

### PERMIT INFORMATION CHART

SUBDIVISION NAME GILL PROPERTY	SECTION/AREA N/A	LOT/PARCEL # PARCEL 320, LOTS 1-4
PLAT # OR L/F 17838	BLOCK # 14	ZONE R-20
TAX MAP 29	ELEC. DIST. FIFTH	CENSUS TRACT 602306
WATER CODE 1-04	SEWER CODE N/A	

PROPOSED IMPROVEMENTS:  
CONSTRUCT HOUSE, ASSOCIATED GRADING & SEDIMENT CONTROL, CONSTRUCT NOISE WALL, AND CONSTRUCT PRIVATE STORMWATER MANAGEMENT MEASURES.

### ADDRESS CHART

LOT/PARCEL NO.	STREET ADDRESS
LOT 1	11835 CLARKSVILLE PIKE
LOT 2	11839 CLARKSVILLE PIKE
LOT 3	11843 CLARKSVILLE PIKE
LOT 4	11847 CLARKSVILLE PIKE

### CURVE TABLE

CURVE	LENGTH	TANGENT	BEARING	CHORD	DELTA
C1	308.27	154.14	S56°01'34"W	308.27	00°23'59"

### MINIMUM LOT SIZE CHART

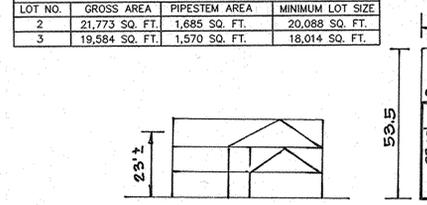
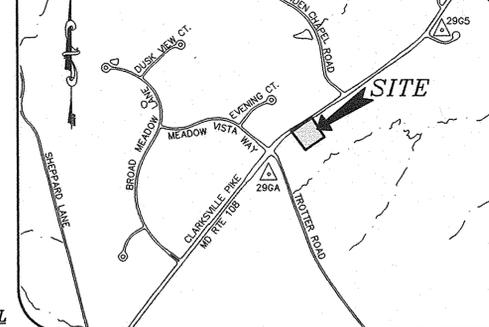
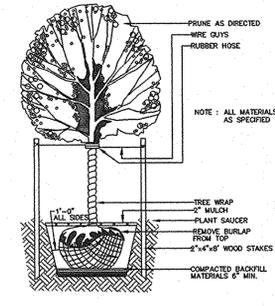
LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
2	21,773 SQ. FT.	1,685 SQ. FT.	20,088 SQ. FT.
3	19,584 SQ. FT.	1,570 SQ. FT.	18,014 SQ. FT.

### INDEX OF DRAWINGS

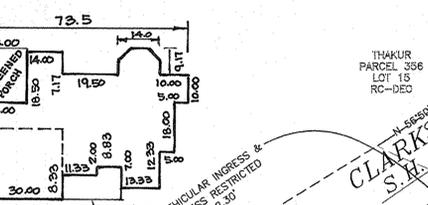
NO.	DESCRIPTION
1	SITE DEVELOPMENT, LANDSCAPE & SEDIMENT CONTROL PLAN
2	SEDIMENT CONTROL NOTES AND DETAILS
3	NOISE WALL AND STORMWATER MANAGEMENT DETAILS

### LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
11		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
8		PINUS STROBUS	WHITE PINE	6' - 8' HT.
<b>TOTAL</b>				
11 SHADE TREES & 8 EVERGREENS				



### Robinson Res. (Lot 1)



### Thurmond Res. Lot 2

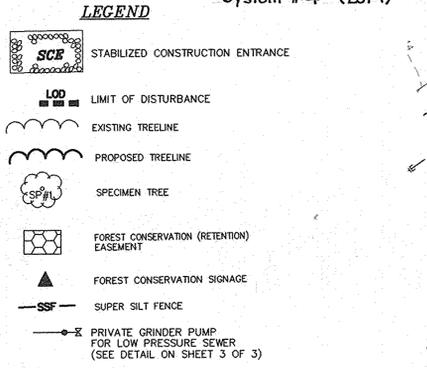


### Do Res. Lot 4



### GENERAL NOTES:

- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/2/04 COMPREHENSIVE ZONING PLAN.
- PROJECT BACKGROUND:  
TAX MAP: 29, PARCEL: 320 BLOCK: 20  
ELECTION DISTRICT: FIFTH  
ZONING: R-20  
DEED REFERENCE: L 7057, F. 36  
PROPOSED USE: SINGLE FAMILY DETACHED.  
DPZ FILES: F-03-181  
TOTAL AREA: 1.83 AC.±
- THIS PLAN IS SUBJECT TO THE AMENDED 5TH EDITION SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS AMENDED UNDER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY CS 75-2003.
- TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY PERFORMED ON OR ABOUT APRIL 2003.
- BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN & MONUMENTED SURVEY BY MILDENBERG, BOENDER & ASSOCIATES, INC. ON OR ABOUT APRIL 2003.
- HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND NAD 83 (HORZ) AND NGVD29 (VERT) AS PROJECTED FROM HOWARD COUNTY CONTROL STATIONS NO. 2411 & 2413 (ALL UNITS IN FEET).  
STA. No. 296A E 566,867.462 ELEV. 450.749  
E 1,333,325.606  
STA. No. 2965 E 568,341.209 ELEV. 388.133  
E 1,335,392.473
- THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED. LOTS 1-4 WILL BE SERVED UNDER CONTRACTS # W-8178 & 34-4166-D.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- 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) 343-3333  
BALTIMORE GAS & ELECTRIC (410) 685-0123  
STATE HIGHWAY ADMINISTRATION (410) 531-5533  
HOWARD COUNTY DEPT. OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION (410) 313-1880
- IN ACCORDANCE WITH SECTION 125 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 SETBACK.
- ALL EXISTING STRUCTURES ON PARCEL 320 TO BE REMOVED UNLESS OTHERWISE NOTED.
- NO STEEP SLOPES EXISTS, WETLANDS, OR FLOODPLAINS EXISTING ON SITE, AS CERTIFIED BY MILDENBERG, BOENDER & ASSOCIATES ON OR ABOUT APRIL 2003.
- LANDSCAPING FOR LOTS 1 THRU 4 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY ZONING MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE GRADING PERMITS FOR LOT 1 (3 SHADE TREES & 4 EVERGREENS) IN THE AMOUNT OF \$1,500.00, LOT 2 (2 SHADE TREES) IN THE AMOUNT OF \$600.00, AND LOT 4 (6 SHADE TREES & 4 EVERGREENS) IN THE AMOUNT OF \$2,400.00.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HERETHWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL OF THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION HAVE BEEN FULFILLED BY RETENTION OF 0.26 ACRES AND BY PAYMENT OF FEE-IN-LIEU OF RESTORATION OF 0.64 ACRES (27,878.4 SQ. FT.) IN THE AMOUNT OF \$13,939.20. FOREST CONSERVATION REQUIREMENTS ADDRESSED UNDER F-03-181.
- SOILS DATA BASED ON HOWARD COUNTY SOIL SURVEY DATED JULY 1968, SHEET 23.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES FOR THE FOLLOWING MINIMUM REQUIREMENTS:  
A) WIDTH - 12 FEET (14 FEET SERVING MORE THAN ONE RESIDENCE).  
B) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.  
C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45-FOOT TURNING RADIUS.  
D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).  
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.  
F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.  
G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- NON-CROWN-ROOTED TREES TO BE EXCLUDED FROM ADDRESS-STORMWATER MANAGEMENT REQUIREMENTS.
- NOISE WALL CONSTRUCTION SHALL COMMENCE UPON SIGNATURE APPROVAL OF SITE DEVELOPMENT PLAN AND ISSUANCE OF GRADING PERMIT. NOISE WALL SHALL BE OWNED AND MAINTAINED BY HOME OWNERS ASSOCIATION.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY.
- THE 65 dBA NOISE CONTOUR LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992 AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65 dBA NOISE EXPOSURE. THE 65 dBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT EXCEED GENERALLY DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.



### DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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 BECOMING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

*Donald R. Reuben, Jr. Resident* 7-18-05  
DATE

### ENGINEER'S CERTIFICATE

FOR EROSION AND SEDIMENT CONTROL REPRESENTS THIS PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE NATURAL RESOURCE CONSERVATION SERVICE.

*R. JAGOB HIKMAT* 7/19/05  
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Jim Maynard* 10-5-05  
DATE

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

*John R. Robinson* 10-5-05  
DATE

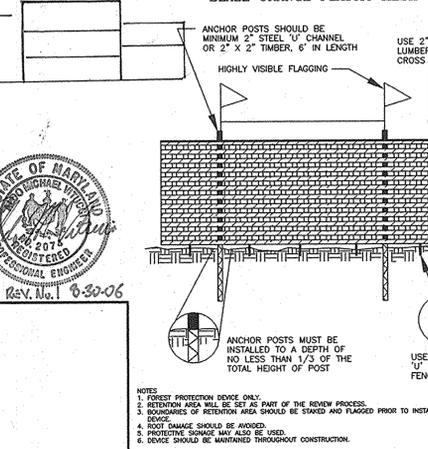
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT-ENGINEERING DIVISION  
*Chris Harnett* 11/1/05  
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT  
*Mark D. Laughlin* 11/1/05  
DATE

DIRECTOR

### PROTECTIVE FENCE DETAIL



### SCHEDULE A: PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAY				ADJACENT TO PERIMETER PROPERTIES				TOTAL
	B (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	A (PERIMETER 3)	A (PERIMETER 4)	A (PERIMETER 3)	A (PERIMETER 4)	
LANDSCAPE TYPE	B (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	A (PERIMETER 3)	A (PERIMETER 4)	A (PERIMETER 3)	A (PERIMETER 4)	
LINEAR FEET OF PERIMETER	308.27 LF	283.70 LF	306.64 LF	310.81 LF					
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	N/A	YES, 155 LF OF EX. TO REMAIN	YES, 306.64 LF OF EX. TO REMAIN	YES, 140.10 LF OF EX. TO REMAIN					N/A
NUMBER OF PLANTS REQUIRED	6 SHADE TREES 8 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	11 SHADE TREES 8 EVERGREEN TREES 0 SHRUBS				
CREDIT FOR EXISTING VEGETATION	N/A	N/A	N/A	N/A					
NUMBER OF PLANTS PROVIDED	6 SHADE TREES 8 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	11 SHADE TREES 8 EVERGREEN TREES 0 SHRUBS				
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	0 SHRUBS								

DATE	DESCRIPTION
JUL 2005	engineering
03-085	illustration
MAP/MAT	approval
7-18-05	date

by FCC, Inc.  
Rev. Use, grad. lot 1 to show ex. cond.  
no. 1

GILL PROPERTY  
LOTS 1 THRU 4  
TAX MAP 29 - GRID 20 - PARCEL 320  
HOWARD COUNTY, MARYLAND  
FIFTH ELECTION DISTRICT  
SITE DEVELOPMENT PLAN

MILDENBERG & ASSOC., INC.  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0298 Fax  
(301) 621-5521

**HOWARD SOIL CONSERVATION DISTRICT**

**PERMANENT SEEDING NOTES**

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

SEEDBED 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 ACRES DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.)
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR 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 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (07 LBS./1000 SQ.FT.) FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOO. OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

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

MAINTENANCE - INSPECT ALL 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.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR 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 (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (07 LBS./1000 SQ.FT.) FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 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 SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEEED FREE SMALL GRAIN 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 (8 GAL/1000 SQ.FT.) FOR ANCHORING.

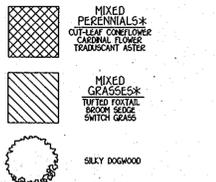
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

**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 MAY 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: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, Dikes, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 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 (SEC.51), SOO (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE:	1.83	ACRES
AREA DISTURBED:	1.62	ACRES
AREA TO BE ROOFED OR PAVED:	0.40	ACRES
AREA TO BE VEGETATIVELY STABILIZED:	1.22	ACRES
TOTAL CUT:	2000	CU. YDS.
TOTAL FILL:	2000	CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	N/A	

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITY MEASUREMENTS.



**BIORETENTION FILTER PLANTING DETAIL**

**PRIVATE BIORETENTION 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 CONSIDER 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.

- 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 DETECTION OF PERMETER 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 MADE.
- 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 AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CONCRETES, 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 BERMUDA GRASS, QUACKGRASS, JOHNSON-SON 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 (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0.0 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 PERSORBED 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 DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

**TOPSOIL APPLICATION**

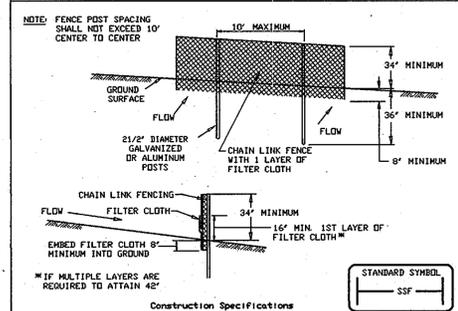
- WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DICES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
- TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL 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 SEEDBED 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 PERMITTED (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 PHOSPHOROUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
    - 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 SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

**TEMPORARY DUST CONTROL MEASURES**

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
- VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS APCHED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
- BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

**DETAIL 33 - SUPER SILT FENCE**



- Fencing shall be 42" in height and constructed in accordance with the specification for the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" 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 buildups removed when "buttes" 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:
 

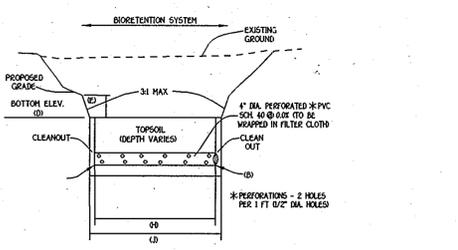
Tensile Strength	50 lbs/in (min.)	Test: HSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: HSMT 509
Flow Rate	0.3 gal/Pst/minute (max.)	Test: HSMT 382
Filtering Efficiency	75% (min.)	Test: HSMT 382

**SUPER SILT FENCE**

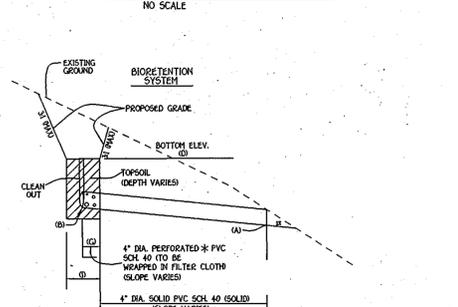
Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 Feet	1,500 Feet
20 - 33%	5:1 - 3:1	100 Feet	1,000 Feet
33 - 50%	3:1 - 2:1	100 Feet	500 Feet
50% +	2:1 +	50 Feet	250 Feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 11-29-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

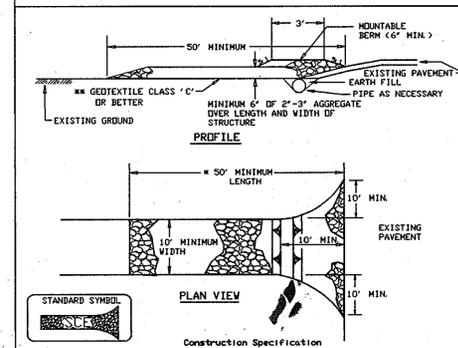
**PROFILE ALONG 4" PVC UNDERDRAIN**



**PROFILE ALONG 4" PVC OUTLET**



**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**



- 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. #4 pipe 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 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 7-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

QUANTITY	NAME	MAXIMUM SPACING (FT.)
25	MIXED PERENNIALS	1 FT.
25	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

WATERING FILTER	A	B	C	D	E	F	G	H	I	J
1	422.00	422.50	422.50	425.00	425.50	34	4.0	6.0	8.0	10.0
2	48.00	48.50	48.50	48.50	48.50	34	5.0	10.0	10.0	20.0
4	430.00	430.00	430.00	430.00	430.00	35	3.5	6.0	7.0	10.0

**DEVELOPERS CERTIFICATE**

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESTRICTION OR 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 NATURAL RESOURCE CONSERVATION SERVICE.

**W.M. PRESIDENT ELIOTT CITY LAND HOLDING, INC.** 7-18-05  
 SIGNATURE OF DEVELOPER DATE

**DONALD R. REHNER JR. PRESIDENT**  
 PRINTED NAME OF DEVELOPER

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS AN ENGINEERING AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONSTRUCTION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

**JACOB NIKMA** 7/19/05  
 SIGNATURE OF ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

**John Robinson** 10-5-05  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

**10/1/06** DATE  
**12/1/06** DATE  
**12/1/06** DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

date JUL 2005  
 project 03-015  
 illustration engineering  
 MAP/MMT  
 scale approval  
 AS SHOWN R/H

description  
 revisions

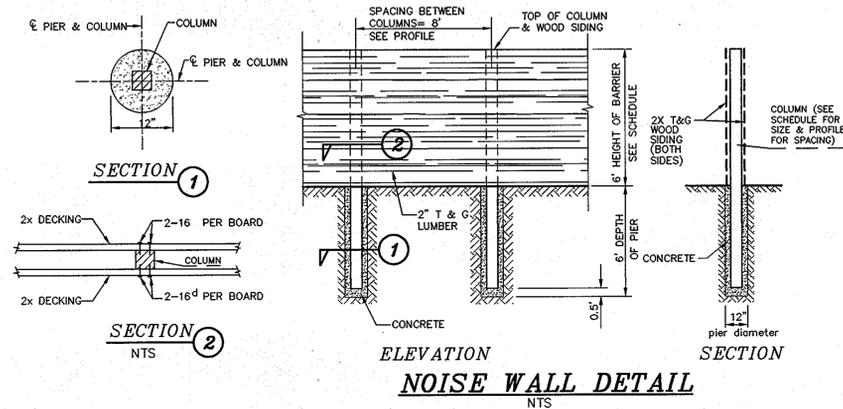
date

no.

GILL PROPERTY  
 TAX MAP 29 - GRID 20 - PARCEL 320  
 HOWARD COUNTY  
 FIFTH ELECTION DISTRICT  
 SEDIMENT AND EROSION CONTROL DETAILS

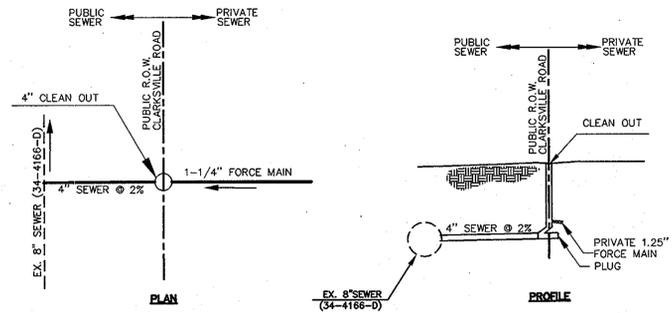
MILDENBERG & ASSOC., INC.  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0696 Fax: (410) 997-0288

2 OF 3

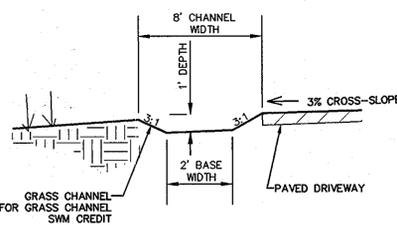


NOTE: THE PROPOSED NOISE WALL IS PRIVATELY OWNED AND SHALL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION. THE NOISE WALL SHALL BE INSPECTED AND REPAIRED AS NECESSARY AT A MINIMUM OF ONCE PER YEAR.

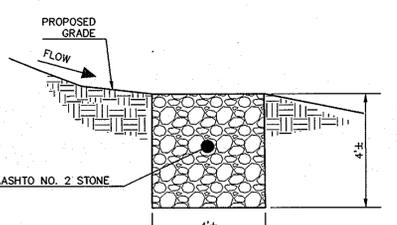
- NOTES:
- GENERAL:
    - HEIGHT OF BARRIER SHALL BE BASED ON ACOUSTIC REQUIREMENTS.
    - BARRIER WALLS HAVING A HEIGHT (H) NOT INDICATED IN THE TABLES SHALL BE CONSTRUCTED AS SHOWN IN THE HIGHER HEFT CATEGORY.
  - SIDING:
    - 2X WOOD DECKING MATERIAL SHALL BE UTILIZED TO SPAN HORIZONTALLY BETWEEN POSTS. DESIGN CRITERIA IS BASED ON AN ALLOWABLE BENDING STRESS OF 1400 LBS. PER SQ. IN. AND A 33 1/3% INCREASE IN STRESS FOR WIND LOADS AS CONSIDERED APPROPRIATE. DECKING SHALL BE MOIS.
    - SIDING IN CONTACT WITH THE GROUND AND FOR A DISTANCE OF 6" ABOVE GRADE SHALL BE TREATED WITH WOOD PRESERVATIVE.
  - POST:
    - WOOD POST SHALL BE UTILIZED AT THE SPACING INDICATED ON THE SCHEDULE. DESIGN CRITERIA IS BASED ON AN ALLOWABLE BENDING STRESS OF 1400 LBS. PER SQ. IN. AND A 33 1/3% INCREASE FOR WIND LOAD.
    - POST EMBEDDED IN CONCRETE SHALL BE TREATED WITH A WOOD PRESERVATIVE IN THE AREA OF EMBEDMENT AND 12" ABOVE GRADE.
  - CONCRETE:
    - CONCRETE IN THE PIERS SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 LBS. PER SQ. IN.
    - CONCRETE SHALL BE PLACED IN DRILLED PIERS UTILIZING THE EARTH AS THE FORMS.
  - FOUNDATIONS:
    - THE DRILLED PIERS HAVE BEEN DESIGNED UTILIZING AN ALLOWABLE PASSIVE PRESSURE OF 300 LBS. PER SQ. FT. AND THE FOLLOWING FORMULA:  $D = \frac{(1.55M)^{1/2}}{P}$
    - M = MOMENT AT TOP OF DRILLED PIER (FT/LBS)
    - P = ALLOWABLE PASSIVE PRESSURE (300 LBS PER SQ.FT.)
    - D = DIAMETER OF PIER (FT.)
    - D = DEPTH OF PIER (FT.)
  - ALTERNATIVE #1 (PRESERVATIVE TREATMENT) ALTERNATIVE #1 REPRESENTS THE ADDITIONAL COST FACTOR FOR TREATING THE BASIC WOOD STRUCTURE INDICATED ON THIS REFERENCE PLAN. THE NECESSITY FOR TREATMENT AND THE TYPE OF PRESERVATIVE WILL BE SUBJECT TO LOCAL CONDITIONS. ALL TREATMENTS SHALL CONFORM TO ANPA STD C-14.
  - ALTERNATIVE #2 (PAINTING) ALTERNATIVE #2 REPRESENTS THE ADDITIONAL COST FACTOR REQUIRED TO PAINT ONE SIDE OF THE BASIC WOOD STRUCTURE SHOWN ON THIS REFERENCE PLAN. PAINTING SHALL CONSIST OF 3 APPLICATIONS OF PAINT. 2 COATS OF LATEX BASE PAINT CONFORMING TO FEDERAL SPECIFICATION T1-P-009996 SHALL BE APPLIED OVER PRIMER COAT CONFORMING TO FEDERAL SPECIFICATION T1-P-00250.
  - ALTERNATIVE #3 (STAINING) ALTERNATIVE #3 REPRESENTS THE ADDITIONAL COST FACTOR REQUIRED TO STAIN ONE SIDE OF BASIC WOOD STRUCTURE. STAIN SHALL CONSIST OF 2 COATS OF SEMI-TRANSPARENT SEALER STAIN APPLIED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.



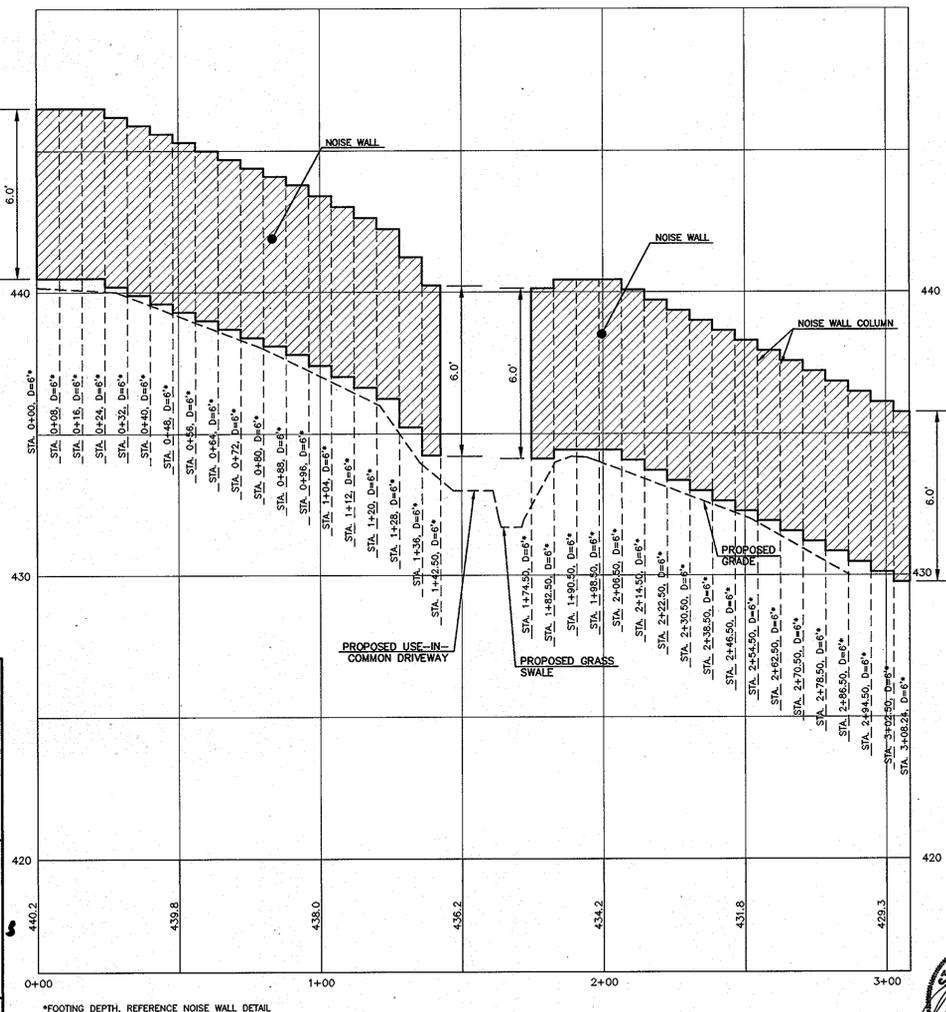
PRIVATE SHC CLEAN-OUT DETAIL FOR PRIVATE LOW PRESSURE SEWER AT PUBLIC RIGHT-OF-WAY NTS



GRASS CHANNEL DETAIL NTS



LEVEL SPREADER DETAIL NTS



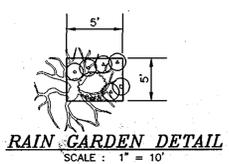
NOISE WALL PROFILE

HORZ. SCALE: 1"=30'  
VERT. SCALE: 1"=3'

PLANT LIST

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
1	○	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2-1/2" - 3" CAL.
1	○	ILEX GLABRA	INK BERRY	2' - 3' HT.
3	○	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	1 GAL. CONTAINER
2	○	ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL. CONTAINER
1	○	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER

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



RAIN GARDEN DETAIL SCALE: 1" = 10'

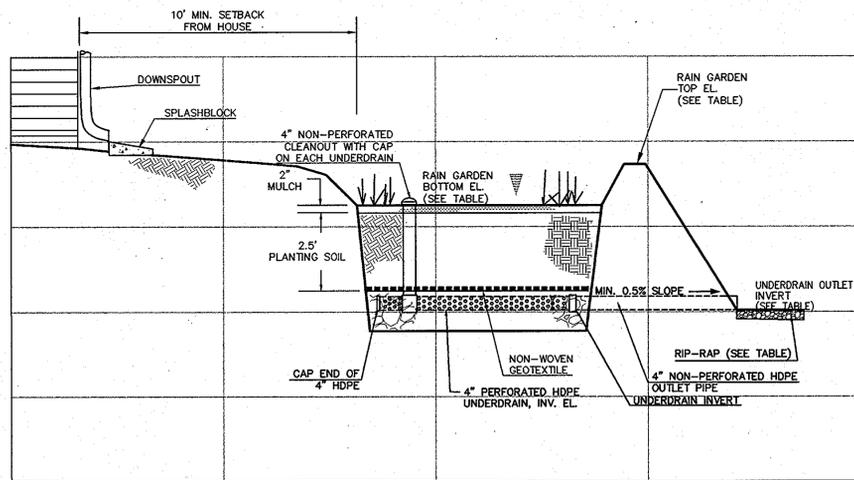
OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDENS

- 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 CONSIDERED 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.

RAIN GARDEN DESIGN DATA

RAIN GARDEN #	RAIN GARDEN TOP EL.	RAIN GARDEN BOTTOM EL.	UNDERDRAIN INVERT EL.	UNDERDRAIN OUTLET INVERT EL.	MAX. PONDING DEPTH	RIP-RAP* DIMENSIONS
						Lg W T
1	434.0	433.5	431.0	430.0	6"	3' 2' 6"
2	431.5	431.0	427.9	427.8	6"	3' 2' 6"
3	426.0	425.5	422.4	422.2	6"	3' 2' 6"
4	422.0	421.5	418.4	418.3	6"	3' 2' 6"
5	420.0	419.5	416.4	416.3	6"	3' 2' 6"
6	420.0	419.5	416.4	416.3	6"	3' 2' 6"

\* USE AASHTO NO. 2 STONE



TYPICAL RAIN GARDEN PROFILE NTS

DEVELOPER'S CERTIFICATE

I 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 THIS PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: DONALD B. REWDER JR. PRESIDENT  
DATE: 7-18-05

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS THE BEST PRACTICES AVAILABLE FOR THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: JACOB HILMANT  
DATE: 7/19/05

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
DATE: 10/1/05

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature]  
DATE: 12/1/05

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature]  
DATE: 12/1/05

DIRECTOR: [Signature]



FOR REV. No. 1 8-30-06

1	Rev. Rain Garden Chart by FCC, Inc.	8-29-06
No	REVISION	Date

project	03-015	date	JUL 2005
illustration	MAP/MNT	engineering	MAP
scale	1"=30'	approval	RH

description	revisions	date

GILL PROPERTY  
TAX MAP 29 - GRID 20 - PARCEL 320  
TAX MAP 38, PARCEL 141, LOT 4  
HOWARD COUNTY, MARYLAND  
FIFTH ELECTION DISTRICT  
NOISE WALL, SWM & LOW PRESSURE SEWER DETAILS

MILDENBERG & ASSOC., INC.  
Boender & Assoc., Inc. Surveyors  
Engineers Planners  
5072 Dorsey Hill Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0296 Fax. (301) 821-5521 Wash. (410) 997-0298 Fax.