing Plans for Major Waterbodies** 

LEGEND       2500         C		
P2:22:22:22:23       TOPSOL SEGRAGATION AREA       2450         P2:22:22:23:23:10 TOPSOL SEGRAGATION AREA       2450         P2:22:22:23:23:10 CONSTURB       2450         P2:22:22:23:23:10 CONSTURB       2450         P2:22:23:23:10 CONSTURB       2450         P2:23:23:23:23:10 CONSTURB       2400         P:23:23:23:23:23:20 CONSTURBANCE       2400         P:23:23:23:23:23:20 CONSOST FLITER SOCK       2350         P:23:23:23:23:23:20 CONSOST FLITER SOCK       2350         P:23:23:23:23:23:20 CONSOST FLITER SOCK       2350         P:23:23:23:23:23:23:23:23:23:23:23:23:23:		1
2012       2000       2450         2012       EXTRA WORK SPACE       2450         2012       EXTRA WORK SPACE       2400         2012       EXTRA WORK SPACE       2400         2012       EXTRA WORK SPACE       2400         2012       EXTRA MORE OF DISTURBANCE       2400         2014       EXTRA MORE OF DISTURBANCE       2500         2015       EXTRA MORE OF DISTURBANCE       2500         2016       MATERBORY INFRANCE       2500         2017       TEMPORARY SLOPE BREAKER       2500         2018       MATERBORY IMPACT       2200         WATERBORY IMPACT       2200       2200         WATERBORY IMPACT       2200       2200         WATERBORY IMPACT       2200       2200         WATERBORY IMPACT       2200       2200         WATERBORY ONSTRUCTION NOTES:       41       41         1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.       2000 ACRES       2200         VATERBORY ENDAGE       EXEMPTION FLOW SELL BE MAINTIMED AT ALL THENDER MARK.       2000 CONSTRUCTION ACTIVE BUNKING AND ACTIVE WATER WARK MARK.       2000 CONSTRUCTION CONTOURS OR TO A STALL EMAIL BE MAINTIMED AT ALL THRUCH PLUGS AND WATERBARS AS DIRACINCLE WATER WARK MARK.       2000 CONSTRUCTION CONTOURS OR TO A STABLE ANALE OF REPOROUP DANKS AND INS		
222222       EXTRA WORK SPACE       2450         222222       EXTRA WORK SPACE       2400         22222       STREAM       2400         22222       CONTOUR       2350         22222       CONTOUR       2350         22300       STREAM       2300         22001       STREAM       2300         22002       MATERBODY IMPACT       2300         22003       MATERBODY IMPACT       2200         22004       MATERBODY IMPACT       2200         22005       WATERBODY IMPACT       2200         22006       WATERBODY IMPACT       2200         22007       WATERBODY IMPACT       2200         22008       WATERBODY IMPACT       2200         22009       WATERBODY IMPACT       2200         WATERBODY IMPACT       2200       2200         WATERBODY CONSTRUCTION NOTES:       42       42         1       CONSTRUCTION NOTES:       42       42         2       CONSTRUCTION NOTES:       42       42         3       RIP RAP (OR OTHER NON-ERODIBLE       MATERIALS) TO BE PLACED IN SIGNICIRCLE       42         4       DISCHARGE ALL WATER THROVED HANKS AND       INSTALL TREMORANY SOLED DENSTRUCTION ON TO A STABLE		
WETLAND         Image: Stream       2400         Image: Stream       2400         Image: Stream       2400         Image: Stream       2300         Image: Stream       Image: Stream		
DO NOT DISTURB STREAM 2400 STREAM 2400 STREAM 2400 <		
→ →       STREAM       2400         → →       CONTOUR       2350         → →       SITE SOCK       2360         → →       TEMPORARY SLOPE BREAKER       2300         →       TEMPORARY SLOPE BREAKER       2250         WATERBODY IMPACT       2200       2200         WATERBOY HIPH VICTION NOTES:       41       41         CONSTRUCTION ON TOBE PREFORMED IN LOW       7       41         ATCLINES, TO BE LOWHALT RANKINTIANED       7       41         ATALL THENCION PRECONSTRUCTION NOTES:       41       41         CONSTRU		
CONTOUR     CONTOUR     CONTOUR     SSRF     SSRF		
CONTOUR     BSRF     S230     SUPPORT PLACE     SUPPORT PLACE     SUPPORT PLACE     SUPPORT PLACE     SUPPORT     SUPPOR		
BSRF     2350		
2390  300  301  302  302  3030  302  3030  303  304  305  305  305  305  30		
SILT SOCK      WATER BAR     TEMPORARY SLOPE BREAKER     ROCK CONSTRUCTION ENTRANCE      WATERBODY IMPACT     ROCK CONSTRUCTION ENTRANCE      WATERBODY # TEMP. IMPACT PERMANENT IMPACT     10.75 ACRES 0.00 ACRES      WATERBODY # TEMP. IMPACT     VATERBODY IMPACT      WATERBODY ONSTRUCTION NOTES:     1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM. 2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES. 3. RIP RAP (OR OTHER NON-ERODIBLE MATERRADY CONSTRUCTION NOTES: 4.1     OR OSING TO BE COMPLETED VIA THE USE OF A COFFERDAM. 2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES. 3. RIP RAP (OR OTHER NON-ERODIBLE MATERRADY SEDIMENT TRAPPING DEVICE. 5. STABLE ANGLE OF RET THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE. 5. STABLE ANGLE OF RET THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT TRAPPING DEVICE. 5. STABLE ANGLE OF REPOSE DAY THE EVIVIENT ON CONTROLETING IN-STREAM CONSTRUCTION CONTROLES OR TO A STABLE ANGLE OF REPOSED BY THE EVIL UNSPECTED ON AND SEDIMENTATION CONTROL PLAN ON BOTH SEDIMENTAT		
TRENCH PLUG       2300         Mater Bar       2200         Mater Bar       2250         Mater Body # Dep Breaker       2250         WATER BODY # MPACT       2250         WATER BODY # TEMP.IMPACT       2200         WATER BODY ONSTRUCTION ENTRANCE       2200         WATER BODY CONSTRUCTION NOTES:       0.03 ACRES         1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.       2000         2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS, FLOW SHALL BE MAINTAINED AT ALL TIMES.       47         3. RIP RAP (OR OTHER NON-ERODIBLE MATERNALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.       105CHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.         5. STABILIZE WATER WATERBODY BANKS TO PRE-CONSTRUCTION ACTIVITIES.       8         6. RETURN ALL WATERD ANKS TO PRE-CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE EONITARY HIGH WATER MARK SHOULD BE AVOIDED.         7. INSTALL TRENCH PLUGS AND WATERBARS AS DEPICTED. ON THIS PLAN.       8. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO A CONFRUCTION.         8. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO A CONFRUCTION.       900 FLOK OPOLITES INCOMPLETION OF PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.         8. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO A CHIEVE NEGATIVE BUOYANCY. <t< td=""><td></td><td></td></t<>		
WATER BAR       2300         A       TEMPORARY SLOPE BREAKER         ROCK CONSTRUCTION ENTRANCE       2250         WATERBODY IMPACT       2250         WATERBODY #       TEMP.IMPACT         PERMANENT IMPACT       2250         WATERBODY #       TEMP.IMPACT         PERMANENT       0.03 ACRES         WATERBODY CONSTRUCTION NOTES:       42         1.       CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.         2.       CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.         3.       RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.         4.       DISCHARCE ALL WATER THROUGH AN APPROVED SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES.         6.       RETURN ALL WATER MARK SHOULD BE AVOILD BE AVOILDED.         7.       INSTALL TRENCH PLUGS AND WATERBARS AS DIRCITED BY THE APROVED DEROSION AND SEDIMENT FARPROYED DEROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERBARY SAD DEPICTED. ON THIS PLAN.         8.       PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUCYANCY.         7.       RIVET RAFFIC WILL NOT BE IMPENDED DURING CONSTRUCTION.         10.       UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM WILL BE RELOCATED TO OPROSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE		
TEMPORARY SLOPE BREAKER       2250         WATERBODY IMPACT       2200         WATERBODY IMPACT       2200         WATERBODY CONSTRUCTION NOTES:       2000 ACRES         1       CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS, FLOW SHALL BE MAINTAINED AT ALL TIMES.       241         3       RIP RAP (OR OTHER NON-ERODIBLE MATERALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.       2000         4.1 DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.       35         5. STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.       30         9. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER ROSSING TO ACHEVE NEGATIVE BUOYANCY.       30         9. RIVER TRAFFIC WILL NOT BE IMPENDED DURING CONSTRUCTION.       30         10. UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, THE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.         11. THE TEMPORARY BRIDGE WILL UTILIZE IN-STREAM SUPPORTS.         TIME OF YEAR RESTRICTION		
WATERBODY IMPACT       2250         WATERBODY IMPACT       0.75 ACRES       0.00 ACRES       2200         WATERBODY IMPACT       0.75 ACRES       0.00 ACRES       2200         WATERBODY ONSTRUCTION NOTES:       1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.       241         2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS, FLOW SHALL BE MAINTAINED AT ALL TIMES.       41         3. RIP RAP (OR OTHER NON-ERODIBLE MATERIARS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE OORDINARY HIGH WATER MARK.       10 SCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.         5. STABILIZE WATER WATER TO PROUGH NA APPROVED SEDIMENT TRAPPING DEVICE.       5. STABIL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTOUR PLAN AND AS DEPICTED. ON THIS PLAN.         8. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO A STABLE SOF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.         9. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACCHEVE BUGANCY.         9. RIVER TRAFFIC WILL NOT BE IMPENDED DUNING CONSTRUCTION.         10. UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM THE COFFERDAM WILL BE RELOCATED TO OPROSITE SIDE OF WATERERODY FOR COMPLETION OF PIPELINE CONSTRUCTION.     <		
WATERBODY IMPACT         WATERBODY #       TEMP.IMPACT       PERMANENT IMPACT         WATERBODY #       TEMP.IMPACT       PERMANENT IMPACT         WATERBODY IMPACT       0.00 ACRES       2200         WATERBODY CONSTRUCTION NOTES:       1.       CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.       47         2.       CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.       47         3.       RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.       105CHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.       5.         5.       STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN STREAM CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED.         7.       INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSINA AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.         8.       PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.         8.       PIPELINE SHALL BE WEIGHTED WITH COPFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMSTRUCTION.         10.       UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM WILL BE CONSTRUCTION.         11.       THE TEMPORARY BRIDGE WILL UTILIZE IN-STREAM SUPPORTS. <td></td> <td></td>		
WATERBODY #       TEMP. IMPACT       PERMANENT IMPACT       2200         WATERBODY CONSTRUCTION NOTES:       0.00 ACRES       41         CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.       42       43         2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.       43       44         3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM. ABOVE THE ORDINARY HIGH WATER MARK.       44       44         0.001000000000000000000000000000000000		
0.75 ACRES     0.00 ACRES       WATERBODY IMPACT     2200       WATERBODY CONSTRUCTION NOTES:     47       1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.     47       2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.     47       3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM. ABOVE THE ORDINARY HIGH WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.     47       5. STABILIZE WATER ROW WATER MARK.     1000000000000000000000000000000000000		
WATERBODY IMPACT       2200         WATERBODY CONSTRUCTION NOTES:       43         1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.       43         2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.       43         3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.       10         4. DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.       5.         5. STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES.       ••••         6. RETURN ALL WATERBODY BANKS TO PRE-CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED.       ••••         7. INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.       PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.         8. PIPELINE SHALL BE WEIGHTED WITH CONSTRUCTION.       10. UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, HE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.         11. THE TEMPORARY BRIDGE WILL UTILIZE IN-STREAM SUPPORTS.       TIME OF YEAR RESTRICTIONS (TOYRS)		
<ul> <li>WATERBODY IMPACT</li> <li>WATERBODY CONSTRUCTION NOTES: 43</li> <li>CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.</li> <li>CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.</li> <li>RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.</li> <li>DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.</li> <li>STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTOLRS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE CONSTRUCTION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.</li> <li>PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.</li> <li>RIVER TRAFFIC WILL NOT BE IMPENDED DURING CONSTRUCTION.</li> <li>UPON COMPLETION OF CONSTRUCTION WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.</li> <li>UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, THE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.</li> <li>TIME OF YEAR RESTRICTIONS (TOYRS)</li> </ul>		
<ol> <li>CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.</li> <li>CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.</li> <li>RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.</li> <li>DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.</li> <li>STABIL/ZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES.</li> <li>RETURN ALL WATERBODY BANKS TO PRE-CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR, FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED.</li> <li>INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.</li> <li>PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.</li> <li>RIVER TRAFFIC WILL NOT BE IMPENDED DURING CONSTRUCTION.</li> <li>UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, THE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.</li> <li>TIME OF YEAR RESTRICTIONS (TOYRS)</li> </ol>		
<ul> <li>A COFFERDAM.</li> <li>CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.</li> <li>RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.</li> <li>DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.</li> <li>STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES.</li> <li>RETURN ALL WATER THROUGH SONT O A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED.</li> <li>INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.</li> <li>PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.</li> <li>RIVER TRAFFIC WILL NOT BE IMPENDED DURING CONSTRUCTION.</li> <li>UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, THE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.</li> <li>UPON COMPLETION OF CONSTRUCTION WITHIN THE TEMPORARY BRIDGE WILL UTILIZE IN-STREAM SUPPORTS.</li> <li><b>TIME OF YEAR RESTRICTIONS (TOYRS)</b></li> </ul>	97+35	
IN-STREAM SUPPORTS. TIME OF YEAR RESTRICTIONS (TOYRS)	STOCKPILE AREA F 12" OF STREAM BEI	

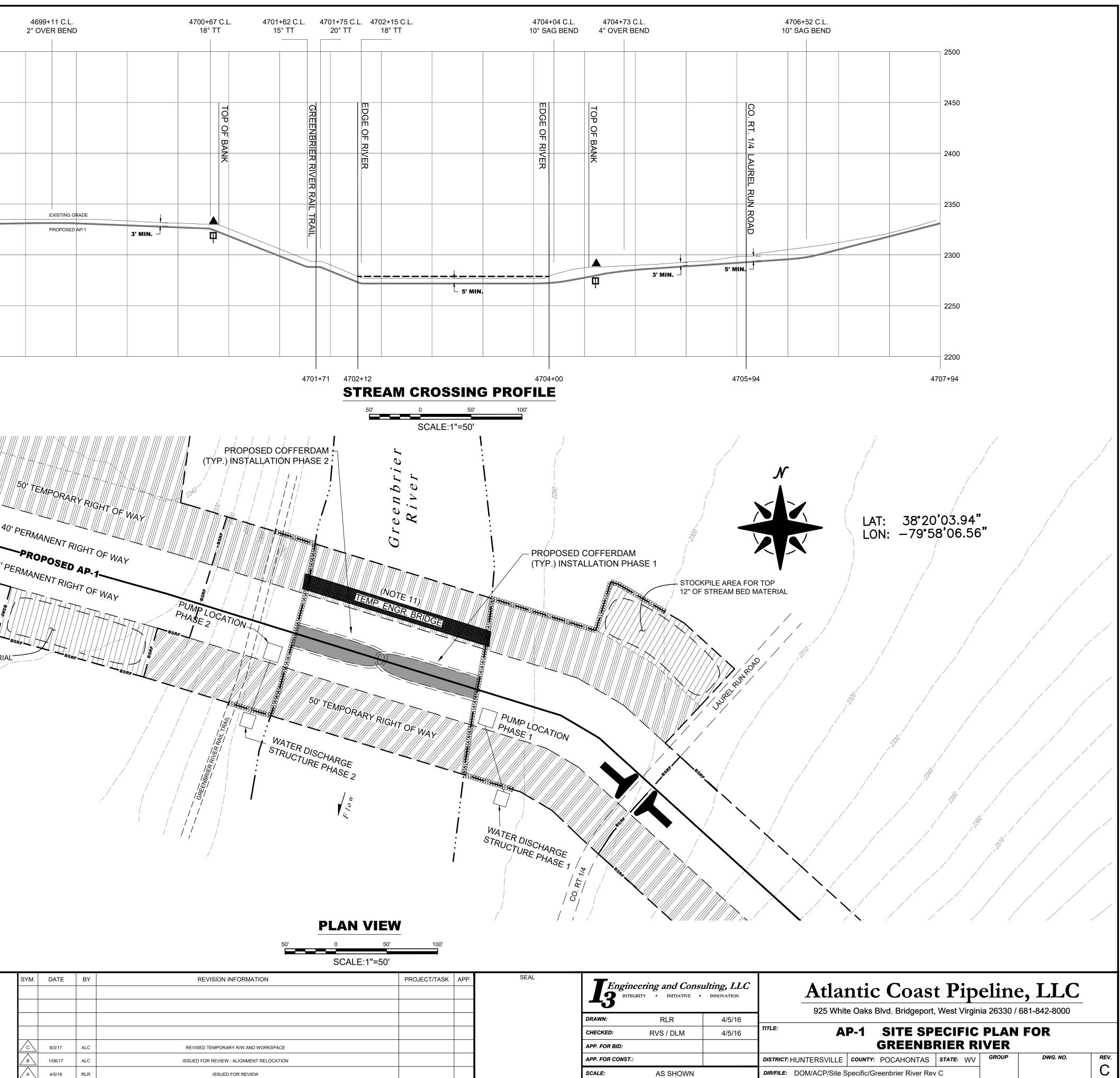
# REFERENCE

ELEVATION DATA FROM THE USGS GIS DATA CLEARING HOUSE.

PIPELINE SURVEY INFORMATION PROVIDED BY GAI CONSULTANTS.

STREAM AND WETLAND DATA COLLECTED BY NATIONAL RESOURCE GROUP, LLC.

MAPPING DATUM-UTM17-NAD 83 CONTOUR INTERVAL - 10 FEET



DIR/FILE: DOM/ACP/Site Specific/Greenbrier River Rev C

DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL		eering and Cons
						<b></b> 3	
						DRAWN:	RLR
						CHECKED:	RVS / DLM
8/3/17	ALC	REVISED TEMPORARY R/W AND WORKSPACE				APP. FOR BID:	
1/06/17	ALC	ISSUED FOR REVIEW - ALIGNMENT RELOCATION				APP. FOR CONST.:	
4/5/16	RLR	ISSUED FOR REVIEW				SCALE:	AS SHOWN

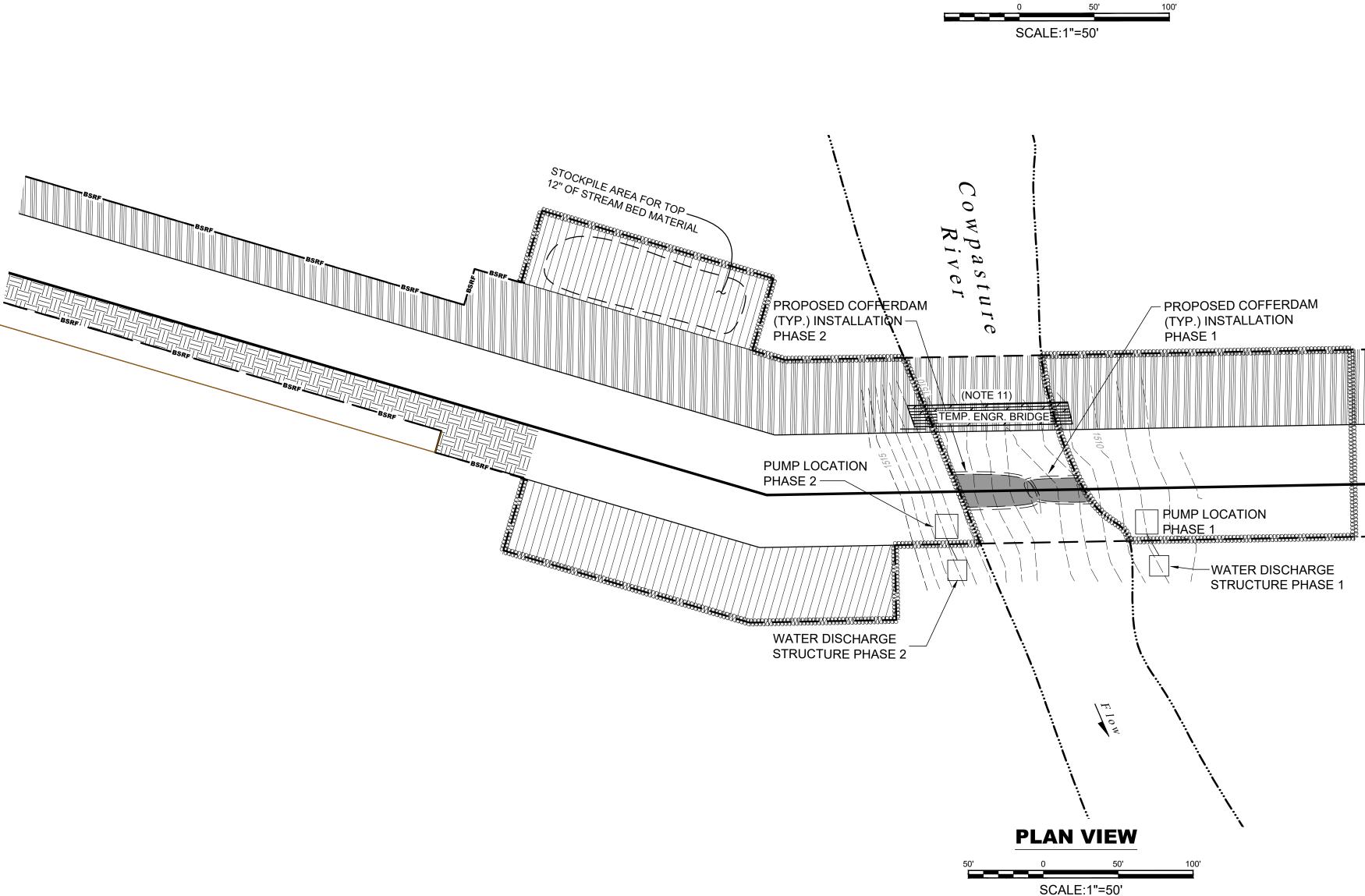
LEGEND \_\_\_\_\_ PERMANENT RIGHT-OF-WAY TEMPORARY RIGHT-OF-WAY TOPSOIL SEGRAGATION AREA EXTRA WORK SPACE ••••••••• WETLAND DO NOT DISTURB ---- STREAM — — LIMITS OF DISTURBANCE --100 -- CONTOUR -------------------------------BSRF ROCK CONSTRUCTION ENTRANCE Ш TRENCH PLUG WATER BAR Δ TEMPORARY SLOPE BREAKER WATERBODY IMPACT WATERBODY # TEMP. IMPACT PERMANENT IMPACT 0.00 ACRES 0.25 ACRES WATERBODY IMPACT WATERBODY CONSTRUCTION NOTES: 1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM. 2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES. 3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK. 4. DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE. 5. STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES. 6. RETURN ALL WATERBODY BANKS TO PRE-CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED. 7. INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSION AND

- DIRECTED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.
- PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.
   RIVER TRAFFIC WILL NOT BE IMPENDED
- DURING CONSTRUCTION.
- 10. UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, THE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.
- 11. THE TEMPORARY BRIDGE WILL UTILIZE IN-STREAM SUPPORTS.

## TIME OF YEAR RESTRICTIONS (TOYRS)

ALL WORK MUST BE COMPLETED FROM MARCH 15 to JUNE 30 & MAY 15 to JULY 31

1600	 
1000	
1550	
1500	
1500	
1500	
1500	
1500	
1500	



# REFERENCE

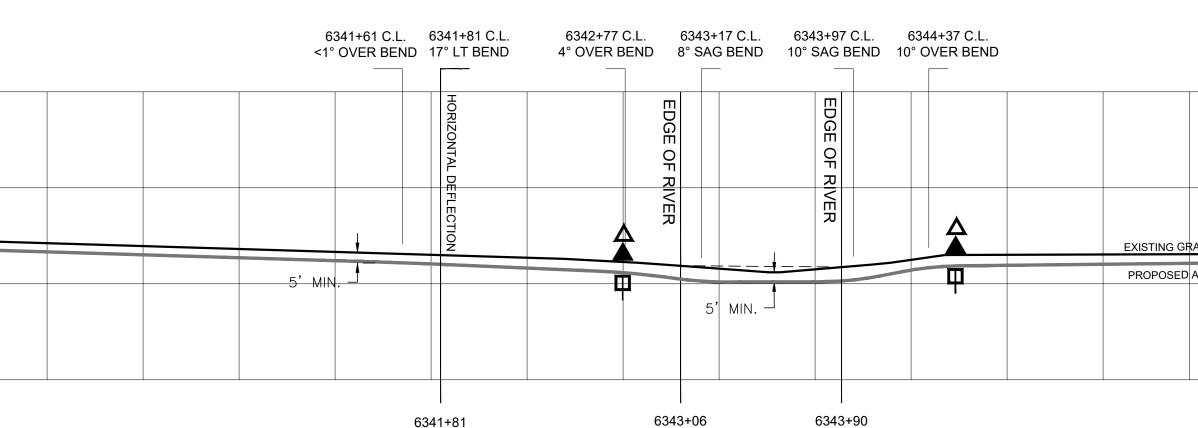
ELEVATION DATA PROVIDED BY GAI CONSULTANTS.

PIPELINE SURVEY INFORMATION PROVIDED BY GAI CONSULTANTS.

STREAM AND WETLAND DATA COLLECTED BY NATIONAL RESOURCE GROUP, LLC.

MAPPING DATUM-UTM 17-NAD 83 CONTOUR INTERVAL - 1 FOOT & 40 FOOT

SYM.	
В	



# STREAM CROSSING PROFILE

DATE	BY REVISION INFORMATION	PROJECT/TASK	APP.	SEAL		
					DRAWN:	RLR
					CHECKED:	RVS / DLM
					APP. FOR BID:	
8/3/17	ALC REVISED TEMPORARY R/W AND WORKSPACE				APP. FOR CONST.:	
11/16/15	RLR ISSUED FOR REVIEW				SCALE:	AS SHOWN

							1600			
			L				1550			
D AP-1	3'	 MIN. –				-	1500			
							1450			
				,						
						N 				
							LAT: 3 LON: -	8°07'56 -79°36'	.90" 33.23"	
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			— PI		HT OF WAY <b>AP-1</b> GHT OF WA					
							- 1560			
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				Atl	antic	Coast	t Pipe	line.	LLC	
_M	11/16		TITLE:		t Main St. Cla	arksburg, West	Virginia 2630	1 / Phone: (3	804) 623-800	- 1
			DISTRIC			RIVER -				REV.

STATE: VA

COUNTY: BATH

DIR/FILE: DOM/ACP/Site Specific/Cowpasture Rev B

В

LEGEND \_\_\_\_\_ PERMANENT RIGHT-OF-WAY TEMPORARY RIGHT-OF-WAY TOPSOIL SEGRAGATION AREA EXTRA WORK SPACE DO NOT DISTURB ---- STREAM — — LIMITS OF DISTURBANCE --100-- CONTOUR -------------------------BSRF ROCK CONSTRUCTION ENTRANCE  $\square$ TRENCH PLUG WATER BAR Δ TEMPORARY SLOPE BREAKER WATERBODY IMPACT WATERBODY # TEMP. IMPACT PERMANENT IMPACT 0.25 ACRES 0.00 ACRES

## WATERBODY IMPACT

- WATERBODY CONSTRUCTION NOTES:
  1. CROSSING TO BE COMPLETED VIA THE DAM AND PUMP METHOD.
- 2. SUFFICIENT PUMPS TO MAINTAIN 1.5 TIMES THE FLOW PRESENT IN THE STREAM DURING CONSTRUCTION.
- 3. MAINTAIN ONE BACKUP PUMP ON SITE.
- 4. DAMS CONSTRUCTED WITH MATERIALS THAT PREVENT SEDIMENT AND OTHER POLLUTANTS FROM ENTERING THE WATERBODY (E.G. SANDBAGS OR CLEAN GRAVEL WITH PLASTIC LINER.
- 5. SCREENS SHALL BE INSTALLED ON PUMP INTAKES.
- 6. STREAMBED SCOUR PREVENTED AT PUMP DISCHARGE.
- 7. STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES.
- 8. RETURN ALL WATERBODY BANKS TO PRE-CONSTRUCTION CONTOURS OR TO A STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED.
- 9. INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.
- 10. PUMPS SHALL BE INSTALLED IN SECONDARY CONTAINMENT.
- 11. FUEL SHALL BE STORED IN SECONDARY CONTAINMENT AND AT LEAST 100 FEET FROM WATERBODY.
- 12. SEGREGATE TOP 12" OF STREAM BED MATERIAL AND STORE WITHIN APPROVED CONSTRUCTION WORKSPACE.
- 13. EQUIPMENT BRIDGE WILL BE CONSTRUCTED ACROSS STREAM CHANNEL IN A MANNER THAT WILL MAINTAIN UNRESTRICTED FLOW, PREVENT SOIL FROM ENTERING WATERBODY, AND WITH STAND THE HIGHEST FLOW EXPECTED TO OCCUR WHILE BRIDGE IS IN PLACE.
- 14. OPTION A (COFFERDAM) OR OPTION B (DAM & PUMP) WILL BE DETERMINED AT TIME OF CONSTRUCTION AND BASED ON SITE CONDITIONS.
- 15. PUMP LOCATIONS SHOULD BE SELECTED ON AS NEEDED BASIS BY CONTRACTOR. MULTIPLE LOCATIONS PROVIDED.
- 16. THE TEMPORARY ENGINEERED BRIDGE WILL UTILIZE IN-STREAM SUPPORTS.

TIME OF YEAR RESTRICTIONS (TOYRS)

ALL WORK MUST BE COMPLETED FROM MARCH 15 to JUNE 30 & MAY 15 to JULY 31

GENERAL NOTES AND COMMENTS:

### REFERENCE

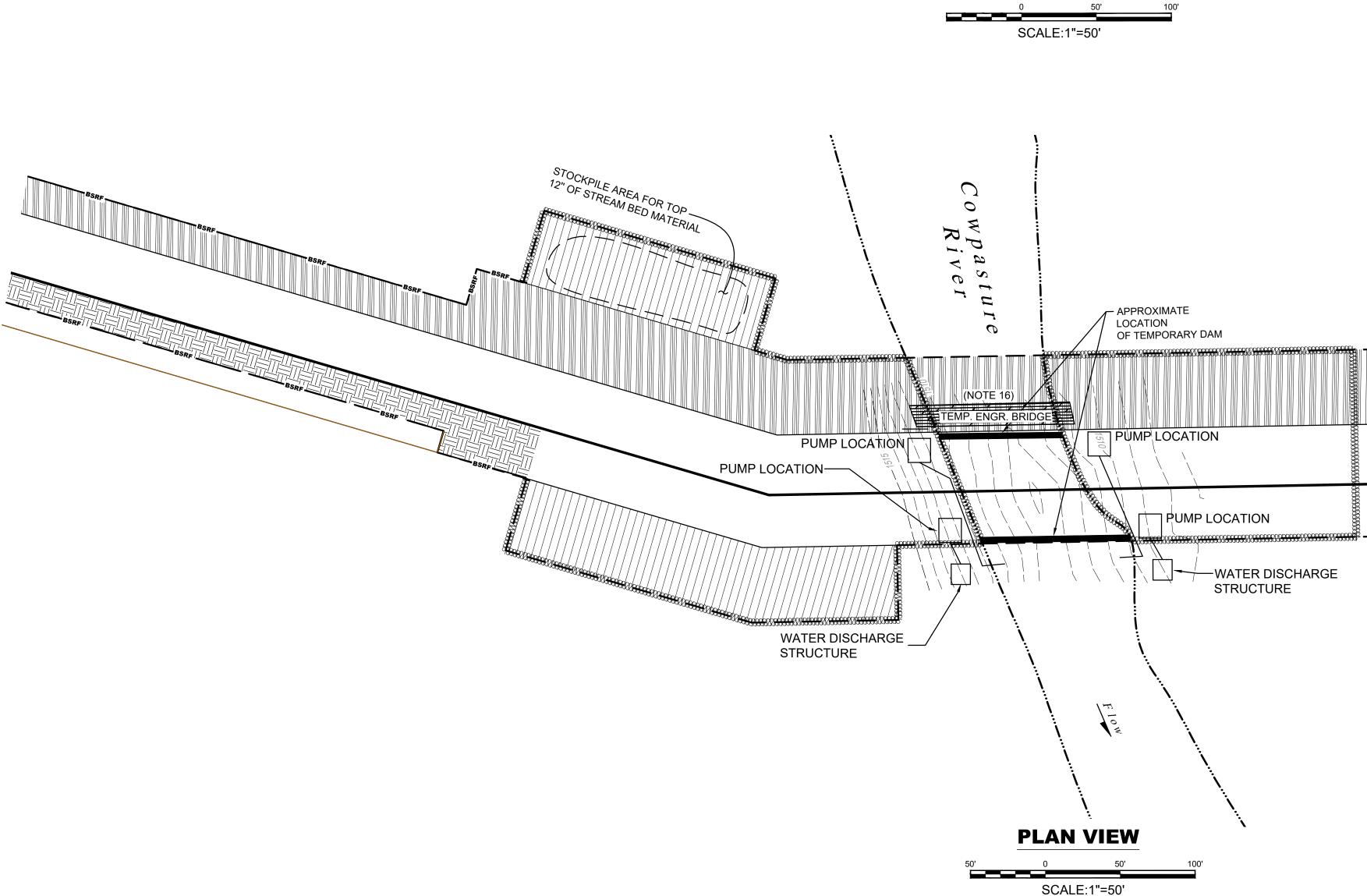
ELEVATION DATA PROVIDED BY GAI CONSULTANTS.

PIPELINE SURVEY INFORMATION PROVIDED BY GAI CONSULTANTS.

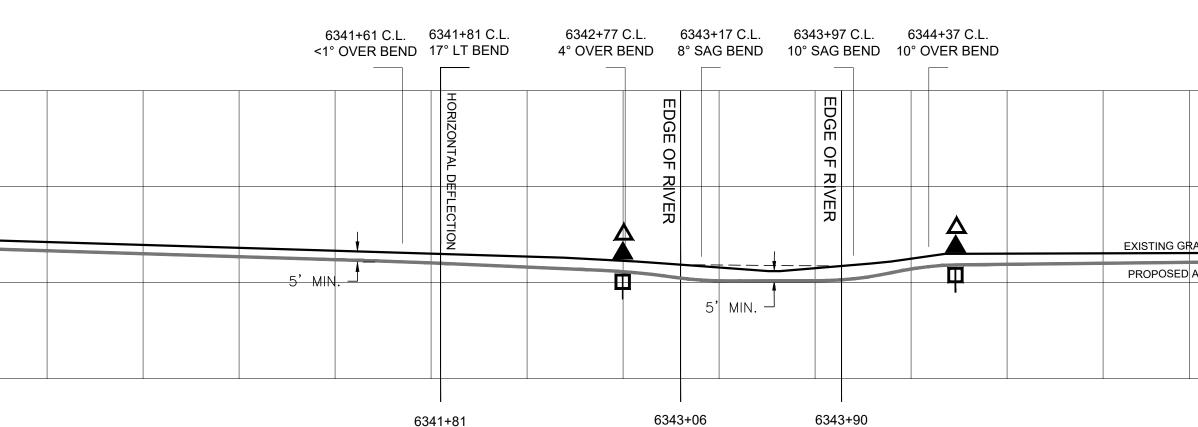
STREAM AND WETLAND DATA COLLECTED BY NATIONAL RESOURCE GROUP, LLC.

MAPPING DATUM-UTM 17-NAD 83 CONTOUR INTERVAL - 1 FOOT & 40 FOOT

600	 
1000	
1550	
1500	
450	



SYM.	
В	
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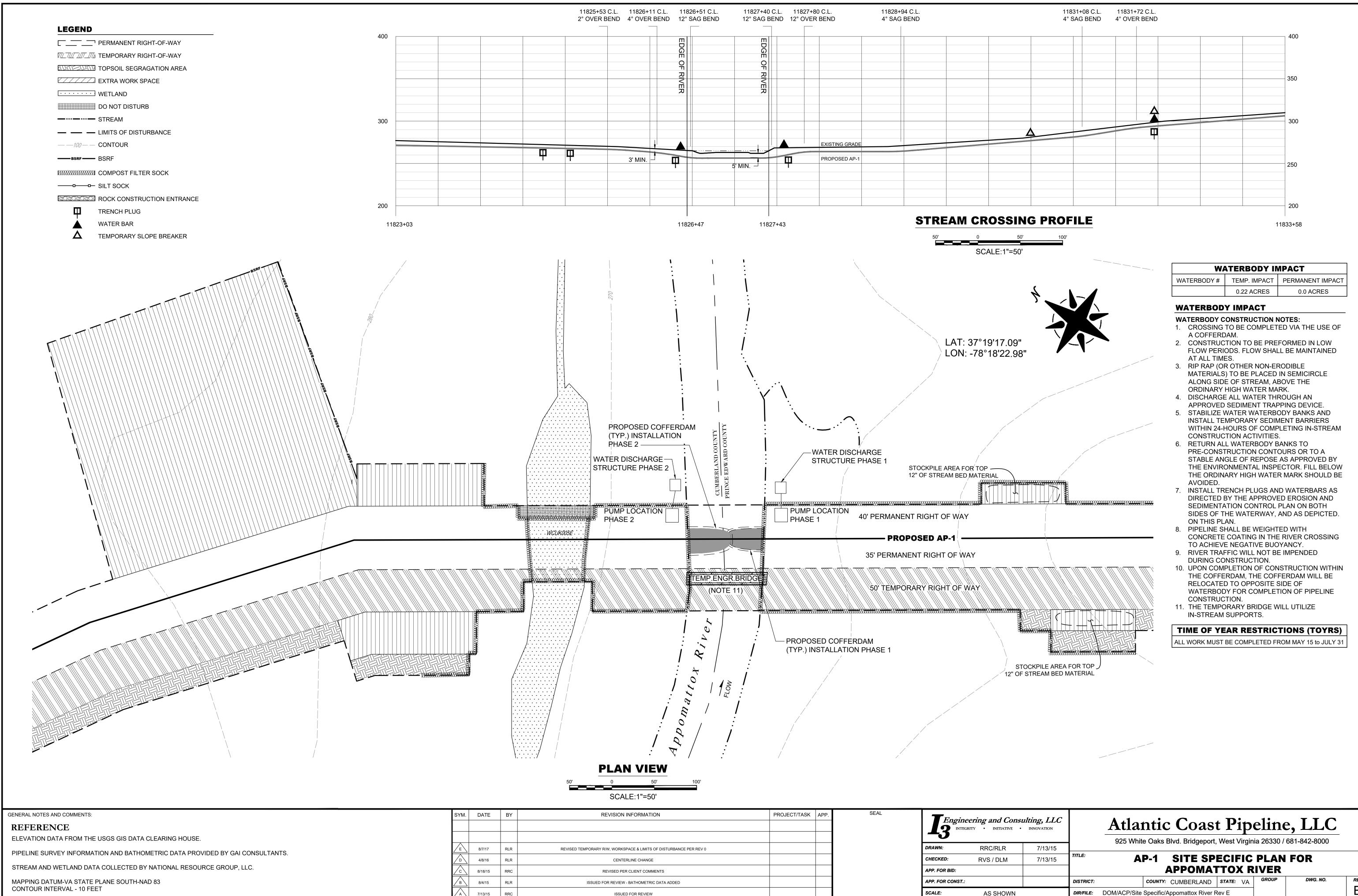
# **STREAM CROSSING PROFILE**

DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL		
						DRAWN:	RLR
						CHECKED:	RVS / DLM
						APP. FOR BID:	
8/3/17	ALC	REVISED TEMPORARY R/W AND WORKSPACE				APP. FOR CONST.:	
11/16/15	RLR	ISSUED FOR REVIEW				SCALE:	AS SHOWN

					1600		
RADE					1550		
DAP-1 <u>7</u>	3' MIN. —				1500 1450		
				N 			
					LAT: 38°07 LON: -79°	7'56.90" '36'33.23"	
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					- 1560 -		
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					t Pipelin Virginia 26301 / Ph	-	
	16/16 16/16 DISTRI	COWPA	<b>AP-1</b>	SITE SP	ECIFIC PLA OPTION B (	N FOR	

DOM/ACP/Site Specific/Cowpasture Rev B

В



WATERBODY IMPACT						
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT				
	0.22 ACRES	0.0 ACRES				

<i>Consulting, LLC</i>		Atlantic Coast Pipeline, LLC							
			925 White	e Oaks B	Slvd Bridgeport	West Vird	, 26330 vinia	681-842-8000	
LR	7/13/15		925 White Oaks Blvd. Bridgeport, West Virginia 26330 / 681-842-8000						
LM	7/13/15	AP-1 SITE SPECIFIC PLAN FOR APPOMATTOX RIVER							
		DISTRICT:		COUNTY:	CUMBERLAND	STATE: V	GROUP	DWG. NO.	REV.
IOWN		DIR/FILE:	DOM/ACP/Site S	Specific/A	ppomattox River R	lev E			E

<u> </u>	PERMANENT RIGHT-OF-WAY		
TILTILI	TEMPORARY RIGHT-OF-WAY		
	TOPSOIL SEGRAGATION AREA		
	EXTRA WORK SPACE		
•••••	WETLAND		
	DO NOT DISTURB		
	STREAM		
	LIMITS OF DISTURBANCE		
— — 100 — —	CONTOUR		
BSRF ———	BSRF		
2222222222222222222222222	COMPOST FILTER SOCK		
oo	SILT SOCK		
ROCK CONSTRUCTION ENTRANCE			
Δ	TEMPORARY SLOPE BREAKER		

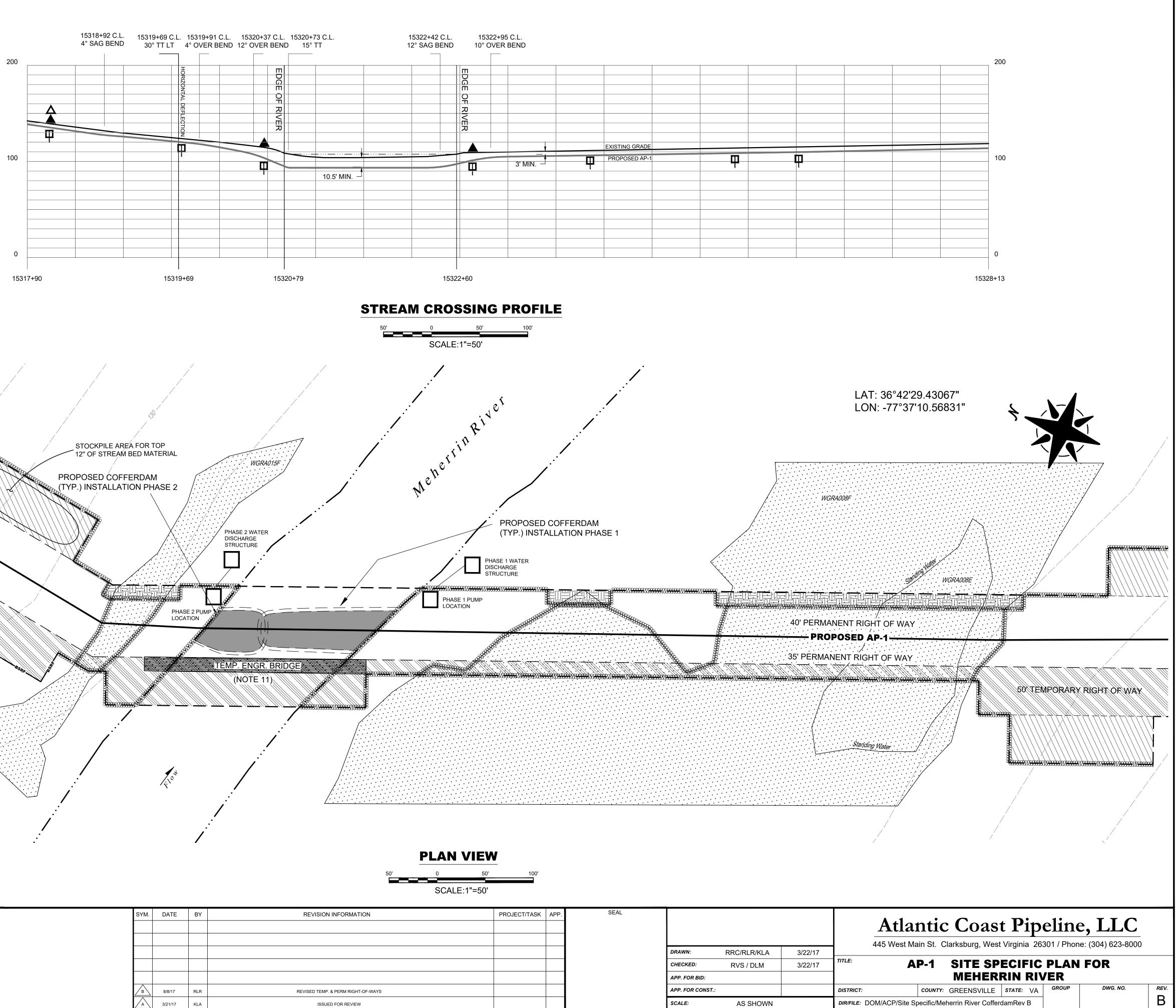
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT				
	0.37 ACRES	0.0 ACRES				

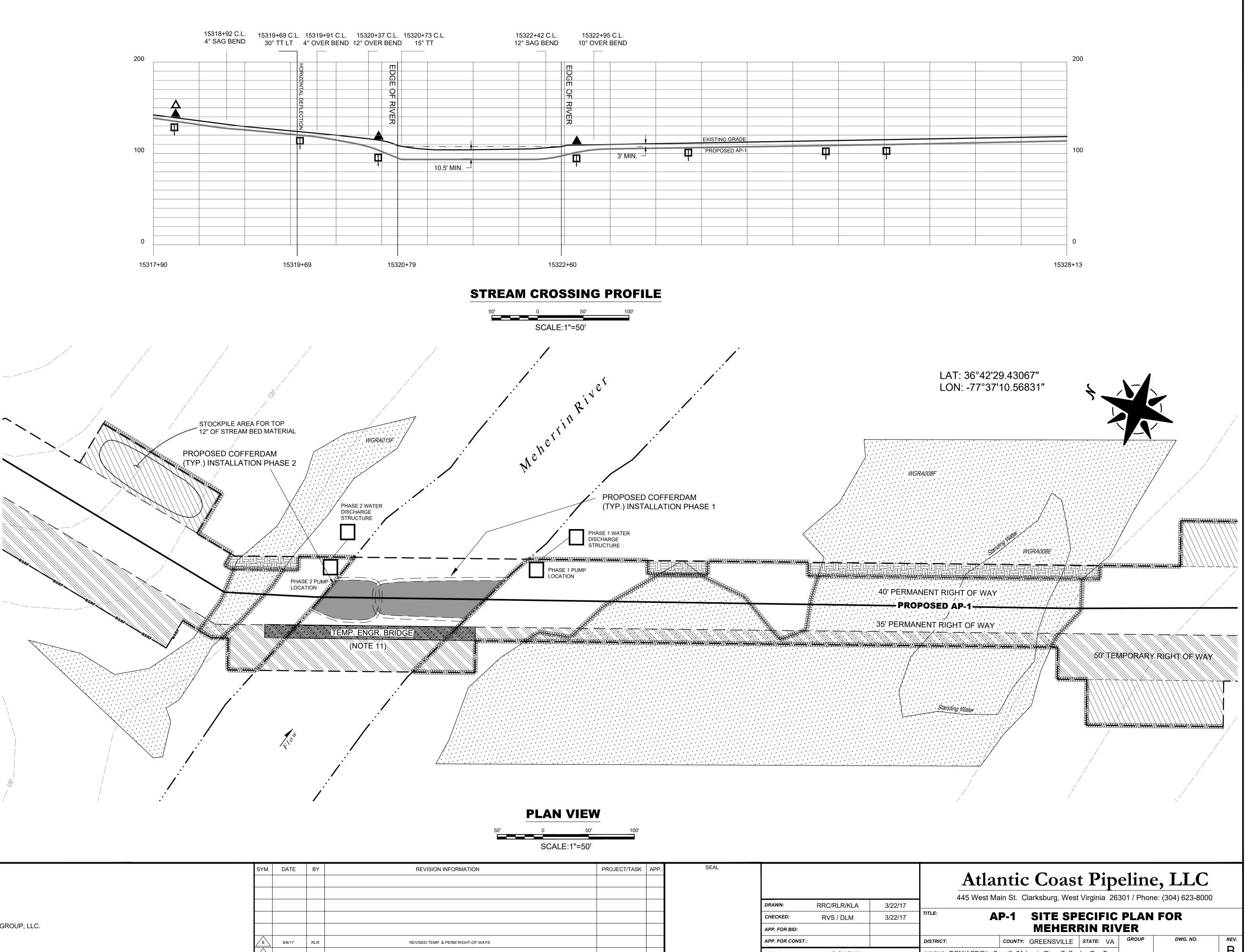
# WATERBODY IMPACT

WATERBODY CONSTRUCTION NOTES: 1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.

- 2. CONSTRUCTION TO BE PREFORMED IN LOW FLOW PERIODS. FLOW SHALL BE MAINTAINED AT ALL TIMES.
- 3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM, ABOVE THE ORDINARY HIGH WATER MARK.
- 4. DISCHARGE ALL WATER THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE.
- 5. STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM
- CONSTRUCTION ACTIVITIES. 6. RETURN ALL WATERBODY BANKS TO PRE-CONSTRUCTION CONTOURS OR TO A
- STABLE ANGLE OF REPOSE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR. FILL BELOW THE ORDINARY HIGH WATER MARK SHOULD BE AVOIDED.
- 7. INSTALL TRENCH PLUGS AND WATERBARS AS DIRECTED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN ON BOTH SIDES OF THE WATERWAY, AND AS DEPICTED. ON THIS PLAN.
- 8. PIPELINE SHALL BE WEIGHTED WITH CONCRETE COATING IN THE RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.
- 9. RIVER TRAFFIC WILL NOT BE IMPENDED DURING CONSTRUCTION.
- 10. UPON COMPLETION OF CONSTRUCTION WITHIN THE COFFERDAM, THE COFFERDAM WILL BE RELOCATED TO OPPOSITE SIDE OF WATERBODY FOR COMPLETION OF PIPELINE CONSTRUCTION.
- 11. THE TEMPORARY BRIDGE WILL UTILIZE IN-STREAM SUPPORTS.

TIME OF YEAR RESTRICTIONS (TOYRS) ALL WORK MUST BE COMPLETED FROM FEBRUARY 15 to JUNE 30 / MAY 15 to JULY 31 / APRIL 15 to JUNE 15 & AUGUST 15 to SEPTEMBER 30





GENERAL NOTES AND COMMENTS:

### REFERENCE

ELEVATION DATA FROM THE USGS GIS DATA CLEARING HOUSE.

PIPELINE SURVEY INFORMATION PROVIDED BY GAI CONSULTANTS.

STREAM AND WETLAND DATA COLLECTED BY NATIONAL RESOURCE GROUP, LLC.

MAPPING DATUM-VA STATE PLANE SOUTH-NAD 83 CONTOUR INTERVAL - 10 FEET

SYM.	
В	
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						-	
DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL		
						DRAWN:	RRC/RLR/KL
						CHECKED:	RVS / DLM
						APP. FOR BID:	
8/8/17	RLR	REVISED TEMP. & PERM RIGHT-OF-WAYS				APP. FOR CONST.:	
3/21/17	KLA	ISSUED FOR REVIEW				SCALE:	AS SHOW

## LEGEND

	PERMANENT RIGHT-OF-WAY				
V71_711_117_117	TEMPORARY RIGHT-OF-WAY				
	TOPSOIL SEGRAGATION AREA				
	EXTRA WORK SPACE				
WETLAND					
DO NOT DISTURB					
	STREAM				
	LIMITS OF DISTURBANCE				
— — 100 — —	CONTOUR				
——BSRF ——	BSRF				
R888888888888888888888	COMPOST FILTER SOCK				
<u> </u>	ROCK CONSTRUCTION ENTRANCE				
Ψ	TRENCH PLUG				
À	WATER BAR				
Δ	TEMPORARY SLOPE BREAKER				
WATERBODY IMPACT					

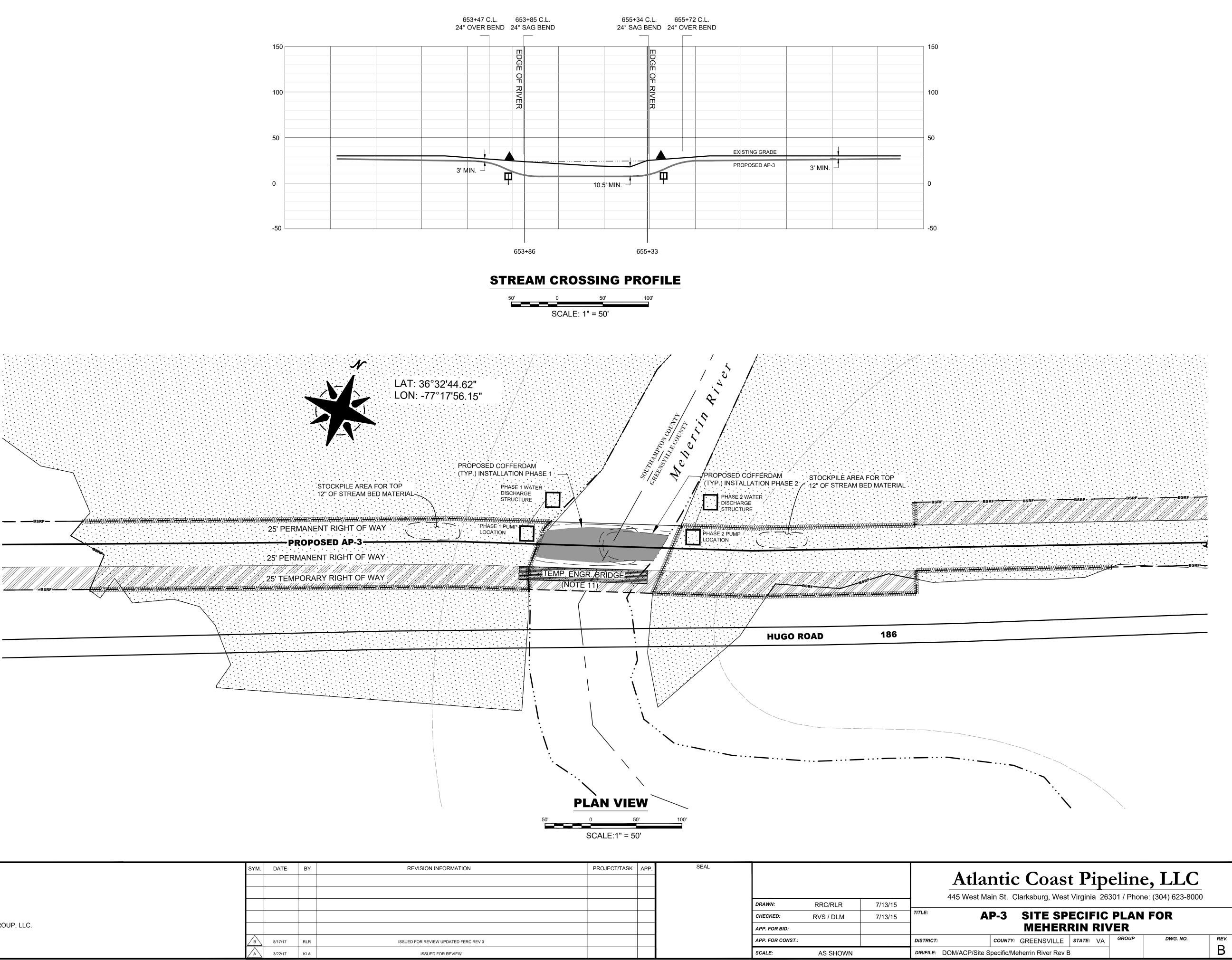
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT					
	0.22 ACRES	0.0 ACRES					

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MAPPING DATUM-VA STATE PLANE SOUTH-NAD 83 CONTOUR INTERVAL - 10 FEET

DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL		
						DRAWN:	RRC/RLR
						CHECKED:	RVS / DLM
						APP. FOR BID:	
8/17/17	RLR	ISSUED FOR REVIEW UPDATED FERC REV 0				APP. FOR CONST.:	
3/22/17	KLA	ISSUED FOR REVIEW				SCALE:	AS SHOV