

12-16-20

MA PROPERTY

N/A

greathomes111@yahoo.com

LOT 2

2ND

CENSUS TR.

ZONE TAX/ZONE ELEC. DIST.

24

R-20

5DP-19-052

DATE: AUGUST 2020

SHEET 3 OF 5

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation 1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches 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 must not be rolled or dragged smooth but left in the roughened condition. Slope 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

- c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means. 2. Permanent Stabilization
- a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
- Soil pH between 6.0 and 7.0. . Soluble salts less than 500 parts per million (ppm).
- iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted then a sandy soil (less than 30 percent silt plus clay) would be acceptable Soil contains 1.5 percent minimum organic matter by weight.
- v. Soil contains sufficient pore space to permit adequate root penetration b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
- c. 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. d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
- e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions 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 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.
- B. Topsoiling 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient
- 2. Topsoil salvaged 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 representative soil profile section in the Soil Survey published by USDA-NRCS.
- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- b. The soil material is so shallow that the rooting zone is not deep 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
- 4. Areas having slopes steeper than 2:1 require special consideration and design.
- 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
- a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
- b. 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
- c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. 6. Topsoil Application
- a. Erosion and sediment control practices must be maintained when applying topsoil.
- b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches.
- Spreading 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 operations must be corrected in order to prevent the formation of depressions or water pockets c. Topsoil must not be placed if 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.

- C. Soil Amendments (Fertilizer and Lime Specifications) 1 Soil tests must be performed to determine the evact 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 private
- or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate
- equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. rilizers 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. 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when
- hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limeston must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

TEMPORARY SEEDING NOTES (B-4-4)

disking or other suitable means

- 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 ground 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 B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

tardiness Zo Seed Mixture	ne (from Figure B. (from Table B.1):	3):6b		Fertilizer Rate (10-20-20)	Lime Rate
5pecies	Application Rate (lb/ac)	Seeding Dațes	Seeding Depths		
BARLEY	96	3/1 - 5/15, 0/15 - 10/15	1"	436 lb/ac	2 tons/ac
OAT5	72	3/1 - 5/15, 8/15 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"		

PERMANENT SEEDING NOTES (B-4-5) A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table 8.3 for the appropriate Plant Hardiness Zone (from Figure 8.3) and based on the site condition or purpose found on Table 8.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS 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 in the Permanent Seeding Summary

2. Turfgrass 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 turf 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 total mixture by weight.

iii. 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 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

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 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3

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

Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (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 diameter. The resulting seedbed must be in such condition that future moving of grasses will pose no

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 Summary

	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ 0	
TALL SCUE	100	1-May 15 1-Oct. 15	1/4-1/2 in.	per acre	90 lb/ac (2 lb/	90 lb/ac (2 lb/	(90 lb/
				(1.0 lb/ 1000 sf)	1000 sf)	1000 sf)	1000 sf)

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR

STANDARD STABILIZATION NOTE

a.) 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

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED

STANDARDS AND SPECIFICATIONS STOCKPILE AREA

Definition

The mound or pile of soil protected by appropriately designed erosion and sediment control measures.

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper tha 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice. Access the stockpile area from the upgrade side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization. 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to

facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3

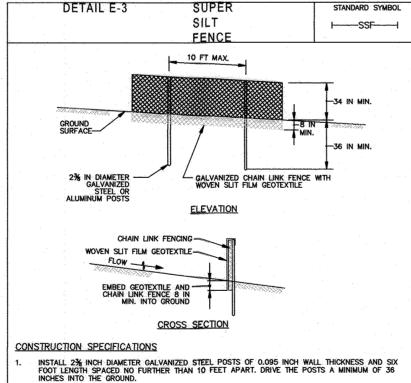
STANDARDS AND SPECIFICATIONS SEEDING AND MULCHING (B-4-3)

Definition 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.

- 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
- b. 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 each direction.
- c. 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; P20, (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.
- B. Mulching 1. 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 ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds at concentration levels that will by 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.
- Apply mulch to all seeded areas immediately after seeding. 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: A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch 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 or 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 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 egual 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. iv. 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



- FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO TUPSLOPE 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.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE. 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENI OF THE SUPER SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHE SEDIMENT REACHES 25% OF FENCE HEIGHT, REPLACE GEOTEXTILE IF TORN, IF UNDERMININ REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONME WATER MANAGEMENT ADMINISTRATION

ENGINEER'S CERTIFICATE

pent and erosion control represents a practical and workable

edge of the site conditions and that it was prepared in

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 48 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance.

HOWARD SOIL CONSERVATION DISTRICT (HSCD)

STANDARD SEDIMENT CONTROL NOTES

b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.

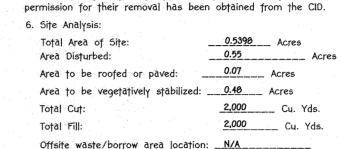
c. Prior to the start of another phase of construction or opening of another grading unit, d. Prior to

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

avoid conflicts with this plan. 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 ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. 8-4-8) 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. 8-4-6) 5. All sediment control structures are to remain in place, and are to be maintained in operative condition unt



7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

8. 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
 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 Evidence of sediment discharges · 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 Maintenance and/or corrective action performed · Other inspection items as required by the General Permit for Stormwater Associated with Construction
- 9. 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 the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of
- H5CD-approved field changes. 11. Disturbance shall not occur outside the L.O.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
- 12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

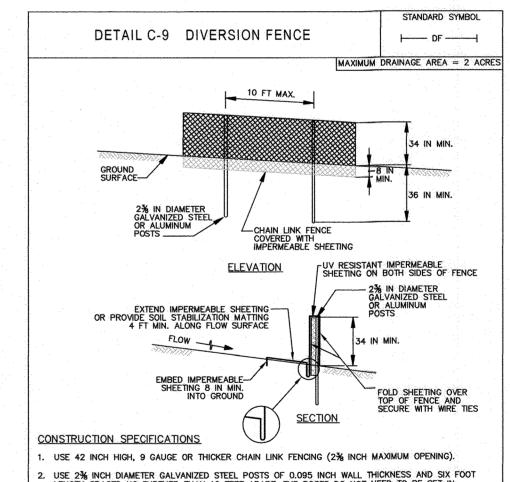
15. Stream channels must not be disturbed during the following restricted time periods

- 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade. 14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation
- Use I and IP March 1 June 15 • Use III and IIIP October 1 - April 30

• Use IV March 1 - May 31

cumulatively may be disturbed at a given time.

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.



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 FENCE 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 WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
- KEEP FLOW SURFACE ALONG DIVERSION FENCE 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 MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

DATE NO. PERMIT INFORMATION CHART LOT Nos. SUBDIVISION SECTION/AREA LOT 2 MA PROPERTY CENSUS TR. BLOCK NO. ZONE | TAX/ZONE | ELEC. DIST.

ASSOCIATED SSF AND PERIMETER DIVERSION FENCE AS SHOWN ON THE PLANS. (2 WEEKS)

2 NOTIFY "MISS LITHTY" AT LEAST 48 HOURS REFORE ANY WORK AT 1-800-257-7777 NOTIFY

HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST

3. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, AND SUPER SILT FENCE. (2

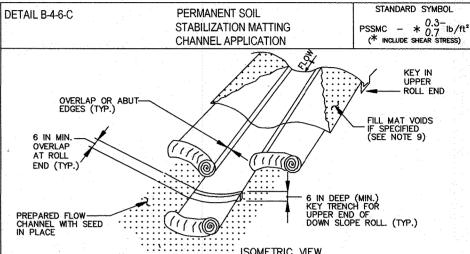
- 4. INSTALL STORM DRAIN SYSTEM AND GRADE AROUND I-3 TO THE NORTHEAST. INSTALL
- 5. GRADE SITE TO THE PROPOSED CONTOURS FOR THE ACCESS DRIVE TO LOT 2. (1 WEEK)
- 6. INSTALL THE PROPOSED SEWER AND WATER MAINS IN CONJUNCTION WITH THE ABOVE STORM DRAIN SYSTEM. (1 WEEK)
- 7. CONSTRUCT RETAINING WALL AND ROUGH GRADE THE SITE. (1 DAY) 8. CONSTRUCT THE HOUSE. (4 MONTHS)
- 9. STABILIZE ALL DISTURBED AREAS ONSITE. (2 DAYS)

SEQUENCE OF CONTSRUCTION

24-HOURS BEFORE STARTING ANY WORK. (1 WEEK)

1. OBTAIN GRADING PERMITS. (2 WEEKS)

- 10. PAVE THE DRIVEWAY FOR THE ACCESS TO LOT 2. (1WEEK)
- 11. ONCE ALL AREAS ARE STABILIZED, CONSTRUCT MICRO BIO-RETENTION FACILITY AND INSTALL RAIN BARRELS. (1 WEEK)
- 12. AT APPROVAL OF SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROLS. (2 DAYS) 13. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HERON AND AFTER EACH RAINFALL AND ON A DAILY



ISOMETRIC VIEW

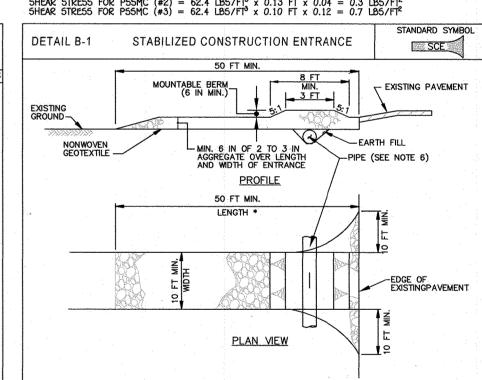
CONSTRUCTION SPECIFICATIONS: USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH—SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION 2011 SHEAR STRESS FOR PSSMC (#1) = $62.4 \text{ LBS/FT}^3 \times 0.21 \text{ FT} \times 0.025 = 0.3 \text{ LBS/FT}^2$ SHEAR STRESS FOR PSSMC (#2) = $62.4 \text{ LBS/FT}^3 \times 0.13 \text{ FT} \times 0.04 = 0.3 \text{ LBS/FT}^2$ SHEAR STRESS FOR PSSMC (#3) = $62.4 \text{ LBS/FT}^3 \times 0.10 \text{ FT} \times 0.12 = 0.7 \text{ LBS/FT}^2$



CONSTRUCTION SPECIFICATIONS

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.

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 RAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS 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. TAIN 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

NOTES & DETAILS

SEDIMENT AND EROSION CONTROL

MA PROPERTY, LOT 2

4335 Centennial Lane, Ellicott City, MD 21042 (A Single Family Dwelling) (Plat Ref. 17794)

DATE: AUGUST 2020

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

FISHER, COLLINS & CARTER, INC (410) 461 - 2055

12/14/20 Chief, Division of Land Development 12-16-20 epartment of Planning and Zoning

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Mr. Hong Tao Ma

DEVELOPER'S CERTIFICATE 'I/We certify that all development and construction will be done according to this plan for sediment 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. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

the Howard Soil Conservation District." 1/9/2030

CONSTRUCTION SPECIFICATIONS

OWNER/DEVELOPER

B-4-1 STANDARDS AND SPECIFICATIONS

INCREMENTAL STABILIZATION

Establishment of vegetative cover on cut and fill slopes.

To provide timely vegetative cover on cut and fill slopes as work progresses

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and

a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around

c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as

Figure B.1: Incremental Stabilization - Cut

1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and

2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading

3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept

a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around

the fill. Construct silt fence on low side of fill unless other methods shown on the plans address

b. At the end of each day, install temporary water conveyance practice(s), as necessary, to

e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as

completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the

interruptions in the operation or completing the operation out of the seeding season will necessifate the

Figure B.2: Incremental Stabilization - Fill

6 IN MIN. HEIGHT OF WOVEN SLIT FILM GEOTEXTILE

L8 IN MIN. DEPTH

FENCE POST 18 IN MIN.

— ABOVE GROUND

/-- UNDISTURBE GROUND

TANDARD SYMBO

——SF——

intercept surface runoff and convey it down the slope in a non-erosive manner.

d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded

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 will necessitate

-PHASE 2 EXCAVATION

TEMPORARY DIKE/SWALE TO BE PLACED AT THE END OF EACH

15 FT. MAX.

WORK DAY, TO BE USED UNTIL SLOPE IS COMPLETELY STABILIZE

SILT FENCE/
-SUPER SILT FENCE

PHASE 3 EXCAVATION

Conditions Where Practice Applies

Definition

Purpose

apply seed and mulch on all cut slopes as the work progresses.

b. Perform Phase 1 excavation, prepare seedbed, and stabilize.

ISTING GROUND EXISTING GROUND-

Construction sequence example (Refer to Figure B.

A. Incremental Stabilization - Cut Slopes

the application of temporary stabilization.

8. Incremental Stabilization - Fill Slopes

operation ceases as prescribed in the plans.

apply seed and mulch on all slopes as the work progresses.

4. Construction sequence example (Refer to Figure 8.2):

c. Place Phase 1 fill, prepare seedbed, and stabilize.

d. Place Phase 2 fill, prepare seedbed, and stabilize.

application of temporary stabilization.

PHASE 3 EXCAVATION-

PHASE 2 EXCAVATION -

SILT FENCE

WOVEN SUT FILM— GEOTEXTILE

6 FT MAX.
CENTER TO CENTER 36 IN MIN. FENCE POST LENGTH
DRIVEN MIN. 16 IN INTO GROUND

CROSS SECTION

FENCE SECTIONS (TOP MEW)

USE WOOD POSTS 1% χ 1% \pm % INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "1" OR "U" SECTION STEEL POSTS WEIGHIN NOT LESS THAN 1 POUND PER LINEAR FOOT.

USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET

USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.

WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.

EXTEND BOTH ENDS OF THE 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 SILT FENCE.

RÉMOVÉ ACCUMULATED SEDIMENT AND DÉBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT, REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCIDES REINSTAIL FENCE.

U.S. DEPARTMENT OF AGRICULTURE
TURAL RESOURCES CONSERVATION SERVICE

2011

WARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

surface runoff and convey it down the slope in a non-erosive manner

the excavation.

15 FT. MAX.

4268 Maisel Farm Lane Ellicott City, Maryland 21042 410.493.4950

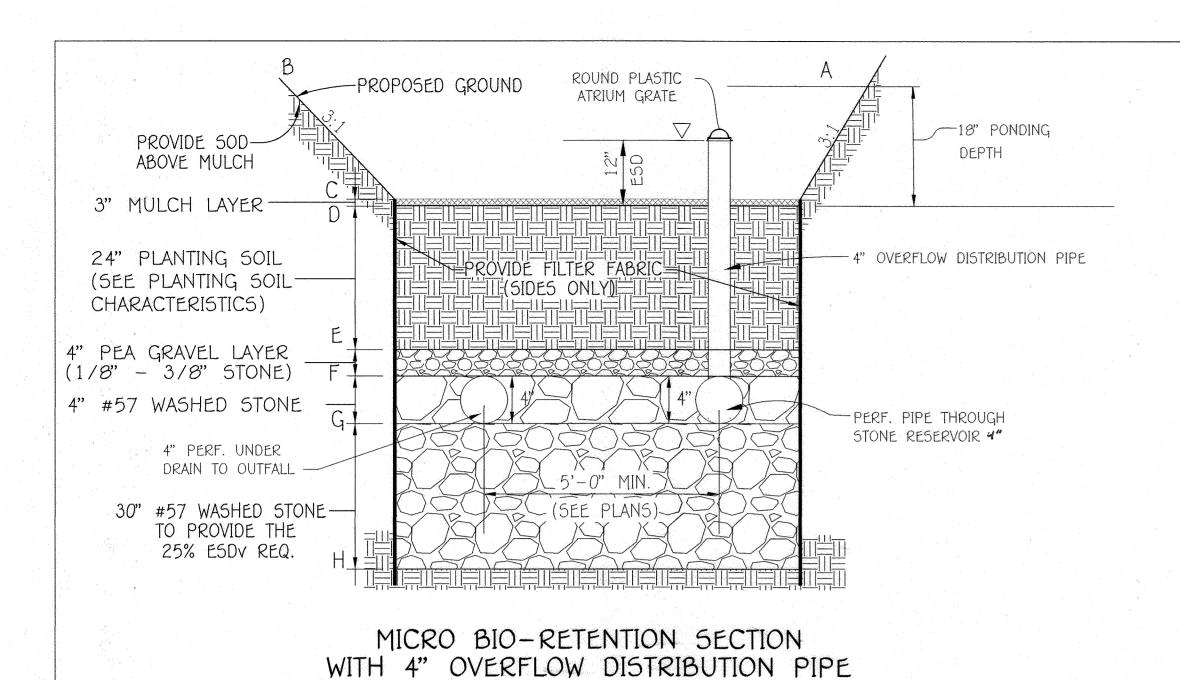
greathomes111@yahoo.com

17794 N/A R-20

Zoning: R-20 TAX MAP NO: 24 PARCEL NO.: 1037 GRID NO.: 19 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET 4 OF 5

5DP-19-052



NO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6)

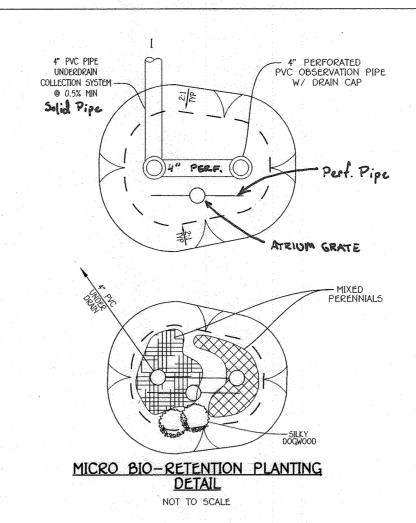
1. The owner shall maintain the plant material, mulch layer and soil layer annually. maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.

2. The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, Treat diseased trees ans shrubs and replace all deficient stakes and wires.

3. The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years, The previous mulch layer shall be removed before the new layer is applied.

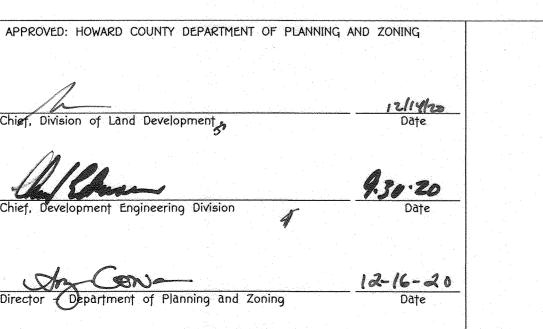
4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

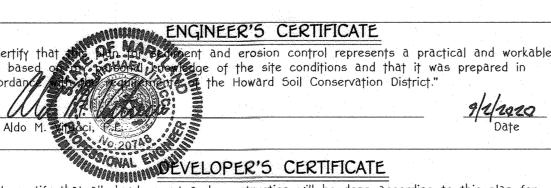
	M	ICRO)-BI	ORE	TENT	ΓΙΟΝ			
MICRO-BIORETENTION FILTER	А	В	С	D	E	F	G	H	I.
# 1	478.50	479.00	477.25	477.00	475.00	474.67	474.33	471.83	471.06



MICRO-BIC	RETENTION	PLANT MATERIAL			
MICRO-BIO 1 QUANTITY	NAME	MAXIMUM SPACING (FT.)			
65	MIXED PERENNIALS	1.5 TO 3.0 FT.			
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION			







Mr. Hong Tao Ma

"I/We certify that all development and construction will be done according to this plan for sediment 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.

I also authorize periodic on-site inspection by the Howard Soil Conservation District."

This development plan is approved for soil erosion and sediment control by the HOVARD SOIL CONSE VATION DISTRICT.

Howard SCD

Date

OWNER/DEVELOPER

Mr. Hong Tao Ma

Mr. Hong Tao Ma 4260 Maisel Farm Lane Ellicott City, Maryland 21042 410.493.4950 greathomes111@yahoo.com NO.

REVISION

PERMIT INFORMATION CHART

SUBDIVISION

MA PROPERTY

PLAT NO.

BLOCK NO.

ZONE

TAX/ZONE

ELEC. DIST.

CENSUS TR.

17794

N/A

R-20

24

2ND

601101

SWM DETAILS-STORM DRAIN PROFILE

MA PROPERTY, LOT 2

4335 Centennial Lane, Ellicott City, MD 21042
(A Single Family Dwelling)
(Plat Ref. 17794)

Zoning: R-20

TAX MAP NO: 24 PARCEL NO.: 1037 GRID NO.: 19

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: AUGUST 2020 SHEET 5 OF 5

5DP-19-052