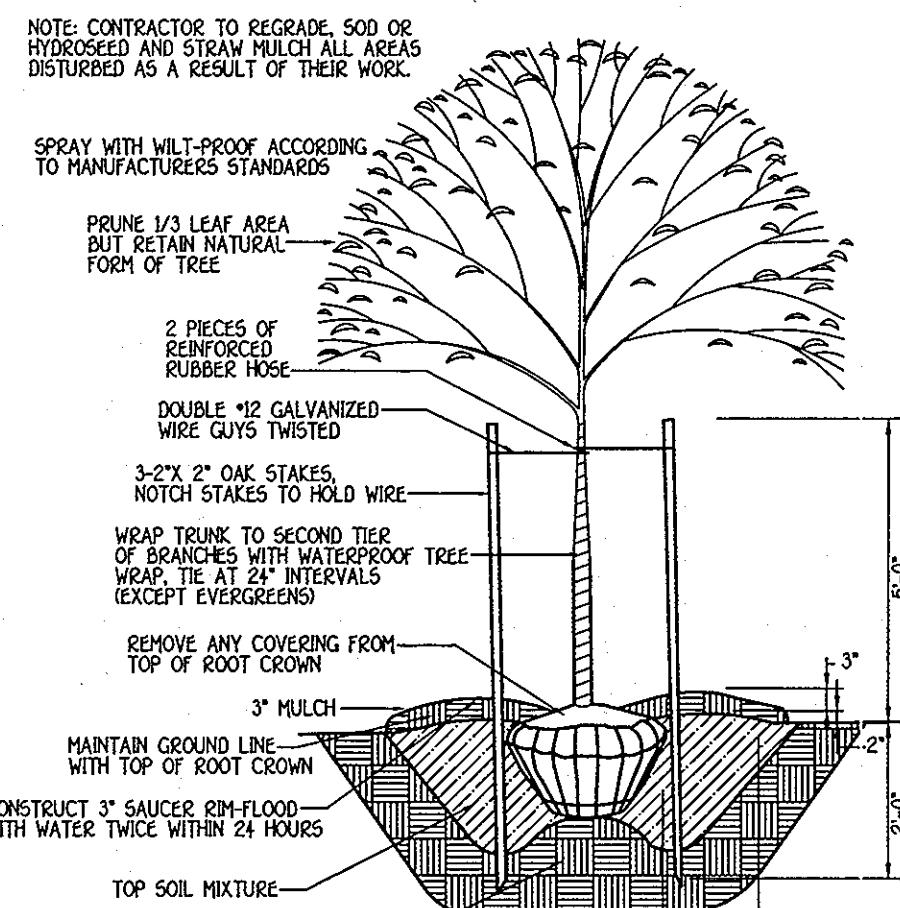
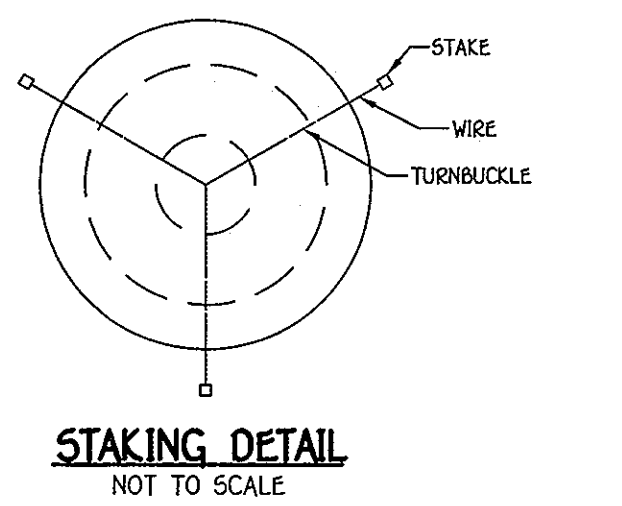


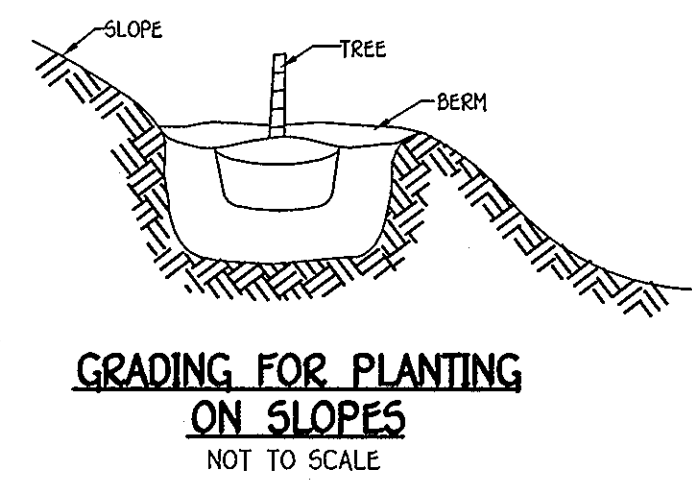
EVERGREEN PLANTING DETAIL
NOT TO SCALE



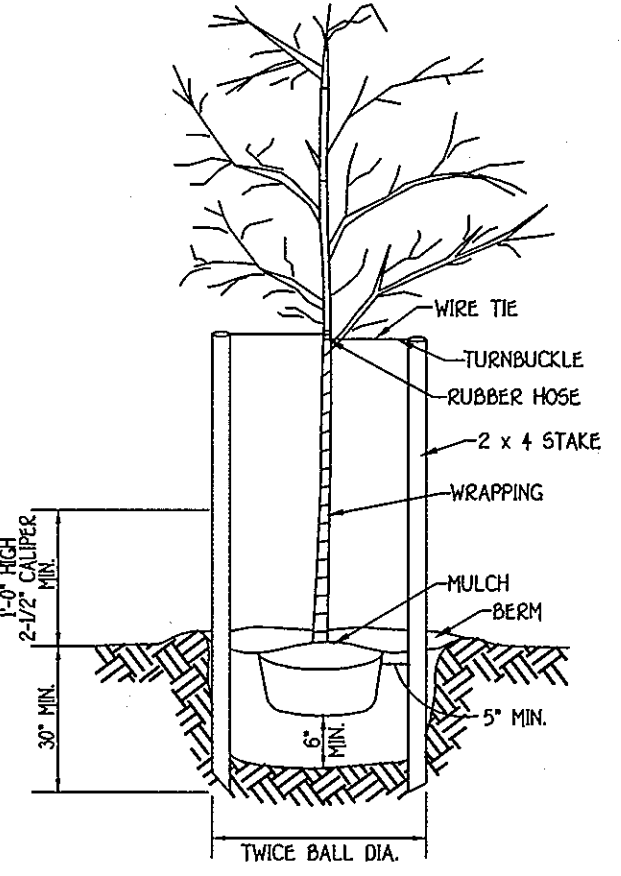
TREE PLANTING DETAIL
NOT TO SCALE



STAKING DETAIL
NOT TO SCALE



GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

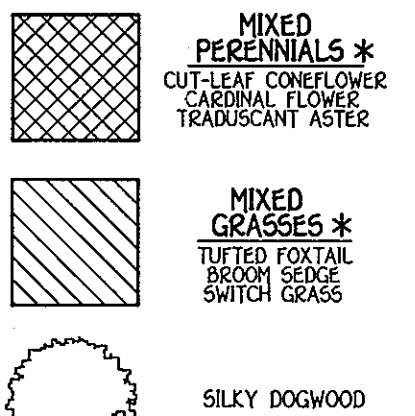


TREE PLANTING
NOT TO SCALE

SCHEDULE A PERIMETER LANDSCAPE EDGE						
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED AND PROVIDED
P-1	FRONT TO ADJACENT TO ROADWAY	N/A	360.71'	NO	NO	0 0 0
P-2	ADJACENT TO PERIMETER	A	555.95'	YES (178')	NO	6 - -
P-3	ADJACENT TO PERIMETER	A	370.20'	YES (100')	NO	0 - -
P-4	ADJACENT TO PERIMETER	A	506.43'	YES (178')	NO	7 - -

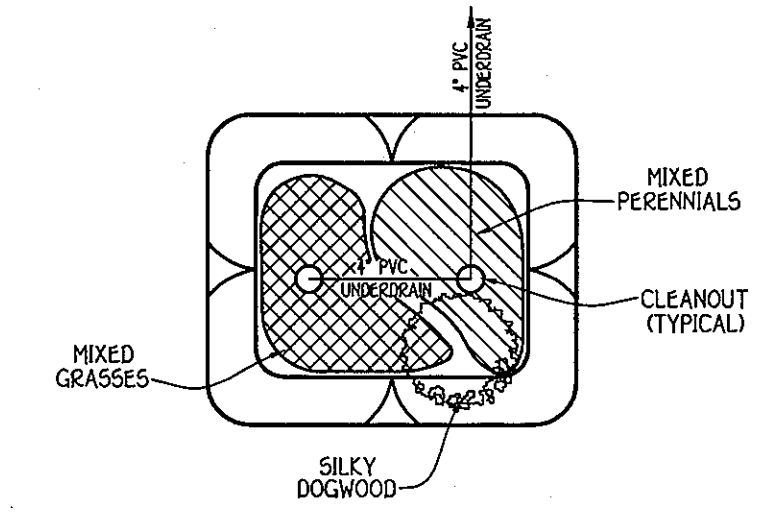
NOTE: LANDSCAPING WAS PROVIDED PER F-08-135.

RAIN GARDEN FILTER PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	MIXED PERENNIALS	1 FT.
45	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION



RAIN GARDEN FILTER PLANTING DETAIL
NOT TO SCALE

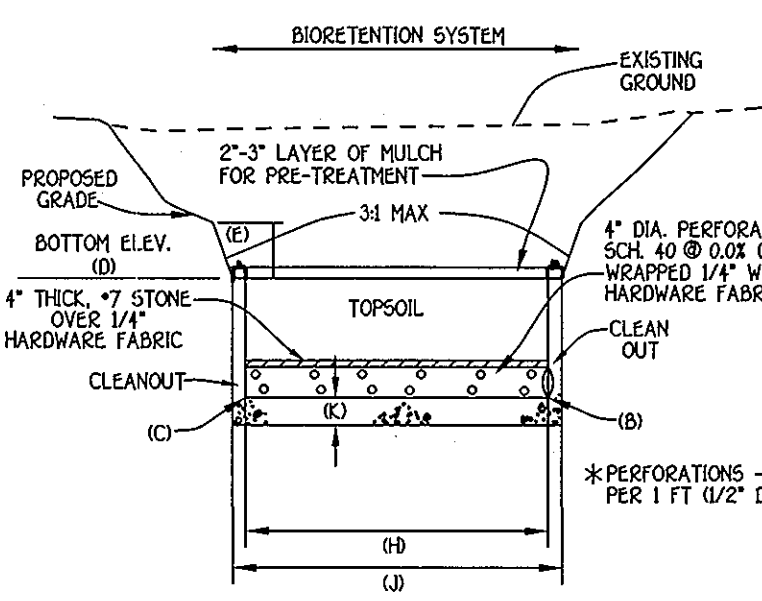
RAIN GARDEN FILTER DATA											
RAIN GARDEN FILTER	A	B	C	D	E	F	G	H	I	J	K
1	430.0	430.5	430.5	433.0	434.0	53'	4.0'	12'	0'	10'	10'
2	429.0	429.5	429.5	432.0	433.0	22'	12.0'	0'	2.5'	10'	10'
3	430.0	430.5	430.5	434.0	435.0	25'	4.0'	12'	0'	10'	10'



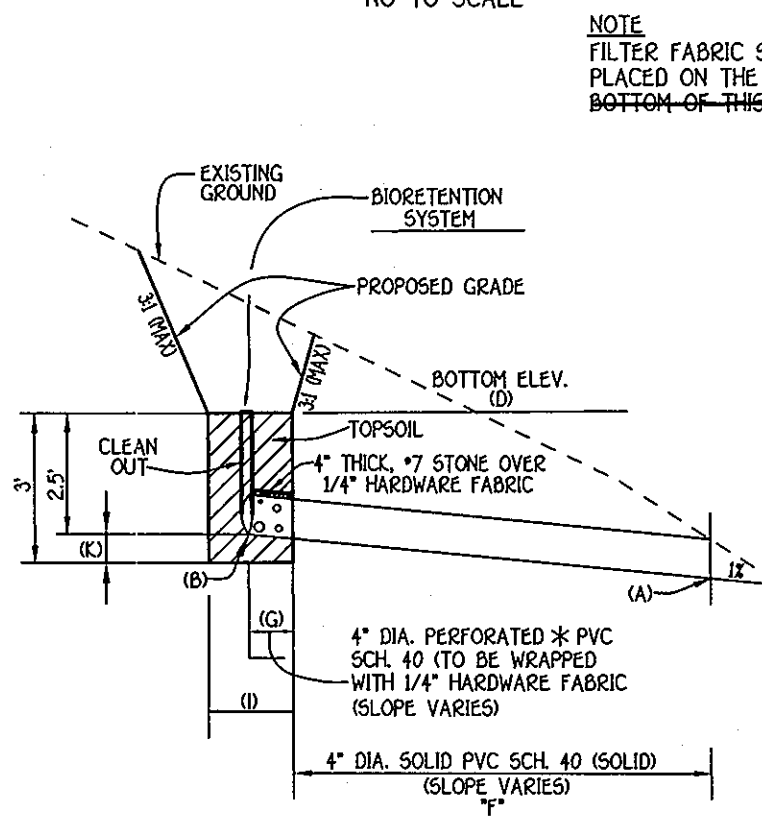
RAIN GARDEN FILTER PLANTING DETAIL
NOT TO SCALE

PRIVATE RAIN GARDEN FILTER OPERATION & MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- 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.



PROFILE ALONG 4" PVC UNDERDRAIN
NOT TO SCALE



PROFILE ALONG 4" PVC OUTLET
NOT TO SCALE

PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN. ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AAO) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DEFENDING ROOTS, SUN SCALD INJURIES, ABSCISSIONS OF THE BARK, PLANT DISEASE, INSECT PESTS, GOSSES AND ALL FORMS OF INSECT INFESTATIONS OR OBSTRUCTIVE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORGED LEAVERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG, NO HEATED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED. UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS, RECOMMENDED LANDSCAPE GUIDELINES APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE METROPOLITAN CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL ADDENDUMS. CONTRACTOR SHALL BE RESPONSIBLE TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "HIS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK. CONTRACTOR MAY MAKE MORE ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES. DAMAGE TO EXISTING STRUCTURE AND UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4 FOOT HIGH SNOW FENCE OR BLAZE ORANGE SAFETY FENCE AT THE DROP LINE. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE. ALL PLANTING IS TO BE COMPLETED WITHIN THE GROWING SEASON OF COMPLETION OF SITE CONSTRUCTION. BID SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS. PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN TAKE PRECEDENCE. ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED OR ELSE. POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE. PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROOTED COW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART LEAF OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES. WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED. ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEDED. THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, LAYOUT, ETC.

BUILDER/DEVELOPER'S CERTIFICATE

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

Cary K. Cumberland 1-12-09
CARY CUMBERLAND DATE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 9733, EXPIRATION DATE: 2/28/10.

Earl D. Collins 1-8-09
EARL D. COLLINS DATE

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
1	9203 WILRICK OVERLOOK
3	9211 WILRICK OVERLOOK
4	9215 WILRICK OVERLOOK
5	9210 WILRICK OVERLOOK
6	3712 CHATHAM ROAD
7	3708 CHATHAM ROAD

MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
LOT 2	36,369 SQ.FT.	284 SQ.FT.	35,105 SQ.FT.
LOT 3	20,702 SQ.FT.	622 SQ.FT.	20,080 SQ.FT.
LOT 4	20,869 SQ.FT.	792 SQ.FT.	20,087 SQ.FT.
LOT 5	20,441 SQ.FT.	381 SQ.FT.	20,060 SQ.FT.

INDEX CHART

SHEET	DESCRIPTION
SHEET 1	TITLE SHEET, HOUSE TYPES, TEMPLATES
SHEET 2	SITE DEVELOPMENT PLAN, LOTS 1,3,4,5,6 & 7
SHEET 3	SEDIMENT/EROSION CONTROL PLAN LOTS 1,3,4,5,6 & 7
SHEET 4	SEDIMENT/EROSION CONTROL NOTES & DETAILS

LEGEND

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - - -	PROPOSED CONTOUR 2' INTERVAL
+362.2	SPOT ELEVATION
▭	WALKOUT BASEMENT
- - - -	SILT FENCE
- - - -	SUPER SILT FENCE
▭	EROSION CONTROL MATTING
○	LIMIT OF DISTURBANCE
★	STREET LIGHT PER F-08-135
○	PERIMETER LANDSCAPING PER F-08-135
○	STREET TREES PER F-08-135

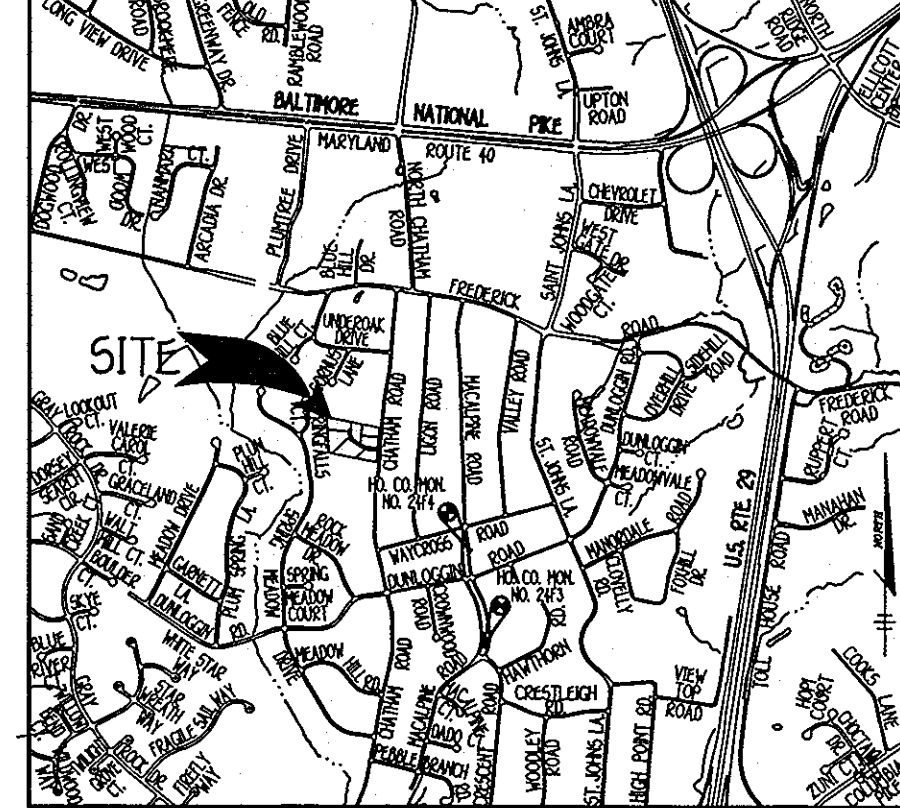
OWNER/BUILDER/DEVELOPER

VIKING DEVELOPMENT
5850 OLD WASHINGTON ROAD
SYKESVILLE, MARYLAND 21784
410-977-2180

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hunt 3/2/09
Chief, Division of Land Development
Thomas J. Swisher 3/2/09
Chief, Development Engineering Division
Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.			
THE ENCLAVE AT DUNLOGGIN	N/A	1,3,4,5,6 & 7			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
20304	10	R-20	24	2	6069.02
WATER CODE	SEWER CODE				
C-02	7390000				



SITE ANALYSIS DATA CHART

- TOTAL PROJECT AREA: 3.636 ACRES OR 158,304.16 SQUARE FEET.
- AREA OF SUBMISSION: 2.800 ACRES OR 122,015.16 SQUARE FEET.
- LIMITS OF DISTURBANCE: 1,900 ACRES OR 82,807.55 SQUARE FEET.
- PRESENT ZONING DESIGNATION: R-20.
- PROPOSED USES FOR SITE: RESIDENTIAL.
- APPLICABLE DPZ FILE REFERENCES: SP-07-003, WP-07-118, WP-08-104, F-08-135 AND WATER & SEWER (CONT. NO. 24-4461-D) PLAT NO. 20304.

GENERAL NOTES

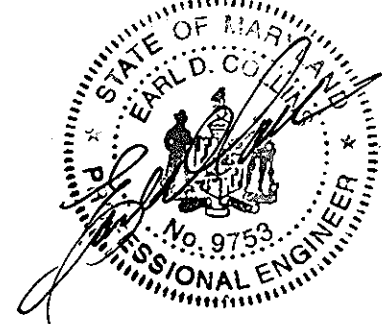
- SUBJECT PROPERTY ZONED R-20 PER THE COMPREHENSIVE ZONING PLAN DATED 2/2/04 AND THE COMP LITE ZONING AMENDMENT EFFECTIVE 7/28/06.
- TOTAL AREA OF SITE: 3.636 ACRES.
- TOTAL NUMBER OF LOTS SUBMITTED: 6 SFD, THE HOUSE ON LOT 2, TO REMAIN.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION SECTION DIVISION AT 410-313-1800 AT LEAST FIVE WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "HIS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THIS SITE IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT OCTOBER 3, 2005 BY FISHER, COLLINS AND CARTER, INC.
- ALL LOT AREA ARE MORE OR LESS (+ OR -).
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER IS UTILIZED IN THIS SUBDIVISION.
- PREVIOUS DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: SP-07-003, WP-07-118, WP-08-104, F-08-135 AND WATER & SEWER CONTRACT NO. 24-4461-D, PLAT NO. 20304.
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PRODUCED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.
- HOWARD COUNTY MONUMENT 243 N 581,299.8436 E 1,360,713.7282 ELEV. 365.41 HOWARD COUNTY MONUMENT 244 N 582,298.6165 E 1,360,570.9683 ELEV. 366.19
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING.
- SEWER HOUSE CONNECTION ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL P.6.06.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12' (10' SERVING MORE THAN ONE RESIDENCE).
B) SURFACE - 5' OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN).
C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45 FOOT TURNING RADIUS.
D) STRUCTURES - (BRIDGES/CULVERTS) CAPABLE OF SUPPORTING 25 GROSS TONS (HEAVY-LOADING).
- DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
- MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- TRAFFIC REPORT WAS PREPARED BY MARS GROUP, DATED AUGUST, 2006.
- NO CEMETERIES EXIST ON THIS SITE BASED ON A VISUAL SITE VISIT AND AN EXAMINATION OF THE HOWARD COUNTY CEMETERY INVENTORY MAP.
- NO 100 YEAR FLOOD PLAN EXISTS ON SITE.
- THIS PLAN IS IN COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WATER PETITION AND/OR BUILDING/CORRECTION PERMIT.
- IN ACCORDANCE WITH SECTION 12B OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE CRITERIA CONTAINED IN THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II, CHAPTER 5 "STORMWATER CREDITS FOR INNOVATIVE SITE PLANNING". WOV AND REV WILL BE PROVIDED AND MAINTAINED BY UTILIZING THE CREDITS FOUND IN SECTION 5.2 "DISSECTION OF ROOFTOP RUNOFF CREDIT; SECTION 5.3 "DISSECTION OF NON-ROOFTOP RUNOFF CREDIT" ALONG WITH THE CRITERIA FOUND IN APPENDIX C.2, SECTION C.2.41 "BIORETENTION SYSTEM". CPV WAS NOT REQUIRED BECAUSE THE 1 YEAR STORM IS LESS THAN THE 2.0CFS MANDATED BY THE AFOREMENTIONED MANUAL.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. ALL FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT REQUIREMENTS FOR THIS SUBDIVISION HAVE BEEN FULFILLED BY PROVIDING 0.53 ACRES OF ON-SITE RETENTION AND A FEE-IN-LIEU PAYMENT OF \$40,454.40 BASED ON 0.32 AC. x 43,560 SQ.FT./ACRE x 40.75/SQ.FT. THE SURETY AMOUNT \$46,873.60 FOR ON-SITE RETENTION OBLIGATION IS 0.53 AC. x 43,560 SQ.FT./ACRE x 40.20/SQ.FT.
- LANDSCAPING FOR LOTS 1 THROUGH 7 ON THIS FILE IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY FOR 13 SHADE TREES IN THE AMOUNT OF \$3,900.00 WAS PROVIDED AS PART OF THE DEVELOPER'S AGREEMENT. FOR FINAL PLAN F-08-135.
- NO GRADING, REMOVAL OF NEGATIVE CORNER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- HOUSE SHOWN ON LOT 2 IS TO REMAIN.
- PLAT SUBJECT TO WP-08-104 WHICH THE PLANNING DIRECTOR ON JUNE 5, 2008 APPROVED A WAIVER OF SECTION 16.1200(a)(2)(ii) 16.1200(a)(2)(iii) AND 16.1200(a) OF THE SUBDIVISION REGULATIONS SUBJECT TO:
1) PAYMENT TO DIRECTOR OF FINANCE OF A FEE-IN-LIEU OF SIDEWALK CONSTRUCTION.
2) SITE REFERENCE TO WP-08-104 ON ALL PLANS.
- FIRST FLOOR SEWER SERVICE ONLY FOR LOTS 3 AND 4. THE WAIVER OF BASEMENT GRAVITY SERVICE HAS BEEN APPROVED BY THE BUREAU OF ENGINEERING IN A LETTER DATED SEPTEMBER, 2008.
- OPEN SPACE LOT 8 SHOWN ON THIS PLAN IS HEREBY DEDICATED TO THE ENCLAVE AT DUNLOGGIN HOMEOWNERS ASSOCIATION, INC. FOR THE RESIDENTS OF THIS SUBDIVISION AND THE RECORDING REFERENCES OF THE ARTICLES OF INCORPORATION FOR THE ISAA. WAS RECORDED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON AUGUST 21, 2008 AS RECEIPT NO. 018283686.
- THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-DIAGNOSIS PROFESSIONALS, DATED SEPTEMBER 2008. PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- THE USE-IN-COMMON DRIVEWAY MAINTENANCE AGREEMENTS FOR LOTS 1 THRU 5, OPEN SPACE LOT 8 AND NON-BUILDABLE BULK PARCEL 'A' HAS BEEN RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE WITH RECORDING OF SUBDIVISION PLAN, F-08-135, PLAT NO. 20304.

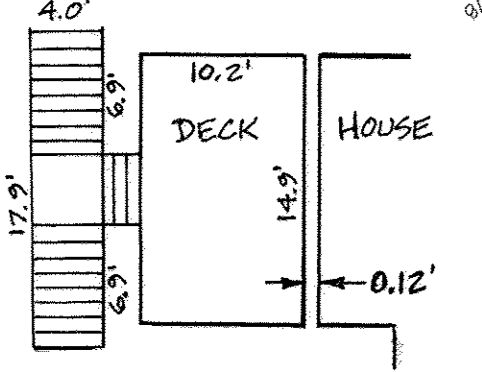
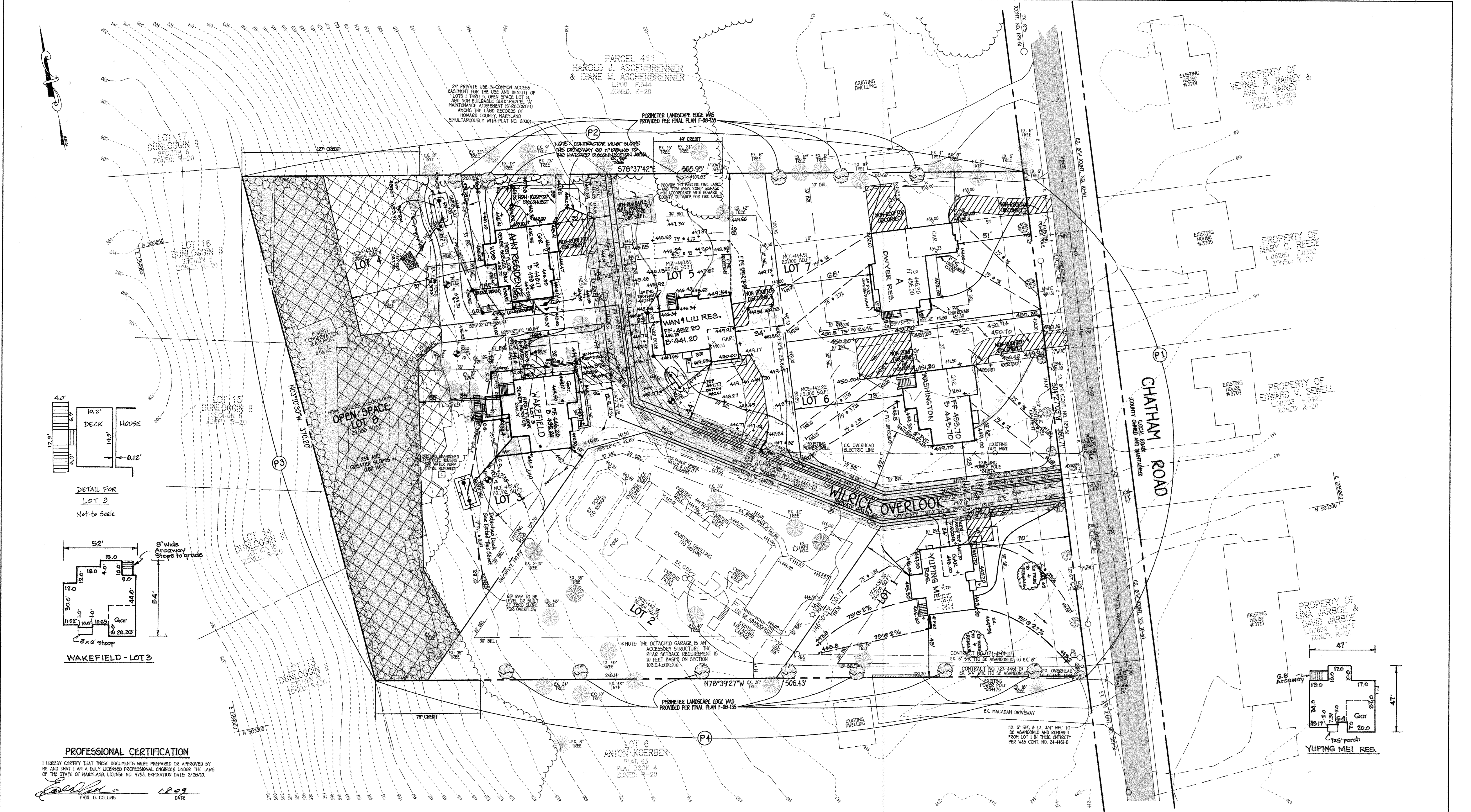
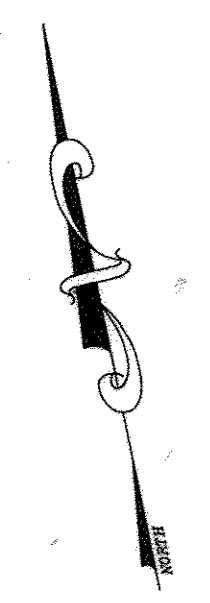
TITLE SHEET

SINGLE FAMILY DETACHED
THE ENCLAVE AT DUNLOGGIN
PLAT NO. 20304
LOTS 1,3,4,5,6 & 7

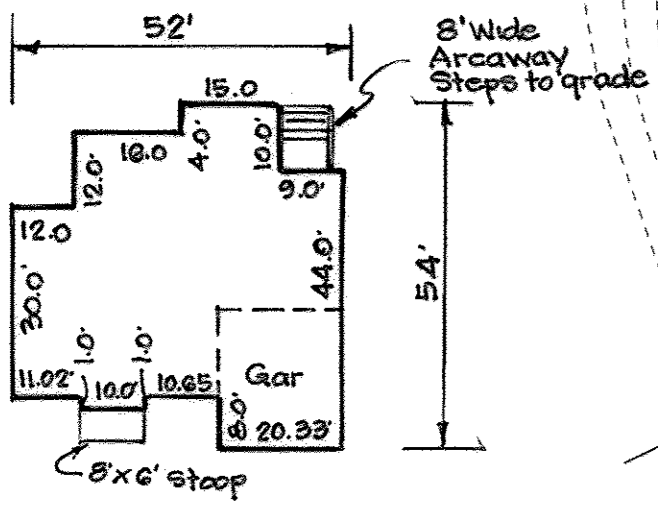
TAX MAP NO.: 24 PARCEL NO.: 412 & 413 GRID NO.: 10
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: SEPTEMBER, 2008
SHEET 1 OF 4

SDP 09-027

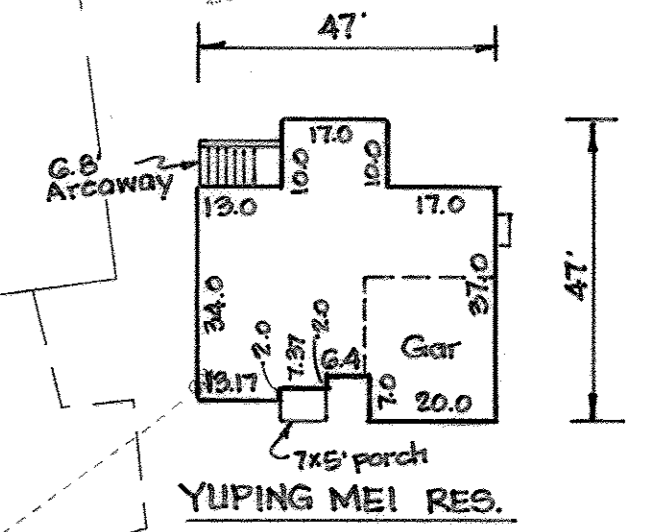




DETAIL FOR LOT 3
Not to Scale



WAKEFIELD - LOT 3



YIPING MEI RES.

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 9753, EXPIRATION DATE: 2/28/10.
Earl D. Collins
EARL D. COLLINS 1.8.09
DATE

ENGINEER'S CERTIFICATE
"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."
Earl D. Collins
Signature of Engineer EARL D. COLLINS 1.8.09
DATE

BUILDER/DEVELOPER'S CERTIFICATE
"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
Cary Cumberland
Signature of Developer CARY CUMBERLAND 1-12-09
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Judy Hamm 3/2/09
Chief, Division of Planning and Development
William 3/2/09
Chief, Development Engineering Division
Thomas S. Pulte 3/2/09
Director - Department of Planning and Zoning

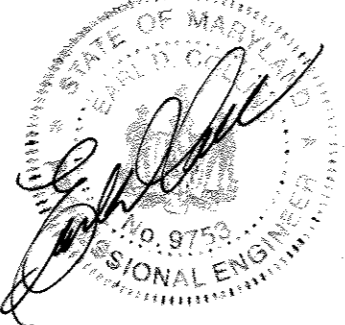
PROJECT	SECTION	LOTS NO.
THE ENCLAVE AT DUNLOGGIN	N/A	1,3,4,5,6 & 7

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
20304	10	R-20	24	2	6069.02

WATER CODE	SEWER CODE
C-02	7390000

SITE DEVELOPMENT PLAN
SINGLE FAMILY DETACHED
THE ENCLAVE AT DUNLOGGIN
PLAT NO. 20304
LOTS 1,3,4,5,6 & 7
TAX MAP NO.: 24 PARCEL NO.: 412 & 413 GRID NO.: 10
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: SEPTEMBER, 2008
SHEET 2 OF 4

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 1822 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
410.461.2955



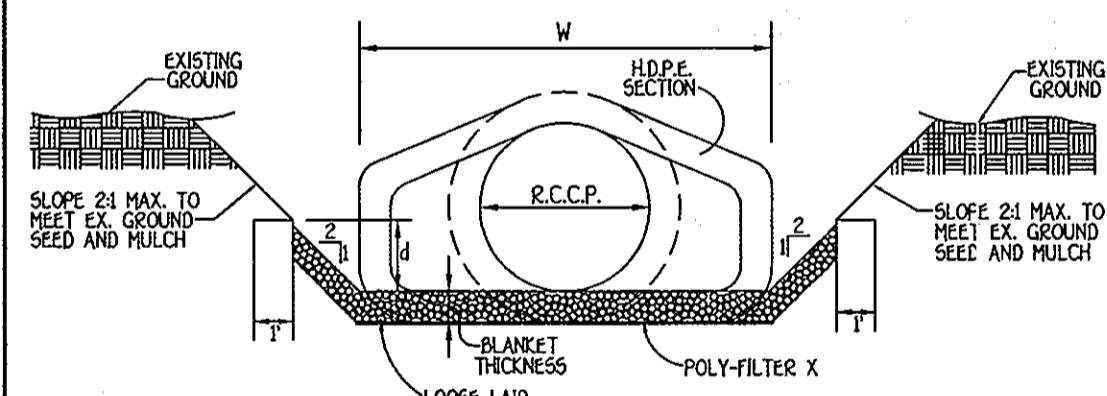
NO.	REVISION	DATE
9	Rev. Hse & Grading, Show Detached Deck & Detail for As-Built Conditions	9-9-13
8	Rev. hse type & grad. Lot 3 to show side entry porch	12-11-12
7	Rev. hse type & grad. Lot 1, to save additional trees	11-29-10
6	Rev. grad., Lot 4 to show as-built conditions	6-25-10
5	Rev. Lot grading to show as-built cond. Lot 5	6-22-10
4	Rev. HSE & GRD. LOT 4 FROM 'A' BOX TO CUSTOM HSE.	10/17/09
3	Rev. hse & grad., Lot 5	9-17-09
2	Rev. hse type & grad. Lot 7	7-10-09
1	Rev. hse type & grad. Lot 6	6-2-09

13:0005050609.dwg (05/06/09) SJP, LWS 1:3:7.dwg, 1/17/2009 3:19:52 PM, bberry, 1:30

SDP 09-027

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

1. THE SURGRADE FOR THE FILTER, RIPRAP OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SURGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIPRAP OR FILTER.
3. FILTER CLOTH SHALL BE PROTECTED FROM PUNCHING, CUTTING OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF CLOTH OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE CLOTH. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF CLOTH SHALL BE A MINIMUM OF ONE FOOT.
4. STONE FOR THE RIPRAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. BOTH SHALL EACH BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIPRAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THAT IT IS SUBSTANTIALLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIPRAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER. BLANKET OR FILTER CLOTH HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.



RIP RAP CHANNEL DETAIL
NO SCALE

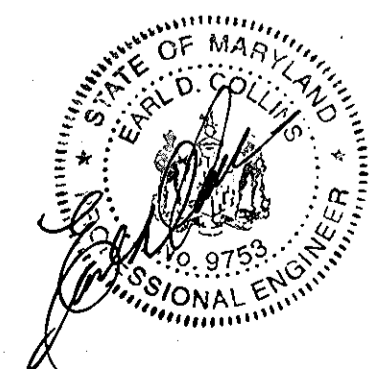
PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 9753, EXPIRATION DATE: 2/28/10.

Earl D. Collins 1-8-09
EARL D. COLLINS DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
BELL GATE CITY, MARYLAND 20842
(410) 441-2955

NO.	REVISION	DATE



ENGINEER'S CERTIFICATE

"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."

Earl D. Collins 1-8-09
Signature of Engineer EARL D. COLLINS DATE

BUILDER/DEVELOPER'S CERTIFICATE

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

Cary Cumberland 1-12-09
Signature of Developer CARY CUMBERLAND DATE

Reviewed for HOWARD SCD and meets Technical Requirements

SDA Natural Resources Conservation Service
The development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT
John K. Reuter 1/27/09
Howard SCD

OWNER/BUILDER/DEVELOPER

VIKING DEVELOPMENT
5050 OLD WASHINGTON ROAD
SYKESVILLE, MARYLAND 21784
410-977-2180

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Horat 2/3/09
Chief, Division of Land Development
William S. Swartz 3/2/09
Chief, Development Engineering Division
Dorothy S. Swartz 3/2/09
Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.			
THE ENCLAVE AT DUNLOGGIN	N/A	1,3,4,5,6 & 7			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
20304	10	R-20	24	2	6069.02
WATER CODE	SEWER CODE				
C-02	7390000				

SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY DETACHED
THE ENCLAVE AT DUNLOGGIN
PLAT NO. 20304
LOTS 1,3,4,5,6 & 7

TAX MAP NO.: 24 PARCEL NO.: 412 & 413 GRID NO.: 10
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: SEPTEMBER, 2008

SHEET 3 OF 4

SDP 09-027



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20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification applies to Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, slash dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas of final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, transpiration, and groundwater recharge. Vegetation over time will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mudding and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation**
 - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- Soil Amendment (Fertilizer and Lime Specifications)**
 - Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer law and shall bear the name, trade name or trademark and warranty of the producer.
 - Lime materials shall be ground limestone hydrated or burnt lime may be substituted which contains at least 50% total calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- Seeded Preparation**
 - Temporary Seeding**
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chain plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
 - Permanent Seeding**
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay and enough finely graded material (D30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if loessess or serechil aspedesols is to be planted, then a sandy soil (USAR silt plus clay) would be acceptable.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by site conditions, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn rollers shall be used to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to rough the surface. Steep slopes (greater than 3:1) should be treated by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

- Seed Specifications**
 - All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to retesting by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
 - Inoculant - The inoculant for treating legume seed in seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as dry as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.
 - Methods of Seeding**
 - Hydroseeding:** Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a compaction seeder.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: Nitrogen maximum of 100 lbs. per acre total of soluble nitrogen; P2O5 (phosphorus) 200 lbs./acre; K2O (potassium) 200 lbs./acre.
 - Lime** - use only ground agricultural limestone, (40 to 4 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
 - Dry Seeding:** This includes use of conventional drop or broadcast spreaders.
 - Seed spreader shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall be covered with a weighing roller to provide good seed to soil contact.
 - Where practical, seed shall be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
 - Drill or Cultivator Seeding:** Mechanized seeders that apply and cover seed with soil.
 - Cultivating seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- Mulch Specifications (in order of preference)**
 - Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be rusty, moldy, cakey, rotted, or excessively dirty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 - Wood Cellulose Fiber Mulch (WCFM)**
 - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM shall be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniform spread strata.
 - WCFM including dye shall contain no germination or growth inhibiting factors.
 - WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will bond with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and permeation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings. WCFM material shall contain no elements or compounds at concentrations that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 15% maximum and water holding capacity of 90% minimum.

- Incremental Stabilization - Cut Slopes**
 - All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
 - Construction sequence (Refer to Figure 3 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 - Perform Phase 1 excavation, dress, and stabilize.
 - Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as areas as necessary.
 - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (311-3055).
- 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 RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PROMISED SLOPES AND ALL SLOPES STEEPER THAN 3:1; b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWING MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY SANITATION, STORM DRAINAGE, AND ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING (SEC. 5), 500 SEC. 594, TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECEPTION 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 PERMISHION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 7 SITE ANALYSIS:

TOTAL AREA OF SITE	3636 ACRES
AREA DISTURBED	1901 ACRES
AREA TO BE ROOFED OR PAVED	0.503 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.631 ACRES
TOTAL CUT	0 CU.YDS.
TOTAL FILL	0 CU.YDS.

TEMPORARY SEEDING NOTES

- Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.
- Seeded 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. per 1000 sq.ft.).
- Seeding -** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use seed.
- Mulching -** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unwetted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (9 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.
- Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded 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 dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.
- Seeding -** In March thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (14 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 50 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:
- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
 - Use seed.
 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.
- Mulching -** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unwetted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (9 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.
- Maintenance -** Inspect all seeded areas and make needed repairs, replacements and reseeds.

SEQUENCE OF CONSTRUCTION

- | | |
|---|---------|
| 1. OBTAIN GRADING PERMIT | 7 DAYS |
| 2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN | 7 DAYS |
| 3. CLEAR AND GRUB TO LIMITS OF DISTURBANCE | 4 DAYS |
| 4. INSTALL TEMPORARY SEEDING | 2 DAYS |
| 5. CONSTRUCT BUILDINGS | 60 DAYS |
| 6. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE | 14 DAYS |
| 7. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/C/S CONTROL INSPECTOR. | 7 DAYS |
| 8. INSTALL RAIN GARDENS | 2 DAYS |

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

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 Specifications**
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, silty sand. Other soils may be approved 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, silt, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-6 tons/acre (200-300 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over despatched 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 detailing fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - 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 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 disintegration of phytotoxic materials.

- 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.

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

- Topsoil Application
 - When 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, albeit 4" - 6" higher in elevation.
 - Topsoil shall be uniformly distributed to a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seedling 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 where the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

- 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 be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - 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 COM-06 28.04.6.
 - 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 coefficients 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 Soddling, MD-VIA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

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- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 6" higher in elevation.

- Topsoil shall be uniformly distributed to a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seedling 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.

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 - 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 COM-06 28.04.6.
 - 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 coefficients 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.

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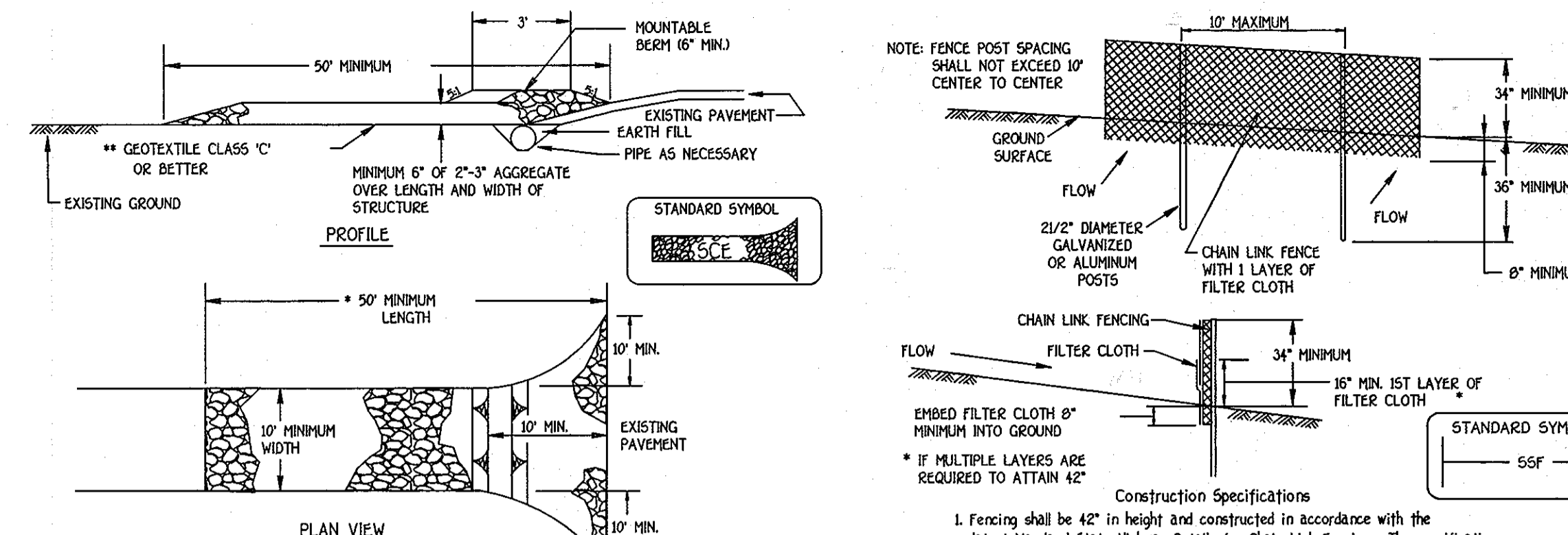
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 6" higher in elevation.

- Topsoil shall be uniformly distributed to a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seedling 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 where the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

- 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 be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - 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 COM-06 28.04.6.
 - 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 coefficients 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 Soddling, MD-VIA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.



- Length - minimum of 50' (30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- 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.
- 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.
- Surface Water - All surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 51 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

- Topsoil Application
 - When 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, albeit 4" - 6" higher in elevation.
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