

REQUEST FOR PROPOSAL (RFP)

Chesapeake Conservancy is a non-profit organization that works with conservation partners and landowners to implement Best Management Practices on agricultural land.

Chesapeake Conservancy is soliciting proposals for the following services:

- Excavation
 - Water System (includes watering facility/trough/hydrant, gravel apron and livestock pipeline)
 - Stream Crossing
 - Animal Trail and Walkway
 - Rock Lined Waterway/Outlet

RFP OVERVIEW AND PROJECT DESCRIPTION

RFP Release Date: March 4, 2026

Landowner Name: Andrew and Corinda Snook

Project Location: 972 Jones Hill Road
Middleburg, PA 17842
Snyder County, Washington Township

RFP Issuing Office: Chesapeake Conservancy
Email: paprograms@chesapeakeconservancy.org
Phone: 570-372-4075

Consultant/Partner: Natural Resources Conservation Service (NRCS)

**Site Showing/
Pre-Bid Meeting:** A *non-mandatory* site showing will be held at the Project Location on:
March 18, 2026 @ 10:00 am EDT

Registration for the Site Showing and Pre-Bid Meeting is required electronically:

Registration Deadline: March 12, 2026

Registration By Phone: 570-372-4075

Registration Email: paprograms@chesapeakeconservancy.org

Include "Snook Excavation Site Showing Registration" in the subject line.

RFP Due Date: **All proposals must be submitted by:**
March 26, 2026 at 10:00 am EDT
Proposals will not be accepted after this date and time.

RFP Submission: **All proposals must be submitted electronically to the following email address*:**

Email: paprograms@chesapeakeconservancy.org
Include "Snook Excavation RFP Response" in the subject line.

**If bidder is unable to submit proposal via email, please contact Chesapeake Conservancy to arrange another method to submit proposal.*

RFP Results: RFP results and notification of award will be distributed no later than:
April 3, 2026

Questions: All questions regarding this RFP should be submitted to:
Kathy Rohrer, 570-372-4075, paprograms@chesapeakeconservancy.org

Project Description:

Pasture Water System

The successful contractor will be responsible for the installation of 3 frost free hydrants, 1 permanent watering trough (MiraFount 3390) and ~2,350 feet of 1 ¼" waterline rated at 160 psi minimum and connecting it to the new well. Waterline must be dug, placed and properly backfilled to supply water to the new waterers.

Contractors should note that Weller Hill Road runs between the pasture fields. Contractor will need to bore under Weller Hill Road to run the waterline to the pasture fields on the east side of the road.

Note: The pressure tank and pump are not included in this RFP. The company drilling the well will be installing the tank and pump.

Stream Crossing

The successful contractor will be responsible for installing 1 stream crossing (~300 square feet). In addition, the concrete trough/spring box seen in the photos will need to be removed and hauled away.

Animal Trail and Walkway

The successful contractor will be responsible for the installation of ~8,232 square feet of animal trail and walkway. The walkway was cleared several years ago when the area was timbered. The landowner will brush hog the walkway prior to contractor starting work.

Rock Lined Waterway/Outlet

The successful contractor will be responsible for installing a rock lined outlet (~130 feet) to convey surface runoff to the stream.

The contract resulting from this RFP will include, but is not limited to, the labor, material, and installation of the items as shown in Attachment A - NRCS Designs and Specifications. The proposed BMPs are to be constructed in the areas shown on the drawings and maps provided.

RFP TERMS AND CONDITIONS

Selected contractors will be working with Chesapeake Conservancy and NRCS on the implementation of this project.

CONSTRUCTION TIMELINE AND SCHEDULE:

The water system, stream crossing, animal walkway and rock lined outlet are being installed as part of a large barnyard project which includes the construction of a new heavy use area (HUA)/waste storage facility and drilling of a new well which is to begin in March 2026, weather permitting.

The water system will tie into the new well which is anticipated to be drilled in March/April 2026. The water system should be installed immediately following the well installation or as soon as the contract is finalized. Construction of the stream crossing, walkway and rock lined outlet can be installed simultaneously, before or after the water system installation. Contractor shall confirm with the landowner that all required permits are in place prior to construction.

Target construction for most of the work in this RFP is to be completed by early June as fence will need to be installed along the stream crossing, animal walkway and pasture boundaries. The fence will likely need to be installed in phases (phase 1 – east side of Weller Hill Road, phase 2 – west side of Weller Hill Road). A large portion of the fence needs to be installed by mid-July due to the grant funding deadline for the project.

The selected contractor for this RFP will work with NRCS, the landowner and other contractors working on the HUA facility to ensure timely installation of all the practices and to prevent unnecessary delays. Therefore, timing and coordination is very important.

Contractors shall include with their response a proposed start date and estimated completion date. Preference may be given to contractors who can meet the short timeframe.

If the contracted services are not completed within the designated time period (as specified in the resulting contract from this RFP), the contract can be extended if agreed to in writing by Chesapeake Conservancy and the contractor.

PENNSYLVANIA ONE CALL:

Contractor shall follow all laws and regulations relating to the Pennsylvania One-Call System, including submitting all required locate requests to the Pennsylvania One-Call System to assist with the prevention of accidental damage to underground public utilities.

PA One Call: 1-800-242-1776 or 811

	<u>Project Final Design Serial #:</u>
Water System	20260282214
Stream Crossing, Walkway and Rock Lined Waterway/Outlet	20251283439

EROSION AND SEDIMENT POLLUTION CONTROL PLAN:

Contractor is responsible for implementing the E&S plan enclosed in the design (Attachment A).

COMMUNICATION AND INSPECTIONS:

Communication between the contractor, NRCS and Chesapeake Conservancy is crucial to a successful project. Contractor shall notify NRCS at a minimum three days before the start of work. Weather will be taken into consideration. Failure to notify NRCS may result in inadequate inspection of construction and the inability to certify that the installation meets the NRCS specifications. Work must be done Monday through Friday between the hours of 7:00 am and 5:00 pm unless approved by NRCS.

Continuous supervision/inspection by NRCS is required for the stream crossing when the frame stone, crossing stone and riprap are installed. All other practices will be inspected intermittently during or upon completion of the work. Payment cannot be made on practices that have not been certified to NRCS specifications.

PAYMENT INFORMATION:

This project is being funded by **multiple grant sources** including an NRCS Regional Conservation Partnership Program (RCP) grant. The remaining project is being funded through Chesapeake Conservancy grants. Selected contractors will receive payments from the landowner and the Conservancy. Payments made by NRCS to the landowner will determine the Conservancy’s portion. The Conservancy cannot pay more than it cost to install the practices. Contractors should expect payment from the landowner at the completion of the project when NRCS certifies that the project was installed to NRCS specifications.

Contractor shall invoice the Conservancy for services rendered during the preceding month. Invoices will be paid after all required documentation have been received and approved AND the Conservancy receives reimbursement from its funding source. We anticipate the time from invoice submission to payment to be 60 calendar days. This may be longer if our payment from our funder is delayed. Since this is an NRCS project, the Conservancy’s portion of the payment may be capped until final NRCS certification is calculated to ensure the payment to the Contractor doesn’t exceed the total project cost.

GRANTS:

The terms and conditions of the National Fish and Wildlife Foundation Small Watershed Grant (Snyder County 0603.24.081009) and Pennsylvania Hamer Foundation apply to the contracts that result from this RFP. Copies of the grant(s) are available upon request.

LOBBYING CERTIFICATION FORM:

As required by National Fish and Wildlife Foundation grants, the successful bidder will be required to sign a Lobbying Certification Form acknowledging compliance with 43 CFR §18 New Restrictions on Lobbying. This form will be signed at the time of contract execution.

INSURANCE REQUIREMENTS:

Bidders shall include a copy of their current (*not expired*) Certificate of Insurance (COI) that reflects their existing levels of liability insurance coverage. Prior to executing a contract with the Conservancy, the successful bidder and all subcontractors must obtain the following minimum levels of liability insurance, **at their own expense**. Contractors who do not carry commercial liability insurance for religious reasons and/or are self-insured should provide applicable documentation with their bid response.

<i>Type of Insurance Coverage</i>	<i>Limit Required</i>
General Liability -	
Each Occurrence:	\$1,000,000
Automobile Liability -	
Combined Single Limit (Each Accident):	\$1,000,000
Excess or Umbrella Liability -	
Each Occurrence:	\$2,000,000
Workers Compensation and Employer’s Liability* -	
E.L. Each Accident:	\$1,000,000
E.L. Disease - Each Employee:	\$1,000,000
E.L. Disease - Policy Limit:	\$1,000,000

**Workers Compensation and Employer’s Liability can be waived for sole proprietors.*

Contractors and subcontractors will be required to include a waiver of subrogation in favor of Chesapeake Conservancy on all liability policies.

“**Chesapeake Conservancy**” and “**National Fish and Wildlife Foundation**” must be named as additional insured on all contractor’s and subcontractor’s policies except workers compensation.

Contractors shall include the cost to obtain additional insurance coverage that is above what they currently carry when calculating their price on the Contractor Response Form.

Immediately following the RFP award notification, the successful bidder shall work with their insurance agent to obtain the insurance requirements noted above. The awarded Contractor and all subcontractors shall provide Chesapeake Conservancy with a current COI certified by a licensed insurance broker within 14 days of award notification. The approved COIs need to be provided to Chesapeake Conservancy prior to signing a contract.

Note: Bidders **do not** need to change their current liability insurance or add additional insured and waiver of subrogation to their policies when responding to the RFP. Only the successful bidder will be required to meet the insurance requirements noted above after the bid is awarded. The Certificate Holder should be as follows: Chesapeake Conservancy, 1212 West Street, Annapolis, MD 21401.

BIOSECURITY:

The successful bidder is encouraged to follow basic farm biosecurity practices.

SAFETY PERFORMANCE:

Bidders shall provide safety performance information including OSHA records and EMR on their company and any subcontractors.

OSHA Records:

- OSHA reportable incidents for the past three (3) years. If there were no OSHA reportable incidents, indicate “none”. See <https://www.osha.gov/recordkeeping/> for additional information.
- TRIR (Total Recordable Incident Rate) which is the number of incidents x 200,000 / total number of employee hours worked in a year.
- DART (Days Away, Restricted or Transferred Rate). See <https://data.bls.gov/iirc/> to determine the value.

Contractors whose business is not required to keep OSHA records because they have 10 employees or less should check the applicable box on the Contractor Response Form.

Experience Modifier Rate (EMR):

- EMR provided by the insurance company.

DOMESTIC PREFERENCE FOR PROCUREMENT:

In accordance with 2 C.F.R. 200.322, the successful bidder shall to the greatest extent practicable, purchase, acquire, or use goods, products or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

For purposes of this RFP, the following definitions apply:

- i. Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States; and
- ii. Manufactured products means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

DEBARMENT AND TAX LIABILITY:

Contractors will be required to certify that they and any subcontractors are not listed on the Debarment and Suspension List maintained by the Pennsylvania Department of General Services (<https://www.dgs.internet.state.pa.us/debarmentsearch/debarment/index>) and the General Services Administration’s List of Parties Excluded from Federal Procurement or Nonprocurement Programs (www.SAM.gov) in accordance with Executive Orders 12549 and 12689, “Debarment and Suspension” and have no outstanding tax liabilities. Contractors will also be required to certify that they and any subcontractors are not in default of a loan or funding agreement administered by any Commonwealth agency.

SMALL BUSINESS AND SMALL DIVERSE BUSINESS:

Chesapeake Conservancy encourages the use of small and small diverse businesses when soliciting Requests for Proposals. Contractors are encouraged to register with the federal government at www.sam.gov and with the Pennsylvania Department of General Services at www.dgs.pa.gov (search [Small Diverse Business Verification](#)). Please note Pennsylvania Department of General Service registration is only valid for three years. Contractors are encouraged to verify that their registration is current.

Contractors and any subcontractors who register on Sam.gov and with the PA Dept of General Services and who qualify as a small and/or small diverse business should check the applicable boxes on the Contractor Response Form. Points will be awarded as per the scoring sheet in Attachment B to contractors whose registration is confirmed by Chesapeake Conservancy.

EQUAL EMPLOYMENT OPPORTUNITY:

Chesapeake Conservancy is an equal opportunity employer. The successful bidder shall comply with all federal, state, and local equal employment opportunity requirements. Additional information can be found at <https://www.ecfr.gov> and searching [41 CFR 60-1.4\(b\)](#).

SUBMISSION OF PROPOSALS AND SELECTION CRITERIA

SUBMISSION OF PROPOSALS:

Proposals are requested for the items described in the Project Description and NRCS Designs and Specifications included in Attachment A, in accordance with the Terms and Conditions included in this RFP. Any estimated quantities included in this RFP are for information only. Bidders are responsible for determining the quantities needed to complete the project based on the provided design and bid documents.

At a minimum each proposal response must include:

- Contractor Response Form
 - Price
 - Three references
 - List of subcontractors used (if applicable)
 - Proposed start dates
 - Proposed completion dates
 - Safety performance
 - Debarment and tax liability certification
 - Insurance requirements - agreement to obtain or documentation of self-insurance
 - Signed by authorized representative
- Current Certificate of Insurance
 - *All policies on the COI must have current dates. Please do not submit expired COIs.*

All proposals must be submitted electronically to Chesapeake Conservancy by the RFP due date specified on Page 1 of the RFP.

It is the responsibility of each contractor to ensure that the proposal is received prior to the due date and time for submission of proposals. No proposal shall be considered if it was sent or received after this date and time.

CONTRACTOR SELECTION CRITERIA:

Proposals will be evaluated based on the criteria listed in Attachment B.

Proposals must be firm. The proposal may be rejected if the items offered by the contractor are not in conformance with the specifications as determined by the Issuing Office.

Proposals will be awarded to the most qualified economic bidder, as determined by Chesapeake Conservancy. Chesapeake Conservancy reserves the right to reject any or all proposals and/or cancel the RFP for any reason and to waive any technical defects, if it determines that it is in the best interest of the landowner, partner or Chesapeake Conservancy.

Chesapeake Conservancy reserves the right to check with other conservation partners and landowners for feedback on working relationship and quality of work of bidders.

CONTRACTOR RESPONSE FORM

Page 1 of 2

Contractor Name: _____

Project Name: Snook Excavation for Pasture Water System and other BMPs

Project Location: 972 Jones Hill Road, Middleburg, PA 17842 (Snyder County)

1. Total price for materials, labor, equipment and insurance for performing the work included in the design and as described in the Project Description - **Required:**

<u>Service Type</u>	<u>Price</u>
Excavation	\$ _____

2. I/We plan to use the following subcontractors in order to perform parts of this project (include Tax ID):

Name: _____ EIN: _____

Name: _____ EIN: _____

3. The following three references are provided with telephone numbers of projects completed of similar scope and size - **Required:**

Name: _____ Telephone: _____

Name: _____ Telephone: _____

Name: _____ Telephone: _____

4. Proposed start date of construction - **Required:** _____

5. Proposed completion date of construction - **Required:** _____

6. Small Business or Small Diverse Business (See Terms and Conditions for details) - *Check if Applicable*

I have registered with Sam.gov and my business (or any subcontractors listed above) qualifies as a

Small Business and/or Small Diverse Business

I have registered with the PA Dept of General Services and my business (or any subcontractors listed above) has been certified as a Small Business and/or Small Diverse Business.

7. Safety performance (See Terms and Conditions for details) - **Required:**

OSHA Records

I certify that my business does not need to keep OSHA records because we have 10 employees or less.

_____ OSHA reportable incidents for the past three years (attach documentation if applicable)

_____ TRIR (Total Recordable Incident Rate) (show calculation, if none, write 0)

_____ DART (Days Away, Restricted or Transferred Rate) (attach documentation/screen printout, if applicable)

Experience Modifier Rate

_____ EMR (attach documentation from insurance company, write N/A if not applicable)

CONTRACTOR RESPONSE FORM

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8. Debarment and tax liability status (See Terms and Conditions for details) - **Required:**

- I certify that my business, and any subcontractors, are not debarred by the State of Pennsylvania or the federal government.
- I certify that my business, and any subcontractors, have no tax liabilities and are not in default of a loan or funding agreement administered by the State of Pennsylvania.

9. Insurance Requirements (See Terms and Conditions for details) - **Required:**

- I have included a copy of my current COI. If awarded the contract, I agree to obtain the levels of insurance outlined in the Terms and Conditions of the RFP within 14 days of award notification and prior to signing a contract.
- I do not carry commercial liability insurance due to religious reasons and/or I am self-insured. I have included supporting documentation with my response.

This proposal is submitted in response to the RFP for the project described within. The proposal is based on my knowledge of the plans and specifications identified within. This proposal will remain valid for 90 days after submission. If awarded the RFP, I agree to sign a contract with the Chesapeake Conservancy.

Company Name: _____ Company Tax ID (EIN): _____

Company Address: _____

Representative's Name: _____ Telephone: _____

Email Address: _____

Signature: _____ Title: _____ Date: _____

ATTACHMENTS:

The following Attachments are included for reference as part of this RFP:

Attachment A – NRCS Designs and Specifications

Attachment B – RFP Scoring Sheet

Contract Name: Andrew Snook RCPP **County:** Snyder
Conservation Practice Design for: Water System

PROJECT NOTES:

REGULATIONS: All Federal, State, and Local Laws. Rules and Regulations governing the construction of this facility shall be strictly followed. The owner or operator is responsible for obtaining all construction permits.

NRCS DESIGN: Failure to construct this facility in accordance with design or authorized modifications will result in withdrawal of NRCS technical assistance. Withdrawal of financial assistance will also be recommended to the appropriate agencies.

PA ACT 187: The contractor must comply with PA ACT 187 and notify PA One Call at 1-800-242-1776 prior to the start of any excavation. The PA One Call design serial number is 20260282214 dated 1/28/26.

CONTRACTOR NAME: _____
CONTACT INFORMATION: _____

ENGINEERING JOB CLASS:
II

NRCS PRACTICE CERTIFICATION

The practices listed below have been installed as per the attached drawings and specifications and meet all applicable NRCS standards and specifications and that the as-built documents are a true and correct record. Certification signatures listed below must have appropriate EJAA for the listed conservation engineering practice.

CIN	CPS #	Conservation Practice	Contracted Amount	Designed Amount	As-built Amount	Certification Signature	Date
4	516	Pipeline	3,107 Ft.	2,350 Ft.			
5	533	Pump	1 no.	1 no.			
8	614	Watering Troughs	6 no.	1 Trough 3 hydrants			

As-Built Completed By: _____ **Date:** _____

Designed By:	_____	Date:	_____
Title:	_____		
Checked By:	_____	Date:	_____
Title:	_____		
Approved By:	_____	Date:	_____
Title:	_____		



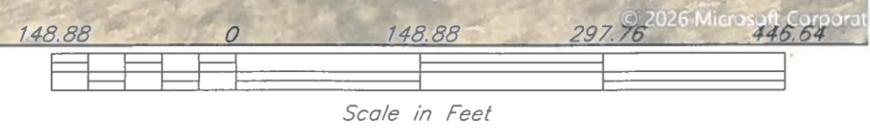


Date _____
 Designed S. Eira
 Drawn _____
 Checked _____
 Approved _____

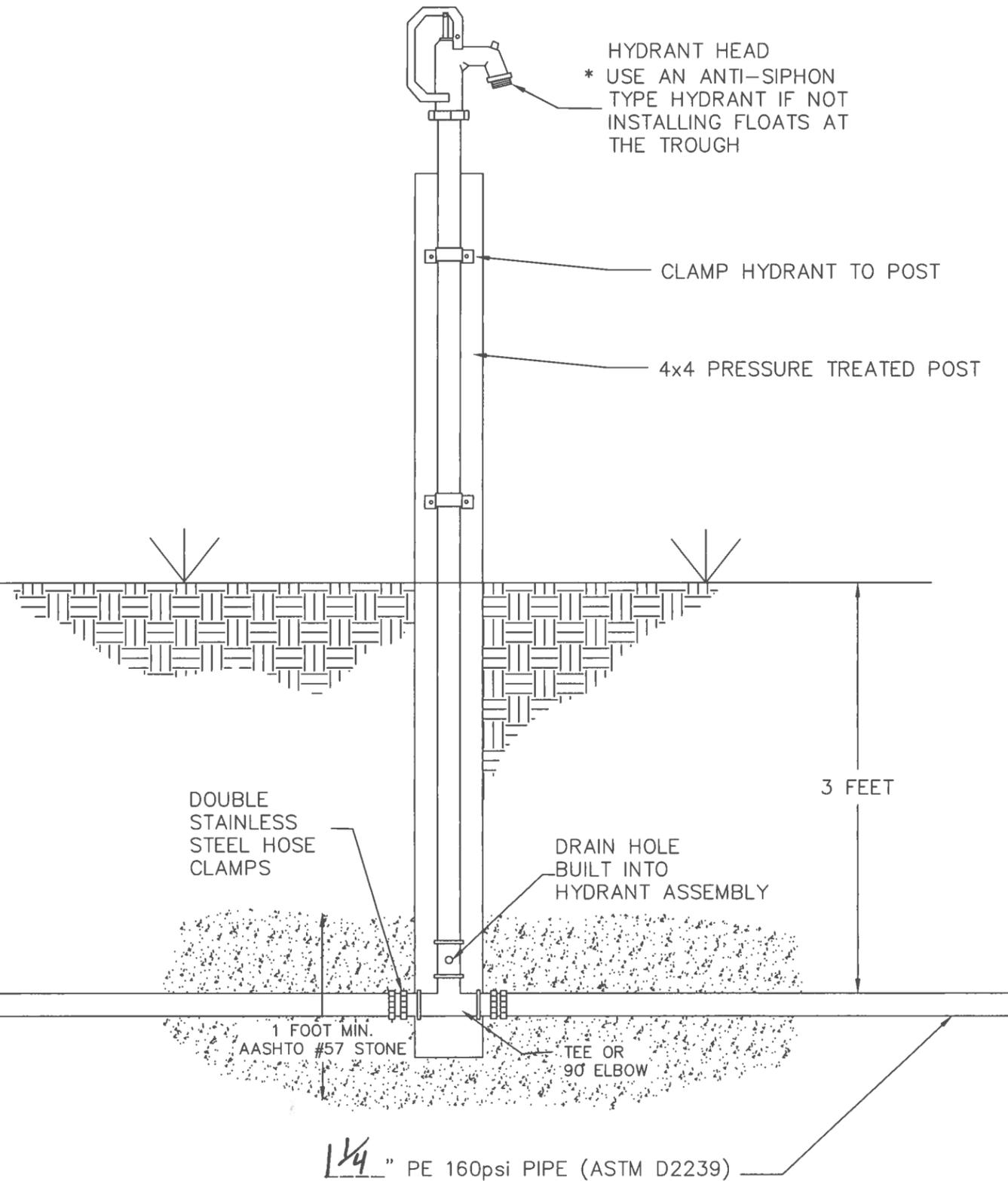
Water System Layout
 Andrew Snook
 Snyder County, PA

United States
 Department of
 Agriculture
USDA
 Natural Resources
 Conservation Service

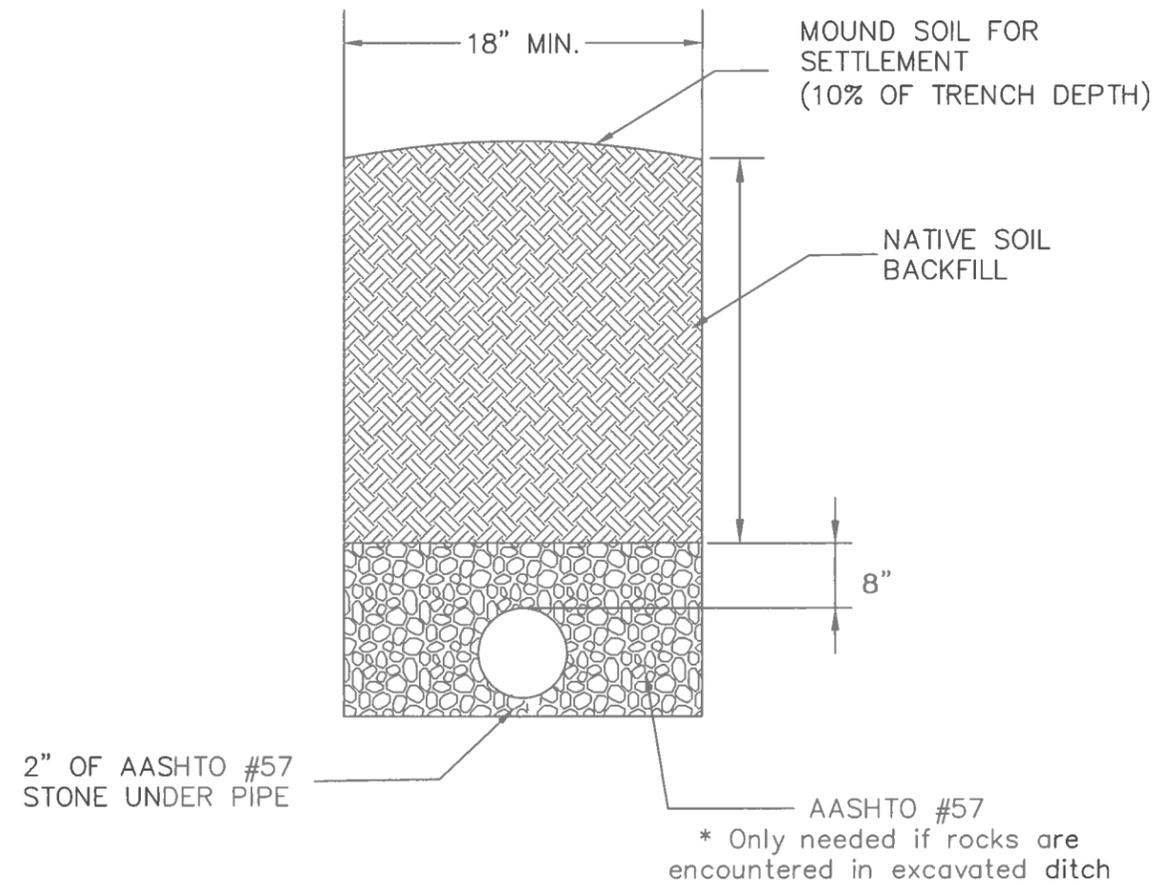
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 Drawing No. _____
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FROST-FREE HYDRANT DETAIL



PIPE INSTALLATION DETAIL



NOT TO SCALE

Date	_____
Designed	_____
Drawn	_____
Checked	_____
Approved by	_____

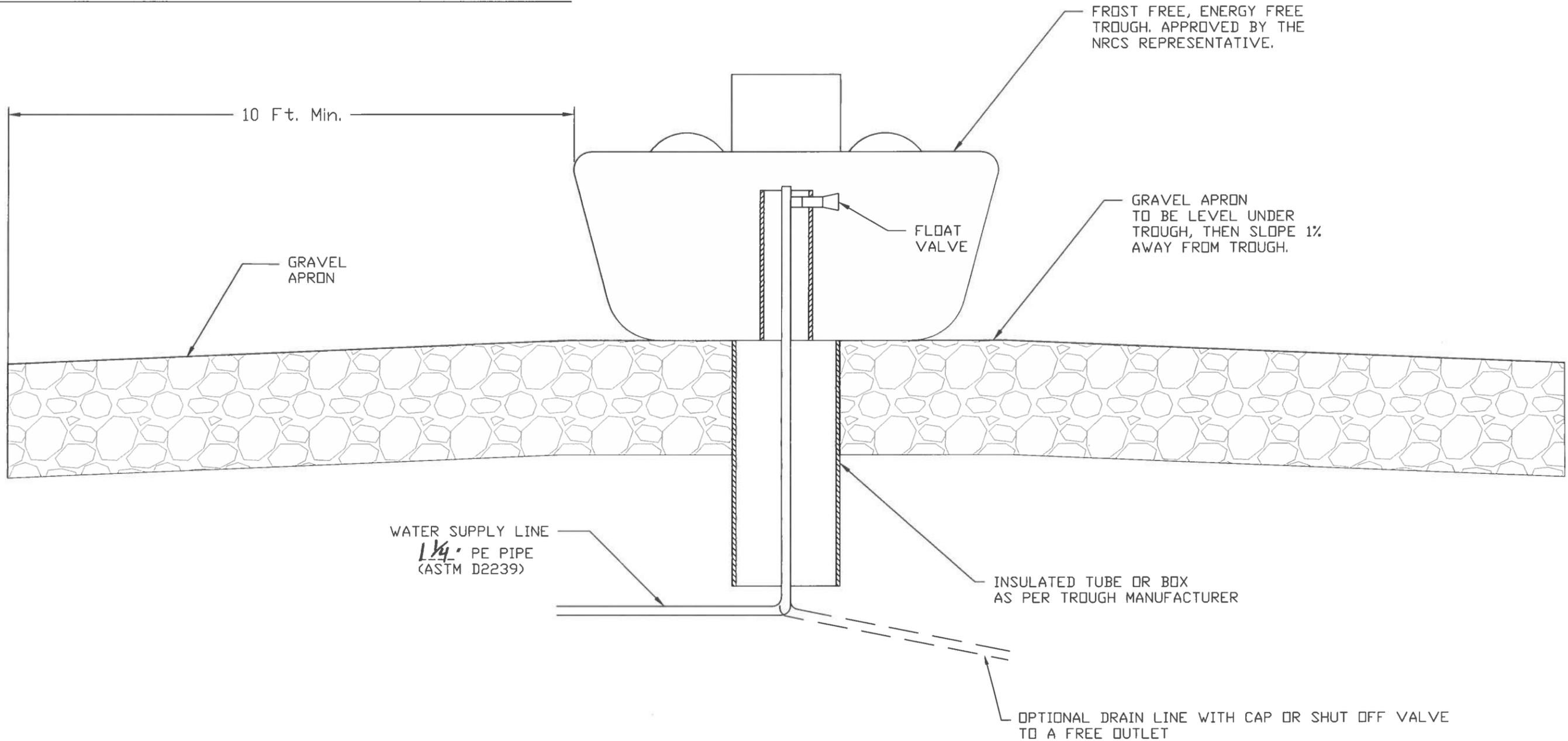
FROST FREE HYDRANT & PIPE INSTALLATION DETAILS

Andrew Snook



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Sheet	_____ of _____

MANUFACTURED TROUGH



Designed	_____
Drawn	_____
Checked	_____
Approved by	_____

MANUFACTURED TROUGH OPTION
Andrew Sneed



File No.	_____
Drawing No.	_____
Sheet _____ of _____	

CONSTRUCTION OF THE PROPOSED WATERING SYSTEM INCLUDES EXCAVATION, FURNISHING OF MATERIALS, AND INSTALLATION OF THE WATER PIPELINE, PRESSURE TANK AND PUMP, HYDRANTS, AND/OR TROUGHS WHERE SHOWN ON THE PLANVIEW MAP. IN ADDITION TO THE REQUIREMENTS SET FORTH IN CONSTRUCTION SPECIFICATIONS PA-516, PA-533, AND PA-614, THE FOLLOWING REQUIREMENTS SHALL BE MET BELOW:

1. THE PIPE LINES SHALL BE OF POLYETHYLENE (PE) PLASTIC PIPE, MEETING THE REQUIREMENTS OF ASTM D-2239. THE PRESSURE RATING OF THE (PE) PIPE IS A MINIMUM OF 160 PSI. PIPE SHALL BE BOUGHT IN ROLLS, NOT SECTIONS; A MINIMUM OF 300 FOOT ROLL LENGTHS IS REQUIRED.
2. NO HIGH POINTS IN THE PIPELINE SHALL BE ALLOWED, ONLY HIGH POINTS AT HYDRANT LOCATIONS ARE ALLOWED. HIGH POINTS IN THE PIPELINE WILL POTENTIALLY CREATE AIRLOCKS AND CAN SLOW FLOW RATES DOWN. INSTALL AN ADDITIONAL HYDRANT OR A 1 INCH CONTINUOUSLY ACTING AIR VENT AT ANY HIGH POINT LOCATIONS. PROTECT VENTS FROM FREEZING AND ANIMAL/MACHINERY DAMAGE BY INSTALLING BELOW GRADE IN A VALVE BOX.
3. ALL PIPELINES AND APPURTANCES SHALL BE BURIED A MINIMUM OF 3 FEET. ALL PIPELINES WHICH CROSS UNDER ROADS SHALL BE BURIED 4 FEET AND HAVE 1' OF CRUSHED STONE (AASHTO #1 OR #57 STONE) ALONG THE SIDES AND OVERTOP OF THE PIPE PRIOR TO BACKFILLING WITH NATIVE MATERIAL.
4. ALL PIPE CONNECTIONS SHALL BE WATER TIGHT AND CONFORM TO THE REQUIRED PRESSURE CHECKS.
5. ALL PIPE FITTINGS SHALL BE DOUBLE CLAMPED AND MEET THE ASTM NUMBER IN THE SPECIFICATIONS. BRASS FITTINGS SHALL BE USED ON ALL PE PIPE.
6. ALL VALVES & OTHER FITTINGS SHALL BE OF THE SAME DIAMETER AS THE PIPELINE IN WHICH THEY ARE BEING INSTALLED ON. ANY BALL VALVES REQUIRED IN THE PIPELINE SHALL BE HOUSED TO ALLOW FOR EASY ACCESS AND USE. THERE SHALL ALSO BE A CHECK VALVE INSTALLED IN THE WELL.
7. FROST FREE HYDRANTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER AND SHALL HAVE A MINIMUM DEPTH OF 3 FT. CLEAN GRAVEL SHALL BE PLACED AROUND THE BLEED HOLE TO ALLOW FOR DRAINAGE. HYDRANTS SHALL BE PROTECTED FROM ANIMALS BY INSTALLING A PRESSURE TREATED POST OR EQUAL. HYDRANTS CAN BE SUBSTITUTED WITH 2-BALL STYLE WATER TROUGHS DEPENDENT ON LANDOWNER'S PREFERENCES AND NUMBER OF LIVESTOCK NEEDING TO DRINK AT ANY GIVEN TIME. INSTALLATION OF 2-BALL TROUGHS SHALL BE AS PER MANUFACTURER.
8. THE PUMP SHALL BE SIZED FOR 10 GPM CAPABLE OF MEETING A TOTAL DYNAMIC HEAD OF 181 FT FROM THE PROPOSED WATER SYSTEM IN ADDITION TO THE HEAD REQUIREMENTS FROM THE PUMP LOCATION TO THE PRESSURE TANK. THE PUMP SIZING DATA, INCLUDING THE PUMP CURVE, SHALL BE SUPPLIED TO THE NRCS INSPECTOR PRIOR TO ORDERING.
9. THE WELL PUMP TYPE AND MAKE SHALL BE DETERMINED BY A PUMP SUPPLIER, CHOSEN BY THE LANDOWNER.
10. A LOW-FLOW SHUT OFF SWITCH SHALL BE WIRED TO THE PUMP, TO SHUT THE PUMP OFF WHEN THE COLUMN OF WATER IN THE WELL HAS BEEN DEPLETED.
11. THE PUMP MANUFACTURER SHALL RECOMMEND THE SIZE OF ELECTRIC WIRE REQUIRED TO POWER THE PUMP. ALL WIRE SHALL BE RATED FOR EXTERIOR USE AND HAVE A MINIMUM OF 2 FEET OF COVER.
12. THE PRESSURE TANK SHALL HAVE A PRESSURE SWITCH WITH A 30 - 50 PSI SWITCH SETTING. HIGHER SWITCH SETTINGS SHALL BE PRE-APPROVED BY THE ENGINEER. ~~IF CONNECTING ONTO A PUBLIC WATER TAP, A PRESSURE REDUCER SHALL BE INSTALLED AT THE TAP AND SET TO A PRESSURE OF PSI.~~
13. THE PRESSURE TANK SHALL BE "HOUSED" FOR PROTECTION AGAINST THE ELEMENTS & FREEZING. THE HOUSING TYPE IS THE LANDOWNER'S DECISION. A BURIED MANHOLE WITH LID OR A BURIED CONCRETE TANK (TRAFFIC RATED) WITH MANHOLE RISER SECTION & LID ARE OPTIONS. HOWEVER; THE EASIEST OPTION IS TO HOUSE THE PRESSURE TANK INSIDE OF AN INSULATED ROOM IN A BUILDING. IF WATER OR SEEPS ARE ENCOUNTERED WHEN EXCAVATING FOR THE "HOUSING", A TILE DRAIN WITH PIPE AND OUTLET SHALL BE INSTALLED.
14. THE PRESSURE TANK SHALL BE SIZED BY THE SUPPLIER. IT IS RECOMMENDED THAT THE WELL PUMP "RUN" FOR A MINIMUM OF 1 MINUTE EACH TIME IT CYCLES OR "KICKS" ON. THE PRESSURE TANK SHALL BE SIZED WITH AN ADEQUATE DRAW-DOWN TO ALLOW FOR AN APPROPRIATE WELL PUMP RUN TIME.
15. THE FLOAT VALVES USED AT EACH OF THE TROUGHS SHALL BE Jobe FLOATS, OR EQUIVALENT, AS APPROVED BY THE DESIGNER. THE FLOATS MUST HAVE A MAXIMUM WORKING PRESSURE OF 125 PSI AND BE FULL FLOW. THE FLOATS SHOULD ALSO HAVE A MINIMUM WORKING PRESSURE OF 0 PSI. FLOATS SHALL BE INSTALLED AS PER MANUFACTURER.
16. IT IS RECOMMENDED THAT PORTABLE TROUGHS BE ANCHORED IN-PLACE TO PROTECT THEM FROM BEING TIPPED OVER BY THE CATTLE. THIS CAN BE ACCOMPLISHED USING FENCE POSTS AND PRESSURE TREATED BOARDS ALONG THE SIDES.
17. 150 GALLON, MINIMUM, TROUGH SIZE IS RECOMMENDED.
18. A GRAVEL APRON IS REQUIRED AROUND EACH OF THE WATERING TROUGHS. THE PADS SHALL SHALL EXTEND A MINIMUM OF 10' IN ALL DIRECTIONS FROM THE EDGE OF THE TROUGH.
19. IT IS RECOMMENDED THAT THE SYSTEM BE DRAINED WHEN NOT IN USE AND WHEN FREEZING IS OF A CONCERN.
20. SEEDING SHALL BE DONE ON ALL DISTURBED AREAS AS A RESULT OF THE INSTALLATION OF THE COMPONENTS OF THE WATERING SYSTEM. SEED, LIME, FERTILIZER, AND MULCH SHALL BE APPLIED AT THE FOLLOWING RATES:
 - A. NURSE CROP--SELECT ONE OF THE FOLLOWING RATES; OATS @ 64 LBS/ACRE PLS* OR WHEAT @ 90 LBS/ACRE PLS OR ANNUAL RYE @ 40 LBS/ACRE PLS.
 - B. STABILIZATION: PERENNIAL RYE 40 LBS/ACRE PLS PLUS TALL FESCUE 80 LBS/ACRE PLS.
 - C. LIME: APPLICATION RATE BASED ON SOIL TEST RECOMMENDATIONS OR USE AN APPLICATION RATE OF: 4 TON / ACRE.
 - D. FERTILIZER: APPLICATION RATE BASED ON SOIL TEST RECOMMENDATIONS OR USE AN APPLICATION RATE OF: 1000 LBS OF 10-20-20 / ACRE
 - E. MULCH: CEREAL STRAW OR EQUIVALENT 3 TONS/ACRE
 - F. BAND SEEDING WILL NOT BE PERMITTED.

LIME AND ONE-HALF (1/2) THE AMOUNT OF THE FERTILIZER SHALL BE INCORPORATED 4 TO 6 INCHES INTO THE SOIL. FOLLOW WITH BALANCE OF FERTILIZER AND SEED.

*PLS MEANS PURE, LIVE SEED. PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATION DIVIDED BY 100. FOR EXAMPLE, TO SECURE THE ACTUAL PLANTING RATE FOR SWITCHGRASS, DIVIDE 12 POUNDS PLS BY THE PLS PERCENTAGE SHOWN ON THE SEED TAG. THUS, IF THE PLS CONTENT OF A GIVEN SEED LOT IS 35%, DIVIDE BY 0.35 TO OBTAIN 34.3 POUNDS OF SEED, THE AMOUNT OF SEED REQUIRED TO PLANT 1 ACRE.

Date _____

Designed _____

Drawn _____

Checked _____

Approved by _____

WATERING SYSTEM CONSTRUCTION NOTES

Andrew Snook



File No. _____

Sheet No. _____

Sheet _____ of _____

Natural Resources Conservation Service Practice Specification Livestock Pipeline (Code 516)

1. SCOPE

The work shall consist of furnishing materials and installing all components of a pipeline, as outlined in this specification and the drawings.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the plans, set forth in Section 5, or as otherwise listed below:

PIPE

If the plastic pipe is stored on site, it should be protected from sunlight.

Pipe and fittings shall meet the requirements of one of the following types and standards, or as described in NRCS NEH Part 636 Chapter 52, or as otherwise set forth in Section 5 or on the drawings.

1. Steel Pipe. AWWA standard C200; ASTM standards A53, A134, A135 and A139, A858, and A865.
2. Ductile Iron. AWWA standard C600; and ASTM standard A746.
3. Aluminum (Tubing). ASTM standards B210, B241, and B313; ANSI standards H35.1 and H35.2.
4. Corrugated Metal. ASTM standards A760 and B745; AASHTO standards M36, M196, and M245. Pipe bands or couplers shall meet the requirements of the applicable pipe specification, except that channel bands (for use with flanged pipe), smooth or flat bands, nor dimple bands shall be allowed.
5. Polyvinyl chloride (PVC). ASTM standards D1784, D1785, D2241, D2466, F794, D2774; AASHTO standard M304; AWWA standards C900 or C905; and ASABE/ANSI standard S376.
6. Acrylonitrile-butadiene-styrene (ABS). ASTM standards D1527, D2282, and D3965.
7. Polyethylene (PE; commonly referred to as PE or HDPE, the primary difference being product density). ASTM standards D3350, F714, D2104, D2239, D2447, D2513, D2737, D3035, F405, F667, F771, F894, and D2774; AASHTO standard M294; AWWA standards C901 and C906; and ASABE/ANSI standard S376.

Pipe shall be marked as directed by the applicable reference standard(s) but shall have at a minimum: nominal pipe size, pipe material, dimensioning system (IPS, NPS, Sch, etc.), thickness (pressure rating or substitute designation from which the pressure rating can be obtained), and manufacture's name or trademark.

Unless otherwise set forth in Section 5, pipe and fittings shall have a protective coating applied and shall conform to one of the following specifications, as applicable:

AWWA C104, AWWA C116, AWWA C203, AWWA C203, AWWA C209, AWWA C210, AWWA C213, AWWA C214, AWWA C218, ASTM A53, ASTM A123/A 123M, or ASTM A153/A

All joints and connections shall be constructed to withstand the design working pressure for the pipeline without leakage and shall leave the inside of the pipeline free of any obstruction which could reduce the pipe capacity below design requirements.

All fittings, such as couplers, reducers, bends, tees and endives shall be made of material that is recommended for use with the type of pipe specified and shall be installed in accordance with the recommendations of the pipe manufacturer.

Joints and connections for steel pipe shall meet the following requirements:

- Field joints shall be installed according to the manufacturer's recommendations. On buried pipelines, high-resistance joints between pipe lengths shall be electrically bridged with a welded, brazed, or soldered copper wire. If coated pipe is field welded, care shall be taken to avoid burning the protective coating. After joints are welded, they shall be covered with a coating equal in quality to that specified for the pipe and hardware.

Plastic pressure pipe fittings shall conform to the following ASTM specifications, as applicable: D 2464, D 2466, D 2467, D 2468, D 2609, D 2672, D 2683, D 3139, or D 3261

Solvents for solvent-welded plastic pipe joints shall conform to the following ASTM specifications, as applicable: D 2235, D 2564, or D 2855

Rubber gaskets for pipe joints shall conform to the requirements of ASTM F477.

VALVES AND OTHER APPURTENANCES

The pipeline valves and appurtenances shall be of the size, type, material and pressure rating as shown on the drawings. If not specified in the design, pressure ratings shall equal or exceed that of the pipe.

Pressure relief valves shall be stamped with the pressure at which the valve starts to open. Adjustable valves shall be sealed or otherwise altered to ensure that the setting marked on the valve is not changed.

All other appurtenances, such as valve housings, shall be made of non-corrosive material and shall be according to manufacturer's recommendations, Section 5 and/or the drawings.

CONCRETE

Concrete used for thrust blocks shall have a minimum compressive strength, at 28 days, of 3000 psi. If the supplier cannot show evidence that a mix will meet strength requirements, a mix with a maximum net water content of seven gallons per bag (94 lbs.) of cement, and a minimum cement content of five and a half (5.5) bags per cubic yard of concrete, may be used

3. PIPE INSTALLATION

Pipelines shall be placed so that they are protected against hazards imposed by traffic, livestock, farm operations, freezing temperatures, or soil cracking. Other means of protection must be provided if the depth required for protection is impracticable because of shallow soils over rock or for other reasons. Abrupt changes in grade must be avoided to prevent rupture of the pipe. All special pipe installation requirements of the pipe manufacturer shall be followed.

Upon pipeline completion, pipeline shall be flushed to ensure that air vents properly operate, and airlocks do not occur.

ABOVE GROUND INSTALLATIONS

For suspension installations the pipe supports (saddle, rack, stand, hanger, etc.) shall meet design specifications and manufacturer or industry recommendations. Unless otherwise specified on the drawings, pipe shall (1) be supported a minimum of one foot above the ground, (2) have two layers of felt strips placed between the pipe and the support, and (3) have graphite lubricant placed between the pipe and the felt strip. Treated wood shall be used for timber supports.

Unless otherwise specified on the drawings, above ground pipelines with restrained joints (e.g., welded steel or banded CMP) shall have: (1) expansion couplers installed at a spacing not to exceed 400 feet, (2) a maximum distance between a coupler and a fixed or anchored location of 200 feet, and (3) couplers that provide for a minimum of 4 inches of travel distance.

For installations designed for laying the pipe across naturally occurring terrain, the pipe shall be firmly and uniformly bedded throughout its entire length. For corrugated metal pipe the bedding shall facilitate pipe installation so that at least the bottom 25% of the pipe circumference shall be in contact with the pipe.

Unless otherwise specified on the design, bedding material shall be imported if the ground surface will result in point loads or unacceptable abrasion on the pipe (e.g., bedrock or rock outcrops). Blocking or mounding shall not be used to bring the pipe up to final grade. Unless otherwise specified on the drawings, supports/saddles specifications as described above shall be followed.

The pipe shall not be handled in a manner to cause damage to the pipe and its coating. The pipe shall not be rolled or dragged on the ground. The pipe shall be placed onto above ground supports by the use of canvas slings or padded cables. Individual joints of pipe shall be inspected, and any damaged pipe shall be removed and replaced.

UNDERGROUND INSTALLATIONS

a. Trench Construction

Trench depth and depth of cover shall be as specified on the drawings.

Trench width at any point below the top of the pipe should be only wide enough to permit the pipe to be easily placed and joined and to allow the initial backfill to be safely and properly placed and compacted. The minimum trench width is dependent on backfill

placing and compacting equipment, but for typical manual installation clearance on either side of the pipe shall be 9 inches unless the trench is precision excavated with a semicircular bottom that closely fits the pipe. In that case, the minimum clearance on either side of the pipe shall be 6 inches. The maximum trench width shall be no greater than the minimum required by backfill placing and compacting equipment, but for typical manual installation shall be 30 inches greater than the outside diameter of the pipe (i.e., maximum clearance between the pipe and trench wall shall be 15 inches).

Trenches more than 5 feet deep shall be shored, sloped, or benched to provide safe and stable trench walls. Unless otherwise specified on the drawings, trenches shall be constructed according to Figures 1 through 5; or as provided in OSHA Construction Safety Regulations, Subpart P, Excavations, Appendix B – Sloping and Benching.

Where rock, hardpan, cobbles or other hard material which might prevent the pipe from being uniformly supported is encountered in the bottom of the trench, the trench shall be undercut a minimum of four inches below final grade. The trench shall then be brought back to grade with appropriate backfill material placed and compacted to provide proper bedding.

More than one pipe may be placed in a common trench. In such cases with typical manual installation the minimum and maximum clearances shall apply, and the minimum distance between pipes shall be 12 inches to facilitate safe and proper backfill installation.

b. Bedding

The pipe shall be firmly and uniformly bedded throughout its entire length. Bedding material, if necessary, shall be placed and spread in uniform layers and in such a manner as to fill the trench so there are no unfilled spaces (air pockets) below the pipe. For pipe with bell joints, holes shall be dug in the bedding at the bells to permit the body of the pipe to be in contact with the bedding along its entire length. Blocking or mounding shall not be used to bring the pipe up to final grade.

The pipe shall not be dropped into the trench or handled in a manner to cause damage. PVC pipe shall not be handled when the temperature is less than 20°F or greater than 100°F. PE pipe shall not be handled when the temperature is less than 10°F or greater than 110°F. The pipe shall be allowed to come within a few degrees of the temperature it will have after it is completely backfilled before placing fill other than that needed for shading or before connecting the pipe to other facilities. Individual joints of pipe shall be inspected, and any damaged pipe shall be removed and replaced.

Thrust blocks shall be formed against a solid trench wall. They shall be of the minimum size and materials as specified on the drawings.

The thrust block cavity shall be in undisturbed soil or previously placed compacted backfill that yields an acceptable allowable bearing pressure. The cavity shall be formed with soil or wood to hold the freshly placed concrete without displacement until an initial set has occurred.

When excavation beyond the designated trench widths and depths, as shown on the drawings or specified in Section 5 of this specification, occurs at locations where installation of concrete thrust blocks is required, the contractor shall install an alternative thrust block provision.

The concrete thrust block shall have a thickness, length, and depth as shown on the drawings or specified in Section 5. Backfill shall be placed on all sides of the thrust block and to the sides of the excavation.

c. Backfill

Initial Backfill. Unless otherwise specified in the design solid wall pipe 18 inches nominal diameter or less the initial backfill material may be fine grained soil. This may be the on-site trench excavated materials as long as any unsuitable materials are removed; it must be free of rocks, gravels, frozen materials larger than 1 inch or earth clods greater than 2 inch in diameter. Unless otherwise specified in the design, for solid wall pipe greater than 18 inches nominal diameter and corrugated, ribbed, or profile wall pipe, the initial backfill material shall be angular 1 to ¼ inch size crush stone with a maximum of 10 percent cohesive fines or sand and gravels (Soil types GW, GP, SW, and SP) with a maximum particle size of 1 inch containing a maximum of 12 percent of non-cohesive fines. Sands shall have a maximum of 45 percent passing the # 40 sieve.

Unless otherwise specified in the design, initial backfill shall be placed in lifts no greater than 8 inches deep before being compacted. For typical manual installation, each lift shall be worked to eliminate any unfilled spaces and compacted with appropriate tamping equipment and significant effort. When backfilling is done by mechanical means the initial fill shall first be worked to eliminate any voids.

The initial backfill materials shall be placed in a manner so as not to displace, deform or damage the pipe.

When water packing is used, the pipe shall be filled with water. The initial backfill, before wetting, shall be of sufficient depth to ensure complete coverage of the pipe with backfill after consolidation has taken place. Water packing shall be accomplished by adding water to diked reaches of the trench in such quantity as to thoroughly saturate the initial backfill. After the backfill is saturated, the fill shall be consolidated by rodding or with a vibrator. The wetted fill shall be allowed to dry until firm before completing the final backfill. The pipeline shall remain full of water until after the final backfill is placed.

Final Backfill. The final backfill material shall be free of rocks, frozen clods or other debris larger than 1 inch in diameter within 6 inches of the pipe and 6 inches in particle size for the remaining portion of the final backfill unless otherwise specified in the design. The material shall be placed and spread in approximately uniform layers so there are no unfilled spaces in the backfill. Rolling equipment shall not be used until a minimum of 18 inches of compacted backfill material has been placed over the top of the pipe

Final backfill shall result in a finished trench surface that is smooth, slightly rounded so that the trench surface is higher than the surrounding ground, free of rocks greater in

size than the surrounding surface and has a clean and finished appearance.

Plastic pipelines may be placed by plow-in equipment if soils are suitable and rocks and boulders will not damage the pipe.

All disturbed areas shall be revegetated according to the recommendations for permanent seeding as stated in Conservation Practice Standard PA342, Critical Area Planting and/or the Pennsylvania Agronomy Guide.

4. BASIS OF ACCEPTANCE

The acceptability of the pipeline shall be determined by inspections to check compliance with all the provisions of this standard and specifications including the design of the line, the pipe, and pipe marking, the appurtenances, and the minimum installation requirements.

The pipeline shall be pressure tested for leaks. Before pressure testing, the joints of the assembled pipeline shall be allowed to set as recommended by the manufacturer and all concrete thrust blocks shall be in place and allowed to cure for a minimum of 3 days.

Pipeline shall be pressure tested by one of the following methods:

1. Before backfilling, fill the pipe with water and test at the design working head or at a minimum head of 10 ft., whichever is greater. All leaks must be repaired, and the test must be repeated before backfilling.
2. Pressure test at the working pressure for 2 hours. The allowable leakage shall not be greater than one gallon per diameter inch per mile. If the test exceeds this rate, the defect must be repaired until retests show that the leakage is within the allowable limits, but all visible leaks must be repaired.

If water is not available to complete a test, the installer shall provide a guarantee stating they will return and fix leaks that are found when the pipe is initially filled with water.

All materials shall conform to these minimum requirements and to the tests prescribed in the applicable ASTM Specification. If requested by the engineer, a qualified testing laboratory must certify with supporting test results that the pipe meets the requirements specified in this specification. The seal of approval of a recognized laboratory on pipe bearing the ASTM or AWWA designations may be accepted for this certification.

The installing contractor shall certify that the materials and installation comply with the requirements of these specifications. He shall furnish a written guarantee against defective workmanship and materials to cover a period of not less than one year. The installing contractor shall furnish a copy of the certification and guarantee, which will be made a part of the supporting records of the pipeline.

5. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

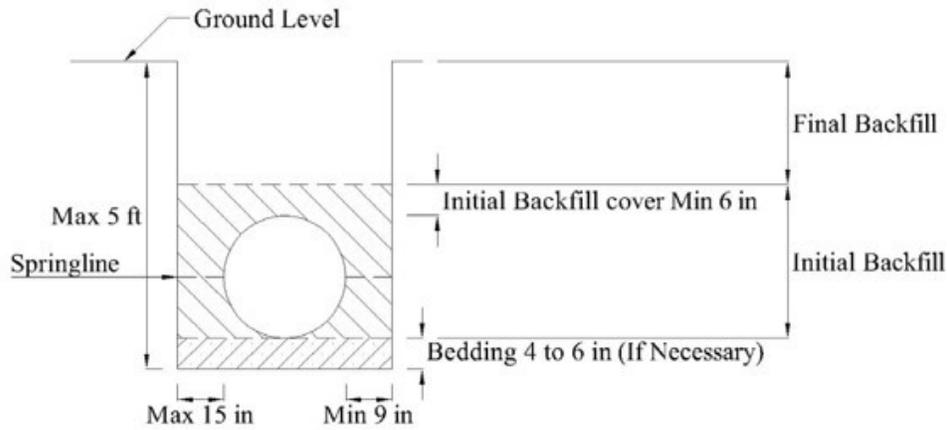


Figure 1. Typical Trench with flat bottom, Manual Installation of Backfill

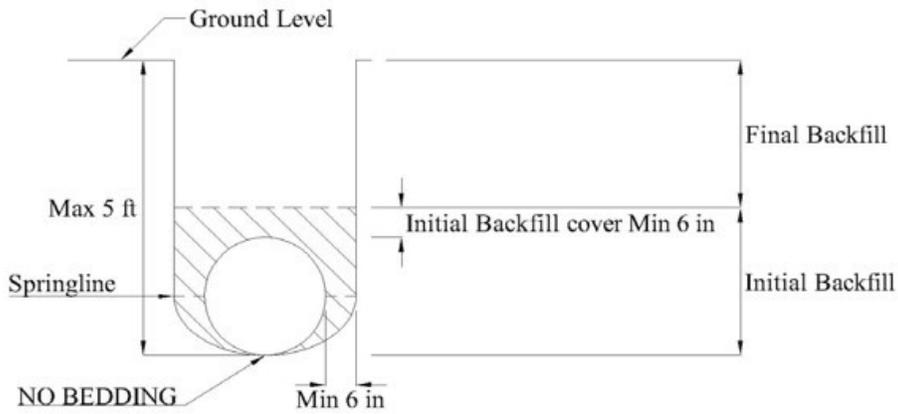


Figure 2. Typical Trench with semi-circular bottom, Manual Installation of Backfill

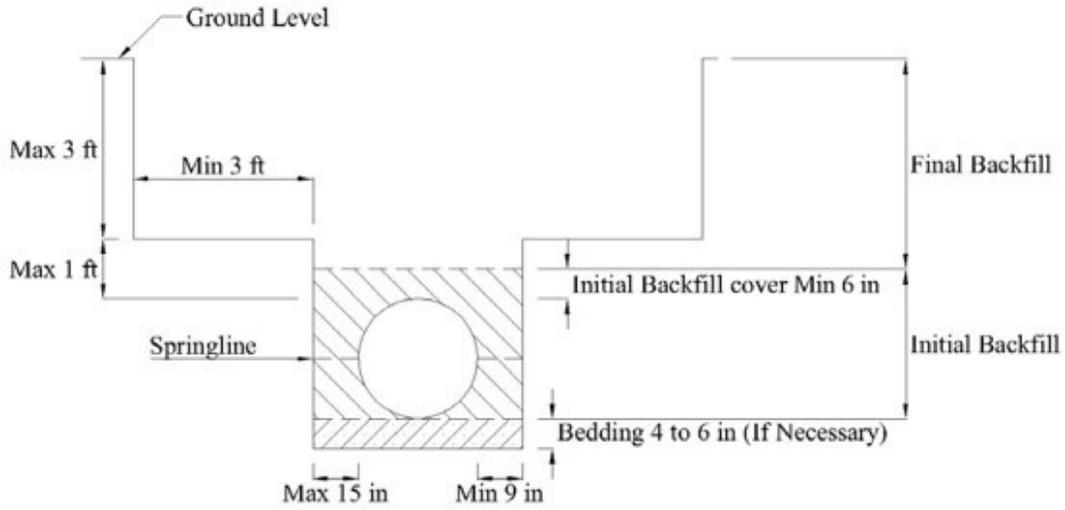


Figure 3. Trench Depth 5 to 10 feet: Benching System.

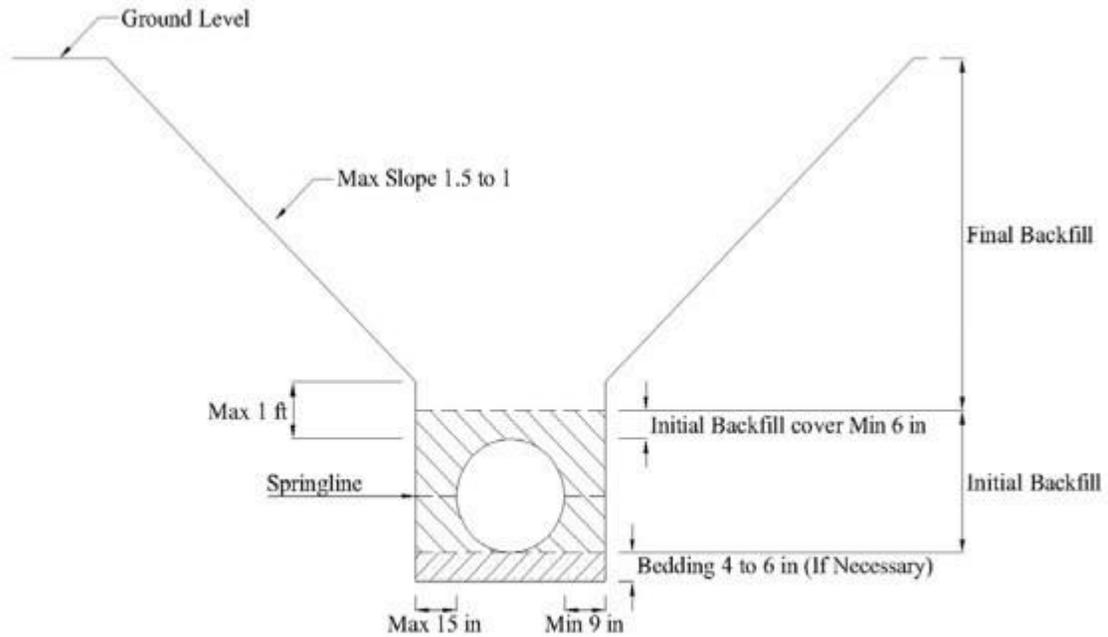


Figure 4. Trench Depth 5 to 10 feet: Vertically-sided lower portion with sloped upper portion

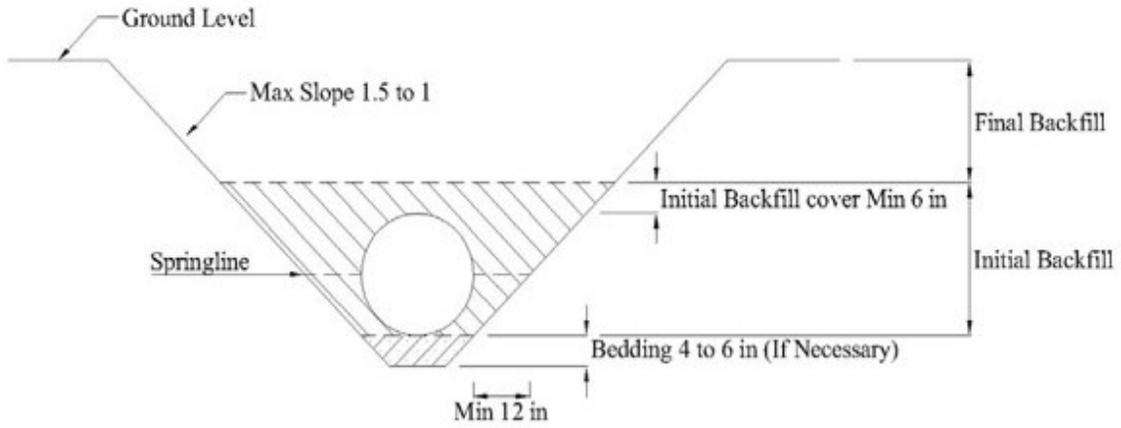


Figure 5. Trench Depth 5 to 12 feet: Sloped walls

NATURAL RESOURCES CONSERVATION SERVICE PRACTICE SPECIFICATION WATERING FACILITY (Code 614)

1. SCOPE

The work shall consist of furnishing materials and installing all components of the watering facility, as outlined in this specification and the drawings.

2. MATERIALS

All materials used shall conform to the size, quality and grade noted on the plans, set forth in Section 6, or as otherwise noted below.

a. Concrete and masonry:

Precast concrete and masonry structures are acceptable when their design and construction have been reviewed and approved.

Precast units shall comply with ACI-318, Chapter 16 and ACI-533.

Masonry components shall meet the requirements of ASTM-C90 & C270 and placed in accordance with ACI-530.

Concrete shall have a minimum compressive strength, at 28 days of 4,000 psi. If the supplier cannot show evidence that a mix will meet strength requirements, a mix with a maximum net water content of seven gallons per bag (94#) of cement and a minimum cement content of six bags per cubic yard of concrete, may be used. Coarse Aggregates shall be #57 or #67 for ready-mix and hand-mixed concrete. Hand-mixed concrete shall be mixed at a ratio of 1-part cement, 2-parts sand, and 3-parts coarse aggregate. Pre-bagged concrete mix will be mixed according to the manufacturer's recommendation.

Mixing water will be clean and free of substances that would affect the strength or durability of the concrete.

Concrete shall be mixed to a consistency that will allow proper consolidation i.e., slump between 3" and 6"

b. Metal:

Steel tanks shall have a minimum thickness of 20 gauge. The steel shall be galvanized for protection from deterioration.

c. Wood:

Wood products used for anchoring or protection measures shall be graded and stamped by an agency accredited by the American Lumber Standards Committee as meeting the required species, grade, and moisture content. Pressure treated wood products shall be Douglas Fir, Southern Yellow Pine, or as otherwise specified in Section 6 or on the drawings. They shall be treated with preservatives in accordance with the American Wood Preservers Association (AWPA) Standard UI as it relates to farm applications. In the absence of a stamp of quality, the contractor or material supplier shall provide written certification that the wood meets the designated quality criteria.

d. Rubber:

Rubber tires, used for troughs, shall be free of holes or deep abrasions. The tire sidewall shall be cut at an inward angle so to not expose any metal chords in the tire.

Tires that were filled with antifreeze or other toxic liquids cannot be used for watering facilities, unless they are thoroughly cleaned before use. As a minimum, this shall include scrubbing the inside of the tire with a detergent and rinsing with a high-pressure washer. This process should be repeated at least four(4) times.

The tire shall be placed such that approximately 1/3 to 1/2 of the tire is below grade. As a minimum, 3" to 4" layer of compacted clay shall be placed as a foundation or seal before installing the tire. A 4" to 6" thick slab of concrete shall be placed to seal the hole in the bottom of the tire trough.

e. Plastic and fiberglass:

Plastic and fiberglass structures shall be made of ultraviolet resistant materials or shall have a durable coating for protection from sunlight.

Cast-iron, plastic, or fiberglass bathtubs are not acceptable for use, as a trough or tank.

f. Aggregate and geotextile:

Aggregates used for stabilization around the watering facilities shall meet the requirements of Penn DOT, Publication 408, Section 703, for coarse aggregate.

The size and gradation shall be as specified in Section 6 or on the drawings. The aggregate shall be hard, durable, and resistant to weathering.

Geotextile shall meet the requirements as outlined in NRCS Design Note 24 and NRCS Material Specification 592.

g. Pipe:

Unless otherwise shown on the plans or in Section 6, pipe, fittings, and components (e.g., valves), and their installation, shall comply with the requirements of construction specification PA516.

3. FOUNDATION PREPARATION

The foundation area, for the watering facility and related stabilization areas shall be cleared of organic matter and all other unsuitable material. When backfill is required to establish planned grade lines, within 2' of a structure, the backfill shall be compacted by hand-operated compaction equipment.

The foundation area and the immediately surrounding area shall be smoothed and graded to permit free drainage of surface water.

All construction shall be performed in a workmanlike manner and the job site shall have a neat appearance when finished.

4. EROSION AND POLLUTION CONTROL

Construction operations will be carried out in such a manner so erosion and air and water pollution will be minimized. Where required, this shall be in accordance with the E&S Control Plan

5. SEEDING

All disturbed areas shall be protected from erosion as soon, after installation of the structure, as practical. Vegetation, if required, shall be established at the locations shown on the drawings and/or staked in the field, and as set forth herein, in Section 6, and/or as shown on the drawings.

6. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

ATTACHMENT A - NRCS Designs and Specifications
Stream Crossing

Contract Name: Andrew Snook **County:** Snyder

CONSERVATION PRACTICE: STREAM CROSSING

PROJECT NOTES:

REGULATIONS: All Federal, State, and Local Laws. Rules and Regulations governing the construction of this facility shall be strictly followed. The owner or operator is responsible for obtaining all construction permits, including DEP General Permits. Contact the local Conservation District for information on applying for a General Permit.

NRCS DESIGN: Failure to construct this facility in accordance with design or authorized modifications will result in withdrawal of NRCS technical assistance. Withdrawal of financial assistance will also be recommended to the appropriate agencies.

PA ACT 187: The contractor must comply with PA ACT 187 and notify PA One Call at 1-800-242-1776 prior to the start of any excavation. The PA One Call design serial number is 2025 1283439 dated 5/8/25.

CONTRACTOR NAME:

CONTACT INFORMATION:

ENGINEERING JOB CLASS:

NRCS PRACTICE CERTIFICATION

The practices listed below have been installed as per the attached drawings and specifications and meet all applicable NRCS standards and specifications and that the as-built documents are a true and correct record. Certification signatures listed below must have appropriate EIAA for the listed conservation engineering practice.

CIN	CPS #	Conservation Practice	Contracted Amount	Designed Amount	As-built Amount	Certification Signature	Date
7	578	Stream Crossing	300sf.	300sf.			
6	575	Walkway	8,232 sf.				

As-Built Completed By:

Date:

Designed By:	<u>Shane Eia</u>	Date:	<u>5/6/25</u>
Title:	<u>CET</u>		
Checked By:	<u>Rd</u>	Date:	<u>5-12-25</u>
Title:			
Approved By:	<u>Robt G. Dulst</u>	Date:	<u>5-12-25</u>
Title:			



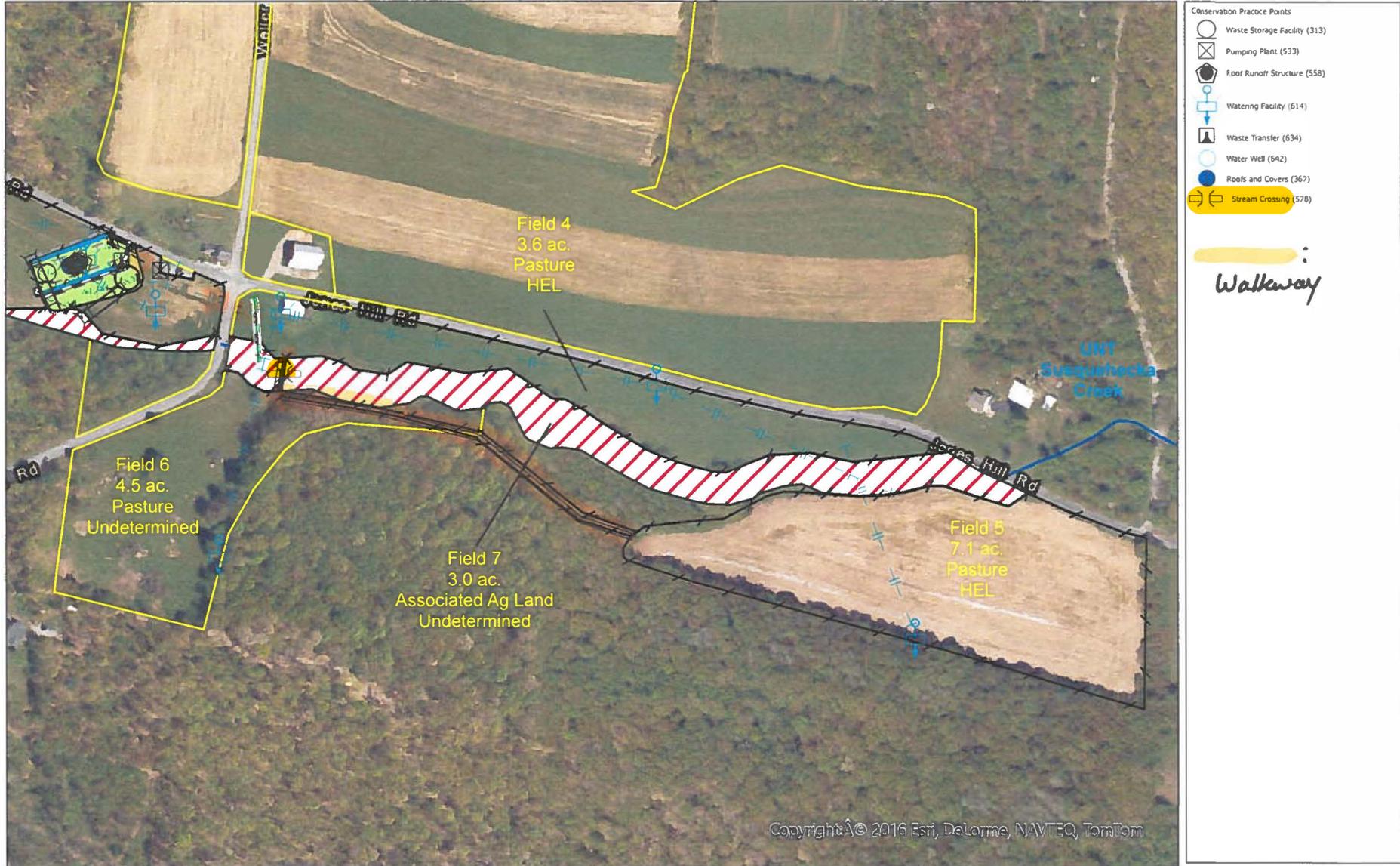
RCCP Conservation Plan Map

Date: 7/17/2024

Client(s): ANDREW R SNOOK
 Location: Farm: 3010 Tract: 11157
 Snyder County, Pennsylvania

Assisted By: BRANDON FORD
 USDA-NRCS
 MIDDLEBURG SERVICE CENTER
 SNYDER COUNTY CONSERVATION DISTRICT

528 Prescribed Grazing to be Applied to all Pasture (1, & 4-6) Fields, 18.9 acres.



Prepared with assistance from USDA-Natural Resources Conservation Service



Proposed
Xing, looking
upstream

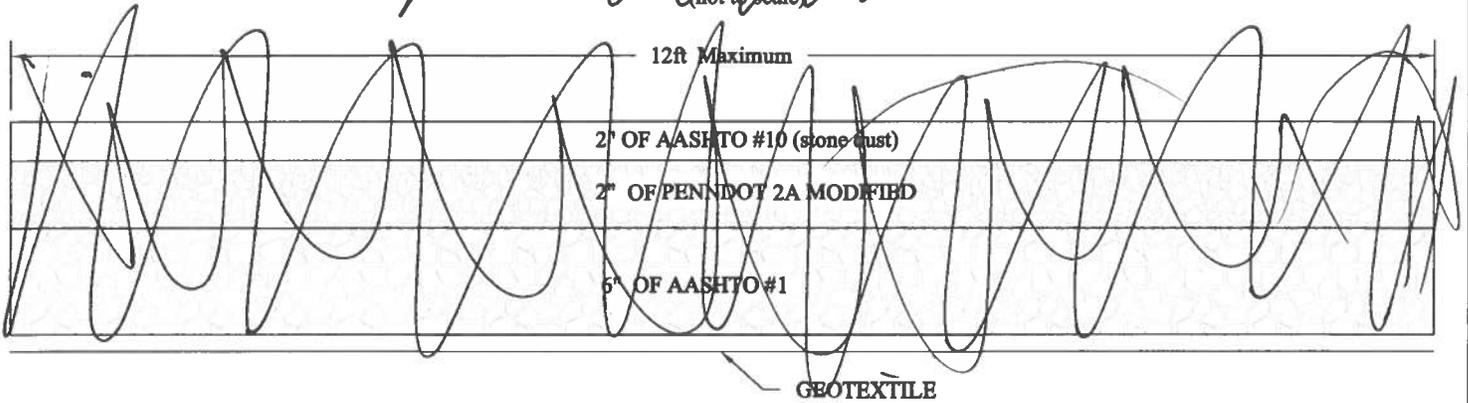


Looking
downstream
towards
Xing

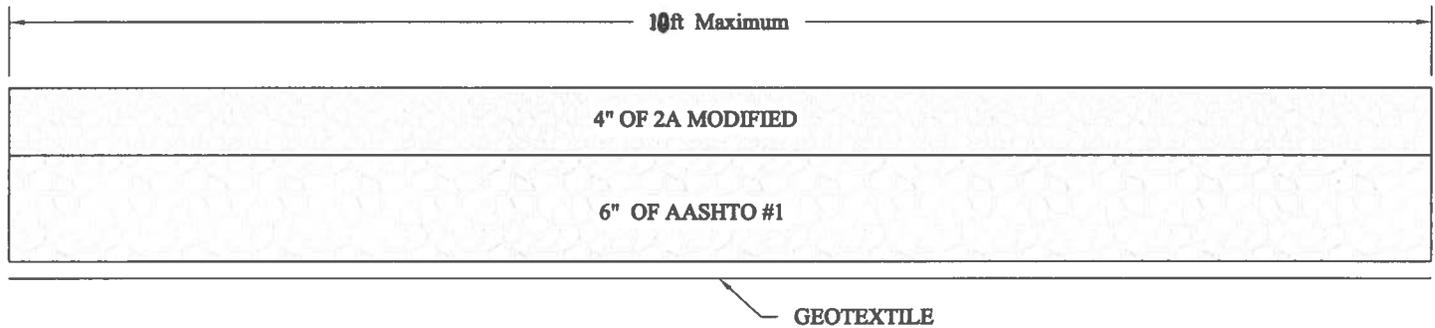


Xing location, spring box to be removed

Animal Trail and Walkway Detail Option #1
(not to scale)



Animal Trail and Walkway Detail Option #2 at Crossing
(not to scale)



Cross-Slope

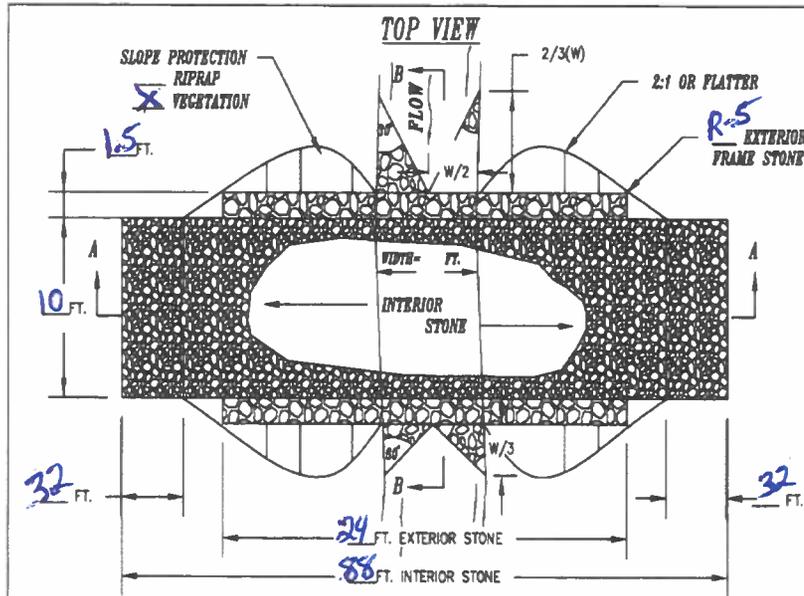
Crown



Trail cross-slope / crown requirements	
Trail Width	Slope
≤ 6.0 ft	1.0 in/ft
6.1 ft - 11.9 ft	0.75 in/ft
≥ 12 ft	0.5 in/ft

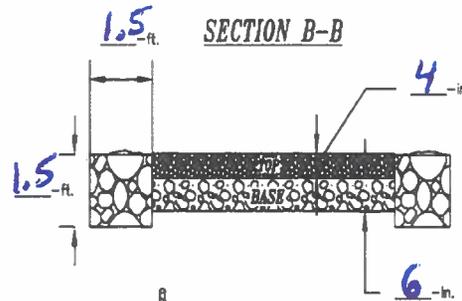
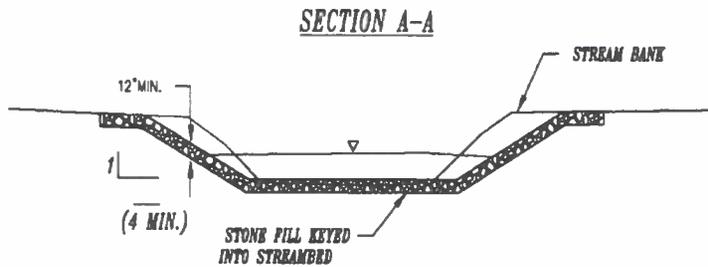
NOTES:

1. TOPSOIL SHALL BE REMOVED PRIOR TO ACCESS ROAD CONSTRUCTION.
2. STONE DEPTH SHALL BE MEASURED AFTER COMPACTION, THE MINIMUM DEPTHS ARE SHOWN.
3. ALL STONE SHALL BE COMPACTED WITH A SMOOTH DRUM VIBRATORY ROLLER.
4. AASHTO #1 CAN BE SUBSTITUTED WITH SHALE IF MATERIAL IS APPROVED BY THE NRCS INSPECTOR PRIOR TO PLACEMENT.
5. 2A MODIFIED CAN BE SUBSTITUTED WITH AN APPROVED EQUAL, AS PER THE NRCS INSPECTOR.
6. INSTALL WALKWAY WITH A CROSS-SLOPE OR CROWN, AS SHOWN, TO ALLOW DRAINAGE OFF OF THE WALKWAY. LOCATIONS SHALL BE STAKED IN THE FIELD BY THE NRCS INSPECTOR.
7. GEOTEXTILE SHALL MEET THE REQUIREMENTS SHOWN BELOW.
 - A. Geotextile shall be WOVEN or NON-WOVEN with a minimum tensile strength of 160 pounds.
 - B. Geotextile installed on slopes greater than 8% shall be NON-WOVEN.
 - C. Geotextile installed where a wet subgrade is an issue shall be WOVEN or NON-WOVEN. The inspector shall have a discussion with the contractor to see which geotextile type the contractor recommends for the wet subgrade issues. The inspector shall then discuss with the design engineer.
 - D. Allow 1' overlap between adjacent panels of geotextile where applicable.



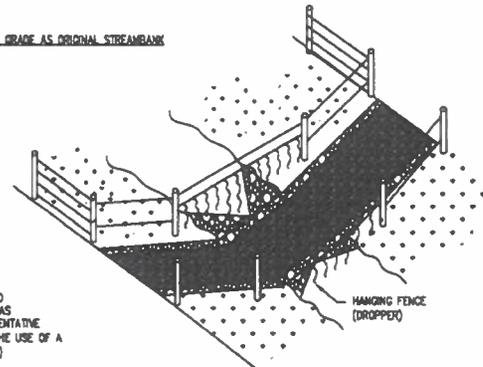
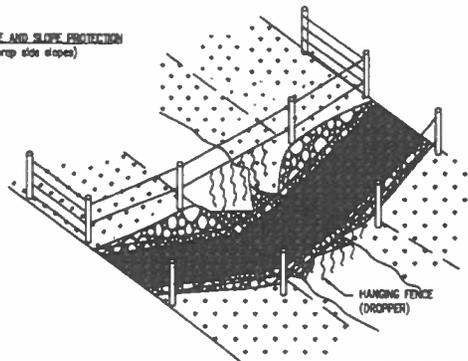
Gradation Name	RIPRAP GRADATIONS			
	Size - Inches (sq. opening)			
	D ₁₀₀	D ₈₅	D ₅₀	D ₁₅
R-3	6	5	3	2
R-4	12	10	6	3
R-5	18	15	9	5
R-6	24	20	12	7
R-7	30	28	15	12
R-8	48	30	24	15

- NOTES:**
1. ALL SPOIL SHALL BE DEPOSITED OUTSIDE OF THE FLOODWAY AND WETLANDS.
 2. DEPTH OF STONE FILL ABOVE NATURAL STREAMBED SHALL NOT EXCEED 6-INCHES.
 3. AASHTO #1 STONE TO BE USED AS INTERIOR STONE. DEPTH OF STONE 5 FT.
 4. AASHTO #57 STONE TO BE USED TO FILL ANY SUBSEQUENT VOIDS ON INTERIOR STONE SURFACE.
 5. R-5 STONE SHALL BE USED AS EXTERIOR FRAME STONE. DEPTH OF STONE 1.5 FT.
 6. STONE SHALL BE KEYED INTO THE STREAMBANK AND BED.
 7. INSTALL FENCING FOR LIVESTOCK EXCLUSION.



STREAMBANK CUT-SLOPE AND SLOPE PROTECTION
(shown with riprap side slopes)

CROSSING AT SAME GRADE AS ORIGINAL STREAMBANK



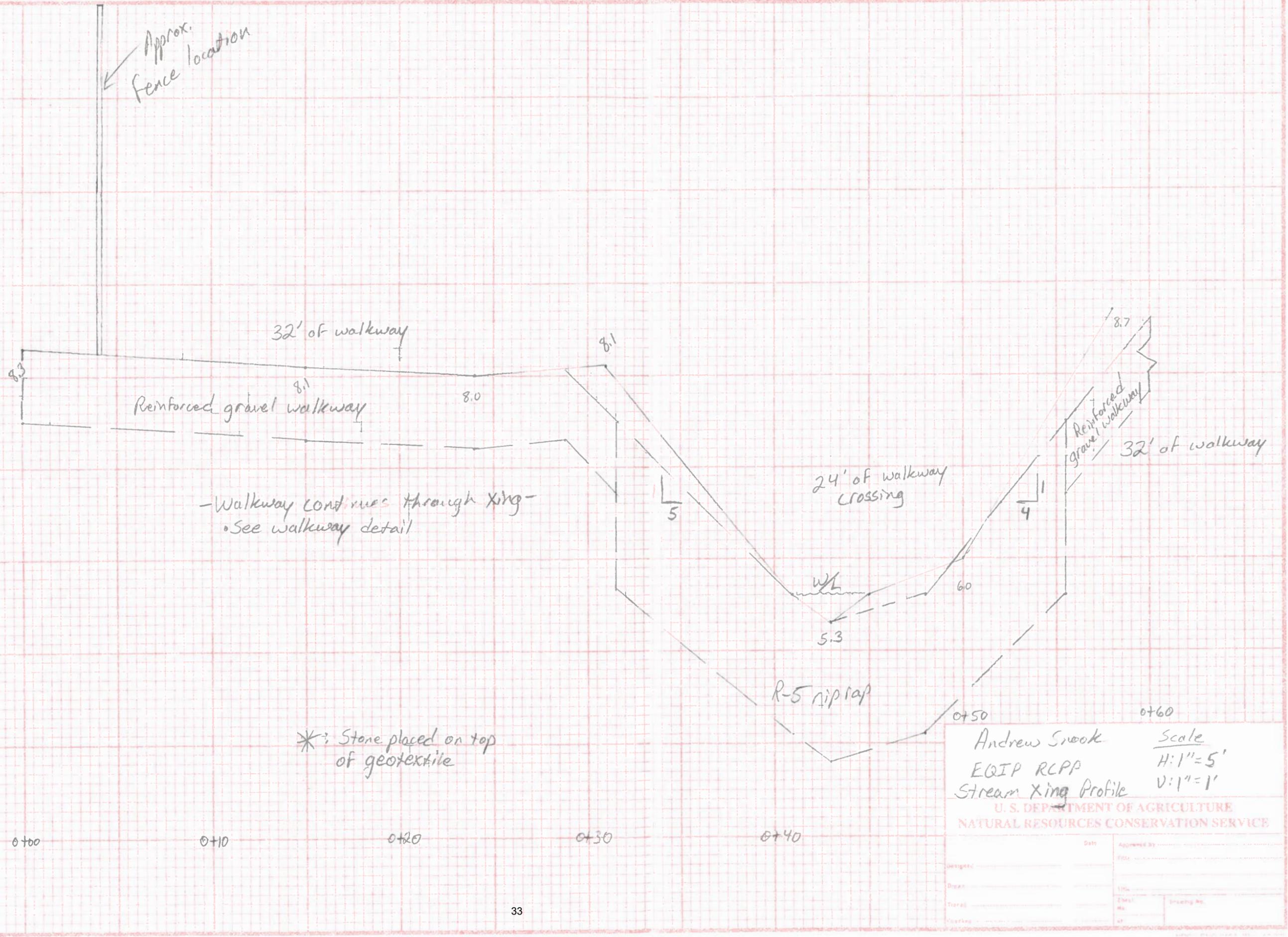
ADAPTED FROM FH D.R.P.
GENERAL PERMIT
807B-C2-6
DRAWING NO. 3

NOT TO SCALE
ALL FENCING TO BE CONSTRUCTED
AS PER SPECIFICATION 302 AND AS
APPROVED BY THE NRCS REPRESENTATIVE
(LARGE STREAMS MAY REQUIRE THE USE OF A
ENERGY LIMITER FOR HIGH WATER)

Andrew Snook
COUNTY, PENNSYLVANIA
Snyder
MODERATE GRADE STREAM CROSSING DETAILS



File No.
PS-002.dwg
Drawing No.
PS-002



Approx. Fence location

32' of walkway

Reinforced gravel walkway

- Walkway continues through King -
• See walkway detail

* Stone placed on top of geotextile

24' of walkway crossing

Reinforced gravel walkway

32' of walkway

R-5 riprap

Andrew Snook
EQIP RCPP
Stream Xing Profile

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Scale
H: 1" = 5'
V: 1" = 1'

Date	Approved by
Designer	Title
Drawn	Title
Checked	Checked by
Checked	Date
Checked	Drawing No.

**Practice Specification
Stream Crossing (Code 578)**

1. SCOPE

The work shall consist of furnishing materials and installing all components of the stream crossing, as outlined in this specification and the drawings.

2. MATERIALS

Unless otherwise set forth in Section 7, the following materials are to be used:

a. ROCK shall be durable and obtained from sources listed in PennDOT Bulletin 14 or as otherwise approved by the designer. Size and gradation, where required, shall be as specified in Section 7 or as shown on the drawings. The nominal size of a rock is that dimension (middle) which passes through a square opening with the same size dimension; i.e. it is not the greatest dimension. The rock shall be free from soil and trash. Rocks shall be angular or subangular in shape. However, the least dimension of any individual rock shall be not less than one-third the greatest dimension.

b. GEOSYNTHETICS shall meet the requirements set forth in Section 7 and/or on the drawings. In addition, geotextiles shall meet the requirements of PennDOT Specifications, Section 735, for the appropriate class defined in Section 212. Certification from the manufacturer shall be provided by the Contractor that the geosynthetics meets these requirements.

c. BIOTEXTILES, BIOMATS and other manufactured, natural materials shall conform to the requirements in Section 7, and be installed according to the manufacturer's recommendations for flowing water applications.

d. AGGREGATE for bedding, drainfill, and concrete shall be durable and obtained from sources listed in PennDOT Bulletin 14. The gradation shall be as set forth in Section 7 or on the drawings.

e. PORTLAND CEMENT shall be Type I, with air-entrainment agent, or Type IA, unless otherwise required in Section 7. All cement shall conform to ASTM-C150.

f. MASONRY shall meet the requirements of ASTM-C90 & C270.

g. PRECAST concrete units shall meet the requirements of ACI-525 & 533, unless otherwise specified in Section 7.

h. LUMBER shall be the dimensions and species specified in Section 7 or shown on the drawings. Pressure treated products shall conform to the requirements of the AWPA Standard C16, except that only non-CCA preservatives, suitable for use in aquatic habitats, can be used.

i. PLANT MATERIALS, including seed, shall be true to the type, name and size required on the drawings or in Section 7. Plants and seeds shall be viable and free from disease, injurious insects, mechanical injury, decay, or other defect that will decrease survivability. All bare rootstock shall have a root:stem ratio of at least 1:1 by volume. Bulbs and tubers shall be firm and rhizomes resilient. Balled and burlapped, multi-stem stock shall be pruned to one-half height prior to planting. Transport and storage of all stock shall be done in a manner that prevents windburn and drying. All local, state, and Federal regulations regarding plant shipments shall be complied with.

3. SITE ACCESS AND CLEARING

Only those areas, shown on the drawings, to be protected or actually required for access shall be cleared. Tree and brush removal shall be done in such a manner to prevent damage to other trees and property, and to minimize erosion. Unless otherwise specified in Section 7, all cleared materials, including trash, shall be burned or removed from the site. Burning shall comply with all state and local applicable regulations.

4. GRADING

Soil surfaces shall be graded to the lines or sections shown on the drawings and/or staked in the field. Surfaces which have been over-excavated shall be brought to the planned grade by replacement with

soils similar to, and at a density equal to, that of the adjacent soils. Unless otherwise set forth in Section 7, fill that is required to be imported to the site shall be similar to, and placed at a density equal to, that of the adjacent soils, except that areas to be vegetated shall receive topsoil approved by the Engineer. Excess soil material shall be disposed of as set forth in Section 7 or shown on the drawings.

Provide for water diversion and erosion control as set forth in plans and permits.

5. STRUCTURAL INSTALLATION

Structures shall be installed as set forth in Section 7, as shown on the drawings, and in such a manner as to minimize erosion and sedimentation.

Rock shall be placed by equipment on the surface and to the depths specified, and in such a manner as to avoid displacement or damage to the underlying materials or adjacent structures. Graded rock shall be delivered and placed in such a manner that will ensure that the in-place material is homogeneous with no one size dominating an area. Some hand placing may be necessary to provide a neat and uniform surface on grade.

Commercially manufactured structures, including but not limited to culverts, gabions, precast slabs, etc., shall be installed as required by the manufacturer for flowing water applications.

6. VEGETATION

Vegetation shall be established at the locations shown on the drawings and/or staked in the field, and as set forth herein, in Section 7, and/or as shown on the drawings. Unless otherwise set forth in Section 7, all woody vegetation shall be planted between October 1 and April 15.

Unless otherwise approved by the Engineer, the application of seed, soil supplements, and mulch shall be done by mechanical methods that ensure uniform coverage.

7. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Snook FARM
STREAM CROSSING & SUPPORTING PRACTICES
Quality Assurance Plan

Landowner/Operator: Andrew Snook Farm
Location: Snyder County, Pa

Critical Items of Work and Timing of Inspection

Work	Inspection Requirements
Pre-Construction meeting	full time
E&S measures installation	daily as needed
Excavation	daily as needed
Frame Stone	full time
Crossing Stone	full time
Riprap	full time
Seed all disturbed areas	once when done

General Items

1. The site will be checked at least once a day during the construction period when the contractor is working, expected to work, or could work. These visits should be unannounced and at random times.
2. Materials should match the specifications or values referenced within the construction package. A substitution should not be made without prior approval by the design engineer. If the contractor expects that a different product will be used, they will need to provide pertinent material information in order to provide adequate comparison.
3. All visits must be documented on SCS-CPA-6 or job diary. It is required that a continuous record of construction assistance be kept from the pre-construction conference to the final inspection. OSHA standards for trenches and other excavation must be followed. If safety violations are observed, notify the contractor and contact the NRCS supervisor or engineer assigned to the job.
4. **If the primary inspector can't meet the inspection responsibilities day to day or otherwise, they should contact the backup inspector and be sure the site is adequately inspected. It is the responsibility of the primary inspector to be sure there is adequate and continuous inspection throughout the project.** If a backup inspector agrees to inspect a project during a period of time when the primary inspector will be absent, it is then the backup's responsibility to find an inspector if they can't inspect the site.

Specific Items Needed:

- 1) Preliminary Information
 - a) Document contractor names and associated work items
 - b) Ensure that a PA-One Call Construction request has been submitted and that all lines are marked prior to beginning excavation
- 2) Erosion and Sedimentation Controls
 - a) Document these practices
- 3) Stream Crossing Placement
 - a) Verify dimensions and grades of Walkway (Approaches)
 - b) Document material types
 - c) Verify subgrade conditions
 - d) Verify rock/stone sizes and installation
- 4) Seeding
 - a) Document materials and locations
- 5) Final Documentation
 - a) Make daily inspection documentation.
 - b) Sufficient information should be taken to document against the original construction drawings.
 - c) Final documentation of the completed project must be shown in red on the construction drawings.
 - d) Take photos and include in the asbuilt plans, as needed, to show installation procedures or materials used.
 - e) Make notes of verifications and/or any changes in red as well.

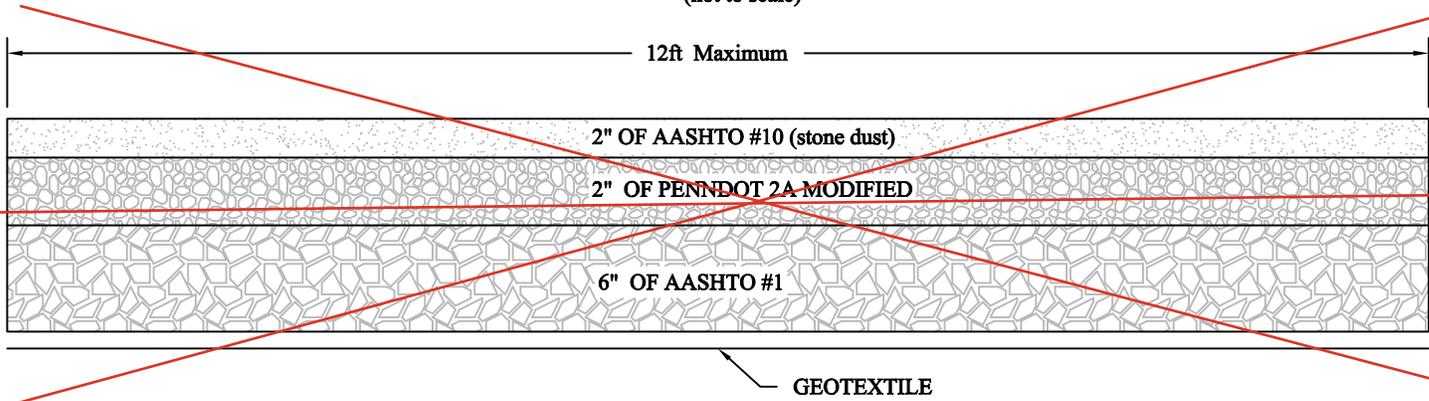
This inspection plan was developed to insure the designer's objectives are met and quality workmanship is performed. This plan sets forth the minimum, but not necessarily all the inspection items and time needed. If additional inspection is needed, the assigned inspector shall inform the supervisor and note it on the SCS-CPA-6.

The inspector concurs in the content of this plan, inspection requirements, and obligations:

Inspector  Date 5/8/25

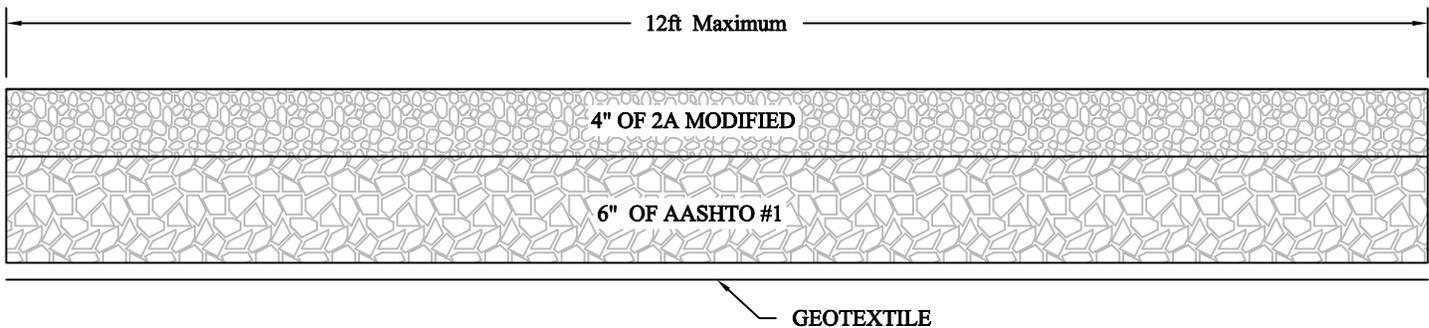
Animal Trail and Walkway Detail Option #1

(not to scale)



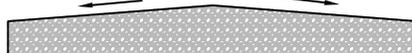
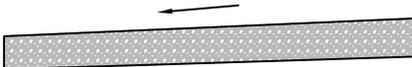
Animal Trail and Walkway Detail Option #2

(not to scale)



Cross-Slope

Crown



Trail cross-slope / crown requirements	
Trail Width	Slope
≤ 6.0 ft	1.0 in/ft
6.1 ft - 11.9 ft	0.75 in/ft
≥ 12 ft	0.5 in/ft

NOTES:

1. TOPSOIL SHALL BE REMOVED PRIOR TO ACCESS ROAD CONSTRUCTION.
2. STONE DEPTH SHALL BE MEASURED AFTER COMPACTION, THE MINIMUM DEPTHS ARE SHOWN.
3. ALL STONE SHALL BE COMPACTED WITH A SMOOTH DRUM VIBRATORY ROLLER.
4. AASHTO #1 CAN BE SUBSTITUTED WITH SHALE IF MATERIAL IS APPROVED BY THE NRCS INSPECTOR PRIOR TO PLACEMENT.
5. 2A MODIFIED CAN BE SUBSTITUTED WITH AN APPROVED EQUAL, AS PER THE NRCS INSPECTOR.
6. INSTALL WALKWAY WITH A CROSS-SLOPE OR CROWN, AS SHOWN, TO ALLOW DRAINAGE OFF OF THE WALKWAY. LOCATIONS SHALL BE STAKED IN THE FIELD BY THE NRCS INSPECTOR.
7. GEOTEXTILE SHALL MEET THE REQUIREMENTS SHOWN BELOW.
 - A. Geotextile shall be WOVEN or NON-WOVEN with a minimum tensile strength of 160 pounds.
 - B. Geotextile installed on slopes greater than 8% shall be NON-WOVEN.
 - C. Geotextile installed where a wet subgrade is an issue shall be WOVEN or NON-WOVEN. The inspector shall have a discussion with the contractor to see which geotextile type the contractor recommends for the wet subgrade issues. The inspector shall then discuss with the design engineer.
 - D. Allow 1' overlap between adjacent panels of geotextile where applicable.



Natural Resources Conservation Service

Andrew Snook
Snyder COUNTY, PA
 38
Walkway Detailed Drawing

Designed _____ Date _____
 Drawn _____
 Checked _____
 Approved _____

File Name _____
 Drawing Name _____
 Sheet ___ of ___

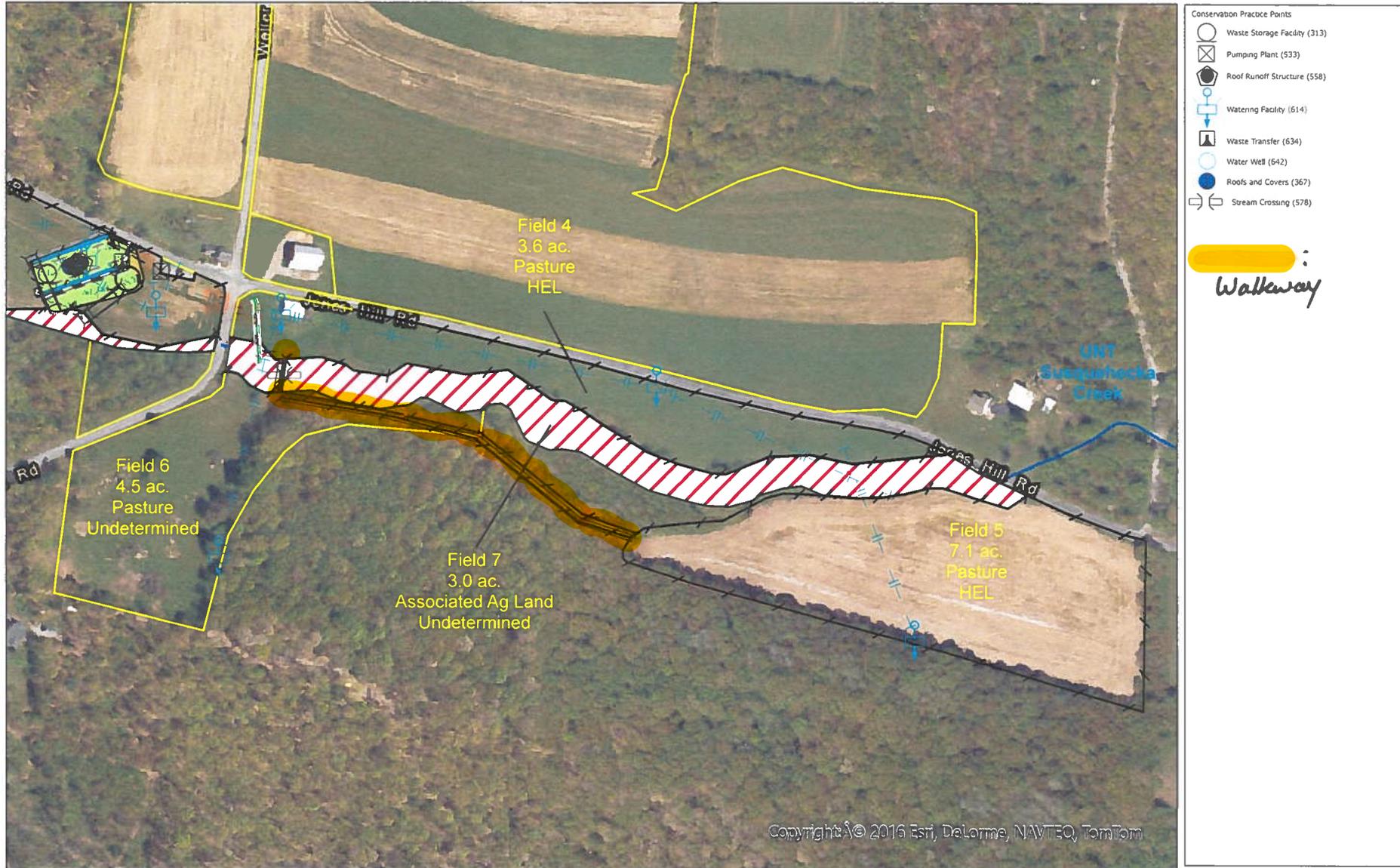
RCCP Conservation Plan Map

Date: 7/17/2024

Client(s): ANDREW R SNOOK
Location: Farm: 3010 Tract: 11157
Snyder County, Pennsylvania

Assisted By: BRANDON FORD
USDA-NRCS
MIDDLEBURG SERVICE CENTER
SNYDER COUNTY CONSERVATION DISTRICT

528 Prescribed Grazing to be Applied to all Pasture (1, & 4-6) Fields, 18.9 acres.



Prepared with assistance from USDA-Natural Resources Conservation Service



Natural Resources Conservation Service Practice Specification Trails and Walkways (Code 575)

1. SCOPE

The work shall consist of furnishing materials and installing all components of the trails and walkways as outlined in this specification and the drawings.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the plans, set forth in Section 8, or as otherwise listed below:

WEARING SURFACE, BINDER COURSE, and BASE COARSE aggregate shall meet the requirements and gradation specified in Section 8 or on the drawings.

GEOTEXTILE shall meet the requirements as outlined in NRCS Design Note 24 and NRCS Material Specification 592.

PIPE shall meet the requirements specified in Section 8 or on the drawings.

PRESSURE TREATED WOOD PRODUCTS shall be Douglas Fir, Southern Yellow Pine, or as otherwise specified on the drawings or in Section 8. They shall be treated with preservatives in accordance with the American Wood Preservers Association (AWPA) Standard C16, "Wood Used on Farms, Pressure Treatment." Each piece shall bear the AWPA stamp of quality. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the pressure treated wood meets the designated quality criteria.

FASTENERS for wood structures shall be stainless steel, galvanized, or otherwise protected from corrosion due to contact with moisture and soil.

3. FOUNDATION PREPARATION

All trees, brush, fences, manure, and rubbish shall be cleared within the trail or walkway area, including any associated drainage control features and borrow areas. All stumps and roots larger than two-inch diameter shall be removed down to the subgrade elevation. All material removed by clearing operations shall be disposed of as directed by the Owner or his/her Representative.

Topsoil shall be stripped and stockpiled in a convenient location for use on disturbed areas to facilitate seeding.

Soil shall be excavated and if suitable can be used as fill as shown on the drawings to establish a uniform, stable subgrade. Wet soil, mud, and topsoil shall not be used as fill. The fill material shall be compacted as specified in Section 8 or on the drawings.

Borrow material shall be taken from the designated borrow area as needed after excavation of the trail or walkway is complete. The borrow area shall be final graded to drain freely and blend into the surrounding undisturbed area.

Excess excavated material shall be disposed of in the designated spoil area, which shall be graded to blend into the surrounding undisturbed area. Geotextile or base course material shall be installed on undisturbed soil or non-yielding compacted material. Over-excavation must be corrected as noted on the drawings, or as directed by the Engineer or his/her designated Representative.

4. DRAINAGE STRUCTURES

Culverts, subsurface drains, and swales shall be installed as shown on the drawings. Surface and subsurface drainage structures shall be adequately removing water from the foundation to allow for proper placement of base and surface materials.

5. GEOTEXTILE

Where specified in Section 8 or on the drawings, geotextile shall be installed on the prepared subgrade. The geotextile shall be placed, overlapped and anchored as recommended by the manufacturer, unless otherwise specified in Section 8 or on the drawings.

Vehicles and heavy equipment shall not be operated directly on top of the geotextile. Base course or surface material shall be placed on the geotextile ahead of the construction equipment.

6. E&S CONTROL

E&S control measures shall be as set forth in the E&S Plan, and as otherwise detailed in the drawings.

Vegetation shall be established as set forth in Construction Specification PA 342, and/or as set forth in Section 8 and the drawings.

7. SURFACING

Where specified in Section 8 or on the drawings, the base and binder course shall be placed on the trail or walkway to the specified grades and thickness. The material shall be wetted and compacted by rollers or other construction equipment approved by the Engineer.

Surface material shall be placed to the grades and thicknesses set forth in Section 8 or on the drawings. The material shall be compacted by rollers or other construction equipment approved by the Engineer. The finished surface shall be smooth and free of projecting stones.

Vegetation shall be established in accordance with Construction Specification PA342.

The surface material within 3' of surface water control devices and other structures (pipes, drop inlets, etc.) shall be compacted using manually directed tamping equipment.

8. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Andrew Snook
Rock Lined Waterway

Snyder County, PA.
May 2025



CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL



POCS SERIAL NUMBER
20251283439

Prepared by Shanahia Date 5/13/25

Approved by Robert G. Doherty III Date 5-14-25

Stone Centered Waterway

Andrew Snook
Snyder County
May 2025

Narrative

This system is being installed through EQIP. Due to a gully in the pasture from the road culvert, a stone centered waterway is needed to convey the surface runoff to the stream. A layout with the proposed practice was discussed with Andrew. The design was completed by the NRCS Field Office in Middleburg, PA.

The waterway will run parallel to Weller Hill Rd., from the culvert to the stream. The waterway will be constructed where shown on the plan view map attached as part of this package.

Installation

The contractor shall notify the NRCS representative at least 24 hours prior to start of construction. Failure to do so may result in NRCS being unable to check construction and certify that the installation meets NRCS standards, which is needed to receive cost share payment.

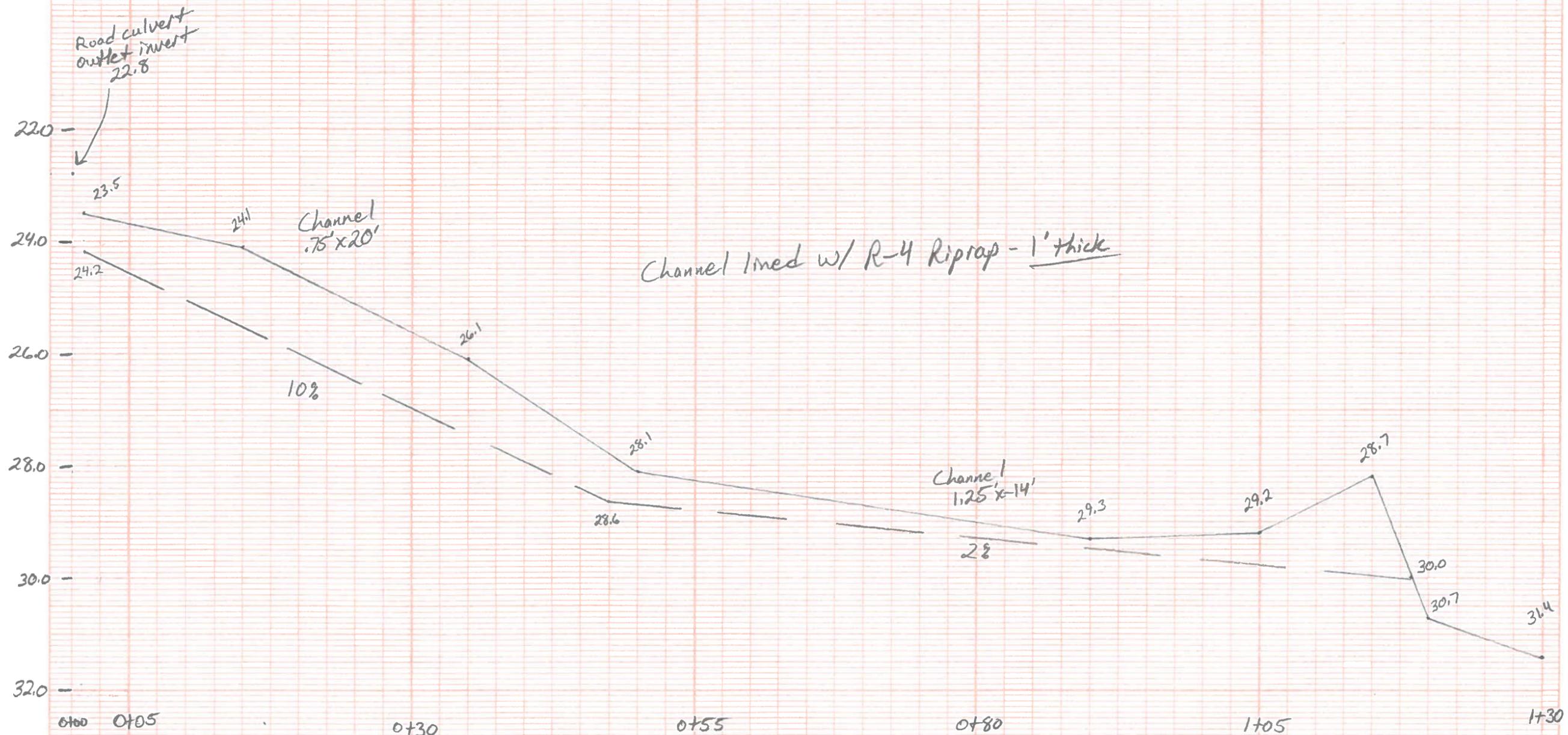
The scope of this project includes the necessary materials and complete installation of the waterway and outlet. All work shall be done as shown in the drawings and according to the following Pennsylvania Technical Guide Specifications, which are enclosed.

468 Lined Outlet

Operation and Maintenance Plan

1. Establish a maintenance program to maintain waterway capacity, rock cover, and outlet stability. Any rock movement should be repaired promptly.
2. Inspect the waterway and outlet regularly, especially following heavy rains. Fill, compact, and reseed damaged areas immediately. Remove sediment deposits to maintain capacity of the waterway.





REFERENCE
 Andrew Snook
 Rock Lined Waterway
 EQIP

U S DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 ASSISTING
 SOIL CONSERVATION DISTRICT

Scale
 H: 1" = 10'
 V: 1" = 2'

DRAWING NUMBER
 SHEET _____ OF _____ SHEETS
 DATE _____

Fence line

26.0

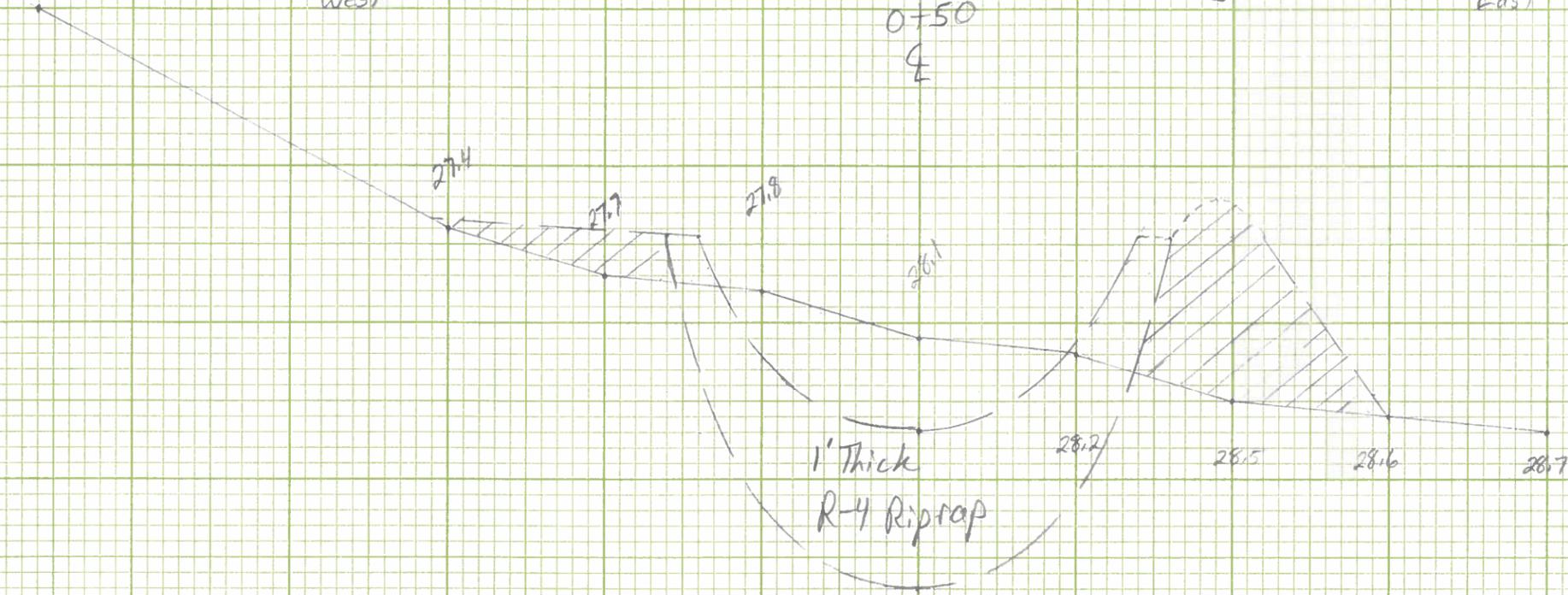
West

0+50
E

2% Channel Grade
T: 14'
D: 1.25'

East

10% Channel section
T: 20'
D: .75'



Andrew Snook
Rock Lined Waterway
EQIP

Scale
H: 1" = 5'
V: 1" = 1'

**NATURAL RESOURCES CONSERVATION SERVICE
PRACTICE SPECIFICATION
LINED WATERWAY OR CONVEYANCE CHANNEL
(Code 468)**

1. SCOPE

The work shall consist of furnishing materials and installing all components of the lined waterway or conveyance channel, as outlined in this specification and the drawings.

Construction work covered by this specification shall not be performed between December 1 and the following March 15, unless the site conditions and/or construction methods to be used have been reviewed and approved by the Engineer.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the drawings, set forth in Section 6, or as otherwise listed below:

a. ROCK shall be durable and obtained from sources listed in Penn DOT Bulletin 14 or as otherwise approved by the designer. Gradation shall be as specified in Section 6 or on the drawings. The nominal size of a rock is that dimension (middle) which passes through a square opening with the same dimension; i.e., it is not the greatest dimension. The rock shall be free from soil and trash. Rocks shall be angular or sub- angular in shape. However, the least dimension of any individual rock shall be greater than one-third the greatest dimension. Unless specified in Section 6, a gradation quality control check shall be made of the in-place riprap by the Contractor. Any dispute on the acceptability of the gradation shall be resolved by physically testing the riprap in question. The Contractor is to provide the equipment and labor necessary to perform the testing at no additional cost.

b. EARTH FILL material used in constructing the waterway shall be obtained from the waterway area or other approved sources. Fill shall contain no frozen material, rocks greater than 6 inches in diameter, roots or wood greater than 2 inches in diameter or 4 inches in length, sod, brush, or other objectionable material.

c. DRAINFILL AGGREGATE shall meet the requirements of Penn DOT Specifications, Section 703.2, Type A, Coarse Aggregate. The size and gradation shall be as specified in Section 6 or on the drawings.

d. CONCRETE, masonry, or pre-cast concrete shall be made in conformance with the requirements of Penn DOT Specifications, Sections 704, 713, and 714, as appropriate.

e. GEOTEXTILE shall meet the requirements as outlined in NRCS Design Note 24 and NRCS Material Specification 592 or as otherwise stated in the design and specifications. Certification from the manufacturer shall be provided by the Contractor that the geotextile meets these requirements.

f. SYNTHETIC TURF REINFORCEMENT FABRICS shall meet the requirements of Penn DOT Specifications, Section 806.2(b) and (c), unless otherwise set forth in Section 6.

g. GRID PAVERS shall meet the requirements of Penn DOT Specifications, Section 857.

3. SITE PREPARATION

The foundation area shall be cleared of trees, stumps, roots, sod, loose rock, and other material. The waterway cross section shall be excavated to the neat lines and grades as shown on the drawings. The sub-grade surface on which the lining is to be installed shall be excavated or filled as needed. Fill shall be compacted to approximately the same density as the adjacent undisturbed material. No abrupt deviations from the design grade or horizontal alignment shall be permitted.

All material removed by the clearing and grubbing operation shall be disposed of as directed by the Owner or his/her Representative, or as set forth in Section 6.

Areas adjacent to the waterway shall be graded to allow water to drain directly into the waterway.

4. FILTER OR BEDDING

Where a geotextile fabric is required under the lining, it shall be unrolled in a direction parallel to the waterway in a loose manner permitting it to conform to the surface, without damage, when the lining is placed. The fabric shall be secured and overlapped as per the manufacturer's recommendations for waterway applications. Fabric ends shall be trenched, as necessary, to ensure that drainage from adjacent areas does not get under the fabric. Placement of fabric on mud, un-compacted fill or frozen material will not be permitted.

Prior to the placement of the lining material, the fabric shall be inspected and approved by the designated inspector. Notification shall be given far enough in advance to provide time to schedule the inspection. Any fabric which is damaged during placement of the lining material shall be replaced.

Aggregate bedding shall be placed to the thickness shown on the drawings, or as set forth in Section 6. Compaction of the bedding material is not required; however, the surface of the material shall be reasonably smooth and free of mounds or windrows.

5. LINING PLACEMENT

Rock linings shall be placed by equipment to the thickness specified. The rock shall be installed to the full thickness in one operation, and in such a manner as to avoid serious displacement or damage to the underlying materials or adjacent structures. In no case shall rock be dropped from a height greater than 3 feet.

The rock shall be delivered and placed in such a manner that will ensure that the in-place lining is homogeneous with no one size dominating an area. Some hand placing may be necessary to provide a neat and uniform surface on grade. Rock shall be placed so as not to obstruct or divert drainage from areas adjacent to the waterway sides.

Concrete linings shall be placed to the thickness shown on the drawings. The surface shall be smooth and even with concrete paste worked to the surface to fill all voids.

Careful screeding (striking-off) and/or wood float finishing shall be required, unless otherwise shown on the drawings, or as set forth in Section 6. Adequate precautions shall be taken to protect freshly placed concrete from freezing or extremely high temperatures, to insure proper curing.

Other pavement or linings, such as synthetic turf reinforcement fabrics, grid pavers, etc., shall be installed in accordance with Penn DOT Specifications, Sections 806 and 857, as appropriate, and/or as otherwise set forth in Section 6.

6. ADDITIONAL CONDITIONS WHICH APPLY TO THE PROJECT ARE:

Agriculture Construction Safety

Compliance with safety regulations on agricultural projects is required by OSHA and by all construction insurance/ liability companies. The contractor is to maintain a safe working environment for themselves, their employees, subcontractors, and others who must have access to the site. Detailed knowledge and implementation of safety regulations is their responsibility. Those with more than ten employees must have written safety procedures and document implementation.

Imminent danger situations (hazards that could cause death or serious physical harm) require immediate action, including work stoppage. When NRCS and/or partner personnel observe or become aware of an imminent danger on the work site they will alert the contractor and landowner. They will also advise the landowner that funding and/or technical assistance will be withdrawn if the situation is not corrected. Work may continue after the imminent danger is resolved.

Effective January 1, 2015, all employers must report work-related fatalities, hospitalizations, amputations, and losses of an eye. They can contact the 24-hour OSHA hotline at 1-800-321-OSHA (6742) or their regional OSHA office. See OSHA standards 29 CFR 1904.39 for more information.

Soil Cave-In Protection

- Applies to all excavation over five feet in depth.
- OSHA has regulations set forth in Standards 29 CFR 1926 -Subpart P.
- Options include: sloping, shoring, or working from a safe distance.
- See “Fact Sheet” – SOIL CAVE IN – A FATAL SLIP for general information.

Fall Protection

- This applies to all areas where an individual could fall six feet or more.
- OSHA regulations in 29 CFR Parts 1910 for General Industry and 1926 for the Construction Industry apply to agricultural construction.
- OSHA 29 CFR 1926 subpart L deals with scaffolds and 29 CFR 1926 Subpart M deals with overall fall protection, including but not limited to cast-in-place concrete work, leading edge work, pre-cast concrete erection, tying reinforcement steel, truss installation, and roof construction.
- Options include: warning line system, safety monitors, mechanical equipment, controlled access area, covers, safety nets, scaffolding, guardrail system, and personal fall arrest.
- Selected method(s) shall be implemented at the start of construction.

Underground and Overhead Utility Protection

- Contractor is required to do their own utility check via PA-ONE Call system (811).
- Landowner and/or contractor shall contact any overhead utilities and prepare a procedure to avoid contact and/or schedule work with utility oversight.
- Landowner is to mark and locate any known private buried utilities within the work area.

NOTE: Critical safety measures may be highlighted in the Project Drawings and Specifications.



E & S PLAN

1. *It is the responsibility of the contractor to comply with the provisions of PA Code Title 25, Chapter 102 before performing any construction.*
2. *All construction permits are the responsibility of the landowner and their contractor.*
3. *Install straw bale barrier or silt fence on the contour at base of slope below the construction area, prior to construction.*
4. *Divert surface water from upslope of the construction site by installing a temporary diversion.*
5. *Minimize the disturbed area.*
6. *Upon completion of construction, all disturbed areas must be seeded and mulched according to NRCS construction specification PA-342 available at the local NRCS Field Office or online at <https://efotg.sc.egov.usda.gov/>. Or the PSU agronomy guide seeding recommendations shall be followed.*
7. *In addition to the requirements set forth in the PA-342 specification, all state and local regulations shall be followed for seeding. Contact the local Conservation District for more information about the requirements.*
8. *Regrade and establish permanent seeding on all disturbed areas as soon as practical after completion of the job.*

ATTACHMENT B RFP Scoring Sheet

Landowner/Job Name:
BMP #:
Project Location:
RFP Due Date:

Evaluation Criteria / Points	%	Bidder Name		Bidder Name		Bidder Name		Bidder Name	
		Score (1-10)	Result						
Adherence to RFP Instructions 1 (some documents filled out completely) - 10 (all documents filled out completely)	10		0		0		0		0
Bid Price 1 (highest price) - 10 (lowest price)	25		0		0		0		0
Safety Record 1 (did not provide record) - 10 (no reportables/good record)	10		0		0		0		0
Confidence in Quality of Work <i>(Conservancy may also check with other partners for feedback)</i> 1 (no references provided and unknown) - 10 (references provided and has done great work)	25		0		0		0		0
Small, Small Diverse Business 1 (no information provided) - 10 (federal and state small and small diverse business)	10		0		0		0		0
Construction Schedule Adherence 1 (no dates or schedule provided) - 10 (schedule completed within preferred timeframe)	20		0		0		0		0
Total -- All Evaluation Points	100		0		0		0		0