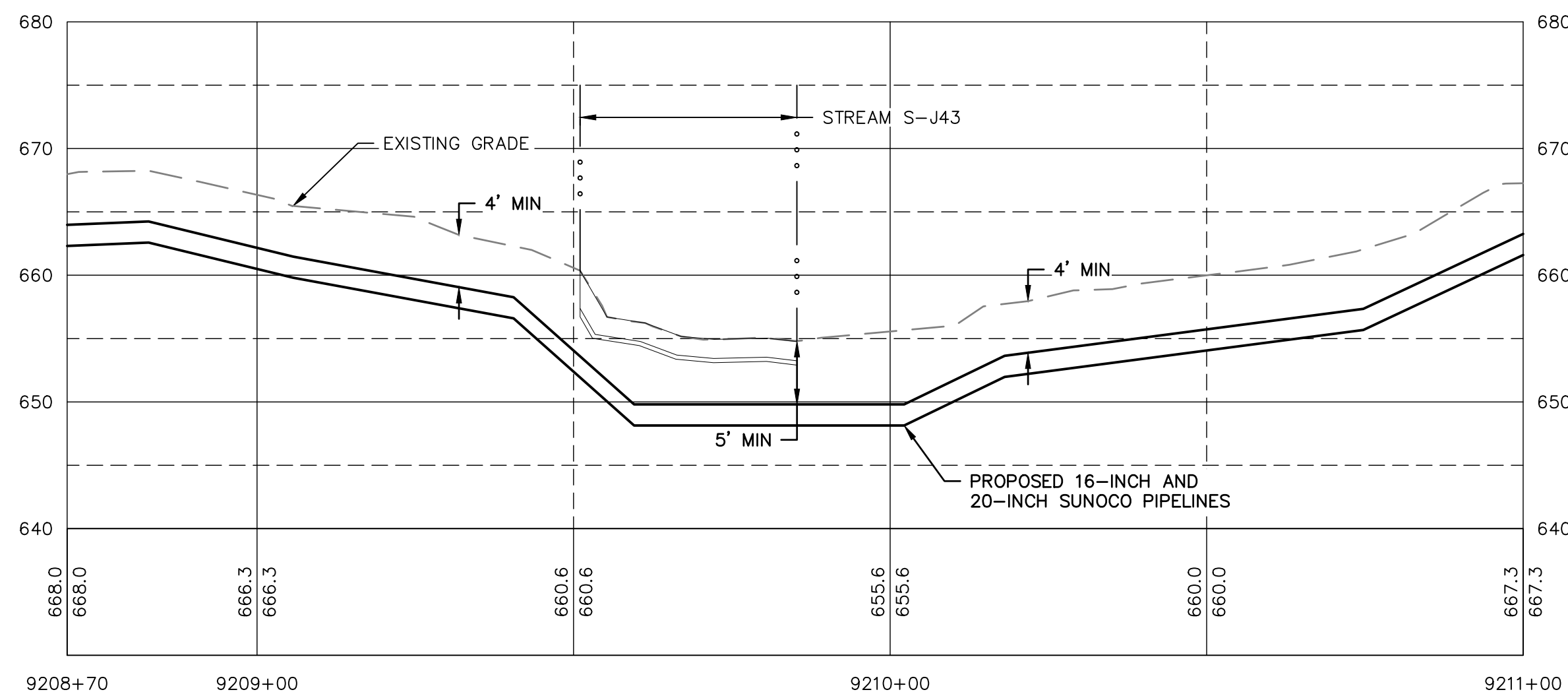
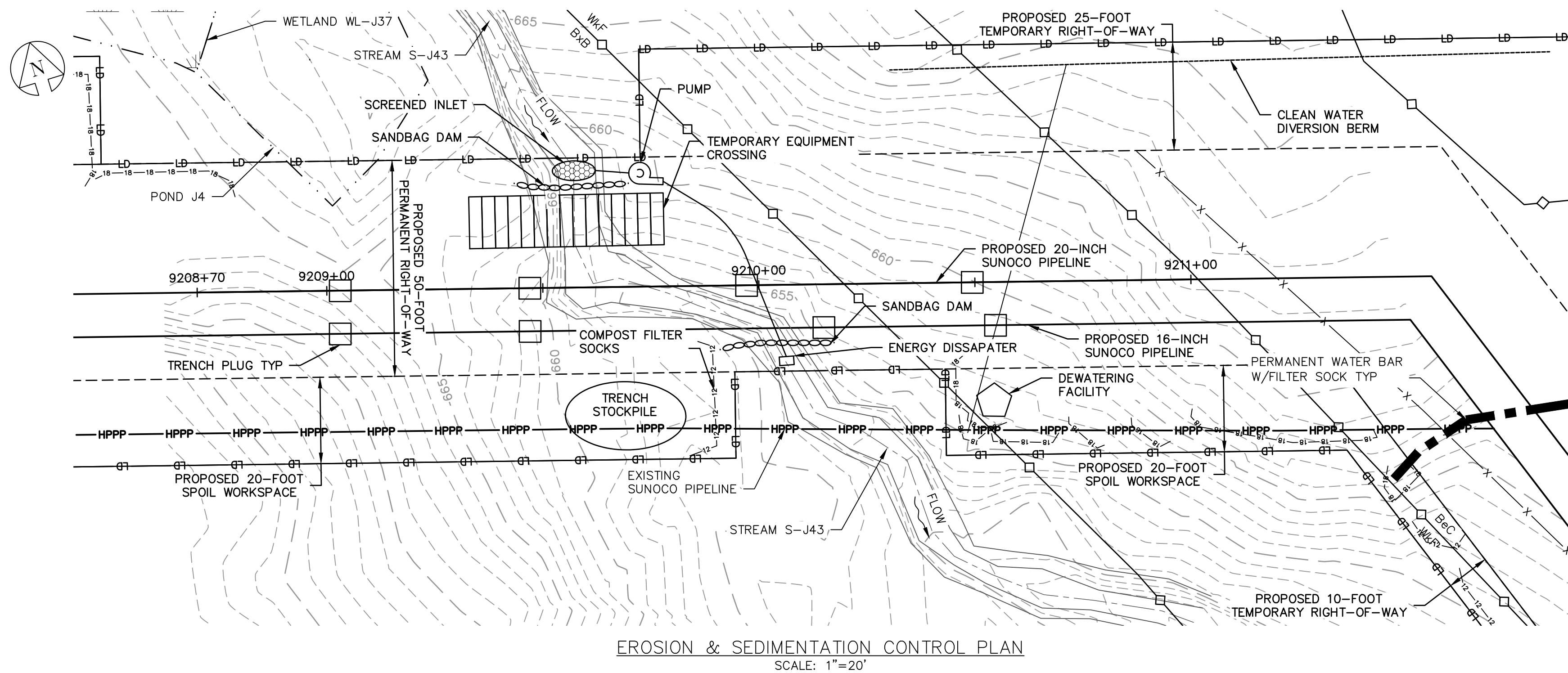
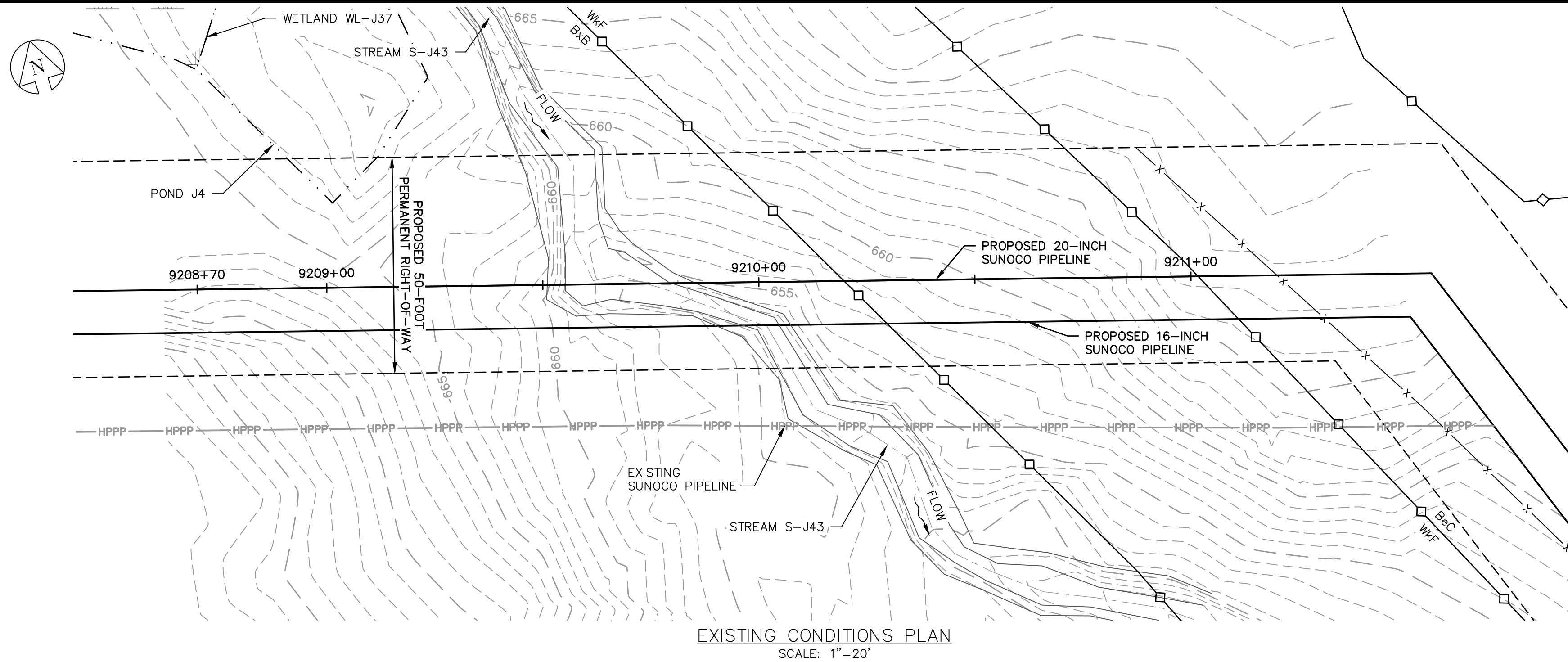




PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

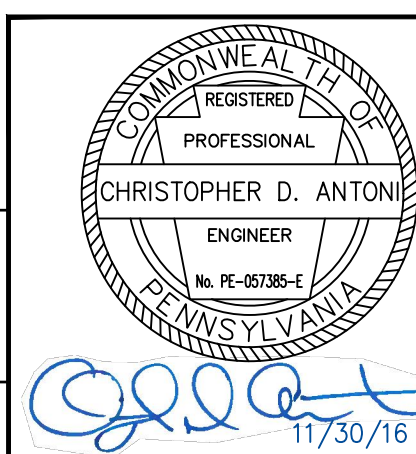
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

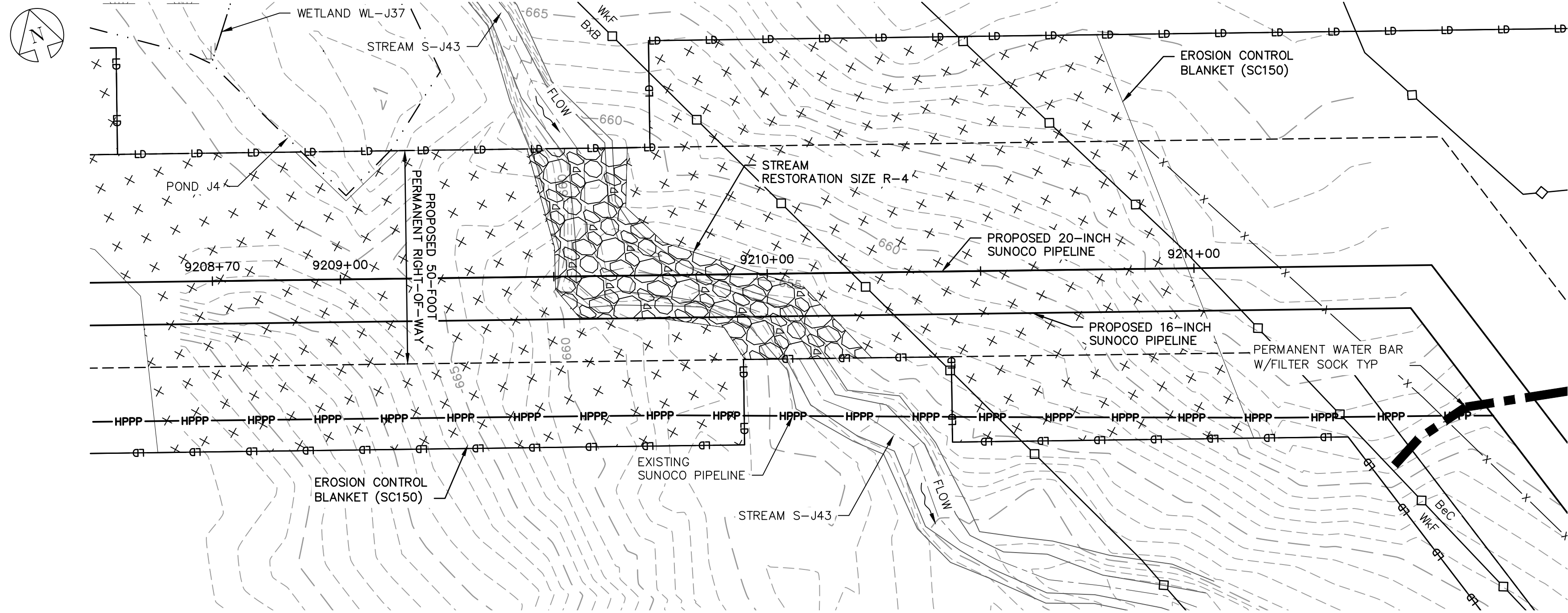
OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-J43 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
CUMBERLAND COUNTY, PA				REV. NO.
DWG. NO. S-J43-A				0

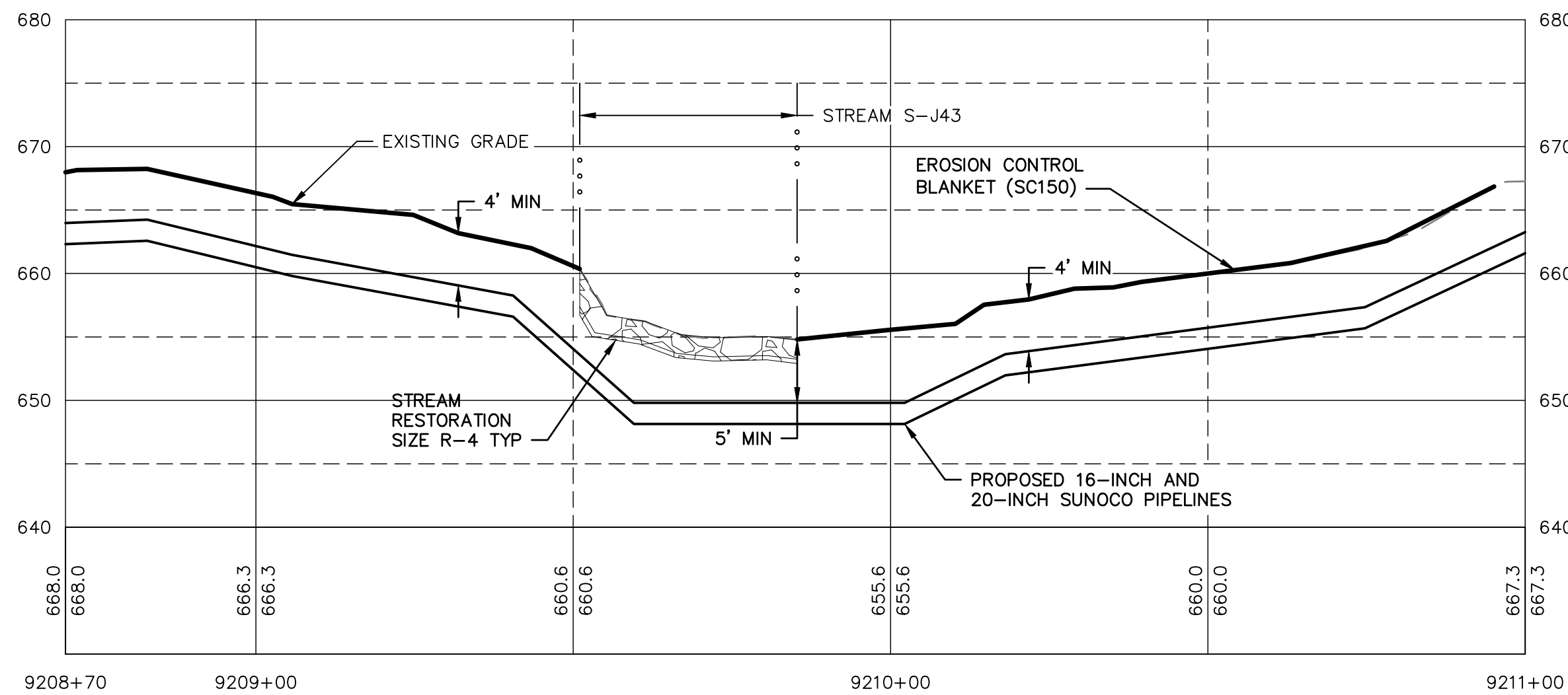
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335



PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

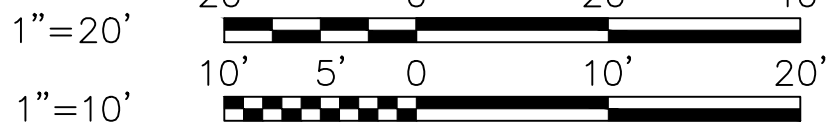
LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

GRAPHIC SCALES



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

ENGINEERING RECORD

DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

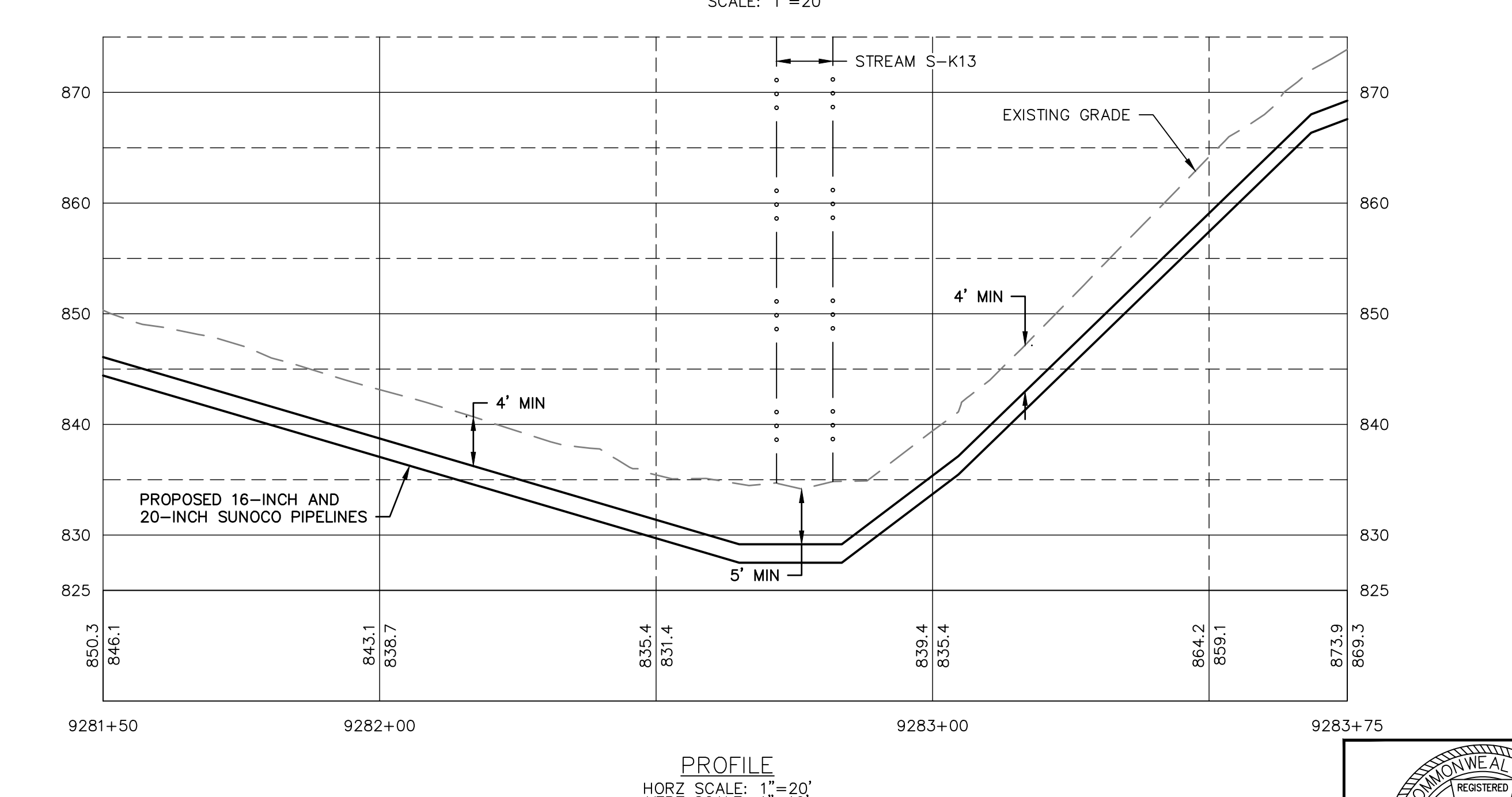
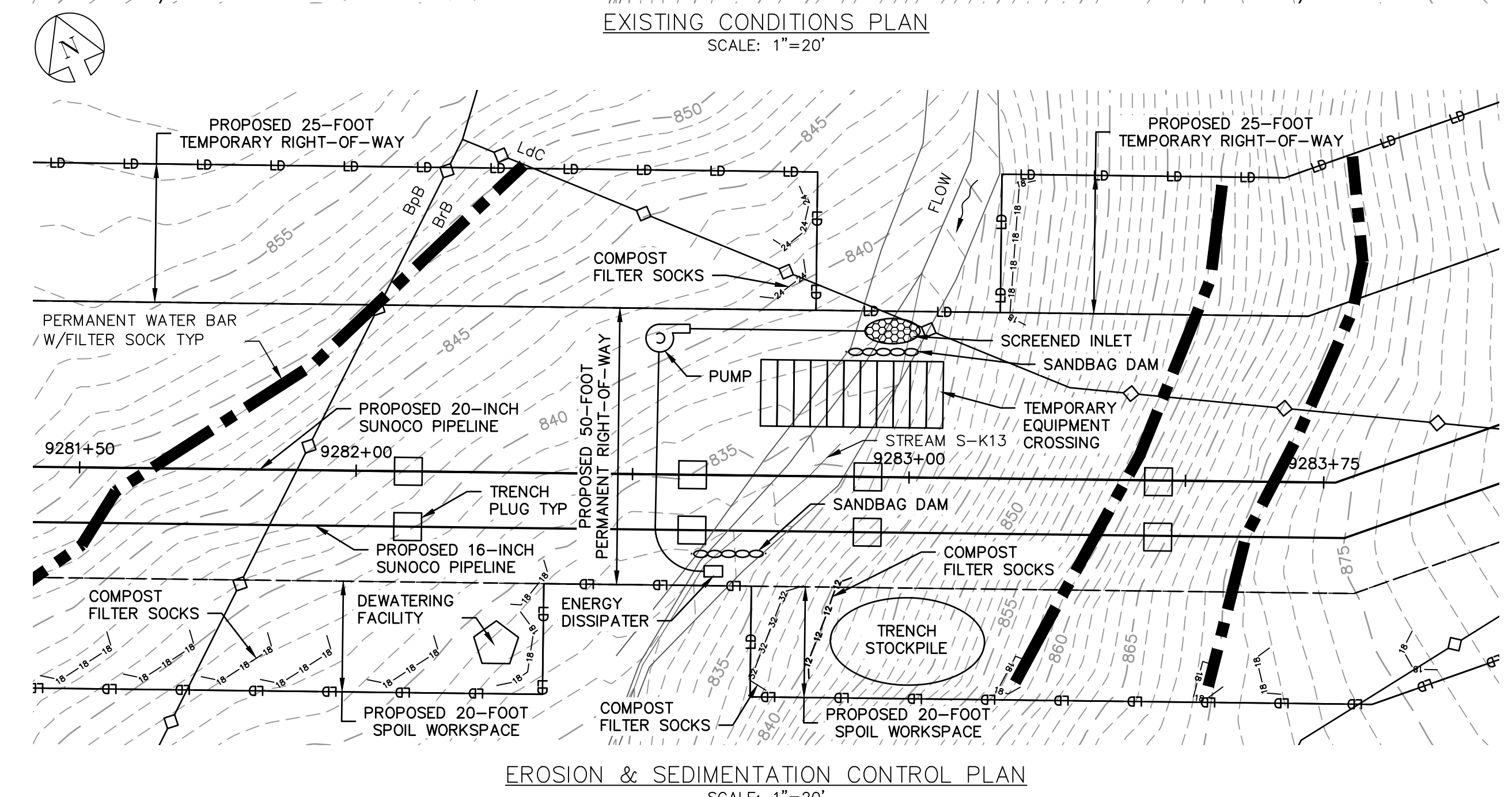
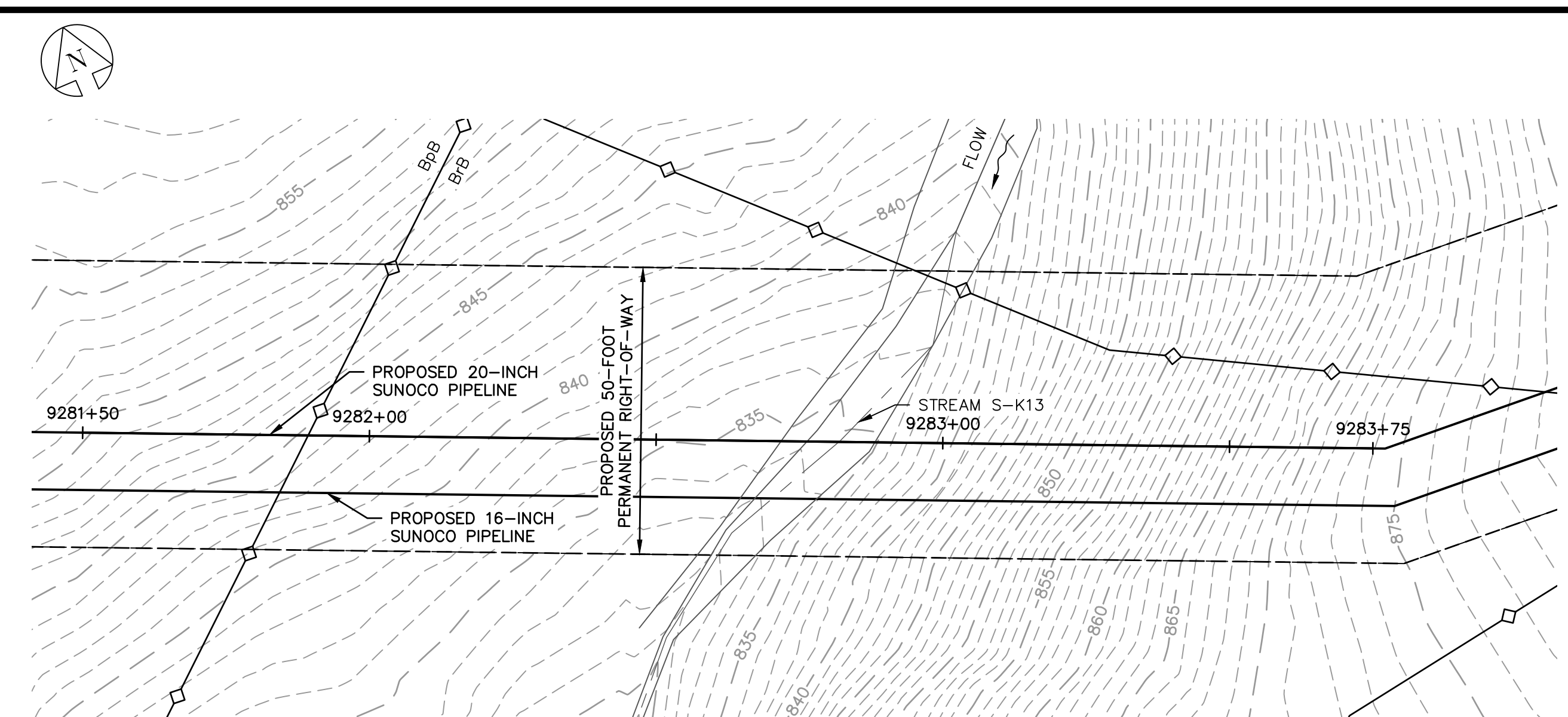
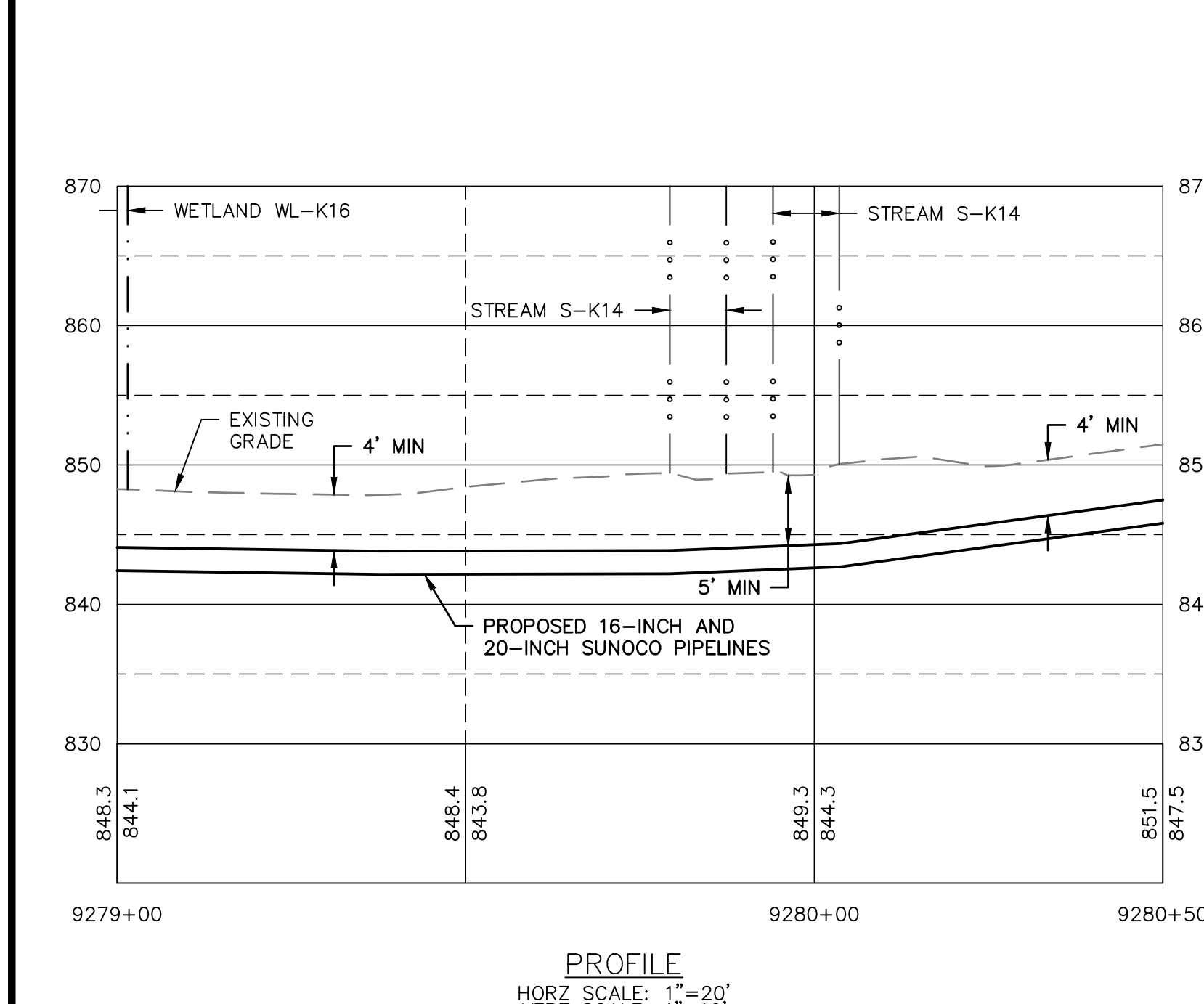
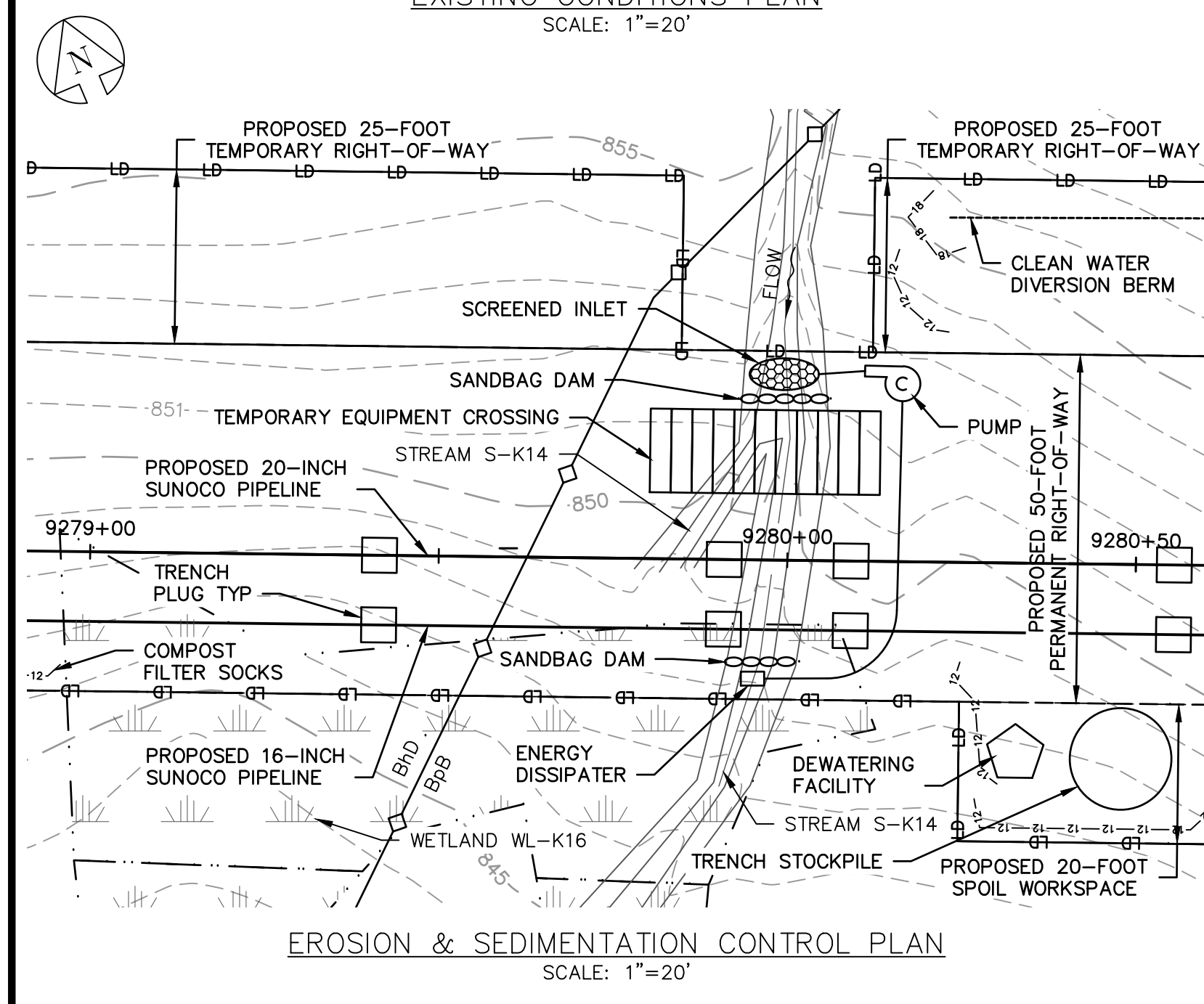
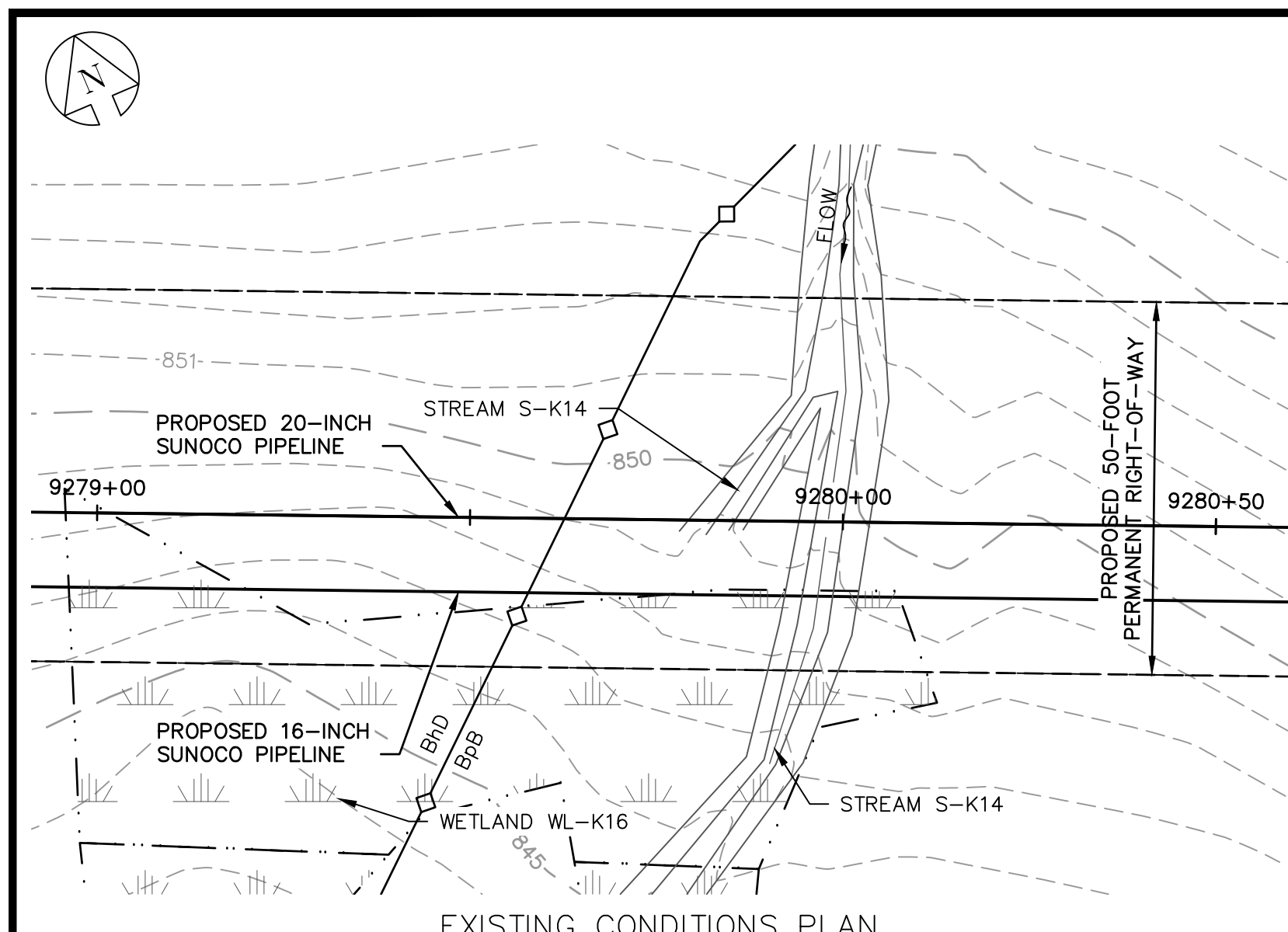
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD

DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-J43 RESTORATION PLAN				
CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
S-J43-B			0	



- GENERAL NOTES:**
- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
 - ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
 - THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
 - THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
 - EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

- WETLAND CROSSING NOTES:**
- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
 - A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
 - FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
 - EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

- STREAM CROSSING NOTES:**
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
 - FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
 - SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
 - THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
 - REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
 - EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
 - TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
 - COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
—	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
- - -	PROPOSED SUNOCO RIGHT-OF-WAY
—HPPP—HPPP—	EXISTING SUNOCO PIPELINE
— 910 —	MAJOR CONTOUR
—	MINOR CONTOUR
—	STREAM CENTERLINE
—	TOP/BOTTOM OF BANK
—	EXISTING EDGE OF PAVED ROADWAY
—	EXISTING EDGE OF UNPAVED ROADWAY
—	EXISTING VEGETATION
—	EDGE OF WATER
— Tm —	SOIL TYPE BOUNDARY
—	WETLAND
—	PROPOSED ROCK CONSTRUCTION ENTRANCE
— LD — LD — LD —	LIMIT OF DISTURBANCE
— CF — CF —	CONSTRUCTION FENCE
— 12 — 12 — 12 — 12 —	12-INCH COMPOST FILTER SOCK
— 18 — 18 — 18 — 18 —	18-INCH COMPOST FILTER SOCK
— 24 — 24 — 24 — 24 —	24-INCH COMPOST FILTER SOCK
— 32 — 32 — 32 — 32 —	32-INCH COMPOST FILTER SOCK
— 18 —	PERMANENT WATER BAR W/FILTER SOCK
—	TRENCH PLUG
—	TEMPORARY EQUIPMENT CROSSING
—	SANDBAG DAM
—	PUMP
—	SCREENED INLET
—	ENERGY DISSIPATER
—	DEWATERING FACILITY
—	CULVERT PIPE
—	EROSION CONTROL BLANKET
—	STREAM RESTORATION

PROFILE LEGEND:

—	PROPOSED PIPELINE
- - -	EXISTING GRADE
—	EXISTING GRADE ELEV.
—	PROPOSED TOP OF PIPE ELEV.

GRAPHIC SCALES

1"=20'

1"=10'

20' 0 20' 40'

10' 5' 0 10' 20'

STV

Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

ENGINEERING RECORD

DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

PENNSYLVANIA PIPELINE PROJECT

STREAMS S-K13 AND S-K14

EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS

CUMBERLAND COUNTY, PA

DWG. NO.

S-K14-A

REV. NO.

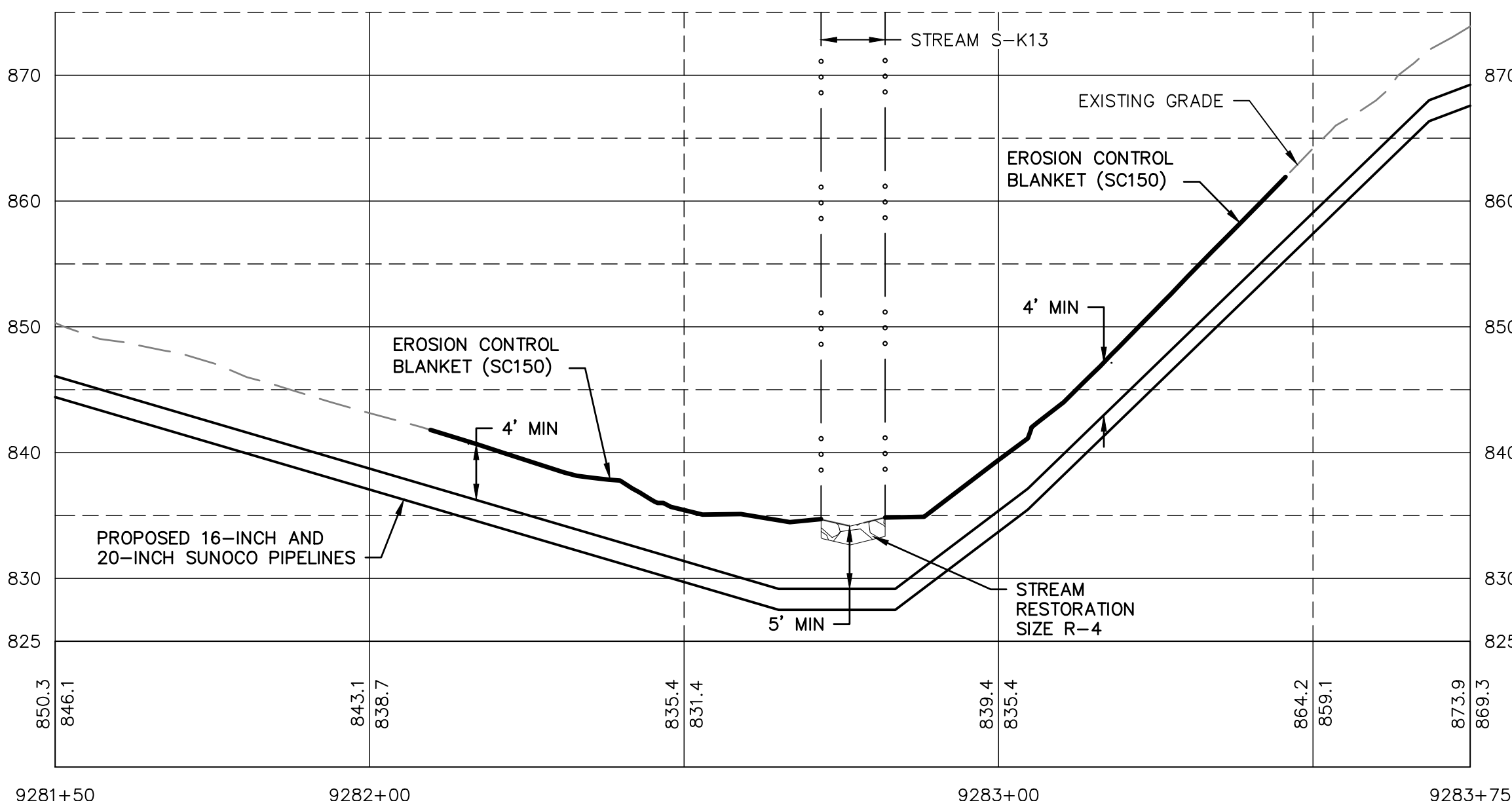
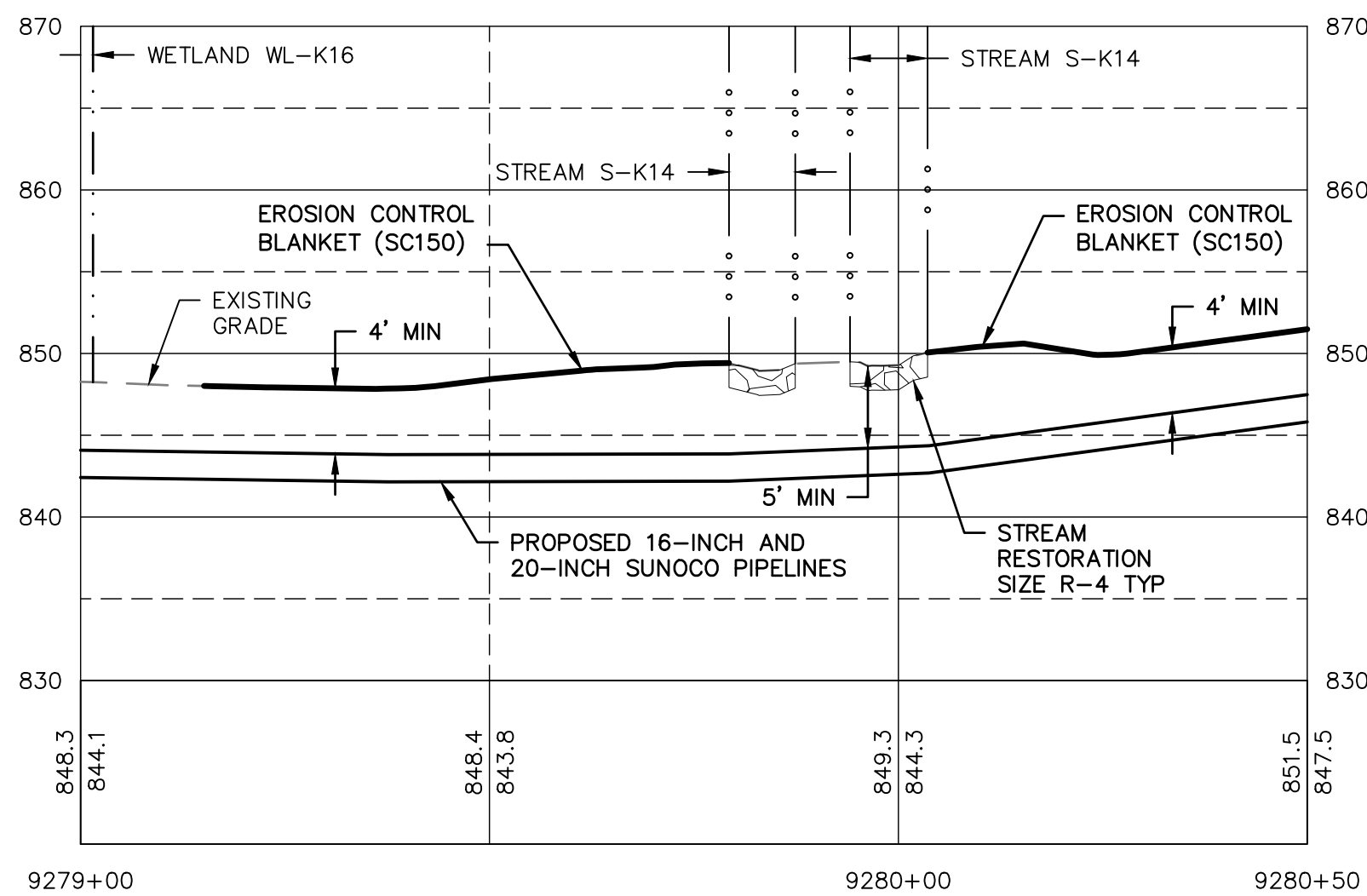
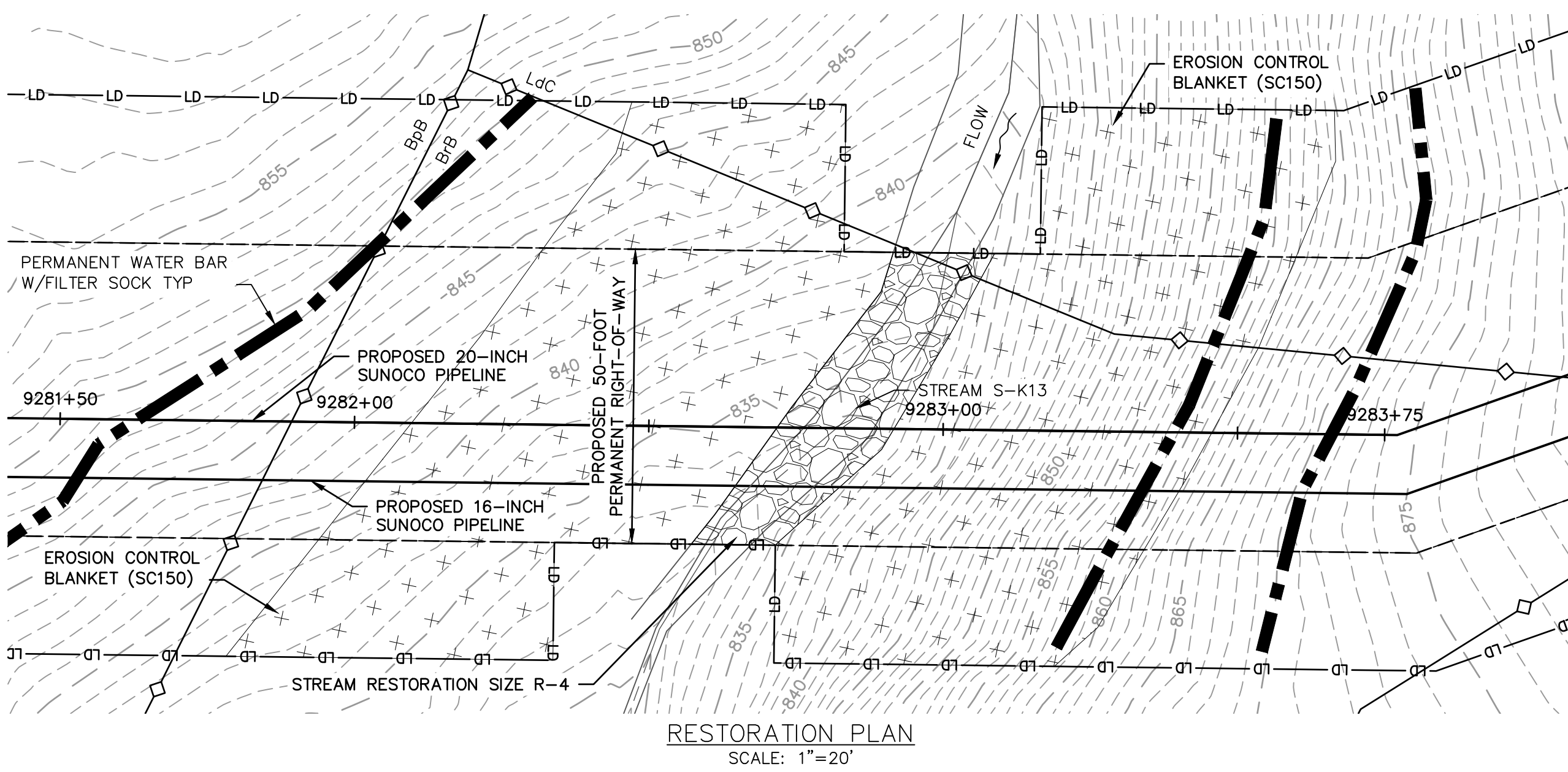
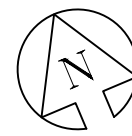
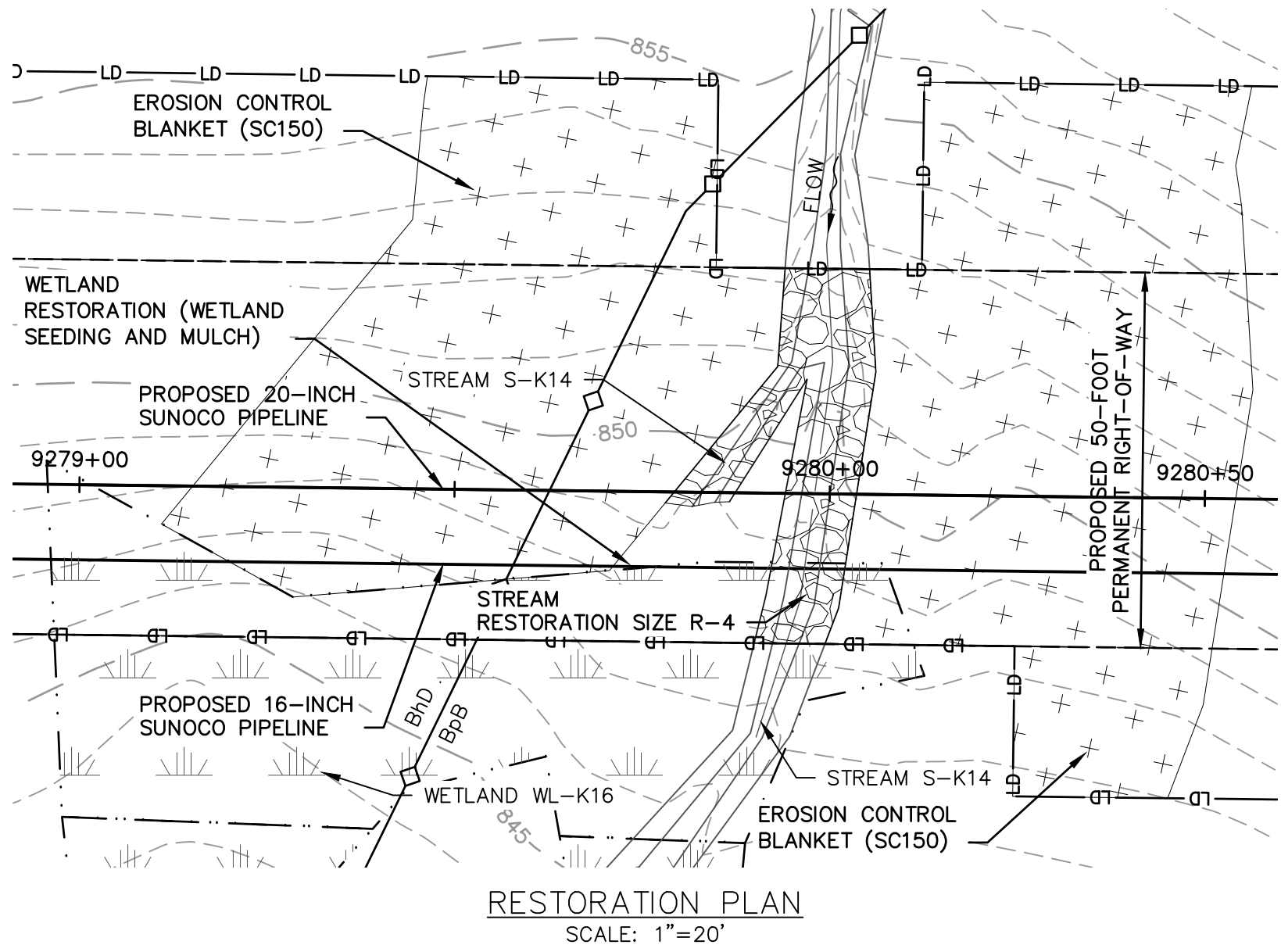
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CHRISTOPHER D. ANTONI

REGISTERED PROFESSIONAL ENGINEER

NO. PE-057385-E

11/30/16



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.

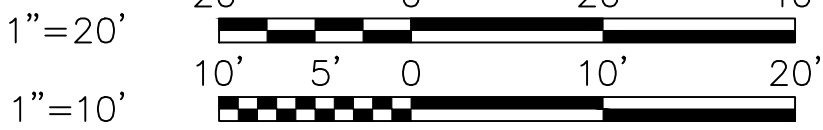
RESTORED GRADE PROFILE

HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'

RESTORED GRADE PROFILE

HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

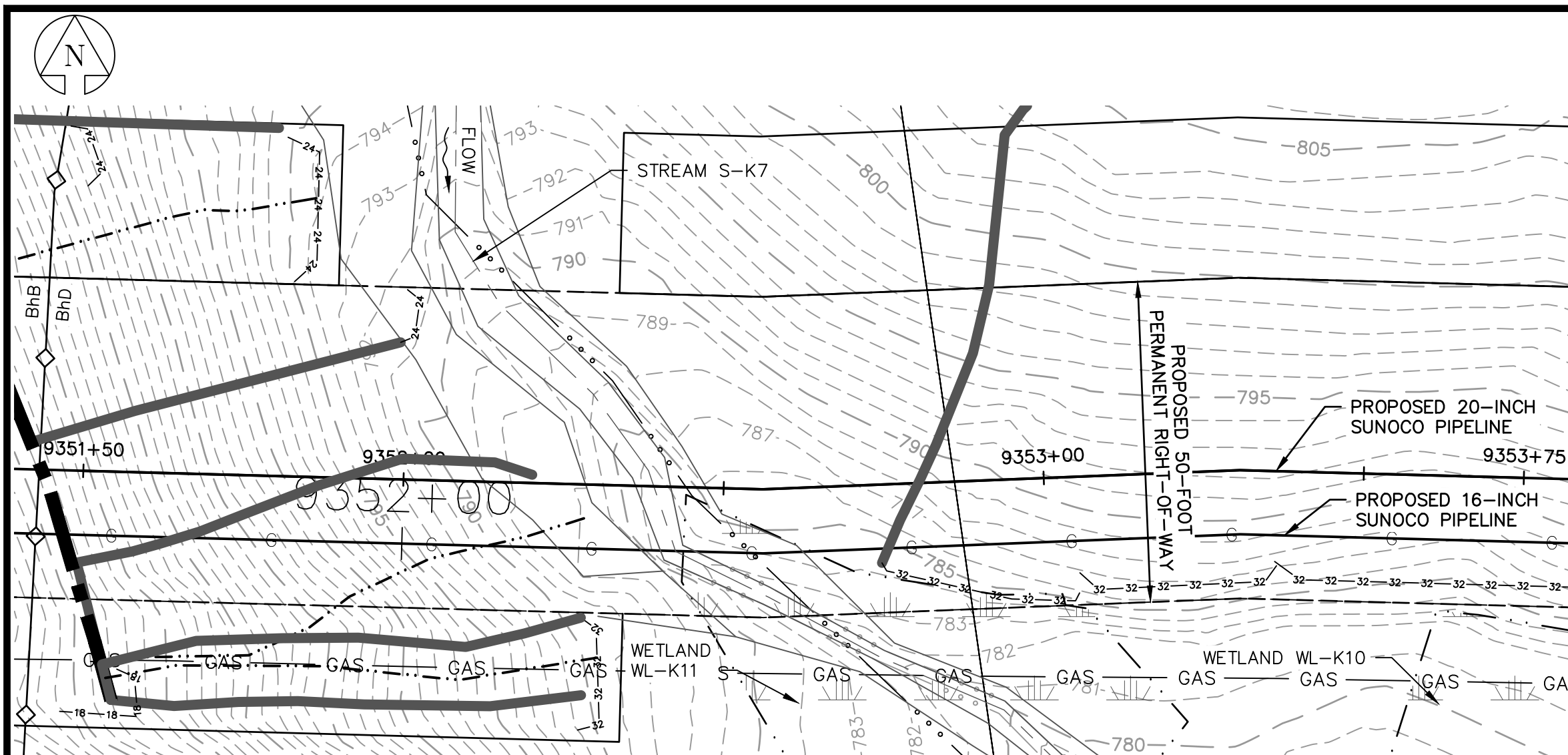
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16

CHRISTOPHER D. ANTONI
PE-057385-E

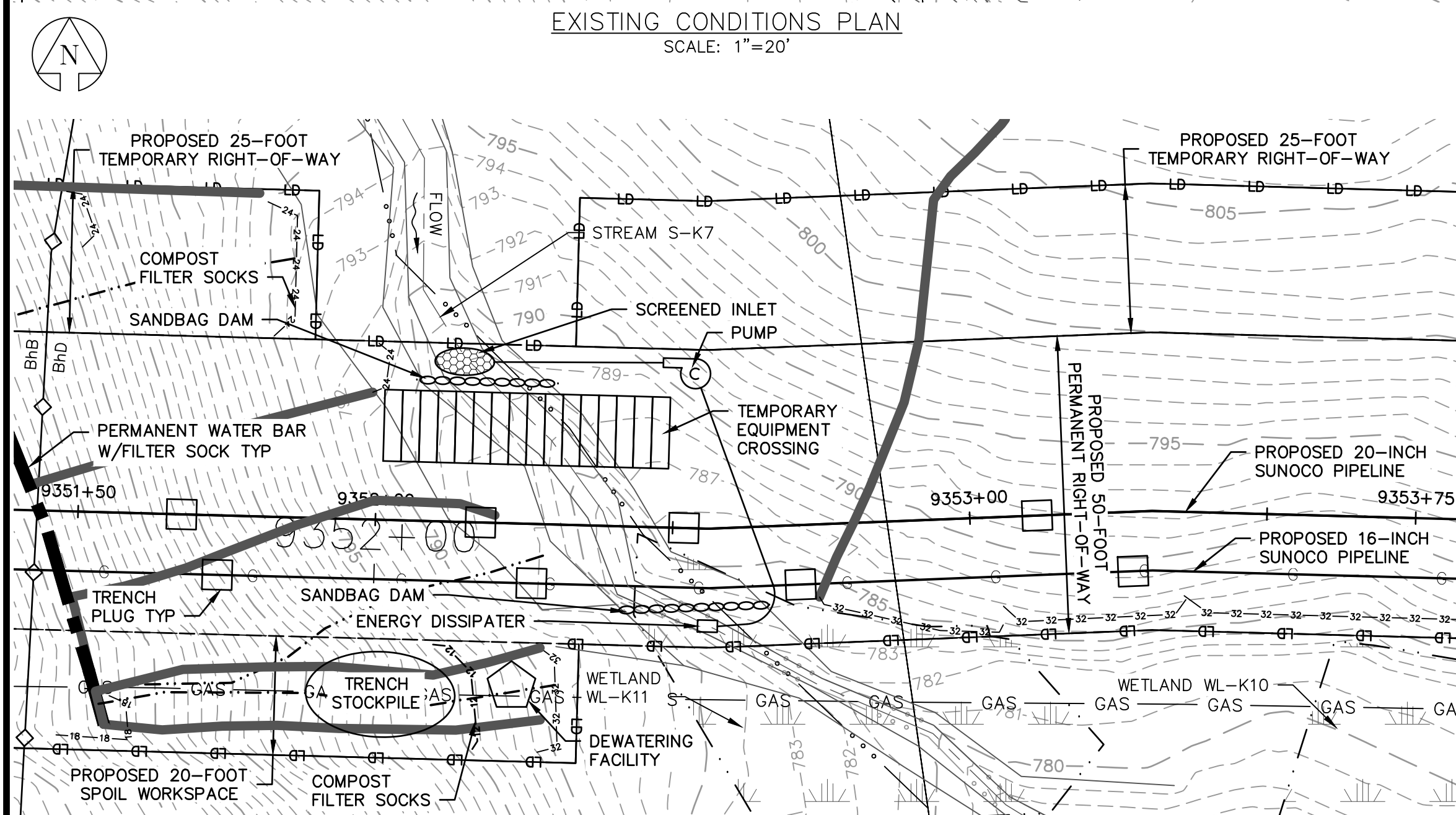
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APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

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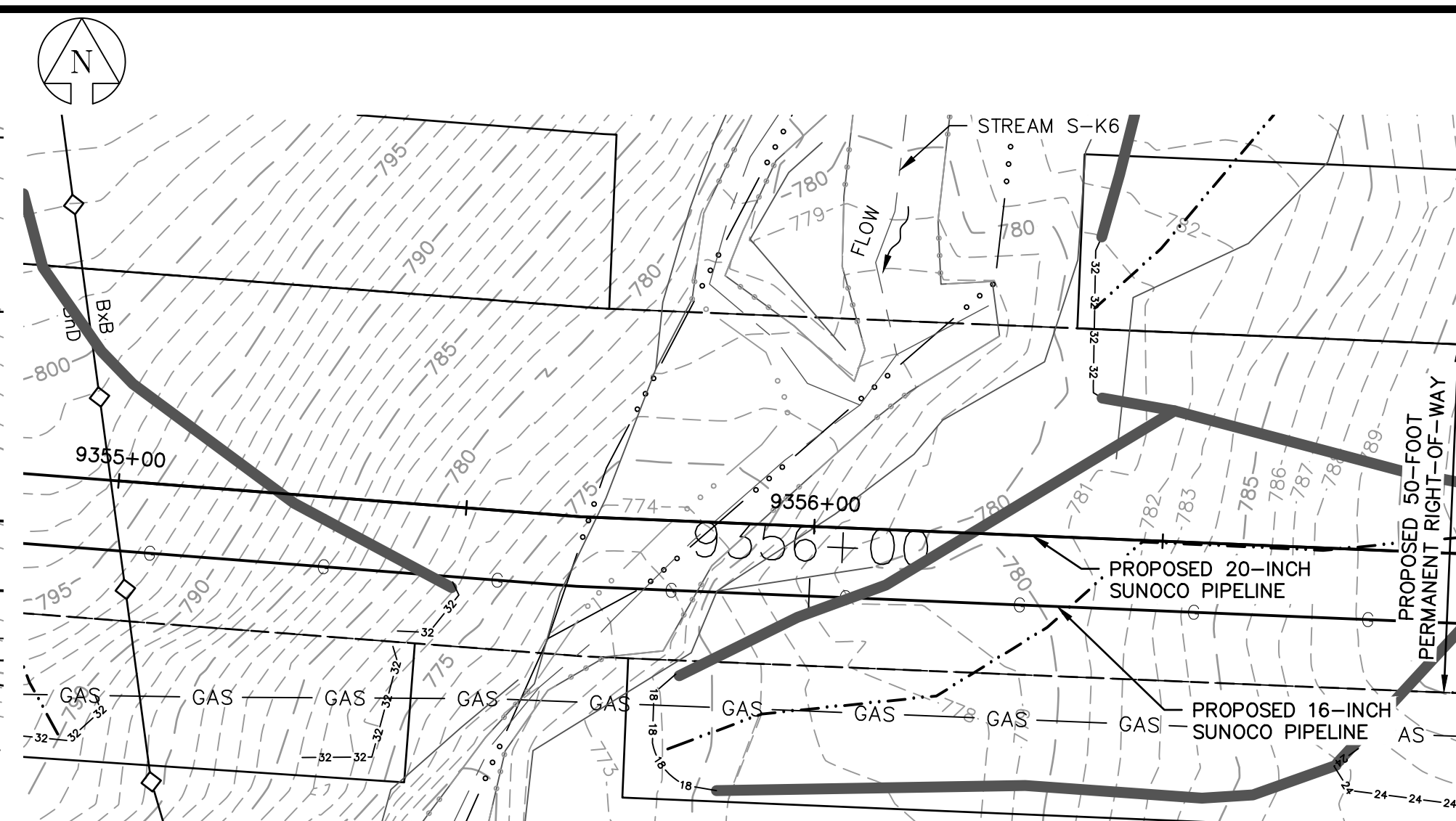
REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P.				
PENNSYLVANIA PIPELINE PROJECT STREAMS S-K13 AND S-K14 RESTORATION PLAN				
CUMBERLAND COUNTY, PA				
DWG. NO.			S-K14-B	REV. NO. 0



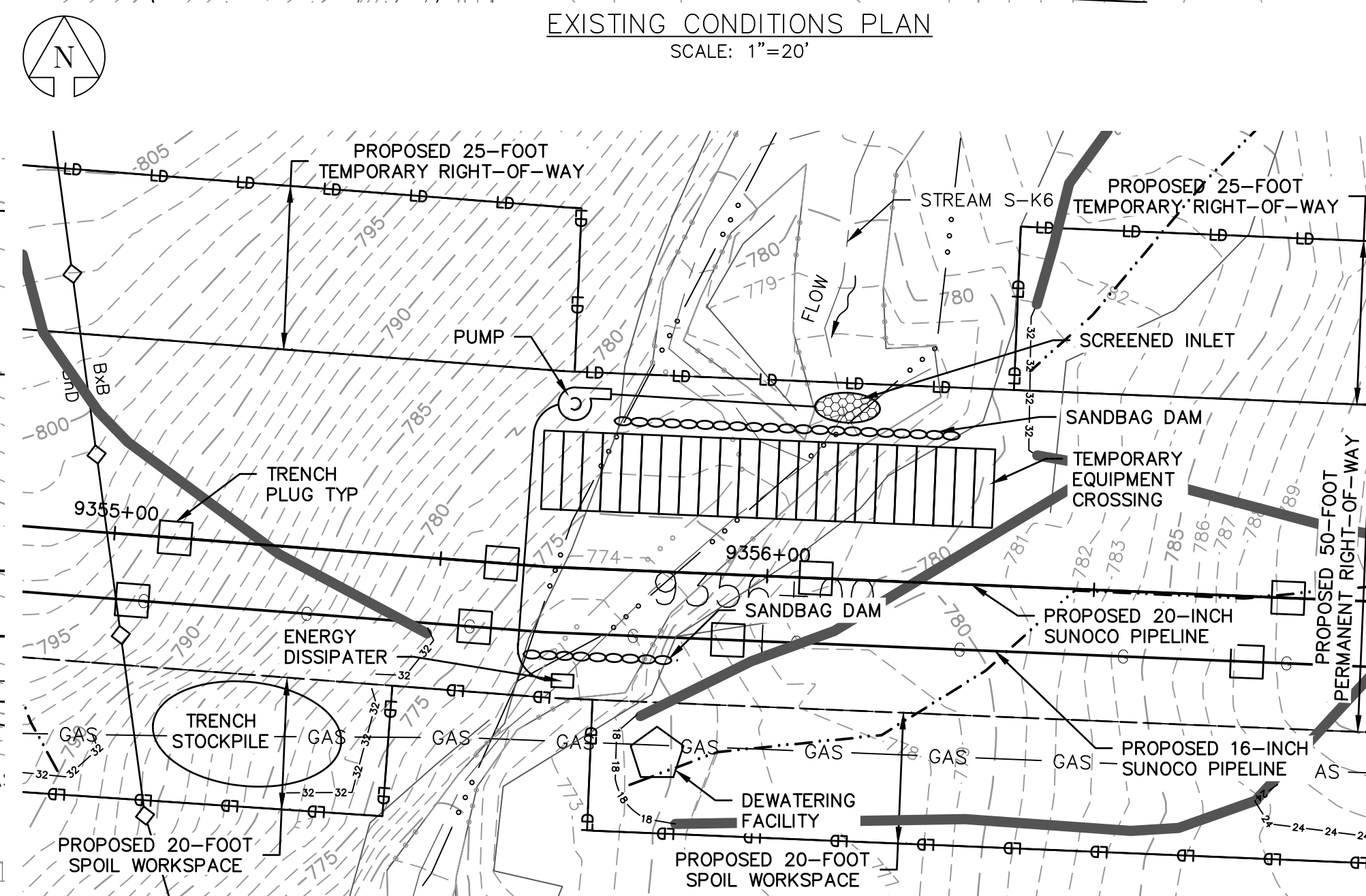
EXISTING CONDITIONS PLAN
SCALE: 1"=20'



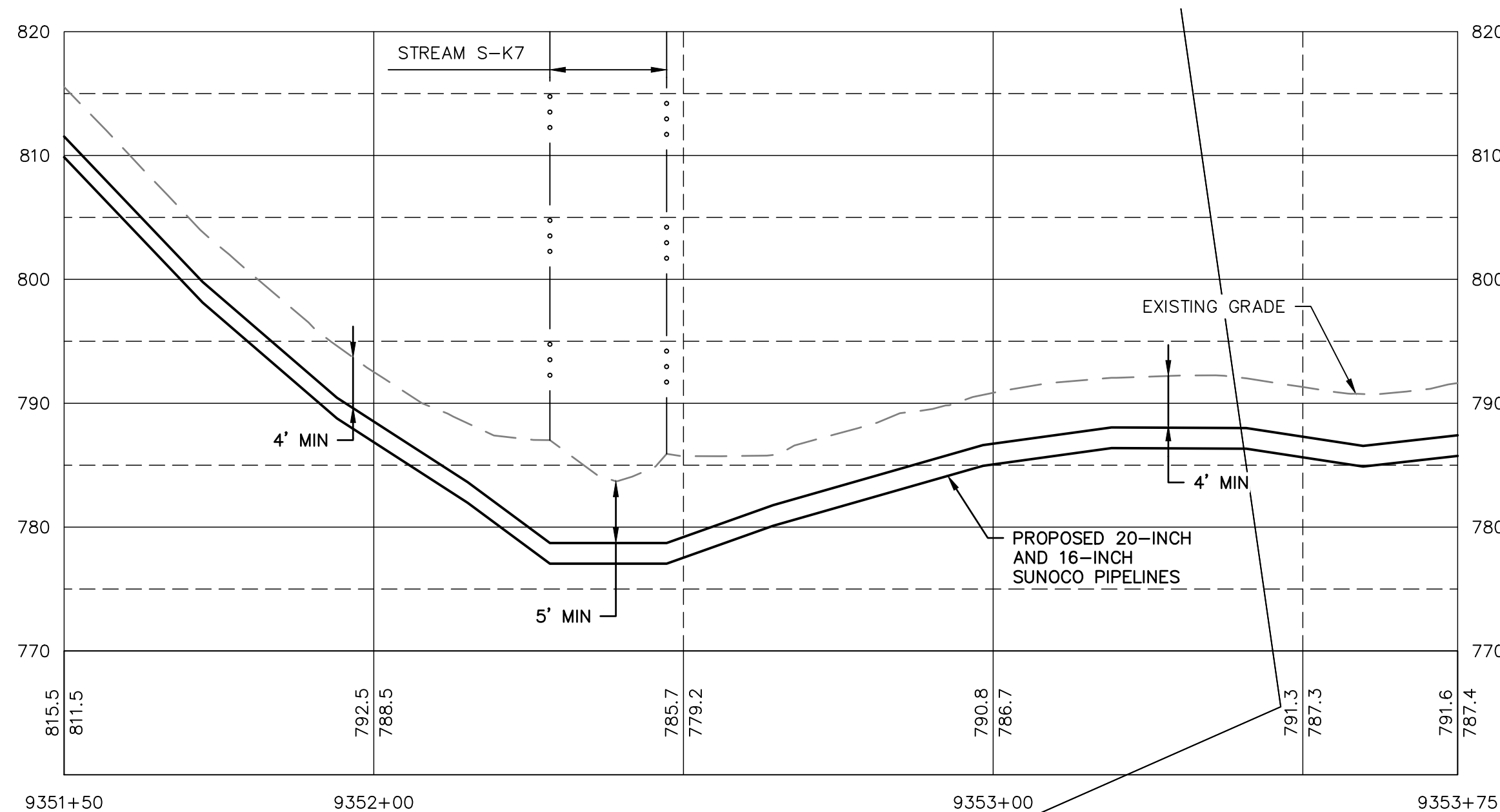
EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



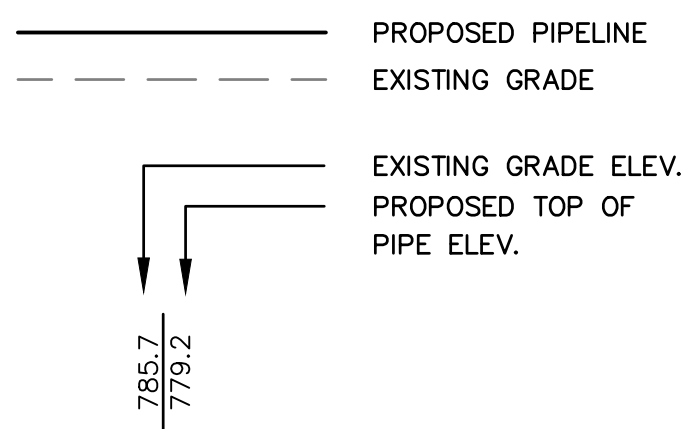
EXISTING CONDITIONS PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'

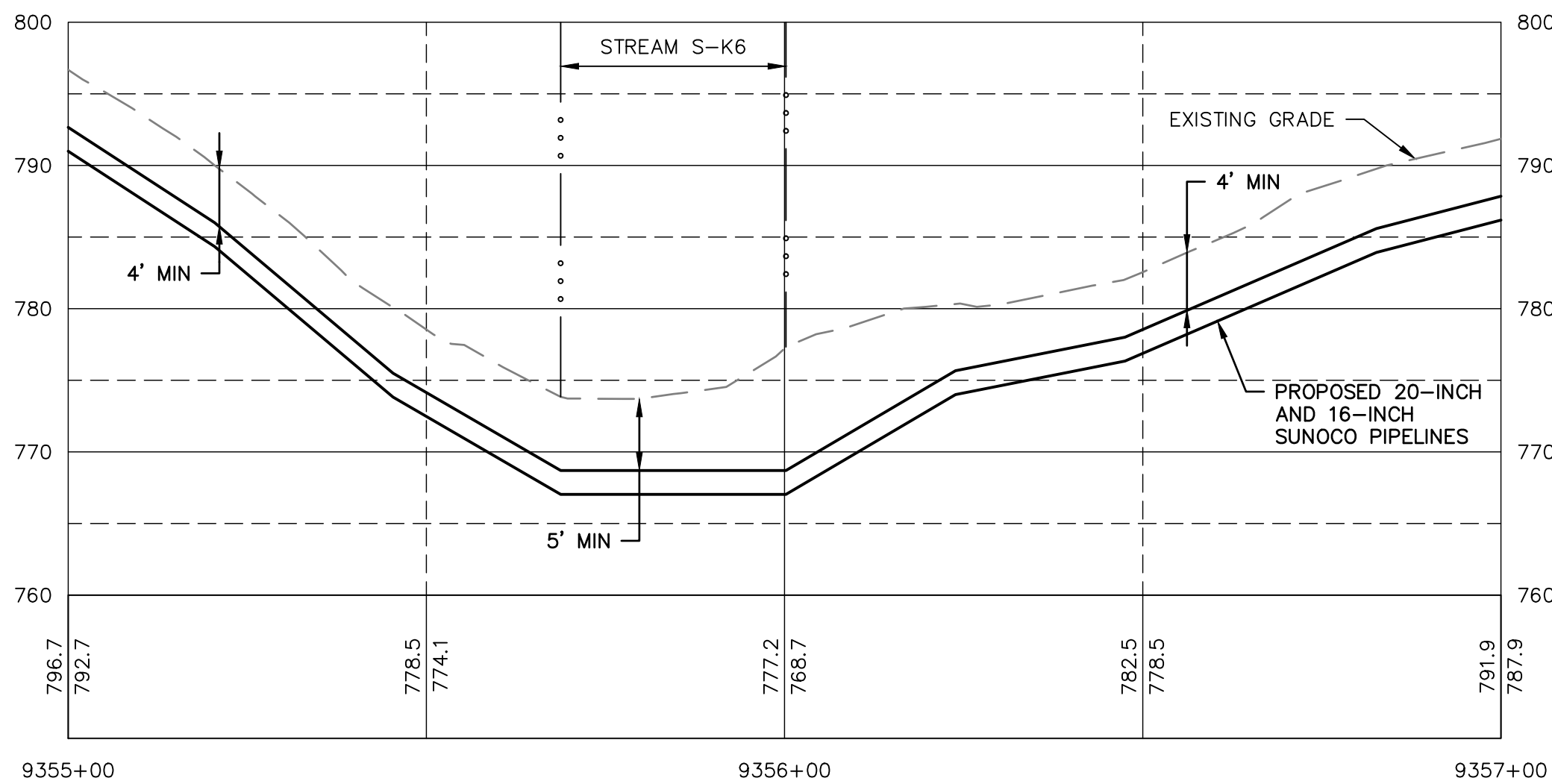
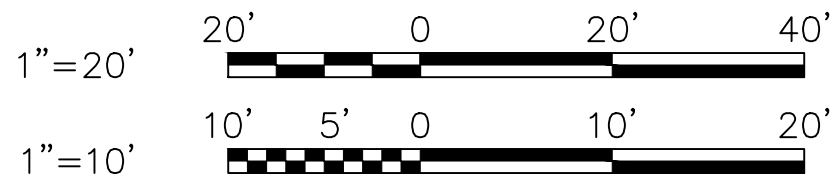


PROFILE LEGEND:



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

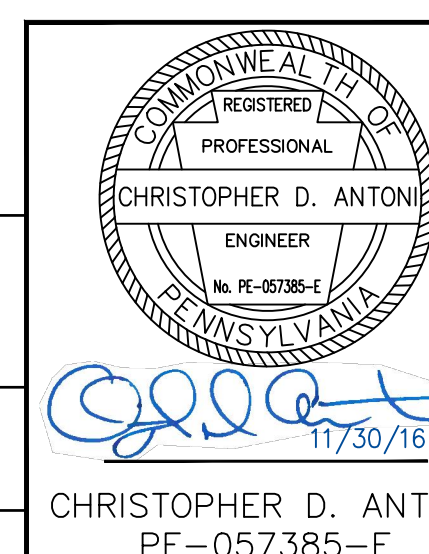
STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-K6 AND S-K7 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
CUMBERLAND COUNTY, PA				
DWG. NO.			S-K6-A	REV. NO. 0



ENGINEERING RECORD	
DRAWN BY	LS
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

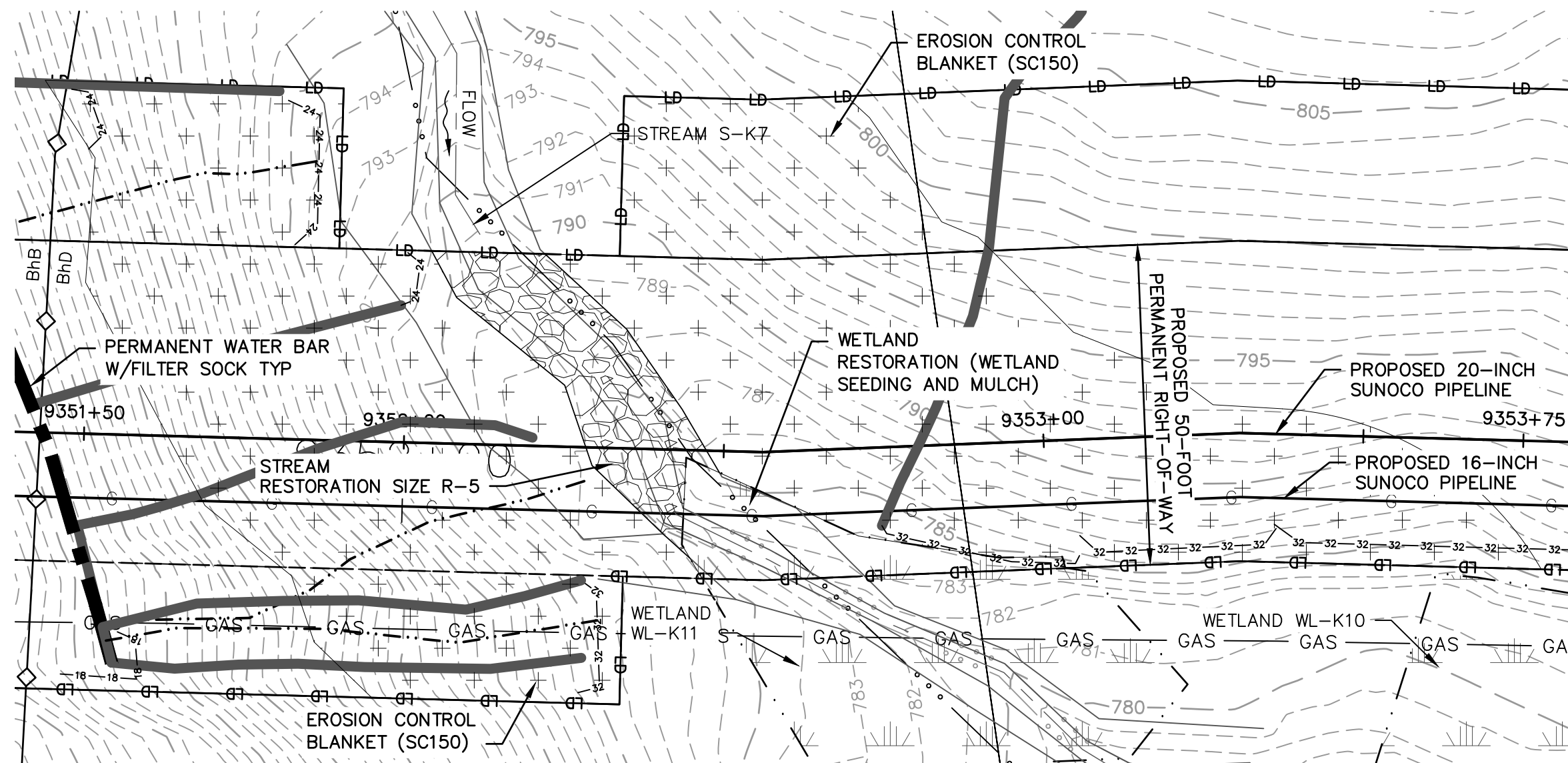
OLD DRAWING NO.

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

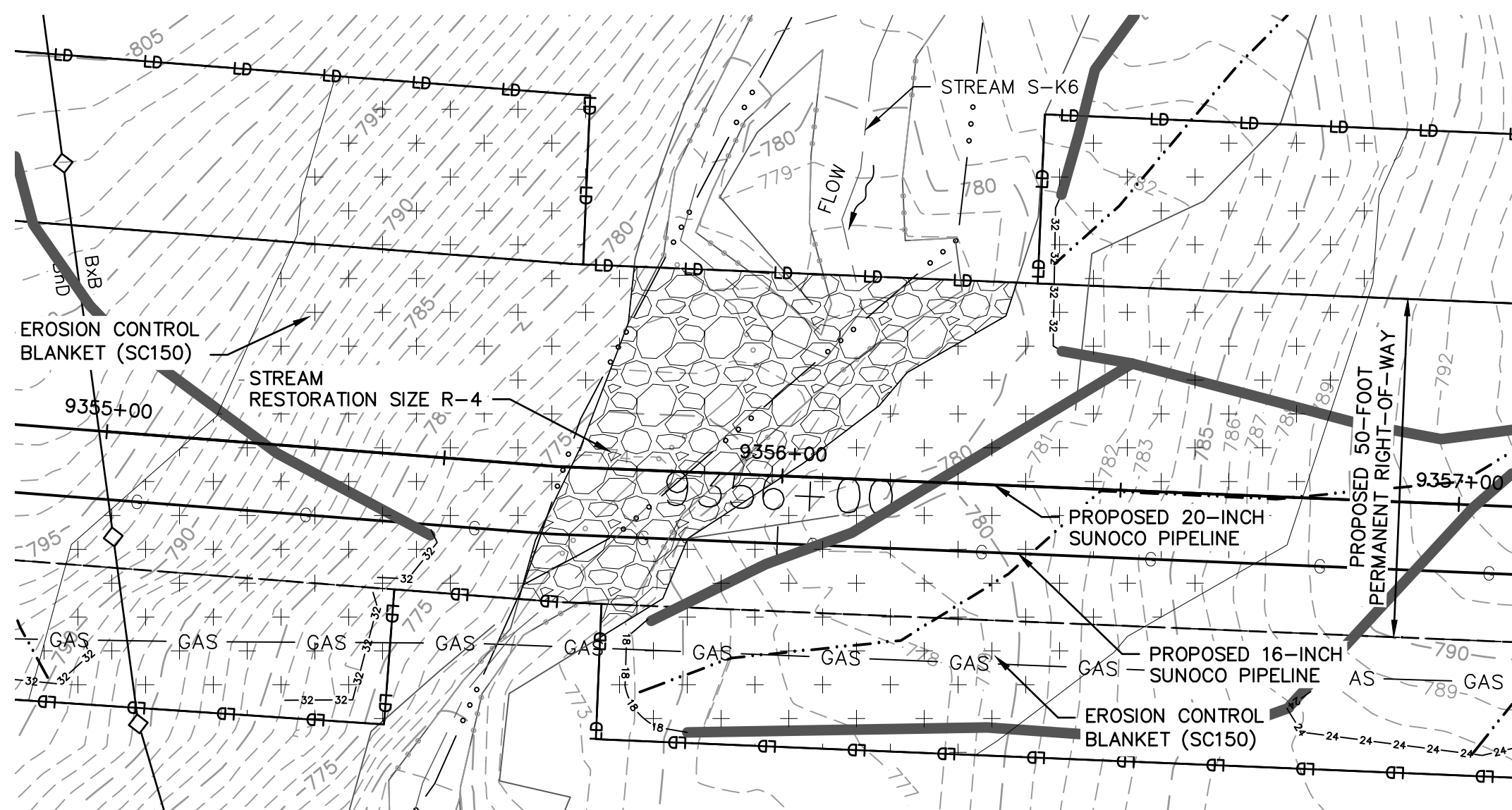
THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335

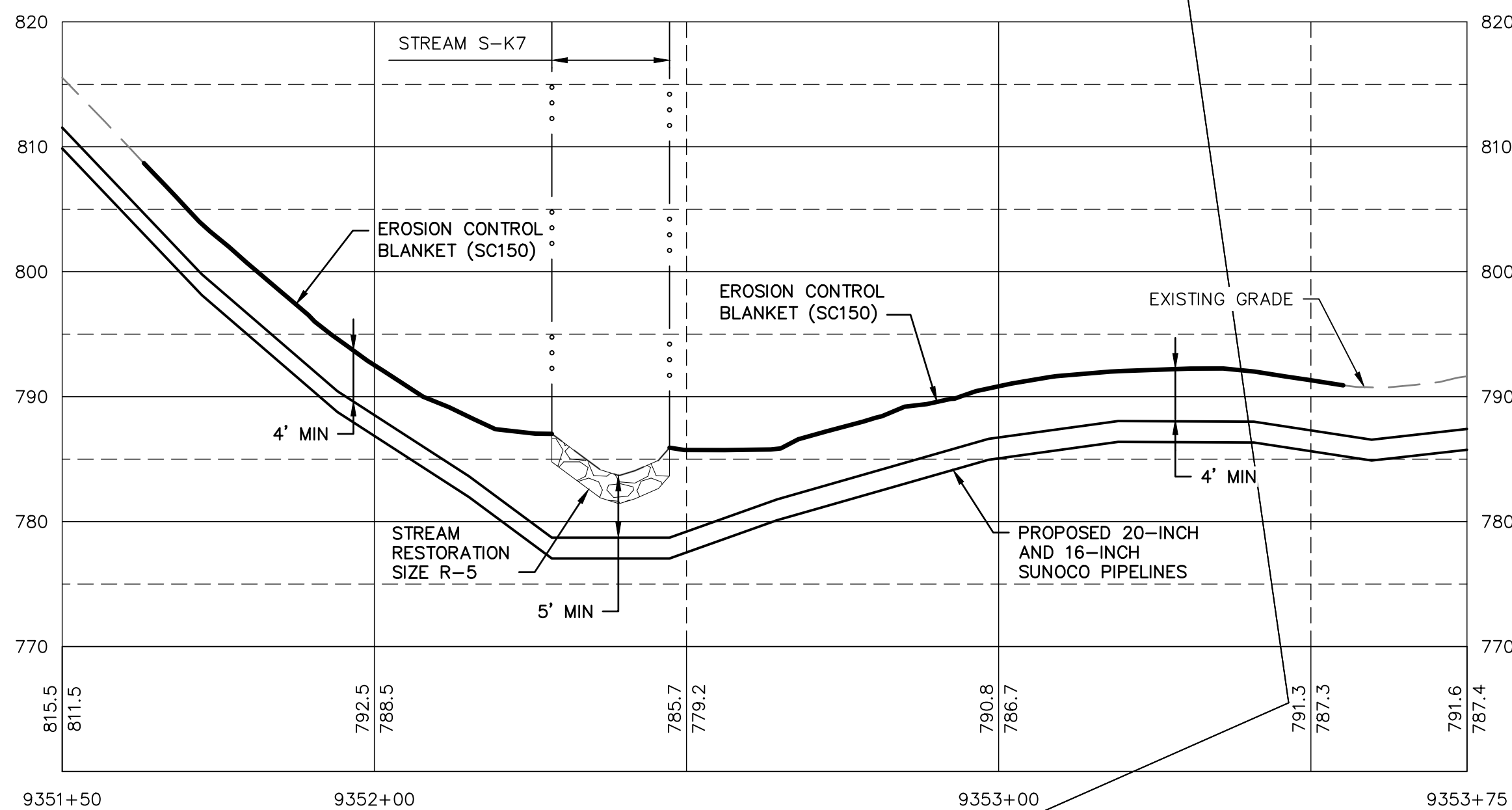
CHRISTOPHER D. ANTONI
PE-057385-E



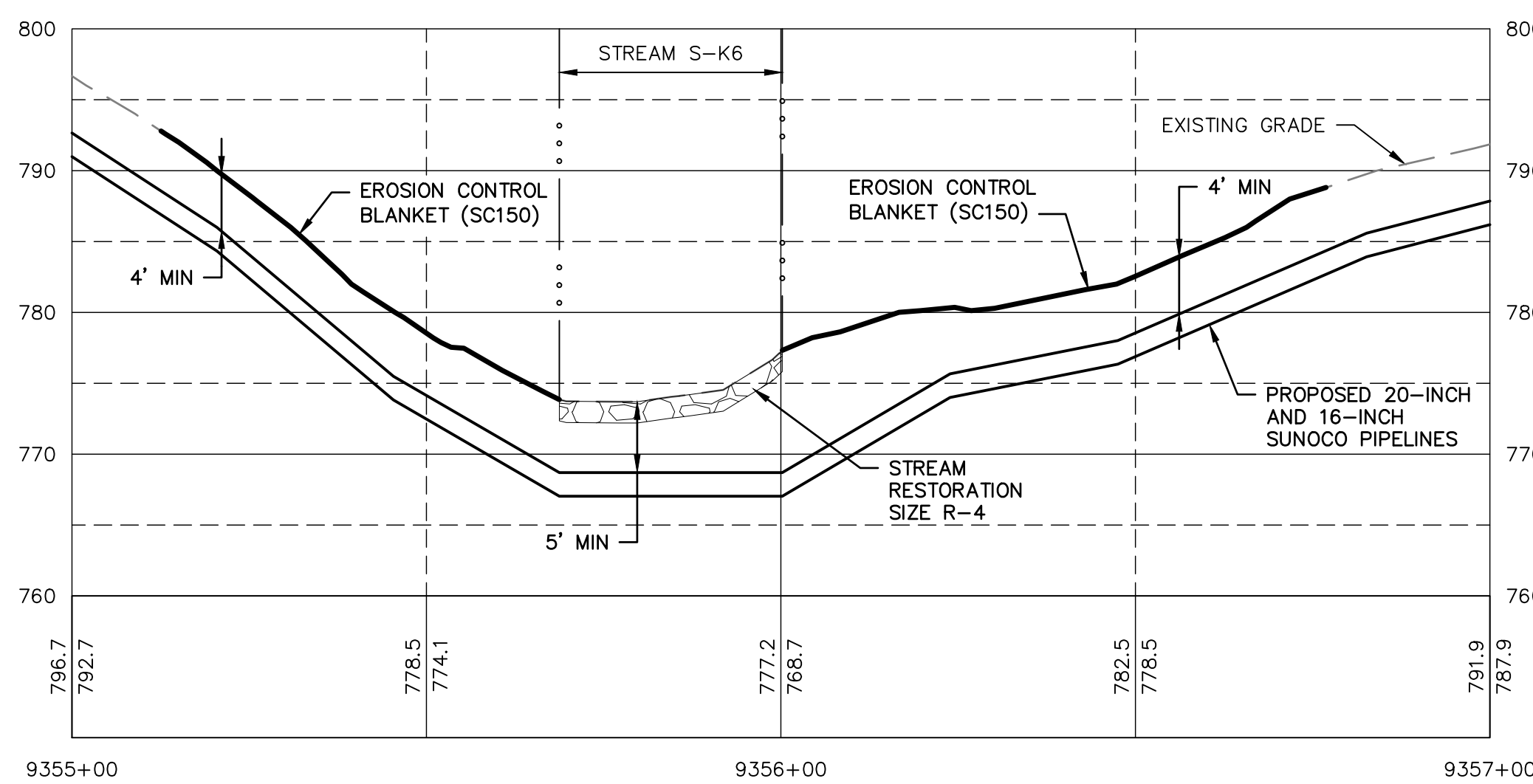
RESTORATION PLAN
SCALE: 1"=20'



RESTORATION PLAN
SCALE: 1"=20'

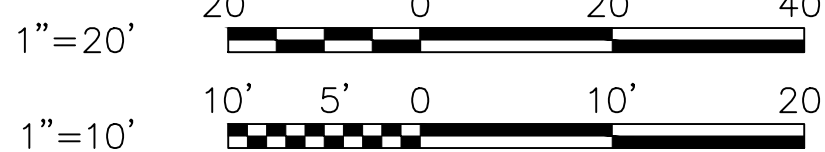


RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

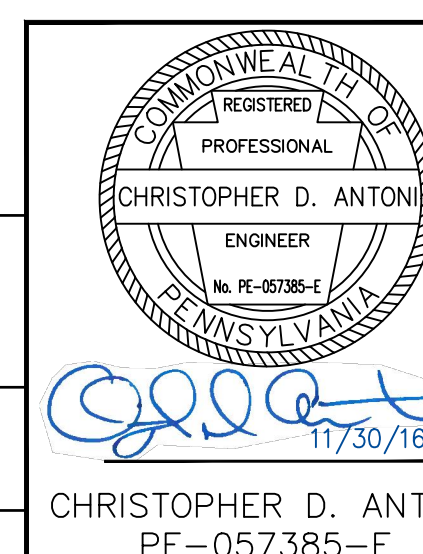
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

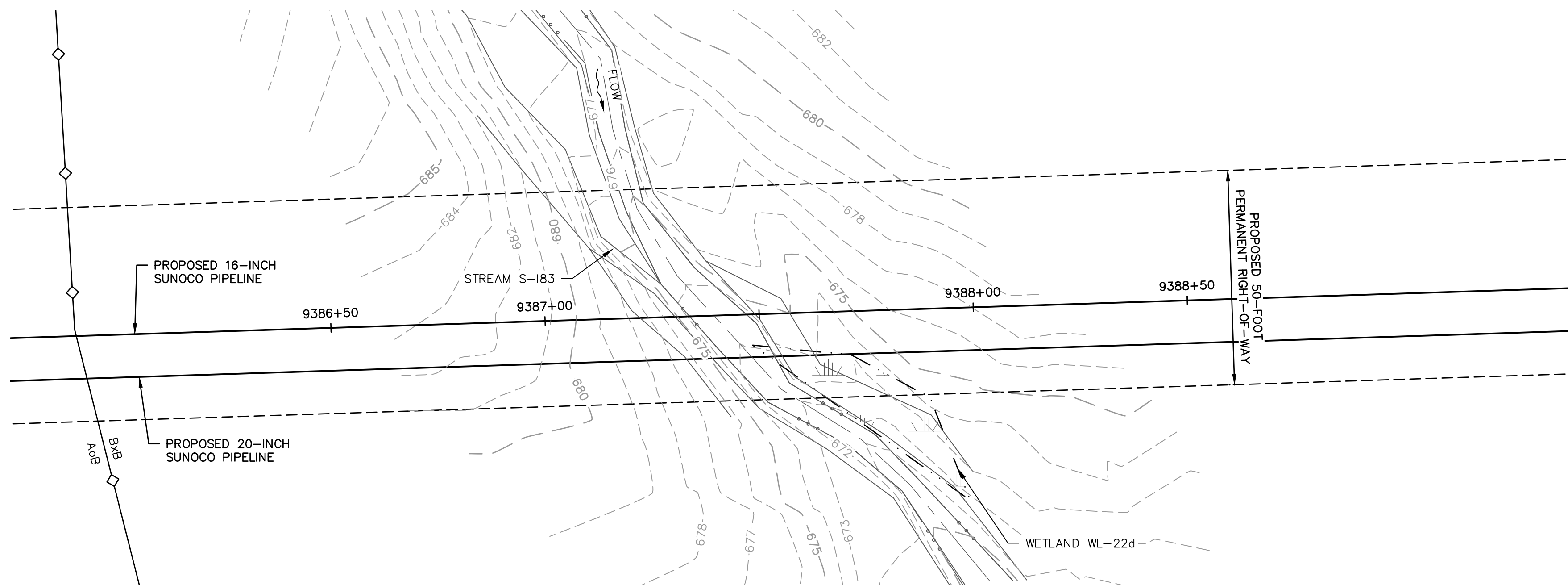
	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



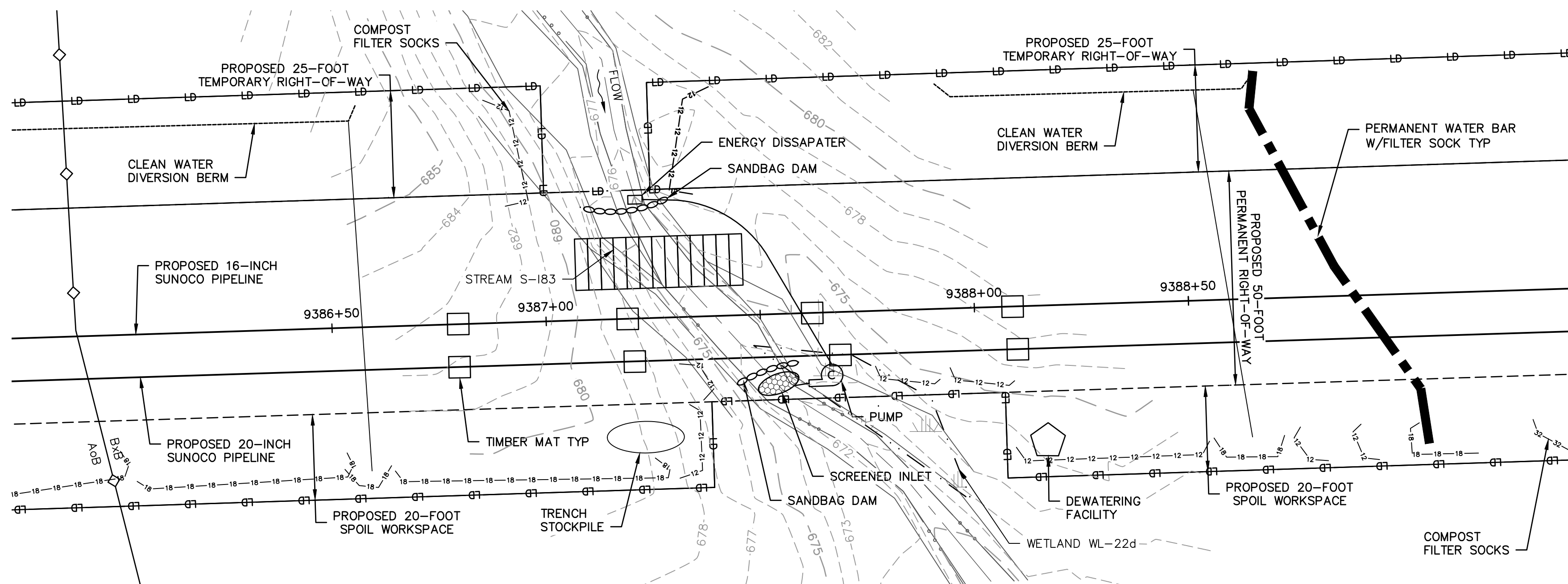
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CHECKED BY	CDA
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DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

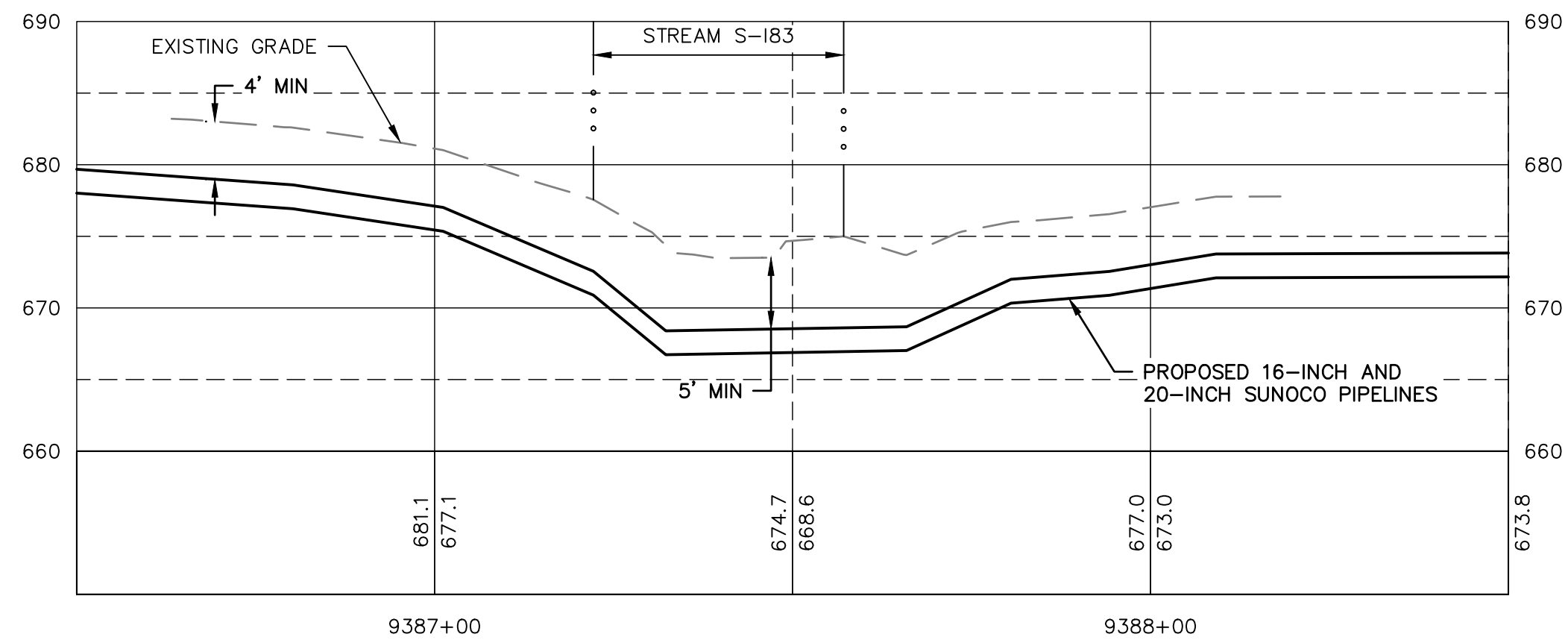
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-K6 AND S-K7 RESTORATION PLAN				
CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
S-K6-B			0	



EXISTING CONDITIONS PLAN
SCALE: 1"=20'

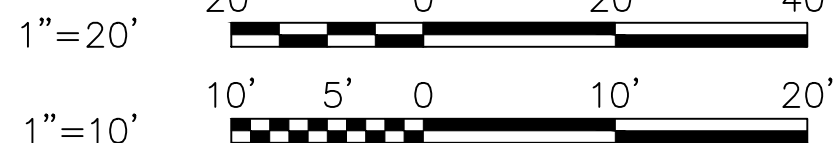


EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

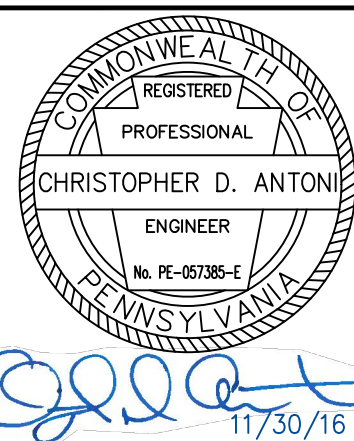
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

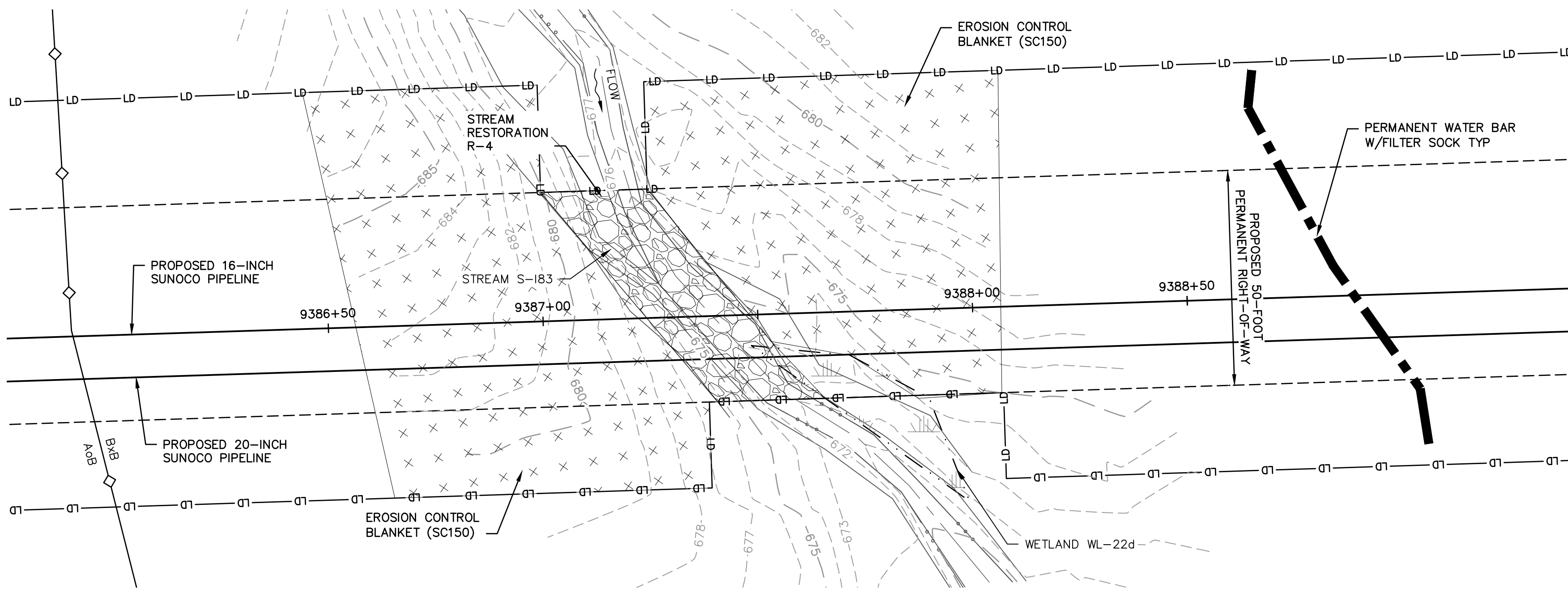


CHRISTOPHER D. ANTONI
PE-057385-E

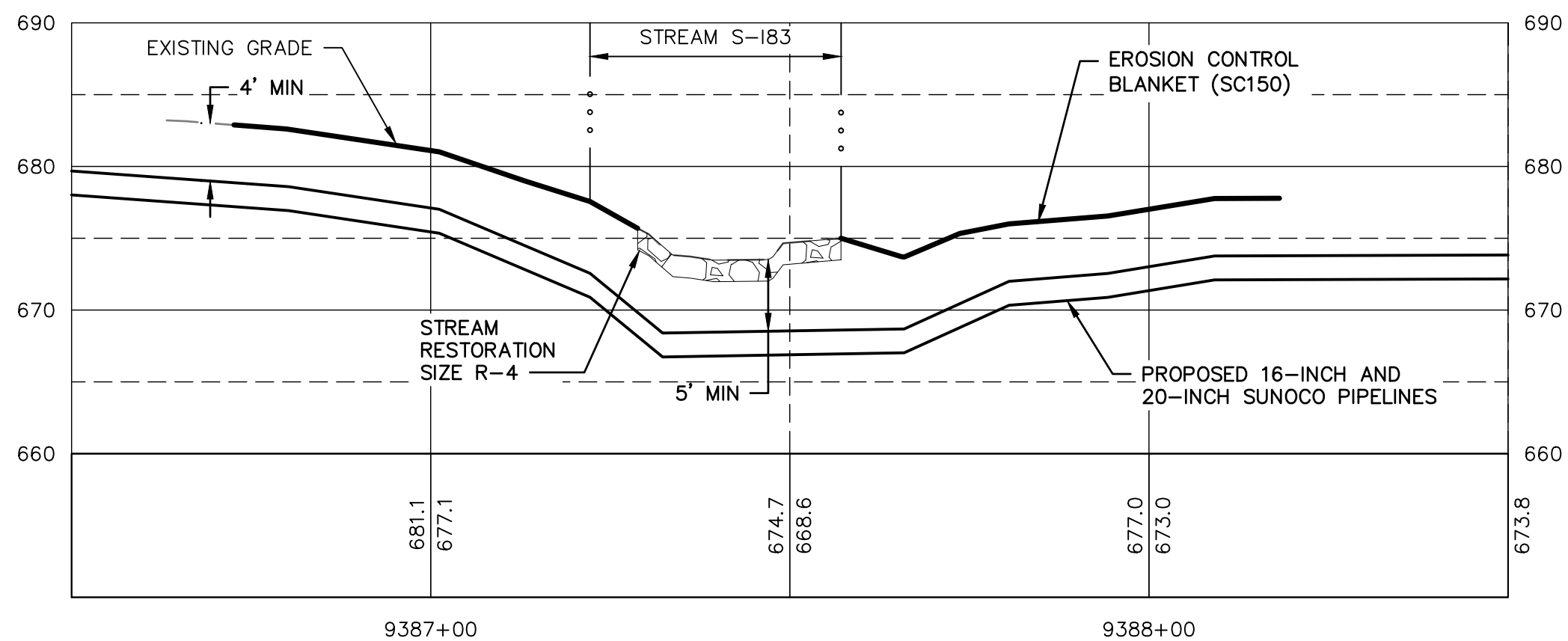
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APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-183 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS CUMBERLAND COUNTY, PA				
DWG. NO.			S-I83-A	REV. NO. 0



PLAN
HORZ SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
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6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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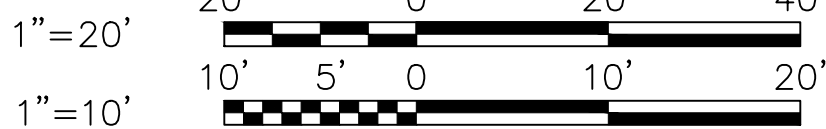
LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

GRAPHIC SCALES



Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

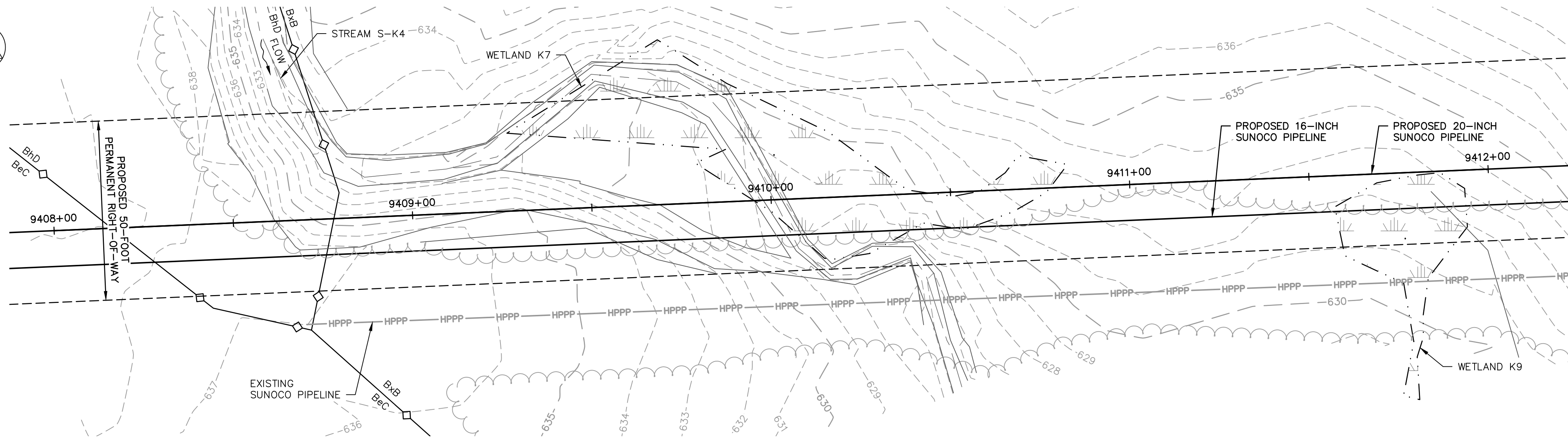
11/30/16

CHRISTOPHER D. ANTONI
PE-057385-E

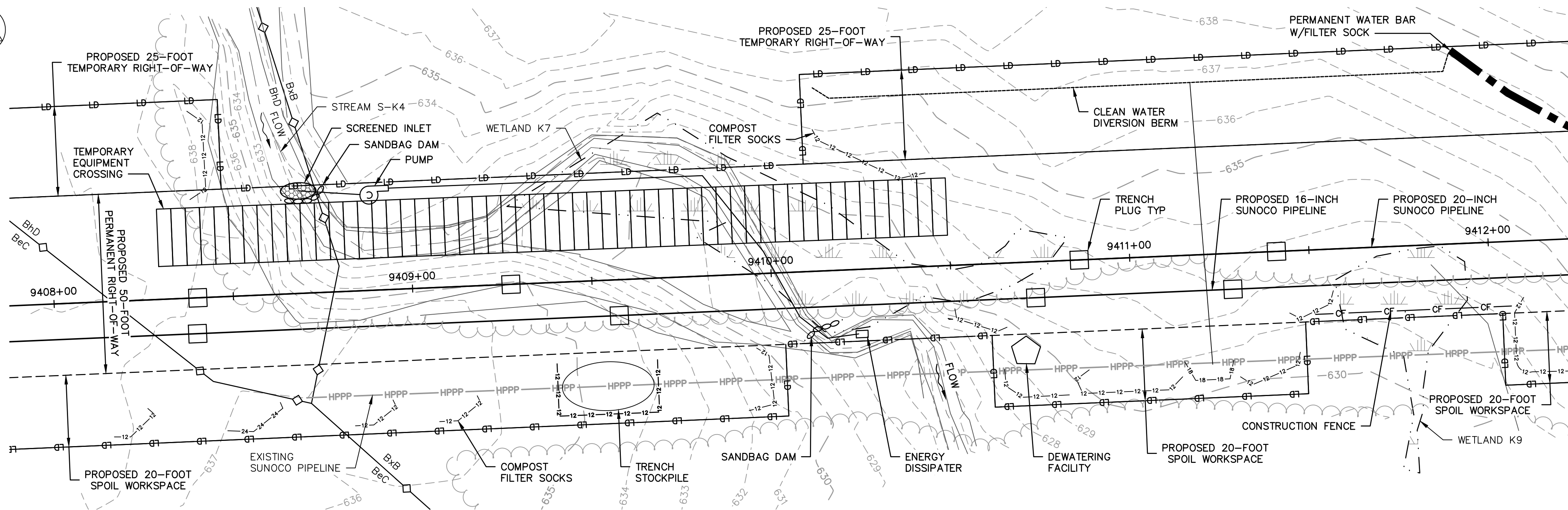
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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

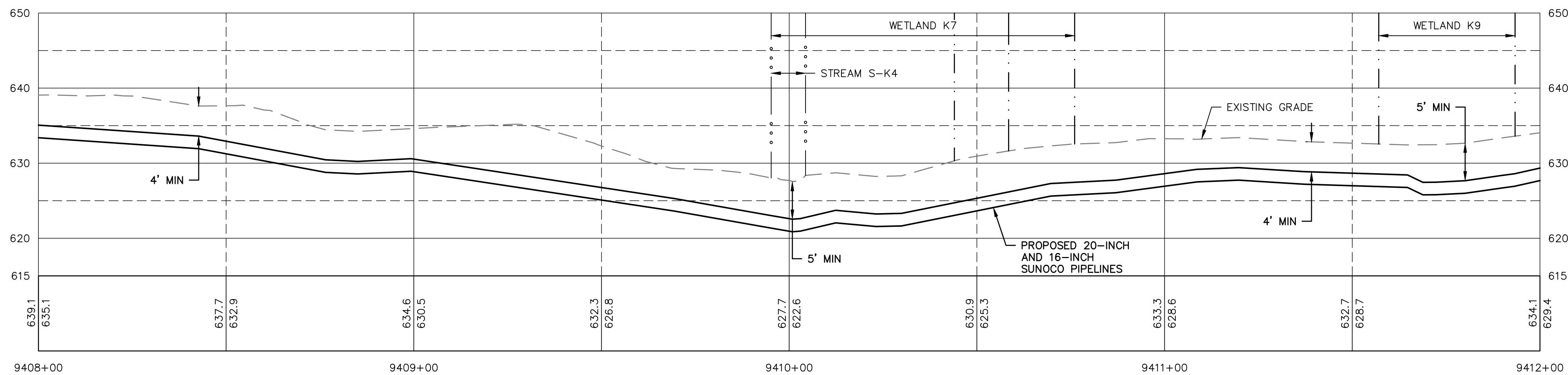
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-183 RESTORATION PLAN				
CUMBERLAND COUNTY, PA				
DWG. NO.			S-I83-B	REV. NO. 0



EXISTING CONDITIONS PLAN
SCALE: 1"=20'

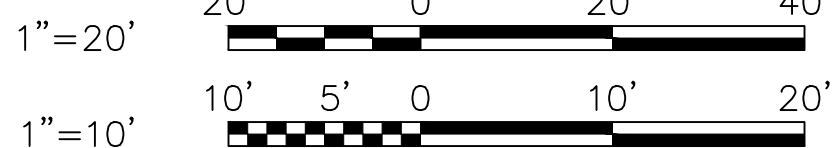


EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

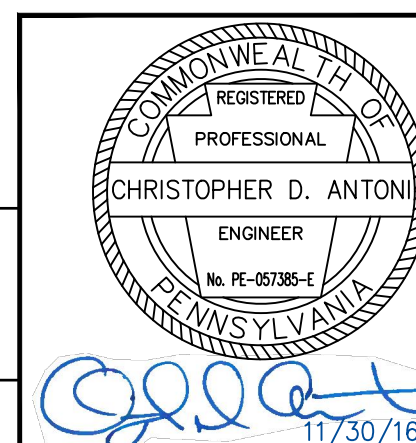
	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAM S-K4
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS

CUMBERLAND COUNTY, PA



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

DWG. NO.

S-K4-C-A

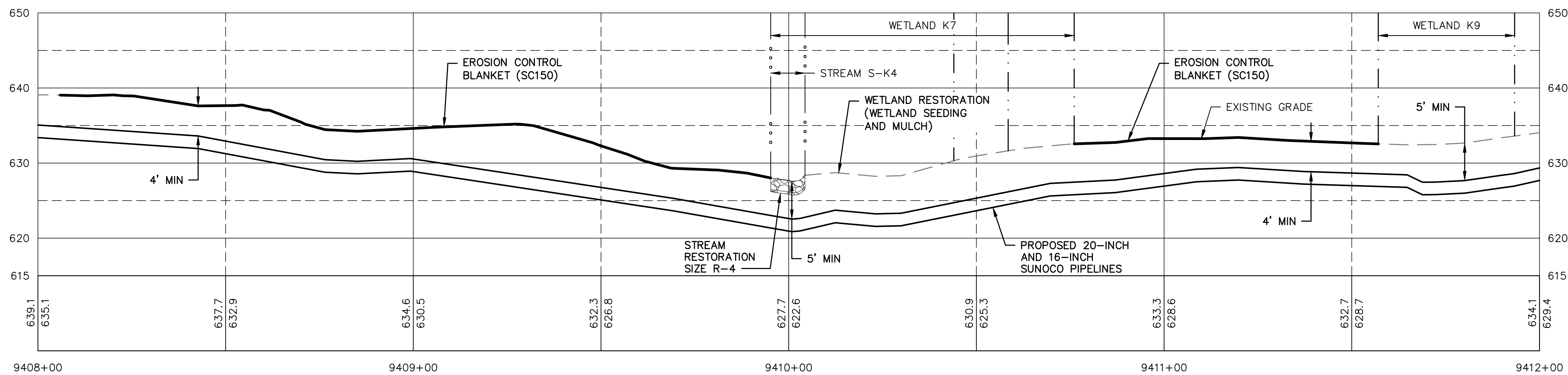
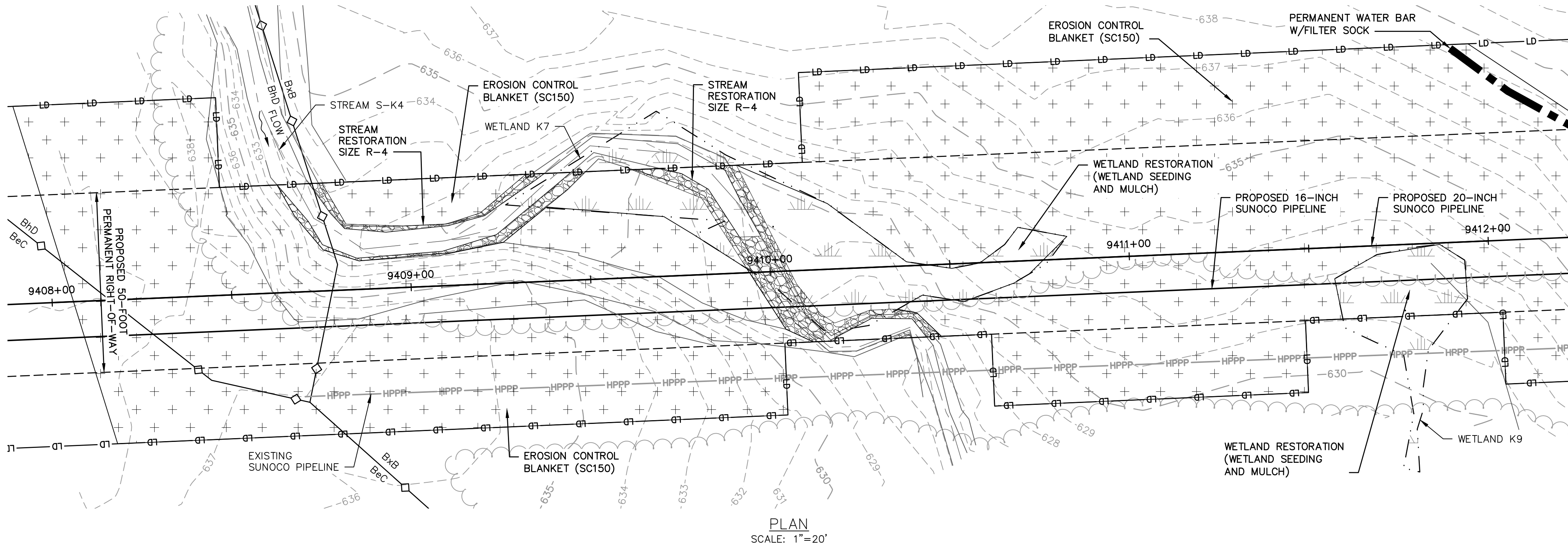
REV. NO.

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STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
—	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
---	PROPOSED SUNOCO RIGHT-OF-WAY
HPPP	EXISTING SUNOCO PIPELINE
910	MAJOR CONTOUR
---	MINOR CONTOUR
---	STREAM CENTERLINE
---	TOP/BOTTOM OF BANK
---	EXISTING EDGE OF PAVED ROADWAY
---	EXISTING EDGE OF UNPAVED ROADWAY
---	EXISTING VEGETATION
---	EDGE OF WATER
---	SOIL TYPE BOUNDARY
---	WETLAND
---	PROPOSED ROCK CONSTRUCTION ENTRANCE
LD	LIMIT OF DISTURBANCE
CF	CONSTRUCTION FENCE
12	12-INCH COMPOST FILTER SOCK
18	18-INCH COMPOST FILTER SOCK
24	24-INCH COMPOST FILTER SOCK
32	32-INCH COMPOST FILTER SOCK
18	PERMANENT WATER BAR W/FILTER SOCK
□	TRENCH PLUG
---	TEMPORARY EQUIPMENT CROSSING
---	SANDBAG DAM
---	PUMP
---	SCREENED INLET
---	ENERGY DISSIPATER
---	DEWATERING FACILITY
---	CULVERT PIPE
---	EROSION CONTROL BLANKET
---	STREAM RESTORATION

PROFILE LEGEND:

---	PROPOSED PIPELINE
---	EXISTING GRADE
---	EXISTING GRADE ELEV.
---	PROPOSED TOP OF PIPE ELEV.

GRAPHIC SCALES



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

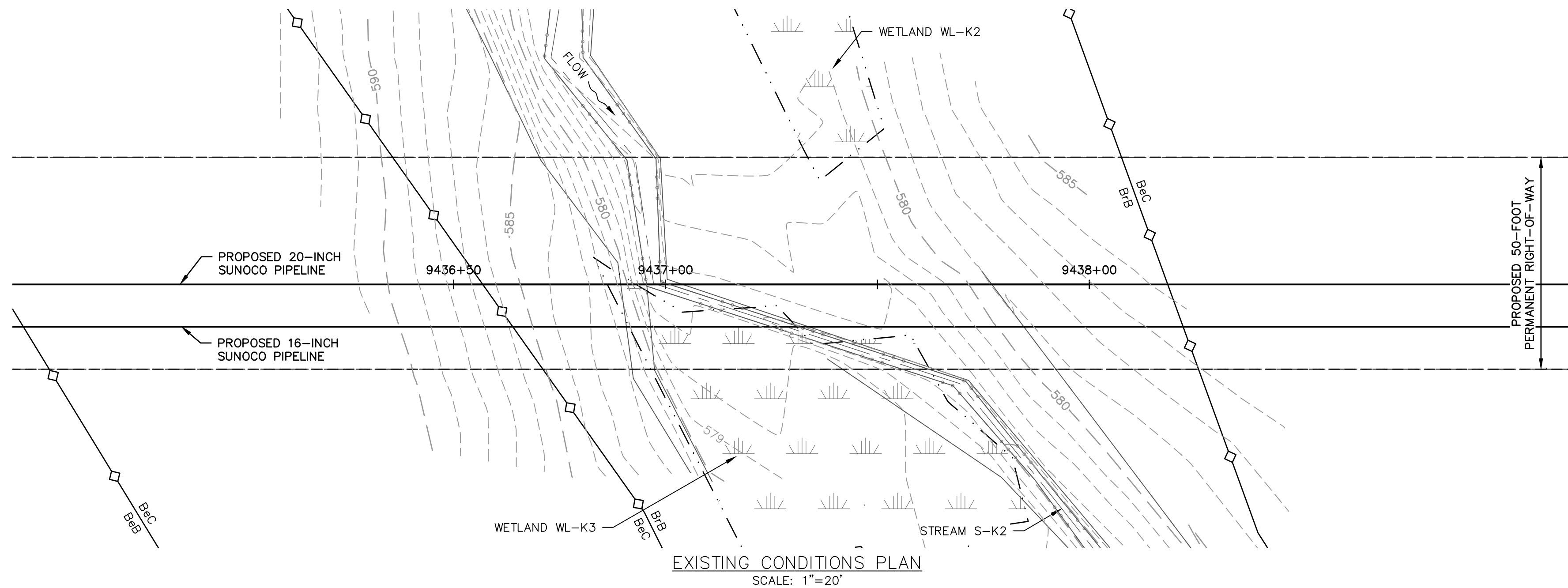
THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335

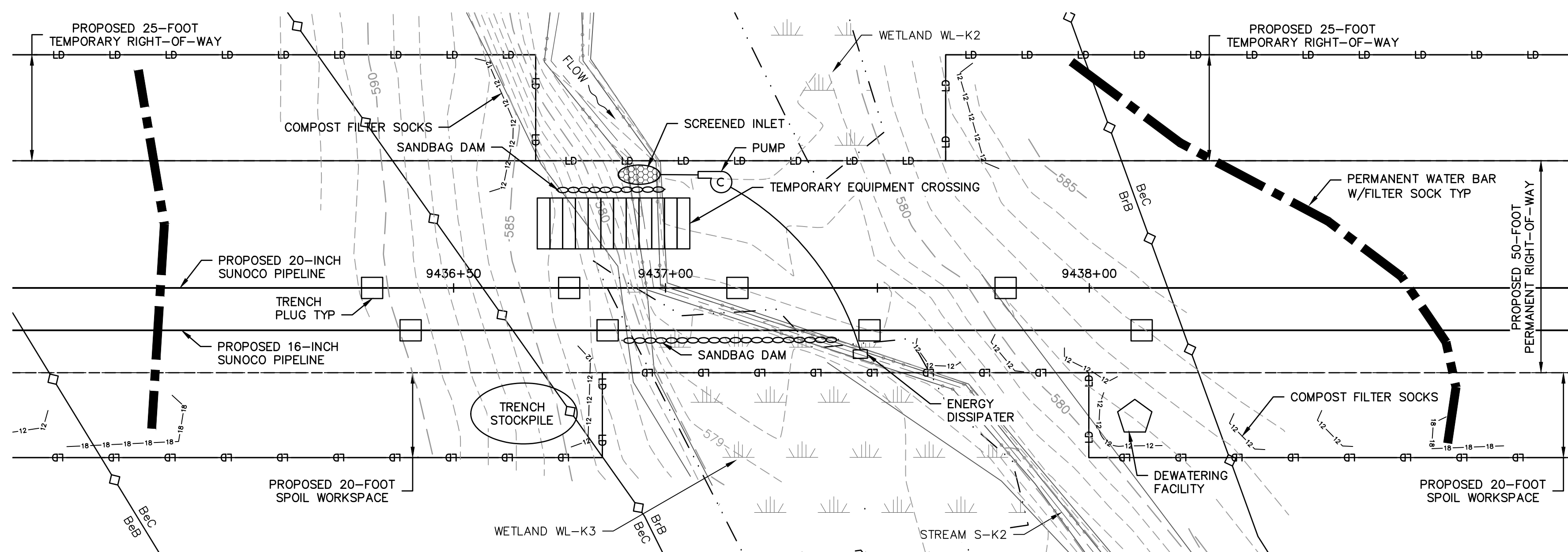
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

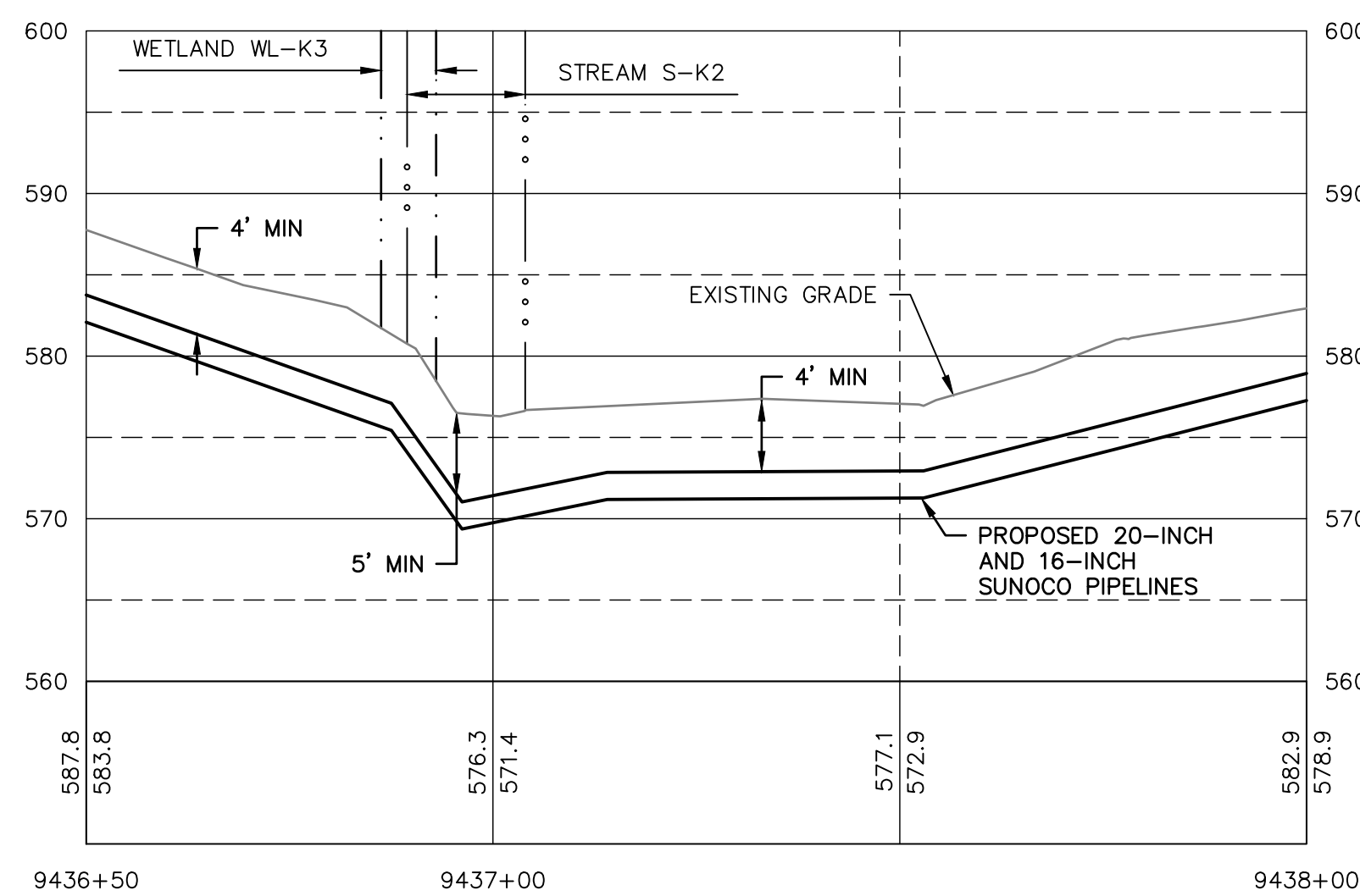
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-K4 RESTORATION PLAN				
OLD DRAWING NO.				DWG. NO. S-K4-C-B
CUMBERLAND COUNTY, PA				REV. NO. 0



EXISTING CONDITIONS PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'

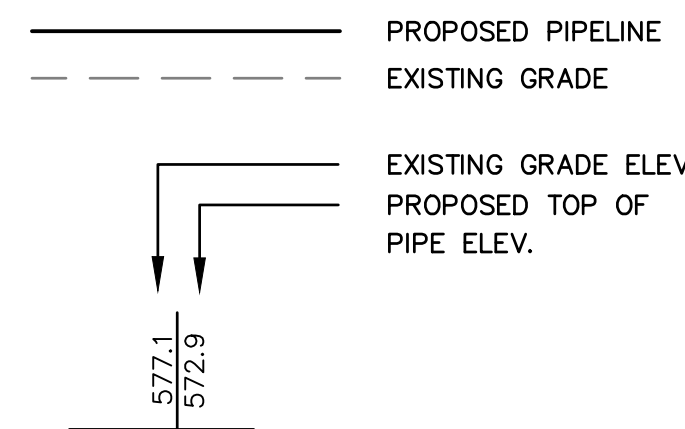


PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



PROFILE LEGEND:



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

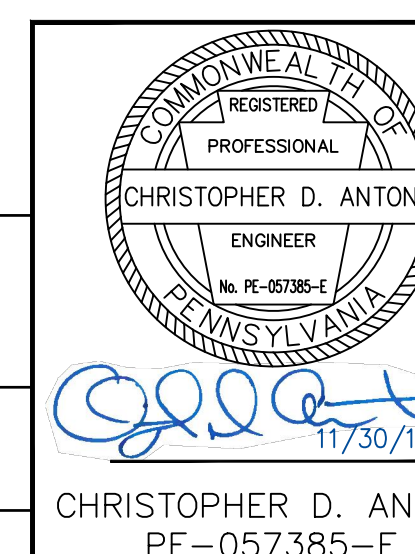
STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-K2				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
CUMBERLAND COUNTY, PA				
DWG. NO.			S-K2-A	REV. NO.
OLD DRAWING NO.				0

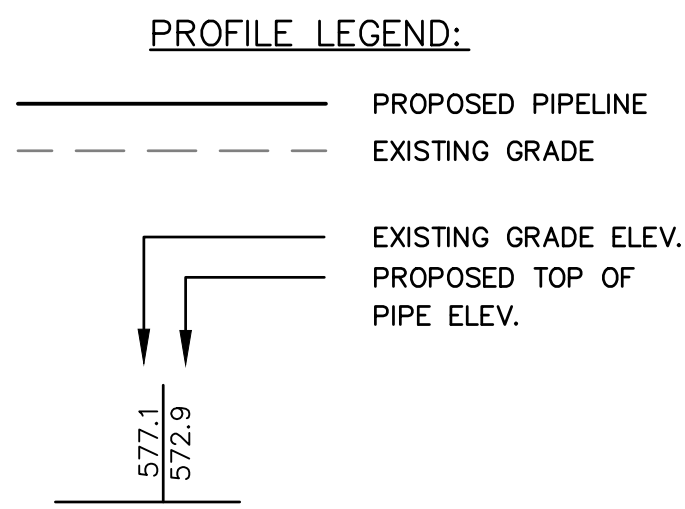
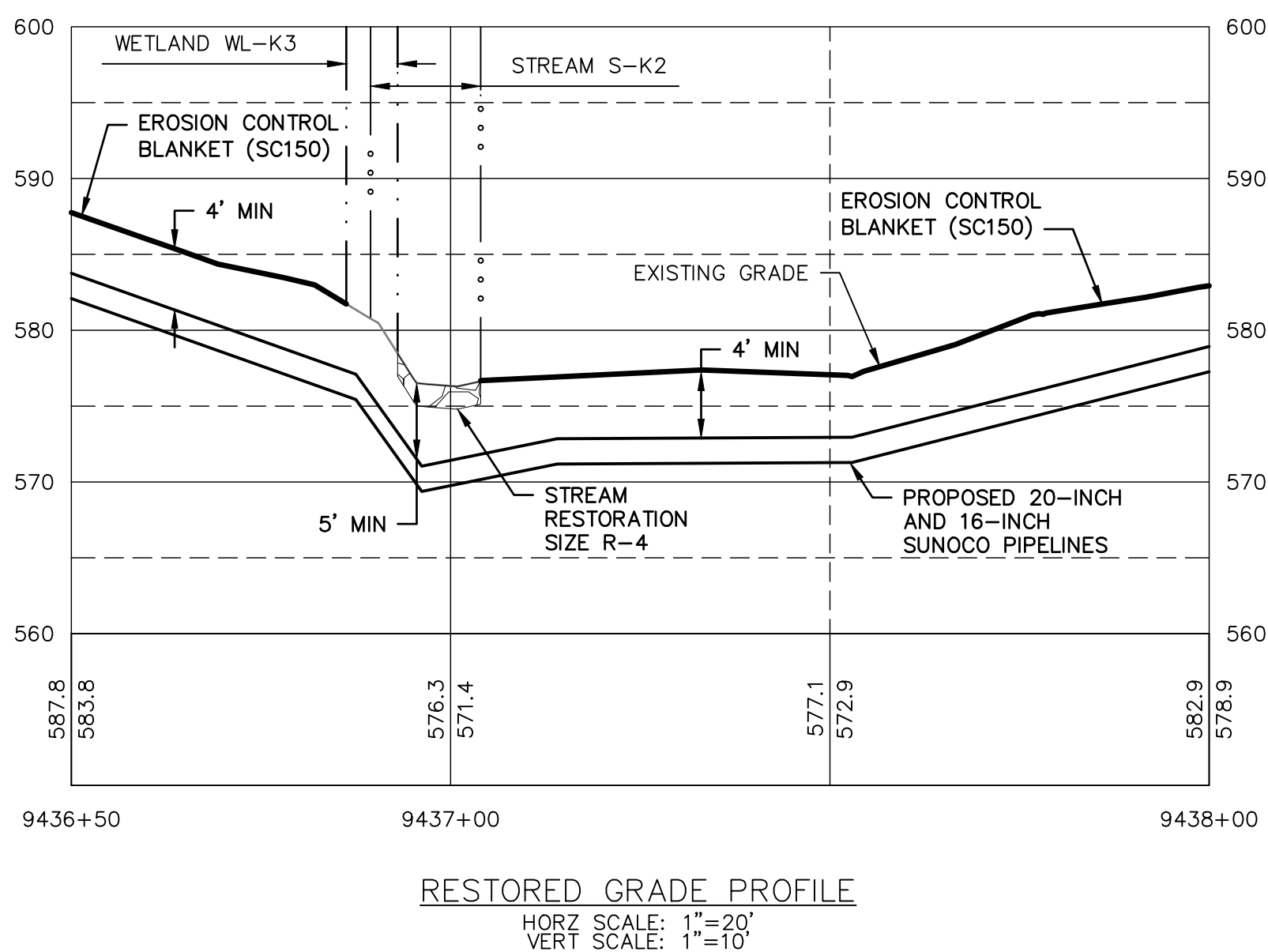
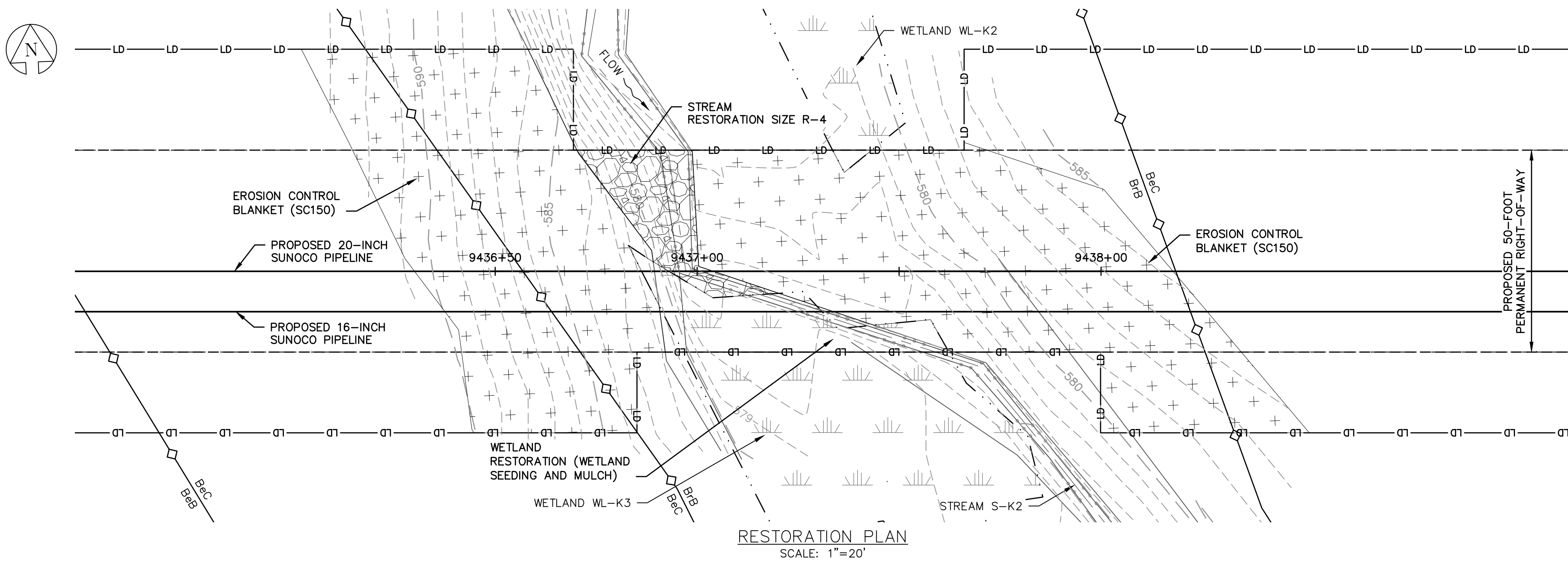


CHRISTOPHER D. ANTONI
PE-057385-E

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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WETLAND CROSSING NOTES:

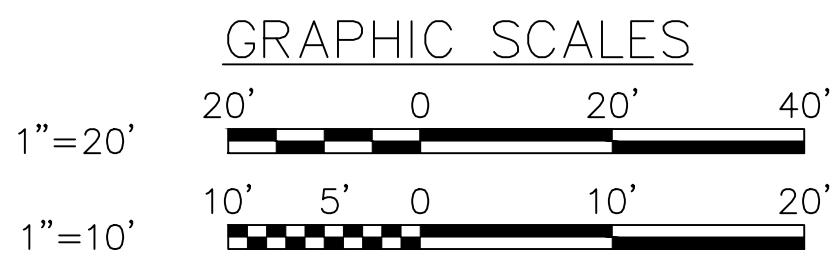
- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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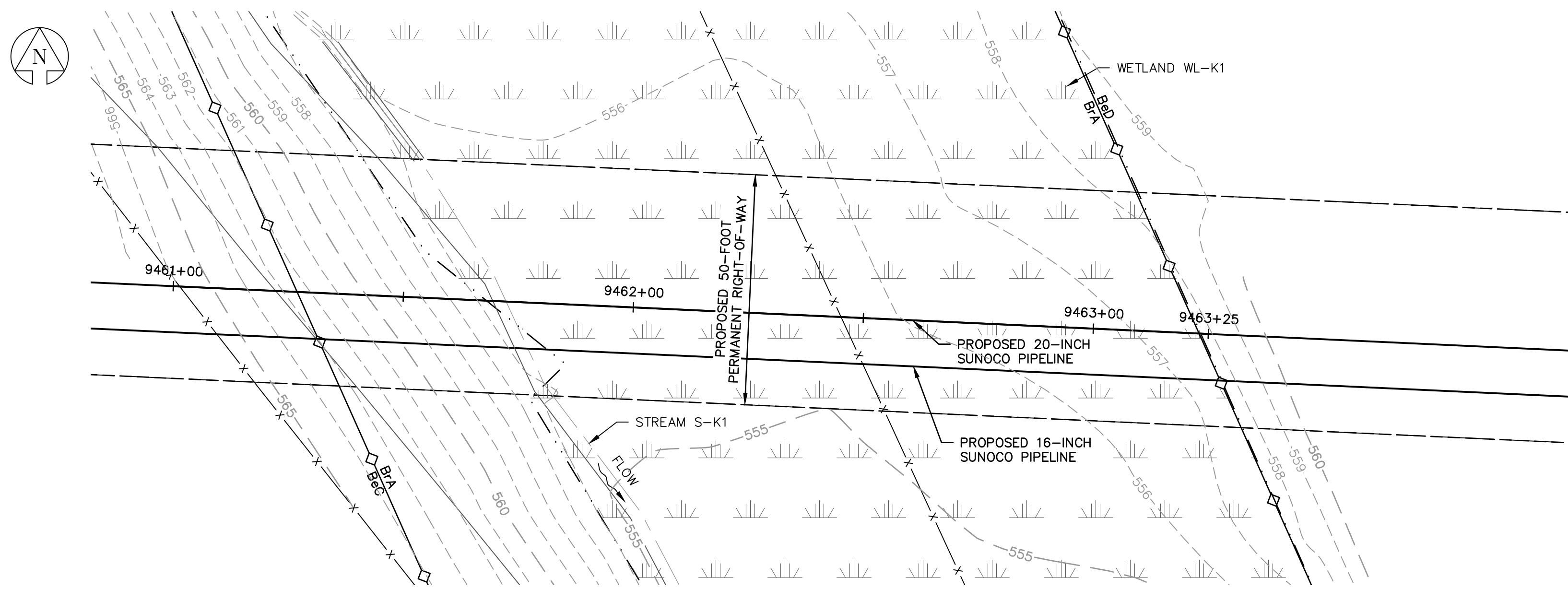
STV PROJECT No.: 38-17335

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTON
No. PE-057385-E
11/30/16

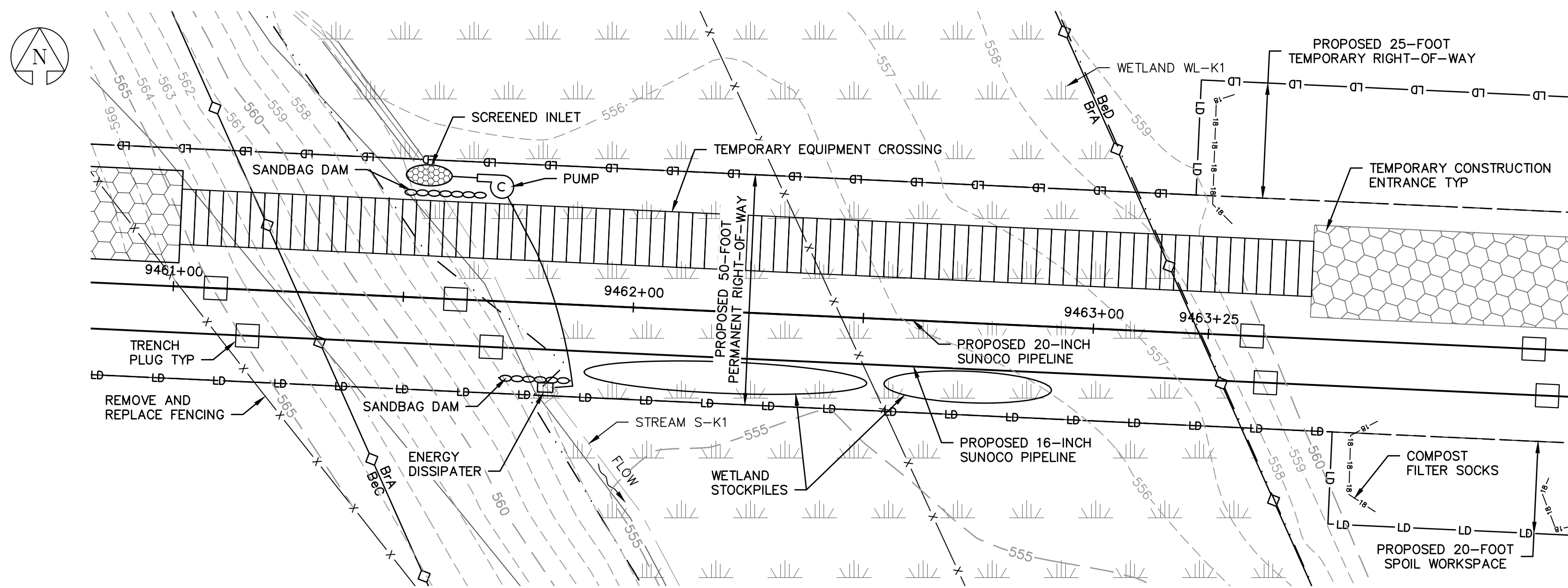
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	PDZ
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

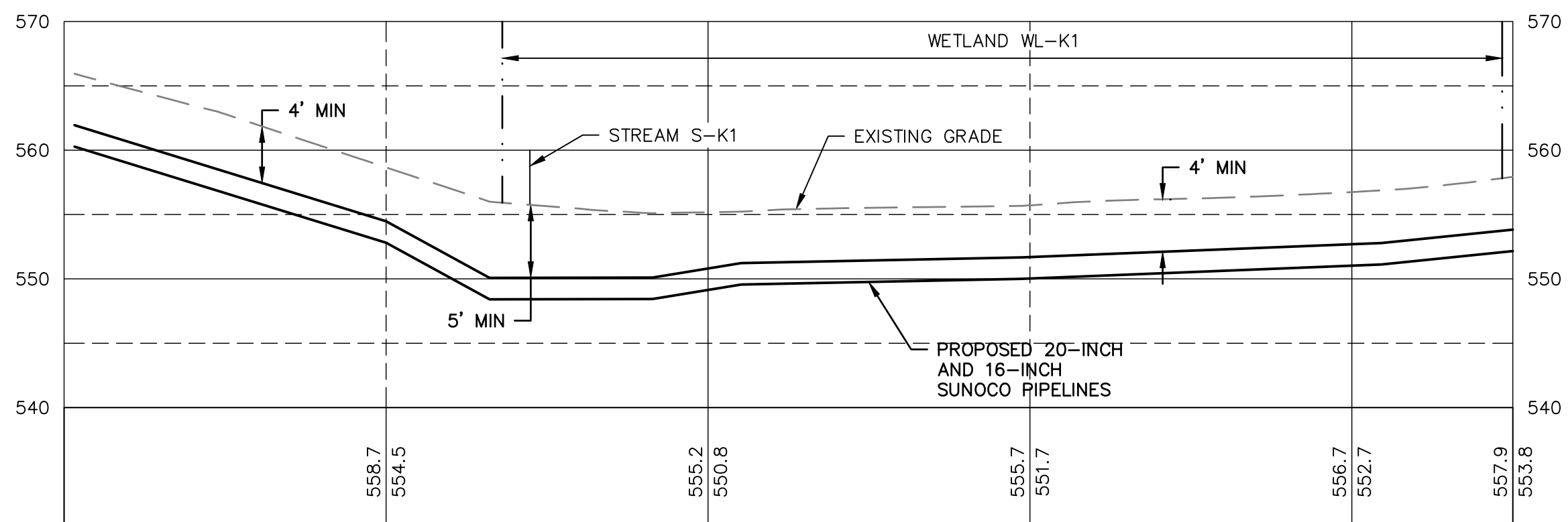
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-K2 RESTORATION PLAN				
CUMBERLAND COUNTY, PA				
OLD DRAWING NO.			DWG. NO. S-K2-B	REV. NO. 0



EXISTING CONDITIONS PLAN
SCALE: 1"=20'

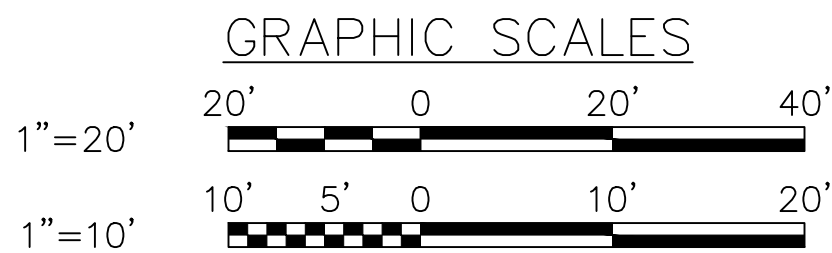
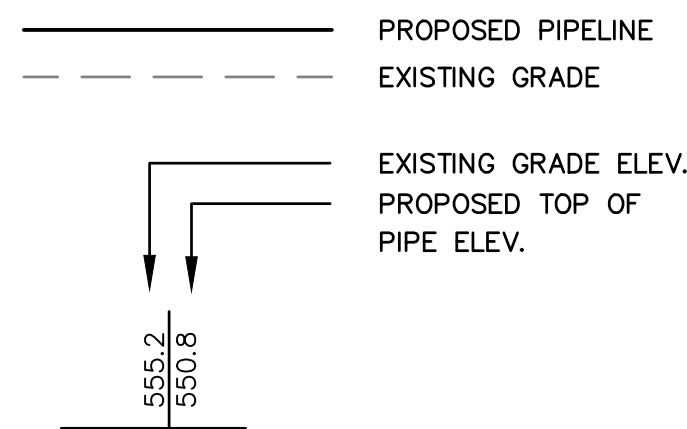


EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

PROFILE LEGEND:



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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WETLAND CROSSING NOTES:

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3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

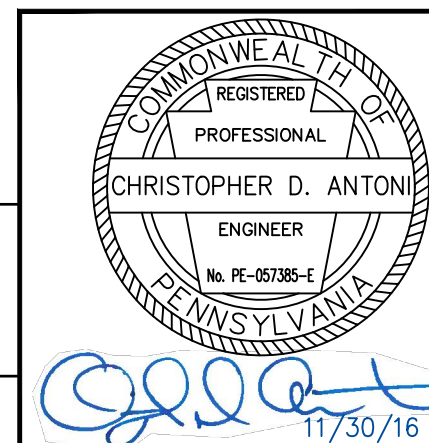
STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED



PENNSYLVANIA PIPELINE PROJECT
STREAM S-K1
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS

CUMBERLAND COUNTY, PA

OLD DRAWING NO.

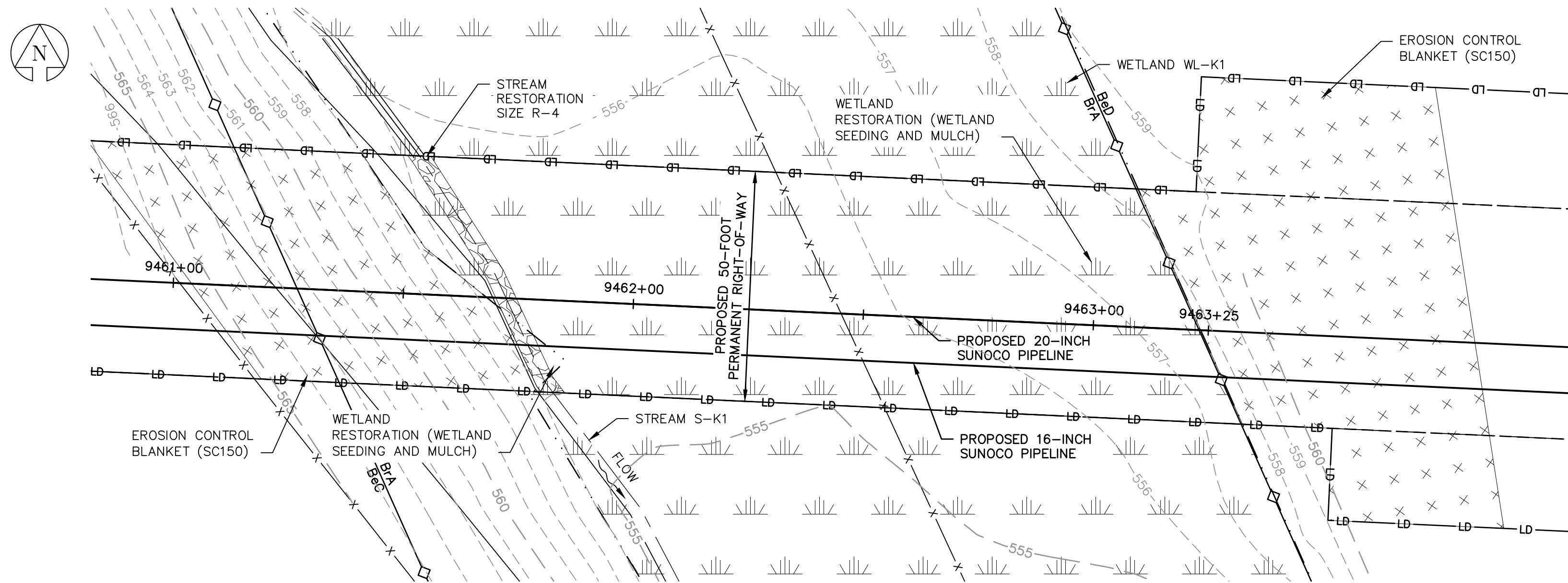
DWG. NO.
S-K1-A

REV. NO.
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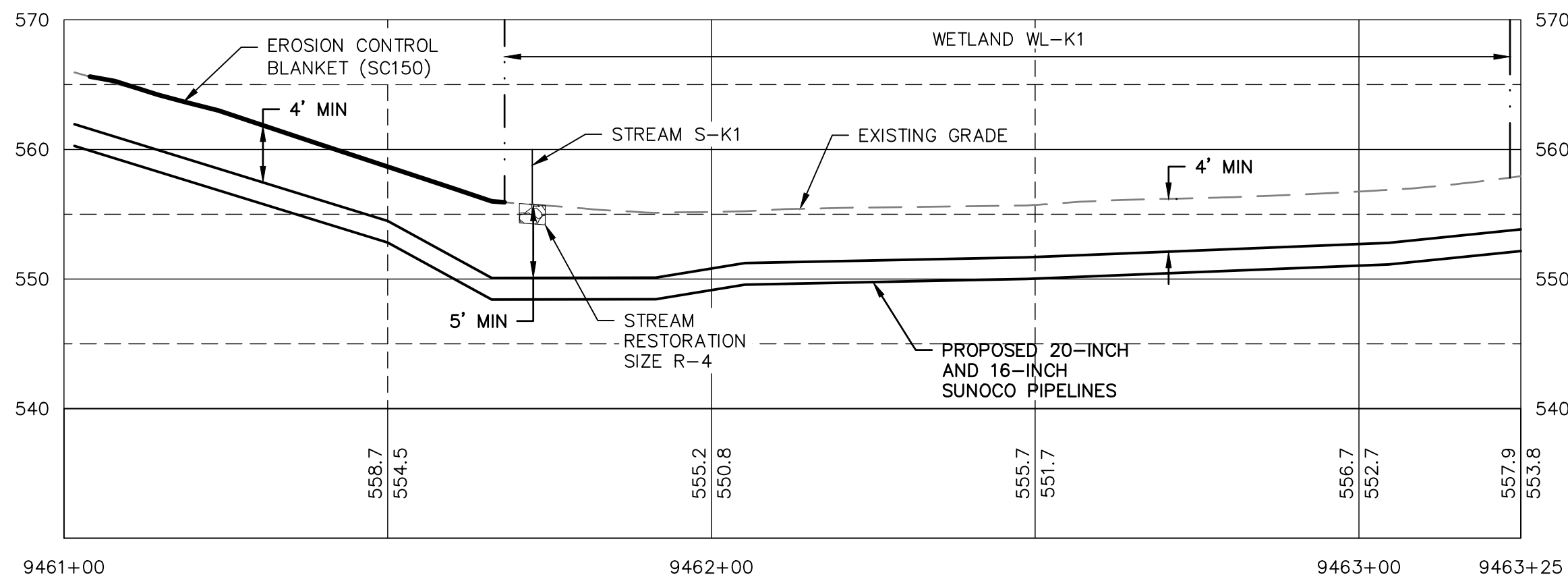
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335

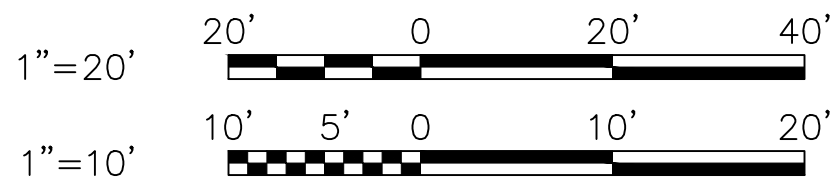


RESTORATION PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD

DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAM S-K1
RESTORATION PLAN

CUMBERLAND COUNTY, PA

DWG. NO.

S-K1-B

REV. NO.

0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335

GENERAL NOTES:

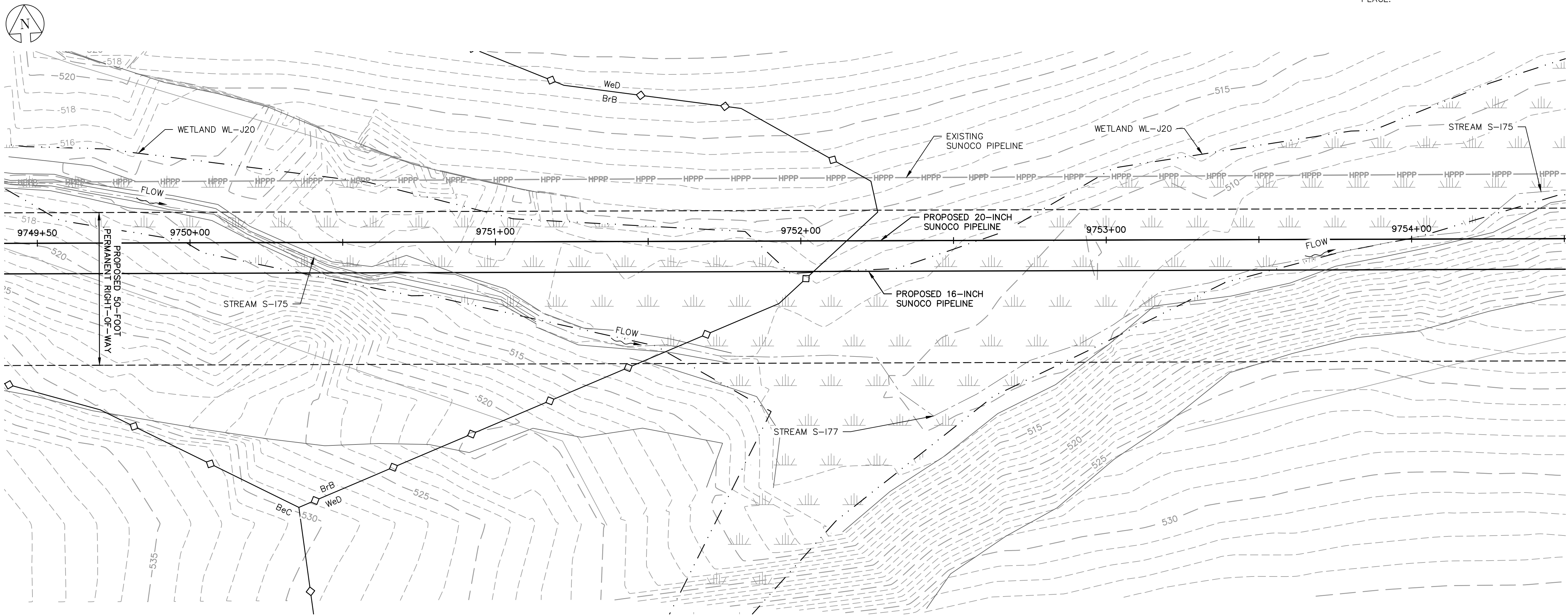
1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.16).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.



PLAN
SCALE: 1"=20'

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

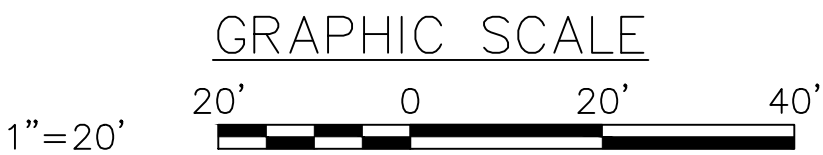
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STV PROJECT No.: 38-17335

CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-I75 AND S-I76 EXISTING CONDITIONS CUMBERLAND COUNTY, PA				
DWG. NO.			S-I75-A	REV. NO. 0



GENERAL NOTES:

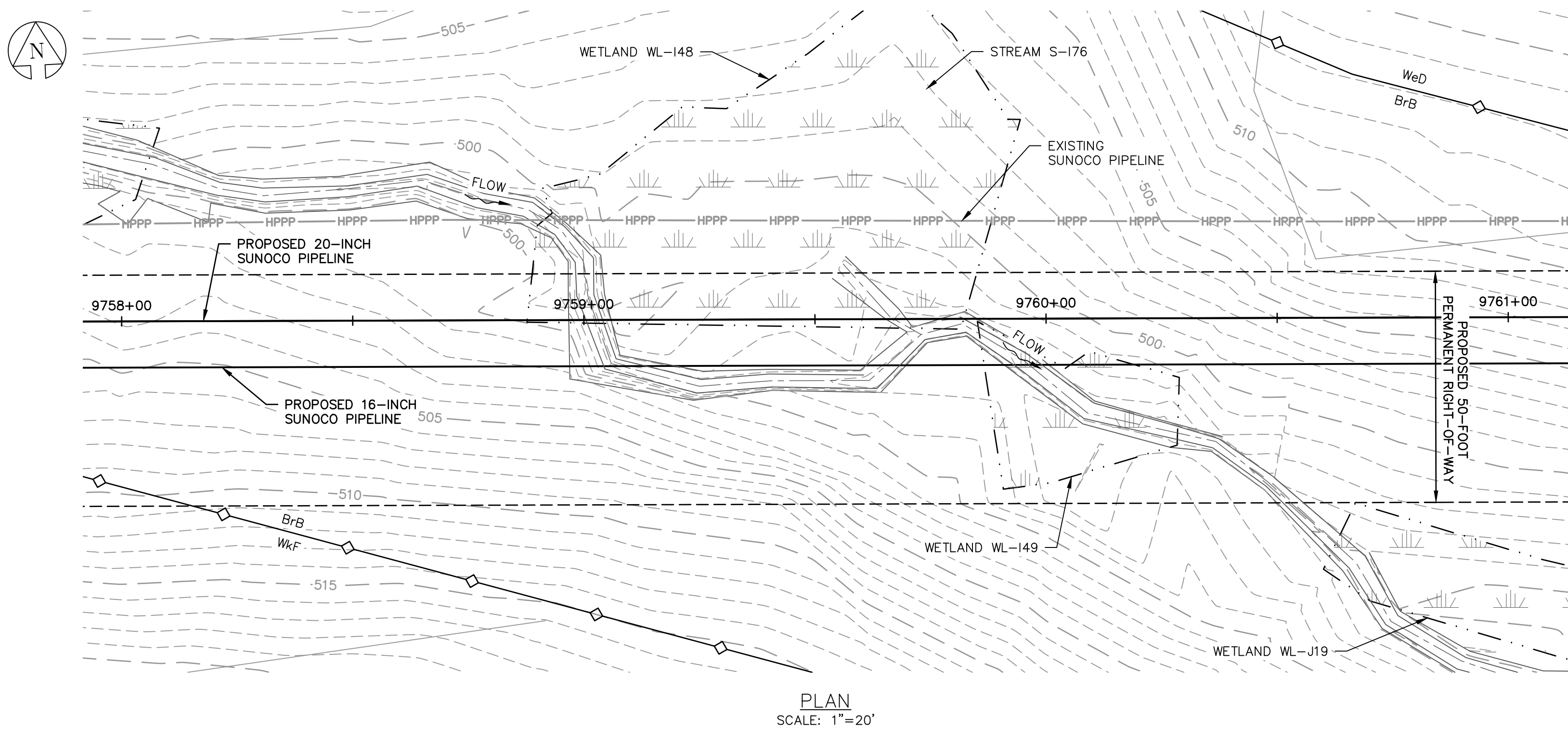
1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

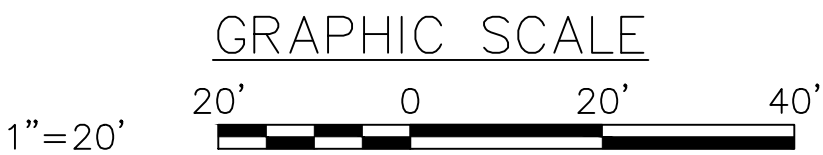
STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.



LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION



Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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SERVICE.

STV PROJECT No.: 38-17335

11/30/16

CHRISTOPHER D. ANTONI
PE-057385-E

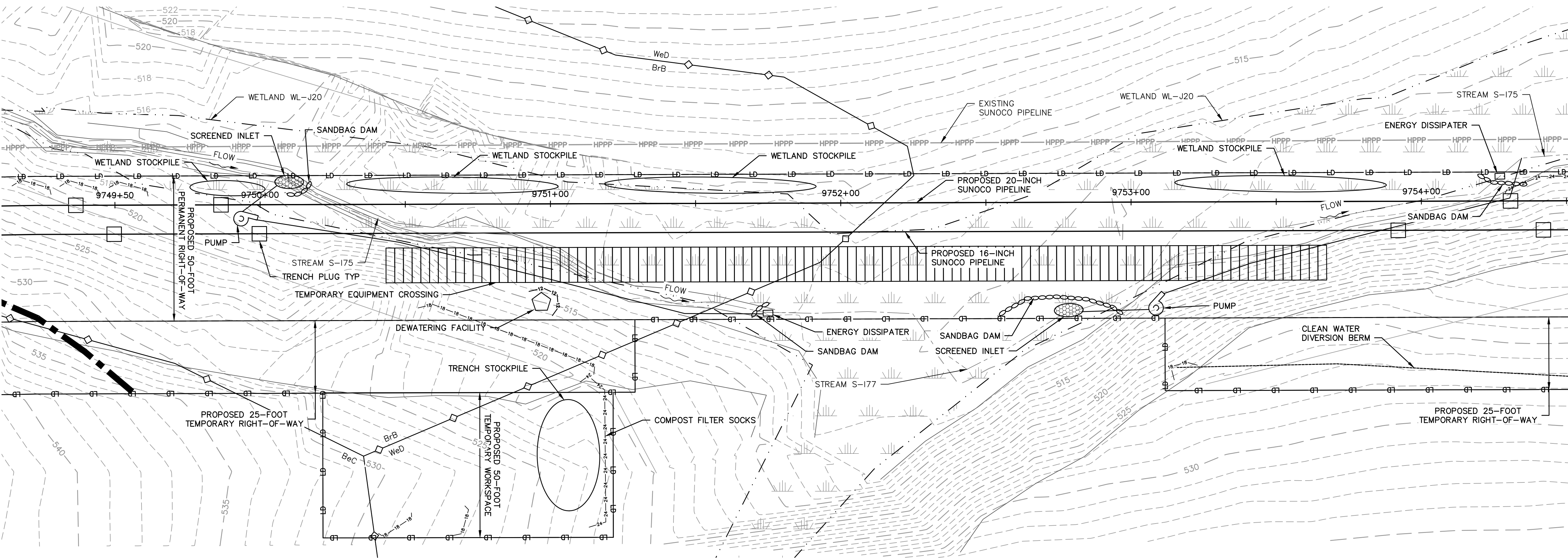
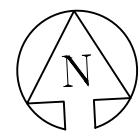
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DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-I75 AND S-I76 EXISTING CONDITIONS CUMBERLAND COUNTY, PA				
DWG. NO.			S-I75-B	REV. NO. 0

- GENERAL NOTES:
1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
 2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
 4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
 5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
 6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

- WETLAND CROSSING NOTES:
1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
 2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
 3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
 4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

- STREAM CROSSING NOTES:
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
 2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
 3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
 4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
 5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.16).
 6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
 7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
 8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.



PLAN
SCALE: 1"=20'

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
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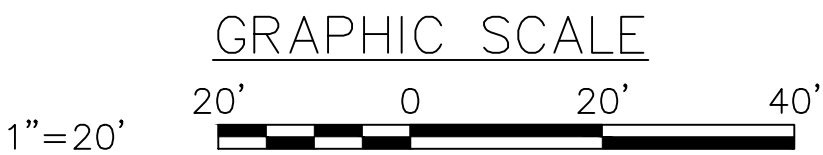
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STV PROJECT No.: 38-17335

CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-I75 AND S-I76 EROSION & SEDIMENTATION CONTROL PLAN CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
S-I75-C			0	



GENERAL NOTES:

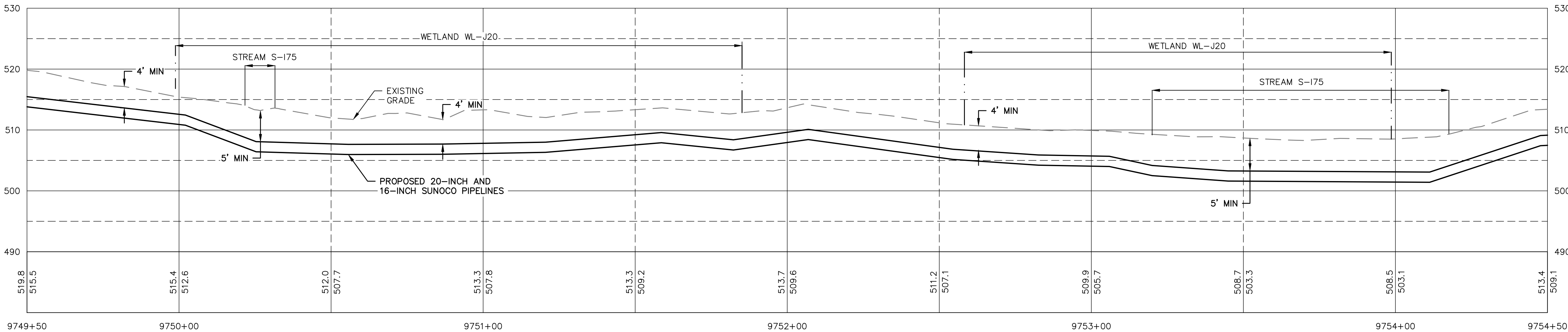
1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.16).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.



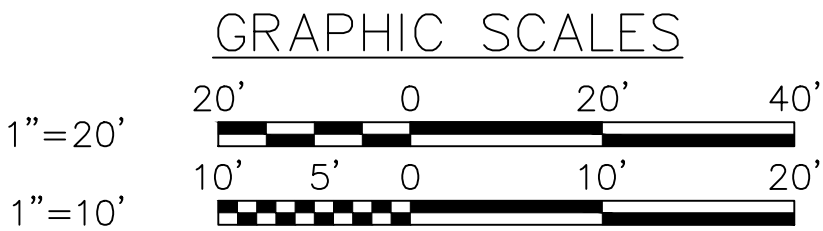
PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

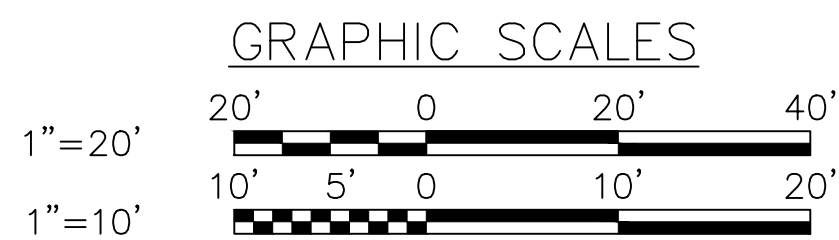
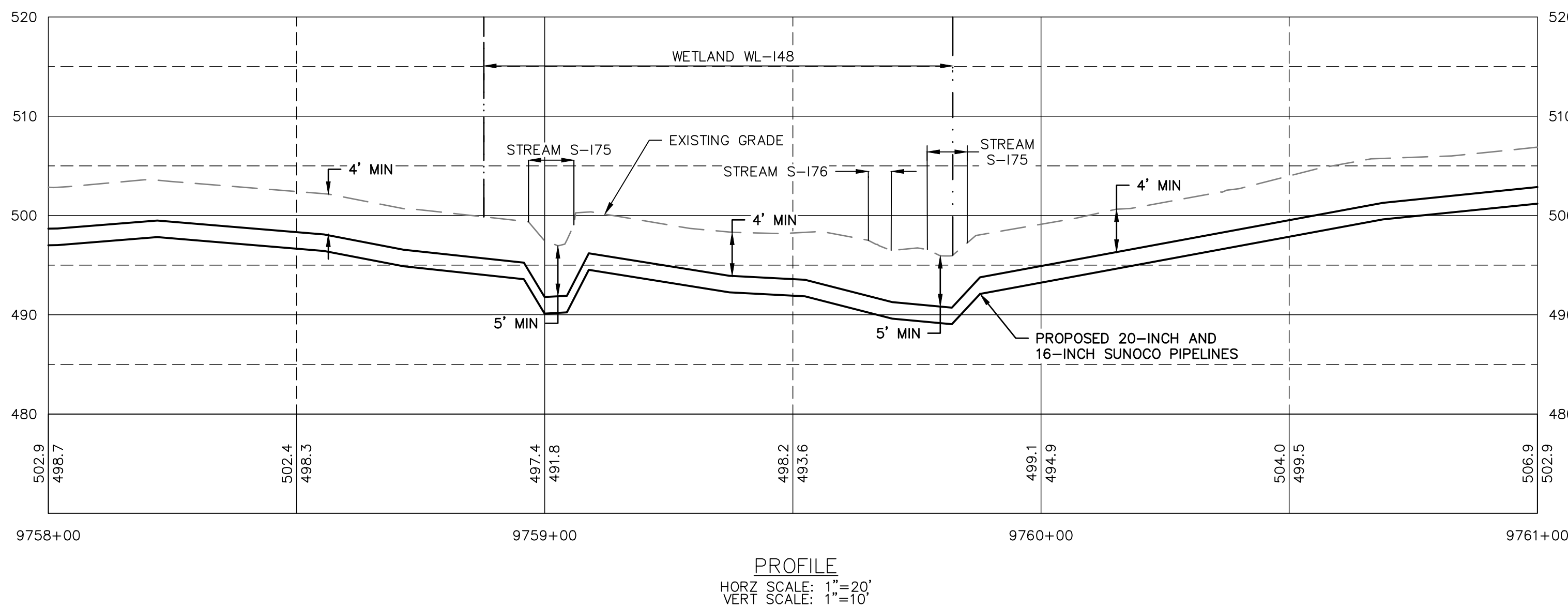
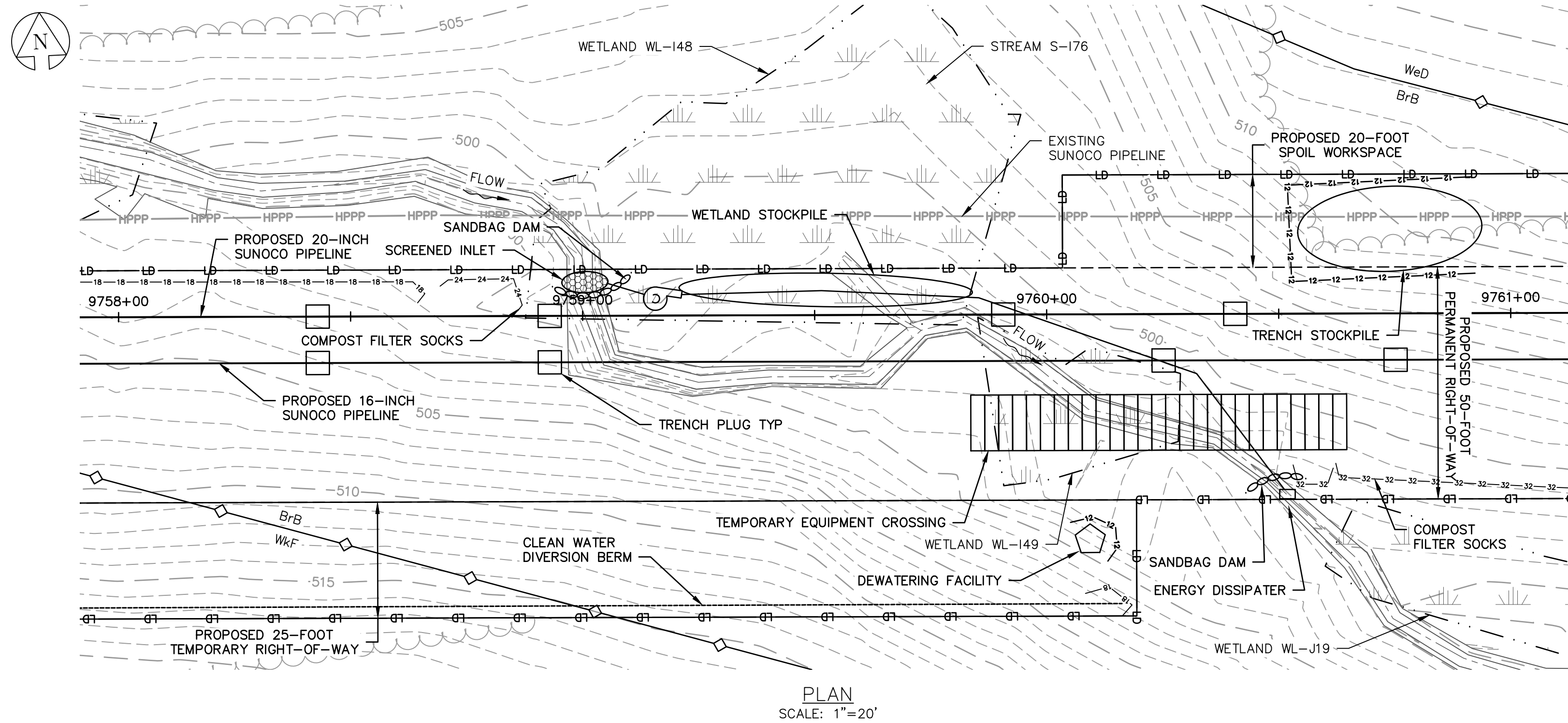
STV PROJECT No.: 38-17335

11/30/16

CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-I75 AND S-I76 EROSION & SEDIMENTATION CONTROL PROFILE CUMBERLAND COUNTY, PA				
DWG. NO.			S-I75-D	REV. NO. 0



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

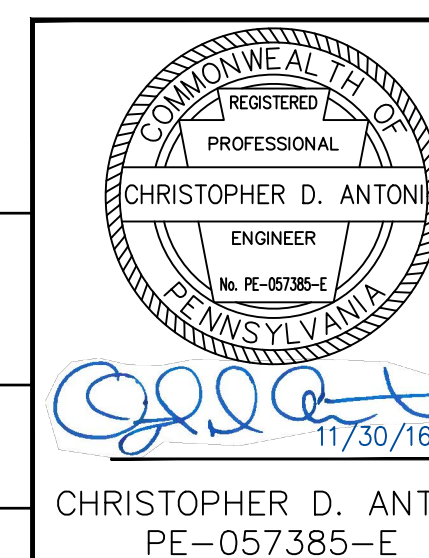
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

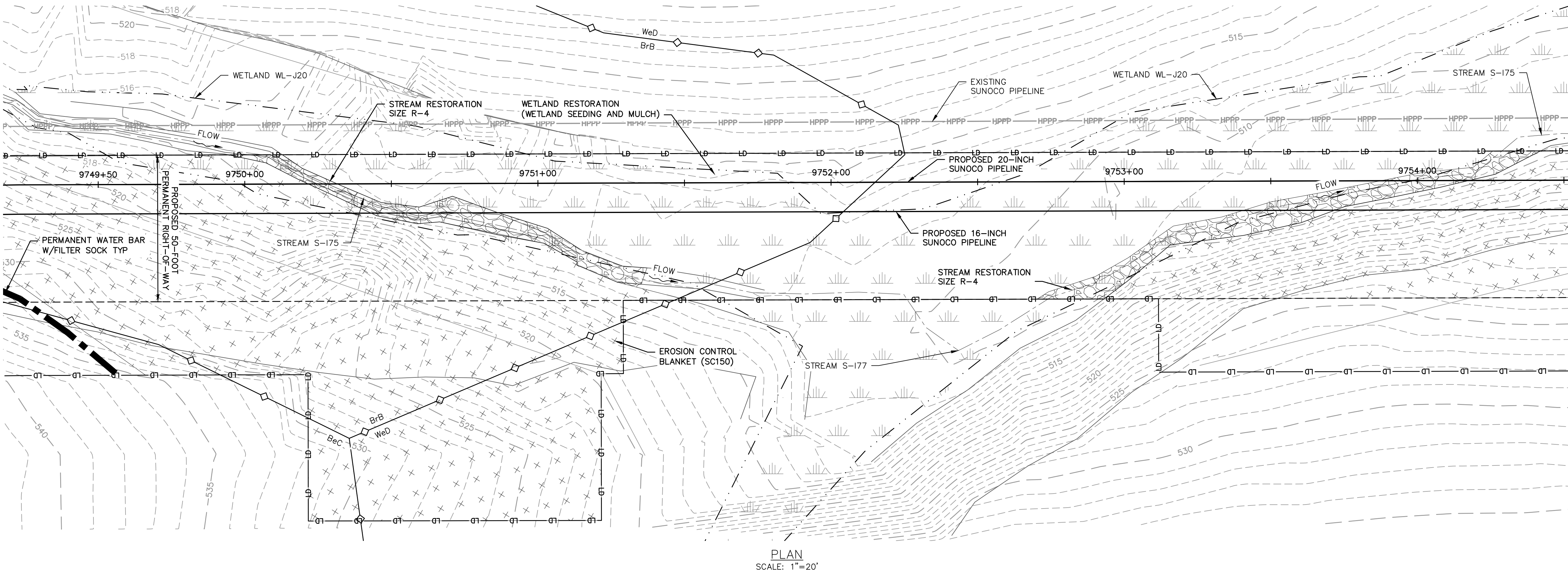
	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



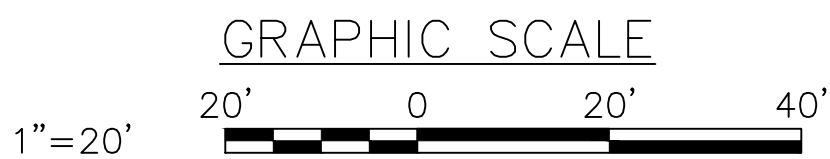
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DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-I75 AND S-I76 EROSION & SEDIMENTATION CONTROL PLAN AND PROFILE				
CUMBERLAND COUNTY, PA				
DWG. NO. S-I75-E				REV. NO. 0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA
THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE
CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT
LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION
SERVICE.
STV PROJECT No.: 38-17335



PLAN
SCALE: 1"=20'



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE
CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT
LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION
SERVICE.

STV PROJECT No.: 38-17335

CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-175 AND S-176 RESTORATION PLAN CUMBERLAND COUNTY, PA				
DWG. NO.			S-I75-F	REV. NO. 0

GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

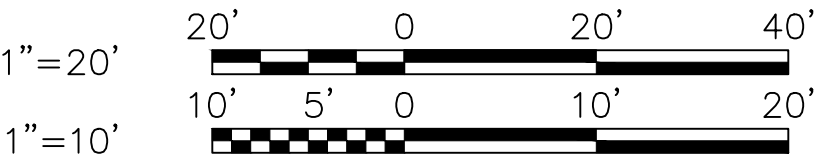
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.16).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

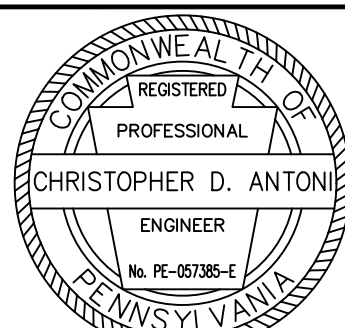
RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAMS S-I75 AND S-I76
RESTORATION PROFILE

CUMBERLAND COUNTY, PA

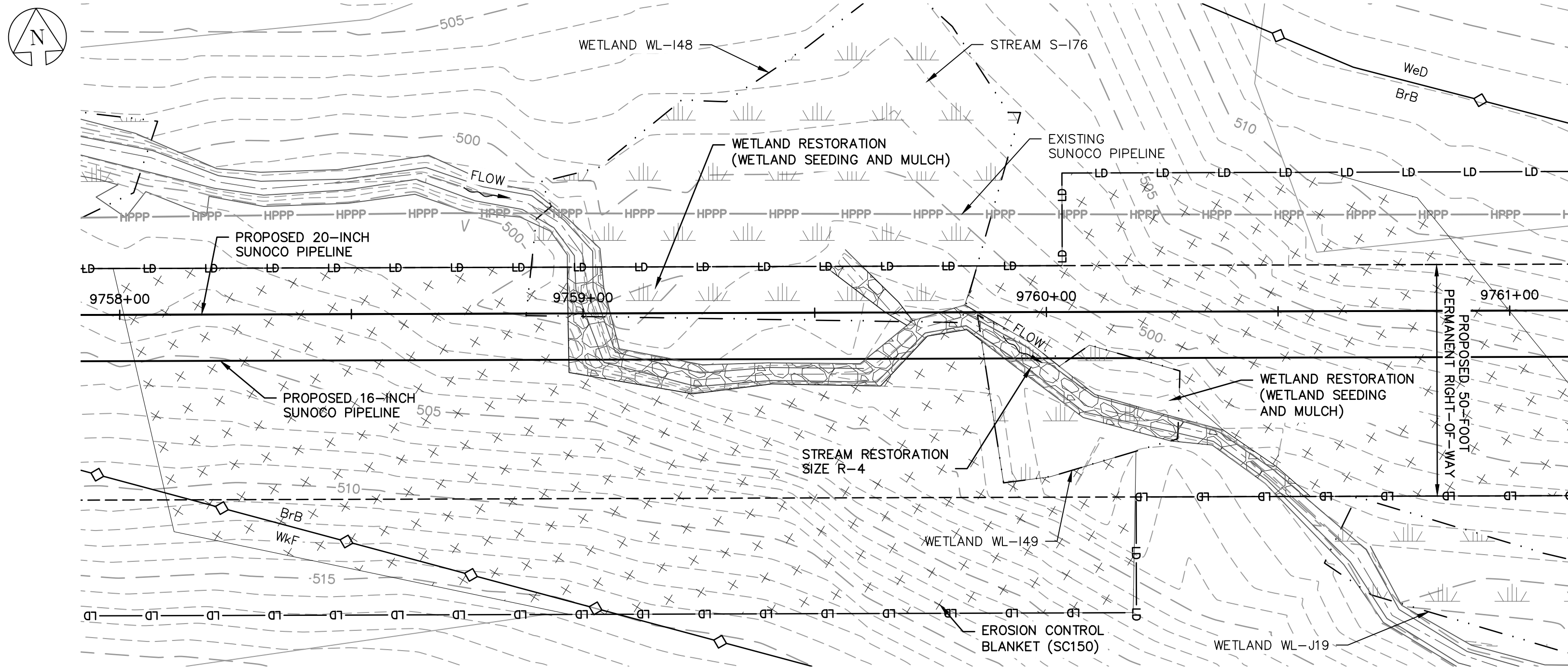
DWG. NO.
S-I75-G

REV. NO.
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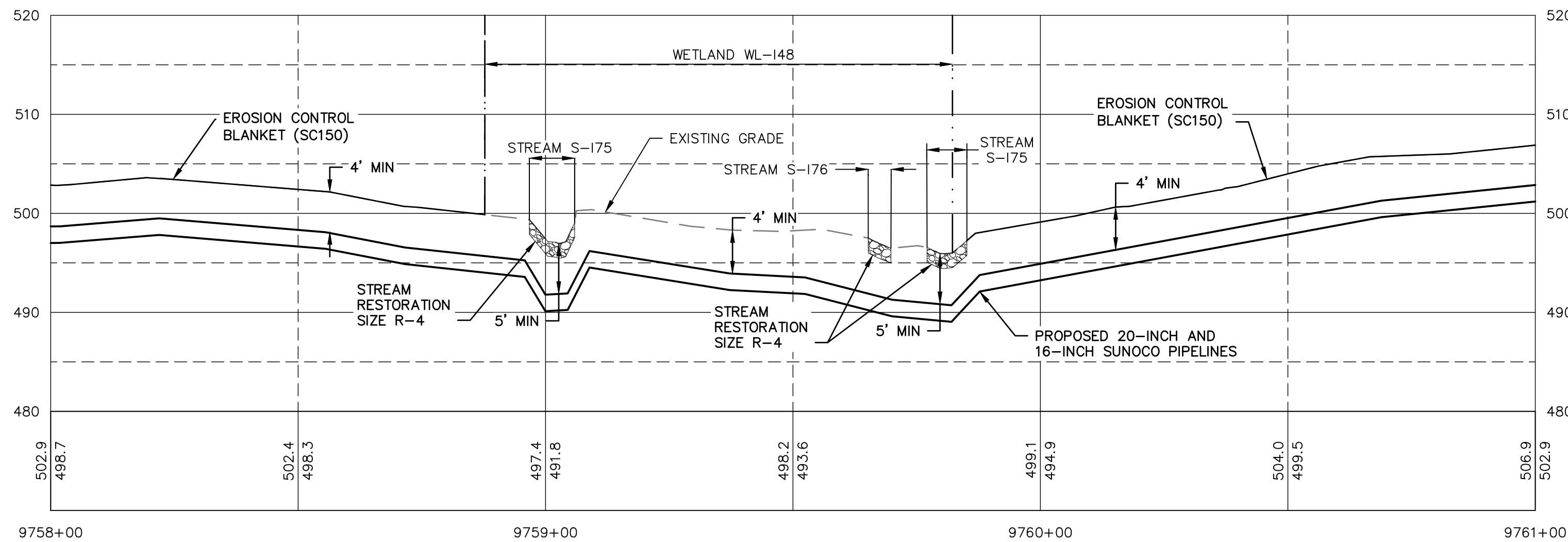
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

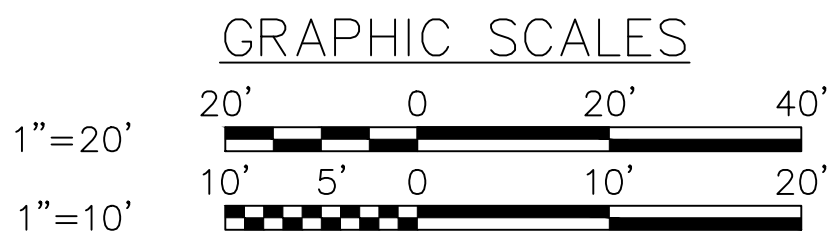
STV PROJECT No.: 38-17335



PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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SERVICE.

STV PROJECT No.: 38-17335

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-I75 AND S-I76 RESTORATION PLAN AND PROFILE CUMBERLAND COUNTY, PA				
DWG. NO.			S-I75-H	REV. NO. 0

GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

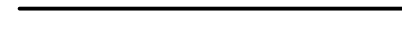
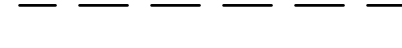
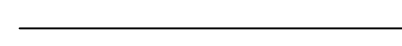
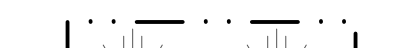
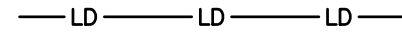
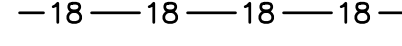
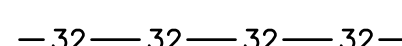
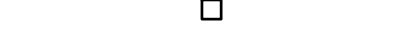
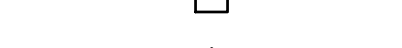
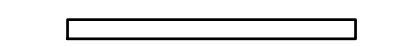
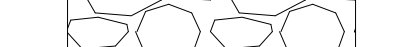
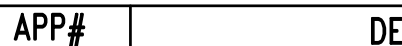
WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
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- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

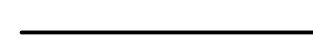
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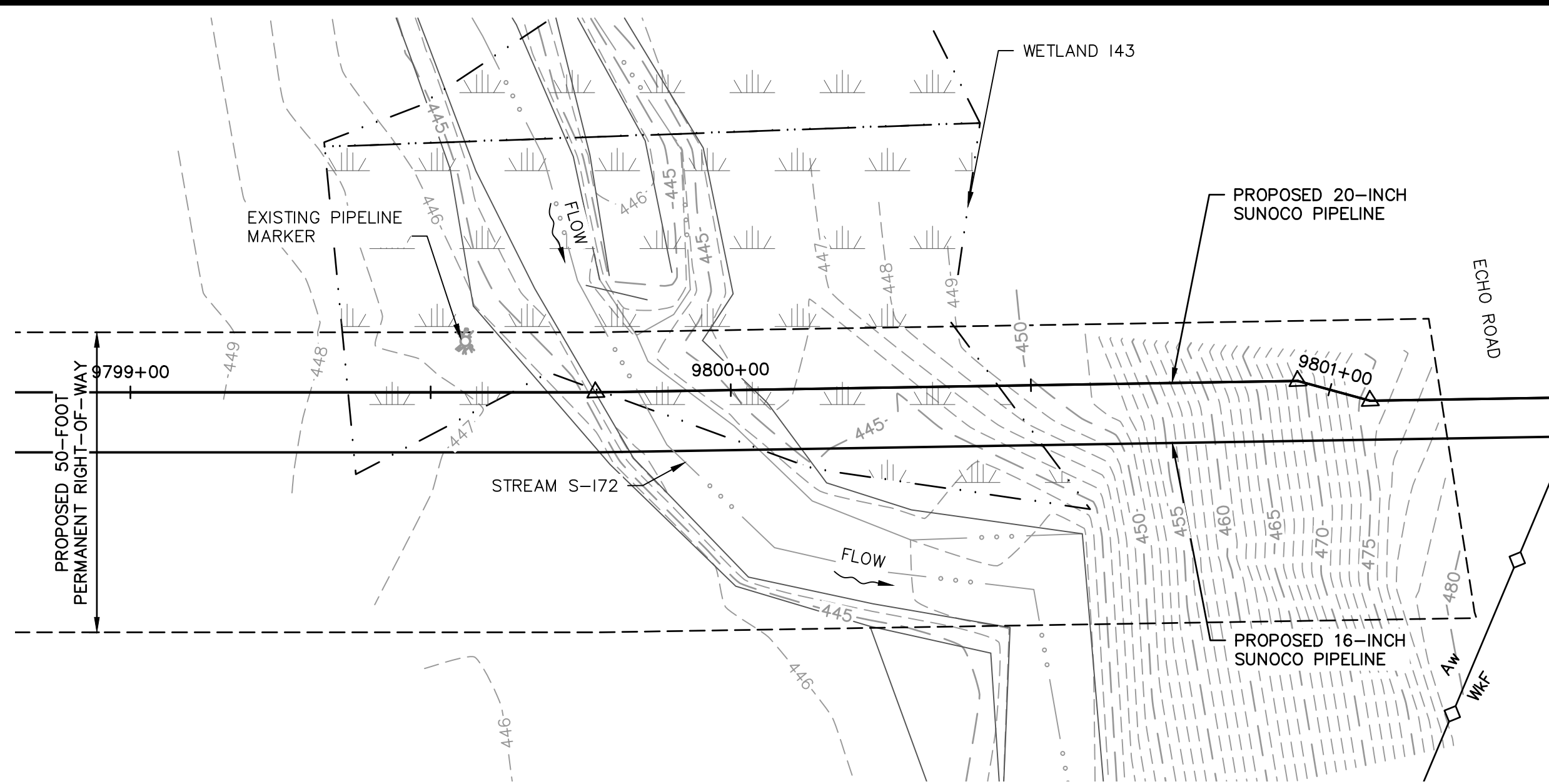
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.16).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

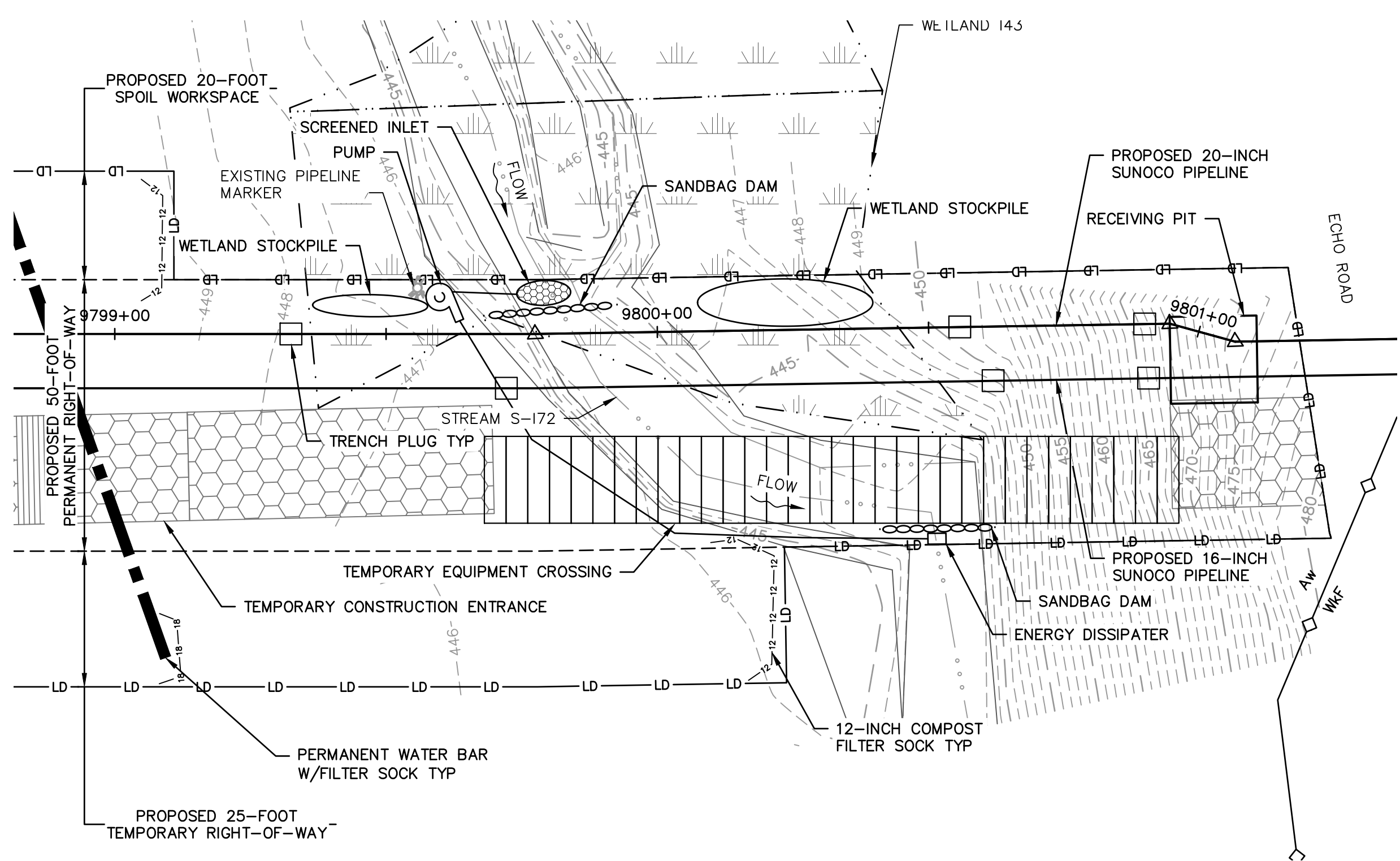
SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

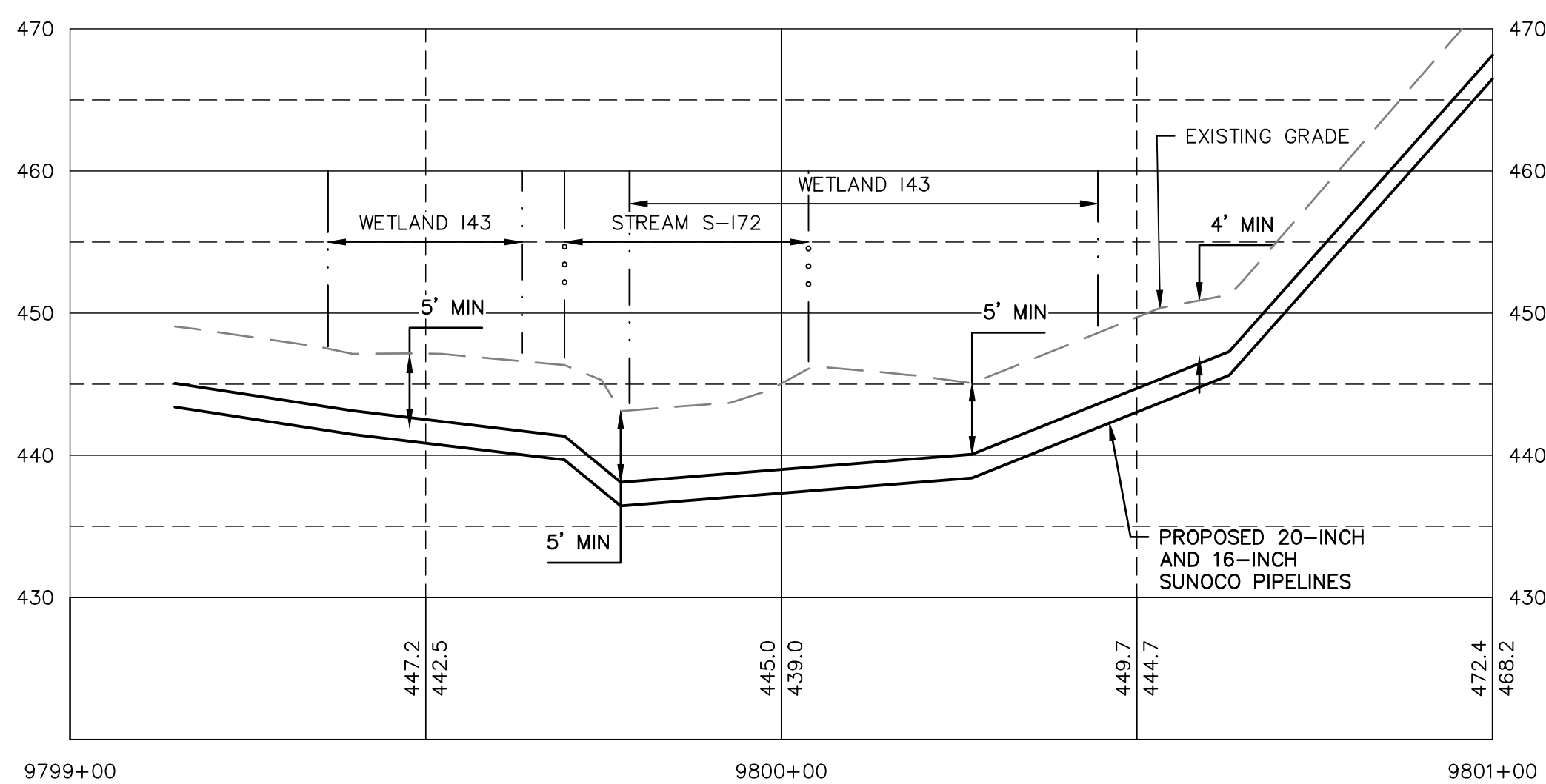
	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



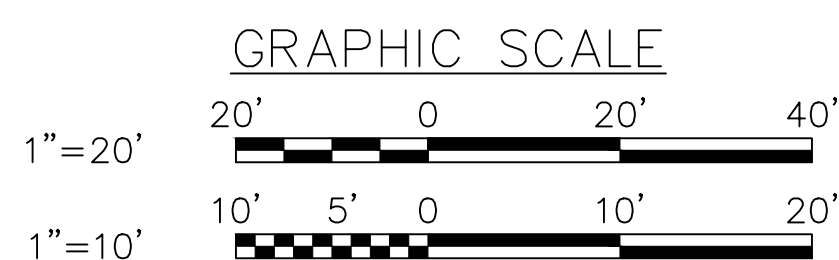
EXISTING CONDITIONS PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335

GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
---	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
----	PROPOSED SUNOCO RIGHT-OF-WAY
HPPP	EXISTING SUNOCO PIPELINE
910	MAJOR CONTOUR
----	MINOR CONTOUR
----	STREAM CENTERLINE
----	TOP/BOTTOM OF BANK
----	EXISTING EDGE OF PAVED ROADWAY
----	EXISTING EDGE OF UNPAVED ROADWAY
----	EXISTING VEGETATION
----	EDGE OF WATER
Tm Ma	SOIL TYPE BOUNDARY
WETLAND	WETLAND
PROPOSED ROCK CONSTRUCTION ENTRANCE	PROPOSED ROCK CONSTRUCTION ENTRANCE
LD	LIMIT OF DISTURBANCE
CF	CONSTRUCTION FENCE
12	12-INCH COMPOST FILTER SOCK
18	18-INCH COMPOST FILTER SOCK
24	24-INCH COMPOST FILTER SOCK
32	32-INCH COMPOST FILTER SOCK
18	PERMANENT WATER BAR W/FILTER SOCK
TRENCH PLUG	TRENCH PLUG
TEMPORARY EQUIPMENT CROSSING	TEMPORARY EQUIPMENT CROSSING
SANDBAG DAM	SANDBAG DAM
PUMP	PUMP
SCREENED INLET	SCREENED INLET
ENERGY DISSIPATER	ENERGY DISSIPATER
DEWATERING FACILITY	DEWATERING FACILITY
CULVERT PIPE	CULVERT PIPE
EROSION CONTROL BLANKET	EROSION CONTROL BLANKET
STREAM RESTORATION	STREAM RESTORATION

PROFILE LEGEND:

---	PROPOSED PIPELINE
----	EXISTING GRADE
445.8 441.8	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.

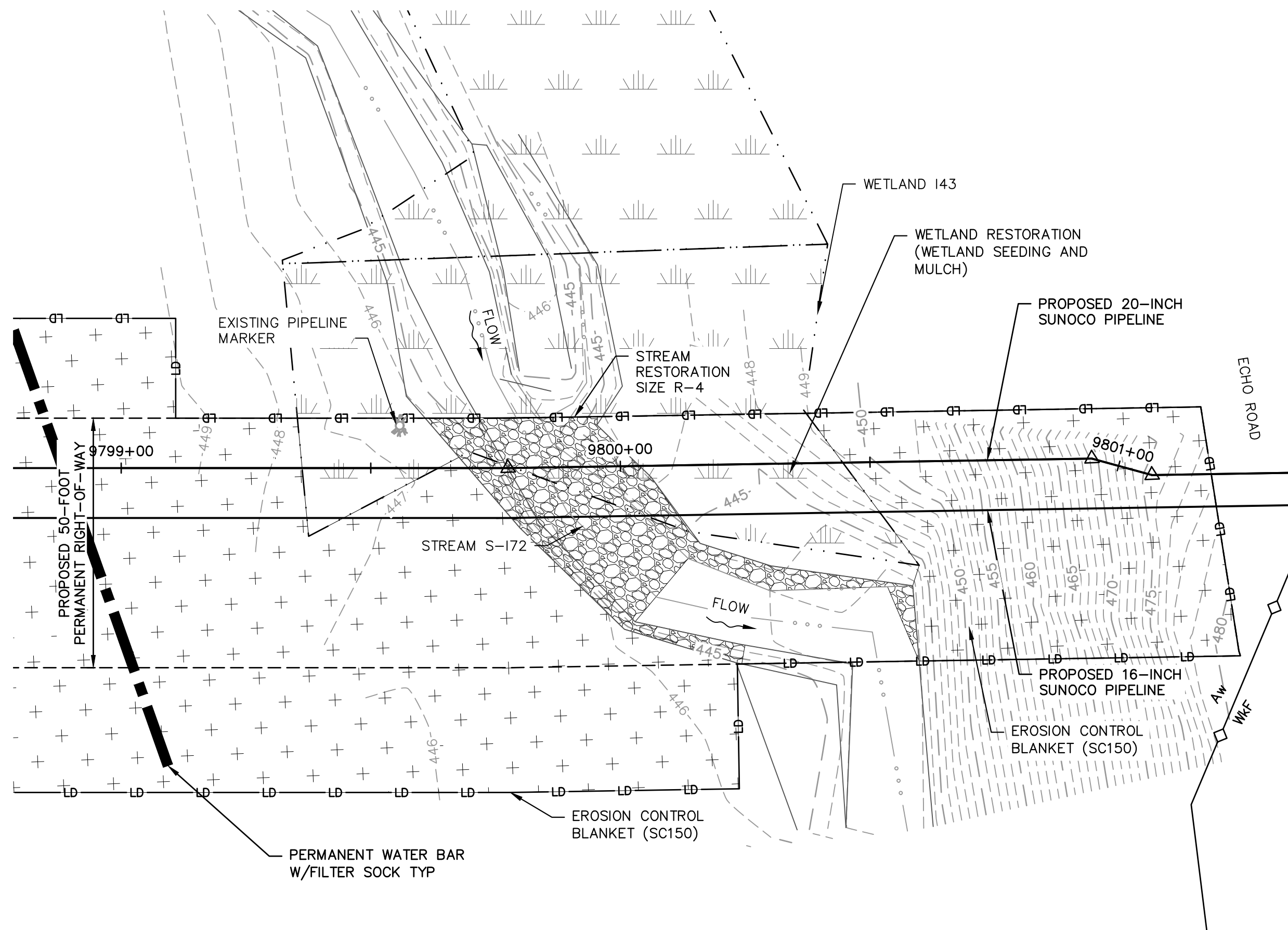
REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAM S-172 EROSION & SEDIMENTATION CONTROL PLAN AND PROFILE CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
S-172-A			0	

ENGINEERING RECORD

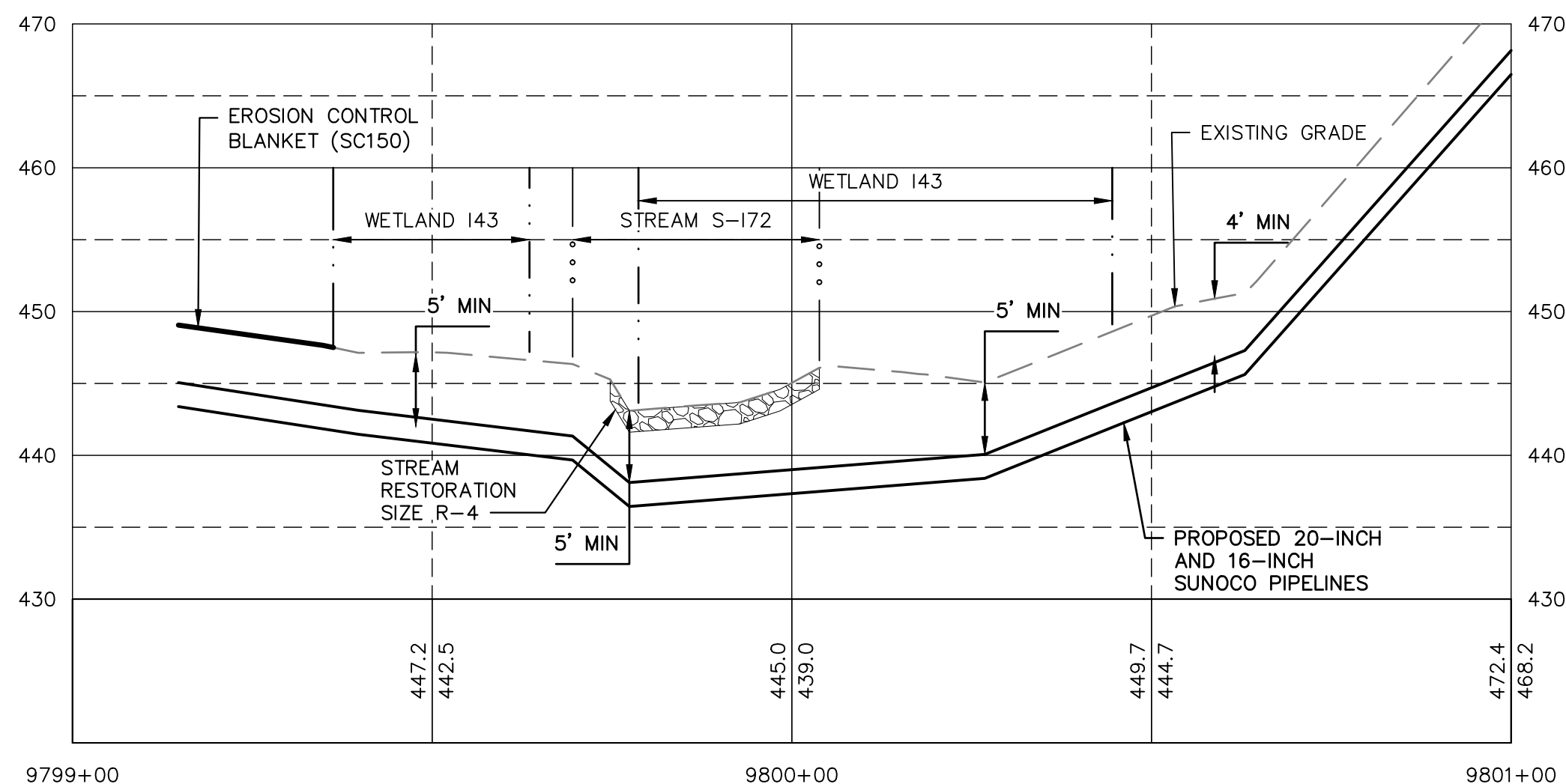
DRAWN BY	LG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

CHARTERED PROFESSIONAL ENGINEER
No. PE-057385-E
11/30/16
CHRISTOPHER D. ANTONI
PE-057385-E

OLD DRAWING NO.

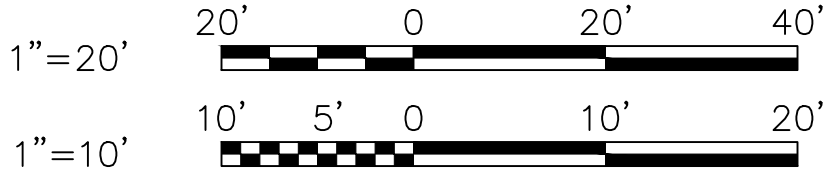


PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALE



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

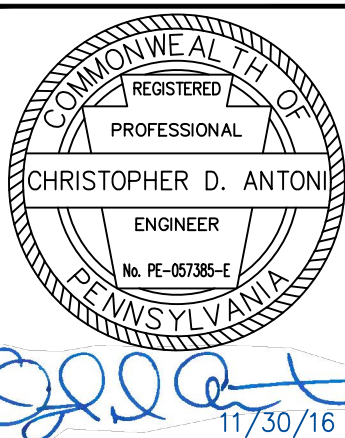
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

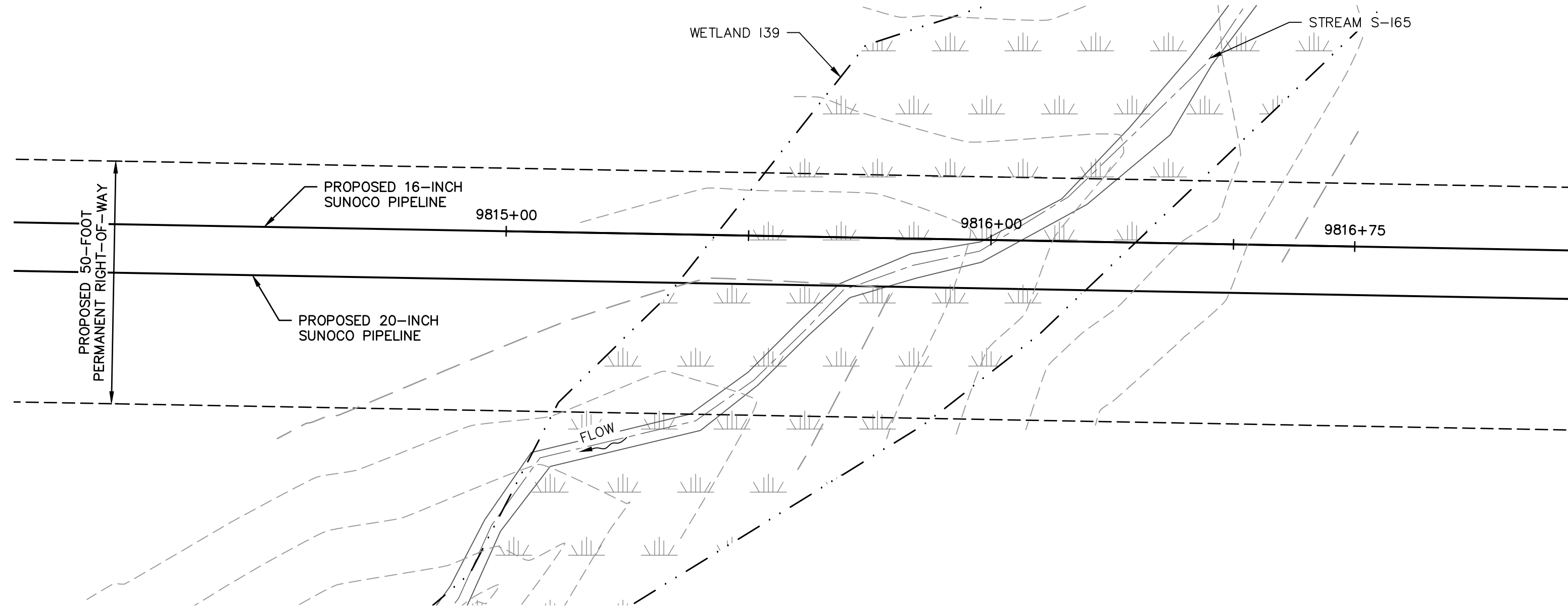


CHRISTOPHER D. ANTONI
PE-057385-E

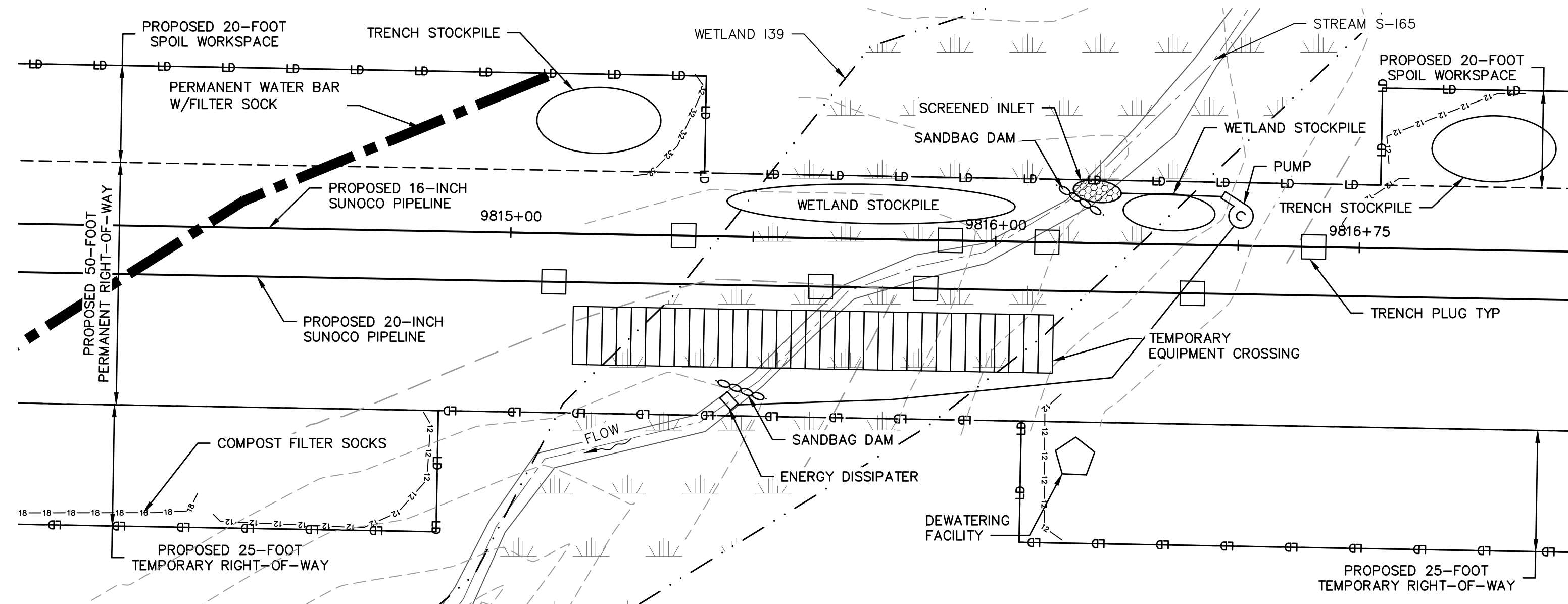
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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

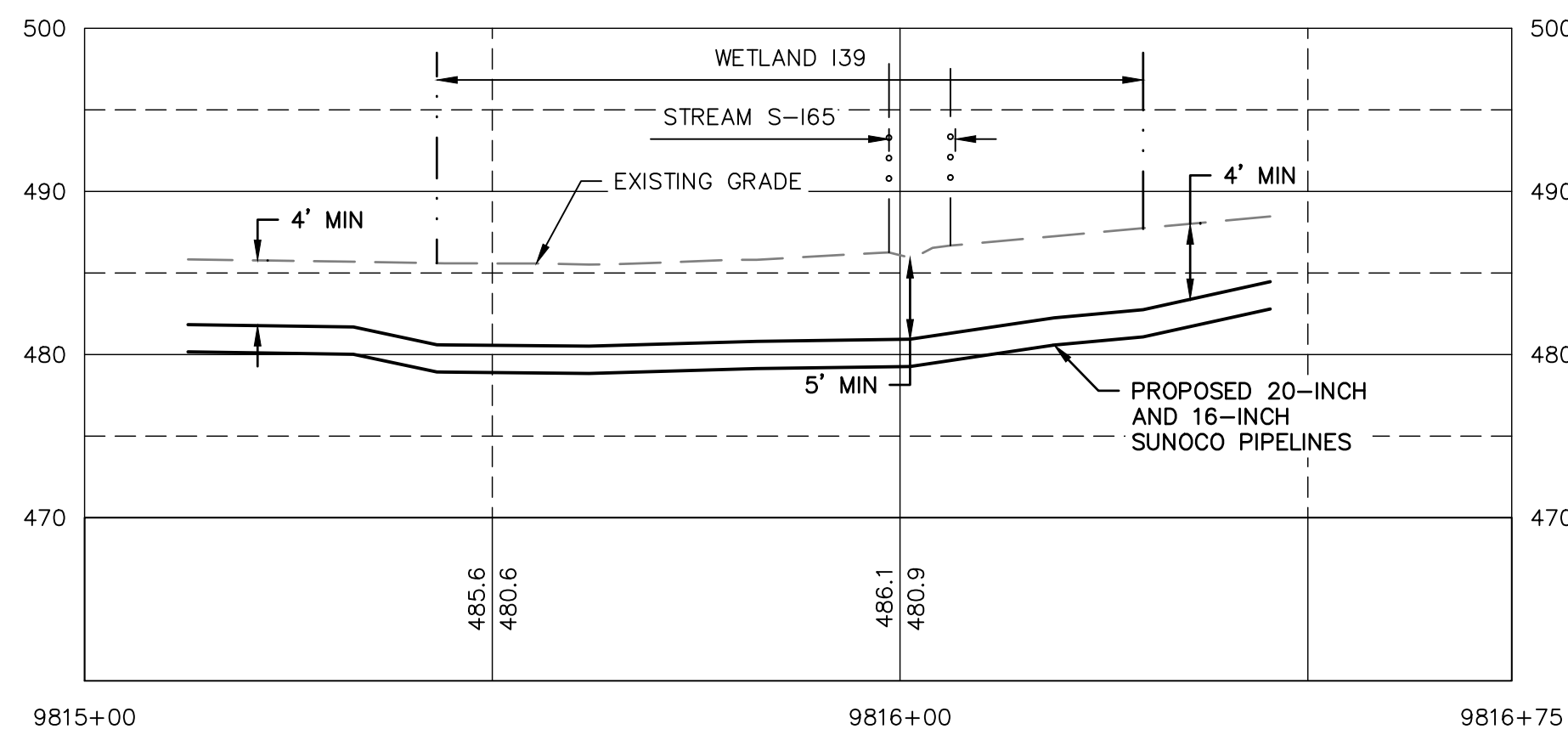
REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAM S-172 RESTORATION PLAN CUMBERLAND COUNTY, PA				
DWG. NO.			S-172-B	REV. NO. 0



EXISTING CONDITIONS PLAN
SCALE: 1"=20'

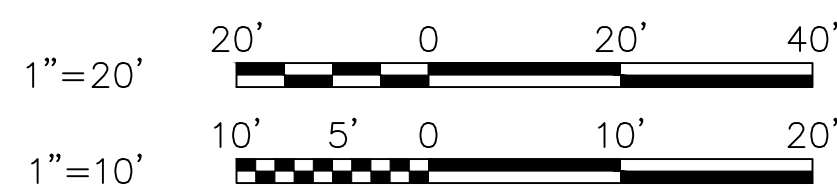


EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

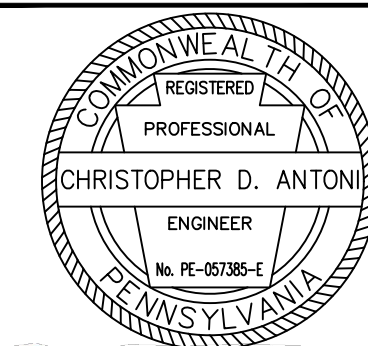
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.16).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD

DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAM S-I65
EXISTING CONDITIONS/EROSION &
SEDIMENTATION CONTROL PLANS

CUMBERLAND COUNTY, PA

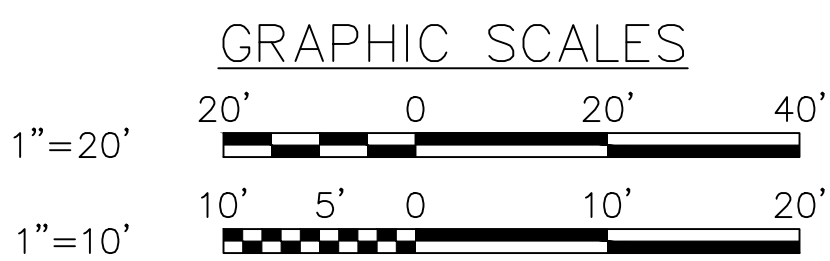
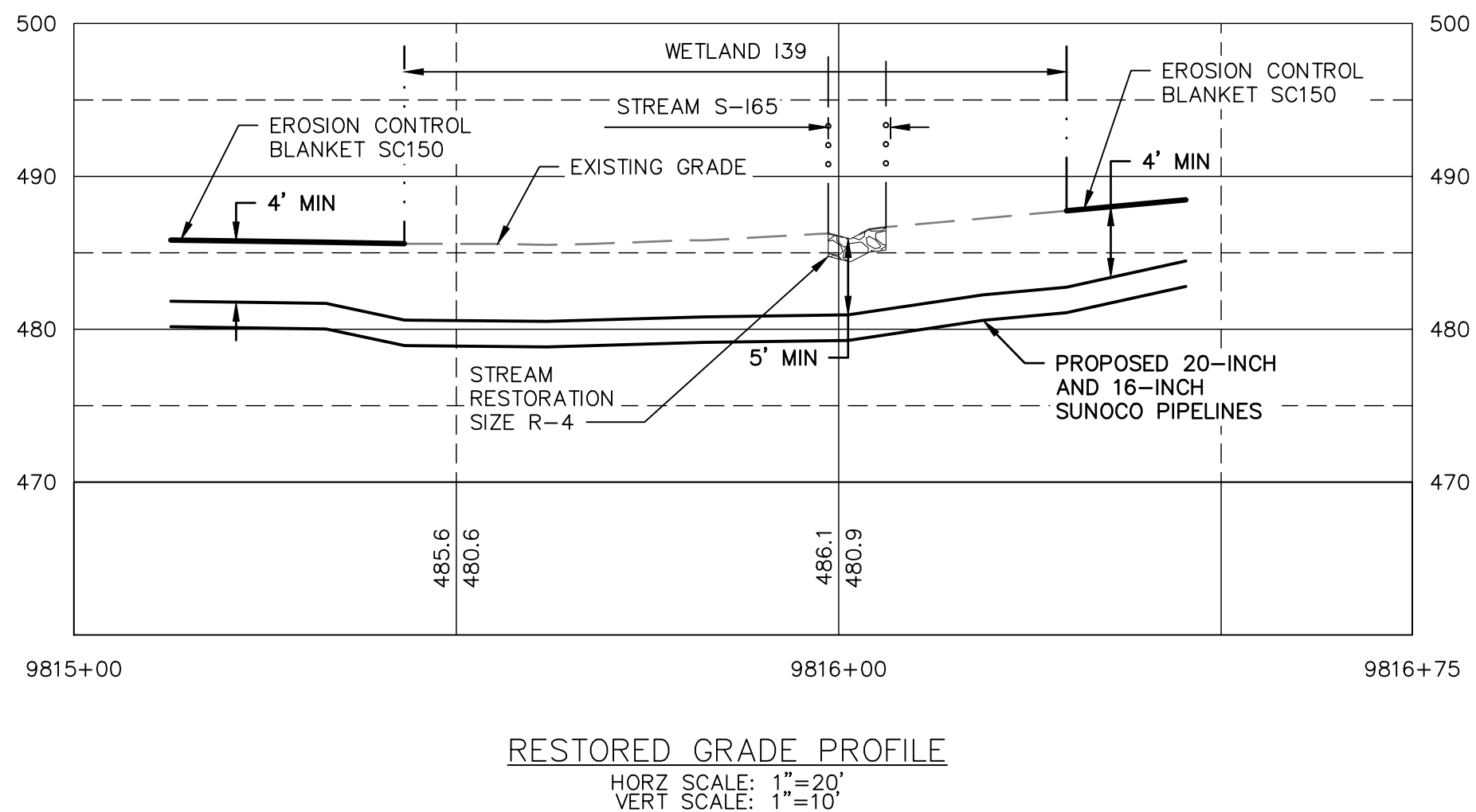
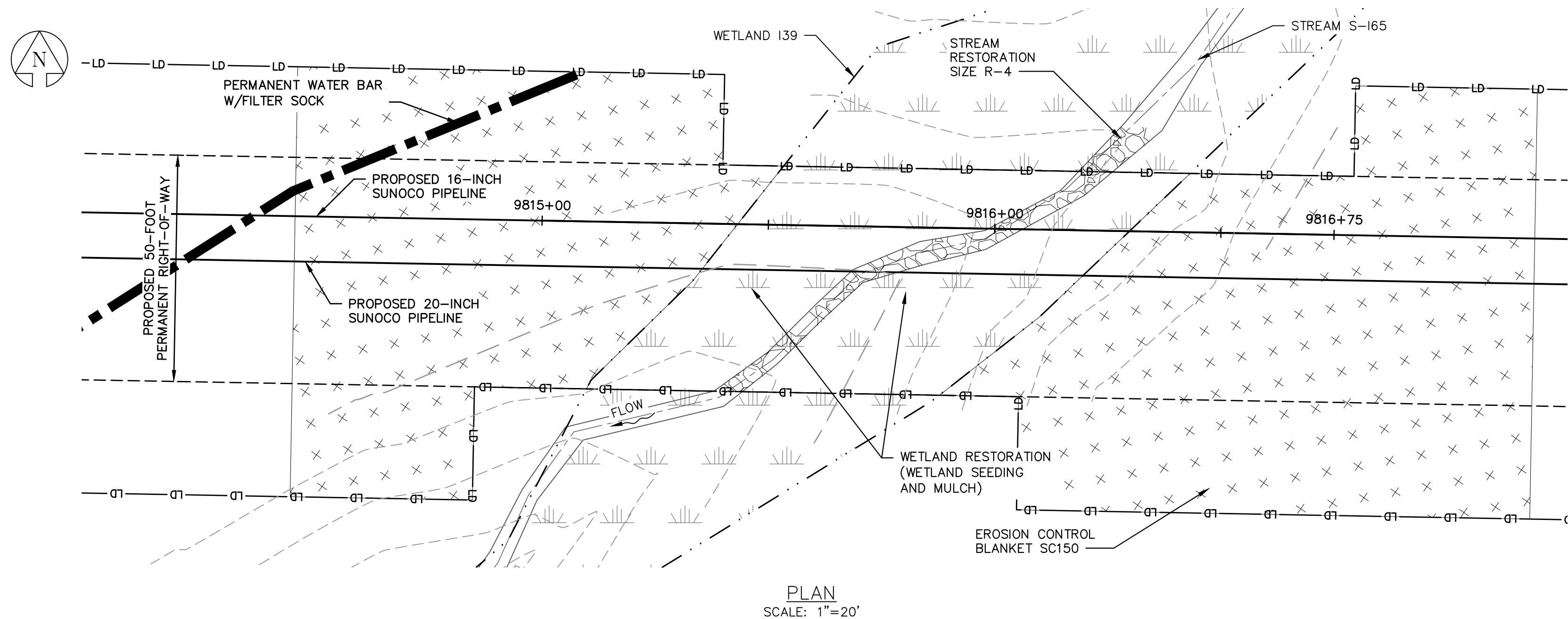
DWG. NO.
S-I65-A

REV. NO.
0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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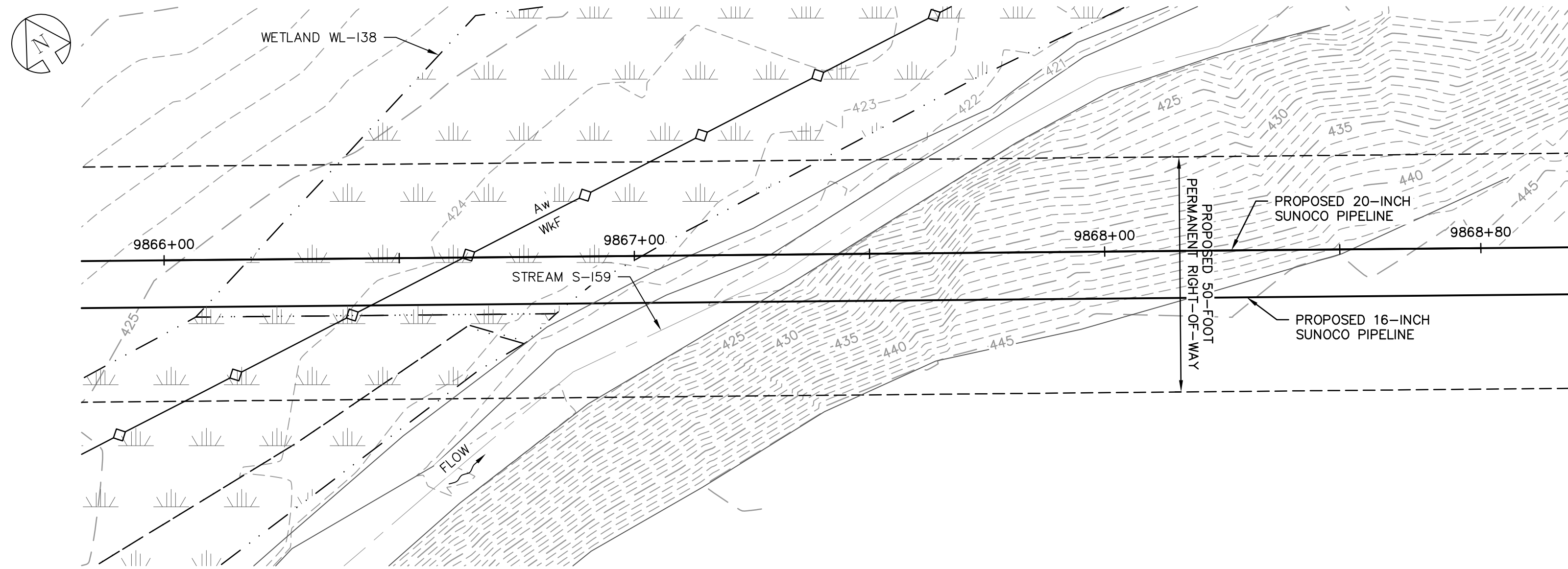
STV PROJECT No.: 38-17335

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16

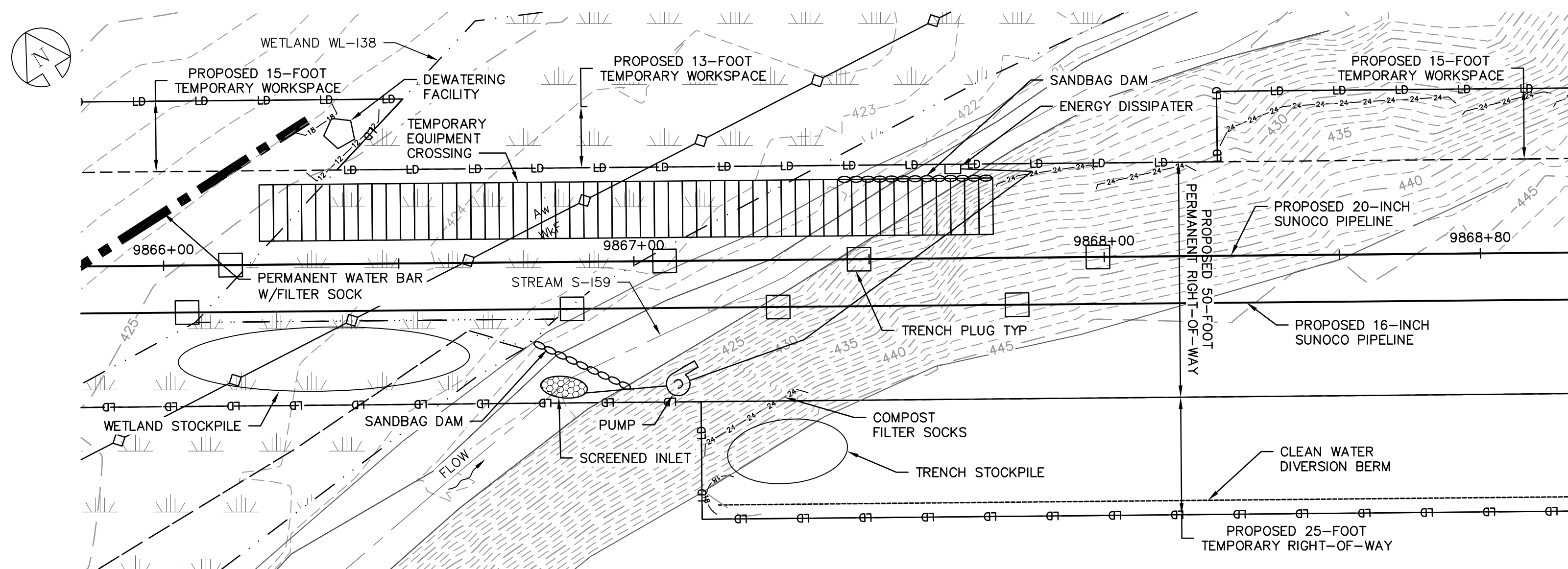
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
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SCALE	AS NOTED
OLD DRAWING NO.	

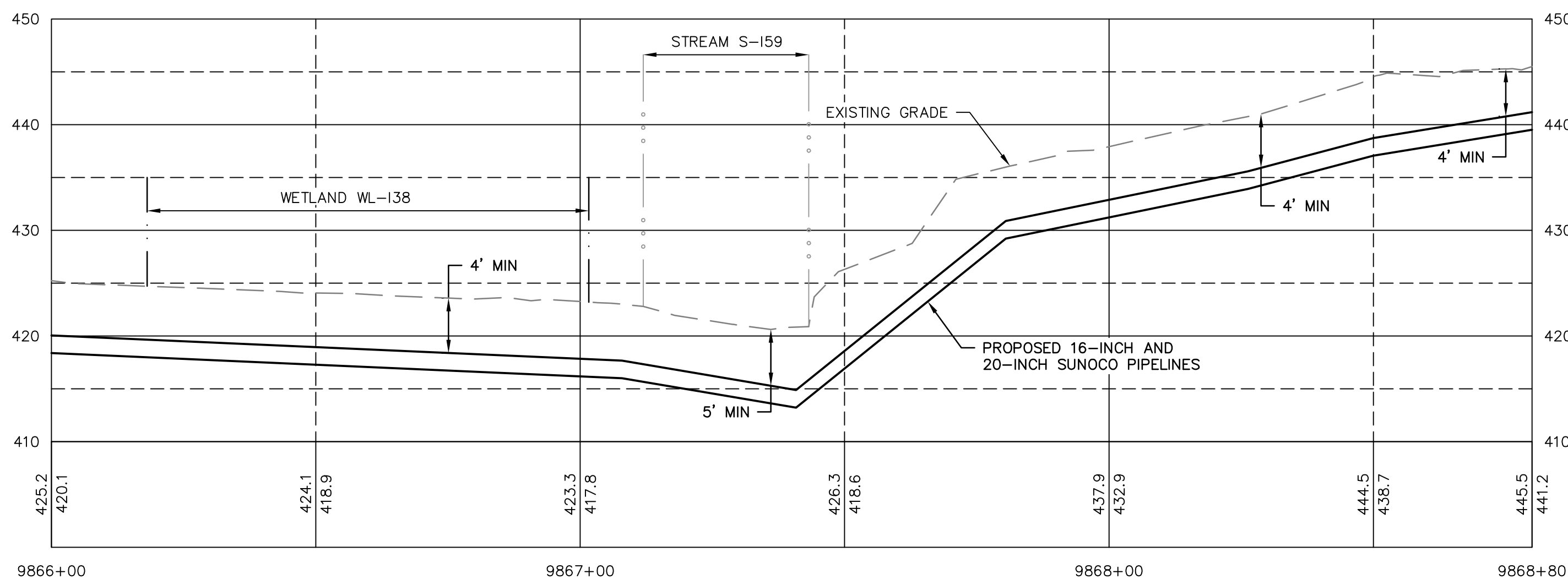
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-I65 RESTORATION PLAN CUMBERLAND COUNTY, PA				
DWG. NO.			S-I65-B	REV. NO.
				0



EXISTING CONDITIONS PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



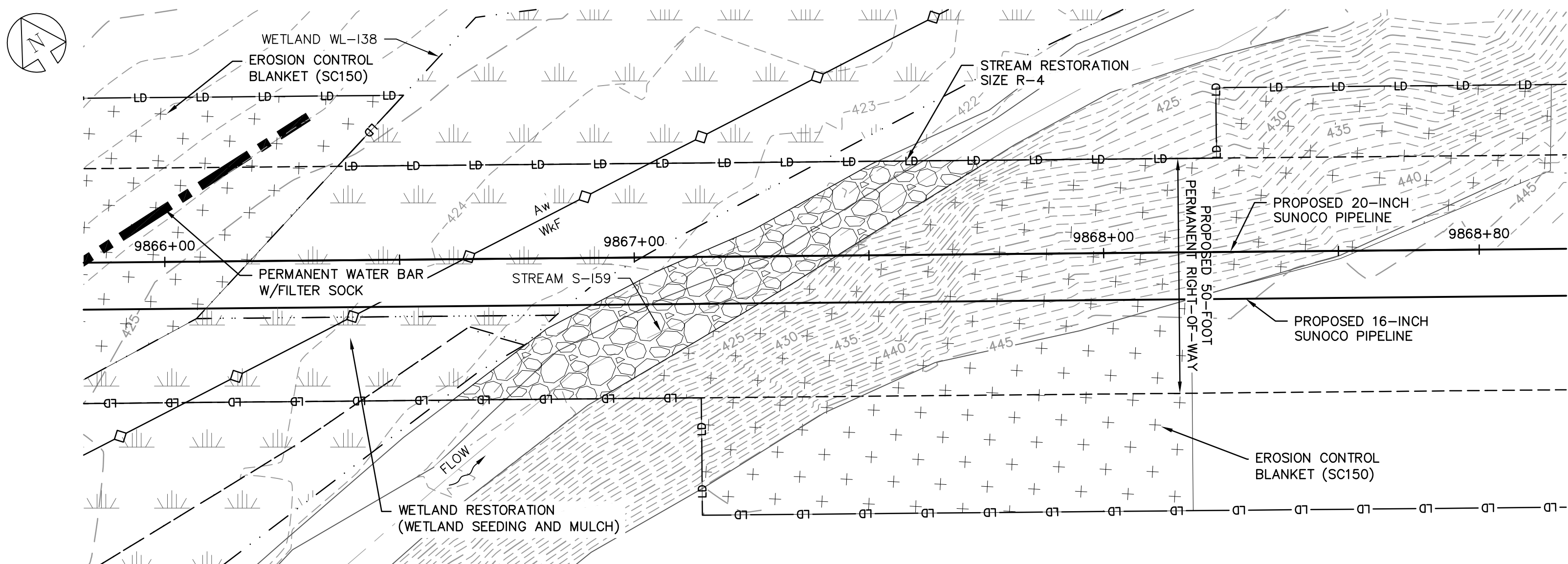
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD

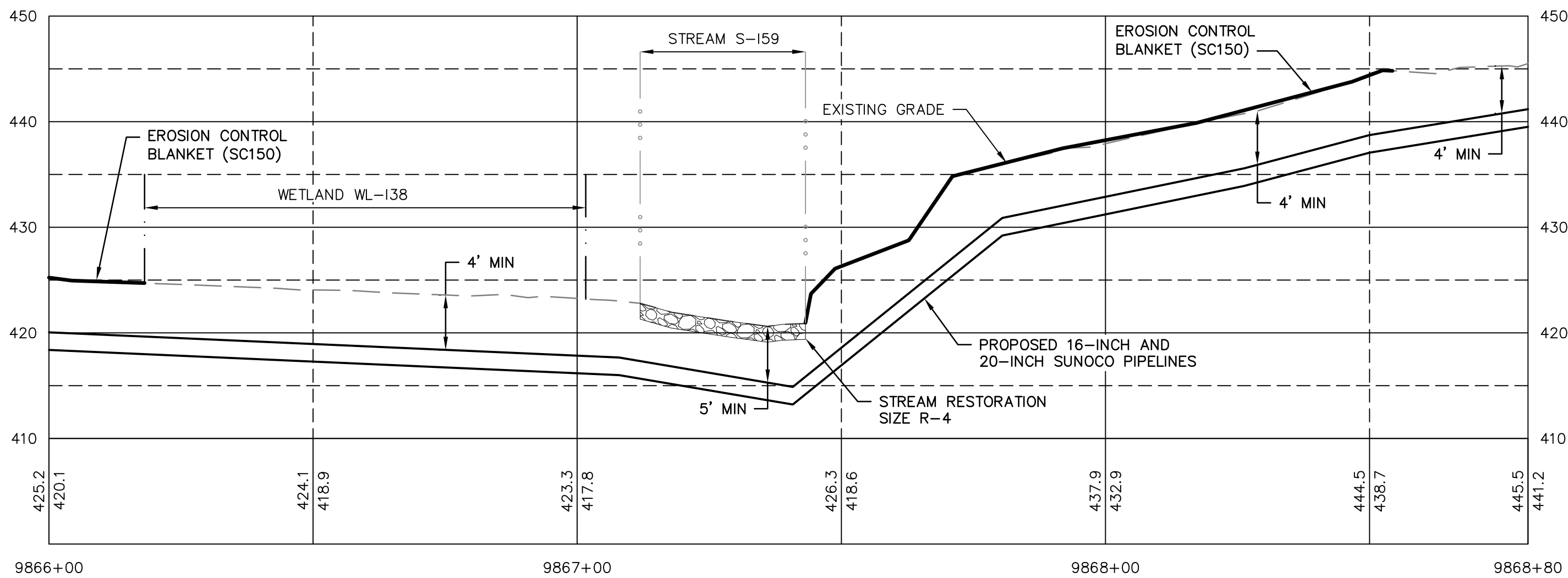
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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-159				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
S-159-A			0	



PLAN
SCALE: 1"=20'

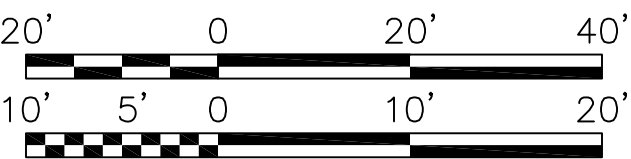


RESTORED GRADE PROFILE

HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

1"=20'
1"=10'

GRAPHIC SCALES



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE
CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT
LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION
SERVICE.

STV PROJECT No.: 38-17335

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16

CHRISTOPHER D. ANTONI
PE-057385-E

GENERAL NOTES:

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LEGEND

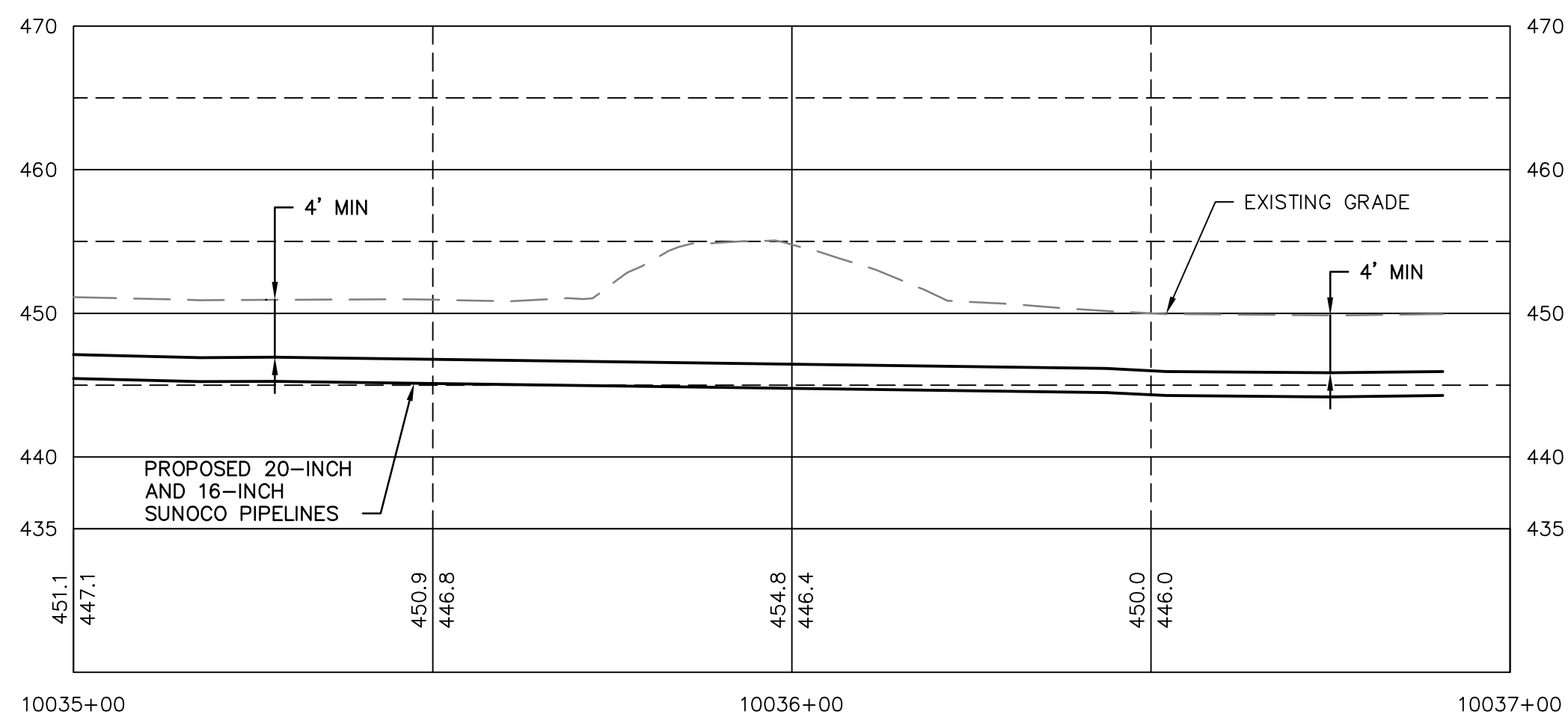
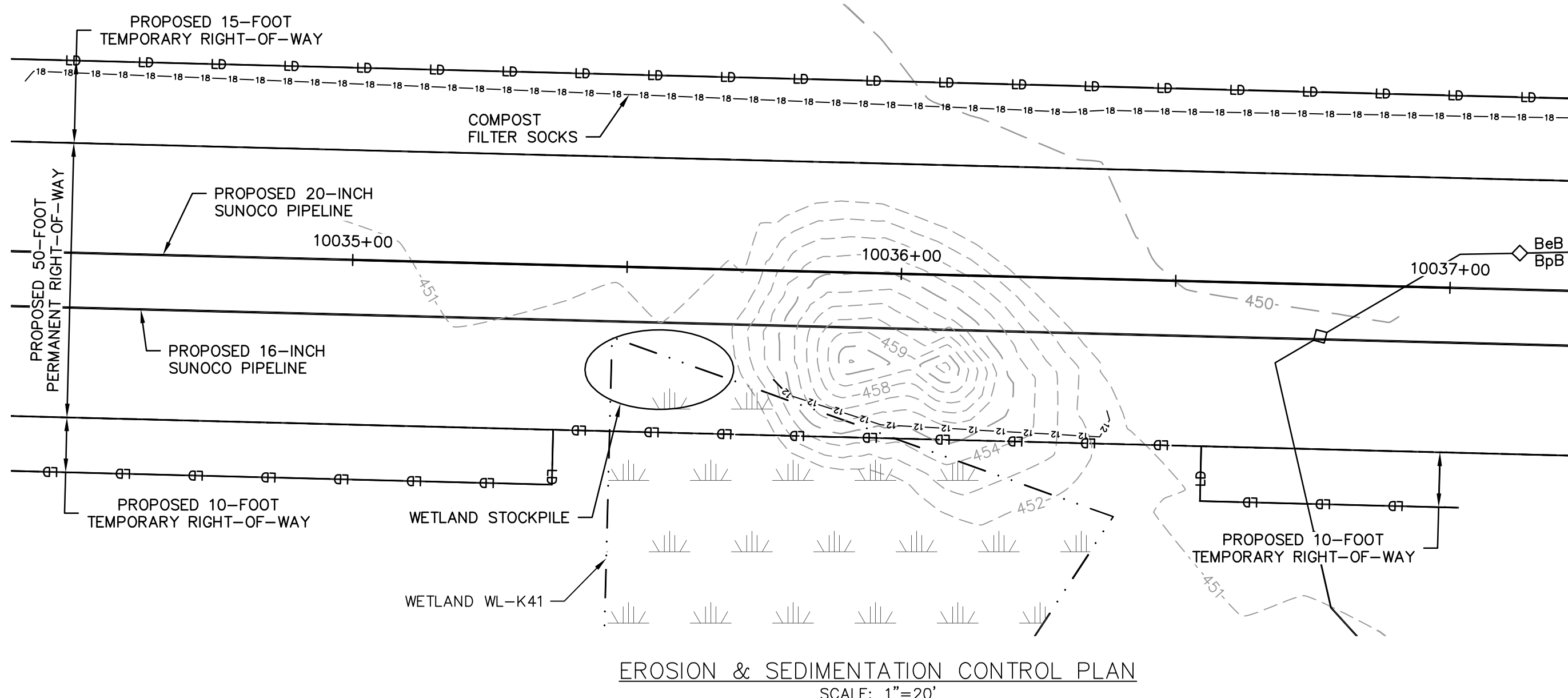
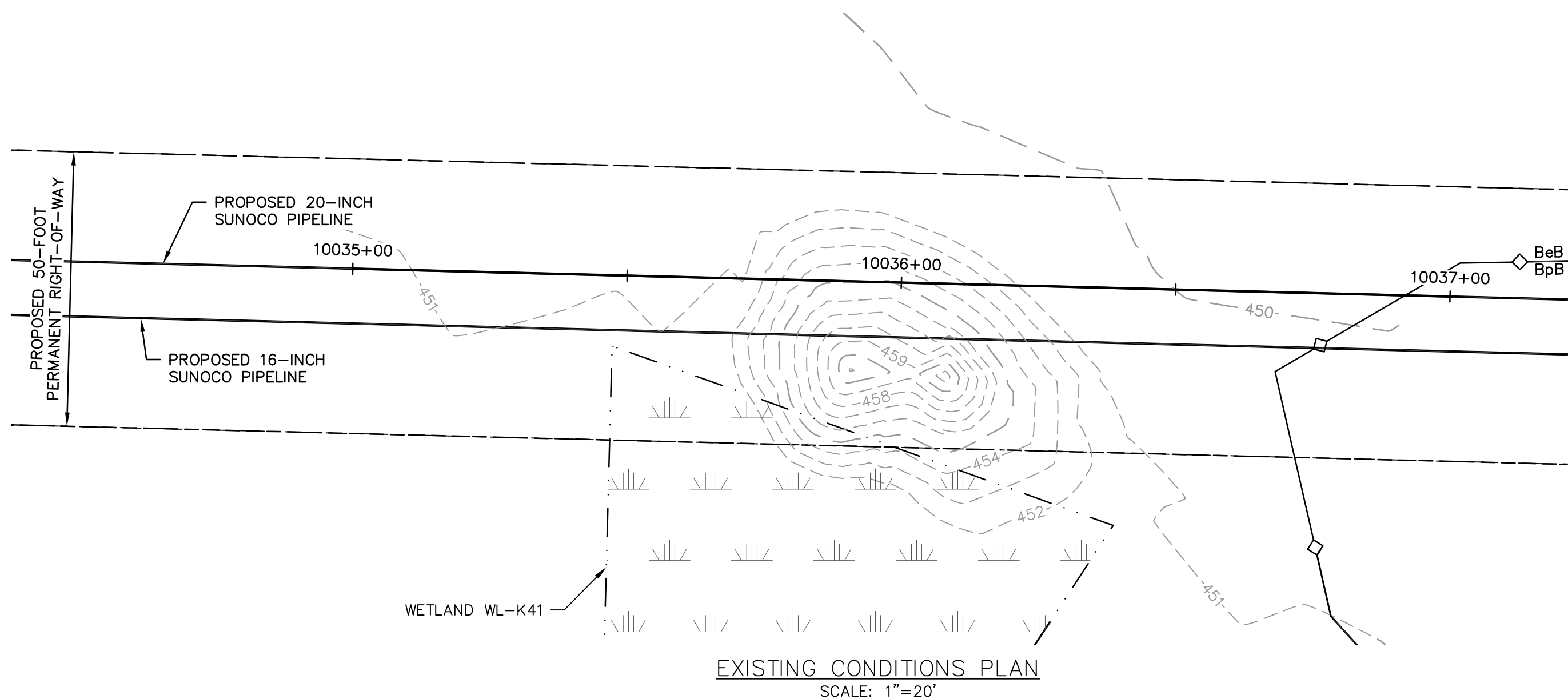
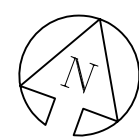
SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
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	EXISTING VEGETATION
	EDGE OF WATER
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	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
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	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

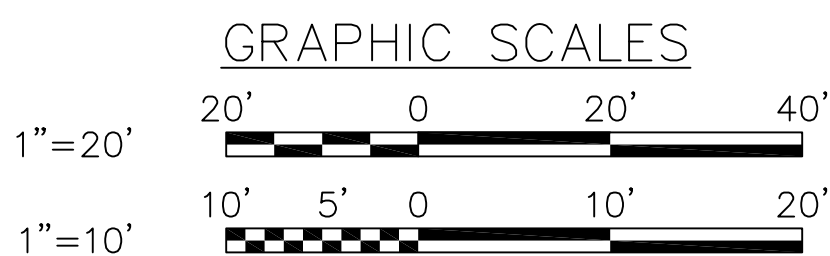
	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-159				
RESTORATION PLAN				
CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
S-I59-B			0	

OLD DRAWING NO.



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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STREAM CROSSING NOTES:

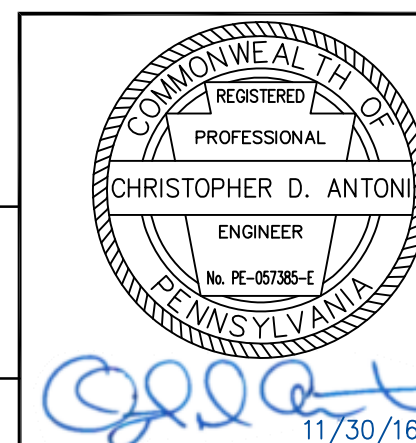
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LEGEND

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	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
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	TOP/BOTTOM OF BANK
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	EDGE OF WATER
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	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

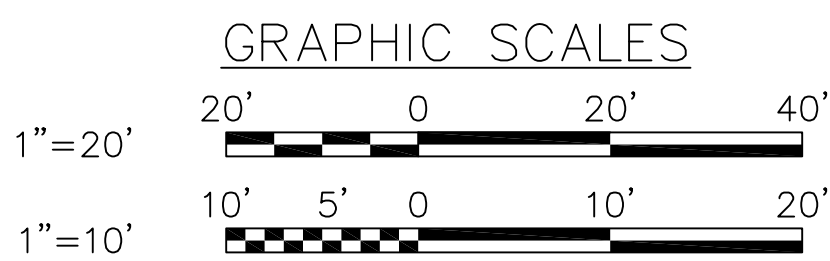
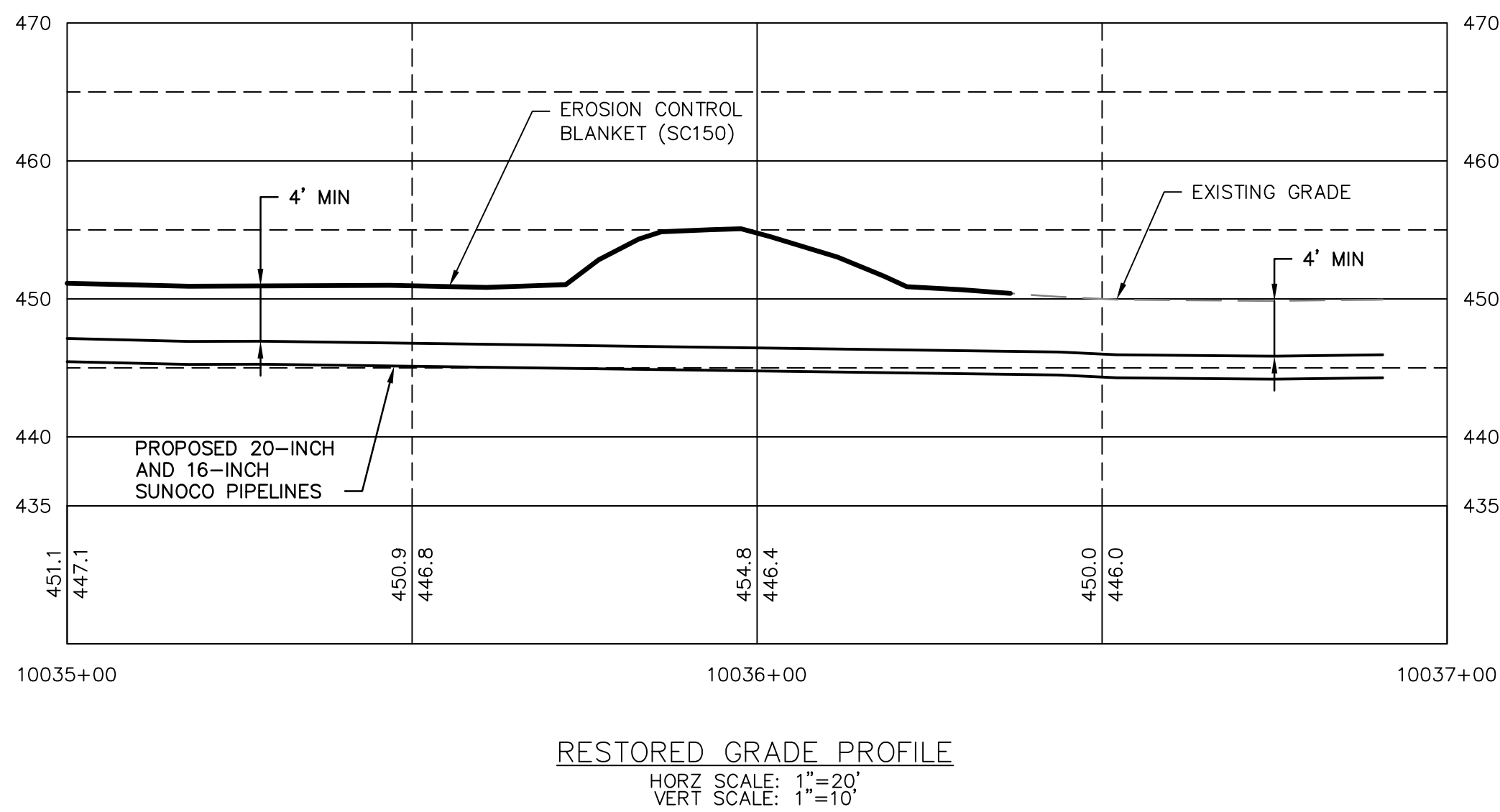
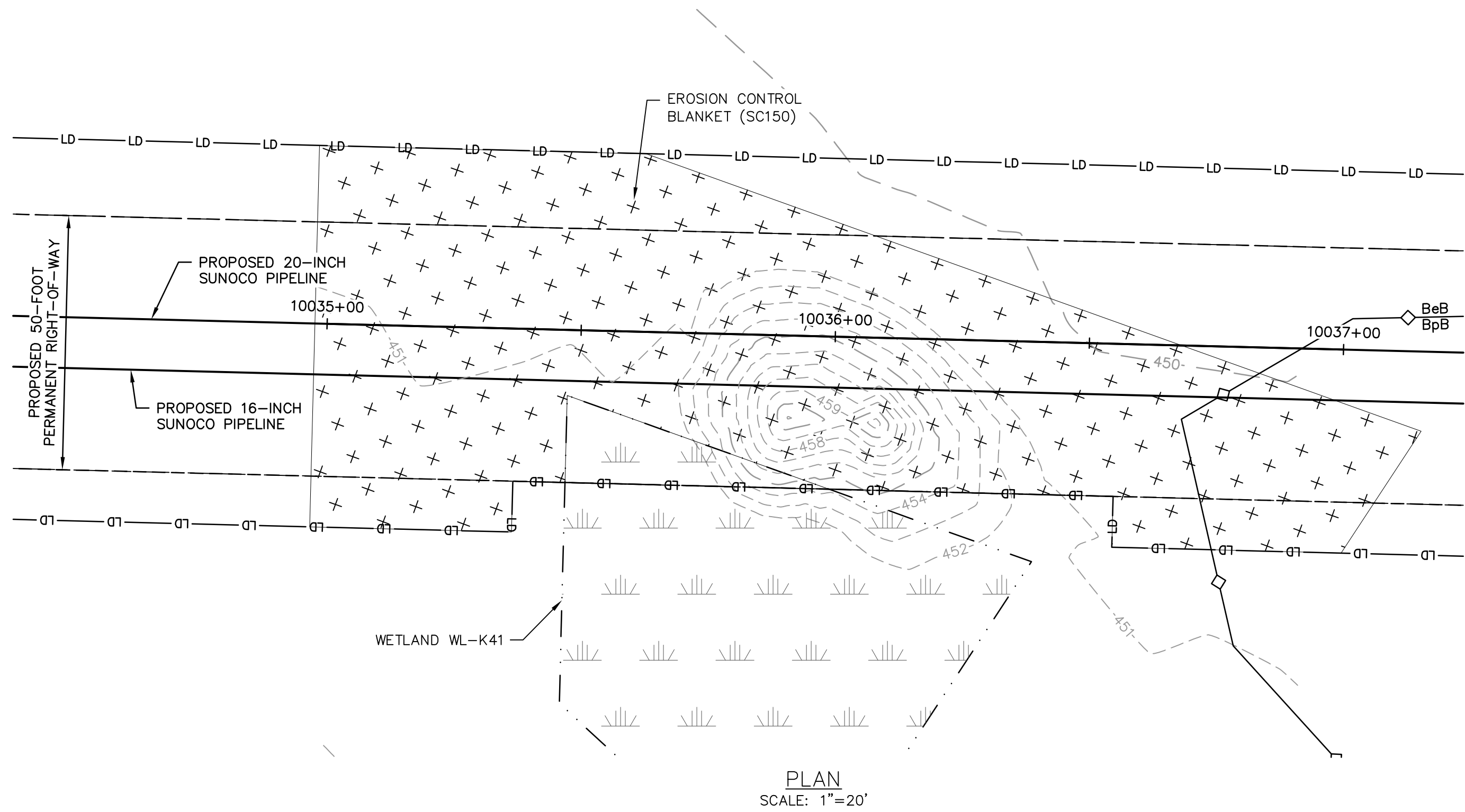


CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

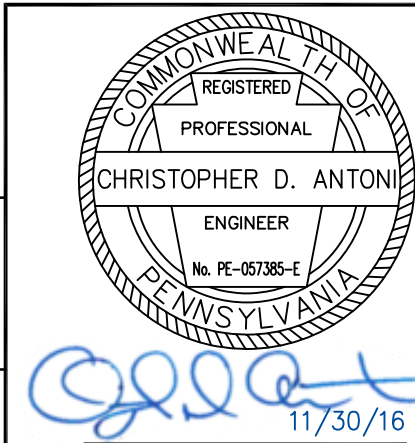
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
WETLAND WL-K41				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
WL-K41-A			0	



- GENERAL NOTES:**
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LEGEND	
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PROFILE LEGEND:	
	PROPOSED PIPELINE
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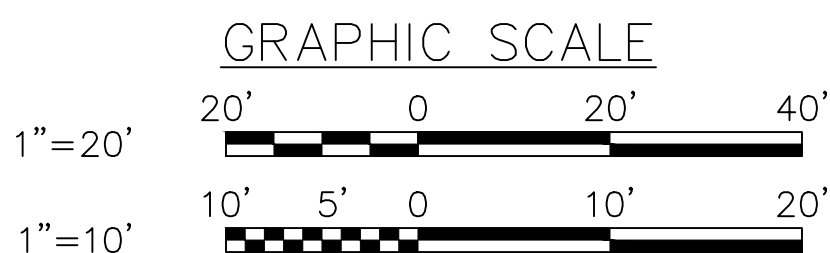
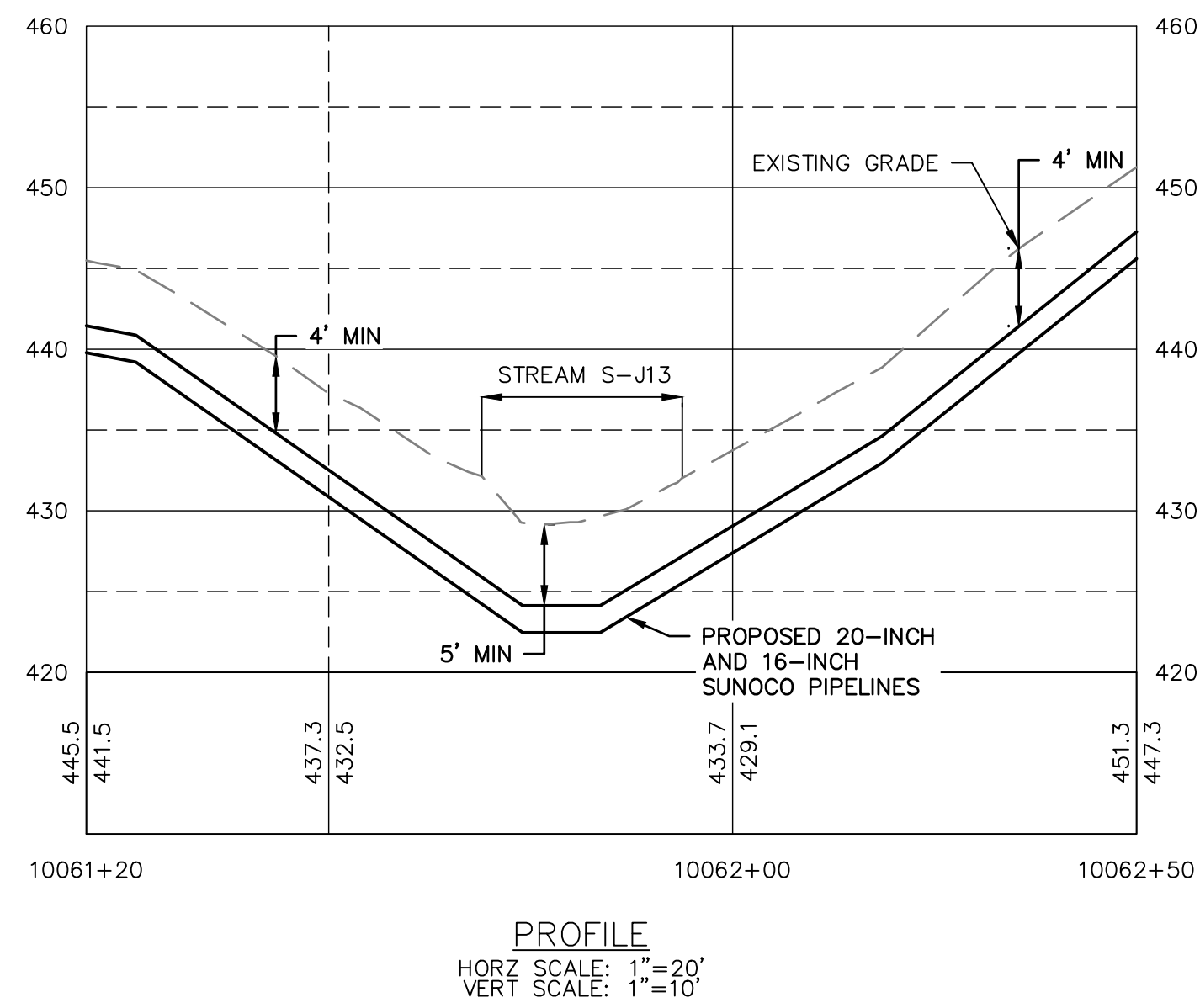
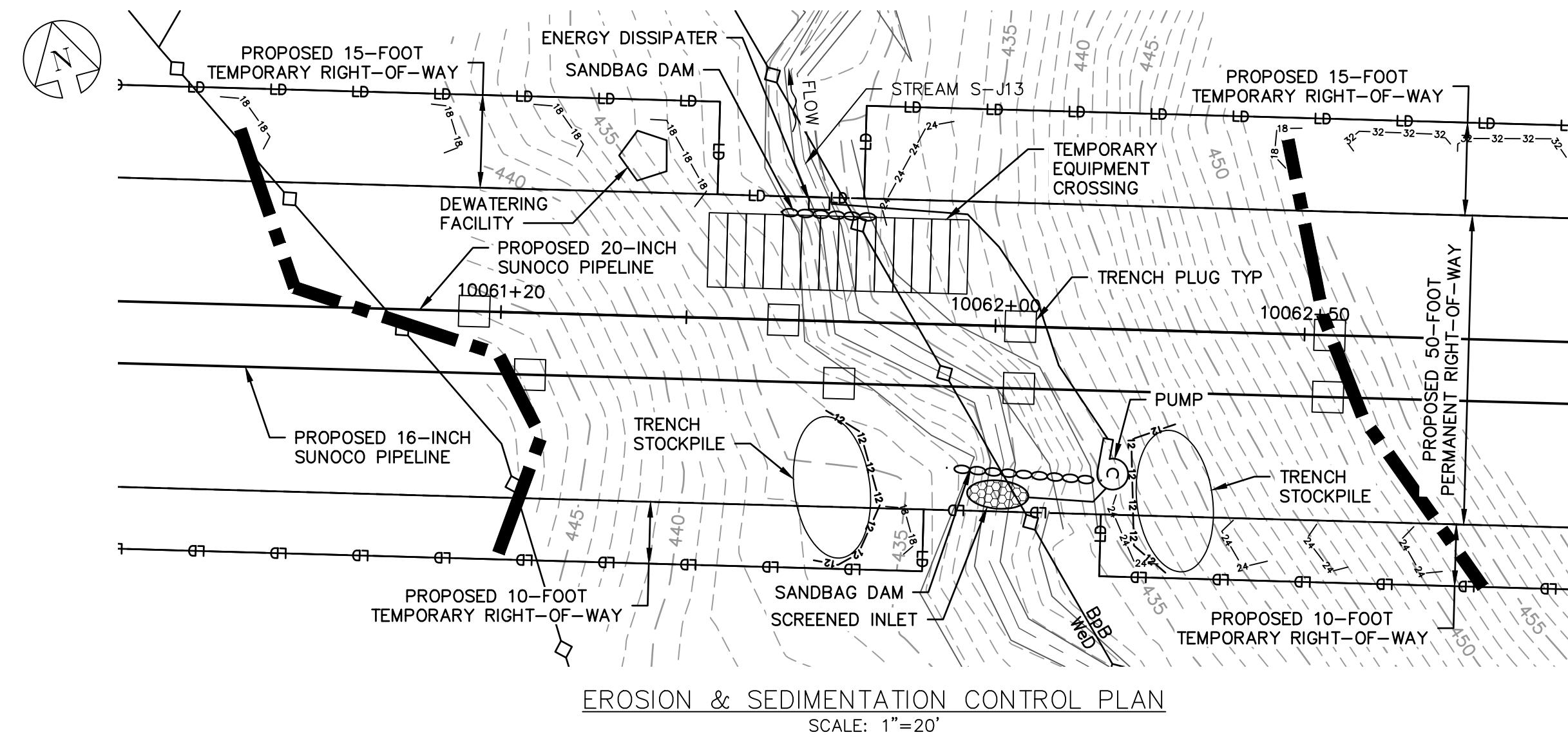
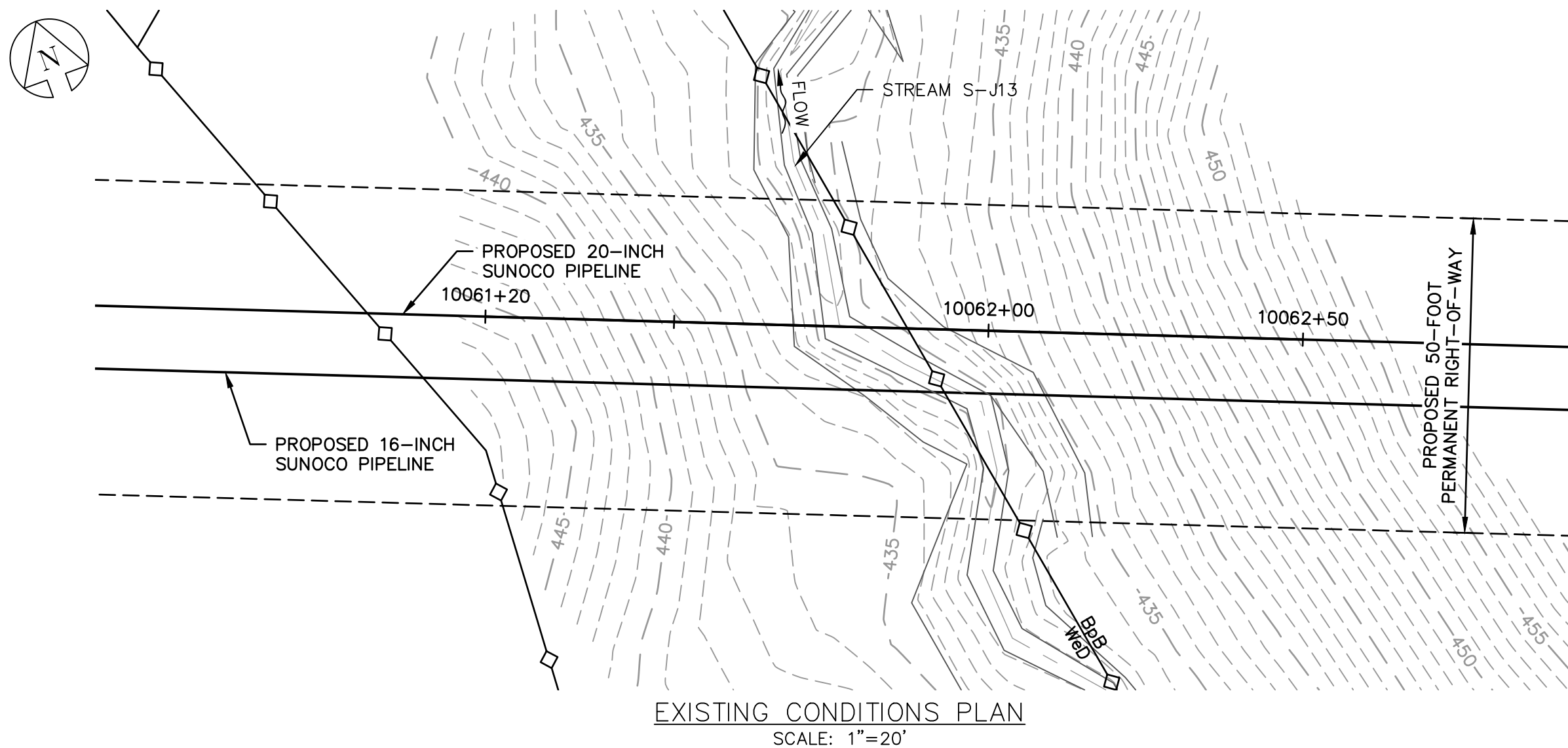


CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
WETLAND WL-K41				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
CUMBERLAND COUNTY, PA				
DWG. NO.			REV. NO.	
WL-K41-B			0	



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

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STREAM CROSSING NOTES:

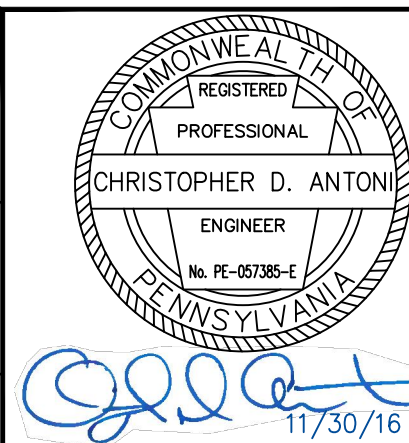
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8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

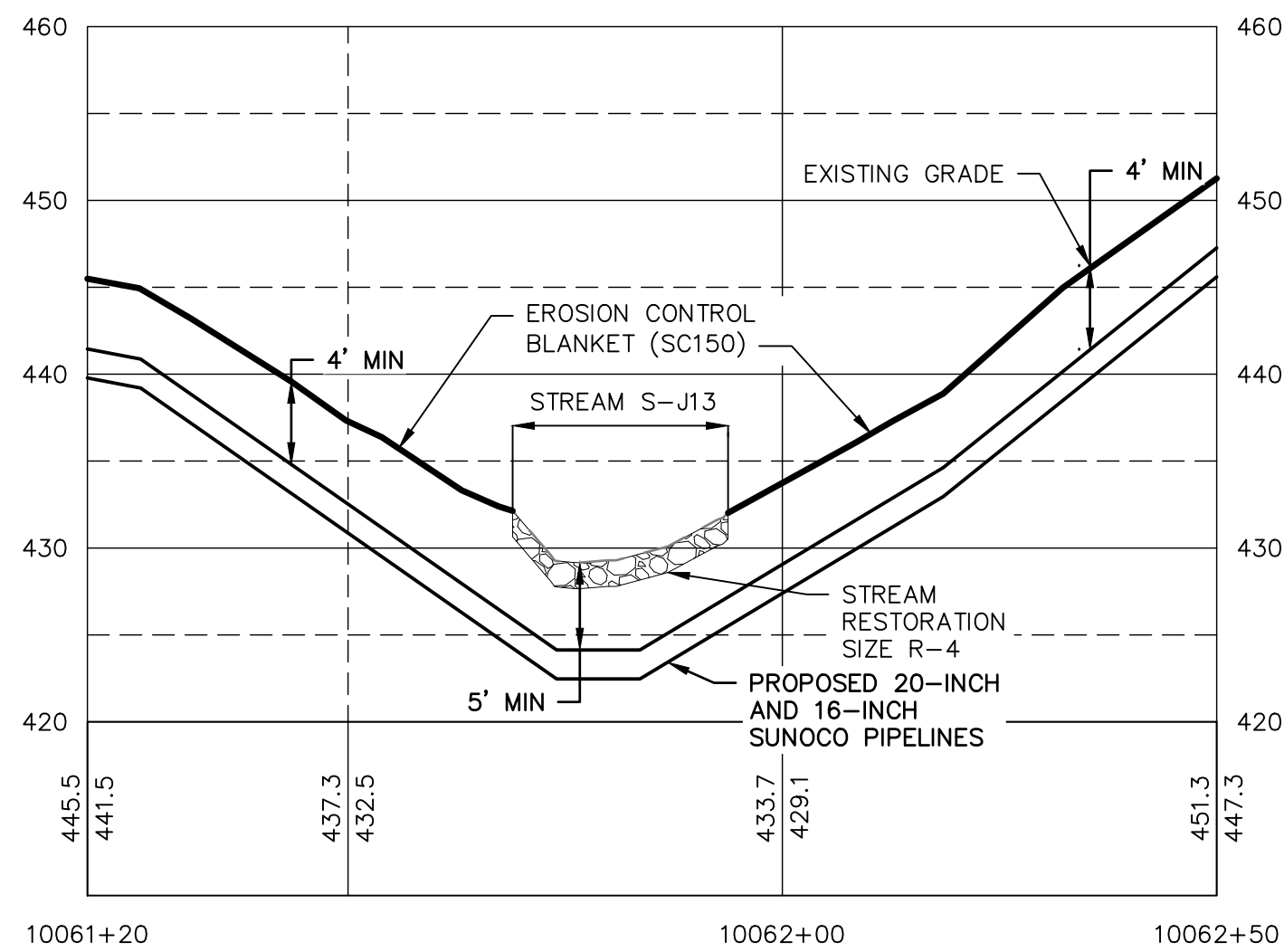
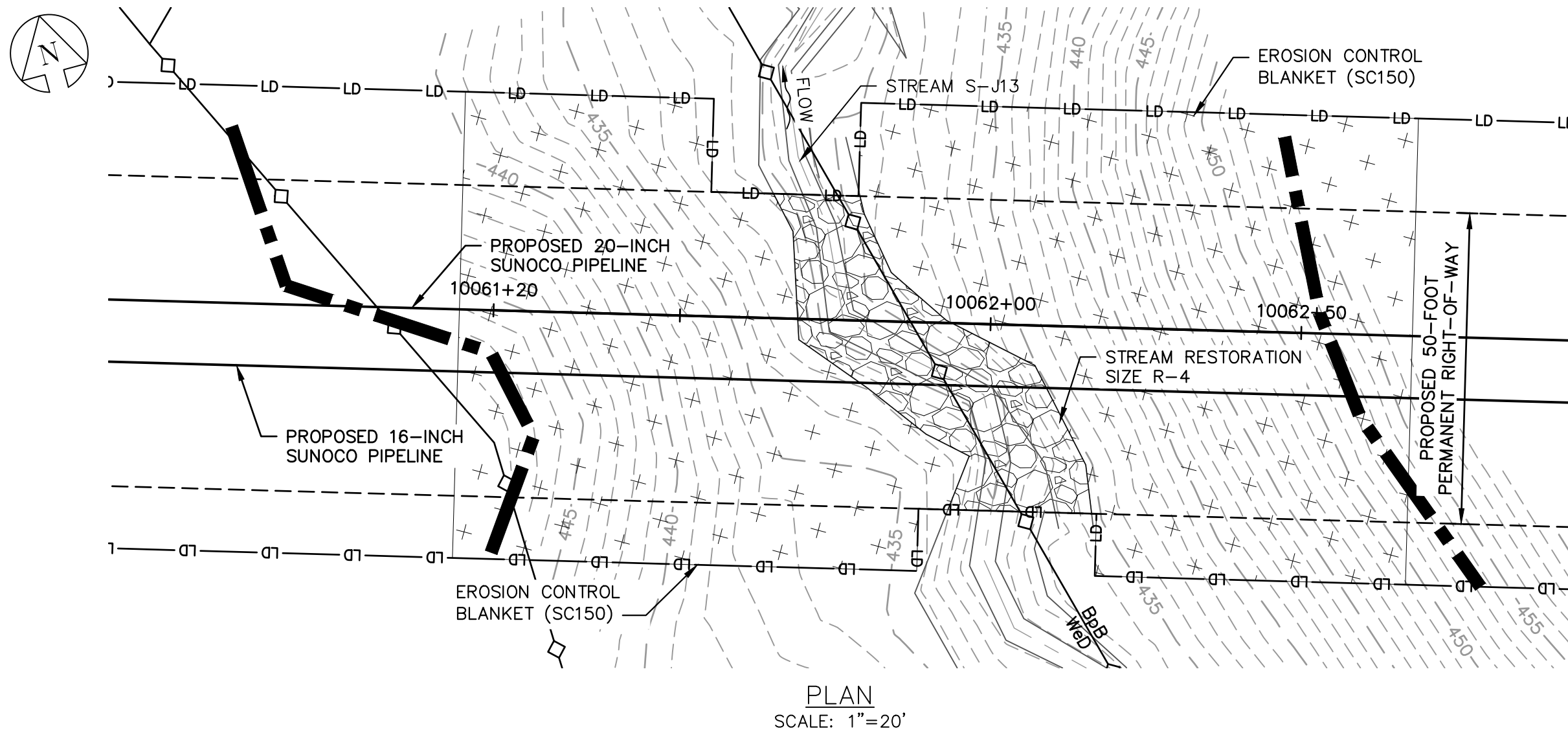


CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

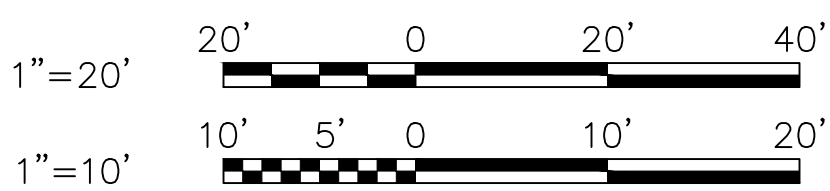
REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAM S-J13 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS CUMBERLAND COUNTY, PA				
DWG. NO.			S-J13-A	REV. NO. 0



RESTORED GRADE PROFILE

HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALE



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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LEGEND

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	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
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	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

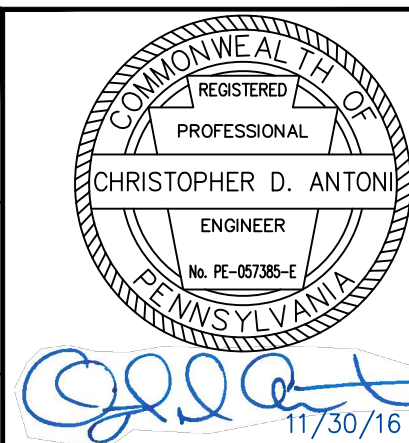
	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAM S-J13
RESTORATION PLAN

CUMBERLAND COUNTY, PA



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

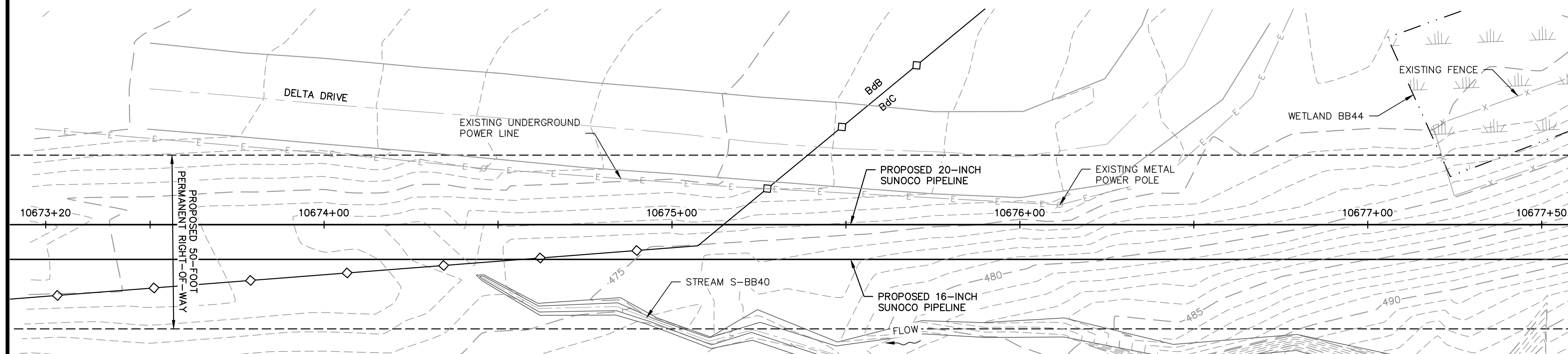
DWG. NO.
S-J13-B

REV. NO.
0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335



Plan view of the proposed 25-foot temporary right-of-way for Delta Drive. The plan shows the proposed 20-inch Sunoco pipeline and the proposed 16-inch Sunoco pipeline. Key features include:

- PROPOSED 25-FOOT TEMPORARY RIGHT-OF-WAY
- DELTA DRIVE
- TEMPORARY CONSTRUCTION ENTRANCE
- EXISTING UNDERGROUND POWER LINE
- COMPOST FILTER SOCKS
- PROPOSED 20-INCH SUNOCO PIPELINE
- EXISTING METAL POWER POLE
- WETLAND BB445
- EXISTING FENCE
- PROPOSED 16-INCH SUNOCO PIPELINE
- STREAM S-BB40
- CLEAN WATER DIVERSION BERM
- PROPOSED 50-FOOT PERMANENT RIGHT-OF-WAY
- Flow direction indicated by an arrow labeled "FLOW".
- Elevation markers: 475, 480, 485, 490.
- Stationing markers: 10673+20, 10674+00, 10675+00, 10676+00, 10677+00, 10677+50.

Profile view of the proposed 20-inch and 16-inch Sunoco pipelines. The graph shows elevation (460 to 490 feet) versus stationing (10673+20 to 10677+50). It includes labels for 'EXISTING GRADE' and 'PROPOSED 20-INCH AND 16-INCH SUNOCO PIPELINES'. A vertical clearance of '4' MIN' is indicated between the existing grade and the proposed pipelines. The proposed pipelines are shown as solid lines, and the existing grade is shown as a dashed line.

GRAPHIC SCALES

$1'' = 20'$

$1'' = 10'$

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16"/20" PIPELINE.

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3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

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2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
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	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROPOSED PIPELINE

EXISTING GRADE

EXISTING GRADE ELEV.

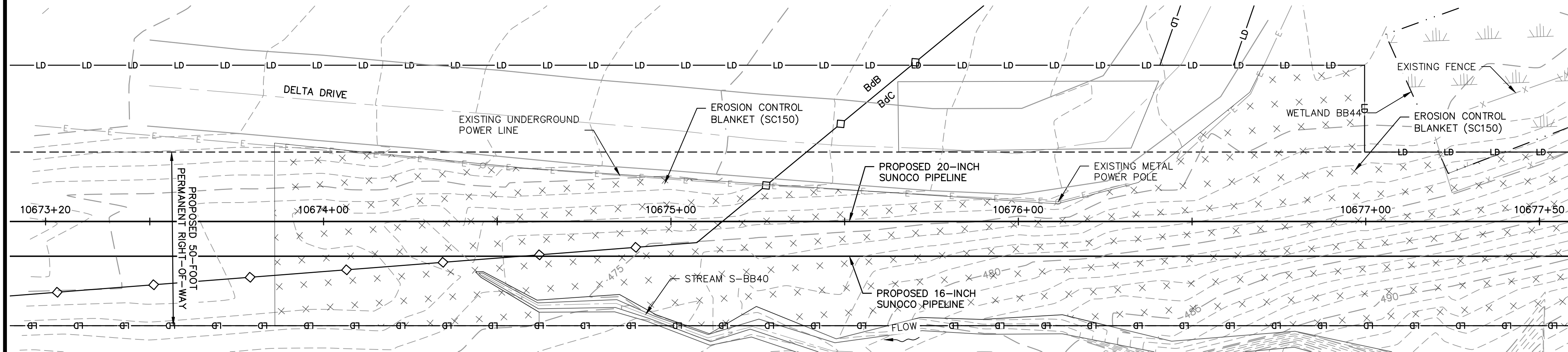
PROPOSED TOP OF PIPE ELEV.

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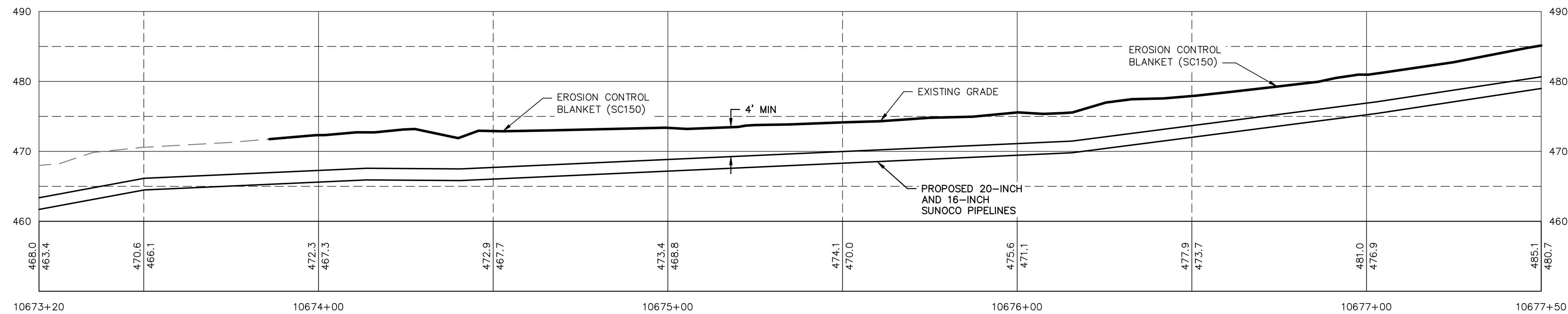
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16

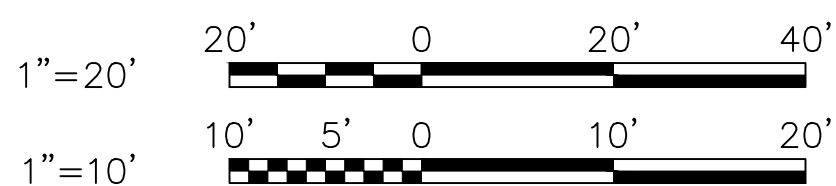


PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

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2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD

DRAWN BY	LG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

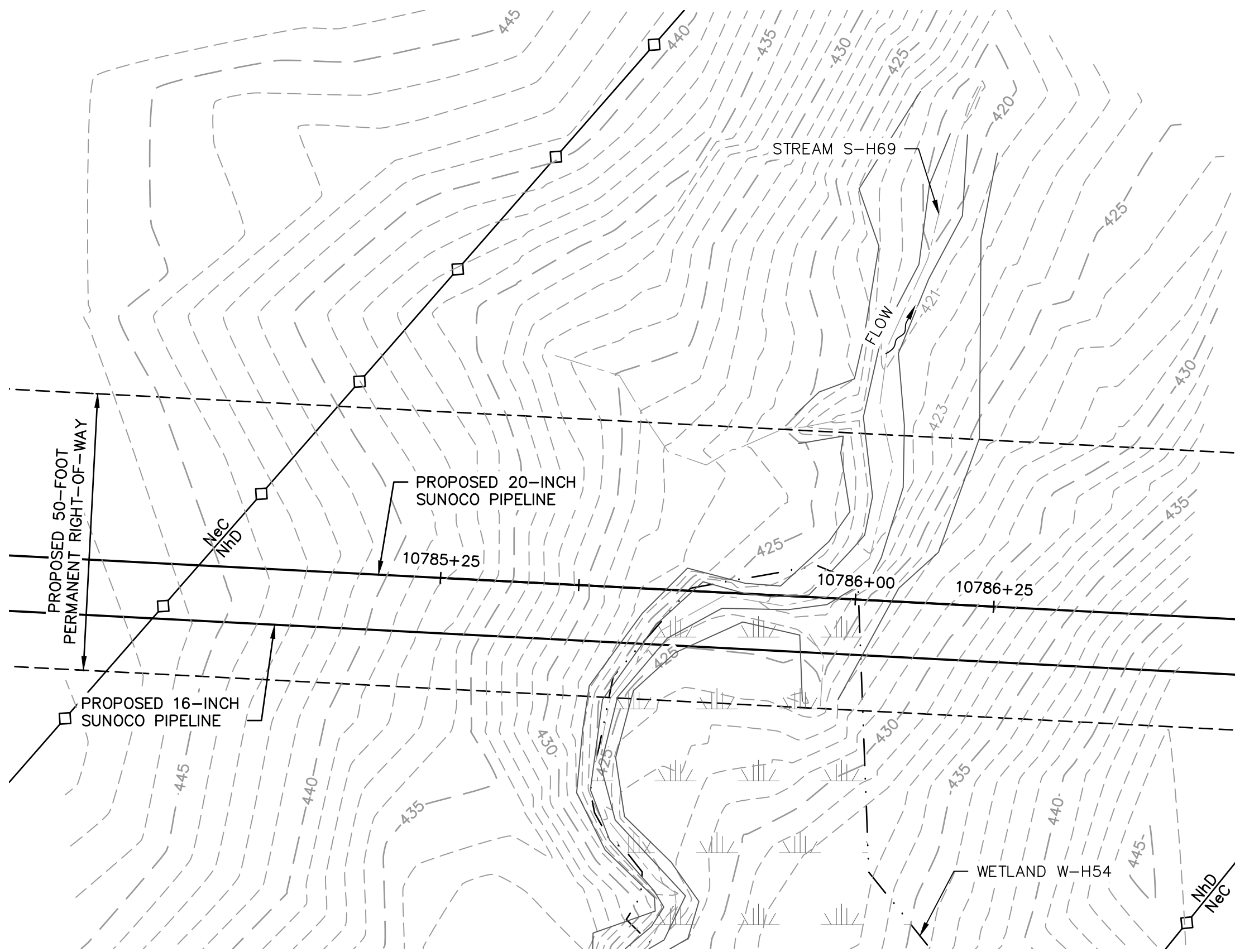
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REV.	DATE	APP#	DESCRIPTION	APPROVAL
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CUMBERLAND COUNTY, PA				
DWG. NO.			S-BB40-B	REV. NO. 0

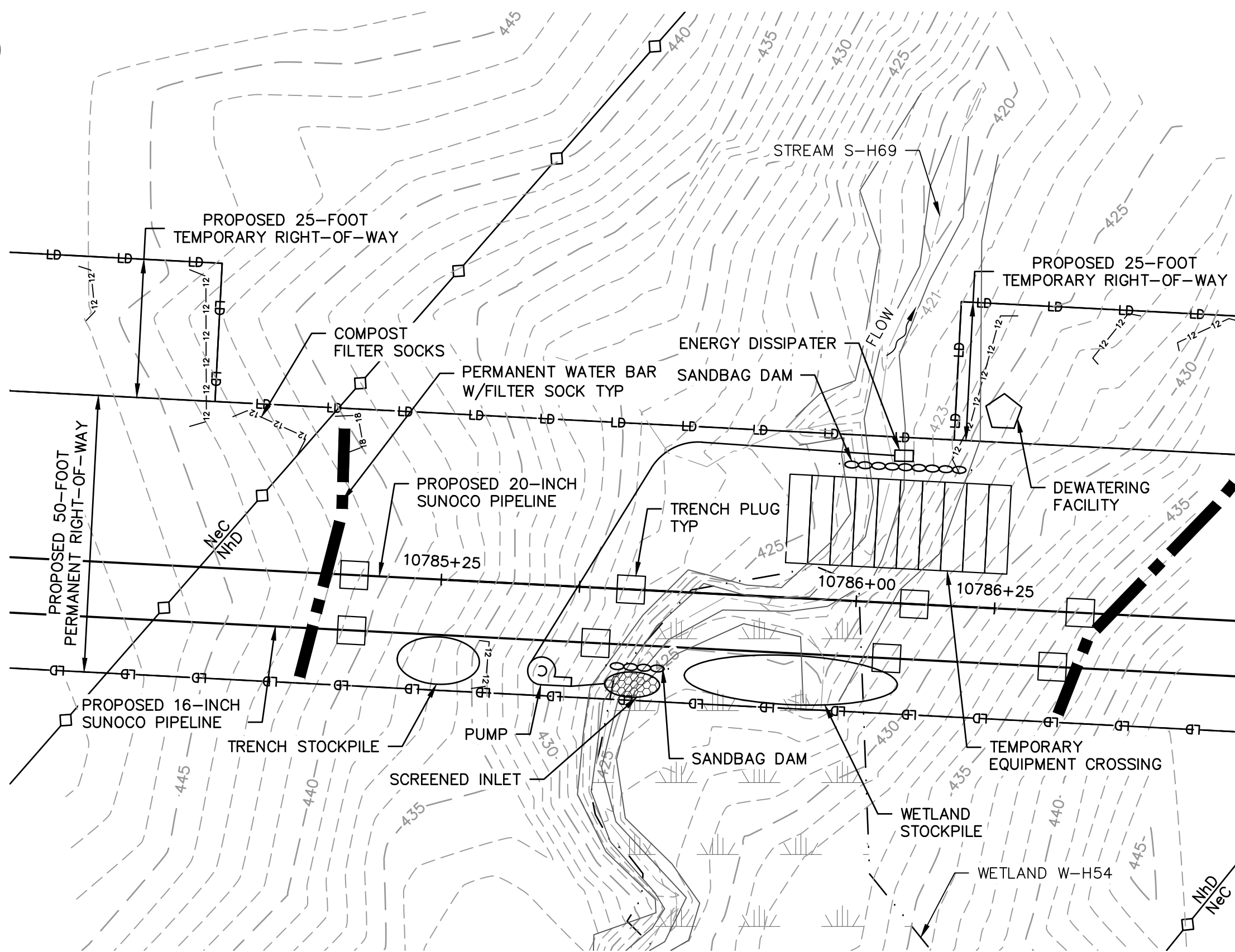
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

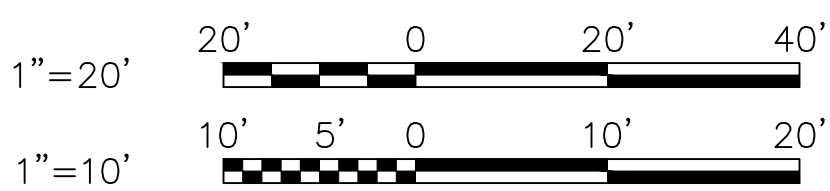


EXISTING CONDITIONS PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'

GRAPHIC SCALES



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

11/30/16

CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-H69 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS CUMBERLAND COUNTY, PA				
DWG. NO. S-H69-A				REV. NO. 0

GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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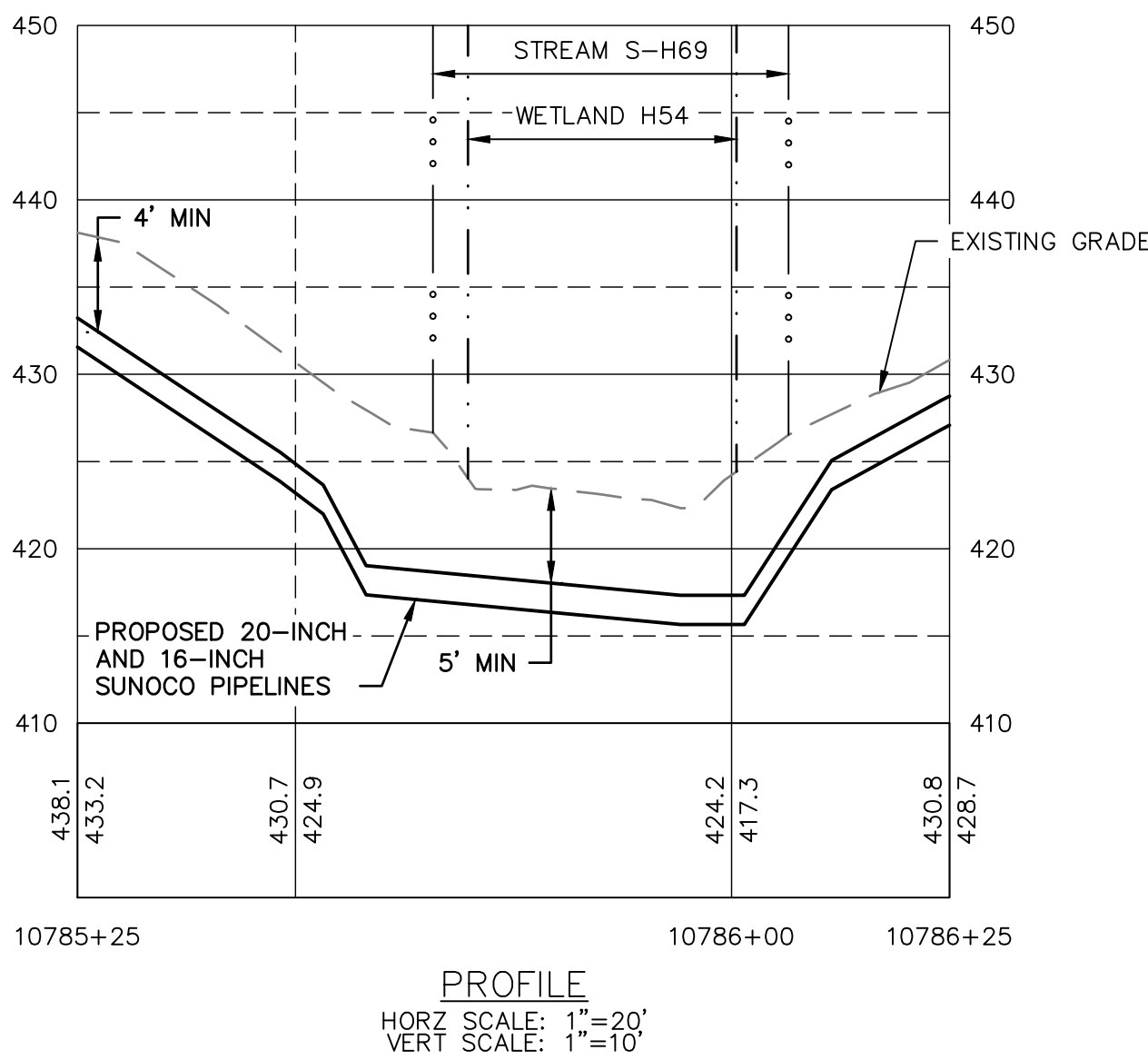
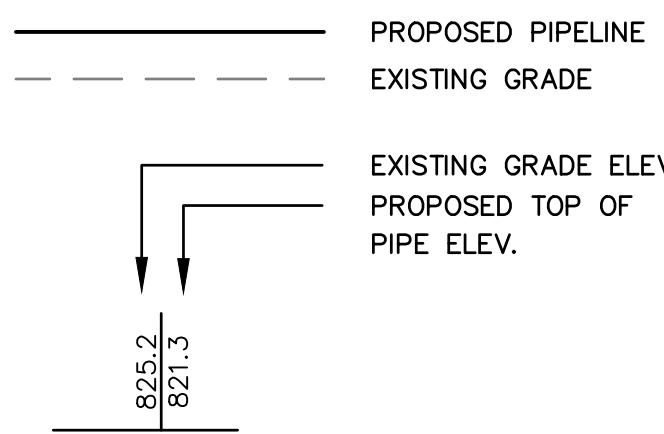
STREAM CROSSING NOTES:

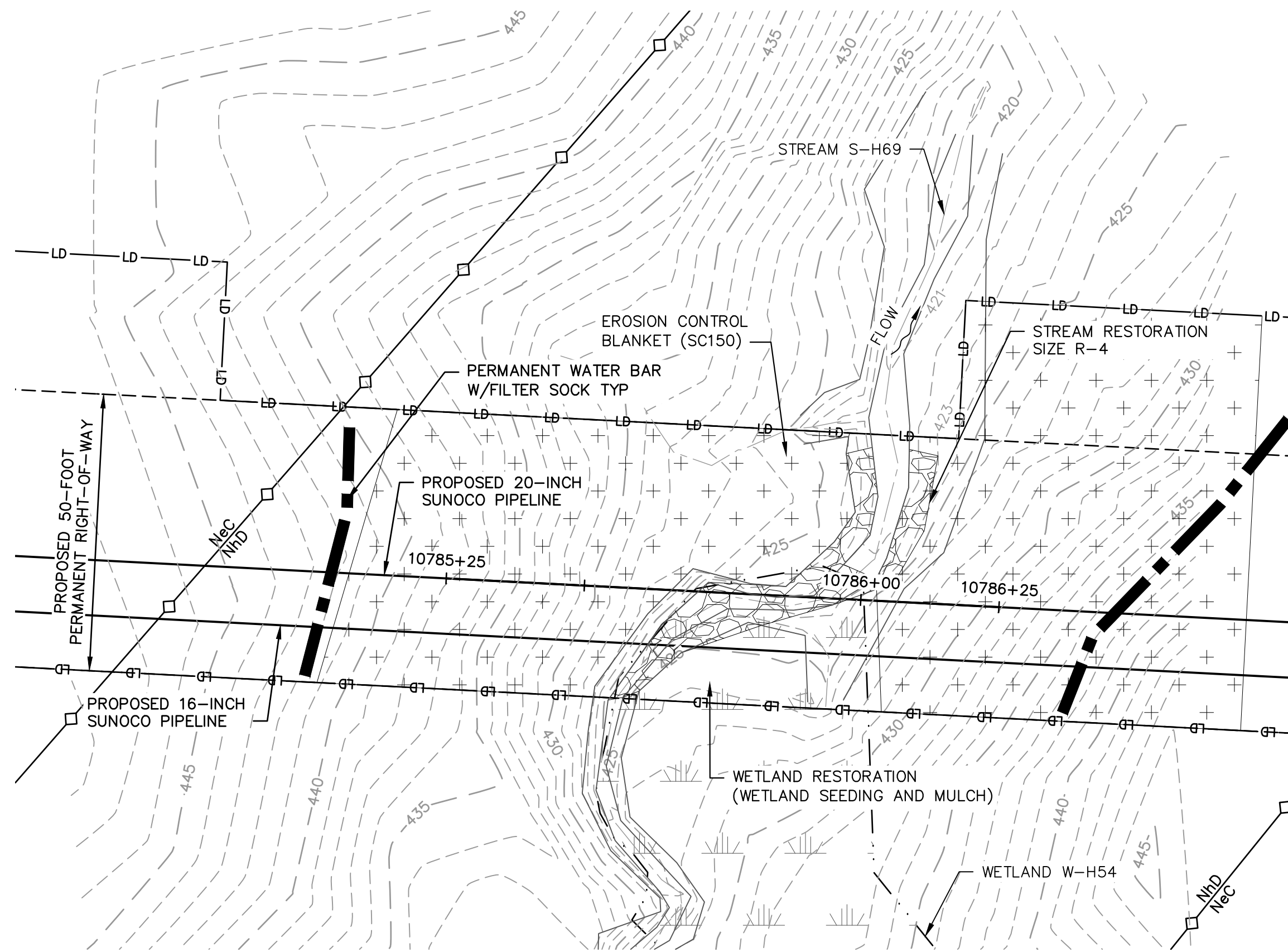
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- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

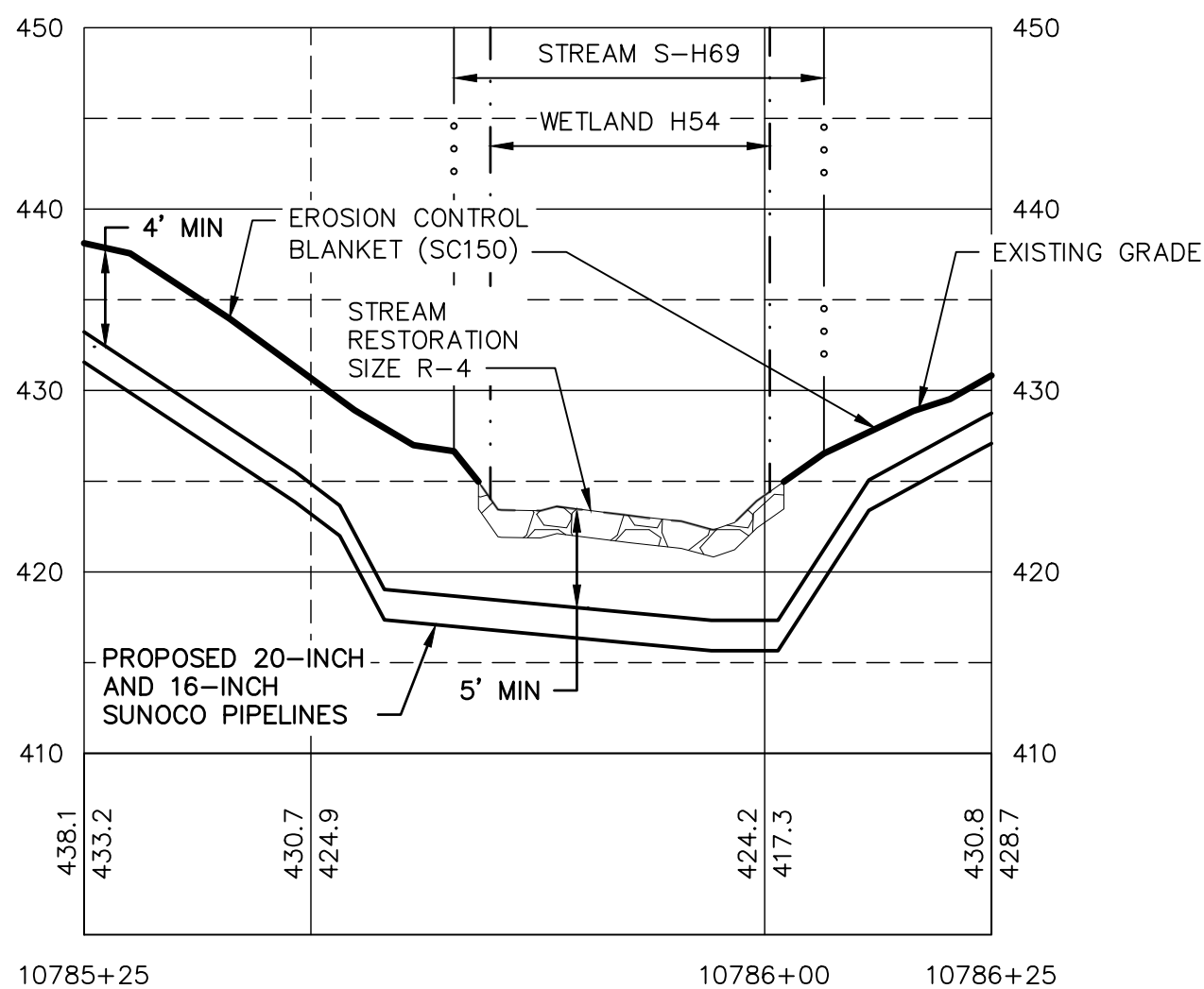
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	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
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	STREAM RESTORATION

PROFILE LEGEND:



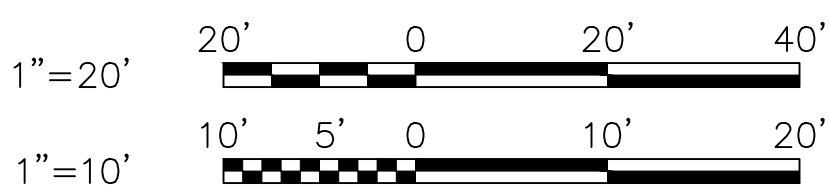


PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

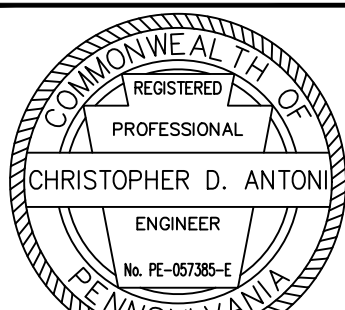
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD

DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAM S-H69
RESTORATION PLAN

CUMBERLAND COUNTY, PA

DWG. NO.
S-H69-B

REV. NO.
0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335