SOUTH CONNELLSVILLE MUNICIPAL AUTHORITY

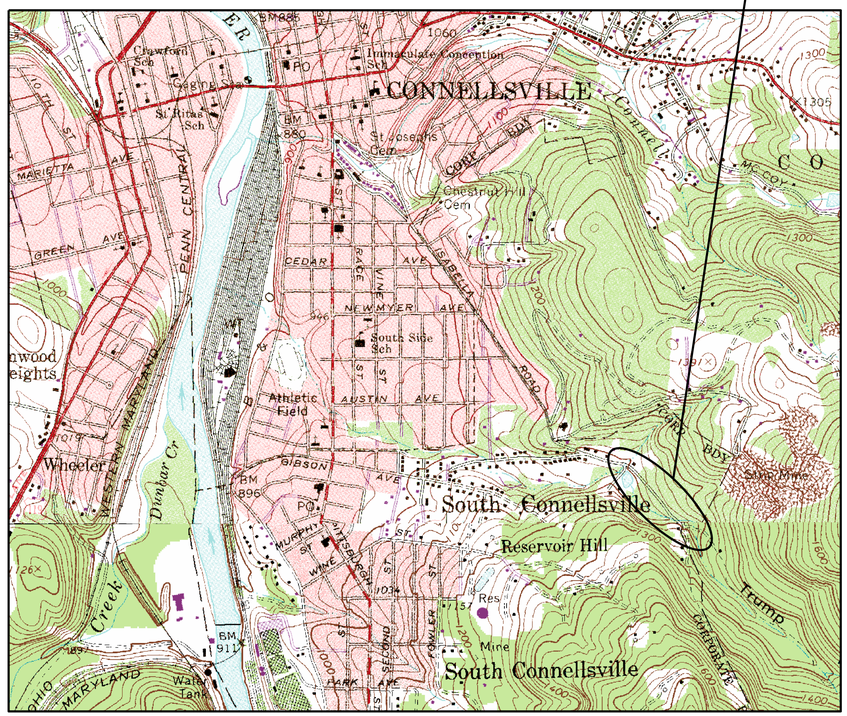
REIDMORE ROAD SEWER EXTENSION

SOUTH CONNELLSVILLE BOROUGH

FAYETTE COUNTY

WIDMER ENGINEERING No: 24654
JUNE 2026

PENNSYLVANIA



LOCATION MAP

SOURCE: USGS QUAD - CONNELLSVILLE, PA

PROJECT LOCATION
REIDMORE RD
SOUTH CONNELLSVILLE, PA 15425

TABLE OF CONTENTS

CALL BEFORE YOU DIG!

PENNSYLVANIA ACT 287 REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 5 WORKING DAYS IN DESIGN STAGE - STOP - CALL

PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776
OR 811

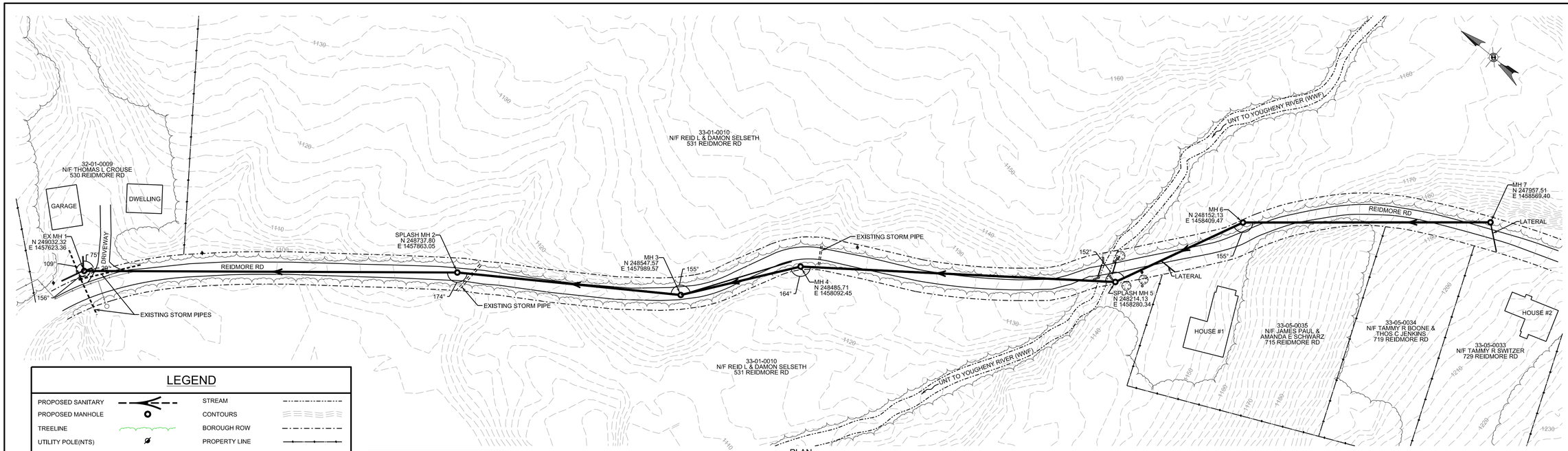
PENNSYLVANIA ONE-CALL:

1. ALL UNDERGROUND UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. EXACT LOCATIONS, DEPTH, AND SIZE OF ALL EXISTING UTILITIES IN THE PROJECT AREA SHALL BE FIELD VERIFIED BY THE CONTRACTOR WITH A REPRESENTATIVE FROM THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES AT LEAST SEVENTY-TWO (72) HOURS BEFORE ANY WORK IS COMMENCED AT THE PROJECT SITE.

PENNSYLVANIA ONE-CALL: 1-800-242-1776 OR 811

PENNSYLVANIA ONE CALL SERIAL NUMBER : 20260710731

WIDMER ENGINEERING INC.
CONSULTING ENGINEERS
225 West Crawford Avenue, Connellsville, PA 15425



LEGEND

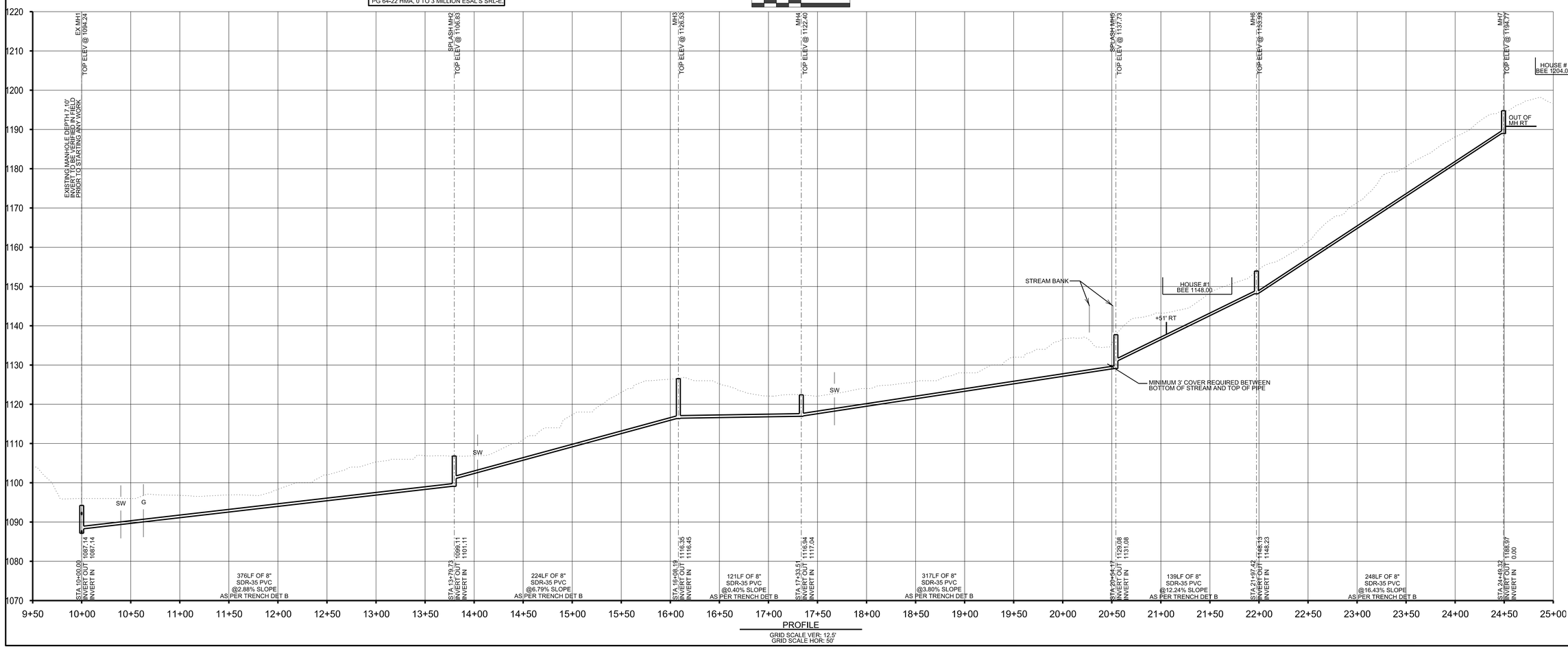
PROPOSED SANITARY		STREAM	
PROPOSED MANHOLE		CONTOURS	
TREELINE		BOROUGH ROW	
UTILITY POLE(NTS)		PROPERTY LINE	
GAS		STORM SEWER	

ALTERNATE BID: ENTIRE CURB TO CURB WIDTH OF REIDMORE ROAD FROM EX MH 1 TO MH 7 TO RECEIVE 1 1/2" OF 9.5 MM PG 64-22 HMA, 0 TO 3 MILLION ESAL'S SRL-E.

PLAN

SCALE: 1" = 50'

50' 0 50'



PROFILE

GRID SCALE VER: 12.5'
GRID SCALE HOR: 50'

WIDMER ENGINEERING
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SEAL

SOUTH CONNELLSVILLE MUNICIPAL AUTHORITY
REIDMORE ROAD SEWER EXTENSION

SOUTH CONNELLSVILLE BOROUGH FAYETTE COUNTY PENNSYLVANIA

SANITARY SEWER PLAN AND PROFILE

FIELD BOOK No.:	N/A
PROJECT No.:	24654
DRAWN: JDS	CHECKED: KLB
DATE:	JUNE 2026

REVISION

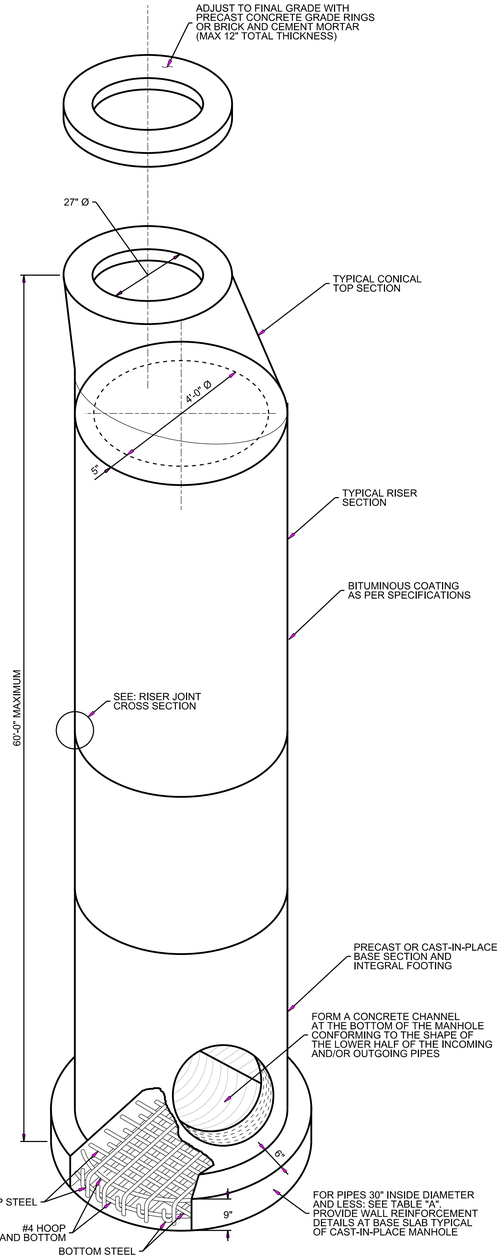
No.	DATE	DESCRIPTION
1	MMDDYY	

DRAWING NAME

24654 - 01

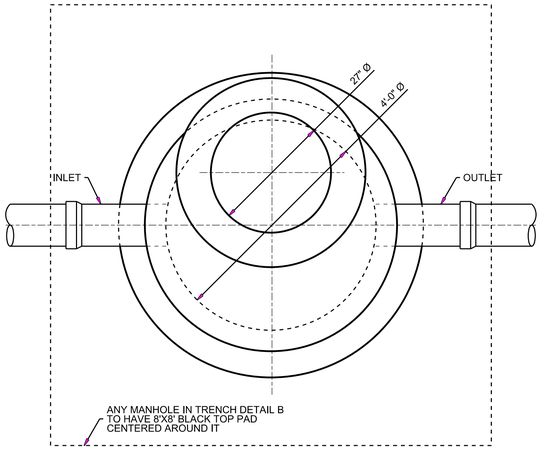
SHEET NUMBER

1 OF 2

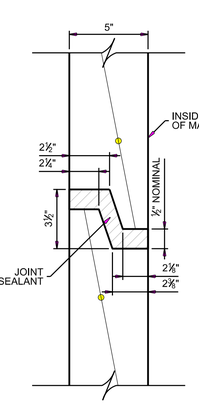


MANHOLE DETAIL
NOT TO SCALE

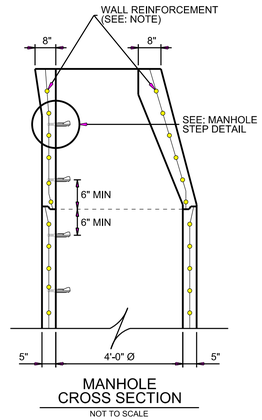
TABLE "A"		
PRECAST MANHOLE HEIGHT	TOP STEEL REQUIREMENTS	BOTTOM STEEL REQUIREMENTS
0'-0" TO 30'-0"	# 4 BARS AT 6" C. TO C. OR 0.33 SQIN / FT WWF 6" MAXIMUM SPACING	# 4 BARS AT 12" C. TO C. OR 0.16 SQIN / FT WWF 6" MAXIMUM SPACING
>30'-0" TO 60'-0"	# 5 BARS AT 6" C. TO C. OR 0.56 SQIN / FT WWF 6" MAXIMUM SPACING	# 4 BARS AT 6" C. TO C. OR 0.27 SQIN FT WWF 6" MAXIMUM SPACING



PRECAST MANHOLE PLAN DETAIL
NOT TO SCALE



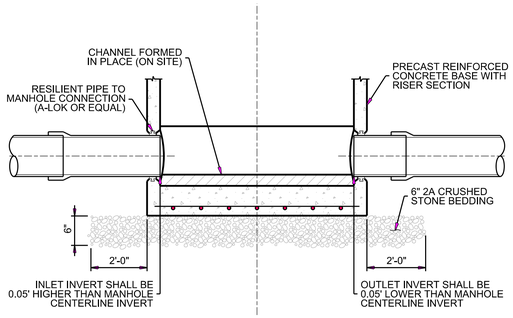
RISER JOINT CROSS SECTION
NOT TO SCALE



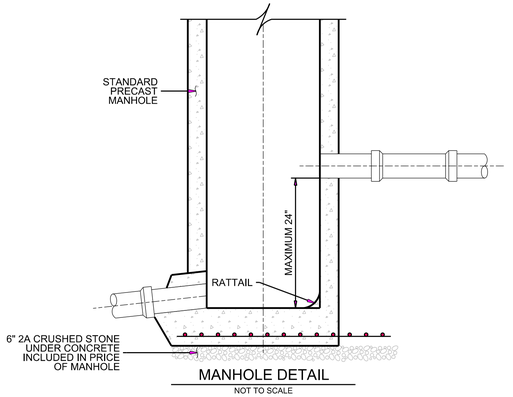
MANHOLE CROSS SECTION
NOT TO SCALE

NOTES:

1. WALL REINFORCEMENT:
   CIRCUMFERENTIAL FULL DEPTH: 0.12/VERTICAL FT
   VERTICAL FULL DEPTH: 0.12/HORIZONTAL FT.
2. PLACE REINFORCEMENT MESH CENTRALLY IN WALL



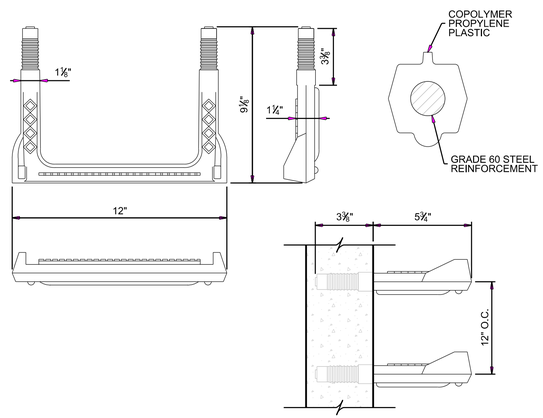
PRECAST MANHOLE BASE DETAIL
NOT TO SCALE



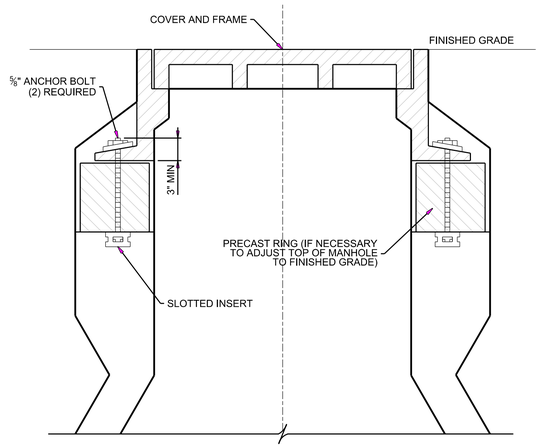
MANHOLE DETAIL
NOT TO SCALE

NOTES:

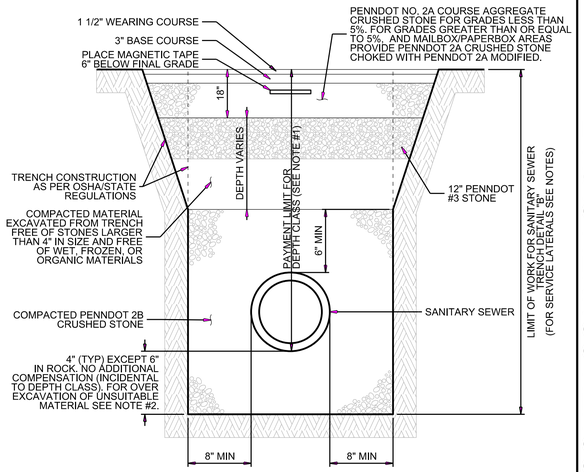
1. PAYMENT FOR DROP CONNECTIONS WILL BE MADE IN ADDITION TO PAYMENT FOR THE MANHOLE.
2. PAYMENT FOR MANHOLE DROP CONNECTIONS WILL BE MADE USING TWO BID ITEMS:
   A. BY THE NUMBER OF DROP CONNECTIONS OF EACH SIZE AND TYPE.
   B. BY THE VERTICAL FEET OF DROP FOR EACH SIZE.
3. THE VERTICAL DISTANCE WILL BE MEASURED FROM THE MANHOLE INVERT AT CENTERLINE TO THE INVERT OF THE UPPER INFLUENT PIPE. AS SHOWN ON THE APPROVED GRADE SHEET.
4. A DROP CONNECTION IS REQUIRED FOR ALL SEWER LINES ENTERING A MANHOLE AT AN ELEVATION OF 24" OR MORE ABOVE THE MANHOLE INVERT.



MANHOLE STEP DETAILS
NOT TO SCALE



MANHOLE COVER WITH ANCHOR BOLTS
NOT TO SCALE



SANITARY SEWER TRENCH DETAIL "B"
NOT TO SCALE

FOR BOROUGH ROADS, PAVED AREAS WITHIN BOROUGH RIGHT-OF-WAYS, AND OTHER PAVED AREAS

WIDMER ENGINEERING
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SEAL

SOUTH CONNELLSVILLE MUNICIPAL AUTHORITY
REIDMORE RD SEWER EXTENSION
FAYETTE COUNTY PENNSYLVANIA
SOUTH CONNELLSVILLE BOROUGH

SANITARY SEWER
MISCELLANEOUS DETAILS

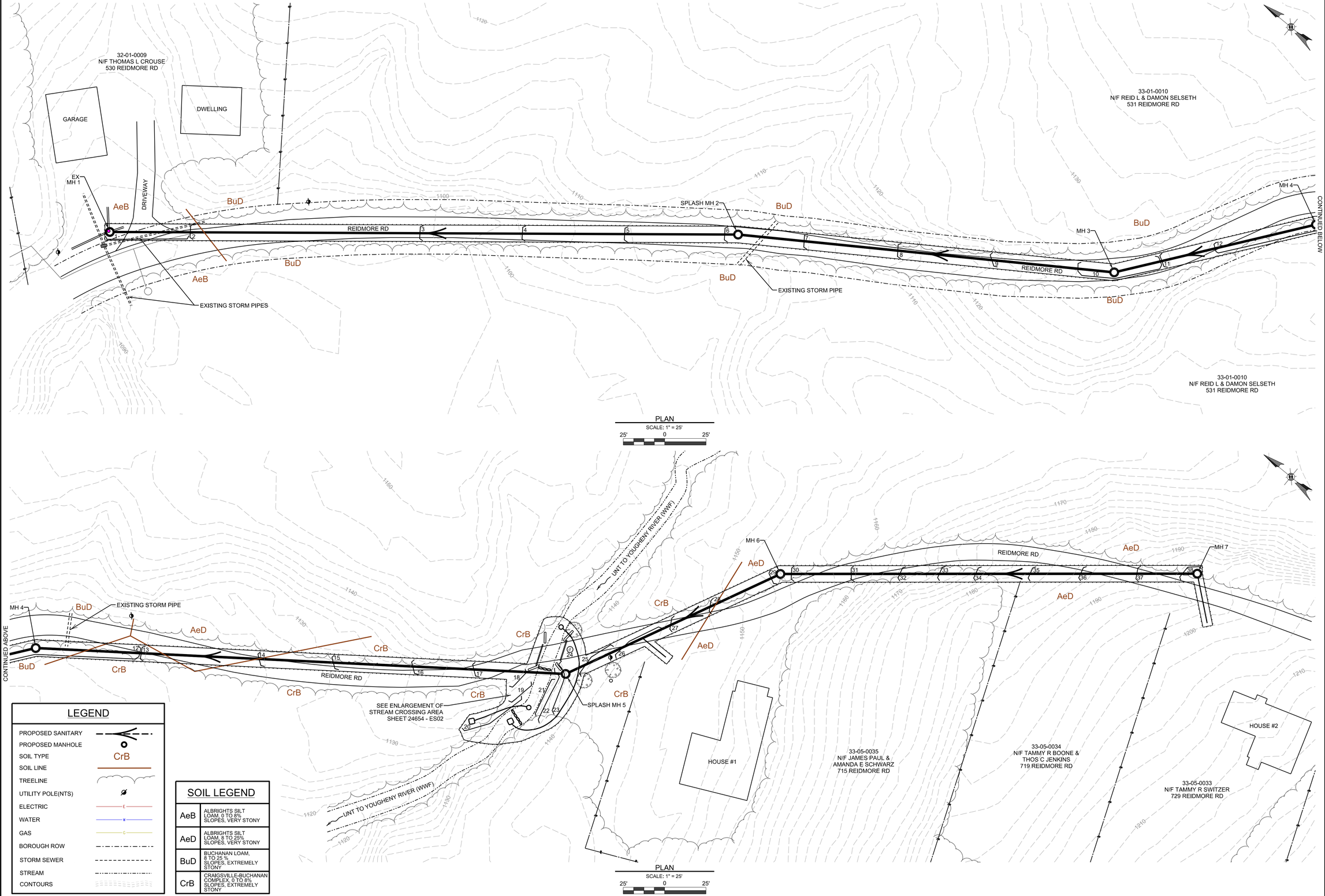
FIELD BOOK No.:	
PROJECT No.:	24654
DRAWN: RAS	CHECKED: SE
DATE:	JUNE 2026

REVISION

No.	DATE	DESCRIPTION
X	MMDDYY	

DRAWING NUMBER
24654 - 02

SHEET NUMBER
2 OF 2



LEGEND

- PROPOSED SANITARY
- PROPOSED MANHOLE
- SOIL TYPE
- SOIL LINE
- TREELINE
- UTILITY POLE(NTS)
- ELECTRIC
- WATER
- GAS
- BOROUGH ROW
- STORM SEWER
- STREAM
- CONTOURS

SOIL LEGEND

AeB	ALBRIGHTS SILT LOAM, 0 TO 8% SLOPES, VERY STONY
AeD	ALBRIGHTS SILT LOAM, 8 TO 25% SLOPES, VERY STONY
BuD	BUCHANAN LOAM, 8 TO 25 % SLOPES, EXTREMELY STONY
CrB	CRAIGSVILLE-BUCHANAN COMPLEX, 0 TO 8% SLOPES, EXTREMELY STONY

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SOUTH CONNELLSVILLE MUNICIPAL AUTHORITY
REIDMORE ROAD SEWER EXTENSION

SOUTH CONNELLSVILLE BOROUGH FAYETTE COUNTY PENNSYLVANIA

EROSION AND SEDIMENTATION CONTROL PLAN

FIELD BOOK No.:	N/A
PROJECT No.:	24654
DRAWN: JDS	CHECKED: KLB
DATE:	JUNE 2026

REVISION

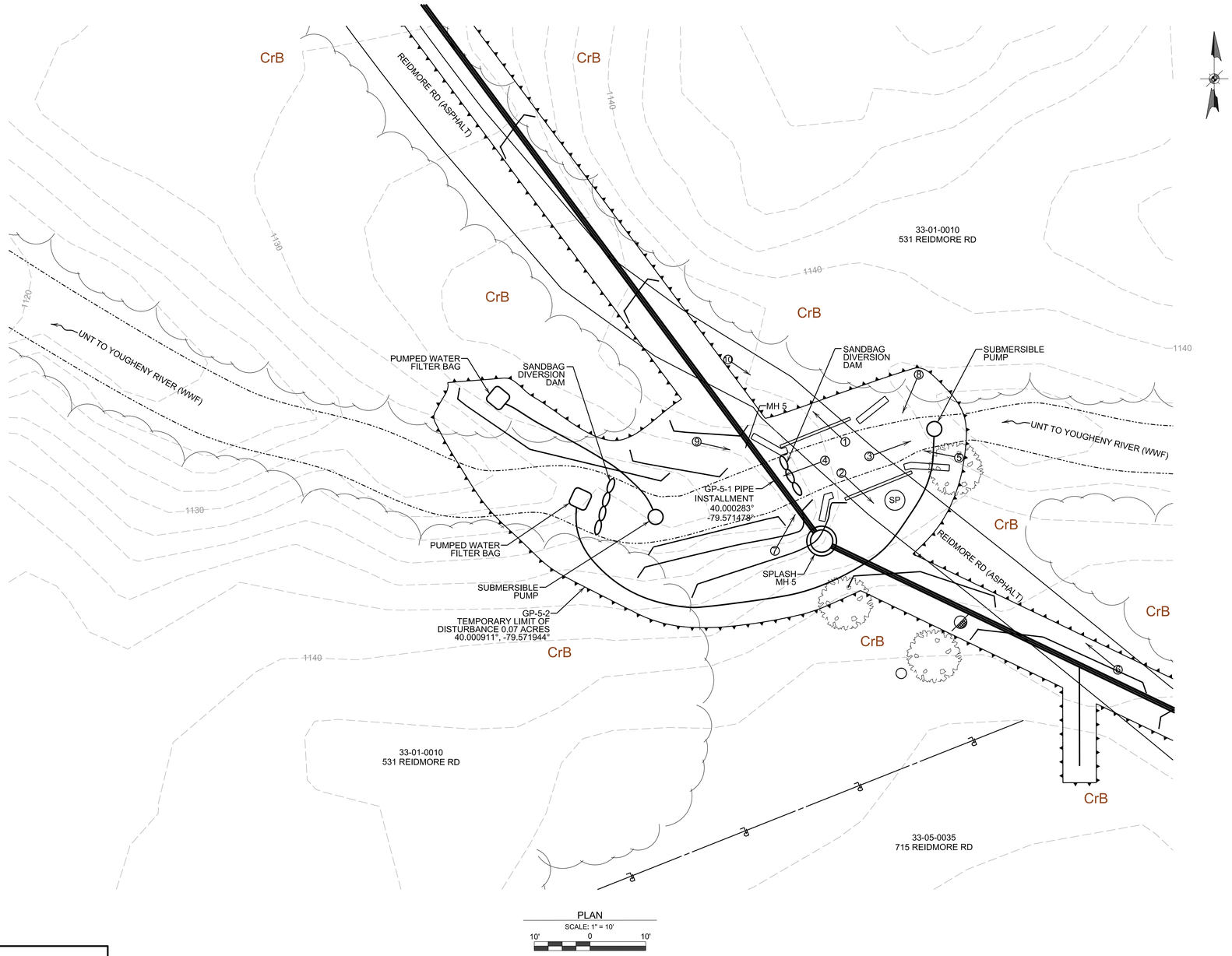
No.	DATE	DESCRIPTION
1	MMDDYY	

DRAWING NAME

24654 - ES01

SHEET NUMBER

1 OF 4



PLAN
SCALE: 1" = 10'
10' 0 10'

LEGEND

- PHOTO LOCATION
- PROPOSED SANITARY
- PROPOSED MANHOLE
- SOIL STOCK PILE (SP)
- FILTER SOCK 12"
- SOIL TYPE (CrB)
- SOIL LINE
- LOD/NPDES BOUNDARY
- TREELINE
- UTILITY POLE(NTS)
- ELECTRIC (E)
- WATER (W)
- GAS (G)
- BOROUGH ROW
- STORM SEWER
- STREAM
- CONTOURS

SOIL LEGEND

AeB	ALBRIGHTS SILT LOAM, 0 TO 8% SLOPES, VERY STONY
AeD	ALBRIGHTS SILT LOAM, 8 TO 25% SLOPES, VERY STONY
BuD	BUCHANAN LOAM, 8 TO 25 % SLOPES, EXTREMELY STONY
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REIDMORE ROAD SEWER EXTENSION

FAYETTE COUNTY PENNSYLVANIA

SOUTH CONNELLSVILLE BOROUGH

EROSION AND SEDIMENTATION CONTROL PLAN ENLARGEMENT

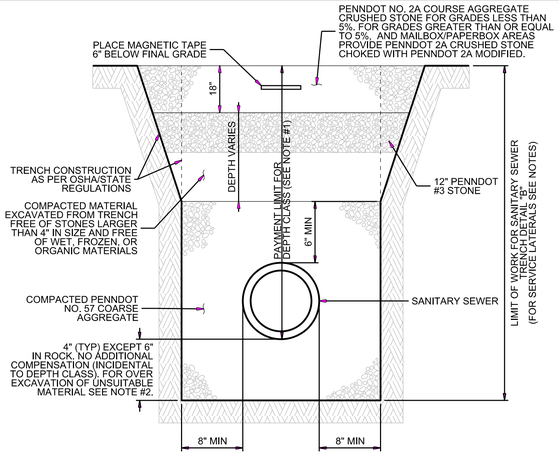
FIELD BOOK No.:	N/A
PROJECT No.:	24654
DRAWN: JDS	CHECKED: KLB
DATE:	JUNE 2026

REVISION

No.	DATE	DESCRIPTION
1	MMDDYY	

DRAWING NAME
24654 - ES02

SHEET NUMBER
2 OF 4

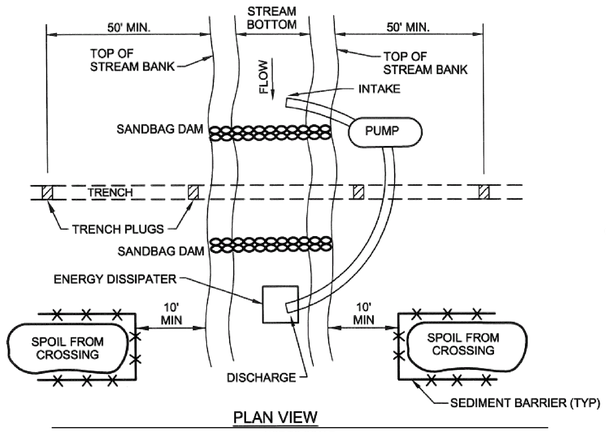


SANITARY SEWER TRENCH DETAIL "B"

NOT TO SCALE

FOR TOWNSHIP ROADS, PAVED AREAS WITHIN TOWNSHIP RIGHT-OF-WAYS, AND OTHER PAVED AREAS

** ALL RESTORATION IS INCIDENTAL TO LINE ITEM #2.

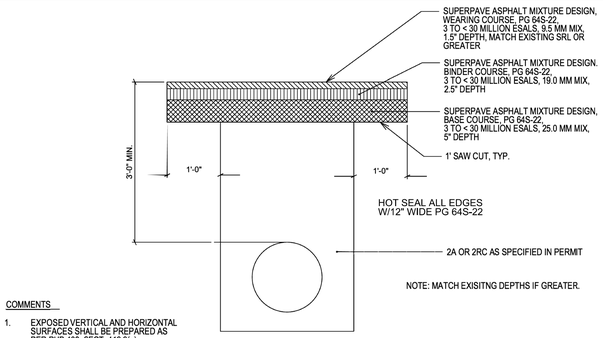


PLAN VIEW

NOT TO SCALE

UTILITY LINE STREAM CROSSING WITH PUMP BYPASS

Grubbing shall not take place within 50 feet of top-of-bank until all materials required to complete crossing are on site and pipe is ready for installation. Bypass pump intake shall be maintained a sufficient distance from the bottom to prevent pumping of channel bottom materials. Trench plugs shall be installed within the trench on both sides of the stream channel. Water accumulating within the work area shall be pumped to a pumped water filter bag or sediment trap prior to discharging into any receiving surface water. Hazardous or pollutant material storage areas shall be located at least 100 feet back from the top of streambank. All excess excavated material shall be immediately removed from the stream crossing area. All disturbed areas within 50 feet of top-of-bank shall be blanketed or matted within 24 hours of initial disturbance for minor streams or 48 hours of initial disturbance for major streams unless otherwise authorized. Appropriate streambank protection shall be provided within the channel.

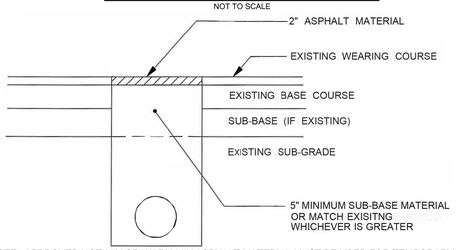


COMMENTS

1. EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB 408, SECT. 413.3(g).
2. MINIMUM 1' PAVEMENT CUTBACK, EXCAVATE OLD AND TEMPORARY MATERIAL RECOMPACT SUBBASE, TACK COAT ALL VERTICAL EDGES. INSTALL ONLY BASE COURSE AND BINDER COURSE IN ONE DAY.

FLEXIBLE PAVEMENT RESTORATION FIGURE C8-1

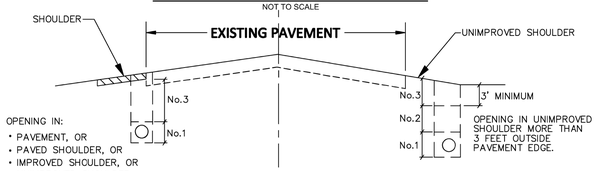
NOT TO SCALE



NOTE: APPROVED HOT-MIX OR WARM MIX ASPHALT MATERIAL MUST BE USED FOR TEMPORARY RESTORATION WHEN AVAILABLE. COLD MIX MATERIAL WILL BE PERMITTED AT THE DISCRETION OF PENNDOT.

TEMPORARY PAVEMENT RESTORATION FIGURE C8-4

NOT TO SCALE



No.1 PLACE FINE AGGREGATE OR GRANULAR MATERIAL UP TO 1 FOOT OVER TOP OF THE FACILITY, AND COMPACT IN 4" LOOSE LIFTS.

No.2 PERMIT MAY AUTHORIZE RETAINED SUITABLE MATERIAL, IN LIEU OF #3 BELOW, AND COMPACT IN ACCORDANCE WITH DEPARTMENT REGULATIONS 459.8(g).

No.3 PLACE SELECT GRANULAR MATERIAL (2RC) UNLESS COARSE AGGREGATE MATERIAL IS SPECIFIED IN PERMIT, AND COMPACT (IN 4" LOOSE LIFTS WITH MECHANICAL TAMPER OR 8" LOOSE LIFTS IF VIBRATORY COMPACTION EQUIPMENT IS USED) TO 100% OF THE DETERMINED DRY WEIGHT DENSITY.

NOTE: For openings behind curb or outside shoulder, suitable material will normally be authorized full depth.

TYPICAL BACKFILL SECTION FIGURE C8-5

11/2021

NOT TO SCALE

Native Erosion and Sedimentation Control Seed Mix	
Seed Mix (all)	Weight (lb/ac)
Deertongue (*Dicanthelium clandestinum*) or Switchgrass (*Panicum virgatum*)	10
Virginia wildrye (*Elymus virginicus*)	5
Autumn bentgrass (*Agrostis perennans*)	5
Partridge pea (*Chamaecrista fasciculata*)	2
Cover Crop (choose one)	Weight (lb/ac)
Spring oats (*Avena fatua*) if seeding prior to August 15th (with Seed Mix)	30
Spring oats (Avena fatua) if seeding prior to August 15th (alone)	60
Winter rye (*Secale cereale*) if seeding after August 15th (with Seed Mix)	30
Winter rye (*Secale cereale*) if seeding after August 15th (alone)	60
Annual rye (*Lollium multiflorum*) (with Seed Mix)	30
Annual rye (*Lollium multiflorum*) (alone)	60

*From DCNR Pennsylvania Bureau of Forestry Planting and Seeding Guidlines

1 Temporary cover crops should be added to all mixes to improve soil stabilization and increase the chance of establishment. Cover crops can be applied before the desired mix if waiting for the optimum time to plant native seed (April - May and early fall).

2 Broadcast or hand spreading are acceptable.

3 Mowing should be limited to 8" in height by brush hog and be done the first time on the 3rd year after planting.

4 Lime and fertilizer are not generally recommended for native seed mixes. If lime and fertilizer are used then a product with a reduced nitrogen content should be used.

GENERAL NOTES:

1. Utility lines that are abandoned must be capped and sealed, if the lines are over 8" in diameter they must be purged and grouted or removed from the row. If the lines contain any hazardous material the line must be removed from the row.

2. Trenches in paved area or shoulder: 2a coarse aggregate backfill is required as per the district geotechnical engineer and under section 459.8(g)(2) and section 703.2 of publication 408. Shoulders to be restored in accordance with appropriate section of publication 408 and roadway construction standards rc-25.

3. An opening shall be backfilled by permittee in accordance with the departments standard specifications and details. (67 pa. code, chapter 459.8(g)). Backfill with 2a stone placed in compacted 4-inch layers when using equipment, as specified in sections 108.05(c)3.d and 108.05(c)4. Up to 8-inch compacted layers are acceptable if using a vibratory roller, as specified in section 108.05(c)3.l. If using a backhoe-mounted hydraulic plate compactor, up to 12-inch compacted layers are acceptable (publication 408).

4. The explicit restriction on the use of excavator mounted hydraulic plate compactors has been removed. The maximum backfill layer thickness will remain at 4 to 8 inches at this time if excavator-mounted plate compactors are used as per strike off letter 481-13-03 dated: November 22, 2013.

5. All trench and pit openings in the roadway or shoulder to be vibratory compacted such that:
a. Adjacent compactor passes do not leave a groove or dent in the 2a in the adjacent pass in the same lift.
b. Compaction effort is at least 100% of the required dry weight density as determined according to PTM NO. 106, method b in the top three (3) feet and 97% beneath that. The permittee is required to use hot mix or warm mix material for temporary restoration. Cold mix will be permitted at the discretion of the department. Permittee must maintain a smooth pavement surface suitable for driving for the duration of the temporary pavement. Backfill compaction testing is required a minimum one test per lift daily for openings less than or equal to 500 total feet in pavement, shoulder or sidewalk, the permittee may choose the compaction test method, provided the test method is performed consistent with department publications, and on the condition that the permittee provide the completed CS-6 (pipe installation inspection form) and accompanying TR-476 and/or TR-4276 forms within two weeks of the completion of the work represented on the form. PennDOT will not close-out the permit prior to receiving the completed forms.

6. Backfill detail for trenches in paved area: Show trench detail with 2a coarse aggregate compacted in accordance with Publication 408 Section 206 (b): To 97% of the dry weight density according to PTM NO. 106, Method B up to within 3' of the subgrade elevation and 100% in the top 3'.

7. Trenches in R/W but outside of pavement or shoulder: All disturbed areas outside of pavement or shoulder but in PennDOT right-of-way shall be restored to a condition at least equal to that which existed prior to the start of work and to 95% of the dry weight density according to PTM NO. 106, Method B. All trench and pit openings to be vibratory tamped in 8" maximum lifts.

8. Form CS-6 note that an authorized inspector must be present for trench backfill work conducted in accordance with Section 601.3(f) & (q). The inspection form CS-6 must be submitted to the department representative promptly after installation. Permittee must provide an authorized inspector for all trench backfill within department legal right-of-way in accordance with section 601 in Publication 408. The contractor performing the trench backfilling work is to print their name, title, signature, and date the bottom of the second page of form CS-6. The inspector's signature and date is just above the contractors portion also on this second page of form CS-6 and the highway occupancy permit number must also be included on the form. Both the contractor and the inspector must sign this form. Completed forms are to be furnished to the district permit office for review and approval.

9. Reference TECHNICAL SPECIFICATIONS FOR THE PERRYOPOLIS AREA JOINT AUTHORITY PENNDOT SEWERLINE RELOCATION for standards, installation details, and testing requirements.

TRENCH DETAIL NOTES:

1. Depth classes:

0-6' depth, 6'-10' depth, 10'-14' depth, 14'-18'depth, 18'-22'depth

Payment limit for depth class shall be measured between the sanitary sewer invert and final grade. Payment shall be made at the unit cost per linear foot at average depths at 25 foot stations based on an approved grade sheet. In the event that the payment depth is equal to the upper limit of a depth class, payment shall be made at the lower depth class unit price.

Payment for additional crushed stone for replacement in areas of over excavation of unsuitable material, as directed by the engineer, shall be made at a unit cost per cubic yard.

2. Trench restoration is incidental to the pipe.

3. No payment classes for service laterals.

GENERAL SEQUENCE OF CONSTRUCTION ACTIVITIES

only the area necessary for the installation of the sanitary sewer will be cleared.

1. Clear and grub areas necessary for the installation of the sanitary sewer line. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
2. Excavate topsoil from trench area and stockpile for use as a top layer of backfill for final seeding later. Any stockpiled materials left undisturbed for more than twenty (20) days must be stabilized by temporary seeding.
3. Begin excavation. Excavation shall not exceed two-hundred (200) feet in length. Excavation may not exceed the length that can be backfilled in one day where site conditions and/or weather conditions hinder normal construction activities. Limit daily trench excavation to the length of pipe placement, plug installation, and backfilling that can be completed on the same day. Water pumped from trenches and other work areas shall be treated for sediment removal prior to discharge.
4. Install proposed sanitary sewers and backfill with approved materials and compaction per specifications.
5. Grade, amend and mechanically prepare soils (as directed/ needed), seed (permanent vegetative cover), and mulch all areas after each five-hundred (500) linear feet of line is installed or where work is completed in a specific area and prior to a day forecasted to rain. Apply temporary stabilization where construction activities are disrupted for a period of four (4) days or longer. Apply permanent vegetative cover where construction activities are disrupted for one (1) year or longer. Apply erosion control blanket where required and as shown on plans.
6. All excavated trench areas in the roadway shall be backfilled, compacted, and covered with six (6) inches of compacted crushed stone or temporarily paved with asphalt. Replace roadway material as per the appropriate pavement detail. Roadways shall be swept or vacuumed to clean all deposits of soil. Roadways shall not be washed with water.
7. Complete the proposed sanitary sewer installation. restore all remaining areas.

AVOIDANCE AND CONSERVATION MEASURES:

(Redacted) Clay Mine - Avoidance Measures:
To avoid and minimize risk of take of federally-listed indiana and northern long-eared bats, and the proposed-listed tricolored bat, PennDOT has committed to specific measures to avoid minimize habitat disturbance as result of their blasting activities (i.e., for bridge demolition and for removal of overburden for the new roadway alignment). To avoid disturbing hibernating bats, PennDOT and their contractors will implement a seasonal blasting time of year restriction. To avoid noise and vibration disturbances to hibernating bats, blasting will only occur in the bats' active season (between April 1 and October 31), from 9am to 7pm. During this time frame, bats will not be in their hibernacula, but out on the landscape. They are less likely to be disturbed from their hibernation or forced to use their limited energy reserves. In addition, to monitor and minimize vibrations that may disturb bats. PennDOT commits to implement a vibration monitoring program, and will place vibration and air blast monitoring devices at the main entrance to (Redacted) Clay Mine. Based on information provided during the meeting of June 18, 2024, and in the meeting notes, PennDOT committed to include a "special provision" to place 1-2 additional monitoring locations at all entrances to (Redacted) Clay Mine. Air blasting thresholds are not to exceed the maximum limits detailed in the table below:

LOWER-FREQUENCY LIMIT OF MEASURING SYSTEM IN Hz (+3 dB)	MAXIMUM ALLOWABLE LEVELS IN dBL
0.1 Hz OR LOWER - FLAT RESPONSE *	134 PEAK
2.0 Hz OR LOWER - FLAT RESPONSE	133 PEAK
6.0 Hz OR LOWER - FLAT RESPONSE	129 PEAK

In additional, PennDOT has committed to ensure that the maximum peak particle velocity will not exceed two inches per second on the transverse, vertical, or longitudinal planes (at 40 hz or greater). If vibration or air blast monitoring detects disturbances above the thresholds indicated above, contractors will cease all blasting activities and notify PennDOT. In turn, PennDOT will notify and coordinate with the agencies (the Service and PA Game Commission) regarding required actions to be taken. No blasting will resume until PennDOT provides clearance (ESI. 2024b). PennDOT has incorporated provisions into their standard blasting and monitoring plan and has tailored them to protect bats that may be in the area near (Redacted) Clay Mine.

(Redacted) Clay Mine, Layton Bridge Tunnel, and rock outcrops - avoidance measure:
To avoid harm to bats, ESI bat biologists will conduct late winter/early spring surveys of all potential roosting structures, including (Redacted) Clay Mine, Layton Tunnel, and the rock outcrops to confirm that bats are not using these structures and landscape features. Based on information provided (ESI email of August 22, 2024), the methods used for late winter/early spring surveys of the (Redacted) Clay Mine and the Layton Tunnel are based on the standard protocols detailed in the range-wide Indiana Bat and Northern Long-Eared Bat guidance. ESI bat biologists remain confident that the (Redacted) Clay Mine, which is nearly void of crevices and cracks, can be easily, visually, inspected. the Layton Tunnel is also nearly void of suitable crevices and cracks (i.e., the Big Brown bats found were clearly visible roosting on the interior tunnel surface (ESI email of August 22, 2024)). Standard visual inspection search measures also appear to be suitable search methodology for the tunnel. As there are no standardized survey techniques to assess rock outcrops, ESI bat biologists developed search methods based on techniques used by bat researchers on talus slopes, boulder fields and sandstone cliffs/outcrops (ESI email of August 22, 2024). Further, the cracks, crevices, and cavities observed in the rock outcrops during the March 2024 bat surveys were found to be shallow, and therefore easily, visually, inspected. ESI bat biologist will then install a novel approach to exclusionary materials as a bat protective measure to prevent bats from using these features during construction, demolition, decommissioning and backfilling. ESI bat specialists will place exclusionary materials only after they verify that the (Redacted) Clay Mine, tunnel, and rock outcrop features are clear of bats.

AVOIDANCE AND CONSERVATION MEASURES (CONT'D):

The proposed exclusionary material for the (Redacted) Clay Mine and the Layton Tunnel will be installed directly after the late winter/early spring surveys to confirm that bats are not using this feature. The exclusionary material is composed of 3/8-inch polyethylene knotted mesh (uv stabilized, rot proof, flame resistant, non-conductive, and freeze resilient), wire cable, and eye bolts (ESI 2024b). The exclusionary devices will completely fit these features in a way that bats cannot gain access into these dangerous (to them) areas, and they will be weighted down or firmly anchored at the entire base when they are installed. ESI bat biologists will monitor the exclusionary devices for signs of deficiencies, and if found, immediately correct them. Exclusionary devices will always remain in place, once they are installed, except during daylight, when contractors are actively working in the cave or the tunnel. During construction, contractors will roll the exclusionary devices aside, but remain closed and in place at all other times, until the openings are demolished or sealed.

Anchored rolled erosion control product (RECP) will be used to cover the rock face outcroppings along the Great Allegheny Passage Trail in areas that are to be excavated, to prevent bats from using these areas during construction (ESI 2024b). After clearing the area for bats, esi bat biologists will assist in recp installation, monitoring, and repairs. Rocky outcrop roosting habitat abounds on the south side of the river, so bats have opportunities to seek alternative sites to relocate and roost.

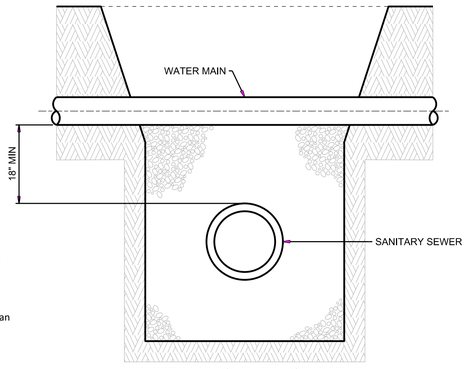
Rock outcrops - Avoidance and Conservation Measures:

Rock outcrops will be removed to widen an existing township road, to make way for the new roadway alignment, and to stabilize the existing tunnel (that will be closed). PennDOT has committed to provide a total of 0.14 acres of six specialty rock piles (PA Game Commission Design) to offset the 0.51 acres of existing rock outcrop bat roosting habitat loss.

Known and Potential Warm Season Habitats - Avoidance Measures:

To minimize the risk of take of federally-listed indiana and northern long-eared bats, and the proposed-listed tricolored bats, PennDOT has committed to specific species avoidance measures. Based on the information in the letter of November 30, 2023, PennDOT anticipates that about 8.69 acres of trees will be cleared to implement the project. These trees will be removed during the typical bat hibernation period in Pennsylvania, (November 15 to March 31), during which time, bats will likely be hibernating and not be in the project area.

To offset the loss of 13 of the 16 identified potential bat roost trees, PennDOT has committed to erect 13 bat boxes on the project site. Because they are cavity/structure roosters, the Indiana Bat and Northern Long Eared Bat are more likely to use the proposed bat boxes than will tricolored bats. Tricolored bats, more adapted to hanging leaf clusters for roosting, are less likely to use the proposed bat boxes (M. Turner, USFWS, Pers Comm.).



WATER MAIN CLEARANCE DETAIL

NOT TO SCALE

WATER MAIN VERTICAL SEPARATION NOTES:

1. WHERE SEWERS CROSS UNDER WATER MAINS THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN
2. IF JOINT ON WATER MAIN IS WITHIN LIMITS OF SEWER TRENCH, INSTALL MECHANICAL BELL JOINT CLAMP.
3. IF CLEARANCE IS LESS THAN 18", ENCASE SEWER PIPE 10 FEET EACH SIDE OF WATER MAIN TO BE PAID AT UNIT PRICE ID PER LINEAR FOOT OF CONCRETE.
4. IN NO CASE SHALL THE SEWER PIPE CONTACT ANY WATER MAIN, SERVICE LINE OR APPURTENANCE.

WATER MAIN HORIZONTAL SEPARATION NOTES:

1. SEWERS SHALL BE LAID AT LEAST 10 FEET, HORIZONTALLY FROM ANY EXISTING WATER MAIN.
2. THE SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER MAIN IF IT IS LAID IN A SEPARATE TRENCH, OR IF IT IS LAID IN THE SAME TRENCH WITH THE WATER MAIN LOCATED AT ONE SIDE OF A BENCH OF UNDISTURBED EARTH AND IF IN EITHER CASE THE ELEVATION OF THE SEWER IS AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN.

Table 11.1
Cubic Yards of Topsoil Required for Application to Various Depths

Depth (in)	Per 1,000 sqft	Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1074

TABLE 11.2
Soil Amendment Application Rate Equivalents

Soil Amendment	Permanent Seeding Application Rate			
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	Notes
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields
10-10-20 fertilizer	1,000 lb.	25 lb.	210 lb.	Or as per soil test; may not be required in agricultural fields
	Temporary Seeding Application Rate			
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

Table 11.6
Mulch Application Rates

Mulch Type	Application Rate (Min.)			Notes
	Per Acre	Per 1,000 sqft	Per 1,000 sqyd	
Straw	3 tons	140 lb	1240 lb	Either wheat or oat straw free of weeds, not chopped or finely broken
Hay	3 tons	140 lb	1240 lb	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4-6 tons	185-275 lb	1650-2500 lb	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb	415 lb	See limitations above

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5-23-25

SOUTH CONNELLSVILLE MUNICIPAL AUTHORITY REIDMORE ROAD SEWER EXTENSION

SOUTH CONNELLSVILLE BOROUGH, FAYETTE COUNTY, PENNSYLVANIA

DETAILS, NOTES, AND SPECIFICATIONS

FIELD BOOK No.: N/A
PROJECT No.: 24654
DRAWN: RAS CHECKED: KLB
DATE: JUNE 2026

REVISION

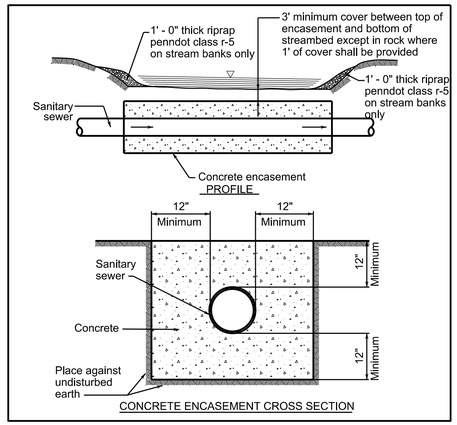
No.	DATE	DESCRIPTION
X	MMDDYY	

DRAWING NUMBER

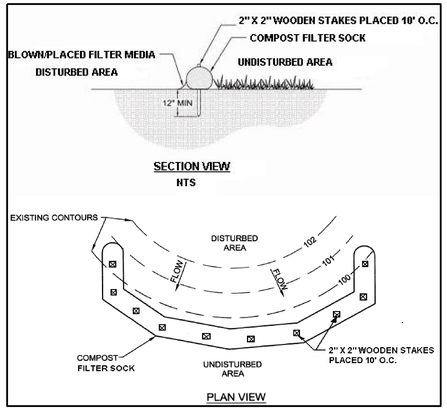
24654 - ES03

SHEET NUMBER

3 OF 4



STREAM CROSSING CONCRETE ENCASEMENT DETAIL



#4-1 COMPOST FILTER SOCK

Sock fabric shall meet standards of Table 4.1. Compost shall meet the standards of Table 4.2.

Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1).

Maximum slope length above any sock shall not exceed that shown on Figure 4.2. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.

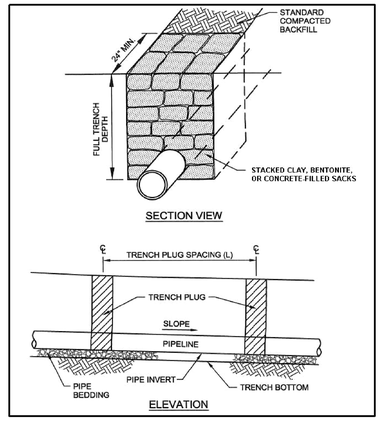
Traffic shall not be permitted to cross filter socks.

Accumulated sediment shall be removed when it reaches half the aboveground height of the sock and disposed in the manner described elsewhere in the plan.

Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.

Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.

Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.

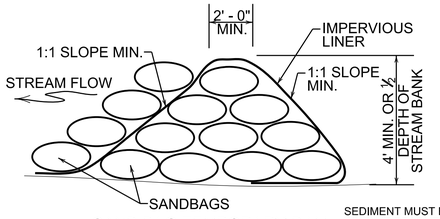


#13-4 TYPICAL TRENCH PLUG INSTALLATION

MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS		
TRENCH SLOPE	SPACING (LF)	PLUG MATERIAL
<5	1000	CLAY, BENTONITE, OR CONCRETE FILLED SACKS
5 - 15	500	CLAY, BENTONITE, OR CONCRETE FILLED SACKS
15 - 25	300	CLAY, BENTONITE, OR CONCRETE FILLED SACKS
25 - 35	200	CLAY, BENTONITE, OR CONCRETE FILLED SACKS
35 - 100	100	CLAY, BENTONITE, OR CONCRETE FILLED SACKS
>100	50	CEMENT FILLED BAGS (WETTED) OR MORTARED STONE

TOPSOIL MAY NOT BE USED TO FILL SACKS.

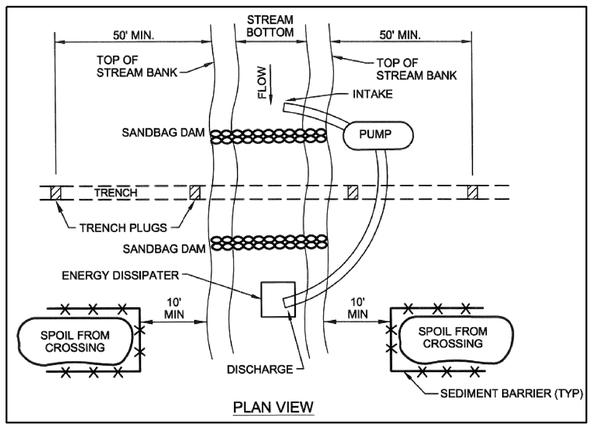
IMPERVIOUS TRENCH PLUGS ARE REQUIRED FOR ALL STREAM, RIVER, WETLAND, OR OTHER WATER BODY CROSSINGS.



SAND BAG TEMPORARY DAM

NOT TO SCALE

SEDIMENT MUST BE REMOVED IF AND WHEN IT REACHES 1/3 HEIGHT OF DAM



#13-2 TYPICAL UTILITY LINE STREAM CROSSING WITH PUMP BYPASS

N.T.S.

Grubbing shall not take place within 50 feet of top-of-bank until all materials required to complete crossing are on site and pipe is ready for installation.

Bypass pump intake shall be maintained a sufficient distance from the bottom to prevent pumping of channel bottom materials.

Trench plugs shall be installed within the trench on both sides of the stream channel.

Water accumulating within the work area shall be pumped to a pumped water filter bag or sediment trap prior to discharging into any receiving surface water.

Hazardous or pollutant material storage areas shall be located at least 100 feet back from the top of streambank.

All excess excavated material shall be immediately removed from the stream crossing area.

All disturbed areas within 50 feet of top-of-bank shall be blanketed or matted within 24 hours of initial disturbance for minor streams or 48 hours of initial disturbance for major streams unless otherwise authorized.

Appropriate streambank protection shall be provided within the channel.

TABLE 4.1
Compost Sock Fabric Minimum Specifications

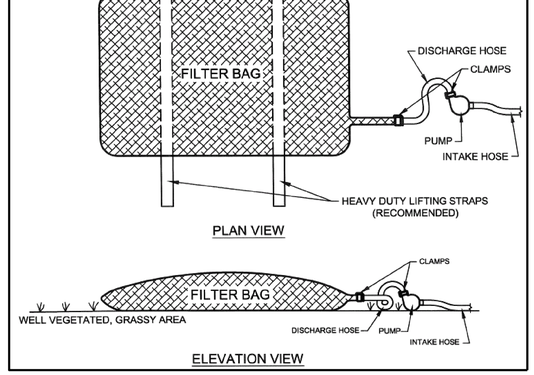
Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years
Two-ply systems					
Inner Containment Netting			HDPE biaxial net Continuously wound Fusion-welded junctures 3/4" X 3/4" Max. aperture size		
Outer Filtration Mesh			Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch) 3/16" Max. aperture size		
Sock fabrics composed of burlap may be used on projects lasting 6 months or less.					

Filtrexx & JMD

TABLE 4.2 COMPOST STANDARDS	
Organic Matter Content	25% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.5
Moisture Content	30% - 60%
Particle Size	30% - 50% pass through 3/8" sieve
Soluble Salt Concentration	5.5 dS/m (mmhos/cm) Maximum

NOTE: (SOURCE)

NUMBERED DETAILS FROM:
EROSION AND SEDIMENTATION POLLUTION CONTROL MANUAL 2012
(REFERRED TO AS E&SPCP MANUAL 2012) OF THE PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION.



#3-16 PUMPED WATER FILTER BAG

NOT TO SCALE

Low volume filter bags shall be made from non-woven geotextile material sewn with high strength, 150 microns. High volume filter bags shall be made from woven geotextiles that meet the following standards:

PROPERTY	TEST METHOD	MINIMUM STANDARD
Avg. Wide Width Strength	ASTM D-4884	60 lb/in
Grab Tensile	ASTM D-4632	205 lb
Puncture	ASTM D-4833	110 lb
Mullen Burst	ASTM D-3786	350 psi
UV Resistance	ASTM D-4355	70%
AOS % Retained	ASTM D-4751	80 Sieve

A suitable means of accessing the bag with machinery required for disposal purposes shall be provided. Filter bags shall be replaced when they become 1/2 full of sediment. Spare bags shall be kept available for replacement of those that have failed or are filled. Bags shall be placed on straps to facilitate removal unless bags come with lifting straps already attached.

Bags shall be located in well-vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, a geotextile underlayment and flow path shall be provided. Bags may be placed on filter stone to increase discharge capacity. Bags shall not be placed on slopes greater than 5%. For slopes exceeding 5%, clean rock or other non-erodible and non-polluting material may be placed under the bag to reduce slope steepness.

No downslope sediment barrier is required for most installations. Compost berm or compost filter sock shall be installed below bags located in HQ or EV watersheds, within 50 feet of any receiving surface water or where grassy area is not available.

The pump discharge hose shall be inserted into the bags in the manner specified by the manufacturer and securely clamped. A piece of PVC pipe is recommended for this purpose. The pumping rate shall be no greater than 750 gpm or ½ the maximum specified by the manufacturer, whichever is less. Pump intakes shall be floating and screened. Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

Pumped water filter bags are to be used where excess water collects in stream crossing work areas. These should be placed by the contractor in a suitable location within the general work area and bounded by a sediment barrier. Additional filter bags are shown on the plan drawings in multiple locations which may be moved if necessary to filter excess water accumulating in the trench.

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REIDMORE ROAD SEWER EXTENSION
FAYETTE COUNTY
PENNSYLVANIA
SOUTH CONNELLSVILLE BOROUGH

NOTES AND DETAILS

FIELD BOOK No.: N/A
PROJECT No.: 24654
DRAWN: RAS CHECKED: KLB
DATE: JUNE 2026

REVISION

No.	DATE	DESCRIPTION
X	MMDDYY	

DRAWING NUMBER
24654 - ES04

SHEET NUMBER
4 OF 4