

NO.	TITLE
1	COVER SHEET
2	HOUSE TEMPLATES AND ELEVATIONS
3	SITE DEVELOPMENT PLAN
4	SITE DEVELOPMENT PLAN NOTES AND DETAILS
5	EROSION AND SEDIMENT CONTROL PLAN
6	INDIVIDUAL LOT CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN
7	EROSION AND SEDIMENT CONTROL NOTES & DETAILS
8	SIGHT DISTANCE ANALYSIS PLAN
9	BIORETENTION PLANTING PLAN
10	BIORETENTION PLANTING NOTES AND DETAILS
11	TRAFFIC CONTROL PLAN

LOT NO.	ADDRESS
1	6005 JERRY'S DRIVE
2	10507 HICKORY GLEN DRIVE
3	10511 HICKORY GLEN DRIVE
4	10515 HICKORY GLEN DRIVE
5	10510 HICKORY GLEN DRIVE
6	10502 HICKORY GLEN DRIVE
7	10502 HICKORY GLEN DRIVE

LOT NO.	SHC INV. PROPERTY LINE	HO. CO. DETAIL NO.	SLOPE (%)	MIN. CELLAR ELEVATION
1	407.80	DETAIL S2.12	2	410.23
2	408.48	DETAIL S2.12	2	410.13
3	409.48	DETAIL S2.12	2	411.12
4	410.37	DETAIL S2.12	2	411.39
5	410.53	DETAIL S2.12	2	412.34
6	404.52	DETAIL S2.12	2	411.33
7	408.37	DETAIL S2.12	2	410.38

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" AND MSHA STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 318-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK, THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF HIGHWAYS AT (410) 318-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION ON COUNTY ROADS FOR LAYING WATER AND SEWER MAINS OR HOUSE CONNECTIONS.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-267-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE PER HOWARD COUNTY RECORDS.
- PUBLIC WATER AND SEWER IN JERRY'S DRIVE PROVIDED BY CONTRACT # 44-3182(WATER) AND #20-3363(SEWER). PROPOSED WATER AND SEWER TO THE LOTS WILL BE PROVIDED IN ACCORDANCE WITH SECTION 16.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME. A PUBLIC WATER AND SEWER PLAN WAS SUBMITTED TO THE DEVELOPMENT ENGINEERING DIVISION FILE NUMBER 24-6262 AND APPROVED ON FEBRUARY 25, 2007.
- THIS SITE IS LOCATED IN THE LITTLE PATUXENT WATERSHED.
- ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH AASHTO T-100 - STANDARD.
- CONTRACTOR SHALL MAINTAIN ALL SEDIMENT CONTROL DEVICES WITHIN THE LIMITS OF THE SITE DURING CONSTRUCTION OF THE SITE IMPROVEMENTS. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AS MAY BE NECESSARY DURING CONSTRUCTION AND/OR BY GOVERNING AGENCIES.
- PER FEMA MAPS 24044033B DATED DECEMBER 04, 1986, THIS SITE IS NOT LOCATED WITHIN THE 100 YR FLOODPLAIN. PER THE HOWARD COUNTY BUREAU OF ENVIRONMENTAL SERVICES, THIS SITE IS NOT LOCATED IN THE 100-YR FLOODPLAIN.
- THERE ARE NO EXISTING WETLANDS ON SITE.
- THERE ARE NO STEEP SLOPES OR HIGHWAY ERODIBLE SOILS ON THIS SITE. THE TOPOGRAPHY IS BASED ON A FIELD RUN SURVEY COMPLETED BY CHRISTOPHER CONSULTANTS IN MAY 2005.
- THERE ARE NO KNOWN CEMETERIES OR BURIAL GROUNDS ON THIS SITE. HOWEVER, UPON DISCOVERY OF ANY EVIDENCE OF BURIAL OR GRAVES THE DEVELOPER SHALL BE SUBJECT TO SECTION 16.122 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES LOCATED ON SITE.
- ALL ADJACENT PROPERTIES ARE RESIDENTIAL USES.
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE COMPREHENSIVE ZONING PLAN (04/12/2004).
- THE TOPOGRAPHY AND SITE BOUNDARY HERE PREPARED BY CHRISTOPHER CONSULTANTS IN MAY 2005.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. MONUMENT NUMBERS 306A AND 36DA WERE USED FOR THIS PROJECT (NAD 83/94).
- CONTRACTOR SHALL VERIFY SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND TEST PIT ALL UTILITIES, INCLUDING PROPOSED TIE IN LOCATIONS, AT LEAST 5 WORKING DAYS PRIOR TO STARTING ANY WORK ON THESE DRAWINGS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IN ADVANCE OF CONSTRUCTION START.
- THE CONTRACTOR SHALL INSURE THAT CURRENT AS-BUILT RECORDS ARE MAINTAINED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION, CERTIFIED (I.E. P.E. STAMPED) AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER.
- WATER QUALITY FOR THIS SITE HAS BEEN PROVIDED ON A LOT BY LOT BASIS AND WILL BE ACHIEVED THROUGH THE USE OF GRASS SWALES, BIORETENTION, AND VARIOUS COMBINATIONS OF THESE DEVICES. THE ROAD WILL BE TREATED USING A DRY SWALE. ALL DEVICES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2000 HDE STORMWATER DESIGN MANUAL.
- THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE, AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED PERIMETER PLANTINGS IN THE AMOUNT OF \$10,200 WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT UNDER F-05-145 (28 SHADE TREES AND 12 EVERGREEN TREES) IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. BIORETENTION PLANTINGS WILL BE INCLUDED UNDER THE STORMWATER MANAGEMENT BOND, WHICH IS PART OF THIS SDP. PLANT UNITS HAVE BEEN INCLUDED IN THE ENGINEERING COST ESTIMATE.
- A FEE-IN-LIEU WILL BE PAID INSTEAD OF PROVIDING FULL RIGHT-OF-WAY IMPROVEMENTS. THIS PLAN IS SUBJECT TO THE CONDITIONS OF APPROVED PETITION WP-05-145 APPROVED AUGUST, 2005 BY THE DIRECTOR OF THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. PAYMENT OF A FEE-IN-LIEU FOR THE REQUIRED ROAD IMPROVEMENTS IS REQUIRED FOR THE STREET LIGHTS, STREET TREES, SIDEWALKS AND PAVING SECTION FOR THE PUBLIC ROAD FRONTAGE OF THE SUBJECT PROPERTY ALONG JERRY'S DRIVE. PAYMENT OF THE FEE-IN-LIEU SHALL BE PROVIDED AND PLACED IN AN APPROPRIATE ACCOUNT DESIGNATED BY THE DEVELOPMENT ENGINEERING DIVISION WITH THE PROCESSING OF F-05-145. THEREFORE THIS SITE IS NOT SUBJECT TO:
  - SECTION 16.122(a)(2)(i)(c) - WHICH REQUIRES THE CONSTRUCTION OF ROAD IMPROVEMENTS ON ONE SIDE OF A COUNTY ROAD
  - SECTION 16.126 - WHICH REQUIRES STREET TREES TO BE PLANTED
  - SECTION 16.125(a) - WHICH REQUIRES STREET LIGHTS TO BE INSTALLED
  - SECTION 16.124(a)(1)(i) - WHICH REQUIRES SIDEWALKS TO BE CONSTRUCTED
- ON 08/17/05 THE HOWARD COUNTY PLANNING DIRECTOR APPROVED WP-05-145 WHICH MAILED SECTION 16.122 (a)(1)(iv) WHICH REQUIRES ROAD IMPROVEMENTS, SECTION 16.124 WHICH REQUIRES THE CONSTRUCTION OF SIDEWALKS ALONG THE PUBLIC RIGHT-OF-WAY, SECTION 16.126 WHICH REQUIRES THE DEVELOPER TO PROVIDE STREET TREES AND SECTION 16.125 WHICH REQUIRES THE DEVELOPER TO PROVIDE STREET LIGHTS. PAYMENT OF A FEE-IN-LIEU OF PROVIDING THE REQUIRED ROAD IMPROVEMENTS SHALL BE PROVIDED AND PLACED IN AN APPROPRIATE ACCOUNT DESIGNATED BY THE DEVELOPMENT ENGINEERING DIVISION WITH THE PROCESSING OF F-05-145.
- ASSOCIATED PLANS: BASSLER SUBDIVISION (PLAT BOOK # 1910 72) FINAL PLAN F-05-145 SUBMITTED JUNE 27, 2005 (RECORDED ON MARCH 29, 2007) (PLAT # 19160) FINAL PLAN F-05-145 SUBMITTED JUNE 27, 2005 (RECORDED ON MARCH 29, 2007) (PLAT # 19160) MAVER PETITION WP-05-145 SUBMITTED JUNE 27, 2005, APPROVED AUGUST 17, 2005
- EXISTING STRUCTURES ON BASSLER LOTS 16 AND 17 WILL BE DEMOLISHED PRIOR TO BEGINNING ANY WORK ASSOCIATED WITH THESE PLANS. THE STRUCTURES ARE ONLY SHOWN FOR STORMWATER MANAGEMENT DESIGN PURPOSES ONLY.
- CONTRACTOR TO PROVIDE SIGNAGE AND TRAFFIC CONTROL DEVICES FOR JERRY'S DRIVE AS NECESSARY TO PREVENT PUBLIC ACCESS TO ROAD DURING CONSTRUCTION.
- DEVELOPER RESERVES UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE AND OTHER PUBLIC UTILITIES LOCATED IN, ON, OVER AND THROUGH LOTS/PARCELS, ANY CONVEYANCES OF THE FORESAID LOTS/PARCELS SHALL BE SUBJECT TO THE EASEMENTS HEREIN RESERVED, WHETHER OR NOT EXPRESSLY STATED IN THE DEED(S) CONVEYING SAID LOT(S) / PARCELS. DEVELOPER SHALL EXECUTE AND DELIVER DEEDS FOR THE EASEMENTS HEREIN RESERVED TO HOWARD COUNTY WITH A FETES AND BOUNDS DESCRIPTION OF THE FOREST CONSERVATION AREA. UPON COMPLETION OF THE PUBLIC UTILITIES AND THEIR ACCEPTANCE BY HOWARD COUNTY, AND IN THE CASE OF THE FOREST CONSERVATION EASEMENT(S), UPON COMPLETION OF THE DEVELOPER OBLIGATIONS UNDER THE FOREST CONSERVATION INSTALLATION AND MAINTENANCE AGREEMENT EXECUTED BY THE DEVELOPER AND THE COUNTY, AND THE RELEASE OF DEVELOPER'S SURETY POSTED WITH SAID AGREEMENT, THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEED(S) OF EASEMENT IN THE LAND RECORDS OF HOWARD COUNTY.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ON THESE PLANS:
  - MISS UTILITY 1-800-267-7777
  - HOWARD COUNTY DEPT. BUREAU OF UTILITIES (410) 318-4900
  - BALTIMORE GAS AND ELECTRIC COMPANY CONTRACTOR SERVICES (410) 950-4620
  - BALTIMORE GAS AND ELECTRIC COMPANY UNDERGROUND DAMAGE CONTROL (410) 787-4068
  - VERIZON 1-800-446-5266
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS AS NECESSARY TO GRADE THE SITE AND COMPLETE ANY REQUIRED EXCAVATIONS.
- IN ACCORDANCE WITH SECTION 126 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16' IN WIDTH MAY PROJECT NOT MORE THAN 4' INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT MORE THAN 10' INTO THE FRONT OR REAR YARD SETBACKS.
- THE FOREST CONSERVATION OBLIGATION (1.71 ACRES) FOR THIS SUBDIVISION HAS BEEN PROVIDED UNDER FINAL PLAN F-05-145, IN ACCORDANCE WITH SECTION 16.120 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL. THE FOREST CONSERVATION OBLIGATION WILL BE MET BY THE USE OF THE FRIENDSHIP LAKES FOREST MITIGATION BANK APPROVED BY SDP-02-17 AND F-03-71.

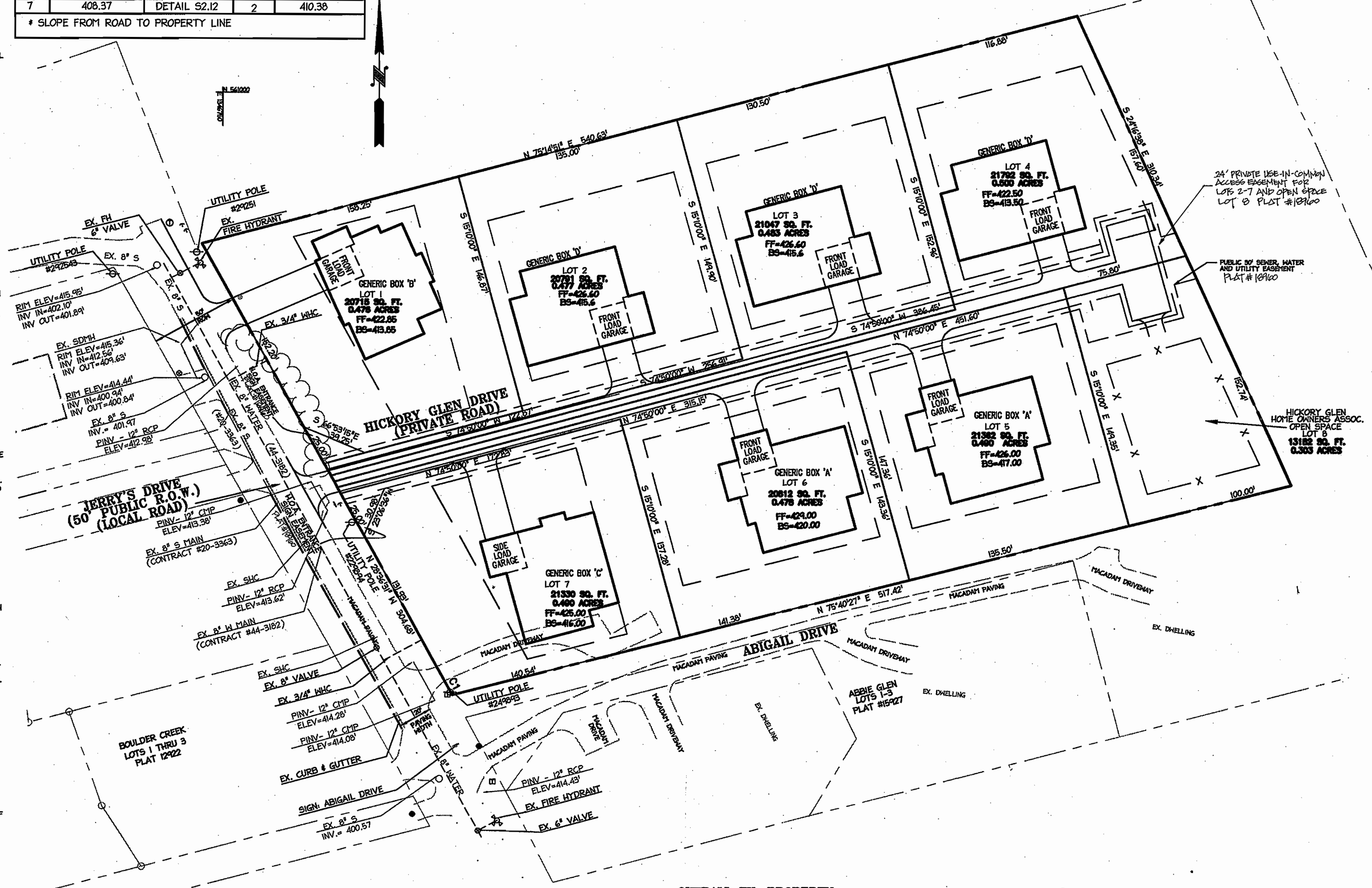
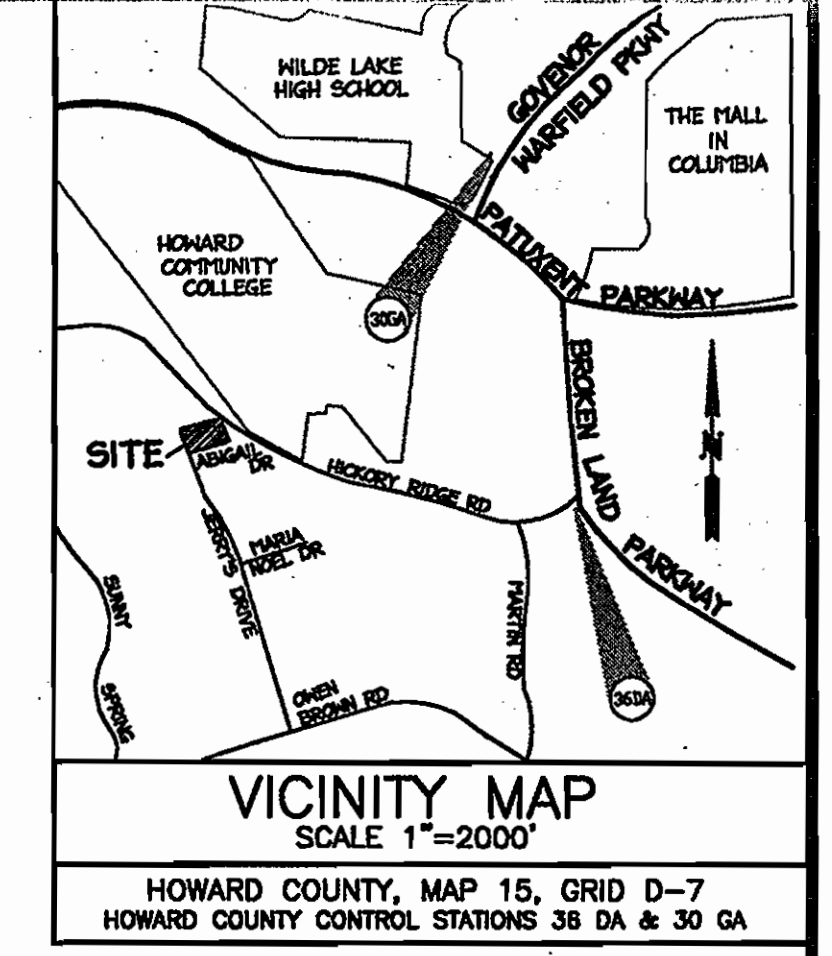
# SITE DEVELOPMENT PLAN

## HICKORY GLEN, LOTS 1-7 AND OPEN SPACE LOT 8

### OF THE EDWARD BASSLER SUBDIVISION

#### 5TH ELECTION DISTRICT

#### HOWARD COUNTY, MARYLAND



- DRIVENWAY (S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - WIDTH-12 FEET (14 FEET SERVING MORE THAN ONE RESIDENCE).
  - SURFACE-4 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
  - GEOMETRY-MAXIMUM 8% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45-FOOT TURNING RADIUS.
  - STRUCTURES (CULVERTS/BRIDGES)-CAPABLE OF SUPPORTING 25 GROSS TONS (425 LOADING).
  - DRAINAGE ELEMENTS-CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
  - STRUCTURE CLEARANCES-MINIMUM 12 FEET.
  - MAINTENANCE-SUFFICIENT TO INSURE ALL WEATHER USE.
- THIS IS A RESIDENTIAL INFILL DEVELOPMENT CREATING 10 OR FEWER LOTS. PER SECTION 16.121 (a) OPEN SPACE IS NOT REQUIRED.
- THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10-02-03 AND THE 2004 ZONING REGULATIONS EFFECTIVE 4-18-04. DEVELOPMENT OF CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, MAVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT APPLICATION.
- 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 ONTO THE PIPESTEM LOT DRIVEWAY.

**SITE ANALYSIS DATA CHART**

- GENERAL SITE DATA
  - PRESENT ZONING: R-20 RESIDENTIAL PER THE 02/02/2004 COMP. ZONING PLAN AND PER THE "CORP LITE" ZONING AMENDMENTS EFFECTIVE 07/23/06.
  - APPLICABLE DPZ FILE REFERENCES:
  - PROPOSED USE OF SITE OR STRUCTURE(S): SEVEN (7) SINGLE FAMILY DETACHED RESIDENTIAL HOUSES WITH A COMMON USE DRIVEWAY AND 1 PRIVATE DRIVEWAY.
  - PROPOSED WATER AND SEWER SYSTEMS: PUBLIC WATER & SEWER
  - PROPOSED NUMBER OF UNITS: SEVEN (7)
- AREA TABULATION
  - TOTAL PROJECT AREA: 3.69 AC.
  - AREA OF THIS PLAN SUBMISSION: 3.69 AC
  - LIMIT OF DISTURBED AREA: 3.69 AC.
  - MINIMUM LOT SIZE 20,000 S.F.
  - MINIMUM LOT WIDTH AT BELL: 60'
  - MINIMUM OPEN SPACE 6% GROSS TRACT
  - MAXIMUM BUILDING HEIGHT: 34' FOR PRIMARY STRUCTURE, 15' FOR ACCESSORY STRUCTURE REQUIRED.
- SETBACKS
 

FOR THE LOTS FRONTING JERRY'S DRIVE

FRONT: SETBACK FROM PUBLIC STREET R.O.W.: 50'

SIDE: COMMON ACCESS DRIVE: 20'

REAR: ADJACENT LOT: 30'

REMAINING LOTS THAT FRONT THE USE-IN-COMMON DRIVEWAY:

FRONT: UNITS FACING EACH OTHER ACROSS A COMMON USE DRIVEWAY: 20'

SIDE: 10'

REAR: 30'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Chris Hanks* 4/9/07  
Chief, Division of Land Development Date

*Mark D'Angelo* 4/10/07  
Chief, Development Engineering Division Date

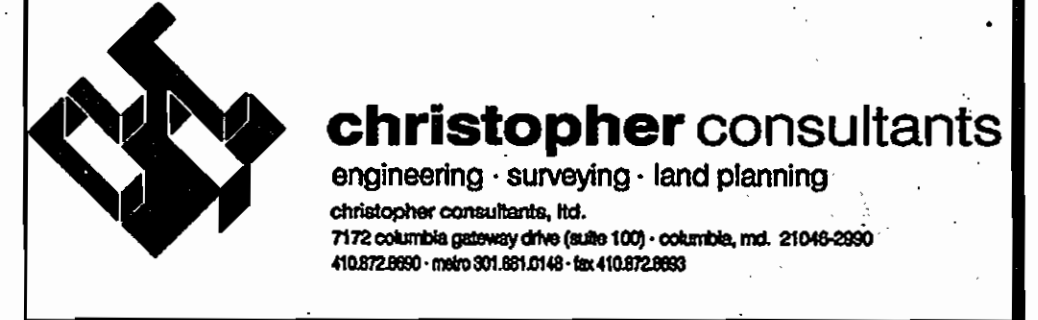
*Mark D'Angelo* 4/10/07  
Director, Department of Planning and Zoning Date

Date	No.	Revision Description
5/12/06	2	REVISED PER COUNTY COMMENTS DATED 4/29/06
11/23/05	1	REVISED PER DPZ COMMENTS DATED 10/19/05

**HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8**

**OWNER / DEVELOPER**

THE WILLIAMSBURG GROUP  
CONTACT: BOB CORBETT  
5405 HARPER'S FARMS RD., P.O. BOX 1018  
COLUMBIA, MARYLAND 21044  
TEL: (410) 997-2660 FAX (410) 997-4338



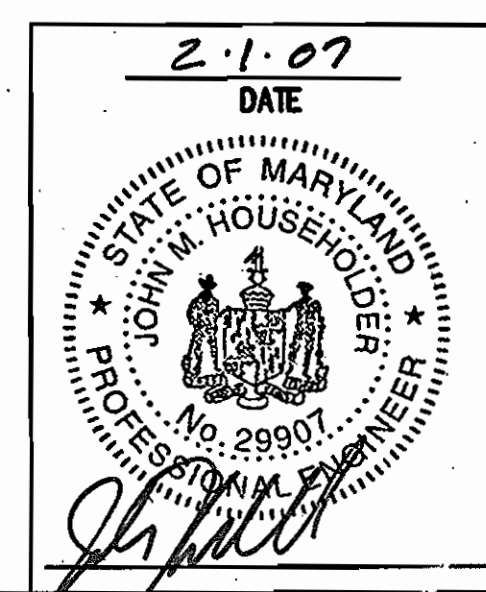
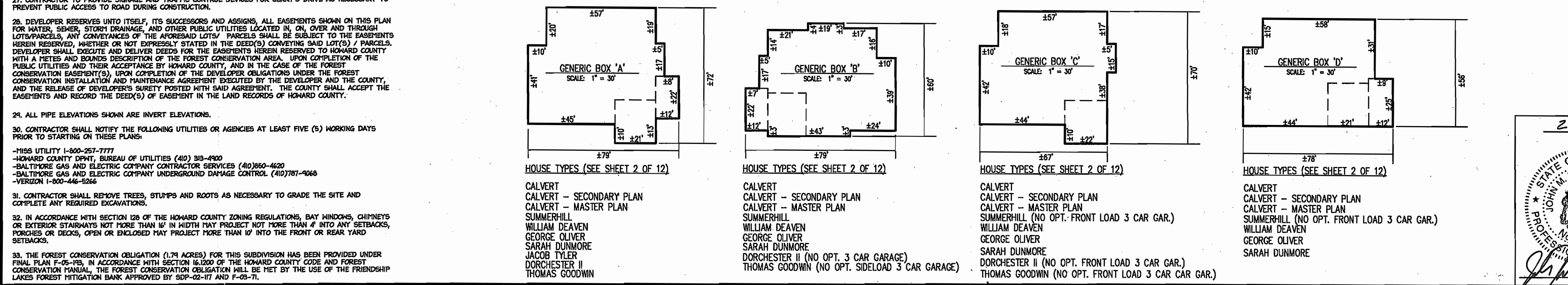
**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
HICKORY GLEN	LOTS 1-8 PVD PARCELS 179	06056.02		
PLAT NO.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
18160	12	R-20	35	5TH
WATER CODE	SEWER CODE	SDP CODE		
IE 26	PUBLIC	6325500	PUBLIC	

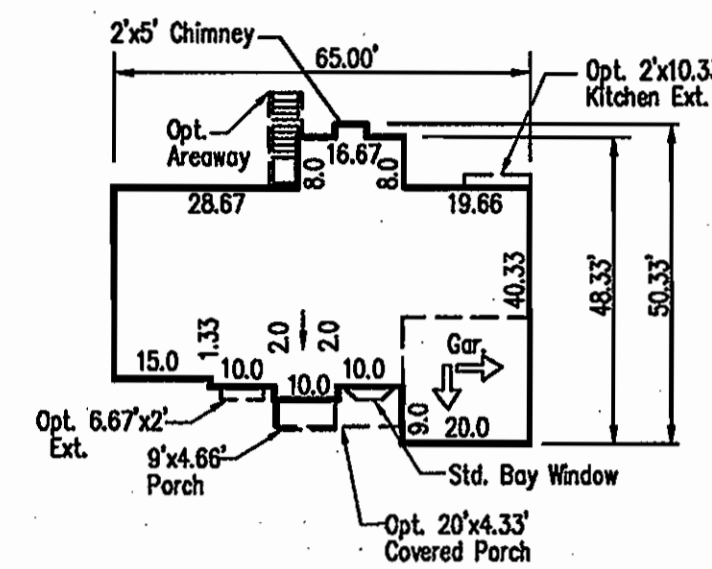
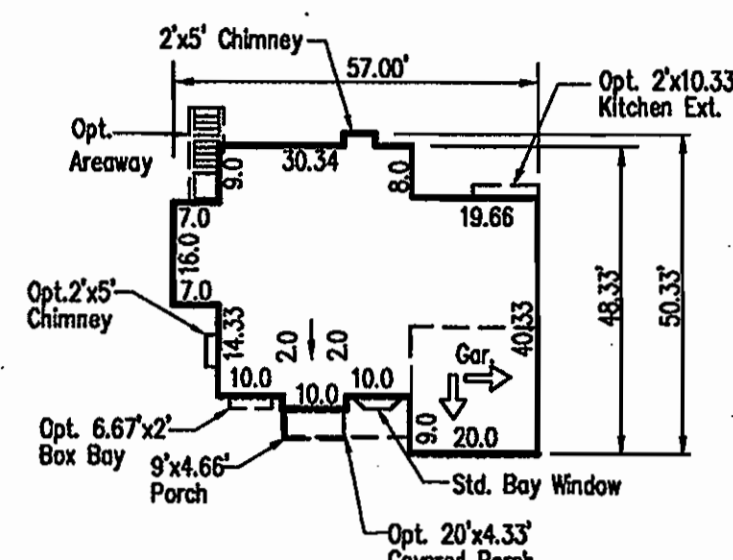
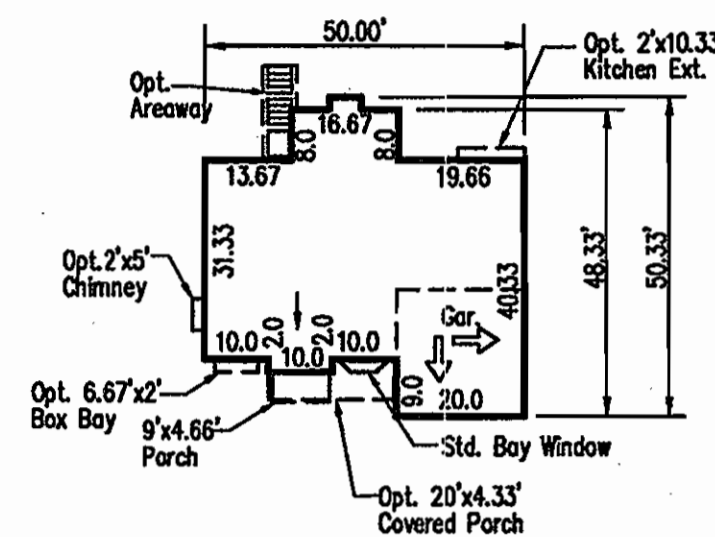
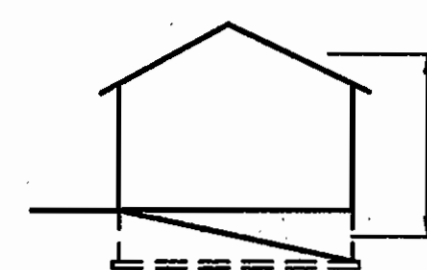
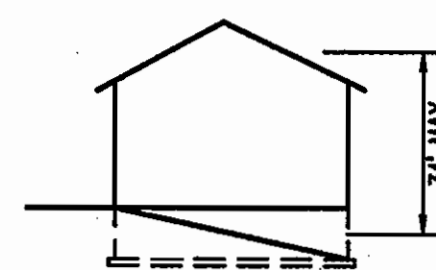
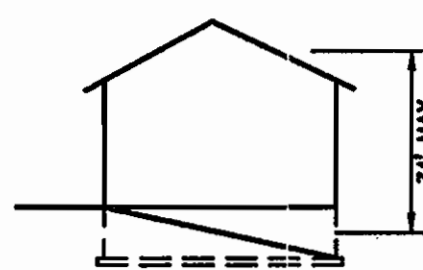
**COVER SHEET**

DESIGN:	SCALE:	PROJECT:
ENJ	AS SHOWN	056001.01
DRAWN:	DATE:	
DAM	12-19-06	
CHECKED:	APPROVED:	
JPH	<i>[Signature]</i>	

**1 OF 11**



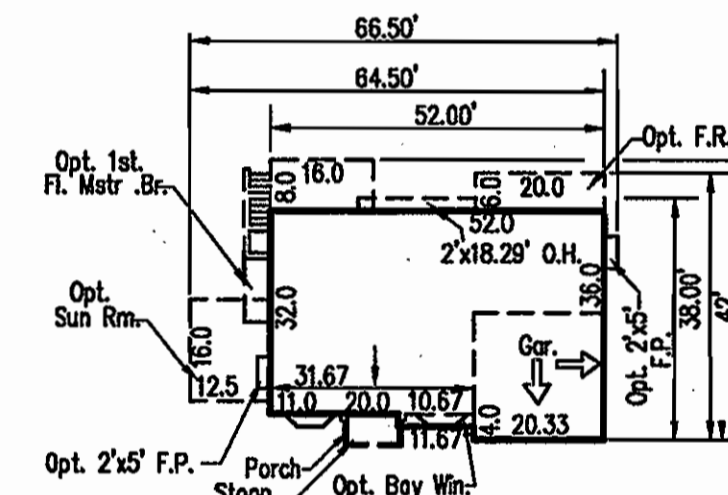
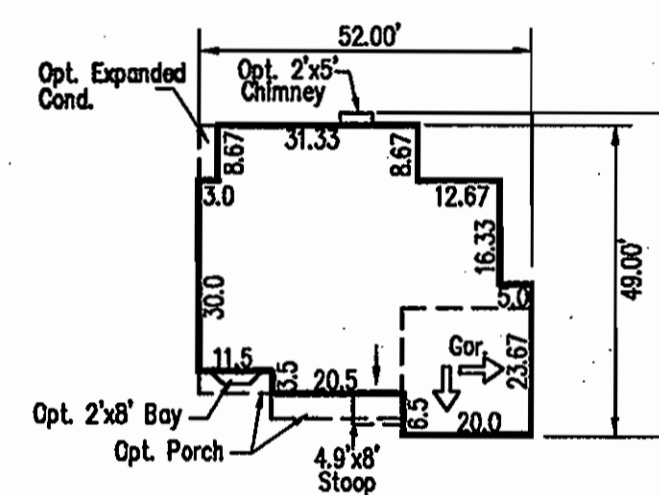
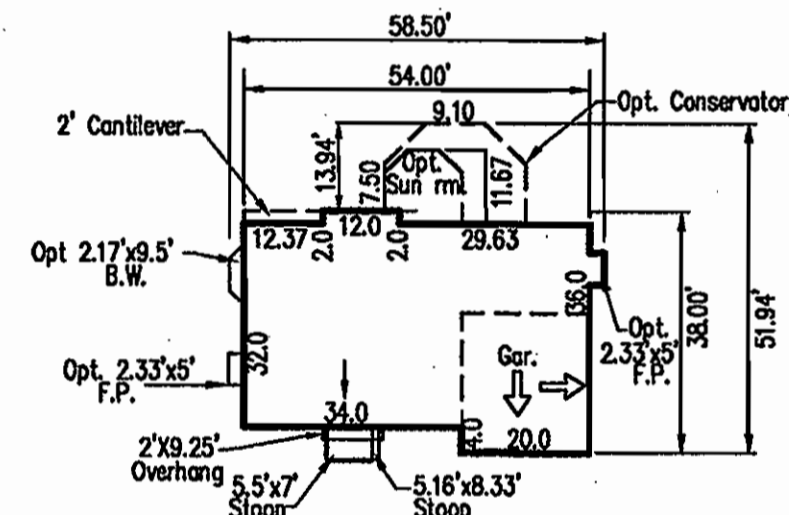
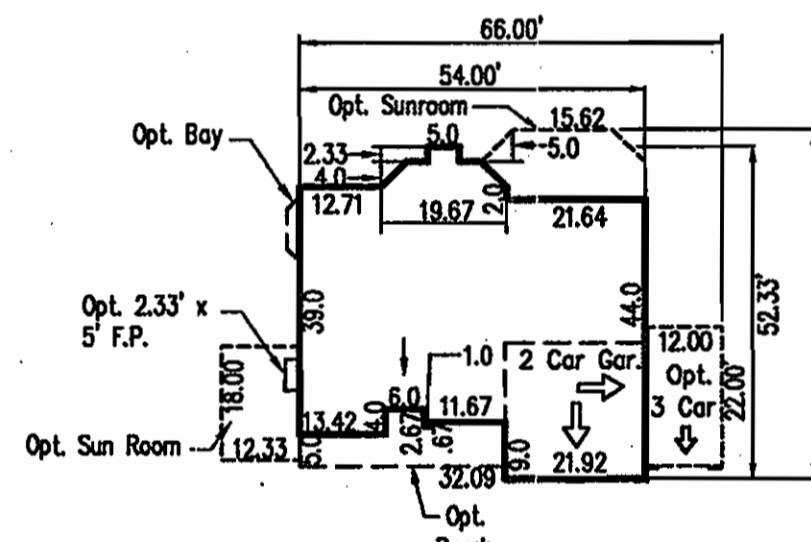
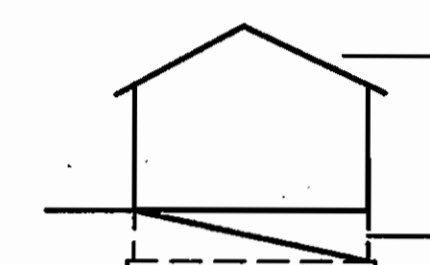
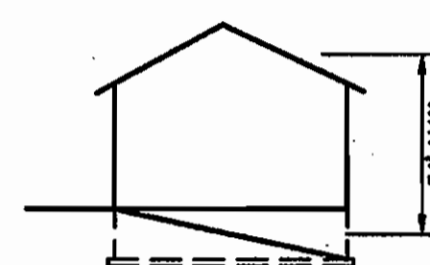
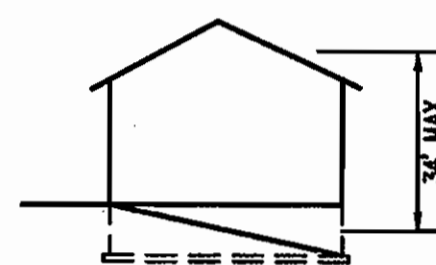
MDC-297 (SDP)



CALVERT - UNIT 'C'  
SCALE: 1" = 30'

CALVERT - UNIT 'C'  
SECONDARY PLAN  
SCALE: 1" = 30'

CALVERT - UNIT 'C'  
MASTER PLAN  
SCALE: 1" = 30'

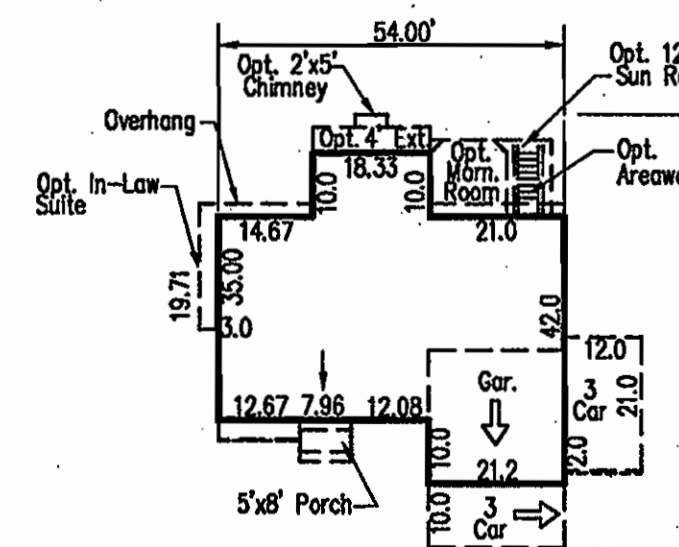
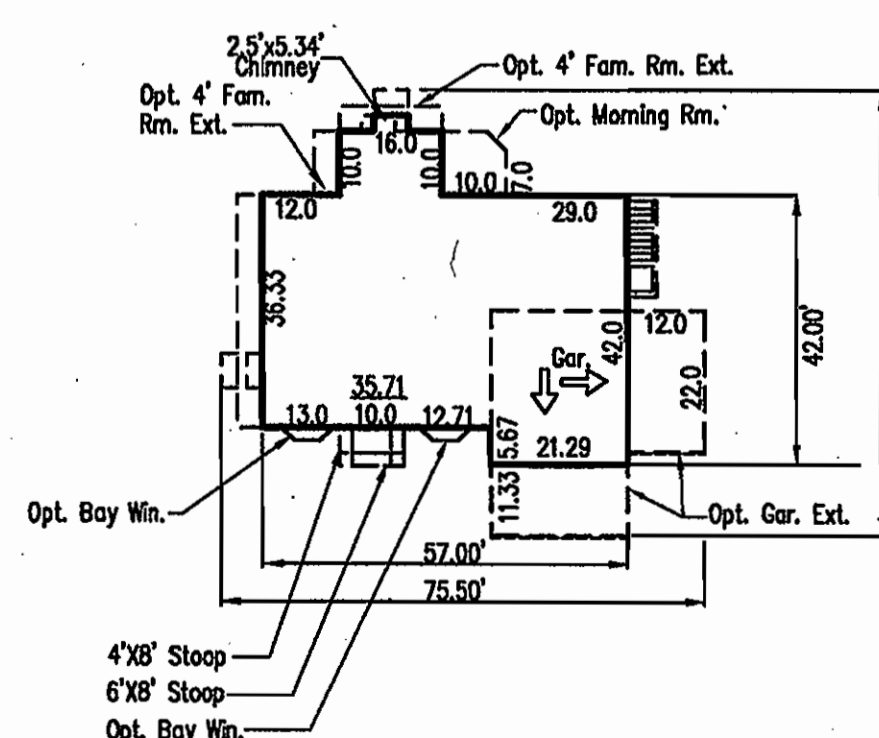
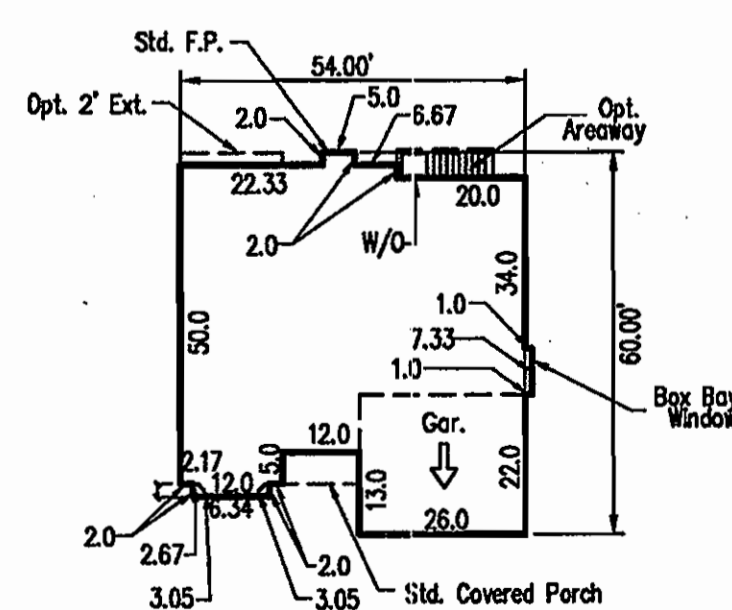
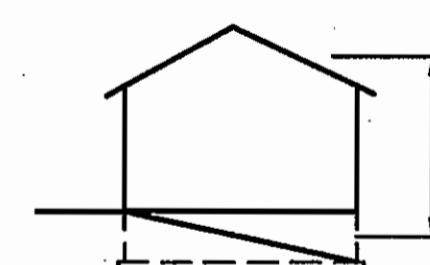
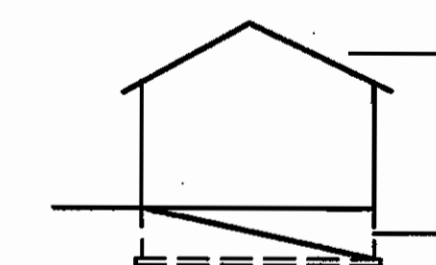
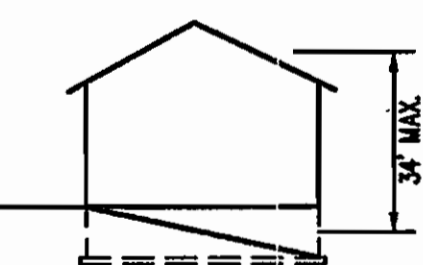


SUMMERHILL  
SCALE: 1" = 30'

THE WILLIAM DEAVEN  
SCALE: 1" = 30'

GEORGE OLIVER  
SCALE: 1" = 30'

SARAH DUNMORE  
SCALE: 1" = 30'



JACOB TYLER (REVERSE UNIT)  
SCALE: 1" = 30'

DORCHESTER II  
SCALE: 1" = 30'

THOMAS GOODWIN  
SCALE: 1" = 30'

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Cynthia Henth</i> Chief, Division of Land Development	4/9/07 Date
<i>Michael Quinn</i> Chief, Development Engineering Division	2/20/07 Date
<i>Robert H. Gyle</i> Director, Department of Planning and Zoning	4/14/07 Date

Date	No.	Revision Description
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HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8

OWNER / DEVELOPER

THE WILLIAMSBURG GROUP  
CONTACT: BOB CORBETT

5485 HARPER'S FARM RD., P.O. BOX 1018  
COLUMBIA, MARYLAND 21044  
TEL. (410) 947-8800 FAX (410) 897-4358

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7172 COLUMBIA GATEWAY DRIVE (SUITE 102) · COLUMBIA, MD. 21046-2990  
410.872.8800 · INFO 301.981.0148 · FAX 410.872.2899

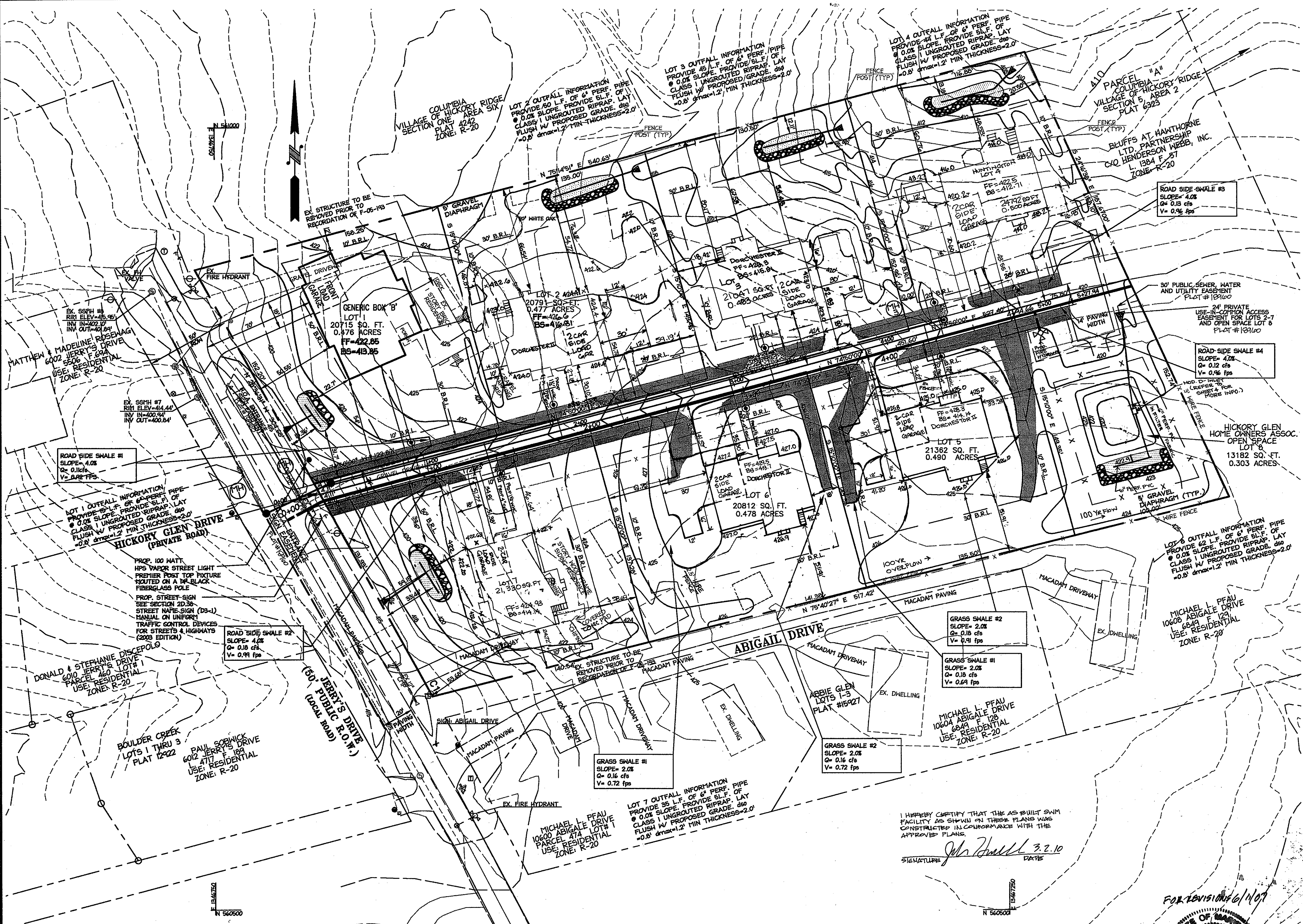
PERMIT INFORMATION CHART				
PROJECT NAME HICKORY GLEN	LOT/PARCEL NO. LOTS 1-8 P/O PARCEL 179	CENSUS TRACT 06056.02		
PLAT NO. 18760	GRID NO. 12	ZONE R-20	TAX MAP 35	ELECTION DISTRICT 5TH
WATER CODE IE 28 PUBLIC	SEWER CODE PUBLIC			

TITLE:  
HOUSE TEMPLATES AND ELEVATIONS

DESIGN: TIK/LNG	SCALE: AS SHOWN	PROJECT: 058061.01
DRAWN: TIK/LNG	DATE: 12-13-06	
CHECKED: BKC	APPROVED:	



MDC-297(SDP)



**LEGEND**

- EXISTING CONTOURS: --- 4/6 ---
- EXISTING STORM DRAIN: --- EX. 12" RCP ---
- EXISTING SANITARY SEWER: --- EX. 8" SAN ---
- EXISTING WATER: --- EX. 6" WATER ---
- EXISTING TRANSFORMER: [Symbol]
- EXISTING TRANSFORMER: [Symbol]
- EXISTING MAILBOX: [Symbol]
- EXISTING PLAYGROUND: [Symbol]
- EXISTING FENCE POST: [Symbol]
- EXISTING FENCE: [Symbol]
- PROPERTY LINE: [Symbol]
- PROPOSED STORM DRAIN: [Symbol]
- TO BE REMOVED: TBR [Symbol]
- TREELINE: [Symbol]
- WATER QUALITY SHALES: [Symbol]
- BIORETENTION AREAS: [Symbol]
- PROPOSED SEWER: [Symbol] PROP. 4" SHC
- PROPOSED WATER: [Symbol] PROP. 2" MHC
- FLOW AREAS: [Symbol] 100 YR FLOW
- BUILDING RESTRICTION LINES: [Symbol]
- PROPOSED FENCE: [Symbol]

**GENERAL NOTES:**

- HOUSES/GARAGES WILL BE SITED ON LOTS SO THAT A SECOND CAR, IF IN THE DRIVEWAY, WILL NOT OVERHANG INTO THE PRIVATE ACCESS PLACE DRIVEWAY (18' MINIMUM CLEARANCE).
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.

LOT NO.	SHC INV. PROPERTY LINE	HO. CO. DETAIL NO.	SLOPE (%)	MIN. CELLAR ELEVATION
1	407.80	DETAIL S2.12	2	410.23
2	408.48	DETAIL S2.12	2	410.15
3	409.48	DETAIL S2.12	2	411.12
4	410.37	DETAIL S2.12	2	411.39
5	410.53	DETAIL S2.12	2	412.34
6	409.52	DETAIL S2.12	2	411.33
7	408.37	DETAIL S2.12	2	410.38

\* SLOPE FROM ROAD TO PROPERTY LINE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Cathy Hamilton* 4/19/07  
 Chief, Division of Land Development Date

*Mark A. Coyle* 4/19/07  
 Chief, Development Engineering Division Date

*Mark A. Coyle* 4/19/07  
 Director, Department of Planning and Zoning Date

Date	No.	Revision Description
7.30.09	4	AS-BUILT SWM FACILITY - LOTS 1-7
G-1107	3	PREDLINED REVISIONS DATED 6/4/07 FROM OSD

**HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8**

**OWNER / DEVELOPER**  
 THE WILLIAMSBURG GROUP 5485 HARPER'S FARM RD., P.O. BOX 1018  
 COLUMBIA, MARYLAND 21044 CONTACT: BOB CORBETT TEL. (410) 997-8880 FAX (410) 997-4358

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, inc.  
 7172 columbia gateway drive (suite 100) · columbia, md 21046-2990  
 410.872.8690 · fax 410.872.8688

**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
HICKORY GLEN	LOTS 1-8 P/O PARCEL 174	06056.02
PLAT NO. 129160	GRID NO. 12	ZONE R-20
TAX MAP 35	ELECTION DISTRICT 5TH	
WATER CODE IE 2B PUBLIC	SEWER CODE 53255000	PUBLIC

**TITLE: SITE DEVELOPMENT PLAN**

DESIGN: ENJ	SCALE: 1" = 30'	PROJECT: 056001.01
DRAWN: DAM	DATE: 12-13-06	
CHECKED: JMH	APPROVED:	<b>3 OF 11</b>

**BIORETENTION SUMMARY SHEET**

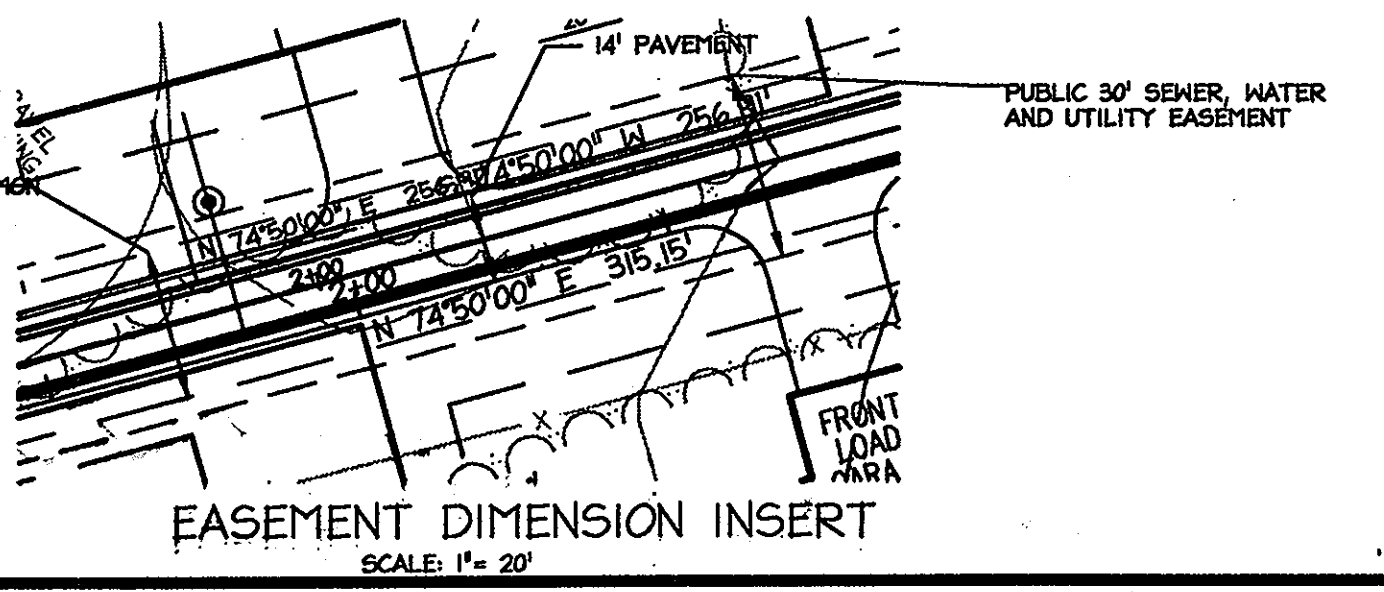
Lot #	Area required (sq)	Area Provided (sq)	Planting Soil Depth (ft)	Rev Required (cf)	Rev provided (cf)	Revdepth	Remarks
1	199	251.1	2.5	36.3	50.22	0.5	Surface layer elevation= 419.5 Inv. At outfall = 415.5
2	182.95	279	2.5	35.1	55.8	0.5	Surface layer elevation= 421.8 Inv. At outfall = 417.8
3	195.7	265.1	2.5	36.6	53.0	0.5	Surface layer elevation= 415.8 Inv. At outfall = 411.8
4	215.72	279	2.5	38.3	55.8	0.5	Surface layer elevation= 411.8 Inv. At outfall = 407.8
7	174.1	279	2.5	31.7	36.8	0.33	Surface layer elevation= 419.9 Inv. At outfall = 415.9
8	39.2	200	2.5	7.1	13.6	0.17	Surface layer elevation= 422.9 Inv. At outfall = 418.9

**MINIMUM LOT SIZE CHART**

LOT NO.	GROSS AREA	PIPE STEM AREA	MINIMUM LOT SIZE
1	20,715 SQ.FT.	---	20,715 SQ.FT.
2	20,791 SQ.FT.	489 SQ.FT.	20,302 SQ.FT.
3	21,047 SQ.FT.	1026 SQ.FT.	20,021 SQ.FT.
4	21,742 SQ.FT.	1544 SQ.FT.	20,248 SQ.FT.
5	21,362 SQ.FT.	1262 SQ.FT.	20,100 SQ.FT.
6	20,812 SQ.FT.	693 SQ.FT.	20,119 SQ.FT.
7	21,330 SQ.FT.	---	21,330 SQ.FT.
8	13,182 SQ.FT.	---	13,182 SQ.FT.

MISS UTILITY  
 Before You Dig  
 Call  
 Service Protection Center  
 CALL TOLL FREE 1-800-257-7777

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 JOHN M. HOUSEHOLDER  
 No. 29907  
 DATE: 2-1-07



MDC-287(SDP)

**PLANTING SPECIFICATIONS FOR BIORETENTION**

**I. GENERAL NOTES**

- A. SCOPE: THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES OF PLANT MATERIAL SHOWN ON THE PLAN IN THE PLANT LIST, AND SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE ALL LANDSCAPE WORK AS SHOWN ON THE PLANS AND SPECIFICATIONS.
- B. UTILITIES: THE LANDSCAPE CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-257-7777) TO VERIFY THE LOCATION OF ALL MAIN UTILITIES AND SHALL ASK THE GENERAL CONTRACTOR TO LOCATE LIGHTING AND OTHER ON-SITE UTILITIES IN THE FIELD BEFORE PROCEEDING WITH THE INSTALLATION OF ANY PLANTING. IF CONDITIONS ARISE IN THE FIELD WHICH NECESSITATE THE SHIFTING OF A PLANT LOCATION MORE THAN 15', THE LANDSCAPE ARCHITECT IS TO BE CONSULTED.
- C. SUBSTITUTIONS: ANY CHANGE IN THE TYPE, SIZE AND QUANTITY OF PLANT MATERIAL BY THE LANDSCAPE CONTRACTOR MUST BE APPROVED BY THE ENVIRONMENTAL CONSULTANT PRIOR TO INSTALLATION.
- D. PLANT STANDARDS: PLANTS SUPPLIED SHALL CONFORM IN ALL RESPECTS TO THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1). THEY SHALL BE FIRST CLASS REPRESENTATIVES OF THEIR SPECIES AND VARIETIES, NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. PLANT NAMES SHALL BE THOSE GIVEN IN THE LATEST EDITION OF STANDARD PLANT NAMES, AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.  
 PLANTS SHALL BE SOUND, VIGOROUS AND HEALTHY, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE AND INSECT PESTS AND SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SUBSTANCE. TRUNKS AND BRANCHES SHALL BE FREE OF CUTS AND ABRASIONS OVER ONE INCH (1") IN ANY DIMENSION. PLANTS IN LEAF SHALL BE SPRAYED WITH ANTI-DESICCANT IMMEDIATELY BEFORE DIGGING TO FILM THE LEAVES, BRANCHES, AND THIGS.  
 SHADE TREES WITH BROKEN, DAMAGED OR MULTIPLE LEADERS WILL BE REJECTED.  
 BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH A FIRM NATURAL ROOT BALL. PLANTS WITH SOFT, BROKEN OR DAMAGED LIMBS WILL BE REJECTED.  
 PLANTS SHALL BE TAGGED WITH LABELS IDENTIFYING THE BOTANICAL AND COMMON NAMES OF THE PLANTS. NO CHANGE IN THE KIND, QUANTITY, QUALITY, OR SIZE OF PLANTS SPECIFIED SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE APPROVING AGENCY.  
 ALL PLANTS SHALL BE CERTIFIED PEST-FREE BY THE DEPARTMENT OF AGRICULTURE OF THEIR STATE OF ORIGIN.  
 MAJOR SHADE TREES SHALL BE 2-1/2" CALIPER OR LARGER (EXCEPT WHEN WITHIN 2 YEAR INSET, THEN 1-1/4" - 1-1/2" CAL. WILL BE PERMITTED). ORNAMENTAL TREES SHALL HAVE A MINIMUM CALIPER OF 1-1/4". EVERGREEN TREES SHALL HAVE A MINIMUM HEIGHT OF 6' AND SHALL BE FULL TO THE GROUND AND HEAVILY BRANCHED. GARBS SHALL HAVE A SPREAD OF AT LEAST 18". NO BARE ROOT TREES OR SHRUBS WILL BE ACCEPTED WITHOUT WRITTEN APPROVAL OF THE APPROVING AGENCY.
- E. PLANTING MATERIALS: TOPSOIL SHALL BE FERTILE, FRAGILE AND TYPICAL OF THE PROJECT SITE BEFORE DISTURBANCE. IT SHALL HAVE A MINIMUM ORGANIC CONTENT OF 2.5 % BY VOLUME AND SHALL BE FREE OF STONES, LUMPS, ROOTS, STICKS, AND DEBRIS LARGER THAN 2" IN ANY DIMENSION. IT SHALL NOT BE LOADED, DELIVERED, SPREAD OR OTHERWISE HANDLED IN A MUDDY OR FROZEN CONDITION. (SEE BIORETENTION SPECS.)  
 PLANTING (BACKFILL) MIX SHALL BE COMPOSED OF THREE PARTS OF THE SOIL IMMEDIATELY ADJACENT TO THE PLANT PIT OR BED TO ONE PART APPROVED ORGANIC MATTER.  
 TREE STAKING MATERIALS SHALL BE ROUGH-SAWN HARDWOOD 2" BY 2" STOCK OF A LENGTH TO CONFORM TO THE REQUIREMENTS OF THE TREE PLANTING DETAIL SHOWN ON THE PLANTING PLAN.  
 STAKING TIES SHALL BE DOUBLE STRANDS OF 12 OR 14 GAUGE GALVANIZED STEEL WIRE, TWISTED, FURNISHED WITH PROTECTIVE SECTIONS OF CORRODED 3/4" DIAMETER RUBBER HOSE OR NYLON WEBBING AT LEAST 1-1/2" WIDE OR POLYPROPYLENE CHAINLOCK STRAPPING MANUFACTURED FOR THE PURPOSE OR OTHER MATERIALS APPROVED BY THE APPROVING AGENCY.  
 ALL DIG PLANT MATERIAL SHALL HAVE BEEN DUG BEFORE BUD BREAK OR AFTER LEAF MATURATION. ANY PLANT MATERIAL EXHIBITING DROOPING NEW GROWTH WITHIN TWO (2) WEEKS OF BEING PLANTED WILL BE REJECTED AND MUST BE REMOVED FROM THE JOB.
- F. POOR DRAINAGE: NO PLANT SHALL BE PLANTED IN SITUATIONS THAT SHOW OBVIOUS POOR DRAINAGE. SUCH SITUATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENVIRONMENTAL CONSULTANT AND OWNER, AND IF THEY DEEM NECESSARY, THE PLANTS SHALL BE RELOCATED OR THE CONTRACTOR SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE CORRECTION AT A NEGOTIATED COST.
- G. SITE PREPARATION: IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PRESENT 'CLEAN' SOIL CONDITIONS TO THE LANDSCAPE CONTRACTOR PRIOR TO ANY LANDSCAPE INSTALLATION. 'CLEAN' SOIL MAY INCLUDE ON-SITE SOIL THAT IS FREE OF PAVEMENT MATERIALS, MUCK, ROOT SYSTEMS, PETROLEUM OR OTHER CHEMICAL SUBSTANCES, BLUE STONE, CONSTRUCTION DEBRIS AND OTHER MATERIALS LARGER THAN 2" IN DIAMETER. THE 'CLEAN' SOIL SHALL EXTEND TO THE FOLLOWING MINIMUM DEPTHS: 18" WHERE TREES ARE PROPOSED, 12" WHERE SHRUBS ARE PROPOSED AND 4" WHERE LAWN IS PROPOSED. IF THE LANDSCAPE CONTRACTOR ENCOUNTERS ANY AREA TO BE DEFICIENT REGARDING THESE 'CLEAN' SOIL SPECIFICATIONS, HE SHALL REPORT THIS CONDITION TO THE ENVIRONMENTAL CONSULTANT AND OWNER PRIOR TO PLANTING THOSE AREAS.
- H. WORKMANSHIP: DURING PLANTING, ALL AREAS SHALL BE KEPT NEAT AND CLEAN, AND ALL REASONABLE PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING PLANTS, TURF AND STRUCTURES. UPON COMPLETION, ALL DEBRIS AND WASTE MATERIAL RESULTING FROM PLANTING OPERATIONS SHALL BE REMOVED FROM THE PROJECT AND THE AREA CLEANED UP. ANY DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
- I. WATER: IF AVAILABLE ON-SITE, THE OWNER SHALL SUPPLY WATER AT NO EXTRA COST. IT WILL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY WATER IF THERE IS NONE ON THE SITE.

**II. PLANTING METHODS**

- A. PLANTING BEDS: STAKE-OUT OUTLINES OF PLANTING BEDS AND CENTERS OF INDIVIDUAL PLANTING PITS. THESE LOCATIONS ARE TO BE APPROVED IN THE FIELD BY THE APPROVING AGENCY BEFORE PLANTING OPERATIONS BEGIN.  
 EXCAVATE STAKE OUT AREAS AND PREPARE PLANTING MIX (SEC. E1 & 2). ONLY PLANTING MIX SHALL BE USED TO BACKFILL THE PLANTING PITS AND BEDS.
- B. TREE/SHRUB PIT: SET PLANTS SO THAT THE ROOTBALL REST ON FIRM GROUND AND THE ROOT CROWN IS 3" - 4" HIGHER THAN THE SURROUNDING GRADE. BACKFILL WITH PLANTING MIX AND TAMP LIGHTLY IN EIGHT (8") INCREMENTS. WATER THOROUGHLY TO ELIMINATE AIR POCKETS IN THE BACKFILL. REMOVE ALL MATERIALS OTHER THAN UNTREATED BURLAP, JUTE TWINE AND WIRE BASKET FROM THE TOP 1/3 OF THE BALL. COMPLETE BACKFILLING WITH PLANTING MIX TO BRING SOIL LEVEL TO SURROUNDING GRADE.  
 PROTECT PLANTS AT ALL TIMES FROM SUN AND DRYING WINDS. PLANTS THAT CANNOT BE PLANTED IMMEDIATELY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH TOPSOIL, PEAT MOSS OR OTHER ACCEPTABLE MATERIAL AND SHALL BE KEPT WELL WATERED. PLANTS SHALL NOT BE UNPLANTED FOR MORE THAN THREE (3) CALENDAR DAYS.  
 PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANYTIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES AND THIGS. PLANTS SHALL BE LIFTED FROM THE BOTTOM OF THE BALL ONLY.  
 MULCH ALL BEDS AND PLANTING PITS WITH A THREE INCH (3") LAYER OF MULCH IMMEDIATELY AFTER PLANTING.  
 ALL PLANTS ARE TO BE WATERED THOROUGHLY ON THE DAY OF PLANTING, EVEN IF IT IS RAINING.
- C. TREE BRACING: STAKE PLANTS IMMEDIATELY AFTER PLANTING, TAKING CARE THAT THEY STAND PLUMB AFTER STAKING. STAKED AND STAKING MATERIALS SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- D. TREE WRAP: WRAP DECIDUOUS TREE TRUNKS STARTING AT THE BASE OF THE TREE UP TO THE SECOND BRANCH. REMOVE WRAPPING AT THE END OF THE GUARANTEE PERIOD.
- E. PRUNING: PRUNE PLANT AT THE TIME OF PLANTING AS DIRECTED BY THE APPROVING AGENCY, TAKING CARE TO RETAIN THE NATURAL FORM AND CHARACTER OF THE PLANT.
- F. MISC.: ANY ITEMS NOT ADDRESSED IN THIS SECTION SHALL BE IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF THE LANDSCAPE SPECIFICATION GUIDELINES OF THE LANDSCAPE CONTRACTORS ASSOCIATION, MD-DC-VA.
- G. WETLAND PLANTING NOTES: CONTRACTOR SHALL PROVIDE A MINIMUM SOIL DEPTH OF 4" AT THE COMPLETION OF FINAL GRADING. ANY LARGE STONES, DEBRIS OR CONSTRUCTION MATERIALS SHALL BE REMOVED AT THIS TIME. COMPACTED SOILS SHALL BE DISKED TO A DEPTH NO LESS THAN 6" PRIOR TO BASIN PLANTING AND FLOODING.  
 A SPRING OR EARLY SUMMER PLANTING SHALL BE REQUIRED. PLANTING MATERIALS SHALL NOT BE STORED ON-SITE LONGER THAN 48 HOURS. PLANT ROOTS SHALL BE KEPT MOIST AT ALL TIMES. PLANTS SHALL BE STORED OUT OF DIRECT SUNLIGHT.  
 FOR PLANTING POTTED PLANTS, MAKE A HOLE IN THE SUBSTRATE WIDE ENOUGH TO TAKE THE POTTED PLANT, AND DEEP ENOUGH THAT THE WETLAND SUBSTRATE IS AT THE SAME DEPTH (OR A LITTLE DEEPER) THAT THE SOIL LEVEL IN THE POT. THE POT SHALL BE REMOVED RIGHT BEFORE PLANTING TO FACILITATE THE ROOT SPREADING. THE OVERALL DEPTH SHOULD BE APPROXIMATELY 4"-6". PRESS THE SUBSTRATE FIRMLY AROUND THE POT POT.  
 EACH PLANT IS TO BE SIDE DRESSED AT THE TIME OF PLANTING WITH 30 GRAMS OSMOCOTE 16-8-12 SLOW RELEASE FERTILIZER OR AN EQUIVALENT.  
 SOURCE OF AQUATIC PLANTS: RUPPERT ENVIRONMENTAL, ASHTON, MARYLAND (301)774-0400 AND ENVIRONMENTAL CONCERN, INC., ST. MICHAELS, MARYLAND (410)745-9620.

**III. SEEDING AND SODDING**

ALL DISTURBED AREAS NOT COVERED BY BUILDINGS, PAVEMENTS AND PLANTING BEDS ARE TO BE ESTABLISHED IN A LAWN OF KENTUCKY-31 TALL FESCUE EITHER BY SEEDING OR SOO, OR COMBINATION, DEPENDING ON THE TIME OF YEAR, AVAILABILITY OF MATERIALS AND OWNER'S PREFERENCE. THE STABILIZATION SHALL BE IN CONFORMANCE TO STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL, PUBLISHED BY THE STATE OF MARYLAND.

**IV. GUARANTEE**

ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN HEALTHY AND VIGOROUS CONDITION AT THE BEGINNING OF THE SECOND GROWING SEASON FOLLOWING ACCEPTANCE BY THE APPROVING AGENCY. PLANTS WITH GREATER THAN 33 % DIEBACK, OR HAVE NOT GROWN SO AS TO EMERGE FROM THE WATER SURFACE, SHALL BE REPLACED AT THE NEXT PLANTING SEASON.

**V. MAINTENANCE**

REMOVE LITTER AND DEBRIS AS REQUIRED DURING THE FIRST GROWING SEASON AND AT THE BEGINNING OF THE SECOND GROWING SEASON.  
 REPLACE UNSUCCESSFUL TRANSPLANTS MONTHLY FOR 6 MONTHS AND AT THE BEGINNING OF THE SECOND GROWING SEASON.

**BIORETENTION SOIL & MATERIAL REQUIREMENTS**

- 1. SOIL TEXTURE AND STRUCTURE:  
 TOPSOIL FOR BIORETENTION SHALL HAVE A SANDY LOAM, LOAMY TEXTURE PER USDA TEXTURAL TRIANGLE. MAXIMUM CLAY CONTENT IS 5%. SOIL MOISTURE SHALL BE 50-60 % LEAF MULCH; 20-30 % TOPSOIL. THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, HEARTHURST, OR OTHER NOXIOUS WEEDS.
- 2. SOIL TESTING:  
 PLANTING SOIL FOR BIORETENTION AREAS MUST BE TESTED PRIOR TO INSTALLATION FOR PH AND ORGANIC MATTER. THE SOIL SHOULD MEET THE FOLLOWING CRITERIA (LANDSCAPE CONTRACTORS ASSOCIATION, 1986).  
 PH RANGE: 5.5-6.5  
 ORGANIC MATTER: 1.5-3.0 %  
 IT IS REQUIRED THAT A SEIVE ANALYSIS, PH, AND ORGANIC MATTER TEST BE PERFORMED PER EACH BIORETENTION AREA.
- 3. SOIL PLACEMENT:  
 PLACEMENT OF THE PLANTING SOIL IN THE BIORETENTION AREA SHOULD BE IN LIFTS OF 12 TO 18 INCHES AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR BACKHOE. REFER ALSO TO 'COMPACTION'.
- 4. MULCH SPECIFICATIONS:  
 INDIVIDUAL PLANTING SHALL BE MULCHED (REFER TO LANDSCAPING DETAILS). ACCEPTABLE MULCH SHALL BE SHREDDED HARDWOOD ONLY. MULCH MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCKPILED FOR STORED FOR AT LEAST TWELVE (12) MONTHS.
- 5. SAND SPECIFICATIONS:  
 PROVIDE CLEAN SAND, FREE OF DELETERIOUS MATERIALS. SAND SHALL MEET AASHTO M-6 OR ASTM C-33 WITH GRAIN SIZE OF 0.075-0.04".
- 6. GEOTEXTILE SPECIFICATIONS:  
 GEOTEXTILE FABRIC SHALL MEET ASTM D-751 (PUNCTURE STRENGTH - 125 LB) ASTM D-1117 (MULLEN BURST STRENGTH - 400 PSI) ASTM D-1682 (TENSILE STRENGTH - 300 LB) FABRIC SHALL HAVE 0.08" THICK E.O.S. OF #80 SIEVE, AND MAINTAIN 125 GPM PER SQ. FT. FLOW RATE.
- 7. GRAVEL FILTER SPECIFICATIONS:  
 UNDERDRAIN GRAVEL BLANKET SHALL BE DOUBLE WASHED, #57 STONE, 1-1/2" IN SIZE. PEA GRAVEL SHALL BE WASHED, RIVER-RUN, ROUND DIAMETER 1/4" - 1/2" IN SIZE.
- 8. INSPECTION REQUIREMENTS:  
 ( ) THE CONTRACTOR SHALL ARRANGE A "PRECONSTRUCTION MEETING" WITH THE OWNER AND LANDSCAPE ARCHITECT/ENGINEER PRIOR TO BEGINNING WORK IN THE BIORETENTION FACILITY.  
 ( ) AT THE COMPLETION OF EXCAVATION TO INSPECT SUB GRADE PREPARATION.  
 ( ) DURING UNDERDRAIN AND FILTER INSTALLATION  
 ( ) BACK FILL OF SOIL INTO THE BIORETENTION AREAS. SOIL CERTIFICATIONS FOR BACK FILL ARE REQUIRED.  
 ( ) THE FINAL TOPSOIL LAYERS SHOULD BE THOROUGHLY METTED TO ACHIEVE SETTLEMENT OF THE SOIL/SAND BACKFILL MIX.  
 ( ) THE WORK SHALL BE INSPECTED BY THE OWNER/LANDSCAPE ARCHITECT PRIOR TO FINAL STABILIZATION AND PLANTING.  
 ( ) SEDIMENT AND EROSION CONTROL PRACTICES MAY BE REMOVED UPON APPROVAL BY THE COUNTY INSPECTOR.

**CONSTRUCTION SPECIFICATIONS FOR BIORETENTION**

**I. BIORETENTION AREA PLANT SPECIFICATIONS**

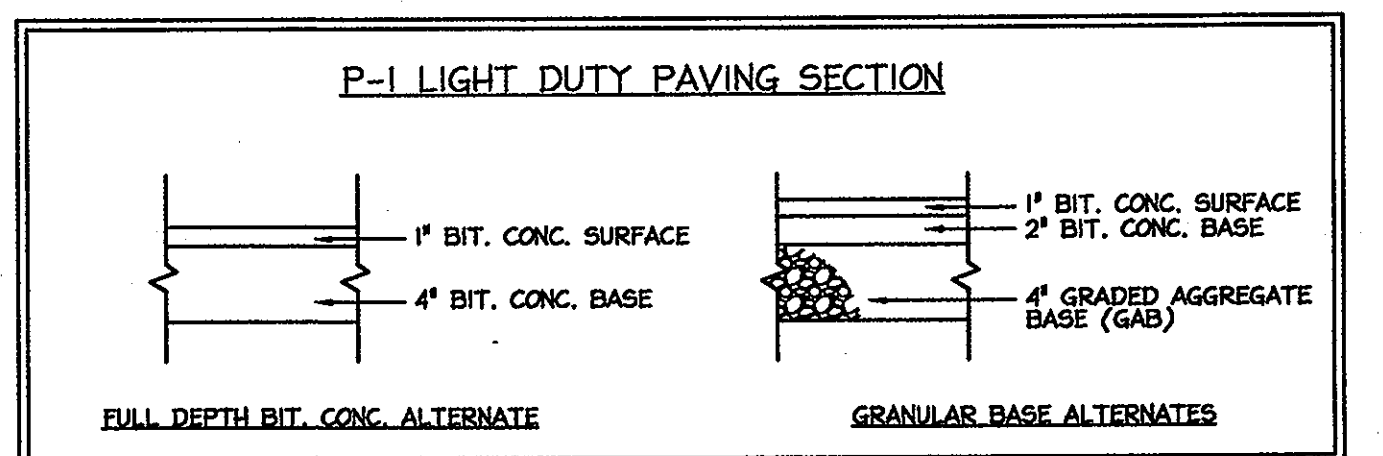
- GENERAL PLANTING SPECIFICATIONS**  
 ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE AND UNTIL PLANTED.  
 WALLS OF PLANTING PITS SHALL BE DUG SO THAT THEY ARE VERTICAL.  
 THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THAN THE DIAMETER OF THE BALL OF THE TREE.  
 THE PLANTING PITS SHALL BE DEEP ENOUGH TO ALLOW 1/4" OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.  
 THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS' BALL (NEVER LIFT BY BRANCHES OR TRUNK).  
 SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT THE TOP OF THE BALL IS APPROXIMATELY 1/4" ABOVE THE FINAL GRADE.  
 BACKFILL PLANTING PIT WITH EXISTING SOIL.  
 MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.  
 NEVER COVER THE TOP OF THE BALL WITH SOIL. MOUND SOIL AROUND THE EXPOSED BALL (1/4").  
 TREES SHALL BE BRACED BY USING 2" BY 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL, UTILIZING HOSE AND WIRE SO THE TREE IS BRACED TO THE STAKES.
- PLANTING GRASS GROUND COVER**  
 GRASSES AND LEGUME SEED SHALL BE TILLED INTO THE SOIL TO A DEPTH OF AT LEAST 2 INCHES BY WITHER HARROWING OR DISCING. FERTILIZER SHALL BE APPLIED AT THE SAME RATE AND UTILIZING THE SAME PROCESS FOR NON-GRASS GROUND COVER.  
 GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING TECHNIQUES.
- FERTILIZER**  
 ALL GROUND COVER SHALL BE FERTILIZED WITH A 10-6-4 ANALYSIS FERTILIZER AS A WET APPLICATION AT THE RATE OF 3 LBS. PER 100 SQUARE FEET OF THE BIORETENTION AREA PRIOR TO PLANTING NON-GRASS GROUND COVER AS PART OF THE GRASS SEED GROUND COVER.  
**FERTILIZATION**  
 TREE AND SHRUB FERTILIZER SHALL BE 21 GM. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2 YEAR) FERTILIZER TABLET WITH A MINIMUM GUARANTEED ANALYSIS OF 20-10-5.  
 TOTAL NITROGEN (N) 20%  
 WATER SOLUBLE ORGANIC NITROGEN 7%  
 AVAILABLE PHOSPHORIC ACID (P2O5) 10%  
 SOLUBLE POTASH (K2O) 5%  
 FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIC FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:  
 1 GAL. CONTAINER 1 EA. 21 GM. TABLETS  
 3 GAL. CONTAINER 2 EA. 21 GM. TABLETS  
 5 GAL. CONTAINER 3 EA. 21 GM. TABLETS  
 7 GAL. CONTAINER 5 EA. 21 GM. TABLETS  
**PLANTING NON-GRASS GROUND COVER**  
 THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASSES OR LEGUMES). SPACING SHALL BE 2' ON CENTER.  
 BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMPLED.  
 THE GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH, POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOT OF BARE ROOT PLANTS SHALL BE COVERED TO THE CROWN.  
 SPRAY THE MULCHED AND PLANTED GROUND COVER BED WITH A PRE-EMERGENT HERBICIDE.  
 THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORM WATER FACILITIES**

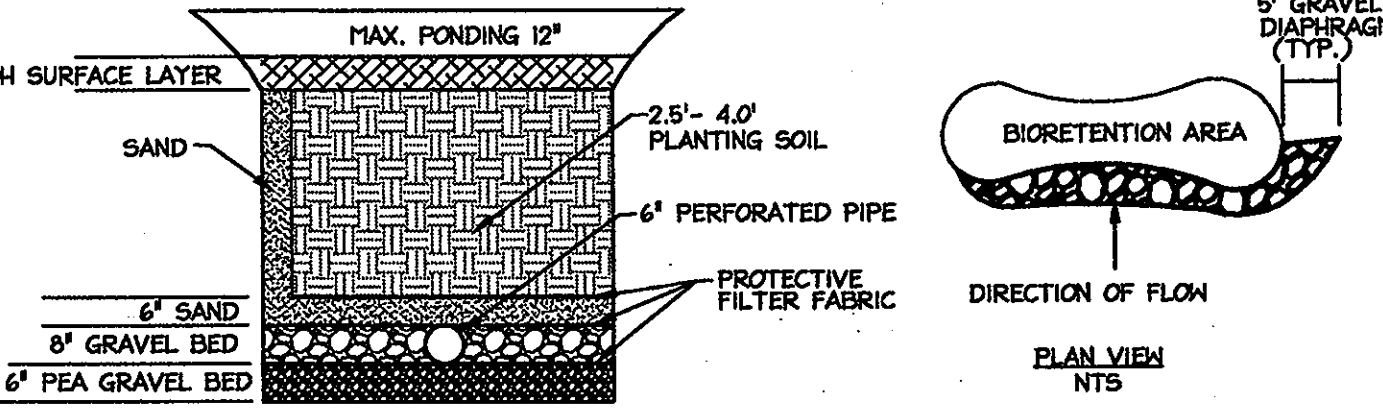
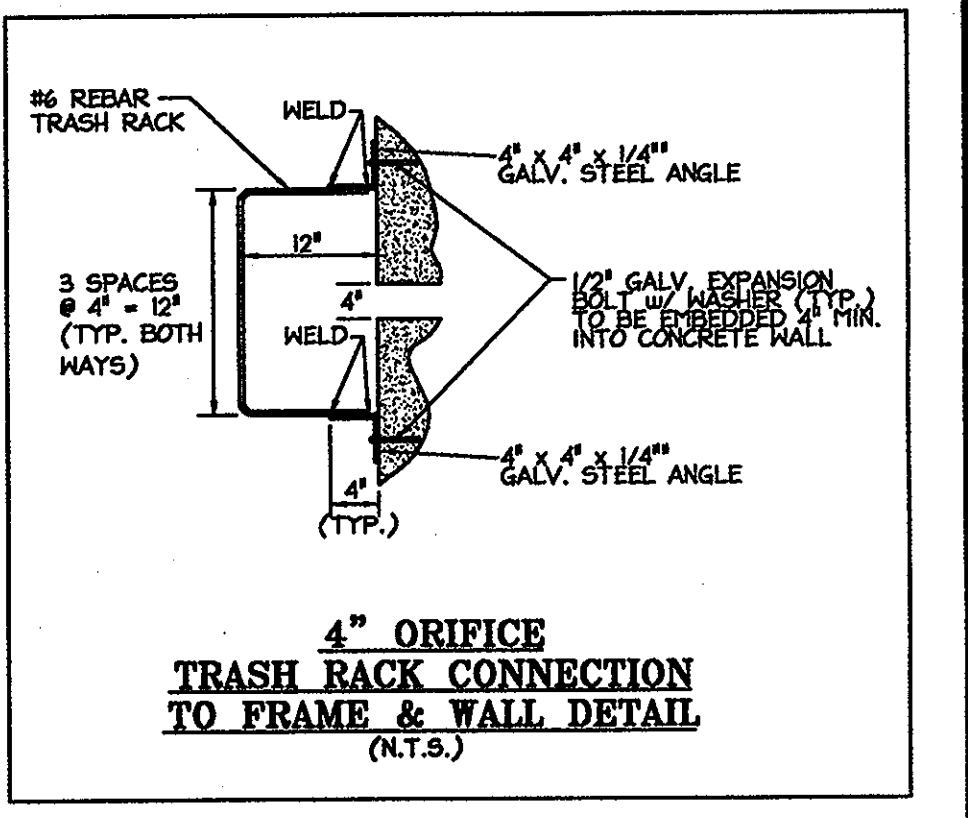
- ROUTINE MAINTENANCE:**
- 1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
  - 2. TOP AND SIDE SLOPES OF THE FACILITY SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER.
  - 3. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOWED AS NEEDED.
  - 4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
  - 5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

- NON-ROUTINE MAINTENANCE:**
- 1. STRUCTURAL COMPONENTS OF THE FACILITY SUCH AS THE INLET AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
  - 2. SEDIMENT SHALL BE REMOVED FROM THE FACILITY, NO LATER THAN WHEN THE CAPACITY OF THE FACILITY, IS HALF FULL OF SEDIMENT, OR WHEN DEEMED NECESSARY FOR AESTHETIC REASON, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

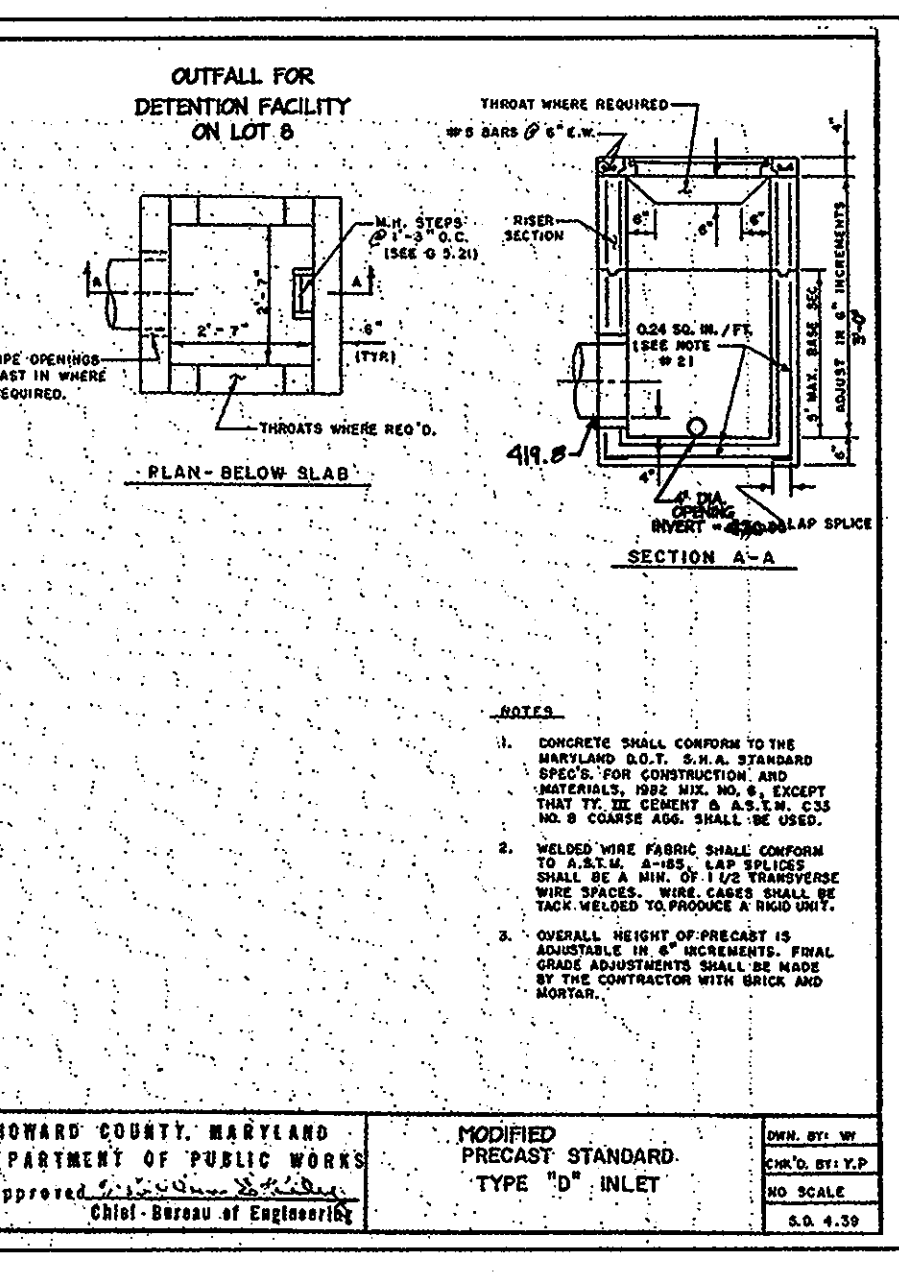
**OPERATION, MAINTENANCE AND INSPECTION**  
 INSPECTION OF THE FACILITY SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY. THE FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FACILITY AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF.



NOTE: PAVING SECTIONS SHOWN RELATES TO A CBR VALUE OF 7. ACTUAL CBR TEST RESULTS MAY CAUSE MODIFICATION OF THESE PAVING SECTIONS.



**BIORETENTION DETAIL**  
 N75



I HEREBY CERTIFY THAT THE AS-BUILT SWM FACILITY AS SHOWN ON THESE PLANS WAS CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.  
 SIGNATURE: [Signature] DATE: 3-2-10

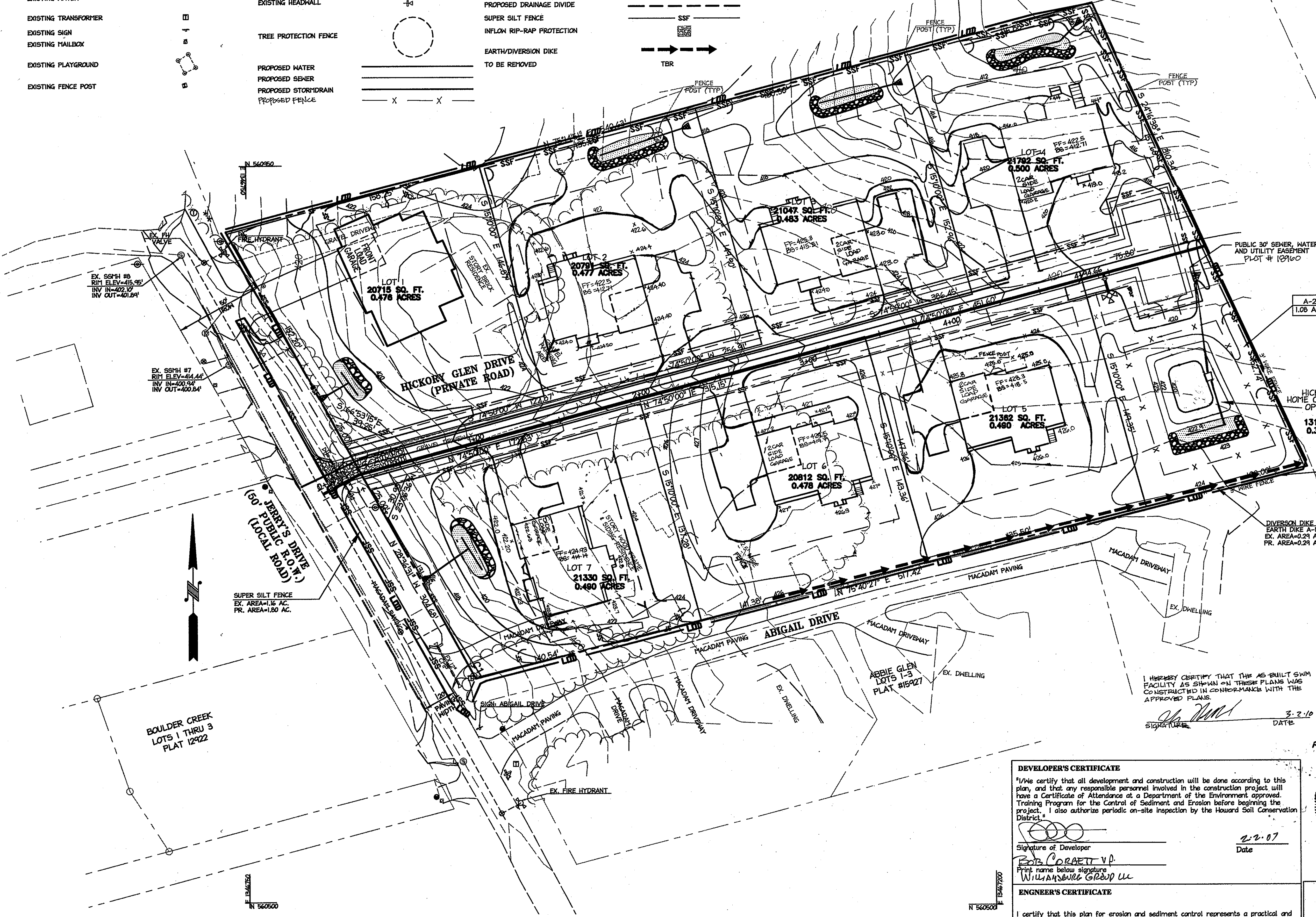


APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Candy Brantley</i> Chief, Division of Land Development	4/9/07 Date
<i>Mark A. Wagoner</i> Chief, Development Engineering Division	2/26/06 Date
<i>Mark A. Wagoner</i> Director, Department of Planning and Zoning	4/1/07 Date

7.30.01	4	AS-BUILT SWM FACILITY - LOT B
Date	No.	Revision Description
<b>HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8</b>		
<b>OWNER / DEVELOPER</b>		
THE WILLIAMSBERG GROUP CONTACT: BOB CORBETT		5485 HARPER'S FARM RD., P.O. BOX 1016 COLUMBIA, MARYLAND 21044 TEL. (410) 947-3880 FAX (410) 987-4358
<b>christopher consultants</b> engineering - surveying - land planning christopher consultants, inc. 7172 columbiaparkway drive (suite 100) - columbia, md. 21046-2900 410.872.8880 - metro 301.881.0148 - fax 410.872.8883		
<b>PERMIT INFORMATION CHART</b>		
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
HICKORY GLEN	LOTS 1-8 P/O PARCEL 179	06056.02
PLAT NO.	GRID NO.	ZONE
109100	12	R-20
TAX MAP	ELECTION DISTRICT	
35	5TH	
WATER CODE	SEWER CODE	
IE 28	5325500	
PUBLIC	PUBLIC	
<b>TITLE: SITE DEVELOPMENT PLAN NOTES AND DETAILS</b>		
DESIGN: ENJ	SCALE: AS SHOWN	PROJECT: 058001.01
DRAWN: DAM	DATE: 12-15-06	
CHECKED: JPH	APPROVED:	<b>4 of 11</b>

MDC-297(SDP)

EXISTING CONTOURS	--- 416 ---	EXISTING FENCE	--- X ---	LIMIT OF DISTURBANCE	--- LOD ---
PROPOSED CONTOUR	--- 418 ---	PROPERTY LINE	--- ---	SILT FENCE	--- SF ---
EXISTING STORM DRAIN	--- EX. 12" RCP ---	PROPOSED RIGHT OF WAY LINE	--- ---	STABILIZED CONSTRUCTION ENTRANCE	
EXISTING SANITARY SEWER	--- EX. 8" SAN ---	PROPOSED SETBACK LINES	--- ---	EXISTING DRAINAGE DIVIDE	--- ---
EXISTING WATER	--- EX. 6" WATER ---	PROPOSED UTILITY EASEMENT	--- ---	PROPOSED DRAINAGE DIVIDE	--- ---
EXISTING TRANSFORMER		EXISTING WATER VALVE	--- ○ ---	SUPER SILT FENCE	--- SSF ---
EXISTING SIGN		EXISTING HEADWALL	--- □ ---	INFLOW RIP-RAP PROTECTION	--- ---
EXISTING MAILBOX		TREE PROTECTION FENCE	--- ○ ---	EARTH/DIVERSION DIKE TO BE REMOVED	--- ---
EXISTING PLAYGROUND		PROPOSED WATER	--- ---		
EXISTING FENCE POST		PROPOSED SEWER	--- ---		
		PROPOSED STORM DRAIN	--- ---		
		PROPOSED FENCE	--- X ---		



- ### SEQUENCE OF CONSTRUCTION
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS INCLUDING THE GRADING PERMIT PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES.
  - AN ON-SITE PRECONSTRUCTION MEETING SHALL BE CONDUCTED WITH THE CONTRACTOR AND THE HOWARD COUNTY INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. CONTACT THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT (410) 318-1880 TO SCHEDULE.
  - CLEAR AND GRUB FOR THE INSTALLATION OF THE PERIMETER SEDIMENT CONTROL DEVICES INCLUDING SILT FENCE, SUPER SILT FENCE, EARTHDIKE AND THE STABILIZED CONSTRUCTION ENTRANCE (2 DAYS).
  - BEGIN ROUGH GRADING THE SITE. ALL ATTEMPTS SHALL BE MADE TO PRESERVE THE LARGE TREES ON LOTS 1 & 2. (10 DAYS).
  - BEGIN COMMON DRIVEWAY CONSTRUCTION AND DRIVEWAY ENTRANCES FROM THE COMMON DRIVEWAY ENTRANCE TO THE EDGE OF THE UTILITY EASEMENT (15 DAYS).
  - BEGAN BASE PAVING COMMON ACCESS DRIVE (5 DAYS).
  - COMPLETE ALL ROUGH GRADING AND STABILIZE ALL DISTURBED AREAS (2 DAYS).
  - CONSTRUCT HOUSES AND FINE GRADE THE LOTS. CONSTRUCT BIORETENTION AREAS. STABILIZE EACH LOT AS CONSTRUCTION IS COMPLETED (20 DAYS).
  - AFTER PERMANENT STABILIZATION OF ALL LOTS AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE THE EARTH DIKE, SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE (2 DAYS).
  - AS NECESSARY TO CONSTRUCT LOTS, INSTALL PERIMETER SEDIMENT CONTROL DEVICES AROUND THE LOT INCLUDING STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE. (1 DAY)
  - GRADE THE SITE. (5 DAYS)
  - CONSTRUCT THE HOUSE AND FINE GRADE THE LOT. STABILIZE EACH LOT AS CONSTRUCTION IS COMPLETED. (20 DAYS)
  - WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE THE SILT FENCE, SUPER SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)
  - INSTALL THE REMAINDER OF THE DRIVEWAY ENTRANCE (2 DAYS).
  - SURFACE PAVE ALL ROADWAYS (2 DAYS).
  - STABILIZE ALL REMAINING DISTURBED AREAS (3 DAYS).
  - WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE ANY REMAINING SEDIMENT CONTROL DEVICES.
- TOTAL CONSTRUCTION TIME: 168 DAYS
- FOR STEPS 8-15 REFER TO SHEET 6 OF 10 FOR THE LOCATION OF THE SEDIMENT CONTROL DEVICES. THESE STEPS ARE FOR THE FINAL CONSTRUCTION ON EACH LOT. A PRECONSTRUCTION MEETING FOR LOT CONSTRUCTION MAY BE REQUIRED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS WITH THE SEDIMENT CONTROL INSPECTOR. STEPS 10-15 CAN BE RUN CONCURRENTLY ON DIFFERENT LOTS AT THE DISCRETION OF THE CONTRACTOR AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR.

**NOTE:**

- LIMIT OF DISTURBANCE SHOWN GRAPHICALLY FOR CLARITY. ACTUAL LIMIT OF DISTURBANCE SHALL BE JUST OUTSIDE OF SEDIMENT CONTROLS AND SHALL BE LOCATED ON THE SITE.
- STOCKPILING WILL NOT BE PERMITTED ON THIS SITE.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*Jim Meyer* 2/8/07  
USDA-Natural Resources Administration Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

*John W. Dutton* 2/8/07  
Howard SCD Date

**DEVELOPER'S CERTIFICATE**

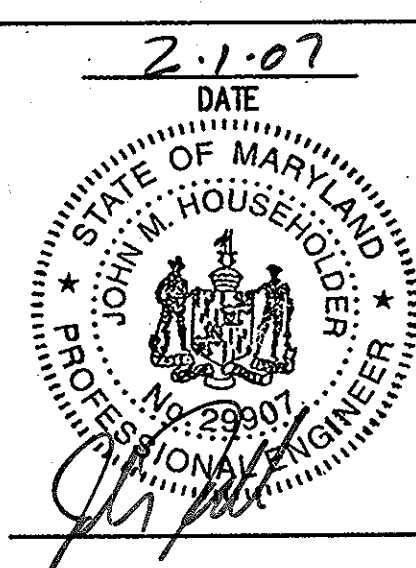
I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before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

Signature of Developer: *Bob Corbett* 2-2-07  
Print name below signature: **WILLIAMSBURG GROUP LLC** 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.

Signature of Engineer: *John Householder* 2-1-07  
Print name below signature: **JOHN HOUSEHOLDER, P.E.** Date



APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Chris Korach</i>	4/9/07
Chief, Division of Land Development	Date
<i>Bob Williams</i>	2/26/07
Chief, Development Engineering Division	Date
<i>Mark D. Wyle</i>	4/1/07
Director, Department of Planning and Zoning	Date

7-30-07	4	AS-BUILT SWM FACILITY - LOT 8
6-11-07	3	REDLINED REVISIONS DATED 6/4/07 FROM CDZ
Date	No.	Revision Description

**HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8**

**OWNER / DEVELOPER**

THE WILLIAMSBURG GROUP 5485 HARPER'S FARM RD. P.O. BOX 1018  
COLUMBIA, MARYLAND 21044  
CONTACT: BOB CORBETT TEL. (410) 947-8860 FAX (410) 947-4358

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7172 columbia gateway drive (suite 100) · columbia, md 21046-2890  
410.872.8890 · metro 301.881.0148 · fax 410.872.8893

**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
HICKORY GLEN	LOTS 1-8	06056.02
	P/O PARCEL 179	
PLAT NO.	GRID NO.	ZONE
129400	12	R-20
		TAX MAP
		35
		ELECTION DISTRICT
		5TH
WATER CODE	SEWER CODE	
1E 20	PUBLIC	5325500
		PUBLIC

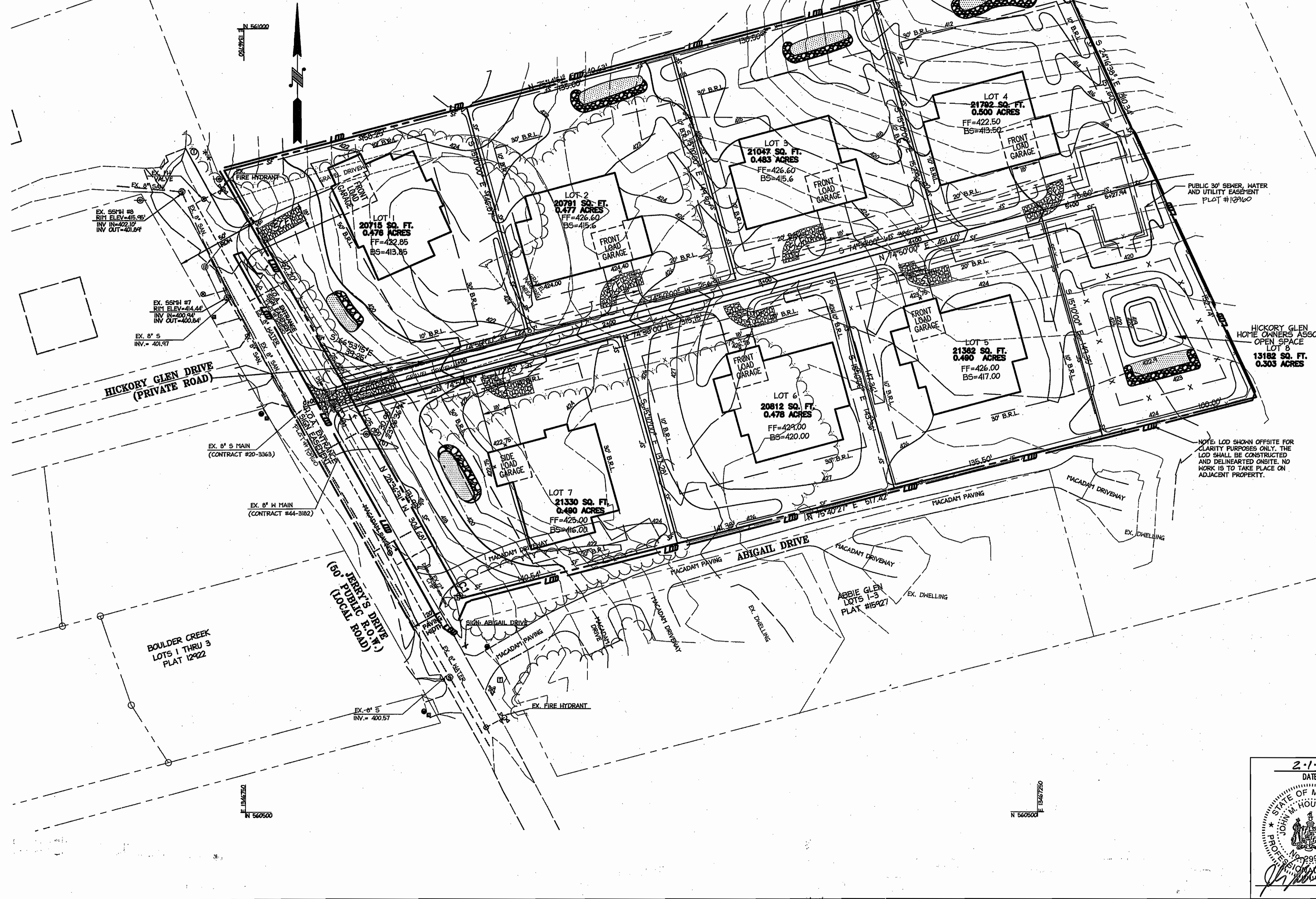
**TITLE:**

**EROSION AND SEDIMENT CONTROL PLAN**

DESIGN: ENJ	SCALE: 1" = 30'	PROJECT: 056001.01
DRAWN: ADL	DATE: 12-19-06	
CHECKED: JPH	APPROVED:	<b>5 OF 11</b>

MDC-297(SDP)

EXISTING CONTOURS	416	EXISTING FENCE	X	LIMIT OF DISTURBANCE	LOD
PROPOSED CONTOUR	418	PROPERTY LINE	---	SILT FENCE	SF
EXISTING STORM DRAIN	EX. 12" RCP	PROPOSED RIGHT OF WAY LINE	---	STABILIZED CONSTRUCTION ENTRANCE	[Symbol]
EXISTING SANITARY SEWER	EX. 8" SAN	PROPOSED SETBACK LINES	---	BIORETENTION AREAS	[Symbol]
EXISTING WATER	EX. 6" WATER	PROPOSED UTILITY EASEMENT	---	PROPOSED SETBACK LINES	X
EXISTING TRANSFORMER	[Symbol]	PROPOSED WATER	---	PROPOSED FENCE	X
EXISTING TRANSFORMER	[Symbol]	PROPOSED SEWER	---		
EXISTING MAILBOX	[Symbol]	PROPOSED STORM DRAIN	---		
EXISTING PLAYGROUND	[Symbol]	TREE PROTECTION FENCE	---		
EXISTING FENCE POST	[Symbol]				



**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Signature of Developer: *Bob Corbett*  
 Print name below signature: **BOB CORBETT V.P.**  
 WILLIAMSBURG GROUP LLC  
 Date: 2.2.07

**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.  
 Signature of Engineer: *John Householder*  
 Print name below signature: **JOHN HOUSEHOLDER, P.E.**  
 Date: 2.1.07

**REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.**  
 Signature: *John Householder*  
 Print name below signature: **JOHN HOUSEHOLDER, P.E.**  
 USDA-Natural Resources Conservation Service  
 Date: 2/8/07

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *John Householder*  
 Print name below signature: **JOHN HOUSEHOLDER, P.E.**  
 Date: 2/8/07

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
 Signature: *Cathy Hamilton*  
 Chief, Division of Land Development and Planning  
 Date: 2/9/07  
 Signature: *John Householder*  
 Chief, Development Engineering Division  
 Date: 2/26/07  
 Signature: *Martha K. Leggett*  
 Director, Department of Planning and Zoning  
 Date: 2/2/07

Date No. Revision Description

**HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8**

**OWNER / DEVELOPER**  
 THE WILLIAMSBURG GROUP 5485 HARPER'S FARM RD. P.O. BOX 1018  
 COLUMBIA, MARYLAND 21044  
 CONTACT: BOB CORBETT TEL. (410) 497-8880 FAX (410) 987-4358

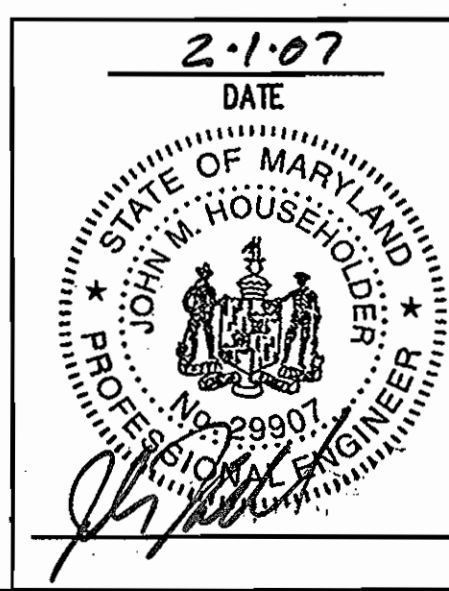
**christopher consultants**  
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 christopher consultants, inc.  
 7172 columbia gateway drive (suite 103) - columbia, md. 21046-2900  
 410.872.8800 - metro 301.881.0148 - fax 410.872.8888

**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
HICKORY GLEN	LOTS 1-8 P/O PARCEL 179	06056.02
PLAT NO.	GRID NO.	ZONE
129160	12	R-20
TAX MAP	ELECTION DISTRICT	
35	5TH	
WATER CODE	SEWER CODE	ELECTION DISTRICT
IE 28 PUBLIC	5325500 PUBLIC	

TITLE: **INDIVIDUAL LOT CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN**

DESIGN: ENJ	SCALE: 1" = 30'	PROJECT: 058001.01
DRAWN: SS	DATE: 12-13-06	
CHECKED: JPH	APPROVED:	



19.0 Standards and Specifications For Land Grading

Definitions

Reshaping of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose

The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grading information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measured for drainage and water removal and vegetative treatment, etc.

Many countries have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they should be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (including grade and cross-section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

- 1. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.
2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to mowing steep slopes.
3. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slopes it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slopes face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.
a. Benches shall be a minimum of six-feet wide to provide ease of maintenance.
b. Benches shall be designed with a reverse slope of 6:1 of flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.
c. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary suades.
4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and suades or conveyed downcut by the use of a designated structure, except where:
a. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected for surface runoff until they are stabilized.
b. The face of the slope shall not be subjected to any concentrated flows of surface water such as from natural drainways, graded suades, downspouts, etc.
c. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.
5. Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut as nominal two-foot intervals with nominal three-foot horizontal slopes. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is L-L. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Over land flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.
6. Surface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.
7. Slopes shall not be created to close to property lines as the endanger adjoining properties without adequately protecting such properties against sediment, erosion, slippage, settlement, subsidence or other related damages.
8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.
9. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subjected to the provisions of the Standard and Specifications.
All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

21.0 Standard and Specifications For Topsoil

Definitions

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

Purpose

To provide a suitable soil medium for vegetative growth. Solid 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:

- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains materials toxic to plant growth.
d. 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-BCS in cooperation with Maryland Agricultural Experiment Station.

Topsoil Specifications - Soil to be used as topsoil must meet the following:

- i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or other as specified.
iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread to 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 in to 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 I - 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:

- a. pH for topsoil shall be between 6.0 and 7.5. If tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise pH to 6.5 or higher.
b. Organic content of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 day min.) to permit dissipation of phytotoxic materials.

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

Place topsoil (if required) and apply soil amendments as specified on 20.0 Vegetative Stabilization - Section I - 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 Fences and Sediment Traps and Basins.

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

Topsoil shall be uniformly distributed in a 4" - 6" 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 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 must be applied as specified below:

Composted Sludge Materials 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:

- a. Composted sludge shall be supplied by, or originated from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

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.

30.0 Dust Control

Definition

Controlling dust blowing and movement on construction sites and roads.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement when in and off-site damage is likely without treatment.

Specifications

Temporary Methods
1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.

2. Vegetative Cover - See standards for temporary vegetative cover.

3. 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 spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.

4. 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.

5. Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar materials 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.

6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods

1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.

2. Topsoil - Covering with less erosive materials. See Standards for topsoiling.

3. Stone - Cover surface with crushed stone or coarse gravel.

References

- 1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA - ARS.

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:
1. Preferred--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/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/acre 30-0-0 urea form fertilizer (9 lbs/1000 sq. ft.)
2. Acceptable--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/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 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 -- February 29, protect site by:
Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring.
Option 2 - Use sod. Option 3 -- Seed with 60 lbs/acre Kentucky 30 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 unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2/8 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 6 feet or higher, use 3/8 gallons per acre (9 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 re-disturbed 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, if not previously loosened.

Soil Amendments: -- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).
Seeding: -- For periods March 1 -- April 30 and from August 15 -- October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 -- February 28 protect the site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: -- Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrattled weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2/8 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 6 ft. or higher, use 3/8 gal. per acre (9 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

DEVELOPER'S CERTIFICATE

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

Signature of Developer: [Signature] vp Date: 2-2-07
Print name below signature: ROBERT CORBETT
WILLIAMSBURG GROUP INC

ENGINEER'S CERTIFICATE

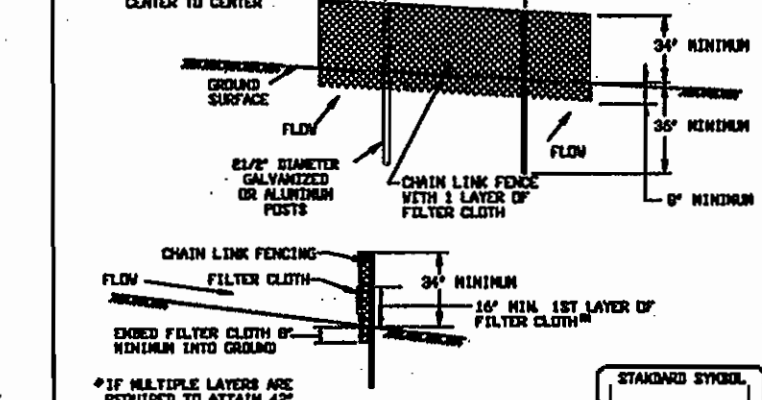
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer: [Signature] Date: 2-1-07
Print name below signature: JOHN HOUSEHOLDER, P.E.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-Natural Resources Conservation Service Date: 2/2/07
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Signature: [Signature] Date: 2/2/07
Howard SCD

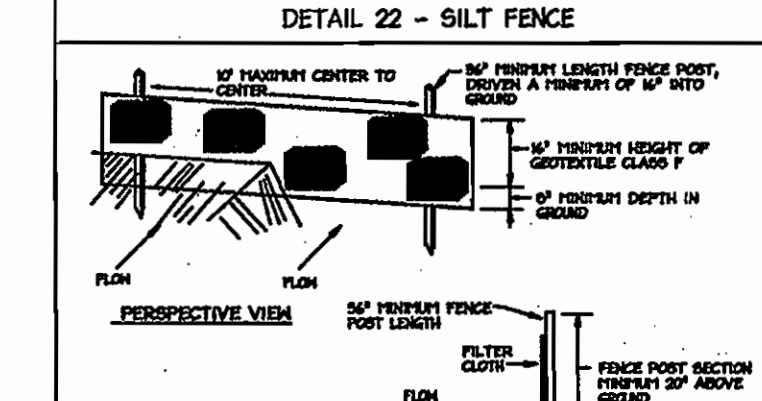
DETAIL 23 - SUPER SILT FENCE



Construction Specifications
1. Facing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Design for Chain Link Fencing. The specification for a 4" fabric shall be used, substituting 4" fabric and 4" length.

- 2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower section, stone and gravel, shall be secured and fastened to the fence posts.
3. Filter cloth shall be fastened securely to the chain link fence with wire ties spaced every 6" along the entire length.
4. Filter cloth shall be embedded a minimum of 12" into the ground.
5. When the sections of filter cloth adjoin each other, they shall be overlapped 12" and folded.
6. Maintenance shall be performed as needed and silt buildup removed when "haircut" develops in the silt fence. or when silt reaches 100% of fence height.
7. 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 Contractor's Choice:
Tensile Strength 50 lbs/in (min.) Test: HST1 805
Tensile Pullback 30 lbs/in (min.) Test: HST1 805
Filtering Efficiency 75% (min.) Test: HST1 805

DETAIL 22 - SILT FENCE

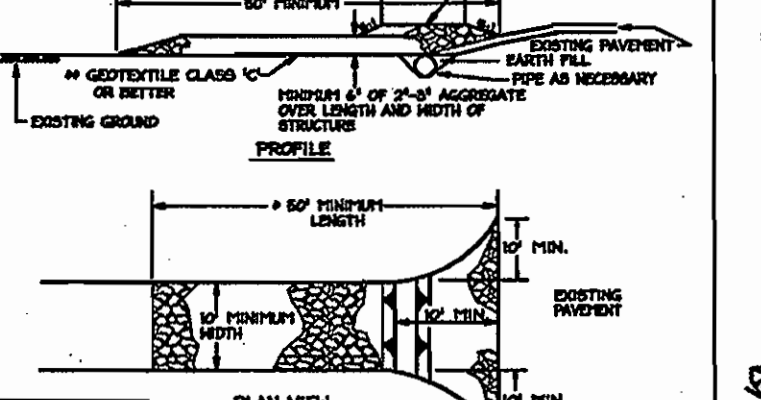


Construction Specifications
1. Fence posts shall be a minimum of 36" long driven 18" minimum into the ground. Head posts shall be 100% x 100% galvanized (minimum) 2" x 4" (maximum) (minimum) wood and shall be of square quality hardwood. Head posts shall be standard T or U section weighing not less than 120 pound per linear foot.

- 2. Posts 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 Contractor's Choice:
Tensile Strength 50 lbs/in (min.) Test: HST1 805
Tensile Pullback 30 lbs/in (min.) Test: HST1 805
Filtering Efficiency 75% (min.) Test: HST1 805
3. Stone units of aggregate fabric come together, they shall be overlapped, and fastened to prevent sediment bypass.
4. Silt fence shall be inspected other each rainfall event, and maintained when buildup occurs or when sediment accumulation reaches 50% of the fabric height.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

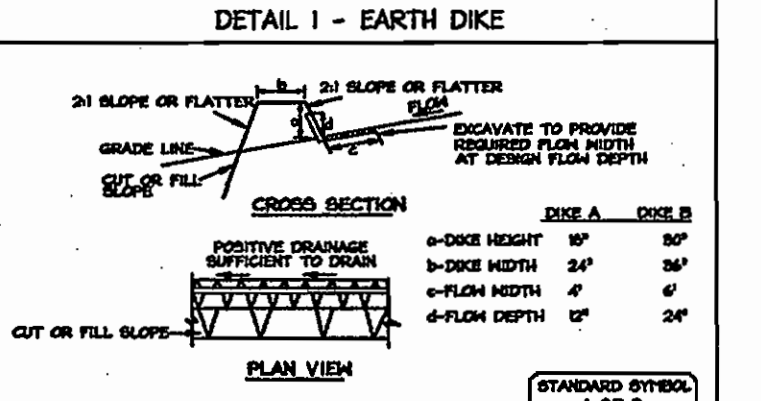
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specifications
1. Length - minimum of 80' (40' for single residence lot).

- 2. Width - 12" minimum, should be flared at the existing road to provide a turning radius.
3. Gravelite fabric (filter cloth) shall be placed over the existing ground prior to construction and shall be placed at least 6" deep over the length and width of the entrance.
4. Stone - crushed aggregate (2" to 3") or retained or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or through stabilized construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a grateable storm drain with a minimum of 2' slope over the pipe. Pipe shall be placed according to the drainage. When the pipe is located at a high spot, the pipe shall be supported by concrete piers. Pipe shall be supported by concrete piers according to the amount of runoff to be conveyed. A 4" minimum will be required.
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

DETAIL 1 - EARTH DIKE



Construction Specifications
1. All temporary earth dikes shall have unobstructed pathways grade to an outlet. Good drainage may be necessary for grades less than 1%.

- 2. Dikes shall be placed in a cleared area shall be covered to a minimum of 12" of straw mulch.
3. Dikes shall be placed in a cleared area shall be covered to a minimum of 12" of straw mulch.
4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of as far as possible from the dike.
5. The dike shall be secured or staked to the grade and cross section as required to meet the criteria specified herein and to be free of bare projections or other irregularities which will impede traffic.
6. All shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed on the dike and spread to prevent sediment bypass.
8. Inspection and maintenance must be provided periodically and after each rain event.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

HOWARD COUNTY SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- 1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. 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, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specific above in accordance with the 1995 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Section 52). Temporary stabilization with mulch along can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained by the Howard County Sediment Control Inspector.
7. Site Analysis:
Total Area of Site 3.62 Acres
Area Disturbed 3.64 Acres
Area to be roofed or paved 0.32 Acres
Area to be vegetatively stabilized 2.77 Acres
Total Cut 2500 Cu. Yds.
Total Fill 2500 Cu. Yds.
Offsite waste/borrow area location: N/A
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all site with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized any construction as shown on these plans by the end of each work day, whichever is shorter.

TREE PROTECTION FENCE

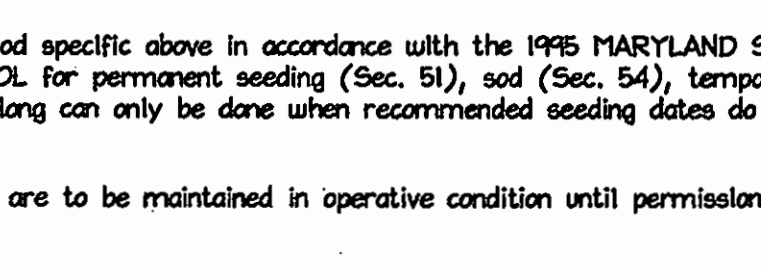
NOTE:
1. BRACE ORANGE OR BLUE PLASTIC FLEX FENCE FOR TREE PROTECTION ONLY.
2. DIMENSIONS OF RETENTION AREA SHALL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
3. DIMENSIONS OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DOWNS.
4. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVERE LARGE ROOTS WHEN INSTALLING POSTS.
5. RETENTION DOWNS ARE REQUIRED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development Date: 4/10/07
Chief, Development Engineering Division Date: 2/28/07
Director, Department of Planning and Zoning Date: 4/10/07

HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8

OWNER / DEVELOPER
THE WILLIAMSBURG GROUP 5485 HARRPER'S FARM RD. P.O. BOX 1018
CONTACT: BOB CORBETT COLUMBIA, MARYLAND 21044
TEL: (410) 947-8680 FAX: (410) 897-4358



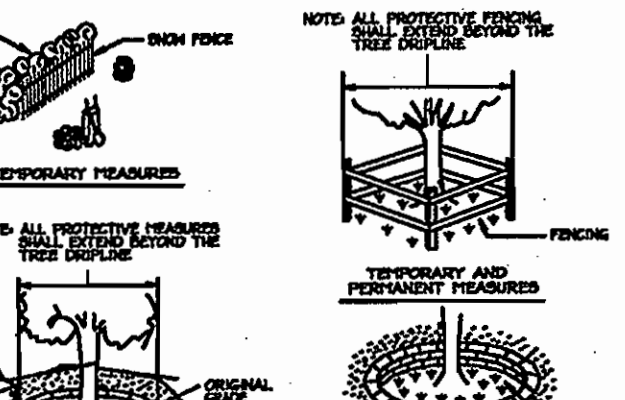
PERMIT INFORMATION CHART

Table with columns: PROJECT NAME, LOT/PARCEL NO., CENSUS TRACT, PLAT NO., GRID NO., ZONE, TAX MAP, ELECTION DISTRICT, WATER CODE, IE 2B, PUBLIC, SBMR CODE, 5325500, PUBLIC.

TITLE: EROSION AND SEDIMENT CONTROL NOTES & DETAILS

Table with columns: DESIGN: ENJ, SCALE: AS SHOWN, PROJECT: DS8001.01, DRAWN: DAF, DATE: 12-13-06, CHECKED: JPH, APPROVED: [Signature]

DETAIL 31 - TREE PROTECTION



NOTE: ALL PROTECTIVE FENCES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

- 1. Temporary Fences - Temporary fences shall be installed around trees to be protected. The fence shall be constructed of 2" x 4" posts and 1/2" x 4" rails. The fence shall be 6 feet high and shall be supported by 4" x 4" posts. The fence shall be maintained throughout construction.
2. Permanent Fences - Permanent fences shall be installed around trees to be protected. The fence shall be constructed of 2" x 4" posts and 1/2" x 4" rails. The fence shall be 6 feet high and shall be supported by 4" x 4" posts. The fence shall be maintained throughout construction.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development Date: 4/10/07
Chief, Development Engineering Division Date: 2/28/07
Director, Department of Planning and Zoning Date: 4/10/07

HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8

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PERMIT INFORMATION CHART

Table with columns: PROJECT NAME, LOT/PARCEL NO., CENSUS TRACT, PLAT NO., GRID NO., ZONE, TAX MAP, ELECTION DISTRICT, WATER CODE, IE 2B, PUBLIC, SBMR CODE, 5325500, PUBLIC.

TITLE: EROSION AND SEDIMENT CONTROL NOTES & DETAILS

Table with columns: DESIGN: ENJ, SCALE: AS SHOWN, PROJECT: DS8001.01, DRAWN: DAF, DATE: 12-13-06, CHECKED: JPH, APPROVED: [Signature]



PLAN  
SCALE: 1"=50'

**PROPOSED STOPPING SIGHT DISTANCE**

DRIVEWAY	GRADE	REQUIRED DISTANCE	DIRECTION TO DRIVEWAY
1	0%	200'	SOUTHBOUND
1	0%	200'	NORTHBOUND

**NOTES:**

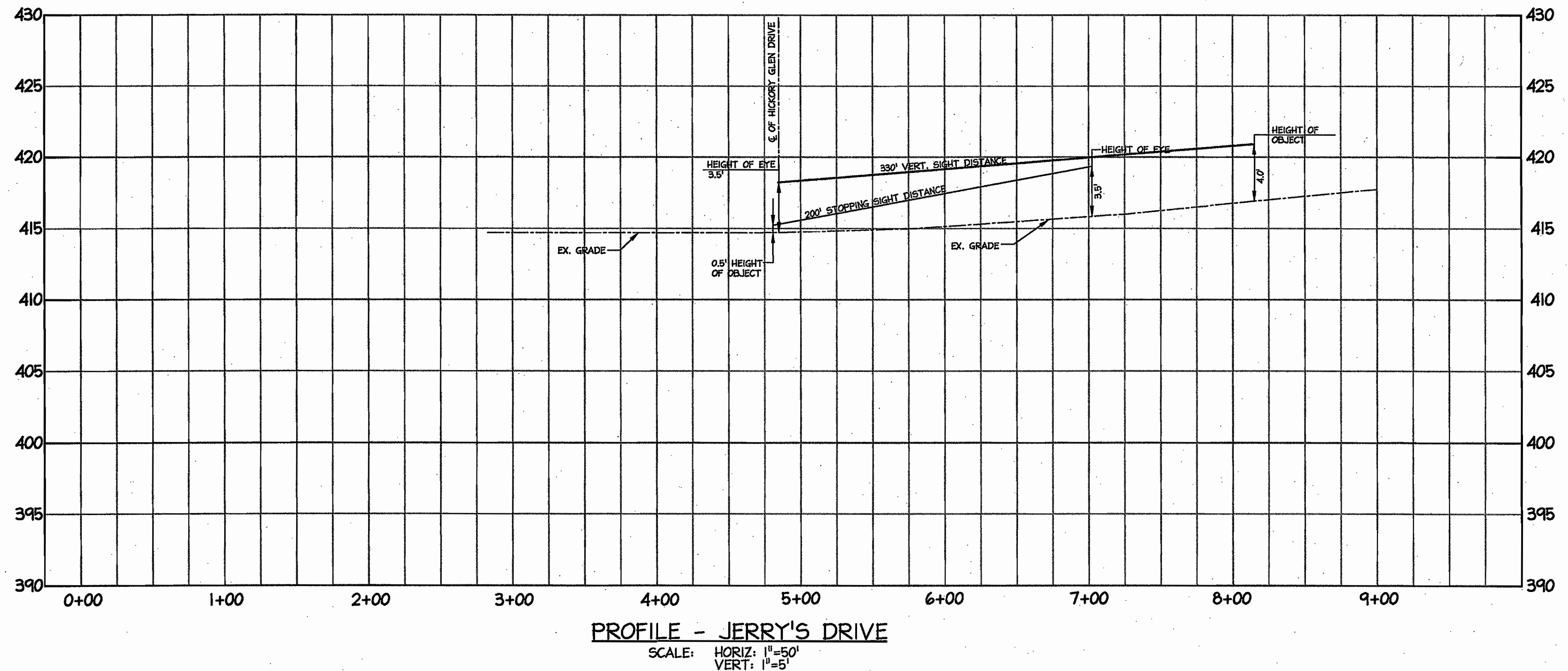
1. THE REQUIRED STOPPING SIGHT DISTANCE WAS CALCULATED USING THE EQUATION FROM SECTION 2.3.1.B.1 IN HOWARD COUNTY DESIGN MANUAL VOLUME III. THE FRICTION FACTOR USED IS FROM TABLE 2.02 FROM THE AFORESAID MANUAL WITH RESPECT TO THE DESIGN SPEED OF JERRY'S DRIVE.

2. SINCE THERE ARE NO OVER PASSES, UNDERPASSES OR STEEP CHANGES IN GRADES, NO ADJUSTMENTS FOR VERTICAL CURVES WERE MADE.

**PROPOSED INTERSECTION AT JERRY'S DRIVE**

OPERATING SPEED= 30 MPH/ SU  
(85TH PERCENTILE SPEED ON EXISTING ROAD)  
BASED ON FIGURE 2.17 OF DESIGN MANUAL VOL. III (P)

	DL	DR
CROSS	270'	310'
LEFT TURN	330'	330'
RIGHT TURN	300'	N/A



PROFILE - JERRY'S DRIVE  
SCALE: HORIZ: 1"=50'  
VERT: 1"=5'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development *[Signature]* Date: 4/9/07

Chief, Development Engineering Division *[Signature]* Date: 2/20/07

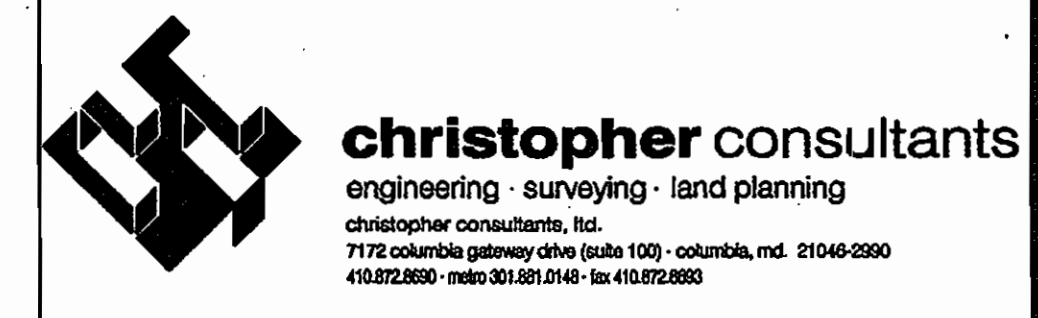
Director, Department of Planning and Zoning *[Signature]* Date: 4/10/07

Date	No.	Revision Description

**HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8**

**OWNER / DEVELOPER**

THE WILLIAMSBURG GROUP 5485 HARPER'S FARM RD. P.O. BOX 1018  
COLUMBIA, MARYLAND 21044  
CONTACT: BOB CORBETT TEL. (410) 997-8860 FAX (410) 997-4358

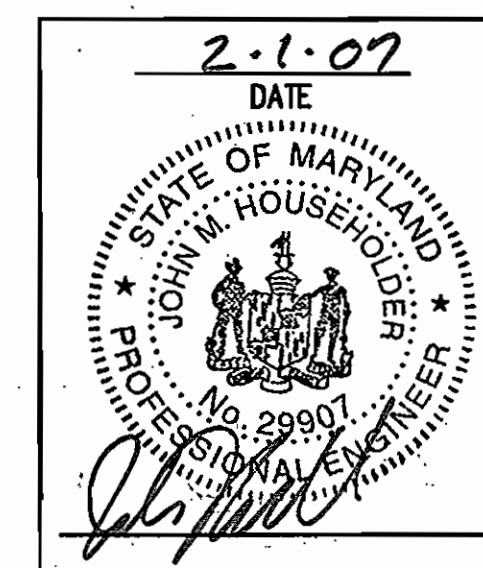


**PERMIT INFORMATION CHART**

PROJECT NAME HICKORY GLEN	LOT/PARCEL NO. LOTS 1-8 P/O PARCEL 179	CENSUS TRACT 06056.02
PLAT NO. 1-23100	GRID NO. 12	ZONE R-20
TAX MAP 35	ELECTION DISTRICT 5TH	
WATER CODE IE 28 PUBLIC	SEWER CODE 5325500 PUBLIC	

TITLE:  
**SIGHT DISTANCE ANALYSIS PLAN**

DESIGN: ENJ	SCALE: AS SHOWN	PROJECT: 058001.01
DRAWN: DAM	DATE: 12-18-06	
CHECKED: JPH	APPROVED:	



MDC-297(SDP)



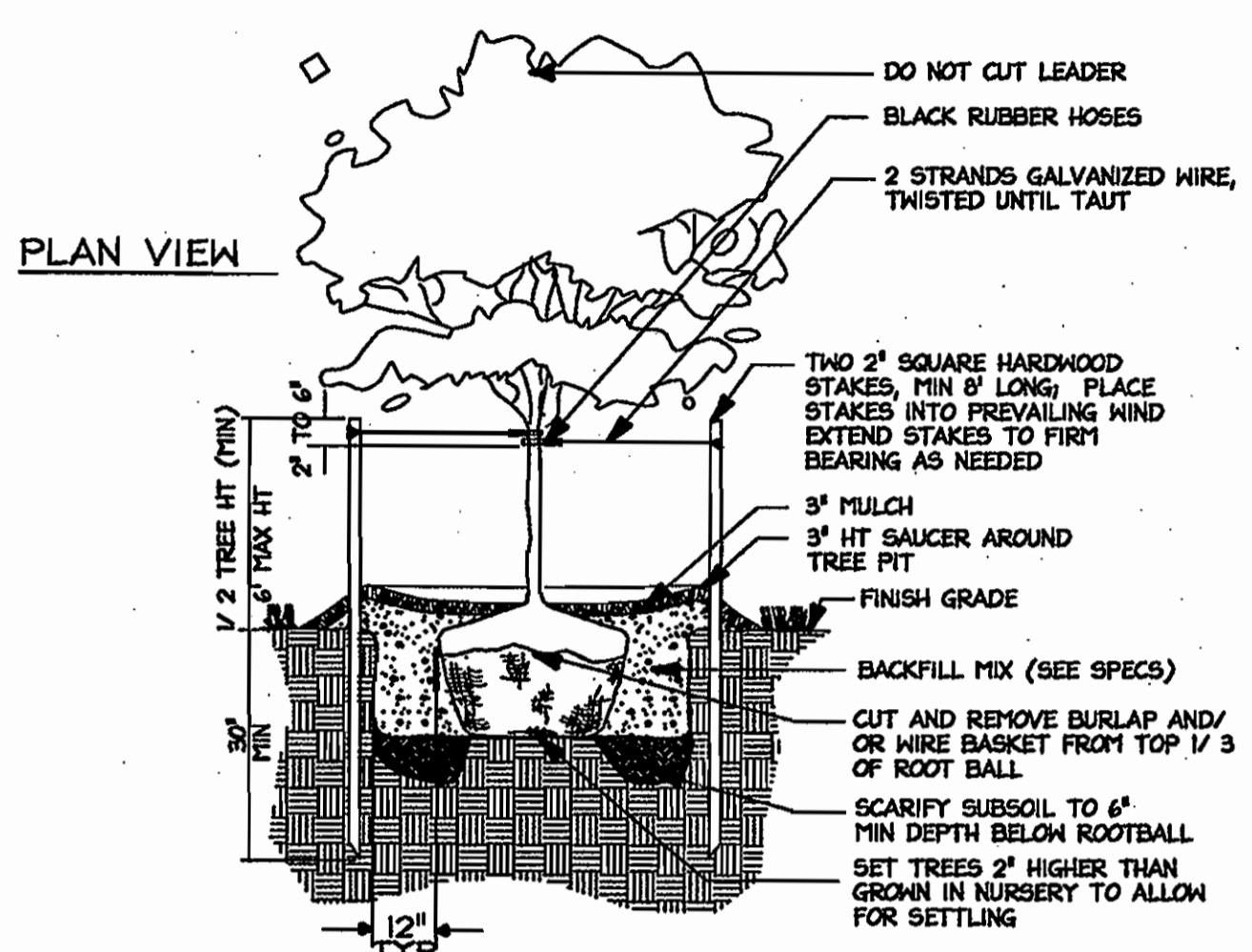


**GENERAL PLANTING NOTES**

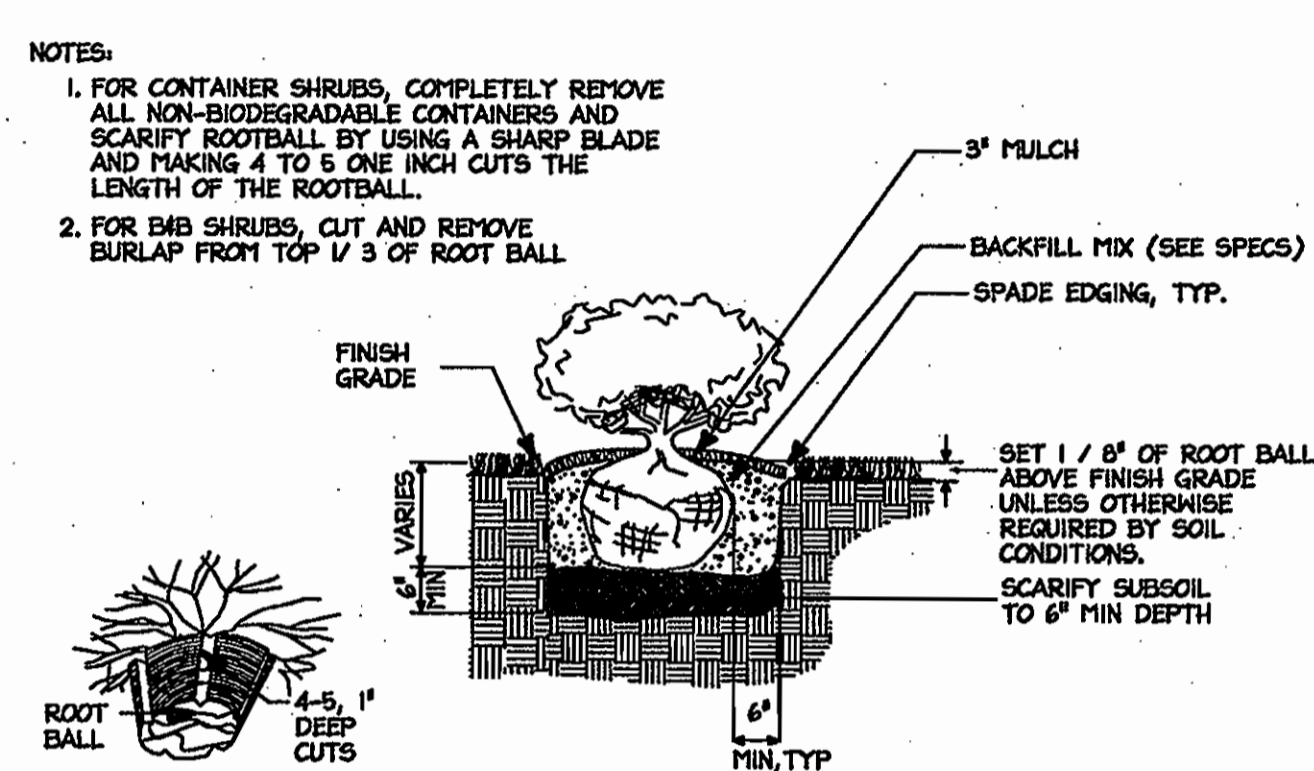
1. ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
2. LANDSCAPING CONTRACTOR TO FOLLOW LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METRO AREA APPROVED BY LC&M.
3. NO SUBSTITUTIONS TO BE MADE WITHOUT CONSENT OF LANDSCAPE ARCHITECT OR OWNER.
4. IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOD QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN THE PLANT LIST.
5. ALL BEDS TO BE TOPPED WITH THREE INCHES OF HARDWOOD MULCH.
6. LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UTILITIES WITH OWNERS BEFORE PLANTING.
7. LANDSCAPE ARCHITECT/OWNER SHALL SELECT, VERIFY AND/OR APPROVE ALL PLANT MATERIAL AT OWNER'S DISCRETION, SPECIMEN AND OTHER PLANT MATERIAL WILL BE SELECTED.
8. LANDSCAPE CONTRACTOR SHALL COORDINATE PLANT BED FILLING OPERATIONS AND PLANT MATERIAL INSTALLATION WITH GENERAL CONTRACTOR AND UTILITIES CONTRACTOR. AT THE TIME OF FINAL INSPECTION WITH ACCEPTANCE, ALL ELECTRIC, WATER, DRAINAGE, AND FOUNTAIN UTILITIES, AS WELL AS ALL PLANT MATERIALS, SHALL REMAIN UNDAMAGED. LIKEWISE, LANDSCAPE CONTRACTOR AND UTILITIES CONTRACTOR SHALL COORDINATE EFFORTS TO ENSURE THAT SURFACE UTILITIES ARE AT THE PROPER ELEVATION RELATIVE TO FINAL GRADES.
9. CONTRACTOR SHALL NOTIFY MISS UTILITY 72 HOURS PRIOR TO CONSTRUCTION.
10. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERRYS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
11. TOPSOIL MIX
  - a. Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
  - b. Thoroughly mixed in the following proportions for tree and shrub planting mix:
    - 5 cy existing soil
    - 2 cy sharp sand
    - 3 cy wood residue
    - 4.5 lbs treble superphosphate
    - 5 lbs dolomite limestone (eliminate for acid loving plants)
  - c. For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 sf and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation.
    - 2 cy sharp sand
    - 3 cy organic material
    - 4.5 lbs treble superphosphate
    - 5 lbs dolomite limestone (eliminate for acid loving plants)
12. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HO. CO. CODE. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$10,200.00 HAS BEEN POSTED AS PART OF THE F-05-193 DEVELOPER'S AGREEMENT. (28 SHADE TREES AND 12 EVERGREEN TREES).
13. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
14. DEVELOPER'S BUILDER'S CERTIFICATE
 

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPING MANUAL.

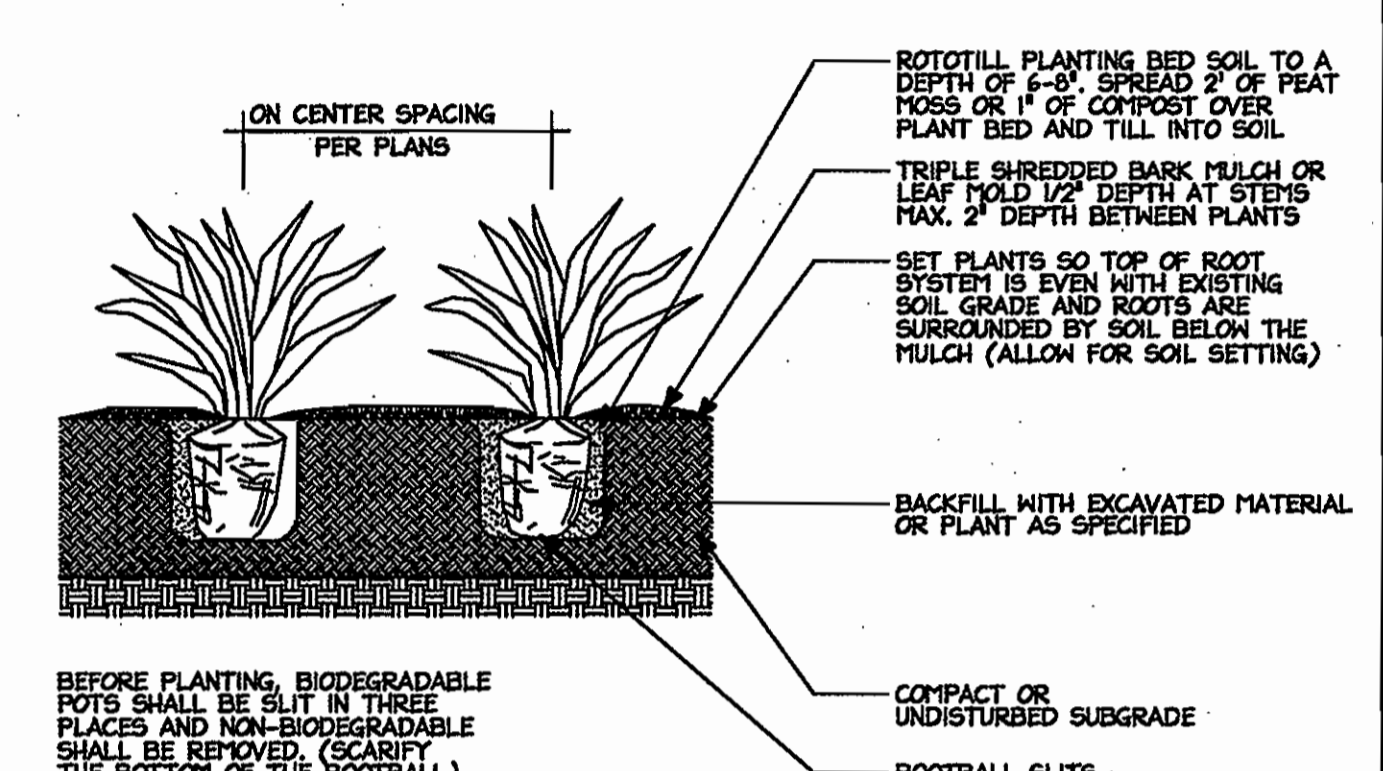
I/WE FURTHER CERTIFY THAT UPON TREES COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.



**B TREE PLANTING DETAIL**  
Not To Scale

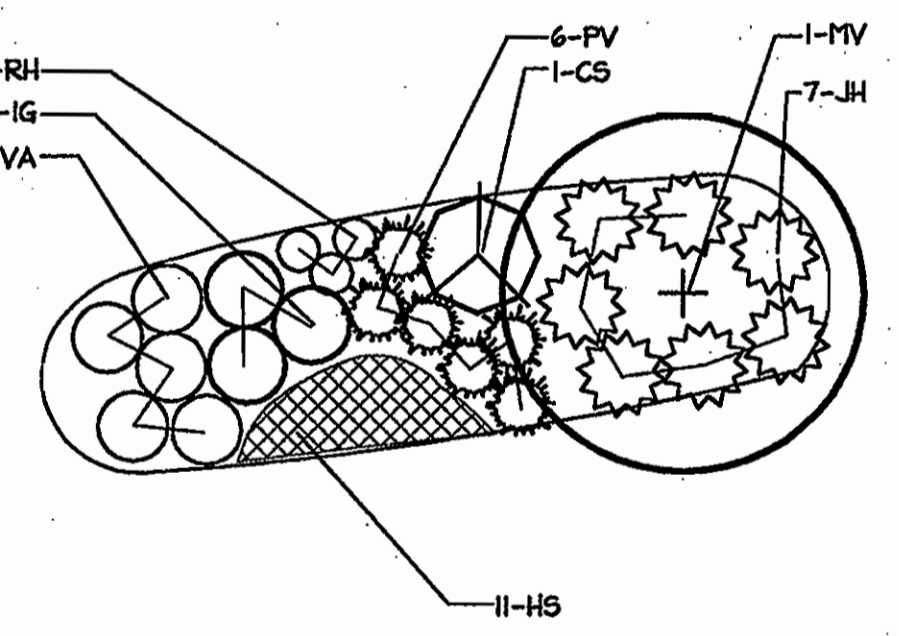


**F SHRUB BED PLANTING**  
Not To Scale



**E PERENNIAL PLANTING**  
Not To Scale

NAME: \_\_\_\_\_ DATE: 2-2-07



**G TYPICAL BIORETENTION PLANTING DETAIL**  
SCALE: 1"=10'

Note: Modifications may be required to adjust the typical bio-retention layout plantings to those shown on the Landscape Plan.

**BIORETENTION PLANT LIST:**

SYMBOL	LATIN NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
MV	MAGNOLIA VIRGINICA	SHEETBAY MAGNOLIA	1	10'-12'	EMB
CS	CORNUS STOLONIFERA	RED TWIG DOGWOOD	3	3G	-
IG	ILEX GLABRA	INKBERRY HOLLY	3	3G	4' O.C.
JH	JUNIPERUS HORIZONTALIS	CREeping JUNIPER	7	2G	3' O.C.
PV	PANICUM VIRGATUM	SWITCH GRASS	6	2G	3' O.C.
VA	VACCINIUM AUGUSTIFOLIUM	LOW BLUEBERRY	6	3G	3' O.C.
RH	RUDEBECKIA HIRTA	BLACK EYED SUSAN	3	1G	2' O.C.
HS	HEPEROCALLIS SPP.	'STELLA D'ORA' DAYLILY	11	1G	18' O.C.

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Chief, Division of Land Development	4/9/07
Chief, Development Engineering Division	2/20/07
Director, Department of Planning and Zoning	4/10/07

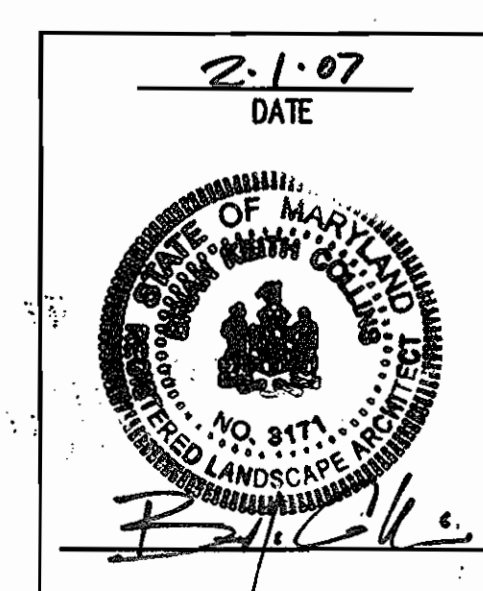
**HICKORY GLEN - LOTS 1-7 AND OPEN SPACE LOT 8**

**OWNER / DEVELOPER**  
THE WILLIAMSBURG GROUP 5495 HARPER'S FARM RD. P.O. BOX 1018  
COLUMBIA, MARYLAND 21044  
CONTACT: BOB CORBETT TEL. (410) 917-2650 FAX (410) 937-4358

PROJECT NAME		LOT/PARCEL NO.	CENSUS TRACT
HICKORY GLEN		LOTS 1-9	06056.02
P/O PARCEL 179			
PLAT NO.	GRID NO.	ZONE	TAX MAP
129160	12	R-20	35
ELECTION DISTRICT		5TH	
WATER CODE		SEWER CODE	
IE 28		5325500	
PUBLIC		PUBLIC	

**BIORETENTION PLANTING NOTES AND DETAILS**

DESIGN: LMG	SCALE: AS SHOWN	PROJECT: 050001.01
DRAWN: LMG	DATE: 12-13-06	
CHECKED: BKC	APPROVED:	



MDC-297

