SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY					
CATEGORY	ADJACENT TO ROADWAY	NO	YES	NO	NO
	ADJACENT TO PERIMETER PROPERTIES	YES	NO	YES	YES
PERIMETER NO. / LANDSCAPE TYPE		① A	② N/A	③ N/A	④ A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER		136.2'	81.1'	135.7'	69.3'
CREDIT FOR EXISTING VEGETATION: (NO OR YES W/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM: (NO OR YES W/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED:		136.2 L.F.	N/A	N/A	69.3 L.F.
SHADE TREES		3	–	–	1
EVERGREEN TREES		–	–	–	–
OTHER TREES (2:1 SUBSTITUTE)		–	–	–	–
SHRUBS		–	–	–	–
NUMBER OF PLANTS PROVIDED:					
SHADE TREES		3	–	–	1
EVERGREEN TREES		–	–	–	–
OTHER TREES (2:1 SUBSTITUTE)		–	–	–	–
SHRUBS (10:1 SUBSTITUTE)		–	–	–	–
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)					

LANDSCAPE PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
(+)	4	PRUNUS SARGENTII (SARGENT CHERRY)	2-1/2" TO 3.0" MIN. CAL. B&B FULL HEAD

LANDSCAPING NOTES

1.) PERIMETER LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS AS SHOWN ON THESE PLANS.

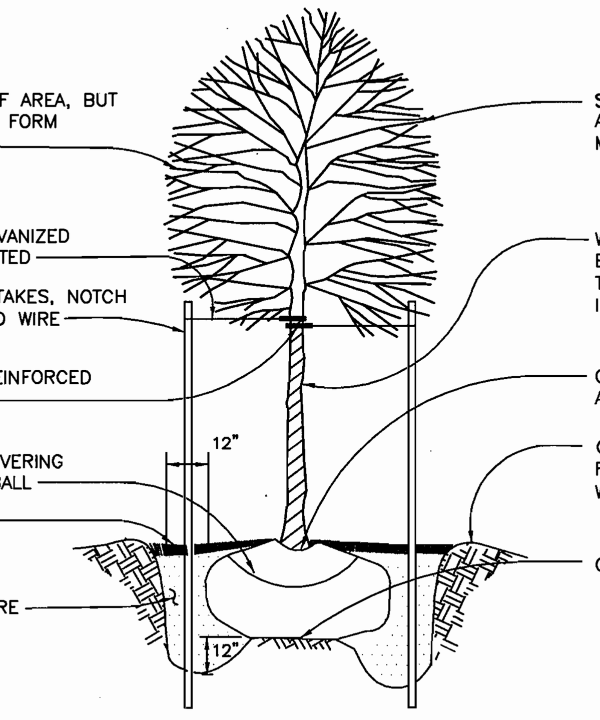
2.) TREES MUST BE A MINIMUM OF FOUR(4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE(5) FEET FROM ANY STORM DRAIN.

3.) A MINIMUM DISTANCE OF TWENTY(20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM ANY STREET LIGHTS.

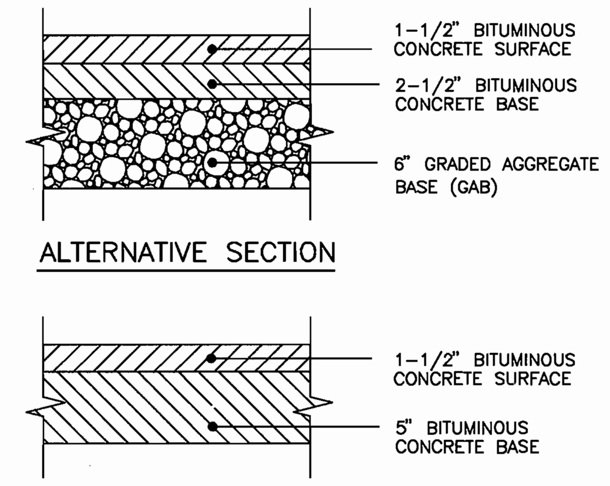
4.) TREE MUST BE PLANTED A MINIMUM OF FIVE(5) FEET FROM AN OPEN SPACE ACCESSS STRIP AND TEN(10) FEET FROM A DRIVEWAY.

5.) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC.–16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.

6.) FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF $1,200.00



TREE PLANTING DETAIL
NOT TO SCALE

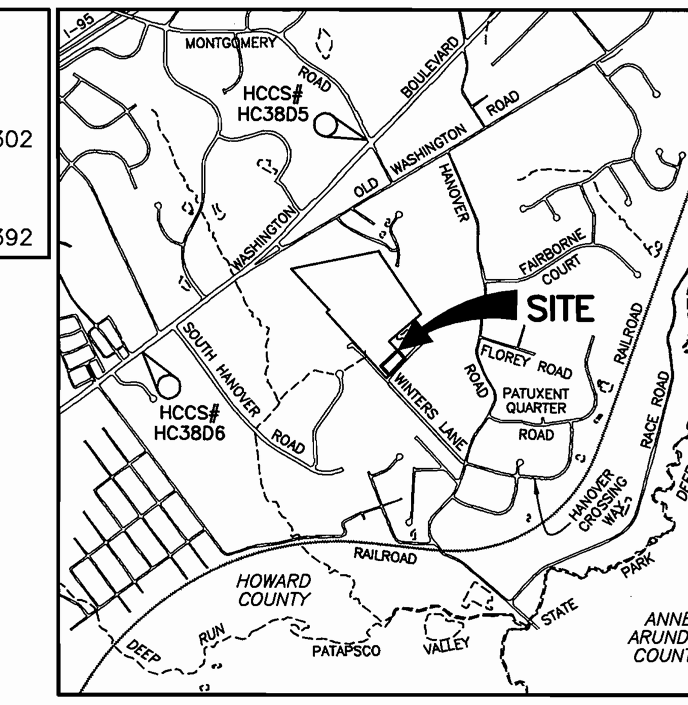


P-2 PAVEMENT DETAIL
NOT TO SCALE

BENCH MARKS NAD'83

HO. CO. CONTROL STATION
No.HC38D5
N558378.578 E1386527.302

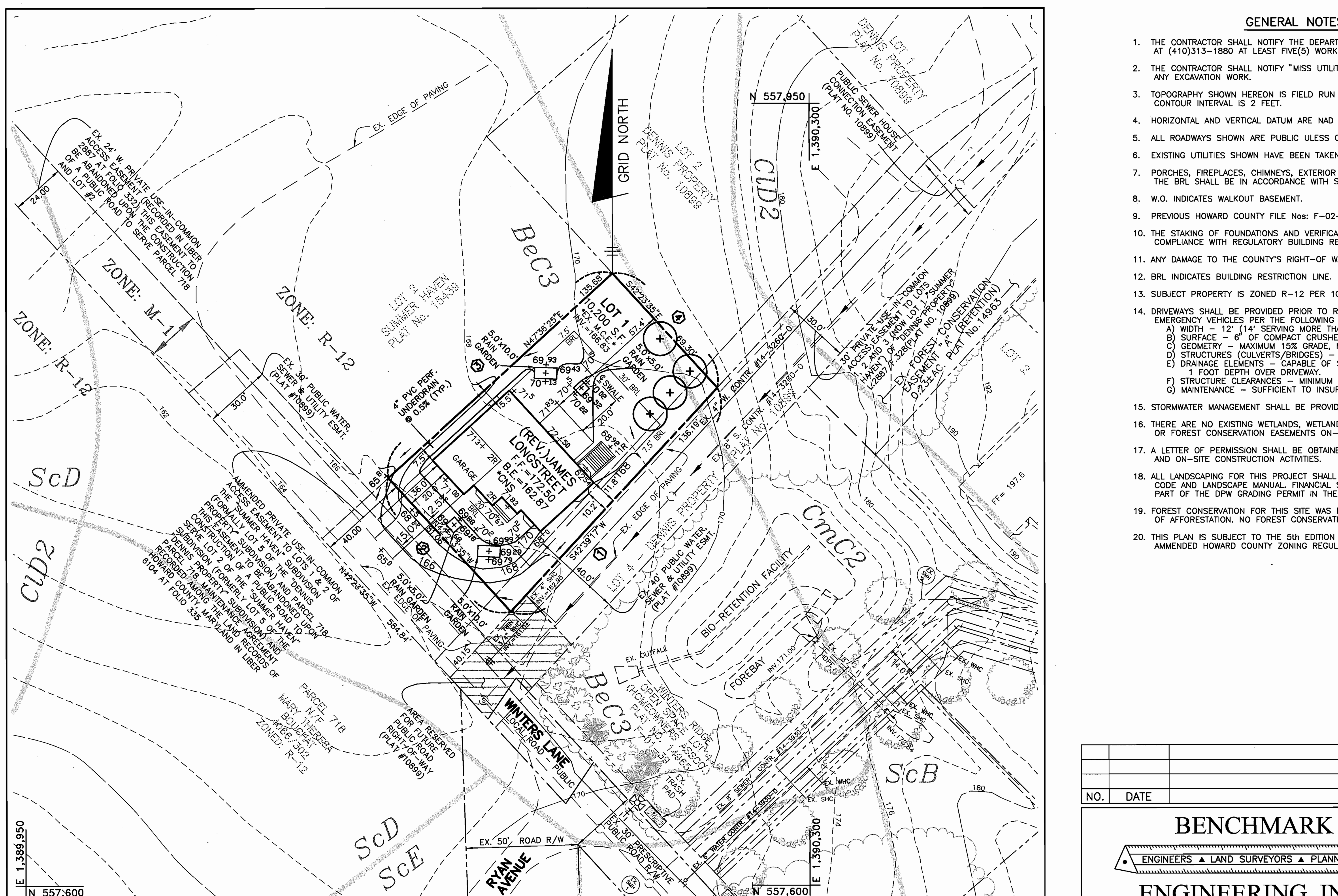
HO. CO. CONTROL STATION
No.HC38D6
N557155.445 E1384992.392



VICINITY MAP
SCALE: 1" = 2000'

LEGEND

SOILS CLASSIFICATION	AbC1
SOILS DELINEATION	
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING WOODS LINE	
PROPOSED WOODS LINE	
EXISTING STRUCTURE	
PROPOSED STRUCTURE	
DRAINAGE AREA	
DRAINAGE DIVIDE	
Tc STUDY PATH	Ⓐ Ⓑ
LIMIT OF DISTURBANCE	
STABILIZED CONSTRUCTION ENTRANCE	
SILT FENCE	SF
SOIL STABILIZATION	



PLAN
SCALE: 1" = 30'

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT (410)313–1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1–800–257–7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
3. TOPOGRAPHY SHOWN HEREON IS FIELD RUN BY NASSAUX–HEMSLEY, INC. DATED 10/30/02, CONTOUR INTERVAL IS 2 FEET.
4. HORIZONTAL AND VERTICAL DATUM ARE NAD '83 MONUMENTS 38DE AND 38D6.
5. ALL ROADWAYS SHOWN ARE PUBLIC ULESS OTHERWISE NOTED.
6. EXISTING UTILITIES SHOWN HAVE BEEN TAKEN FROM APPROVED CONTRACT DRAWINGS.
7. PORCHES, FIREPLACES, CHIMNEYS, EXTERIOR STAIRWAYS, DECKS AND BAY WINDOWS WHICH EXTEND ACROSS THE BRL SHALL BE IN ACCORDANCE WITH SECTION 128A(1) OF THE HOWARD COUNTY ZONING REGULATIONS.
8. W.O. INDICATES WALKOUT BASEMENT.
9. PREVIOUS HOWARD COUNTY FILE Nos: F–02–163, F–93–83, WP–92–191
10. THE STAKING OF FOUNDATIONS AND VERIFICATION OF THE FOOTERS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.
11. ANY DAMAGE TO THE COUNTY'S RIGHT–OF WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE.
12. BRL INDICATES BUILDING RESTRICTION LINE.
13. SUBJECT PROPERTY IS ZONED R–12 PER 10–18–93 COMPREHENSIVE ZONING PLAN.
14. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
    A) WIDTH – 12' (14' SERVING MORE THAN ONE RESIDENCE).
    B) SURFACE – 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
    C) GEOMETRY – MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE & MINIMUM 45' TURNING RADIUS.
    D) STRUCTURES (CULVERTS/BRIDGES) – CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
    E) DRAINAGE ELEMENTS – CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
    F) STRUCTURE CLEARANCES – MINIMUM 12 FEET.
    G) MAINTENANCE – SUFFICIENT TO INSURE ALL WEATHER USE.
15. STORMWATER MANAGEMENT SHALL BE PROVIDED BY USE OF ROOFTOP DISCONNECTION CREDITS.
16. THERE ARE NO EXISTING WETLANDS, WETLANDS BUFFERS, STREAMS, STREAM BUFFERS, 100–YR. FLOODPLAIN, OR FOREST CONSERVATION EASEMENTS ON–SITE.
17. A LETTER OF PERMISSION SHALL BE OBTAINED BY THE OWNER OF ADJOINING LOT 2 TO ALLOW FOR GRADING AND ON–SITE CONSTRUCTION ACTIVITIES.
18. ALL LANDSCAPING FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH SEC.–16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE DPW GRADING PERMIT IN THE AMOUNT OF $1,200.00
19. FOREST CONSERVATION FOR THIS SITE WAS PROVIDED UNDER F–93–83 BY A PAYMENT OF FEE–IN–LIEU OF AFFORESTATION. NO FOREST CONSERVATION WAS REQUIRED UNDER F–02–163.
20. THIS PLAN IS SUBJECT TO THE 5th EDITION OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE AMMENDED HOWARD COUNTY ZONING REGULATIONS, COUNCIL BILL 50–2001

SITE ANALYSIS DATA CHART

GENERAL SITE DATA

1.) PRESENT ZONING: R–12
2.) APPLICABLE DPZ FILE REFERENCES: F–02–163, F–93–83, WP–92–191
3.) PROPOSED USE OF SITE: SINGLE–FAMILY DETACHED
4.) PROPOSED WATER AND SEWER SYSTEMS: PUBLIC

AREA TABULATION

1.) TOTAL PROJECT AREA ____ 0.23 AC.±
2.) AREA OF THIS PLAN SUBMISSION ____ 0.23 AC.±
3.) APPROXIMATE LIMIT OF DISTURBANCE ____ 0.25 AC.±
4.) TOTAL NUMBER OF LOTS ALLOWED AS SHOWN ON FINAL PLAT(S) ____ 1
5.) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION ____ 1
6.) OPEN SPACE REQUIREMENTS ARE PROVIDED BY A FEE–IN–LIEU PAYMENT MADE UNDER F–93–83

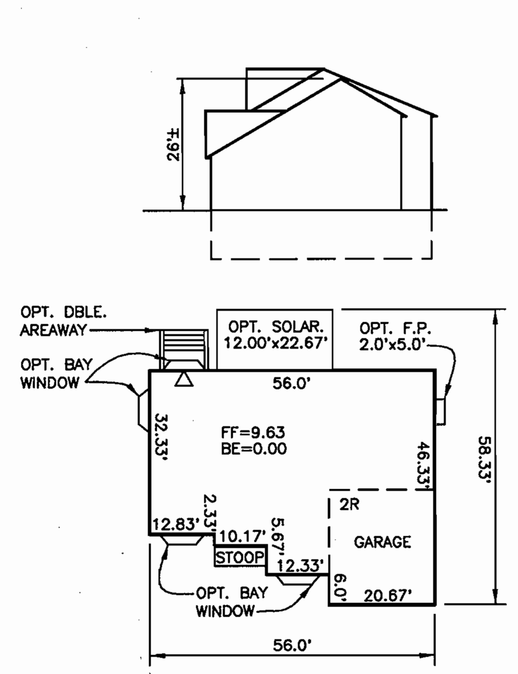
DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Robert L. Dorsey Jr. 3-21-03
BUILDER /DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/7/03
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/10/03
DIRECTOR — DATE 4/10/03



JAMES LONGSTREET
SCALE: 1"=30'

SHEET INDEX

NO.	DESCRIPTION
1	GRADING AND LANDSCAPE PLAN, NOTES & DETAILS
2	SEDIMENT & EROSION CONTROL PLAN, NOTES & DETAILS

SOILS LEGEND

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
CID2	B	CHILLUM GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
CmC2	B	CHILLUM SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
HO. CO. SOILS MAP No.26		

– BASEMENT WILL NOT SEWER BY GRAVITY –

SHC TABLE

LOT NO.	MINIMUM CELLAR ELEV.	INVERT @ EASEMENT
1	166.83*	162.93±

* – PER CONTR. No.14–3260–D

NOTE: CONTRACTOR SHALL CHECK EX. SEWER HOUSE CONNECTION ELEVATION AT PROPERTY/EASEMENT LINE PRIOR TO CONSTRUCTION OF THE HOUSE TO ENSURE PROPER SLOPES CAN BE MAINTAINED.

ADDRESS CHART

LOT NO.	STREET ADDRESS
1	6259 WINTERS LANE

PERMIT INFORMATION CHART

SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL	
SUMMER HAVEN		N/A		LOT 1	
PLAT No.	BLOCK No.	ZONING	TAX MAP	ELEC. DIST.	CENSUS
15439	14	R–12	38	1st	6012.01
WATER CODE	A01	SEWER CODE	2150300		

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410–465–6105 FAX: 410–465–6644
E–MAIL: benchmrk@cais.com

STATE OF MARYLAND — DONALD ALAN MASON — No. 21443 — REGISTERED PROFESSIONAL ENGINEER
3/21/03

BUILDER:
DORSEY FAMILY HOMES
9926 CYPRESSMEDE DRIVE
ELLICOTT CITY, MD 21041
PHONE: 410–465–7200

OWNER:
JAMES L. NEWBURN
6255 WINTERS LANE
HANOVER, MD 21076
PHONE: 410–465–4244

PROJECT: SUMMER HAVEN
LOT 1
SINGLE–FAMILY DETACHED

LOCATION: TAX MAP 38 – GRID 14
PARCEL p/o233
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT AND LANDSCAPE PLAN, NOTES & DETAILS

DATE: DECEMBER 9, 2002 / MARCH 24, 2003 — PROJECT NO. 1579

Design: DAM/MCR — Draft: MCR/JPF — Check: DAM — SCALE: AS SHOWN — DRAWING 1 OF 2

SDP–03–081

\\tsa\vol1\engineer\projects\1579\dwg\8000C.dwg, SDP (1), 03/21/2003 10:04:55 AM, MCR

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	0.23±	ACRES
TOTAL AREA DISTURBED	0.25±	ACRES
AREA TO BE ROOFED OR PAVED	0.08±	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.17±	ACRES
TOTAL CUT	250	CU. YDS.
TOTAL FILL	250	CU. YDS.
OFFSITE HAUL	N/A	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

* – IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AN OFF-SITE FILL AREA WITH AN APPROVED SEDIMENT & EROSION CONTROL PLAN.

TEMPORARY SEEDBED PREPARATION

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

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

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

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

PERMANENT SEEDBED PREPARATION

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

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWING SCHEDULES:

1. PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0- UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
2. ACCEPTABLE – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable 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.

Conditions Where Practice Applies

I. This practice 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 furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible. II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications – Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 ½" in diameter.

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

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:

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

IV. For sites having disturbed areas over 5 acres:

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

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

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

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil 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.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

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

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" – 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" – 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. G-21-2

VI. Alternative for Permanent Seeding – Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribed amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

SEQUENCE OF CONSTRUCTION

– NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION –

DAY 1	OBTAIN GRADING PERMIT.
DAY 2-8	INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP.
DAY 9-12	EXCAVATE FOR FOUNDATIONS, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
DAY 13-82	CONSTRUCT HOUSE, BACKFILL AND CONSTRUCT DRIVEWAYS.
DAY 83-87	FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES.
DAY 88-91	WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DITURBED AREAS.

NOTE: 1. SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THESE PLANS IS SUBJECT TO REVISION IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
2. EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOD SHOULD BE USED.
3. THE DURATION OF EVENTS SHOWN IN THIS SEQUENCE ARE APPROXIMATE ONLY, THEY DO NOT REFLECT ACTUAL BUILDING TIMES AND WILL BE ADJUSTED DURING CONSTRUCTION BY THE BUILDER.

SOILS LEGEND

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
CID2	B	CHILLUM GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
CmC2	B	CHILLUM SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
HO. CO. SOILS MAP No.26		

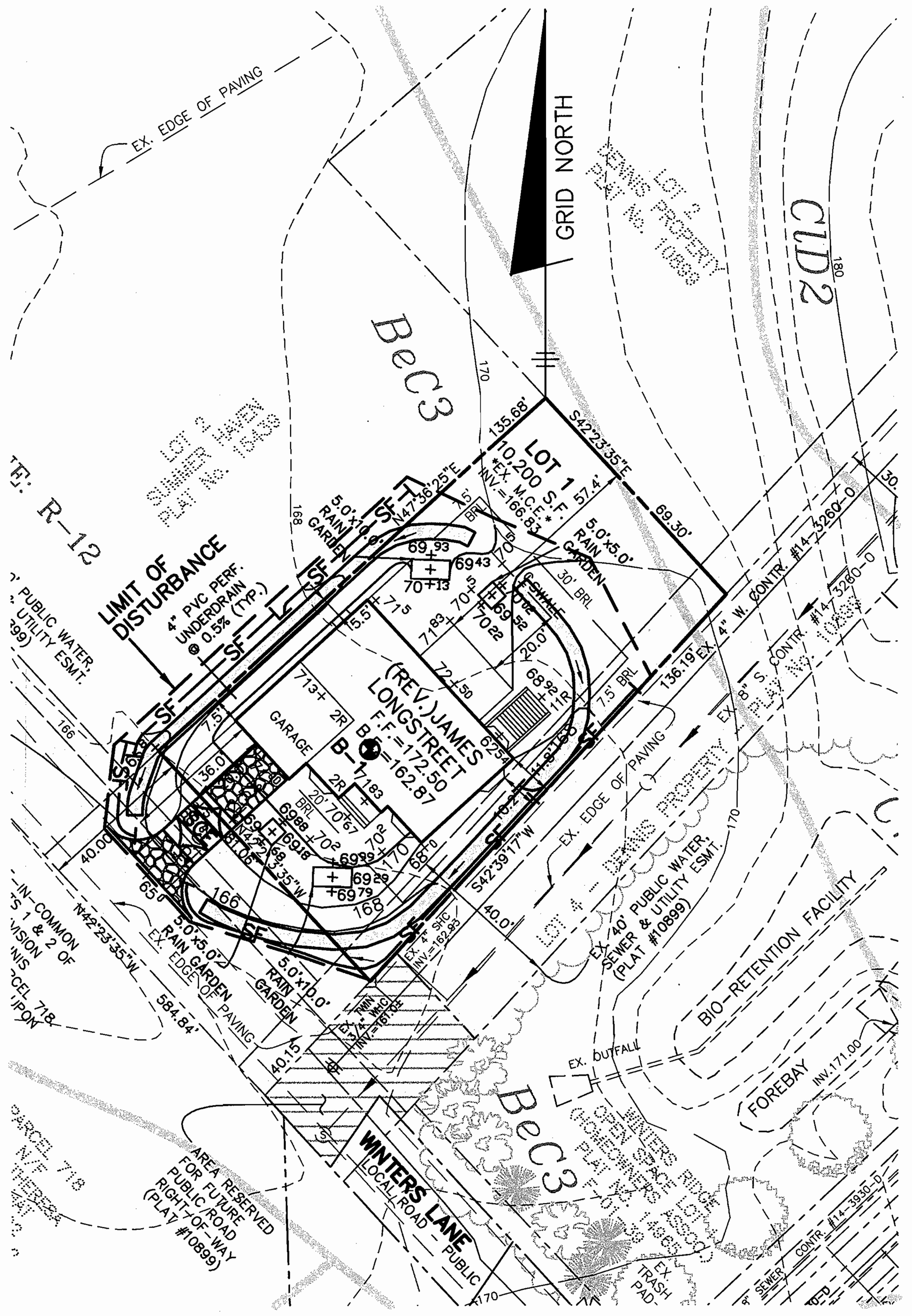
BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
DEVELOPER: Robert L. Dorsey Jr Pres — DATE 3-21-03

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
ENGINEER: Donald Mason — DATE 3/21/03

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — DATE 4/3/03

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
NATURAL RESOURCES CONSERVATION SERVICE — DATE 4/3/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/7/03
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/10/03
DIRECTOR — DATE 4/10/03



PLAN

SCALE: 1" = 30'

MATERIALS AND SPECIFICATIONS FOR RAIN GARDEN

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS (IF REQUIRED)	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.5' TO 4.0' DEEP)	SAND: 35-60% SILT: 30-35% CLAY: 10-25%	N/A	USDA SOIL TYPES: LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
GEOTEXTILE (CLASS "C")	APPARENT OPENING SIZE: (ASTM D-4751) GRAB TENSILE STRENGTH: (ASTM D-4632) PUNCTURE RESISTANCE: (ASTM D-4833)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.750"	
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC OR SDR35	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES

OPERATION & MAINTENANCE SCHEDULE FOR RAIN GARDENS

1. ANNUAL MAINTENANCE OF PLANT MATERIAL AND MULCH LAYER IS REQUIRED. MAINTENANCE OF MULCH IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH-OUT. ANY REPLACEMENT OF MULCH SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE & INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL & PRUNING.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN THE SPRING AND FALL. THIS INSPECTION WILL INCLUDE; REMOVAL OF DEAD & DISEASED VEGETATION CONSIDERED BEYOND TREATMENT; TREATMENT OF ALL DISEASED TREES & SHRUBS; AND REPLACEMENT OF ALL DEFICIENT STAKES & WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE THE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS-NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

RAIN GARDEN – LANDSCAPE DATA

HYDROLOGIC ZONE 3 – REGULARLY INUNDATED SHORELINE FRINGE (HIGH MARSH)
HYDROLOGIC CONDITION – 0" TO 1'-0" DEEP
HARDINESS – TEMPERATE ZONE 6b (-5' TO 0')
SEE SHEET 2 FOR SEQUENCE OF CONSTRUCTION

NOTE: REFER TO MDE 2000 MD STORMWATER DESIGN MANUAL VOLUMES 1 & 2 FOR LANDSCAPE CONTRACTOR RESPONSIBILITIES, PRACTICES AND MAINTENANCE DUTIES

RAIN GARDEN – PLANTING DATA

1. PLANTINGS WITHIN THE PONDING AREA OF THE RAIN GARDEN ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE
SUGGESTED SPECIES:
CREEPING BUGLEWEED (AJUGA REPTANS)
COMMON PERIWINKLE (VINCA MINOR)
LILY-TURF (LIRIOPE, SP.)
2. PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE RAIN GARDEN ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE
SUGGESTED SPECIES:(PERENNIALS/ANNUALS)
IRIS (IRIS VERSICOLOR)
DAYLILY (HEMEROCALLIS SP.)
WHITE GLORY (ASTIBLE SP.)
3. AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAIN GARDEN NEAR O.B. PIPE AND UNDERDRAIN.

ALL SEDIMENT & EROSION CONTROL FEATURES ARE TO BE REPAIRED IMMEDIATELY IF DISRUPTED BY UTILITY INSTALLATION

SILT FENCE IS TO BE INSPECTED FREQUENTLY & CLEANED, REPAIRED AND/OR RE-INSTALLED IMMEDIATELY AS NECESSARY

SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THIS PLAN IS SUBJECT TO REVISIONS IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR

ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

LEGEND

SOILS CLASSIFICATION	AbC1
SOILS DELINEATION	
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING WOODS LINE	
PROPOSED WOODS LINE	
EXISTING STRUCTURE	
PROPOSED STRUCTURE	
DRAINAGE AREA	
DRAINAGE DIVIDE	
Tc STUDY PATH	Ⓐ — Ⓑ
LIMIT OF DISTURBANCE	
STABILIZED CONSTRUCTION ENTRANCE	
SILT FENCE	SF
SOIL STABILIZATION	

HILLIS-CARNES ENGINEERING ASSOCIATES,INC.

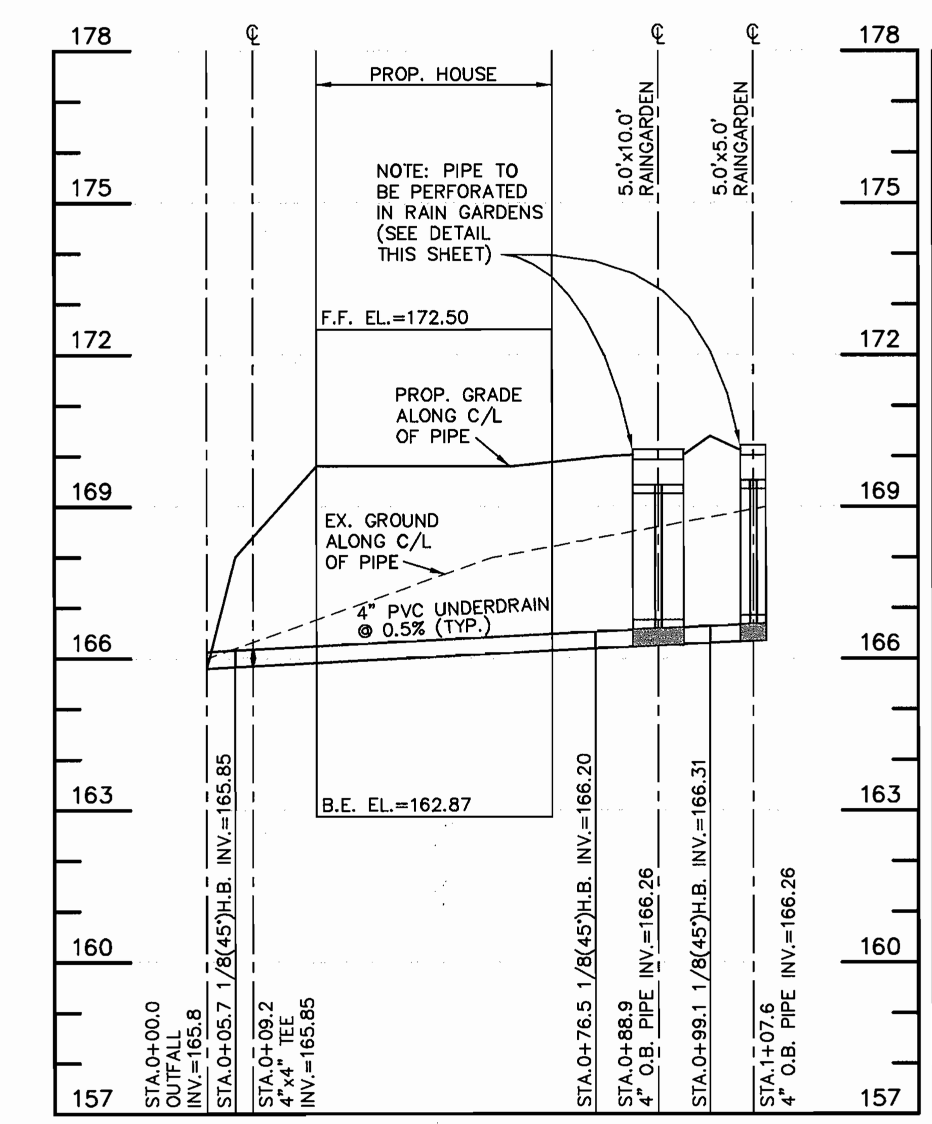
Page 1 of 1

PROJECT NAME: SUMMER HAVEN – LOT 1 BORING # B-1
LOCATION: HOWARD COUNTY, MARYLAND JOB # 02591A
Datum – Hammer Wt. 140 lbs Hole Diameter 6" Foreman Steven McManus
Surf. Elev. – Hammer Drop 30" Rock Core Dia. – Inspector –
Date Started 11/26/02 Pipe Size 2.0"o.d. Boring Method HSA Date Completed 11/26/02

ELEV.	SOIL DESCRIPTION (COLOR, MOISTURE, DENSITY, SIZE, PROPORTION)	STRA. DEPTH	DEPTH SCALE	CON.	BELOW 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE		0.0					
	Brown, moist, loose to medium dense, SILTY SAND-SANDY SILT, trace medium to coarse gravel, trace roots (SM-ML) Possible Fill			D	2-4-5-7	1	10"	3" Topsoil; No groundwater encountered during drilling
				D	8-10-8-8	2	10"	
	Orange-brown, moist, medium dense, SANDY SILT (ML)	5.0	5.0	L	5-7-9-8	3	0"	Caved in at 1.4' at completion; Caved in at 1.4' after 24 hours
				I	5-6-6-7	4	14"	
		8.0		D	5-8-9-12	5	16"	
	Bottom of hole at 10.0'	10.0	10.0					
			15.0					
			20.0					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE CA-CONTINUOUS FLIGHT AUGER RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED I-INTACT U-UNDISTURBED L-LOST
GROUND WATER DEPTH: AT COMPLETION Dry FT. AFTER 24 hrs. Dry FT. AFTER – FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS CFA-CONT. FLIGHT AUGERS DC-DRIVING CASING MD-MUD DRILLING

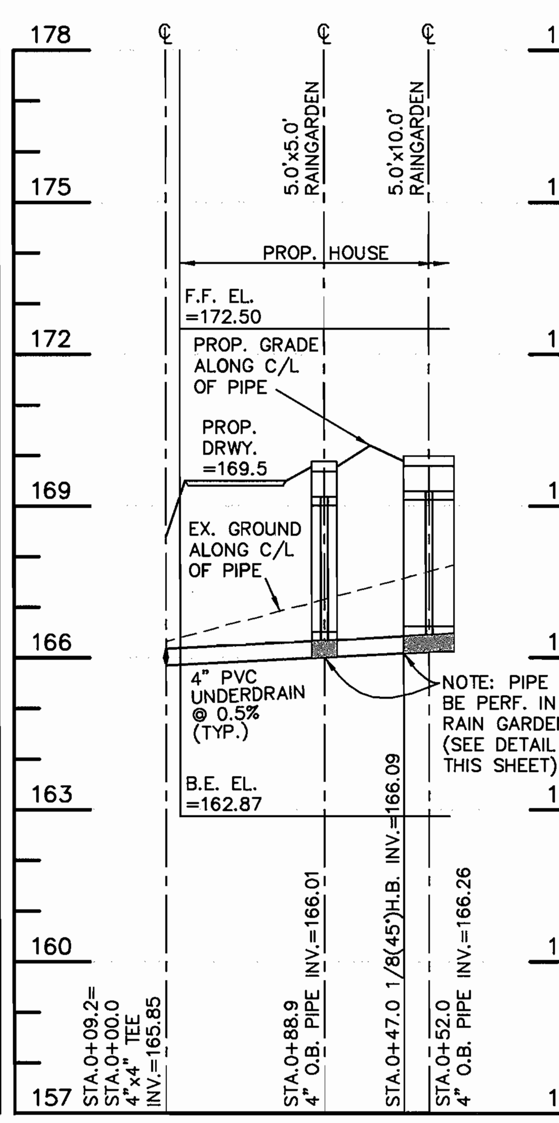
STANDARD PENETRATION TEST – DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS



UNDERDRAIN PROFILE

RAIN GARDENS – REAR

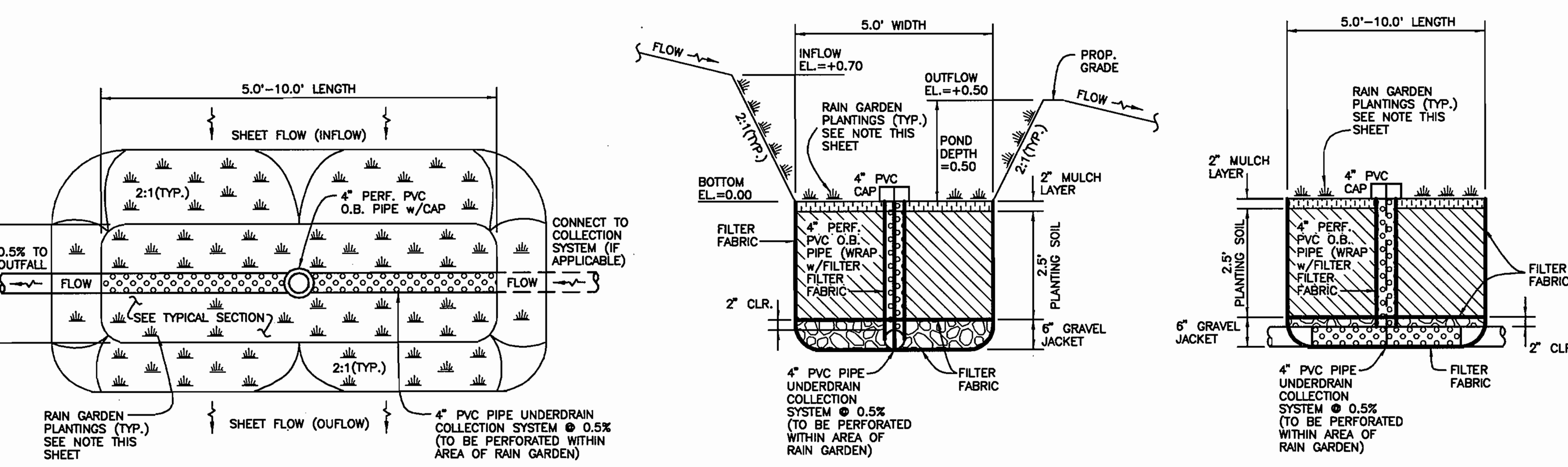
HORIZINTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



UNDERDRAIN PROFILE

RAIN GARDENS – FRONT

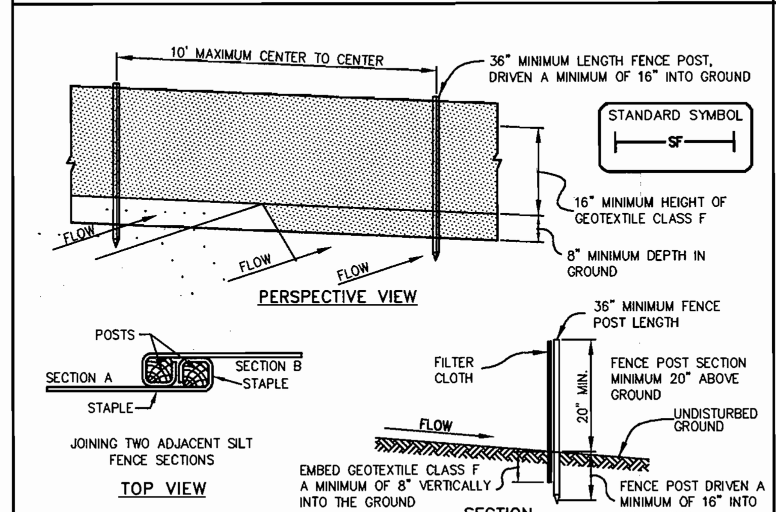
HORIZINTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



RAIN GARDEN DETAIL

NOT TO SCALE

DETAIL 22 – SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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SILT FENCE

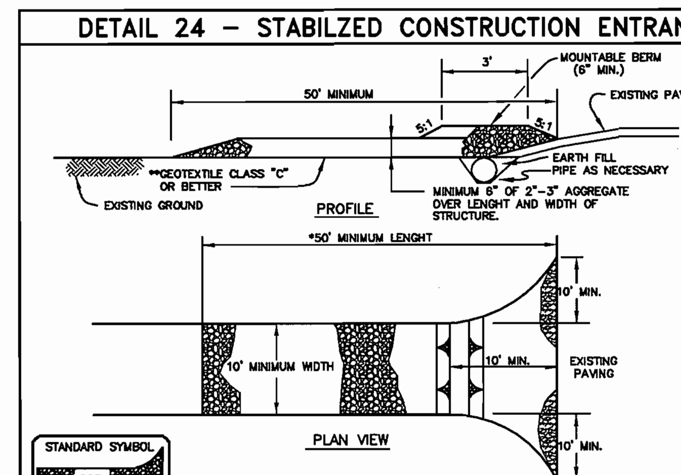
SILT FENCE DESIGN CRITERIA

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 15 – 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 – STABILZED CONSTRUCTION ENTRANCE

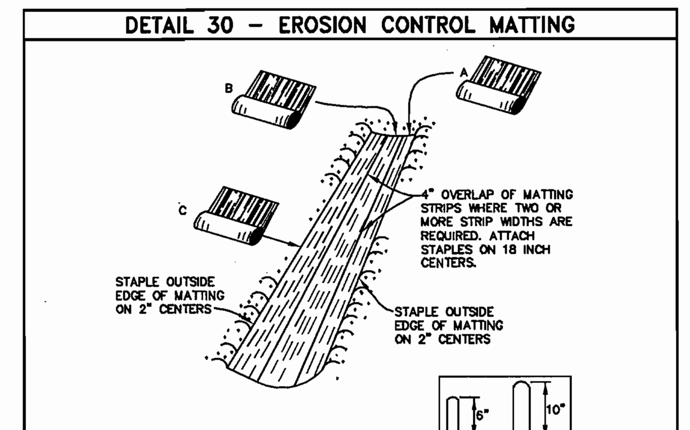


Construction Specifications

1. Lenght – minimum of 50' (*30' for single residence lot).
2. Width– 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residence to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed atleast 6" deep over the lenght and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounted berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire lenght of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 – EROSION CONTROL MATTING



CONSTRUCTION SPECIFICATIONS

1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4", SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.

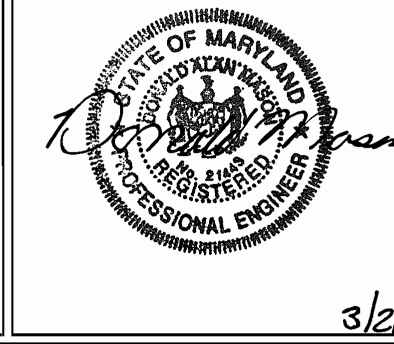
SOIL STABILIZATION MATTING

NOT TO SCALE

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 22 – 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
E-MAIL: benchmrk@cais.com



3/21/03

BUILDER:
DORSEY FAMILY HOMES
9926 CYPRESSMEDE DRIVE
ELLICOTT CITY, MD 21041
PHONE: 410-465-7200

OWNER:
JAMES L. NEWBURN
6255 WINTERS LANE
HANOVER, MD 21076
PHONE: 410-465-4244

PROJECT: SUMMER HAVEN
LOT 1
SINGLE-FAMILY DETACHED

LOCATION: TAX MAP 38 – GRID 14
PARCEL p/o233
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN, NOTES & DETAILS

DATE: DECEMBER 9, 2002 / MARCH 24, 2003 — PROJECT NO. 1579
Design: DAM/MCR — Draft: MCR/JPF — Check: DAM — SCALE: AS SHOWN — DRAWING 2 OF 2

SDP-03-081

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