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**Contact**

703-324-1460, TTY 711
Fax: 703-324-1421
ConservationDistrict@fairfaxcounty.gov

Working for Clean Streams and Protected Natural Resources in Fairfax County

REQUEST FOR BIDS
to Construct a Bioretention (Rain Garden) at the Mason Neck Wayside Kiosk & Parking Area

The Northern Virginia Soil and Water Conservation District (NVSWCD), in partnership with the U.S. Department of Interior – Bureau of Land Management seeks a qualified contractor to construct a 1,000 square foot bioretention basin and to modify an existing outfall at the new Mason Neck Wayside Kiosk and Parking Area located on Gunston Road in Lorton, VA. The facility will capture stormwater runoff from the parking lot and surrounding area, which is an area of approximately 1.5 acres.

This bid package includes the terms and conditions for bidding, as well as the following four attachments:

- A. Project Location Map
- B. Construction Specifications
- C. Site Plan
- D. Cross-Section
- E. Outfall Channel Profile

TERMS AND CONDITIONS FOR BIDDING**BID SUBMISSION**

Bid solicitation begins at 5:00 PM on September 4, 2014. Bids must be received via email by NVSWCD no later than 5:00 PM on Monday, September 15, 2014. Email bids to conservationdistrict@fairfaxcounty.gov, with the subject line: *Mason Neck Bioretention Project*.

NVSWCD will hold a conference call on September 10, 2014 starting promptly at 10:00 AM to respond to questions. Please use the following information to participate on the call:

Toll Free Number: 1-866-806-1389
Passcode: 4496098

The contract award will be announced by NVSWCD on September 23, 2014.

BID CONTENTS

Bids must include the following information:

- I. Signed cover letter with description of qualifications of company and project team;
- II. Cost estimates for construction of the rain garden based upon the material estimates, sequence and specifications provided under *Attachment B: Construction Sequence and Specifications*; and
- III. Construction schedule.

BID REVIEW AND EVALUATION

NVSWCD staff shall evaluate bids against price paid for comparable projects. The NVSWCD Board of Directors reserves the right to reject any or all bids, waive informalities, and to contract as the best interests of NVSWCD may require. When evaluating bids, the following criteria in addition to prices, specifications, schedule, quality of goods, and guaranteed efficiencies, will be considered:

1. The bidder's experience, technical qualifications and skill;
2. The guaranteed availability of materials and staff resources included in the bid;
3. The bidder's ability and capacity to perform within the time required, taking into account the bidder's existing performance commitments and past performance;
4. The bidder's qualifications and eligibility to contract under applicable laws and regulations;
5. The bidder's compliance with the terms and conditions and specifications of the request for bids;
6. Any equalizing elements or factors, in addition to price, which would affect the acquisition, maintenance and/or operation costs or benefits to NVSWCD;
7. Any additional evaluation criteria or specifications set forth in *Attachment B: Construction Sequence and Specifications*; and
8. Any other information as may have a bearing on the bid.

CANCELLATION BY NVSWCD

In its sole discretion, NVSWCD may cancel any bid award upon written notification to the successful bidder within 30 (thirty) days after the date of the bid award, without any cost, expense, penalty or damages payable by NVSWCD to the bidder.

PAYMENT

Invoicing shall be directed to Northern Virginia Soil and Water Conservation District, 12055 Government Center Parkway, Suite 905, Fairfax, VA 22035. Payment will be made by NVSWCD within 30 (thirty) days after receipt of vendor's invoice for work performed and accepted by NVSWCD.

Attachment A: Project Location Map



Northern VA Soil & Water Conservation District
Bureau of Land Management

1 inch = 400 feet

Bioretention Location Map
Mason Neck Wayside Kiosk & Parking Area



Northern VA Soil & Water Conservation District
Bureau of Land Management
Meadowood Special Recreation Management Area
Bioretention (Rain Garden) Construction Sequence and Specifications
Mason Neck Wayside Kiosk & Parking Area
Project EN06-029-1

Bioretention Specs:

- Total footprint (surface area) = 1,000 SF
- Total Depth = 5.0 FT
- Ponding depth = 1.0 FT
- Soil media = 2.0 FT
- Pea gravel = 0.5 FT
- Gravel filter (VDOT # 57) = 1.5 FT

Construction Specifications & Sequence

1. **Excavation.** The entire rain garden within its 1,000 SF footprint and 5.0 FT depth will be excavated. Excavation should be carried out from the outside perimeter of the rain garden. Under no circumstance should machinery be used inside the rain garden for either excavation or placing fill material in the rain garden. The rain garden dimensions have been selected to allow an excavator with a long arm to perform the excavation and filling the rain garden without any need for any mechanical equipment entering the rain garden. During excavation attention should be paid to avoid damage to the existing yard inlet structure and 18" culvert connected to the yard inlet. The site plan shows the location of the yard inlet and the approximate location of the 18" culvert.
2. **Stockpile and hauling the excavated material.** The excavated material has to be stockpiled close to the excavation site easy for the trucks to reach and excavator to load the trucks. The objective is to cause minimum land disturbance on the area around the rain garden¹.
3. **Filling the rain garden.**
 - a. **Gravel filter (VDOT # 57).** The gravel depth is 1.5 FT (18.0"). The VDOT # 57 should be double washed. Gravel should be added in 6.0" lifts and leveled.
 - b. **Under drain.** The under drain consists of 4.0 inches in diameter PVC pipes. In this rain garden the under drain is placed within the pea gravel. A minimum of 6.0 inches of pea gravel (or VDOT # 8) should be placed on top of the main drain and the laterals. The under drain should be laid at a minimum of 0.5 percent slope. The under drain and its laterals should start 5.0 feet from the boundary of the rain garden. The observation

¹¹ If there is an existing stockpiles location, part of the kiosk and parking area construction, contractor is advised to use the existing location for all the stockpiles.

well/clean-out pipe should be 4.0 inches in diameter, cut 2.0 inches above top of the planting soil, and fitted with an adaptor and screw cap. All under drains including laterals should be perforated. Observation/clean-out pipe should not be perforated.

- c. **Pea gravel or VDOT # 8.** The pea gravel depth is 0.5 FT. Pea gravel should be double washed. An additional 6.0" of pea gravel should be added on top of the under drain including the laterals.
- d. **Soil media.** Soil media should strictly comply with specification provided in Appendix A, Section 2. Supplier should provide contractor with soil media certification that shows compliance with the specifications provided in section 4 part (a). Examples of soil medium certification are provided in Appendix A. Stockpiling the soil media on the construction site for a long period should be avoided. If left overnight, the soil media should be covered.
- e. **Compost.** Three inches of soil compost is added to the top of soil medium. The compost depth has not been added to the total rain garden depth. For compost, the NVSWCD recommends a local product known as Soilmate provided by Loudoun Composting.

4. Material Specifications

- a. **Soil Media.** The bioretention soil media shall be composed of a mixture of minimum 70-80 percent washed sand, 5-15 percent organic compost, and 10-20 percent topsoil. Compost need to meet the requirements presented in Appendix A, Section 1. Topsoil shall be a sandy loam, loamy sand, silt loam or loam per USDA textural classification. The textural class of the topsoil shall be verified by a laboratory analysis. Samples of certifications for soil mix (final product) compost and sand added to the mix and are provided in Appendix A, Section 2. Topsoil shall be of uniform composition, containing no more than 8 percent clay, free of stones, stumps, brush, roots, or similar objects larger than 2 inches. Topsoil shall be free of Bermuda Grass, Quackgrass, Johnson Grass, Mugwort, Nutsedge, Poison Ivy, Canadian Thistle, Tearthumb, or other noxious weeds. Sand shall meet AASHTO M-6, ASTM C-33, or VDOT Section 202 Grade "A" Fine Aggregate specifications. Sand shall be clean and free of deleterious materials. The final soil mixture shall not contain any material or substance that may be harmful to plant growth, or a hindrance to plant growth or maintenance.
- b. **Under drains.** Under drains should be PVC pipe conforming to the requirements of ASTM F758, Type PS 28 or ASTM F949; HDPE pipe conforming to the requirements AASHTO M252 or M 294, Type S; or approved equivalent pipe. Under-drains shall be perforated with four rows of 3/8-inch holes with a hole spacing of 3.25 ± 0.25 inches or a combination of hole size and spacing that provides a minimum inlet area ≥ 1.76 square inches per linear foot of pipe or be perforated with slots 0.125 inches in width that provides a minimum inlet area ≥ 1.5 square inches per linear foot of pipe.

The observation well/clean-out pipe is similar to under drains but without perforation.

Pre-Construction Meeting

Prior to construction, representatives from the selected contractor, NVSWCD, and BLM will meet on-site to review the project plan and to discuss any construction-related items. The meeting is anticipated to last one (1) hour.

APPENDIX A

Section 1.

Compost Specifications

pH	6.0-8.0
Soluble Salts (electrical conductivity)	< 5 dS/m
Nutrient Content (dry weight basis)	Nitrogen – 1% or above Phosphorus – 1% or above Potassium – 1% or above
Organic Matter Content (dry weight basis)	50-60%
Moisture Content (wet weight basis)	40-50%
Particle Size (aggregate size)	Pass through a 1/2 inch screen or smaller
Maturity Indicator (percentage of control)	> 80% of control
Stability (CO ₂ evolution)	0-4 mg CO ₂ C per g OM per day
Trace Elements/Heavy Metals	Meet U.S. EPA Class A standard, 40 CFR § 503.13. Tables 1 and 3
Pathogens	Meet U.S. EPA Class A standard, 40 CFR § 503.32(a)

Section 2:

Samples of soil media certification including, soil mix, compost, and sand.



April 6, 2012

Northern Virginia Soil and Water Conservation District
HERRITY BUILDING - SUITE 905
12055 Government Center Pkwy
Fairfax, VA 22035
Phone: 703-324-1427
Email: asad/rouhi@fairfaxcounty.gov

RE: 4022 HUMMER ROAD
ANNANDALE, VIRGINIA

Dear Mr. Rouhi,

The Spec Soil-Mix produced at our Aggtrans/The Stone Store facility in Hanover, Maryland conforms to the following results listed below.

SPEC SOIL MIX:

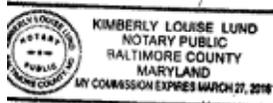
75% Washed Concrete Sand
10% Screened Topsoil
15% Leafgro

Individual test results are subject to vary at anytime.

Sincerely,

Carly Hynson
Customer Service Representative

BALTIMORE COUNTY – State of Maryland
Sworn and subscribed to before me on this Sixth day of April 2012.



Kimberly Louise Lund
Notary Public

My commission expires March 27, 2016.

7535 Railroad Avenue • Hanover, Maryland 21076-3141
Office: 1-888-766-4242 • Fax: 410-766-2002
Website: www.aggtrans.com



April 9, 2012

NORTH VA SOIL & WATER CONSERVATION
Attn: Asad Rouhi
12000 Government Center Parkway
Fairfax, VA 22035
Phone: 703-324-1427
Email: asad.rouhi@fairfaxcounty.gov

RE: 4022 HUMMER ROAD
ANNANDALE, VA

Dear Mr. Rouhi,

Per your request, below is information pertaining to:

LEAFGRO
Leafgro Quality Information

As a soil amendment, Leafgro has the following properties:

Quality Parameters	Range	Averages
Nitrogen	1.9 – 2.8%	2.35%
Phosphorus	0.42 – 0.44%	0.43%
Potassium	1.2 – 1.9%	1.55%
Calcium	2.2 – 3.1%	2.65%
Soluble Salts	3.41 – 4.07	3.74 mmhos/cm
Bulk Density	14 – 19	16.5 lbs/cu ft
Organic Matter	58.5 – 87.7%	73.1%
pH Value	7.15 – 8.48	7.75
Particle Size	Passes 3/8" mesh	
C/N Ratio	14 – 15	14.5

Leafgro is a superior quality compost used extensively by the landscape industry and homeowners as a source of humus for soil improvement. Leafgro is an outstanding example of recycling at its best. By composting leaves and grass clippings that would have normally been disposed of in a landfill, the Maryland Environmental Service converts organic wastes into a valuable resource.

Sincerely,

Kelly Fleishell
Customer Service Representative

7535 Railroad Avenue • Hanover, Maryland 21076-3141
Office: 1-888-766-4242 • Fax: 410-766-2002
Website: www.aggtrans.com



April 9, 2012

NORTH VA SOIL & WATER CONSERVATION
Attn: Asad Rouhi
12000 Government Center Parkway
Fairfax, VA 22035
Phone: 703-324-1427
Email: asad.rouhi@fairfaxcounty.gov

RE: 4022 HUMMER ROAD
ANNANDALE, VA

Dear Mr. Rouhi,

This letter is to certify that the Washed Concrete Sand meets the specifications of the, 2008 Maryland State Highway Administration, Table 901 specification, ASTM C-33-08, ASTM C-404-07 and AASHTO, M 6-93.

WASHED CONCRETE SAND:

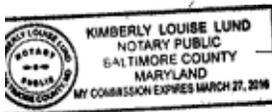
Table with 9 columns: Sieve Size, 3/8", #4, #8, #16, #30, #50, #100, #200. Rows include %Passing and Limits.

Dry Rodded Unit Weight PCF 103.0
Bulk Specific Gravity 2.63
Soundness 1.77%
Absorption 0.70%

Sincerely,

Handwritten signature of Kelly Fleishell
Kelly Fleishell
Customer Service Representative

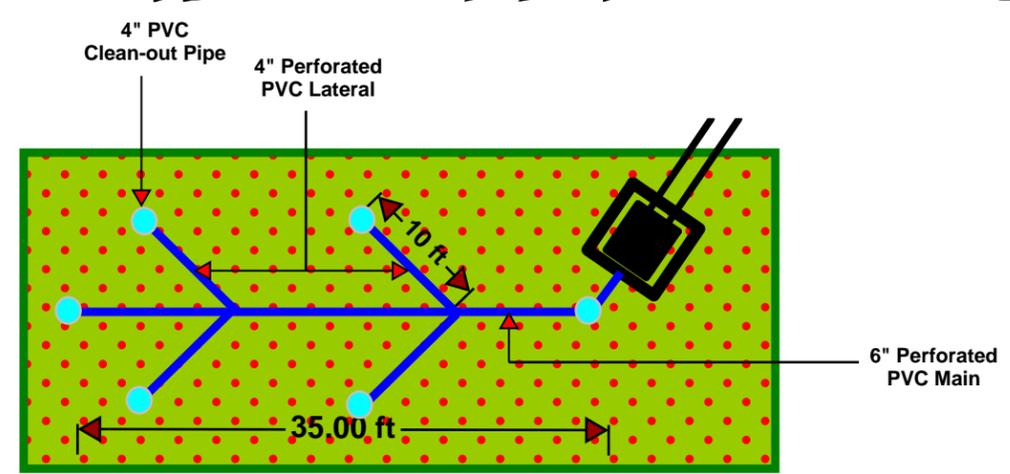
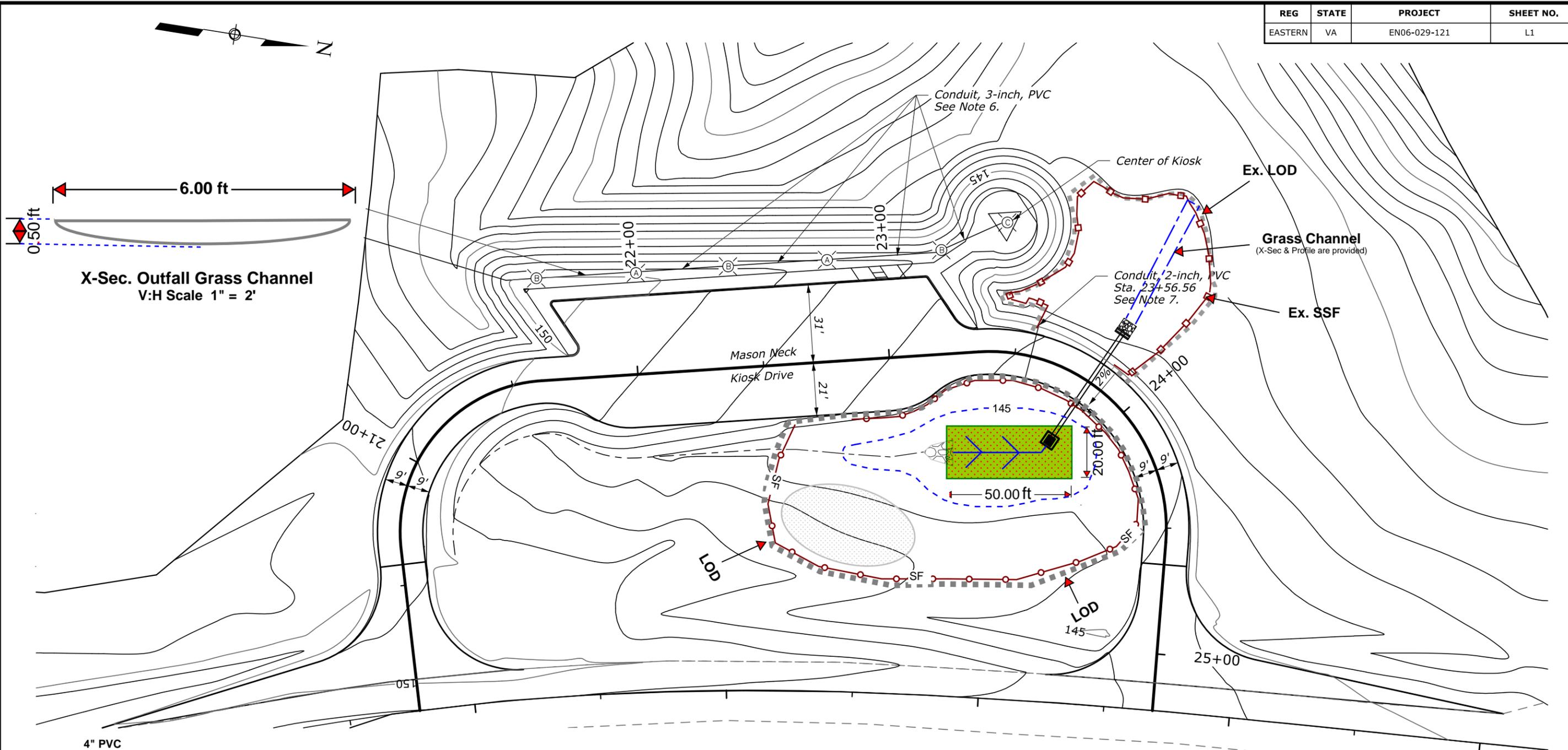
BALTIMORE County - State of Maryland
Sworn and subscribed to before me this Ninth day of April, 2012.



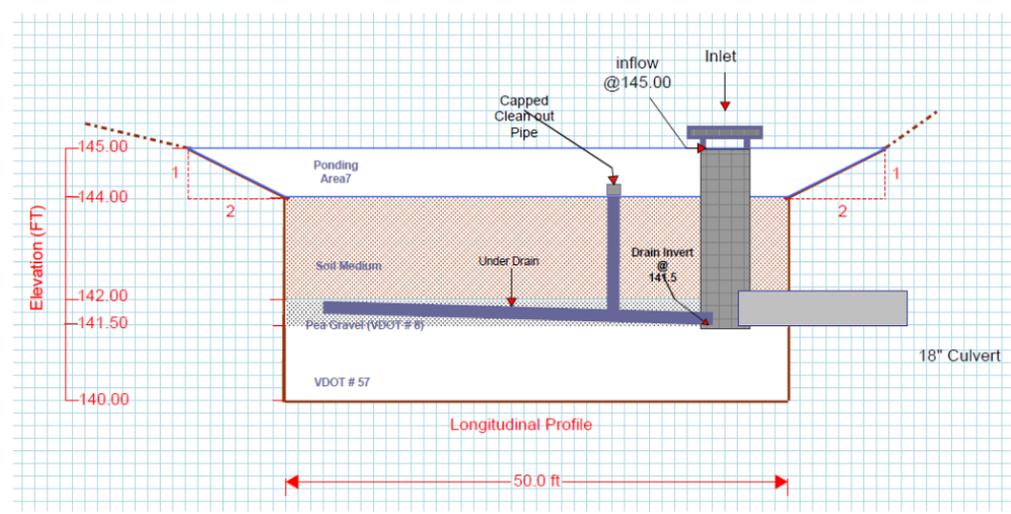
Handwritten signature of Kimberly Louise Lund
Kimberly Louise Lund
Notary Public
My Commission expires March 27, 2016.

7535 Railroad Avenue ■ Hanover, Maryland 21076-3141
Office: 1-888-768-4242 ■ Fax: 410-768-2002
Website: www.aggtrans.com

REG	STATE	PROJECT	SHEET NO.
EASTERN	VA	EN06-029-121	L1



Under-drains
(Not to Scale)



Northern Virginia Soil & Water Conservation District
Bureau of Land Management
Meadowood Special Recreation Management Area

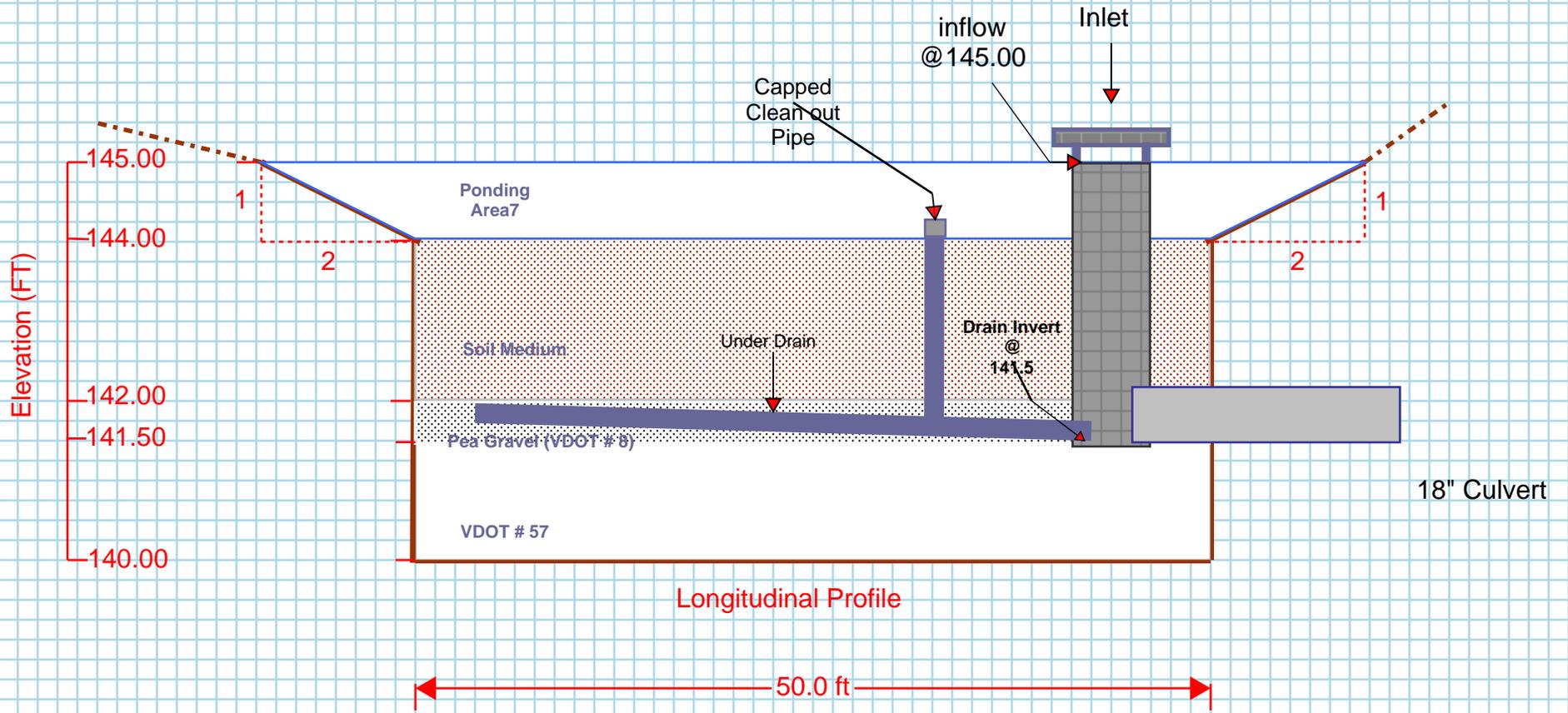
Bioretention Details
Grading - E&S Control Plan

0 20 40
1 Inch = 40 Feet

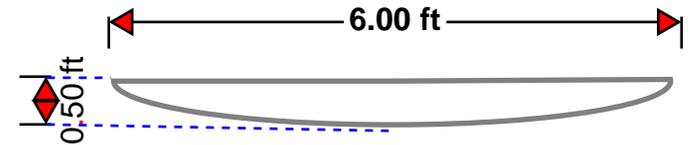
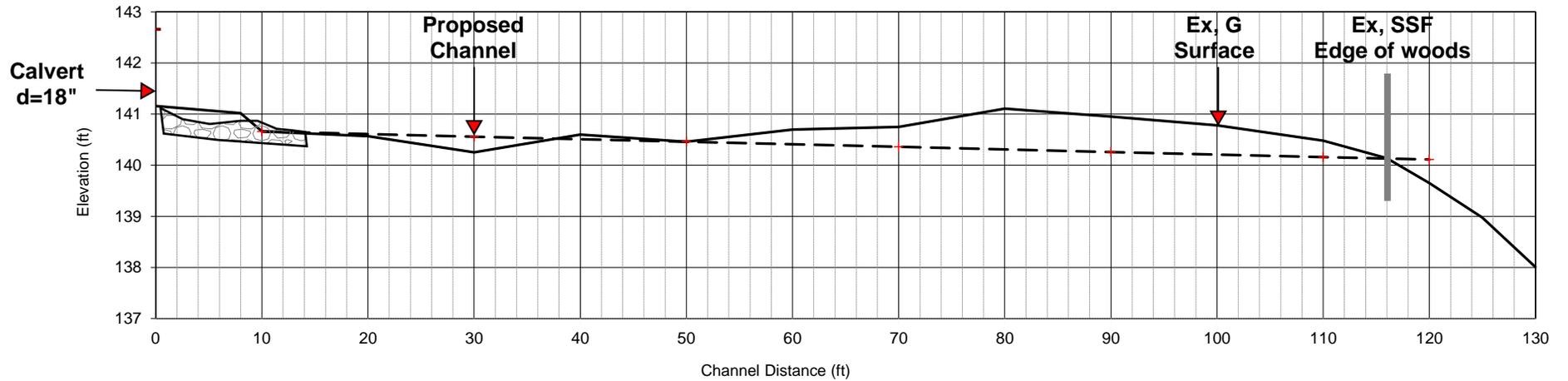
Base-map prepared by the U.S. Department of Transportation,
Federal Highway Administration

14-Feb-2013 11:00 AM \$TIME\$ \\verifiles\share\fld\7hwadotgov\cond\PROJECTS\STATE_DOT\VA\EN06_029_121\Proj_Devel\CADD\U-MasonNeck_1gr.dgn

Attachment D: Bioretention Basin Profile



Longitudinal Profile, Bioretention Outfall Channel



X-Sec. Outfall Grass Channel
V:H Scale 1" = 2'