

ROAD CONSTRUCTION PLANS

MARBUCK ESTATES

LOTS 1 THRU 8 AND OPEN SPACE LOT 9

FIRST ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:
 - MISS UTILITY 1-800-257-7777
 - VERIZON TELEPHONE COMPANY (410) 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900
 - AT&T CABLE LOCATION DIVISION (410) 393-3533
 - BALTIMORE GAS & ELECTRIC (410) 685-0123
 - STATE HIGHWAY ADMINISTRATION (410) 531-5533
 - HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION (410) 313-1880
- SITE DATA:
 - ZONING: R-20 (ZONING MAP DATED JULY 28, 2006)
 - TAX MAP 37, PARCEL 47, DEED REFERENCE: 9862/52
 - GROSS AREA: 4.89 ACRES ±
 - NET TRACT AREA: 4.89 ACRES ±
 - MINIMUM LOT SIZE: 18,000 SQ.FT.
 - NUMBER OF BUILDABLE LOTS: 8 LOTS
 - NUMBER OF OPEN SPACE LOTS: 1 LOT
 - AREA OF PROPOSED BUILDABLE LOTS: 4.37 ACRES
 - AREA OF ROAD DEDICATION: 5,398 SQ.FT. OR 0.12 AC.±
 - OPEN SPACE REQUIRED AT 10%: 21,780 SQ.FT. OR 0.50 AC.±
 - OPEN SPACE PROVIDED: 21,804 SQ.FT. OR 0.50 AC.±
 - PREVIOUS PROJECT NUMBERS: SP-05-007
- HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND NAD 83 (HORZ) AND NGVD29 (VERT) AS PROJECTED FROM HOWARD COUNTY CONTROL STATIONS NO. 37BA & 37BB.
 - STA. No. 37BA N 563,785.618 ELEV. 394.786
 - E 1,376,343.172
 - STA. No. 37BB N 563,663.415 ELEV. 373.822
 - E 1,378,040.471
- TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY PERFORMED ON OR ABOUT SEPTEMBER 2003 BY MILDENBERG, BOENDER ASSOCIATES.
- THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT.
- WETLAND DELINEATION PERFORMED BY WILDMAN ENVIRONMENTAL ASSOCS. ON OR ABOUT JANUARY 2004 UNDER SP-05-007.
- BASED ON AVAILABLE COUNTY DATA, NO HISTORIC STRUCTURES OR BURIAL GROUNDS EXIST ON SITE.
- ALL EXISTING STRUCTURES ON PARCEL 47 ARE TO REMAIN UNLESS LABELED OTHERWISE. BUILDING EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING(S) ARE TO BE CONSTRUCTED IN COMPLIANCE WITH ZONING REGULATIONS.
- NO STEEP SLOPES OR FLOODPLAINS EXIST ON SITE AS CERTIFIED BY MILDENBERG BOENDER & ASSOCIATES ON OR ABOUT APRIL 2003.
- VEHICULAR ACCESS FOR MAINTENANCE TO OPEN SPACE LOT 9 WILL BE DERIVED FROM ACCESS THROUGH ROCKBURN BRANCH PARK APPROVED BY THE DEPARTMENT OF RECREATION AND PARKS.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE 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 - 8 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
 - C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND A MINIMUM 45-FOOT RADIUS.
 - D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H2S 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
 - G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- PERIMETER LANDSCAPING 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 LANDSCAPING (30 SHADE TREES AND 4 EVERGREENS) SHALL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$9,600.00.
- THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, 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.
- MINIMUM LOT SIZE AND OPEN SPACE REQUIREMENTS SHOWN ABOVE ARE IN ACCORDANCE WITH SECTION 16.121(2)(2) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, 5th ED.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY ON-SITE RETENTION OF 0.78 ACRES OF FOREST AND OFF-SITE REFORESTATION AT RUSSELL HOLLAND PROPERTY FOR 0.95 ACRES (41,382 SQ. FT.) FINANCIAL SURETY FOR THE ON-SITE RETENTION (0.78 ACRES OR 33,976.8 SQ.FT.) IN THE AMOUNT OF \$6,786.00 AND OFF-SITE AFFORESTATION (0.95 ACRES OR 41,382 SQ.FT.) IN THE AMOUNT OF \$20,691.00 WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE 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 THE APPLICABLE PLANS.
- TRAFFIC STUDY WAS PREPARED BY MARS GROUP ON OR ABOUT AUGUST 2004 AND APPROVED UNDER SP-05-007.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- THE PROPOSED HOUSE LOCATION FOR LOTS 3 THRU 8 SHALL BE AT LEAST 10 FEET FROM THE PUBLIC WATER & SEWER EASEMENT.
- IF A TEMPORARY USE PERMIT TO ALLOW THE BLOCK BUILDING (ACCESSORY STRUCTURE) TO REMAIN ON AN UNIMPROVED LOT (NO PRINCIPAL STRUCTURE) IS DENIED, THE BUILDING MUST BE REMOVED OR THE LOT MUST BE REDESIGNED SO THAT THE STRUCTURE IS IN COMPLIANCE WITH THE ZONING REGULATIONS.
- THIS SUBDIVISION IS SUBJECT TO WP-05-34 APPROVED ON DECEMBER 10, 2004, WHICH WAIVED SECTION 16.121(2)(1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO PERMIT A MINIMUM OF 40 FEET OF PUBLIC ROAD FRONTAGE FOR AN OPEN SPACE LOT TO BE REDUCED TO ZERO FEET FOR PROPOSED OPEN SPACE LOT 9. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE PROPOSED OPEN SPACE ACCESS EASEMENT FROM THE PROPOSED PUBLIC ROAD TO PROPOSED OPEN SPACE LOT 9 SHALL COMPLY WITH THE REQUIREMENTS OF THE DESIGN CRITERIA, 16.121(2)(1)(a), (b), (c), and (d).
 - ALL BRL'S SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTIONS 10B.4.a and b.
- THIS SUBDIVISION IS SUBJECT TO WP-05-78 DENIED ON FEBRUARY 28, 2005, WHICH WAIVED SECTION 16.120(b)(4) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO PERMIT A RESIDENTIAL LOT TO BE IRREGULAR IN SHAPE.
- ADEQUATE FACILITIES ROAD TEST EVALUATION WAS PERFORMED BY MARS GROUP IN AUGUST 2004 UNDER SP-05-007.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY.
- FOR DRIVEWAY INTERSECTION DETAIL USE HOWARD COUNTY STANDARD DETAILS R-6--05
- STORMWATER MANAGEMENT IS SATISFIED THROUGH THE USE OF THE GRASS CHANNEL CREDIT, THE ROOFTOP DISCONNECTION CREDIT, AND THE NON-ROOFTOP DISCONNECTION CREDIT AND USE OF RAINGARDENS IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED, SQUARE TUBE SLEEVE (12" GAUGE) - 3' LONG - A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- PUBLIC WATER AND SEWAGE ALLOCATION WILL BE GRANTED AT THE TIME OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- THIS PROPOSED SUBDIVISION WILL CONSIST OF SINGLE FAMILY DETACHED DWELLINGS.
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME I & II. IT WAS DETERMINED THAT THIS PROJECT MET THE CRITERIA OUTLINED IN THE MDE STORMWATER MANAGEMENT REGULATION GUIDANCE FOR IMPLEMENTATION FOR ACCEPTANCE OF THE 2000 DESIGN CRITERIA AND GRANTED A WAIVER. THIS PLAN RECEIVED PRELIMINARY APPROVAL (SP-05-007 ON MARCH 10, 2006). THIS PLAN IS ALSO SUBJECT TO THE EXPIRATION OF THIS WAIVER UNLESS ALL STORMWATER MANAGEMENT IS CONSTRUCTED BY MAY 4, 2011. EXPIRATION OF ADMINISTRATIVE WAIVERS FOR GRADING SHALL BE MADE BY MAY 4, 2011 IF THE DEVELOPER DOES NOT RECEIVE APPROVAL (SIGNED BY SD) PRIOR TO THIS DATE SO THAT A GRADING PERMIT COULD BE OBTAINED AND THE PROJECT CONTINUE TO CONSTRUCTION COMPLETION. THE GRADING PERMITTING ADMINISTRATIVE WAIVER IS ALSO CONDITIONED THAT THE DEVELOPER WILL MAKE TIMELY CONSTRUCTION PROGRESS AND COMPLETION BY MAY 4, 2011.

SHEET INDEX

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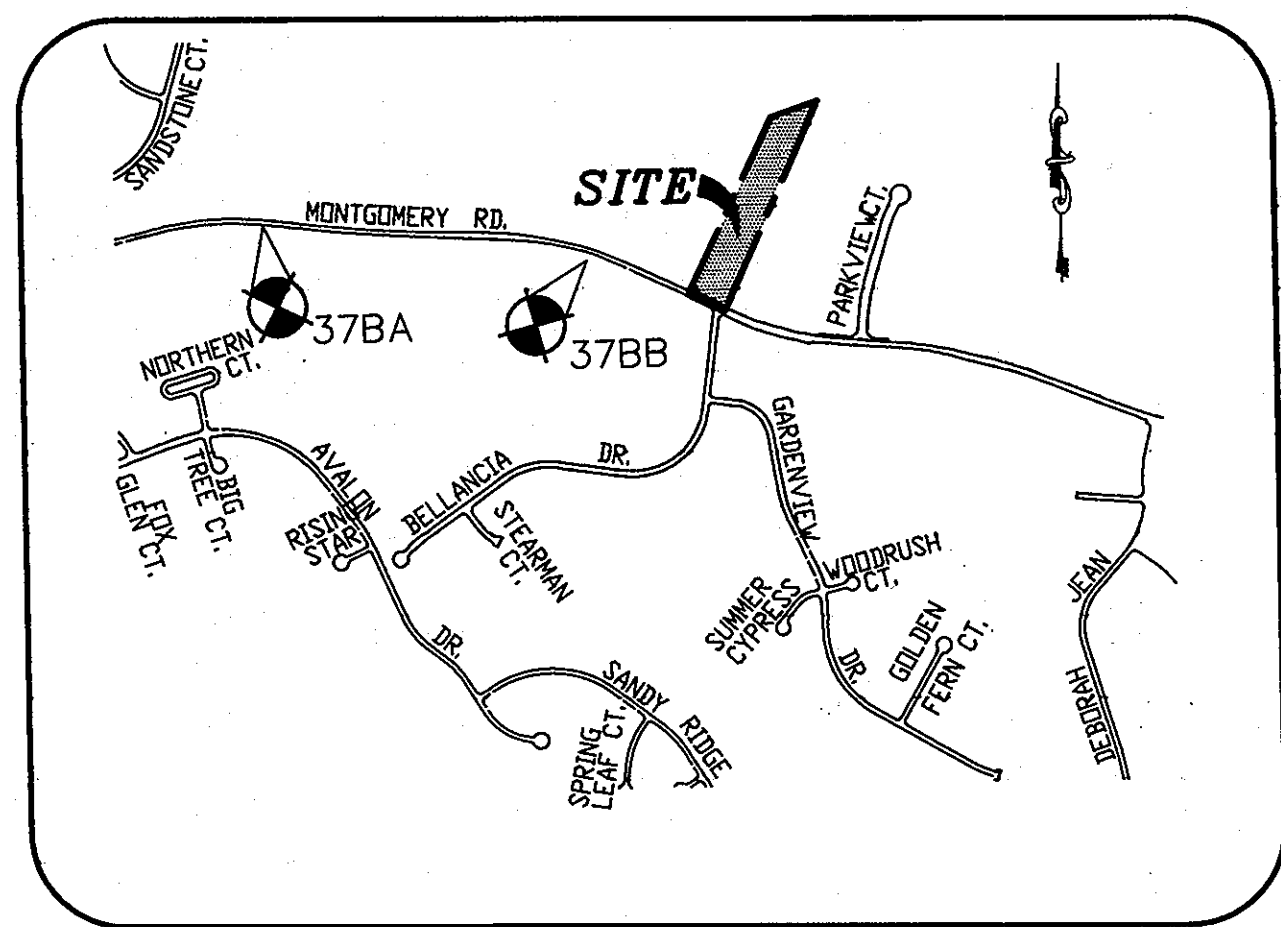
LEGEND

- DENOTES LAND DEDICATED TO HOWARD COUNTY FOR THE PURPOSE A PUBLIC ROAD
- PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 3-8 & PRIVATE WATER, SEWER AND UTILITY EASEMENT FOR LOTS 7 & 8. PRIVATE INGRESS & EGRESS EASEMENT TO OPEN SPACE LOT 9 FOR LOTS 1-8. PRIVATE DRAINAGE, STORMWATER MANAGEMENT AND RETAINING WALL EASEMENT.
- FOREST CONSERVATION (RETENTION), & STORMWATER MANAGEMENT CREDIT EASEMENT
- PUBLIC WATER, SEWER AND UTILITY EASEMENT
- DENOTES FOREST CONSERVATION SIGNAGE
- EXISTING TREELINE
- DENOTES EXISTING POWER POLE
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE

STREET LIGHT LOCATION.

INTERSECTION OF THE PROPOSED DRIVEWAY AND MONTGOMERY ROAD (N 563322.7718, E 1378762.2050).

NOTE - THE STREET LIGHT LOCATION AND TYPE OF LIGHT SHOWN ARE AS FOLLOWS:
 - 150-WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.



VICINITY MAP

SCALE: 1"=100'
 ADC MAP: 4936 H6

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 COUNTY CONSERVATION DISTRICT.

Robert L. Dorsey 2-3-2011
 DEVELOPER'S SIGNATURE DATE
 ROBERT L. DORSEY
 DEVELOPER'S NAME

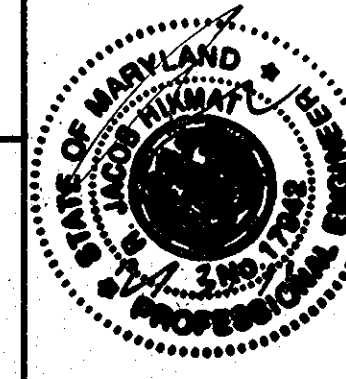
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT.

R. Jacob Hikmat 2/3/11
 ENGINEER'S SIGNATURE DATE
 R. JACOB HIKMAT
 ENGINEER'S NAME

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

John R. Robertson 2/24/11
 HOWARD SCD DATE

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. 17942, EXP DATE 9/3/12.



STORMWATER MANAGEMENT PRACTICES

LOT #	ADDRESS	GREEN ROOF PERMEABLE PAVEMENTS			DISCONNECTION OF ROOFTOP RUNOFF N-1 (NUMBER)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	SHEETFLOW TO CONSERVATION AREAS N-3 (Y/N)	RAINWATER HARVESTING M-1 (NUMBER)	SUBMERGED GRAVEL WETLANDS M-2 (NUMBER)	LANDSCAPE INFILTRATION M-3 (NUMBER)	INFILTRATION BERMS M-4 (NUMBER)	DRY WELLS M-5 (NUMBER)	MICRO-BIORETENTION M-6 (NUMBER)	RAIN GARDENS M-7 (NUMBER)	SWALES M-8 (NUMBER)	ENHANCED FILTERS M-9 (NUMBER)
		A-1 (Y/N)	A-2 (Y/N)	A-3 (Y/N)												
1	MONTGOMERY ROAD	N	N	N	2	Y	N	0	0	0	0	0	0	1	0	0
2	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	0	0	0
3	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	1	1	0
4	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	1	1	0
5	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	1	1	0
6	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	2	0	0
7	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	2	0	0
8	MONTGOMERY ROAD	N	N	N	0	Y	N	0	0	0	0	0	0	2	0	0

OWNER
 RONALD B. WILDMAN
 4747 BONNIE BRANCH ROAD
 ELLICOTT CITY, MD. 21043
 410-869-9999

DEVELOPER
 DORSEY FAMILY, HOMES
 10717 BIRMINGHAM WAY SUITE B
 WOODSTOCK, MARYLAND 21163
 410-465-7200

date: OCT. 2010
 engineering: MMT
 illustration: MMT
 scale: AS SHOWN
 approval: MMT

date: _____
 description: _____
 revision: _____

MARBUCK ESTATES
 LOTS 1 THRU 8 AND OPEN SPACE LOT 9
 TAX MAP 37 GRID 5, PARCEL 47
 HOWARD COUNTY, MARYLAND

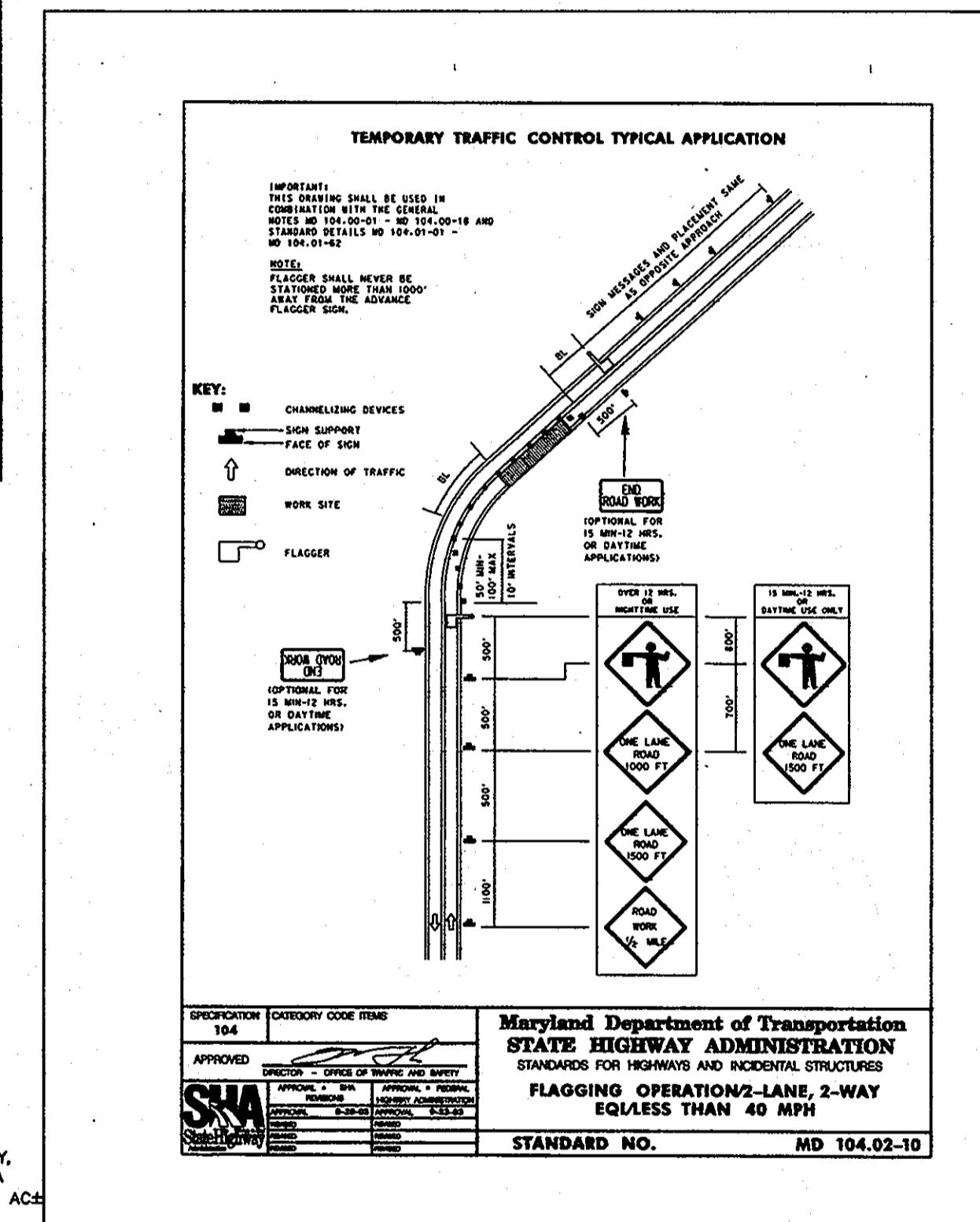
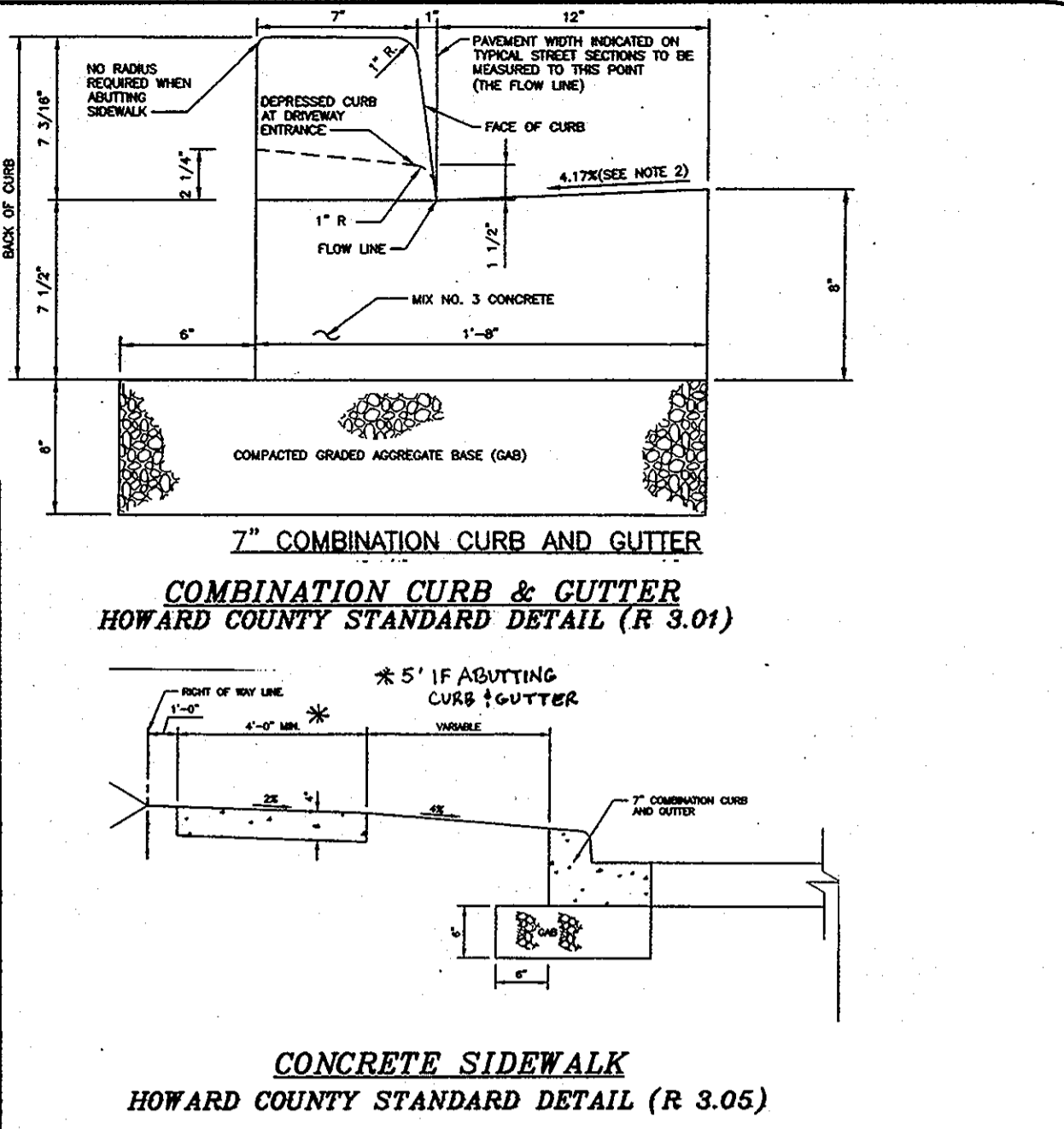
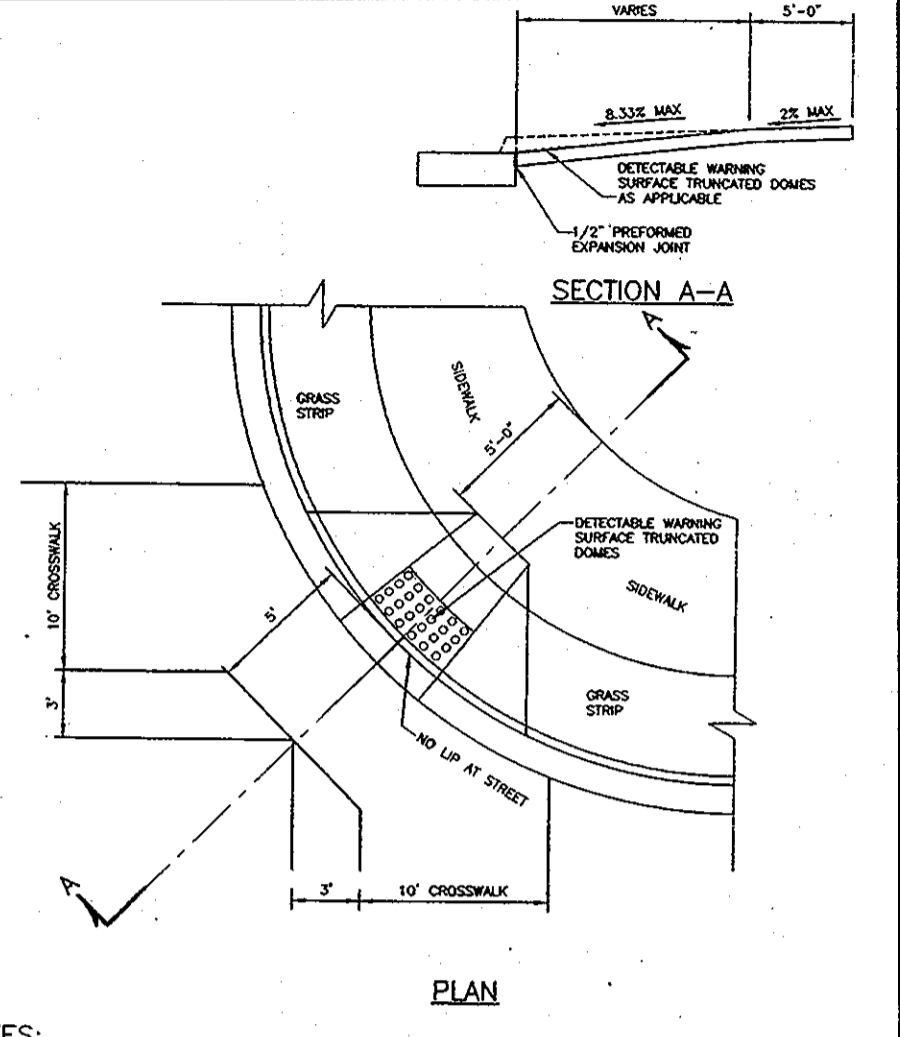
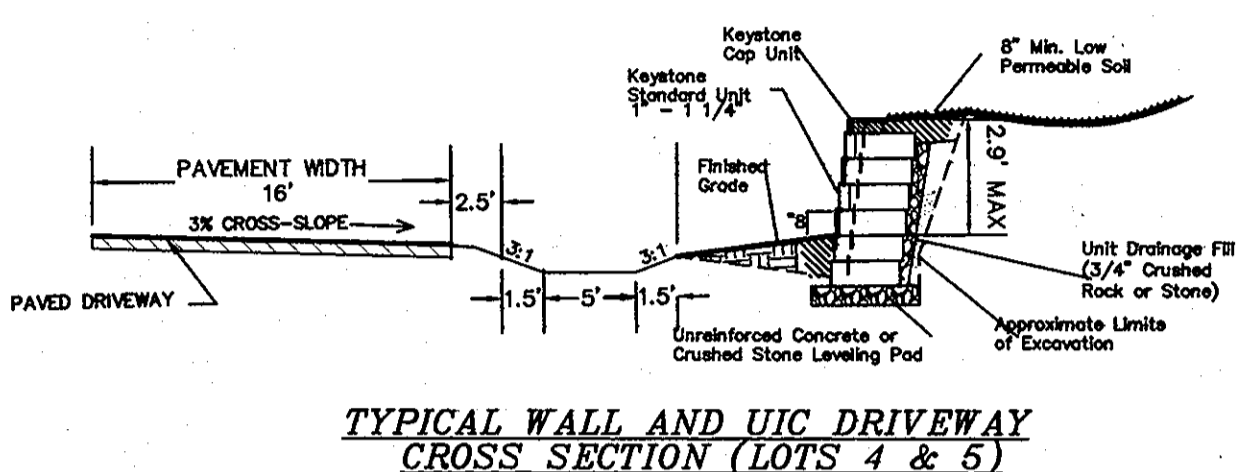
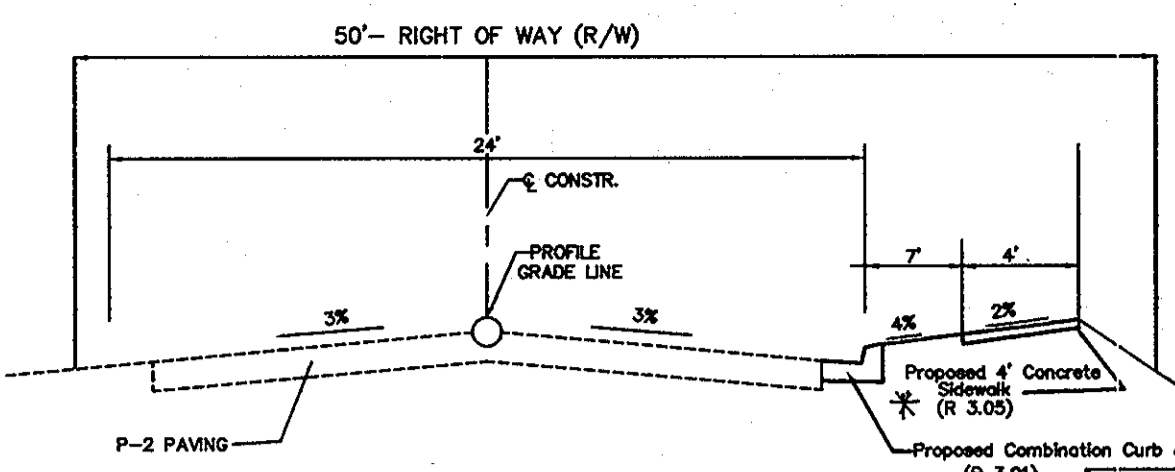
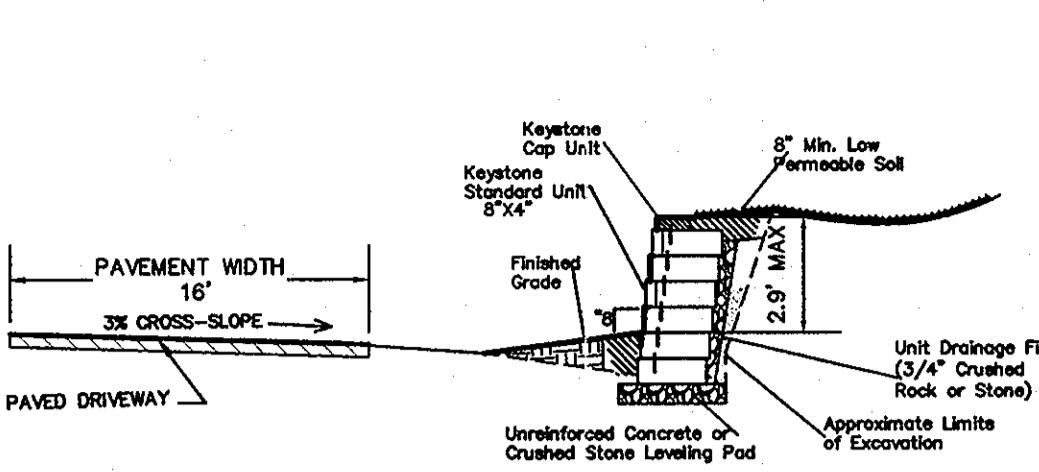
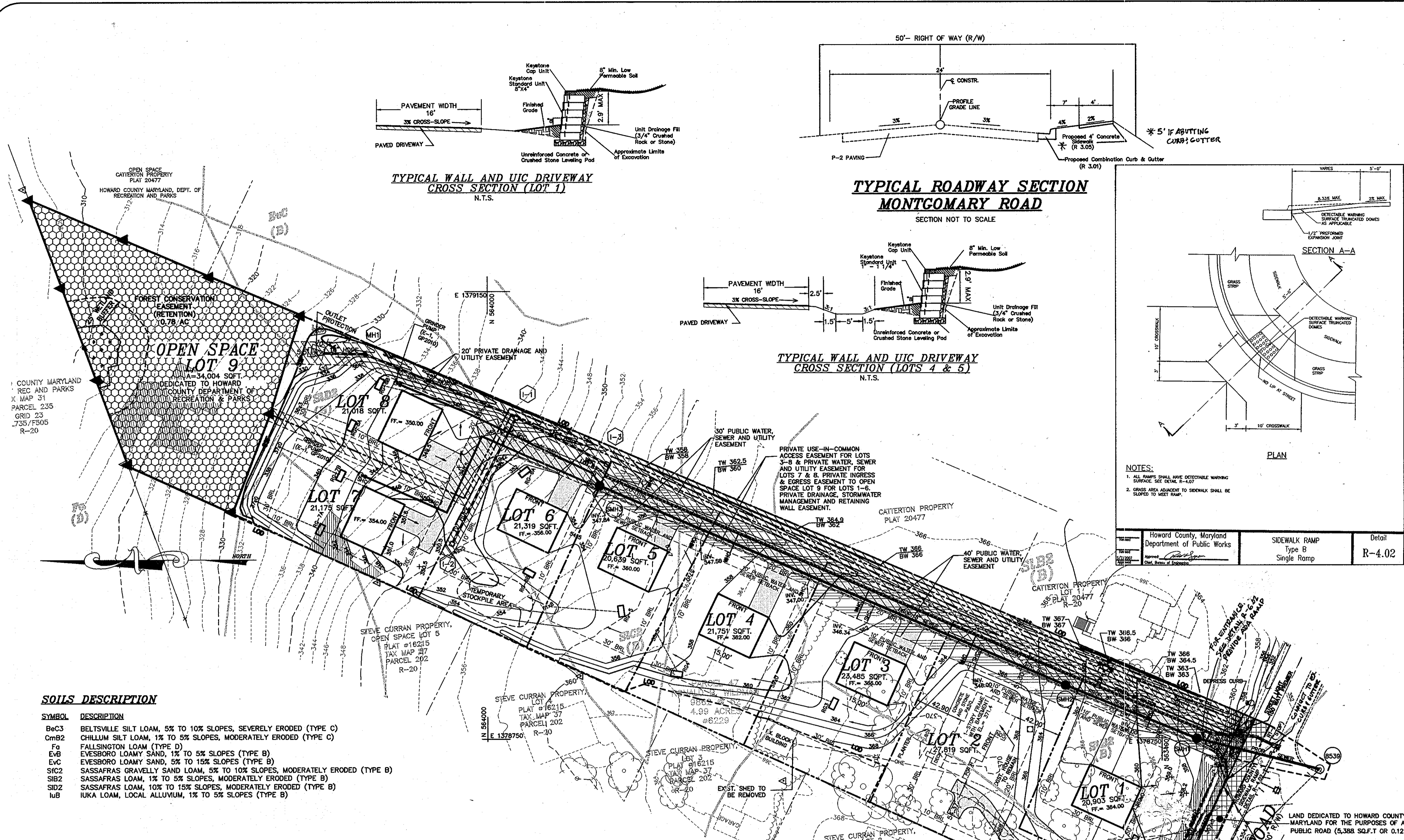
COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deerpath Road, Suite 150, Ellicott City, Maryland 21075
 (410) 987-0288 Fax: (410) 987-0288

FIRST ELECTION DISTRICT

1 OF 8

F-10-107



SOILS DESCRIPTION

SYMBOL	DESCRIPTION
BaC3	BELTSVILLE SILT LOAM, 5% TO 10% SLOPES, SEVERELY ERODED (TYPE C)
CmB2	CHILLUM SILT LOAM, 1% TO 5% SLOPES, MODERATELY ERODED (TYPE C)
Fa	FALLSINGLOM LOAM (TYPE D)
EvB	EVESSBORO LOAMY SAND, 1% TO 5% SLOPES (TYPE B)
Evc	EVESSBORO LOAMY SAND, 5% TO 15% SLOPES (TYPE B)
SiC2	SASSAFRAS GRAVELLY SAND LOAM, 5% TO 10% SLOPES, MODERATELY ERODED (TYPE B)
SiB2	SASSAFRAS LOAM, 1% TO 5% SLOPES, MODERATELY ERODED (TYPE B)
SiD2	SASSAFRAS LOAM, 10% TO 15% SLOPES, MODERATELY ERODED (TYPE B)
luB	IUKA LOAM, LOCAL ALLUVIUM, 1% TO 5% SLOPES (TYPE B)

LEGEND

	DENOTES LAND DEDICATED TO HOWARD COUNTY FOR THE PURPOSE A PUBLIC ROAD		DENOTES FOREST CONSERVATION SIGNAGE
	PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 3-8 & PRIVATE WATER, SEWER AND UTILITY EASEMENT FOR LOTS 7 & 8. PRIVATE INGRESS & EGRESS EASEMENT TO OPEN SPACE LOT 9 FOR LOTS 1-6. PRIVATE DRAINAGE, STORMWATER MANAGEMENT AND RETAINING WALL EASEMENT.		EXISTING TREELINE
	FOREST CONSERVATION (RETENTION), & STORMWATER MANAGEMENT CREDIT EASEMENT		DENOTES EXISTING POWER POLE
	PUBLIC WATER, SEWER AND UTILITY EASEMENT		LIMIT OF DISTURBANCE
			SUPER SILT FENCE

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'S SIGNATURE: *Kobert L. Deason, Jr.* DATE: 2-3-2011

DEVELOPER'S NAME: **Kobert L. Deason, Jr.**

I HEREBY 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'S SIGNATURE: *R. Jacob Hikmat* DATE: 2/3/11

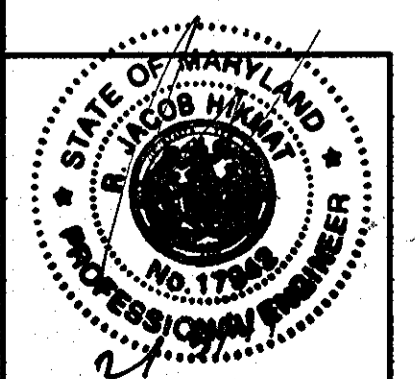
ENGINEER'S NAME: **R. JACOB HIKMAT**

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 DATE: 2-9-2011
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 3/04/11
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF ENGINEERING
 DATE: 2/10/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



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 410-869-9999

DEVELOPER
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 10717 BIRMINGHAM WAY SUITE B
 WOODSTOCK, MARYLAND 21163
 410-465-7200

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. 17942, EXP DATE 9/3/12.

Project date	FEB. 2011
Illustration	MMT
Scale	1" = 50'
Approval	MMT
Comments	1. 1/1/13 2. 1/1/13
Revisions	1. REVISE TO ADD DETAIL 988 COMMENTS 2. ADD 13542 IMPROVEMENTS AND 13543 IMPROVEMENTS

MARBURCK ESTATES
 LOTS 1 THRU 8 AND OPEN SPACE LOT 9
 TAX MAP 37 GRID 5, PARCEL 47
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 GRADING AND SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deerpath Road, Suite 150, Ellicott City, Maryland 21075
 (410) 987-0236 Fax: (410) 987-0238 Fax

2 OF 8

HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-TERM VEGETATIVE COVER IS NEEDED.

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

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

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS./1000 SQ.FT.) AND 800 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA (60 LBS./1000 SQ.FT.)
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (28 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOO. OPTION (3) - SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELLS ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRASS 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 (6 GAL./1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

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

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING 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 PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (32 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WHEAT COVER CROP (37 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 15 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED FREE SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (6 GAL./1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. FOR ADDITIONAL RATES AND METHODS NOT COVERED.

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, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 5:1.
 - 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/RAGNS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH SECTION 12, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SECTION 50), TEMPORARY SEEDING (SECTION 50) AND MULCHING (SECTION 52). 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 PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS: N/A
- TOTAL AREA OF SITE: 4.88 ACRES
- AREA TO BE PROTECTED OR STABILIZED: 0.83 ACRES
- TOTAL FILL: 10,000 CU. YDS.
- TOTAL CUT: 10,000 CU. YDS.
- TOTAL FILL/BORROW AREA LOCATION: THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITIES MEASUREMENTS.
- 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 CONTROL. 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 OBTAINED.
- 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.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
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.

CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 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.
- 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

- 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.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - 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 AGRONOMIC OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF ONIONS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACKGRASS, JOHNSON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - 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 (600-800 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.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PERFORMED TO RAISE THE PH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - NO SOO 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 DEGRADATION OF PHYTO-TOXIC MATERIALS.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

TOPSOIL APPLICATION

- WHICH TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" OR HIGHER IN ELEVATION.
- TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 6" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL 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.
- 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 SEEDING PREPARATION.
- 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:
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE POINTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 - 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 SOODING, MD-VA, PUB. #1, CONSERVATION EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

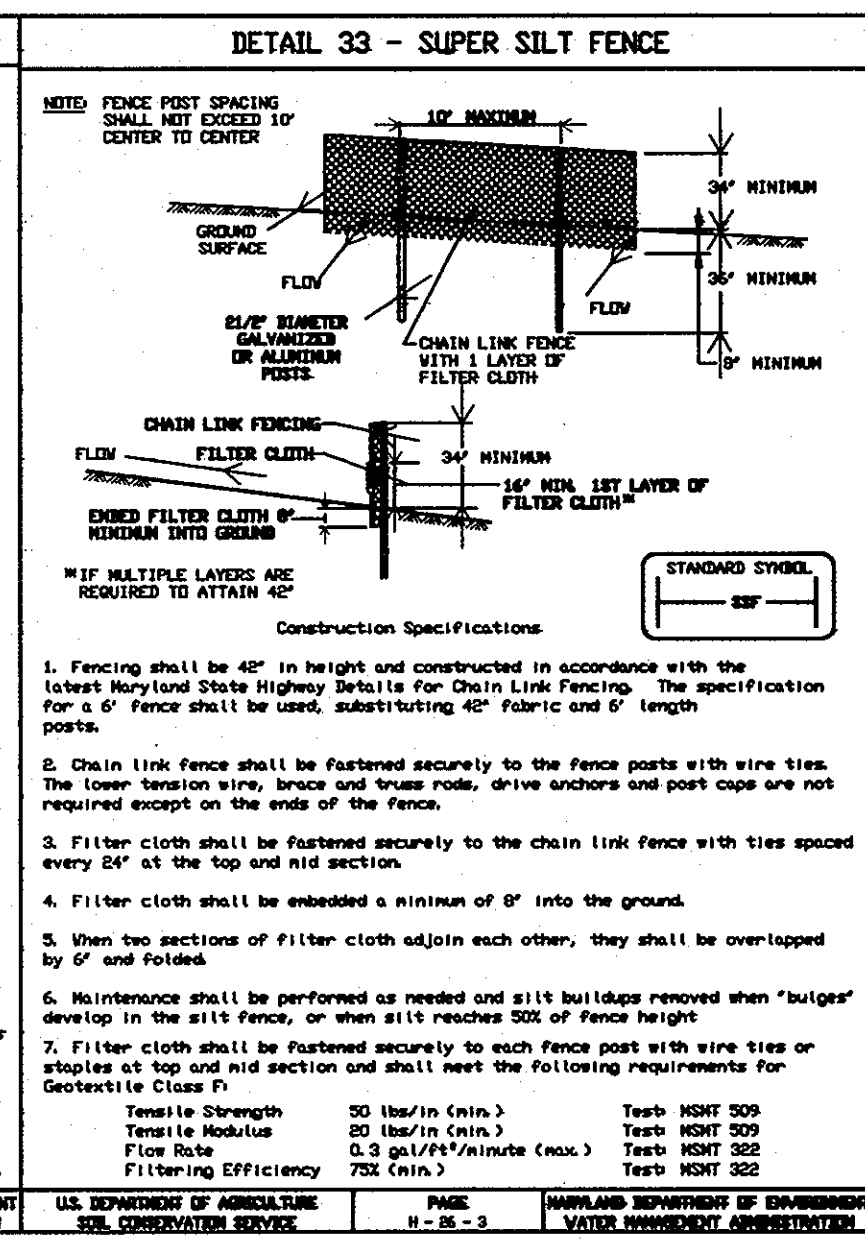
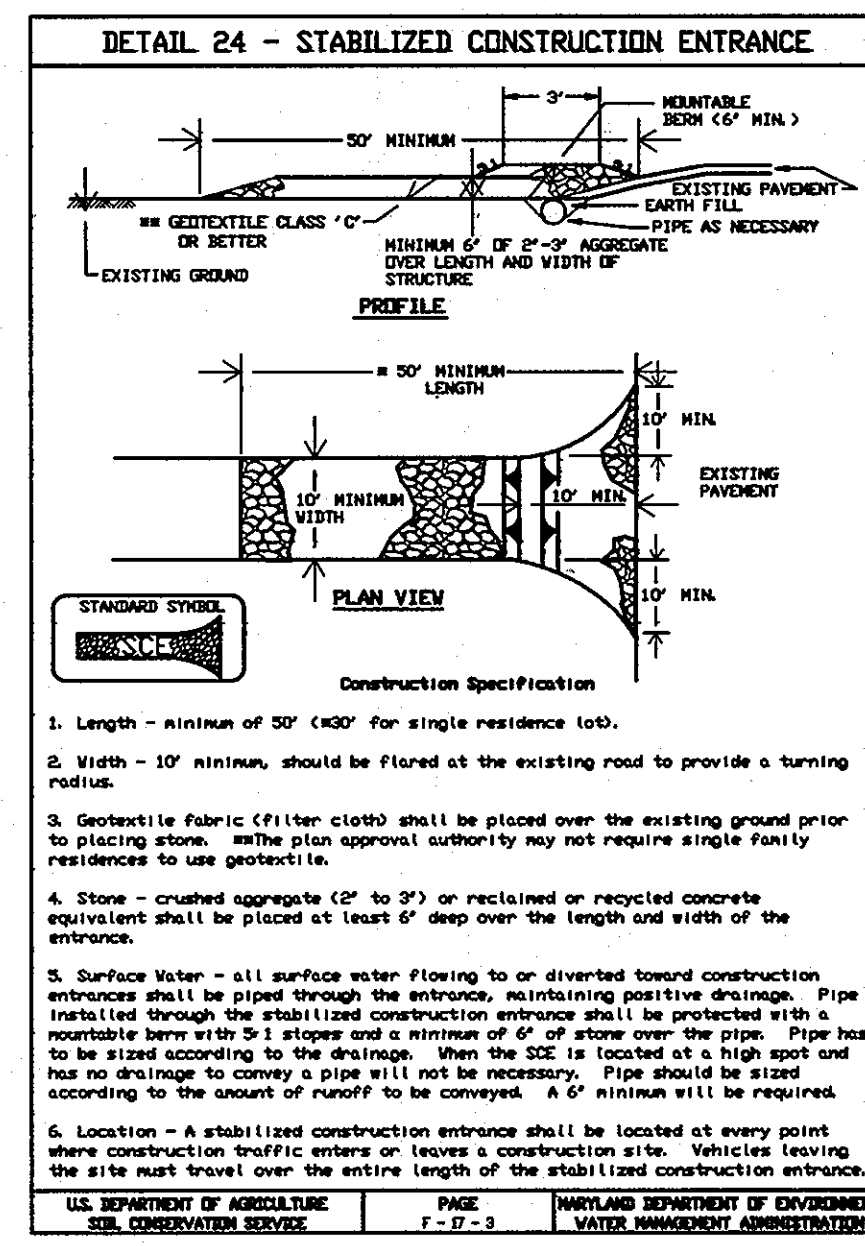
EROSION AND SEDIMENT CONTROL NOTES

- ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.
- ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPSIDE SIDE OF THE MAIN TRENCH.
- EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY.
- IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN ON THIS PLAN.
- THROUGHOUT THE PROJECT, THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES AND PROVIDE NECESSARY MAINTENANCE TO INSURE THAT ALL DEVICES ARE IN OPERATIVE CONDITION.
- ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1 DAY)
- CONSTRUCT SILT FENCE AND SUPER SILT FENCE (3 DAYS)
- AFTER RECEIVING PERMISSION FROM INSPECTOR CONSTRUCT ROAD IMPROVEMENTS INCLUDING SEWER (10 DAYS)
- AFTER RECEIVING PERMISSION FROM INSPECTOR BRING SITE TO DESIGN GRADES, CONSTRUCT GRASS CHANNEL, RETAINING WALL AND DRIVEWAY. (30 DAYS)
- CONSTRUCT STORMDRAIN SYSTEM. (10 DAYS)
- WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE ALL OLD AND NEW JUNK, TRASH AND DEBRIS FROM THE FLOODPLAINS, STREAMS, WETLANDS AND THEIR BUFFERS, AND FROM FOREST CONSERVATION AREAS. (5 DAYS)
- WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES (EXCEPT SILT FENCES AND SUPER SILT FENCES WHICH SHOULD BE USED FOR SOO-CONSTRUCTION OF THE HOUSES) AND STABILIZE REMAINING DISTURBED AREAS. (5 DAYS)

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. 17942, EXP DATE 9/3/12.



SUPER SILT FENCE

Slope	Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
0 - 10%	0 - 1:1	Unlimited	Unlimited
10 - 20%	1:1 - 3:1	250 Feet	1,500 Feet
20 - 30%	3:1 - 1:1	100 Feet	1,000 Feet
30 - 50%	3:1 - 2:1	100 Feet	500 Feet
50% +	3:1 +	50 Feet	250 Feet

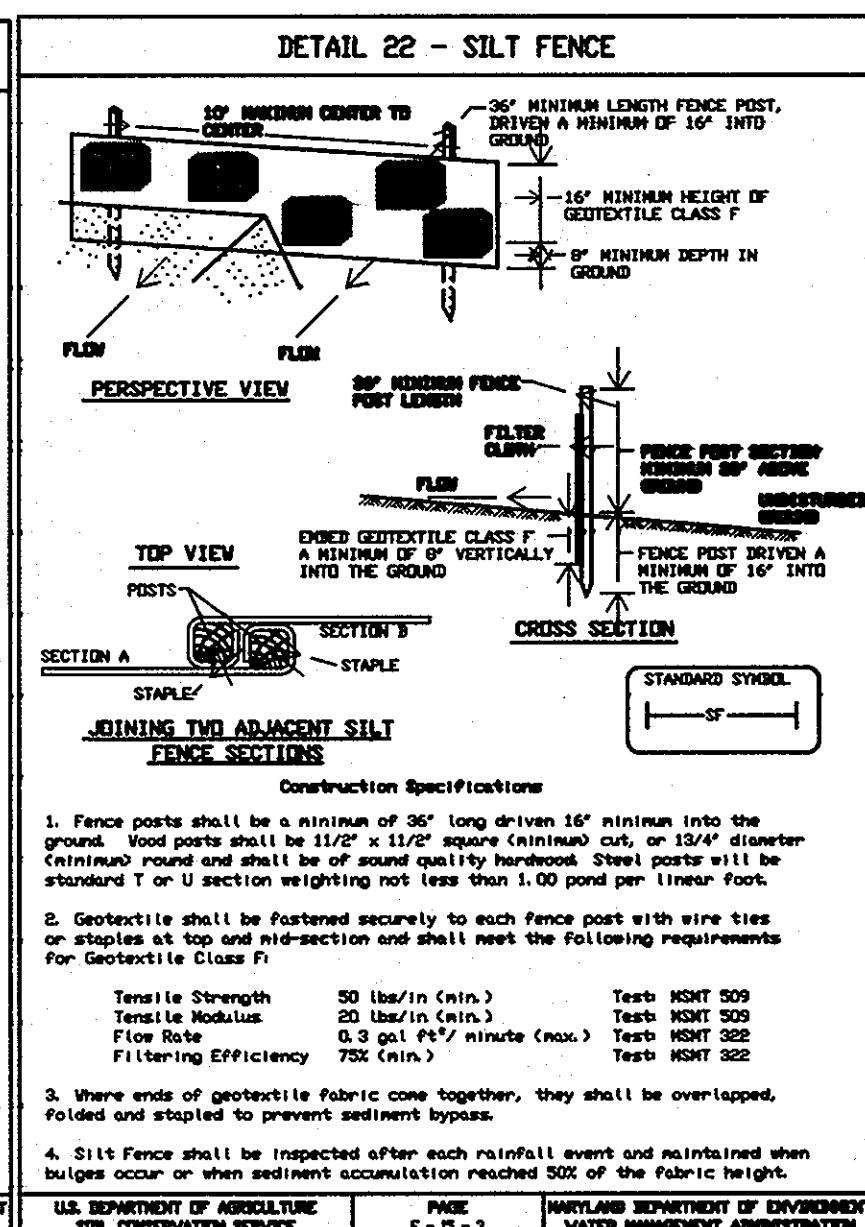
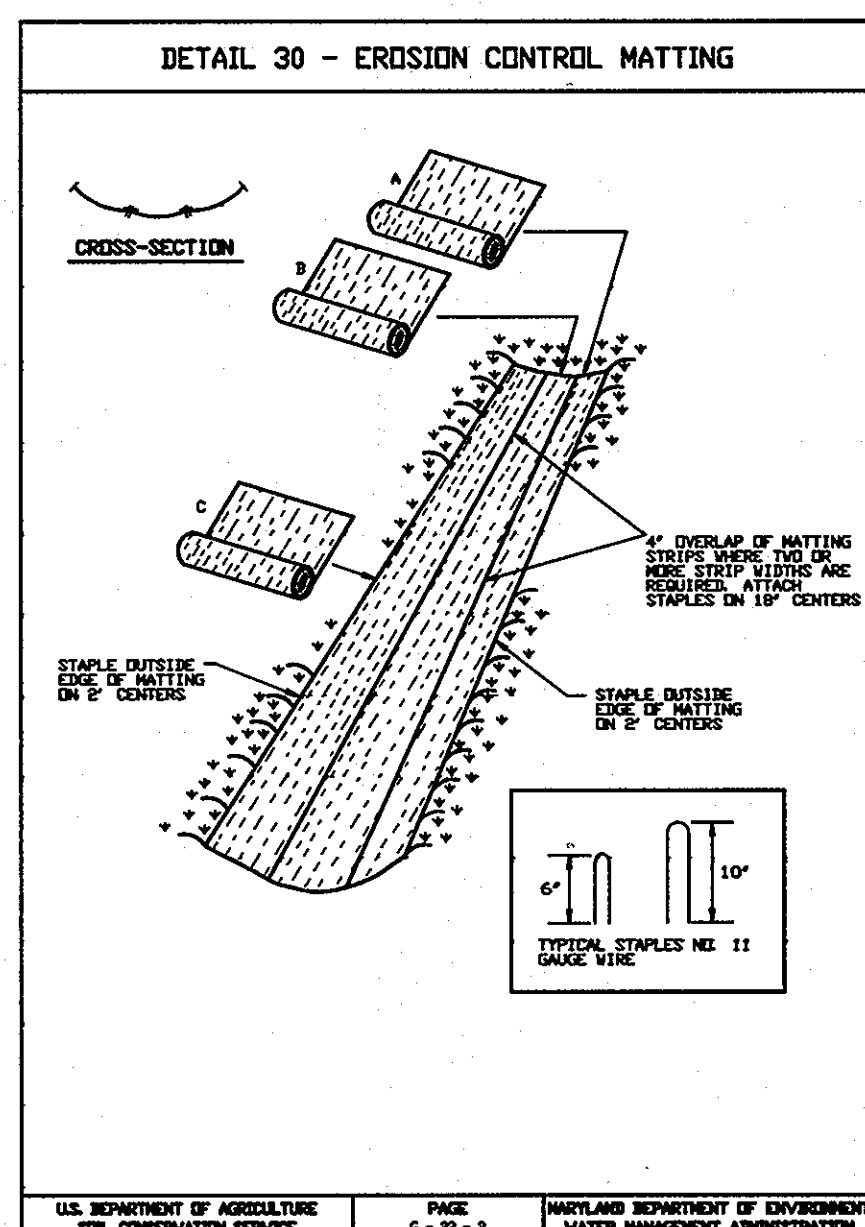
Design Criteria

- Fencing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 48" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lb/in (min.)	Test: NHT 509
Tensile Modulus	20 lb/in (min.)	Test: NHT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: NHT 502
Filtering Efficiency	75% (min.)	Test: NHT 502

Construction Specifications

1. Length - minimum of 50' (400' for single residence lot).
2. Width - 10' minimum, should be placed at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a removable berm with 3:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the 6" is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe shall 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 length of the stabilized construction entrance.



SILT FENCE

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Factor than 5:1	Unlimited	Unlimited
5:1 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

Silt Fence Design Criteria

- Fence posts shall be a minimum of 30' long driven 15' minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut), or 1 3/4" diameter (minimum round) and shall be of equal quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
- 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 lb/in (min.)	Test: NHT 509
Tensile Modulus	20 lb/in (min.)	Test: NHT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: NHT 502
Filtering Efficiency	75% (min.)	Test: NHT 502
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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.

OWNER
RONALD B. WILDMAN
4747 BONNIE BRANCH ROAD
ELLICOTT CITY, MD. 21043
410-869-9999

DEVELOPER
DORSEY FAMILY HOMES
10717 BIRMINGHAM WAY SUITE B
WOODSTOCK, MARYLAND 21163
410-465-7200

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 CALIBRATED 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.

Robert S. [Signature] 2-3-2011
DEVELOPER'S SIGNATURE DATE

Kenneth L. [Signature] 2/13/11
DEVELOPER'S NAME DATE

I HEREBY 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.

[Signature] 2/13/11
ENGINEER'S SIGNATURE DATE

R. JACOB HIKMAT
ENGINEER'S NAME

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

[Signature] 2/24/11
HOWARD SCD DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 2-9-2011
CHIEF BUREAU OF HIGHWAYS DATE

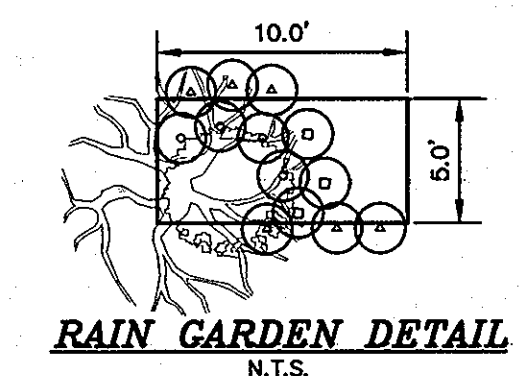
APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 3/10/11
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



PLANT LIST

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
1	[Symbol]	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2-1/2" - 3" CAL.
1	[Symbol]	ILEX GLABRA	INK BERRY	2" - 3" HT.
6	[Symbol]	LOBELIA SPICULATA	GREAT BLUE SPRELLIA	1 GAL. CONTAINER
4	[Symbol]	ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL. CONTAINER
3	[Symbol]	ASTER NOVAE-ANGLOE	NEW ENGLAND ASTER	1 GAL. CONTAINER

TOTAL: 13 PERENNIALS, 1 SHRUB, 1 TREE (PER EACH RAIN GARDEN)



RAIN GARDEN DESIGN DATA

RAIN GARDEN #	DIMENSIONS	RAIN GARDEN BOTTOM EL.	MAX. POOLING DEPTH	DEPTH OF GRAVEL	WER ELEVATION	UNDERDRAIN UNDER INVERT	OUTLET INV.
1	5'x10'	361.3	6"	6"	361.8	358.1	357.9
3	5'x10'	362.5	6"	6"	363.0	359.3	359.0
4	5'x10'	359.0	6"	6"	359.5	355.8	354.5
5	5'x10'	355.3	6"	6"	355.8	352.1	351.8
6A	5'x10'	352.5	6"	6"	353.0	349.3	349.2
6B	5'x10'	353.0	6"	6"	353.5	349.8	349.5
7A	5'x10'	340.0	6"	6"	341.5	337.8	337.5
7B	5'x10'	341.0	6"	6"	341.5	337.8	337.5
8A	5'x10'	340.5	6"	6"	341.0	337.3	337.0
8B	5'x10'	340.5	6"	6"	341.0	337.5	337.0

* USE AASHTO NO. 2 STONE

OPERATION AND MAINTENANCE SCHEDULE FOR RAINGARDENS

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

date FEB. 2011
Project 09-005
FEB. 2011
illustration MMT
scale MMT
approval AS SHOWN

description revisions

date

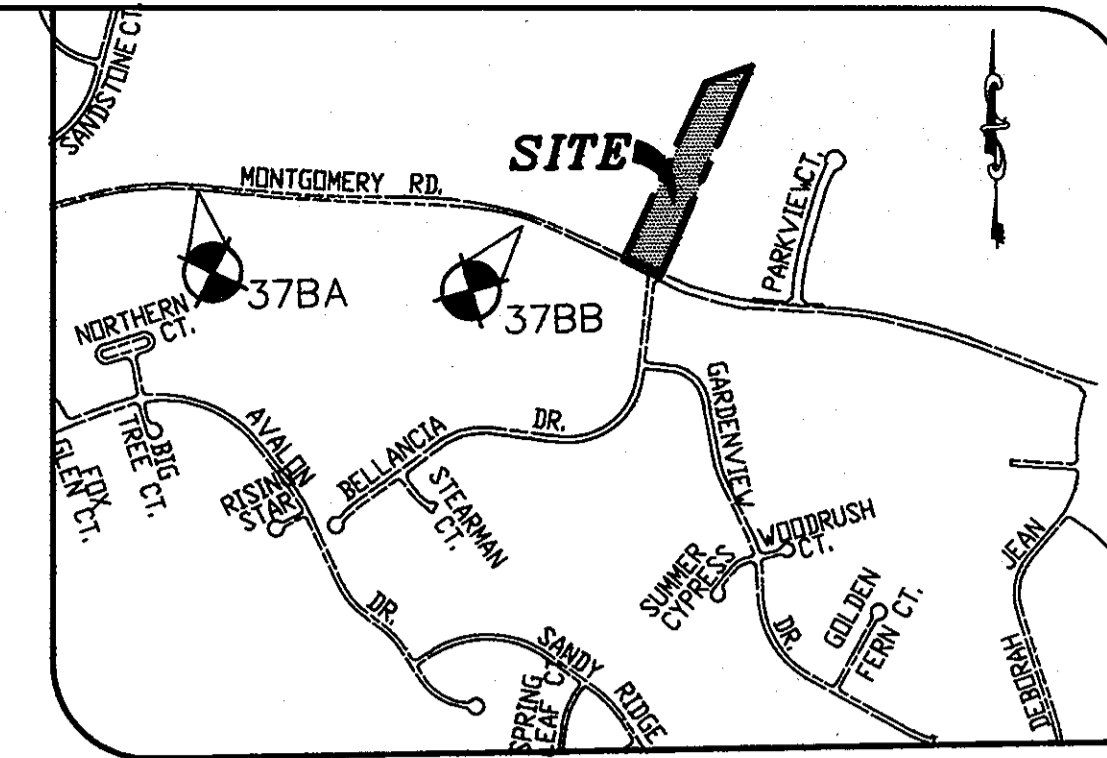
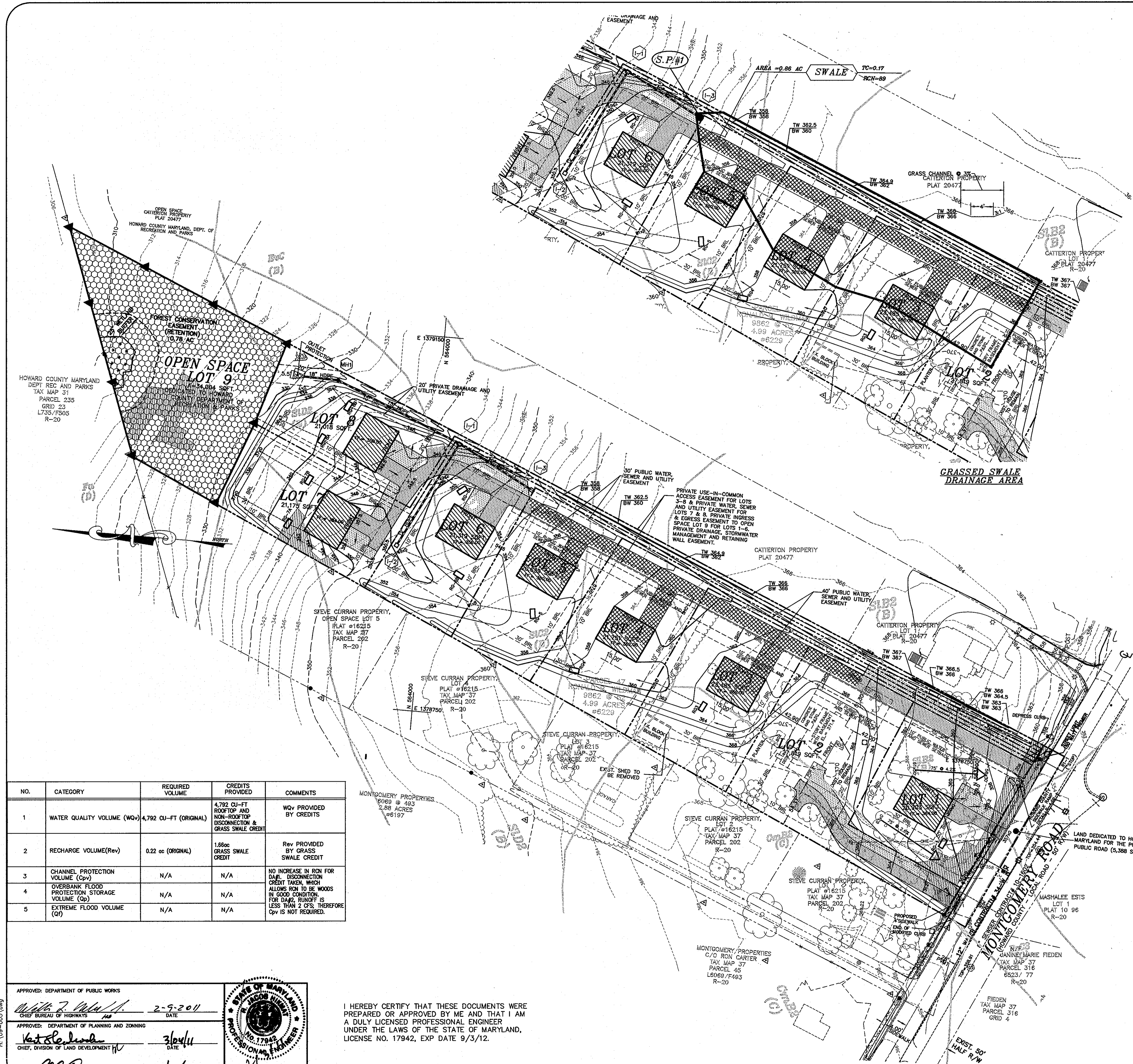
MARBUCK ESTATES
LOTS 1 THRU 8 AND OPEN SPACE LOT 9
TAX MAP 37 GRID 5, PARCEL 47
HOWARD COUNTY, MARYLAND

FIRST ELECTION DISTRICT
SEDIMENT CONTROL NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
6800 Deerpath Road, Suite 150, Ellicott City, Maryland 21075
(410) 987-0286 Fax

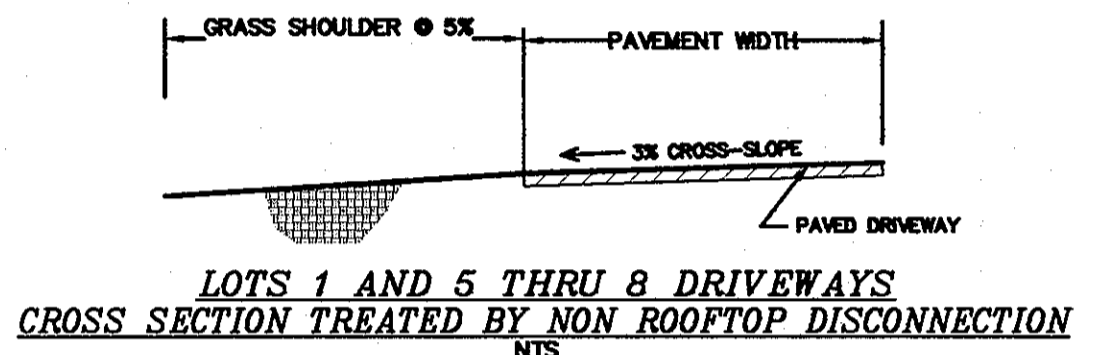
3 OF 8

F-10-107

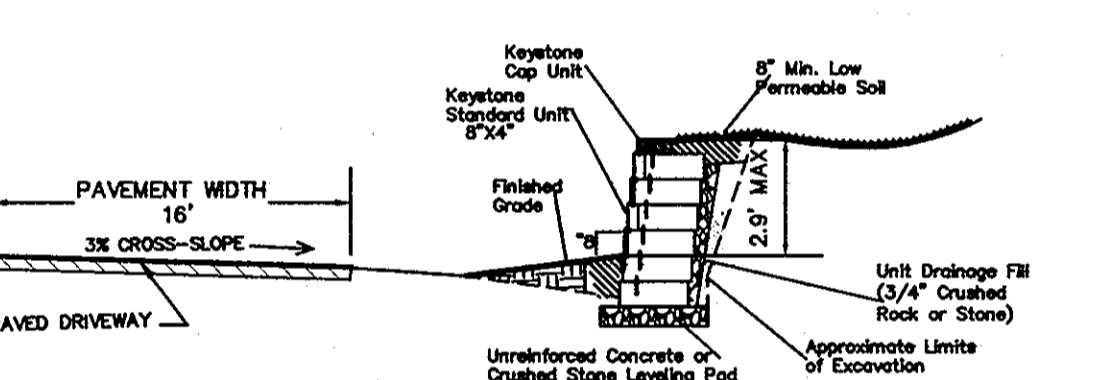


GENERAL NOTES

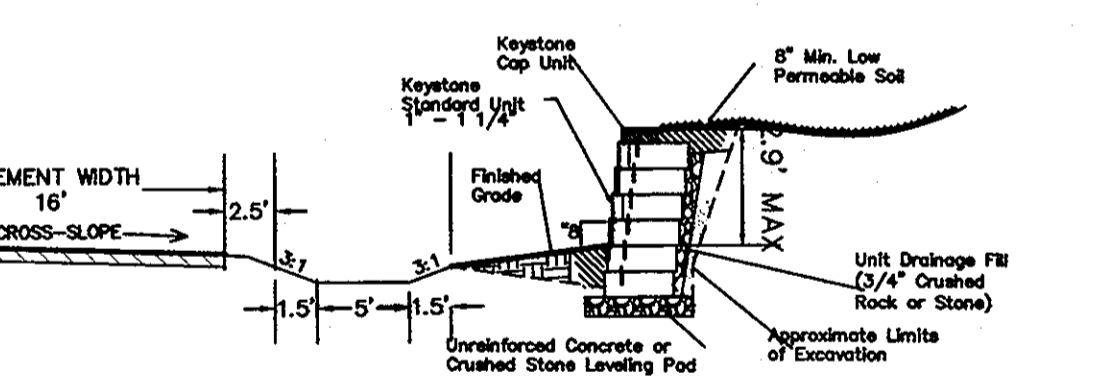
- TAX MAP : 37, PARCEL : 47, BLOCK : 5
DEED REFERENCE : L 3856, F. 269
AREA OF SITE : 4.99 ACRES±
ZONING : R-20
- TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON A FIELD RUN SURVEY BY MILDENBERG BOENDER & ASSOC'S. ON OR ABOUT JUNE 2003. OFFSITE TOPO IS SUPPLEMENTED WITH HOWARD COUNTY AERIAL TOPOGRAPHY.
- NO HISTORIC STRUCTURES OR BURIAL GROUNDS EXIST ON-SITE PER THE HOWARD COUNTY HISTORIC SITES LIST DATED DECEMBER 1994 AND THE HOWARD COUNTY CEMETERIES AND GRAVESITES INVENTORY, RESOLUTION # 47-1994.
- SOILS DATA BASED ON HOWARD COUNTY SOIL SURVEY DATED 1988, SHEET 20.



LOTS 1 AND 5 THRU 8 DRIVEWAYS
CROSS SECTION TREATED BY NON ROOFTOP DISCONNECTION
N.T.S.



TYPICAL WALL AND UIC DRIVEWAY
CROSS SECTION
N.T.S.



TYPICAL WALL AND UIC DRIVEWAY
CROSS SECTION
N.T.S.

- LEGEND**
- DRAINAGE AREA DIVIDE
 - AREA CREDITED BY NON ROOFTOP DISCONNECTION
 - NON ROOFTOP DISCONNECTION CREDIT AREA
 - AREA TREATED BY GRASS CHANNEL CREDIT
 - AREA TREATED BY ROOFTOP DISCONNECTION AND RAIN GARDENS
 - DISCONNECTION PATH 75' ± 5% MAX.
 - PROPOSED FOREST CONSERVATION EASEMENT (RETENTION)

- SOILS DESCRIPTION**
- | SYMBOL | DESCRIPTION |
|--------|--|
| BcC3 | BELTSVILLE SILT LOAM, 5% TO 10% SLOPES, SEVERELY ERODED (TYPE C) |
| OnB2 | CHILLUM SILT LOAM, 1% TO 5% SLOPES, MODERATELY ERODED (TYPE C) |
| Fa | FALLSINGTON LOAM (TYPE D) |
| EvB | EVESBORO LOAMY SAND, 1% TO 5% SLOPES (TYPE B) |
| Evc | EVESBORO LOAMY SAND, 5% TO 15% SLOPES (TYPE B) |
| SiC2 | SASSAFRAS GRAVELLY SAND LOAM, 5% TO 10% SLOPES, MODERATELY ERODED (TYPE B) |
| SiB2 | SASSAFRAS LOAM, 1% TO 5% SLOPES, MODERATELY ERODED (TYPE B) |
| SiD2 | SASSAFRAS LOAM, 10% TO 15% SLOPES, MODERATELY ERODED (TYPE B) |
| IuB | IUKA LOAM, LOCAL ALLUVIUM, 1% TO 5% SLOPES (TYPE B) |

NO.	CATEGORY	REQUIRED VOLUME	CREDITS PROVIDED	COMMENTS
1	WATER QUALITY VOLUME (WQV)	4,792 CU-FT (ORIGINAL)	4,792 CU-FT ROOFTOP AND NON-ROOFTOP DISCONNECTION & GRASS SWALE CREDIT	WQV PROVIDED BY CREDITS
2	RECHARGE VOLUME (Rev)	0.22 ac (ORIGINAL)	1.86ac GRASS SWALE CREDIT	Rev PROVIDED BY GRASS SWALE CREDIT
3	CHANNEL PROTECTION VOLUME (Cv)	N/A	N/A	NO INCREASE IN RON FOR DAI. DISCONNECTION CREDIT TAKEN, WHICH ALLOWS RON TO BE WOODS IN GOOD CONDITION. FOR DAI, RUNOFF IS LESS THAN 2 CFS. THEREFORE Cv IS NOT REQUIRED.
4	OVERBANK FLOOD PROTECTION STORAGE VOLUME (Op)	N/A	N/A	
5	EXTREME FLOOD VOLUME (Q)	N/A	N/A	

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 2-9-2011
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 3/24/11
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] 2/10/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

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. 17942, EXP DATE 9/3/12.

TAX MAP 37 - PARCEL 47 - GRID 5
MARBUCK ESTATES
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 SWM CREDIT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deeprock Road, Suite 150, Ellicott City, Maryland 21075
 (410) 997-0236 Fax: (410) 997-0238 Fax

4 OF 8
 F-10-107

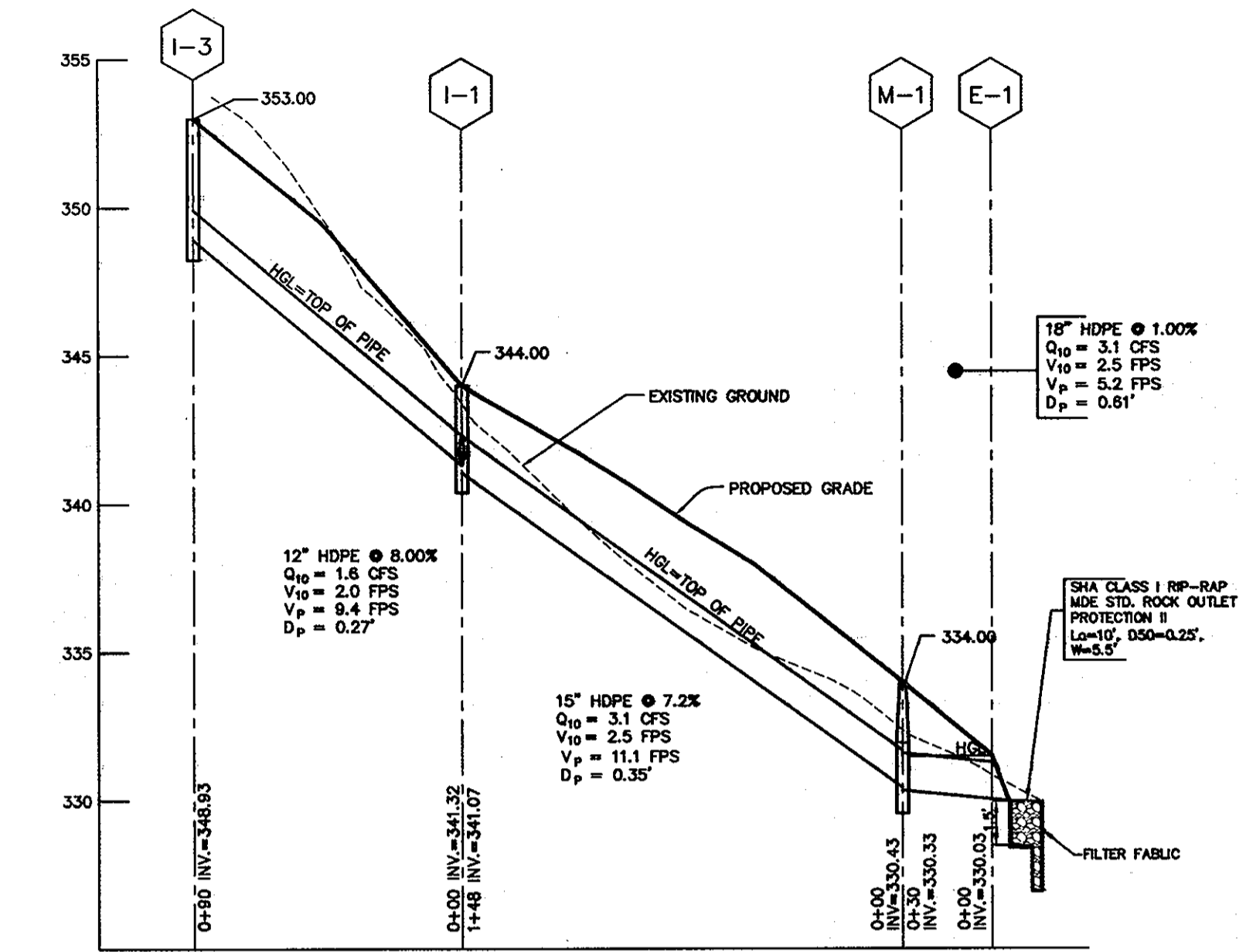
STRUCTURE SCHEDULE

NO.	LOCATION*	TOP**	INV. IN	INV. OUT	COMMENTS
I-1	N 563,975.6 E 1,379,035.6	344.00	341.32	341.03	YARD INLET (HO. C. STD. D-4.14)
I-2	N 564,031.6 E 1,378,924.5	349.50	-	346.82	YARD INLET (HO. C. STD. D-4.14)
I-3	N 563,894.1 E 1,378,995.5	353.00	-	348.93	YARD INLET (HO. C. STD. D-4.14)
M-1	N 564,108.7 E 1,379,094.2	334.00	330.43	330.33	MH (HO. CO. STD G 5.12)
E-1	N 564,143.4 E 1,379,094.6	-	330.03	330.03	15" HDPE END SECTION

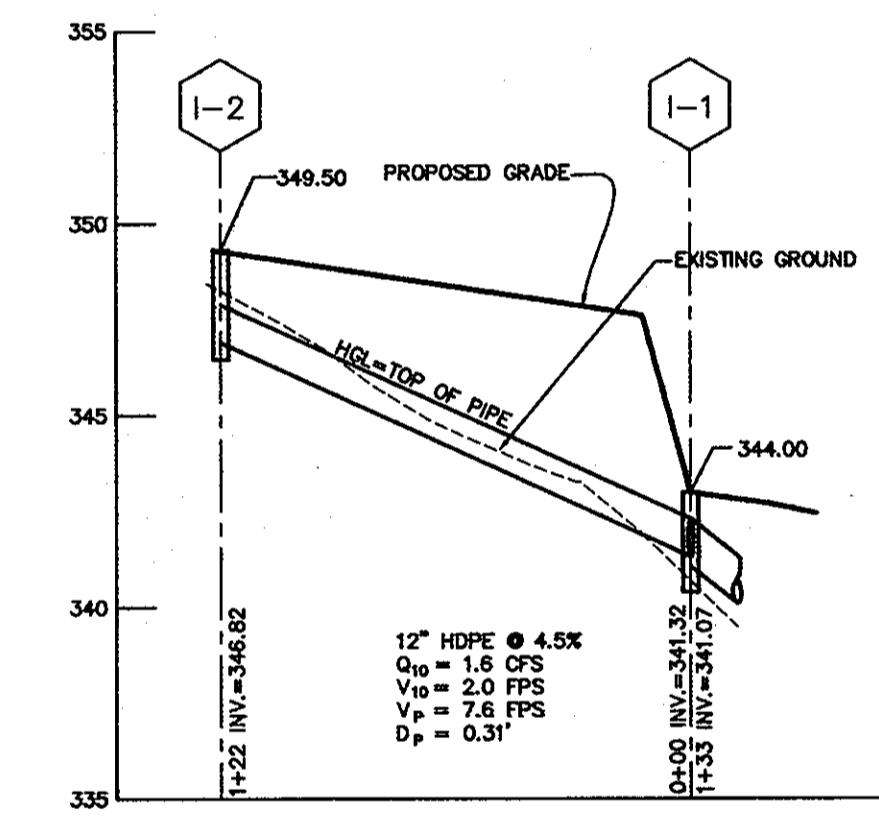
* STATIONS GIVEN TO CENTERLINE FACE OF INLET AT TOP OF CURB FOR INLETS LOCATED WITHIN THE ROAD RIGHT-OF-WAY. STATIONS FOR YARD INLETS TO CL OF INLET. LOCATION OF MANHOLES IS TO CL OF MANHOLE COVER. END SECTION GIVEN TO THE CENTERLINE OF PIPE AT THE CONNECTION OF THE STORM DRAIN PIPE TO THE END SECTION.
 ** ELEVATIONS MEASURED TO CENTER OF ALL INLETS.

PIPE SCHEDULE

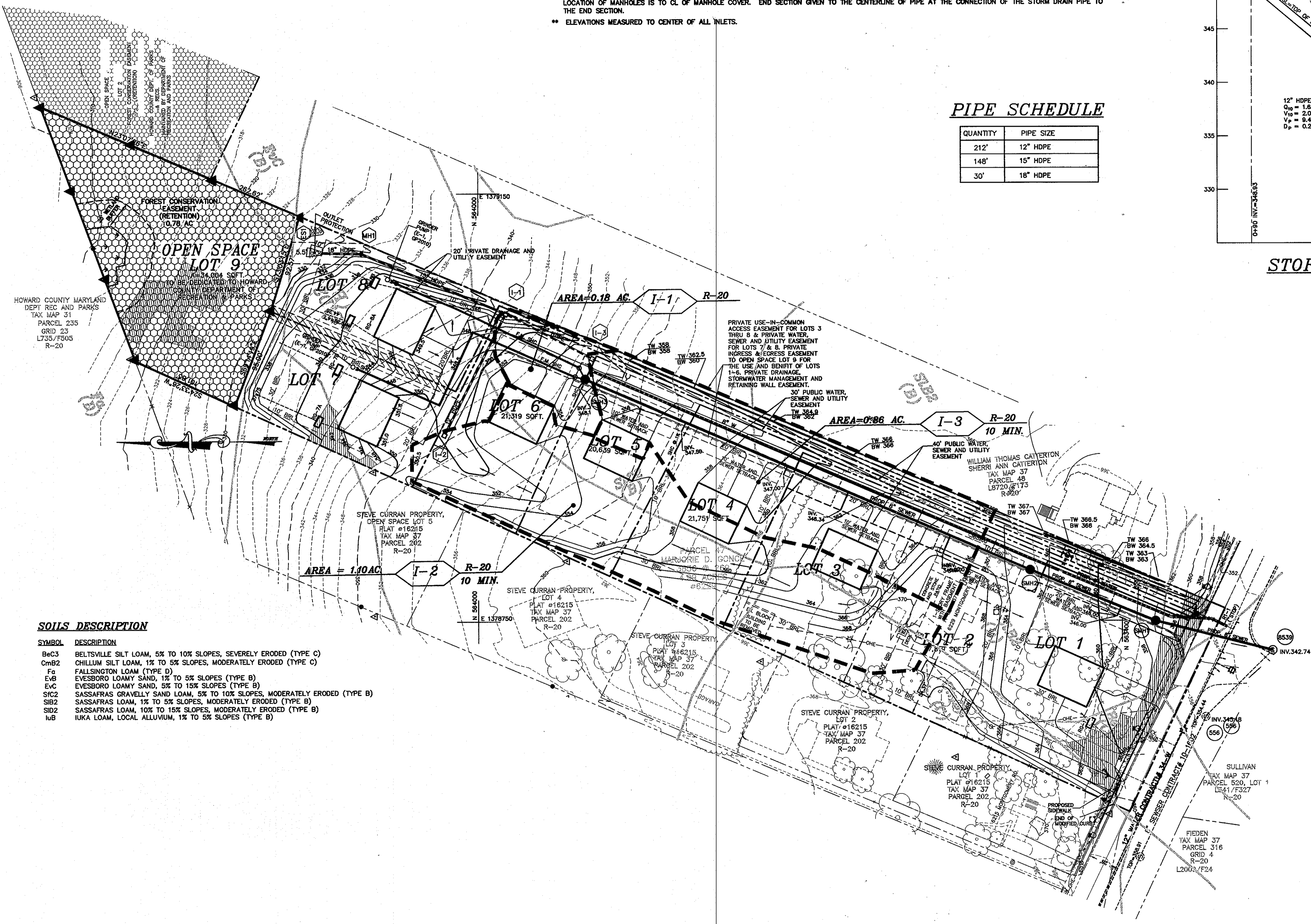
QUANTITY	PIPE SIZE
212'	12" HDPE
148'	15" HDPE
30'	18" HDPE



STORM DRAIN PROFILE
 SCALE: HOR. 1"=50'
 VER. 1"=5'



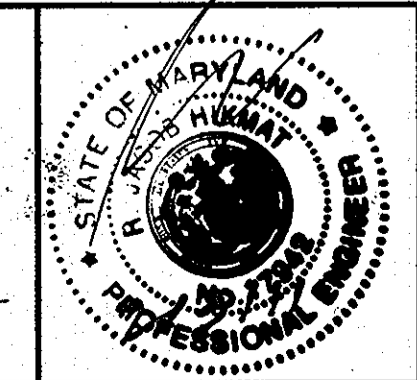
STORM DRAIN PROFILE
 SCALE: HOR. 1"=50'
 VER. 1"=5'



SOILS DESCRIPTION

SYMBOL	DESCRIPTION
BcC3	BELTSVILLE SILT LOAM, 5% TO 10% SLOPES, SEVERELY ERODED (TYPE C)
CmB2	CHILLUM SILT LOAM, 1% TO 5% SLOPES, MODERATELY ERODED (TYPE C)
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EVC	EVESBORO LOAMY SAND, 5% TO 15% SLOPES (TYPE B)
SC2	SASSAFRAS GRAVELLY SAND LOAM, 5% TO 10% SLOPES, MODERATELY ERODED (TYPE B)
SIB2	SASSAFRAS LOAM, 1% TO 5% SLOPES, MODERATELY ERODED (TYPE B)
SID2	SASSAFRAS LOAM, 10% TO 15% SLOPES, MODERATELY ERODED (TYPE B)
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1% TO 5% SLOPES (TYPE B)

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2/10/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 3/04/11
 CHIEF, DIVISION OF LAND DEVELOPMENT



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. 17942, EXP DATE 9/3/12.

DEVELOPER
 DORSEY FAMILY, HOMES
 10717 BIRMINGHAM WAY SUITE B
 WOODSTOCK, MARYLAND 21163
 410-465-7200

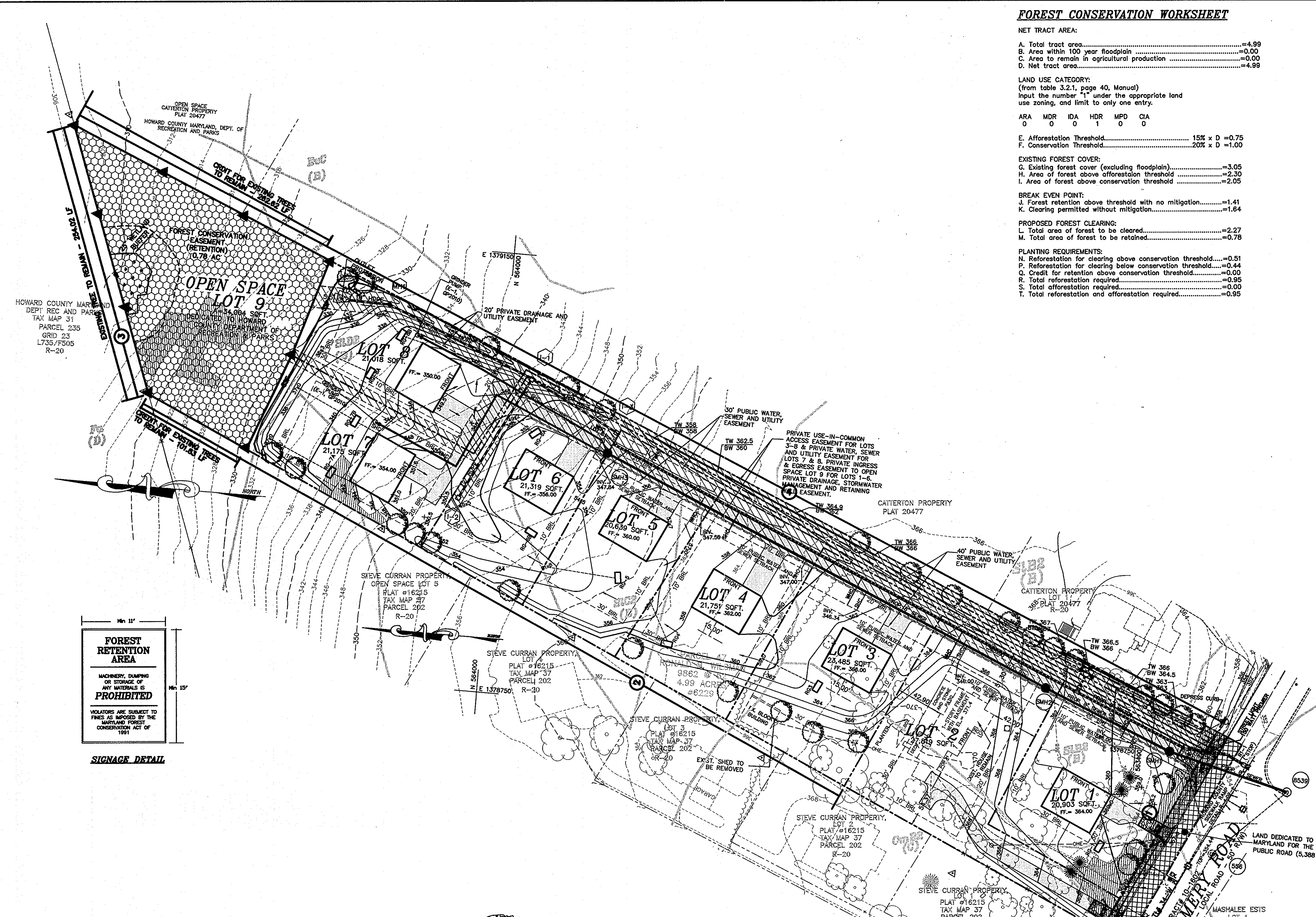
OWNER
 RONALD B. WILDMAN
 4747 BONNIE BRANCH ROAD
 ELLICOTT CITY, MD. 21043
 410-869-9999

Project: 09-005
 Date: FEB. 2011
 Illustration: MMT
 Engineering: MMT
 Scale: 1"=50'
 Approval: RJH

no.	description	revisions

MARBUCK ESTATES
 TAX MAP 37 - PARCEL 47 - GRID 5
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 STORM DRAIN PROFILE AND INLET DRAINAGE AREA MAP

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deepwater Road, Suite 150, Ellicott City, Maryland 21075
 (410) 997-0286 Fax: (410) 997-0288 Fax



FOREST CONSERVATION WORKSHEET

NET TRACT AREA:
 A. Total tract area=4.99
 B. Area within 100 year floodplain=0.00
 C. Area to remain in agricultural production=0.00
 D. Net tract area=4.99

LAND USE CATEGORY:
 (from table 3.2.1, page 40, Manual)
 Input the number "1" under the appropriate land use zoning, and limit to only one entry.
 ARA MDR IDA HDR MPD CIA
 0 0 0 1 0 0

E. Afforestation Threshold 15% x D =0.75
 F. Conservation Threshold 20% x D =1.00

EXISTING FOREST COVER:
 G. Existing forest cover (excluding floodplain)=3.05
 H. Area of forest above afforestation threshold=2.30
 I. Area of forest above conservation threshold=2.05

BREAK EVEN POINT:
 J. Forest retention above threshold with no mitigation=1.41
 K. Clearing permitted without mitigation=1.64

PROPOSED FOREST CLEARING:
 L. Total area of forest to be cleared=2.27
 M. Total area of forest to be retained=0.78

PLANTING REQUIREMENTS:
 N. Reforestation for clearing above conservation threshold=0.51
 O. Reforestation for clearing below conservation threshold=0.44
 P. Credit for retention above conservation threshold=0.00
 R. Total reforestation required=0.95
 S. Total afforestation required=0.00
 T. Total reforestation and afforestation required=0.95

GENERAL NOTES

- FOREST PROTECTION**
- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
 - ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
 - ATTACHMENT OF SIGNS OR OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRINKING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
 - THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
 - THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

- FIRE-CONSTRUCTION MEETING**
- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A FIRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
 - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIFIC TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
 - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
 - MAKE ALL NECESSARY ADJUSTMENTS;
 - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

- CONSTRUCTION MONITORING**
- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.
 - THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

NOTE :

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

NOTE :

- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY ON-SITE RETENTION OF 0.78 ACRES OF FOREST AND OFF-SITE REFORESTATION AT RUSSELL HOLLAND PROPERTY FOR 0.95 ACRES (41,382 SQ. FT.) FINANCIAL SURETY FOR THE ON-SITE RETENTION (0.78 ACRES OR 33,976.8 SQ.FT.) IN THE AMOUNT OF \$6,796.00 AND OFF-SITE AFFORESTATION (0.95 ACRES OR 41,382 SQ.FT.) IN THE AMOUNT OF \$20,691.00 WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1202 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$9,600.00 WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT.

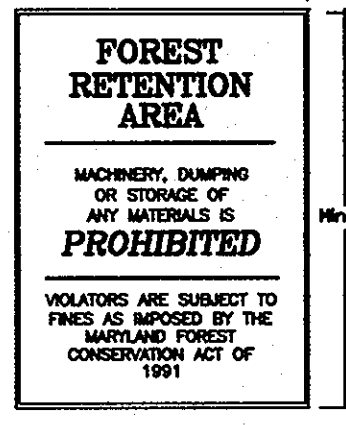
LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
30		PRUNUS SARGENTII OR EQUIVALENT	SARGENT CHERRY OR EQUIVALENT	2-1/2" - 3" CAL.
4		PINUS THUNBERGIANA	JAPANESE BLACK PINE OR EQUIVALENT	6' - 8' HT.
TOTAL				
34 TREES (30 SHADE TREES AND 4 EVERGREENS)				

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES				TOTAL
	B (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	
LANDSCAPE TYPE	B (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	TOTAL
LINEAR FEET OF PERIMETER	151 LF	536.26' LF	333.30 LF	1199.85 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	YES, 101.83 LF.	YES, 333.30 LF.	YES, 262.62 LF.	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED					
SHADE TREES	3	11	0	16	30
EVERGREEN TREES	0	0	0	0	0
SHRUBS	0	0	0	0	0
NUMBER OF PLANTS PROVIDED					
SHADE TREES	3	11	0	16	30
EVERGREEN TREES	0	0	0	0	0
SHRUBS	0	0	0	0	0

* NOTE THAT PART OF PERIMETER 2 HAS BEEN EXCLUDED SINCE THERE IS AN EXISTING HOUSE TO REMAIN.



SIGNAGE DETAIL

OWNER
 RONALD B. WILDMAN
 4747 BONNIE BRANCH ROAD
 ELLICOTT CITY, MD. 21043
 410-869-9999

DEVELOPER
 DORSEY FAMILY, HOMES
 10717 BIRMINGHAM WAY SUITE B
 WOODSTOCK, MARYLAND 21163
 410-465-7200

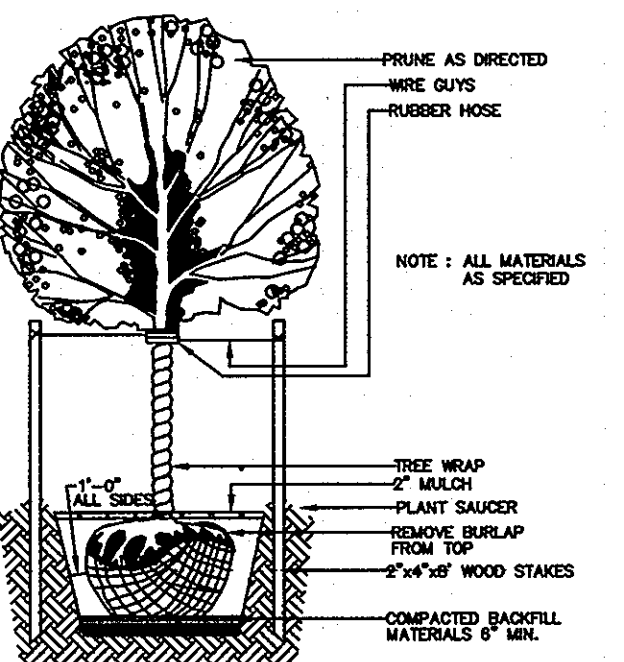
DEVELOPER'S/OWNER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE IN ACCORDANCE TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Robert Salyer 2-3-2011
 NAME DATE

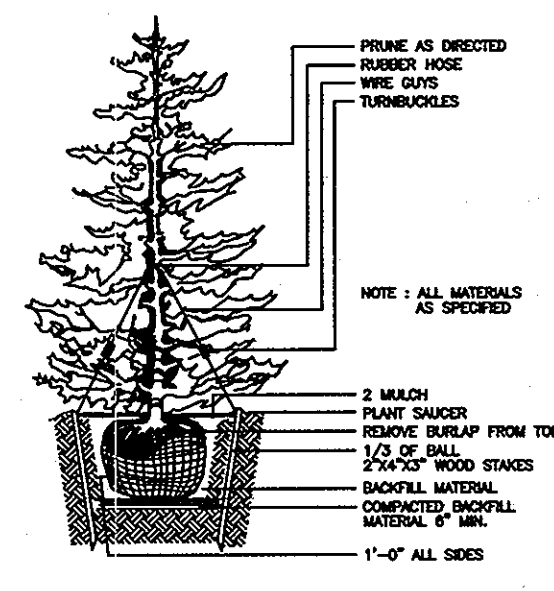
APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 2-9-2011
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2/04/11
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 2/04/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



TYPICAL DECIDUOUS TREE PLANTING DETAIL
 NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
 NOT TO SCALE

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. 17942, EXP DATE 9/3/12.

MD DNR QUALIFIED PROFESSIONAL
 [Signature] 2/3/11
 MASHID TRUONG

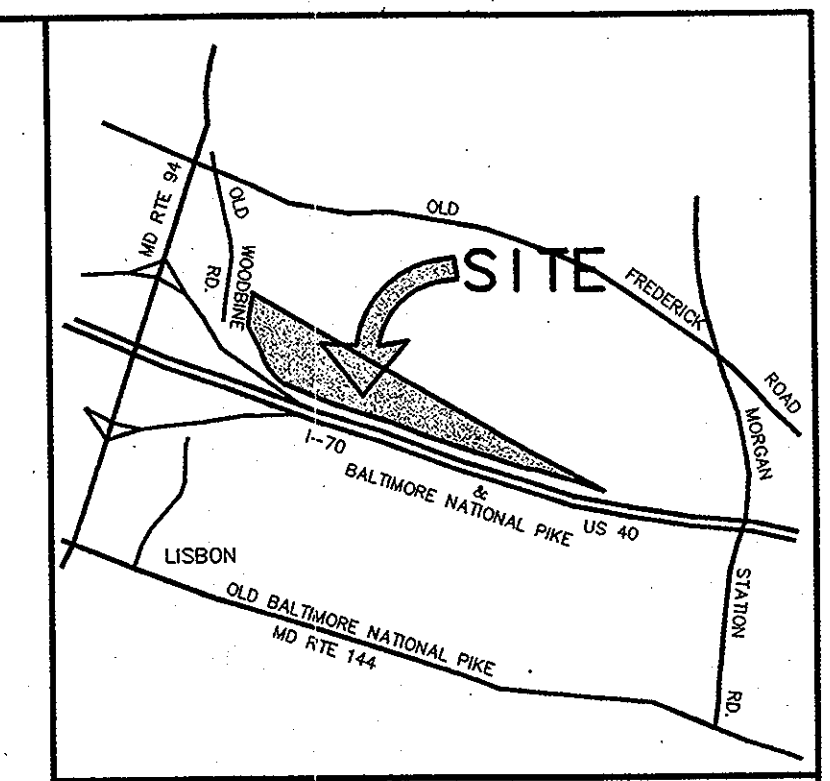
Project: 09-005
 Date: FEB. 2011
 Illustration: MMT
 Scale: 1"=50'
 Approval: MMT

no. description revisions

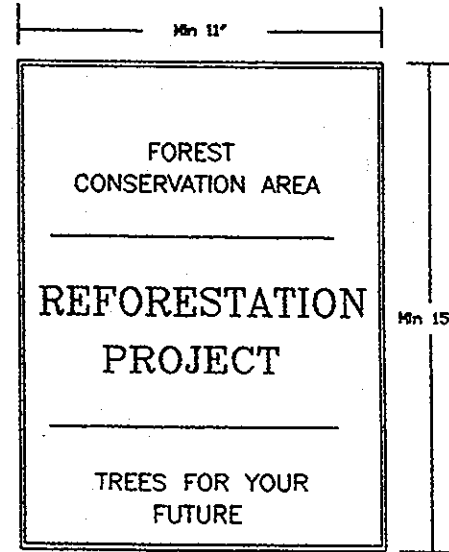
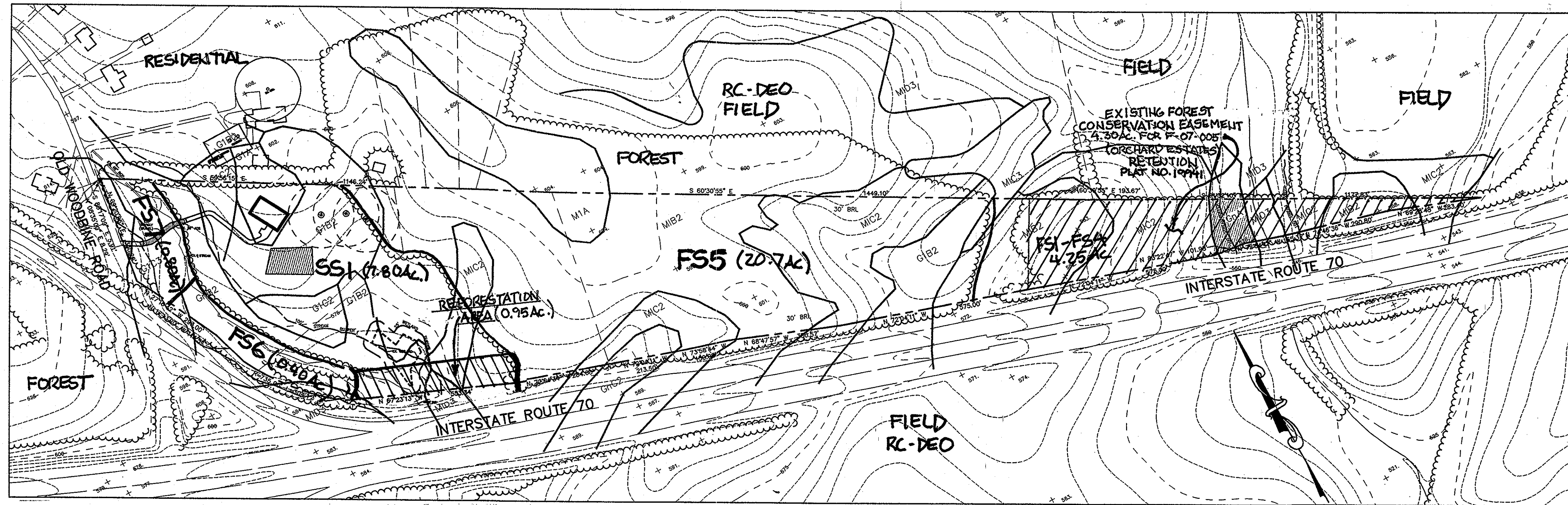
MARBUCK ESTATES
 LOTS 1 THRU 8 AND OPEN SPACE LOT 9
 TAX MAP 37 GRID 5, PARCEL 47
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 LANDSCAPE AND FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deerpath Road, Suite 160, Elkridge, Maryland 21075
 (410) 987-0286 Fax

6 OF 8



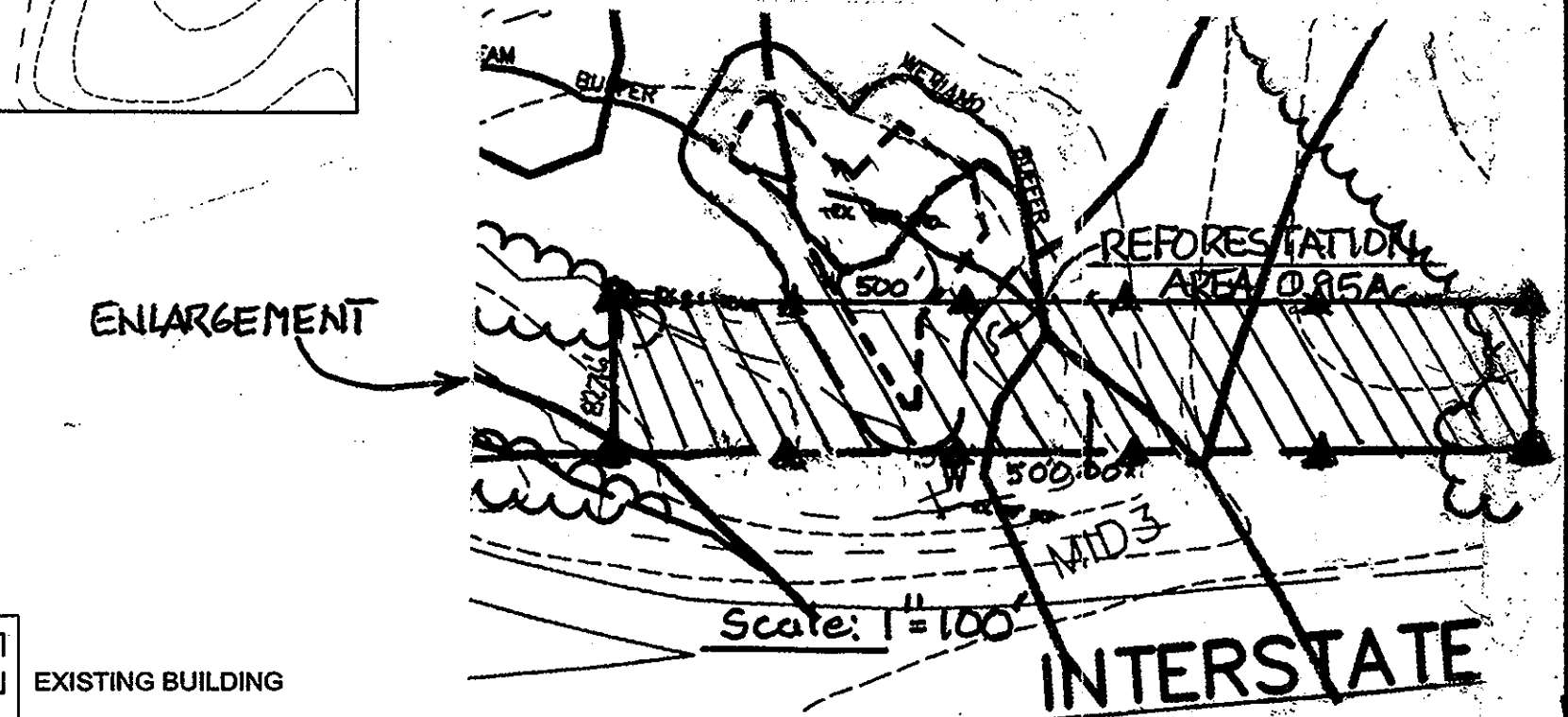
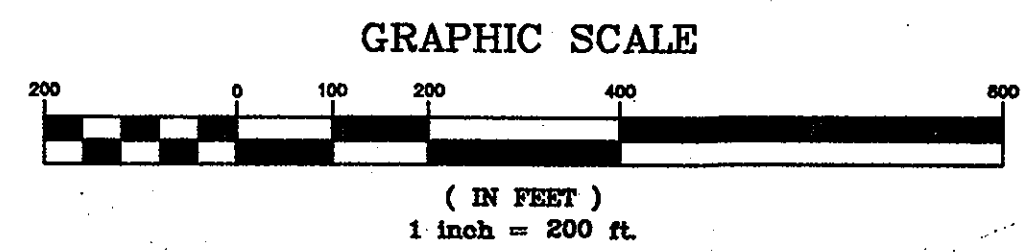
VICINITY MAP 1" = 2,000'



SIGNAGE DETAIL NOT TO SCALE

REFORESTATION PLANT LIST						
QTY	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN. O.C. SPACING	SIZE & REMARKS
19	Prunus serotina Wild Black Cherry	I	M	FACU	15'	1" CAL. CONT.
	Robinia pseudacacia Black Locust	VI	D-M	FACU		
	Liriodendron tulipifera Tulip Poplar	I	D-M	FACU		
	Quercus rubra Red Oak	MT	D-M	UPL		
	Quercus prinus Chestnut Oak	MT	D-M	FACU		
	Nyssa sylvatica Black Gum	T	M-W	FAC		
	Juglans nigra Black Walnut	VT	M	FACU		
	Acer rubrum Red Maple	VT	D-W	FAC		
	Cercis canadensis Eastern Redbud	T	M	UPL		
	Diospyros virginiana Persimmon	I	D-M	UPL		

Quantities of individual species and species composition may change depending on availability at time of planting. Total quantity of trees for entire easement area will not change. Any species substitution must be listed on the Howard County Forest Association List. If quantities are changed, a minimum of five (5) species must be planted.



PLANTING SPECIFICATIONS AND NOTES

SITE PREPARATION AND SOILS

- PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
- SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
- ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
- FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
- PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
- UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

PLANT INSTALLATION

- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
- PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
- CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
- CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENEED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
- FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
- AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
- NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

FERTILIZING

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
- ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
- REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

SUPERVISION

- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.08.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

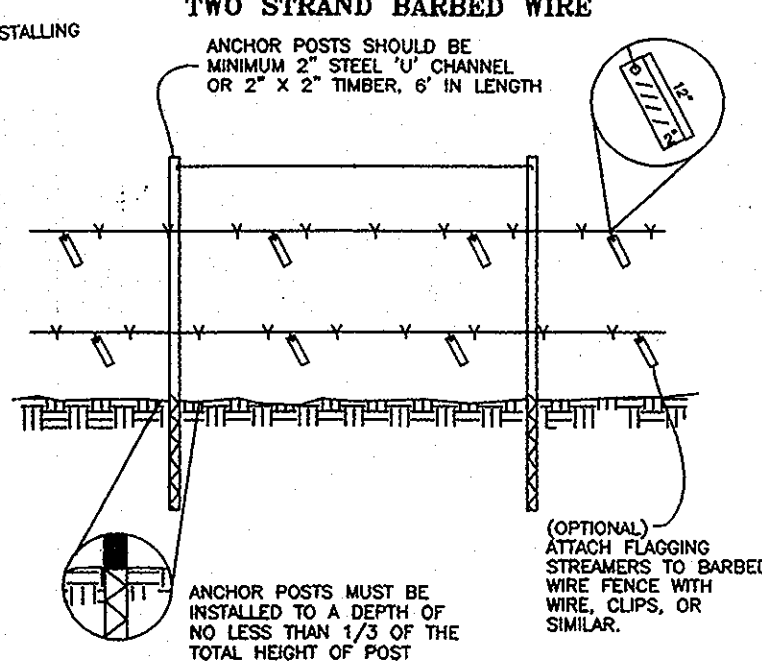
LEGEND

	PROPERTY LINE		EXISTING BUILDING
	EXISTING TREELINE		PROPOSED BUILDING
	EXISTING SOILS		PROPOSED WELL
	STREAM AND BUFFER		PROPOSED SEPTIC AREA
	WETLAND AND BUFFER		PASSING PERC TEST
	EXISTING CONTOURS		WET SEASON SOILS
	DENOTES REFORESTATION SIGNAGE		
	REFORESTATION AREA (EASEMENT) (PROPOSED - Marbuck Estates)		

SOILS DESCRIPTION

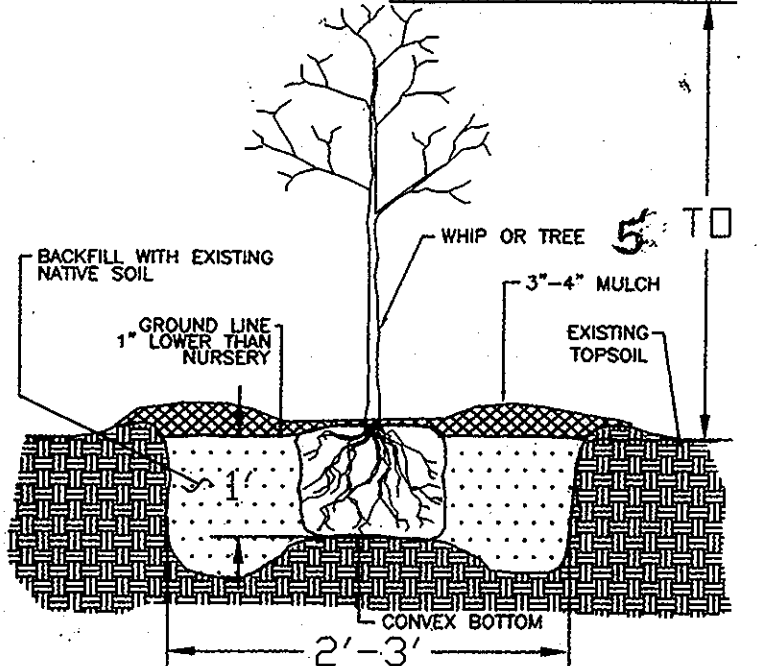
SYMBOL	DESCRIPTION
Ca	ODORUS SILT LOAM --- TYPE C
GB2	GLENELE LOAM, 0% TO 3% SLOPES --- TYPE B
GB2	GLENELE LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
GB2	GLENELE LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
GB2	GLENELE SILT LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE C
Hd	HATBORO SILT LOAM --- TYPE D
LhC2	LINGANORE CHANNERY LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
MB2	MANOR LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
MC2	MANOR LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
MC3	MANOR LOAM, 8% TO 15% SLOPES, SEVERELY ERODED --- TYPE B
MD2	MANOR LOAM, 15% TO 25% SLOPES, MODERATELY ERODED --- TYPE B
MD3	MANOR LOAM, 15% TO 25% SLOPES, SEVERELY ERODED --- TYPE B
ME	MANOR LOAM, 25% TO 45% SLOPES --- TYPE B
Md	MANOR VERY STONY LOAM, 3% TO 25% SLOPES --- TYPE B
Mp	MANOR VERY STONY LOAM, 25% TO 60% SLOPES --- TYPE B
MT	MT. AIRY CHANNERY LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE A
MC2	MT. AIRY CHANNERY LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE A
MC3	MT. AIRY CHANNERY LOAM, 8% TO 15% SLOPES, SEVERELY ERODED --- TYPE A
MD2	MT. AIRY CHANNERY LOAM, 15% TO 25% SLOPES, MODERATELY ERODED --- TYPE A
ME	MT. AIRY CHANNERY LOAM, 25% TO 45% SLOPES --- TYPE A

PROTECTIVE FENCE DETAIL



NOTES:

- NO FLOODPLAIN EXISTS ONSITE.
- THERE ARE NO EXISTING STRUCTURES.
- THERE IS AN EXISTING FOREST CONSERVATION EASEMENT #1 ON THIS SITE OF 4.30 ACRES FOR F-07-005 (RETENTION) ORCHARD ESTATES. PLAT NO. 19941.



TREE PLANTING DETAIL

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 3/09/11 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 2/8/11 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE	NO.	REVISION
OWNER		Chuck Sharp 4003 Jennings Chapel Road Brookeville, MD 20833
DEVELOPER		Chuck Sharp 4003 Jennings Chapel Road Brookeville, MD 20833
PROJECT RUSSELL-HOLLAND PROPERTY F-08-173		
AREA TAX MAP 7, PARCEL 101 ZONED RC-DEO ELECTION DISTRICT 04 HOWARD COUNTY, MARYLAND		
TITLE REFORESTATION PLANTING PLAN & FOREST CONSERVATION PLAN		
FOR MARBUCK ESTATES F-10-107		
 WILDMAN ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. BELLICOTT CITY, MD 21104 PHONE: (410) 869-9899 FAX: (410) 869-9901 DESIGNED BY: R.B.W. DRAWN BY: J.E.P. PROJECT NO.: DATE: 3/31/10 SCALE: 1" = 200' SHEET NO. 2 OF 8		