**PETER FRANCISCO**
**SOIL AND WATER CONSERVATION DISTRICT**
**16842 West James Anderson Hwy**
**Buckingham, Virginia 23921**
**Phone (434) 983-7923**
***Serving Buckingham and Cumberland Counties***

January 18, 2024

RE: Bid Information for Contract to Install Remote Monitoring Stations and Replacement/Install Emergency Staff Gauges

Prospective Contractors:

Thank you for your interest in the Remote Monitoring Stations and Emergency Staff Gauge Installation Contract bid information as presented by the Peter Francisco Soil and Water Conservation District (PFSWCD). This letter and attached documents will summarize the project expectations.
*Prospective contractors are required to have liability insurance that covers up to $1,000,000 with proof of workman's compensation in order to be considered.*
*Proof of insurance coverage MUST be supplied at time of bid submission.*

Contract summary:
Installation of remote monitoring equipment on 13 watershed dams. Removal of existing wooden staff gauges and replacement per specifications noted within contract on 17 watershed dams. PFSWCD will provide remote monitoring data logger, sensor cable (30-meter roll per station on hand) and water level sensor; contractor will provide other materials needed to complete the install. Note: location of remote monitoring station may require contractor to order additional sensor cable. Reference attached bid packet for details on materials required. Payment will be made after job has been completed and reviewed by District Directors and/or staff and contractor has submitted an invoice. Proof of insurance coverage MUST be included along with bid information.

Bids are due to the PFSWCD office by Friday, February 16, 2024 4:30 p.m. A locked drop box is available to the left of the USDA Service Center front door for outside business hours deliveries. Contractors awarded the bid will be notified after Wednesday, February 21, 2024. After being contacted by the District, the chosen contractor(s) and District Directors/Staff will review the contract(s). The completion deadline for the remote monitoring and staff gauge installation is June 21, 2024.

For questions, call the office at (434) 983-7923 or email at kelly.snoddy@vaswcd.org.

Thank you,

Kelly J. Snoddy

Kelly Jones Snoddy
Sr. Conservation Specialist

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## 2024 Watershed Dam Contract Agreement
## Installation of Remote Monitoring Stations & Replacement/Installation of Emergency Staff Gauges

_____ will complete installation of Remote Monitoring Stations on 13 watershed dams and the removal/replacement/installation of emergency staff gauges on 17 watershed dams for the total sum of _____.

Remote Monitoring Stations installation process (13 dams):

- Remote Monitoring Data Logger Installed on a galvanized metal pole on the upstream slope near crest of the dam; at an elevation above the dam crest
- Valve box (or equivalent housing) installed in the wave berm/upstream slope near edge of normal pool
- Water Level Sensor installed in the Valve Box
- Buried conduit and sensor cable connecting the Remote Monitoring Data Logger to the Valve Box and water level sensor. Conduit will be buried approximately 18" in the upstream slope
- PVC pipe to connect the Valve Box with the Normal Pool
- Attach sign "property of PFSWCD" to the pole (provided by PFSWCD)
- Seed and blanket matting over the disturbed dirt/trench from remote monitoring data logger to the edge of water
- Any damaged areas as a result of this work shall be repaired to existing condition prior to completion of project
- Provided by PFSWCD: Remote monitoring data logger, water level sensor, sensor cable. All other materials necessary to complete the job provided by the contractor. Note: location of remote monitoring station may require contractor to order additional sensor cable.

Muddy Creek Dam 1 – Nuckols
Muddy Creek Dam 2 – Banton
Willis River Dam 1A – Big Chesapeake
Willis River Dam 1B – Little Chesapeake
Willis River Dam 2 – Booker
Willis River Dam 3 – Tipton
Willis River Dam 4 – Seaman
Willis River Dam 5E – Hardiman
Willis River Dam 5F – Kyanite
Willis River Dam 6 - John
Willis River Dam 6A – Elcan
Willis River Dam 7 – Ownby
Willis River Dam 9 - Spencer

Emergency Staff Gauge installation process (17 dams):

- Remove and dispose of existing wooden staff gauge post
- Install galvanized metal pole in same or nearby location
- Attach numbered reflective metal sign with bottom of sign being level with elevation of crest of the emergency spillway (sign provided by PFSWCD)
- Attach sign "property of PFSWCD" to the pole (sign provided by PFSWCD)

Muddy Creek Dam 1 – Nuckols
Muddy Creek Dam 2 – Banton
Slate River Dam 7 – State
Slate River Dam 8 – Coffey
Slate River Dam 13 – Slate Chesapeake
Slate River Dam 14 – Ripley Creek
Willis River Dam 1A – Big Chesapeake
Willis River Dam 1B – Little Chesapeake
Willis River Dam 2 – Booker
Willis River Dam 3 – Tipton
Willis River Dam 4 – Seaman
Willis River Dam 5E – Hardiman
Willis River Dam 5F – Kyanite
Willis River Dam 6 - John
Willis River Dam 6A – Elcan
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Willis River Dam 9 - Spencer

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The above mentioned work will be completed by June 21, 2024. Directors and Staff from the Peter Francisco SWCD will supervise the above project.

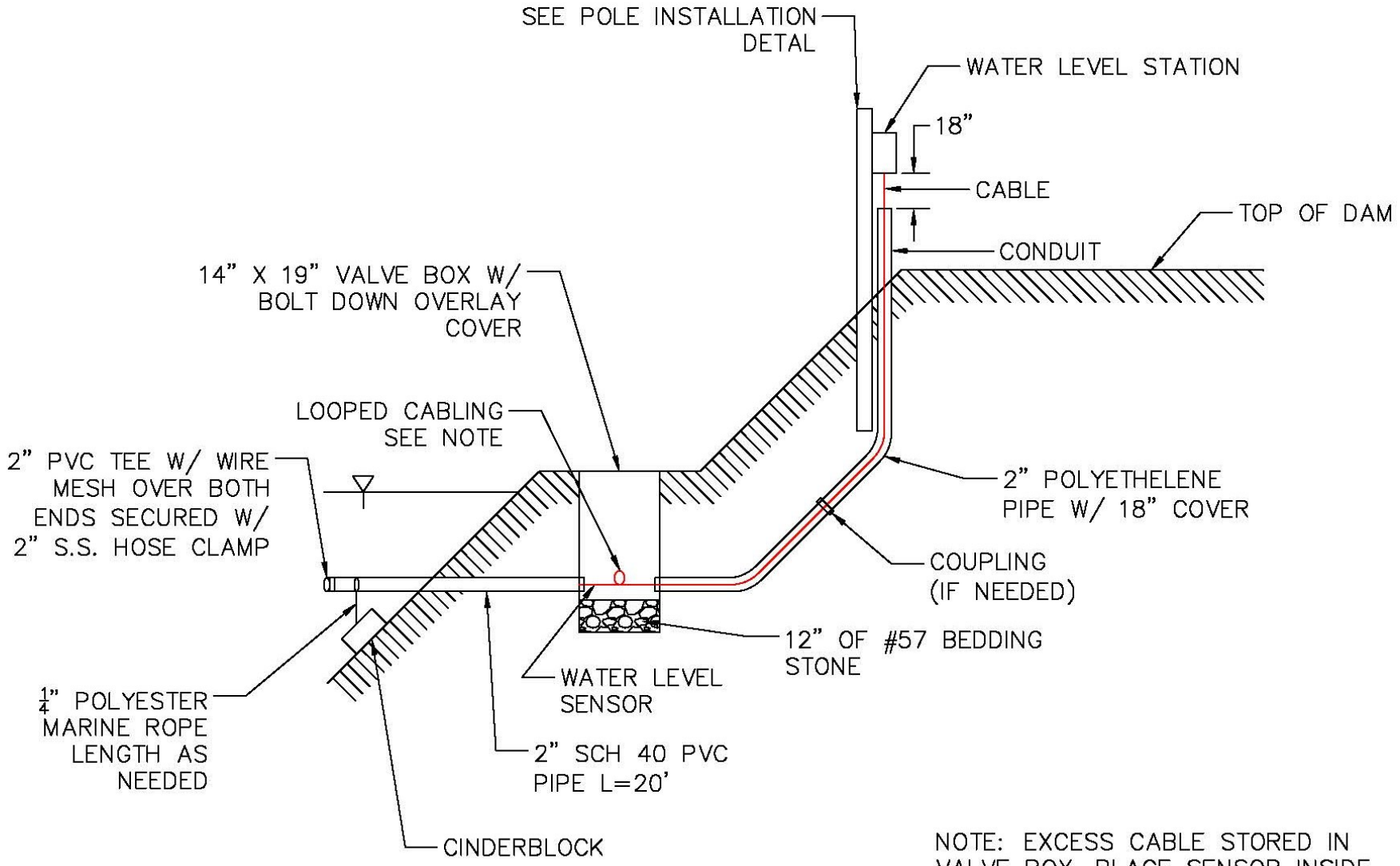
A copy of your general liability insurance of $1,000,000.00 with proof of workman's compensation that complies with Virginia statutory requirements and states our agency on the certificate as an additional insured must be presented to the Peter Francisco SWCD office prior to beginning work.

I (We) _____ will concur and understand the above contract and agree to the terms stated within.

_____ _____
Contractor Date

_____ _____
PFSWCD Representative Date

02-20-2020

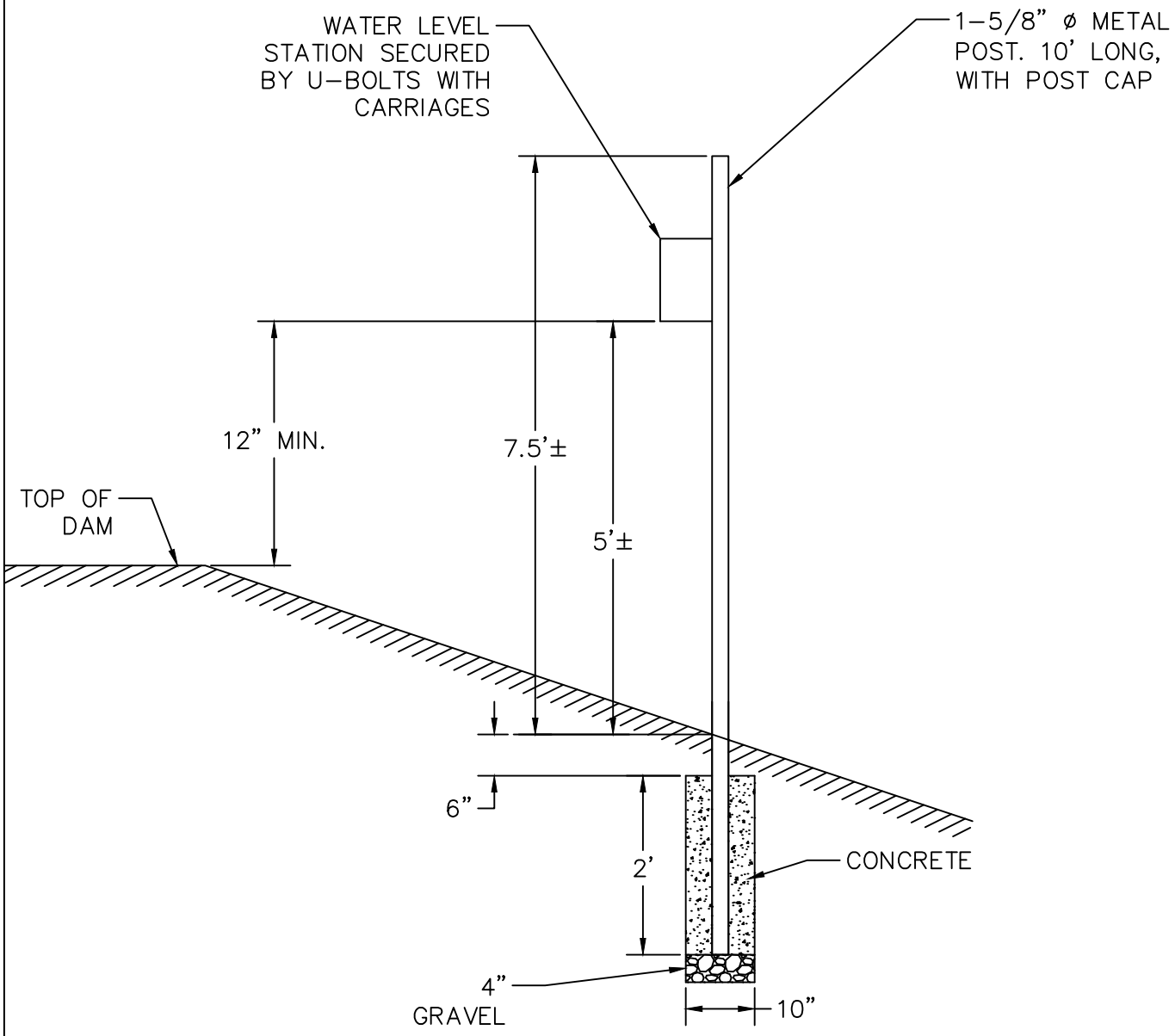



NOTE: EXCESS CABLE STORED IN VALVE BOX. PLACE SENSOR INSIDE SCH 40 PIPE

VIRGINIA DEPARTMENT
OF CONSERVATION & RECREATION
DIVISION OF SOIL AND WATER CONSERVATION
600 EAST MAIN STREET, 4TH FLOOR
RICHMOND, VIRGINIA 23219

# TYPICAL INSTALLATION DETAILS

DCR
Virginia Department of Conservation & Recreation




VIRGINIA DEPARTMENT
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600 EAST MAIN STREET, 4TH FLOOR
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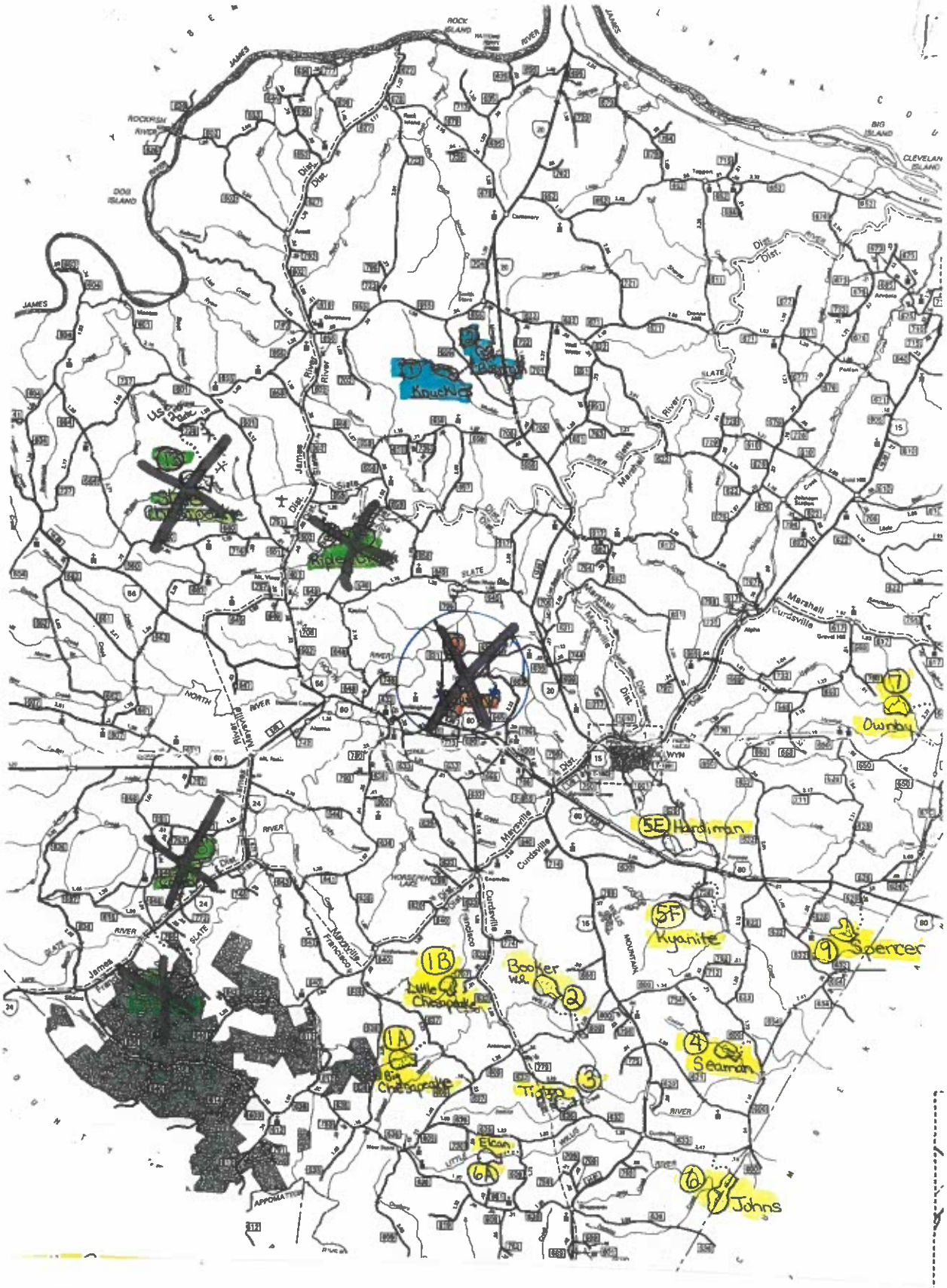
# POLE INSTALLATION DETAIL

DCR
Virginia Department of Conservation & Recreation

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Willis River Dam 7 – Ownby
Willis River Dam 9 - Spencer

# Construction Specification
# VA-705 Pollution Control

## 1. SCOPE

This work consists of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction.

## 2. MATERIALS

All material furnished will meet the requirements listed in the construction drawings and referenced specifications.

## 3. EROSION AND SEDIMENT CONTROL MEASURES

All erosion and sediment control measures will be installed in accordance with all applicable federal, state, and local laws, ordinances, and regulations.

a. Earthwork Activities

The excavation and moving of soil materials will be scheduled and staged to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time.

b. Seeding

Seeding of disturbed areas will occur as soon as reasonably possible following the completion of earthwork activities. All seeding, mulching, fertilizer, and associated work will conform to Construction Specification VA-706, Seeding.

c. Diversions

Diversions to divert water away from work areas will be installed as necessary to prevent erosion. Temporary diversions will be removed, and the area restored to its original condition upon project completion.

d. Sediment Filters

Straw bale filters or silt fence will be used as necessary to prevent sediment from leaving the construction site. Sediment filters will be properly anchored to prevent erosion under or around them. These filters are temporary and will be removed and the area restored to its original condition upon project completion.

e. Sediment Basins

Temporary sediment basins will be used as necessary to collect, settle, and eliminate sediment from eroding areas as well as to prevent impact to properties and streams below the construction site. These basins are temporary and will be removed and the area restored to its original condition upon project completion.

f. Other Measures

Additional protections measures will be used as necessary or as required by federal, state, or local laws, ordinances, and regulations to prevent erosion.

## 4. CHEMICAL POLLUTION

Measures will be taken to contain chemical pollutants, such as fuels, grease, and soaps, produced as a by-product of construction activities. Pollutants will be disposed of in accordance with all appropriate federal, state, or local laws, ordinances and regulations.

## 5. AIR POLLUTION

The burning of brush, wood debris or other construction related material will be in accordance with all applicable federal, state, or local laws, ordinances, and regulations. Fire prevention measures will be taken to prevent the start or spreading of wildfires that may result from construction activities.

## 6. MAINTENANCE, REMOVAL, AND RESTORATION

All pollution control measures will be adequately maintained in a functional condition for the duration of the construction period. All temporary measures will be removed, and the site restored to original condition upon project completion.

## 7. Specific Site Requirements

Reset

# Construction Specification
# VA-706 Seeding

## 1. SCOPE

The work consists of seeding, mulching, liming, and fertilizing all disturbed areas and other areas shown on the construction drawings or otherwise designated.

## 2. GENERAL

Liming, fertilizing, seeding, and mulching will be performed within 10 days from disturbance unless the seedbed cannot be properly prepared due to wetness, snow or frozen soil or as otherwise directed by the NRCS representative.

## 3. FERTILIZER AND LIME

Lime will be standard agricultural ground limestone. Fertilizer will meet the requirements of the applicable Virginia state laws and will be in such physical condition to ensure uniform application over the area to be fertilized. Rates of application will be as specified on the construction drawings or as shown on the attachment to this specification.

## 4. SEED

The seed will conform to the latest seed laws of the United States and of Virginia. Species, the source of production if native grasses are used, and rate of seeding will be as specified on the construction drawings or as shown on the attachment to this specification.

## 5. PREPARATION OF SEEDBED

The entire area to be seeded will be reasonably smooth and all washes and gullies will be filled to conform to the desired cross-section before actual seedbed preparation is begun. Scarify subsoil areas perpendicular to water flow before they are filled. After final grading, the required fertilizer (except that applied with a hydraulic seeder) and/or lime will be applied uniformly and incorporated into the top 3 inches of the soil. The seedbed preparation operation will be suspended when the soil is too wet or too dry.

On side slopes steeper than 3:1, the 3-inch minimum depth of seedbed preparation is not required, but the soil will be worked enough to ensure sufficient loose soil to provide adequate seed cover.

## 6. SOWING THE SEED

Seed immediately after preparation of the seedbed. Uniform seed distribution will be accomplished by drilling, broadcasting, or hydraulic seeding. If a hydraulic seeder is used, the seed, fertilizer and mulch may be applied together with water.

## 7. MULCHING

The required mulching will be performed with hydraulic seeding or immediately after seeding. The mulch will be applied uniformly over the area. The type and rate will be as specified on the construction drawings or as shown on the attachment to this specification.

The mulch, except for hydraulically placed mulch, will be anchored. Anchoring of the mulch will be performed by application of a commercially available tackifier at the rate recommended by the manufacturer; by a mulch anchoring tool, a tandem disk weighted and set nearly straight, or a track type tractor; or by installation of mulch netting. Mechanical anchoring will be performed in a manner that creates ridges perpendicular to flow of water. Where netting is used in flow areas, the upstream end of each section will be buried in a trench to a minimum depth of 6 inches and a maximum of 50 ft. intervals thereafter.

**ATTACHMENT TO CONSTRUCTION SPECIFICATION VA-706**

The estimated area to be seeded = _____(acres) (1000 square feet)

1. LIME

   The following minimum amount of lime will be applied:

   _____ pounds per (acre) (1000 square feet)

   _____ (pounds) (tons) total

2. FERTILIZER

   Without soil tests, apply a minimum of _____ pounds per acre or _____ pounds per 1000 square feet of a commercial fertilizer having an analysis of _____ or equivalent.

   With a soil test, apply the Virginia Polytechnic Institute and State University recommended rate of fertilizer for establishment of the seeding specified.

   _____ pounds of _____ fertilizer total

   or

   _____ pounds of _____ fertilizer total

3. SEED

   The following types/species and rates of seed will be sown:

   Nurse Crop:

| Types/Species of Seed | Pounds Per (acre) (1000 sq. ft.) | Total Seed (Pounds) |
|---|---|---|

   Primary Seed:

| Types/Species of Seed | Pounds Per (acre) (1000 sq. ft.) | Total Seed (Pounds) |
|---|---|---|

4. MULCH

   Straw mulch will be uniformly spread over the seeded area at the rate of 1.5 to 2 tons per acre or 2 to 3 bales per 1000 square feet.

   _____ (tons) (bales) total mulch

   _____ (square yards) (linear feet) total of netting (linear feet based on ____ wide roll)

## 9. Specific Site Requirements

Reset

# Construction Specification
# VA-745 Plastic Pipe

## 1. SCOPE

The work consists of furnishing and installing plastic pipe and the necessary fittings specified herein or as shown on the construction drawings.

## 2. MATERIALS

| | |
|---|---|
| **Poly Vinyl Chloride (PVC) Pipe** | |
| PVC Plastic Pipe - Schedules 40, 80, 120 | ASTM D1785 |
| PVC Plastic Pipe Fittings, Schedule 40 | ASTM D2466 |
| PVC Pressure Rated Pipe - SDR Series 4-inch through 12-inch Diameter | AWWA C900<br>ASTM D2241 |
| PVC Pressure Rated Pipe - SDR Series 14-inch through 48-inch Diameter | AWWA C905 |
| PVC Plastic Drain, Waste, and Vent Pipe and Fittings | ASTM D2665 |
| Joints for IPS PVC Pipe Using Solvent Weld Cement | ASTM D2672 |
| ABS and PVC Composite Sewer Pipe | ASTM D2680 |
| Type PSM PVC Sewer Pipe and Fittings | ASTM D3034 |
| PVC Large-Diameter Gravity Sewer Pipe and Fittings | ASTM F679 |
| PVC Smooth-Wall Underdrain Systems for Highway, Airport, and Similar Drainage | ASTM F758 |
| PVC Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter | ASTM F794 |
| PVC Corrugated Sewer Pipe with a Smooth Interior and Fittings | ASTM F949 |
| **Polyethylene (PE) and High Density Polyethylene (HDPE) Plastic Pipe** | |
| 12 to 60-inch Annular Corrugated Profile-Wall PE Pipe and Fittings | ASTM F2306 |
| 2 to 60-inch Annular Corrugated Profile Wall Polyethylene (PE) Pipe And Fittings for Land Drainage Applications | ASTM F2648 |
| PE (SIDR-PR) Based on Controlled Inside Diameter | ASTM D2239 |
| PE (DR-PR) Based on Controlled Outside Diameter | ASTM D3035 |
| 3 to 6-inch Corrugated PE Pipe and Fittings | ASTM F405 |
| 3 to 24-inch Corrugated PE Pipe and Fittings | ASTM F667 |
| 10 to 120-inch Corrugated PE Profile Wall Sewer and Drain Pipe | ASTM F894 |
| 3 to 10-inch Corrugated PE Pipe | AASHTO M252 |
| 12 to 60-inch Corrugated PE Pipe | AASHTO M294 |
| PE Plastic Pipe and Fittings | ASTM D3350 |
| PE Plastic Pipe (DR-PR) Based on Outside Diameter | ASTM F714 |
| Heat Fusion Joining of Polyolefin Pipe and Fittings | ASTM D2657 |
| PE Plastic Tubing | ASTM D2737 |
| **Acrylonitrile-Butadiene-Styrene (ABS) Pipe** | |
| ABS Plastic pipe, Schedules 40 and 80 | ASTM D1527 |
| ABS and PVC Composite Sewer Pipe | ASTM D2680 |

Fittings and Joints

Where pressure pipe is specified, fittings will have a design capacity equal to or exceeding that specified for the pipe to which it is attached. Fittings will be cast iron, steel, one-piece injection molded plastic fitting, or fabricated from plastic pipe and one-piece injection molded plastic fittings.

Where nonpressure pipe is specified, the fittings will be of the same or similar materials as the pipe and will provide the same durability and strength as the pipe.

Joints may be bell and spigot type with elastomeric gaskets, coupling type with elastomeric gasket on each end, or solvent cemented. When a lubricant is required to facilitate joint assembly, it will be a type having no detrimental effect on the gasket or pipe material.

Mechanical joints (split couplings and snap couplings) may be used when joining PE pipe and fittings with nonpressure flow and a free draining sand or gravel bedding material. Elastomeric-sealed mechanical joints will be used when joining PE pipe and fittings under pressure flow or where seepage cannot be tolerated.

Pipe joints will conform to the details shown on the construction drawings and specified herein.

Pipe will be installed and joined in accordance with the manufacturer's recommendations, except as otherwise specified.

## 3. HANDLING AND STORAGE

Pipe will be delivered to the job site and handled by means which provide adequate support to the pipe and does not subject it to undue stresses or damage. When handling and placing plastic pipe, care will be taken to prevent impact blows, abrasion damage, and gouging or cutting (by metal surfaces or rocks). All special handling requirements of the manufacturer will be strictly observed. Special care will be taken to avoid impact when the pipe must be handled at temperatures of 40°F (4.4°C) or less.

Pipe will be stored on a relatively flat surface so that the barrels are evenly supported. Unless the pipe is specifically coated to withstand exposure to ultraviolet radiation, it will be covered with an opaque material when stored outdoors for a period of 15 days or longer.

## 4. LAYING AND BEDDING THE PIPE

Plastic pipe conduits and fittings will be installed as shown on the construction drawings and specified herein. The pipe will be laid so that there is no reversal of grade between joints, unless otherwise shown on the construction drawings. The pipe will be placed with the bell end upstream, unless otherwise specified. The pipe will be carefully placed on the bedding or into the pipe trench.

Care will be taken to prevent distortion and damage during hot (over 90°F) or cold weather (under 40°F). After the pipe has been assembled in the trench, it will be allowed to reach ground temperature before backfilling to prevent pull out of joints due to thermal contraction.

The pipe ends and the couplings will be free of foreign material when assembled. During the placement of the pipe, each open end of the pipeline will be closed off by a suitable cover or plug at the end of work on the pipeline each day and until work resumes or installation is complete.

Perforated pipe will be laid with the perforations down and oriented symmetrically about the vertical centerline. Perforations will be clear of any obstructions when the pipe is laid.

Pipe will be firmly and uniformly supported throughout the entire length. Bell-holes will be made in the bedding under bells or couplings and other fittings to prevent the pipe from being supported by fittings.

1. Earth Bedding. When bedding is specified, the pipe will be firmly and uniformly bedded in a shaped bedding groove that closely conforms to the bottom of the pipe for a depth equal to a minimum of 1 inch or 5 percent of the diameter of the pipe, whichever is greater. The bedding material will be free of rocks or stones greater than 3 inch diameter.
2. Sand or Gravel Bedding, or Drain Fill. When sand or gravel bedding is specified, the pipe will be firmly and uniformly placed on a sand or gravel bed. Sand or gravel fill will be carefully placed and compacted as specified herein and as shown on the construction drawings.

In areas with heavy loads or excessive rocks, the pipe will be sleeved as shown on the construction drawings.

## 5. BACKFILL

The pipe will be held down during backfilling to the top of the pipe to prevent its being lifted from its original placement.

Backfill will be compacted to the degree required to prevent settlement of the backfill material after construction.

The water content of cohesive backfill material will be such that, kneaded in the hand, the soil will form a ball which does not readily separate. For non-cohesive sand and gravel backfill material, water content is not a concern for thin lifts.

**Specific Site Requirements**

Reset