

# SUPPLEMENTAL INFORMATION PLAN

## BRIAN SMITH PROPERTY LOTS 1-3

### 8302 OLD MONTGOMERY ROAD COLUMBIA, MD 21045 L. 2181 / F. 172

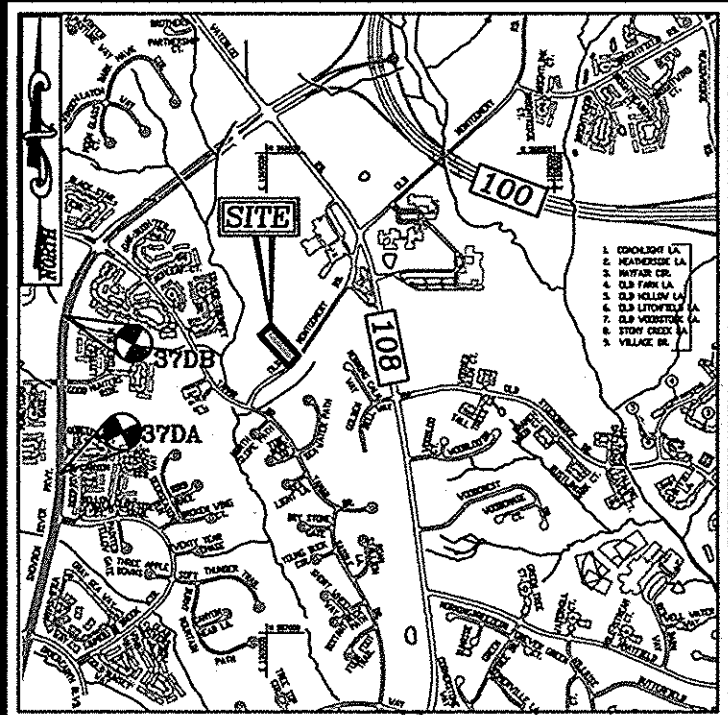
#### GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS NEHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. ALL WORK AND MATERIALS SHALL COMPLY WITH G.S.A.A. STANDARDS.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:  
 MESS UTILITY: 1-800-257-7777  
 VERIZON TELEPHONE COMPANY: 1-410-954-6281  
 HOWARD COUNTY BUREAU OF UTILITIES: 410-313-2888  
 AT&T CARE LOCATION DIVISION: 1-800-393-3553  
 B.G.A.E. CO. CONTRACTOR SERVICES: 410-850-4620  
 B.G.A.E. CO. UNDERGROUND DAMAGE CONTROL: 410-797-4620  
 SITE HIGHWAY ADMINISTRATION: 410-531-5533
- THIS SUPPLEMENTAL INFORMATION PLAN IS SUBJECT TO THE FOLLOWING DP2 FILES: ECP-14-051 (APPROVED 05/13/2014), CONT. #44-1889 AND CONT. #20-1264.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOUR INTERVALS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 2012.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT NOVEMBER, 2013 BY ROBERT H. VOGEL ENGINEERING, INC.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS BEING PROVIDED BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO BIO-RETENTION FACILITIES (M-6) AND ROOF DISCONNECTS (D-1) TO ACCOMMODATE THE TOTAL EXISTING VOLUME REQUIRED. SWM FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED. REFERENCE MDE STORMWATER DESIGN MANUAL (CHAPTER 5).
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
- THE SUBJECT PROPERTY IS ZONED "R-20" IN ACCORDANCE WITH THE 10/06/13 COMPREHENSIVE ZONING PLAN.
- THIS PROPERTY IS NOT LOCATED IN A HISTORIC DISTRICT.
- THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL HAVE MINIMAL IMPACT ON EXISTING ENVIRONMENTAL FEATURES AND BUFFERS.
- EXISTING UTILITIES ARE BASED ON ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF 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 CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 44-1689 AND PUBLIC SEWER AVAILABLE THROUGH CONTRACT NO. 20-1264.
- THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND/OR SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS THEREOF, EFFECTIVE ON THE DATE THE DEVELOPER AGREEMENT FOR IF-14-114 IS FILED AND ACCEPTED.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 370A AND 370B WERE USED FOR THIS PROJECT.
- NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY.
- THERE IS NO 100-YR FLOODPLAIN LOCATED WITHIN THE LIMITS OF THIS SITE.
- THERE ARE NO STREAMS, OR STREAM BUFFERS LOCATED WITHIN THE LIMITS OF THIS SITE.
- THERE ARE NO STEEP SLOPES LOCATED WITHIN THE LIMITS OF THIS SITE.
- SEDEMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS PROJECT.
- COMPLIFIED FOREST STAND DELINEATION AND ENVIRONMENTAL RESOURCES ASSESSMENT WAS PERFORMED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 2013.
- A TOTAL OF 3 LOTS ARE PROPOSED UNDER THIS PLAN.
- NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF THE WETLANDS OR THEIR REQUIRED BUFFERS.
- THERE ARE NO WETLANDS, OR WETLAND BUFFERS LOCATED WITHIN THE LIMITS OF THIS SITE.
- A NOISE WALL IS NOT REQUIRED FOR THIS PROJECT.
- SPECIMEN TREES 'A' (42" SILVER MAPLE) AND 'B' (32.5" SILVER MAPLE) ARE TO BE REMOVED DUE TO THEIR PROXIMITY TO THE EXISTING FOUNDATION (TO BE REMOVED) AND THE PROPOSED HOUSE. SPECIMEN TREE 'C' (32.5" BLACK CHERRY) WILL BE RETAINED. REFERENCE WAIVER PETITION NUMBER WP-15-049, APPROVED OCTOBER 22, 2014.
- APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:  
 1. PROVIDE TWO ADDITIONAL REPLACEMENT TREES OF 3" TO 4" CALIPER ON SITE IN PLACE OF THE TWO REMOVED TREES. THE MITIGATED PLANTINGS WILL BE INCLUDED AS PART OF THE REQUIRED LANDSCAPING AND SHALL BE BOUND WITHIN THE LANDSCAPING GENERAL.
- THE FOREST CONSERVATION OBLIGATION WILL BE MET BY A FEE-IN-LIEU PAYMENT OF \$6,534.00 MADE OUT TO HOWARD COUNTY FOREST CONSERVATION FUND FOR THE 0.20 ACRE AFFORESTATION REQUIREMENT FOR THIS PROJECT. FEE-IN-LIEU - (0.20 AC.) 8,712 SF x .75 = \$6,534.00
- DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:  
 a) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE).  
 b) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN).  
 c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45-FOOT TURNING RADIUS.  
 d) STRUCTURE (CULVERTS/BROOKS) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).  
 e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.  
 f) STRUCTURE CLEARANCES - MINIMUM 12 FEET.  
 g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- THE EXISTING HOUSE LOCATED ON THIS PROPERTY IS TO BE RAZED. ALL EXISTING SIDEWALKS, CONCRETE PADS, AND THE DRIVEWAY SHALL BE REMOVED.
- OLD MONTGOMERY ROAD IS NOT A SCENIC ROAD.
- LOTS 1-3 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. A USE-IN-COMMON MAINTENANCE AGREEMENT FOR THE SHARED DRIVEWAY SHALL BE RECORDED SIMULTANEOUSLY WITH THE FINAL PLAN.
- LANDSCAPING FOR LOTS 1-3 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$4,350.00 FOR THE REQUIRED 10 SHADE TREES AND 45 SHRUBS SHALL BE POSTED WITH THE GRADING PERMIT FOR THIS PLAN.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE LANDSCAPE MANUAL.
- A TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- FLAG AND PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE FOR LOTS 1-3 ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM OR ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- CERTIFIED TEST PITS HAVE BEEN PROVIDED TO VERIFY THAT GROUNDWATER AND ROCK ARE NOT PRESENT AT RAIN GARDEN AND MICRO-BIORETENTION LOCATIONS.
- BG&E HAS REVIEWED AND APPROVED PROPOSED TRASH PAD SCREENING AND PERIMETER TREE PLANTINGS.
- A FEE-IN-LIEU OF OPEN SPACE FOR TWO LOTS SHALL BE PROVIDED UNDER THIS FINAL PLAN IN THE AMOUNT OF \$3,000.00.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED BY HOWARD COUNTY BUREAU OF HIGHWAYS AND PLACED AT THE DRIVEWAY ACCESS POINT ONTO OLD MONTGOMERY ROAD AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED (QUICK PUNCH TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- SITE DEVELOPMENT PLAN APPROVAL BY THE DEPARTMENT OF PLANNING AND ZONING IS REQUIRED PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF RESIDENTIAL DWELLINGS ON THESE LOTS.
- THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 RESIDENTIAL INFILL DEVELOPMENT OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED LANDSCAPING, BERRIS, FENCES, SIMILAR HOUSING UNIT TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSES.
- REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND SITE PLAN STAGES. THEREFORE THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.
- IN ACCORDANCE WITH SECTION 16.134(c)(1)(ii) OF THE REGULATIONS, A FEE-IN-LIEU OF SIDEWALK CONSTRUCTION (\$4,960.00) HAS BEEN PAID TO HOWARD COUNTY.

COORDINATE TABLE		
NO.	NORTH	EAST
201	559894.52	1368330.26
202	559780.72	1368229.75
203	560105.70	1368931.34
204	559802.99	1368209.30
205	559850.14	1368256.54
206	559914.46	1369311.95
1005	560207.83	1368042.57

MINIMUM LOT SIZE CHART				
LOT	GROSS AREA	PIPESTEM AREA	NET AREA	MIN. LOT SIZE
1	18,109 SF	NA	18,109 SF*	20,000 SF
2	19,933 SF**	1,771 SF	18,162 SF**	20,000 SF
3	23,342 SF	3,342 SF	20,000 SF	20,000 SF

\* USE 1,891 SQUARE FEET FROM RIGHT-OF-WAY DEDICATION TO MAKE 20,000 SQUARE FEET MINIMUM LOT SIZE PER SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.120(b)(2)(ii)  
 \*\* USE 1,838 SQUARE FEET FROM RIGHT-OF-WAY DEDICATION TO MAKE 20,000 SQUARE FEET MINIMUM LOT SIZE PER SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.120(b)(2)(ii)

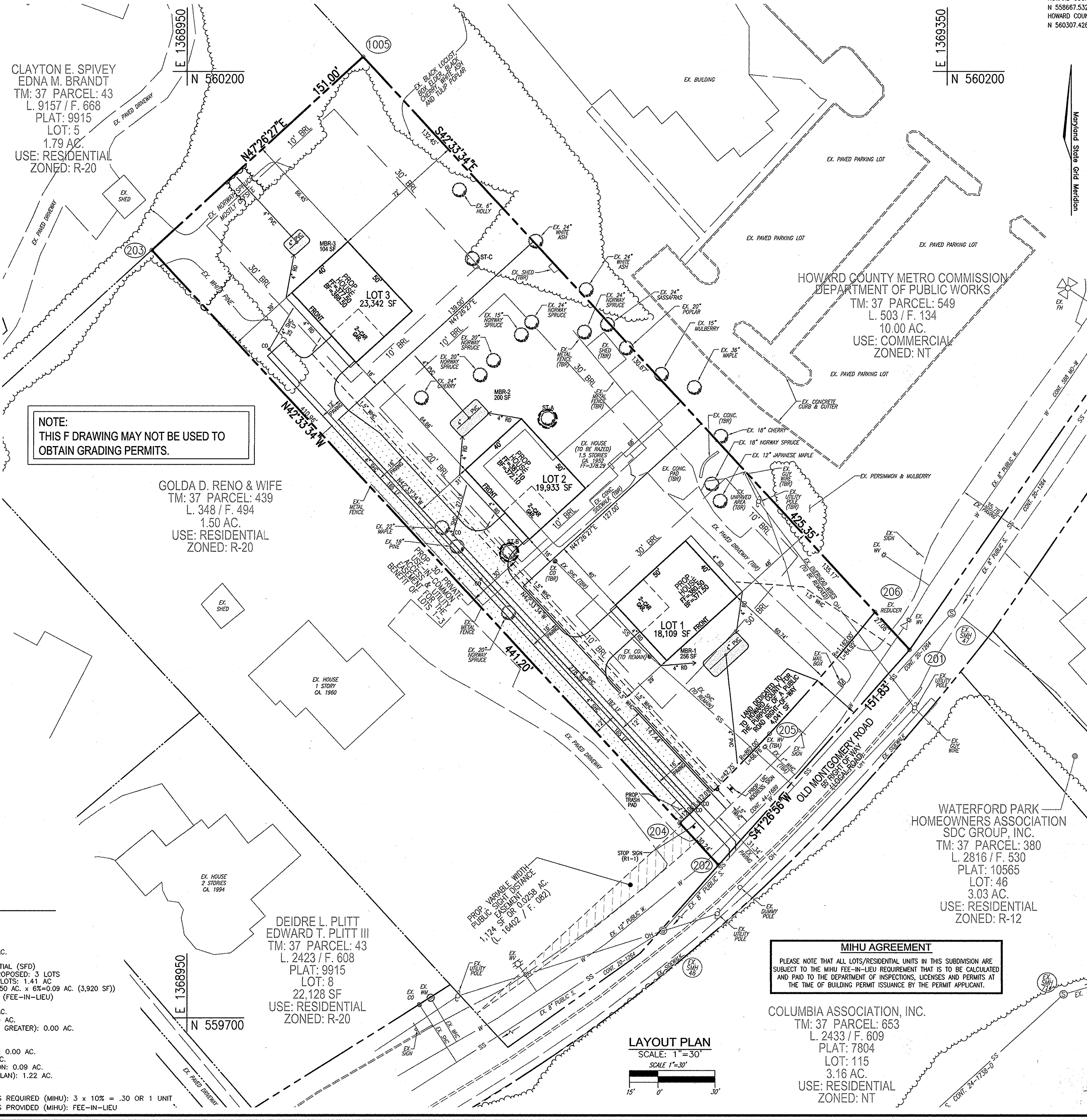


BENCHMARKS		
HOWARD COUNTY BENCHMARK 370A	N 558867.5329	E 1368857.4659
HOWARD COUNTY BENCHMARK 370B	N 560307.4266	E 1368698.1604
	ELEV. 379.708	ELEV. 395.417

LOT TABULATION	
TOTAL NO. OF PROPOSED LOTS:	3
TOTAL NO. OF DWELLING UNITS:	3
NO. OF SINGLE FAMILY DETACHED:	3
NO. OF OPEN SPACE LOTS:	0

**VICINITY MAP**  
 SCALE: 1"=2000'  
 ADC MAP COORDINATE: 34/82

LEGEND:	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURBS AND GUTTERS
	EXISTING EDGE OF PAVING
	PROP. 30' PRIVATE USE-IN-COMMON AREA & UTILITY EASEMENT FOR THE BENEFIT OF LOTS 1-3
	PROP. VARIABLE WIDTH PUBLIC RIGHT OF WAY
	EXISTING UTILITY POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE
	EXISTING TREES
	EXISTING FENCE
	PROPOSED TREE LINE
	MICRO-BIORETENTION (M-6)
	EXISTING SPECIMEN TREE TO BE REMOVED



**NOTE:**  
 THIS F DRAWING MAY NOT BE USED TO OBTAIN GRADING PERMITS.

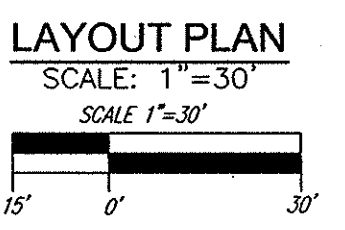
GOLDA D. RENO & WIFE  
 TM: 37 PARCEL: 439  
 L. 348 / F. 494  
 1.50 AC.  
 USE: RESIDENTIAL  
 ZONED: R-20

DEIDRE L. PLITT  
 EDWARD T. PLITT III  
 TM: 37 PARCEL: 43  
 L. 2423 / F. 608  
 PLAT: 9915  
 LOT: 8  
 22,128 SF  
 USE: RESIDENTIAL  
 ZONED: R-20

WATERFORD PARK  
 HOMEOWNERS ASSOCIATION  
 SDC GROUP, INC.  
 TM: 37 PARCEL: 380  
 L. 2816 / F. 530  
 PLAT: 10565  
 LOT: 46  
 3.03 AC.  
 USE: RESIDENTIAL  
 ZONED: R-12

**MIHU AGREEMENT**  
 PLEASE NOTE THAT ALL LOTS/RESIDENTIAL UNITS IN THIS SUBDIVISION ARE SUBJECT TO THE MIHU FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.

COLUMBIA ASSOCIATION, INC.  
 TM: 37 PARCEL: 653  
 L. 2433 / F. 609  
 PLAT: 7804  
 LOT: 115  
 3.16 AC.  
 USE: RESIDENTIAL  
 ZONED: NT



SPECIMEN TREE CHART					
NO.	SIZE (DBH)	CRZ	COMMON NAME	CONDITION	COMMENTS
ST-A	42"	53'	SILVER MAPLE	GOOD	TO BE REMOVED
ST-B	32.5"	48.75'	SILVER MAPLE	FAIR, CROWN DIEBACK NOTED	TO BE REMOVED
ST-C	32.5"	48.75'	BLACK CHERRY	POOR, SIGNIFICANT CROWN DIEBACK	TO REMAIN

**SITE DATA**  
 LOCATION: TAX MAP 37, BLOCK 7  
 PARCEL: 230  
 DEED REFERENCE: L.2181 F.172  
 6TH ELECTION DISTRICT  
 PRESENT ZONING: R-20  
 GROSS AREA OF PROJECT: 1.50 AC.  
 LIMIT OF DISTURBANCE: 1.22 AC.  
 PROPOSED USE OF SITE: RESIDENTIAL (SFD)  
 NUMBER OF RESIDENTIAL LOTS PROPOSED: 3 LOTS  
 AREA OF PROPOSED RESIDENTIAL LOTS: 1.41 AC.  
 OPEN SPACE REQUIRED: 0.09 AC. (1.50 AC. x 6% = 0.09 AC. (3,920 SF))  
 IMPERVIOUS AREA: 0.29 AC. (FEE-IN-LIEU)  
 AREA OF STREAM/BUFFER: 0.00 AC.  
 AREA OF WETLANDS/BUFFER: 0.00 AC.  
 AREA OF STEEP SLOPES (25% OR GREATER): 0.00 AC.  
 AREA OF FLOODPLAIN: 0.00 AC.  
 NET PROJECT AREA: 1.50 AC.  
 AREA OF EXISTING FOREST COVER: 0.00 AC.  
 AREA OF FERTILE SOILS: 0.38 AC.  
 AREA OF RIGHT OF WAY DEDICATION: 0.09 AC.  
 AREA MANAGED BY ESDV (\*THIS PLAN): 1.22 AC.  
 \*IMPERVIOUS AREA: 0.29 AC.  
 \*GREEN AREA: 0.93 AC.  
 MODERATE INCOME HOUSING UNITS REQUIRED (MIHU): 3 x 10% = .30 OR 1 UNIT  
 MODERATE INCOME HOUSING UNITS PROVIDED (MIHU): FEE-IN-LIEU

SHEET INDEX	
LAYOUT PLAN	SHEET NO.
GRADING, SEDIMENT, AND EROSION CONTROL PLAN AND SOILS MAP	1 OF 5
GRADING, SEDIMENT, AND EROSION CONTROL NOTES AND DETAILS	2 OF 5
SWM DRAINAGE AREA MAP, SWM NOTES AND DETAILS	3 OF 5
LANDSCAPE AND MICRO-BIORETENTION PLANTING PLAN, NOTES, AND DETAILS	4 OF 5
LANDSCAPE AND MICRO-BIORETENTION PLANTING PLAN, NOTES, AND DETAILS	5 OF 5

**OWNER/DEVELOPER**  
 BRIAN E. SMITH  
 SHARON R. SMITH  
 8302 OLD MONTGOMERY RD.  
 COLUMBIA, MD 21045  
 443-864-8141

NO.	REVISION	DATE

**SUPPLEMENTAL INFORMATION PLAN**  
**LAYOUT PLAN**  
**BRIAN SMITH PROPERTY**  
**LOTS 1-3**  
 8302 OLD MONTGOMERY ROAD  
 COLUMBIA, MD 21045  
 L. 2181 / F. 172  
 ZONED: R-20  
 USE: RESIDENTIAL  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8961

**PROFESSIONAL CERTIFICATE**

DESIGN BY:	RHV
DRAWN BY:	JMR
CHECKED BY:	RHV
DATE:	SEPTEMBER 2015
SCALE:	AS SHOWN
W.O. NO.:	13-24

1 SHEET OF 5

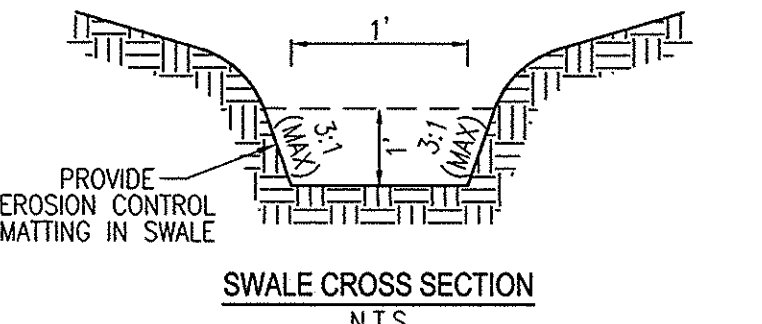
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9-21-15  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 9-24-15  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

- LEGEND:**
- PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - ADJACENT PROPERTY LINE
  - EXISTING CURB AND GUTTER
  - EXISTING EDGE OF PAVING
  - PROP. 30' PRIVATE USE-IN-COMMON ACCESS & UTILITY EASEMENT FOR THE BENEFIT OF LOTS 1-3
  - PROP. VARIABLE WIDTH PUBLIC SIGHT DISTANCE EASEMENT
  - EXISTING UTILITY POLE
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING TREELINE
  - EXISTING TREES
  - EXISTING FENCE
  - EXISTING 10' CONTOUR
  - EXISTING 2' CONTOUR
  - SOILS
  - PROPOSED TREELINE
  - PROPOSED 10' CONTOUR
  - PROPOSED 2' CONTOUR
  - PROPOSED SPOT ELEVATION
  - PROPOSED DIMENSION FENCE
  - PROPOSED SILT FENCE
  - PROPOSED LIMIT OF DISTURBANCE
  - PROPOSED EROSION CONTROL MATING
  - PROPOSED STABILIZED CONSTRUCTION ENTRANCE
  - MICRO-BIORETENTION (M-6)
  - PROPOSED TEST PIT



NOTE: THE HOWARD SCD STANDARD SEDIMENT CONTROL PLAN MAY NOT BE USED TO OBTAIN GRADING PERMITS.

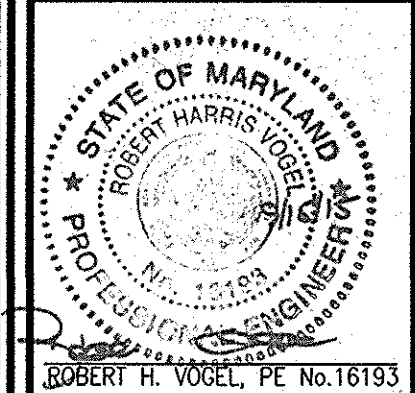
**OWNER/DEVELOPER**  
BRIAN E. SMITH  
SHARON R. SMITH  
8302 OLD MONTGOMERY RD.  
COLUMBIA, MD 21045  
443-864-8141

NO.	REVISION	DATE

**SUPPLEMENTAL INFORMATION PLAN  
GRADING, SEDIMENT, AND EROSION CONTROL  
PLAN AND SOILS MAP**

**BRIAN SMITH PROPERTY**  
LOTS 1-3  
8302 OLD MONTGOMERY ROAD  
COLUMBIA, MD 21045  
L. 2181 / F. 172  
ZONED: R-20  
USE: RESIDENTIAL  
HOWARD COUNTY, MARYLAND

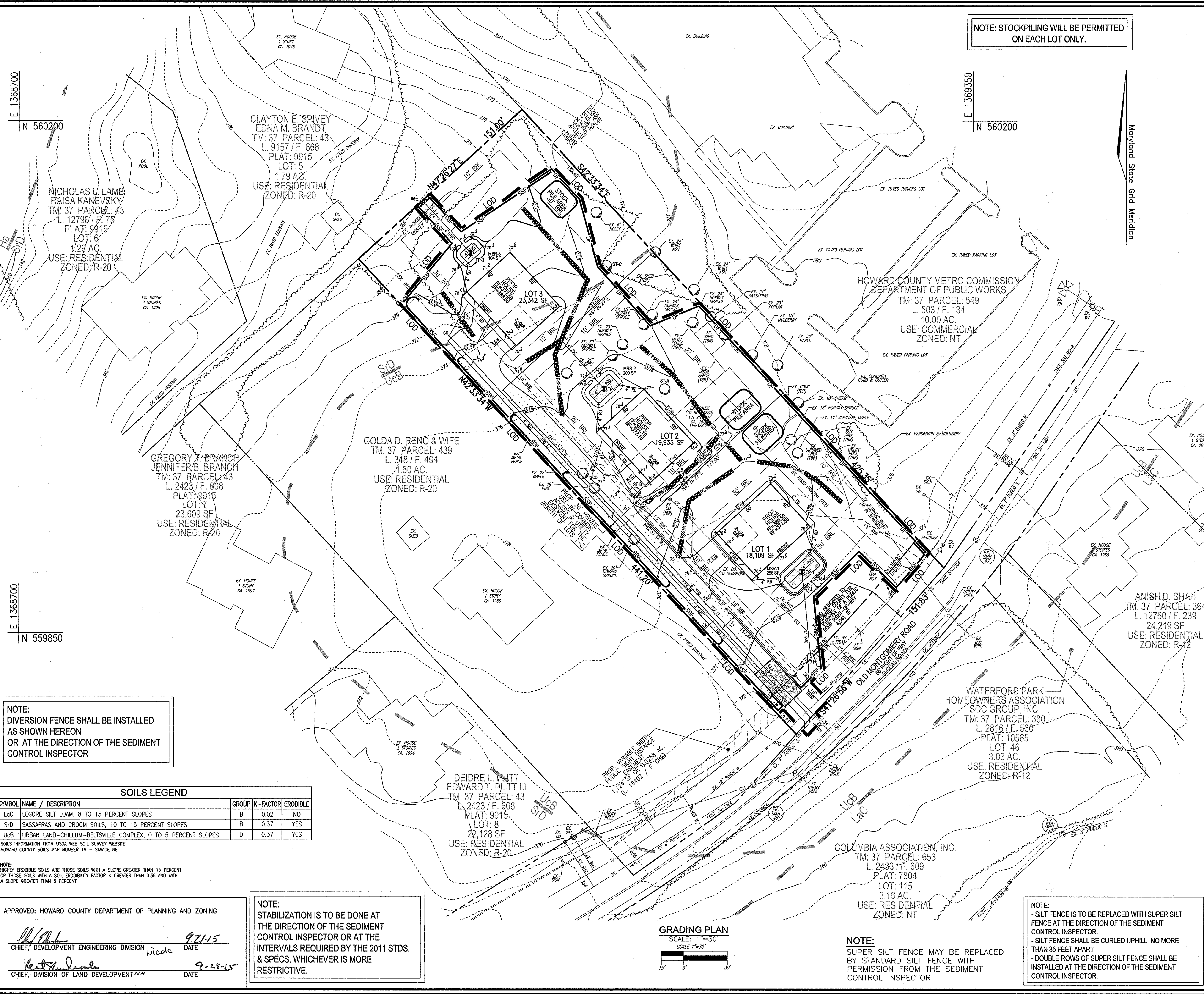
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELICOTT CITY, MD 21043  
TEL: 410-461-7666  
FAX: 410-461-8961



**PROFESSIONAL CERTIFICATE**  
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. 16193, EXPIRATION DATE: 09-27-2016

DESIGN BY: RHV  
DRAWN BY: JMR  
CHECKED BY: RHV  
DATE: SEPTEMBER 2015  
SCALE: AS SHOWN  
W.O. NO.: 13-24

2 SHEET OF 5



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9/21/15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 9-24-15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

HOWARD 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...

- 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...

- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1...

- 4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...

PERMANENT STABILIZATION

- 1. SEED MIXTURES A. GENERAL USE 1. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

R-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

- DEFINITION TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION. PURPOSE TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

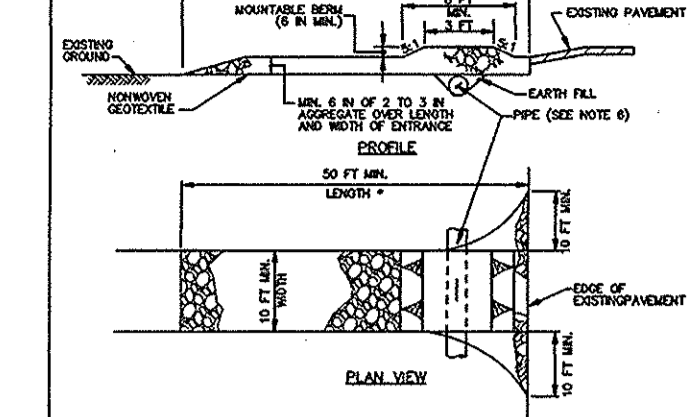
- 1. TEMPORARY STABILIZATION A. SEEDING PREPARATION CONSISTS OF LOOSESSING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

- DEFINITION THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. PURPOSE TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

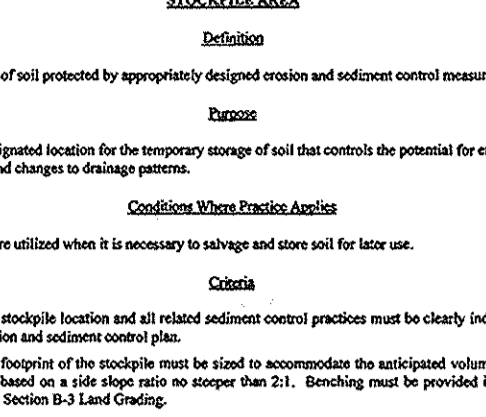
- 1. SEEDING A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO "TESTING" BY A RECOGNIZED SEED LABORATORY...

STABILIZED CONSTRUCTION



- CONSTRUCTION SPECIFICATIONS 1. PLACE ORANGE POLYPROPYLENE MATS AS SPECIFIED BY THE APPROVED PLAN VOUCHER MUST TRAIL OVER THE ENTIRE LENGTH OF THE SOIL EXPOSED LENGTH OF 24 INCHES...

PERMANENT SOIL STABILIZATION MATS CHANNEL APPLICATION



- CONSTRUCTION SPECIFICATIONS 1. USE MATS WITH A 10' CHANNEL WIDTH FOR BEAR STRIPS EQUAL TO OR GREATER THAN THE BEAR STRIPS...

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

- DEFINITION TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS. PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS...

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES...

TEMPORARY SEEDING SUMMARY

Table with 5 columns: NO, SPECIES, APPLICATION RATE (LB/AC), SEEDING DEPTHS, FELZLER RATE (10-20-20), LIME RATE. It contains two rows of seed mixture data.

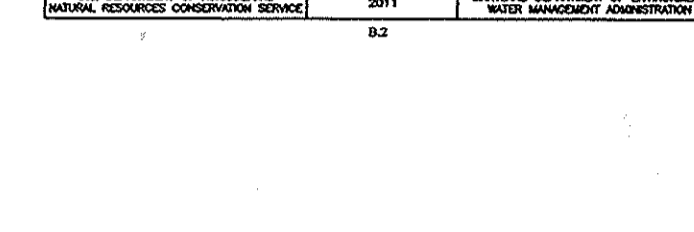
SEQUENCE OF CONSTRUCTION

- 1. OBTAIN GRADING PERMIT. (1 DAY) DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO BEGINNING CONSTRUCTION. (1 DAY)

NOTES

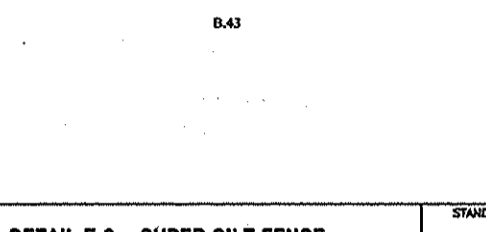
DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.

DIVERSION FENCE



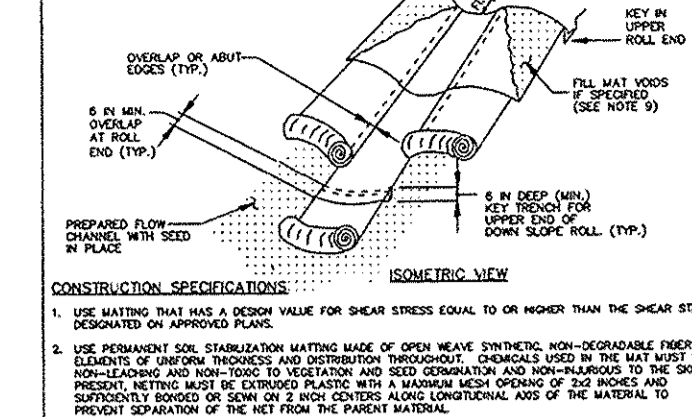
- CONSTRUCTION SPECIFICATIONS 1. INSTALL 18 IN DIAMETER GALVANIZED STEEL POSTS OF 120 LB PER 30 FT POSTS AND 3/4 IN DIAMETER GALVANIZED STEEL RAILS OF 10 FT LONG...

SUPER SIL FENCE



- CONSTRUCTION SPECIFICATIONS 1. INSTALL 18 IN DIAMETER GALVANIZED STEEL POSTS OF 120 LB PER 30 FT POSTS AND 3/4 IN DIAMETER GALVANIZED STEEL RAILS OF 10 FT LONG...

DIVERSION FENCE



- CONSTRUCTION SPECIFICATIONS 1. USE 42 IN HIGH IN 2 GAUGE OF TROUSER CHAIN LINK FENCING (20 IN MAXIMUM SPACING).

Table with 5 columns: NO, SPECIES, APPLICATION RATE (LB/AC), SEEDING DEPTHS, FELZLER RATE (10-20-20), LIME RATE. It contains two rows of seed mixture data.

OWNER/DEVELOPER

BRIAN E. SMITH SHARON R. SMITH 8302 OLD MONTGOMERY RD. COLUMBIA, MD 21045 443-864-8141

SUPPLEMENTAL INFORMATION PLAN

GRADING, SEDIMENT, AND EROSION CONTROL NOTES AND DETAILS BRIAN SMITH PROPERTY LOTS 1-3 8302 OLD MONTGOMERY ROAD COLUMBIA, MD 21045

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM AN ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 210145 EXPIRATION DATE: 09-27-2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division DATE 9/27/15

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE 9-28-15

REVISION

Table with 3 columns: NO., REVISION, DATE. It is currently empty.

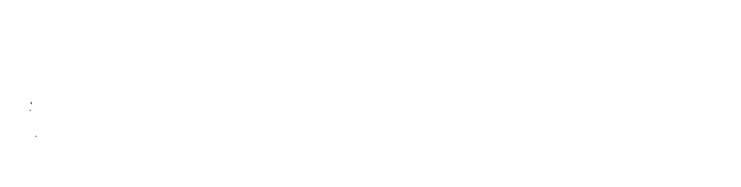
ROBERT H. VOGEL ENGINEERING, INC.

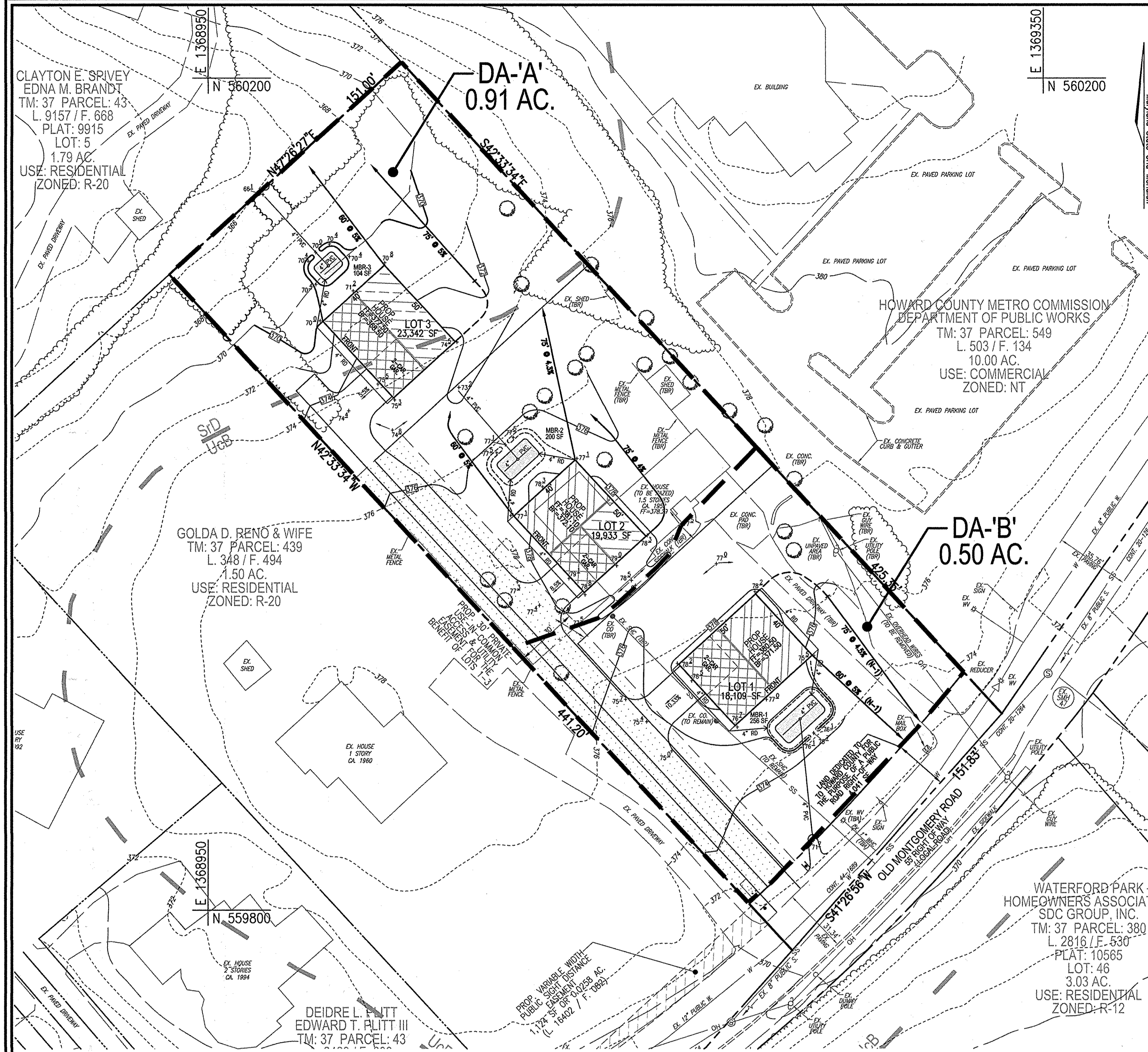
ENGINEERS - SURVEYORS - PLANNERS 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RHW

DRAWN BY: JMR CHECKED BY: RHW DATE: SEPTEMBER 2015 SCALE: AS SHOWN W.O. NO.: 13-24

3 SHEET OF 5

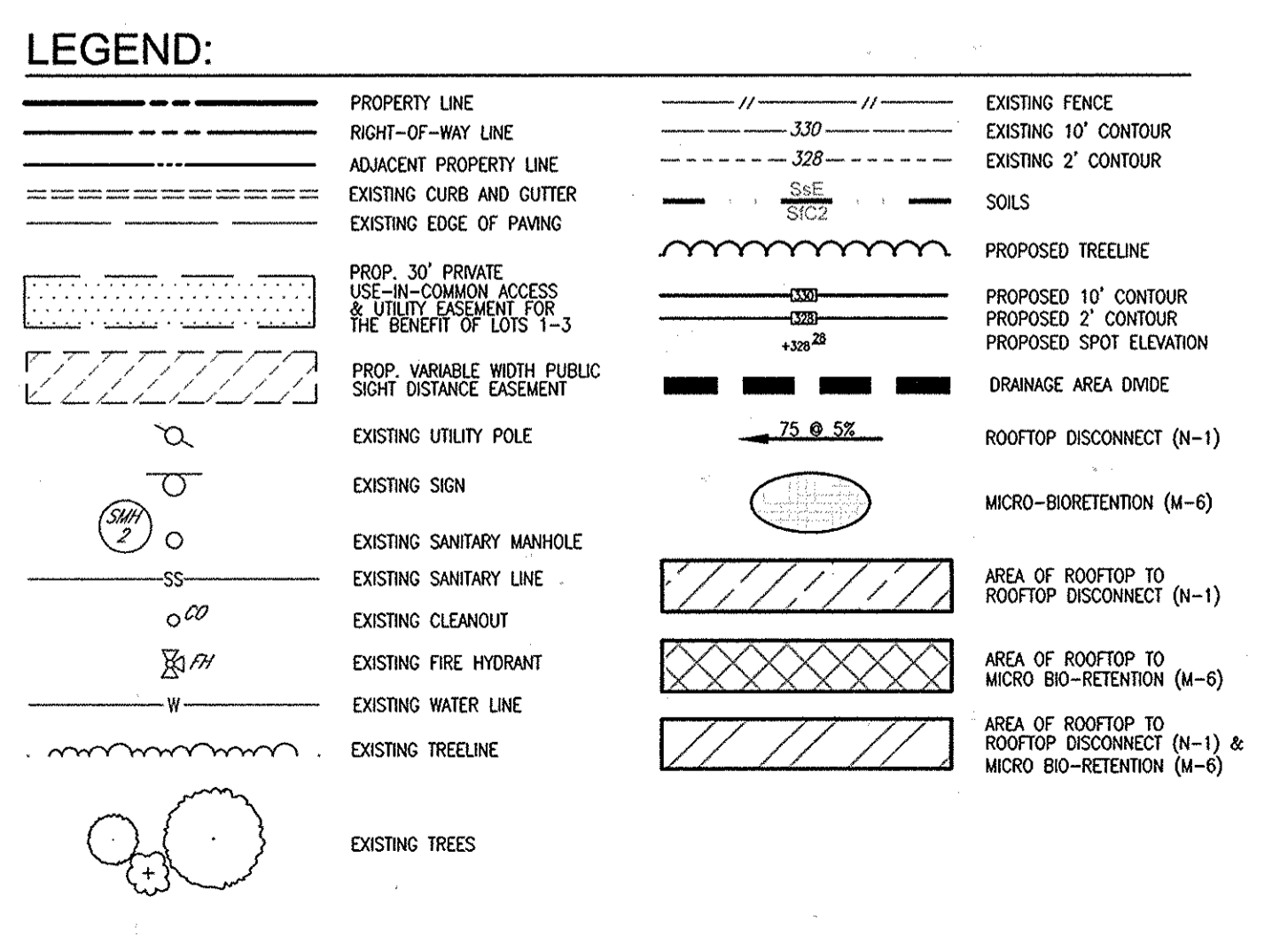
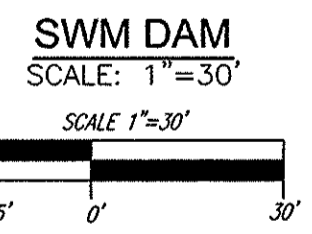




SOILS LEGEND				
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
LoC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES	B	0.02	NO
Sd	SASSAFRAS AND CROOM SOILS, 10 TO 15 PERCENT SLOPES	B	0.37	YES
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	0.37	YES

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development



**N-1. DISCONNECTION OF ROOFTOP RUNOFF**  
**CONSTRUCTION CRITERIA:**  
 THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED ROOFTOP DISCONNECTIONS:  
 - EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF  
 - SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTION, SCRAPING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.  
**INSPECTION:**  
 A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAVE BEEN MET AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.  
**MAINTENANCE CRITERIA:**  
 MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

**DETAIL - MICROBIORETENTION/RAIN GARDEN (M-6)**  
 NOT TO SCALE

**NOTES**  
 1. THE SIDES OF THE MBR'S ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC SHALL NOT BE INSTALLED BETWEEN THE MBR LAYERS OR AT THE BOTTOM OF THE MICRO-BIORETENTION AS IT WILL CAUSE THE MBR TO FAIL.  
 2. THE PERFORATED UNDERDRAIN PIPE OF THE MBR SHOULD BE WRAPPED WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.

SWM PRACTICE CHART	
ESD PRACTICES BY LOT	
LOT #	ESD PRACTICE
#1	DISCONNECT ROOFTOP RUNOFF (N-1), AND MICRO BIO-RETENTION (M-6)
#2	DISCONNECT ROOFTOP RUNOFF (N-1), AND MICRO BIO-RETENTION (M-6)
#3	DISCONNECT ROOFTOP RUNOFF (N-1), AND MICRO BIO-RETENTION (M-6)

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specifications	Notes
Plantings	see Appendix A, Table A.4	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (50%), coarse sand (20%) & compost (40%)	USDA soil types loamy sand or sandy loam; clay content < 9%
Organic content	Min. 10% by dry weight (ASTM D 2974)	aged 6 months, minimum no pine or wood chips
Mulch	shredded hardwood	
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"
Geotextile	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35
Poured in place concrete (if required)	MESA Mix No. 3, F <sub>c</sub> = 3500 psi (28 days), normal weight, air-entrained, reinforcing to meet ASTM-A1549	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standard requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland design to include meeting ACI Code 308.8R9; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressure); and analysis of potential cracking. Sand substitutions such as Diabase and Gneisses (AASHTO #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

PROJECT SMITH PROPERTY		DESIGNER RHV		DATE 04/21/14		ROBERT H. VOGEL ENGINEERING, INC.	
DRAINAGE AREA #		AREA TREATED	IMPERVIOUS AREA	ROOFTOP DISCONNECT N-1	MICRO BIORETENTION M-6	ESDv VOLUME	
A	39,460	7,530	72	341	413		
B	21,800	4,970	183	404	587		
TOTAL AREA		61,260 SF		TOTAL ESDv PROVIDED		1,000	
		1.41 AC.					

**APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS**  
 1. MATERIAL SPECIFICATIONS  
 THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.  
 2. FILTERING MEDIA OR PLANTING SOIL  
 THE SOIL SHALL BE A UNIFORM MIX FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTITUTES SHALL BE MIXED OR QUARIED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A BARRIER TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER INDIAN WEEDS AS SPECIFIED UNDER COMAR 16.06.01.02.  
 \* SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).  
 \* ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35%-40%) OR SANDY LOAM (50%), COARSE SAND (20%) AND COMPOST (40%).  
 \* CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.  
 \* pH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, HIGH SULFATE PULP SOIL) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE pH.  
 THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TITRATION ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TITRATION ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS DETAILED.  
 3. COMPACTION  
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION TOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR WHEEL TRACK EQUIPMENT OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO SEWER FLOODING.  
 COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLAGE DOES NOT WILL KEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.  
 ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PUMPED WATER BEFORE PREPARING (ROTOTILLING) BASE.  
 WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A COMPACTION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.  
 WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 16". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.  
 4. PLANT MATERIAL  
 RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.  
 5. PLANT INSTALLATION  
 COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDINGS TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIPHERY OF THE BIORETENTION AREA. ROTOLOGGING OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/3RD OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE CENTER OF THE PLANTING HOLE SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE CIRCUMFERENCE OF THE TREE BALL.  
 GRASSES AND LEGUME SEED SHOULD BE BROADCAST TO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.  
 THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURE'S CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFATS, OR AT A MINIMUM, IMPROVES THE QUALITY OF THE UNDERDRAIN. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UNDER FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.  
 6. UNDERDRAINS  
 UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:  
 \* PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F758, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PERFORATED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HEAVY).  
 \* PERFORATIONS - 1/2" PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4A) GALVANIZED HARDWARE CLOTH.  
 \* GRAVEL - THE GRAVEL LAYER (AND STONE FILTERED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.  
 \* THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.  
 \* A RIGID, UNPERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.  
 \* A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONES) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN.  
 THIS MANUFACTURED UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).  
 7. MISCELLANEOUS  
 THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

**OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (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 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 IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEFORE 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.

MICRO-BIORETENTION (M-6) ELEVATIONS									
LOT #	FACILITY #	1	2	3	4	5	6	7	4" INV. OUTFALL
LOT 1	MBR-1	376.10	375.70	374.70	374.45	372.95	372.62	371.79	372.04
LOT 2	MBR-2	377.50	377.10	376.10	375.85	374.35	374.02	373.19	373.44
LOT 3	MBR-3	370.40	370.00	369.00	368.75	367.25	366.92	366.09	366.34

**OWNER/DEVELOPER**  
 BRIAN E. SMITH  
 SHARON R. SMITH  
 8302 OLD MONTGOMERY RD.  
 COLUMBIA, MD 21045  
 443-864-8141

NO.	REVISION	DATE

**SUPPLEMENTAL INFORMATION PLAN**  
**SWM DRAINAGE AREA MAP;**  
**SWM NOTES AND DETAILS**  
**BRIAN SMITH PROPERTY**  
 LOTS 1-3  
 8302 OLD MONTGOMERY ROAD  
 COLUMBIA, MD 21045  
 L 2181 / F. 172  
 ZONED: R-20  
 USE: RESIDENTIAL  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8961

DESIGN BY: RHV  
 DRAWN BY: JMR  
 CHECKED BY: RHV  
 DATE: SEPTEMBER 2015  
 SCALE: AS SHOWN  
 W.O. NO.: 13-24

PROFESSIONAL CERTIFICATE  
 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. 16183, EXPIRATION DATE 09-27-2016

4 SHEET OF 5

**FOREST CONSERVATION WORKSHEET**  
Version 1.0

Project: 8302 Old Montgomery Road  
Date: September 18, 2015

NET TRACT AREA	Acres
A. Total Tract Area	1.5
B. Area within 100 Year Floodplain	0
C. Area of existing impervious surface/changed use	0
D. Net Tract Area	1.5

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)  
ARR: MDR IDA HDR MPD CIA  
R-20

Alteration Threshold (percentage)	Conservation Threshold (percentage)
1.0	0.2
1.0	0.3

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain)	0
H. Area of forest above alteration threshold	0
I. Area of forest above conservation threshold	0

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation	NA
K. Clearing permitted without mitigation	Break-Even Point

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared or retained outside FCE	0
M. Total area of forest to be retained in FCE	0

PLANTING REQUIREMENTS:

N. Reafforestation for clearing above Conservation Threshold	0
O. Reafforestation for clearing below Conservation Threshold	0
P. Credit for retention above conservation threshold	0
Q. Total reafforestation required	0
R. Total reafforestation required	0
T. Total reafforestation and afforestation required	0

**FOREST CONSERVATION:**

THE FOREST CONSERVATION OBLIGATION WILL BE MET BY A FEE-IN-LIEU PAYMENT OF \$6,534.00 MADE OUT TO HOWARD COUNTY FOREST CONSERVATION FUND FOR THE 0.20 ACRE AFFORESTATION REQUIREMENT FOR THIS PROJECT.  
FEE-IN-LIEU = (0.20 AC.) 5,712 SF x .75 = \$6,534.00

**LANDSCAPE NOTES**

- 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.
- 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.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

**LANDSCAPE SCHEDULE NOTE:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

**B & E NOTES:**

- THE LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS.
- BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
- THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT. IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHOLD PERMISSION.

**GENERAL NOTES:**

- LANDSCAPING FOR LOTS 1-3 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$4,350.00 FOR THE REQUIRED 10 SHADE TREES AND 45 SHRUBS SHALL BE POSTED WITH THE GRADING PERMIT FOR THIS PLAN.
- THERE IS NO 100-YEAR FLOODPLAIN WITHIN THE LIMITS OF THIS PROJECT.
- THERE ARE NO WETLANDS, OR WETLAND BUFFERS LOCATED WITHIN THE LIMITS OF THIS SITE.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS AND THEIR REQUIRED BUFFERS.
- THE SUBJECT PROPERTY IS ZONED "R-20" IN ACCORDANCE WITH THE 10/06/13 COMPREHENSIVE ZONING PLAN.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT NOVEMBER, 2013 BY ROBERT H. VOGEL ENGINEERING, INC.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOUR INTERVALS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 2012.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO GRAVE SITES, OR CEMETERIES LOCATED ON THE SUBJECT PROPERTY.
- THE REMOVAL OF TREES 30' OR GREAT DHB IS PROHIBITED WITHOUT COUNTY WAIVER APPROVAL.
- BG&E HAS REVIEWED AND APPROVED PROPOSED TRASH PAD SCREENING AND PERIMETER TREE PLANTINGS.

**SCHEDULE A: PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			TREES FOR WP-15-049	TOTAL
	1	2	3		
PERIMETER/FRONTAGE DESIGNATION	1	2	3		
LANDSCAPE TYPE	A	A	A		
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	398'	151'	411'		
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES 28'	YES 31'	YES 38'		
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO		
NUMBER OF PLANTS REQUIRED (IF REMAINING)	370	120	373		
SHADE TREES	150	6	150	2**	16
EVERGREEN TREES	-	-	-	-	-
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED	4*	2	2	2**	10
SHADE TREES	-	-	-	-	-
EVERGREEN TREES	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED					

**NOTE:**  
\* CREDIT IS BEING TAKEN FOR ONE 24" SASSAFRASS TREE AND ONE 20" POPLAR TREE ALONG PERIMETER 1.  
\*\* PROVIDE 2 WILLOW OAK TREES, 3"-4" CALIPER, AS PART OF THE REQUIREMENTS FOR WP-15-049.

**TRASH PAD LANDSCAPING**

SYMBOL	QTY.	DESCRIPTION	SIZE	REMARKS
⊙	5	DWARF JAPANESE YEW	3'-4" HT	B & B

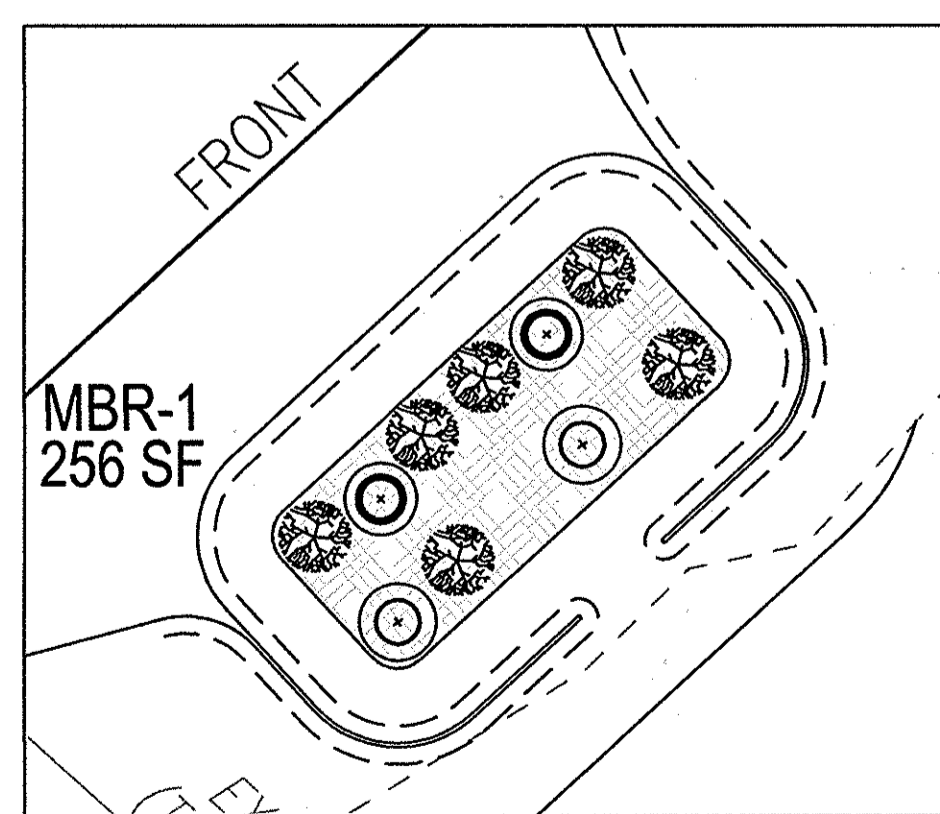
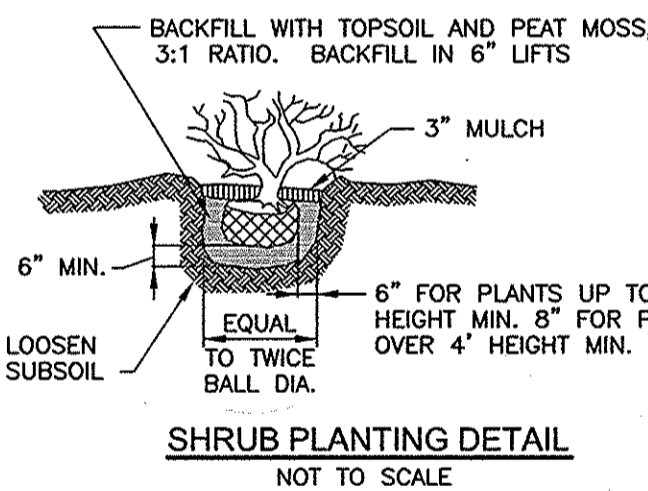
**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVING
- PROP. 30' PRIVATE USE-IN-COMMON ACCESS R/W UTILITY EASEMENT FOR THE BENEFIT OF LOTS 1-3
- PROP. VARIABLE WIDTH PUBLIC RIGHT DISTANCE EASEMENT
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TRENCH
- EXISTING TREES
- EXISTING FENCE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED TREE LINE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- MICRO-BIORETENTION (M-6)
- EXISTING BG&E GREEN ZONE
- EXISTING BG&E YELLOW ZONE

LANDSCAPE SCHEDULE					
SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
⊕	AR	4	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2"-3" CAL.	B & B
⊙	GB	4	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO (MALE ONLY)	2-1/2"-3" CAL.	B & B
⊙	HY	40	TAXUS MEDIA 'HICKSII' HICKS YEW	2-1/2"-3" HGT.	B & B
⊙	OP	2	QUERCUS PHELLOS WILLOW OAK	3"-4" CAL.	B & B

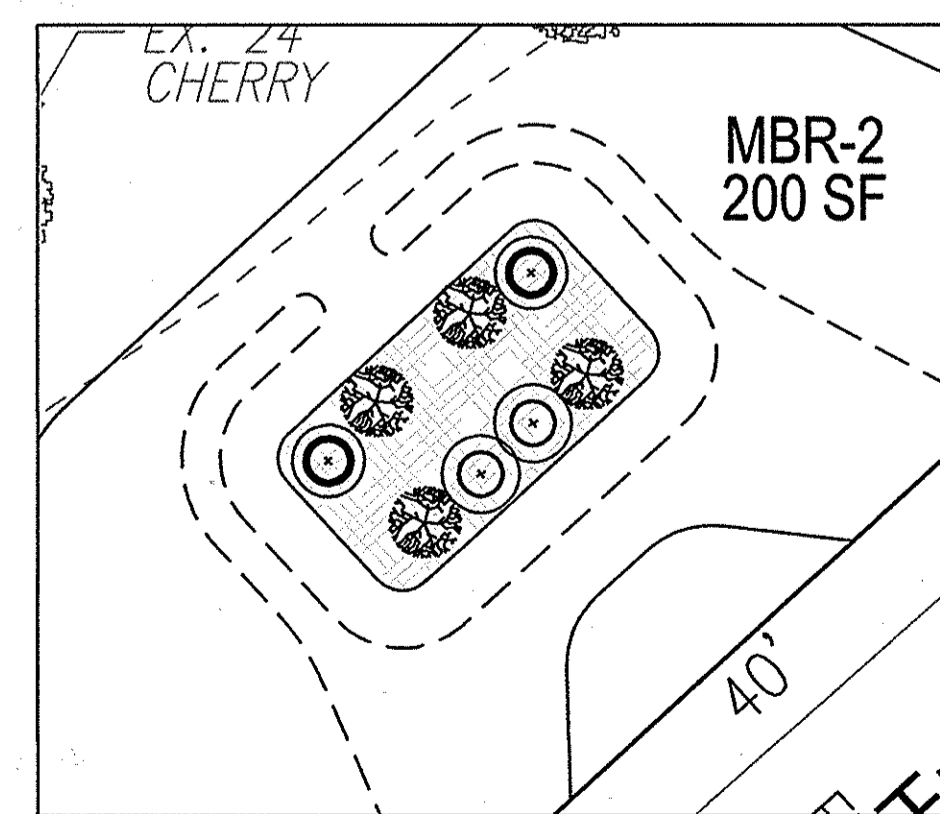
**"MICRO-BIORETENTION" PLANTING SCHEDULE NOTES:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDV SUMMARY.
- FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH.



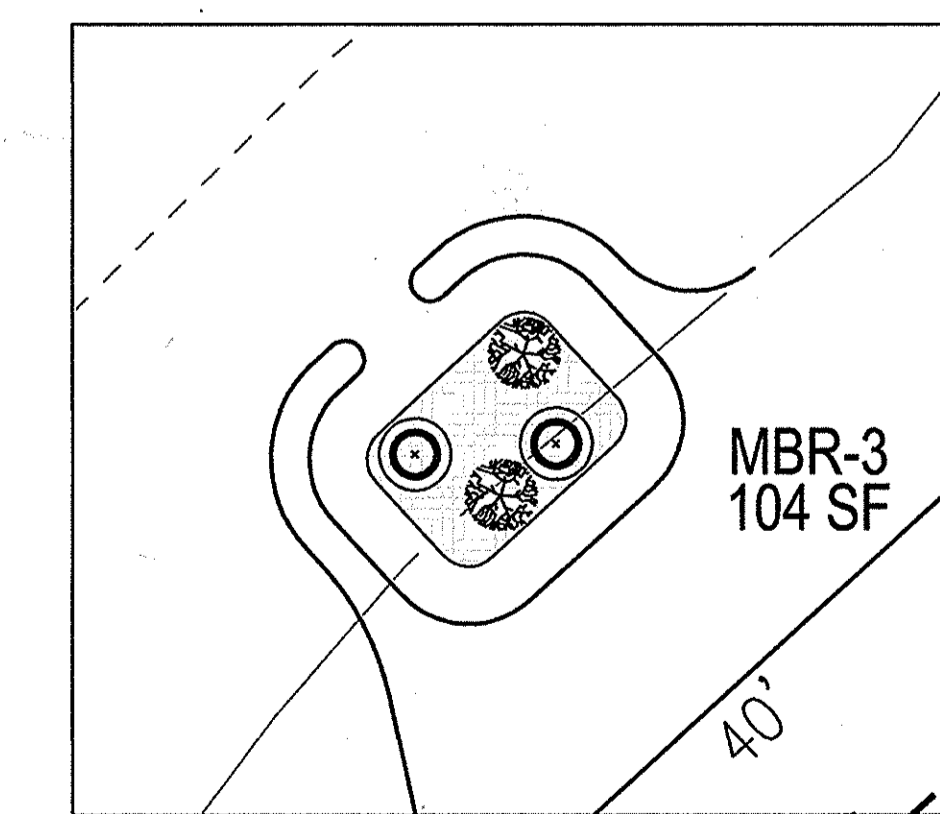
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	LINDERA BENZON SPICEBUSH	5 GALLON	CONT
2	ILEX GLABRA INKBERRY	3 GALLON	CONT
6	VEIBURNUM TRILOBUM AMERICAN HICHLUSH CRANBERRY	3 GALLON	CONT

SF X 75X X .0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED



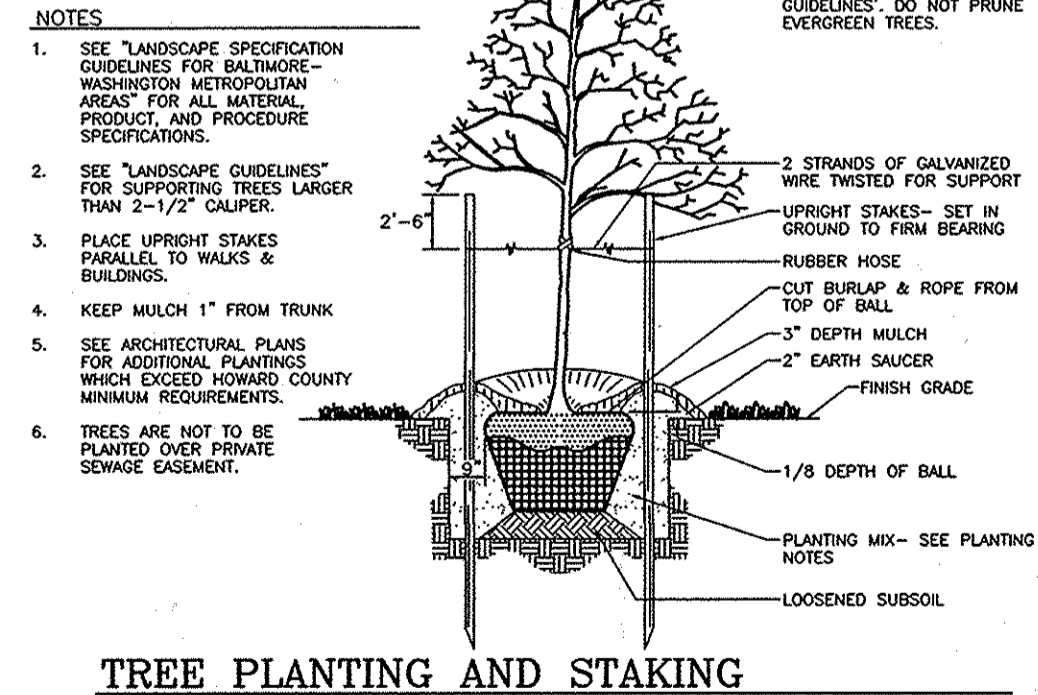
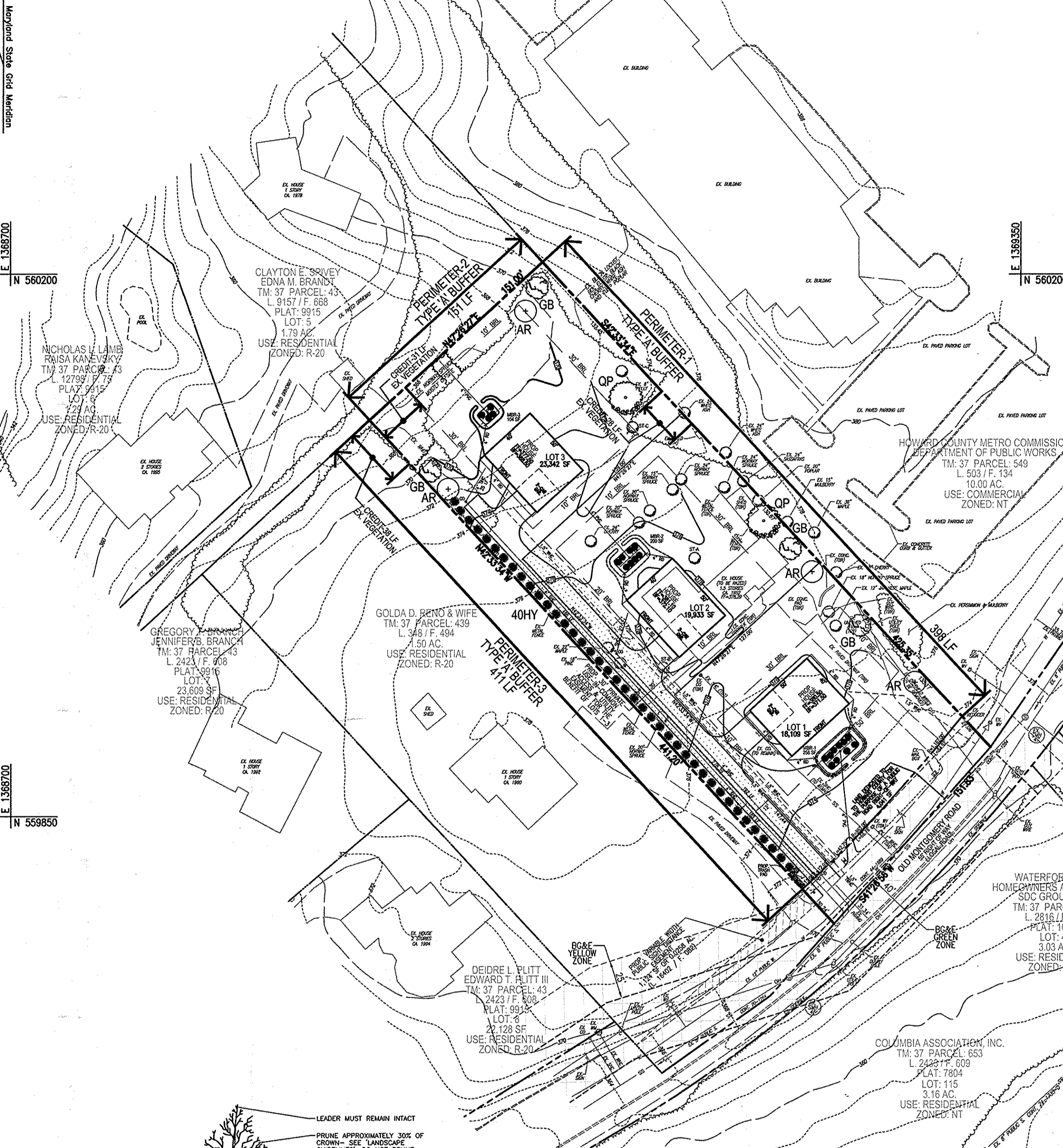
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	LINDERA BENZON SPICEBUSH	5 GALLON	CONT
2	ILEX GLABRA INKBERRY	3 GALLON	CONT
4	VEIBURNUM TRILOBUM AMERICAN HICHLUSH CRANBERRY	3 GALLON	CONT

SF X 75X X .0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	ILEX GLABRA INKBERRY	3 GALLON	CONT
2	VEIBURNUM TRILOBUM AMERICAN HICHLUSH CRANBERRY	3 GALLON	CONT

SF X 75X X .0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9/21/15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 9/24/15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**OWNER/DEVELOPER**

BRIAN E. SMITH  
SHARON R. SMITH  
8302 OLD MONTGOMERY RD.  
COLUMBIA, MD 21045  
443-864-8141

NO.	REVISION	DATE

**SUPPLEMENTAL INFORMATION PLAN**  
**LANDSCAPE AND MICRO-BIORETENTION PLANTING PLAN, NOTES, AND DETAILS**  
**BRIAN SMITH PROPERTY**  
LOTS 1-3  
8302 OLD MONTGOMERY ROAD  
COLUMBIA, MD 21045  
L. 2181 / F. 172  
ZONED: R-20  
USE: RESIDENTIAL  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLICOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE  
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. 16193 EXPIRATION DATE 09-27-2016

DESIGN BY: RHY  
DRAWN BY: JMR  
CHECKED BY: RHY  
DATE: SEPTEMBER 2015  
SCALE: AS SHOWN  
W.O. NO.: 13-24

5 SHEET OF 5