

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

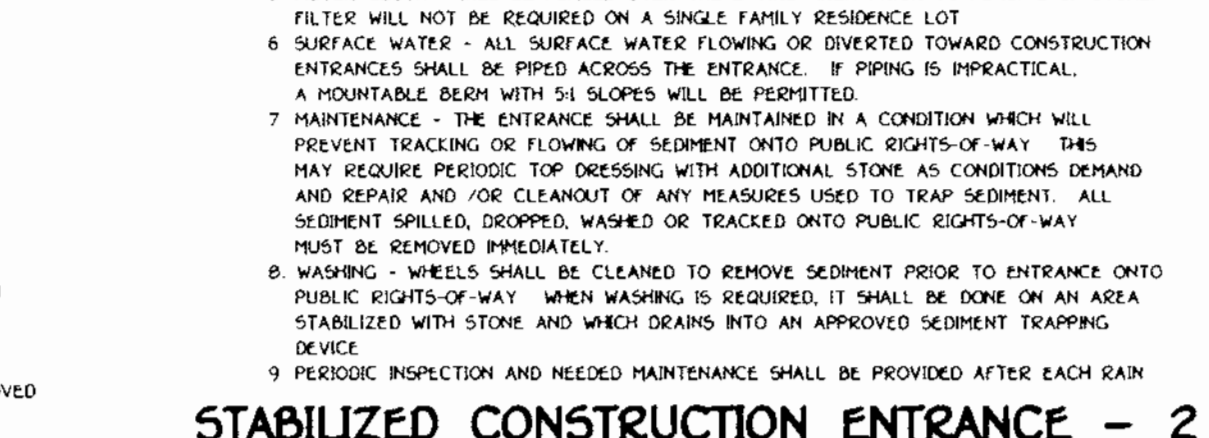
Using vegetation as cover for barren soil to protect it from forces that cause erosion. Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil, when soil is stabilized with vegetation, the soil is less likely to erode, thereby reducing sediment loss and run-off to downstream areas, and improving wildlife habitat and visual resources.

DEFINITION
Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil, when soil is stabilized with vegetation, the soil is less likely to erode, thereby reducing sediment loss and run-off to downstream areas, and improving wildlife habitat and visual resources.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation**
 - Initial erosion and sediment control structures (either temporary or permanent) such as diversion, grade stabilization structures, berms, vetures, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having deviations from standard soil conditions.
- Soil Amendments (Fertilizer and Lime Specifications)**
 - Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having deviations from standard soil conditions. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully baled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime) may be substituted which contains at least 50% total calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a #20 mesh sieve and 90% will pass through a #30 mesh sieve. Lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
- Seeded Preparation**
 - Temporary Seeding**
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc, harrow or chisel plow or ripper mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Seeded areas greater than 50' wide shall be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - To correct lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
 - Permanent Seeding**
 - Soil pH shall be between 6.0 and 7.0.
 - Soil shall contain less than 100 ppm phosphorus.
 - The soil shall contain less than 100 ppm calcium, but enough lime should be applied to bring the soil pH up to 6.5 to provide the capability to hold a moderate amount of moisture. An exception is if loesslike or silty loesslike soils are present. In such cases, a soil test shall be conducted to determine if a moderate amount of lime is to be applied. Then a soil test shall be conducted to determine if a moderate amount of lime is to be applied. Then a soil test shall be conducted to determine if a moderate amount of lime is to be applied.
 - Soil shall contain 1.5% minimum organic matter by weight.
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 - If these conditions cannot be met by soil on site, adding topsoil is required in accordance with Section 23 Standard Specification for Topsoil.
 - Areas previously graded in accordance with 11 shall be maintained in a true and even grade. Then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check dams to prevent topsoil to the surface area and to create horizontal erosion check dams to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Soil amendments into the top 3-5" of topsoil by diking or other suitable means. Lawn areas should be diked to remove fertilizer and lime from the areas and branches, and reduce the area for seed application. Where site conditions will not permit normal seeded preparation, loosen surface soil by diking with a heavy chain or other equipment to roughen the surface. Steep slopes (greater than 3:1) should be tracked by a dicer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 3-5" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.
- Seed Specifications**
 - All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to retesting by a recognized seed laboratory. All seed used shall have been tested within the 6 months preceding the date of seeding or the date of seeding shall be less than 6 months.
 - Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
 - Inspection - The location for treating heavy seed in the seed mixtures shall be a bare portion of the site (indicated on the contractor). Add fresh (moist) soil directed on package. Use four times the amount of seed in the seed mixture. Seed shall be applied in a random pattern. Use four times the amount of seed in the seed mixture. Seed shall be applied in a random pattern. Use four times the amount of seed in the seed mixture.
- Methods of Seeding**
 - Hydroseeding** - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast and water.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not meet the following minimum requirements: Nitrogen: 200 lbs/acre; Phosphorus: 200 lbs/acre; Potassium: 200 lbs/acre.
 - Lime shall be ground agricultural limestone. 10 lbs 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.
 - Seed and fertilizer shall be mixed on site and seeding shall commence immediately and without interruption.
 - Dry Seeding** - This includes use of conventional drop or broadcast spreaders.
 - Seed spreader shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Specifications (Tables 200 or 201). The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
 - When practical, seed shall be applied in the direction perpendicular to each other.
 - Apply half the seeding rate in each direction.
 - Dib or Catapult Seeding** - Mechanical seeders that apply and cover seed with soil. Catapulting seeders are required to bury the seed in such a fashion as to provide at least 1/2" of soil contact. Seed shall be applied in the direction perpendicular to each other.
 - Where practical, seed shall be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- Mulch Specifications**
 - Straw shall consist of thoroughly threshed wheat, rice or oat straw, reasonable bright in color, and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 - Wood Cullage Fiber** - WCF shall consist of specially prepared wood cullage processed into a uniform fiber of physical size:
 - WCF shall be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual detection of the underlying mulch.
 - WCF shall contain no germination or growth inhibiting factors.
 - WCF material shall be manufactured and processed in such a manner that the wood cullage fiber mesh will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a weather-resistant ground cover on application, having moisture absorption and permeation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCF material shall contain no dyes or chemicals or compounds at concentrations that will be detrimental to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1 mm, gel range of 20 to 85, ash content of 10% maximum and water holding capacity of 50% minimum.
 - Note: Only straw or mulch shall be used in areas where any species of grass is desired.
 - Mulching Seeded Areas** - Mulch shall be applied to all seeded areas immediately after seeding. If grading is completed outside of the seeding season, mulch shall be applied as prescribed in this section and maintained until the seeding season and seeding can be performed in accordance with these specifications.
 - When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the seed surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
 - Wood cullage fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cullage fiber shall be mixed with water, and the mixture shall contain a maximum of 50% of wood cullage fiber per 100 gallons of water.
 - Secured straw mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods listed by preference, depending upon size of area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas but is limited to flatter slopes where equipment can operate safely. If used on an sloping area, this practice should be used on the contour if possible.
 - Wood cullage fiber shall be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cullage fiber shall be mixed with water and the mixture shall contain a minimum of 50 pounds of wood cullage fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be applied uniform after binder application. Synthetic binders, such as acrylic latex (Acrylic Latex) or other latex. The manufacturer's application instructions should be followed. The manufacturer's application instructions should be followed. The manufacturer's application instructions should be followed.
 - Lightweight plastic netting may be applied over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

STABILIZED CONSTRUCTION ENTRANCE - 2



PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS
- SEEDING PREPARATION**
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
 - SOIL AMENDMENTS**
APPLY TWO TONS PER ACRE (2000 LBS PER ACRE) OF 0-20-20 FERTILIZER AND 100 LBS PER ACRE OF 50-50-50 FERTILIZER. APPLY TWO TONS PER ACRE (2000 LBS PER ACRE) OF 0-20-20 FERTILIZER AND 100 LBS PER ACRE OF 50-50-50 FERTILIZER. APPLY TWO TONS PER ACRE (2000 LBS PER ACRE) OF 0-20-20 FERTILIZER AND 100 LBS PER ACRE OF 50-50-50 FERTILIZER.
 - SEEDING**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS PER ACRE (2.3 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 50 LBS PER ACRE (1.4 LBS/1000 SQ FT) KENTUCKY 31 TALL FESCUE AND 2 LBS PER ACRE (0.05 LBS/1000 SQ FT) OF WHEAT. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY OPTION (1) - TWO TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOIL, OPTION (3) - SEED WITH 100 LBS PER ACRE (2.3 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 100 TONS PER ACRE (2000 TONS PER ACRE) OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.
 - MULCHING**
APPLY 1 TO 2 TONS PER ACRE (100 TO 200 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GALLONS/1000 SQ FT) OF CRUSHED ASPHALT ON FLAT AREAS OR SLOPES 8 FEET OR HIGHER USE 340 GALLONS PER ACRE (10 GALLONS/1000 SQ FT) FOR ANCHORING.
 - MAINTENANCE**
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.
FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNWEAT AT 15 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 10 LBS/ACRE AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.

TEMPORARY SEEDING NOTES

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION**
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 - SOIL AMENDMENTS**
APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (4 LBS/1000 SQ FT)
 - SEEDING**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH NOVEMBER 15, SEED WITH 1/2 DUMSEL PER ACRE OF ANNUAL RYE (1.2 LBS/ACRE OF WHEATING LOVEGRASS 107 LBS/1000 SQ FT) FOR THE PERIODS NOVEMBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.
 - MULCHING**
APPLY 1 TO 2 TONS PER ACRE (100 TO 200 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 200 GALLONS PER ACRE (5 GALLONS/1000 SQ FT) OF CRUSHED ASPHALT SHALL BE USED ON FLAT AREAS OR SLOPES 8 FEET OR HIGHER. USE 340 GALLONS PER ACRE (10 GALLONS/1000 SQ FT) FOR ANCHORING.
- REFER TO THE 1986 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON PLAN
- CLEAR AND GRUB TO LIMITS OF DISTURBANCE AND MASS GRADE TO FINISH GRADE
- INSTALL TEMPORARY SEEDING
- CONSTRUCT BUILDINGS
- FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE
- REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR

SEDIMENT CONTROL NOTES

- A Minimum of 48 Hours Notice Must Be Given To The Howard County Department of Inspectors, Licenses And Permits, Sediment Control Division Prior To The Start of Any Construction (33-1055)
- All Vegetative And Structural Practices Are To Be Installed According To The Provisions Of The Plan And Are To Be In Accordance To The Provisions Of This Plan And Are To Be In Compliance With The Most Current Maryland Standards And Specifications For Soil Erosion And Sediment Control And Revisions Thereto.
- Following Initial Soil Disturbance Or Re-disturbance, Permanent Or Temporary Stabilization Shall Be Completed Within 14 Calendar Days For All Perimeter Sediment Control Structures, Dikes, Perimeter Slopes And All Slopes Steeper Than 3:1, 30' 14' Days As To All Other Disturbed Or Graded Areas On The Project Site. As To All Other Disturbed Or Graded Areas On The Project Site.
- All Sediment Traps/Basins Shown Must Be Fenced And Warning Signs Posted Around Their Perimeter In Accordance With Vol. 1, Chapter 12, Of The Howard County Design Manual, Storm Drainage, Chapter 12, Of The Howard County Design Manual, Storm Drainage.
- All Disturbed Areas Must Be Stabilized Within The Time Period Specified Above In Accordance With The 1994 Maryland Standards And Specifications For Soil Erosion And Sediment Control For Permanent Seeding (Sec. 30, Sub Sec. 24), Temporary Seeding (Sec. 30, Permanent Seeding (Sec. 30, Sub Sec. 24), Temporary Seeding (Sec. 30, And Mulching (Sec. 52) Temporary Stabilization with Mulch Can Only Be Done When Recommended Seeding Dates Do Not Allow For Proper Germination And Establishment Of Grasses.
- 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 Control Inspector.

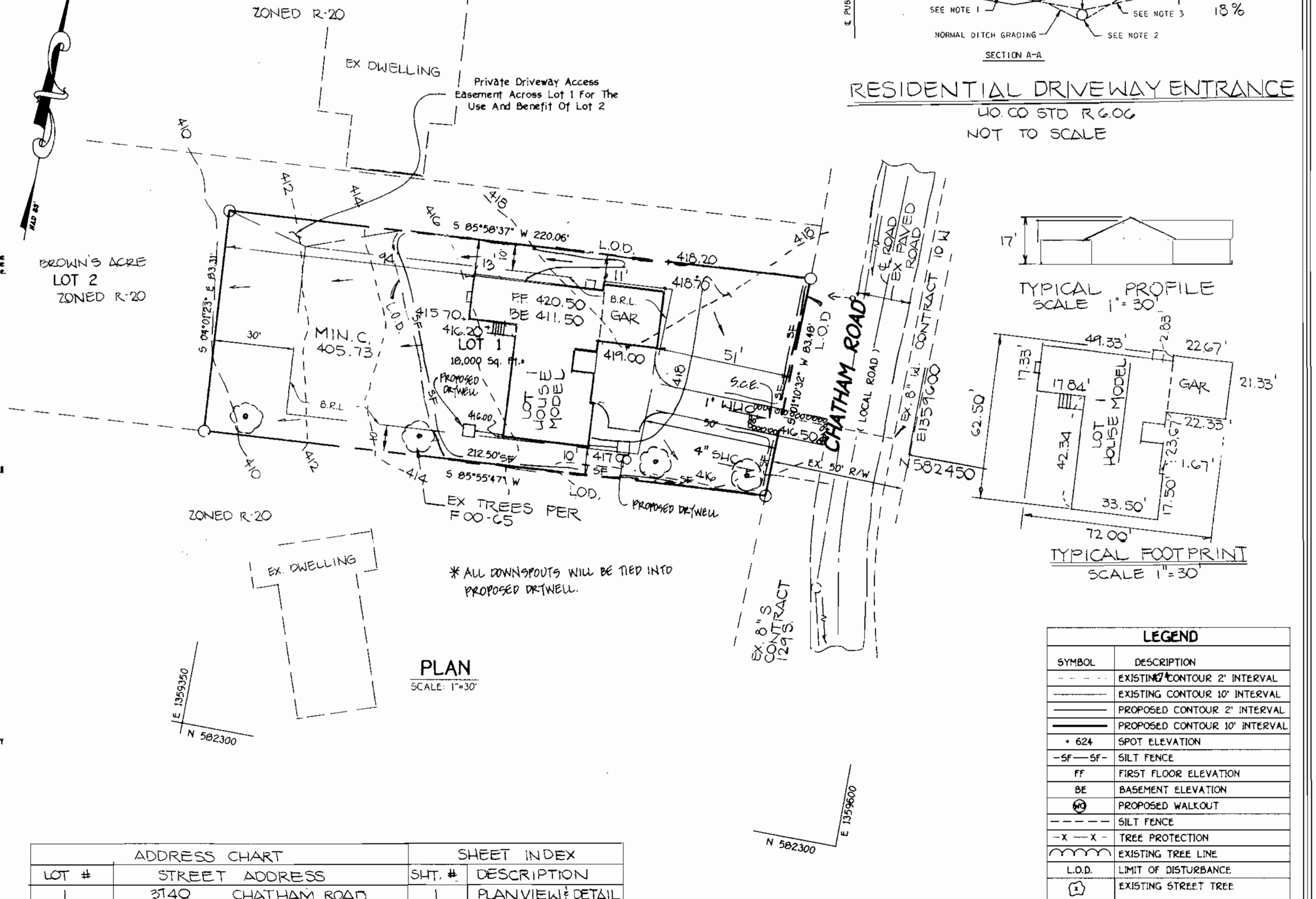
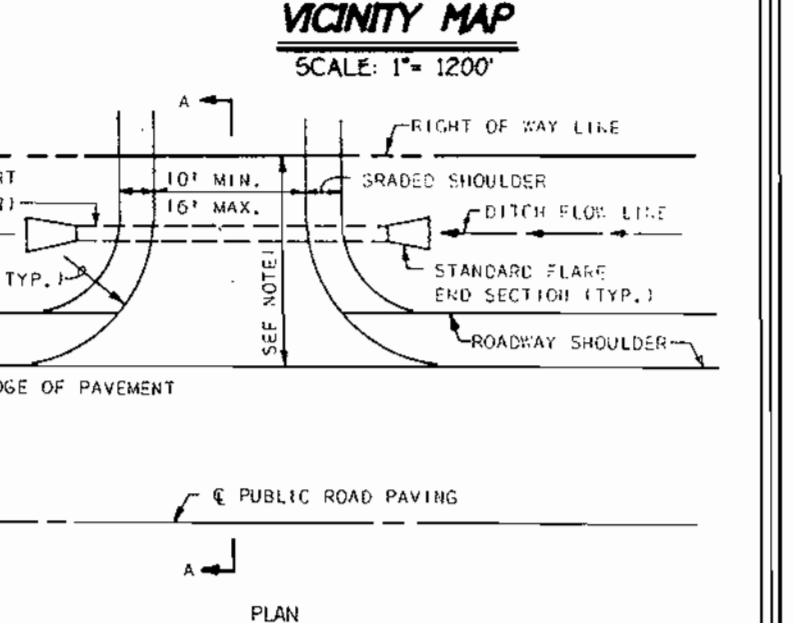
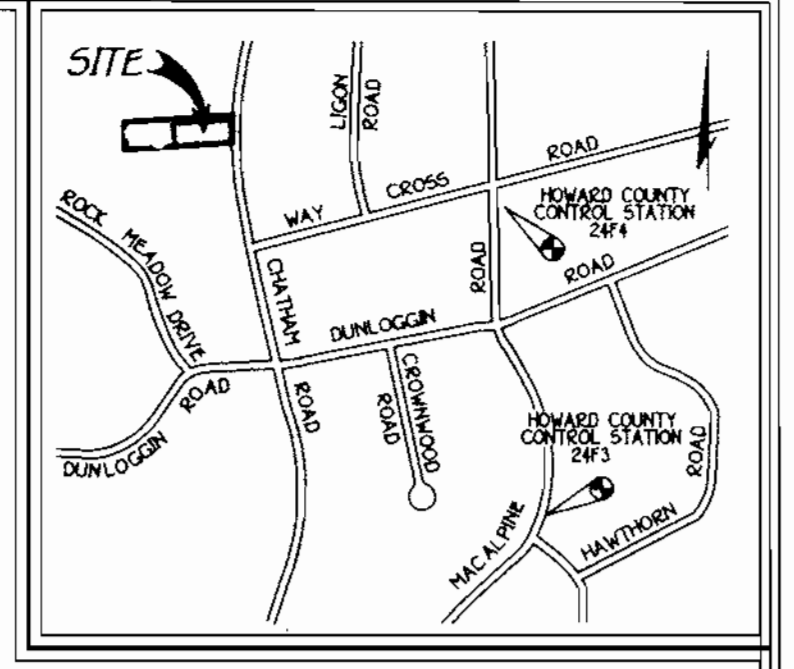
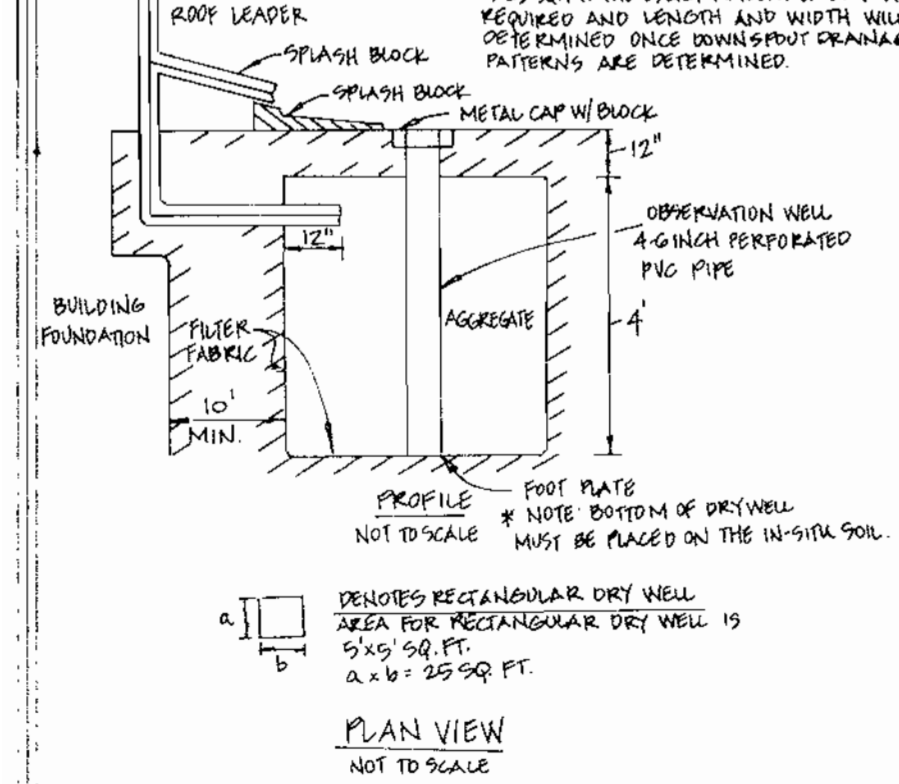
Site Analysis:

Total Area of Site	0.41 Acres
Area To Be Seeded	0.17 Acres
Area To Be Vegetatively Stabilized	0.19 Acres
Total Cut	400 Cu.Yds.
Total Fill	400 Cu.Yds.
Off-Site Waste/Barrow Area Location	_____ Cu.Yds.

Any Sediment Control Practice Which Is Disturbed By Grading Activity For Placement Of Utilities Must Be Replaced On The Same Day Of Disturbance.

Additional Sediment Controls Must Be Provided, If Deemed Necessary By The Howard County Sediment Control Inspector.

TYPICAL PERIMETER CROSS SECTION



FISHER, COLLINS & CARTER, INC.
ENGINEERING CONSULTANTS & LAND SURVEYORS
10000 WOODBINE DRIVE, SUITE 100, BALTIMORE, MARYLAND 21286
TEL: 410-326-1200

DATE	DESCRIPTION

ENGINEER'S CERTIFICATE
I certify that this plan for erosion and sediment 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 District.

Earl D. Lee
Signature of Engineer (Print name below signature) Date: 4/12/00

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 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.

Christopher L. Brown
Signature of Developer (Print name below signature) Date: 4-11-00

OWNER & DEVELOPER
Mr. Christopher L. Brown
c/o Harmony Builders
4228 Columbia Road
Ellicott City, Maryland 21042

ADDRESS CHART

LOT #	STREET ADDRESS
1	3140 CHATHAM ROAD

SHEET INDEX

SHT. #	DESCRIPTION
1	PLANVIEW DETAIL

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE	DATE
4/29/00	4/27/00
4/27/00	4/25/00

SUBDIVISION
BROWN'S ACRE

SECTION/AREA
LOT NO. 141

PLAT NO. 1411G **BLOCK NO.** 1G **ZONE** R-20 **TAX CODE** 24 **ELEC. DIST.** 2ND **CENSUS TR.** 6030

WATER CODE HO-5 **SEWER CODE** 5993000

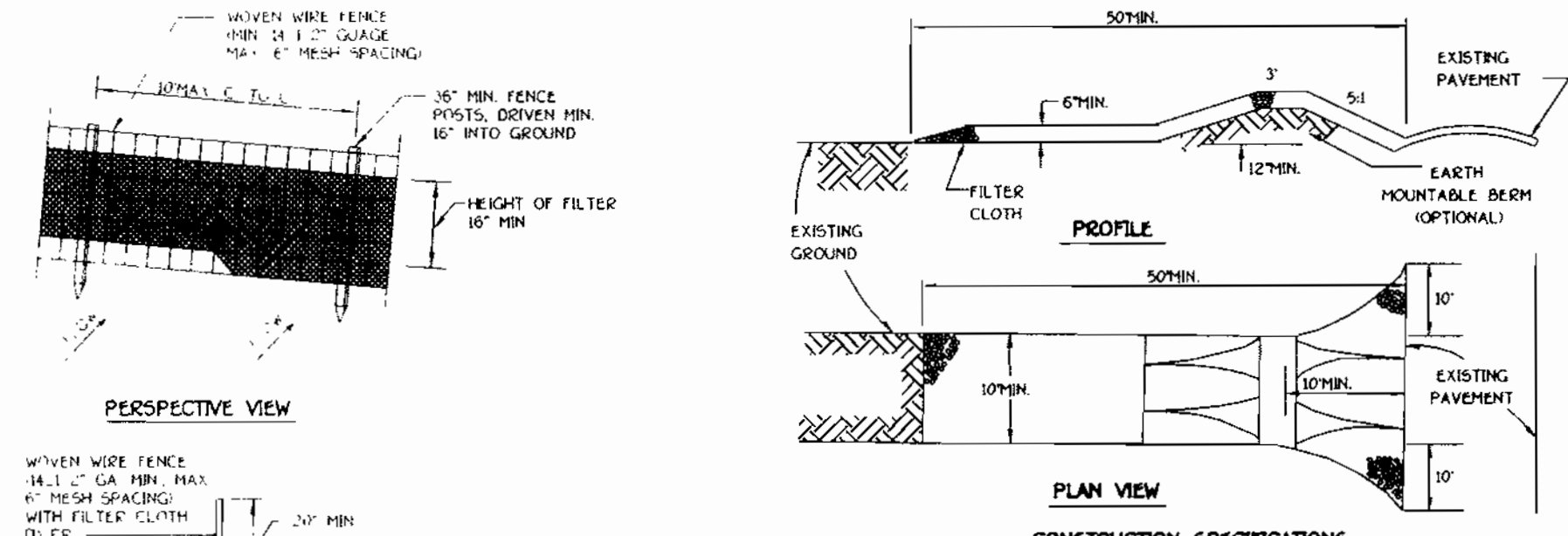
SITE DEVELOPMENT PLAN

BROWN'S ACRE LOT 1

ZONING: R-20
TAX MAP NO: 24 PARCEL: 941 GRID: 16
SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2000

SHEET 1 OF 1

SPP-00-93



STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
Using vegetation as cover for barren soil to protect it from forces that cause erosion.

VEGETATIVE STABILIZATION
Vegetative stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil has the ability to absorb and retain rainfall, thereby reducing sediment loads and runoff to stream channels, and improving wildlife habitat and soil resources.

CONSTRUCTION SPECIFICATIONS

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 30 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A PORTABLE BERM WITH 5% SLOPES WILL BE REQUIRED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND JOE CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- SEDIMENT SHELLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE - 2 NOT TO SCALE

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDING PREPARATION
LOOSEN TOPS THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 0-20-20 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING HARROW OR DISC INTO SOILS THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (18 LBS/1000 SQ FT) AND 500 LBS PER ACRE 10-5-10 FERTILIZER (1000 SQ FT) OF 10-20-20 FERTILIZER.

SEEDING
FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS PER ACRE 0-13-13 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE (14 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE AND 2 LBS PER ACRE (0.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 THROUGH FEBRUARY 28, PROJECT SITE BY OPTION (D) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (C) - USE 500, OPTION (E) SEED WITH 100 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEED.

MULCHING
APPLY 1 TO 2 TONS PER ACRE (20 TO 40 LBS/1000 SQ FT) OF UNLIMITED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE 10 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 8 FEET OR HIGHER USE 340 GALLONS PER ACRE 10 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE
APPLY ALL SEEDS AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

* FOR PUBLIC PONDS SUBSTITUTE CHEMICAL CROWNATCH AT 15 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 10 LBS/ACRE AS WELL AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION
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SOIL AMENDMENTS
APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (4 LBS/1000 SQ FT).

SEEDING
FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH (D) BURIED, PER ACRE OF ANNUAL RYE (32 LBS/ACRE OF WEEPING LOVEGRASS (27 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 1 THROUGH FEBRUARY 28, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

MULCHING
APPLY 1 TO 2 TONS PER ACRE (20 TO 40 LBS/1000 SQ FT) OF UNLIMITED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE 10 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 8 FEET OR HIGHER USE 340 GALLONS PER ACRE 10 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1986 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

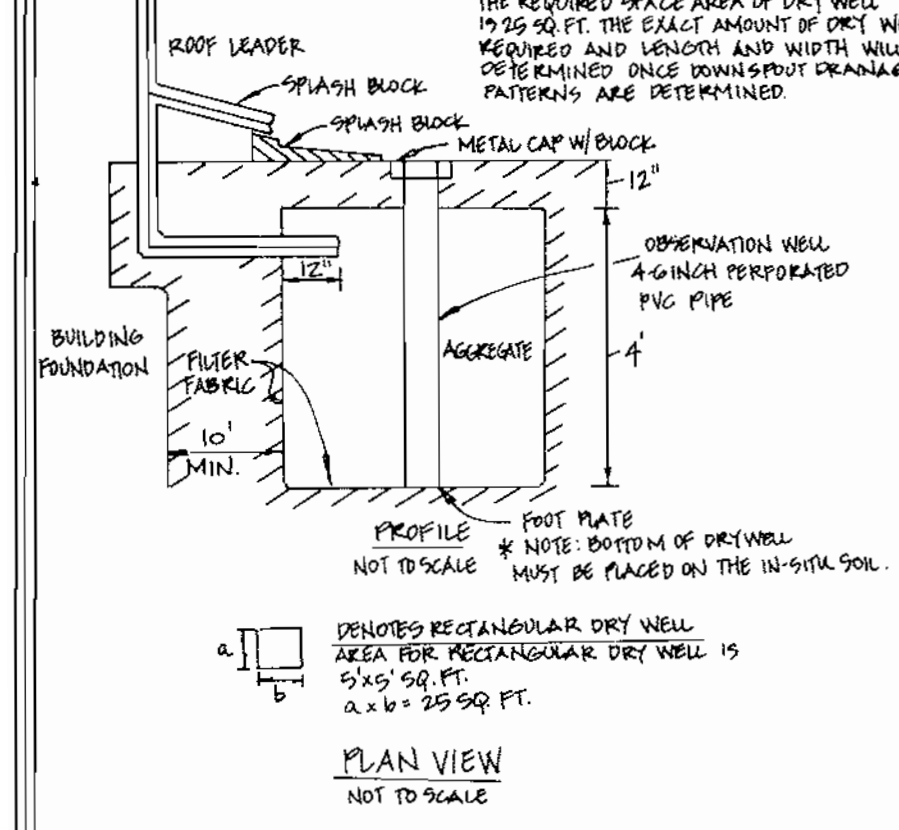
SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT
- INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN
- CLEAR AND GRUB TO LIMITS OF DISTURBANCE AND MASS GRADE TO SURFACE
- INSTALL TEMPORARY SEEDING
- CONSTRUCT BUILDINGS
- FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE
- REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.

SEDIMENT CONTROL NOTES

- A Minimum of 48 Hours Notice Must Be Given To The Howard County Department of Inspection, Licenses And Permits, Sediment Control Division Prior To The Start Of Any Construction (333-1055).
- All Vegetative And Structural Practices Are To Be Installed According To The Provisions Of This Plan And Are To Be In Accordance With The Provisions Of This Plan And Are To Be In Accordance With The Most Current Maryland Standards And Specifications For Soil Erosion And Sediment Control And Revisions Thereof.
- Following Initial Soil Disturbance Or Re-disturbance, Permanent Or Temporary Stabilization Shall Be Completed Within: A) 7 Calendar Days For All Perimeter Sediment Structures, B) 14 Calendar Days For All Slopes Steeper Than 3:1, C) 14 Days For All Other Disturbed Or Graded Areas On The Project Site. As To All Other Disturbed Or Graded Areas On The Project Site.
- All Sediment Traps/Basins Shown Must Be Fenced And Warning Signs Posted Around Their Perimeter In Accordance With Vol. 1, Chapter 12, Of The Howard County Design Manual, Storm Drainage, Chapter 12, Of The Howard County Design Manual, Storm Drainage.
- All Disturbed Areas Must Be Stabilized Within The Time Period Specified Above In Accordance With The 1994 Maryland Standards And Specifications For Soil Erosion And Sediment Control For Permanent Seeding (Sec. 50), Soil (Sec. 54), Temporary Seeding (Sec. 50), Permanent Seeding (Sec. 50), Soil (Sec. 54), Temporary Seeding (Sec. 50), and Mulching (Sec. 50). Temporary Stabilization With Mulch Alone Can Only Be Done When Recommended Seeding Dates Do Not Allow For Proper Germination And Establishment Of Grasses.
- All Sediment Control Structures Are To Remain In Place And Are To Be Maintained In Good Condition Until Permission For Their Removal Has Been Obtained From The Howard County Sediment Control Inspector.
- Site Analysis:
 - Total Area Of Site: 0.41 Acres
 - Total Area To Be Disturbed: 0.37 Acres
 - Total Area To Be Re-seeded: 0.19 Acres
 - Total Cut: 400 Cu Yds.
 - Total Fill: 400 Cu Yds.
 - Off-Site Waste/Borrow Area Location: - Cu Yds.
- Any Sediment Control Practice Which Is Disturbed By Grading Activity For Placement Of Utilities Must Be Replaced On The Same Day Of Disturbance.
- Additional Sediment Controls Must Be Provided, If Deemed Necessary By The Howard County Sediment Control Inspector.
- 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 earthwork. This May Not Be Authorized Until The Initial Approval By The Inspection Agency Is Made.
- Trenches For The Construction Of Utilities Is Limited To Three Pipe Lengths Or That Which Shall Be Back-filled And Stabilized Within One Working Day, whichever is shorter.

TYPICAL DRYWELL CROSS SECTION INFILTRATION MANUAL



DATE	REV.	DESCRIPTION
9-22-00	REV. FF FLOOR EL. AND DRIVEWAY	

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SERVICE OFFICE #401 10732 BALTIMORE NATIONAL PIKE
ELLSWORTH, MD 21117
410-486-1299

GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410) 313-1080 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "WSS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THIS PLAN IS SUBJECT TO A WAIVER PETITION NUMBER 92 APPROVED ON APRIL 22, 1999 TO WAIVE SECTION 16.147 REQUIRING THE SUBMISSION OF A FINAL PLAN TO ADJUST CHANNEL LINES OF RECORDED PARCELS. P-00-65
- BOUNDARY AND PERFORMED BY FISHER COLLINS AND CARTER INC. ON OR ABOUT JUNE 1999.
- TOPOGRAPHIC SURVEY PERFORMED BY: JUNE 1999
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY GEODETIC CONTROL STATIONS:
 - HOWARD COUNTY MONUMENT 24 F4 N 54714.7, 60 E 127844.00
 - HOWARD COUNTY MONUMENT 24 F3 N 54629.00 E 127892.10
- ANY CHANGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THIS PLAN IS FOR HOUSE SITING AND LOT GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHT-OF-WAYS OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION.
- CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- A FEE-IN-LIEU OF STORM WATER MANAGEMENT HAS BEEN MET IN THE AMOUNT OF \$1000. APPROVAL LETTER DATED JANUARY 11, 2000.
- LANDSCAPING FOR LOT 1 IS PROVIDED IN ACCORDANCE WITH CERTIFIED LANDSCAPE PLAN FILED WITH FCO-65 PER SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING OF FOUR TREES IN THE AMOUNT \$1200 IS TO BE PROVIDED BY THE BUILDER WITH GRADING PERMIT APPLICATION.
- WETLANDS STUDY PERFORMED BY ELO-SCIENCE PROFESSIONALS, INC. NO WETLANDS ARE LOCATED ON SITE.
- THIS LOT IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS PER SECTION 16.120.2(b)(1)(iii).
- A FEE-IN-LIEU OF OPEN SPACE HAS BEEN MET IN THE AMOUNT OF \$1900.
- THIS SITE WILL UTILIZE PUBLIC WATER AND SEWER.

VEGETATIVE STABILIZATION METHODS AND MATERIALS

- A. Site Preparation**
- Initial erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, vetiver, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary structures.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- B. Soil Amendment (Fertilizer and Lime Specifications)**
- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizer shall be free flowing and suitable for accurate application by approved equipment. Nitrate may be substituted for fertilizer with prior approval from the appropriate authority. All fertilizer shall be delivered to the site fully baled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and verbatim of the producer.
 - Liming materials shall be ground limestone (hydrated or burnt lime) may be substituted which contains at least 50% total oxides calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a #20 mesh sieve and 90-100% will pass through a #40 mesh sieve.
 - Incorporation lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- C. Seeded Preparation**
- Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of available agricultural or construction equipment, such as disc harrows or chisel plows or rollers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Seeded areas greater than 30 should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plan.
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- D. Seed Specifications**
- All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to laboratory inspection by the Howard County Department of Inspection, Licenses and Permits immediately preceding the date of sowing such materials on the job.
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SEEDING PREPARATION

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- SOIL AMENDMENTS**
APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (4 LBS/1000 SQ FT).
- SEEDING**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH (D) BURIED, PER ACRE OF ANNUAL RYE (32 LBS/ACRE OF WEEPING LOVEGRASS (27 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 1 THROUGH FEBRUARY 28, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.
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SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT
- INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN
- CLEAR AND GRUB TO LIMITS OF DISTURBANCE AND MASS GRADE TO SURFACE
- INSTALL TEMPORARY SEEDING
- CONSTRUCT BUILDINGS
- FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE
- REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.

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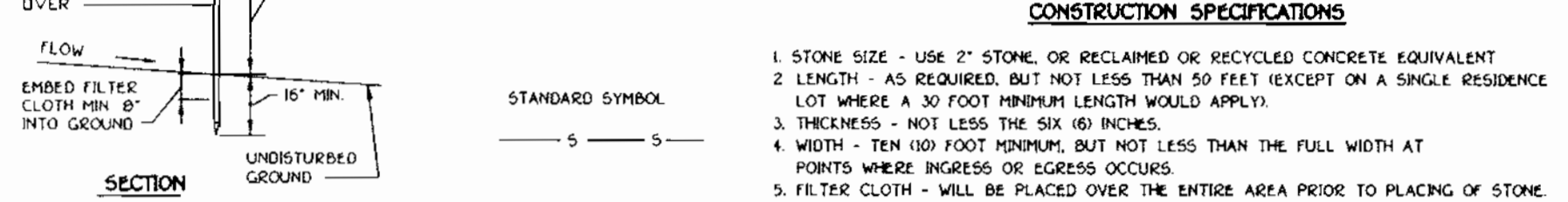
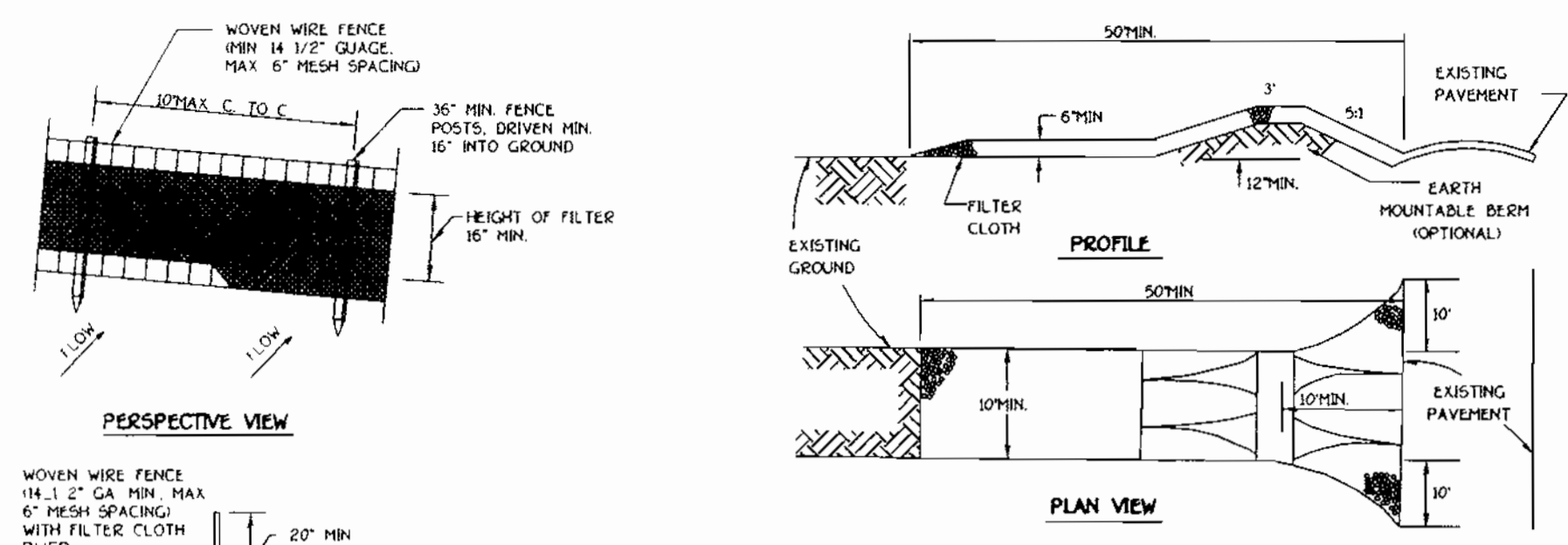
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- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizer shall be free flowing and suitable for accurate application by approved equipment. Nitrate may be substituted for fertilizer with prior approval from the appropriate authority. All fertilizer shall be delivered to the site fully baled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and verbatim of the producer.
 - Liming materials shall be ground limestone (hydrated or burnt lime) may be substituted which contains at least 50% total oxides calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a #20 mesh sieve and 90-100% will pass through a #40 mesh sieve.
 - Incorporation lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- C. Seeded Preparation**
- Seeded preparation shall consist of loosening soil to a depth of 3"



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. FENCE POSTS TO BE FASTENED SECURELY TO WIRE TIES OF STAPLES
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES EVERY 6" AT TOP AND MID SECTION
3. WHEN TWO SECTIONS OF FILTER CLOTH JOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE

STANDARD SYMBOL

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE 1/2" GA. MAX. 6" FRESH SPACING

FILTER CLOTH: FILTER 1 X 1 MEAT 100% STAINLESS TH OR APPROVED EQUAL

PRE-FABRICATED UNIT: GEOTEX, ENVIRONMENTAL, OR APPROVED EQUAL

SILT FENCE
NOT TO SCALE

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Vegetation as cover for barren soil to protect it from erosion and to stabilize exposed soil. Vegetative stabilization specifications 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 slow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

DEFINITION
Vegetative stabilization is the process of establishing vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to slow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

CONDICTIONS WHERE PRACTICE APPLIES
This practice shall be used on disturbed areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into temporary seeding to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stabilization, cleared areas being left between construction phases, clear ditches, etc. and for Permanent Seeding are levees, dunes, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY
Planting vegetation in disturbed areas will have an effect on the water budget, especially on volume and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation over time, 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 assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation**
 1. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 3. Schedule residue and soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- Soil Amendment, Fertilizer and Lime Specifications**
 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil analysis taken for engineering purposes may also be used for chemical analysis.
 2. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Material may be substituted with prior approval from the appropriate authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable fertilizer label and shall bear the name of the manufacturer and manufacturer of the product.
 3. Lime materials shall be ground limestone (hydrated or burnt lime) may be substituted which contains at least 90% calcium hydroxide plus magnesium oxide. Magnesium oxide shall be such that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 4. Incorporate lime and fertilizer into the top 3-5" of soil by mixing or other suitable means.
- Seeding Preparation**
 1. Seeding preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Seeded areas greater than 30' should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 2. Apply fertilizer and lime as prescribed on the plans.
 3. Incorporate lime and fertilizer into the top 3-5" of soil by mixing or other suitable means.
- Permanent Seeding**
 1. Minimum soil conditions required for permanent vegetative establishment:
 - a. Soil shall be between 10% and 20% clay.
 - b. Soluble salts shall be less than 500 parts per million (ppm).
 - c. The soil shall contain more than 40% clay, but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if loesslike or aeolian deposits in to be planted, then a sandy soil (20% silt plus clay) would be acceptable.
 - d. Soil shall contain sufficient pore space to permit adequate root penetration.
 - e. If these conditions cannot be met by soil on site, adding topsoil is required in accordance with Section 23.5.1.1.1.1.
 2. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3" to 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check sets to prevent topsoil from sliding down the slope.
 3. Apply soil amendments as per soil test or as included on the plans.
 4. Soil shall contain sufficient pore space to permit adequate root penetration. Lawn soils should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application, when soil conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeding loosening may not be necessary on disturbed areas.

STABILIZED CONSTRUCTION ENTRANCE - 2
NOT TO SCALE

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDBED PREPARATION
LOOSEN TOP THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS
APPLY TWO TONS PER ACRE COLONIC LIMESTONE @ 100 LBS./1000 SQ.FT. AND 500 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-30 UREAFORM FERTILIZER (90 LBS./1000 SQ.FT.) AND 500 LBS. PER ACRE (115 LBS./1000 SQ.FT.) OF 10-20-20 FERTILIZER.

SEEDING
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 THROUGH FEBRUARY 29, PROTECT SITE BY OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLY IN THE SPRING, OPTION (2) - USE 500, OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE PROTECTED.

MULCHING
APPLY 1 TO 2 TONS PER ACRE (20 TO 40 LBS./1000 SQ.FT.) OF UNMILLED SMALL GRAM STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS OR SLOPES 5 FEET OR HIGHER, USE 340 GALLONS PER ACRE (8 GAL./1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE
INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS. REFER TO THE 1998 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR RATE AND METHODS NOT COVERED.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REINTEGRATED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION
LOOSEN TOP THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS
APPLY 500 LBS. PER ACRE 10-10-10 FERTILIZER (4 LBS./1000 SQ.FT.).

SEEDING
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 THROUGH FEBRUARY 29, PROTECT SITE BY OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLY IN THE SPRING, OPTION (2) - USE 500, OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE PROTECTED.

MULCHING
APPLY 1 TO 2 TONS PER ACRE (20 TO 40 LBS./1000 SQ.FT.) OF UNMILLED SMALL GRAM STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS OR SLOPES 5 FEET OR HIGHER, USE 340 GALLONS PER ACRE (8 GAL./1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1998 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, FOR RATE AND METHODS NOT COVERED.

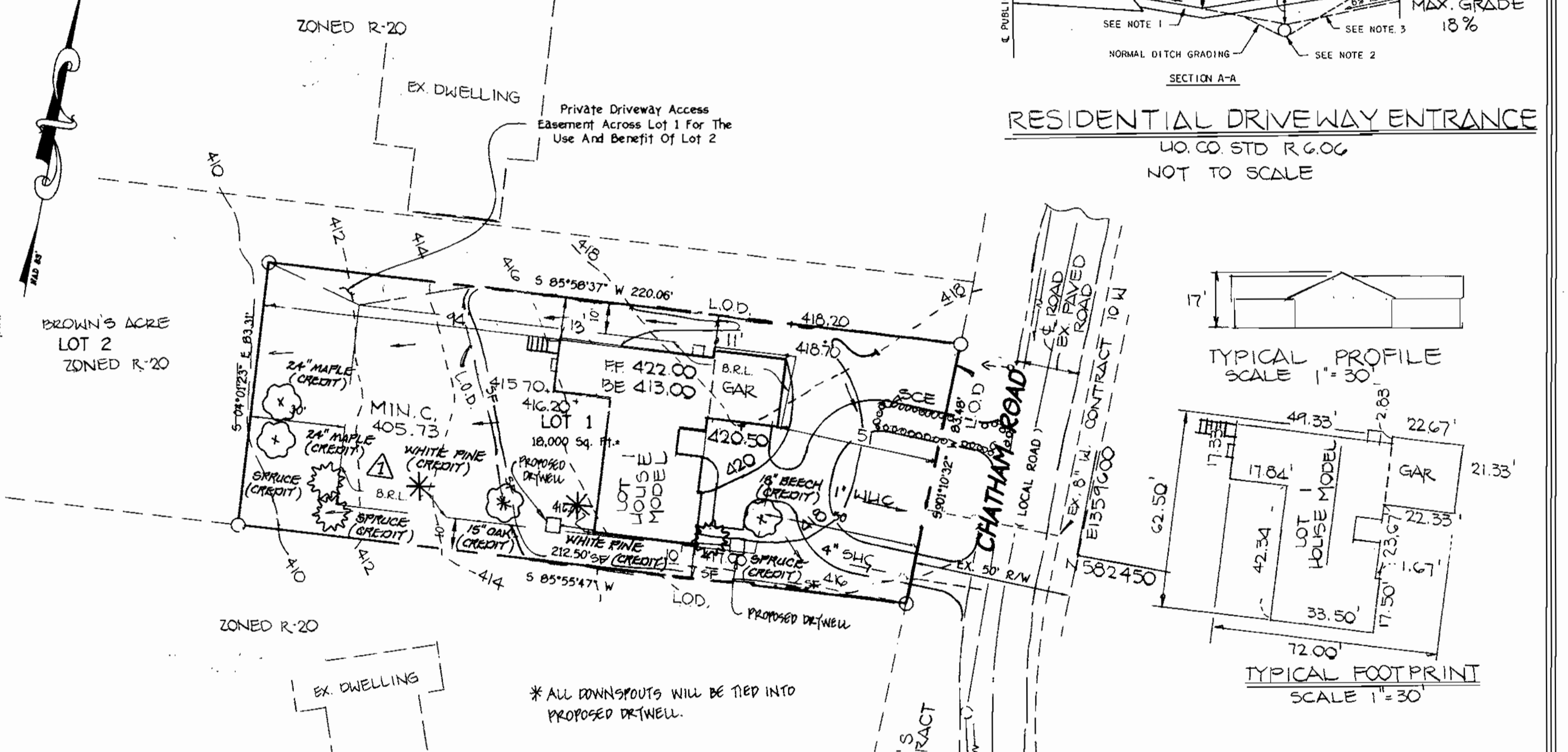
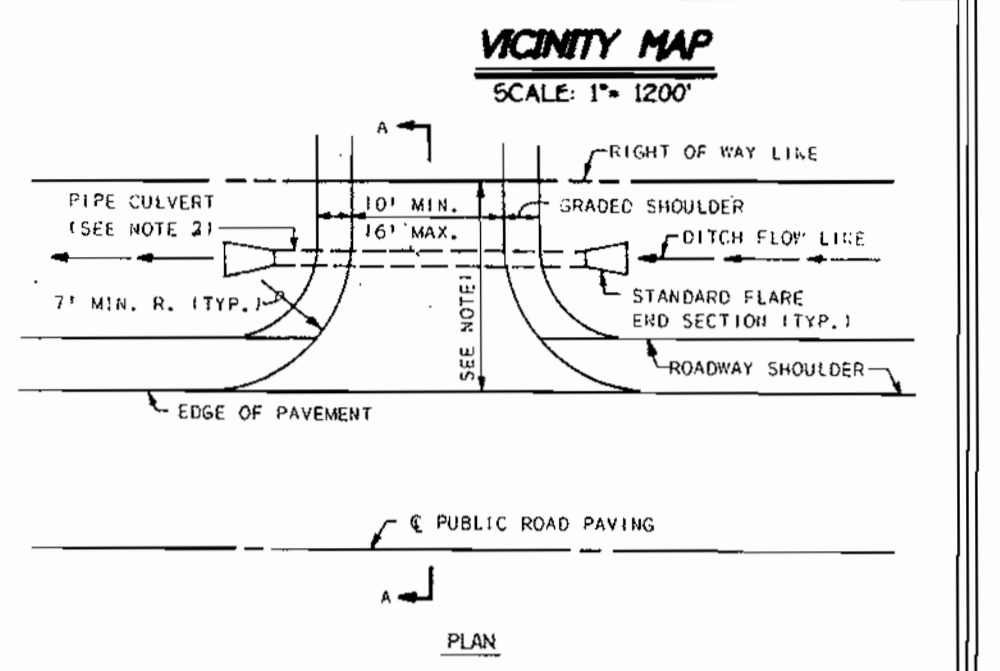
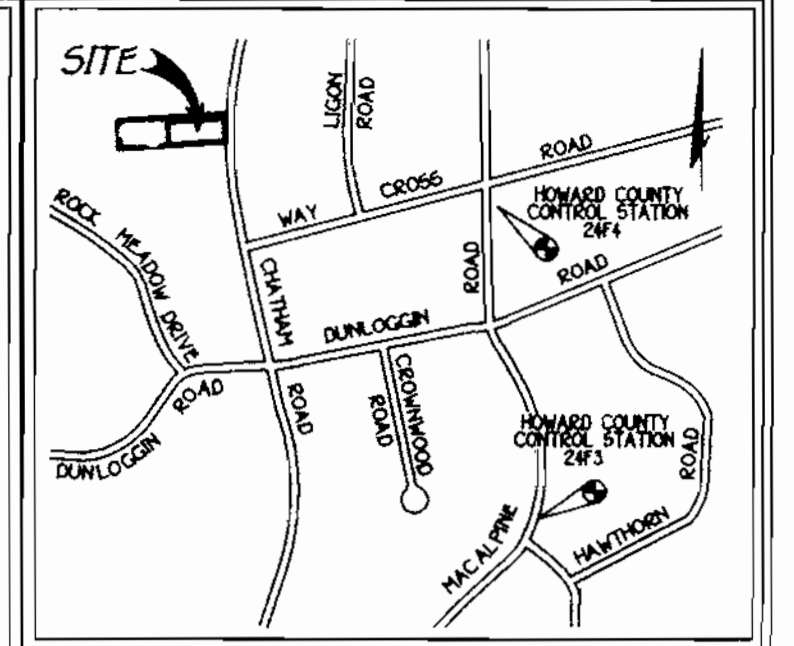
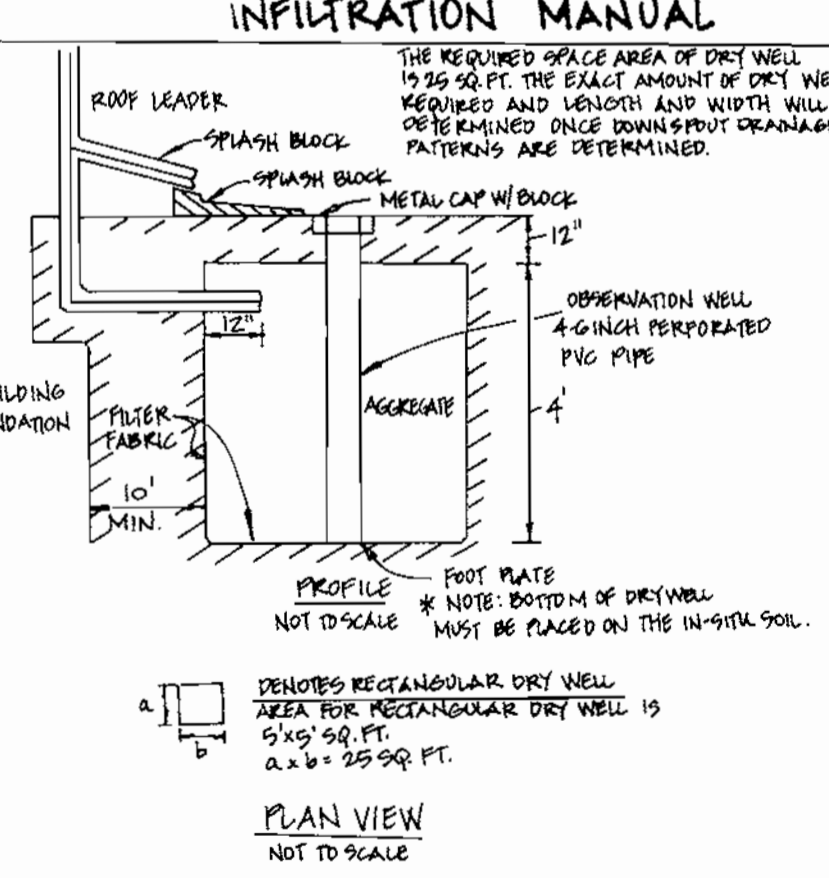
SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN.
3. CLEAR AND GRUB TO LIMITS OF DISTURBANCE AND MASS GRADE TO SUN-BASE.
4. INSTALL TEMPORARY SEEDING.
5. CONSTRUCT BUILDINGS.
6. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE.
7. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, Licenses and Permits, Sediment Control Division Prior to the Start of Any Construction (23-1055).
2. All Vegetative And Structural Practices Are To Be Installed According to the Provisions of This Plan And Are To Be In Accordance with the Provisions of This Plan And Are To Be In Conformance with the Most Current Maryland Standards And Specifications for Soil Erosion and Sediment Control And Revisions Thereof.
3. Following Initial Soil Disturbance Or Re-Disturbance, Permanent Or Temporary Stabilization Shall Be Completed Within (A) 7 Calendar Days For All Perimeter Sediment Control Structures, Dikes, Perimeter Slopes And All Slopes Steeper Than 3:1, (B) 14 Days As To All Other Disturbed Or Graded Areas On The Project Site. As To All Other Disturbed Or Graded Areas On The Project Site.
4. All Sediment Traps/Basins Shown Must Be Fenced And Warning Signs Posted Around Their Perimeter In Accordance with Vol. 1 Chapter 12. of the Howard County Design Manual, Storm Drainage, Chapter 12. of the Howard County Design Manual, Storm Drainage.
5. All Disturbed Areas Must Be Stabilized Within the Time Period Specified Above in Accordance with the 1998 Maryland Standards And Specifications for Soil Erosion and Sediment Control for Permanent Seeding (Sec. 50), Soil (Sec. 54), Temporary Seeding (Sec. 50), Permanent Seeding (Sec. 50), Soil (Sec. 54), and Mulching (Sec. 52). Temporary Stabilization with Mulch Alone Can Only Be Done When Recommended Seeding Dates Do Not Allow For Proper Germination And Establishment of Grasses.
6. 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 Control Inspector.
7. Site Analysis:
 - Total Area of Site: 0.41 Acres
 - Area Disturbed: 0.37 Acres
 - Area To Be Roofed Or Paved: 0.05 Acres
 - Area To Be Vegetatively Stabilized: 0.19 Acres
 - Total Cut: 400 Cu.Yds.
 - Total Fill: 400 Cu.Yds.
 - Off-Site Water/Borrow Area Location: _____
8. 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 Controls Must Be Provided, if Deemed Necessary by the Howard County 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 Approvals May Not Be Authorized Until This Initial Approval by the Inspection Agency is Made.
11. Trenches For the Construction of Utilities is Limited to Three Pipe Lengths Or That Which Shall Be Back-filled And Stabilized Within One Working Day, whichever is Shorter.

TYPICAL DRYWELL CROSS SECTION INFILTRATION MANUAL



LEGEND

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+624	SPOT ELEVATION
-SF - SF	SILT FENCE
FF	FIRST FLOOR ELEVATION
BE	BASEMENT ELEVATION
○	PROPOSED WALKOUT
---	SILT FENCE
-X - X	TREE PROTECTION
---	EXISTING TREE LINE
L.O.D.	LIMIT OF DISTURBANCE
---	EXISTING STREET TREE

ADDRESS CHART

LOT #	STREET ADDRESS
1	3740 CHATHAM ROAD

SHEET INDEX

SHT. #	DESCRIPTION
1	PLANVIEW/DETAIL

REVISIONS

NO.	DATE	REVISIONS
1	3/4/02	REVISE LOT 1 LANDSCAPE CREDIT

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK 10725 EASTWIND NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
410-491-2899

ENGINEER'S CERTIFICATE
I certify that this plan for erosion and sediment 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 District.

Christopher L. Brown
Signature of Engineer (Print name below signature) Date: 4/12/00

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

Christopher L. Brown
Signature of Developer (Print name below signature) Date: 4-11-00

OWNER & DEVELOPER
Mr. Christopher L. Brown
c/o Harmony Builders
4228 Columbia Road
Ellicott City, Maryland 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John J. Smith
Director, Department of Planning and Zoning 4/28/00
Condy Hamilton
Chief, Division of Land Development 4/27/00
Asa S. Simms
Chief, Development Engineering Division 4/25/00

SUBDIVISION

SECTION/AREA	LOT NO.
BROWN'S ACRE	941

PLAT NO. 1411G **BLOCK NO.** 1G **ZONE** R-20 **TAX/ZONE** 24 **ELEC. DIST.** 2ND **CENSUS TR.** 6030

WATER CODE HO-5 **SEWER CODE** 5993000

SITE DEVELOPMENT PLAN

BROWN'S ACRE
LOT 1

ZONING: R-20
TAX MAP No: 24 PARCEL: 941 GRID: 16
SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2000
SHEET 1 OF 1

SDP-00-93