

size with a 1' thick layer of 3/4' to 11/2' washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

Constuction Specifications

The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.

3. All cut and fill slopes shall be 2:1 or flatter.

4. Elevation of the top of any dike directing water into trap must equal or

5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 10).

6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6' into existing ground at entrance of outlet channel.

7. Stone used in the outlet channel shall be 4" - 7" placed 18" thick.

8. Dutlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel, Protection against scour at the discharge end shall be provided as necessary,

Outlet channel must have positive drainage from the trag

10. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/4 of the wet storage depth of the trap (1350 cf/ac). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

11. The structure shall be inspected periodically after each rain and repaired

12. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Bnce constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.

13. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

WATER MANAGEMENT ADMINISTRATION DETAIL 33 - SUPER SILT FENCE NOTE: FENCE POST SPACING 10' MAXIMUM 34' MINIMUM GROUND / SURFACE

MARYLAND DEPARTMENT OF ENVIRONMEN

GALVANIZED OR ALUMINUM ←CHAIN LINK FENCE - 8' MINIMUM CHAIN LINK FENCING-FILTER CLOTH-EMBED FILTER CLOTH 8 MINIMUM INTO GROUND STANDARD SYMBO

*IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42' Construction Specifications

U.S. DEPARTMENT OF AGRICULTURE

. Fencing shall be 42' in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24' at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8' into the ground. 5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded

6. Maintenance shall be performed as needed and silt buildups removed when "builges" develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class Fi

Tensile Strength 50 lbs/in (min,) Test: MSMT 509 Tensile Modulus 20 lbs/in (min.) 0.3 gal/ft2/minute (max.) Filtering Efficiency 75% (min.) U.S. DEPARTMENT OF AGRICULTURE

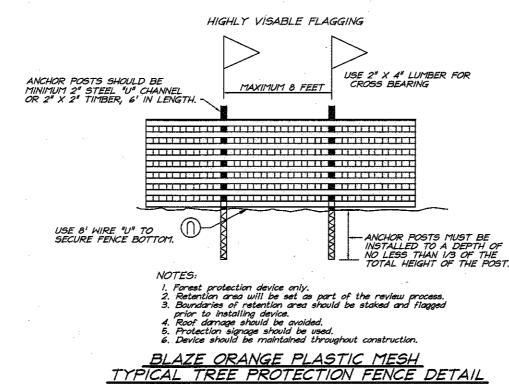
Test: MSMT 509 Test: MSMT 322 Test: MSMT 322 MARYLAND DEPARTMENT OF ENVIRONMENT

16" MINIMUM HEIGHT 6" MINIMUM FENCE-PERSPECTIVE VIEW POST LENGTH FENCE POST SECTION
- MINIMUM 20" ABOVE - FENCE POST DRIVEN A MINIMUM OF 8" VERTICALLY SECTION A STANDARD SYMBOL JOINING TWO ADJACENT SILT FENCE SECTIONS Construction Specifications Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F: 50 lbs/in (min.) Test: MSMT 509 Tensile Strength 20 lbs/in (min.) Test: MSMT 509 Filtering Eggeciency 75% (min.) Test: MSMT 322 3. Where ends of geotextile fabric come together, they shall be overlapped,

Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

DETAIL 22 - SILT FENCE

DETAIL 1 - EARTH DIKE b 2:1 SLOPE OR FLATTER - FXCAVATE TO PROVIDE REQUIRED FLOW WIDTH AT DESIGN FLOW DEPTH CROSS SECTION DIKE A DIKE B POSITIVE DRAINAGE SUFFICIENT TO DRAIN 6-DIKE WIDTH **** c-FLOW WIDTH PLAN VIEW A-2 B-3 FLOW CHANNEL STABILIZATION 2. Seed and cover with Erosion Control Matting or line with sod. 3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum Construction Specifications 1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1% 2. Runoff diverted from a disturbed area shall be conveyed to a sediment 3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity. 4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper 5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow. 6. Fill shall be compacted by earth moving equipment. 7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.



8. Inspection and maintenance must be provided periodically and after

S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE A-1-6 WATER MANAGEMENT ADMINISTRATION

each rain event.

U.S. DEPARTMENT OF AGRICULTURE

Reviewed for HOWARD

and maets Technical Requirements

Signature) Date 5. Natural Resovrace Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED

FOR SOIL EROSION AND SEDIMENT

CONTROL BY THE HOWARD SOIL

CONSERVATION DISTRICT.

Simmons sell/28

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE MOUNTABLE BERM (6" MIN.) PAVEMEN - EARTH FILL ** GEOTEXTILE CLASS -- PIPE AS NECESSAR MINIMUM 6" OF 2"- 3" AGGREGATE OVER LENGTH - EXISTING GROUND - * 50' MINIMUM LENGTH **PAVEMENT** PLAN VIEW Construction Specification . Length - minimum of 50' (* 30' for a single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a

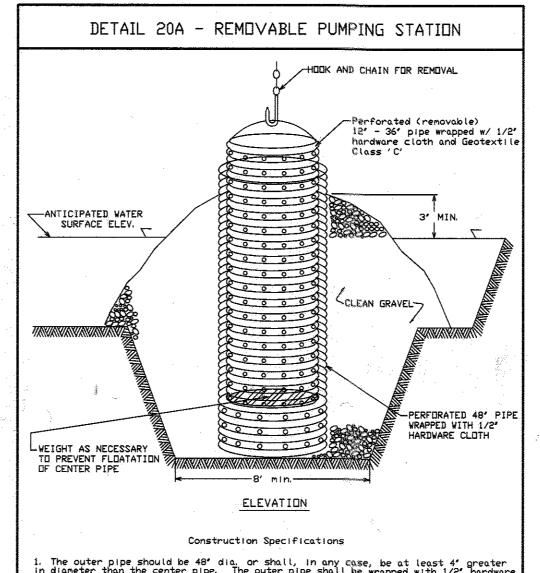
Geotextile fabric (filter cloth) shall be placed ever the existing ground prior to placing stone, ** The plan approval authority may not require single family residences to use geotextile.

Stone — crushed aggregate (2" to 3") or recigimed 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 diverted toward construction entrances shall be piped 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 SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. 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 con-

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



1. The outer pipe should be 48° dia. or shall, in any case, be at least 4° greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2° hardware cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2' aggregate or clean gravel. 3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12' and 36' in diameter. The perforations shall be 1/2' X 6' slits or 1' diameter holes 6' on center. The center pipe shall be wrapped with 1/2' hardware cloth first, then wrapped again with Geotextile Class C 4. The center pipe should extend 12' to 18' above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL Placement of topsoil over a prepared subsoil prior to

<u>Purpose</u>

Conditions Where Practice Applies

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

II. For the purpose of these Standards and Specifications,

areas having slopes steeper than 2:1 require specific consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shoun on the plans.

Construction and Material Specifications

published by USDA-SCS in cooperation with Maryland

II. Topsoil Specifications - Soil to be used as topsoil

Topsoil salvaged from the existing site may be used

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and

approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger that I and 1/2" in

iii. Where the subsoil is either highly acidic or

composed of heavy clays, ground limestone shall be spread a the rate of 4-8 tons/acre (200-400 pounds per 1,000 square

feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described

Place topsoil (if required) and apply soil.
 amendments as specified in <u>20.0 Vegetative Stabilization</u> – Section I – Vegetative Stabilization Methods and Materials.

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: Loosen upper three inches of soll by raking, discing or other acceptable means before seeding, if not previously

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of

1) Preferred-Apply 2 tans per acre dolomitic limestane (92 lbs/ 100 sq.ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs./ 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq.ft.)

2) Acceptable-Apply 2 tons per ocre dolornatic limestone (92 lbs/

1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10- fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper

SEEDING: For the periods March I thru April 30, and August I thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May I thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tans per acre well anchored straw muich and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tans/acre well anchored straw.

MULCHING: Apply I 1/2 to 2 tans per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened

SEEDING: For periods March I thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.) For the period May I thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November I thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING: Apply I 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallans per acre (5 gal/1000 sq.ft.) of emulsified asphalt an flat areas. On slopes 8 feet or higher, use 348 gallans per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.).

PERMANENT SEEDING NOTES

II. For sites having disturbed areas under 5 acres:

is not adequate to produce vegetative growth.

To provide a suitable soil medium for vegetable growth.

Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

This practice is limited to areas having 2:1 or flatter

The texture of the exposed subsoil/parent material

The soil material is so shallow that the rooting

iii. For sites having disturbed areas over 5 acres:

1. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

b. Criganic cartest of Oppon Shall be flot less than
1.5 percent by weight.
c. Topsoil having soluble salt content greater than
500 parts per million shall not be used.
d. No sod or seed shall be placed on soil soil which
has been treated with soil sterilants or chemicals
used for weed control until sufficient time has
elapsed (14 days min.) to permit dissipation of
phyto-topic materials

phyto-toxic materials.

NOTE: 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 Place topsoil (if required) and apply soil ammendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4"
 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tiliage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions

> Topsoil shall not be place while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

SEDIMENT AND EROSION CONTROL NOTES

. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).

All vegetative and structural practices are to be installed

according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECS, FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within a) 7 calendar days for all perimeter sediment control stuctures, dikes, perimeter slopes and all slopes greater than 3:1 b) 14 days as to all other disturbed or graded areas on the

All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol.1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm

All disturbed areas must be stabilized within the time period specified above, in accordance with the 1994 MARYLAND STAND-ARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec G).

Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination

. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment

. SITE ANALYSIS:

and establishment of grasses.

Total Area of Site: 14.183 Acres
Area Disturbed: 12.0 Acres
Area to be roofed or paved: 2.81 Acres
Area to be vegetatively stabilized: 9.19 Acres ocal Fill: 17.250 CY
Offsite Waste/Borrow Area Location: *

control practice with the second of the

Any sediment control practice which is disturbed by grading activity 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 DPW Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is

11. Trenches for the construction of utilities is limited to three pine lengths or that which shall be back-filled and stabilized within

The total amount of silt fence = 4600 LF

The total amount of super silt fence = 7010 LF

The total amount of earth dike = 455 LF The total amount of earth dike = ___

* It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction

CONSTRUCTION SEQUENCE:

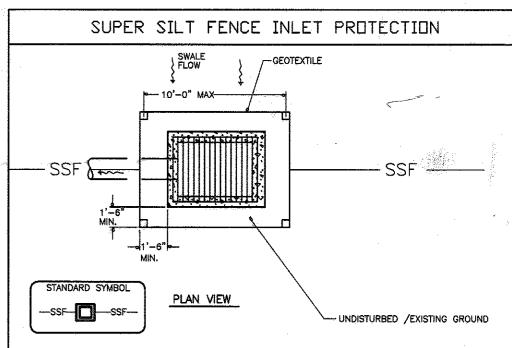
. Obtain grading permit. ?. Instal! tree protection fence. 3. Instal! sediment and erosion control devices and stabilize. 4. Excavate for foundations, rough grade and temporarily stabilize. 30
5. Construct structures, sidewalks and driveways. 60
6. Final grade, install Erosion Control Matting and stabilize in accordance with standards and specifications.
7. Upon approval of the sediment control inspector, remove

sediment and erosion control devices and stabilize. 8. The builder is responsible for cleaning the receiving SWIM Pond of any and all sediment resulting from disturbances related to this plan. Builder must abwater ponds if necessary for cleaning.

* Delay construction of noves on lots!

N/A

SUPER SILT FENCE INLET PROTECTION ►--- 10'-0" MAX---



. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not

Construction Specifications

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8' into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded 6. Maintenance shall be performed as needed and silt buildups removed when "bulges"

develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength Tensile Modulus Flow Rate

50 lbs/in (min.) 20 lbs/in (min.) Filtering Efficiency 75% (min.)

Test: MSMT 509 Test: MSMT 509 0.3 gal/ft*/minute (max.) Test: MSMT 322 Test: MSMT 322

NO SCALI

DRAWING

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FILE NO.

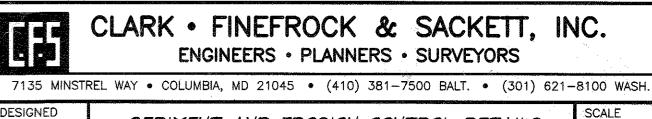
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7 of 7

97-180

OWNER / DEVELOPER MANGIONE ENTERPRISES OF TURF VALLEY 1205 YORK ROAD, PENTHOUSE

TOWSON, MARYLAND 21093



SEDIMENT AND EROSION CONTROL DETAILS TD LOTS 106 THRU 138 DRAWN

SECOND (2nd) ELECTION DISTRICT

CHECKED HOWARD COUNTY, MARYLAND DATE TYLER HOMES OF TOWSON C/O Commercial Contractors

1205 York Road

Towson, Maryland 21093

to this plan of development and 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 or their authorized agents, as are deemed necessary",

Erosion Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation