

**LEGEND**

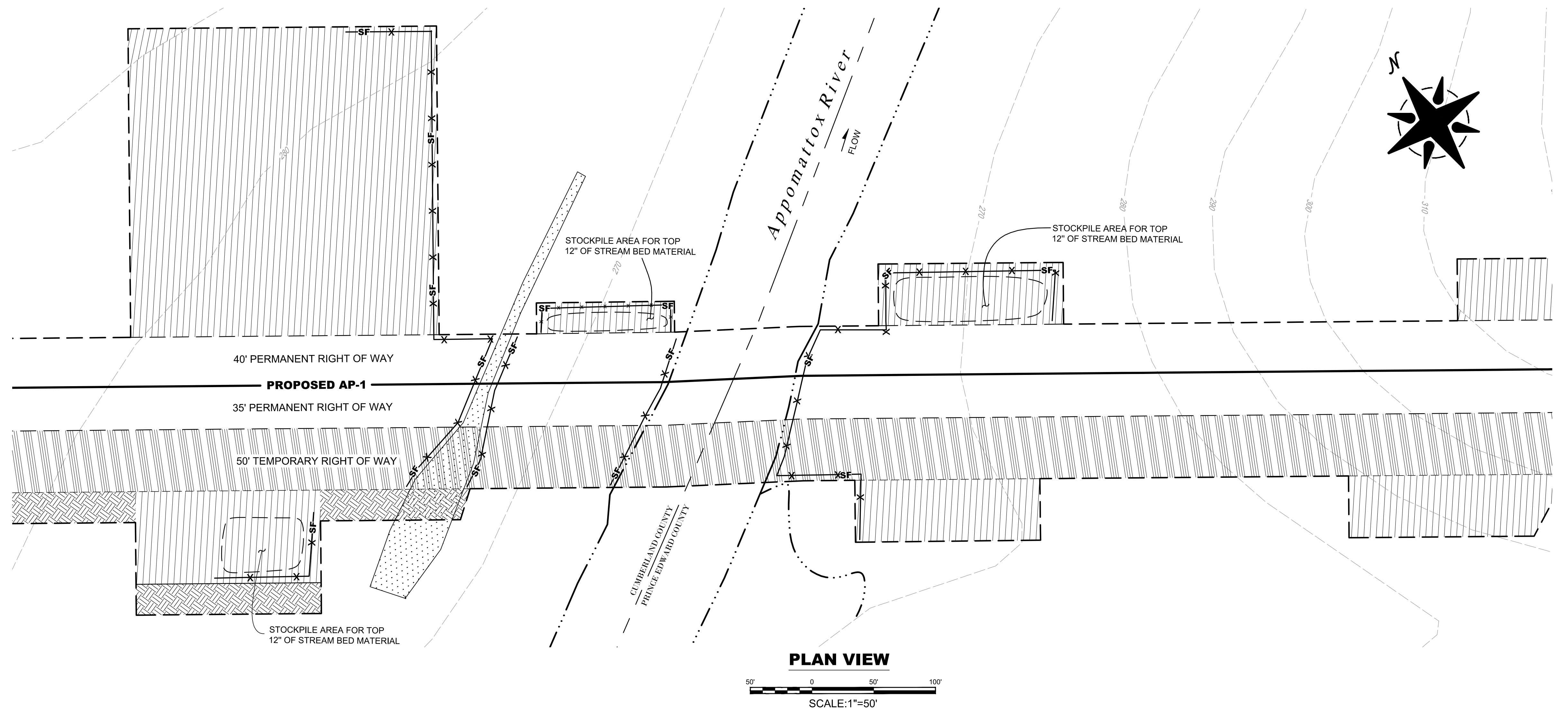
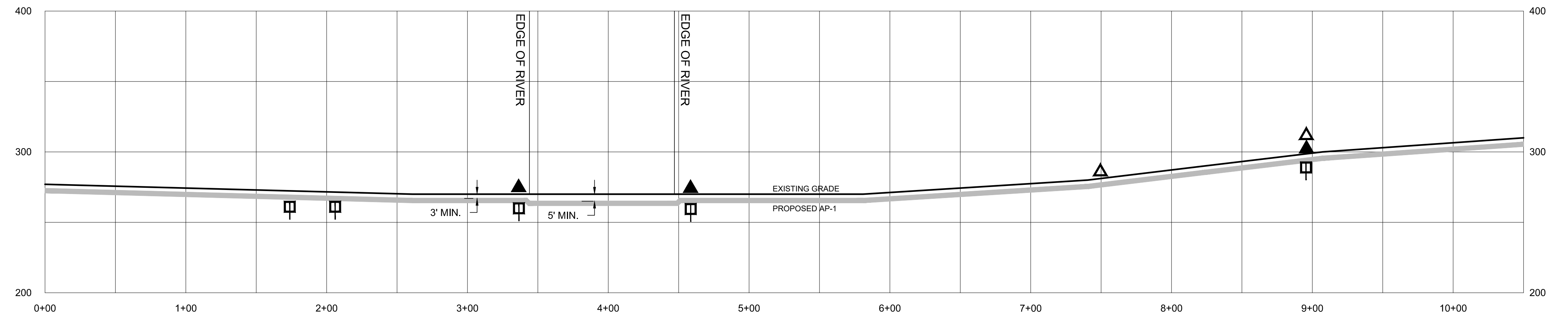
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TOPSOIL SEGREGATION AREA
- EXTRA WORK SPACE
- WETLAND
- STREAM
- LIMITS OF DISTURBANCE
- CONTOUR
- SILT FENCE
- SILT SOCK
- ROCK CONSTRUCTION ENTRANCE
- TRENCH PLUG
- WATER BAR
- TEMPORARY SLOPE BREAKER

WATERBODY IMPACT		
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT
SCUK011	0.22 ACRES	0.0 ACRES

**WATERBODY IMPACT**

**WATERBODY CONSTRUCTION NOTES:**

1. CROSSING TO BE COMPLETED VIA THE USE OF A COFFERDAM.
2. CONSTRUCTION TO BE PERFORMED 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.
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.
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 PIPESAK OR APPROVED EQUAL IN RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.



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.	DATE	BY	REVISION INFORMATION
△	7/13/15	RRC	ISSUED FOR REVIEW

PROJECT/TASK	APP.	SEAL

**Atlantic Coast Pipeline, LLC**  
 445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

TITLE: <b>AP-1 SITE SPECIFIC PLAN FOR APPOMATTOX RIVER</b>				
DISTRICT:	COUNTY: CUMBERLAND	STATE: VA	GROUP:	DWG. NO. 1
DIR/FILE: DOM/ACP/Site Specific/Appo: attox River			REV. A	

DRAWN:	RRC/RLR	7/13/15
CHECKED:	RVS / DLM	7/13/15
APP. FOR BID:		
APP. FOR CONST.:		
SCALE:	AS SHOWN	

**LEGEND**

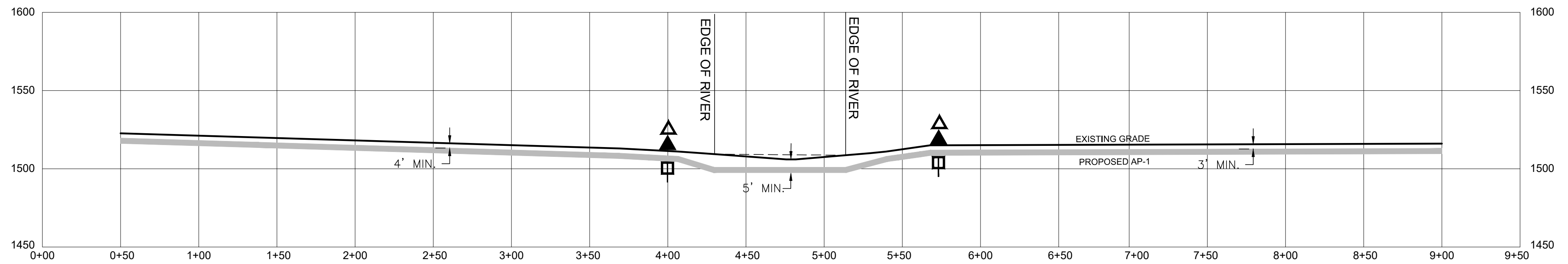
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TOPSOIL SEGREGATION AREA
- EXTRA WORK SPACE
- WETLAND
- STREAM
- LIMITS OF DISTURBANCE
- CONTOUR
- SILT FENCE
- SILT SOCK
- ROCK CONSTRUCTION ENTRANCE
- TRENCH PLUG
- WATER BAR
- TEMPORARY SLOPE BREAKER

WATERBODY IMPACT		
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT
	0.25 ACRES	0.00 ACRES

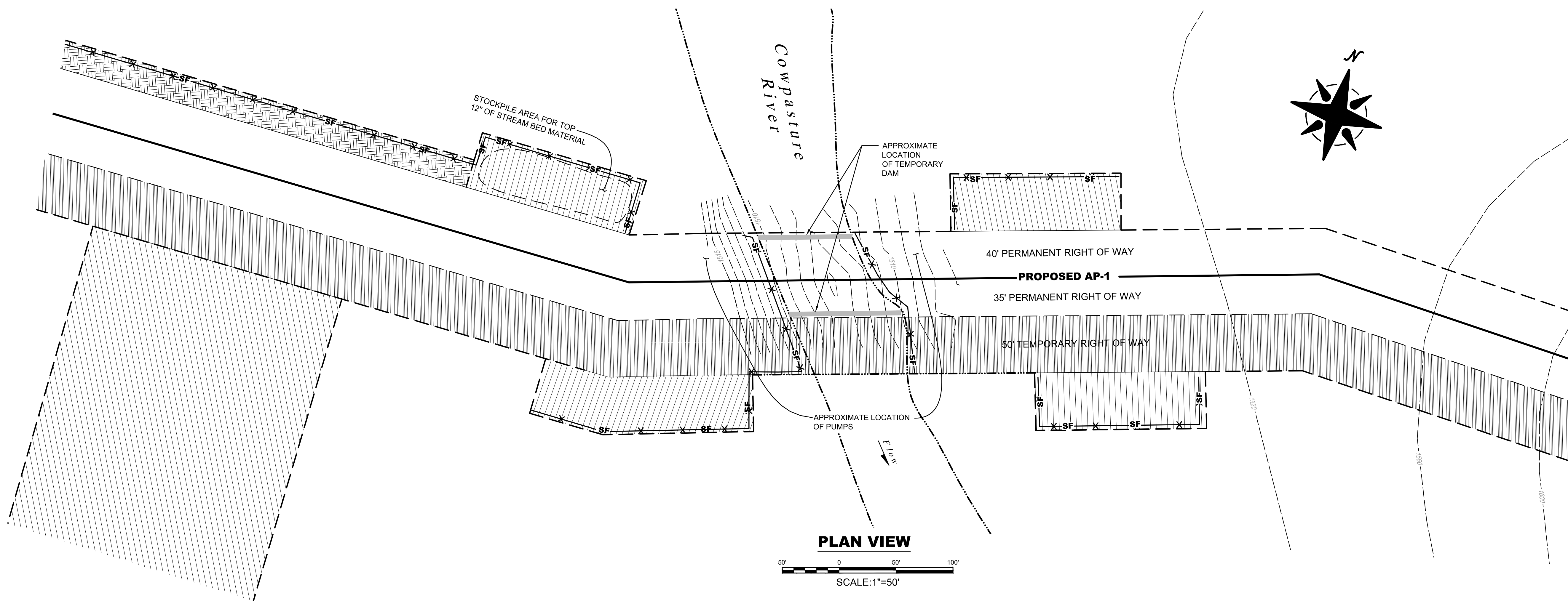
**WATERBODY IMPACT**

**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 EQUAL NUMBER OF BACKUP PUMPS ON SITE AS BEING USED FOR REQUIRED CAPACITY.
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.



**STREAM CROSSING PROFILE**



**PLAN VIEW**



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

SYM.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL
▲	11/16/15	RLR	ISSUED FOR REVIEW			

DRAWN:	RLR	11/16/16
CHECKED:	RVS / DLM	11/16/16
APP. FOR BID:		
APP. FOR CONST.:		
SCALE:	AS SHOWN	

**Atlantic Coast Pipeline, LLC**  
 445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

**TITLE: AP-1 SITE SPECIFIC PLAN FOR COWPASTURE RIVER - OPTION B DAM & PUMP**

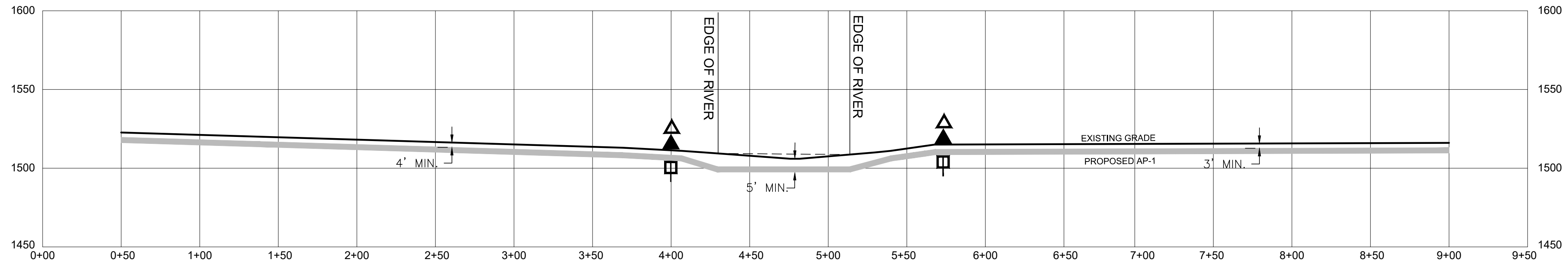
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DIR/FILE:	DOM/ACP/Site Specific/Cowpasture						A

**LEGEND**

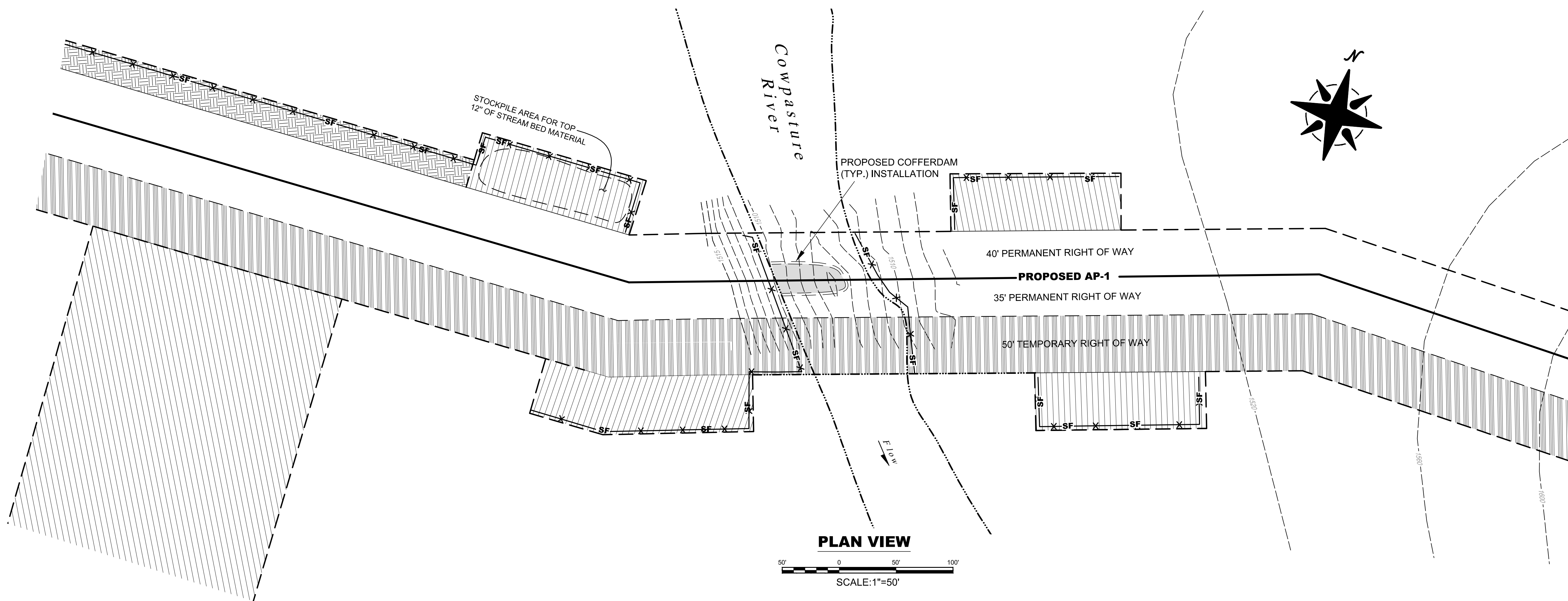
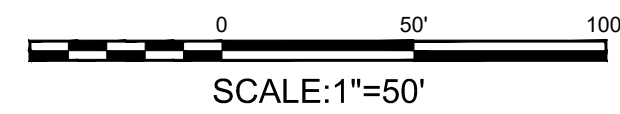
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TOPSOIL SEGREGATION AREA
- EXTRA WORK SPACE
- WETLAND
- STREAM
- LIMITS OF DISTURBANCE
- CONTOUR
- SILT FENCE
- SILT SOCK
- ROCK CONSTRUCTION ENTRANCE
- TRENCH PLUG
- WATER BAR
- TEMPORARY SLOPE BREAKER

WATERBODY IMPACT		
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT
	0.25 ACRES	0.00 ACRES

- WATERBODY IMPACT**
- WATERBODY CONSTRUCTION NOTES:
1. CROSSING TO BE A COFFERDAM.
  2. CONSTRUCTION TO BE PERFORMED IN LOW FLOW PERIODS.
  3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM.
  4. DISCHARGED WATER INTO A SEDIMENT TRAPPING DEVICE.
  5. STABILIZE 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.
  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. DO NOT USE HERBICIDES OR PESTICIDES WITHIN 100 FEET OF THE WATERBODY.



**STREAM CROSSING PROFILE**



**PLAN VIEW**



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

SYM.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL
A	11/16/15	RLR	ISSUED FOR REVIEW			

**Atlantic Coast Pipeline, LLC**  
445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

<b>DRAWN:</b> RLR	11/16/16	<b>TITLE:</b> <b>AP-1 SITE SPECIFIC PLAN FOR COWPASTURE RIVER - OPTION A COFFERDAM</b>	<b>CHECKED:</b> RVS / DLM	11/16/16
<b>APP. FOR BID:</b>			<b>DISTRICT:</b>	<b>COUNTY:</b> BATH
<b>APP. FOR CONST.:</b>			<b>STATE:</b> VA	<b>GROUP:</b>
<b>SCALE:</b> AS SHOWN			<b>DIR/FILE:</b> DOM/ACP/Site Specific/Cowpasture	<b>DWG. NO.:</b>

<b>REV.</b>	<b>A</b>
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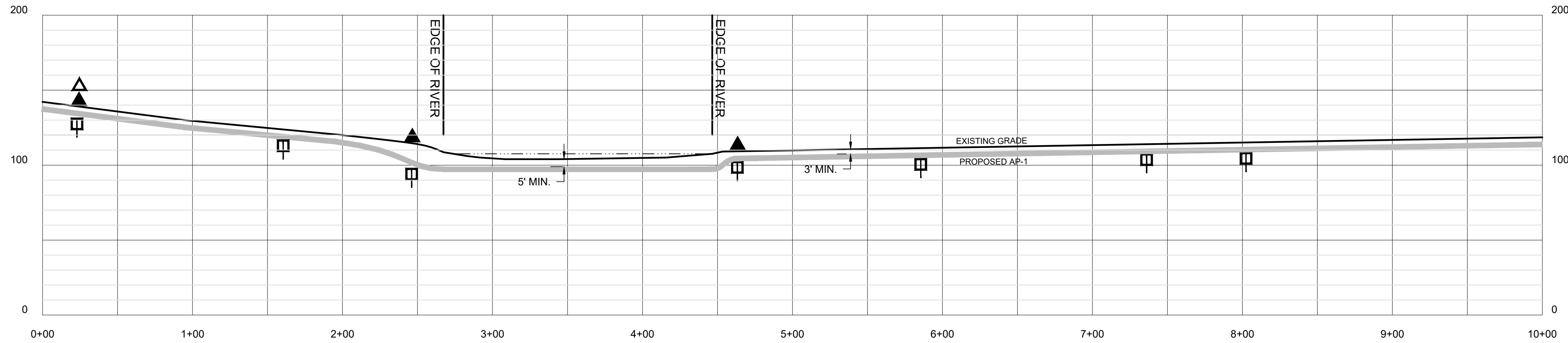


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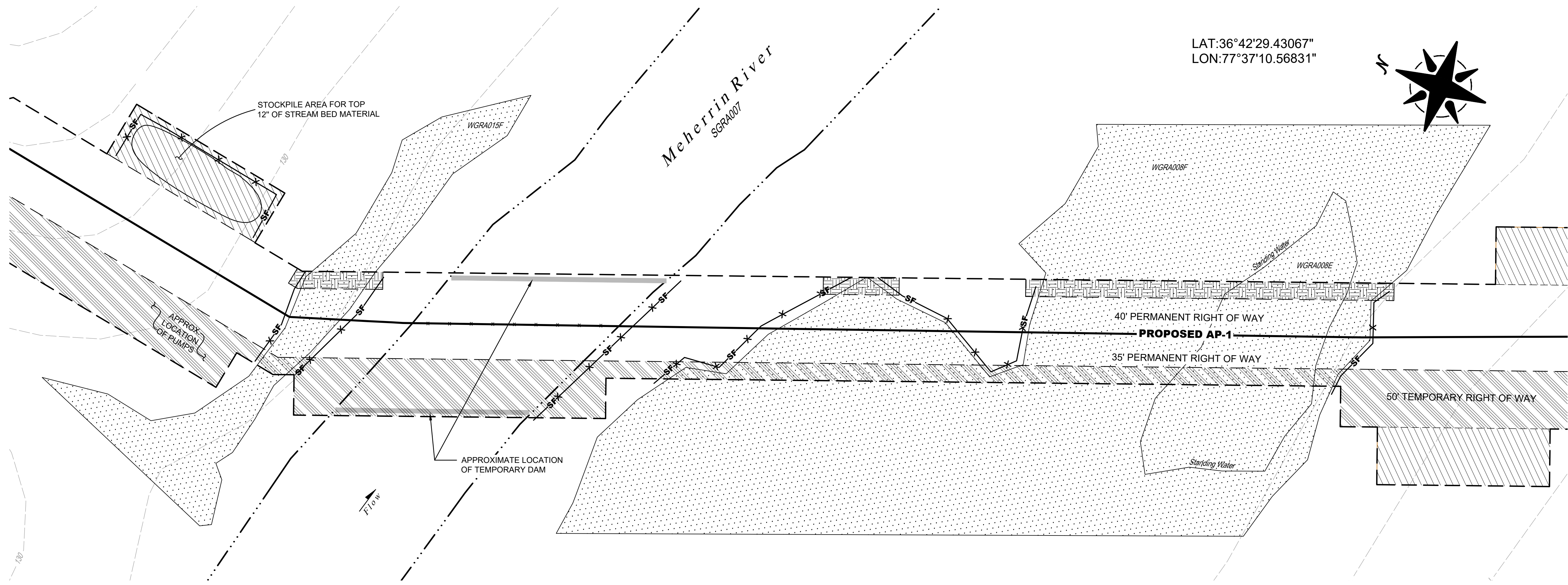
- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TOPSOIL SEGREGATION AREA
- EXTRA WORK SPACE
- WETLAND
- STREAM
- LIMITS OF DISTURBANCE
- CONTOUR
- SILT FENCE
- SILT SOCK
- ROCK CONSTRUCTION ENTRANCE
- TRENCH PLUG
- WATER BAR
- TEMPORARY SLOPE BREAKER

WATERBODY IMPACT		
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT
SGRA007	0.48 ACRES	0.0 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.



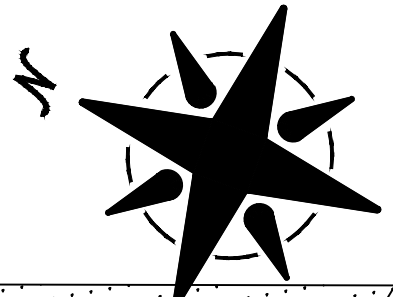
**STREAM CROSSING PROFILE**



**PLAN VIEW**



LAT: 36°42'29.43067"  
LON: 77°37'10.56831"



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.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.
E	3/22/17	KLA	REVISED PER CLIENT COMMENTS		
D	11/20/15	RRC	REVISED PER CLIENT COMMENTS		
C	8/18/15	RRC	REVISED PER CLIENT COMMENTS		
B	8/4/15	RRC	ISSUED FOR REVIEW - BATHOMETRIC DATA ADDED		
A	7/13/15	RRC	ISSUED FOR REVIEW		

SEAL

<b>DRAWN:</b>	RRC/RLR	7/13/15
<b>CHECKED:</b>	RVS / DLM	7/13/15
<b>APP. FOR BID:</b>		
<b>APP. FOR CONST.:</b>		
<b>SCALE:</b>	AS SHOWN	

**Atlantic Coast Pipeline, LLC**  
 445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

**AP-1 SITE SPECIFIC PLAN FOR MEHERRIN RIVER**

<b>DISTRICT:</b>	<b>COUNTY:</b> GREENSVILLE	<b>STATE:</b> VA	<b>GROUP:</b>	<b>DWG. NO.:</b>	<b>REV:</b>
<b>DIR/FILE:</b>	DOM/ACP/Site Specific/Meherrin River Rev E				<b>E</b>



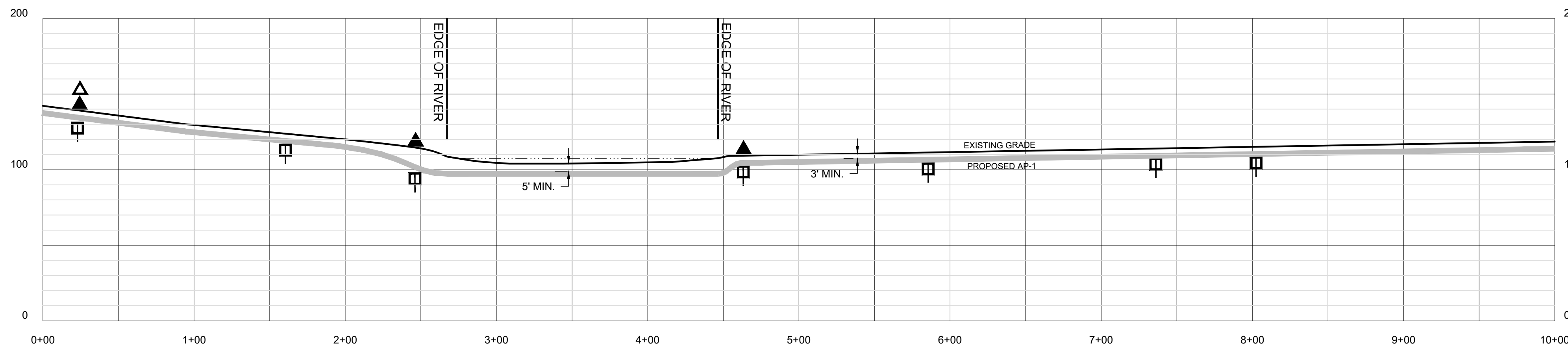
**LEGEND**

- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TOPSOIL SEGREGATION AREA
- EXTRA WORK SPACE
- WETLAND
- STREAM
- LIMITS OF DISTURBANCE
- CONTOUR
- SILT FENCE
- SILT SOCK
- ROCK CONSTRUCTION ENTRANCE
- TRENCH PLUG
- WATER BAR
- TEMPORARY SLOPE BREAKER

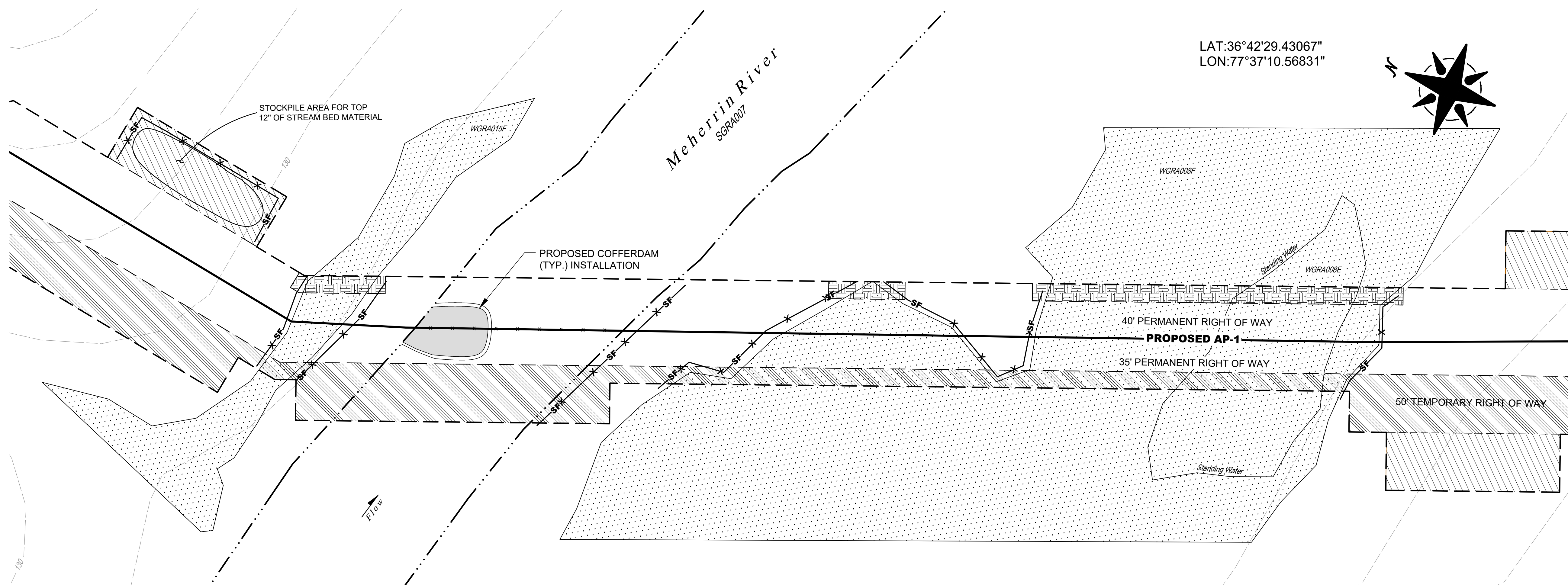
WATERBODY IMPACT		
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT
SGRA007	0.48 ACRES	0.0 ACRES

**WATERBODY IMPACT**

- WATERBODY CONSTRUCTION NOTES:
1. CROSSING TO BE A COFFERDAM.
  2. CONSTRUCTION TO BE PERFORMED IN LOW FLOW PERIODS.
  3. RIP RAP (OR OTHER NON-ERODIBLE MATERIALS) TO BE PLACED IN SEMICIRCLE ALONG SIDE OF STREAM.
  4. DISCHARGED WATER INTO A SEDIMENT TRAPPING DEVICE.
  5. STABILIZE 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.
  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. DO NOT USE HERBICIDES OR PESTICIDES WITHIN 100 FEET OF THE WATERBODY.



**STREAM CROSSING PROFILE**



**PLAN VIEW**



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.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL
△	3/21/17	KLA	ISSUED FOR REVIEW			

DRAWN:	RRC/RLR/KLA	3/22/17
CHECKED:	RVS / DLM	3/22/17
APP. FOR BID:		
APP. FOR CONST.:		
SCALE:	AS SHOWN	

**Atlantic Coast Pipeline, LLC**  
445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

**AP-1 SITE SPECIFIC PLAN FOR MEHERRIN RIVER**

DISTRICT:	COUNTY: GREENSVILLE	STATE: VA	GROUP:	DWG. NO.:	REV:
DIR/FILE: DOM/ACP/Site Specific/Meherrin River Cofferdam Rev A					A



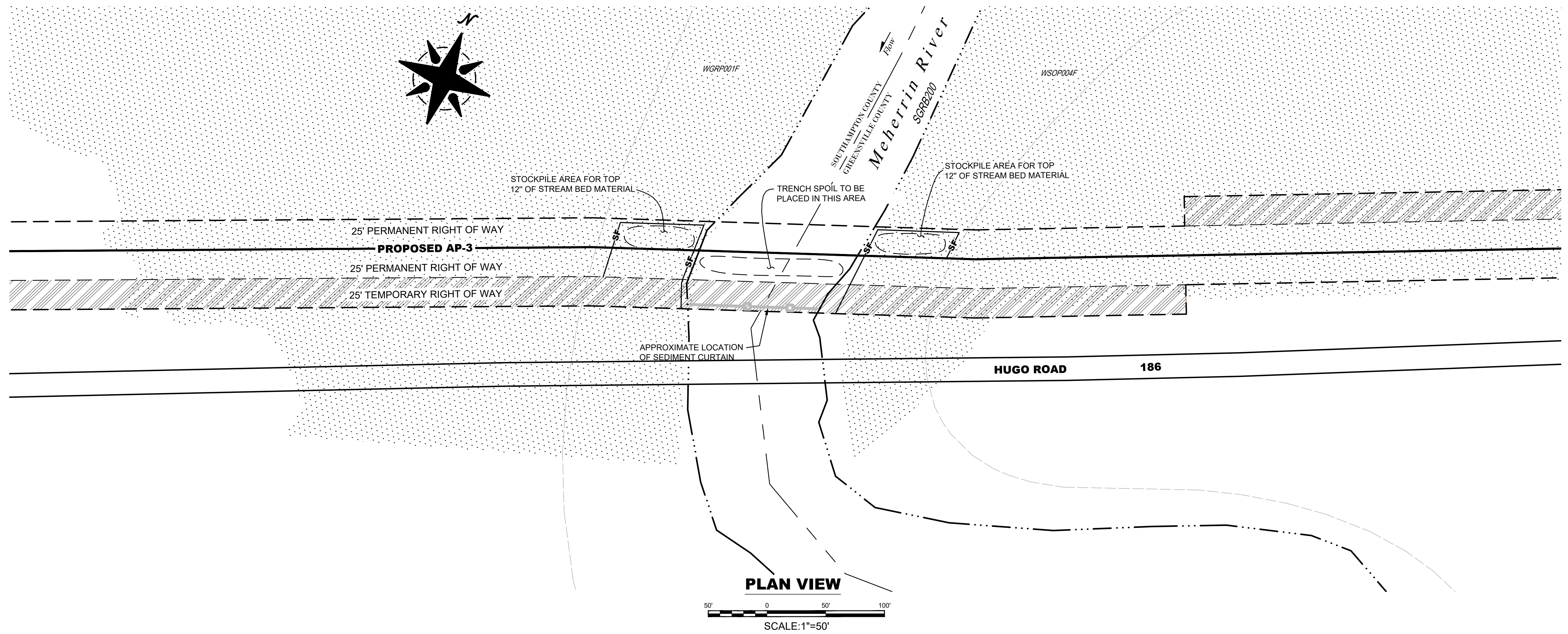
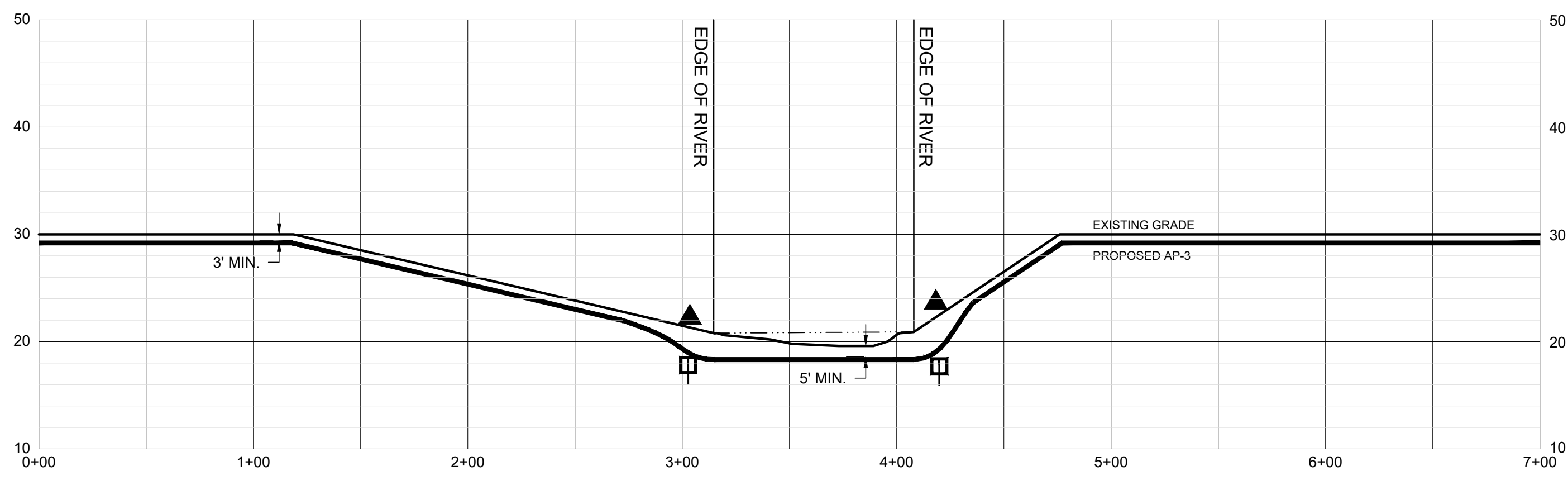
**LEGEND**

- PERMANENT RIGHT-OF-WAY
- TEMPORARY RIGHT-OF-WAY
- TOPSOIL SEGREGATION AREA
- EXTRA WORK SPACE
- WETLAND
- STREAM
- LIMITS OF DISTURBANCE
- CONTOUR
- SILT FENCE
- SILT SOCK
- ROCK CONSTRUCTION ENTRANCE
- TRENCH PLUG
- WATER BAR
- TEMPORARY SLOPE BREAKER
- SEDIMENT CURTAIN

WATERBODY IMPACT		
WATERBODY #	TEMP. IMPACT	PERMANENT IMPACT
SGRB200	0.19 ACRES	0.0 ACRES

**WATERBODY IMPACT**

- WATERBODY CONSTRUCTION NOTES:**
- CONSTRUCTION TO BE AN OPEN CUT WET CROSSING.
  - LIMIT USE EQUIPMENT OPERATING IN THE WATERBODY TO THAT NEEDED TO CONSTRUCT THE CROSSING.
  - WHILE OPEN CUTTING IN THE WATERWAY, KEEP EXCAVATION AS CLOSE TO THE BOTTOM OF THE WATERBODY AS POSSIBLE. USE A SMOOTH MOTION AND PLACE THE SEDIMENT ON THE BOTTOM OF THE STREAM. AVOID DROPPING THE MATERIAL AS MUCH AS POSSIBLE.
  - A SEDIMENT CURTAIN SHALL BE USED IN STREAM ON THE DOWNSTREAM SIDE OF THE WORK AREA.
  - STABILIZE WATER WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24-HOURS OF COMPLETING IN-STREAM CONSTRUCTION ACTIVITIES.
  - 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.
  - 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.
  - THE TRAVEL LANE SHALL BE CLEARED WITH SUBSOIL EXCAVATED FROM PIPELINE TRENCH ONLY.
  - PIPELINE SHALL BE WEIGHTED WITH PIPESAK OR APPROVED EQUAL IN RIVER CROSSING TO ACHIEVE NEGATIVE BUOYANCY.



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.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.	SEAL
E	3/22/17	KLA	REVISED PER CLIENT COMMENTS			
D	11/17/15	RRC	REVISED PER CLIENT COMMENTS			
C	8/18/15	RRC	REVISED PER CLIENT COMMENTS			
B	8/4/15	RLR	ISSUED FOR REVIEW - BATHOMETRIC ADDED			
A	7/13/15	RRC	ISSUED FOR REVIEW			

<b>DRAWN:</b>	RRC/RLR	7/13/15
<b>CHECKED:</b>	RVS / DLM	7/13/15
<b>APP. FOR BID:</b>		
<b>APP. FOR CONST.:</b>		
<b>SCALE:</b>	AS SHOWN	

**Atlantic Coast Pipeline, LLC**  
 445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

**TITLE: AP-3 SITE SPECIFIC PLAN FOR MEHERRIN RIVER**

<b>DISTRICT:</b>	<b>COUNTY:</b> GREENSVILLE	<b>STATE:</b> VA	<b>GROUP:</b>	<b>DWG. NO.:</b>	<b>REV.:</b> E
<b>DIR/FILE:</b> DOM/ACP/Site Specific/Meherrin River Rev E					