

# INVITATION FOR BID # 17-18

**COUNTY OF MONTGOMERY**  
**PURCHASING DEPARTMENT**  
 755 ROANOKE STREET, SUITE 2C  
 CHRISTIANSBURG, VA 24073-3179

DATE		BID OPENING DATE AND HOUR	SEALED BID
October 18, 2016		November 8, 2016 3:00 p.m.	NO

ADDRESS ALL INQUIRES AND  
 CORRESPONDENCE TO:  
 Montgomery County Purchasing Department  
 755 Roanoke Street, Suite 2C  
 Christiansburg, VA 24073-3179  
 Heather M. Hall, C.P.M.  
 Telephone Number: (540) 382-5784  
 Fax Number: (540) 382-5783  
 e-mail address:  
[hallhm@montgomerycountyva.gov](mailto:hallhm@montgomerycountyva.gov)

### SPECIAL INSTRUCTIONS

1. **Sealed Bid** responses should be returned in an envelope with the bid number and opening date indicated on the outside of the envelope.
2. Faxed responses to Sealed Bids cannot be sent directly to the Purchasing Department.
3. Responses must be submitted on this form and the attachment provided.
4. Responses should be signed below.
5. Responses will be received in the Montgomery County Purchasing Department, at the address listed above, until the bid opening date and hour or, if specified, the bid return date and hour shown above.
6. Contact the Purchasing Department for bid award information. Enclose a self-addressed stamped envelope if you wish to obtain price information.
7. DELIVERY IS F.O.B. DESTINATION UNLESS OTHERWISE NOTED BY MONOTGOMERY COUNTY IN THE BODY OF THE BID.
8. Attachment A is incorporated by reference into this invitation for bid and any resulting contract.

### COMMODITY: Rifle Range improvements at the Denhill Law Enforcement Training Center

NO	Description	Quantity	Unit	Unit Price	Extended Price
	Objective: Level out a 2500 square foot area by adding fill dirt and construct a 10 foot tall berm 80 feet by 30 feet. The existing land cannot be dug into. Vendor must obtain an E&S bond in the amount of \$3,434.38. Stone will be hauled from Sisson & Ryan quarry.				
1.	Fill Dirt – Haul	200	Loads		
2.	Fill Dirt	2,000	Yd <sup>3</sup>		
3.	Grader for road improvements	24	Hrs		
4.	Dozer for leveling	80	Hrs		
5.	Silt Fence	150	Feet		
6.	Stone for Grade Area ( MCSO will directly pay Salem Stone for this)	875	Tons		
7.	Hauling Stone for Grade Area	52	Loads		
8.	Hydro-Seeding	.25	Acres		
	Pre-bid to take place at 2 pm November 1, 2016. We will begin at the Purchasing Dept, 755 Roanoke Street and take the group down to the site.				

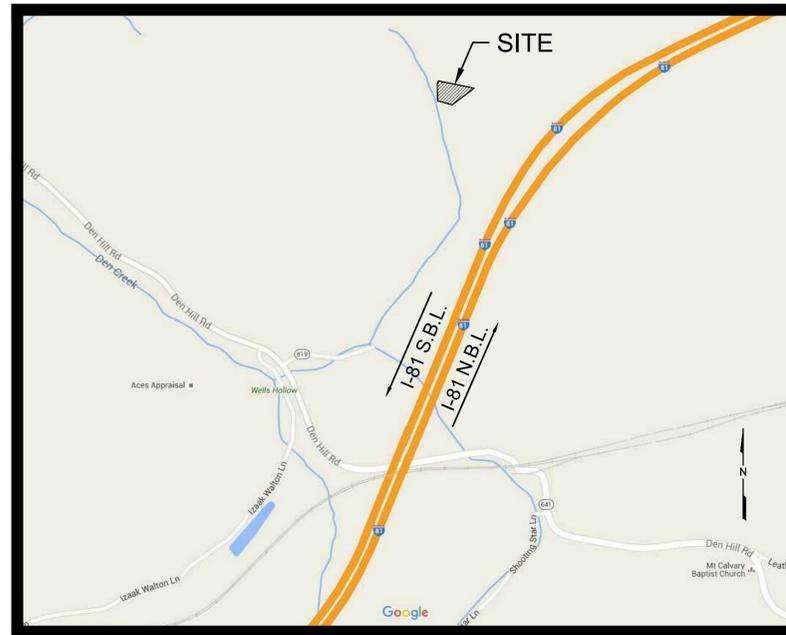
IN ACCORDANCE WITH THIS INVITATION FOR BID AND SUBJECT OT ALL TERMS AND CONDITIONS IMPOSED HERIN AND IN ATTACHMENTS, THE UNDERSIGNED OFFERS AND AGREES TO FURNISH THE ITEM(S) FOR THE PRICES OFFERED.

FULL LEGAL NAME (PRINT)	FEDERAL TAXPAYER NUMBER (ID#)	DELIVERY DATE
PURCHASE ORDER ADDRESS	PAYMENT ADDRESS	TERMS <b>NET 30</b>
CONTACT NAME/TITLE (PRINT)	SIGNATURE (INK)	DATE
E-MAIL ADDRESS	TELEPHONE NUMBER	TOLL FREE NUMBER
		FAX NUMBER

# MONTGOMERY COUNTY FIRING RANGE MODIFICATIONS

## EROSION & SEDIMENT CONTROL PLAN

### DEN HILL ROAD, MONTGOMERY COUNTY, VA



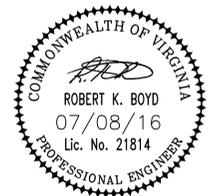
**VICINITY MAP**  
SCALE: 1" = 1000'  
1:12,000

EXISTING	ITEM	PROPOSED
— 2050 —	CONTOUR LINE - INDEX	— 00 —
-----	CONTOUR LINE - INTERMEDIATE	-----
N/A	SPOT ELEVATION	+83.5
N/A	LIMITS OF DISTURBANCE	— LOD —
☼	TREE	

**COVER NOTES:**

- OWNER/DEVELOPER:  
MONTGOMERY COUNTY
- PLANS PREPARED BY:  
ANDERSON & ASSOCIATES, INC.  
C/O MARK CLINE  
100 ARDMORE STREET  
BLACKSBURG, VIRGINIA 24060
- ZONING DISTRICT: N/A (NO COUNTY ZONING ORDINANCE).
- PROPERTY INFORMATION:  
33.375 ACRES  
PARCEL NUMBER 081-A-19  
DEED BOOK 2009  
PAGE 003018
- THIS PROJECT DOES NOT LIE WITHIN A 100-YEAR FLOOD PLAIN. THE SITE IS LOCATED IN ZONE X ON FLOOD MAP 51063C0215C, EFFECTIVE DATE APRIL 16, 2008. ZONE X IS DESCRIBED AS AREAS OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- THIS PROJECT DOES NOT PROPOSE ANY IMPACTS TO WETLANDS OR WATERS OF THE U.S.

Sheet List Table	
Sheet Number	Sheet Title
1	TITLE SHEET
2	EROSION & SEDIMENT CONTROL NOTES
3	GRADING & EROSION CONTROL PLAN
4	EROSION & SEDIMENT CONTROL DETAILS



**ANDERSON & ASSOCIATES, INC.**  
Professional Design Services  
www.andassoc.com  
VA - NC - TN - WV

100 Ardmore St.  
Blacksburg, Va. 24060  
540-552-5592

J.N. 32237.00      24 JUN 16      SHEET NUMBER      01

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**EROSION & SEDIMENT CONTROL NOTES**

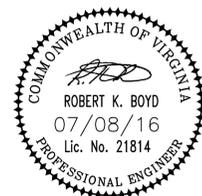
1. UPON AWARD OF THE CONTRACT AND PRIOR TO ANY LAND DISTURBANCE, DESIGNATE A PERSON WHO IS CERTIFIED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) AS A RESPONSIBLE LAND DISTURBER (RLD) FOR THIS PROJECT. NOTIFY THE OWNER, ANDERSON & ASSOCIATES, INC., AND MONTGOMERY COUNTY IN WRITING OF THIS DESIGNATION. NAME OF RLD AND CERTIFICATE NUMBER SHALL BE HANDWRITTEN ON THE APPROVED PLANS AT THE PRE-CONSTRUCTION MEETING.
2. THE RLD SHALL INSPECT EROSION AND SEDIMENT CONTROL (E&SC) DEVICES AND MEASURES FOR PROPER INSTALLATION AND DEFICIENCIES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY WHEN NO RAINFALL EVENT OCCURS.
3. PLACE ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO OR AS THE FIRST STEP IN SITE OPERATIONS.
4. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION (VESCH), AND VIRGINIA REGULATIONS 9VAC25-840 EROSION AND SEDIMENT CONTROL REGULATIONS.
5. NOTIFY THE PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
6. THE EROSION & SEDIMENT CONTROL NARRATIVE PREPARED FOR THIS PLAN IS PART OF THE PLANS AND SHALL BE USED IN CONJUNCTION WITH THE PLANS. A COPY OF THE APPROVED NARRATIVE AND THE VESCH, SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
7. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY. DISPOSE OF EXCESS MATERIALS IN A LEGAL, APPROVED SITE.
8. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT TRAPPING MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
9. INSTALL ADDITIONAL EROSION CONTROL MEASURES AS REQUIRED TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE SITE, AND AS DICTATED BY THE PLAN APPROVING AUTHORITY OR ENGINEER.
10. AS THE EROSION CONTROL PLAN APPROVING AUTHORITY MAY CHANGE THE APPROVED PLAN IF INSPECTION REVEALS THAT THE APPROVED PLAN IS INADEQUATE TO SATISFY APPLICABLE REGULATIONS.
11. STORE EXCAVATED TOPSOIL IN TOPSOIL STOCKPILES WITHIN THE LIMITS OF CONSTRUCTION, IN COORDINATION WITH THE OWNER. PROTECT STOCKPILE WITH SILT FENCE IN ACCORDANCE WITH VESCH STANDARDS.
12. FOR ALL DISTURBED AREAS THAT ARE NOT PAVED, SEED IN ACCORDANCE WITH THE SPECIFICATIONS, AND THE VESCH, LATEST EDITION.
13. SEED AND STRAW MULCH ALL SOIL STOCKPILES LEFT UNDISTURBED MORE THAN 14 DAYS.
14. SEEDING MIXES FOR PERMANENT STABILIZATION SHALL BE CHOSEN FROM THE SPECIFICATIONS. INSTALL PERMANENT STABILIZATION WITHIN 7 DAYS OF FINAL STABILIZATION ON ANY PORTION OF THE SITE, IN ACCORDANCE WITH VESCH STANDARD AND SPECIFICATION 3.32. INSTALL TEMPORARY STABILIZATION WITHIN 7 DAYS ON DENUDED AREAS THAT ARE TO REMAIN DORMANT (UNDISTURBED) FOR GREATER THAN 14 DAYS AND LESS THAN ONE YEAR, IN ACCORDANCE WITH VESCH STANDARD AND SPECIFICATION 3.31.
15. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. ANY AREAS THAT DO NOT ESTABLISH WILL REQUIRE ADDITIONAL STABILIZATION.
16. STABILIZE EARTHEN STRUCTURES SUCH AS DIVERSIONS, BASIN EMBANKMENTS, ETC. IMMEDIATELY AFTER INSTALLATION.
17. CUT AND FILL SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION MUST BE PROVIDED WITH ADDITIONAL STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.
18. WHERE CONSTRUCTION VEHICLES ACCESS PAVED OR PUBLIC ROADS, PROVISIONS MUST BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT. ANY SEDIMENT WHICH IS TRACKED ONTO PUBLIC ROADS MUST BE REMOVED FROM THE ROADS AT THE END OF EACH DAY, BY EITHER SHOVELING OR SWEEPING, AND TRANSPORTED TO AN APPROVED DISPOSAL AREA.
19. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. ANY AREAS THAT ARE DISTURBED AS THE RESULT OF REMOVAL OF TEMPORARY PRACTICES MUST BE RESTABILIZED ACCORDING TO VESCH STANDARD AND SPECIFICATION 3.32. TRAPPED SEDIMENT MUST BE EITHER REDISTRIBUTED OR TRANSFERRED TO AN APPROVED DISPOSAL SITE.
20. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
21. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES AT LEAST WEEKLY AND IMMEDIATELY AFTER EACH RUNOFF PRODUCING STORM EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MADE IMMEDIATELY. CONTRACTOR SHALL SUBMIT EVIDENTIARIES OF INSPECTIONS WITH MONTHLY REPORTS TO THE OWNER.
22. TEMPORARY/PERMANENT STABILIZATION OPERATIONS SHALL BE INITIATED WITHIN 7 DAYS AFTER REACHING FINAL GRADE OR UPON SUSPENSION OF GRADING OPERATIONS FOR ANTICIPATED DURATION OF GREATER THAN 14 DAYS OR UPON COMPLETION OF GRADING OPERATIONS FOR A SPECIFIC AREA.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOILS.

**9VAC25-840-40. MINIMUM STANDARDS**

- A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:
1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
  2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
  3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
  4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
  5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
  6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
    - A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
    - B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
  7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
  8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
  9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
  10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
  11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
  12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
  13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
  14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
  15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
  16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
    - A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
    - B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
    - C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
    - D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
    - E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
    - F. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.
  17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
  18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
  19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
    - A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

**9VAC25-840-40. MINIMUM STANDARDS (CONTINUED)**

- B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
- (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
  - (2) (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
    - (B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
    - (C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
  - C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
    - (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS; OR
    - (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
    - (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
    - (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
  - D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
  - E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
  - F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
  - G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
  - H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
  - I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
  - J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
  - K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
  - L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.
  - M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMMP) REGULATIONS.
  - N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMMP) REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.





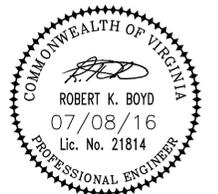
PROPOSED EROSION CONTROL MEASURES

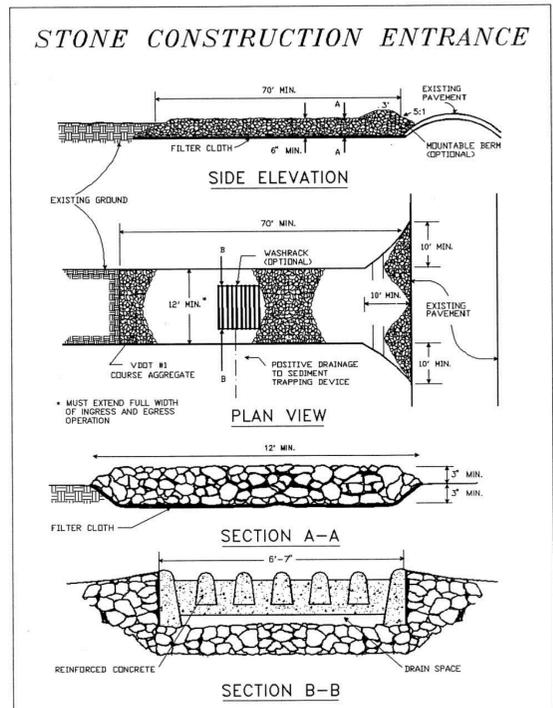
- (CE) CONSTRUCTION ENTRANCE  
VESCH STD. & SPEC. 3.02
- (SSF) SILT FENCE (CHAIN LINK REINFORCED)  
VESCH STD. & SPEC. 3.05
- (SR) SURFACE ROUGHENING  
VESCH STD. & SPEC. 3.29
- (TO) TOPSOILING  
VESCH STD AND SPEC 3.30
- (PS) PERMANENT SEEDING  
VESCH STD. & SPEC. 3.32
- (MU) MULCHING  
VESCH STD. & SPEC. 3.35
- LIMITS OF DISTURBANCE

SEE NOTE 5

NOTES:

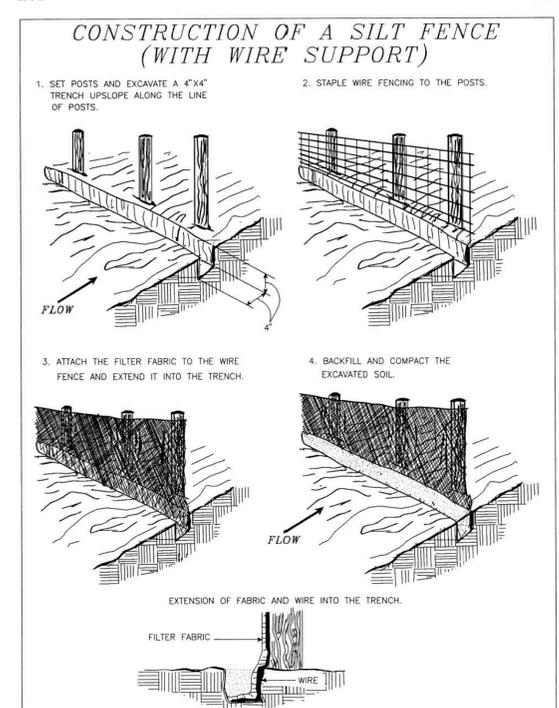
1. 2' CONTOUR INTERVAL, MAPPING PROVIDED BY MONTGOMERY COUNTY.
2. PURPOSE OF PROJECT IS TO PROVIDE A PHYSICAL BARRIER (EARTHEN BERM) BETWEEN TWO EXISTING FIRING AREAS, AND TO PROVIDE A MORE EVEN SLOPE ON THE NORTHERN RANGE AREA.
3. EARTHEN BERM IS TO BE 10' HEIGHT, WITH 2:1 SIDE SLOPES AND 5' TOP WIDTH.
4. RE-GRAVING OF NORTHERN FLAT AREA TO BE WITH A COMBINATION OF SOIL AND STONE. ANY DISTURBED AREAS NOT COVERED WITH STONE SHALL BE PERMANENTLY SEEDED.
5. EXISTING BUILDING IS TO REMAIN. DO NOT DISTURB.
6. AREA PROPOSED TO BE DISTURBED IS 0.51 ACRES.





Source: Adapted from 1983 Maryland Standards for Soil Erosion and Sediment Control, and Va. DSWC Plate 3.02-1

III - 9



Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant Plate 3.05-1

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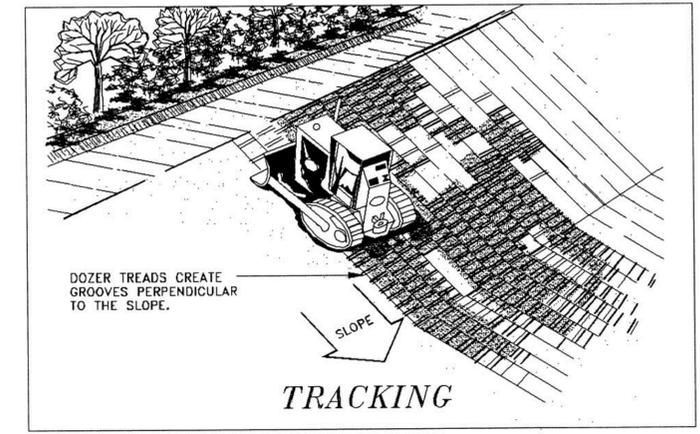
**TABLE 3.32-C  
SITE SPECIFIC SEEDING MIXTURES  
FOR APPALACHIAN/MOUNTAIN AREA**

	Total Lbs. Per Acre
<b>Minimum Care Lawn</b>	
- Commercial or Residential	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	90-100%
- Improved Perennial Ryegrass *	0-10%
- Kentucky Bluegrass	0-10%
<b>High-Maintenance Lawn</b>	
Minimum of three (3) up to five (5) varieties of bluegrass from approved list for use in Virginia.	125 lbs.
<b>General Slope (3:1 or less)</b>	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop **	20 lbs.
	150 lbs.
<b>Low-Maintenance Slope (Steeper than 3:1)</b>	
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop **	20 lbs.
- Crownvetch ***	20 lbs.
	150 lbs.

\* Perennial Ryegrass will germinate faster and at lower soil temperatures than fescue, thereby providing cover and erosion resistance for seedbed.

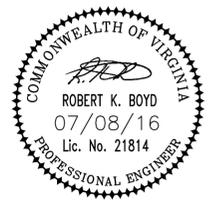
\*\* Use seasonal nurse crop in accordance with seeding dates as stated below:  
 March, April through May 15th ..... Annual Rye  
 May 16th through August 15th ..... Foxtail Millet  
 August 16th through September, October ..... Annual Rye  
 November through February ..... Winter Rye

\*\*\* If Flatpea is used, increase to 30 lbs./acre. All legume seed must be properly inoculated. Weeping Lovegrass may also be included in any slope or low-maintenance mixture during warmer seeding periods; add 10-20 lbs/acre in mixes.



Source: Michigan Soil Erosion and Sedimentation Guide Plate 3.29-4

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Dunford, Cormen / 6/24/2016 10:47 AM / \\approjects\projects\32\32237\engineering\design\plans\32237\_groing\_plans.dwg

## EROSION AND SEDIMENT CONTROL BOND CALCULATOR

Project: Thompson Landfill - Rifle Range Disturbed Acreage: 0.51  
 Date: 7/14/2016

VEESC Std.	DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
3.01	Safety Fence	LF	\$18.00	0	\$0.00
3.02	Temporary Gravel Construction Entrance	EA	\$985.00	1	\$985.00
	<i>with Wash Rack</i>	EA	\$3,400.00	0	\$0.00
3.03	Construction Road Stabilization	SY	\$5.00	0	\$0.00
3.04	Straw Bale Barrier	LF	\$3.75	0	\$0.00
3.05	Silt Fence (SF)	LF	\$3.75	170	\$637.50
3.06	Brush Barrier	LF	\$2.00	0	\$0.00
3.07	Storm Drain Inlet Protection (IP)	EA	\$135.00	0	\$0.00
3.08	Culvert Inlet Protection (CIP)	EA	\$190.00	0	\$0.00
3.09	Temporary Diversion Dike	LF	\$5.20	0	\$0.00
3.10	Temporary Fill Diversion	LF	\$2.00	0	\$0.00
3.11	Temporary Right of Way Diversion	LF	\$2.40	0	\$0.00
3.12	Diversion (DV)	LF	\$7.00	0	\$0.00
3.13	Temporary Sediment Trap (ST)				
	1 acre	EA	\$1,250.00	0	\$0.00
	2 acres	EA	\$2,100.00	0	\$0.00
	3 acres	EA	\$2,300.00	0	\$0.00
3.14	Temporary Sediment Basin (SB)				
	3 to 5.9 Acre Drainage Area	EA	\$3,000.00	0	\$0.00
	6 to 14.9 Acre Drainage Area	EA	\$6,000.00	0	\$0.00
	15 Acre Drainage Area	EA	\$9,200.00	0	\$0.00
3.15	Temporary Slope Drain	LF	\$5.75	0	\$0.00
3.16	Paved Flume	SY	\$52.00	0	\$0.00
3.17	Stormwater Conveyance Channel				
	Seeded	SY	\$10.00	0	\$0.00
	Sodded	SY	\$20.00	0	\$0.00
	Temporary Matting	SY	\$30.00	0	\$0.00
	Permanent Matting	SY	\$40.00	0	\$0.00
	Riprap	SY	\$60.00	0	\$0.00
3.18	Outlet Protection (OP)	EA	\$175.00	0	\$0.00
	Riprap	SY	\$60.00	0	\$0.00
	Grouted Riprap	SY	\$60.00	0	\$0.00
	Concrete	SY	\$45.00	0	\$0.00
3.19	Riprap	TN	\$20.00	0	\$0.00
3.20	Rock Check Dams (CD)	EA	\$165.00	0	\$0.00
3.21	Level Spreader	SY	\$10.00	0	\$0.00
3.22	Vegetative Streambank Stabilization	SY	\$350.00	0	\$0.00
3.23	Structural Streambank Stabilization	LF	\$17.00	0	\$0.00
3.24	Temporary Vehicular Stream Crossing	EA	\$2,500.00	0	\$0.00
3.25	Utility Stream Crossing	EA	\$1,800.00	0	\$0.00
3.26	Dewatering Structure	LF	\$3.00	0	\$0.00
3.27	Turbidity Curtain	LF	\$16.00	0	\$0.00
3.28	Subsurface Drain	LF	\$50.00	0	\$0.00
3.29	Surface Roughening	SF	\$0.25	0	\$0.00
3.30	Topsoiling	AC	\$1,500.00	0	\$0.00

## EROSION AND SEDIMENT CONTROL BOND CALCULATOR

Project: Thompson Landfill - Rifle Range Disturbed Acreage: 0.51

Date: 7/14/2016

VESC Std.	DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
3.31	Temporary Seeding	AC	\$1,875.00	0	\$0.00
3.32	Permanent Seeding	AC	\$2,250.00	0.5	\$1,125.00
3.33	Sodding	SY	\$5.00	0	\$0.00
3.34	Bermudagrass and Zoysiagrass Establishment	SY	\$7.50	0	\$0.00
3.35	Mulching	AC	\$3,750.00	0	\$0.00
3.36	Soil Stabilization Blankets and Matting	LF	\$2.50	0	\$0.00
3.37	Trees, Shrubs, Vines, and Ground Cover	SY	\$25.00	0	\$0.00
3.38	Tree Preservation and Protection	LF	\$9.00	0	\$0.00
3.39	Dust Control	LS	\$500.00	0	\$0.00

ESC BOND	\$2,747.50
25% Contingency	\$686.88
<b>Total ESC Bond</b>	<b>\$3,434.38</b>

ATTACHMENT A

TERMS AND CONDITIONS

**GENERAL TERMS AND CONDITIONS**

[http://www.montgomerycountvva.gov/filestorage/16277/16344/16633/16661/IFB\\_terms\\_and\\_conditions.pdf](http://www.montgomerycountvva.gov/filestorage/16277/16344/16633/16661/IFB_terms_and_conditions.pdf)

**SPECIAL TERMS AND CONDITIONS**

1. **AWARD OF CONTRACT:** Montgomery County will make the award on line item basis to the lowest responsive and responsible bidder. The Montgomery County Purchasing Department also reserves the right to reject any or all bids, in whole or in part, to waive informalities and to delete items prior to making the award, whenever it is deemed in the sole opinion of Montgomery County to be in its best interest.
2. **WARRANTY (COMMERCIAL):** The Contractor agrees that the supplies or services furnished under any award resulting from this solicitation shall be covered by the most favorable commercial warranties the contractor gives any customer for such supplies or services and that the rights and remedies provided therein are in addition to and do not limit those available to Montgomery County by any other clause of this solicitation. A copy of this warranty must be furnished with the bid.
3. **WORK SITE DAMAGES:** Any damage to existing utilities, equipment or finished surfaces resulting from the performance of this contract shall be repaired to the Owner's satisfaction at the Contractor's expense.
4. **WARRANTY (COMMERCIAL):** The Contractor agrees that the supplies or services furnished under any award resulting from this solicitation shall be covered by the most favorable commercial warranties the contractor gives any customer for such supplies or services and that the rights and remedies provided therein are in addition to and do not limit those available to Montgomery County by any other clause of this solicitation. A copy of this warranty must be furnished with the bid.
5. **INSURANCE:**  
By signing and submitting a bid under this solicitation, the Bidder certifies that if awarded the contract, it will have the following insurance coverages at the time the work commences. Additionally, it will maintain these during the entire term of the contract and that all insurance coverages will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.  
During the period of the contract, Montgomery County reserves the right to require the Contractor to furnish certificates of insurance for the coverage required.  
**INSURANCE COVERAGES AND LIMITS REQUIRED:**
  - A. Worker's Compensation - Statutory requirements and benefits.
  - B. Employers Liability - \$100,000.00
  - C. General Liability - \$500,000.00 combined single limit. Montgomery County and the Commonwealth of Virginia shall be named as an additional insured with respect to goods/services being procured. This coverage is to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability and Personal Injury Liability.
  - D. Automobile Liability - \$500,000.00

The contractor agrees to be responsible for, indemnify, defend and hold harmless Montgomery County, its officers, agents and employees from the payment of all sums of money by reason of any claim against them arising out of any and all occurrences resulting in bodily or mental injury or property damage that may happen to occur in connection with and during the performance of the contract, including but not limited to claims under the Worker's Compensation Act. The contractor agrees that it will, at all times, after the completion of the work, be responsible for, indemnify, defend and hold harmless Montgomery County, its officers, agents and employees from all liabilities resulting from bodily or mental injury or property damage directly or indirectly arising out of the performance or nonperformance of the contract.
6. **INSTALLATION:** All items must be assembled and set in place, ready for use. All crating and other debris must be removed from the premises.
7. **INSPECTION OF JOB SITE:** My signature on this solicitation constitutes certification that I have inspected the job site and am aware of the conditions under which the work must be accomplished. Claims, as a result of failure to inspect the job site, will not be considered by Montgomery County.
8. **INDEPENDENT CONTRACTOR:** The contractor shall not be an employee of Montgomery County, but shall be an independent contractor. Nothing in this agreement shall be construed as authority for the contractor to make commitments which shall bind Montgomery County, or to otherwise act on behalf of Montgomery County, except as Montgomery County may expressly authorize in writing.
9. **FINAL INSPECTION:** At the conclusion of the work, the Contractor shall demonstrate to the authorized owners representatives that the work is fully operational and in compliance with contract specifications and codes. Any deficiencies shall be promptly and permanently corrected by the Contractor at the Contractor's sole expense prior to final acceptance of the work.
10. **EXTRA CHARGES NOT ALLOWED:** The bid price shall be for complete installation ready for Montgomery County use, and shall include all applicable freight and installation charges; extra charges will not be allowed.
11. **DRAWINGS:** The Contractor shall provide Montgomery County a clean set of reproducible "as built" drawings and wiring diagrams, marked to record all changes made during installation or construction. The Contractor shall also provide Montgomery County with maintenance manuals, parts lists, and a copy of all warranties for all equipment. All "as built" drawings and wiring diagrams, maintenance manuals, parts lists, and warranties shall be delivered to Montgomery County upon completion of the work and prior to final payment.
12. **CONTRACTOR REGISTRATION:** If a contract for construction, removal, repair or improvement of a building or other real property is for seventy thousand dollars (\$70,000) or more, or if the total value of all such contracts undertaken by Bidder within any twelve-month period is five hundred thousand dollars (\$500,000) or more, the Bidder is required under Title 54.1, Code of Virginia. (1950), as amended, to be licensed by the State Board of Contractors as a "CLASS A CONTRACTOR". If such a contract is for seventy-five hundred dollars (\$7,500) or more (one thousand dollars [\$1,000] for electrical, plumbing and HVAC work) but less than seventy thousand dollars (\$70,000), the Bidder is required to be licensed as a "CLASS B CONTRACTOR". If such a contract is for one thousand dollars (\$1,000) or more but less than seventy five hundred dollars (\$7,500) and is not for electrical, plumbing and HVAC work, the Bidder is required to be licensed as a "CLASS C CONTRACTOR". The Bidder shall place on the outside of the envelope containing the bid and shall place in the bid over their signature whichever of the following notations is appropriate, inserting their contractor license number:

Licensed Class A Virginia Contractor No. \_\_\_\_\_ Specialty \_\_\_\_\_

Licensed Class B Virginia Contractor No. \_\_\_\_\_ Specialty \_\_\_\_\_

Licensed Class C Virginia Contractor No. \_\_\_\_\_ Specialty \_\_\_\_\_

If the Bidder shall fail to provide this information on their bid or on the envelope containing the bid and shall fail to promptly provide said

Contractor license number to Montgomery County in writing when requested to do so before or after the opening of bids, they shall be deemed to be in violation of Section 54.1-1115 of the Code of Virginia (1950), as amended, and their bid will not be considered. If a Bidder shall fail to obtain the required license prior to submission of their bid, the bid shall not be considered.