PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", thereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to quarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor. Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on

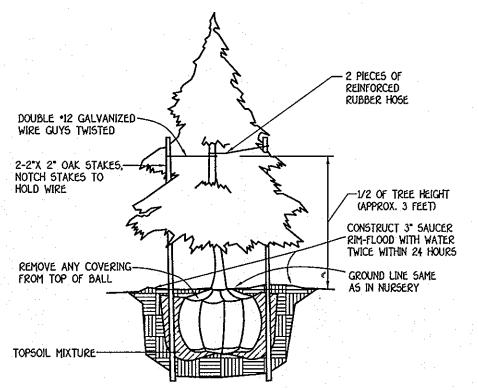
the plant list, the quantities on the plan take precedence All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope?

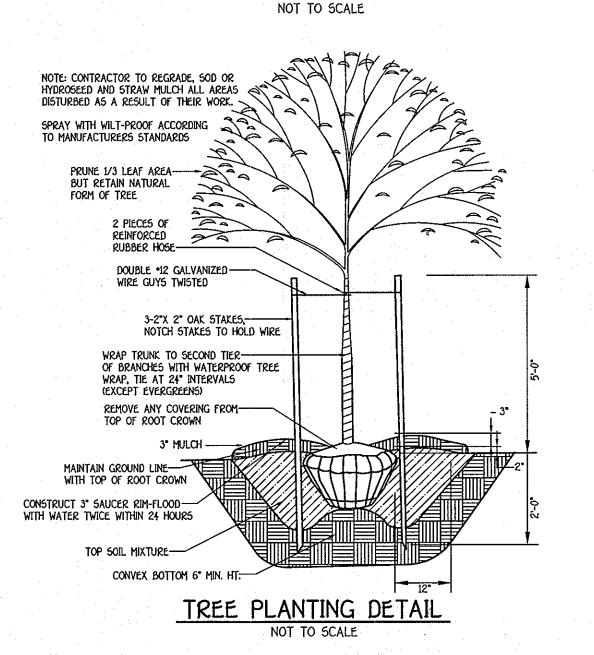
Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded. This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

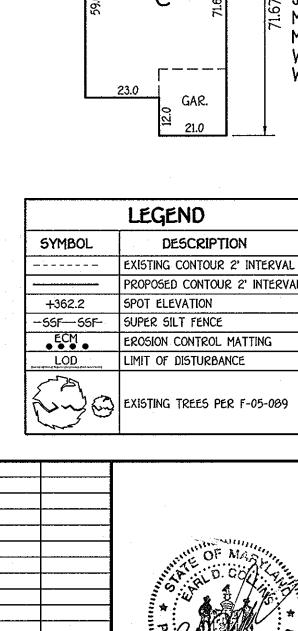


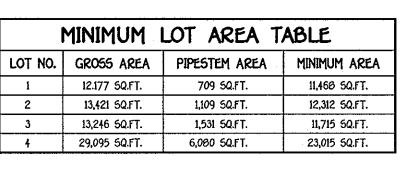
EVERGREEN PLANTING DETAIL

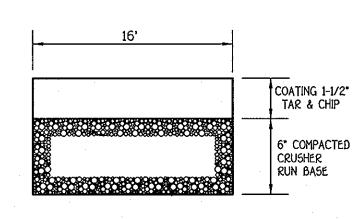


BUILDER/DEVELOPER'S/CERTIFICATE

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING. <u>7-11-08</u>







ALL HOUSE TYPES

CALVERT

HAMPTON

MAYFIELD

MAYFIELD II

WOODBURY

CHURCHILL

HAMPTON

MAYFIELD

MAYFIELD II

WOODBURY

WETHERBURN

JAMES RIVER

CHURCHILL

JAMES RANDOLPH

THOMAS GOODWIN

JAMES RIVER

WETHERBURN

WILLIAM DEAVEN

W/ALL OPTIONS



NOT TO SCALE

40.0

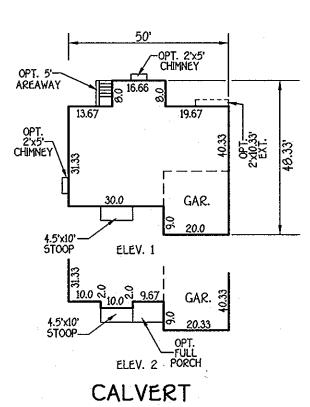
50.0

GAR.

GAR.

31.0

34.0



GAR.

ELEV. 3

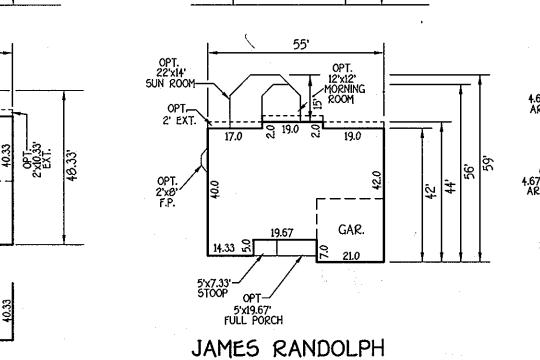
THE CHURCHILL

GAR.

ELEV. 3

ELEV. 2

THE HAMPTON



JAMES RIVERI

MADISON

INDEX CHART

SHEET 3 SEDIMENT/EROSION CONTROL PLAN LOTS 1 THRU 4

SHEET 4 SEDIMENT/EROSION CONTROL NOTES & DETAILS

SHEET 1 COVER SHEET, HOUSE TYPES, TEMPLATES

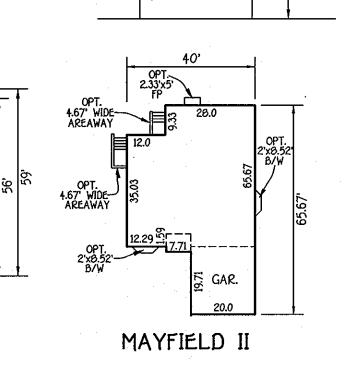
SHEET 2 SITE DEVELOPMENT PLAN, LOTS 1 THRU 4,

LANDSCAPE & SOILS MAP

DESCRIPTION

410-992-6000

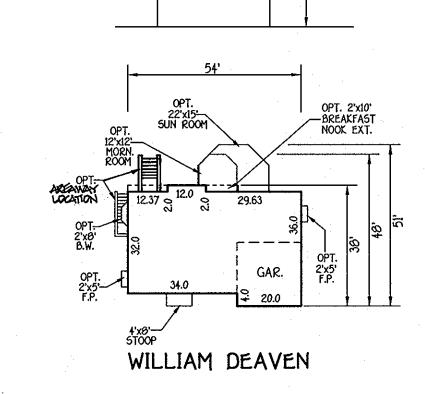
— 5'x13' 5toop



THOMAS GOODWIN

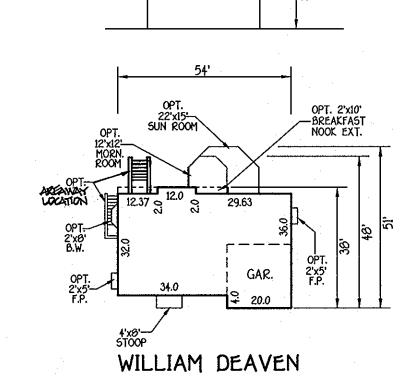
22.0

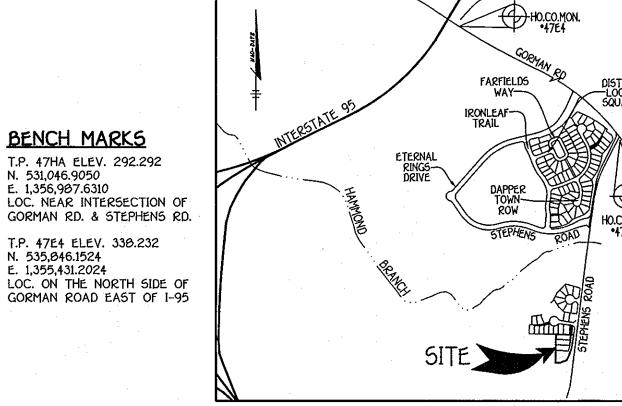
WETHERBURN



OPT. 2'X4.8'-4 8/W

WOODBURY





VICINITY MAP SCALE: 1" = 1,200'

GENERAL NOTES

BENCH MARKS

T.P. 47HA ELEV. 292.292

T.P. 47E4 ELEV. 338.232

N. 531,046.9050

N. 535.846.1524

E. 1.355.431.2024

E. 1.356.987.6310

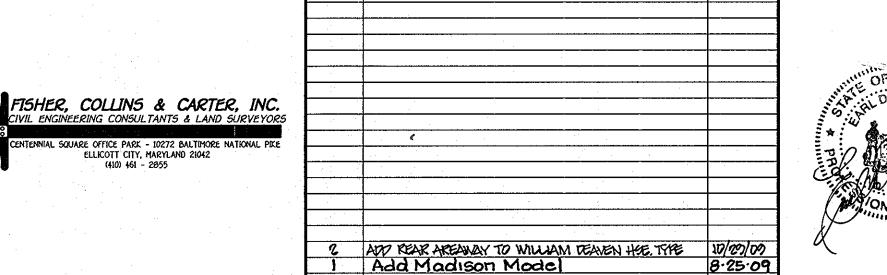
- 1. THE SUBJECT PROPERTY IS ZONED R-SC-MXD-3 & R-SC PER THE 02/02/04 COMPREHENSIVE ZONING PLAN. AND THE "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7/28/06.
- TOTAL AREA OF SITE: 1.5597 ACRES TOTAL NUMBER OF LOTS SUBMITTED: 4 SFD
- . THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE WORKING DAYS PRIOR TO START OF WORK.
- 5. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS
- PRIOR TO ANY EXCAVATION WORK.

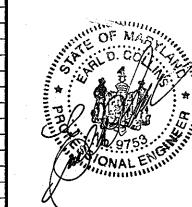
 6. THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES: ZB-979-M, 5-99-12, F-05-089, P-04-14,
- PB-339, PB-359, AND W&S CONT. *24-4231-D. (AMENDED 5-99-12), F-05-117, F-07-166 & F-07-168. 7. THIS PLAN IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JULY, 2000 BY DAFT McCUNE WALKER, INC., THE EXISTING TOPOGRAPHY WAS TAKEN FROM
- FIELD RUN TOPOGRAPHY WITH 2 FOOT INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC., DATED DECEMBER, 2007. 8. HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83. MARYLAND COORDINATE
- SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS. HOWARD COUNTY MONUMENT 47HA N 531,046.9050 E 1,356,987.6310 HOWARD COUNTY MONUMENT 47E4 N 535,846.1524 E 1,355,431.2024
- 9. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- 10. THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 24-4231-D.
- 11. CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- 12. STORMWATER MANAGEMENT WILL BE PROVIDED BY A POCKET POND TO BE JOINTLY MAINTAINED BY H.O.A. AND HOWARD COUNTY AS SHOWN ON THE APPROVED ROAD CONSTRUCTION DRAWINGS
- FILED UNDER F-05-89. 13. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL AND DEVELOPMENT CRITERIA
- APPROVED BY THE PLANNING BOARD 7-1-99 PER CASE NO. PB-339 REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$2,550.00 FOR
- 7 SHADE TREES AND 3 EVERGREEN TREES. AND MUST BE POSTED AS PART OF THE SITE DEVELOPMENT PLAN.
- 14. FOREST CONSERVATION REQUIREMENTS HAVE BEEN ADDRESSED UNDER F-05-117 WITH FEE-IN-LIEU IN THE AMOUNT OF \$16,989.00.
- 15. FOR DRIVEWAY ENTRANCE DETAILS REFER TO HO. CODES MANUAL VOL. IV DETAILS R.6.03 & R.6.05. 16. FINANCIAL SURETY FOR THE REQUIRED 10 TREES IN THE AMOUNT OF \$2,550.00 IS PART OF THE BUILDERS GRADING PERMIT APPLICATION FOR LOTS 1,2,3 & 4.
- 17. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE
- FOLLOWING (MINIMUM) REQUIREMENTS: A.) WIDTH - 12' (16') IF SERVING MORE THAN ONE RESIDENCE. B.) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.)
- C.) GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45 FOOT TURNING RADIUS.
- D.) STRUCTURES (BRIDGES/CULVERTS) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING)
- E.) DRAINAGE ELEMENTS CAPABLE OF SAFETY PASSING 100 YEAR FLOOD WITH NO MORE THAN I FOOT DEPTH OVER DRIVEWAY SURFACE.
- F.) STRUCTURE CLEARANCES MINIMUM 12 FEET
- G.) MAINTENANCE SUFFICIENT TO INSURE ALL WEATHER USE 18. THIS SITE IS BEING DEVELOPED UNDER THE R-SC ZONING REQUIREMENTS 19. NO WETLANDS, WETLAND BUFFERS, STREAMS, STREAM BUFFERS OR STEEP SLOPES GREATER
- THAN 15% ARE PRESENT ON THE SITE. 20. THERE ARE NO FLOODPLAIN LIMITS WITHIN THE LIMITS OF THE SUBJECT PROPERTY
- 21. THE LOTS OF THIS MINOR SUBDIVISION WILL OBTAIN THEIR ACCESS OVER THEIR OWN 6.04' FEE SIMPLE STRIPS VIA THE EXISTING 24' PRIVATE USE-IN-COMMON DRIVEWAY, AS RECORDED ON PLAT
- NO. 17915 AND THE PROPOSED 24' PRIVATE USE-IN-COMMON DRIVEWAY EASEMENT, AS SHOWN HEREON 22. IN ACCORDANCE WITH COUNCIL BILL 15-2006, THE SIDEWALK REQUIREMENTS WAS ADDRESSED WITH
- PAYMENT OF FEE-IN-LIEU FOR SIDEWALK CONSTRUCTION IN THE AMOUNT OF \$10,922.50, PER F-06-166. 23. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS. CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE
- THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS.
- 24. EXISTING UTILITIES WERE FIELD LOCATED BY FISHER, COLLINS & CARTER, INC. ON DECEMBER, 2007
- 25. SEWER HOUSE CONNECTION ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE. 26. A "NO PARKING" SIGN SHALL BE INSTALLED AT THE DRIVEWAY TURN AROUND ON LOT 4 TO ACCOMODATE EMERGENCY VEHICLE.
- 27. THE EXISTING TREES TO REMAIN HAVE BEEN LABELED AND LOCATED ACCORDING TO SPECIES AND SIZE. THE SITE IS A BASICALLY UNWOODED OPEN FIELD WITH A GENTLE SLOPE OF LESS

SITE ANALYSIS DATA CHART

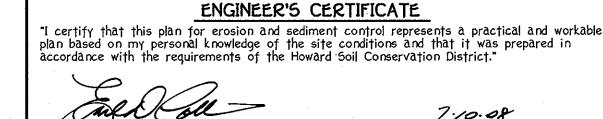
- A. TOTAL PROJECT AREA: 1.5597 ACRES OR 67,939 SQUARE FEET.
- B. AREA OF SUBMISSION: 1.5597 ACRES OR 67,939 SQUARE FEET. C. LIMITS OF DISTURBANCE: 1.2614 ACRES OR 54,947 SQUARE FEET.
- D. PRESENT ZONING DESIGNATION: R-SC-MXD-3 & R-SC. E. PROPOSED USES FOR SITE: RESIDENTIAL
- F. APPLICABLE DPZ FILE REFERENCES: ZB-979-M, S-99-12, F-05-089,
- P-04-14, PB-339, PB-359, AND W&S CONT. NO. 24-4231-D, (AMENDED 5-99-12), F-05-117, F-07-166 & F-07-168.
- G. TOTAL NUMBER OF UNITS ALLOWED: 4 TOTAL NUMBER OF UNITS PROPOSED: 4
- I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER

THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 9753, EXPIRATION DATE IS 2/28/10. 7.10.08





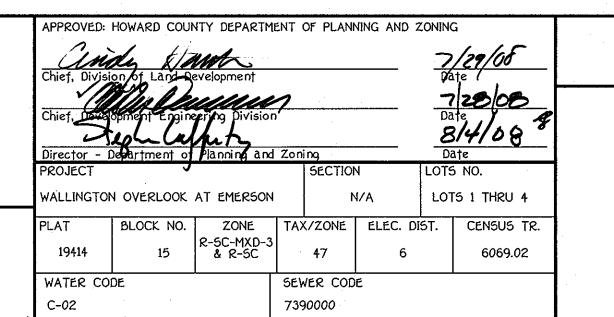
<u>9·25·09</u>



7.10.08 EARL D. COLLINS 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

ROBERT CORBETT

OWNER BUILDER/DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT CORP. WILLIAMSBURG GROUP, LLC 10275 LITTLE PATUXENT PARKWAY 5485 HARPERS FARM ROAD COLUMBIA, MARYLAND 21044 COLUMBIA, MARYLAND 21044



CALVERT I

LOT NUMBER

(MODIFIED)

ADDRESS CHART

STREET ADDRESS

9410 FOREST GATES PATH

9414 FOREST GATES PATH

9410 FOREST GATES PATH

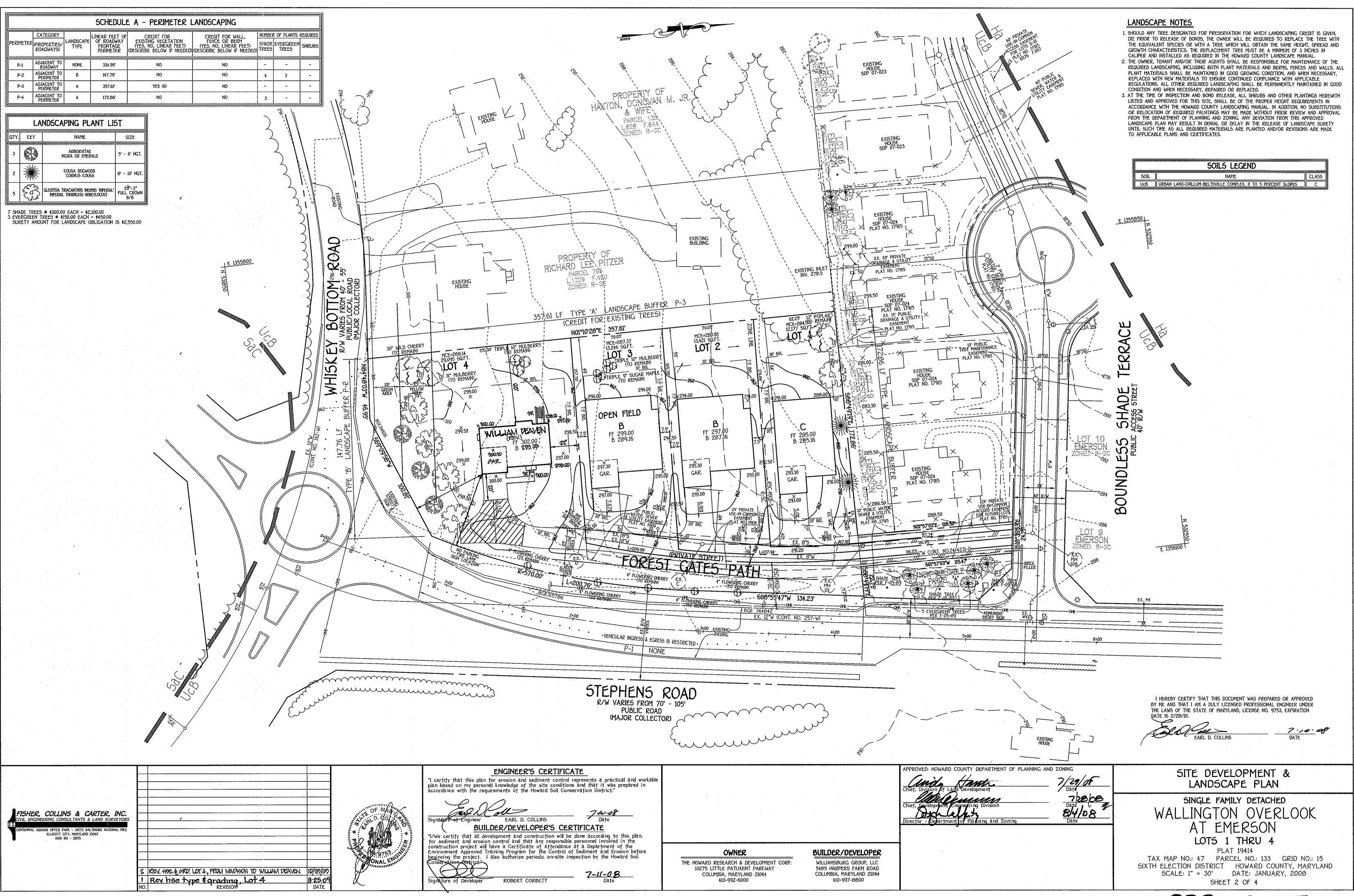
9422 FOREST GATES PATH

COVER SHEET

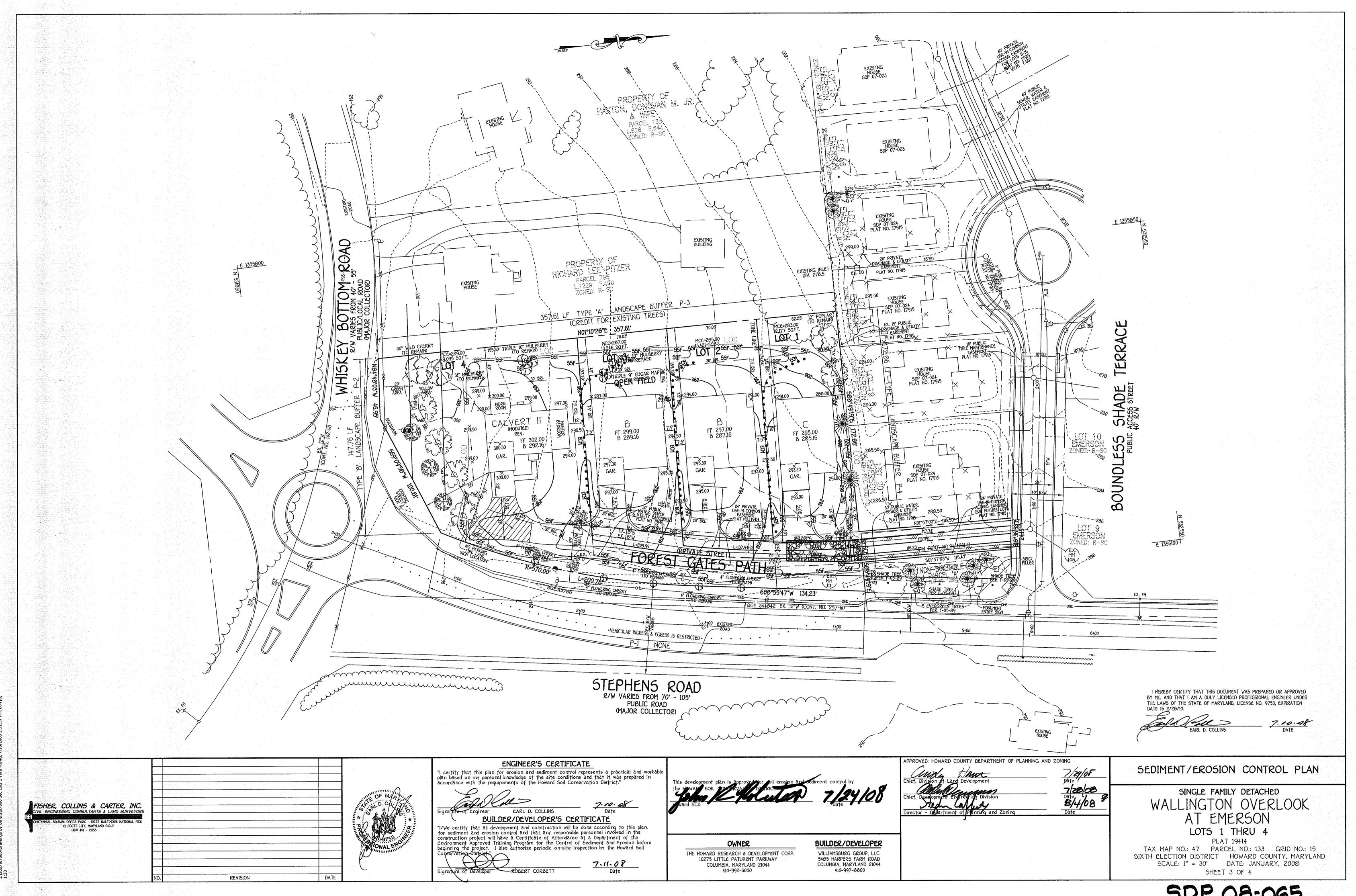
SINGLE FAMILY DETACHED WALLINGTON OVERLOOK AT EMERSON

LOTS 1 THRU 4

TAX MAP NO.: 47 PARCEL NO.: 133 GRID NO.: 15 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 30' DATE: JANUARY, 2008 SHEET 1 OF 4



SDP 08-065



SDP 08-065

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 and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources. CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded 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 Olup to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, 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 volumes 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, seedbed preparation, 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

A. Site Preparation Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins. ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually

necessary for temporary seeding. iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres. Soil Amendments (Fertilizer and Lime Specifications)

i. 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 analyses. ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee

of the producer. iii. Lime 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 *100 mesh sieve and 90-100% will pass through a *20

mesh sieve. iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. C. Seedbed Preparation

a. Seedbed 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. Sloped areas (greater than 3:1) 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 plans. In corporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means. ii Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:
1. Soil pH shall be between 6.0 and 7.0. Soluble salts shall be less than 500 parts per million (ppm) The soil shall contain less 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 lovegrass or serecia lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.

Soil shall contain 1.5% minimum organic matter by weight. 5. Soil must contain sufficient pore space to permit adequate root penetration 6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil

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 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per soil test or as included on the plans.
d. Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site 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. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used. ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of introgen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective. Methods of Seeding

Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder. a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium): 200 lbs/ac. b. 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. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders. a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction Mulch Specifications (In order of preference)

Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law. ii. Wood Cellulose Fiber Mulch (WCFM)

a: WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors. WCFM materials shall 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 shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.

NO.

REVISION

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

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. 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 soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs of wood cellulose fiber per 100 gallons of water. H. Securing Straw Mulch (Mulch Anchoring): 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: i. 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 sloping land, this practice should be used on the contour if possible.
ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and

the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons

iii. 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 appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Ta II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulc

mendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long. I. Incremental Stabilization - Cut Slopes All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15°.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recom-

ii. Construction sequence (Refer to Figure 3 below): a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 b. Perform Phase 1 excavation, dress, and stabilize.

Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as

necessary.
d. Perform final phase excavation, dress and stabilize. Overseed previously seeded

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.

J. Incremental Stabilization of Embankments - Fill Slopes Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches

15°, or when the grading operation ceases as prescribed in the plans.

iii. At the end of each day, femporary berms and pipe slope drains should be constructed along the top edge of the embarkment to intercept surface runoff and convey it down the slope in a non-crosive manner to

a sediment trapping device. iv. Construction sequence: Refer to Figure 4 (below). a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place Phase 1 embankment, dress and stabilize.

Place Phase 2 embankment, dress and stabilize

Place final phase embankment, dress and stabilize. Overseed previously seeded

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of and placement of topsoil (if required) grading and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

SEDIMENT CONTROL NOTES

D A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1055).

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 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION 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 4) ALL SEDIMENT TRAPS/BASING 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 5) 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. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50 AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN

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.

ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER

7) SITE ANALYSIS: TOTAL AREA OF SITE 1.5597 ACRES AREA DISTURBED 1.2614 ACRES AREA TO BE ROOFED OR PAVED 0.5899 ACRES AREA TO BE VEGETATIVELY STABILIZED 0.9698 ACRES TOTAL CUT O CU.YDS. 0 CU.Y05 TOTAL FILL OFFSITE WASTE/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 DISTILLATION APPAS IN EXCESS OF 2 ACCES APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER FROSION AND SEDIMENT

CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH

BY THE INSPECTION AGENCY IS MADE. 1D TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE , LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION

APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL

PERMANENT SEEDING NOTES

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 soil by raking, discing or other acceptable means before seeding, if not previously

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules: 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs.

per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.). 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs, per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following

1) 2 tons per acre of well—anchored mulch straw and seed as soon as possible in the spring.

2) Use sod. 3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw

upper three inches of soil.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal.

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

per 1000 sq.ft.) for anchoring.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed. Seedbed Preparation: Loosen upper three inches of soil by raking.

discing or other acceptable means before seeding, if not previously

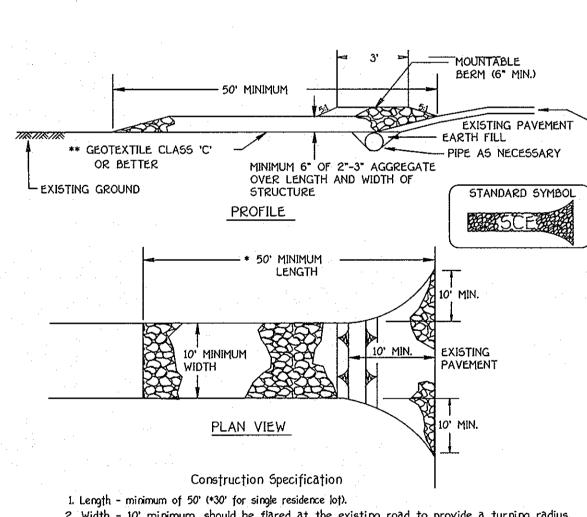
Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sa.ft.). Seeding: For periods March 1 thru April 30 and from August 15 thru

November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sa.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 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 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding.

Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 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.



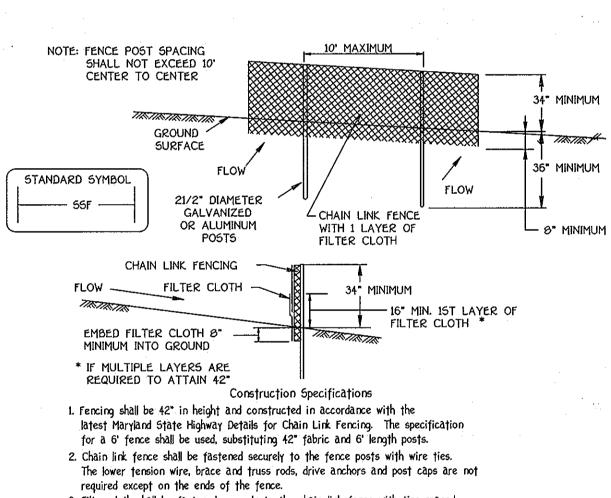
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius. 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone - crushed aggregate (2" to 3") or reclaimed 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.

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.

STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE



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 Test: MSMT 509 50 lbs/in (min.) Tensile Modulus 20 lbs/in (min.) Test: MSMT 509 0.3 gal/ft /minute (max.)² Test: M5MT 322 Flow Rate Filtering Efficiency Test: MSMT 322

Slope

0 - 10%

20 - 33%

33 - 50%

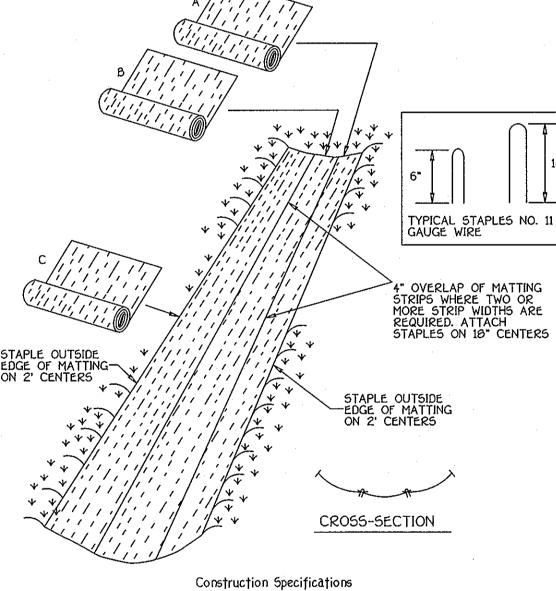
50% +

2:1 +

Design Criteria Silt Fence Lenath Slope Lenath Steepness (നർximum് (maximum) 0 - 10:1 Unlimited Unlimited 100 feet 1,000 feet 5:1 - 3:1 100 feet 500 feet 3:1 - 2:1

50 feet

SUPER SILT FENC NOT TO SCALE



1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6". 2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center. 5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4". shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples. Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

EROSION CONTROL MATTING

SEQUENCE OF CONSTRUCTION 1. OBTAIN GRADING PERMIT 2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN 7 DAYS 3. CLEAR AND GRUB TO LIMITS OF DISTURBANCE 4. INSTALL TEMPORARY SEEDING 5. CONSTRUCT BUILDINGS 6. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE TYPICAL STAPLES NO. 11 7. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR. ANCHOR POST SHOULD BE MINIMUM 2" STEEL "U" CHANNEL OR 2" x 2" TIMBER 6' IN LENGTH

USE 2" x 4" HIGHLY VISIABLE FLAGGING ---LUMBER FOR CROSS BACKING MAXIMUM & FEET ANCHOR POST MUST BE INSTALLED USE 3' WIRE TO A DEPTH OF NO LESS THAN 1/3 "U" TO SECURE OF THE TOTAL HEIGHT OF POST FENCE BOTTOM NOTES:

7 DAYS

4 DAYS

2 DAYS

60 DAYS

14 DAYS

1. FOREST PROTECTION DEVICE ONLY. 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS. 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE. 4. ROOT DAMAGE SHOULD BE AVOIDED. 5. PROTECTIVE SIGNAGE MAY ALSO BE USED.

> BLAZE ORANGE PLASTIC MESH TREE PROTECTION DETAIL

6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

NOT TO SCALE

FISHER, COLLINS & CARTER. INC. IL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 2104: (410) 461 - 2855

DATE

ENGINEER'S CERTIFICATE l 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."

7.10.08 Signature of Engineer EARL D. COLLINS DEVELOPER'S CERTIFICATE

ROBERT CORBETT

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 peginning the project. I also authorize periodic on-site inspection by the Howard Soil

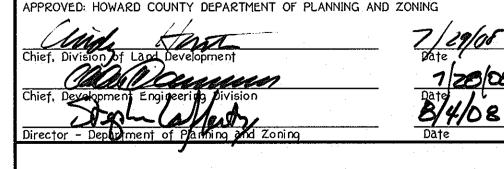
7-11-08

410-992-6000

OWNER THE HOWARD RESEARCH & DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044

250 feet

BUILDER/DEVELOPER WILLIAMSBURG GROUP, LLC 5485 HARPERS FARM ROAD COLUMBIA, MARYLAND 21044 410-997-8800



SEDIMENT/EROSION CONTROL NOTES & DETAILS

SINGLE FAMILY DETACHED WALLINGTON OVERLOOK AT EMERSON

LOTS 1 THRU 4

PLAT 19414 TAX MAP NO.: 47 PARCEL NO.: 133 GRID NO.: 15 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: JANUARY, 2008 5CALE: 1" = 30'

> SHEET 4 OF 4 SDP 08-065