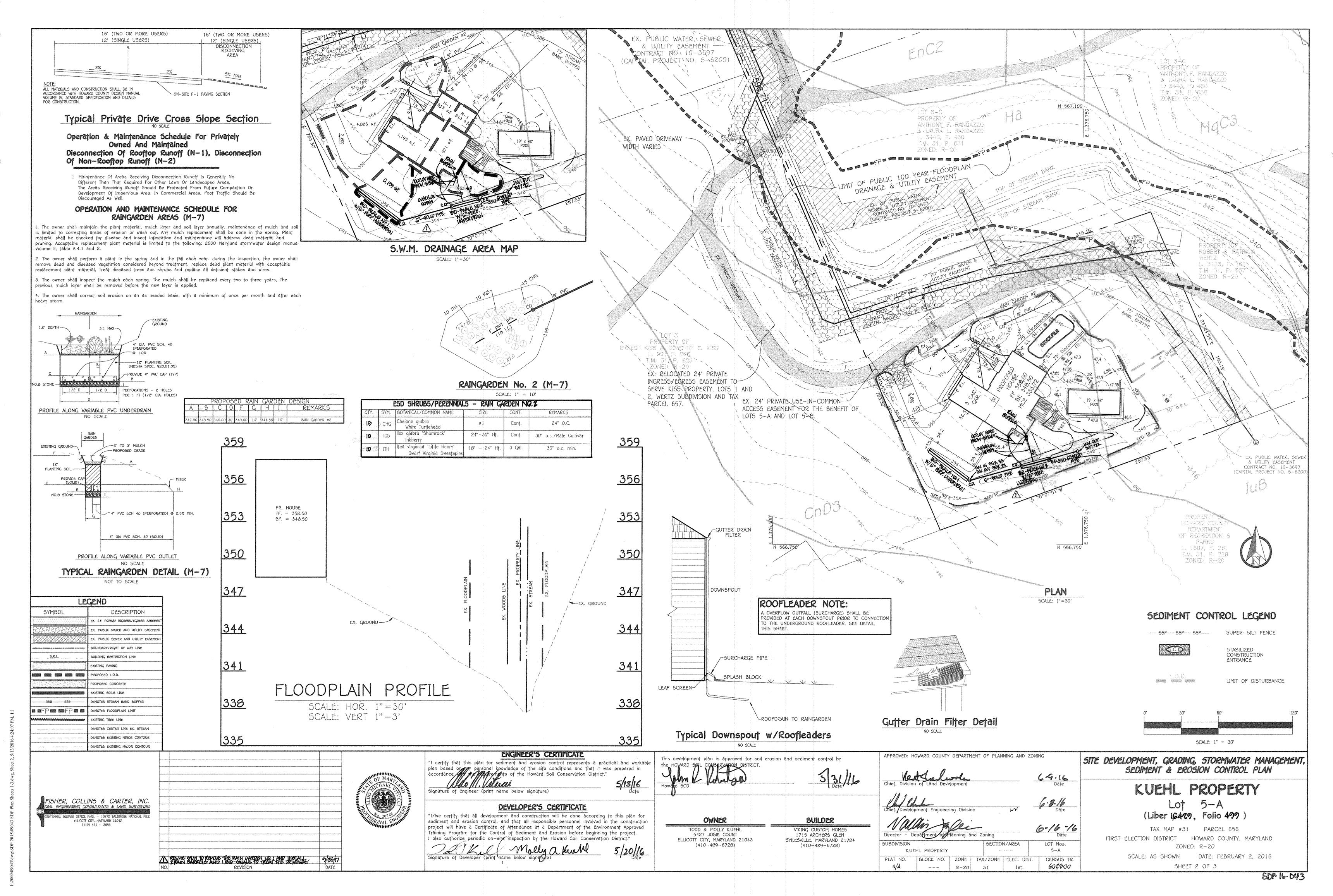


ELECTRONOLOGICAL CONTRACTOR OF LEDWING STORM STORM COLORER STORM S



A. Soil Proparation

Temporary Stabilization

. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable toricultural or construction equipment such as disc harrows or chisel plays or dispers mounted on onstruction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left n the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

. Apply fertilizer and lime as prescribed on the plans.

. Incorporate time and fertilizer into the top 3 to 5 inches of soil by disking or other suitable eanPermanent Stabilization

. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required

Soil pH between 6.0 and 7.0. Soluble salts less than 500 parts per million (ppm). Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus

lay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be lanted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable. 5oil contains 1.5 percent minimum organic matter by weight. Soil contains sufficient pore space to permit adequate root penetration

Application of amendments or topsoil is required if on-site soils do not meet the above conditions. . Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

. Mix soil amendments into the top 3 to 5 inches of soil by disking or other sultable means. Rake lawn area. o smooth the surface, remove large objects like stones and branches, and ready the area for seed application. posen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site onditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide à suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient ivels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

. Topsoil sälväged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the epresentative soil profile section in the Soil Survey published by USDA-NRCS.

. Topsoiling is limited to areas having 2:1 or flatter slopes where:

ontinuing supplies of moisture and plant nutrien

 The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. z. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish

. 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.

 Areas having slopes steeper than 2:1 require special consideration and design . Topsoil finecifications: Soil to be used as topsoil must meet the following criteria:

. Topsoli must be à loàm, sàndy loàm, clây loàm, sìlt loàm, sàndy clây loàm, or loàmy sànd. Other soils mày e used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. oppoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by rolume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1

. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved ry the appropriate approval authority, may be used in lieu of natural topsoil. i. Topsoil Application

. Crosion and sediment control practices must be maintained when applying topsoil

. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. reading is to 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 perations must be corrected in order to prevent the formation of depressions or water pock

.. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is rcessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation C. Soil Amendments (Perfiller and Line Specifications)

Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized privati or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical

Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for tertilizer with prior approval from the appropriate approval authori ertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer

). Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when droseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100

Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means

. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoi

STANDARDS AND SPECIFICATIONS

FOR SEEDING AND MULCHING (8-4-3)

The application of seed and mulch to establish vegetative cover.

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Specifications

a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.

Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.

Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.

d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in

each direction. Roll the seeded area with weighted roller to provide good seed to soil

Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. 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. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P205 (phosphorus), 200 pounds per acre; K₂0 (potassium), 200 pounds per acre.

ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre 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

Mix seed and fertilizer on site and seed immediately and without interruption. iv. When hydroseeding do not incorporate seed into the soil.

Mulch Materials (in order of preference)

a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.

b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state. WCFM is to be dyed green or contain a green dye in the package that will provide an

appropriate colot to facilitate visual inspection of the uniformly spread slurry. WCFM, including dye, must contain no germination or growth inhibiting factors. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under gaitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like around cover, on application, having moisture absorption

without inhibiting the growth of the grass seedlings. iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.

and percolation properties and must cover and hold grass seed in contact with the soil

WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

a. Apply mulch to all seeded areas immediately after seeding. b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the

application rate to 2.5 tons per acre. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:

into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of

A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch

50 pounds of wood cellulose fiber per 100 gallons of water. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is

strictly prohibited Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3.000

TEMPORARY SEEDING NOTES (8-4-4

To stabilize disturbed soils with vegetation for up to 6 months.

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies Exposed soils where around cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure 8.3), 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 plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the

testing agency. Soil tests are not required for Temporary Seeding 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section 8-4-3.A.1.b and maintain until the next seeding

lardiness Zone (from Figure 8.3): 6b Seed Mixture (from Table 8.1):				Fertilizer Rate (10-20-20)	Lime Rațe
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	chrumque de plane que la compansa de la compansa del compansa de la compansa de la compansa de la compansa de la compansa del compansa de la compansa del	
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1*	436 lb/dc (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OAT5	72		1"		
RYE	112		1"		

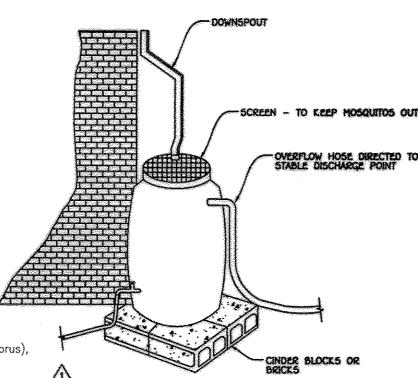
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS

establishment in high quality, intensively managed furf area. Mixture includes, Certified Kentucky Bluegrass SPECTIONS SHALL BE PROPORTION OF THE PACIFIED THE FACILITY IS DOUBLE PROPORTION. 2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF ONCE PER YEAR, NOT WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.

3. FILTERS THAT HAVE A GRASS COVER SHALL BE HOWED A HIMMUM OF THREE (3) THE GROWING SEASON TO HAMMAIN A HAWMUM GRASS HEIGHT OF LESS THAN 12 INCHES . DEBES AND LITTLE SHALL BE REMOVED DUCING REQUIRE HOWING OPERATIONS AND AS RELDED.

5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPARRED AS 500H AS IT IS NOTICED. RUNCHE SET WHEN IT EXCLEDS FOUR (4) INCHES DEEP IN THE PORESHY Filter hateral hust be replaced when water remains on the surface of the filter bed for hore than 24 hours following a 1 or 2 year storm event or hore than

B. A LOCADOX SHALL BE HADITAINED TO DETERMINE THE PATE AT WHICH THE MACLITY DRABBS. THE MUNICELLOGBOOK SHALL BE AMEABLE TO HOWERD COUNTY FOR INSPECTION TO INNUES CONTINUES WITH OPERATION AND MAINTENANCE CONTINUES. 10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED WE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE INDICATES THAT A HORE PREQUENT SCHEDULE IS REQUIRED.



SEQUENCE OF CONSTRUCTION

OBTAIN GRADING PERMITS. (2 WEEKS)

NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK. IN ADDITION, NOTIFY AT&T PRIOR TO ANY ACTIVITY WITHIN THEIR EASEMENT

3. INSTALL STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, SUPER-SILT FENCE AND DIVERSION FENCE WHERE SHOWN ON

4. INSTALL REMAINING PERIMETER SEDIMENT CONTROL MEASURES AS SHOWN. (3 DAYS)

5. STABILIZE ALL DISTURBED AREAS WITH TEMPORARY SEEDING, CONTACT THE COUNTY SEDIMENT EROSION CONTROL INSPECTOR BEFORE

PROCEEDING, (2 DAYS) 6. GRADE IN THE DRIVEWAY TO THE GRADES AS SHOWN ON THE PLAN. (1 WEEK)

7. BEGIN HOUSE EXCAVATION FOR FOUNDATION AND PLACE

EXCAVATED MATERIAL INTO THE STOCKPILE AREA. (8 WEEKS) 8. STABILIZE ALL DISTURBANCE WITH TEMPORARY SEEDING, RECEIVE PERMISSION TO CONTINUE FROM THE EROSION AND SEDIMENT CONTROL INSPECTOR, (2 DAYS)

9. INSTALL DECK AND POOL AREA AS SHOWN ON THE PLANS. (4 WEEKS) 10. STABILIZE ALL DISTURBANCE WITH TEMPORARY SEEDING. RECEIVE PERMISSION TO CONTINUE FROM THE EROSION AND SEDIMENT CONTROL INSPECTOR. (2 DAYS)

11. INSTALL THE 2 PROPOSED RAIN GARDENS TO TREAT THE SWM FOR THE HOUSE, INSTALL THE FILTER MEDIA AND CONNECT THE ROOF LEADER SYSTEM INTO THE FACILITIES, INSTALL THE POOF LEADERS FOR THE DISCONNECTION CREDIT AREAS

12. INSTALL FINAL COURSE OF PAVING FOR THE DRIVEWAY. (2 WEEKS)

13. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING. (1 DAY) 14. BEGIN REMOVAL OF THE PERIMETER SEDIMENT CONTROL FEATURES WITH THE APPROVAL OF THE EROSION AND SEDIMENT INSPECTOR. ONCE ALL THE SEDIMENT CONTROL MEASURES HAVE BEEN REMOVED PROVIDE PERMANENT SEEDING TO ANY DISTURBED AREAS. 1 (WEEK) NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. NOTE: ALL CONSTRUCTION WASTE MUST BE MANAGED IN ACCORDANCE WITH THE CONSTRUCTION WASTE MANAGEMENT PLAN.

PERPANENT SEEDING NOTES (6-4-5) A. Seed Matures

a. Select one or more of the species or mixtures listed in Table 8.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected nixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or desthetic treatment may be found in USDA-NECS Technical Field Office Guide, Section 342 - Critical Area Planting. c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown

2. Turfordss Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The

summary is to be placed on the plan. i. 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 per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight. ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid stablishment is necessary and when turt will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet

Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended. v. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For

Select turforass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" 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 reliable means of consumer protection and assures a pure genetic line

Ideal Times of Seeding for Turf Grass Mixtures Western MO: March 15 to June 1, August 1 to October I (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level

and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse

Permanent Seeding Summar

Seeding Dates

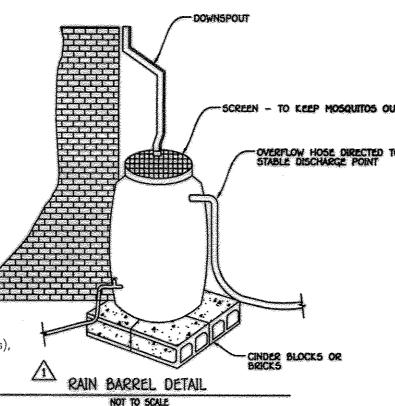
Hardiness Zone (from Figure B.3): 6b

(lb/ac)

100

Seed Mixture (from Table 8.3):

ameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no



HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 40 hour notice to CID must be given at the following stages: a. Prior to the start of earth

b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. c. Prior to the start of another phase of construction or opening of another grading unit, d. Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading. 4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the around is frozen, incremental stabilization (Sec. 8-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6). 5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CIO.

6. Site Analysis: 1.136 Acres Total Area of Site: 0.56 Acres Area Disturbed: Area to be roofed or paved: 0.16 Acres Area to be vegetatively stabilized: 0.40 Acres 2,000 Cu. Yds Total Cut: 2,000 Cu, Yds. Total Fill: Offsite waste/borrow area location: N/A

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired

9. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

· Inspection date Inspection type (routine, pre-storm event, during rain event)
 Name and title of inspector

· Maintenance and/or corrective action performed

15CD-approved field changes

Use IV March 1 - May 31

· Weather information (current conditions as well as time and amount of last recorded precipitation) Brief description of project's status (e.g., percent complete) and/or current activities Identification of plan deficiencies

· Identification of sediment controls that require maintenance Identification of missing or improperly installed sediment controls Compliance status regarding the sequence of construction and stabilization requirements Photographs Monitoring/sampling

s Other inspection items as required by the General Permit for Stormwater Associated with Construction . Activities (NPDE5, MDE). Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter. 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by he HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of

11. Disturbance shall not occur outside the LO.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the CID, no more than 30 acres cumulatively may be disturbed at a given time.

sediment basin or other approved washout structure. 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade. 14. All Sift Fence and Super Sift Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.

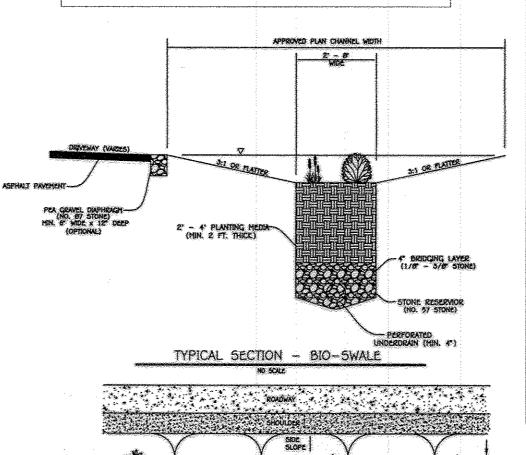
16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a

15. Stream channels must not be disturbed during the following restricted time periods Use I and IP March I - June 15 Use III and IIIP October 1 - April 30

CONTROL, and associated permits shall be on-site and available when the site is active. STANDARD STABILIZATION NOTE FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR

EMPORARY STABILIZATION MUST BE COMPLETED WITHIN:) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1): AND 6.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.



PLAN - BIO-SWALE

This development plan is approved for soil erosion and sediment control by

GALVANIZED CHAIN LINK FENCE WITH WOVEN 5LIT FILM GEOTEXTILE OR ALUMINUM POSTS ELEVATION CHAIN LINK FENCING-WOVEN SLIT FILM GEOTEXTILE-FLOW -EMBED GEOTEXTILE CROSS SECTION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL

----55F-----

NOTE: FENCE POST SPACING

STANDARD SYMBOL

The The Town

HALL NOT EXCEED 10

THE THE THE THE T

GROUND

SURFACE

CHAIN LINK FENCING

6' LENGTH POSTS.

TENSILE STRENGTH

TENSILE MODULUS

FILTERING EFFICIENCY

FLOW RATE

SLOPE

0 - 10%

10 - 20%

50% +

EMBED FILTER CLOTH &

MINIMUM INTO GROUND

* IF MULTIPLE LAYERS ARE

REQUIRED TO ATTAIN 42

FILTER CLOTH

21/2" DIAMETER

OR ALUMINUM

CENTER TO CENTER

CONSTRUCTION SPECIFICATIONS

INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.

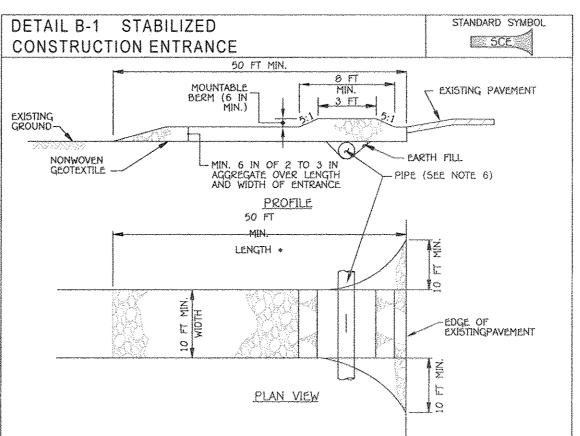
FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION, EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES. FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT

45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT TURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION



CONSTRUCTION SPECIFICATIONS

PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED

3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT), USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT

DETAIL C-9 DIVERSION FENCE ⊢--- DF -------MAXIMUM ORAINAGE AREA = 2 ACRES 36 IN MIN 2% IN DIAMETER GALVANIZED STEEL OR ALUMINUM -CHAIN LINK FENCE COVERED WITH IMPERMEABLE SHEETING UV RESISTANT IMPERMEABLE SHEETING ON BOTH SIDES O **ELEVATION** GALVANIZED S **SECTION** CONSTRUCTION SPECIFICATIONS USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING)

USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.

. FASTEN CHAIN LINK PENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF

8 INCHES INTO GROUND, SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM KEPP FLOW SURFACE ALONG DIVERSION FFNCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE

ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVI MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTES & DETAILS KUEHL PROPERTY

SEDIMENT & EROSION CONTROL

(Liber 16429. Folio 499)

TAX MAP #31 PARCEL 656 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET 3 OF 3

EXISTING TREES TO REMAIN

36" MINIMUM

FLOW

- 16" MIN. 1ST LAYER OF

TEST: MSMT 509

SILT FENCE LENGTH

(MAXIMUM)

UNLIMITED

1,500 FEE

500 FCET

STANDARD SYMBOL

TEST: MEMT 509

TEST: MSMT 322

10' MAXIMUM

FILTER CLO

CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE

SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND

2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE

TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND

3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES

5. MARTENANCE SHALL BE PERFORMED AS NEEDED AND SELT BUILDUPS REMOVED WHEN

"BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE

7. FETER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES

0.3 GAL/FT /MINUTE (MAX.) TEST: MSMT 322

SLOPE LENGTH

(MAXIMI,M)

UNUMED

200 FEET

100 FEET

50 FEET

LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE

POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.

4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF B" INTO THE GROUND.

5. WHEN TWO SECTIONS OF PILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE

OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING

50 LBS/IN (MIN.)

75% (MIN.)

20 185/IN (MIN.)

DESIGN CRITERIA

SUPER SILT FENCE. TREE PROTECTION FENCE

NOT TO SCALE

SPACED EVERY 24" AT THE TOP AND MID SECTION.

OVERLAPPED BY 6" AND FOLDED.

requirements for geotextile class f

SLOPE

STEEPNESS

0 ~ 10:1

10:1 ~ 5:1

3:1 - 2:1

2:1 +

34" MINIMUM

FILTER CLOTH

ORANGE STREAMER

FISHER, COLLINS & CARTER, INC. IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042

Allo H. VALLELLE

ediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. also authorize periodic on-site inspection by the Howard Soil Conservation District."

ENGINEER'S CERTIFICATE

6-9-16 évelopment Enaineerina Division NX SECTION/AREA LOT Nos. 5-A KUEHL PROPERTY BLOCK NO. ZONE CENSUS TR. TAX/ZONE | ELEC. DIST

R-20

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

anature of Endineer (print name below signature)

1) ADD BIO-SWALE, RAIN BARCEL, DECAILS & ADD THE O & M YOR THE BIO-SWALE 0/15/17

certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the featurements of the Howard Soil Conservation District." DEVELOPER'S CERTIFICATE I/We certify that all development and construction will be done according to this plan for

5/20/16

Fertilizer Rate (10-20-20) Lime Rate

Mar. 1-May 15 1/4-1/2 45 lbs. 90 lb/ac 90 lb/ac 2 tons/ac Aug. 15-Oct. 15 in. per acre (2 lb/ (2 lb/ (90 lb/ 1000 sf) 1000 sf) 1000 sf)

OWNER BUILDER TODD & MOLLY KUEHL VIKING CUSTOM HOMES 5427 JOSIE COURT 1715 ARCHERS GLEN ELLICOTT CITY, MARYLAND 21043 SYKESVILLE, MARYLAND 21784 (410 - 489 - 6728)(410 - 489 - 6728)

6-16-16

ZONED: R-20 SCALE: AS SHOWN DATE: FEBRUARY 2, 2016