

GENERAL NOTES

- SUBJECT PROPERTY ZONED RC-DEO PER 02/02/04 COMPREHENSIVE ZONING PLAN.
- TOTAL AREA OF PROPERTY = 33.54 AC ±
- PROPOSED NUMBER OF LOTS = 9
- PROPOSED AREA OF LOTS = 33.54 AC ±
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- THIS PROPERTY IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/20/03 PER COUNCIL BILL 75-2003.
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY SILL, ADCOCK & ASSOCIATES, LLC IN APRIL 2011.
- THE TOPOGRAPHY SHOWN HEREON HAS BEEN FIELD RUN BY SILL, ADCOCK & ASSOCIATES, LLC, IN APRIL, 2011. THE EXISTING TOPOGRAPHY SHOWN OUTSIDE THE SITE IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 1993.
- THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES WITHIN THE PROJECT BOUNDARY.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION 410.531.5533
 - BGE(CONTRACTOR SERVICES) 410.850.4620
 - BGE(UNDERGROUND DAMAGE CONTROL) 410.787.9998
 - MISS UTILITY 1.800.287.7777
 - COLONIAL PIPELINE COMPANY 410.795.1390
 - HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES 410.313.4900
 - HOWARD COUNTY HEALTH DEPARTMENT 410.313.2940
 - AT&T 1.800.292.1133
 - VERIZON 1.800.743.0033/410.224.9210
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY IN ADDITION TO MARYLAND STATE HIGHWAY AUTHORITY STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- ALL HOPE PIPE SPECIFICATION AND INSTALLATION SHALL MEET AASHTO M-252 TYPE S, M-294 TYPE S AND ASTM D321, RESPECTIVELY.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. INDIVIDUAL DRIVEWAY PAVING TO BE HOWARD COUNTY STANDARD P-1 PAVING SECTION. USE IN COMMON DRIVEWAY SECTION TO BE HOWARD COUNTY STANDARD P-2 PAVING SECTION. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST, PRIOR TO CONSTRUCTION.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- ALL TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP, DATED JUNE, 2011.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A TWO INCH (2) GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1/4 GAUGE) INSERTED INTO A TWO AND A HALF INCH (2-1/2) GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) THREE FEET (3) LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- DRIVEWAY ENTRANCES PER HOWARD COUNTY DESIGN MANUAL IV, DETAIL R.6.06.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:
 - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
 - SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM);
 - GEOMETRY - MAXIMUM 6% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YRD FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- ALL DITCHES AND SWALES CONTROL MATING UNLESS SO'S IS BEING UTILIZED.
- REFERENCE: LIBER 3503, FOLIO 615; LIBER 3505 FOLIO 620; LIBER 12886, FOLIO 001; PLAT 9328
- PREVIOUS HOWARD COUNTY FILE NUMBERS: PLAT 9328; F-50-157; ECP-12-006; WP-11-181
- THE SOILS SHOWN HAVE BEEN TAKEN FROM THE NRCS WEB SOIL SURVEY WEBSITE
- THE WETLAND AND STREAM LIMITS SHOWN ARE BASED ON A STUDY OF THE COUNTY RIGHT-OF-WAY PREPARED BY SILL, ADCOCK & ASSOCIATES, LLC IN JULY 2011.
- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN FIELD LOCATED.
- EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE HOUSE ON EXISTING LOT 6, CHAPEL WOODS II, AND ITS SEPTIC SYSTEM ARE TO BE ABANDONED ACCORDING TO THE HOWARD COUNTY HEALTH DEPARTMENT REGULATIONS. THE WELL LOCATED ON EXISTING LOT 6 WILL REMAIN TO BE USED FOR PROPOSED LOT 3. THE EXISTING HOUSE LOCATED ON PARCEL 353 IS TO REMAIN. THE SEPTIC SYSTEM SERVING THIS HOUSE IS TO REMAIN AND HAS AN APPROVED 10,000 SQUARE FOOT SEPTIC EASEMENT. THE WELL SERVING PARCEL 353 WILL BE ABANDONED AND A NEW ONE TO BE INSTALLED IN THE LOCATION SHOWN.
- THE EXISTING WELLS TO BE ABANDONED WILL BE SEALED BY A LICENSED WELL DRILLER AND STATE WELL ABANDONMENT FORMS SUBMITTED IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REQUIREMENTS.
- THE EXISTING SEPTIC TANKS WILL BE PUMPED AND PROPERLY ABANDONED. ANY DRY WELLS WILL BE LOCATED AND PROPERLY ABANDONED. PROPER DOCUMENTATION WILL BE PROVIDED TO THE HEALTH DEPARTMENT IN ACCORDANCE WITH THE REQUIREMENTS FOR THIS PROJECT.
- THE MARYLAND DEPARTMENT OF THE ENVIRONMENT HAS APPROVED A VARIANCE TO ALLOW SEWAGE DISPOSAL SYSTEMS LOCATED ON LOTS 1, 2, 3, 4, 7 & 8 TO BE LOCATED UPGRADIENT FROM THE PRIVATE WATER SUPPLY ON LOT 1 AND NEIGHBORING PARCELS 30, 31, 37, 45 & 47. THIS IS SUBJECT TO THE FOLLOWING CONDITIONS: AN ADVANCED PRE-TREATMENT SYSTEM, WHICH UTILIZES BEST AVAILABLE TECHNOLOGY TO PERFORM NITROGEN REDUCTION, MUST BE INSTALLED ON THE SEWAGE DISPOSAL SYSTEMS ON LOTS 1, 2, 3, 4, 7 & 8. THE SYSTEM SHALL BE CONSTRUCTED USING A STEEL WELL CASING, WHICH MUST BE INSTALLED AT A MINIMUM DEPTH OF 60 BELT-GROUND SURFACE OR 10' IN THE COMPETENT BEDROCK. A LOW PRESSURE DOSING SYSTEM WILL BE REQUIRED FOR THE SEWAGE DISPOSAL SYSTEMS ON LOTS 1, 2, 3, 4, 7 & 8.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS, NUMBERS 2925 AND 2926, WERE USED FOR THIS PROJECT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, UNLESS WAIVERS HAVE BEEN APPROVED. THE DISTURBANCE OF THE WETLAND AREA LOCATED APPROXIMATELY 40' SOUTH OF DRIVEWAY STATION +160 HAS BEEN DETERMINED TO BE A NECESSARY DISTURBANCE BY THE DEPARTMENT OF PLANNING AND ZONING AS PART OF WP-11-181.
- STORMWATER MANAGEMENT OBLIGATIONS FOR THIS PROJECT ARE IN ACCORDANCE WITH THE MARYLAND STORMWATER DESIGN MANUALS, VOLUMES I AND II, AS AMENDED BY THE MARYLAND STORMWATER ACT OF 2007, AND HAVE BEEN HANDLED BY THE USE OF MICRO-BIOTRETENTION FACILITIES, ROOFTOP DISCONNECTS, GRAVEL TRENCHES AND NON-ROOFTOP DISCONNECTS.
- THIS PLAN COMPLES WITH THE REQUIREMENTS OF SECTION 16.120 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 6.96 ACRES OF FOREST AND RESTORATION PLANTING OF 2.37 ACRES (103,237 SF) OF FOREST. SURETY IN THE AMOUNT OF \$51,619 (103,237 x \$0.50) HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$1,050 FOR THE REQUIRED LANDSCAPING (2 SHADE TREES, 3 EVERGREENS) FOR LOT 1, \$750 FOR THE REQUIRED LANDSCAPING (5 EVERGREENS) FOR LOT 2, \$750 FOR THE REQUIRED LANDSCAPING (1 SHADE TREES, 3 EVERGREENS) FOR LOT 7, AND \$1,050 FOR THE REQUIRED LANDSCAPING (2 SHADE TREES, 3 EVERGREENS) FOR LOT 8.
- VEHICULAR ACCESS TO LOTS 1 AND 9 WILL BE VIA DIRECT ACCESS TO CHAPEL ESTATES DRIVE ONLY. LOTS 2-5, 7 AND 8 WILL HAVE VEHICULAR ACCESS TO CHAPEL ESTATES DRIVE VIA THE USE-IN-COMMON DRIVEWAY ONLY. LOT 6 WILL HAVE VEHICULAR ACCESS TO CHAPEL ESTATES DRIVE VIA THE USE-IN-COMMON DRIVEWAY AND WILL HAVE ACCESS TO BRAGDON WOOD VIA AN EXISTING ACCESS EASEMENT. THE PROPOSED GATE AT THE REAR OF LOT 2, ALONG THE LOT 6 DRIVEWAY, WILL BE OWNED, MAINTAINED AND REGULATED BY LOT 6. A KNOX BOX FOR FIRE DEPARTMENT USE WILL BE PROVIDED ON THE GATE SUPPORT COLUMNS.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPER'S/OWNER'S EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410.313.2430 FOR DETAILS AND COST ESTIMATE.
- WAIVER PETITION WP-11-181, TO WAIVE SECTIONS 16.102(d) TO ALLOW THE PROPOSED SUBDIVISION TO PROCEED DIRECTLY TO FINAL PLAN SUBMISSION, 16.120(b)(4)(i) AND (ii) TO ALLOW LOTS TO BE IRREGULAR AND NON RECTANGULAR SHAPED AND ALLOWS DIMENSIONS TO EXCEED A 3:1 LOT DEPTH TO LOT WIDTH RATIO, 16.120(b)(4)(iii)(b) TO ALLOW ENVIRONMENTAL FEATURES AND BUFFERS AND FOREST CONSERVATION EASEMENTS ON LOTS LESS THAN 10 ACRES IN SIZE, 16.120(b)(2)(iii) TO ALLOW THE FRONTAGE OF LOT 6, A SINGLE PIPESTEM LOT HAVING FURTHER SUBDIVISION POTENTIAL, TO BE OF INSUFFICIENT WIDTH TO MEET PUBLIC ROAD RIGHT-OF-WAY REQUIREMENTS AND 16.145(f) TO ALLOW THE PROPOSED SUBDIVISION TO PROCEED DIRECTLY TO FINAL PLAN SUBMISSION, OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WAS APPROVED ON JULY 15, 2011, SUBJECT TO THE FOLLOWING SEVEN (7) CONDITIONS:
 - PETITIONER SHALL INVESTIGATE THE USE OF AN OFF-SITE LOCATION FOR PLANTING AND/OR RETENTION AND USE OF AN APPROVED FOREST CONSERVATION BANK TO SATISFY THE FOREST CONSERVATION REQUIREMENTS OF THE PROPOSED SUBDIVISION. SHOULD USE OF AN OFF-SITE LOCATION OR BANK PROVE IMPRACTICAL, ATTEMPTS MUST BE MADE TO KEEP ALL ON-SITE FOREST CONSERVATION EASEMENTS LESS THAN 100 FEET FROM HOUSE SITES TO AVOID FUTURE INTRUSIONS.
 - PETITIONER SHALL, SHOULD ON-SITE FOREST CONSERVATION BE PERMITTED BY THE DEPARTMENT, INVESTIGATE FOREST CONSERVATION ALTERNATIVES ON LOT 6 OF THE WAIVER EXHIBIT, AND SHALL INCLUDE THESE ALTERNATIVES AS PART OF THE FUTURE ENVIRONMENTAL CONCEPT AND FOREST CONSERVATION PLANS.
 - PETITIONER SHALL, IN DESIGNING THE SHARED ACCESS DRIVEWAY, ATTEMPT TO CREATE A STABLE OPEN CHANNEL TO CONVEY HYDROLOGY FROM THE SMALL WETLAND AREA BEING DIRECTLY AFFECTED BY DRIVEWAY CONSTRUCTION TO THE LARGER WETLAND AREA ADJACENT TO CHAPEL ESTATES DRIVE. SHOULD THE CONVEYANCE BE FOUND FEASIBLE, PETITIONER SHALL INCLUDE A PLANTING PLAN WITH VEGETATION SUITABLE FOR THIS AREA TO BE INCORPORATED WITH THE LANDSCAPING AND/OR FOREST CONSERVATION PLAN.
 - PETITIONER SHALL, AS PART OF THE FUTURE ENVIRONMENTAL CONCEPT AND SUBDIVISION PLANS, ADDRESS THE DEVELOPMENT ENGINEERING DIVISION AND DEPARTMENT OF FIRE AND RESCUE SERVICES COMMENTS.
 - AT THE FINAL PLAT STAGE, PROVIDE THE REQUIRED 35' BFL FROM THE WETLAND BUFFER, STREAM BUFFER AND FOREST CONSERVATION EASEMENT.
 - PETITIONER SHALL COORDINATE WITH THE DEPARTMENT OF PLANNING AND ZONING, DEVELOPMENT ENGINEERING DIVISION TO DETERMINE THE NEED FOR DESIGN MANUAL WAIVERS.
 - APPROVAL OF THE SUBDIVISION IS SUBJECT TO HEALTH DEPARTMENT APPROVAL AT FINAL SUBDIVISION PLAN STAGE.
- A USE-IN-COMMON MAINTENANCE AGREEMENT FOR THE SHARED DRIVEWAY WILL BE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND, CONCURRENTLY WITH THIS PLAT.

AN APPLICATION HAS BEEN SUBMITTED TO MDE NON-TIDAL WETLANDS & WATERWAYS DIVISION FOR NECESSARY DISTURBANCE TO A SMALL ISOLATED WETLAND AND WETLAND BUFFER AREA BEING DISTURBED FOR THE CONSTRUCTION OF A USE-IN-COMMON DRIVEWAY BEING BUILT TO PUBLIC ROAD STANDARDS PER REQUEST OF HOWARD COUNTY. MDE TRACKING NO. 201280467.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5/14/12 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 5/14/12 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

ROAD CONSTRUCTION PLAN

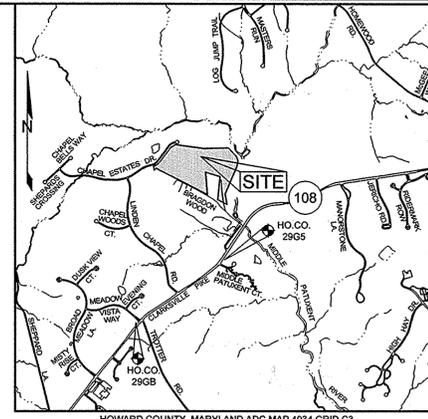
CHAPEL RISE

LOTS 1 THRU 9

HOWARD COUNTY, MARYLAND

LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- SOIL BOUNDARY
- FOREST CONSERVATION EASEMENT
- PROPOSED EASEMENT
- 15.00% - 24.99% SLOPES
- 25.00% AND GREATER SLOPES
- EXISTING WELL BOX LOCATION
- EXISTING SEPTIC FIELD



BENCHMARKS

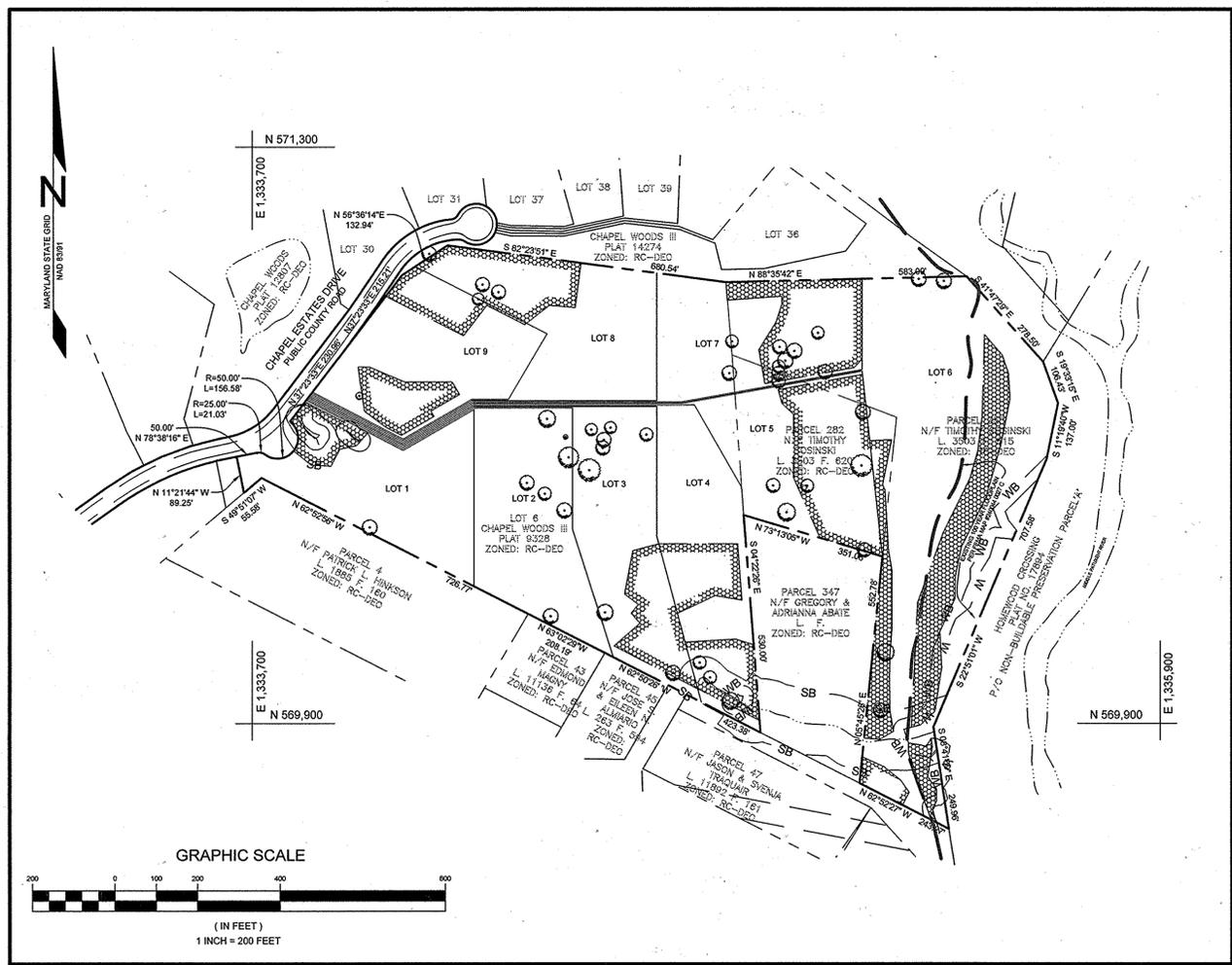
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
29GB	566,826.1	1,333,265.9	456.00	SW CORNER OF MEADOW VISTA ROAD AND TROTTER ROAD, 32.2' FROM CULVERT END
29GS	568,341.2	1,335,392.5	387.40	SE SIDE OF ROUTE 108, 142' FROM MIDDLE PATUXENT RIVER, 87' FROM PAVING EDGE

STORMWATER MANAGEMENT PRACTICES

DESCRIPTION	DISCONNECTION OF ROOFTOP RUNOFF N-1 (NUMBER)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	MICRO BIOTRETENTION M-6 (NUMBER)
LOT 1	0	N	1
LOT 2	0	N	1
LOT 3	3	Y	1
LOT 4	0	Y	1
LOT 5	0	N	0
LOT 6	0	N	1
LOT 7	0	Y	1
LOT 8	0	Y	1
LOT 9	0	N	1
UIC DRIVEWAY EASEMENT	0	N	6

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	USE-IN-COMMON DRIVEWAY LOTS 2 THRU 8 PLAN AND PROFILE
3	GRADING, SEDIMENT AND EROSION CONTROL PLAN
4	GRADING, SEDIMENT AND EROSION CONTROL PLAN
5	GRADING, SEDIMENT AND EROSION CONTROL PLAN
6	SEDIMENT & EROSION CONTROL NOTES AND DETAILS
7	STORM DRAIN AND CULVERT DRAINAGE AREA MAP
8	STORM DRAIN & BIOTRETENTION PROFILES, DETAILS AND CHARTS
9	LANDSCAPE & FOREST CONSERVATION PLAN
10	LANDSCAPE & FOREST CONSERVATION NOTES AND DETAILS



LOCATION MAP
SCALE: 1:2000

AS-BUILT CERTIFICATION



THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

[Signature] 8-19-12 DATE
WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
MD REG. NO. 9011, EXPIRATION DATE 10-02-2015

OWNER
TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
C/O TIM SOSINSKI
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

DEVELOPER
GREEN GATEWAY LLC
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

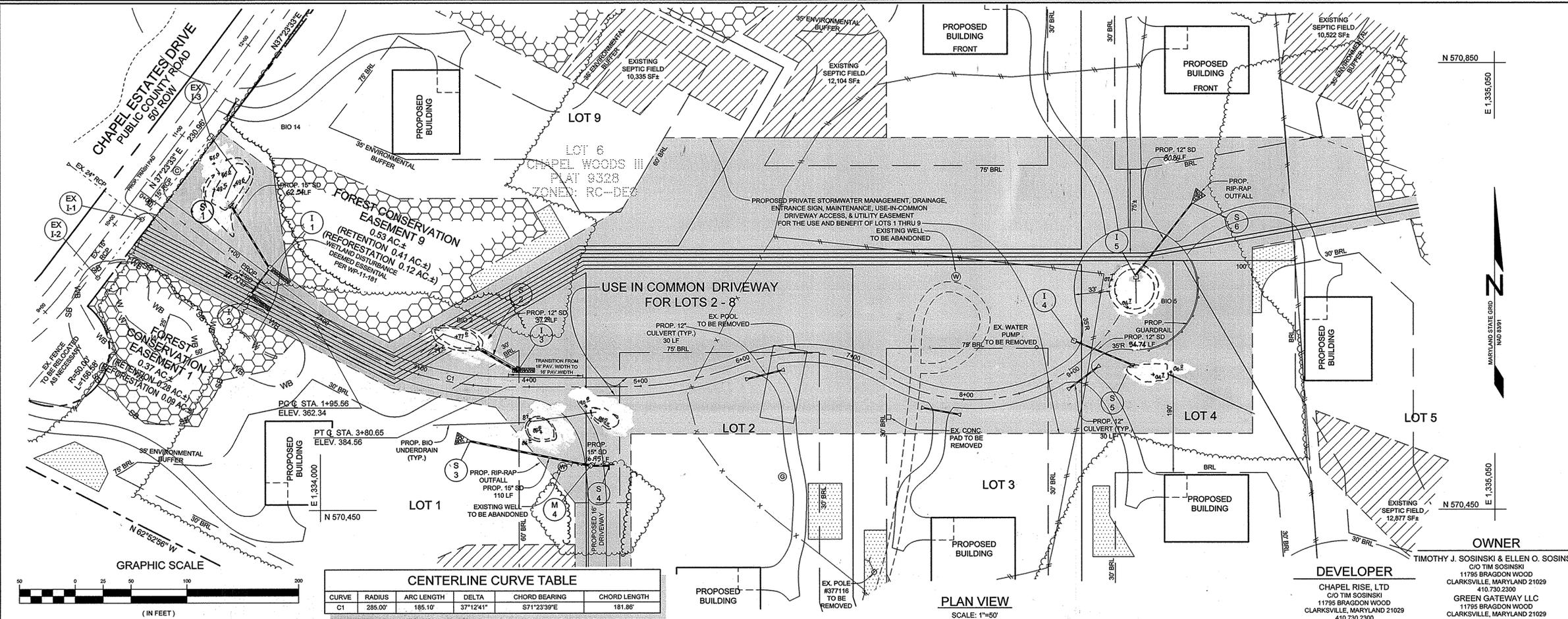
CHAPEL RISE, LTD
C/O TIM SOSINSKI
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300



Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silland.com

DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 24, 2012
PROJECT #: 09-073
SHEET #: 1 of 10

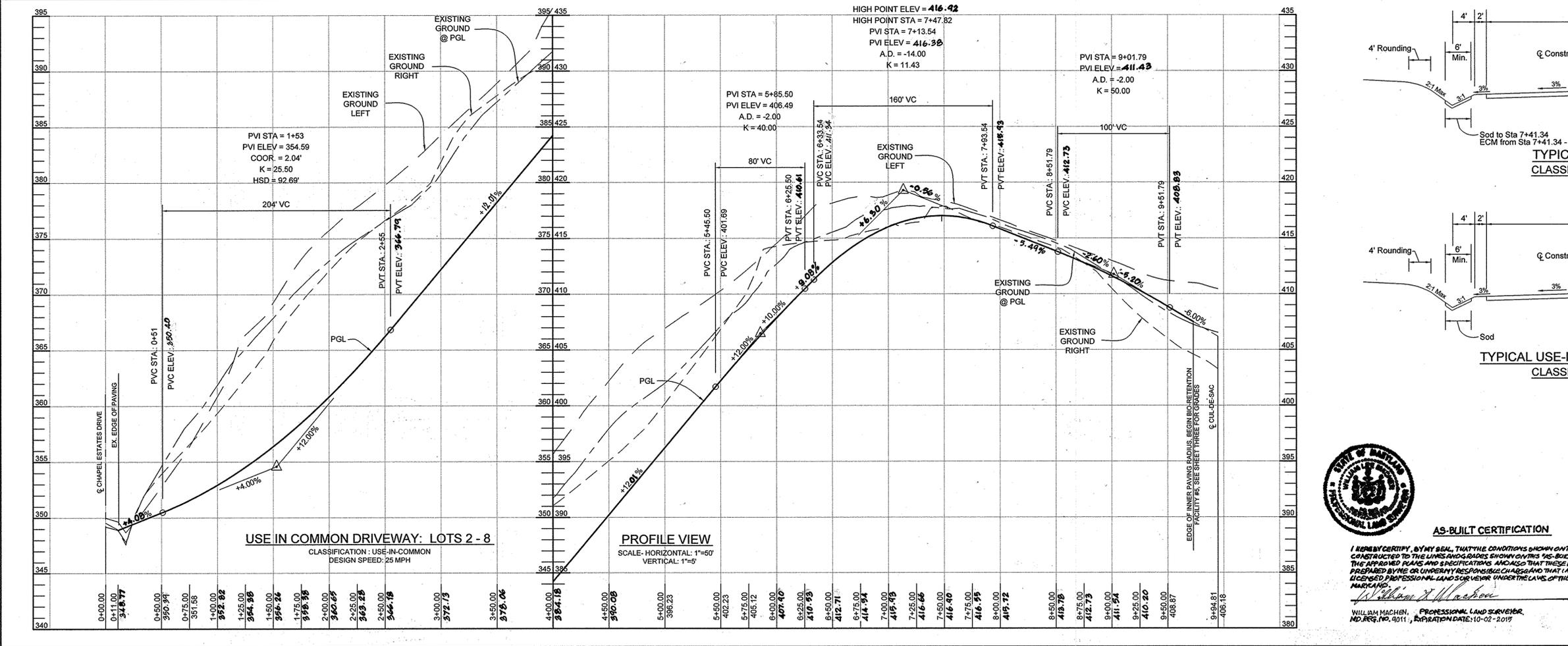
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2013



PAVING SECTIONS

SEC. NO.	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5>	5 TO <7>	7 TO <9>	9 TO <12>	12 TO <15>	15 TO <20>	20 TO <25>	25 TO <30>	30 TO <35>	35 TO <40>	40 TO <45>	45 TO <50>
P-1	PARKING BAYS: RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE (9A)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		HMA SUPERPAVE BASE 19.0 MM PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	3.0	2.5						
		GRADED AGGREGATE BASE (GAB)	8.5	7.0	5.0	4.0	4.0	4.0						
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
		HMA SUPERPAVE INTERMEDIATE SURFACE (9A)	1.0	1.0	1.0	1.0	1.0	1.0						
		HMA SUPERPAVE BASE 19.0 MM PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0						
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0						

NOTES:
 1. HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR MORE INCLUDING GARAGE TRUCKS.
 2. HMA SUPERPAVE LAYERS SHALL BE PLACED IN APPROPRIATE COMPACTED LIFT THICKNESS: 1.0" MIN TO 4.0" MAX, 1.25" MIN TO 3.0" MAX, AND 1.5" MIN TO 3.0" MAX.
 3. GRADED AGGREGATE BASE (GAB) TO BE PLACED AND COMPACTED IN 6" MAX COMPACTED THICKNESS LAYERS.
 4. THE INTERMEDIATE SURFACE COURSE LAYER MUST BE PLACED WITHIN 2 WEEKS OF PLACEMENT OF BASE COURSE, AND IS REQUIRED PRIOR TO SUBSTANTIAL COMPLETION INSPECTION AND BOND REDUCTION.
 5. IN LIEU OF PLACING THE INTERMEDIATE SURFACE COURSE LAYER FOR COMMERCIAL, INDUSTRIAL ENTRANCE APPROX WITHIN THE COUNTY RIGHT-OF-WAY WHERE AUXILIARY LANES ARE NOT REQUIRED, THE THICKNESS OF THE INTERMEDIATE PAVEMENT LAYER CAN BE ADDED TO THE REQUIRED THICKNESS OF THE ASPHALT LAYER.
 6. THE CONSTRUCTION DRAWINGS SHALL SHOW THE PAVING SECTION, ROAD CLASSIFICATION AND CBR VALUE FOR EACH ROADWAY.



USE-IN-COMMON DRIVEWAY LOTS 2 THRU 8

PLAN AND PROFILE

CHAPEL RISE

LOTS 1 THRU 9

A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6, CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13
5TH ELECTION DISTRICT

PARCEL 26, 282 & 353
HOWARD COUNTY, MARYLAND

OWNER
TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

DEVELOPER
CHAPEL RISE, LTD
C/O TIM SOSINSKI
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT THE CONDITIONS SHOWN ON THIS PLAN WERE CONSTRUCTED TO THE LINES AND GRADES SHOWN ON THIS PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS AND ALSO THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND.

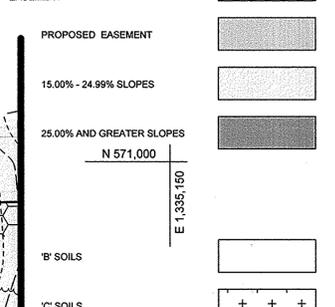
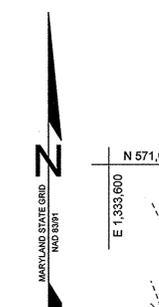
William J. Machen
WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
NO. REG. NO. 9011, EXPIRATION DATE: 10-02-2019

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: JH
DRAWN BY: JH
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 24, 2012
PROJECT #: 09-073
SHEET #: 2 of 10

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GbC	GLADSTONE LOAM, 5 TO 15 PERCENT SLOPES	B	0.20
GnB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
GnB	GLENVILLE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	0.37
Ha	HATBORO-CODORUS SILT LOAMS, 0 TO 3 PERCENT SLOPES	D	0.37
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24

LEGEND	
EXISTING CONTOUR	--- 392
PROPOSED CONTOUR	--- 392
EXISTING SPOT ELEVATION	392.3
PROPOSED SPOT ELEVATION	+ 82.53
DIRECTION OF FLOW	→
EXISTING TREELINE	~
PROPOSED TREELINE	~
SOIL BOUNDARY	---
FOREST CONSERVATION EASEMENT	[Pattern]
PROPOSED EASEMENT	[Pattern]
15.00% - 24.99% SLOPES	[Pattern]
25.00% AND GREATER SLOPES	[Pattern]
'B' SOILS	[Pattern]
'C' SOILS	[Pattern]
STABILIZED CONSTRUCTION ENTRANCE	[Pattern]
SILT FENCE	SF
SUPER SILT FENCE	SSF
LIMIT OF DISTURBANCE	LOD
AT-GRADE INLET PROTECTION	AGIP



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Keith A. ... 5/14/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 5/14/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MATCHLINE SEE SHEET FOUR

AS-BUILT CERTIFICATION

WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
 MD REG. NO. 5011, EXPIRATION DATE 10-02-2019

5-19-14 DATE

* FOR SEDIMENT TRAP AND EARTHDIKE CONSTRUCTION, SEE SHEET 5

DEVELOPER: CHAPEL RISE, LTD
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

OWNER: TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

GREEN GATEWAY LLC
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

AS-BUILT

GRADING, SEDIMENT AND EROSION CONTROL PLAN
 CHAPEL RISE
 LOTS 1 THRU 9

A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6,
 CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13 5TH ELECTION DISTRICT

PARCEL 28, 282 & 353 HOWARD COUNTY, MARYLAND

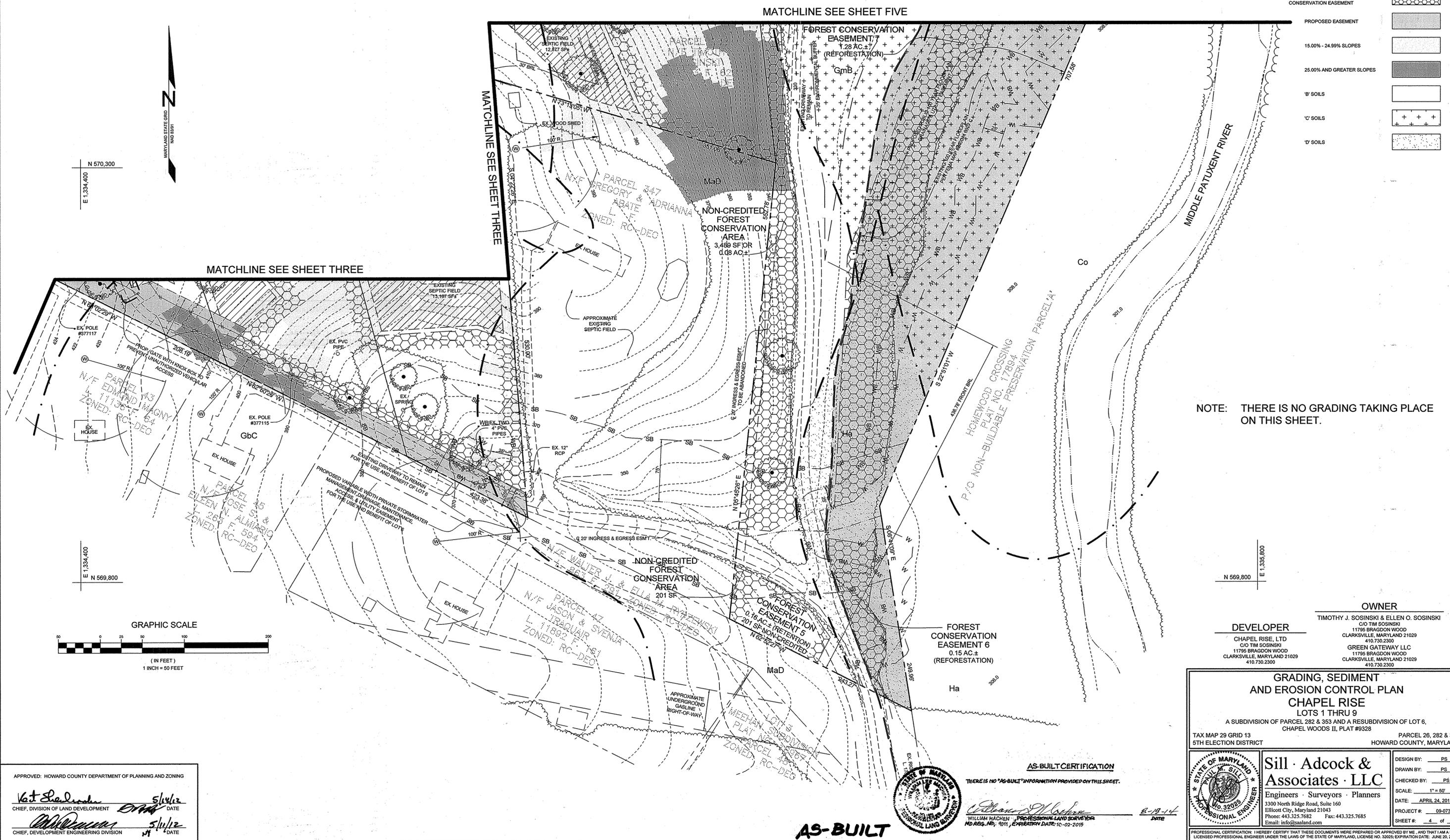
Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners

3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@silladcock.com

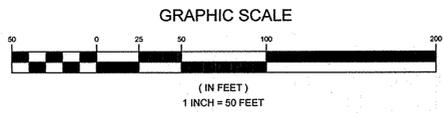
DESIGN BY: PS
 DRAWN BY: PS
 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: APRIL 24, 2012
 PROJECT #: 09-073
 SHEET #: 3 of 10

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GbC	GLADSTONE LOAM, 8 TO 16 PERCENT SLOPES	B	0.20
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
GmB	GLENVILLE-SAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	0.37
Ha	HATBORO-CODORUS SILT LOAMS, 0 TO 3 PERCENT SLOPES	D	0.37
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24

LEGEND	
EXISTING CONTOUR	--- 382
PROPOSED CONTOUR	--- 382
EXISTING SPOT ELEVATION	382.3
PROPOSED SPOT ELEVATION	+82.53
DIRECTION OF FLOW	→
EXISTING TREELINE	~
PROPOSED TREELINE	~
SOIL BOUNDARY	---
APPROXIMATE FOREST CONSERVATION EASEMENT	[Pattern]
PROPOSED EASEMENT	[Pattern]
15.00% - 24.99% SLOPES	[Pattern]
25.00% AND GREATER SLOPES	[Pattern]
'B' SOILS	[Pattern]
'C' SOILS	[Pattern]
'D' SOILS	[Pattern]



NOTE: THERE IS NO GRADING TAKING PLACE ON THIS SHEET.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
16th Street 5/16/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
William M. Machen 5/16/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

AS-BUILT CERTIFICATION
 THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
 [Professional Engineer Seal]
 WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
 MD REG. NO. 2011, EXPIRATION DATE: 10-02-2015
 DATE: 5-19-12

OWNER
 TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
 C/O TIM SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

DEVELOPER
 CHAPEL RISE, LTD
 C/O TIM SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

GREEN GATEWAY LLC
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

GRADING, SEDIMENT AND EROSION CONTROL PLAN
 CHAPEL RISE
 LOTS 1 THRU 9
 A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6,
 CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13 5TH ELECTION DISTRICT PARCEL 26, 282 & 353 HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellittown City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@salland.com

DESIGN BY: PS
 DRAWN BY: PS
 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: APRIL 24, 2012
 PROJECT #: 09-073
 SHEET #: 4 of 10

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2012.

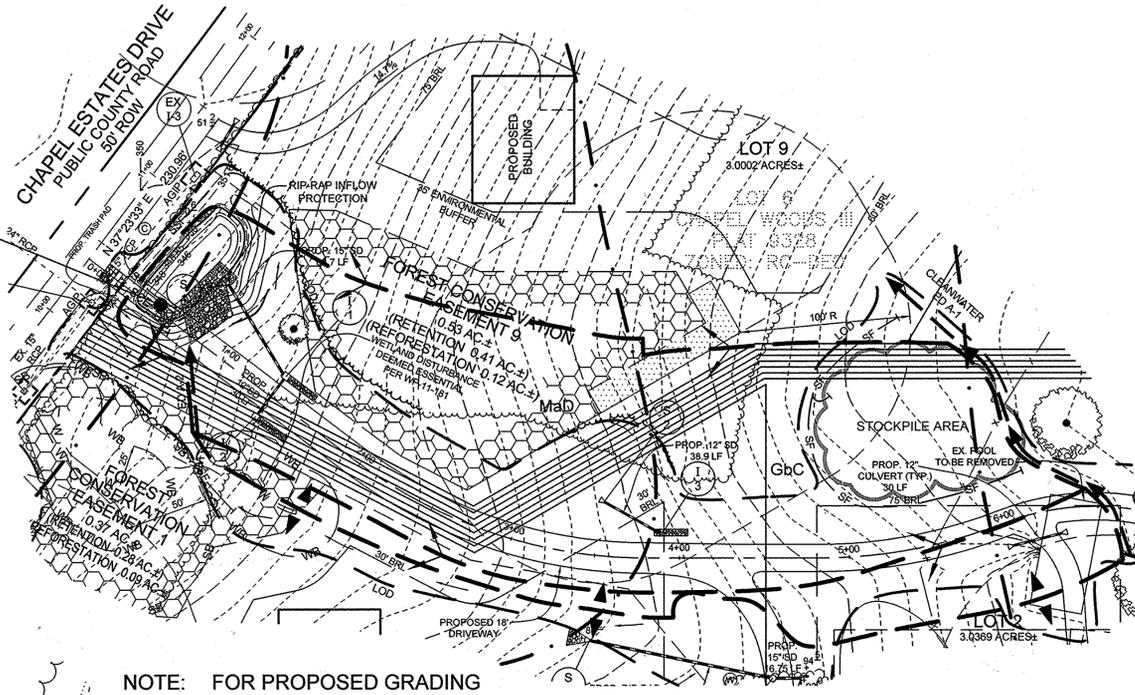
SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	"K" FACTOR
Cs	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	B	0.20
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
GmB	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	0.37
Hs	HATBORO-CODORUS SILT LOAMS, 0 TO 3 PERCENT SLOPES	D	0.37
MdD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24

SEDIMENT TRAP #1 (ST-II)

EXISTING DRAINAGE AREA: 1.60AC±
 PROPOSED DRAINAGE AREA: 1.88AC±
 WET STORAGE REQUIRED: 3,600.CCF
 WET STORAGE PROVIDED: 3,634.CCF
 DRY STORAGE REQUIRED: 3,600.CCF
 DRY STORAGE PROVIDED: 3,606.CCF
 WEIR LENGTH: 8.0'
 STORAGE DEPTH BELOW OUTLET: 1.75'
 CLEANOUT ELEVATION: 347.6
 EMBANKMENT HEIGHT: 1.0'
 TRAP BOTTOM: 346.0
 TRAP DIMENSIONS: 58'x16'
 WET STORAGE ELEVATION: 348.85
 CREST ELEVATION: 350.6

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- SOIL BOUNDARY
- APPROXIMATE FOREST CONSERVATION EASEMENT
- PROPOSED EASEMENT
- 15.00% - 24.99% SLOPES
- 25.00% AND GREATER SLOPES
- "B" SOILS
- "C" SOILS
- PROPOSED DRAINAGE DIVIDE
- EXISTING DRAINAGE DIVIDE
- EARTH DIKE

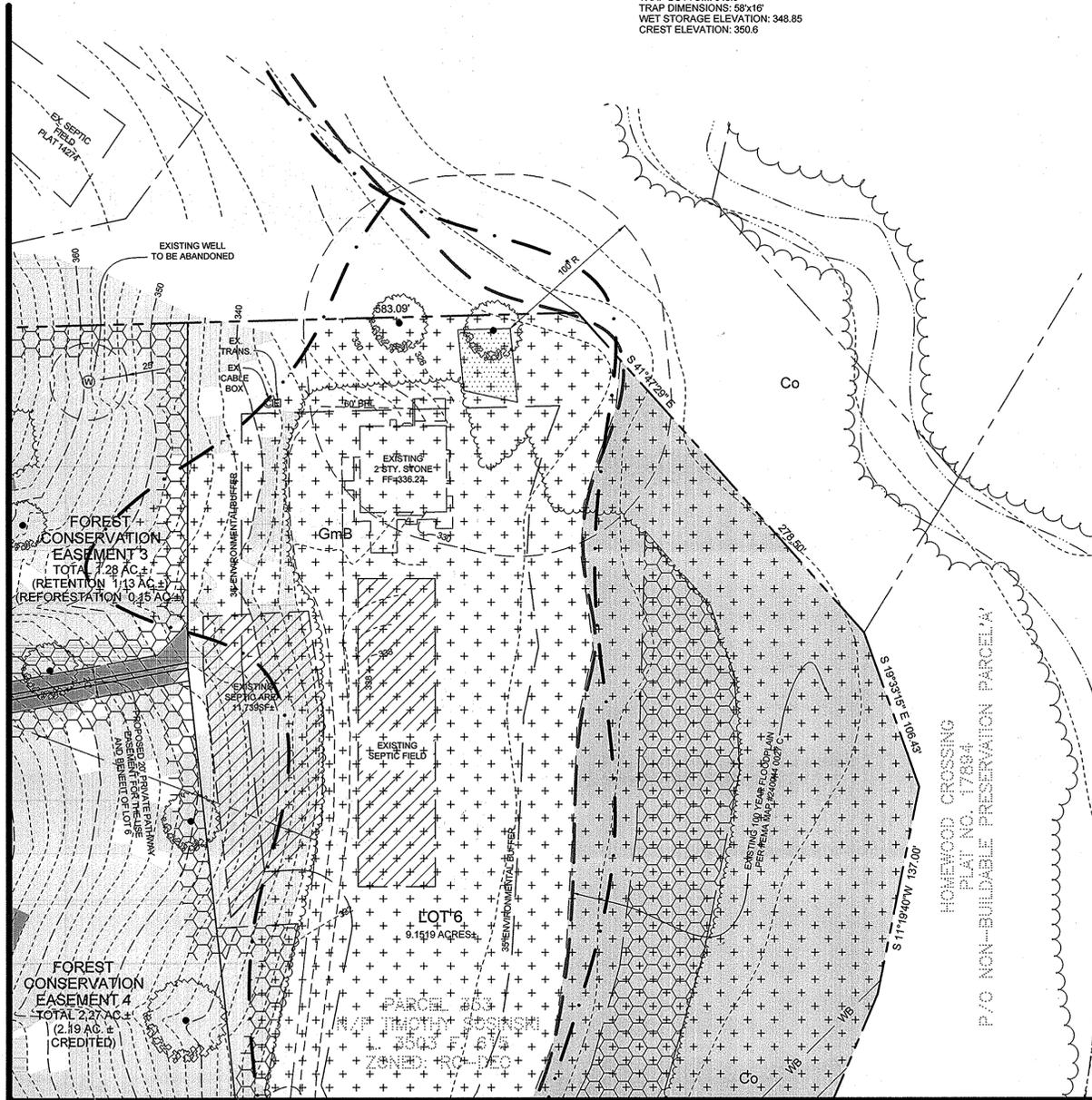


NOTE: FOR PROPOSED GRADING SEE SHEET 3

SEDIMENT TRAP DETAIL

SCALE: 1"=50'

MATCHLINE SEE SHEET THREE



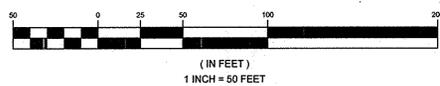
MATCHLINE SEE SHEET FOUR

NOTE: THERE IS NO GRADING TAKING PLACE IN THIS PORTION OF THE PROPERTY.

PLAN VIEW

SCALE: 1"=50'

GRAPHIC SCALE



DEVELOPER

CHAPEL RISE, LTD
 C/O TIM SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

OWNER

TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
 C/O TIM SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300
 GREEN GATEWAY LLC
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

AS-BUILT

GRADING, SEDIMENT AND EROSION CONTROL PLAN
CHAPEL RISE
 LOTS 1 THRU 9

A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6,
 CHAPEL WOODS II, PLAT #9328 PARCEL 26, 282 & 353
 HOWARD COUNTY, MARYLAND
 TAX MAP 28 GRID 13 5TH ELECTION DISTRICT

AS-BUILT CERTIFICATION

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.



WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
 MD REG. NO. 24925, EXPIRATION DATE: 10-01-2015

DATE: 8-19-14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kathleen
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 5/14/12
William
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5/16/12



Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@saaland.com

DESIGN BY: PS
 DRAWN BY: PS
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: APRIL 24, 2012
 PROJECT #: 09-073
 SHEET #: 5 of 10

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2015

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
Gc	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C
GnB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	B
GnB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C
GnB	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C
Hs	HATBORO-CODORUS SILT LOAMS, 0 TO 3 PERCENT SLOPES	D
MaD	MAJOR LOAM, 15 TO 25 PERCENT SLOPES	B

LEGEND	
EXISTING CONTOUR	--- 382
EXISTING SPOT ELEVATION	382.5
DIRECTION OF FLOW	→
EXISTING TREELINE	~
PROPOSED TREELINE	~
SOIL BOUNDARY	- - -
FOREST CONSERVATION EASEMENT	[Hatched Box]
'B' SOILS	[Box with +]
'C' SOILS	[Box with ++]
DRAINAGE DIVIDE	↑
ROOF LEADER	—



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Victor Salas
 CHIEF, DIVISION OF LAND DEVELOPMENT

William M. Machen
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

5-14-12
 5/14/12
 DATE



WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
 MD REG. NO. 3011, EXPIRATION DATE: 6/30/2015

DEVELOPER
 CHAPEL RISE LTD
 C/O TIM SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

OWNER
 TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
 C/O TIM SOSINSKI
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300
 GREEN GATEWAY LLC
 11795 BRAGDON WOOD
 CLARKSVILLE, MARYLAND 21029
 410.730.2300

AS-BUILT

STORM DRAIN AND CULVERT DRAINAGE AREA MAP
CHAPEL RISE
LOTS 1 THRU 9

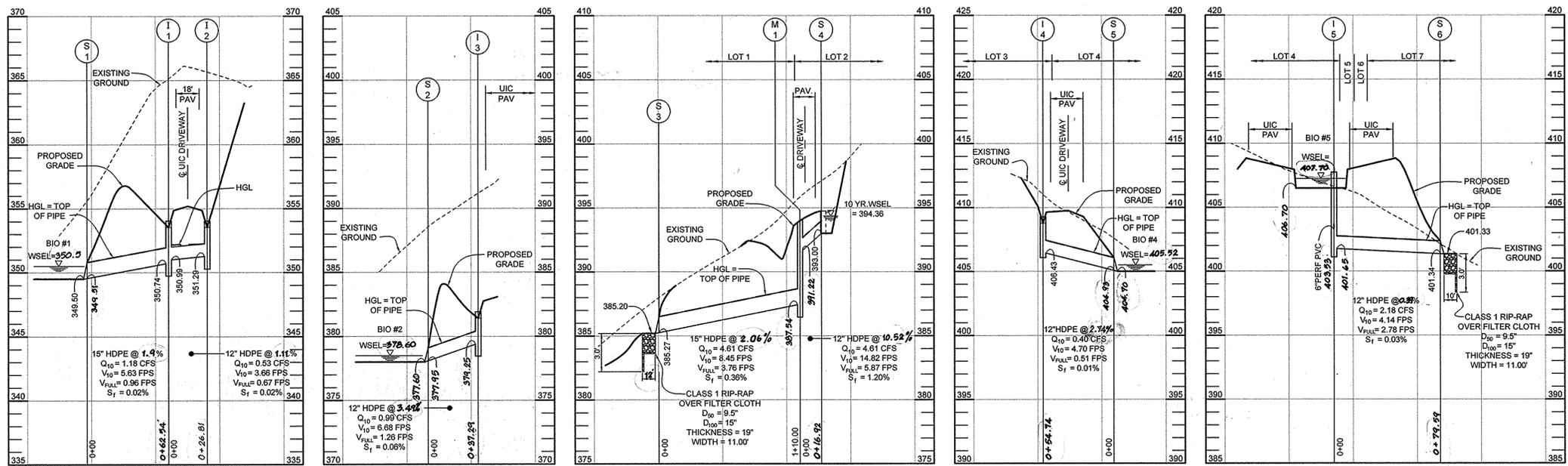
A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6, CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13
 5TH ELECTION DISTRICT

PARCEL 26, 282 & 353
 HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@silladcock.com

DESIGN BY: JH
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 CHECKED BY: PS
 SCALE: 1" = 50'
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 SHEET #: 7 of 10

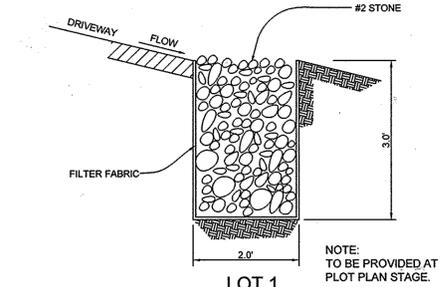


STRUCTURE SCHEDULE						
NO.	TYPE & OWNERSHIP	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-1	TYPE 'K' INLET PRIVATE	UIC - @ STA 1+34.32 - 15.00 LT	350.43	350.99	350.74	D-4.12 & D-4.13
I-2	TYPE 'K' INLET PRIVATE	UIC - @ STA 1+34.32 - 15.00 RT	354.37	-	351.29	D-4.12 & D-4.13
I-3	TYPE 'K' INLET PRIVATE	UIC - @ STA 3+90.21 - 15.00 LT	382.03	-	379.23	D-4.12 & D-4.13
I-4	TYPE 'K' INLET PRIVATE	UIC - @ STA 9+20.74 - 17.75 LT	409.94	-	406.43	D-4.12 & D-4.13
I-5	TYPE 'D' INLET PRIVATE	N 570,658.36 E 1,334,729.58	407.41	403.40	401.65	D-4.11
M-1	STD 4' PRECAST MANHOLE PRIVATE	N 570,489.53 E 1,334,241.48	344.06	341.22	337.94	G-5.12
S-1	15" HDPE END SECTION PRIVATE	N 570,721.54 E 1,339,921.57	-	349.81	349.90	HANDOR OR EQUIVALENT
S-2	12" HDPE END SECTION PRIVATE	UIC - @ STA 3+52.65 - 31.77 LT	-	377.95	377.60	HANDOR OR EQUIVALENT
S-3	15" HDPE END SECTION PRIVATE	N 570,511.74 E 1,334,132.47	-	385.27	385.20	HANDOR OR EQUIVALENT
S-4	STD TYPE 'E' ENDWALL PRIVATE	N 570,491.60 E 1,334,230.74	-	393.00	-	MD 356.01
S-5	12" HDPE END SECTION PRIVATE	UIC - @ STA 9+39.62 - 33.88 LT	-	404.93	405.00	HANDOR OR EQUIVALENT
S-6	12" HDPE END SECTION PRIVATE	N 570,724.62 E 1,334,779.92	-	401.34	401.33	HANDOR OR EQUIVALENT

- NOTES:
- TOP ELEVATIONS FOR TYPES 'K' AND 'D' INLETS ARE TO THE CENTER OF INLET THROAT.
 - FOR 'K' INLETS USE SINGLE OPENING ON THE UPSTREAM SIDE.
 - FOR 'K' INLETS I-1, I-2 AND I-3, REPLACE CONCRETE GUTTER WITH 20 LF RIPRAP UPSTREAM.
 - FOR 'K' INLET I-4, NO CONCRETE GUTTER IS REQUIRED.

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
12" PRIVATE	HDPE	216 LF
15" PRIVATE	HDPE	173 LF
6" PRIVATE	PVC-SOLID	309 LF
6" PRIVATE	PVC-PERF.	144 LF

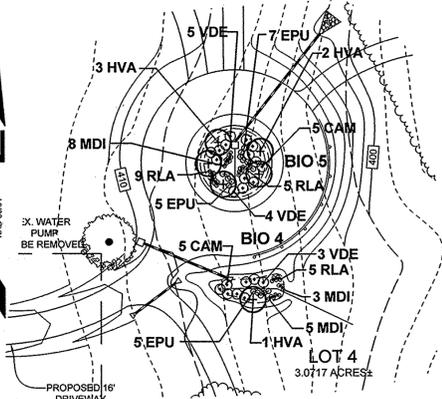
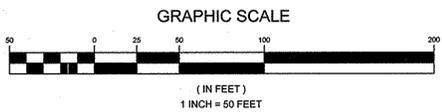
- NOTES:
- ALL PVC PIPE SHALL BE SCHEDULE 40.



OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAINGARDENS (M-7), BIOMETENTION SWALES (M-8) AND ENHANCED FILTERS (M-9)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A-4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD OR DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

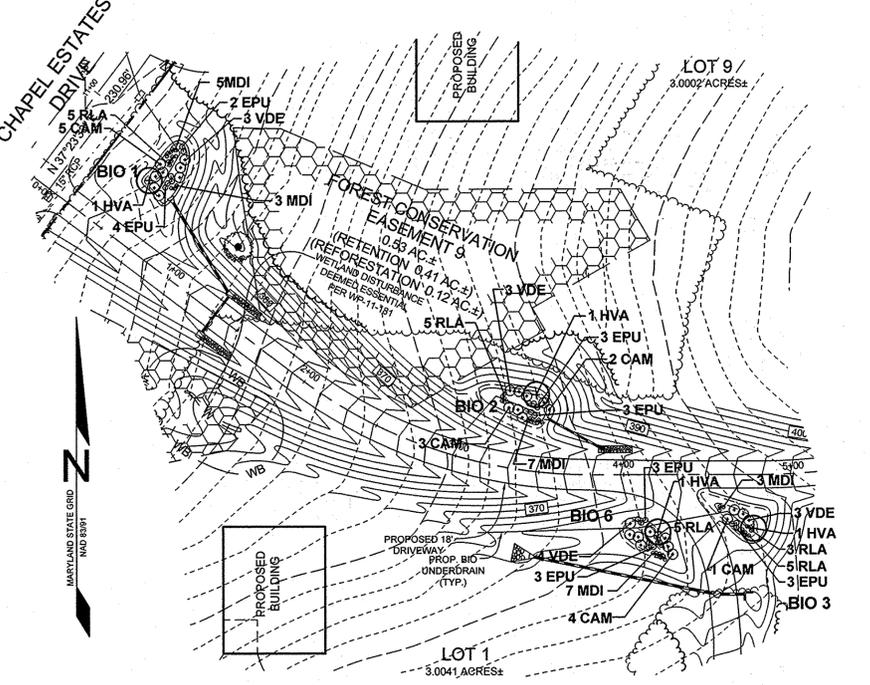
MATERIALS SPECIFICATIONS FOR BIORETENTION FACILITIES			
MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANT LIST THIS SHEET	N/A	PLANTINGS ARE SITE-SPECIFIC. SEE PLANT LIST THIS SHEET
PLANTING SOIL (2.0' DEEP)	SAND 35% - 60% SILT 20% - 25% GROUND COMPOST 40%-50%	N/A	
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM
PEA GRAVEL DIAPHRAGM AND CURTAIN DRAIN, IF REQUIRED	PEA GRAVEL: ASTM-D-448		
HARDWARE CLOTH	ORNAMENTAL STONE: WASHED COBBLES	PEA GRAVEL: NO. 6 STONE: 2" TO 5"	FOR USE AS A WRAP AROUND PERFORATED UNDERDRAIN PIPING
UNDERDRAIN PEA GRAVEL	# 7 OR # 8 STONE	0.25" TO 0.50"	CLEAN WASHED STONE
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.75"	CLEAN WASHED STONE
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	- 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; - SLOTTED PIPE MAY BE USED IN LIEU OF PERFORATED PIPE (HARDWARE CLOTH WRAP NOT REQUIRED); - MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES



MICRO-BIORETENTION FACILITIES 4 AND 5 PLANTING PLAN AS-BUILT CERTIFICATION

MICRO-BIORETENTION ELEVATIONS AND DIMENSIONS						
DESCRIPTION	BIO 1	BIO 2	BIO 3	BIO 4	BIO 5	BIO 6
'A' PONDING DEPTH	1.0'	1.0'	0.5'	1.5'	1.0'	1.0'
'B' WSEL	350.50	378.60	390.00	406.92	407.70	388.50
'C' TOP OF MULCH	349.50	377.60	388.50	404.70	406.70	385.50
'D' FACILITY DIMENSION	99.81	95.19	27.74	36.00	N/A	32.15
'E' PERF. UNDERDRAIN DIMENSION	24.42	29.34	18.25	28.12	23.19	19.66
'F' UNDERDRAIN INVERT	346.48	374.95	385.49	401.79	403.93	382.60
'G' SOLID UNDERDRAIN DIMENSION	34.07	25.84	34.29	40.36	---	48.78
'H' OUTFALL INVERT	345.93	372.25	382.60	399.24	-	381.66

- NOTES:
- * SOLID UNDERDRAIN FROM BIO 3 TO CONNECT TO UNDERDRAIN OF BIO 6.
 - ** OUTFALL INVERT TO MATCH BIO 6 UNDERDRAIN INVERT.
 - *** BIO 5 DOES NOT HAVE A SOLID UNDERDRAIN. THE PERFORATED UNDERDRAIN CONNECTS TO INLET I-5.



MICRO-BIORETENTION FACILITIES 1, 2, 3 AND 6 PLANTING PLAN

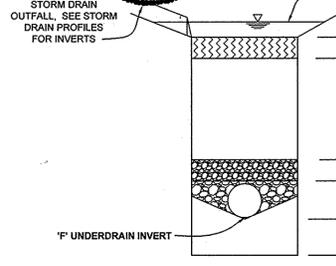
BIORETENTION PLANT LIST											
KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY BIO 1	QUANTITY BIO 2	QUANTITY BIO 3	QUANTITY BIO 4	QUANTITY BIO 5	QUANTITY BIO 6
TREES											
HVA	HAMMELIS VIRGINIANA	WITCH HAZEL	AS SHOWN	1"-1 1/2" CAL.	BB	1	1	1	1	1	1
SHRUBS											
CAM	CORNUS AMOMUM	SILKY DOGWOOD	AS SHOWN	18"-24" HT.	CONT.	5	5	1	5	5	4
VDE	VIBURNUM DENTATUM	ARROWWOOD	AS SHOWN	18"-24" HT.	CONT.	3	3	3	3	9	4
HERBACEOUS SPECIES											
EPM	EUTROCHUM PURPUREUM	JOE-PYE WEED	AS SHOWN	1 QT./12" HT.	CONT. (3' O.C.)	6	6	3	5	12	6
MDI	MONARDA DIDYMA	BEEBALM	AS SHOWN	1 QT.	CONT.	8	7	3	8	8	7
RLA	RUDEBECKIA LACINIATA	TALL CONEFLOWER	AS SHOWN	1 QT.	CONT.	5	5	8	5	14	5

- BIO 1 - BIORETENTION AREA = 804 S.F. OR 0.016 AC.
REQUIRED: 800 TREES AND SHRUBS PER ACRE = 9 TREES AND SHRUBS
PROVIDED: 1 TREE, 8 SHRUBS AND 19 HERBACEOUS SPECIES
- BIO 2 - BIORETENTION AREA = 928 S.F. OR 0.012 AC.
REQUIRED: 800 TREES AND SHRUBS PER ACRE = 9 TREES AND SHRUBS
PROVIDED: 1 TREE, 8 SHRUBS AND 18 HERBACEOUS SPECIES
- BIO 3 - BIORETENTION AREA = 248 S.F. OR 0.006 AC.
REQUIRED: 800 TREES AND SHRUBS PER ACRE = 5 TREES AND SHRUBS
PROVIDED: 1 TREE, 4 SHRUBS AND 14 HERBACEOUS SPECIES
- BIO 4 - BIORETENTION AREA = 470 S.F. OR 0.011 AC.
REQUIRED: 800 TREES AND SHRUBS PER ACRE = 9 TREES AND SHRUBS
PROVIDED: 1 TREE, 8 SHRUBS AND 18 HERBACEOUS SPECIES
- BIO 5 - BIORETENTION AREA = 1042 S.F. OR 0.024 AC.
REQUIRED: 800 TREES AND SHRUBS PER ACRE = 9 TREES AND SHRUBS
PROVIDED: 5 TREES, 14 SHRUBS AND 34 HERBACEOUS SPECIES
- BIO 6 - BIORETENTION AREA = 346 S.F. OR 0.008 AC.
REQUIRED: 800 TREES AND SHRUBS PER ACRE = 9 TREES AND SHRUBS
PROVIDED: 1 TREE, 8 SHRUBS AND 18 HERBACEOUS SPECIES

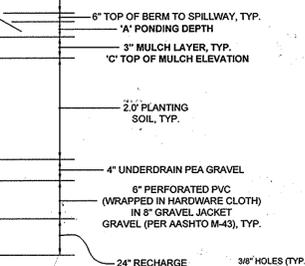


I HEREBY CERTIFY, BY MY SEAL, THAT THE CONDITIONS SHOWN ON THIS PLANNING CONSTRUCTION TO THE LINES AND GRADES SHOWN ON THIS AS-BUILT PLAN, AND MEET THE APPROVED PLANS AND SPECIFICATIONS AND ALSO THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND.

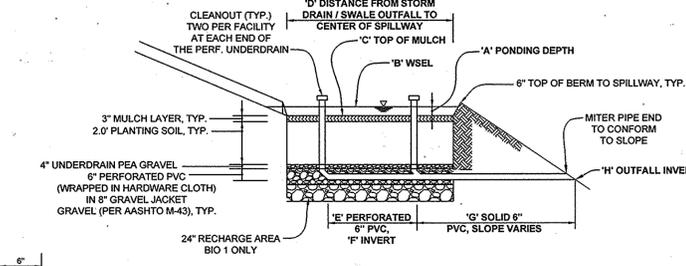
WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
MD REG. NO. 9071, EXPIRATION DATE: 10-02-2019



MICRO-BIORETENTION FACILITY TYPICAL SECTION NOT TO SCALE



PERFORATED PVC UNDERDRAIN DETAIL SCALE: 1"=1'



MICRO-BIORETENTION FACILITY TYPICAL PROFILE NOT TO SCALE

AS-BUILT

STORM DRAIN & BIORETENTION PROFILES, DETAILS AND CHARTS
CHAPEL RISE
LOTS 1 THRU 9
A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6, CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13
5TH ELECTION DISTRICT

PARCEL 26, 282 & 353
HOWARD COUNTY, MARYLAND

DESIGN BY: JH
DRAWN BY: JH
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 24, 2012
PROJECT NO: 09-073
SHEET # 8 OF 10

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Elliott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT

LEGEND

EXISTING CONTOUR
EXISTING SPOT ELEVATION
EXISTING TREELINE
WETLANDS
WETLAND BUFFER
STREAM
STREAM BUFFER
SOIL BOUNDARY

15.00% - 24.99% SLOPES
25.00% AND GREATER SLOPES
'C' SOILS
'D' SOILS

FOREST STAND BOUNDARY

SPECIMEN TREE

PROPOSED TREELINE
FOREST CONSERVATION REFORESTATION AREA
FOREST CONSERVATION RETENTION AREA
FOREST CONSERVATION SIGN

TREE PROTECTION FENCE
SILT FENCE
SUPER SILT FENCE
PROPOSED LANDSCAPING

MATCHLINE, THIS SHEET

AS-BUILT CERTIFICATION

FOREST CONSERVATION EASEMENT 6
0.15 AC.
(REFORESTATION)

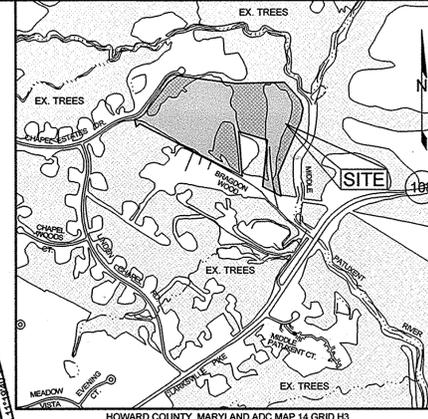
WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
MD REG. NO. 9011, EXPIRATION DATE: 10-02-2015

DATE: 8-19-12



FOREST CONSERVATION EASEMENT 5
0.16 AC. (RETENTION)
201 SF NON-CREDITED

ES3
0.2 ACRES
TOTAL 7.0 ACRES



HOWARD COUNTY, MARYLAND ADC MAP 14 GRID H3
VICINITY MAP
SCALE: 1"=100'

FOREST STAND DESCRIPTIONS

FS1 - 1.7 Acres - A middle successional mixed oak / maple association. The stand has a somewhat well-established canopy dominated by tulip poplar, red oaks, and red maples between 12" and 27" dbh and sub-dominated by hickories, cherries, and tulip poplars between 6" and 13" dbh. The approximate age of the stand is 40 to 50 years.

FS2 - 1.7 Acres - A middle successional tulip poplar association. The stand has a somewhat well-established canopy dominated by tulip poplar and red oaks between 17" and 27" dbh and sub-dominated by hickories, cherries, beech, walnut, elm, and red maple between 6" and 18" dbh. The approximate age of the stand is 40 to 50 years.

FS3 - 7.0 Acres - A mature tulip poplar association. The stand has a well-established canopy dominated by tulip poplar, red oaks, and red maples between 12" and 27" dbh and sub-dominated by hickories, elms, beech, and red maples between 6" and 20" dbh. The approximate age of the stand is 50 to 100 years.

FS4 - 3.2 Acres - An early to middle successional mixed maple / poplar association. The stand has a somewhat well-established canopy dominated by white pine, pin oaks, and red maples between 12" and 38" dbh and sub-dominated by elms, locust, cherries, boxelders, and red oaks between 6" and 12" dbh. The approximate age of the majority of the stand is 25 to 40 years.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 5/11/12

DATE: 5-14-12

DEVELOPER'S / OWNER'S LANDSCAPE CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE: 24 April 2012

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	0.20
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	B	0.20
GmB	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	0.37
GmB	GLENNVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	0.37
Ha	HATBORO-CODORUS SILT LOAMS, 0 TO 3 PERCENT SLOPES	D	0.37
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24



DEVELOPER
CHAPEL RISE, LTD
C/O TIM SOSINSKI
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

OWNER
TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
C/O TIM SOSINSKI
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

OWNER
GREEN GATEWAY LLC
11795 BRAGDON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300



Sill Adcock & Associates - LLC
Engineers - Surveyors - Planners

3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@silladcock.com

DESIGN BY: SJT
DRAWN BY: SJT
CHECKED BY: SJT
SCALE: AS SHOWN
DATE: APRIL 24, 2012
PROJECT#: 09-073
SHEET#: 9 of 10

MATCHLINE, THIS SHEET

LANDSCAPE & FOREST CONSERVATION PLAN

CHAPEL RISE
LOTS 1 THRU 9

A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6,
CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13
6TH ELECTION DISTRICT

PARCEL 28, 282 & 353
HOWARD COUNTY, MARYLAND

AS-BUILT

NOTES

- THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 6.99 ACRES OF FOREST AND REFORESTATION PLANTING OF 2.37 ACRES (103,237 SF) OF FOREST. SURETY IN THE AMOUNT OF \$51,619 (103,237 x \$0.50) HAS BEEN POSTED AS PART OF THE DPV DEVELOPER'S AGREEMENT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.1204 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$1,050 FOR THE REQUIRED LANDSCAPING (2 SHADE TREES, 3 EVERGREENS) FOR LOT 1, \$750 FOR THE REQUIRED LANDSCAPING (2 SHADE TREES, 3 EVERGREENS) FOR LOT 2, \$750 FOR THE REQUIRED LANDSCAPING (1 SHADE TREE, 3 EVERGREENS) FOR LOT 7, AND \$1,050 FOR THE REQUIRED LANDSCAPING (2 SHADE TREES, 3 EVERGREENS) FOR LOT 8.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SEE THE PLAT OR DEED OF EASEMENT DESCRIPTION FOR THE BEARING AND DISTANCE DESCRIPTIONS OF THE FOREST CONSERVATION EASEMENTS.

GENERAL NOTES

FOREST PROTECTION

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY DEMOLITION, LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOOTHING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE. LIMIT OF GRADING, OR TREE PROTECTIVE FENCING WITHIN AND ADJACENT TO ALL SPECIMEN TREES AND EASEMENT AREAS TO BE PRESERVED, AS NECESSARY. ALL POSSIBLE PRECAUTIONS SHALL BE TAKEN TO NOT DAMAGE ROOTS ADJACENT TO DEMOLITION AREAS WHEN BUILDINGS OR FOUNDATIONS ARE BEING REMOVED, AND ESPECIALLY WITH PAVEMENT REMOVAL, WHERE ROOTS LIKELY EXIST WITHIN SUBBASE GRAVEL.

REFORESTATION PLANTING NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL BE WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES.
- PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
- PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BOXERS, INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. PLANTS SHALL BE FRESHLY DUG, NO HELED-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
- UNLESS OTHERWISE SPECIFIED, PLANT MATERIAL SHALL CONFORM TO "AMERICAN STANDARD FOR NURSERY STOCK" ANSI Z60.1-1990, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INCLUDING ALL ADDENDA.
- UNLESS OTHERWISE SPECIFIED, GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES" (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, LATEST EDITION, INCLUDING ALL ADDENDA.
- CONTRACTOR WILL BE REQUIRED TO GUARANTEE PLANT MATERIAL FOR A PERIOD OF TWO YEARS AFTER DATE OF ACCEPTANCE AND MAINTAIN A 75% SURVIVABILITY AT THE END OF TWO YEARS.
- AFTER THE FIRST YEAR OF PLANTING A SOIL TEST SHOULD BE MADE AND A FERTILIZATION PROGRAM DETERMINED. CONTRACTOR'S ATTENTION IS DIRECTED TO THE "LANDSCAPE GUIDELINES" FOR FERTILIZING SPECIFICATIONS. SOIL SHOULD BE AN APPROXIMATE pH OF 6.0.
- TO LESSEN THE CHANCE OF LOSS THE TREES SHOULD BE CHECKED FROM TIME TO TIME TO INSURE THAT THEY ARE RECEIVING SUFFICIENT WATER. IF NECESSARY, PLANTINGS SHOULD BE REGULARLY WATERED DURING DRY PERIODS UNTIL PLANTINGS ARE WELL ESTABLISHED IN ORDER TO MAINTAIN SURVIVABILITY.
- THE LOCATION AND ORIENTATION OF ALL PLANT MATERIAL SHALL BE RANDOMLY PLANTED IN DESIGNATED REFORESTATION AREAS BY THE LANDSCAPE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR MOVING ANY PLANT MATERIAL INSTALLED WITHOUT APPROVAL.
- MOVING AND APPLYING HERBICIDES TO THE REFORESTATION AREA IS PROHIBITED AT ANY AND ALL STAGES OF THE PLANTING PROCESS IN ORDER TO ENCOUPEAGE THE EXISTING SAPLINGS TO GROW.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND PRUNING PLANT MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE. SEE TREE PLANTING AND MAINTENANCE CALENDAR.
- PLANTING MIX SHALL BE AS FOLLOWS:
DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX.
TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.
- THIS PLAN IS INTENDED FOR FOREST CONSERVATION USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, UTILITIES, LAYOUT, ETC.
- UPON COMPLETION OF INSTALLMENT, PROTECTIVE FENCING AND SIGNAGE SHALL BE INSTALLED AS SHOWN.

PRE-CONSTRUCTION MEETING

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

CONSTRUCTION MONITORING

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

FOREST CONSERVATION WORKSHEET			
NET TRACT AREA			
A	TOTAL TRACT AREA		33.55 AC
B	DEDUCTIONS (100 YR FLOODPLAIN)		4.09 AC
C	NET TRACT AREA		29.46 AC
LAND USE CATEGORY			
ARA	MDR	IDA	HDR
0	1	0	0
D	AFFORESTATION THRESHOLD (NET TRACT AREA x 20%)		5.89 AC
E	CONSERVATION THRESHOLD (NET TRACT AREA x 25%)		7.37 AC
EXISTING FOREST COVER			
F	EXISTING FOREST COVER WITHIN THE NET TRACT AREA		13.60 AC
G	AREA OF FOREST ABOVE CONSERVATION THRESHOLD		6.24 AC
BREAK EVEN POINT			
H	BREAK EVEN POINT		8.61 AC
I	FOREST CLEARING PERMITTED WITHOUT MITIGATION		4.99 AC
PROPOSED FOREST CLEARING			
J	TOTAL AREA OF FOREST TO BE CLEARED		6.64 AC
K	TOTAL AREA OF FOREST TO BE RETAINED		6.96 AC
PLANTING REQUIREMENTS			
L	REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD		1.56 AC
M	REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD		0.81 AC
N	CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD		0.0 AC
P	TOTAL REFORESTATION REQUIRED		2.37 AC
Q	TOTAL AFFORESTATION REQUIRED		0.0 AC
R	TOTAL PLANTING REQUIRED		2.37 AC

*NOTE: 2.37 ACRES WILL BE REFORESTED ON-SITE TO FULFILL FOREST CONSERVATION REQUIREMENTS.

FOREST CONSERVATION EASEMENT PLANT LIST (2.37 AC)												
TOTAL	QUANTITY								BOTANICAL NAME	SIZE	SPACING	NOTE
	FCE 1 0.09 AC	FCE 2 0.23 AC	FCE 3 0.16 AC	FCE 4 0.15 AC	FCE 5 1.20 AC	FCE 6 0.10 AC	FCE 7 0.10 AC	FCE 8 0.10 AC				
21	1	3	0	3	14	0	0	0	ACER NEGUNDO 'BOXELDER'	2" CAL.	20' x 20'	B & B
81	2	10	4	4	48	12	1	1	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2" CAL.	20' x 20'	B & B
8	0	0	0	1	6	0	0	0	NYSSA SYLVATICA 'BLACK GUM'	2" CAL.	20' x 20'	B & B
49	1	6	2	3	37	0	0	0	PLATANUS OCCIDENTALIS 'SYCAMORE / PLANE TREE'	2" CAL.	20' x 20'	B & B
8	2	0	2	0	0	4	0	0	PRUNUS SEROTINA 'BLACK CHERRY'	2" CAL.	20' x 20'	B & B
22	1	2	0	3	16	0	0	0	QUERCUS BICOLOR 'SWAMP WHITE OAK'	2" CAL.	20' x 20'	B & B
10	0	0	2	0	0	7	1	1	QUERCUS RUBRA OR QUERCUS COCCINEA 'RED OAK OR SCARLET OAK'	2" CAL.	20' x 20'	B & B
10	0	0	2	0	0	7	1	1	QUERCUS VELUTINA 'BLACK OAK'	2" CAL.	20' x 20'	B & B
9	2	2	2	0	0	5	0	0	AMELANCHIER CANADENSIS 'SERVICE BERRY'	2" CAL.	20' x 20'	B & B
9	0	0	2	0	5	2	0	0	ILEX OPACA 'AMERICAN HOLLY'	6'-8" HT.	20' x 20'	B & B
15	2	2	2	2	5	3	1	1	LINDERA BENZOIN 'SPICEBUSH'	1" CAL.	15' x 15'	B & B
22	4	3	3	3	10	3	0	0	VIBURNUM DENTATUM 'ARROWWOOD VIBURNUM'	2'-3"	15' x 15'	B & B / CONT

NOTE: * PLANT INSTALLED UNDER SEPARATE PLANT LIST AND NOT INCLUDED IN REFORESTATION PLANT TOTALS

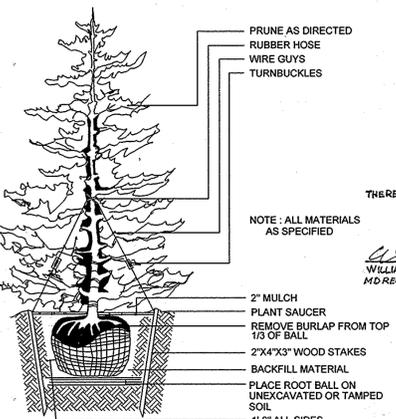
SCHEDULE A: PERIMETER LANDSCAPE EDGE												
CATEGORY	ADJACENT TO ROADWAY						ADJACENT TO PERIMETER PROPERTIES					
	1	2	3	4	5	6	7	8	9	10	11	12
PERIMETER/FRONTAGE DESIGNATION	NA	FRONT TO RD	B	B	A	NA	EX LOT	NA	EX LOT	NA	EX LOT	13
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	691.9	93.8	111.9	898.6	293.2	1479.5	243.3	552.8	351.1	530.0	1368.3	89.3
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	YES, 93.8 LF	YES, 111.9 LF	YES, 566.2 LF	NO	NO	NO	NO	YES, 353.1 LF	YES, 1036 LF	YES, 55.6 LF	YES, 45 LF
REMAINING PERIMETER LENGTH	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REMAINING PERIMETER LENGTH	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED												
SHADE TREES				160 = 6							160 = 5	160 = 1
EVERGREEN TREES												
NUMBER OF PLANTS PROVIDED				3							1	1
SHADE TREES												
EVERGREEN TREES				6							8	14
OTHER TREES (2:1 SUBSTITUTION)												
SHRUBS (10:1 SUBSTITUTION)												
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)												

TOTAL NUMBER OF PLANTS PROVIDED = 5 SHADE TREES & 14 EVERGREEN TREES

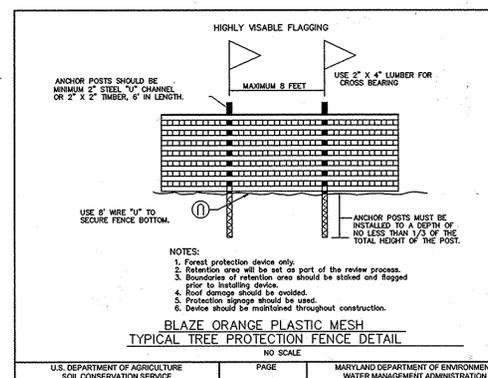
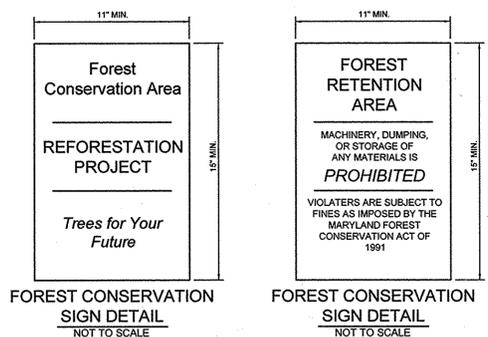
NOTES

- CONSULT INTERNATIONAL SOCIETY OF ARBORICULTURE GUIDELINES FOR FURTHER DETAILS OF PLANTING SPECIFICATIONS, OR CONSULT WITH A QUALIFIED PROFESSIONAL.
- EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL.
- STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.

TYPICAL TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

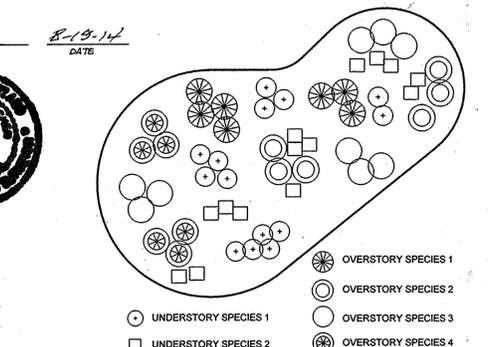


TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE NO. 30205 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

SPECIMEN TREE TABLE					
KEY	SIZE	TYPE	CONDITION	REMARKS	
ST-1	35"	TULIP POPLAR	GOOD	TRI-STEM	
ST-2	34"	TULIP POPLAR	GOOD		
ST-3	38"	PIN OAK	GOOD / FAIR	DEERBERRY 1/2 WAY UP TREE	
ST-4	34"	CHESTNUT	GOOD	SOME DIEBACK	
ST-5	40"	SYCAMORE	VERY GOOD	BEAUTIFUL CANOPY & BRANCHING	
ST-6	48"	RED MAPLE	GOOD		
ST-7	64"	SILVER MAPLE	GOOD	BEAUTIFUL CANOPY	
ST-8	30"	SYCAMORE	FAIR	SOME DIEBACK	
ST-9	34"	RED MAPLE	GOOD		
ST-10	30"	RED OAK	GOOD		
ST-11	43"	TULIP POPLAR	GOOD		
ST-12	44"	TULIP POPLAR	GOOD / FAIR	BROKEN BRANCHES, POISON IVY 3/4 WAY UP TREE	
ST-13	56"	TULIP POPLAR	FAIR	LARGE CANOPY BUT ASYMETRICAL	
ST-14	36"	TULIP POPLAR	GOOD		
ST-15	37"	TULIP POPLAR	GOOD		
ST-16	35"	TULIP POPLAR	GOOD		
ST-17	31"	TULIP POPLAR	GOOD		
ST-18	30"	TULIP POPLAR	FAIR	POISON IVY 1/2 WAY UP TREE	
ST-19	37"	TULIP POPLAR	GOOD	NICE CANOPY	



RANDOM PLANTING DISTRIBUTION PLAN
NOT TO SCALE

SUPPLEMENTAL SWALE PLANT LIST				
KEY	QUANTITY	BOTANICAL NAME	SIZE	NOTE
+	2	AMELANCHIER CANADENSIS 'SERVICE BERRY'	8'-10" HT.	B & B
o	2	LINDERA BENZOIN 'SPICEBUSH'	2-1/2' - 3' HT.	B & B / CONT.
o	4	VIBURNUM DENTATUM 'ARROWWOOD VIBURNUM'	2-1/2' - 3' HT.	B & B / CONT.
o	6	ARISAEMA TRIPHYLLUM 'JACK-IN-THE-PULPIT'	BULB	RANDOM (PART SHADE)
o	6	ASOLEPIS INCARNATA 'SWAMP MILKWEED'	4" CONT.	RANDOM (PART SHADE)
o	15	ONOCLEA SENSIBILIS 'SENSITIVE FERN'	4" CONT.	3" SPACING (FULL SUN)
o	10	OSMUNDA CINNAMOMEA 'CHINAMOM FERN'	4" CONT.	1 1/2" SPACING (PART SHADE)
o	8	SCIRPUS CYPERINUS 'WOOL GRASS'	4" CONT.	3" SPACING (FULL SUN)

TOTAL NUMBER OF PLANTS PROVIDED = 2 TREES, 6 SHRUBS, AND 45 PERENNIALS

LANDSCAPE PLANT LIST				
KEY	QUANTITY	BOTANICAL NAME	SIZE	NOTE
+	5	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2.5'-3" CAL.	B & B
o	9	ILEX OPACA AMERICAN HOLLY	5'-6" HT.	B & B
o	5	JUNIPERUS VIRGINIANA 'CUPRESSIFOLIA' HILLSPIRE JUNIPER	6'-8" HT.	B & B

TOTAL NUMBER OF PLANTS PROVIDED = 9 SHADE TREES & 14 EVERGREEN TREES

DEVELOPER
CHAPEL RISE, LTD
1705 BRADGON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

OWNER
TIMOTHY J. SOSINSKI & ELLEN O. SOSINSKI
C/O TIM SOSINSKI
11795 BRADGON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300
GREEN GATEWAY LLC
11795 BRADGON WOOD
CLARKSVILLE, MARYLAND 21029
410.730.2300

PROFESSIONAL ARCHITECT
WILLIAM MACHEN, PROFESSIONAL LAND SURVEYOR
MD REG. NO. 9011, EXPIRATION DATE: 10-02-2019

AS-BUILT

LANDSCAPE & FOREST CONSERVATION NOTES AND DETAILS
CHAPEL RISE
LOTS 1 THRU 9
A SUBDIVISION OF PARCEL 282 & 353 AND A RESUBDIVISION OF LOT 6, CHAPEL WOODS II, PLAT #9328

TAX MAP 29 GRID 13
5TH ELECTION DISTRICT

PARCEL 26, 282 & 353
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7652 Fax: 443.325.7685

DESIGN BY: SJT
DRAWN BY: SJT
CHECKED BY: SJT
SCALE: AS SHOWN
DATE: APRIL 24, 2012
PROJECT #: 09-073
SHEET #: 10 of 10

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30205, EXPIRATION DATE: 01-01-2013