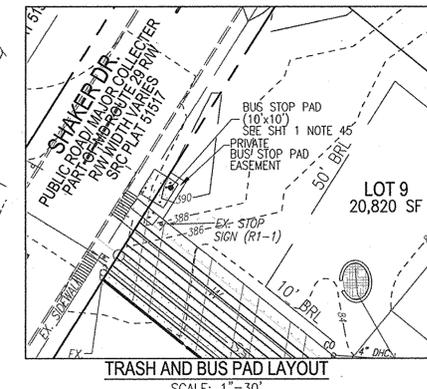


**SILT FENCE PHASING DETAIL**  
N.T.S.

PHASE 1 SILT FENCE LOCATION SHALL BE REMOVED AND RELOCATED ABOVE THE OUTFALL ONCE OUTFALL INSTALLATION IS COMPLETE. AREA STABILIZED AND PERMISSION HAS BEEN OBTAINED BY THE SEDIMENT CONTROL INSPECTOR.

**LEGEND:**

	PROPERTY LINE		EXISTING SANITARY LINE
	RIGHT-OF-WAY LINE		EXISTING CLEANOUT
	ADJACENT PROPERTY LINE		EXISTING FIRE HYDRANT
	EXISTING CURB AND GUTTER		EXISTING WATER LINE
	EXISTING EDGE OF PAVING		EXISTING TREE LINE
	EXISTING WETLANDS		EXISTING TREES
	EXISTING WETLAND BUFFER		EXISTING FENCE
	EX. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7 (PLAT 22836) (TO BE ABANDONED)		PROPOSED STORM DRAIN
	PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 9-17		PROPOSED SIDEWALK
	EX. 30' PUBLIC SEWER, WATER & UTILITY EASEMENT (PLAT 22836)		PROPOSED TREE LINE
	EX. 20' PRIVATE SEWER & UTILITY EASEMENT (PLAT 22836)		EXISTING 10' CONTOUR
	EX. PUBLIC SEWER & UTILITY EASEMENT PLAT MDR 5987		EXISTING 2' CONTOUR
	EXISTING UTILITY POLE		SOILS
	EXISTING LIGHT POLE		PROPOSED 10' CONTOUR
	EXISTING MAILBOX		PROPOSED 2' CONTOUR
	EXISTING SIGN		PROPOSED SPOT ELEVATION
	EXISTING SANITARY MANHOLE		EXISTING STEEP SLOPES
	ON-LOT DRYWELL (M-5)		EXISTING MODERATE SLOPES SOILS BOUNDARY
	ON-LOT RAIN GARDEN MICRO-BIORETENTION M-7		PROPOSED TEST PIT
	PROPOSED TEST PIT WITH 50' COVERAGE RADIUS		SILT FENCE
	PROPOSED TEST PIT WITH 50' COVERAGE RADIUS		SUPER SILT FENCE
	NON-ROOFTOP DISCONNECT (N-2)		LIMIT OF DISTURBANCE
	ROOFTOP DISCONNECT (N-1)		STABILIZED CONSTRUCTION ENTRANCE
	NON-ROOFTOP DISCONNECT (N-2)		ROOFTOP DISCONNECT (N-1)

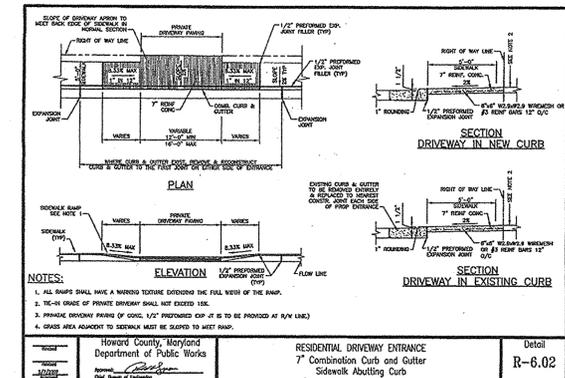


**TRASH AND BUS PAD LAYOUT**  
SCALE: 1"=30'

**NOTE:**  
THIS PLAN MAY NOT BE USED FOR HOUSE CONSTRUCTION

**OWNER**  
MARY THERESA PFAU  
3675 PARK AVE., SUITE 301  
ELLCOTT CITY, MD 21043  
(410) 480-0023

**DEVELOPER**  
TRINITY QUALITY HOMES, INC.  
3675 PARK AVE., SUITE 301  
ELLCOTT CITY, MD 21043  
(410) 480-0023



**SECTION DRIVEWAY IN NEW CURB**  
**SECTION DRIVEWAY IN EXISTING CURB**

**NOTES:**  
1. ALL SLOPES SHALL HAVE A MINIMUM TYPICAL DRAINAGE TO THE FULL VEGETATION OF THE ROAD.  
2. THE 10' GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 10%.  
3. FINISH GRADE SHALL BE 1" BELOW FINISHED CURB TO BE PROVIDED AT R/W LINE.  
4. CURB AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET ROAD.

Howard County, Maryland Department of Public Works	RESIDENTIAL DRIVEWAY ENTRANCE 7" Combination Curb and Outfall Sidewalk Abutting Curb	Detail R-6.02
---	--	------------------

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA RAINFALL RATIO (ERR)	3 TO 45 TO 47	47 TO 50 TO 47			
P-1	RESIDENTIAL DRIVEWAY ENTRANCE	1.0	1.0	1.0	1.0	1.0	1.0
P-2	RESIDENTIAL DRIVEWAY ENTRANCE	1.0	1.0	1.0	1.0	1.0	1.0
P-3	RESIDENTIAL DRIVEWAY ENTRANCE	1.0	1.0	1.0	1.0	1.0	1.0
P-4	RESIDENTIAL DRIVEWAY ENTRANCE	1.0	1.0	1.0	1.0	1.0	1.0

**RESIDENTIAL DRIVEWAY ENTRANCE**  
Detail  
R-2.01

**SOILS LEGEND**  
SOIL MAP# 24

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	15% SLOPE W/ EROSION POTENTIAL
GfB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20	NO
GfC	GLADSTONE-URBAN LAND-UDORTHERTS COMPLEX, 0 TO 8 PERCENT SLOPES	C	0.37	YES
Uof	UDORTHERTS, HIGHWAY, 0 TO 65 PERCENT SLOPES	-	-	-

**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.

**NOTE:**  
SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.  
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART  
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

**NOTE:**  
EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad Ch...* 10-28-15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*W. J. La...* 11-03-15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**SUPPLEMENTAL INFORMATION PLAN**  
**GRADING PLAN**

**STELLA GLEN II - LOTS 8-17**  
A RE-SUBDIVISION OF STELLA GLEN LOTS 1-7  
& A SUBDIVISION OF PARCEL 346

TAX MAP: 36 GRID: 19 ZONED: R-20  
6TH ELECTION DISTRICT PARCELS: 57, 58, 417 & 346  
DPZ REF'S: SEE GENERAL NOTE #4 ON COVER SHEET HOWARD COUNTY, MARYLAND

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

**PROFESSIONAL CERTIFICATE**  
DESIGN BY: RHW/EDS  
DRAWN BY: JMR  
CHECKED BY: RHW  
DATE: OCTOBER 2015  
SCALE: AS SHOWN  
W.O. NO.: 14-37

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 161893 EXPIRATION DATE: 09-27-2016

2 SHEET OF 5

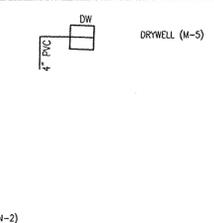
**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING EDGE OF PAVING
	EXISTING WETLANDS
	EXISTING WETLAND BUFFER
	EX. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7 (PLAT 2283E) (TO BE ABANDONED)

	PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 9-17
	EX. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT (PLAT 2283E)
	EX. 20' PRIVATE DRAINAGE & UTILITY EASEMENT (PLAT 2283E)
	EX. PUBLIC SEWER & UTILITY EASEMENT (PLAT MDR 9987)
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX

	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREELINE
	EXISTING FENCE
	PROPOSED STORMDRAIN

	PROPOSED TREELINE
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED SPOT ELEVATION
	DRAINAGE AREA DIVIDE
	ROOFTOP DISCONNECT (N-1)
	RAIN GARDEN (M-7)
	NON-ROOFTOP DISCONNECT (N-2)



**SWM PRACTICE CHART**

**ESD PRACTICES BY LOT**

LOT #	ADDRESS	ESD PRACTICE
#8	10592 SHAKER DRIVE	DISCONNECT ROOFTOP RUNOFF (N-1), RAIN GARDEN (M-7), DISCONNECT NON-ROOFTOP RUNOFF (N-2), AND DRYWELL (M-5)
#12	10517 JUSTICE PLACE	RAIN GARDEN (M-7)
#13	19520 JUSTICE PLACE	DISCONNECT ROOFTOP RUNOFF (N-1), DISCONNECT NON-ROOFTOP RUNOFF (N-2), AND DRYWELLS (M-5)

**STELLA "2" - ESDv COMPUTATIONS**

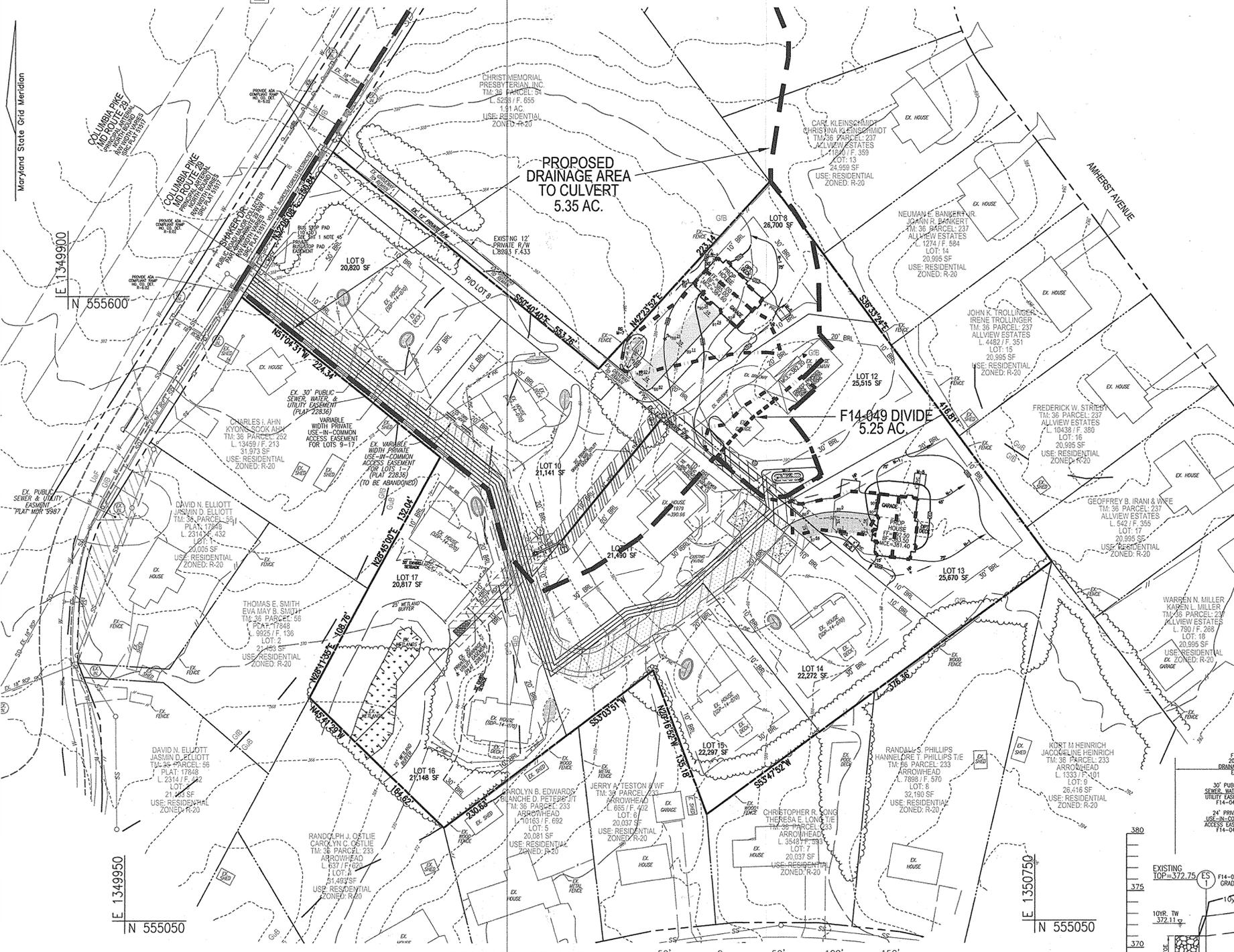
4795 SF

1.10 AC  
1.20 IN  
37.6 PERCENT  
0.384  
999 CF YR

Rv=0.05-0.09X1  
Vmin=1.0' rainfall  
Vmax=1.0' rainfall-2.0'

(1.0x0.95x1)/12  
(2.0x0.95x1)/12

DA #	% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.2" VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS
LOT 13 REAR HSE	100.00	0.9500	1100	0.03	87	226	105	107	1100	0.03	0.00
LOT 13 FRONT HSE	100.00	0.9500	1100	0.03	87	226	105	114	1100	0.03	0.00
LOT 13 DRIVEWAY	61.33	0.6020	2250	0.05	113	293	135	113	1280	0.03	0.02
LOT 12 NEW DRIVEWAY	21.82	0.2464	5500	0.13	113	294	136	140	1200	0.03	0.10
LOT 8 REAR HSE	100.00	0.9500	1100	0.03	87	226	105	114	1100	0.03	0.00
LOT 8 FRONT HSE P/O DRIVE	33.09	0.3478	4306	0.10	125	325	150	168	1425	0.03	0.07
LOT 8 P/O DRIVEWAY	68.48	0.6664	1650	0.04	92	238	110	92	1130	0.03	0.01
<b>TOTALS</b>	<b>49.6</b>	<b>0.4964</b>	<b>17006</b>	<b>0.39</b>	<b>703</b>	<b>1829</b>	<b>844</b>	<b>857</b>	<b>8435</b>	<b>0.19</b>	<b>0.20</b>



**DRAINAGE AREA MAP**  
SCALE: 1"=50'

**STRUCTURE SCHEDULE**

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
MH-2	4'-0" STANDARD PRECAST MANHOLE	N 555494 E 1350424	387.50	378.00	378.00	HO. CO. STD. G-5.12
MH-1	4'-0" STANDARD PRECAST MANHOLE	N 555383 E 1350333	379.00	374.00	373.00	HO. CO. STD. G-5.12
I-1	TYPE "D"	N 555374 E 1350311	375.20	372.50	372.00	HO. CO. STD. D-4.10
EX ES-1	EX 21" CONCRETE END SECTION	N 555317 E 1350256	372.75	371.00	371.00	HO. CO. STD. SD-5.21

\* REPLACE F14-049 ES-2 END SECTION

**OWNER**  
MARY THERESE PFAU  
3675 PARK AVE., SUITE 301  
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(410) 480-0023

**DEVELOPER**  
TRINITY QUALITY HOMES, INC.  
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ELlicOTT CITY, MD 21043  
(410) 480-0023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad E. ...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 10-28-15

*Mark S. ...*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 11-02-15

**MAPPED SOILS TYPES - SAVAGE NW MAP #18**

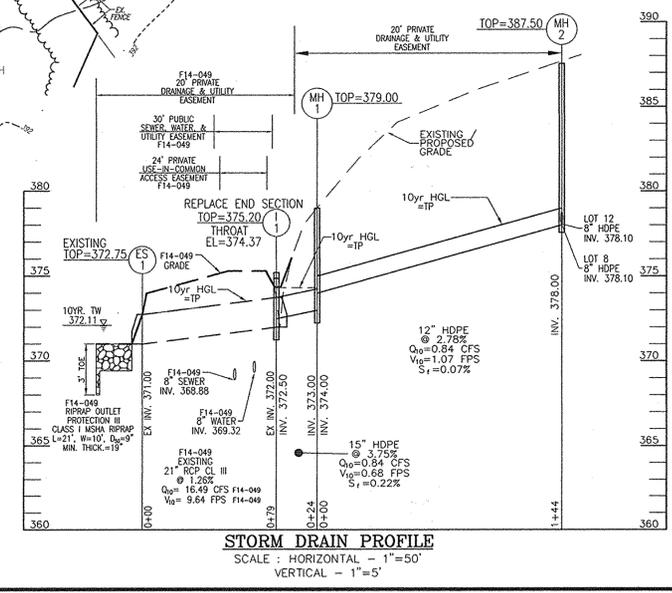
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	HYDRIC	HYDRIC INCLUSIONS	FARMLAND	<15% SLOPE W/ EROSION POTENTIAL
G/B	GLAUSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20	NO		0.20	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

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

**PIPE SCHEDULE**

SIZE	TYPE	LENGTH
12"	HDPE	144 LF
15"	HDPE	24 LF



**SUPPLEMENTAL INFORMATION PLAN**  
DRAINAGE AREA MAP AND SWM PLAN

**STELLA GLEN II - LOTS 8-17**  
A RE-SUBDIVISION OF STELLA GLEN LOTS 1-7 & A SUBDIVISION OF PARCEL 346

TAX MAP: 36 GRID: 19  
6TH ELECTION DISTRICT  
DPZ REF'S: SEE GENERAL NOTE #4 ON COVER SHEET

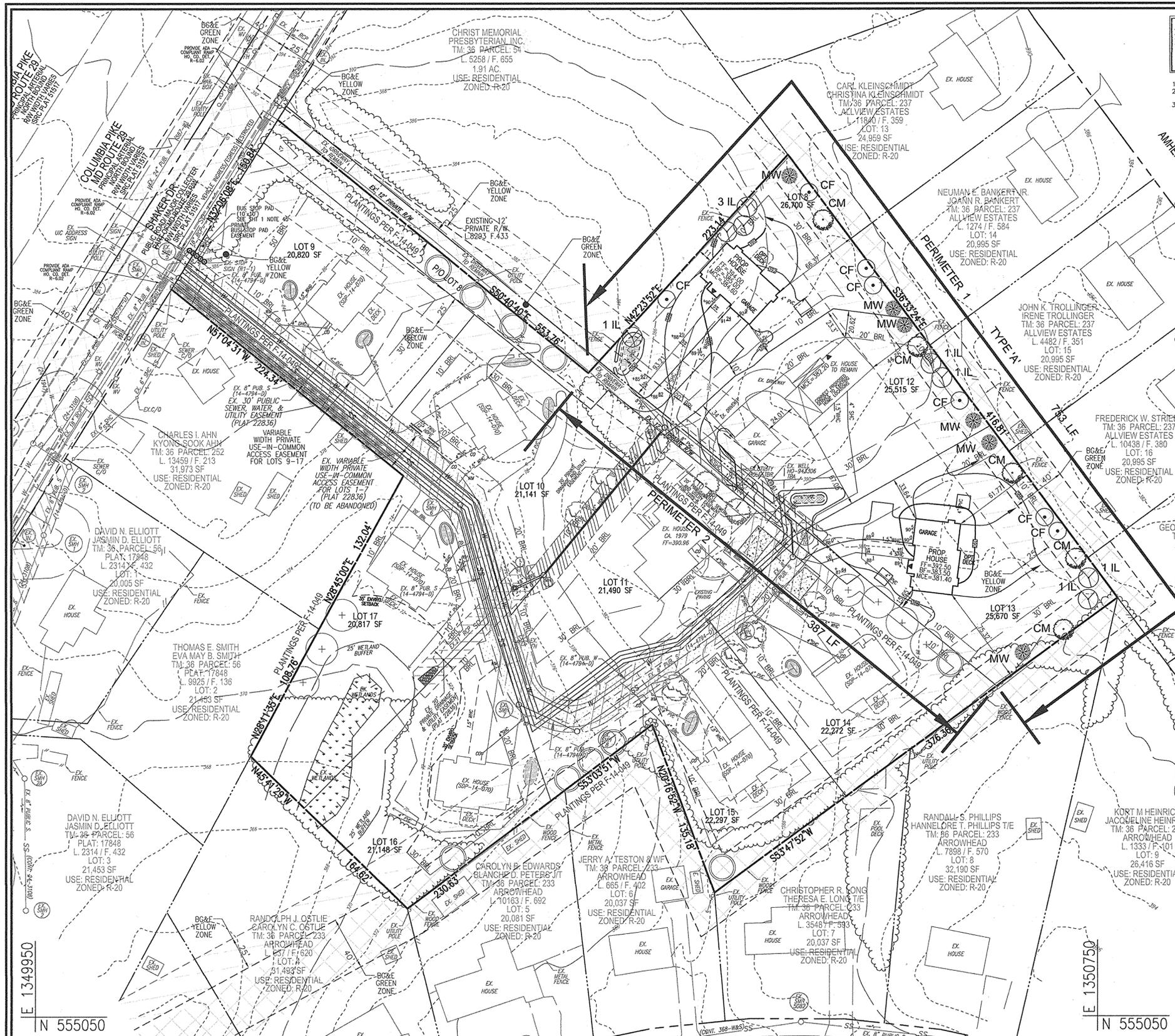
ZONED: R-20  
PARCELS: 57, 58, 417 & 346  
HOWARD COUNTY, MARYLAND

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**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. 18193, EXPIRATION DATE: 09-27-2016

DESIGN BY: RHW/EDS  
DRAWN BY: JMR  
CHECKED BY: RHW  
DATE: OCTOBER 2015  
SCALE: AS SHOWN  
W.O. NO.: 14-37

3 SHEET OF 5



**Eco-Science Professionals, Inc.**  
 Consulting Ecologists  
 P.O. Box 5066 Glen Arm, Maryland 21207 Telephone (410) 833-0400 Fax (410) 833-0448

**MD DNR Qualified Professional**  
 USACOE Wetland Delineator  
 Certification # WDC033MD061004402  
 John P. Canoles

- SURROUNDING LAND USE INCLUDES HIGH DENSITY RESIDENTIAL.
- NO PORTIONS OF THE SITE WOULD BE CONSIDERED FOREST AND NO SPECIMEN TREES ARE PRESENT ON THE SITE.
- NO WETLANDS OR STREAMS ARE PRESENT ON OR IMMEDIATELY ADJACENT TO THE SUBJECT PROPERTY.

**HOWARD COUNTY FOREST CONSERVATION WORKSHEET**

ZONED R-20  
 NET TRACT AREA:  
 A. TOTAL TRACT AREA: 1.48 AC.  
 B. AREA WITHIN 100 YEAR FLOODPLAIN: 0.00 AC.  
 C. NET TRACT AREA: 1.48 AC.

LAND USE CATEGORY  
 INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.  
 ARA MDR IDA HDR MPD CIA  
 0 0 1 0 0 0

D. AFFOREST THRESHOLD: 15% X 1.48 = 0.22 AC  
 E. CONSERVATION THRESHOLD: 20% X 1.48 = 0.30 AC

EXISTING FOREST COVER:  
 F. EXISTING FOREST COVER = 0.00 AC (FSD REPORT)  
 G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.00 AC

BREAK EVEN POINT:  
 (2 X I) + F = BREAK EVEN POINT (0 AC)  
 H. BREAK EVEN POINT = 0.00 AC  
 I. FOREST CLEARING PERMITTED WITHOUT MITIGATION = 0.00 AC

PROPOSED FOREST CLEARING:  
 J. TOTAL AREA OF FOREST TO BE CLEARED = 0.00 AC  
 K. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC

PLANTING REQUIREMENTS:  
 L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 25) = 0.00 AC  
 M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.00 AC  
 N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F) = 0.00 AC  
 O. TOTAL REFORESTATION REQUIRED (N+P-O) = 0.00 AC  
 P. TOTAL AFFORESTATION REQUIRED = 0.22 AC  
 R. TOTAL PLANTING REQUIREMENT (REFORESTATION AND AFFORESTATION) = 0.22 AC

**LEGEND:**

---	PROPERTY LINE	---	EXISTING UTILITY POLE
---	RIGHT-OF-WAY LINE	---	EXISTING LIGHT POLE
---	ADJACENT PROPERTY LINE	---	EXISTING MAILBOX
---	EXISTING CURB AND GUTTER	---	EXISTING SIGN
---	EXISTING EDGE OF PAVING	---	EXISTING SANITARY MANHOLE
---	EXISTING WETLANDS	---	EXISTING SANITARY LINE
---	EXISTING WETLAND BUFFER	---	EXISTING CLEANOUT
---	EX. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7 (PLAT 22836) (TO BE ABANDONED)	---	EXISTING FIRE HYDRANT
---	PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 8-17 (PLAT 22836)	---	EXISTING WATER LINE
---	EX. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT (PLAT 22836)	---	EXISTING TREELINE
---	EX. 20' PRIVATE DRAINAGE & UTILITY EASEMENT (PLAT 22836)	---	PROPOSED TREES
---	EX. PUBLIC SEWER & UTILITY EASEMENT PLAT MDR 9987	---	EXISTING FENCE
---	EXISTING BG&E GREEN ZONE	---	PROPOSED STORMDRAIN
---	EXISTING BG&E YELLOW ZONE	---	PROPOSED TREELINE
---		---	EXISTING 10' CONTOUR
---		---	EXISTING 2' CONTOUR
---		---	PROPOSED 10' CONTOUR
---		---	PROPOSED 2' CONTOUR

**F-14-049 TRASH PAD LANDSCAPING**

KEY	QTY.	DESCRIPTION	SIZE	REMARK
DJ	5	DWARF JAPANESE YEW	3'-4' HT B & B	

**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, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTIVE COPY (1) AND GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Michael Row* 10/14/15  
 SIGNATURE OF DEVELOPER DATE

**LANDSCAPE NOTES**

- AT THE TIME OF PLANT INSTALLATION, ALL 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 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.

**FOREST CONSERVATION:**

FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL HAVE BEEN MET.

F-14-049 MET THE OBLIGATION BY THE PLACEMENT OF 2.76 AC. (21 RATIO) OF RETENTION ON AN OFF-SITE FOREST CONSERVATION BANK IDENTIFIED AS DENISYS SOLUTIONS, APPROVED UNDER SDP-13-059FC WHICH WAS SUFFICIENT TO MEET THE 1.28 ACRES OF REQUIRED REFORESTATION AND 0.10 ACRES OF REQUIRED AFFORESTATION.

FOREST CONSERVATION OBLIGATIONS FOR THIS FINAL PLAN WILL BE MET BY A FREE-IN-LIEU PAYMENT OF \$7,187.25 UNDER SDP-13-059FC.

SEE-N-LIEU - (0.22 AC.) 9,583.32 SF X .75 = \$7,187.40

**LANDSCAPE SCHEDULE NOTE:**

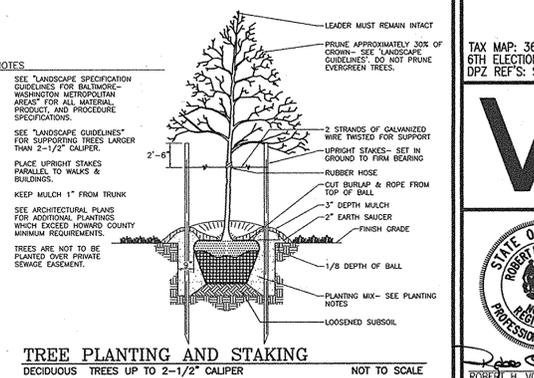
- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANSI SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL 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.

**LANDSCAPE SCHEDULE**

SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
CF	7	CORNUS FLORIDA 'RUBRA'	8'-10' HT.	B & B	
MW	6	CARPINUS CAROLINIANA MUSCLEWOOD (BGE COMPLIANT)	1 1/2"-2" CAL.	B & B	
CM	5	LACERSTROEMIA TUSCARORA TUSCARORA CRAPE MYRTLE (BGE COMPLIANT)	1 1/2"-2" CAL.	B & B	
IL	8	ILEX 'NELLIE R. STEVENS' NELLIE R. STEVENS HOLLY (BGE COMPLIANT)	5'-6' HT	B & B	

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO PERIMETER		TOTAL
	1	2	
PERIMETER/FRONTAGE DESIGNATION	A	N/A*	
LANDSCAPE TYPE	75'	387'	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER			
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	YES*	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	N/A*	
NUMBER OF PLANTS REQUIRED	758'		
SHADE TREES	160	13	13
EVERGREEN TREES			
SHRUBS			
NUMBER OF PLANTS PROVIDED		N/A*	
SHADE TREES			
EVERGREEN TREES			
OTHER TREES (21 SUBSTITUTION)	26(1)		26*
SHRUBS (10:1 SUBSTITUTION)			
EX. SPECIMEN TREES TO REMAIN			
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED:			
*INTERIOR PERIMETER. PREVIOUSLY PLANTED AS PERIMETER 1 (F-14-049)			
*SHADE TREES ARE TO BE SUBSTITUTED WITH SMALLER TREES AT 2:1 AS REQUIRED BY THE BGE PLANTING ZONES			



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John P. Canoles* 10-28-15  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Neil S. Lebeck* 11-02-15  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**DPZ'S POLICIES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BGE'S POWER LINES OR TRANSMISSION RIGHT-OF-WAY ARE BASED ON BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES. AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES AREA DEFINED AS FOLLOWS:**

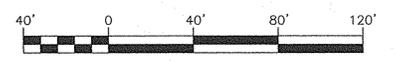
ZONE	DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY	MAXIMUM HEIGHT OF VEGETATION
GREEN	UP TO 20 FEET	25 FEET
YELLOW	BETWEEN 20 FEET AND 45 FEET	40 FEET
RED	BEYOND 45 FEET	ABOVE 40 FEET

**B & E NOTES:**

- 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 CASSEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR CASSEMENT, IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF ANY TREES TO BE TRIMMED OR REMOVED IN ADVANCE OF UNDEVELOPED WORK. DPZ UNDERSTANDS CONSULTATION ENGINEER'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNDERTAKE WITHOUT PERMISSION.
- CALL US UTILITY TO MARK UP THE LOCATION OF EXISTING GAS LINE BEFORE PLANTING STREET TREES.
- BGE ISSUES THEIR APPROVAL OF THE LANDSCAPING SHOWN HEREON ON CERTIFICATES.

**GENERAL NOTES:**

- LANDSCAPING OBLIGATIONS HAVE BEEN PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL - F-14-049 PROVIDED FINANCIAL SURETY IN THE AMOUNT OF \$8,850.00 FOR THE REQUIRED 25 SHADE TREES AND 45 SHRUBS WITH THE F-14-049 DEVELOPERS AGREEMENT.
- A FINANCIAL SURETY IN THE AMOUNT OF \$3,900.00 WILL BE PROVIDED FOR THE REQUIRED 13 SHADE TREES FOR LOTS 8, 12, & 13 (21 ORNAMENTAL PLANTINGS SUBSTITUTED). POSTING OF SURETY IS DEFERRED UNTIL FILING OF GRADING/BUILDING PERMITS AFTER SITE DEVELOPMENT PLAN APPROVAL.
- NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS LISTED HEREWITH 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 RELOCATIONS OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.



**SUPPLEMENTAL INFORMATION PLAN**  
 LANDSCAPE AND FOREST CONSERVATION PLAN  
 NOTES AND DETAILS

**STELLA GLEN II - LOTS 8-17**  
 A RE-SUBDIVISION OF STELLA GLEN LOTS 1-7  
 & A SUBDIVISION OF PARCEL 346

TAX MAP: 36 GRID: 19  
 6TH ELECTION DISTRICT  
 DPZ REF'S: SEE GENERAL NOTE #4 ON COVER SHEET

ZONED: R-20  
 PARCELS: 57, 58, 417 & 346  
 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: RHW/EDS  
 DRAWN BY: JMR  
 CHECKED BY: RHW  
 DATE: OCTOBER 2015  
 SCALE: AS SHOWN  
 W.O. NO.: 14-37

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16818 EXPIRATION DATE: 07-27-2016

ROBERT H. VOGEL, PE No. 16193

4 SHEET OF 5

**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 OF STONES, STAMPS, 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 PROVIDE A HURDLE 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 15.06.04.03.
- 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 (40% TO 45%) OR SANDY LOAM (LOAM), 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, IRON SULFATE PLUS SULFUR) 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 TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS STOCKPILED.

**3. COMPACTION**  
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH 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 DESIGN FAILURE.

COMPACTION CAN BE ALLEVATED 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 RESTRUCTURE THE SOIL PROFILE THROUGHOUT 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 POINDED 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 GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

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". SHREDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH 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 MATTER TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDS 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 758, TYPE PS 28, OR ASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE).  
 • PERFORATIONS - IF PERFORATED PIPE IS USED, 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. 1 OR 4) GALVANIZED HARDWARE CLOTH.  
 • GRAVEL - THE GRAVEL LAYER (NO. 57 STONE, PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.  
 • MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.  
 • A 6" RIGID, NON-PERFORATED UNDERDRAIN 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 (1/4" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

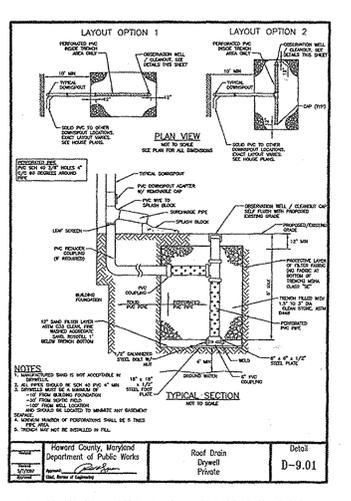
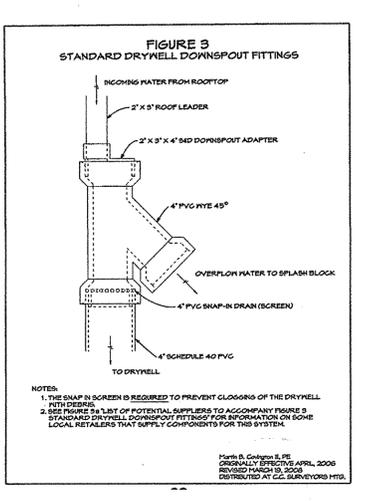
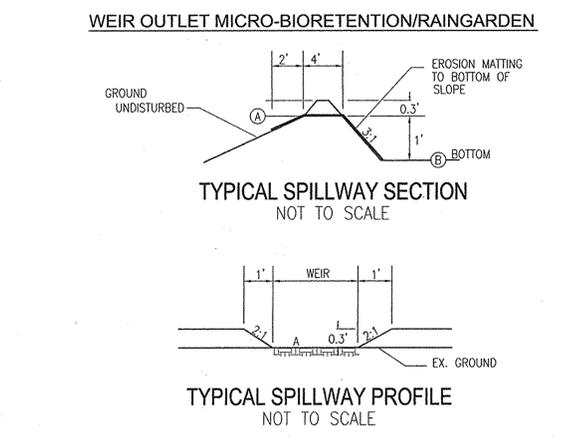
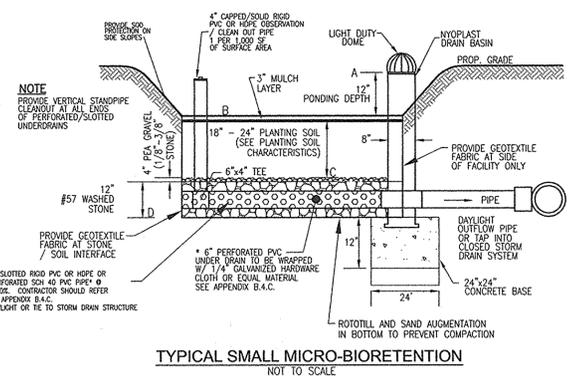
THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

**7. MISCELLANEOUS**  
 THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

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

**Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration-**

Material	Specification	Size	Notes
Planting soil	see Appendix A, Table A.4	n/a	plantings are site-specific
Mulch	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%) & coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood	NO. 8 OR NO. 9 (1/8" TO 3/8")	aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448		
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	n/a	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AAASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or ASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM-615-60	n/a	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 standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.1R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	AAASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AAASHTO) #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



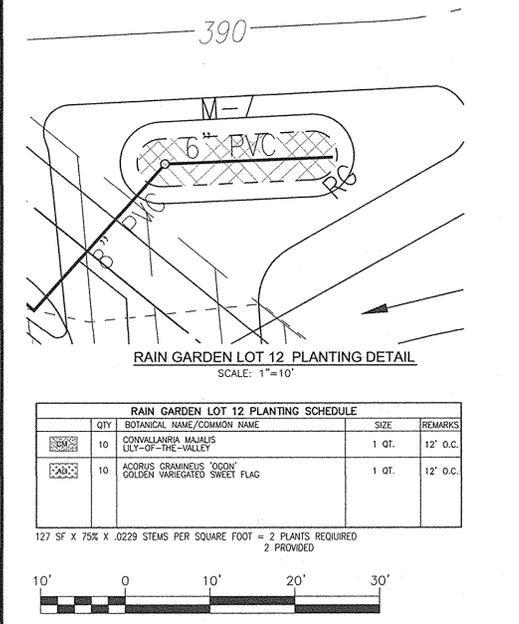
**MICRO-BIORETENTION FACILITY - DESIGN ELEVATION CHART**

MBR FACILITY #	ESD WSEL A	TOP MULCH B	BOTTOM PLANT SOIL C	INV STONE D	SURFACE AREA SF	APPROX DIM
8	384.00	383.00	380.75	379.42	245	SEE PLAN
12	387.00	386.00	383.75	382.42	127	SEE PLAN

**OPERATION AND MAINTENANCE SCHEDULE FOR M-6, M-7 AND M-8 AREAS**

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.
- FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1- OR 2-YEAR STORM EVENT OR MORE THAN 48 HOURS FOLLOWING A 10-YEAR STORM EVENT.

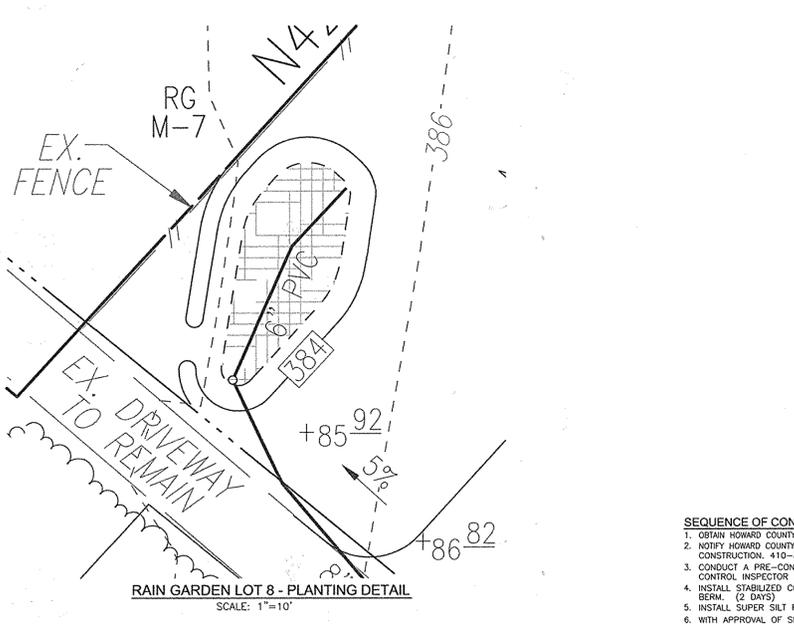
NOTE: UNDERDRAIN AND CHECK DAMS OF BIOSWALE SHALL BE PUBLICALLY MAINTAINED.



**RAIN GARDEN LOT 12 PLANTING SCHEDULE**

QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	CONVALLARIA MAJALIS LILY-OF-THE-VALLEY	1 QT.	12\"/>
10	ACORIS GRAMINEUS 'OGON' GOLDEN VARIEGATED SWEET FLAG	1 QT.	12\"/>

127 SF X 75% X .0229 STEMS PER SQUARE FOOT = 2 PLANTS REQUIRED  
 2 PROVIDED



**RAIN GARDEN LOT 8 PLANTING SCHEDULE**

QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	CONVALLARIA MAJALIS LILY-OF-THE-VALLEY	1 QT.	12\"/>
10	ACORIS GRAMINEUS 'OGON' GOLDEN VARIEGATED SWEET FLAG	1 QT.	12\"/>

245 SF X 75% X .0229 STEMS PER SQUARE FOOT = 4 PLANTS REQUIRED  
 4 PROVIDED

- SEQUENCE OF CONSTRUCTION**
- OBTAIN HOWARD COUNTY GRADING PERMIT. (1 WEEK)
  - NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. 410-313-2455 (2 DAYS)
  - CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (1 DAY)
  - INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (2 DAYS)
  - INSTALL SUPER SILT FENCE AS INDICATED ON PLAN (2 DAYS)
  - WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB SITE. (1 WEEK)
  - BEGIN SITE GRADING AND UTILITY CONSTRUCTION. (1 WEEK)
  - BEGIN BUILDING CONSTRUCTION. (8 WEEKS)
  - WITH INSPECTOR'S APPROVAL, INSTALL ON-SITE PAVING BASE COURSE. (2 DAYS)
  - INSTALL ALL PAVING SURFACE COURSE. (1 DAY)
  - FINE GRADE PROPOSED LOTS IN CONFORMANCE WITH SPOT ELEVATIONS SHOWN AND IN ACCORDANCE WITH THE DISCONNECTION OF ROOFTOP AND NON ROOFTOP RUNOFF PRACTICE REQUIREMENTS. STABILIZE ALL AREAS OF PARCEL INCLUDING ANY EXPOSED EARTH AREAS OUTSIDE THE LOT. (2 DAYS)
  - INSTALL SITE LANDSCAPING, RAIN GARDEN FACILITIES AND DRYWELLS. (1 WEEK)
  - REMOVE ALL SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (2 DAYS)

**N-1 & N-2. DISCONNECTION OF ROOFTOP AND NON-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 COMPACTED, SCARPING 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.

**HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)**

A. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

**OWNER**  
 MARY THERESA PFAU  
 3675 PARK AVE., SUITE 301  
 ELLICOTT CITY, MD 21043  
 (410) 480-0023

**DEVELOPER**  
 TRINITY QUALITY HOMES, INC.  
 3675 PARK AVE., SUITE 301  
 ELLICOTT CITY, MD 21043  
 (410) 480-0023

NO.	REVISION	DATE

**SUPPLEMENTAL INFORMATION PLAN**  
**STELLA GLEN II - LOTS 8-17**  
 A RE-SUBDIVISION OF STELLA GLEN LOTS 1-7 & A SUBDIVISION OF PARCEL 346

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 HOWARD COUNTY, MARYLAND

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 8407 MAIN STREET, ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.1651

**PROFESSIONAL CERTIFICATE**

DESIGN BY: RHV/EDS  
 DRAWN BY: JMR  
 CHECKED BY: RHV  
 DATE: OCTOBER 2015  
 SCALE: AS SHOWN  
 W.O. NO.: 14-437

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2016

5 SHEET OF 5