

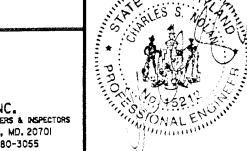
GENERAL NOTES

- i. This plan is submitted to fulfill the woodland conservation requirements for DER 2013-0008. If DER 2013-0008 expires, then this TCP2 also expires and is no longer valid.
- 2. Cutting or clearing of woodland not in conformance with this plan or without the expressed written consent of the Planning Director or designee shall be subject to a \$9.00 per square
- 3. A pre-construction meeting is required prior to the issuance of grading permits. The Department of Public Works and Transportation or the Department of Environmental Resources, as appropriate, shall be contacted prior to the start of any work on the site to conduct a pre-construction meeting where implementation of woodland conservation measures shown on this plan will be discussed in detail.
- 4. The developer or builder of the lots or parcels shown on this plan shall notify future buyers of any woodland conservation areas through the provision of a copy of this plan at time of contract signing. Future property owners are also subject to this requirement.
- 5. The owners of the property subject to this tree conservation plan are solely responsible for conformance to the requirements contained herein.
- 6. The property is within the Developing Tier and is zoned R-R. 7. The site is not adjacent to a roadway designated as scenic, historic, a parkway or a scenic byway.
- 8. The site is not on or adjacent to a roadway classified as arterial or greater.
- 9. This plan is/is not grandfathered under CB-27-2010,
- TREE PRESERVATION AND RETENTION NOTES

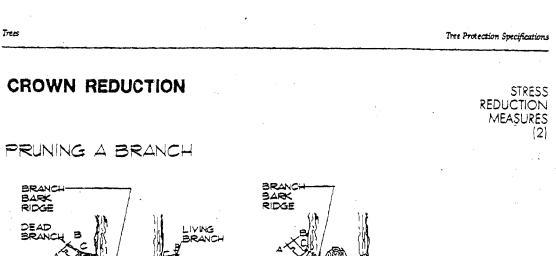
Section 25-117 (g).

- 10. All woodlands designated on this plan for preservation are the responsibility of the property owner. The woodland areas shall remain in a natural state. This includes the canopy trees and understory vegetation. A revised tree conservation plan is required prior to clearing woodland areas that are not specifically identified to be cleared on the approved TCP2.
- II. Tree and woodland conservation methods such as root pruning shall be conducted as noted on this plan.
- 12. The location of all temporary tree protection fencing (TPFs) shown on this plan shall be flagged or staked in the field prior to the pre-construction meeting. Upon approval of the locations by the county inspector, installation of the TPFs may begin.
- 13. All temporary tree protection fencing required by this plan shall be installed prior to commencement of clearing and grading of the site and shall remain in place until the bond is released for the project. Failure to install and maintain temporary or permanent tree protective devices is a violation of this TCP2.
- 14. Woodland preservation areas shall be posted with signage as shown on the plans at the same time as the temporary TPF installation. These signs must remain in perpetuity.
- REMOVAL OF HAZARDOUS TREES OR LIMBS BY DEVELOPERS OR BUILDERS
- 15. The developer and/or builder is responsible for the complete preservation of all forested areas shown on the approved plan to remain undisturbed. Only trees or parts thereof designated by the county as dead, dying, or hazardous may be removed.
- 16. A tree is considered hazardous if a condition is presen which leads a Certified Arborist or Licensed Tree Expert to believe that the tree or a portion of the tree has a potential to fall and strike a structure, parking area, or other high use area and result in personal injury or property damage.
- 17. During the initial stages of clearing and grading, if hazardous trees are present, or trees are present that are not hazardous but are leaning into the disturbed area, the permitee shall remove said trees using a chain saw. Corrective measures requiring the removal of the hazardous tree or portions thereof shall require authorization by the county inspector. Only after approval by the inspector may the tree be cut by chainsaw to near the existing ground level. The stump shall not be removed or covered with soil, mulch or other materials that would inhibit sprouting.
- 18. If a tree or trees become hazardous prior to bond release for the project, due to storm events or other situations not resulting from an action by the permitee, prior to removal, a Certified Arborist or a Licensed Tree Expert must certify that the tree or the portion of the tree in question has a potential to fall and strike a structure, parking area, or other high use area and may result in personal injury or property damage. If a tree or portions thereof are in imminent danger of striking a structure, parking area, or other high use area and may result in personal injury or property damage then the certification is not required and the permitee shall take corrective action immediately. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.
- If corrective pruning may alleviate a hazardous condition, the Certified Arborist or a Licensed Tree Expert may proceed without further authorization. The pruning must be done in accordance with the latest edition of the appropriate ANSI A-300 Pruning Standards. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.
- Debris from the tree removal or pruning that occurs within 35 feet of the woodland edge may be removed and properly disposed of by recycling, chipping or other acceptable methods. All debris that is more than 35 feet from the woodland edge shall be cut up to allow contact with the ground, thus encouraging decomposition. The smaller materials shall be placed into brush piles that will serve as wildlife habitat.
- Tree work to be completed within a road right-of-way requires a permit from the Maryland Department of Natural Resources unless the tree removal is shown within the approved limits of disturbance on a TCP2. The work is required to be conducted by a Licensed Tree Expert.





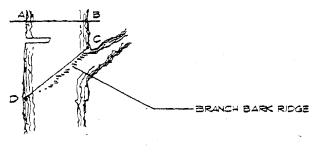
- 19. If the developer or builder no longer has an interest in the property and the new owner desires to remove a hazardous tree or portion thereof, the new owner shall obtain a written statement from a Certified Arborist or Licensed Tree Expert identifying the hazardous condition and the proposed corrective measures prior to having the work conducted. After proper documentation has been completed per the handout "Guidance for Prince George's County Property Owners, Preservation of Woodland Conservation Areas, the arborist or tree expert may then remove the tree. The stump shall be cut as close to the ground as possible and left in place. The removal or grinding of the stumps in the woodland conservation area is not permitted.
- If a tree or portions thereof are in imminent danger of striking a structure, parking area, or other high use area and may result in personal injury or property damage then the certification is not required and the permitee shall take corrective action immediately. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.
- Tree work to be completed within a road right-of-way requires a permit from the Maryland Department of Natural Resources unless the tree removal is shown within the approved limits of disturbance on a TCP2. The work is required to be conducted by a Licensed Tree Expert.
- 20. The removal of noxious, invasive, and non-native plant species from any woodland preservation area shall be done with the use of hand-held equipment only (pruners or a chain saw). These plants may be cut near the ground and materialless than two inches diameter may be removed from the area and disposed of appropriately. All material from these noxious, invasive, and non-native plants greater than two (2) inches diameter shall be cut to allow contact with the ground, thus encouraging decomposition.
- 21. The use of broadcast spraying of herbicides is not permitted. However, the use of herbicides to discourage re-sprouting of invasive, noxious, or non-native plants is permitted if done as an application of the chemical directly to the cut stump immediately following cutting of plant tops. The use of any herbicide shall be done in accordance with the label instructions.
- 22. The use of chainsaws is extremely dangerous and should not be conducted with poorly maintained equipment, without safety equipment, or by individuals not trained in the use of this equipment for the pruning and/or cutting of trees.



- CONFERS FOIR LIVING OR DEIAD BRANCH HARDUCODS
- i. Remove branch weight by undercutting at A and remove limb by cutting through at B. 2. Remove stub at CD (line between branch bank ridge and outer edge of 3. If D is difficult to find on hardwoods, drop vertical from C (line CX). Angle XCY=XCD.

branch Collar

PRUNING A LEADER OR TO REDUCE SIZE



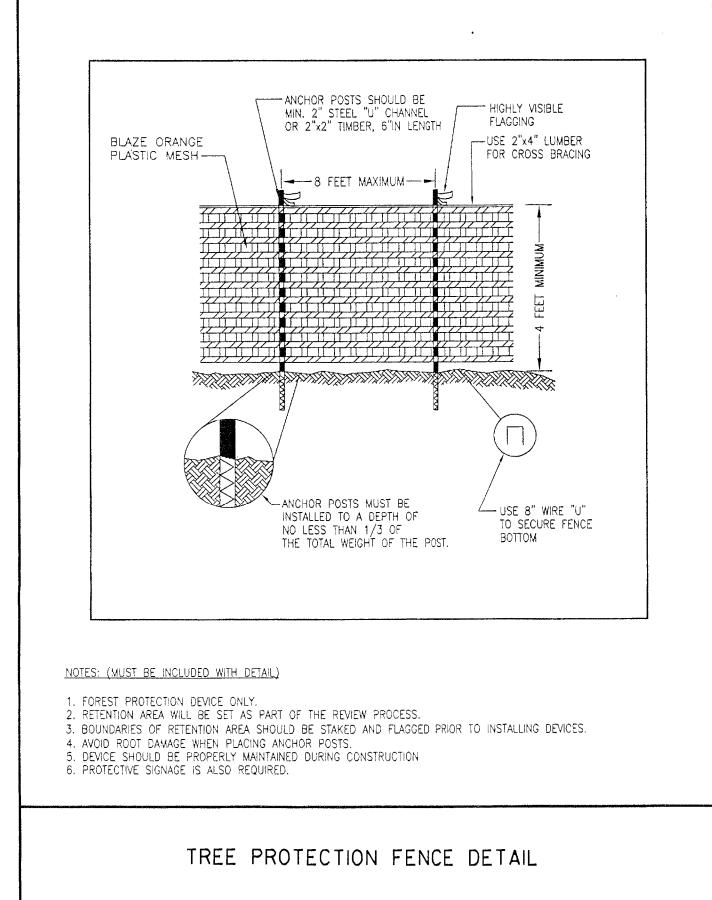
NOTE: Only prune at specified times. 2. No more than 30% of crown to be removed at one time.

SOURCE: Fairtax County, Virginia: VEGETATION PRESERVATION & PLANTTING Adapted from Maryland State FOREST CONSERVATION MANUAL

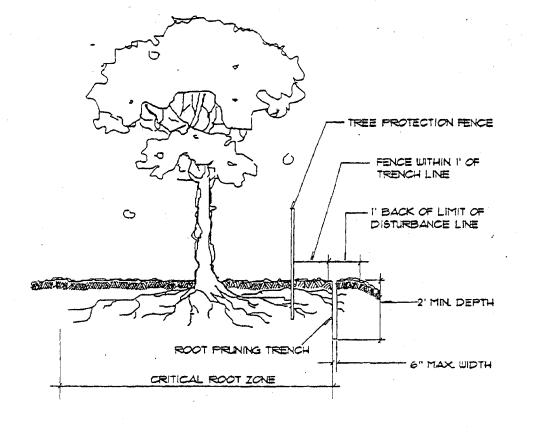
PLANT PRUNING, EDGING, AND MULCHING:

- .EACH TREE, SHRUB OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICES AS STATED IN ANSISTANDARS A300 FOR PRUNING, BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS MADE ON AN ANGLE FROM THE BARK RIDGE TO THE BRANCH COLLAR, NO FLUSH CUTS, TO MINIMIZE THE AREA CUT. ALL CUTS SHALL BE MADE WITH SHARP TOOLS. TRIM ALL EDGES SMOOTH. NO TREE WOUND DRESSINGS SHALL BE APPLIED.
- 2. ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOD WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PILANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.
- 3. AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A TWO TO THREE (2-3) INCH LAYER OF TAN BARK, PEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR: SAUCER. PRINCE GEORGE'S COUNTY LANDSCAPE MANUAL, DECIEMBER 13, 2010.

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15212, EXPIRATION DATE: 12/24/2014.



A-4, DET-4 August 2010 Tree Protection Specification

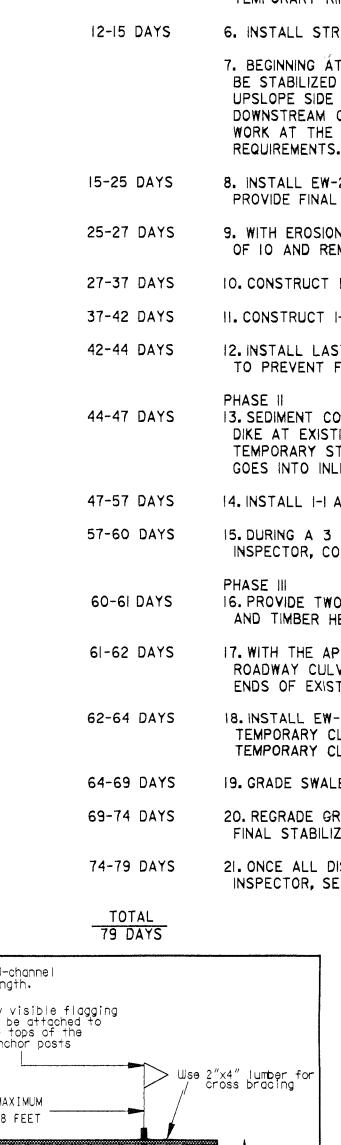


NOTE:

REDUCTION MEASURES

- l. Retention Areas will be set as part of the review process. 2. Boundaries of Retention Areas should be staked and flagged prior to trenching 3. Exact location of trench should be identified. 4. Trench should be immediately backfilled with soil revoved or other high organic
- 5. Roots should be cleanly cut using vibratory knife of other acceptable equipment.

SOURCE : City of Gaithersburg, Maryland: CITY TREE MANUAL dapted from Maryland State FOREST CONSERVATION MANUAL



RANGE OF DAYS SEQUENCE OF CONSTRUCTION I. CONDUCT A PRE-CONSTRUCTION MEETING ON-SITE WITH PRINCE GEORGE'S COUNTY EROSION AND SEDIMENT CONTROL INSPECTOR AND INSPECTOR OF THE AREA (DISTRICT 5-S), JOE LANHAM 240-876-5521, (48 HOURS NOTICE) PRIOR TO CLEARING, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING. 2. FIELD MARK THE LIMITS OF DISTURBANCE PRIOR TO CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES. INSTALL BLAZE ORANGE FENCE. 3. INSTALL MAINTENANCE OF TRAFFIC SIGNAGE PER APPROVED MAINTENANCE OF TRAFFIC PLAN. 4. CLEAR AND GRUB FOR INSTALLATION OF PHASE ISEDIMENT CONTROL DEVICES. REMOVE FENCES 9-12 DAYS 5. INSTALL SEDIMENT CONTROL DEVICES PER APPROVED EROSION AND SEDIMENT CONTROL PLAN - PHASE I: TEMPORARY SAND BAG DIKES, CLEAR WATER DIVERSION I, DIVERSION FENCE TEMPORARY RIPRAP PAD, AND SUPER SILT FENCE. TEMPORARY RIPRAP PAD TO BE INSTALLED WITH SEPERATE STREAM DIVERSION FIRST; SEE INSERT ON DER SHEET 5. 6. INSTALL STREAM DIVERSION: TEMPORARY SANDBAG DIKES, PUMPS, HOSE, IN STREAM AND FILTER BAG. 7. BEGINNING AT EW-2 AND WORKING UPSLOPE CONSTRUCT THE STORM DRAINAGE SYSTEM ONLY IN SECTIONS THAT CAN BE STABILIZED AT THE CONCLUSION OF EACH WORK DAY, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPSLOPE SIDE OF THE PIPE SYSTEM. BLOCK THE OPEN PIPE ENTRANCE TO PREVENT FLOWS FROM ENTERING THE DOWNSTREAM COMPLETED SYSTEM. ANY DISTURBED AREA IS TO BE STABILIZED BEFORE THE CONTRACTOR STOPS WORK AT THE END OF EACH WORKDAY, TEMPORARY VEGETATIVE STABILIZATION SHALL MEET 7/14 DAY SEEDING REQUIREMENTS. 8. INSTALL EW-2, CLASS IRIPRAP PAD, AND LAST TWO SECTIONS OF PIPE FROM MH-2 TO EW-2, AND BACKFILL. PROVIDE FINAL STABILIZATION. 9. WITH EROSION AND SEDIMENT CONTROL INSPECTOR'S APPROVAL, INSTALL SUPER SILT FENCE PER INSERT ON DER 5 OF 10 AND REMOVE STREAM DIVERSION. 10. CONSTRUCT MH-2 AND MH-1 AND CONNECTING PIPES FROM EW-2 THROUGH MH-1. II. CONSTRUCT 1-3 AND PIPE FROM 1-3 TO MH-1. 12. INSTALL LAST TWO SECTION OF PIPE FROM 1-2 TO 1-3 AND LAST SECTION OF PIPE FROM EW-1 TO 1-3. BLOCK PIPES TO PREVENT FLOW FROM ENTERING STORM DRAIN SYSTEM. 13. SEDIMENT CONTROL DEVICES PER APPROVED EROSION AND SEDIMENT CONTROL PLAN - PHASE II: ADJUST SANDBAG DIKE AT EXISTING DRIVEWAY CULVERT, REMOVE CLEAR WATER DIVERSION I, INSTALL ADDITIONAL DIVERSION FENCES, TEMPORARY STONE OUTLET STRUCTURE, SAND BAG DIKE, AND CLEAR WATER DIVERSION 2 SO THAT CLEAN WATER GOES INTO INLET. 14. INSTALL I-I AND I-2 AND CONNECTING PIPES. INSTALL UNDERDRAIN SYSTEM. 15. DURING A 3 DAY FORECAST DRY PERIOD AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, COMPLETE INSTALLATION OF PIPE BETWEEN 1-2 AND 1-3. 16. PROVIDE TWO DAYS NOTICE TO HOMEOWNERS OF DRIVEWAY WORK, REMOVE EXISTING DRIVEWAY, DRIVEWAY CULVERT AND TIMBER HEADWALL. 17. WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE DIVERSION FENCE AT EXISTING ROADWAY CULVERT AND TEMPORARY STONE OUTLET STRUCTURE, BRICK SHUT AND GROUT UPSTREAM AND DOWNSTREAM ENDS OF EXISTING ROADWAY CULVERT. PUMP DIRTY WATER TO FILTER BAG BY CLEAR WATER DIVERSION 2. 18. INSTALL EW-I AND PIPE FROM EW-I TO 1-3. RECONSTRUCT DRIVEWAY, INSTALL SANDBAG DIKES AND PUMPS TO REMOVE TEMPORARY CLASS IRIPRAP PAD; SEE INSERT ON DER SHEET 7. REMOVE DIVERSION FENCE FROM LUMAR DRIVE TO TEMPORARY CLASS I RIPRAP PAD. 19. GRADE SWALE AND PROVIDE FINAL STABILIZATION. 20. REGRADE GRAVEL SHOULDER TO PROVIDE POSITIVE DRAINAGE TO 1-3. MILL AND OVERLAY LUMAR DRIVE. PROVIDE FINAL STABILIZATION IN YARDS ON LUMAR DRIVE. 21. ONCE ALL DISTURBED AREAS ARE STABILIZED, AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, SEDIMENT CONTROL DEVICES MAY BE REMOVED AND THOSE AREAS STABILIZED.

Anchor posts should be minimum 2" steel U-channe or 2"x2" timber at least 6' in length. anchor posts MAXIMUM 8 FEET Use an 8" wire "U" to secure the bottom anchor posts must be put in the ground to a depth of at least 1/3 of the total height of the post 1. Blaze Orange Fence is for safety and tree protection 2. Blaze Orange Fence typically 5' from resource, 2' min. 3. Anchor posts should be placed to avoid severing or damaging large tree roots. 4. Fencing material should be fastened securely to the anchor posts, cross bracing, and ground.

Prince George's County Planning Department Environmental Planning Section APPROVAL TREE CONSERVATION PLAN TCP2-19-13

REVISIONS

DEPARTMENT **ENVIRONMENTAL RESOURCES** ENVIRONMENTAL SERVICES DIVISION PRINCE GEORGE'S COUNTY, MARYLAND DATE SSOCIATE DIRECTOR SCALE: AS SHOWN DWG. 2 OF 3 PPROVED DATE SECTION HEAD

DEPARTMENT OF ENVIRONMENTAL RESOURCES



LUMAR DRIVE STORM DRAIN IMPROVEMENTS

SAFETY FENCE ONLY

BLAZE ORANGE PLASTIC MESH

5. See plan for location.

TCP 2 & GRADIING, **EROSION AND SEDIMENT CONTROL DETAILS**

designed, m.m.r.

DATE

DER 2013-0008 CHECKED BY D.H.M. TCP 2 of 3 JICHESH SHETH PROJECT MANAGER

Section I - Vegetative Stabilization Methods and Materials

- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres. B. Soil Amendments (Fertilizer and Lime Specifications)
- Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
- iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at leas 50% will pass through a #100 mesh sieve and 98 100% will pass through a #20 mesh sieve.
- iv. Incorporate lime and fertilizer into the top 3 $5^{\prime\prime}$ of soil by disking or other suitable means.

C. Seedbed Preparation

- Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
- b. Apply fertilizer and lime as prescribed on the plans. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.
- a. Minimum soil conditions required for permanent vegetative establishment:
- Soil pH shall be between 6.0 and 7.0
 Soluble salts shall be less than 500 parts per million (ppm). The soil shall contain less than 40% clay but enough fine grained material (330% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.

 Soil shall contain 1.5% minimum organic matter by weight.
 Soil must contain sufficient pore space to permit adequate root penetration.
- Soil must contain sufficient para space to principle.

 If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
- b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 5" to permit bonding of the topsail to the surface grea and to create horizontal erosion check slots to prevent topsail from sliding down a slope.
- c. Apply soil amendments as per soil test or as included on the plans. d. Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed

All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this Job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-800 F. can weaken bacteria and make the inoculant less effective.

GREENMAN-PEDERSEN, INC. NGINEERS, ARCHITECTS, PLANNERS, CONSTRUCTION ENGINEERS & INSPECTORS 10977 GUILFORD ROAD, ANNAPOLIS JUNCTION, MD. 20701

WASH. (301) 470-2772 BALT. (410) 880-3055

FAX: (301) 490-2649 www.gpinet.com

FILE: N:\2003\2003046\2003046.30 Lumar Dr\dgn\pTCP-003_lumar.dgn DATE: Monday, June 23, 2014 AT 11:24 AM

- Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.
- If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per gore total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac; K20 (potassium): 200 lbs/ac,
- b. Lime use only ground agricultural limestone. (Up to 3 tons per agree may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
- II. Dry Seeding: This includes use of conventional drop or broadcast spreaders. a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permonent Seeding Summories or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
- b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
- a. Cultipacking seeders are required to bury the seed in such a fashion
 as to provide at least 1/4 inch of soil covering. Seedbed must be firm
 after planting.
- Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

- Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law. ii. Wood Cellulose Fiber Mulch (WCFM)
- WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
- b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
- c. WCFM, including dye, shall contain no germination or growth inhibiting
- d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
- e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
- f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately I mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired. G. Mulching Seed Areas - Mulch shall be applied to all seed areas immediately after seeding.

 If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and se. --din. -, can be performed in accordance with these specifications. ii. When straw mulch is used, it shall be spread over all seed areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between I" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be be Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1500 lbs per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

MA COMPA

- Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flotter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
- i. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- (ii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. The remainder of area should appear uniform after binder application. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax 11, Terra Tack AR or other approved equal may be used at rates recommended by the
- Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.
- Incremental Stabilization Cut Slopes All cut slopes shall be dressed, prepared, seed and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
- i'. Construction sequence (Refer to Figure 3 below):
- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff front the excavation.
- Perform phase I excavation, dress, and stabilize. Perform phase 2 excavation, dress, and stabilize. Overseed phase I areas as necessary.

d. Perform final phase excavation, dress, and stabilize. Overseed previously seeded areas as necessary. Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season necessitate the application of temporary stabilization.

- Figure 4 Incremental Stabilization Cut
- J. Incremental Stabilization of Embankments Fill Slopes Embankments shall be constructed in lifts as prescribed on the plans.
- Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15% or when the grading operation ceases as prescribed in the
- iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edige of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping daylog.
- iv. Construction sequence: Refer to Figure 4 (below).
- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct Slope Slit Fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
- Place phase I embankment, dress and stabilize. Place phase 2 embankment, dress and stabilize.
- d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun, the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

Figure 5 Incremental Stabilization - Fill

Section 11 - Temporary Seeding

Vegetation – annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetaitive cover, Permanent Seeding is required. A. Seed Mixtures - Temporary Seeding;

- Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary Seeding Summary below, along with application rates, seeding dates and seeding depths. If this: Summary is not put on the plans and completed, then Table 26 must be put on the plans.
- For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

	enutxim bee2	(Hardiness Zor From Table 2	Fertilizer Rate	Lime		
,40.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	(10-10-10)	
	Rye pius foxtail miliet	150 LB./AC	2/1 - 11/30	1"	600 lb/gc	
	Annual Ryegrass	50 LB./AC	2/1 - 4/30 8/15 - 11-1	1/4" -1/2"		2 tons/ac (100 lb/1000 sf
	Miliet	50 LB./AC	5/1 - 8/14	U2"		

Section III: Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance. A. Seed Mixtures - Permanent Seeding

- i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permonent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.
- ii. For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in. iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac) in addition to the above soll amendments shown in the table below to be performed at the time of seeding.

Pearmonent Seeding Summary

	From Table 26	Minimum Seeding Rates			Fertilizer Rate (10-20-20)				
No.	Specie s	App. Rate !b/ac	lbs:/100 sqft	Seeding Dates	Seeding Depths	Ν	P205	k20	Lime Rate
3	Tall fescue 85% Per. Ryegrass 10% Kentucky blue 5%	125 15 10	2.9 0.34 0.23	8/15 - 11/15	1/4-1/2"	90 lb/ac	175 lb/ac	175 lb/ac	2 tons/ac
5	Tail fescue 83% or Per. Ryegrass 50% Plus Crownvetch or Flatpea	110 20 20 20 20	2.5 0.46 0.46 0.46	8/15 - 11/15	1/4-1/2"	90 lb/ac	175 lb/ac	175 lb/ac	2 tons/ac

Section V — Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

- Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the job foreman and inspector.
- II. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable. iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- v. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

- During periods of excessively high temperature or in areas having dry subsoil the subsoil shall be lightly irrigated immediately prior to laying the sod. ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent walds which would cause air device of the roots.
- iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
- iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours. C. Sod Maintenance
- i. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent within. ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.

iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cutting. Grass height shall be maintained between 2" and 3" unless otherwise specified.

Section IV - Turfgrass Establishment

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by disking, or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting seedbed shall be in such condition that future moving of grasses will pose no difficulty. Note: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

- A. Turfgrass Mixtures Kentucky Bluegrass – Full sun mixture – For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and eastern shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.
- 1. Kentucky Bluegrass/Perennial Rye Full sun mixture For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Culturs/Certified Kentucky Bluegrass seeding rate: 2 pounds mixture/1000 square feet. A minimum of 3 Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.
- 111. Tall Fescue/Kentucky Bluegrass Full sun mixture For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: certified fail Fescue Cultivars 95 100%, certified Kentucky Bluegrass Cultivars 0 5%. Seeding rate: 5 to 8 lb/1000 square feet. One or more cultivars may be blended.
- iv. Kentucky Bluegrass/Fine Fescue Shade Mixture For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: certified Kentucky Bluegrass Cultivars 30-40% and certified Fine Fescue and 60-70%. Seeding rate: 1:1/2 3 lbs/1000 square feet. A minimum of 3 Kentucky bluegrass cultivars must be chosen, with each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

Note: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Mimeo #77, "Turfgrass Cultivar Recommendations for Maryland".

Western MD: March 15 - June 1, August I - October I (Hardiness Zones - 5b, 6a) Central MD: March I - May 15, August 15 - October 15 (Hardiness Zone - 6b) Southern MD, Eastern Shore: March I - May 15, August 15 - October 15 (Hardiness Zones - 7a, 7b)

21.0 STANDARD AND SPECIFICATIONS

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content. low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

- I. This practice is limited to areas having 2:1 or flatter slopes where:
- A. The texture of the exposed subsoll/parent material is not adequate to produce vegetative growth.
- B. The soil material is so shallow that the rooting zone is not doep enough to support plants or furnish continuing supplies of moisture and plant nutrients. C. The original soil to be vegetated contains material toxic to plant growth.
- D. The soil is so acidic that treatment with limestone is not feasible. II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type ran be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- II. Topsoil Specifications Soil to be used as topsoil must meet the following: A. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall no be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
- B. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
- C. Where the subsoil is either highly acidic or composed of heavy clays, (ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- III. For sites having disturbed areas under 5 acres place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative .Stabilization Section I Vegetative Stabilization Methods and Materials. IV. For sites having disturbed areas over 5 acres:
- A. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and time amendments required to bring the soll into compliance with the following: 1. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to
- 2. Organic content of topsoil shall be not less than 1.5 percent by weight. 3. Topsoil having soluble salt content greater than 500 parts per million shall
- 4. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or omendments, as recommends by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural

- B. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section I Vegetative Stabilization Methods and
- A. When topsoiling, maintain needed erosion and sediment control practices such as diversions. Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" 8" higher in elevation. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting, from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

- VI. Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted slludge and amendments may be applied as specified below: A. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following, requirements:
 - Composted studge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06. Composted studge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
- 3. Composted sludge shall be applied at a rate of I ton/1,000 square feet. B. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate. References: Guideline Specifications, Soil Preparation and Sodding MD-YA, Pub. #1, Cooperative Extension Service, University of Marykand and Virginia Polytechnic Institutes. Revised 1973.

<u>Table 27 Geo-textile Fabric</u> OPENING SIZE STRENGTH MM. MAX. LB. MIN. A 0.30 250 B 0.60 200 320 C 0.30 200 320 D 0.60 90 145 E 0.30 90 145 F(SILT FENCE) 0.40-0.80◆ 90 190

- The properties shall be determined in accordance with the following procedures:
- -Grab tensile strength ASTM D 1682: 4x8" specimen, 1X2" clamps, 12"/min. strain rate in both principal directtions of Geotextile fabric.

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be not and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polyamides. The geotextile fabric shall resist deterioration from ultraviolet exposure. In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507, and an applarent minimum elongation of 20 percent (20%) when tested in

accordance with the grab tensile strength requirements listed above. Class F geotextile fabrics for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft./min. flow rate and seventy—five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322. Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a mini mum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

	Table	9 28 St	one Siz	<u>e</u>	
	SIZE RANGE	D ₅₀	D ₁₀₀	AASHTO	WEIGHT
NUMBER 574	3/8" - 1 1/2"	1/2"	1 1/2"	H-43	N/A
NUMBER 1	2" - 3"	2:" 1/2"	3."	M-43	N/A
RIP-RAP **	4" - 7"	5 1/2"	7 "	N/A	N/A
CLASS I	N/A	9.5"	15*	N/A	150 LB. MAX
CLASS II	N/A	16"	24"	N/A	700 LB. MAX.
CLASS III	N/A	23.	34*	N/A	2000 LB, MAX.

- * This classification is to be used on the inside face of stone outlets and check dams.
- ** This classification is to be used when ever small rip-rap is required. The State Highway Administration designation for this Stone For Gabions (905.01.04).

19.0 STANDARDS AND SPECIFICATIONS

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography amd desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slop stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal

Many counties have regulations and design procedures already established for land grading and out and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

- Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets
 or to stable water courses to insure that surface runoff will not damage slopes or other graded
- II. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed the slope should be no steeper than 3:1: 4:1 is preferred because of safety factors related to mowing steep slopes.) Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey
- consideration when designing benches. A. Benches shall be a minimum off six-feet wide to provide for ease of maintenance.
- B. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate C. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary
- IV. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downslope by the use of a designed structure, except
- A. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized. B. The face of the slope shall mot be subject to any concentrated flows of surface water such as from natural drainageways, graded swales, downspouts, etc.
- C. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see section G), rip-rap V. Cut slopes occurring in ripoble rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Eq. step or serration shall be constructed on the contour and will have steps cut at nominal twofoot intervals with nominal three-foot horizontal shelves. These steps will vary depending on
 the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and
 act to hold moisture. Lime, fertilizer and seed thus producing a much quicker and longer lived
 vegetative cover and better slope stabilization. Overland flow shall be diverted from the top
- VI. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.
- VII. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence or other related damages. VIII. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor
- shall the fill material be placed on a frozen foundation. IX. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications,

X. All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-777

SEDIMENT CONTROL GENERAL NOTES

A. The developer is responsible for the acquisition of all required easement, right and/or rights-of-way pursuant to the discharge from the erosion and sediment control practices, stormwater management practices and the discharge of stormwater onto or downstream properties

B. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than three horizontal to one vertical (3:1) and b) fourteen days for all other disturbed or graded areas on the project site. The in-place sediment control measures will be maintained on a continuing basis until the site is permanently stabilized and all permit requirements are met.

C. On all sites with disturbed areas in excess of two acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals will not be authorized until this initial approval by the inspection agency is made.

D. Approval shall be requested upon final stabilization of all sites with disturbed areas in excess of two acres before

E. The owner/developer that signs the certification on an erosion and sediment control plan is the responsible party regardless of any sale of the property or work of subcontractors. Erosion and sediment control plans are approved for one owner/developer only. All permits under an erosion and sediment control plan must and can only be issued to the owner/developer that signs the certification on the plan.

F. PGSCD approval of an erosion and sediment control plan, pursuant to meeting local permit requirements for grading, building or street permits, etc., is valid only when the work to be performed under the permit is the same as (no more/no less than) that contained in the plan as approved by the PGSCD.

G. Any changes or modifications to an approved erosion and sediment control plan, not approved by the PGSCD. shall invalidate the plan approval. H. Offsite borrow or spoil areas must have an approved

and active erosion and sediment control plan.

vithin 36 months after the beginning of construction of the J. On small pond approvals:

a. The owner or engineer will notify PDSCD promptly in writing when construction is begun and when construction is completed). The project shall be constructed under the supervision of the engineer-in-charge. Within 30 days of the completion of construction. the engineer-in-charge that designed the structure shall provide PGSCD with an as-built plan and shall certify, with the engineer 5/32 s seal, that the MD378

Temporary designed sediment basins shall be removed

pond was constructed as shown on the as-built plans.

c. The approval is valid only for use by the applicant and may not be transferred to another unless written approval for such transfer is obtained from PGSCD. K. Disturbed surface area: 0.82 Ac. Total area of property: 0,82 Volume of spoil material: 4680.0 C.F.
Volume of borrow material: 1000.0 C.F.
Total Cut: 250.0 C.Y.

L. List Predominant soil types and general description per PGSCD soil survey: Bab Beltsville silt loam soils, 2-5% slopes
BuB Beltsville-Urban land complex soils, 0-5% slopes
CWD Croom-Marr complex soils, 10-15% slopes The above quantities are stated for permit acquisition

purposes only and are not to be used for bid tabulation.

EROSION AND SEDIMENT CONTROL NOTES

DATE

ECRED BY D.H.M.

JIGNESH SHETH
PROJECT MANAGER

A. THE SITE SUPERINTENDENT AND/OR THE PARTY DIRECTLY RESPONSIBLE FOR MAINTAINING THE SEDIMENT CONTROLS UNDER THIS CONTRACT MUST MEET WITH THE ERDSION CONTROL INSPECTOR FOR A PRE-CONSTRUCTION MEETING. CALL 301-725-0088 8. CONTACT THE SEDIMENT CONTROL INSPECTOR AT LEAST 48 HOURS PRIOR TO START OF WORK ON EACH PHASE: INFORM THE INSPECTOR OF THE ANTICIPATED STARTING DATE FOR CONSTRUCTION.). THE SEQUENCE OF CONSTRUCTION IS FOR THE CONTRACTOR'S GUIDANCE ONLY. THE Contractor may accelerate the schedule and perform two or more activities Concurrently. Any changes must be approved by the department of public works. D. THE CONTRACTOR SHALL SCHEDULE UTILITY TEST PITS AND RELOCATION WORK BY OTHERS SO AS TO PREVENT ANY DELAYS TO PROGRESS.

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REVISIONS

DEPARTMENT OF ENVIRONMENTAL RESOURCES

LICENSE NO. 15212, EXPIRATION DATE: 12/24/2014.

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSEL

PROFESSIONAL ENCINEER UNDER THE LAWS OF THE STATE OF MARYLAND

Date

M-NCPPC

Environmental Planning Section APPROVAL

TREE CONSERVATION PLAN

TCP2-

Approved by

Prince George's County Planning Department

ENVIRONMENTAL SERVICES DIVISION

LUMAR DRIVE STORM DRAIN IMPROVEMENTS **EROSION AND SEDIMENT CONTROL NOTES**

TCP 2 & GRADING,

TCP 3 of 3

DER 2013-0008

Bid Number

DPW&T PERMIT # 28411-2012