

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition
Using vegetation on cover to protect exposed soil from erosion.

Purpose
To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies
On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity
Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by stabilizing those substances present within the root zone.

Sediment control practices must remain in place during grading, seeded preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative establishment requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for time, fertilizer, seeded preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

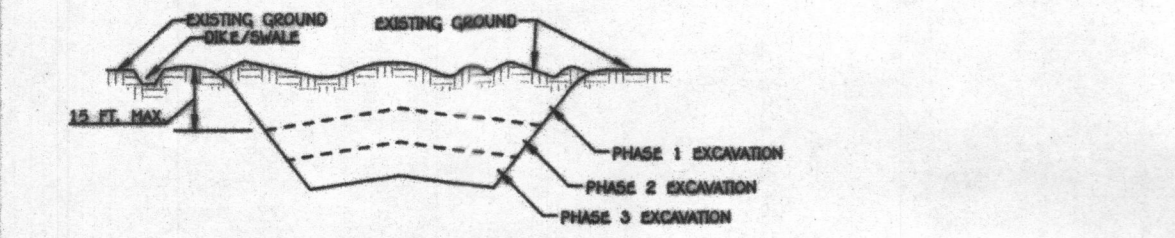
Definition
Establishment of vegetative cover on cut and fill slopes.

Purpose
To provide timely vegetative cover on cut and fill slopes to stop soil progression.

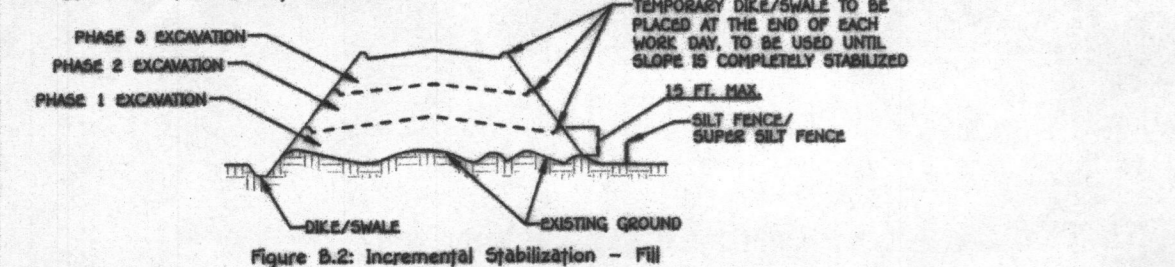
Conditions Where Practice Applies
Any cut or fill slope greater than 15 feet in height. This practice also applies to steepfills.

- Incremental Stabilization - Cut Slopes**
 1. Excavate and stabilize all slopes in increments not to exceed 15 feet in height. Prepare seeded and apply seed and mulch on all cut slopes as the work progresses.
 2. Stabilize slopes immediately when the vertical height of a cut reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
 3. Construct and stabilize all temporary erosion or dikes that will be used to convey runoff around the excavation.
 4. Perform Phase 1 excavation, prepare seeded, and stabilize.
 5. Perform Phase 2 excavation, prepare seeded, and stabilize.
 6. Perform final phase excavation, prepare seeded, 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 over the seeding season will necessitate the application of temporary stabilization.



- Incremental Stabilization - Fill Slopes**
 1. Construct and stabilize all slopes in increments not to exceed 15 feet in height. Prepare seeded and apply seed and mulch on all slopes as the work progresses.
 2. Stabilize slopes immediately when the vertical height of a fill reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
 3. At the end of each day, install temporary water conveyance practices, as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
 4. Construct and stabilize all temporary erosion or dikes that will be used to divert runoff around the fill.
 5. Construct and stabilize all erosion control devices on the slope address this area.
 6. At the end of each day, install temporary water conveyance practices, as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
 7. Perform Phase 1 fill, prepare seeded, and stabilize.
 8. Perform Phase 2 fill, prepare seeded, and stabilize.
 9. Perform final phase fill, prepare seeded, and stabilize. Overseed previously seeded areas as necessary.



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

- Temporary Stabilization**
 1. Seeded practices consist of seeding soil to a depth of 3 to 5 inches by means of suitable equipment, such as the use of a hand sower or a sowing machine. The seed should be applied to a depth of 3 to 5 inches and not to be mixed with soil.
 2. Apply fertilizer and lime as specified in the plans.
 3. Landscape law and fertilizer top to 3 to 5 inches of soil by using a hand sower or other suitable means.
- Permanent Stabilization**
 1. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - i. Soil pH between 6.0 and 7.0.
 - ii. Soluble salts less than 500 parts per million (ppm).
 - iii. Soil contains less than 40 percent clay (less than 40 percent plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if loesslike soil is present, then a sandy soil (less than 50 percent plus clay) would be acceptable.
 - iv. Soil contains 1.5 percent minimum available nitrogen by weight.
 - v. Soil contains sufficient pore spaces to permit adequate root penetration.
 2. Application of amendments or topsoil is required if one or more do not meet the above conditions.
 3. Graded areas must be maintained in a true and level grade as specified on the approved plan, then seeded or otherwise treated to a depth of 3 to 5 inches.
 4. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - i. Soil amendments top to 3 to 5 inches of soil by using a hand sower or other suitable means. Also use a hand sower or other suitable means to apply the amendments to roughen the surface where conditions will not permit normal seeded preparation. Thick slopes 2:1 or steeper with limited vegetation leaving the soil in a temperate condition to the center of the slope. Leave the top 1 to 2 inches of soil loose and pliable. Seeded 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 vegetation growth. Subsoil may have low moisture content, low nutrient level, and/or undesirable soil structure.
2. Topsoil obtained from an existing site may be used provided it meets the standards set forth in these specifications. Typically, the depth of topsoil to be added for a given soil type can be found in the appropriate soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or steeper slopes where:
 - a. the texture of the exposed subsoil material is not adequate to produce vegetation growth.
 - b. the soil material is so shallow that the rooting zone is not deep enough to support plants or plants containing nodules and plant nodules.
 - c. the exposed soil to be vegetated contains material not to plant growth.
 - d. the soil is so acidic that treatment with lime is not feasible.
 - e. the slope is so steep that topsoil application is not feasible.
4. Areas having slopes steeper than 2:1 require special construction and design.
5. Topsoiling Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silty loam, silty clay loam, or heavy silt. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate regulatory authority. Topsoil must not be a mixture of competing topsoil materials and contain less than 3 percent volume of stones, cobbles, shells, gravel, pebbles, or other material larger than 1/2 inch in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as burdock, thistle, quack grass, Johnson grass, red top, poison ivy, alfalfa, or other noxious species.
 - c. Topsoiling operations, as recommended by a qualified agronomist or soil scientist and approved by the appropriate regulatory authority, may be used in lieu of other practices.
 - d. Topsoiling Application:
 - i. Erosion and sediment control practices must be established when applying topsoil.
 - ii. Inadequately topsoiled areas to 3 to 5 inches top and light cover to a minimum depth of 4 inches. Topsoiling is to be performed in such a manner that existing vegetation is not damaged and a minimum of 50 percent of the topsoil is applied to the surface resulting from topsoiling or other operation used to correct the condition.
 - iii. Topsoil must not be placed in a frozen or muddy condition when the soil is excessively wet or in a condition that will otherwise be detrimental to proper grading and seeded preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both time and fertilizer on areas having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil analysis taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate regulatory authority. Fertilizers must be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and variety of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime) may be substituted except when hydroxyapatite which contains at least 50 percent phosphorus (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 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by using a hand sower or other suitable means.
5. Areas where additional highly acidic or compound of heavy clay, special ground limestone at the rate of 10 to 20 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition
The application of seed and mulch to establish vegetative cover.

Purpose
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.

- Seeding**
 1. Specifications
 - i. 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 seeding 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.
 - ii. Match clover 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.
 - iii. 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 keep inoculant cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - iv. Soil or seed must not 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 phytotoxic materials.
 2. Application
 - i. Seeding: This includes use of conventional drop or broadcast spreading.
 - ii. Incorporate seed into the subsoil of the areas prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - iii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seed area with weighted roller to provide good seed to soil contact.
 - iv. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacker seeders are required to bury the seed in a firm condition to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - v. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - vi. 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; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre. 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.
 - vii. Mix seed and fertilizer on site and seed immediately and without interruption.
 - viii. When hydroseeding do not incorporate seed into the soil.
 3. Drift or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacker seeders are required to bury the seed in a firm condition to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 4. Application: Roll the seed area with weighted roller to provide good seed to soil contact.
 5. Drift or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacker seeders are required to bury the seed in a firm condition to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 6. Application: Roll the seed area with weighted roller to provide good seed to soil contact.
 7. 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; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre. 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.
 8. Mix seed and fertilizer on site and seed immediately and without interruption.
 9. When hydroseeding do not incorporate seed into the soil.

- Mulching**
 1. Materials (in order of preference)
 - i. Straw consisting of thoroughly tumbled wheat, rye, oat, or barley and reasonably bright in color. Straw to be free of noxious weed seeds as specified in the Seed Law.
 - ii. WCM material may 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 must form a hollow-like ground cover, on application, having minimum absorption and permeation properties and must cover and hold ground seed in contact with the soil without inhibiting the growth of the green seedlings.
 - iii. WCM material must not contain elements or compounds of concentration levels that will be phytotoxic.
 - iv. WCM 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 1.0 percent maximum and water holding capacity of 60 percent minimum.
 2. Application
 - i. Apply mulch to all seeded areas immediately after seeding.
 - ii. When straw mulch is used, spread it over all seeded areas of 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 choker, the mulch application rate is 2.5 tons per acre.
 - iii. Wood cellulose fiber mulch will be applied to a dry mix weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to obtain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - iv. Synthetic binders such as Acrylic BIR (Ago-Tack), DCA-70, Pelment, Terra Tex II, Terra Tack All or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be known in the areas where wood cellulose mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
 - v. Lightweight plastic netting may be applied over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

TEMPORARY SEEDING NOTES (B-4-4)

1. Establish temporary seeding with vegetation for up to 6 months.
2. Purpose: To protect growing vegetation that provides cover on disturbed soils.
3. Conditions Where Practice Applies: Temporary seeding shall be used for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
4. Criteria:
 - a. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary table along with application rates, seeding dates and seeding depths. If this Summary is not part of the plan and completed, then Table B.1 plus fertilizer and lime rates must be part of the plan.
 - b. For sites having steep slopes, use and show the recommended rates by the Seeding Agency. Soil tests are not required for Temporary Seeding.
5. When stabilization is required outside of a seeding season, apply seed and mulch or other match soils as prescribed in Section B-4-3.1.1 and maintain until the next seeding season.

Hardiness Zone (from Figure B.3):	Seed Mixture		Seeding Depth	Fertilizer Rate (10-20-20)	Lime Rate (100-20-20)
	Species	Application Rate (lb/acre)			
BARKLEY	95	3/1 - 5/15	1"	406 lb/acre (10 lb/1000 sq ft)	2 tons/acre (50 lb/1000 sq ft)
QMS	72	6/15 - 10/15	1"		
RYE	112		1"		
POXTAL HILLSET	30	5/16 - 7/31	0.5"		

A. Seed Mixtures

1. General Use
 - a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site conditions or purpose (found on Table B.2). Enter selected mixtures, 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 streambanks, 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 242 - Critical Area Planting.
 - c. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency. For areas receiving low maintenance, apply used from fertilizer (40-0-0) 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 mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

- 1. Kentucky Bluegrass: Full Sun Mixture:** For use in areas that require intensive management. Irrigation required in the areas of central Maryland and eastern shore. Certified Kentucky Bluegrass Cultivar Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of these Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - 1. Kentucky Bluegrass/Parrotail Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will require medium to intensive management. Certified Kentucky Bluegrass Cultivar/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 30 percent of the total mixture by weight.
 - 2. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium maintenance 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: 3 to 3 pounds per 1000 square feet. One or more cultivars may be blended.
 - 3. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in bluegrass lawns. For establishment in high quality, heavily mowed turf lawns. 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 pounds per 1000 square feet.

Note: Match clover 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.

Close certified material Certified material is the best quality of cultivar seed. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable source of consumer protection and assures a pure genetic line.

- 1. Ideal Times of Seeding for Turf Grasses:**
 - 1. Kentucky Bluegrass: March 15 to June 1, 15 to October 1 (Hardiness Zones: 5b, 6a)
 - 2. Tall Fescue: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6b)
 - 3. Kentucky Bluegrass: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6b)
 - 4. Southern Ryegrass: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6b)
2. Turfgrass Mixture:
 - a. Turfgrass Mixture: For use in areas with shade in bluegrass lawns. For establishment in high quality, heavily mowed turf lawns. 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 pounds per 1000 square feet.

Hardiness Zone (from Figure B.3):	Seed Mixture		Seeding Depth	N	P ₂ O ₅	K ₂ O	Fertilizer Rate (10-20-20)	Lime Rate
	No. Species	Application Rate (lb/acre)						
6	TALL FESCUE	100	1/4-1/2	19 lb/acre (5 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	2 tons/acre (50 lb/1000 sq ft)	
3	OSGE TORQUEE	20	1/4-1/2	19 lb/acre (5 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	2 tons/acre (50 lb/1000 sq ft)	
	SHEEP FESCUE	20	1/4-1/2	19 lb/acre (5 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	2 tons/acre (50 lb/1000 sq ft)	
	CANADIAN WILD RYE	20	1/4-1/2	19 lb/acre (5 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	2 tons/acre (50 lb/1000 sq ft)	
	COMMON LYSERGRASS	10	1/4-1/2	19 lb/acre (5 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	90 lb/acre (22 lb/1000 sq ft)	2 tons/acre (50 lb/1000 sq ft)	

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (1 DAY)
2. NOTIFY "THIS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. (7 DAYS)
3. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK. (1 DAY)
4. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, DIVERSION FENCE, AND SUPER-SILT FENCE, AS SHOWN ON THE PLANS. (1 DAY)
5. ROUGH GRADE AROUND HOUSE SITE AND INSTALL TEMPORARY SEEDING, IF REQUIRED. (2 DAYS)
6. CONSTRUCT BUILDING. (60 DAYS)
7. ALL FINAL GRADING AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS.

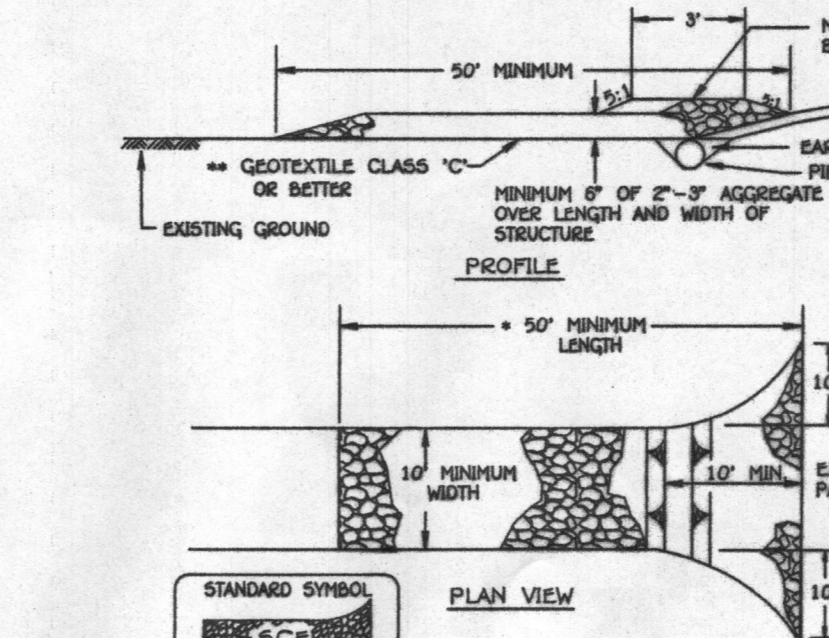
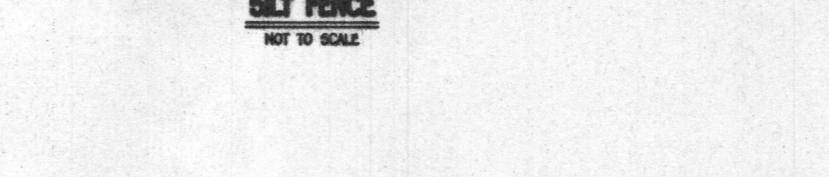
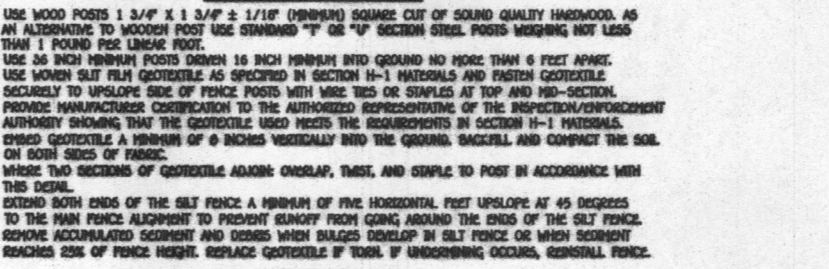
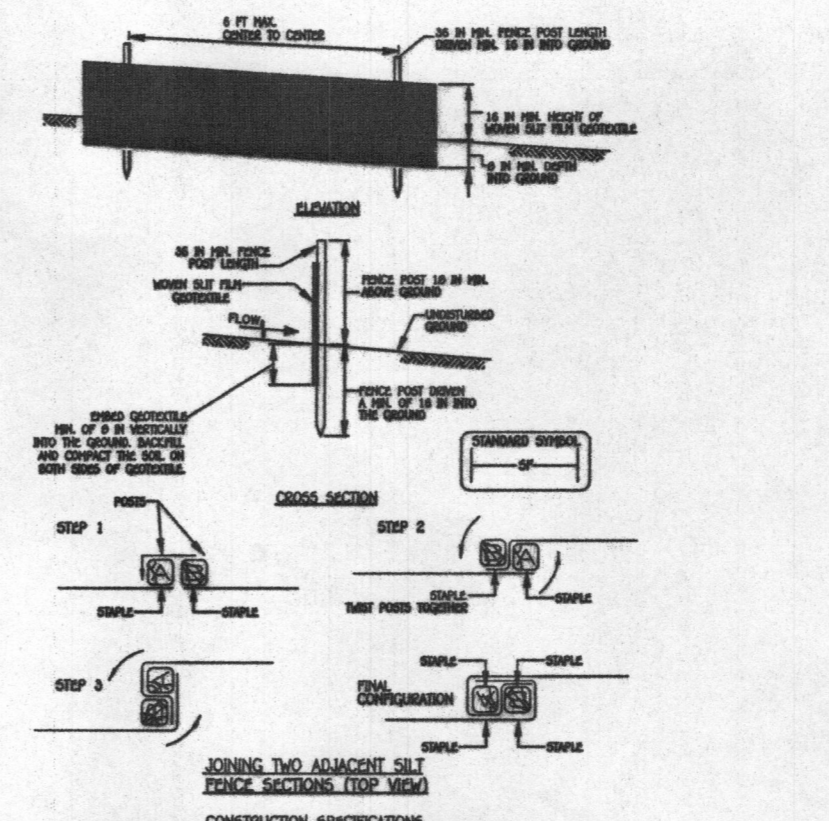
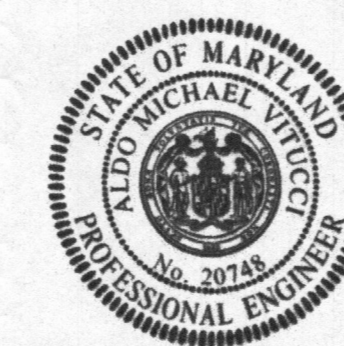
NOTE:
EITHER TEMPORARY OR PERMANENT STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE TIME FRAMES PROVIDED WITHIN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL WHICH IS MORE RESTRICTIVE.

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20746, EXPIRATION DATE: 02/22/17.

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A FEASIBLE AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Alfred M. Virochi*
Name: ALFRED M. VIROCHI
Date: 4/14/15



1. LENGTH - MINIMUM OF 50' FOR SINGLE SECTORING UNITS.
2. WIDTH - 10' MINIMUM; SHALL BE PLACED AT THE EXISTING ROAD TO PROVIDE A TURNING GUIDE.
3. GEOTEXTILE FABRIC FILTER CLOTH SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. WHITE PLAN APPROVAL, AUTHORITY MAY NOT REQUIRE SINGLE FIBER GEOTEXTILE SHALL BE PLACED AT LEAST 6\"/>

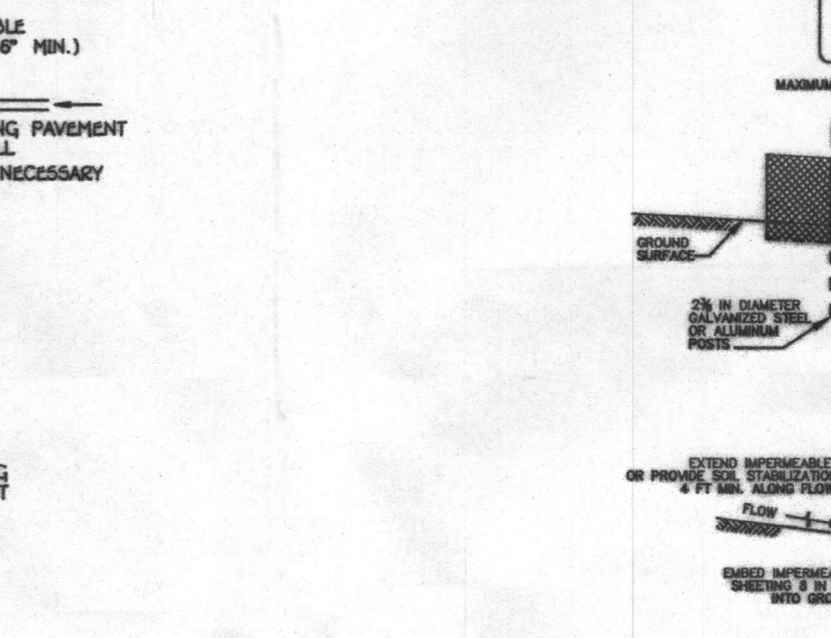
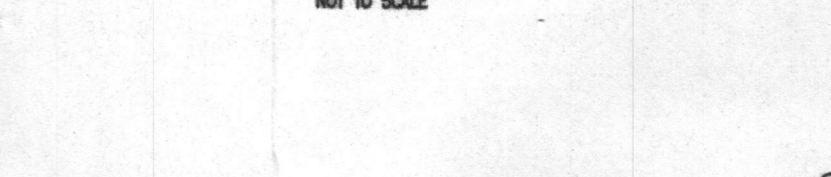
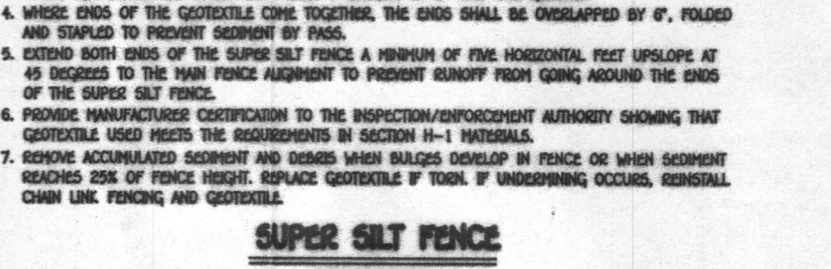
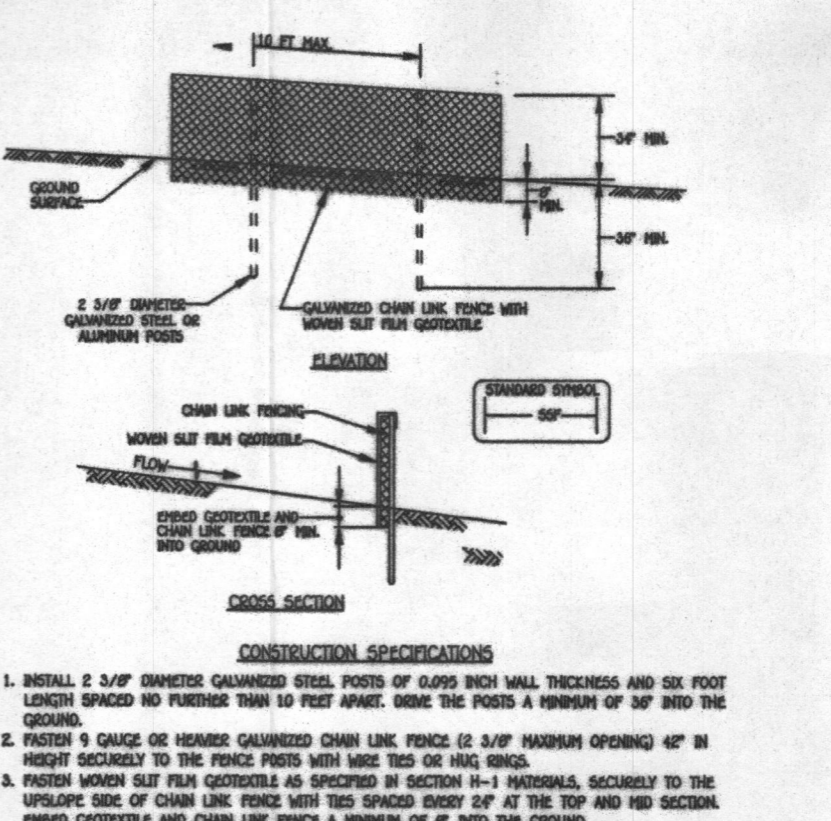
HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION TO THE START OF ANY CONSTRUCTION (410-313-1855).
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 MOST CURRENT STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR DE-STABILIZATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 8) A CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOOPS AND ALL SLOPES EXCEPT THOSE 2:1, 3) 7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. A MINIMUM SHALL BE REQUIRED.
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 PERMANENT SEEDING (SEC. 8-3), TEMPORARY SEEDING (SEC. 8-4) AND MULCHING (SEC. 8-4-3). TEMPORARY STABILIZATION WITH MULCH ALONG CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO BE MAINTAINED IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.
6. SITE ANALYSIS:
 - TOTAL AREA OF SITE: 1.50 ACRES
 - AREA TO BE SEEDED OR PAVED: 0.11 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 0.41 ACRES
 - TOTAL CUT: 364 CUBIC YARDS
 - TOTAL FILL: 319 CUBIC YARDS
7. OFFSITE WASTE/ROADWAY AREA LOCATION: N/A.
8. ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITIES FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBANCE IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE OBTAINED UPON COMPLETION OF INSTALLATION OF POSITIVE PROTECTION AND SEDIMENT CONTROL BUT BEFORE PROCEEDING WITH ANY OTHER CANAL DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL IS OBTAINED.
11. ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY.
12. A PRODUCT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM GRADING OF 20 ACRES PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE INITIAL APPROVAL IS OBTAINED. GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE HOWARD COUNTY CONSERVATION DISTRICT.

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY 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.

Signature: *Salvatore*
Name: SALVATORE
Date: 04/14/15



1. LENGTH -

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - - -	PROPOSED CONTOUR 2' INTERVAL
+	SPOT ELEVATION
UBC	WALKOUT BASEMENT
SF	SILT FENCE
SF-SF	SUPER SILT FENCE
ECM	EROSION CONTROL MATING
LOD	LIMIT OF DISTURBANCE
W	EXISTING WELL

SOILS LEGEND		
SOIL	NAME	CLASS
GgB	Glenn loam, 3 to 8 percent slopes	B
GgC	Glenn loam, 8 to 15 percent slopes	B
MaC	Manor loam, 8 to 15 percent slopes	B

NOTES:

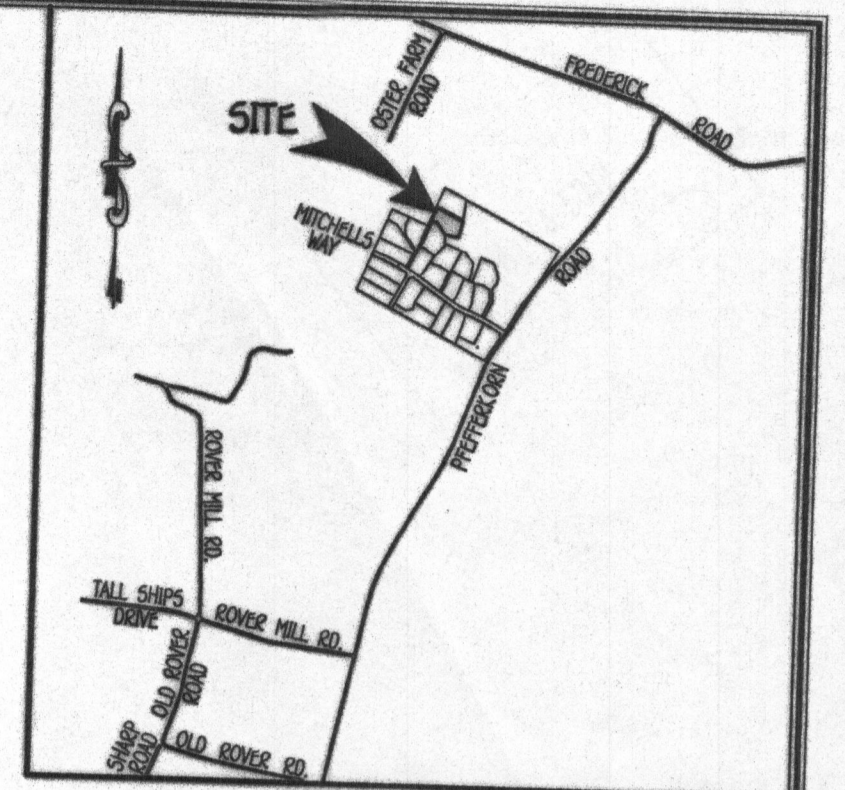
- Hydric soils and/or contains hydric inclusions
- May contain hydric inclusions
- Generally only within 100-year floodplain areas

GENERAL NOTES

- SUBJECT PROPERTY ZONED: RC-040
- TOTAL AREA OF PROPERTY: 56,771 SQ. FT. AND IS SHOWN BY A DEED PLOTTING BY
- THE NEW SEPTIC SYSTEM IS EXISTING AND WILL BE UTILIZED FOR THE PROPOSED HOUSE.
- AN EXISTING WELL WILL BE UTILIZED FOR WATER SERVICE (WELL NO. 95-0369).
- STORMWATER MANAGEMENT IS BEING PROVIDED BY ROOFTOP, NON-ROOFTOP DISCONNECTION (N-1 AND N-2), AND A MICRO-BIORETENTION FACILITY (M-6).
- FIELD RUN TOPOGRAPHIC SURVEY DONE BY FISHER, COLLINS & CARTER, INC. ON APRIL, 2012.
- NO WETLANDS CURRENTLY EXIST ON THE PROPERTY.
- NO DRIVEWAY CULVERTS NEEDED FOR THIS LOT.

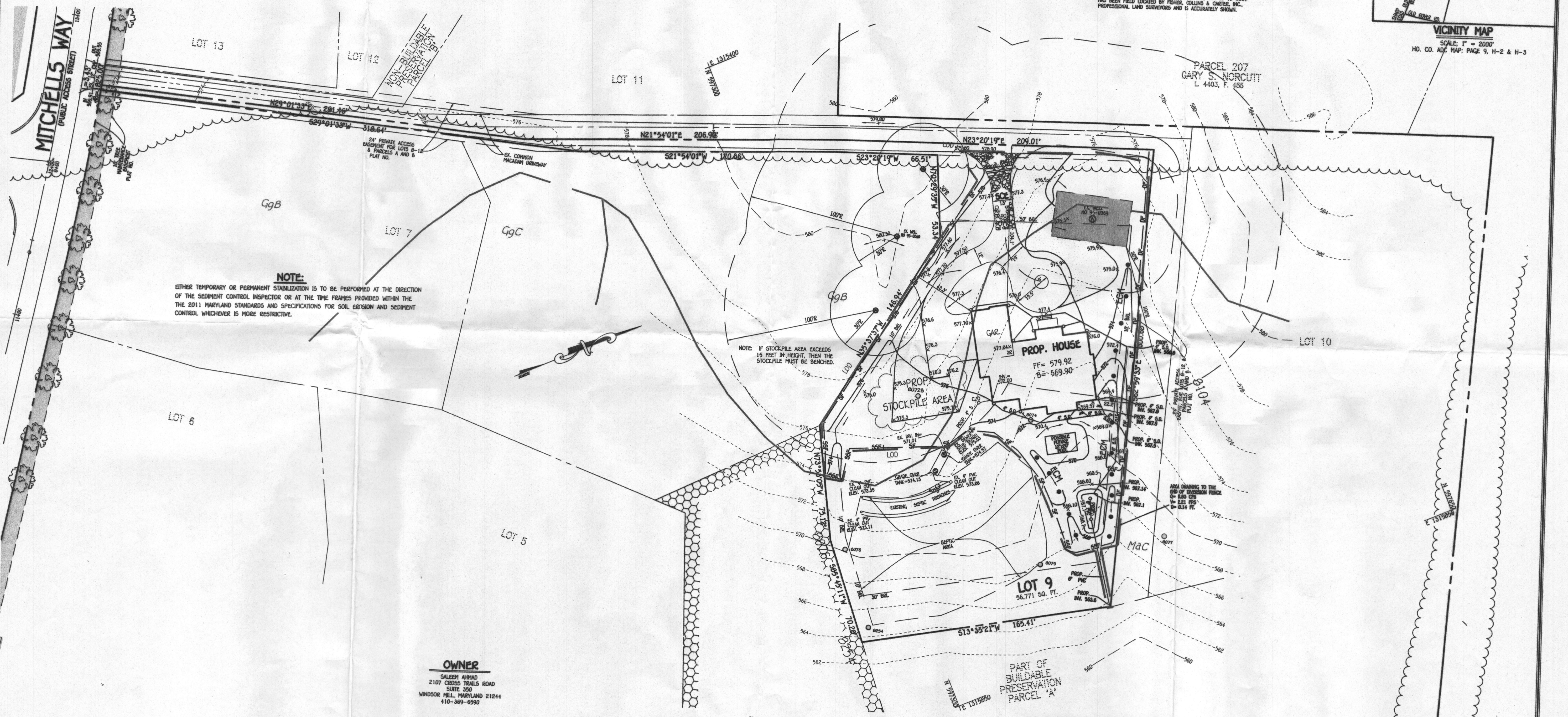
NOTE

THE EXISTING WELL SHOWN ON THIS PLAN, TAG NO. HD 95-0369 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.



VICINITY MAP

SCALE: 1" = 2000'
HO. CO. ADC. MAP: PAGE 9, H-2 & H-3

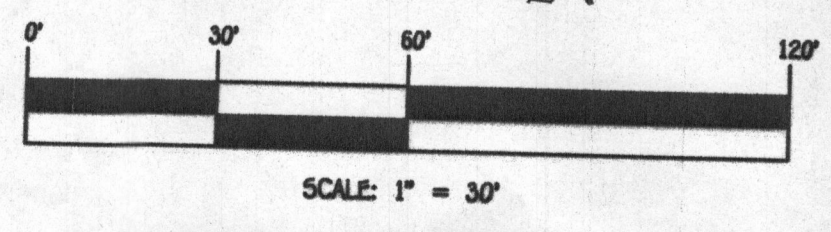


NOTE:
EITHER TEMPORARY OR PERMANENT STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE TIME FRAMES PROVIDED WITHIN THE THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL WHICHEVER IS MORE RESTRICTIVE.

NOTE: IF STOCKPILE AREA EXCEEDS 15 FEET IN HEIGHT, THEN THE STOCKPILE MUST BE BENCHED.

OWNER
SALEEM AHMAD
2107 CROSS TRAILS ROAD
SUITE 350
WINDSOR HILL, MARYLAND 21244
410-369-6590

BUILDER/DEVELOPER
COLONIAL DESIGN AND BUILD
5241 TURKEY POINT ROAD
NORTH EAST, MARYLAND 21901
443-752-5621



BUILDER/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 ANY 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."

SIGNATURE OF DEVELOPER: SALEEM AHMAD DATE: 04/14/15

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. 20748, EXPIRATION DATE: 02/22/17.

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER: ALDO M. VITUCCI DATE: 4/14/15



SITE DEVELOPMENT, SEDIMENT/EROSION CONTROL PLAN SINGLE FAMILY DETACHED CLOVERFIELD LOT 9

PLAT NO'S. 18953-18959
TAX MAP NO.: 15 GRID NO.: 8 PARCEL NO.: 4
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: APRIL 14, 2015

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL OFFICE: 1100 WASHINGTON BLVD., SUITE 200, WASHINGTON, DC 20004
Baltimore Office: 1100 WASHINGTON BLVD., SUITE 200, BALTIMORE, MD 21201

NO.	REVISION	DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John L. ... 4/14/15

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

- A. SOIL PREPARATION**
- 1. TEMPORARY STABILIZATION**
 - a. SEEDING 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 PLANS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE UNCHANGED CONDITION. SLOPES 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 SOIL TEST IS REQUIRED FOR ANY EXISTING OCCURRENCE OF 5 ACRES OR MORE. THE HIGHEST SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATION ESTABLISHMENT ARE:

 - i. SOIL PH BETWEEN 6.0 AND 7.0.
 - ii. SOLUBLE SALTS LESS THAN 500 PPM (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 HUMUS. AN EXCEPTION: IF LOWLANDS WILL BE PLANTED, THEN A SANDY SOIL LESS THAN 30 PERCENT SILT PLUS CLAY WILL BE ACCEPTABLE.
 - iv. SOIL CONTAINS 1.5 PERCENT HIGHER ORGANIC MATTER BY WEIGHT.
 - v. 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.

 - a. GRADED AREAS MUST BE MAINTAINED IN A DRAIN AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SOFTENED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
 - b. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - c. FOR SOIL AMENDMENTS TO THE TOP 3 TO 5 INCHES OF SOIL, BY DISKING OR OTHER SUITABLE MEANS. DISC HARROWS SHOULD BE USED TO DISK THE SURFACE. BEFORE LIME OR FERTILIZER IS APPLIED, 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 SEEDING 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 FIRM. SEEDING LOOSENESS MAY BE UNNECESSARY ON HEAVILY DISTURBED AREAS.

- B. TOPSOILING**
- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATION GROWTH. SOILS OF CONDITION WITH LOW HUMUS CONTENT, LOW NUTRIENT LEVELS, LOW PH, PROXIMATE TOXIC TO PLANTS, AND/OR UNDESIRABLE SOIL GRASSES CAN BE TOPSOILED.
1. TOPSOIL OBTAINED 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.
 2. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- a. THE TEXTURE OF THE EXPOSED SUBSOIL/UNDERLIEING MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATION.
 - b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FUNGUS CONTAINING SUPPLIES OF HUMUS 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 PRACTICABLE.
- AREAS HAVING SLOPES GREATER THAN 2:1 REQUIRING SUBSOIL CORRECTION AND/OR LIMESTONE APPLICATION BY APPROVED METHODS.
3. TOPSOIL SPECIFICATIONS: TOPSOIL 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 COMBINED TOPSOILS, EXCEPT WHERE SPECIFIED LESS THAN 5 PERCENT BY VOLUME OF CHISEL, STONES, SLAG, CONCRETE FRAGMENTS, GRAVEL, STICKS, ROOTS, TWIGS, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.
 - b. TOPSOIL MUST BE FREE OF NOxious PLANTS OR PLANT PARTS SUCH AS BODENGA GRASS, QUACK GRASS, JOHNSON GRASS, NAT GRASS, POND MY, 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.
 4. 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 SEEDING OR SOILING 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 MOIST CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT ANY OVERBURDEN IS DETERMINED TO PROHIBIT GRADING AND SEEDING PREPARATION.

- C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)**
1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT TYPES 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 ANALYSIS.
 2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FROM HAZARDOUS CONTAMINANTS, AND APPLIED BY APPROVED EQUIPMENT. FERTILIZERS MUST BE SUBSTITUTED FOR FERTILIZERS WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST BE APPLIED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAT THE NAME, TRADE NAME OR TRADEMARK, AND MAJORITY OF THE PRODUCTS.
 3. LIME INCREASES MUST BE GRIND AND LIMESTONE (WHICH IS NOT SUITABLE) MAY BE SUBSTITUTED EXCEPT WHEN INDICATED OTHERWISE WHICH CONTAINS AT LEAST 85 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GRIND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
 4. 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.
 5. WHERE THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD QUICK 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)

- DEFINITION**
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
- PURPOSE**
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
- CONDITIONS WHERE PRACTICE APPLIES**
LOOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS, FOR EXPOSED PORTION OF THE PERMANENT STABILIZATION PRACTICE ARE REQUIRED.
- CRITERIA**
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.3 FOR THE APPROXIMATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION DATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.3 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 MUCH ALONG AS PRESCRIBED IN SECTION B-4-4.1.8 AND HIGHER UNITS. THE NEXT SEEDING SEASON.

Permanent Seeding Summary

Hardness Zone (from Figure B.3):	6b	Fertilizer Rate (10-20-20)	Lime Rate
Seed Mixture (from Table B.3):	B		
Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth
BARLEY	96	3/1 - 5/15	1"
OATS	72	8/15 - 10/15	1"
RYE	112		

- 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 B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose shown on Table B.3. Enter selected mixture(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 aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 - c. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency. If for areas receiving low nitrogen, apply urea fertilizer (45-0-0) @ 1 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.

FISHER, COLLINS & CARTER, INC.
Soil Engineering, Consulting & Land Surveying
CENTRAL SERVICE OFFICE: 1827 BELMONT AVE. WASHINGTON, DC 20006
ALLEGANY COUNTY OFFICE: 1000 W. MARKET ST. WHEELING, WV 26060
(410) 461-2825

1. Kentucky Bluegrass: Full Sun Mixture. For use in areas that require intensive management, irrigation in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivar 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.
 - a. Kentucky Bluegrass/Fernhill Sky: Full Sun Mixture. For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Fernhill Skygrass Cultivar/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.
 - b. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture. For use in drought prone areas and/or for areas receiving low to medium maintenance in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivar 95 to 100 percent, Certified Kentucky Bluegrass Cultivar 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
2. Application of seed and mulch to establish permanent vegetation.
 - 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 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.
 - c. Wood cellulose fiber used on 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.
3. Anchoring
 - 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:
 - i. 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 on sloping land, this practice should follow the contour.
 - ii. 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.
 - iii. Synthetic binders such as Acrylics (Acr-900), D-70, Petrol, Terra Tex II, Terra Trak AR or other approved equal binders 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 much, such as 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 feet long.

Permanent Seeding Summary

Hardness Zone (from Figure B.3):	6b	Fertilizer Rate (10-20-20)	Lime Rate
Seed Mixture (from Table B.3):	B		
No. Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth
1 TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.
			45 lb/a (2 lb/1000 sq ft)
			90 lb/acre (2 lb/1000 sq ft)
			90 lb/acre (2 lb/1000 sq ft)
			2 tons/acre (90 lb/1000 sq ft)

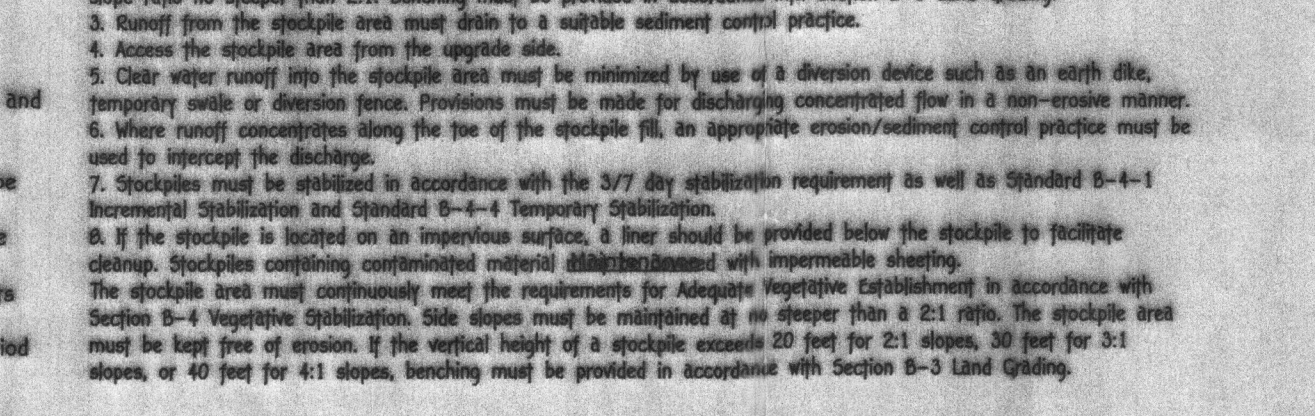
- B. Sod:** To provide quick cover on disturbed areas (2:1 grade or flatter).
1. General Specifications
 - a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - b. Sod must be machine cut to a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must include top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - c. Standard size sections of sod must 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.
 - d. Sod must not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
 - e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period must be approved by an agronomist or soil scientist prior to its installation.
 2. Sod Installation
 - a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints 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 voids which would cause air drying of the roots.
 - c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and firm, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping, and irrigating for any piece of sod within eight hours.
 3. Sod Maintenance
 - a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - b. After the first week, soil watering is required as necessary to maintain adequate moisture content.
 - c. Do not mow until the sod is firmly rooted. No more than 1/5 of the grass leaf must be removed by the initial cutting or subsequent cuttings.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

- PURPOSE**
The application of seed and mulch to establish vegetative cover.
- CRITERIA**
- To protect disturbed soils from erosion during and at the end of construction.
- To the surface of all perimeter control, slopes, and any disturbed area not under active grading.
1. Seeding
 - 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 seeding, with notation 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.
 - b. 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.
 - c. Inoculants: The inoculant for foraging 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 inoculant as directed on the package. Use four times the recommended rate when hydroseeding. Note: It may be important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective. Sod or seed must not 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 phytotoxic materials.
 2. Application
 - a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - i. Incorporate seed into the subsoil at the rates presented on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - ii. 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 contact.
 - b. Disk or Outdragger Seeding: Mechanized seeders that apply and cover seed with soil.
 - i. Outdragger seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - ii. 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).
 - i. 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; P₂O₅ (phosphorus), 200 pounds per acre; K₂O (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.
 - iii. Mix seed and fertilizer on site and seed immediately and without interruption.
 - iv. When hydroseeding do not incorporate seed into the soil.
 3. Mulching
 - a. Mulch Materials (in order of preference)
 - i. 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, soaked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - ii. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical stock.
 - iii. WCFM is to be dry and green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread straw.
 - iv. WCFM, including dye, must contain no germination or growth inhibiting factors.

4. 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 agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blitter-like ground cover, on application, having moisture absorption and retention properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
5. WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
6. 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.

- B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS**
- PURPOSE**
A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
- CRITERIA**
To provide a designated location for the temporary storage of soil that contains the potential for erosion, sedimentation, and slumps to drainage patterns.
- CRITERIA**
Stockpile areas are utilized when it is necessary to advance and store soil for later use.
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
 2. The topography of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Banding must be provided in accordance with Section 5-3 Land Grading.
 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
 4. Access the stockpile area from the upgrate side.
 5. Clear water runoff from the stockpile area must be minimized by use of a diversion ditch such as an ditch with temporary walls or a ditch with a 2:1 temporary stabilization.
 6. Where runoff concentrates along the toe of the stockpile (i.e., an appropriate erosion/sediment control practice must be used to intercept the discharge).
 7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Erosion Control and Specifications.
 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 shall be stabilized with impervious sheeting.
 9. The stockpile area must conform to the requirements for Adequate Hydrologic Evaluation in accordance with Section 5-4 Negative Stabilization. Side slopes must be maintained at 1H:1V for 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, banding must be provided in accordance with Section 5-3 Land Grading.



SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS DIVISION, 1000 W. MARKET ST., WHEELING, MD 26060, PRIOR TO THE START OF ANY CONSTRUCTION (311-1695).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE CONFORMANT WITH THE MOST CURRENT HANDBOOK STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND SPECIFICATIONS FOR PERMANENT SEEDING (SEC. 311), SOIL (SEC. 314), TEMPORARY SEEDING (SEC. 301), AND PRACTICES (SEC. 302). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER ESTABLISHMENT AND ESTABLISHMENT OF GRASSES.
3. ALL SEDIMENT CONTROL STRUCTURES ARE TO BE SHOWN IN PLACE AND ARE TO BE MAINTAINED IN OPERATING CONDITION UNTIL PERMANENT VEGETATION IS ESTABLISHED OR SOIL OBTAINED FROM THE HOWARD COUNTY SEEDMENT CONTROL INSPECTOR.
4. SITE ANALYSIS
 - a. TOTAL AREA OF SITE: 1,000 ACRES
 - b. AREA DISTURBED: 18.4 ACRES
 - c. AREA TO BE COVERED OR PAVED: 6.5 ACRES
 - d. AREA TO BE VEGETATIVELY STABILIZED: 0.51 ACRES
 - e. TOTAL CUT: 215 CUBIC YARDS
5. EROSION CONTROL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE MOST CURRENT HANDBOOK STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND SPECIFICATIONS FOR PERMANENT SEEDING (SEC. 311), SOIL (SEC. 314), TEMPORARY SEEDING (SEC. 301), AND PRACTICES (SEC. 302). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER ESTABLISHMENT AND ESTABLISHMENT OF GRASSES.
6. APPROVAL OF THE INSPECTION AGENCY SHALL BE OBTAINED UPON COMPLETION OF INSTALLATION OF PERMANENT EROSION AND SEDIMENT CONTROL MEASURES AND PRIOR TO THE START OF ANY OTHER CONSTRUCTION, DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTIONS APPROVED BY THE INSPECTION AGENCY SHALL BE MAINTAINED UNTIL THIS NOTE APPROVAL BY THE INSPECTION AGENCY IS PAID.
7. REFINES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE 300'-FOOTED AND STABILIZED WITH ONE WORKING DAY, AND/OTHER IS SHORTER.

- SEQUENCE OF CONSTRUCTION**
1. OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (14 DAYS)
 2. INSTALL SEDIMENT CONTROLS AS SHOWN ON PLAN (1 DAY)
 3. PERFORM NECESSARY GRADING AND STABILIZE THE SITE (2 DAYS)
 4. CONSTRUCT OVERLAPPING ON SITE (90 DAYS)
 5. AFTER THE SITE IS STABILIZED AND PROVISION IS MADE FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.
 6. CONSTRUCT BUILDING. (4 MONTHS)
 7. REMOVE GRASS AND INSTALL PERMANENT VEGETATION. (3 DAYS)
- SEEDING PREPARATION**
LOOSEN UPPER THREE INCHES OF SOIL BY DISKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS**
APPLY 600 LBS. PER ACRE 10-20-20 FERTILIZER (14 LBS./1000 SQ. FT.)
- SEEDING**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 1/2 BU/ACR. PER ANNUAL RATE (1.2 LBS./1,000 SQ. FT.) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS./ACR. OF WEEPING LONGBOW (07 LBS./1000 SQ. FT.). FOR THE PERIOD FEBRUARY 16 THROUGH FEBRUARY 31, PREPARE SITE BY SPRINGING LONG PILE ACRES OF WELLS AND SEED AS SOON AS POSSIBLE IN THE SPRING, USE 500.
- MULCHING**
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ. FT.) OF UNIFORM FIBROUS MULCH IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/8 GAL./ACR. OF WEEPING LONGBOW (07 LBS./1000 SQ. FT.) OR PRESSURE SPRAYED MULCH ON SLOPES 3 FEET OR HIGHER, USE 340 GALLONS PER ACRE (19 GAL./1,000 SQ. FT.) FOR ANCHORING. REFER TO THE 1986 EROSION CONTROL AND SEDIMENT CONTROL HANDBOOK FOR MORE INFORMATION ON SOILS AND METHODS NOT COVERED.

OWNER/BUILDER/DEVELOPER
GOODER BUILDERS
2330 WEST JOPPA ROAD
SUITE 395
LUTHERVILLE, MARYLAND 21093
410-816-9631

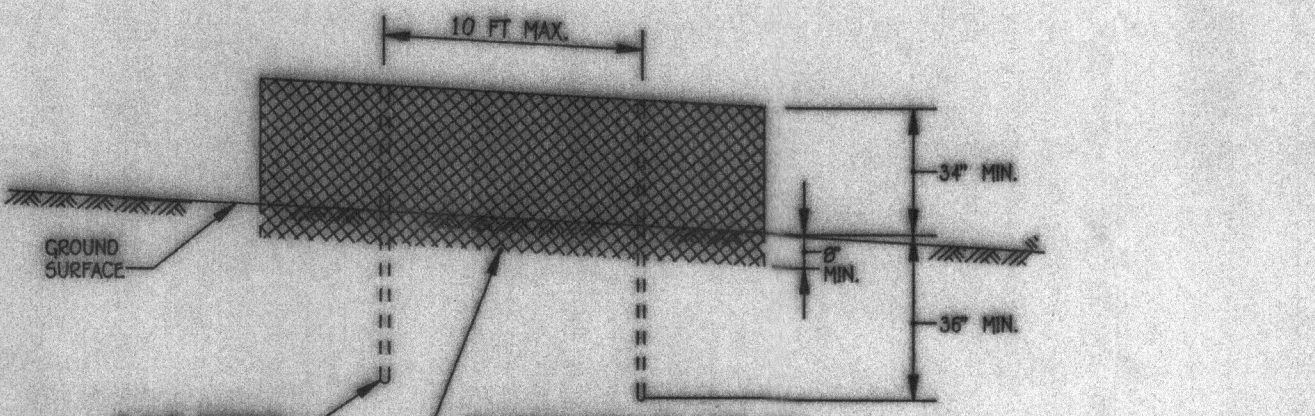
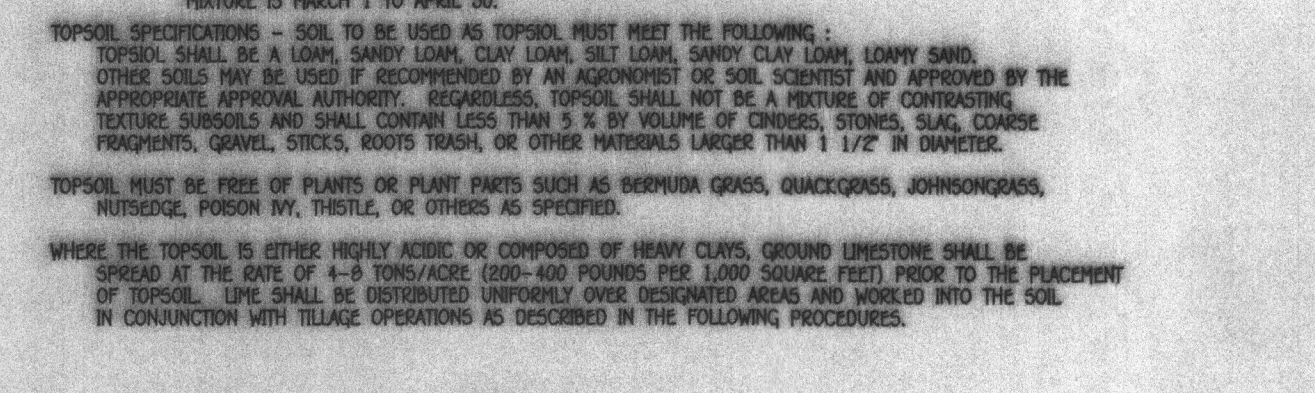
BUILDER/DEVELOPER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT/PROTECTED WATERS PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT."

DATE: 5/29/14

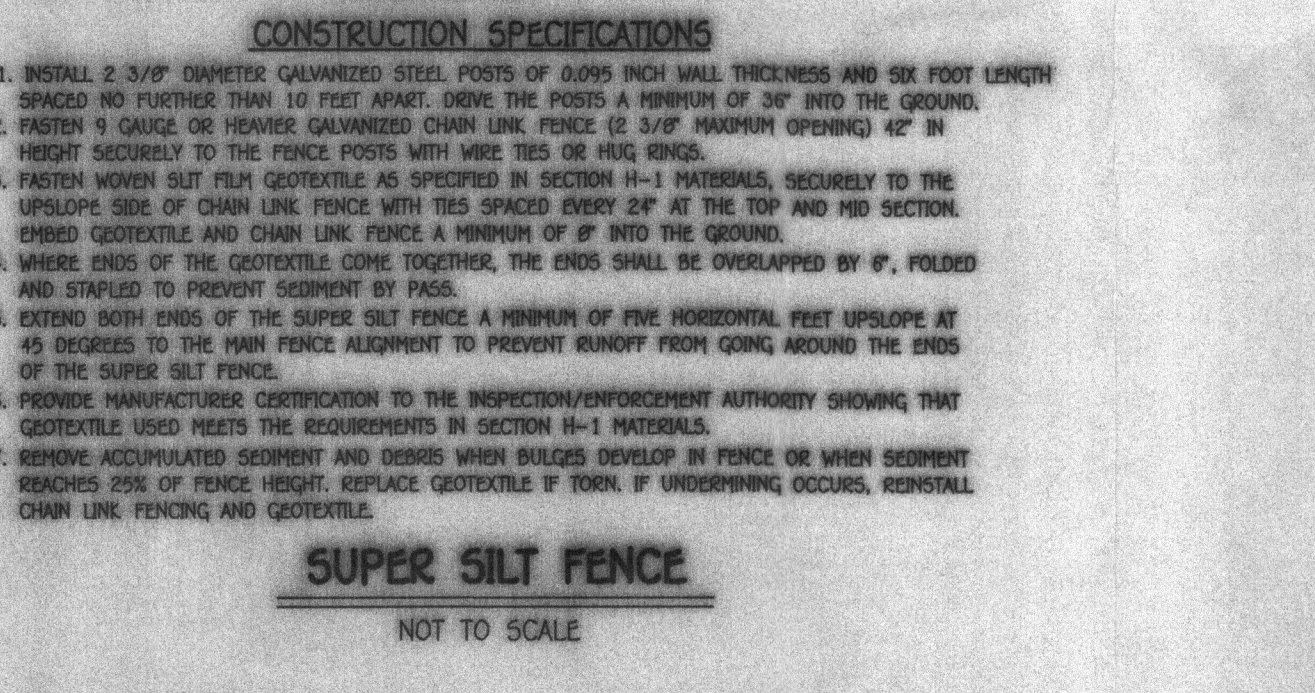
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.

DATE: 5/29/14

- PERMANENT SEEDING NOTES**
ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDING PREPARATION**
LOOSEN UPPER THREE INCHES OF SOIL BY DISKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS**
APPLY 600 LBS. PER ACRE 10-20-20 FERTILIZER (14 LBS./1000 SQ. FT.)
- SEEDING**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 1/2 BU/ACR. PER ANNUAL RATE (1.2 LBS./1,000 SQ. FT.) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS./ACR. OF WEEPING LONGBOW (07 LBS./1000 SQ. FT.). FOR THE PERIOD FEBRUARY 16 THROUGH FEBRUARY 31, PREPARE SITE BY SPRINGING LONG PILE ACRES OF WELLS AND SEED AS SOON AS POSSIBLE IN THE SPRING, USE 500.
- MULCHING**
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ. FT.) OF UNIFORM FIBROUS MULCH IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/8 GAL./ACR. OF WEEPING LONGBOW (07 LBS./1000 SQ. FT.) OR PRESSURE SPRAYED MULCH ON SLOPES 3 FEET OR HIGHER, USE 340 GALLONS PER ACRE (19 GAL./1,000 SQ. FT.) FOR ANCHORING. REFER TO THE 1986 EROSION CONTROL AND SEDIMENT CONTROL HANDBOOK FOR MORE INFORMATION ON SOILS AND METHODS NOT COVERED.



- CONSTRUCTION SPECIFICATIONS**
1. INSTALL 2 3/8" DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO MORE THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 30" INTO THE GROUND.
 2. FASTEN 1 CHAIN OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 3/8" HORIZONTAL OPENING) 42" IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
 3. FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPDRAPE SIDE OF CHAIN LINK FENCE WITH THIS SPACING EVERY 24" AT THE TOP AND MID SECTION. ENSURE GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 6" INTO THE GROUND.
 4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6", FOLDED AND STAPLED TO PREVENT SEDIMENT BY PASS.
 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPDRAPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT EXCEEDS 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.



- CONSTRUCTION SPECIFICATIONS**
1. LENGTH - MINIMUM OF 50' (50' FOR SINGLE RESIDENCE LOT).
 2. WIDTH - 10' MINIMUM. SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 3. SEDIMENT BARRIERS (FRONT CURB) SHALL BE PLACED OVER THE EXISTING DRIVEWAY PRIOR TO PLACING STONE. THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
 4. STONE - CRUSHED AGGREGATE (E-70) OR RECYCLED OR RECYCLED CONCRETE. EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
 5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR OVER THE ENTRANCE DURING CONSTRUCTION ENTRANCES SHALL BE RIPPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE WHEN THE SIZE IS LOCATED AT A HIGH SPOT AND POSITIVE DRAINAGE TO CURB AREA. PIPE WILL NOT BE NECESSARILY PLACED OVER THE ENTRANCE.
 6. ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED, A 6" MINIMUM WILL BE REQUIRED.
 7. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE 7/14/2015.

DATE: 5-29-14

PROFESSIONAL CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND MODERATE PLAN BASED UPON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN MY PROFESSIONAL CAPACITY AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT."

DATE: 5-29-14

NO. REVISION DATE

