

LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- EXISTING TREE LINE
- SOIL LINES AND TYPES
- DENOTES PASSED PERC
- DENOTES GEOTHERMAL WELLS

PERC CERTIFICATION

I certify that the locations and design are based on field locations done under my direct supervision and are true to the best of my professional knowledge and belief.

Signature of Professional Land Surveyor
Terrell A. Fisher, Professional Land Surveyor No. 10692 Expires 12/13/15

7/25/14
Date

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

Signature of County Health Officer
COUNTY HEALTH OFFICER

8/15/2014
DATE

TRENCH DESIGN:

400' GPD
400' / 0.2 APP. RATE = 500 SF
USE 3' WIDE TRENCH AND 9' MIN. SPACING BETWEEN TRENCH EDGES.
500 SF / 3' WIDTH = 166.67 L.F. X 0.50 = 83.33 L.F. MIN. TRENCH
USE 2- 42" LONG TRENCHES = 83.33 L.F.

VICINITY MAP

SCALE: 1" = 1200'

GENERAL NOTES:

- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,095 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.
- ADJUSTMENTS TO SEPTIC EASEMENT AREA IS NOT PERMITTED WITHOUT ADDITIONAL TESTING.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- EXISTING WELLS AND/OR SEWERAGE EASEMENTS WITHIN 100 FEET OF THE PROPERTY HAVE BEEN SHOWN FROM ALL REASONABLE EFFORTS.
- ALL HOUSE SITES SHOWN COMPLY WITH MINIMUM BUILDING RESTRICTION REGULATIONS.
- TOPOGRAPHIC CONTOURS SURVEY PROVIDED BY NJR & ASSOCIATES, LLC.
- BOUNDARY OUTLINE BASED ON FIELD SURVEY BY NJR & ASSOCIATES, LLC.
- ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
- DEED REFERENCE LIBER 55 FOLIO 10.
- A BAT SYSTEM WILL BE REQUIRED AT TIME OF NEW SEPTIC SYSTEM INSTALL.
- THE INTENDED FACILITY USE WILL BE A INTERIOR DESIGN OFFICE. A DETAILED SEPTIC SYSTEM DESIGN WITH PROPOSED USE AND DESIGN WASTEWATER FLOW MUST BE SUBMITTED AND APPROVED BY THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT APPROVAL.
- ALL PROPOSED REPAIR TRENCHES LOCATED UNDER PAVEMENT MUST BE INSTALLED AT THE TIME OF INITIAL SYSTEM INSTALLATION.
- MARYLAND DEPARTMENT OF THE ENVIRONMENT HAS APPROVED THE LOCATION OF THE SDA ON 14290 TRIADELPHIA ROAD UP GRADIENT OF THE NEIGHBORING WELL WITH THE CONDITION THAT THE SEWAGE DISPOSAL SYSTEMS WILL UTILIZE THE BEST AVAILABLE TECHNOLOGY FOR NITROGEN REDUCTION AND A LOW PRESSURE DOSED DISTRIBUTION SYSTEM. A RECORD PLAT DISSOLVING THE INTERIOR LOT LINE ON THE PROPERTY MUST BE SIGNED AND RECORDED PRIOR TO HEALTH DEPARTMENT APPROVAL OF A BUILDING PERMIT FOR THE PROPERTY. ALTERNATIVELY, AN EASEMENT ALLOWING A PORTION OF THE SEWAGE DISPOSAL AREA TO BE LOCATED ON THE NEIGHBORING PARCEL MUST BE RECORDED IN LAND RECORDS.

TRIADELPHIA ROAD
(VARIABLE R/W WIDTH)
(HOWARD COUNTY MAINTAINED)
(MINOR COLLECTOR)
60' R/W

PERC CERTIFICATION PLAN 14290 TRIADELPHIA ROAD

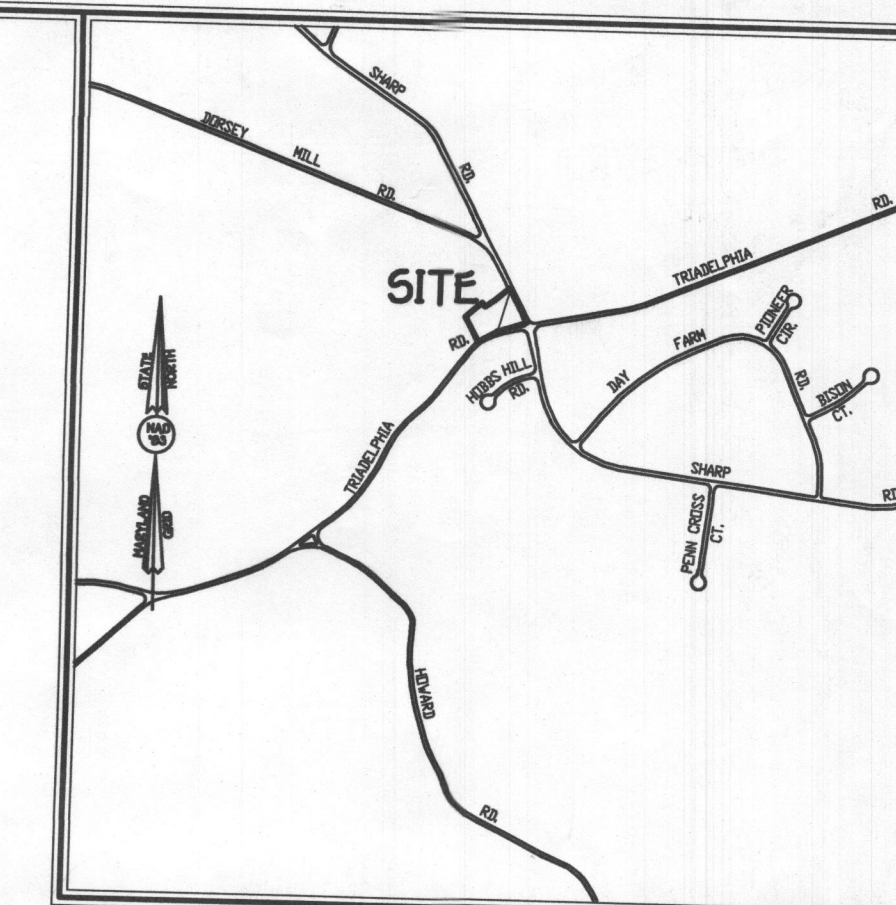
TAX MAP #21 PARCEL #104 AND 135 GRID 18
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1"=30' DATE: July 25, 2014

SHEET 1 OF 1

LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- EXISTING TREE LINE
- SOIL LINES AND TYPES
- GLB2 MUD
- DENOTES PROPOSED WELL
- DENOTES FAILED PERC
- DENOTES PASSED PERC
- DENOTES PROPOSED PERC
- DENOTES PROPOSED HOUSE
- DENOTES 15%-24.9% SLOPES
- DENOTES 25% AND GREATER SLOPE
- DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
- DENOTES GEOTHERMAL WELLS



VICINITY MAP
SCALE : 1" = 1200'

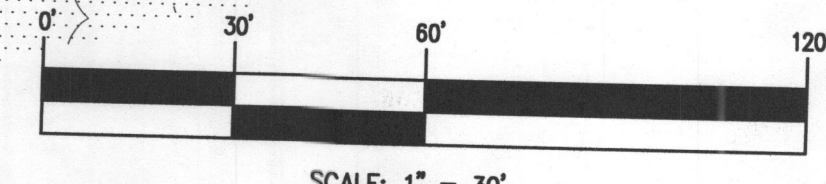
GENERAL NOTES:

- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.
- ADJUSTMENTS TO SEPTIC EASEMENT AREA IS NOT PERMITTED WITHOUT ADDITIONAL TESTING.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- EXISTING WELLS AND/OR SEWERAGE EASEMENTS WITHIN 100 FEET OF THE PROPERTY HAVE BEEN SHOWN FROM ALL REASONABLE EFFORTS.
- ALL HOUSE SITES SHOWN COMPLY WITH MINIMUM BUILDING RESTRICTION REGULATIONS.
- ALL WELLS SHALL BE DRILLED PRIOR TO FINAL PLAT RECORDATION. IT IS THE DEVELOPERS RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS-UP THE HEALTH DEPARTMENT SIGNATURE OF THE RECORD PLAT.
- TOPOGRAPHIC CONTOURS SURVEY PROVIDED BY NJR & ASSOCIATES, LLC.
- BOUNDARY OUTLINE BASED ON FIELD SURVEY BY NJR & ASSOCIATES, LLC.
- ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
- DEED REFERENCE LIBER 55 FOLIO 10.



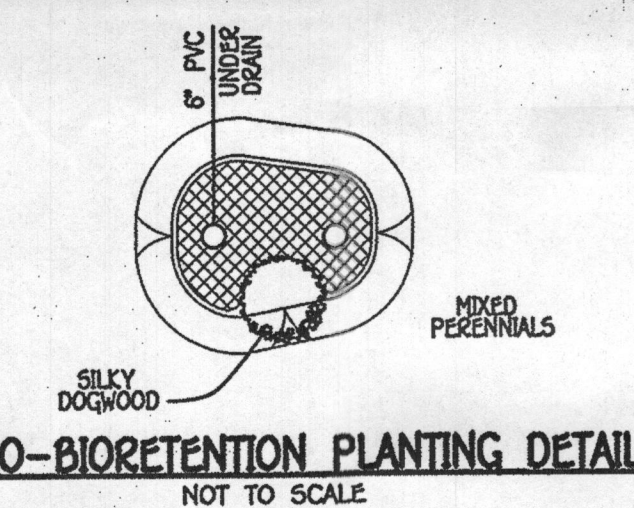
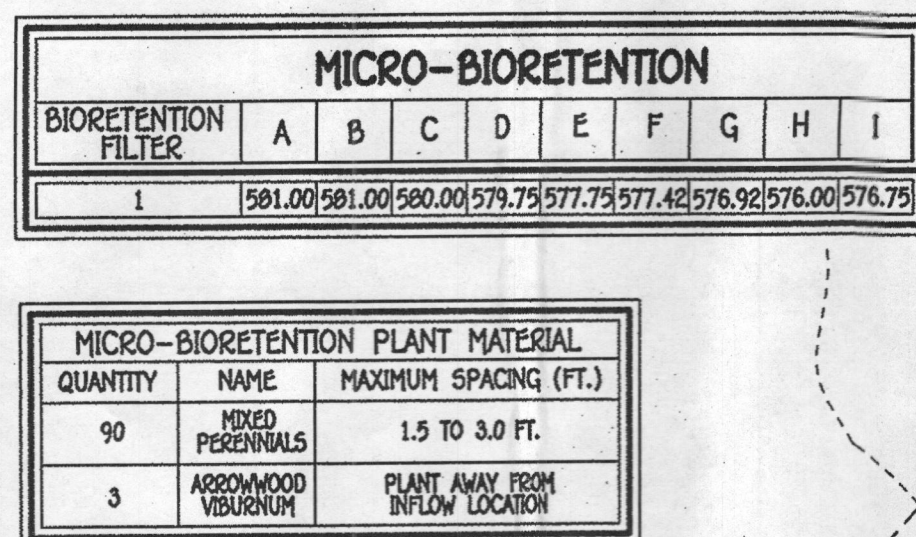
OWNER
HOMWOOD PROPERTIES, LLC
11362 HOMEWOOD ROAD
ELLICOTT CITY, MD 21042
(410) 530-6330

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
410.481.2955



SCALE: 1" = 30'

PERC APPLICATION PLAN
14290 TRIADELPHIA ROAD
TAX MAP *21 PARCEL *104 AND 135 GRID 10
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ZONED: RC-DEO
SCALE: 1"=30" DATE: March 7, 2014
SHEET 1 OF 1



LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING 2' CONTOURS		PROPOSED CONTOUR
	EXISTING 10' CONTOURS		SPOT ELEVATION
	SOILS LINES AND TYPE		LIMITS OF DISTURBANCE
	EXISTING TREE LINE		DRAINAGE AREA DIVIDE
	SPECIMEN TREE		PROPOSED PAVING
	BORING (PERC) TEST HOLE		TREE PROTECTION
	NON-ROOFTOP DISCONNECTION (N-2)		SILT FENCE
	EXISTING LANDSCAPING		EROSION CONTROL MATTING
	LOW VOLTAGE OUTDOOR LED LANDSCAPE LIGHTING FIXTURES		SUPER SILT FENCE
	LOW VOLTAGE LED MOON LIGHTING FIXTURES		STABILIZES CONSTRUCTION ENTRANCE
	EXISTING GRAVE STONES		EXISTING GRAVEL DRIVE TO REMAIN
	EXISTING GRAVEL DRIVE TO BE REMOVED		EXISTING GRAVEL DRIVE TO BE ABANDONED
	EXISTING WHITE VINYL FENCE		

DESIGN BY: SJT
DRAWN BY: AF/SJT
CHECKED BY:

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2895

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND, LICENSE NO. 30386,
EXPIRATION DATE: 01/12/2016.



STYTRAM TEST 3/13/15

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

B. W. L. for Maura Rosman
COUNTY HEALTH OFFICER

OWNERS

HOMEWOOD PROPERTIES, LLC
14290 TRIADELPHIA ROAD
GLENELG, MD 21737
(410) 489-5600

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Valaris J. J.
Director - Department of Planning and Zoning

Kent Glenbrook
Chief, Division of Land Development

Chief, Development Engineering Division

PROJECT

HOMWOOD INTERIORS, 'PARCEL A'

PLAT REF.	BLOCK NO.	ZONE
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12	22.350
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23287	18	RC-DEO
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P-1 DRIVEWAY PAVING SECTION
NOT TO SCALE

NOTE:

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.
2. SWALES ARE FOR CONVEYANCE OF RUNOFF AND NOT UTILIZED FOR TREATMENT CREDIT.

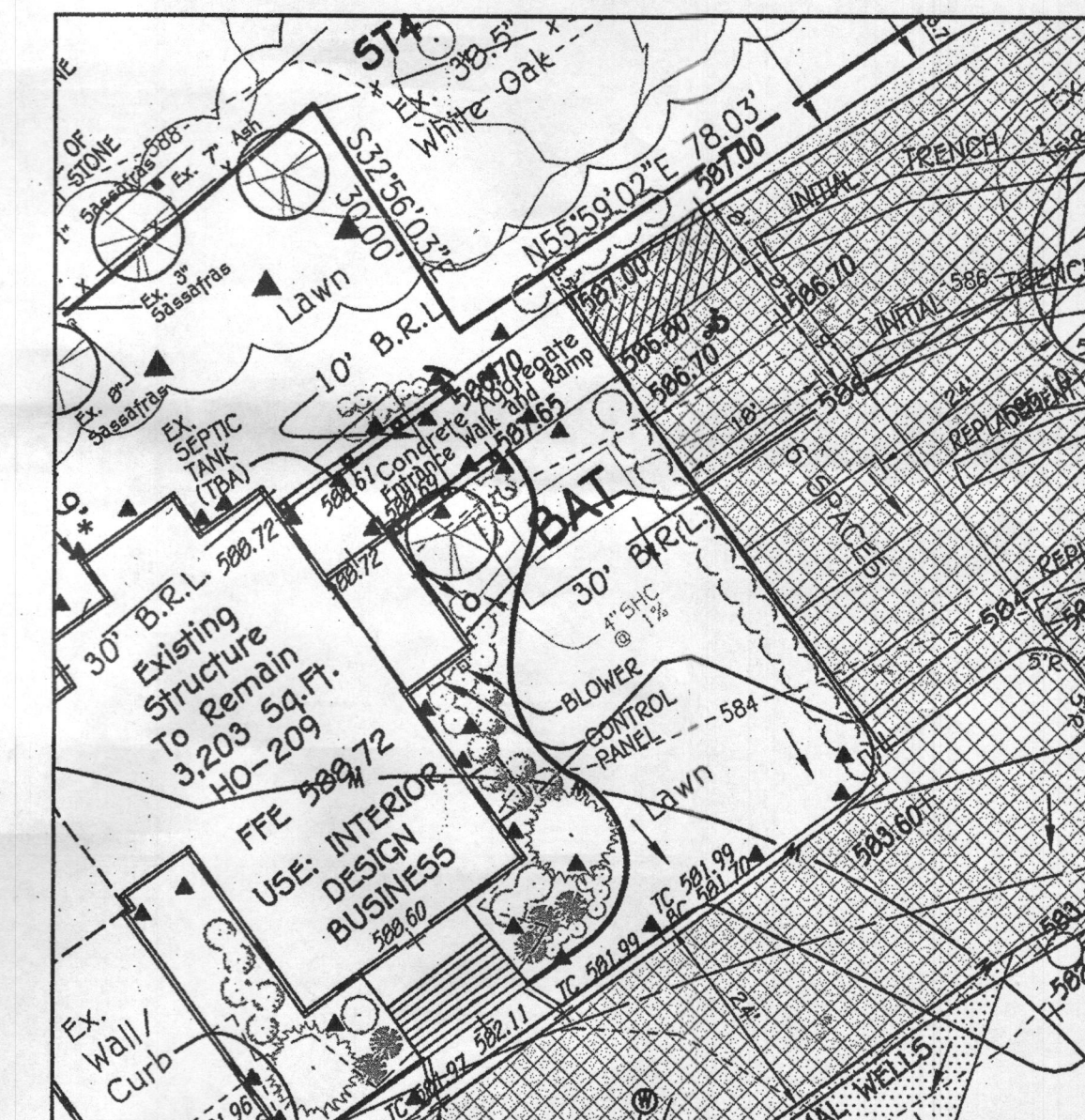
DRIVEWAY - CROSS SLOPE SECTION
NOT TO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED, DISCONNECTION OF NONROOFTOP RUNOFF (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING 2000 CALIFORNIA PROPAGATED PLANT LIST.
- B. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STEM AND BRANCHES.
- C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH RAINY SEASON.



HANDICAP DETAIL
SCALE: 1"=20'

KEY	SPECIES	SIZE (DBH)	CR2 (FT RADII)	COMMENTS	STATUS
1	WHITE OAK	46"	69		TO REMAIN
2	WHITE OAK	39"	50	HEAVILY PRUNED	TO REMAIN
3	WHITE OAK	37.5"	56.25	LIGHTLY PRUNED	TO REMAIN
4	WHITE OAK	38.5"	57.75	OFF-SITE	TO REMAIN
5	WHITE OAK	33.5"	50.25	OFF-SITE	TO REMAIN
6	WHITE OAK	39"	58"		TO REMAIN
7	WHITE OAK	39"	58.5	LANDSCAPE LIGHTING IN TREE	TO REMAIN
8	PIGNOT HICKORY	31.5"	47.25	LANDSCAPE LIGHTING IN TREE	TO REMAIN
9	WHITE OAK	40"	60		TO REMAIN

SITE DEVELOPMENT PLAN

HOMWOOD PROPERTIES, PARCEL A

14290 TRIADELPHIA ROAD

TAX MAP No. 21 ZONED RC-DEO GRID No. 18 PARCEL No. 135

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: FEBRUARY, 2011
SHEET 2 OF 5

PAGE 2 OF 3

SDP-15-010

NOTES

1. SINCE THIS IS AN ALREADY BUILT SITE, THE LIMIT OF DISTURBANCE IS BEING UTILIZED AS THE NET TRACT AREA TO DETERMINE FOREST CONSERVATION REQUIREMENTS IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1202 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PAYMENT OF A FEE-IN-LIEU OF AFFORESTATION IN THE AMOUNT OF \$3,724.36 (\$3,920.4 S.O.F.T. X \$0.95/SO.F.T.) FOR 0.09 ACRES (3,920.4 S.O.F.T.) OF AFFORESTATION.
2. FOREST CONSERVATION OBLIGATION FOR THE PROPOSED IMPROVEMENTS HAS BEEN CALCULATED IN ACCORDANCE WITH THE POLICY MEMO DATED 9/15/06. THE PROPOSED LIMIT OF DISTURBANCE IS LESS THAN 40,000 AND THE APPLICANT HAS ELECTED TO BASE THE FOREST CONSERVATION CALCULATIONS ON THE LDD IN ACCORDANCE WITH THE POLICY. FUTURE DEVELOPMENT OF THIS SITE EITHER THROUGH A SERIES OF SITE DEVELOPMENT PLANS OR RESOLUTIONS TO THOSE PLANS, THE LDD RELATIVE TO THE 40,000 SQUARE FOOT THRESHOLD WILL BE TRACKED CONSECUTIVELY. ONCE THE CUMULATIVE LDD EQUALS OR EXCEEDS 40,000 SQUARE FEET IN AREA, THE ENTIRETY OF THE SITE (LESS ANY APPLICABLE DEDUCTIONS SUCH AS 100-YEAR FLOODPLAIN) MUST BE USED AS THE NET TRACT AREA (NTA).
3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SINCE EXISTING STRUCTURE IS TO REMAIN AND ONLY A PARKING AREA / ACCESS DRIVE IS BEING CREATED, ONLY LANDSCAPING TO BUFFER THE PARKING AREA HAS BEEN PROVIDED. FINANCIAL SURETY IN THE AMOUNT OF \$2,790 FOR 3 SHADE TREES, 3 EVERGREENS, AND 40 SHRUBS WILL BE POSTED AS PART OF THE SOW DEVELOPER'S AGREEMENT.
4. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR REDUCTIONS OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REMOVALS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
5. THE OWNER, TOWN, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BENCHES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
6. NO CLEANSING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
7. SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE LANDSCAPE MANUAL.

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	10 SPACES
NUMBER OF TREES REQUIRED	1 SHADE TREE
NUMBER OF TREES PROVIDED	0
SHADE TREES	0
OTHER TREES (2:1 SUBSTITUTION)	2 EX. SHADE TREES

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of notice of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Stuart S. S. S. 3-13-15
Developer/Builder Date

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER DATE

DESIGN BY: SJT
DRAWN BY: AF/SJT
CHECKED BY:

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CITIZENSHIP SERVICE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2295

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 36868, EXPIRATION DATE: 01/12/2016.

Stephanie Tute 3/13/15
Signature of Engineer Date

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Stephanie Tute 3/13/15
Signature of Engineer Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Stuart S. S. S. 3-13-15
Signature of Developer Date

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING 2" CONTOURS
---	EXISTING 10" CONTOURS
---	SOILS LINES AND TYPE
---	EXISTING TREELINE
---	SPECIES TREE
---	BORING (PERC) TEST HOLE
---	NON-ROOFTOP DISCONNECTION (N-2)
---	EXISTING LANDSCAPING
---	LOW VOLTAGE OUTDOOR LED LANDSCAPE LIGHTING FIXTURES
---	LOW VOLTAGE LED MOON LIGHTING FIXTURES
---	EXISTING GRAVE STONES
---	EXISTING GRAVEL DRIVE TO BE REMOVED
---	EXISTING WHITE VINYL FENCE
---	PROPOSED CONTOUR
---	SPOT ELEVATION
---	LIMITS OF DISTURBANCE
---	DRAINAGE AREA DIVIDE
---	PROPOSED PAVING
---	TREE PROTECTION
---	SILT FENCE
---	EROSION CONTROL MATING
---	SUPER SILT FENCE
---	STABILIZES CONSTRUCTION ENTRANCE
---	EXISTING GRAVEL ISLE MARKERS
---	EXISTING GRAVEL DRIVE TO REMAIN
---	TO BE ABANDONED

NOTE: STABILIZED CONSTRUCTION ENTRANCE TO BE PROVIDED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

SCHEDULE A - PERIMETER LANDSCAPE EDGE									
PERIMETER CATEGORY	1A ADJACENT TO PERIMETER PROPERTIES	1B ADJACENT TO PERIMETER PROPERTIES	2A ADJACENT TO ROADWAY	2B ADJACENT TO ROADWAY	3A ADJACENT TO ROADWAY	3B ADJACENT TO ROADWAY	4 ADJACENT TO PERIMETER PROPERTIES	TOTAL	
LANDSCAPE TYPE	N/A (EX. BLDG)	N/A (ADJ. CEMETERY)	E	B	E	N/A (EX. BLDG)	N/A (EX. BLDG)		
LINEAR FEET OF PERIMETER	575 L.F.	197 L.F.	112 L.F.	90 L.F.	120 L.F.	112 L.F.	170 L.F.		
CREDIT FOR EXISTING VEGETATION	N/A	0	0	0	0	0	N/A		
NUMBER OF PLANTS REQUIRED	0	0	3/0/25	2/3/0	3/0/30	0	0		
SHADE TREES	0	0	(112'/40' = 2.8 OR 3)	(90'/50' = 2)	(120'/40' = 3)	0	0		
EVERGREENS/SUBSTITUTION TREES(2:1)	0	0	(112'/4' = 28)	(90'/4' = 2.5 OR 3)	(120'/4' = 30)	0	0		
SHRUBS	0	0	0	0	0	0	0		
CREDIT FOR EXISTING VEGETATION	0	0	1	1	1	0	0		
SHADE TREES	0	0	0	0	0	0	0		
EVERGREENS/SUBSTITUTION TREES(2:1)	0	0	0	0	0	0	0		
SHRUBS	0	0	0	0	0	0	0		
NUMBER OF PLANTS PROVIDED	0	0	2	1	0	0	0		
SHADE TREES	0	0	2	3	0	0	0		
EVERGREENS/SUBSTITUTION TREES(2:1)	0	0	20	0	20	0	0		
SHRUBS	0	0	0	0	0	0	0		

* CREDIT FOR EXISTING TREES: PERIMETER 2A - CREDIT IS TAKEN FOR AN EXISTING 26" TULIP POPLAR; PERIMETER 2B - CREDIT IS BEING TAKEN FOR ONE EXISTING 18" WILLOW OAK; PERIMETER 3A - CREDIT IS BEING TAKEN FOR 2 EXISTING APPLE TREES IN PLACE OF 10 REQUIRED SHRUBS AND CREDIT FOR 4 EXISTING APPLE TREES TO BE SUBSTITUTED FOR 2 REQUIRED SHADE TREES.

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
2	1	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5"-3" OIL FULL CROWN, 8.6B
1	2	TILIA CORDATA 'GREENSPIKE' (GREENSPIKE LITTLELEAF LINDEN)	2.5"-3" OIL FULL CROWN, 8.6B
3	3	ILEX 'NELLIE R. STEVENS' (NELLIE R. STEVENS HOLLY)	5"-7" HT. 8.6B
16	4	ABELIA X GRANDIFLORA (GLOSSY ABELIA)	2.5"-3" HT. CONT.
32	5	ILEX X CRENATA 'COMPACTA' (COMPACT JAPANESE HOLLY)	2.5"-3" HT. CONT.
TOTAL: 3 SHADE TREES, 3 EVERGREENS, & 40 SHRUBS			

SEPTIC SYSTEM ELEVATIONS

FPE = 506.60
INV. OUT OF BLDG = 503.5

SEPTIC SYSTEM DESIGN

LOADING RATE = 300 GPD (0.09 GPD PER SQ.FT. FOR 3,203 SQ.FT.)

APPLICATION RATE = 289 GPD

EFFECTIVE SIDEWALL DEGRIN AT 4 FEET

TRENCH DEPTH = 8 FEET

TRENCH WIDTH (W) = 3 FEET

EFFECTIVE DEPTH (D) = 4 FEET

COEFFICIENT OF REDUCTION OF TRENCH LENGTH = 0.41

(W+2) / (W+1+2D) = (3+2) / (3+1+2(4))

MINIMUM TRENCH LENGTH = 51 FEET

TRENCH LENGTH PROPOSED = 62 FEET

TRENCH SPACING = 11 FEET

TRENCH INVERT = 4 FEET

INITIAL TRENCH 1 INVERT = 503.0

INITIAL TRENCH 2 INVERT = 501.5

REPLACEMENT TRENCH 1 INVERT = 501.0

REPLACEMENT TRENCH 2 INVERT = 500.2

NOTE: CONTRACTOR TO REGRADE 500 OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF THEIR WORK.

SPRAY WITH WILT-PROOF ACCORDING TO MANUFACTURER'S STANDARDS

PRUNE 1/3 LEAF AREA BUT RETAIN NATURAL FORM OF TREE

2 PIECES OF REINFORCED RUBBER HOSE

DOUBLE #12 GALVANIZED WIRE GUYED TWISTED

3"-5" 2" OAK STAKES, NOTCH STAKES TO HOLD WIRE

WRAP TRUNK TO SECOND TIER OF BRANCHES WITH WATERPROOF TREE WRAP, TIE AT 24" INTERVALS (EXCEPT EVERGREENS)

REMOVE ANY COVERING FROM TOP OF ROOT CROWN

3" MULCH

MAINTAIN GROUND LINE WITH TOP OF ROOT CROWN

CONSTRUCT 3" SAUCER RIM-FLOOD WITH WATER TWICE WITHIN 24 HOURS

TOP SOIL MIXTURE

CONVEX BOTTOM 6" MIN. HT.

TREE PLANTING DETAIL

NOT TO SCALE

EVERGREEN PLANTING DETAIL

NOT TO SCALE

SHRUB PLANTING DETAIL

NOT TO SCALE

LANDSCAPE & SEDIMENT AND EROSION CONTROL PLAN

HOMEWOOD PROPERTIES, PARCEL A
14290 TRIADDELPHIA ROAD
ZONED RC-DEO
TAX MAP No. 21 GRID No. 18 PARCEL No. 135
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2015
SHEET 3 OF 5

50P-15-010

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

A. Soil Preparation

1. Temporary Stabilization

- Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment such as moldboard plows or rippers mounted on construction equipment. After the soil is loosened, it must be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
- Apply fertilizer and lime as prescribed on the plans.

2. Permanent Stabilization

- A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soluble salts less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if loesslike soils will be planted, then a sandy soil (less than 30 percent silt plus clay) may be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
- Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
- Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
- Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
- For soil amendments into the top 3 to 5 inches of soil by disk or other suitable means. Make lawn areas smooth the surface. Use stones and branches, and other debris to roughen the surface where site conditions will not permit normal seed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

- Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- Topsoil obtained from an existing site may be used provided it meets the standards set forth in these specifications. Typically, the depth of topsoil to be added for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- Topsoiling is limited to areas having 3:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- Areas having slopes steeper than 2:1 require special consideration and design.
- Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, silty loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate authority. Topsoil must not be a mixture of confining topsoil and subsoil and must contain less than 5 percent by volume of cinders, stones, clay, coarse fragments, gravel, silt, roots, trash, or other materials larger than 1 1/2 inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, johnson grass, nut sedge, poison ivy, yarrow, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- Topsoil Application
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 6 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

C. 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 disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
- Fertilizers must be uniform in composition, free flowing and suitable for accurate application by the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- Lime materials must be ground limestone (hydrated or burnt lime) may be substituted except when hydroseeding which requires at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #200 mesh sieve.
- Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disk or other suitable means.
- Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

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

- The application of seed and mulch to establish vegetative cover.
- Purpose
To protect disturbed soils from erosion during and at the end of construction.
- Conditions Where Practice Applies
To the surface of all perimeter contours, slopes, and any disturbed area not under active grading.
- Criteria
- Seeding
 - Specifications
 - All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.1 regarding the quality of seed. Seed lots must be available upon request to the inspector to verify type of seed and seeding rate.
 - Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
 - Drill or Outdrill Seeding: Mechanized seeders that apply and cover seed with soil.
 - Outdrill seeding is required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering.
 - Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer). It is used on the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P (phosphorus), 200 pounds per acre; K (potassium), 200 pounds per acre.
 - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Mix seed and fertilizer on site and immediately without interruption.
 - When hydroseeding do not incorporate seed into the soil.
 - Application
 - Drop Seeding: This includes use of conventional drop or broadcast spreaders.
 - Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
 - Drill or Outdrill Seeding: Mechanized seeders that apply and cover seed with soil.
 - Outdrill seeding is required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering.
 - Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
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 - Mix seed and fertilizer on site and immediately without interruption.
 - When hydroseeding do not incorporate seed into the soil.

B. Mulching

- Mulch Materials (in order of preference)
 - Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weeds as specified in the Maryland Seed Law and not musty, moldy, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM is to be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniform spread of dye.
 - WCFM, including dye, must contain no germination or growth inhibiting factors.
 - WCFM materials must be maintained and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and penetration characteristics and must cover and hold grass seed properly and without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 10 percent minimum.
- Application
 - Apply mulch to all seeded areas immediately after seeding.
 - When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch churning tool, increase the application rate to 2.5 tons per acre.
 - Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds of wood cellulose fiber per 100 gallons of water.
- Anchoring
 - Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - A mulch anchoring tool is a tractor driven implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on steep slopes, this practice should follow the contour.
 - Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre.
 - Mix the wood cellulose fiber with water at a minimum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Synthetic binders such as Acrylic Latex (Aqua-Tack), DCA-70, Petrosol, Terra Tex II, Terra-Tack AR or other approved liquid may be used for anchoring straw. Apply the binder at a net dry weight of 750 pounds per acre.
 - Lightweight plastic netting may be applied over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

TEMPORARY SEEDING NOTES (B-4-4)

- Definition
To stabilize disturbed soils with vegetation for up to 6 months.
- Purpose
To use fast growing vegetation that provides cover on disturbed soils.
- Conditions Where Practice Applies
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
- Criteria
- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seedling dates and seedling depths. The summary is to be placed on the plan.
 - For sites having soil tests performed, use and show the recommended rates for the testing agency. Soil tests are not required for Temporary Seeding.
 - When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3-A.1.B and maintain until the next seeding season.

Hardiness Zone (from Figure B.3):		Seed Mixture (from Table B.1):		Fertilizer Rate (10-20-20)		Lime Rate	
Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths				
BARLEY	95	3/1 - 5/15	1"	436 lb/acre	2 tons/acre		
OATS	72	8/15 - 10/15	1"	436 lb/acre	2 tons/acre		
RYE	112		1"	436 lb/acre	2 tons/acre		

PERMANENT SEEDING NOTES (B-4-5)

- General Use
 - Seed one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and listed in Table B.2. Enter selected mixtures, application rates, seedling dates and seedling depths in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - Additional planning specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 - For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas requiring low maintenance, apply turf form fertilizer (40-0-0) at 1 1/2 pounds per 1,000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
- Turfgrass Mixtures
 - Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixtures, application rates, and seedling dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
- Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1,000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
- Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Rye/Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1,000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
- Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas requiring low to medium maintenance in full sun to medium shade. Recommended mixture includes Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1,000 square feet. One or more cultivars may be blended.
- Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1,000 square feet.

- Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland".
- Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
- Ideal Times of Seeding for Turf Grass Mixtures: Western MD: March 15 to June 1, August 1 to October 15 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6a) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
 - Tall fescue to receive seed by disk or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The seedling seedbed must be in such condition that future mowing of grasses will pose no difficulty.
 - If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse slopes.

Hardiness Zone (from Figure B.3):		Seed Mixture (from Table B.3):		Fertilizer Rate (10-20-20)		Lime Rate	
No.	Species	Application Rate (lb/acre)	Seeding Dates	N	P ₂ O ₅	K ₂ O	
1	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1 1/4-1 1/2 in.	90 lb/acre (2 lb/1000 sf)	90 lb/acre (2 lb/1000 sf)	2 tons/acre (90 lb/1000 sf)

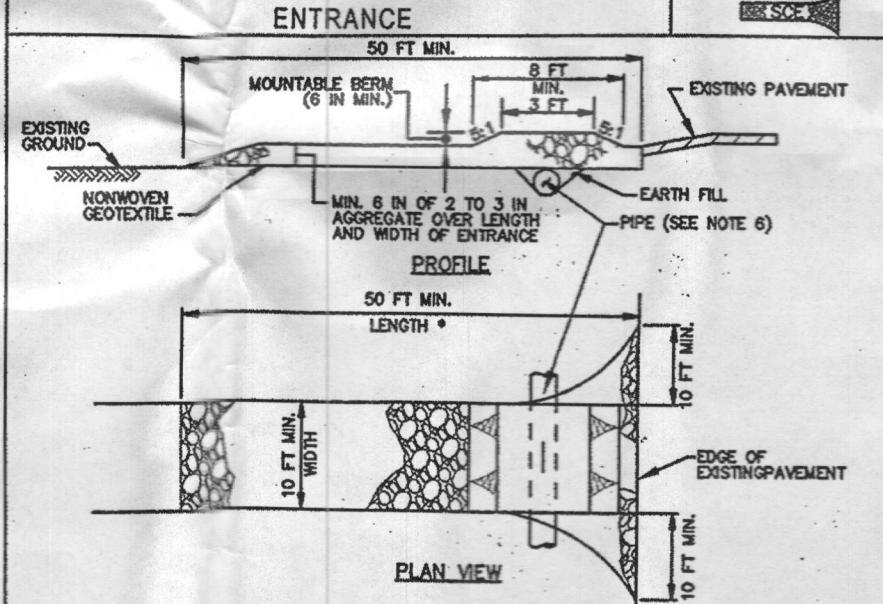
B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

- General Specifications
 - Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut at a uniform soil thickness to 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
- Sod Installation
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are tightly fitted in order to prevent water leakage during the roots.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggered joints. Roll and tamp, and otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping, and irrigating for any new pad within eight hours.
- Sod Maintenance
 - In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain sod to a depth of 4 inches. Water only during the heat of the day to prevent wilting.
 - After the first week, water and watering is required to maintain adequate moisture content.
 - Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-6 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

- A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
- Purpose
To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.
- Conditions Where Practice Applies
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.
- Criteria
- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
 - The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
 - Runoff from the stockpile area must drain to a suitable sediment control practice.
 - Access the stockpile area from the upgrade side.
 - Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
 - Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
 - Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
 - If the stockpile is located on an impervious surface a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.
- The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than 3:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



- CONSTRUCTION SPECIFICATIONS
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SIZE. USE MINIMUM LENGTH OF 30 FEET (20 FEET FOR SINGLE RESISTANCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SIDE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 - PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SIZE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SIZE WITH A MOUNTAIN BERM WITH 6 IN. MIN. AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROTECT PIPE AS SPECIFIED ON APPROVED PLAN. THE SIZE IS LOCATED AT A HIGH SPOT AND HAS NO DOWNHILL TO CONSIDER. A PIPE IS NOT REQUIRED. A MOUNTAIN BERM IS REQUIRED WHEN THE SIZE IS NOT LOCATED AT A HIGH SPOT.
 - PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
 - PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SIZE.
 - MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADJ. STONE OR MAKE OTHER REPAIRS AT CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTAIN BERM, AND SPECIFIED DRAINAGE. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY WASHING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

2011

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson
Howard SCD
3/17/15

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

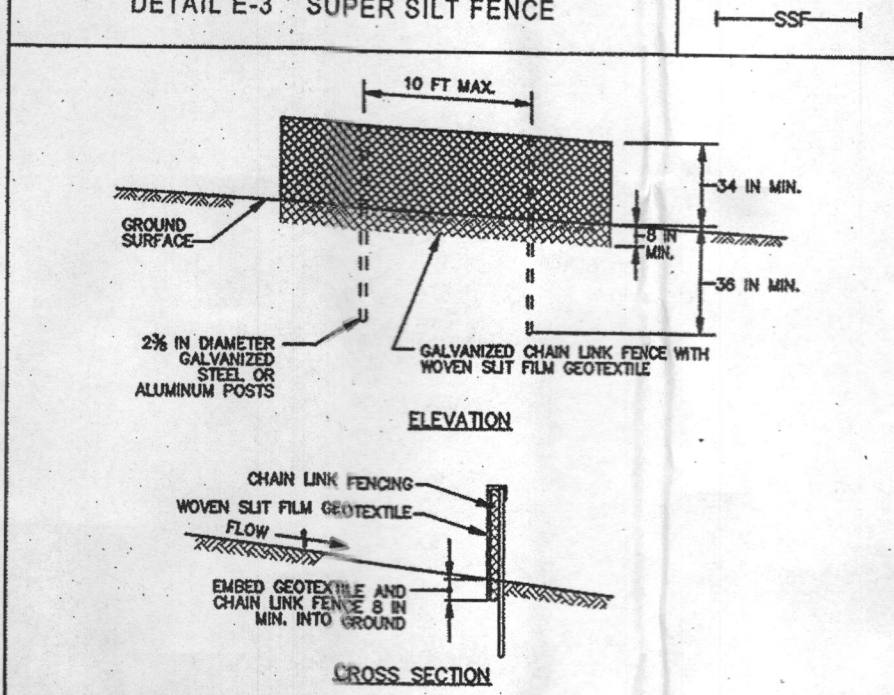
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Director - Department of Planning and Zoning
Chief, Division of Land Development
Chief, Development Engineering Division

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HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1895).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES 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 THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. BY 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER PREPARATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO BE MAINTAINED IN PLACE AND ARE TO BE MAINTAINED IN OPERABLE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SEE ANALYSIS
TOTAL AREA OF SITE: 3.02 ACRES
AREA TO BE ROOFED OR PAVED: 0.34 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 0.11 ACRES
TOTAL CUT: 0.25 ACRES
OFFSITE WASTE/ROOFING AREA LOCATION: 250 CUBIC YDS.
- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL 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 SEDIMENT CONTROL AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE ACTIVITY OR CONSTRUCTION OF PERMANENT BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS RECEIVED.
- DITCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKING DAY. EXCESSIVE DITCHES SHALL BE BACK-FILLED AND STABILIZED.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH ANY CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRES PER GRADING UNIT) AT THE TIME WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WITH AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENVIRONMENTAL AUTHORITY. OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

DETAIL E-3 SUPER SILT FENCE



- CONSTRUCTION SPECIFICATIONS
- INSTALL 2 in. MIN. DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE SUBSOIL.
 - FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCING (2 in. MIN. MINIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSTREAM GALVANIZED CHAIN LINK FENCING WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCING 6 INCHES INTO THE GROUND.
 - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEEDING BY PASS.
 - EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSTREAM AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENGINEERING AUTHORITY SHOWING THAT GEOTEXTILE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES SIDE OF EROSION. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

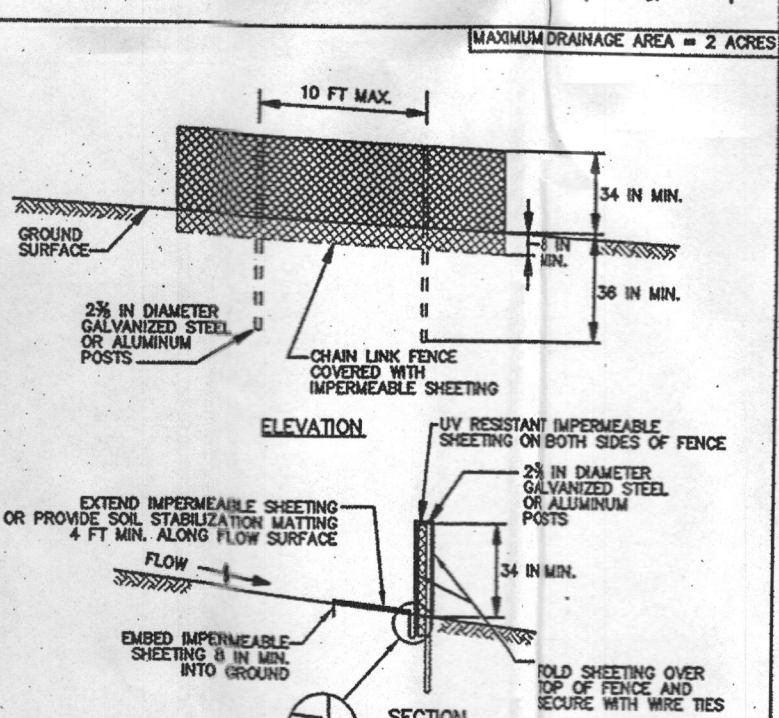
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

2011

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE



- CONSTRUCTION SPECIFICATIONS
- USE 42 INCH HIGH, 8 GAUGE OR THICKER CHAIN LINK FENCING (2 in. MINIMUM OPENING).
 - USE 2 in. MIN. DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS TO NO MORE THAN 36 INCHES INTO THE SUBSOIL.
 - FASTEN CHAIN LINK FENCING SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - SECURE 10 MIL OR THICKER UV RESISTANT IMPERMEABLE SHEETING TO CHAIN LINK FENCING WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
 - EXTEND SHEETING A MINIMUM OF A FEET ALONG FLOW SURFACE AND EMBED ENDS A MINIMUM OF 6 INCHES INTO GROUND. DIVERSION FENCING MATTER MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
 - WHEN TWO SECTIONS OF SHEETING ADJACENT EACH OTHER, OVERLAP BY 6 INCHES AND SEAL WITH SEAM FACING DOWNSTREAM.
 - KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE SHEETING IF TORN, IF UNDERMINING OCCURS, REPAIR OR REPLACE.

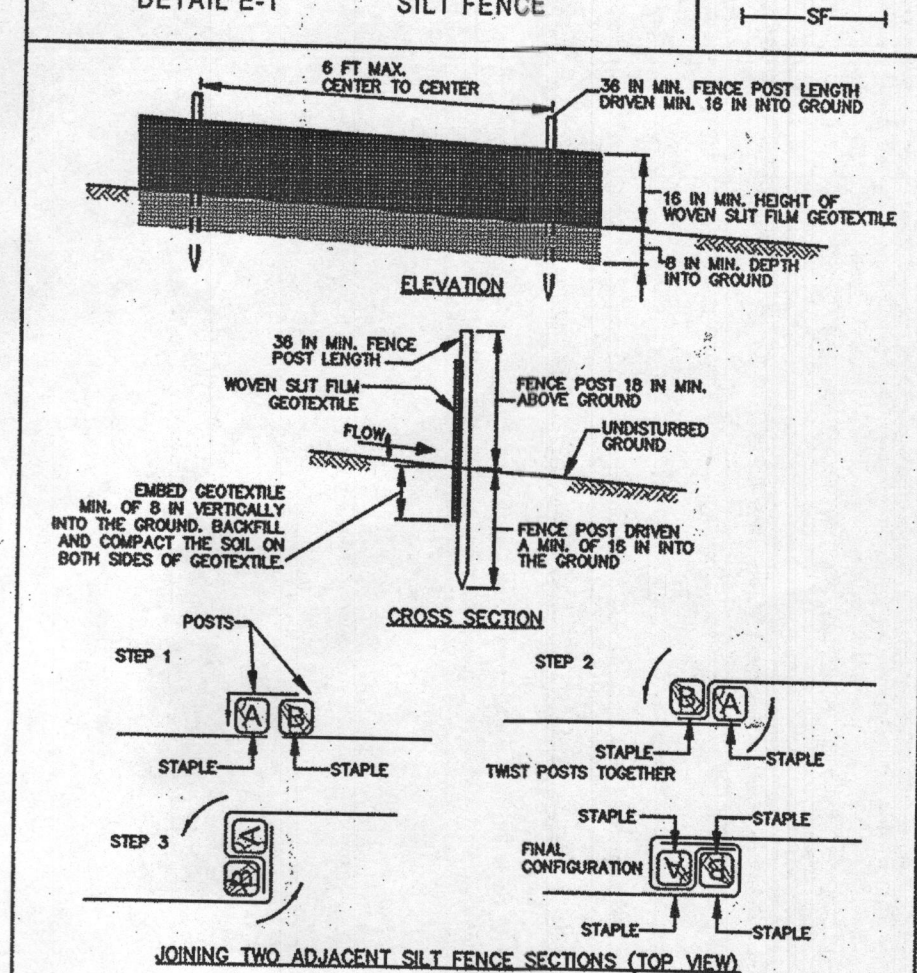
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MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE



- CONSTRUCTION SPECIFICATIONS
- USE WOOD POSTS 18 IN. X 6 IN. (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POSTS USE STANDARD 1 X 8 1/2 SECTION STEEL POSTS. WOODS NOT LESS THAN 10 FEET LONG AND 4 INCHES IN DIAMETER.
 - USE 36 INCH MINIMUM POSTS OPEN 18 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
 - USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENGINEERING AUTHORITY SHOWING THAT THE GEOTEXTILE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - EMBED GEOTEXTILE A MINIMUM OF 6 INCHES VERTICALLY INTO THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF GEOTEXTILE.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJACENT, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSTREAM AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT