SITE DATA LOCATION: TAX MAP 41, GRID 5, PARCEL 273 DEED REFERENCE : L.14161 F.236 PLAT REFERENCE : PLAT BOOK 8, FOLIO 79 5TH ELECTION DISTRICT EXISTING ZONING: R-20 PER THE COMPREHENSIVE ZONING PLAN DATED 2/02/04. GROSS AREA OF PARCEL: 1.00 AC. AREA OF RIGHT OF WAY: 0.00000 AC. AREA OF FLOODPLAIN: N/A AREA OF STEEP SLOPES: N/A NET AREA OF PROJECT: 1.00 AC NUMBER OF RESIDENTIAL LOTS PROPOSED: 2 LOTS AREA OF PROPOSED RESIDENTIAL LOTS: 43,692 SF (1.00 AC) AREA OF SMALLEST BUILDABLE LOT PROPOSED: 21,846 SF NUMBER OF PROPOSED OPEN SPACE LOTS: 0 NUMBER OF NON-BUILDABLE BULK PARCELS : 0 GENERAL NOTES THE PROJECT BOUNDARY IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. IN AUGUST, 2012. THE TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. IN AUGUST, 2012. PUBLIC WATER AVAILABLE THROUGH CONTRACT 34-1810-D AND PUBLIC SEWER AVAILABLE THROUGH CONTRACT 30-3123-D. WATER AND SEWER SERVICE WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122B OF THE HOWARD COUNTY CODE. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT. NO STREAMS EXIST ON SITE NO 100-YEAR FLOODPLAIN EXIST ON SITE. SUBJECT PROPERTY ZONED R-20 PER 2/02/04 COMPREHENSIVE ZONING ZONING PLAN AND AMENDED BY THE COMPREHENSIVE LITE AMENDMENT DATED 07/28/06. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPE TREES (\$4,800.00) WILL BE POSTED AS PART OF THE BUILDERS GRADING PERMIT UNDER PERIMETER = 14 SHADE X 300 (\$4,200) + 4 EVERGREEN X 150 (\$600) = \$4,800 - Street trees - See GN #Z: THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003). DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT "DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS a) WIDTH- 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE). b) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING. d) STRUCTURES (CULVERT/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING). e) DRAINAGE ELEMENTS-CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE. f) STRUCTURE CLEARANCES-MINIMUM 12 FEET. q) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. TO FULFILL THE 0.20 ACRES OF AFFORESTATION REQUIREMENT, THE DEVELOPER HAS PAID A FEE-IN-LIEU IN THE AMOUNT OF \$6,534.00 STORM WATER MANAGEMENT ADDRESSED FOR SITE USING 2007 MARYLAND STORMWATER DESIGN MANUAL (CHAPTER 5). A. WATER QUALITY VOLUME (WQv) AND RECHARGE VOLUME (REV) TO BE PROVIDED BY MICRO BIORETENTION FACILITIES. OPEN CHANEL FLOW (WHEN IMPERVIOUS AREAS CAN NOT BE DIRECTED TO ONE OF THE MICRO BIORETENTION FACILITIES) AND DRYWELLS SITE DEVELOPMENT PLAN APPROVAL BY THE DEPARTMENT OF PLANNING AND ZONING IS REQUIRED PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF THE RESIDENTIAL DWELLING ON LOT 114. THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 RESIDENTIAL INFILL DEVELOPMENT OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERMS. PROPOSED HOUSES. 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 A REQUIRED IN THE LANDSCAPE MANUAL. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED 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 LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTING 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 REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES. 7. A FOREST STAND DELINEATION WAS PERFORMED BY ECO—SCIENCE PROFESSIONALS, INC., AND NOT ONTO THE PIPESTEM LOT DRIVEWAY. \$1200.00 AND WILL BE POSTED WITH THE BUILDERS GRADING PERMIT. REFERENCE WAIVER PETITION WP 13-186 APPROVED 07/23/2013 A. SECTION 16.132.(a)(2)(i)(a), TO WAIVE ROAD IMPROVEMENTS ALONG THE FRONTAGE OF THE PROPERTY B. SECTION 16.134(b)(2) TO ALLOW A FEE-IN-LIEU OF SIDEWALK CONSTRUCTION (\$2368.00) BECAUSE THERE IS NO EXISTING SIDEWALK ANYWHERE IN THE NEIGHBORHOOD.

DATED AUGUST 2012 FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL SHALL BE COMPLIED WITH. THE ENVIRONMENTAL CONCEPT PLAN FOR THESE LOTS (ECP-13-017) WAS APPROVED 19. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY LINE D. THERE IS AN EXISTING DWELLING/STRUCTURE LOCATED ON LOT 113 WHICH IS TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATION REQUIREMENTS. THERE WILL BE FOUR (4) STREET TREES PLANTED FOR THIS PROJECT. THE SURETY AMOUNT WILL BE

C. SECTION 16.135(a) TO NOT PROVIDE STREET LIGHTING BECAUSE THERE IS NO EXISTING STREET LIGHTS IN

23. A SHARED DRIVEWAY ACCESS AND MAINTENANCE OBLIGATION AGREEMENT FOR THE 16' DRIVEWAY WHICH SERVES LOTS 113 AND 114 HAS BEEN RECORDED IN THE LAND RECORDS OF HOWARD COUNTY SIMULTANEOUSLY WITH.

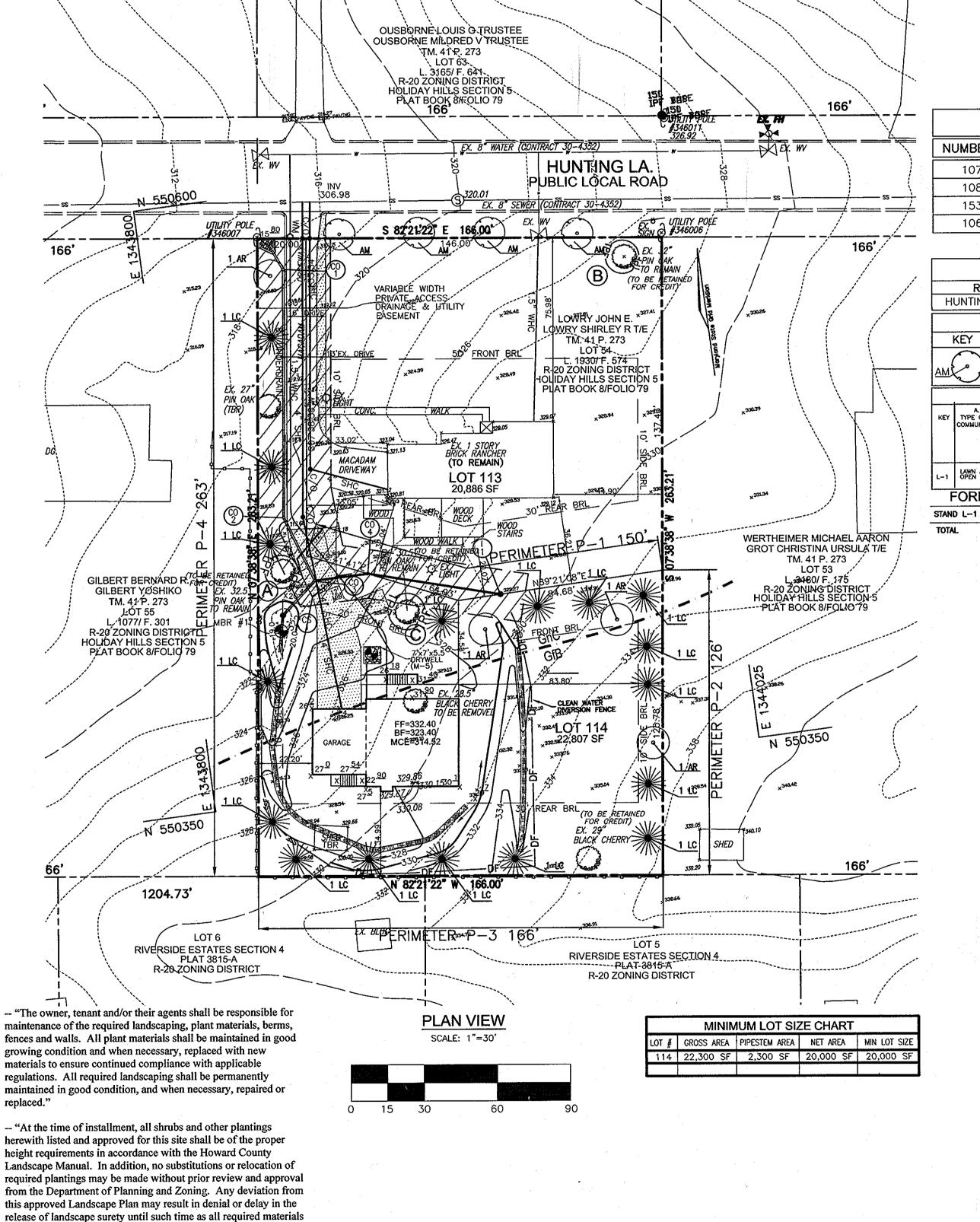
THE CLOSEST DISTANCE FROM THE EXISTING WOODEN STEPS TO THE NEW PROPERTY LINE IS 20.07 FEET AND IS IN COMPLIANCE WITH SECTION 128.A.1.C. OF THE ZONING REGULATIONS WHICH ALLOWS STAIRWAYS OR RAMPS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

SUPPLEMENTAL STORM WATER MANAGEMENT, TOTAL DISTURBED AREA = 0.683 A FOREST CONSERVATION & LANDSCAPE PLAN IMPERVIOUS COVER = 0.219 AC AREA TO BE STABILIZED = 0.464 AC

HOLIDAY HILLS LOTS 113 &114

A RESUBDIVISION LOT 54 SECOND ADDITION TO HOLIDAY HILLS SUBDIVISION PLAT BOOK 8, FOLIO 79



are planted and/or revisions are made to applicable plans and

-- "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.

certificates."



LIMIT OF DISTURBANCE



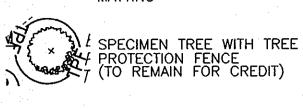
PROPOSED DRIVEWAY PAVEMENT PROPOSED MICRO BIORETENTION

N 550.835.2139 E 1.347.017.6897



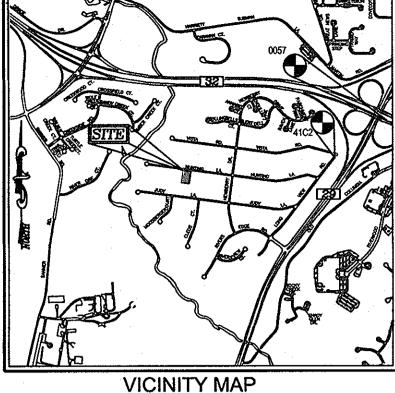


BENCHMARKS





HOWARD COUNTY BENCHMARK 41C2 N 551,616.4187 E 1,348,104.2341 HOWARD COUNTY BENCHMARK 0057



SCALE: 1"=2000' ADC MAP COORDINATES: 5052/H2

COORDINATE TABLE					
NUMBER	NORTHING	EASTING			
107	550559.8596	1344013.3282			
108	550298.9884	1343978.3177			
153	550321.0687	1343813.7927			
106	550581.9399	1343848.8033			

R	DAD	NAM	E		LINEAR		NO.	REQUIR	ED	NO.	PRO\	/IDED
HUNTIN	G L	ANE			166'/	′ 40	<u> </u>	4			4	
· · · · · ·				STREE	TTR	EE S	CHE	DULE				
KEY	QU/	N.		BOTAN	IICAL N	AME			SIZE			REM.
		- 1				DC TOC						
M. CO	4		CER		GROW	TH HEIG	HT=20')	2 1/2 /SIS T	•		. B	& B
KEY TYPE O	<u> </u>		CER	GINNALA PREST	GROW	TH HEIGI	HT=20')	/SIS T	•	.Ε ε.		& B F. FOREST AREA IN SEN. ENV

1.00 ACRES (ENTIRE SITE)

SYMBOL	NAME/DESCRIPTION	TYPE
STWDUL	INCINIE DESCRIPTION	
GnC	GLENVILLE-BAILE SILT LOAM	
GNU	0 TO 8 PERCENT SLOPES	
	0 10 0 1 21(02)(1. 020) 20	
GfB	GLADSTONE-URBAN LAND COMPLEX	
GIB	0 TO 8 PERCENT SLOPES	В
	0 .0 0 . 2	•

CATEGORY	ADJ		TOTAL		
PERIMETER NUMBER	P-1	P-2	P-3	P-4	
LANDSCAPE TYPE	В	Α	Α	Α	
LF OF ROADWAY FRONTAGE / PERIMETER	150 LF	126 LF	166 LF	263 LF	. :
NUMBER OF PLANTS REQUIRED					
SHADE TREES	3	3	3	5	14
EVERGREEN TREES	4	1	-	_	4
CREDIT FOR EXISTING VEGETATION YES/NO	YES	NO	YES	YES	• • • • • • • • • • • • • • • • • • • •
SHADE TREES	1	-	1	2	4
ORNAMENTAL (2:1 SUB FOR SHADE)		_ `	· —	-	
EVERGREEN TREES	- '-	 ·	_	-	
NUMBER OF PLANTS PROVIDED					
SHADE TREES	2	1	_	1	4
ORNAMENTAL (2:1 SUB FOR SHADE)	· 		_	-	-
EVERGREEN TREES (2:1 SUB FOR SHADE)	4	4**	4***	4****	16

**P-3 - SUBSTITUTION: 4 EVERGREENS FOR 2 SHADE TREES
**P-4 - SUBSTITUTION: 4 EVERGREENS FOR 2 SHADE TREES

PLANT LIST							
	QUAN.	BOTANICAL NAME	SIZE	REM.			
AR	5	ACER RUBRUM 'AUTUMN FLAME' AUTUMN FLAME RED MAPLE	2 1/2"-3" CAL.	B & B			
LC 💥	16	LEYLAND CYPRESS CUPPESSOCYPARIS LEYLANDI	5'-6' HT	B & B			

SPECIMEN TREE TABLE						
SPECIMEN TREE	SPECIES	SIZE	DISPOSITION			
Α	PIN OAK	32.5"	TO REMAIN			
В	PIN OAK	32.0"	TO REMAIN			
С	PIN OAK	30.5"	TO REMAIN			

FOREST CONSERVATION WORKSHEET Version 1.0

Project:10821 Hunting Lane

DNR QUALIFIED FOREST PROFESSIONAL

JOHN CANOLES

NET TRACT AREA			Acres
A. Total tract area			1.0
B. Area within 100 Year Floodplain	1		0
C. Area of site included in overhea			0
D. Net Tract Area			1.0
LAND USE CATEGORY: (from tab ARA MDR IDA HDR X	ole 3.2.1, page 40, Manu MPD CIA	ıal)	
E. Afforestation Threshold	(percentage)	0.15	0.2
F. Conservation Threshold	(percentage)	0.20	0.2
EXISTING FOREST COVER:			
 G. Existing forest cover (excluding 			0
H. Area of forest above afforestation			0
 Area of forest above conservation 	xt threshold		G
BREAK EVEN POINT: J. Forest retention above threshold	d with no mitigation		
2. LOIG21 IAIQHIIOH GOAG GHASHON	a will no mingalon		
	Bre	ak-Even Point	1
K. Clearing permitted without mitig		ak-Even Point	
K. Clearing permitted without mitig		ak-Even Point	<u></u>
K. Clearing permitted without mitig	gation	ak-Even Point	
PROPOSED FOREST CLEARING L. Total area of forest to be Cleare	gation i ed or Retained Outside I		0.0
PROPOSED FOREST CLEARING	gation i ed or Retained Outside I		
PROPOSED FOREST CLEARING L. Total area of forest to be Cleare	gation i ed or Retained Outside I		0.0
PROPOSED FOREST CLEARING L. Total area of forest to be Cleare M. Total area of forest to be Retain PLANTING REQUIREMENTS N. Reforestation for clearing above	gation ed or Retained Outside I ned in FCE e Conservation Thresho	FCE	0.0
PROPOSED FOREST CLEARING L. Total area of forest to be Cleare M. Total area of forest to be Retain PLANTING REQUIREMENTS N. Reforestation for clearing above P. Reforestation for clearing below	gation ed or Retained Outside I ned in FCE e Conservation Thresho v Conservation Thresho	FCE	0.0
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PROPOSED FOREST CLEARING L. Total area of forest to be Cleare M. Total area of forest to be Retain PLANTING REQUIREMENTS N. Reforestation for clearing above P. Reforestation for clearing below	gation ed or Retained Outside I ned in FCE e Conservation Thresho v Conservation Thresho	FCE	0.0
PROPOSED FOREST CLEARING L. Total area of forest to be Cleare M. Total area of forest to be Retain PLANTING REQUIREMENTS N. Reforestation for clearing above P. Reforestation for clearing below Q. Credit for retention above cons	gation and or Retained Outside I ned in FCE e Conservation Thresho v Conservation Thresho ervation threshold	FCE	0.0 0.0 0.0

SD PROPERTIES 3138 ROGERS AVENUE ELLICOTT CITY, MARYLAND 21043 (410-203-2460)

NO.	REVISION	DATE
SU	PPLEMENTAL STORM WATER MANAGEM	IENT.
	REST CONSERVATION & LANDSCAPE PL	
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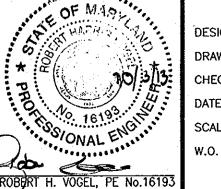
F-13-083 HOLIDAY HILLS

LOTS 113 & 114 HOLIDAY HILLS SUBDIVISION SECTION 5 LOTS 113 & 114 A RESUBDIVISION OF LOT 54, PLAT BOOK 8, FOLIO 79 TAX MAP 41, GRID 6 DPZ FILES: ECP-13-017, WP13-186 STH ELECTION DISTRICT PARCEL 273
HOWARD COUNTY, MARYLAND



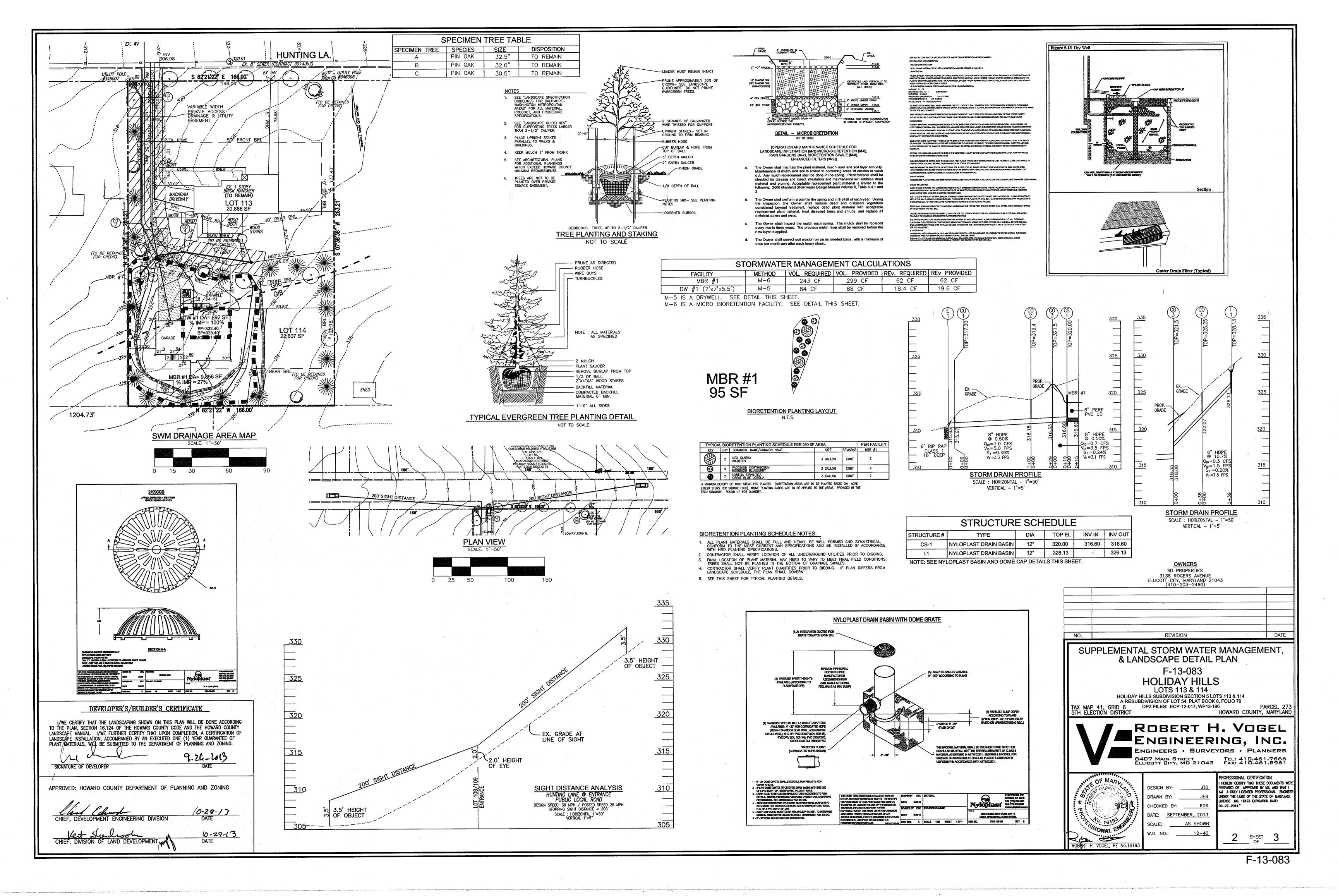
ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS . SURVEYORS . PLANNERS

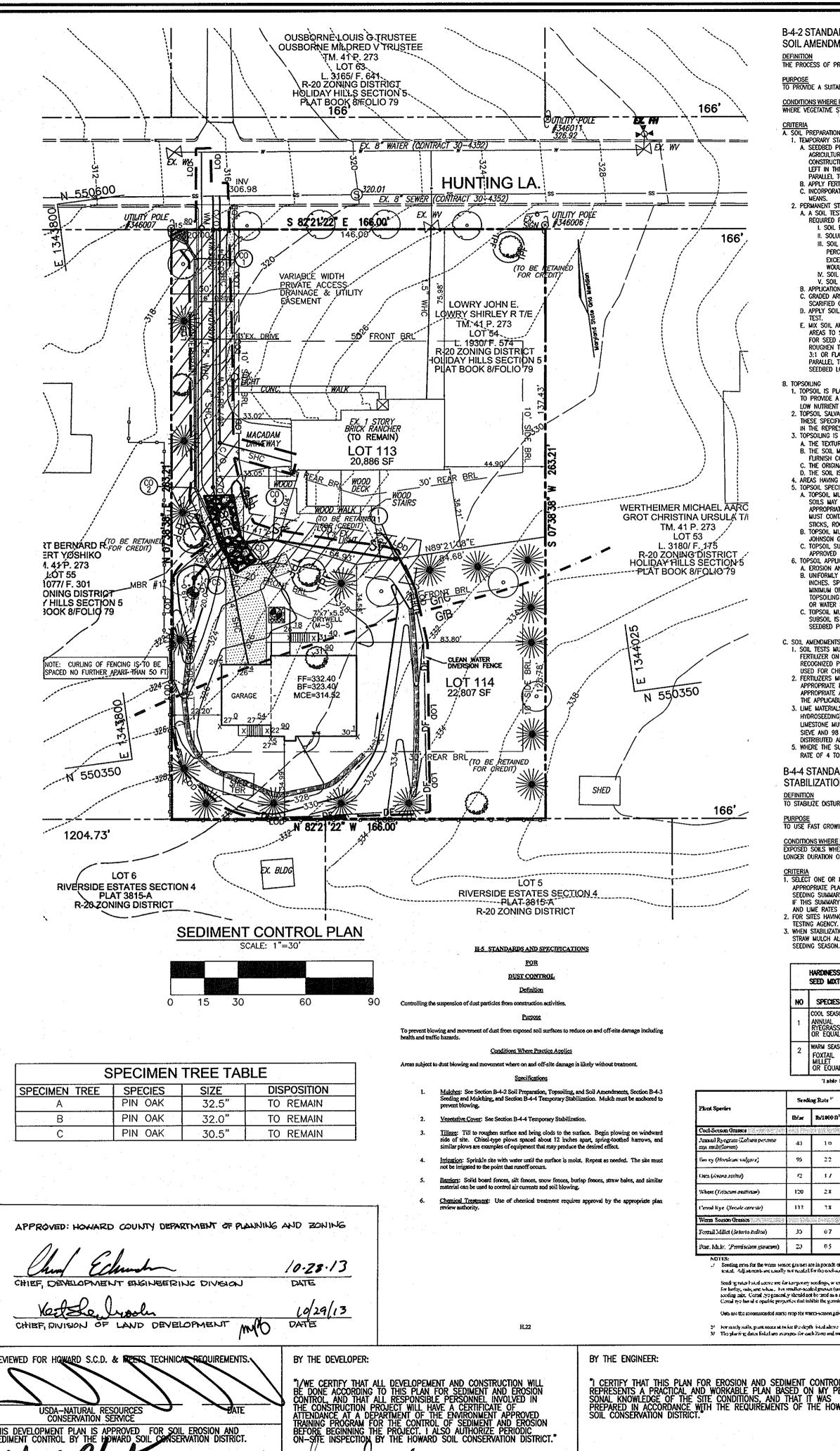
8407 MAIN STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961 PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WER PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE:



ESIGN BY	:JTD_	PREPARED OR
RAWN BY	JER_	UNDER THE LAW LICENSE NO. 1
HECKED	BY: EDS	09-27-2014.
ATE: SE	PTEMBER, 2013	
CALE: _	AS SHOWN	
v.o. No.:	12-40	1

SHEET __ OF _





SIGNATURE OF DEVELOPER

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND

 $\frac{\text{DEFINITION}}{\text{THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.}}$

PURPOSE TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

1. TEMPORARY STABILIZATION

A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISCHARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR ORAGGED 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. B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE: I. SOIL PH BETWEEN 6.0 AND 7.0. II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY 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 LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.

M. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

C. 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.

D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED 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. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

1. 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 CONCEM HAVE LOW MOISTURE CONTENT. LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS. 3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FLIRNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN. 5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 11/2 INCHES IN DIAMETER. B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL. 6. TOPSOIL APPLICATION

A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT 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 C. 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

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS 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 ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM 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. 3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN

HYDROSEEDING) WHICH CONTAINS 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 98 TO 100 PERCENT WILL PASS THROUGH A \$20 MESH SIEVE. 4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOL BY DISKING OR OTHER SUITABLE MEANS.

5. 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

CONSTRUCTION SPECIFICATIONS ISOMETRIC MEW

. Use matters that has a design value for shear stress equal to or higher than the shear stress designated on approved plans.

KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMAN) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STATISHING THE MAT IN PLACE REPLACEMED THE EXCLANATED MATERIAL AND TAKEPING TO SECURE THE MAT END.

OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS, OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT

STAPLE/STARE MAT IN A STAGGERED PATTERN ON 4 FOOT (MADBILLI) CENTERS THROUGHOUT AND 2 FOOT (MADBILLI) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

MASYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

10 FT MAX.

establish and maintain vegetation so that requirements for adequate vegetative establishment are continuously met in accordance with section $\mathbf{8}\!\!\to\!\!$ vegetative

DETAIL C-9 DIVERSION FENCE

EXTEND IMPERMEABLE SHEETING — OR PROVIDE SOIL STABILIZATION MATTING 4 FT MIN, ALONG FLOW SURFACE

. USE 42 INCH HIGH, 9 CAUGE OR THICKER CHAIN LINK FEHCING (2% INCH MAXIMUM OPENING).

2. USE 2% INCH DUMETER CALVANIZED STEEL POSTS OF 0.005 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT MEED TO BE SET IN

Extend sheeting a minimum of 4 feet along flow surface and embed bnd a minimum of 8 inches into ground, soil, stabilization matting may be used in uru of impermeable shefting at long flow surface.

, WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEJECTION DOWNERADS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE 8.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE 8.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT

TEMPORARY SEEDING SUMMARY

NO SPECIES COOL SEASO ANNUAL RYEGRASS OR EQUAL WARN SEAS	APPLICATION RATE (LB/AC)	SEEDING DATES MAR 1 TO	SEEDING DEPTHS	(10-20-20)	LIME RATE
1 ANNUAL RYEGRASS OR EQUAL	N .				
WADU SEAS	40 LB / AC	MAY 15 AUG 1 TO OCT 15	1/2 IN.	436 LB/AC (10 LB PER 1000 SF)	2 TONS/AC (90 LB PER 1000 SF)
FOXTAIL MILLET OR EQUAL	30 LB / AC	MAY 16 TO JUL 31	1/2 IN.		

			•					
	Seeding Rate "		Seeding	Recommended Seeding Dates by Plant Hurdiness Zone 3				
l Species	Oblac	IP/1000 U ₃	Depth 2' (inches)	5b and 6a	бъ	7a and 7h		
Seeson Grasses	4834 AYES	20世纪18世纪	NO MARK	REMARKAN PROPERTY OF STREET	经营销的 计对比数数计算符件	85克沙埃尔州岛州岛大阪公安中央市		
ul Ryogram (Lohum perama mili(lorum)	43	10	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar I to May 15; Aug 1 to Oct 15	Feb 15 to Am 30, Aug 15 to Nov 30		
y (Hordeon volgors)	95	22	,10	Mar 15 to May 31, Aug 1 to Sep 30	Mar I to May 15; Aug 1 to Oct 15	Feb 15 to Att 30; Aug 15 to Nov 30		
(Avera ssilve)	72	1 1/	10	Mar 15 to May 31; Aug 1 to Sep 30	Ms=" to May 15; Aug 1 to Oct 15	Feb 15 to Act 10, Aug 15 to Nov 30		
n (Frinciss austivius)	120	2 %	10	Mar 15 to May 31; Aug 1 to Sep 30	Mar I to May 15; Aug 1 to Oct 15	Feb 15 to Att 30; Aug 15 to Nov. 30		
d Kye (Secule conestr)	172	? X	10	Mw 35 to May 31; Aug 1 to (xx 31	Mar Tto May 15, Aug Tto Nov 15	Feb 15 to Apr 30, Aug. 15 to Dec 15		
s Scuson Gressos	3377 178M	04.1947.3383	《公司登集法》					
al Millet (Seturio Kalisa)	30	Ú7	ú\$	For, 1 to Tal 31	May 16 to Jel 31	May I to Aug 14		
Kake. (Pemáseium glaucum)	ន	0,5	0.5	.w. 1 to Jal 31	May 16 to Jul 31	May 1 to Aug 14		

Seeding rates for the warm season gas uses are in potents of Fure Live Seed (PLS). Actual planting rates thall be adjusted to reflect percent seed garmination and purity, or Seeding rates have decrease the temporary seedings, when planted alone. When planted as a turner crop with permanent seeds river, use 153 of the seeding rate is led a brack for burity, sale, and whose. For smaller-seeding means (unual rysgrave, peer mills), feetail in field, do not covered true that No (by weight) of the execution permanent seeding mix. Coroll type generally should not be used as a number op, unless planting will occur in very lock tild, beyond the seeding deter for other temporary seedings.

de Co

SIGNATURE OF ENGINEER

The planting dates held and averages for each Zone and may require activations to rether residences, aspecially near the boundaries of the zone.

<u>Definition</u> The application of seed and mulch to establish vegetative cover. O PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE
APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING, NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

A DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS. I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE 8.1, PERMANENT SEEDING TABLE 8.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL. 1, CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF

K20 (POTASSIUM). 200 POUNDS PER ACRE. II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). LIME WHEN HYDROSEEDING.

III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

FIBROUS PHYSICAL STATE.

I. WCFM IS TO 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.

II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER. IN APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED

HOLDING CAPACITY OF 90 PERCENT MINIMUM. APPLICATION
 A 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 ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.

A PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND I. A MUICH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MUICH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES, THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750

III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, III. STATHER: BRIDERS SUCH AS ACKTIC DER (ABRO-TAUK), DCA-70, PERROSE). TERRA TAX II, TERRA TAX OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAMER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS, USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.

IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG

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

1. SPECIFICATIONS 1. SPECIFICATIONS A ALL SEED MUST MEET THE REQUIREMENTS 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.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).

1. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED

A STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, LYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED. B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM

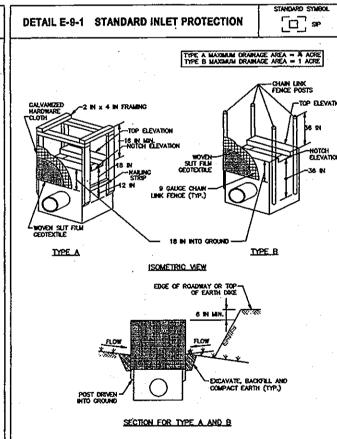
IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

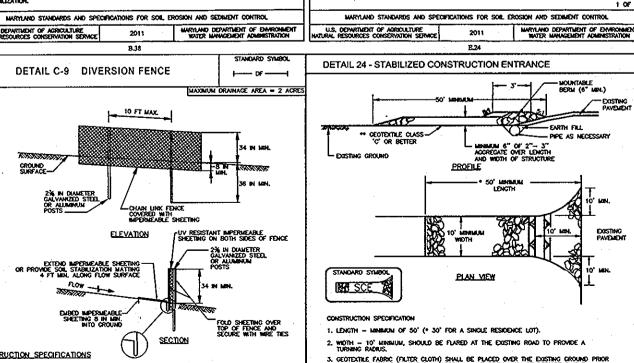
IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC. V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATE

C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPUED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100

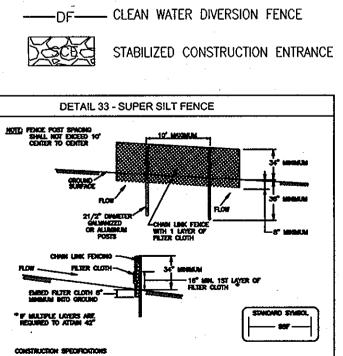
POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

FOREMAN AND INSPECTOR. TYPE A MAXMUM DRAMAGE AREA = A ACRE TYPE B MAXMUM DRAMAGE AREA = 1 ACRE NOTCH ELEVATION LEGEND





S. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STORE. ** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTESTALE. . SECURE 10 MIL OR TRICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. COLDION - A STOREAGED CONSTRUCTION EMPLAYEE SHALL BE LOCATED AT EVERY POW WHERE CONSTRUCTION TRAFFIC EMPESS OR LEAVES A CONSTRUCTION STE. VOWCLES CONSTRUCTION STE. VOWCLES CONSTRUCTION STE. VOWCLES CONSTRUCTION STE. VOWCLES CONSTRUCTION EDITION TRAFFIC OVER THE EDITION LEAVEN OF THE STRUCTION EDITION. U.S. DEPARTMENT OF ACROCULTURE 2011 WARKAND DEPARTMENT OF ENVIRONMENT NUTURAL RESOURCES CONSERVATION SERVICE 2011



LIMIT OF DISTURBANCE

PROPOSED PAVEMENT

STANDARD INLET PROTECTION

PROPOSED MICRO BIORETENTION FACILITY

PROPOSED EROSION CONTROL

----SSF----- SUPER SILT FENCE

3. Filter Cloth shall be frestened securely to the chain lake feace with ties spaced every 24° at the top and Med section. 4. FLUTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND. B. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL SE OVERLAPPED BY ST AND FOLDER. 7. FILTER CLOTH SHALL BE INSTRUCE SECURELY TO EACH FOLCE POST WITH WHE TEB OR STUPLES AT TOP AND MED SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR

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, (313-1855). ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "Maryland Standards and Specifications for soil Erosion and Sediment Control"

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE

ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEFDING (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 GERMINATION AND ESTABLISHMENT OF GRASSES.

ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

TOTAL AREA OF SITE

AREA DISTURBED

AREA TO BE ROOFED OR PAVED

AREA TO BE VEGETATIVELY STABILIZED

TOTAL CUT

TOTAL FILL

TOT OFFSITE WASTE/BORROW AREA LOCATION _____N/A

ANY SEDIMENT CONTROL PRACTICE WHICH 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 EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION

TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRES PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND IPPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY

ESTIMATE ONLY; CONTRACTOR SHALL VERIFY QUANTITIES TO HIS OWN SATISFACTION.
TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL
INSPECTOR, WITH AN APPROVED AND ACTIVE GRADING PERMIT

N P2 O5 K2O 45 LB/AC 90 LB/AC 90 LB/AC 2 TONS/AC 1/4-1/2 IN (1 LB PER (2 LB PER (2 LB PER (90 LB PER 1000 SF) 1000 SF) 1000 SF) 1000 SF

6. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB SITE. (1 WEEK) SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER). CENERAL SPECIFICATIONS
 A CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB
 B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF

CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TOM OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION. D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.

E. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

<u>Purpose</u> To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

GENERAL USE
 A.SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 8.3 FOR THE APPROPRIATE PLANT HARDINESS

B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES O

D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3-1/2 POUNDS PER 1000

2. TURFCRASS MIXTURES
A AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL

RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE.

II. 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

PERFUNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000

III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS

RECEIVING LOW TO MEDIUM MANAGEMENT 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 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 11/2

CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES

IV. 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

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

SOUTHERN MD. EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

D. TILL AREAS TO RECEIVE SEED BY DISKING 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 11/4 INCHES IN DAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE

E, IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS 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

PERMANENT SEEDING SUMMARY

A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

WESTEM MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 58. 6A)

ENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35

ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

I. 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 1000 SQUARE FEET, CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

ZONE (FROM FIGURE 8.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE 8.2. ENTER SELECTED

MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE

FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING.

SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

ie permanent seeding summary.

PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

HARDINESS ZONE (FROM FIGURE B.3): ZONE 6b

TALL FESCUE

A KENTUCKY

BLUEGRASS

K.B. 40 LB / AC AUG 15 TO OCT 15

NO SPECIES RATE (LB/AC) DATES DEPTHS

T.F. 60 LB / AC MAR 1 TO MAY 15

SEED MIXTURE (FROM TABLE B.3): 9

CRITERIA A. SEED MIXTURES

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

SUD INSTALLATION

A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL

AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING

. SOD MAINTENANCE
A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 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.

SEQUENCE OF CONSTRUCTION . OBTAIN HOWARD COUNTY GRADING PERMIT. (1 WEEK) 2. NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. 410-313-2455 (2 DAYS) 3. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (1 DAY) 4. INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (2 DAYS) 5. INSTALL SUPER SILT FENCE AS INDICATED ON PLAN (2 DAYS)

> 7. BEGIN SITE GRADING AND UTILITY CONSTRUCTION. (1 WEEK) 8. BEGIN BUILDING CONSTRUCTION. 9. WITH INSPECTOR'S APPROVAL, INSTALL ON-SITE PAVING BASE 10. INSTALL ALL PAVING SURFACE COURSE. (1 DAY)

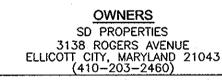
11. FINE GRADE AND STABILIZE ALL AREAS OF PARCEL INCLUDING ANY EXPOSED EARTH AREAS OUTSIDE THE LOD. REMOVE ALL TRASH JUNK AND DEBRIS FROM ENTIRE PARCEL. (2 DAYS) INSTALL SITE LANDSCAPING, MICRO BIORETENTION FACILITIES AND DRYWELLS.

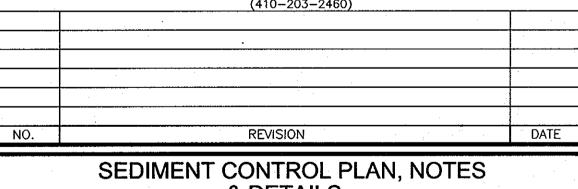
13. REMOVE ALL SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (2. DAYS)

1. DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN. A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES,

DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 B. SEVEN (7) CALENDAR DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE

PROJECT SITE NOT UNDER ACTIVE GRADING.





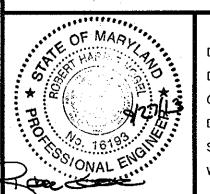
& DETAILS F-13-082

HOLIDAY HILLS LOTS 113 & 114

HOLIDAY HILLS SUBDIVISION SECTION 5 LOTS 113 & 114 A RESUBDIVISION OF LOT 54, PLAT BOOK 8, FOLIO 79 86 PARCEL 273 HOWARD COUNTY, MARYLAND TAX MAP 41, GRID 6 5TH ELECTION DISTRICT DPZ FILES: ECP-13-017, WP13-186



ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WER DESIGN BY: PREPARED OR APPROVED BY ME, AND THAT I DRAWN BY CHECKED BY: SEPTEMBER, 2013 SCALE: 12-40 W.O. NO.:

A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, CENSE NO. 16193 EXPIRATION DATE: 09-27-2014. SHEET __ OF __