

GENERAL NOTES

- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE SUBJECT PROPERTY IS ZONED R-SC PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 37AB AND 0048 WERE USED FOR THIS PROJECT.
- TRACT BOUNDARY IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED ON OR ABOUT APRIL, 2015 BY BENCHMARK ENGINEERING, INC.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THE TRAFFIC STUDY WAS PREPARED BY MARS GROUP, INC. IN MARCH, 2014.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. THE WATER AND SEWER IS PUBLIC. THE CONTRACT NUMBER IS 14-4912-D.
- 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 MARCH 7, 2015, ON WHICH DATE DEVELOPERS AGREEMENT NUMBER F-15-096/14-4912-D WAS FILED AND ACCEPTED.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWERAGE ALLOCATION WILL BE GRANTED AT TIME OF ISSUANCE OF BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON-SITE.
- THERE ARE NO HISTORIC SITES/FEATURES LOCATED ON THIS SITE.
- THERE ARE WETLANDS, STREAMS AND THEIR REQUIRED BUFFERS, LOCATED ON THIS SITE. THERE IS NO 100YR FLOODPLAIN ON THIS SITE.
- THERE ARE NO STEEP SLOPES THAT 25% OR GREATER THAT IS MORE THAN A CONTIGUOUS 20,000 sq ft LOCATED ON THIS SITE.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:

- WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
- SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN).
- GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
- STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
- DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1-FOOT DEPTH OVER DRIVEWAY.
- STRUCTURE CLEARANCES - MINIMUM 12 FEET.
- MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.

- THE WETLAND DELINEATION AND FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN MARCH, 2014.
- THE GEOTECHNICAL REPORT WAS PREPARED BY GEOTECHNICAL LABORATORIES, INC. IN NOVEMBER, 2014.
- IN ACCORDANCE WITH SECTION 12B.0.A.1 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK (APPLIES FOR RESIDENTIAL SIPS).
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS, THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS OR 100 YEAR FLOODPLAIN EXCEPT AS APPROVED THE HOWARD COUNTY, DEPARTMENT OF PLANNING AND ZONING.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- LANDSCAPING FOR THIS SUBDIVISION IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE OBLIGATION FOR SECTION 2, PHASE 2 WAS DEFERRED ON F-15-103 AND IS NOW DESIGNING IN ACCORDANCE WITH THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$3,750.00 (\$300 FOR EACH OF THE 10 SHADE TREES, \$150 FOR THE 5 EVERGREENS) FOR THE REQUIRED PERIMETER LANDSCAPING SHALL BE POSTED AS PART OF THE BUILDER'S GRADING PERMIT. LANDSCAPING FOR SECTION 2, PHASE 1 WAS PROVIDED AT THE TIME OF THE ROAD PLANS, F-15-096, AND SURETY WAS POSTED AS PART OF THE DPW, DEVELOPERS AGREEMENT.

- THE TOTAL FOREST CONSERVATION OBLIGATION HAS BEEN MET BY THIS PLAN BY THE ON-SITE REFORESTATION OF 0.32 AC. WITHIN A FOREST CONSERVATION EASEMENT, FINANCIAL SURETY IN THE AMOUNT OF \$10,486 FOR THE PLANTING WAS POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT, F-15-096.
- THE OPEN SPACE SHOWN HEREON WAS DEDICATED TO A PROPERTY OWNERS ASSOCIATION FOR THE RESIDENTS OF THIS SUBDIVISION AT THE TIME OF FINAL PLAT RECORDATION. THE ARTICLES OF INCORPORATION AND RESTRICTIONS FOR THE HOMEOWNERS ASSOCIATION ARE AS ON THE RECORD PLATS.
- THE REQUIRED COMMUNITY MEETING FOR THIS PROJECT WAS HELD ON JULY 21, 2015.
- STORMWATER MANAGEMENT ENVIRONMENTAL SITE DESIGN (ESD) HAS BEEN PROVIDED IN ACCORDANCE WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT STORMWATER MANAGEMENT ACT OF 2007 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME 1, CHAPTER 5 TO THE MAXIMUM EXTENT PRACTICAL (MEP) VIA M-6 MICRO-BIORETENTION PRACTICES, M-3 LANDSCAPE INFILTRATION PRACTICE AND M-5 DRY WELLS. THE PRACTICES ARE PRIVATELY OWNED AND PRIVATELY MAINTAINED. THE STORMWATER MANAGEMENT WAS APPROVED UNDER F-15-096.


- ON JUNE 8, 2015, WP-15-140 WAS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING. THE FOLLOWING SECTIONS OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WERE WAIVED: SECTION 16.121(c)(2), 16.121(e)(1), 16.144(b) & 16.145, 16.144(g) & 16.146 AND 16.1205(c)(7). APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE PETITIONER MUST RECEIVE APPROVAL OF F-15-096 WOODBROOK, SECTION 2 PHASE 1, TO CONSOLIDATE THE 3 PARCELS AND CREATE 3 BULDBLE LOTS AND 2 NON-BULDBLE BULK PARCELS.
 - ADD THE WAIVER PETITION, WP-15-140 ON F-15-096, SECTION 2, PHASE 1 AS GENERAL NOTE STATING THE REQUEST, THE APPROVAL DATE AND CONDITIONS IN WHICH IT WAS APPROVED.
 - A NOTE SHALL BE PROVIDED ON THE FINAL PLAN FOR F-15-096 AND THE SUPPLEMENTAL PLAN THAT THE 25% OPEN SPACE REQUIREMENT WILL BE TEMPORARILY DEFERRED UNDER SECTION 2, PHASE 1, F-15-096 AND WILL BE PROVIDED IN ITS ENTIRETY UNDER SECTION 2, PHASE 2 OF WOODBROOK.
 - A 12' ACCESS DRIVE WILL BE REQUIRED FOR THE OPEN SPACE ACCESS. A GENERAL NOTE SHOULD BE ADDED TO THE FINAL PLAN AND ALSO STATE THAT HOWARD COUNTY WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF THE OPEN SPACE ACCESS DRIVE IF THE OPEN SPACE LOT IS DEDICATED TO HOWARD COUNTY.
 - SHOW THE 1 SPECIMEN TREE BEING REMOVED AND LABELED PER WP-15-140 ON THE SUPPLEMENTAL PLAN FOR F-15-096. THE SPECIMEN TREE REMOVAL SHALL BE MITIGATED BY THE PLANTING OF 2 PERIMETER SHADE TREES OF 3" CALIPER.
 - PETITIONER SHALL ADDRESS ALL COMMENTS FROM ALL SRC AGENCIES FOR F-15-096.
 - COMPLY WITH ALL COMMENTS FOR THE APPROVED ECP-14-1880.
- 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.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.


28.) EXISTING TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY BENCHMARK ENGINEERING, INC IN FEBRUARY, 2014. CONTOUR INTERVAL IS 2 FEET.


SITE ANALYSIS DATA CHART

A) TOTAL PROJECT AREA	2.02 ACRES
B) AREA OF PLAN SUBMISSION	2.02 ACRES
C) LIMIT OF DISTURBED AREA	1.55 ACRES
D) PRESENT ZONING	R-SC (SINGLE CLUSTER)
E) PROPOSED USE OF SITE	RESIDENTIAL SINGLE FAMILY DETACHED
F) FLOOR SPACE ON EACH LEVEL OF BLDG PER USE	N/A
G) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S)	8
H) TOTAL NUMBER OF UNITS PROPOSED	8
I) MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE	N/A
J) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGS AND/OR FDP CRITERIA	20 (8 UNITS x 2.5)
K) NUMBER OF PARKING SPACES PROVIDED ONSITE (INCLUDES HANDICAPPED SPACES)	24 (1 FOR EACH GARAGE AND 2 FOR EACH DRIVEWAY)
L) OPEN SPACE ON-SITE	0.65 AC.
M) AREA OF RECREATIONAL OPEN SPACE REQUIRED	N/A
N) BUILDING COVERAGE OF SITE	N/A
O) APPLICABLE DPZ FILE REFERENCES	ECP-14-081, F-15-096, WP-15-140, W&S CONTRACT #14-4912-D, F-15-103

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 6-8-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

 6-28-16
 CHIEF, DIVISION OF LAND DEVELOPMENT

 6-28-16
 DIRECTOR

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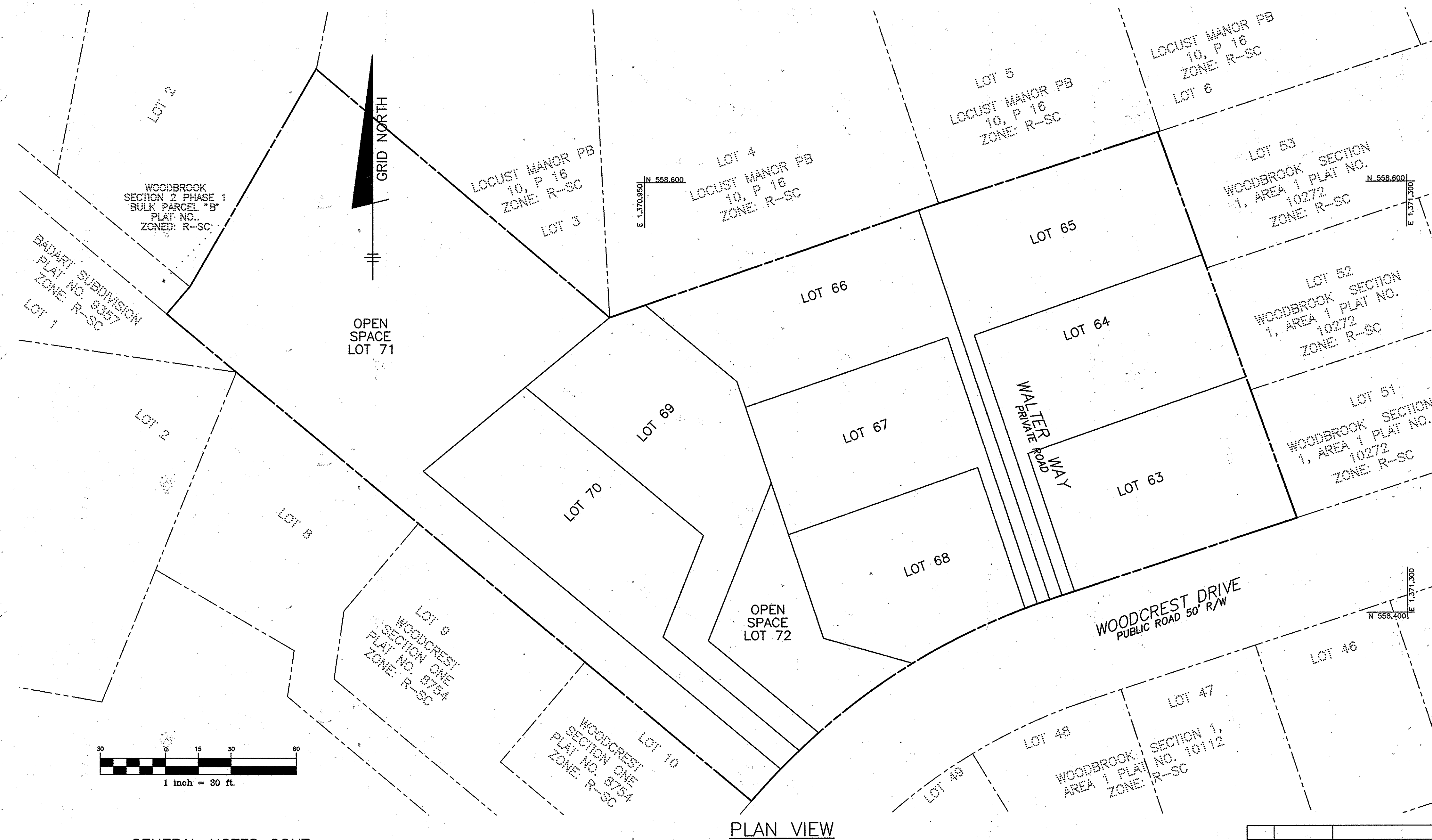
GENERAL NOTES CONT.

- EXISTING UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND RECORD DRAWINGS.
- ANY DAMAGE TO THE COUNTY'S RIGHT OF WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE OR EASEMENT LINE.
- FOR DRIVEWAY ENTRANCES DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.03.

RESIDENTIAL SITE DEVELOPMENT PLAN

WOODBROOK

SECTION 2, PHASES 1 AND 2, LOTS 63-70 AND OPEN SPACE LOTS 71 AND 72



PLAN VIEW

SHEET INDEX	
SHEET	TITLE
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SEDIMENT AND EROSION CONTROL & STORMWATER MANAGEMENT PLAN
4	STORMWATER MANAGEMENT NOTES AND DETAILS
5	STORMWATER MANAGEMENT NOTES AND DETAILS
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	LANDSCAPE PLAN, NOTES AND DETAILS

PERMIT INFORMATION CHART					
SUBDIVISION NAME:		SECTION/AREA:	LOT/PARCEL #		
WOODBROOK		SECTION 2 PHASES 1 & 2	LOTS 63 thru 70		
PLAT No.	GRID	ZONE	TAX MAP	ELECTION DISTRICT	CENSUS TRACT
23004-23005	14	R-SC	37	1st	601108
23002-23003					

BENCH MARKS NAD '83

HO. CO. MON. 37AB ELEV. 390.452
 STAMPED DISC ON CONCRETE MONUMENT,
 CORNER MD. RT. 108 & OLD MONTGOMERY RD
 N 561,137.376 E 1,369,891.847

HO. CO. MON. 0048 ELEV. 348.044
 STAMPED DISC ON CONCRETE MONUMENT,
 CORNER MD. RT. 108 & MAYFIELD AVENUE
 N 557,526.362 E 1,370,661.987



VICINITY MAP

ADDRESS CHART	
LOT	STREET ADDRESS
63	6202 WALTER WAY
64	6206 WALTER WAY
65	6210 WALTER WAY
66	6209 WALTER WAY
67	6205 WALTER WAY
68	6201 WALTER WAY
69	6251 WOODCREST DRIVE
70	6247 WOODCREST DRIVE

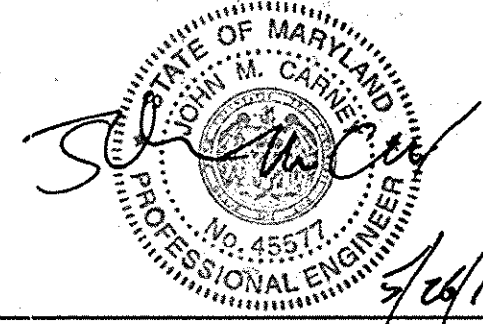
NOTE: THE MODERATE INCOME HOUSING UNIT REQUIREMENT (COUNCIL BILL 35-2013) SHALL BE FULFILLED BY PAYMENT OF A FEE-IN-LIEU IN AN AMOUNT THAT IS TO BE CALCULATED BY THE DEPARTMENT OF INSPECTIONS LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT. THE FEE-IN-LIEU SHALL BE PAID FOR LOTS 64 AND 66-70 WITHIN THIS SUBDIVISION AT TIME OF BUILDING PERMIT ISSUANCE.

NO.	DATE	REVISION

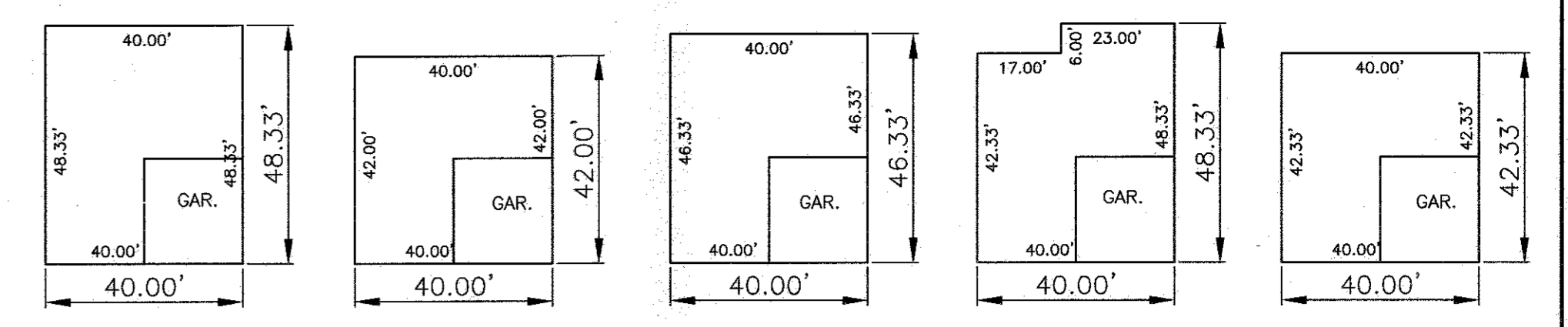
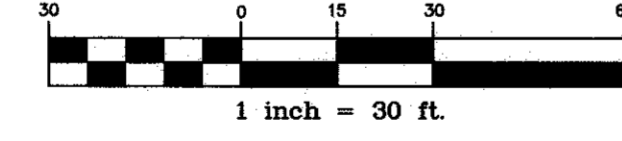
BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 315 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-8844
 WWW.BE-CMLENGINEERING.COM

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. 45577; Expiration Date: 06-08-2016



OWNER/DEVELOPER: SECURITY DEVELOPMENT, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	PROJECT: WOODBROOK SECTION 2, PHASES 1 AND 2, LOTS 63-70 AND OPEN SPACE LOTS 71 AND 72
BUILDER: WILLIAMSBURG GROUP LLC 5485 HARPERS FARM ROAD SUITE 200 COLUMBIA, MARYLAND 21044 410-964-4440	LOCATION: TAX MAP 37, GRID 14 PARCELS 126, 488 AND 530 1st ELECTION DISTRICT WOODCREST DRIVE HOWARD COUNTY, MARYLAND
TITLE: TITLE SHEET	DATE: MAY, 2016 PROJECT NO. 2370
Design: jc Draft: jc Check: -	SCALE: AS SHOWN DRAWING 1 OF 7



SCALE: 1" = 30'

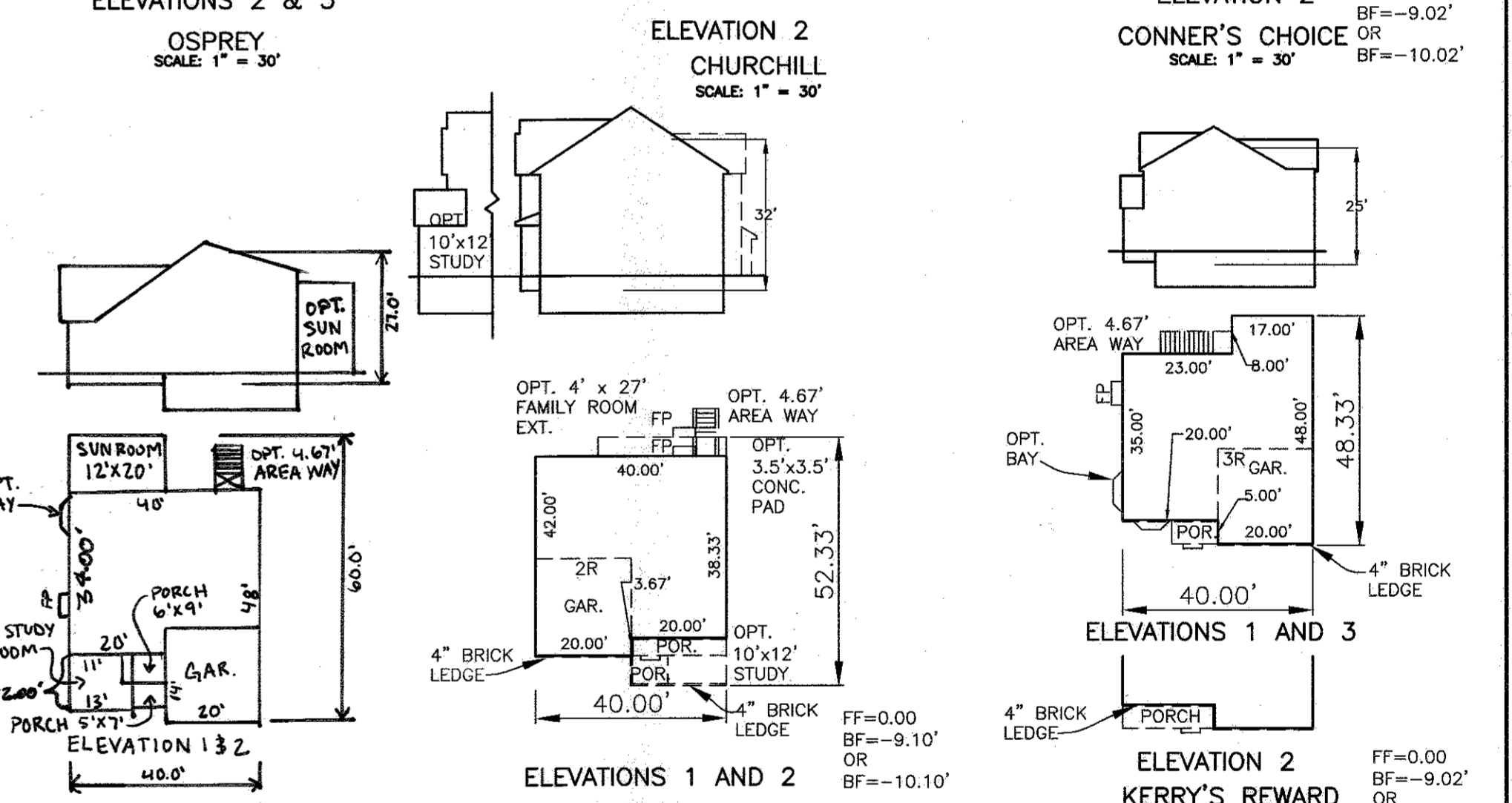
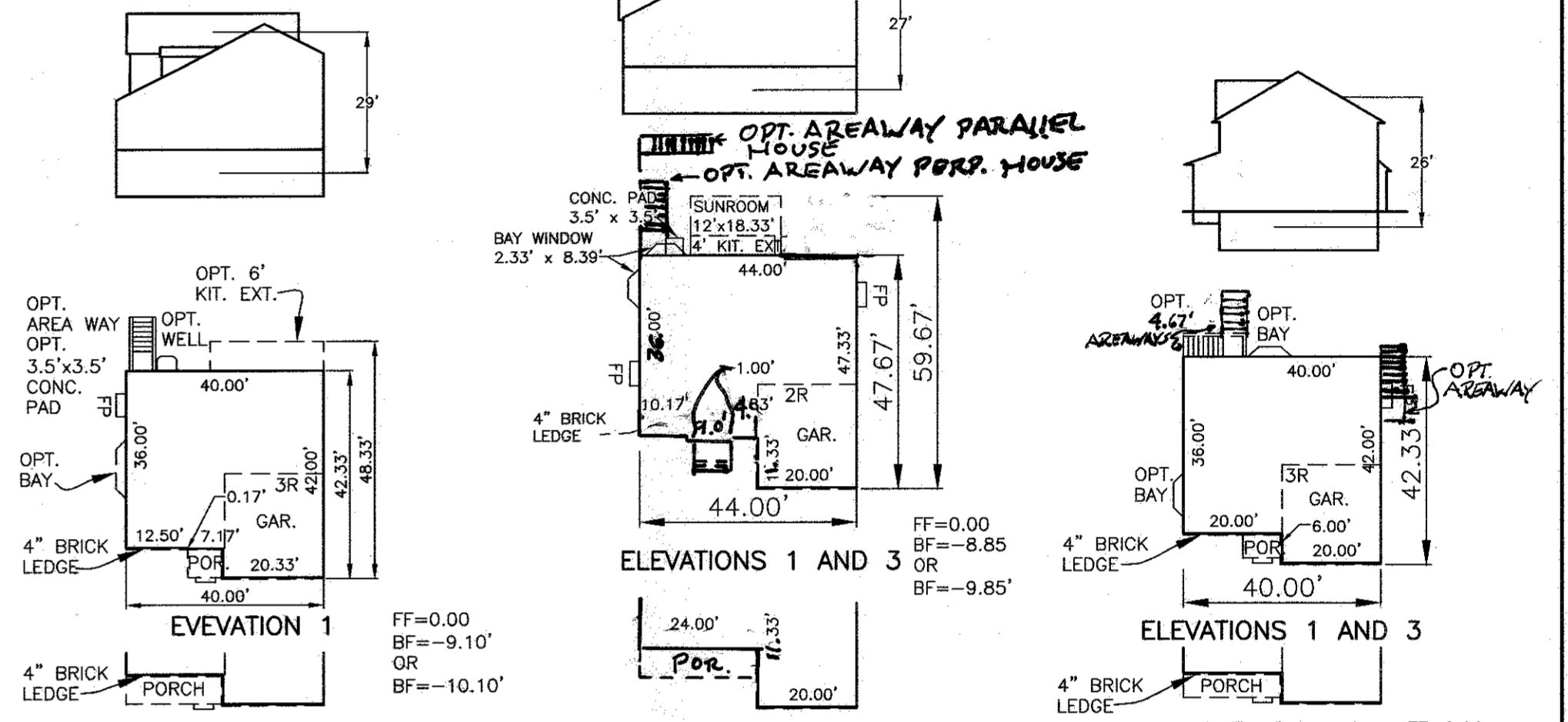
BOX A: KERRY'S REWARD BRICK, CONNER'S CHOICE BRICK, OSPREY BRICK, 6" KIT. EXT., TIDEWATER BRICK, 4' FM EXT. OR STUDY, CAPE ST. CLAIRE ELEV. 1, 2 & 3, NO SUNROOM, YES STUDY, CHESAPEAKE ELEV. 1 ON-Y

BOX B: CONNER'S CHOICE NO BRICK, OSPREY NO BRICK, TIDEWATER NO BRICK

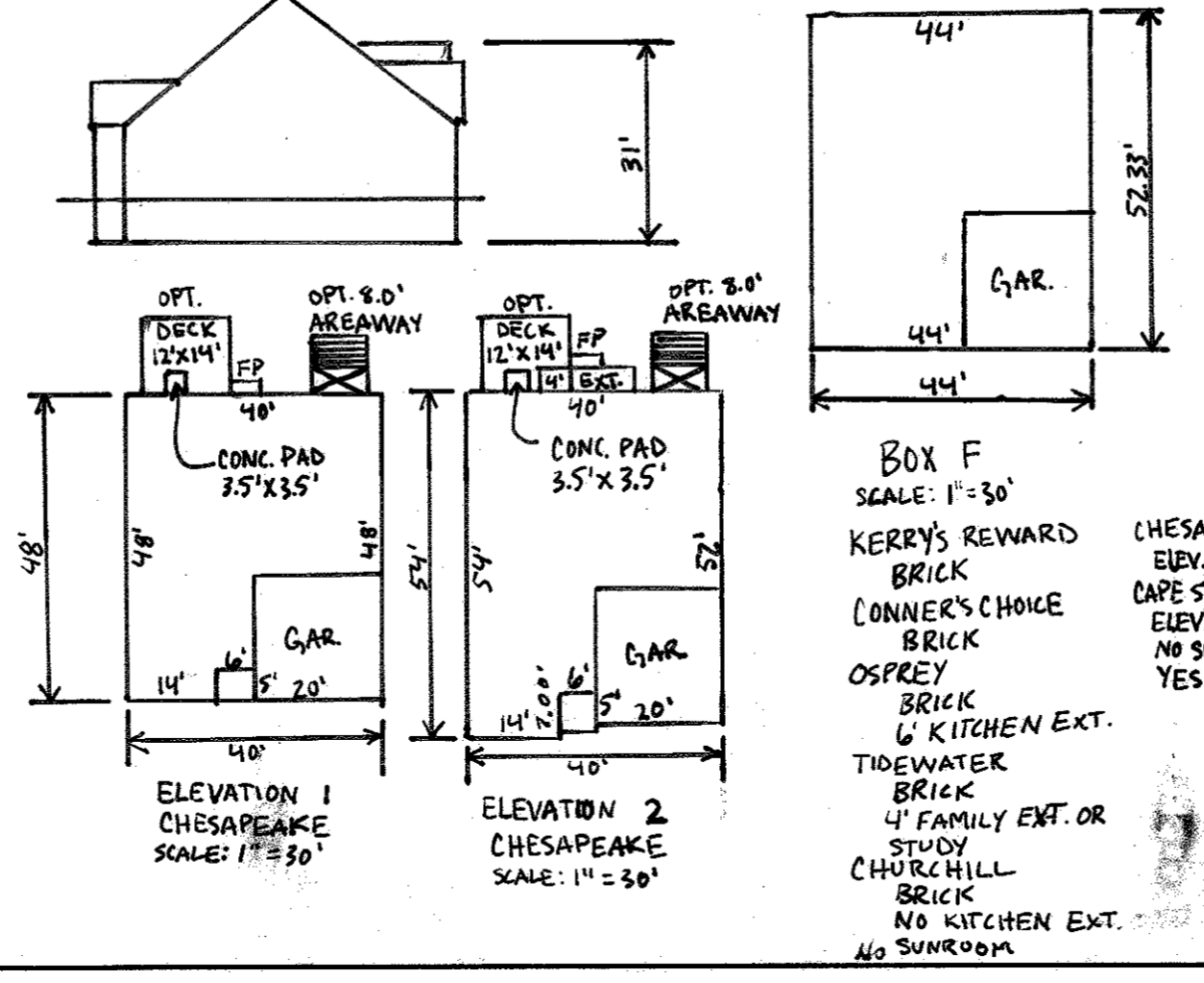
BOX C: CONNER'S CHOICE BRICK, OSPREY BRICK, NO 6" KIT. EXT., TIDEWATER BRICK, 4' FM EXT.

BOX D: KERRY'S REWARD BRICK, CONNER'S CHOICE BRICK, OSPREY BRICK, NO 6" KIT. EXT., TIDEWATER BRICK, 4' FM EXT.

BOX E: CONNER'S CHOICE BRICK, OSPREY BRICK, NO 6" KIT. EXT., TIDEWATER BRICK



NO.	DATE	REVISION
3	9-8-17	REVISE LOT 66 TO SHOW SPECIFIC MODEL
4	9-10-17	REVISE LOT 70 TO A CHESAPEAKE ELEV. ADJUST GRADES ACCORDINGLY
3	5-30-17	REVISED TO ADD UNDERDRAINS, REVISE AREAWAY ON CONNER'S CHOICE
2	3-21-17	REVISED TO ADD BOX F FOOTPRINT; AND TO ADD CAPE ST. CLAIRE CHESAPEAKE HOUSING TYPE FOOTPRINTS; AND REVISE LOTS 69 & 70 TO BOX F.
1	11-29-16	REVISE ACCESS TO LOTS 69 & 70 + 0.5. 72; REVISE CHURCHILL FOOTPRINT



LEGEND

— LIMIT OF SUBMISSION

— SOILS LINE

F₀ SOILS LABEL

EX. FOREST CONSERVATION EASEMENT

EX. FOREST CONS. SIGN

WETLAND LIMITS

STREAM

EXISTING CONTOURS

PROPOSED GRADING

EXISTING TREELINE

PROPOSED TREELINE

EX. 24' USE-IN-COMMON ACCESS, DRAINAGE, SWM, WATER, SEWER & UTILITY EASEMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

6-28-16 DATE

6-28-16 DATE

6-28-16 DATE

BENCHMARK ENGINEERING, INC.
8450 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BE-CIVILENGINEERING.COM

PROJECT: **WOODBROOK**
SECTION 2, PHASES 1 AND 2, LOTS 63-70 AND OPEN SPACE LOTS 71 AND 72

OWNER/DEVELOPER: SECURITY DEVELOPMENT, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

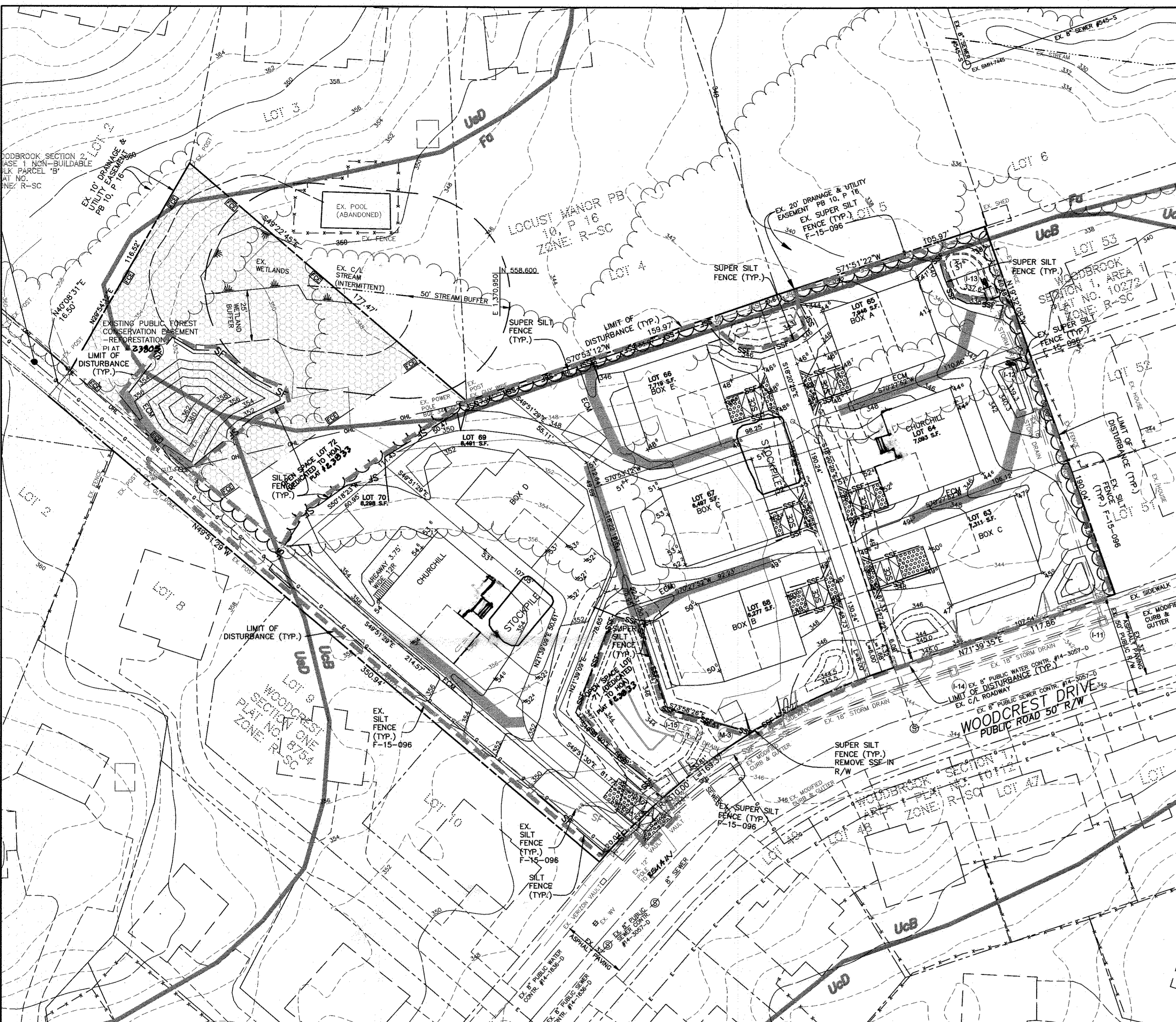
BUILDER: WILLIAMSBURG GROUP LLC
5485 HARPERS FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
410-964-4440

DATE: MAY, 2016 SHEET: 2 OF 7

BEI PROJECT NO. 2370

TITLE: SITE DEVELOPMENT PLAN

DESIGN: JMC DRAFT: JMC



SEDIMENT AND EROSION CONTROL PLAN
SCALE: 1" = 30'

THIS PLAN IS FOR
SEDIMENT CONTROL
ONLY.

ENGINEER'S CERTIFICATE
I, CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Shm. M. Carney 5/26/16
ENGINEER *Shm. M. Carney #45577* DATE

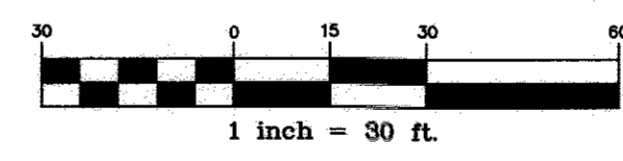
DEVELOPER'S CERTIFICATE
I, WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

John M. Robertson 5/26/16
BUILDERS DATE

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

John M. Robertson 6/1/16
HOWARD SOIL CONSERVATION DISTRICT DATE

- LEGEND**
- LIMIT OF SUBMISSION
 - SOILS LINE
 - Fa SOILS LABEL
 - EX. FOREST CONSERVATION EASEMENT
 - EX. FOREST CONS. SIGN
 - WETLAND LIMITS
 - STREAM
 - EXISTING CONTOURS
 - PROPOSED GRADING
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - INLET PROTECTION
 - ECM SOIL STABILIZATION MATTING
 - SSF SILT FENCE
 - SSF SUPER SILT FENCE
 - LIMIT OF DISTURBANCE
 - STABILIZED CONSTRUCTION ENTRANCE



STORMWATER MANAGEMENT DRAINAGE AREA MAP AND PLAN
SCALE: 1" = 30'

SOILS LEGEND

MAP SYMBOL	SOIL TYPE	MAPPING UNIT	K FACTOR
*Fa	D	FALLSINGTON SANDY LOAM - 0 TO 2 PERCENT SLOPES	0.20
UcB	C (B,D)	URBAN LAND: CHILLUM/BELTSVILLE COMPLEX - 0 TO 5 PERCENT SLOPES	0.37
UcD	C (B,D)	URBAN LAND: CHILLUM/BELTSVILLE COMPLEX - 5 TO 10 PERCENT SLOPES	0.37

USDA-NRCS WEBSITE, MAP #19 SAVAGE NE
* INDICATES HYDRIC SOILS

<p>1 12-1-16 <i>Revise grading on lots 69 & 70, Revise Drive Locations</i></p> <p>NO. DATE REVISION</p>		<p>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. 45577 (Mechanical) Date: 06-08-2016.</p> <p><i>Shm. M. Carney</i> 5/26/16 PROFESSIONAL ENGINEER</p>
<p>BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 9480 BALTIMORE NATIONAL PIKE & SUITE 315 • ELLICOTT CITY, MARYLAND 21043 (P) 410-465-8105 (F) 410-465-6544 WWW.BEI-CVLENGINEERING.COM</p>		
<p>OWNER/DEVELOPER: SECURITY DEVELOPMENT, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244</p> <p>BUILDER: WILLIAMSBURG GROUP, LLC 5485 HARPERS FARM ROAD SUITE 200 COLUMBIA, MARYLAND 21044 410-964-4440</p>		<p>PROJECT: WOODBROOK SECTION 2, PHASES 1 AND 2, LOTS 63-70 AND OPEN SPACE LOTS 71 AND 72</p> <p>LOCATION: TAX MAP 37, GRID 14 PARCELS 126, 485 AND 530 141 ELECTION DISTRICT WOODCREST DRIVE HOWARD COUNTY, MARYLAND</p>
<p>DESIGN: JMC DRAFT: JMC</p>		<p>TITLE: SEDIMENT AND EROSION CONTROL & STORMWATER MANAGEMENT PLAN</p> <p>DATE: MAY, 2016 BEI PROJECT NO. 2370</p> <p>SCALE: 1" = 30' SHEET 3 OF 7</p>

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-376. All references to ASTM and ASHTO specifications apply to the most recent version.

Site Preparation
Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped to topsoil. All trees, vegetation, roots and other objectionable material shall be removed.

Earth Fill
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of rocks, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable material.

Placement
Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill.

Compaction
The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller.

Cut Off Trench
The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet.

Embankment Core
The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The core shall extend up to least the 10 year water elevation shown on the plans.

Structure Backfill
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed 6 inches in thickness and shall be compacted with suitable equipment.

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Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-1. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-5. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-2. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-6. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-3. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-7. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-4. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-8. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-9. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Engineering Associates, Inc. RECORD OF SOIL EXPLORATION. Project Name: Woodbrook Section 2, Boring No. B-10. Location: Ellicott City, MD. Job # 14325A. Includes boring log table with columns for Depth, Description, Boring and Sampling Notes, Rec. NAMS, SPT Blows, and Curves.

Table with columns: Boring, Approximate Depth of Test (ft), Measured In-situ Infiltration Rate (in/hr). Rows B-1 through B-10.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: Howard County Department of Planning and Zoning. Date: 6-28-16.

Professional Certification and Project Information for Benchmark Engineering, Inc. Includes project name (WOODBROOK), location (SECTION 2, PHASES 1 AND 2, LOTS 63-70), owner/developer (SECURITY DEVELOPMENT, LLC), and design/draft information.

B.4.C Specifications for Micro-Bioretention, Rain Gardens, 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 substances shall be mixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

- 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% to 40%) or sandy loam (30%), coarse sand (30%), 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, iron sulfate plus sulfur) may be mixed into 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 textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoses to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type 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 design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep 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 ponded water before preparing (rototilling) base.

When backfilling the bioretention facility, place soil in lifts 12" to 18". 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.

When backfilling the bioretention facility, place soil in lifts 12" to 18". 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 surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only acceptable mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8" of the ball is above final grade surface. The diameter of the planting pit 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 outside of the tree ball.

Grasses and legume seed should be drilled into 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 natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers, defecats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea 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 F 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
- Perforations - If perforated pipe is used, perforations should be 3/4" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 3/4" (No. 4 or 4x4) galvanized hardware cloth.
- Gravel - The gravel layer (No. 57 stone preferred) 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, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.
- A 4" layer of pea gravel (3/4" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for 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

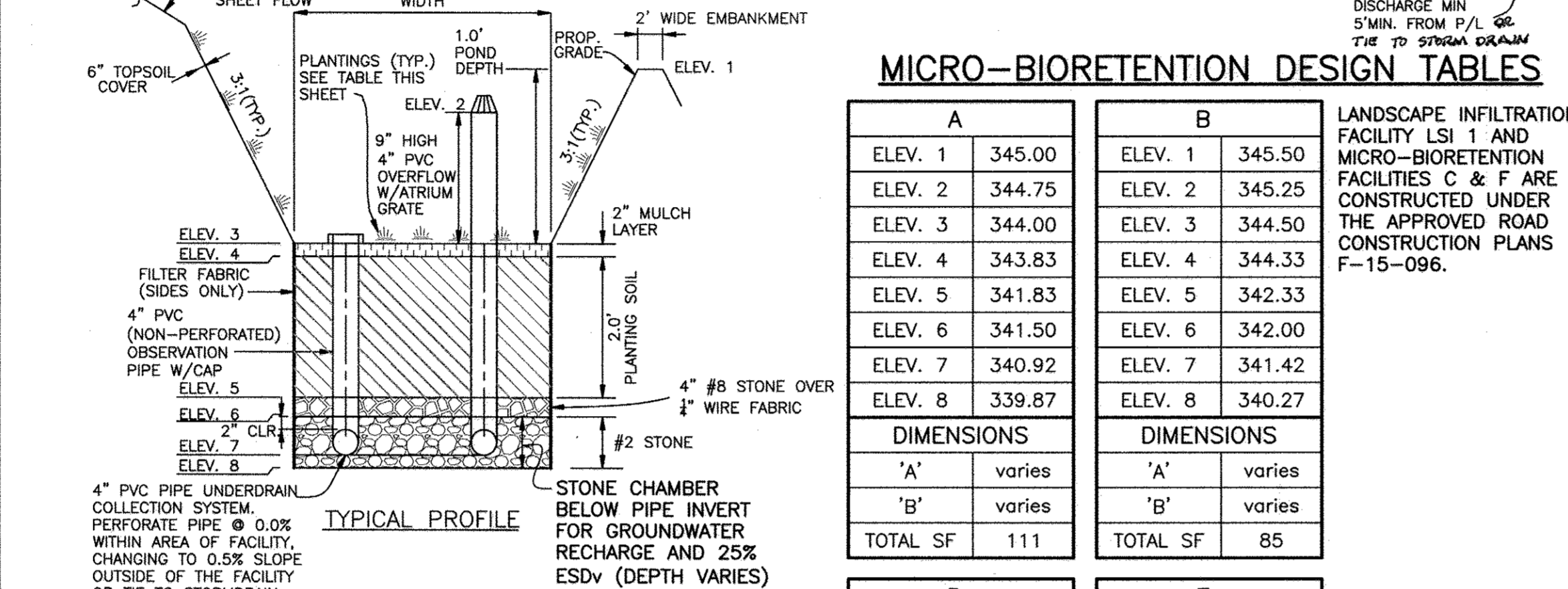
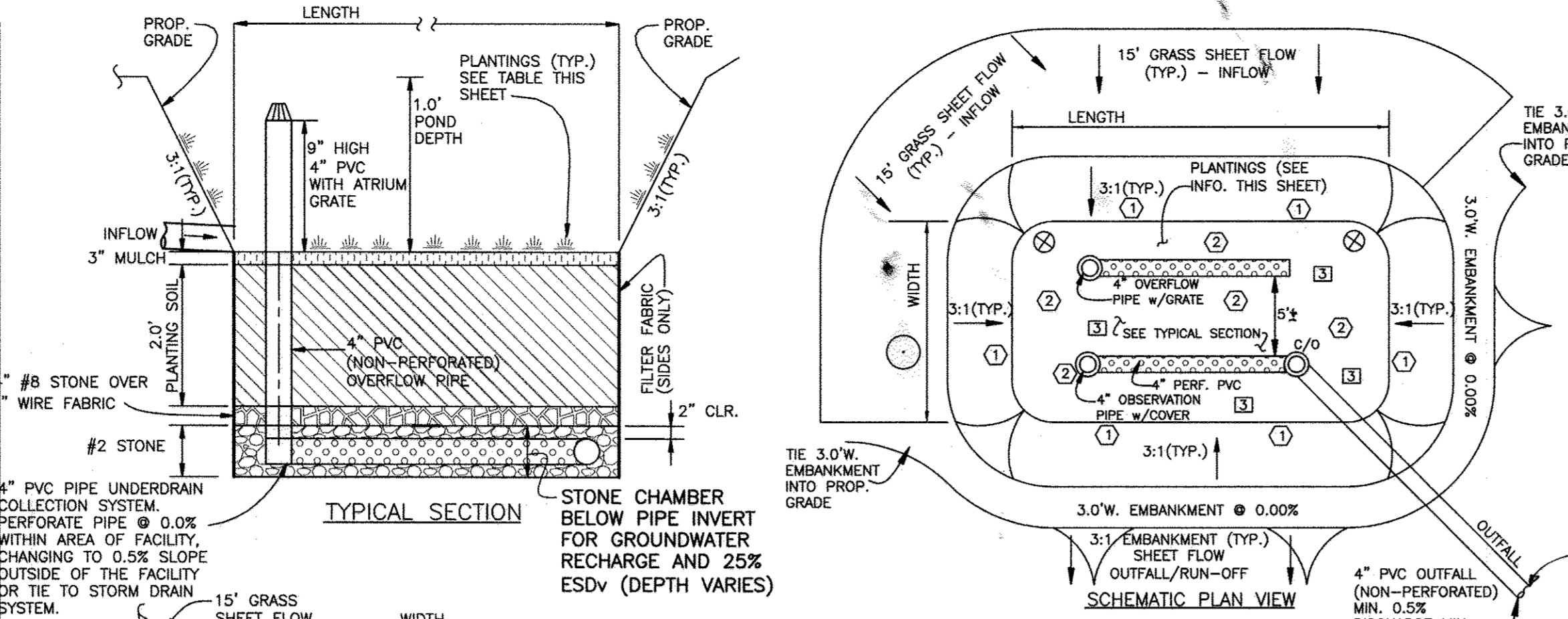
MICRO-BIORETENTION (M-6) LANDSCAPE INFILTRATION

HYDROLOGIC ZONE	MICRO-BIORETENTION (M-6)		LANDSCAPE INFILTRATION	
	A	B	D	E
1	111	85	124	110

PLANTINGS	MICRO-BIORETENTION (M-6)		LANDSCAPE INFILTRATION	
	A	B	D	E
AJUGA REPTANS (CREEPING BUGLEWEED)	4	3	4	4
IRIS VERSICOLOR (IRIS)	4	3	4	4
CLETHRA (COMMON PERIWINKLE)	2	1	2	2
ELYMUS VIRGINICUS (VIRGINIA WILD RYE)	2	1	2	2
VACCINIUM ATROCAROCCUM (HIGHBUSH BLUEBERRY)	2	1	2	2
BETULA NIGRA (RIVER BIRCH)	1	1	1	1

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 6-23-16
 Chief, Division of Land Development: *[Signature]* 6-23-16
 Director: *[Signature]* 6-28-16



TYPICAL MICRO-BIORETENTION DETAILS

NOT TO SCALE

UNDERDRAIN, OVERFLOW AND OUTFALL NOTES

1. THE LAST CLEAN-OUT LOCATION WITHIN EACH MICRO-BIORETENTION FACILITY SHALL BE FITTED WITH A NON-CLOGGING SURFACE DRAIN (EXAMPLE: 4\"/>

MICRO-BIORETENTION (M-6) CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR ALL BIORETENTION COMPONENTS SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL. EMBANKMENTS SURROUNDING TOSPOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE AREAS, AND BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY REFERENCED TO AASHTO T-99 (STANDARD PROCTOR).
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. DO NOT EXCAVATE TRENCH UNTIL DRY WEATHER IS FORECAST LONG ENOUGH TO ALLOW AT LEAST COVERAGE OF THE STORMCHAMBER SYSTEM WITH FILTER FABRIC PRIOR TO LAYING.
4. EXCAVATE TO A WIDTH AND LENGTH SUFFICIENT TO ACCOMMODATE THE NUMBER OF STORMCHAMBERS PLUS A MINIMUM ONE FOOT BORDER AROUND THE ENTIRE BED. THE BOTTOM OF THE BED MUST BE LEVEL, UNLESS OTHERWISE SPECIFIED.
5. DO NOT USE HEAVY EQUIPMENT ON THE EXCAVATED TRENCH BED IN ORDER TO AVOID SOIL COMPACTION.
6. IF USE OF HEAVY EQUIPMENT ON THE EXCAVATED TRENCH BED CANNOT BE AVOIDED, SCUFF THE TRENCH BOTTOM AND BREAK UP SOIL CLUMPS AND BRUSH SMOOTH BEFORE ADDING THE STONE BASE.
7. LINE TRENCH WALLS WITH A 4\"/>

1. BACKFILLING: Backfill soil must be free from large stones and large organic material (e.g. tree limbs and root stumps), and is capable of being compacted to at least 90% of the Standard Proctor Test (AASHTO Method T-99). If not, crusher run or other suitable backfill material must be used. The stone surrounding the StormChamber system closed or protected from receiving sediment until the site is completely stabilized (grass growing and all pavement placed), if desired.
2. COMPACTION OF THE SOIL BACKFILL MUST BE ACHIEVED IN 8\"/>

IMPORTANT: After completion of backfill and setting of final grade, avoid parking on or traversing over the StormChamber installation with heavily loaded trucks and heavy equipment until paved.

IMPORTANT: These instructions assume accepted construction procedures and trucks that do not exceed specified DOT load limits. Unconventional loads or improper load distributions in vehicles may require additional cover. Contact StormChamber for installation under abnormal conditions. Installations not in compliance with these instructions will void warranty.

PLANTING SCHEDULE - MICRO-BIORETENTION AND LANDSCAPE INFILTRATION

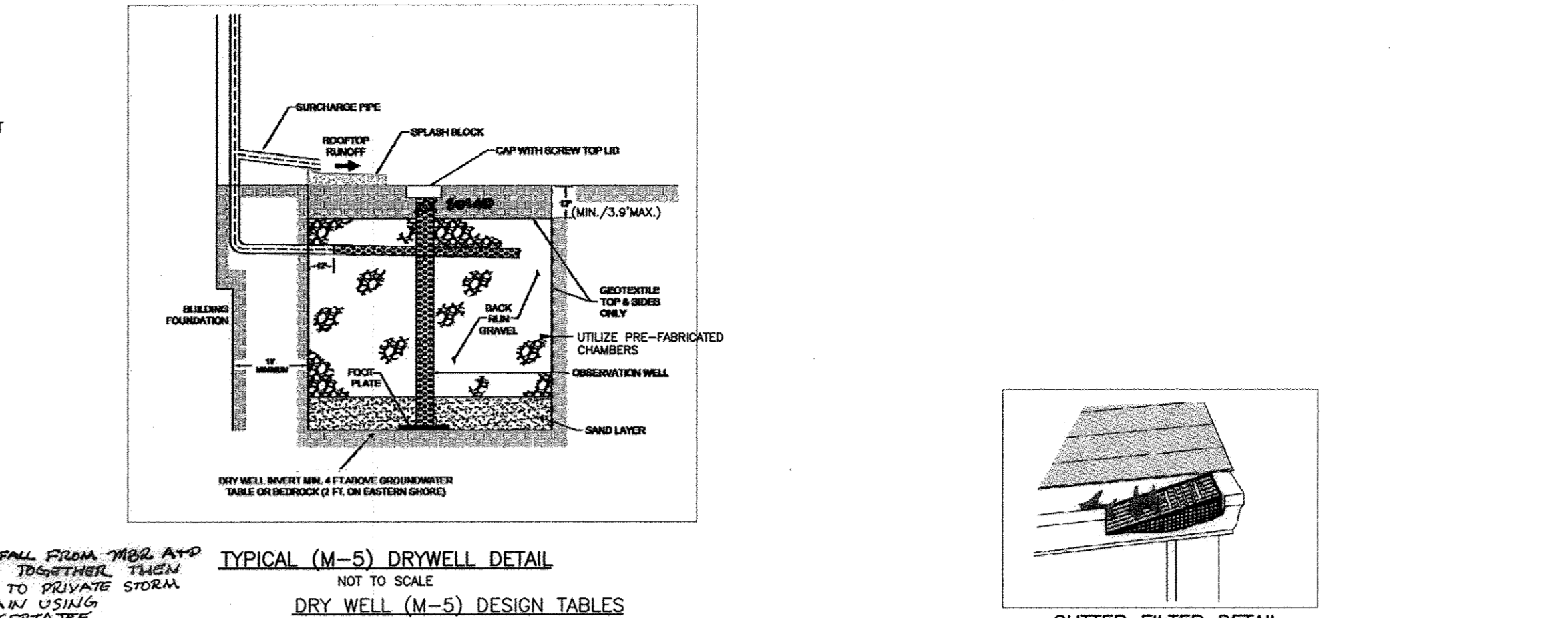
FACILITY AREA (SF)	MICRO-BIORETENTION (M-6)		LANDSCAPE INFILTRATION	
	A	B	D	E
111	85	124	110	

MICRO-BIORETENTION PLANTING LEGEND

SYMBOL	NAME
①	AJUGA REPTANS (CREEPING BUGLEWEED)
②	IRIS VERSICOLOR (IRIS)
□	CLETHRA (COMMON PERIWINKLE)
△	ELYMUS VIRGINICUS (VIRGINIA WILD RYE)
○	VACCINIUM ATROCAROCCUM (HIGHBUSH BLUEBERRY)
●	BETULA NIGRA (RIVER BIRCH)

TABLE B.3.2 MATERIALS AND SPECIFICATIONS FOR SWM FACILITIES

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS (IF REQUIRED)	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.5\"/>			



DRY WELL (M-5) DESIGN TABLES

Designation	Impervious Area (SF)	Drainage Area (SF)	Volumetric Runoff	ESDv	Length (ft)	Width (ft)	Depth (ft)	Volume Provided (CF)	Full ESDv Provided?
DW-1	460	460	0.95	58.27	10	7	5	140	yes
DW-2	1220	1220	0.95	154.53				650	yes
DW-3	1853	1853	0.95	234.71				650	yes
DW-4	1693	1693	0.95	214.46				650	yes
DW-5	1831	1831	0.95	231.93				650	yes
DW-6	1870	1870	0.95	236.97				650	yes

Drywell Designation	Length (ft)	Width (ft)	Depth (ft)	Grade	Top of Stone	Bottom of Stone	Storm-Chamber
DW-1	10.00	7.00	5.00	347.0	346.0	341.0	NO
DW-2	33.00	7.00	5.00	348.0	347.0	342.0	YES
DW-3	33.00	7.00	5.00	351.0	350.0	345.0	YES
DW-4	18.00	13.00	5.00	348.0	347.0	342.0	YES
DW-5	18.00	13.00	5.00	351.0	350.0	345.0	YES
DW-6	18.00	13.00	5.00	350.0	349.0	344.0	YES

SWM SUMMARY TABLE

Pa#	1.6	inches	Impervious Area	Qe	Required	Provided	% DA	Depth	Required	Volume Treated	ESDv at least	Required	Provided	REV
A	(M-6)	2.965	1.387	0.76	59	111	ok	1.00	188	268	PASS	0.0678	0.0678	
B	(M-6)	2.750	1.149	0.68	55	85	ok	1.00	156	223	PASS	0.1195	0.1195	
C	(M-6)	3.208	2.552	0.79	191	191	ok	1.00	341	411	PASS	0.0000	0.0000	
D	(M-6)	3.395	1.936	0.97	67	124	ok	0.95	242	252	PASS	0.0000	0.0000	
E	(M-6)	4.730	1.870	0.65	95	110	ok	1.00	236	276	PASS	0.0000	0.0000	
F	(M-6)	5.089	1.369	0.62	102	176	ok	0.50	262	269	PASS	0.0000	0.0000	
DW-1	(M-5)	460	460	1.52	NA	NA	NA	NA	NA	140	100%	0.0000	0.0000	
DW-2	(M-5)	1220	1220	1.52	NA	NA	NA	NA	NA	650	100%	0.0000	0.0000	
DW-3	(M-5)	1853	1853	1.52	NA	NA	NA	NA	NA	650	100%	0.0000	0.0000	
DW-4	(M-5)	1693	1693	1.52	NA	NA	NA	NA	NA	650	100%	0.0000	0.0000	
DW-5	(M-5)	1831	1831	1.52	NA	NA	NA	NA	NA	650	100%	0.0000	0.0000	
DW-6	(M-5)	1870	1870	1.52	NA	NA	NA	NA	NA	650	100%	0.0000	0.0000	
LS1.1	(M-3)	15,416	2,885	0.35	308	1012	PASS	2.0	449	2733	100%	0.0000	0.0000	
Totals		48,449	22,604		792	1,809			3028	7,811		0.1384	0.2695	

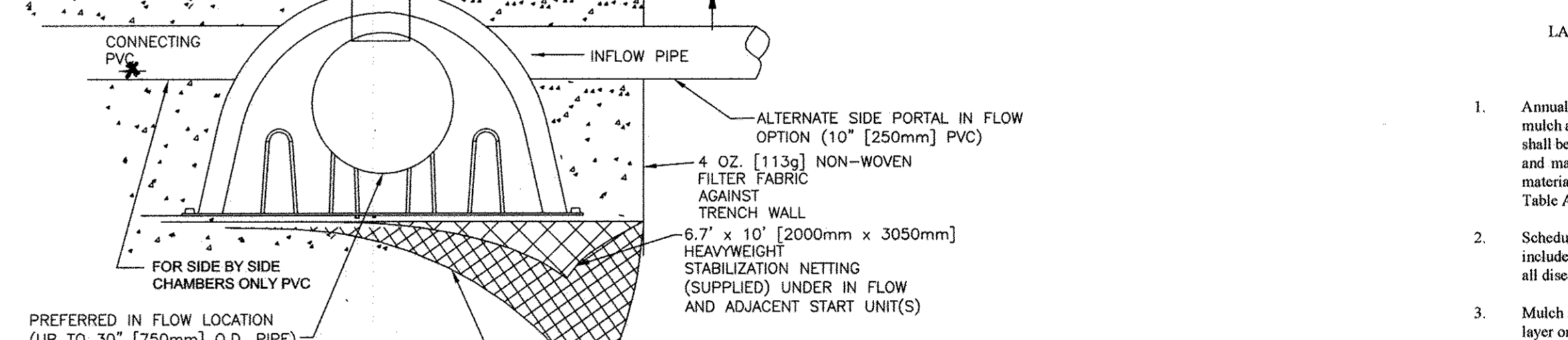
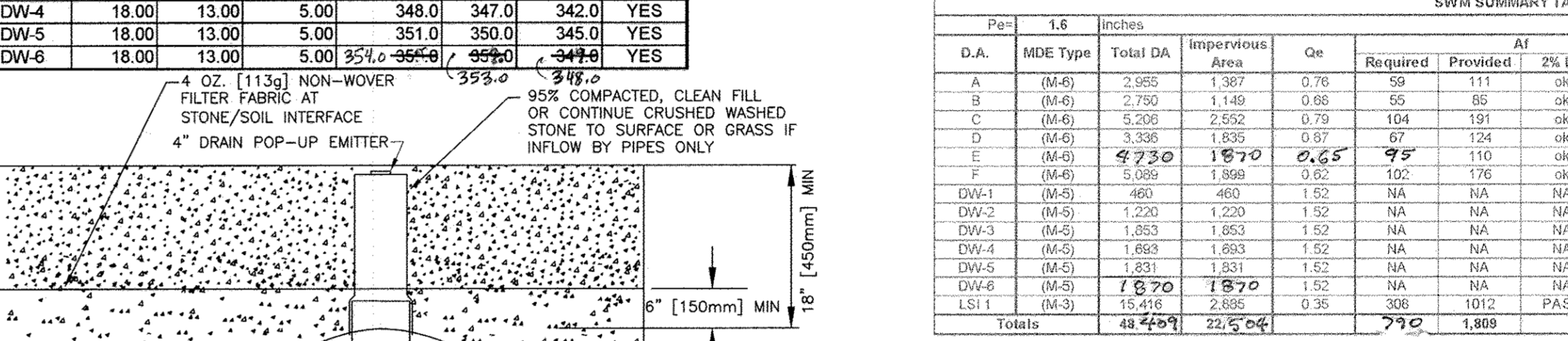


TABLE B.4.1 MATERIALS AND SPECIFICATIONS FOR (M-6) MICRO-BIORETENTION

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS (IF REQUIRED)	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.0\"/>			

TABLE B.3.2 MATERIALS AND SPECIFICATIONS FOR SWM FACILITIES

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS (IF REQUIRED)	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.0\"/>			

BENCHMARK ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-4100 (F) 410-465-4844
 WWW.BE-ONLINEENGINEERING.COM

WOODBROOK
 SECTION 2, PHASES 1 AND 2, LOTS 63-70 AND OPEN SPACE LOTS 71 AND 72

SECURITY DEVELOPMENT, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

WILLIAMS BURG GROUP LLC
 5485 HARPERS FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 410-964-4440

DESIGN: JMC DRAFT: JMC

DATE: MAY, 2016 SHEET 5 OF 7

PERIMETER PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS
	8	Tilia cordata 'greenspire' GREENSPIRE LITTLELEAF LINDEN	2 1/2" MIN. CAL. B & B FULL HEAD
	5	Cupressocyparis leylandii LEYLAND CYPRESS	5' - 6' HEIGHT
	2	Platanus x acerifolia BLOODGOOD LONDON PLANE	3" MIN. CAL.

SCHEDULE A PERIMETER LANDSCAPE EDGE				
CATEGORY	ADJACENT TO ROADWAY	NO		TOTAL
		YES	NO	
PERIMETER NO. / LANDSCAPE TYPE		(3) A	(4) B	
LINEAR FEET OF PERIMETER (FRONTAGE/ROADWAY)		791'	58'	
CREDIT FOR EXISTING VEGETATION: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		YES 237'	NO -	
CREDIT FOR WALL, FENCE OR BERM: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO -	NO -	
NUMBER OF PLANTS REQUIRED: SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTE) SHRUBS		11** - - -	1 1 - -	10 1 - -
NUMBER OF PLANTS PROVIDED: SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTE) SHRUBS (10:1 SUBSTITUTE) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		9** - 4* -	1 1 - 4*	10** 1 - 4*

* SUBSTITUTION IN PERIMETER 3 FROM 2 SHADE TREES TO 4 EVERGREEN TREES IS PROVIDED TO INCREASE THE PRIVACY FROM THE REAR YARD OF THE ADJOINING PROPERTIES.

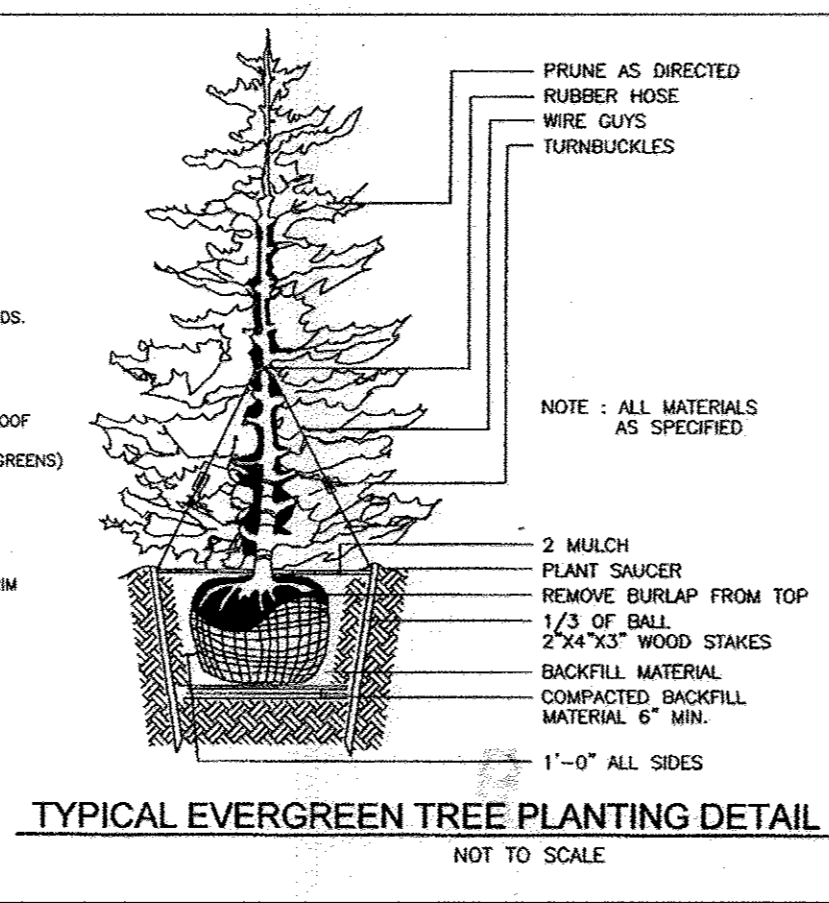
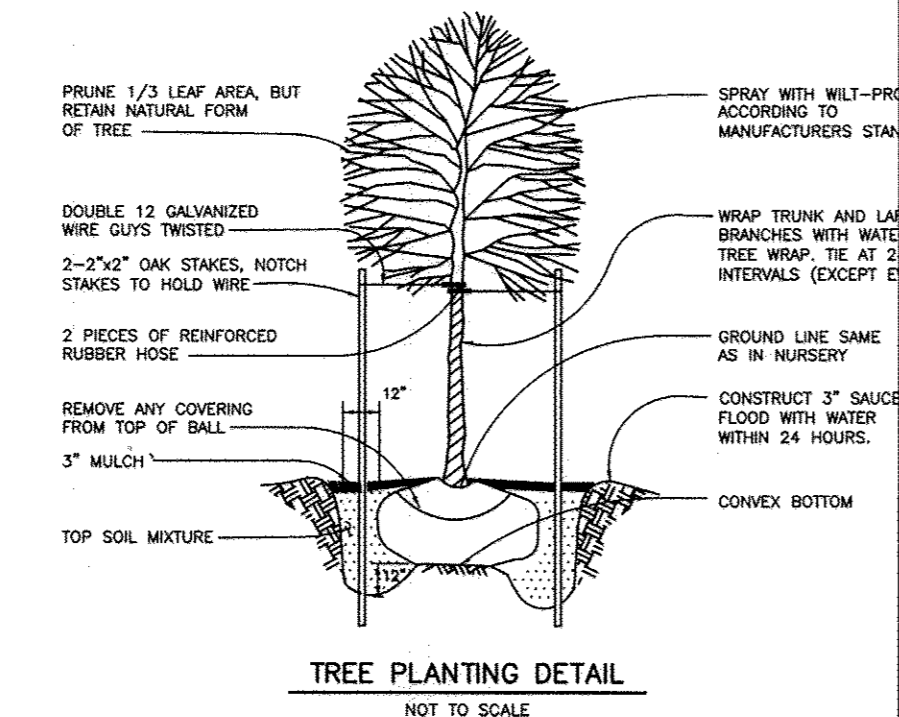
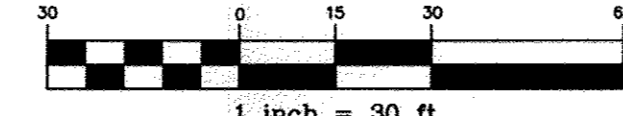
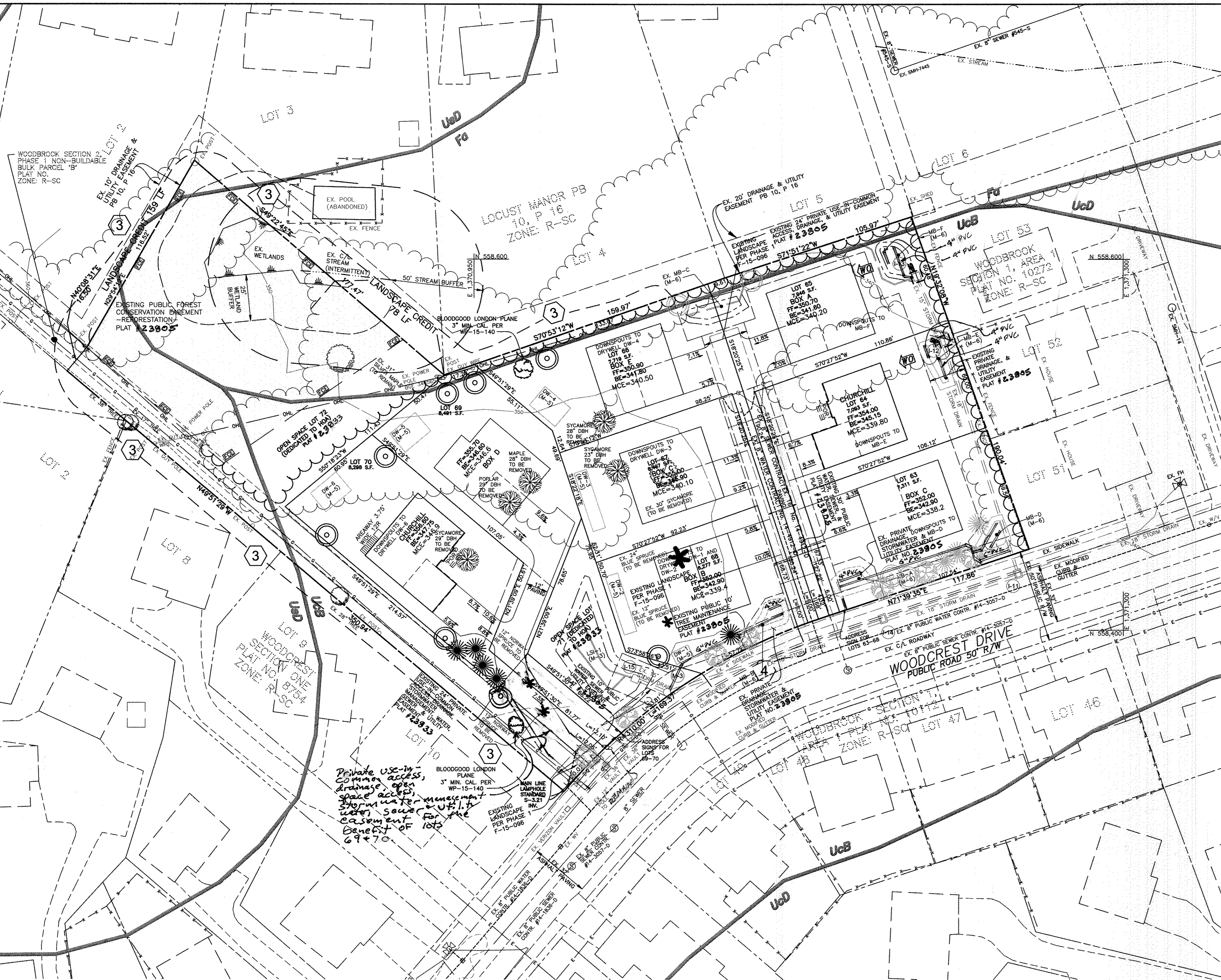
** THE 2 PLATANUS X ACERIFOLIA/BLOODGOOD LONDON PLANE TREES OF 3" CALIPER ARE BEING INSTALLED TO MITIGATE THE REMOVAL OF A SPECIMEN TREE. APPROVAL FOR THIS REMOVAL WAS APPROVED UNDER WAIVER PETITION WP-14-140.

DEVELOPER'S/BUILDER'S CERTIFICATE

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

[Signature] 5/26/16
WILLIAMSBURG GROUP LLC DATE

- LANDSCAPE NOTES:**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.
 - AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.
 - THE OWNER, TENANTS 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.
 - LANDSCAPING FOR THIS SUBDIVISION IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE OBLIGATION FOR SECTION 2, PHASE 2 WAS DEFERRED ON F-15-103 AND IS NOW DESIGNED IN ACCORDANCE WITH THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$3,750.00 (\$300 FOR EACH OF THE 10 SHADE TREES, \$150 FOR THE 5 EVERGREENS) FOR THE REQUIRED PERIMETER LANDSCAPING SHALL BE POSTED AS PART OF THE BUILDER'S GRADING PERMIT. LANDSCAPING FOR SECTION 2, PHASE 1 WAS PROVIDED AT THE TIME OF THE ROAD PLANS, F-15-096, AND SURETY WAS POSTED AS PART OF THE DPW, DEVELOPERS AGREEMENT.
 - THE EASTERN BOUNDARY LINE IS INTERNAL TO THE SAME SUBDIVISION AND THEREFOR NO LANDSCAPE OBLIGATION IS REQUIRED.
 - STREET TREES WERE PLANTED UNDER THE ROAD CONSTRUCTION PLANS FOR SECTION 2, PHASE 1, F-15-096.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6-28-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 6-28-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 6-28-16
 DIRECTOR DATE

NO.	DATE	REVISION
2	5-30-17	REVISE TO ADD UNDERDRAINS.
1	12-1-16	Revise driveway location for lots 69+70.

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 215 • ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-8100 (F) 410-465-8104
 WWW.BE-CVLENGINEERING.COM

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. 45377, Expiration Date: 06-06-2016.

[Signature] 5/26/16

PROJECT: **WOODBROOK**
 SECTION 2, PHASES 1 AND 2, LOTS 63-70 AND OPEN SPACE LOTS 71 AND 72

OWNER/DEVELOPER: SECURITY DEVELOPMENT, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

BUILDER: WILLIAMSBURG GROUP LLC
 5485 HARPERS FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 410-964-4440

DESIGN: JMC DRAFT: JMC

LOCATION: TAX MAP 37, GRID 14 PARCELS 128, 488 AND 530 1st ELECTION DISTRICT WOODCREST DRIVE HOWARD COUNTY, MARYLAND

TITLE: **LANDSCAPE PLAN, NOTES AND DETAILS**

DATE: MAY, 2016 BEI PROJECT NO. 2370

SCALE: AS SHOWN SHEET 7 OF 7