

GENERAL NOTES

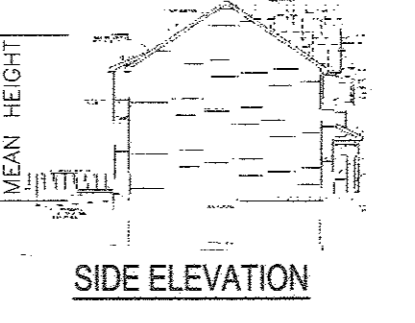
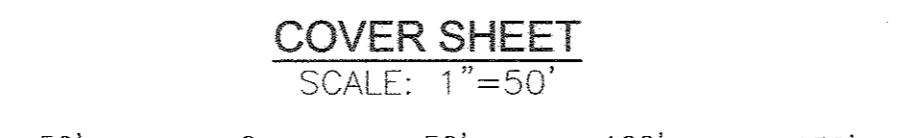
- 1. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS ANY APPLICABLE SPECIFICATIONS OF AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS.
3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS: MISS UTILITY, VERIZON TELEPHONE COMPANY, HOWARD COUNTY BUREAU OF UTILITIES, AT&T CABLE LOCATION DIVISION, B.G.&E. CO. CONTRACTOR SERVICES, B.G.&E. CO. UNDERGROUND DAMAGE CONTROL, STATE HIGHWAY ADMINISTRATION.
4. THIS SITE DEVELOPMENT PLAN IS SUBJECT TO THE FOLLOWING DPZ FILES: EOP-13-024, CONT. #24-3108, WP-13-138, SP-13-009, F-14-049, SDP-13-059FC.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOUR INTERVALS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 20, 2012.
6. THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JUNE, 2012 BY ROBERT H. VOGEL ENGINEERING, INC.
7. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
8. 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.
9. ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
10. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
11. STORM WATER MANAGEMENT FOR THIS PROJECT IS PROVIDED BY THE USE OF ALTERNATIVE SURFACES, NON-STRUCTURAL PRACTICES, AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. NON-STRUCTURAL PRACTICES INCLUDE ROOFTOP DISCONNECTION (N-1) AND NON-ROOFTOP DISCONNECTION (N-2). MICRO-SCALE PRACTICES INCLUDE RAIN GARDENS (M-7) AND GRASS SWALES (M-8). ALTERNATIVE SURFACES INCLUDE PERVIOUS CONCRETE (A-2), ON-LOT NON-STRUCTURAL AND MICRO-SCALE PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNER. ALTERNATIVE SURFACE, STRUCTURAL, AND MICRO-FACILITIES MANAGING RUNOFF FROM THE USE-IN-COMMON DRIVEWAY WILL BE MAINTAINED BY THE HOMEOWNERS IN ACCORDANCE WITH THE USE-IN-COMMON MAINTENANCE AGREEMENT.
12. 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 4/17/14, ON WHICH DATE DEVELOPER AGREEMENT #F-14-049 WAS FILED AND ACCEPTED.
13. THIS PROJECT HAS AN APPROVED PRELIMINARY EQUIVALENT SKETCH PLAN (SP-13-009) WHICH WAS SIGNED ON 9/25/13 AND IS THEREFORE GRANDFATHERED UNDER THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE 7/28/06 AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS IN EFFECT AT THAT TIME. DEVELOPMENT OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SP APPROVAL. THE SUBJECT PROPERTY IS ZONED "R-20" IN ACCORDANCE WITH THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06.
15. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
16. THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL NOT IMPACT EXISTING ENVIRONMENTAL FEATURES AND BUFFERS.
17. 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 CONTRACTORS 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. 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. 3513 AND 41CC WERE USED FOR THIS PROJECT.
19. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY.
20. THERE IS NO 100' FLOODPLAIN WITHIN THE LIMITS OF THIS SITE.
21. SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
22. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 12, 2012, AND APPROVED ON JUNE 20, 2013. THERE ARE NO PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.
23. FOREST STAND DELINEATION PLAN WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 12, 2012, AND APPROVED IN CONJUNCTION WITH SP-13-009.
24. A TOTAL OF 7 LOTS ARE PROPOSED UNDER THIS PLAN.
25. NO CLEARING, GRUBBING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF THE WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS. WETLANDS AND THEIR BUFFERS WILL NOT BE IMPACTED BY THE CONSTRUCTION OF THE SITE.
27. A NOISE WALL IS REQUIRED FOR THIS SITE AND WILL BE CONSTRUCTED IN ACCORDANCE WITH SHA PROJECT HO-3175170 WHICH IS FUNDED FOR CONSTRUCTION.
28. THERE ARE NO SPECIEN TREES LOCATED ON THIS SITE.
29. FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY THE PLACEMENT OF 2.76 AC. (2:1 RATIO) OF RETENTION INTO AN OFFSITE FOREST CONSERVATION BANK FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS: a) SUFFICIENT TO MEET THE 1.28 AC. OF REQUIRED REFORESTATION AND 0.10 AC. OF REQUIRED AFFORESTATION.
30. UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.02 FOR THE USE-IN-COMMON DRIVEWAY ENTRANCE AT SHAKER DRIVE.
31. 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/BRIDGES) - 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.
32. THERE IS AN EXISTING HOUSE TO REMAIN WHICH SHALL BE LOCATED ON LOT 11. THE EXISTING DRIVEWAY TO LOT 11 SHALL BE REMOVED PRIOR TO RECONSTRUCTION OF THE FINAL PLAT AND ACCESS TO LOT 11 SHALL BE PROVIDED BY THE UIC SHARED DRIVEWAY FOR LOTS 9-11 AND F-15-105 LOTS 12 & 13. ANY NEW CONSTRUCTION OR NEW CONSTRUCTION TO THE EXISTING HOUSE SHALL CONFORM TO SETBACKS AS SHOWN ON THE FINAL PLAT FOR THIS SUBDIVISION.
33. SHAKER DRIVE IS NOT A SCENIC ROAD.
34. LOTS 9-11, 14-17 AND F-15-105 LOTS 12 & 13 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. A USE-IN-COMMON MAINTENANCE AGREEMENT FOR THE SHARED DRIVEWAY HAS BEEN RECORDED SIMULTANEOUSLY WITH THE FINAL PLAT.
35. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$8,850.00 FOR THE REQUIRED 17 SHADE TREES AND 45 SHRUBS SHALL BE POSTED WITH F-14-049.
36. DEED REFERENCE: L. 8293/F. 433
37. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC., DATED JULY 12, 2012, AND WAS APPROVED ON JUNE 20, 2013.
38. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
39. FLAG AND PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE FOR LOTS 9-11, 14-17 AND F-15-105 LOTS 12 & 13 ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
40. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED BY HOWARD COUNTY BUREAU OF HIGHWAYS FOR THE DRIVEWAY ACCESS POINT ONTO SHAKER DRIVE AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
41. CERTIFIED TEST PITS HAVE BEEN PROVIDED TO VERIFY THAT GROUNDWATER AND ROCK ARE NOT PRESENT AT RAIN GARDEN LOCATIONS.
42. A DESIGN MANUAL WAIVER TO ALLOW SEVEN USERS ON A USE-IN-COMMON SHARED DRIVEWAY WAS APPROVED BY THE DEVELOPMENT ENGINEERING DIVISION ON MARCH 19, 2013.
43. REFERENCE WP-13-138, DENIED ON MARCH 25, 2013, TO ALLOW FOREST CONSERVATION EASEMENTS ON LOTS LESS THAN 10 ACRES.
44. BG&E HAS REVIEWED AND APPROVED PROPOSED TRASH PAD SCREENING AND PERIMETER TREE PLANTINGS.
45. A FEE-IN-LIEU OF OPEN SPACE FOR THE SIX LOTS HAS BEEN PAID IN CONJUNCTION WITH THE FINAL PLAT (\$9,000.00).
46. ALL EXISTING WELLS AND SEPTIC SYSTEM COMPONENTS MUST BE PROPERLY ABANDONED AND NOTIFICATION OF SUCH SENT TO THE HEALTH DEPARTMENT PRIOR TO HEALTH OFFICER SIGNATURE OF THE FINAL RECORD PLAT.
47. 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.
48. SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1 1/4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (1 1/2 GAUGE) LONG. A GALVANIZED STEEL CAP SHALL BE MOUNTED ON TOP OF EACH POST.
49. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FT. 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 ANY FRONT OR REAR YARD SETBACK.
50. THE DECK SETBACK ENCROACHMENT FOR LOT 17 IS ALLOWED UNDER SECTION 16.120 (b)(4)(iii)(c) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO ALLOW THE DECK TO PROJECT UP TO 10 FEET BEYOND THE BUILDING ENVELOPE.

SHEET INDEX table with columns: SHEET NO., DESCRIPTION, SHEET NO.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 5-13-16
Chief, Division of Land Development
Date: 5-17-16
Director
Date: 5-17-16

SITE DATA
LOCATION: TAX MAP 36, BLOCK 19
PARCELS: 57, 58 & 417
10580 SHAKER DRIVE, COLUMBIA, MARYLAND
DEED REFERENCE: L. 8293 / F. 433
6TH ELECTION DISTRICT
PRESENT ZONING: R-20
TOTAL PROJECT AREA: 160,511 SF / 3.68 AC.
LIMIT OF DISTURBANCE: 2.64 AC. (TOTAL)
PROPOSED USE OF SITE: RESIDENTIAL (SFD)
NUMBER OF RESIDENTIAL LOTS: 7 LOTS
AREA OF RESIDENTIAL LOTS: 3.68 AC.
AREA OF PROPOSED ROADS AND OPEN SPACE DEDICATION: 0.00 AC.
AREA OF STREAM/BUFFER: 0.00 AC.
AREA OF WETLANDS/BUFFER: 0.23 AC.
AREA OF STEEP SLOPES (25% OR GREATER): 0.01 AC.
AREA OF FLOOD PLAIN: 0.00 AC.
NET PROJECT AREA: 3.44 AC.
AREA OF EXISTING FOREST COVER: 0.64 AC.
AREA OF ERODIBLE SOILS: 1.13 AC.

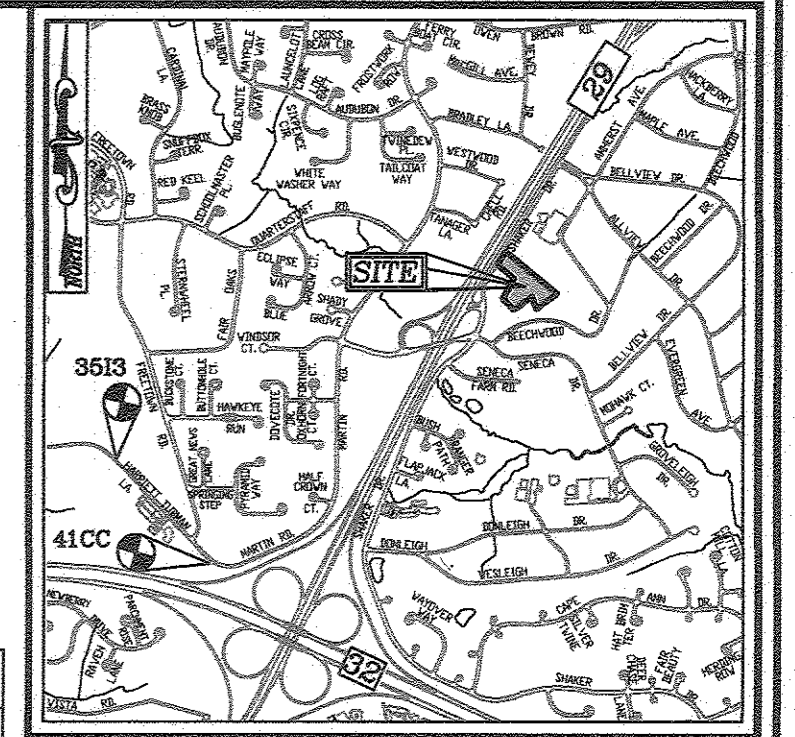
SWM PRACTICE CHART
ESD PRACTICES BY LOT
Table with columns: LOT #, ADDRESS, ESD PRACTICE



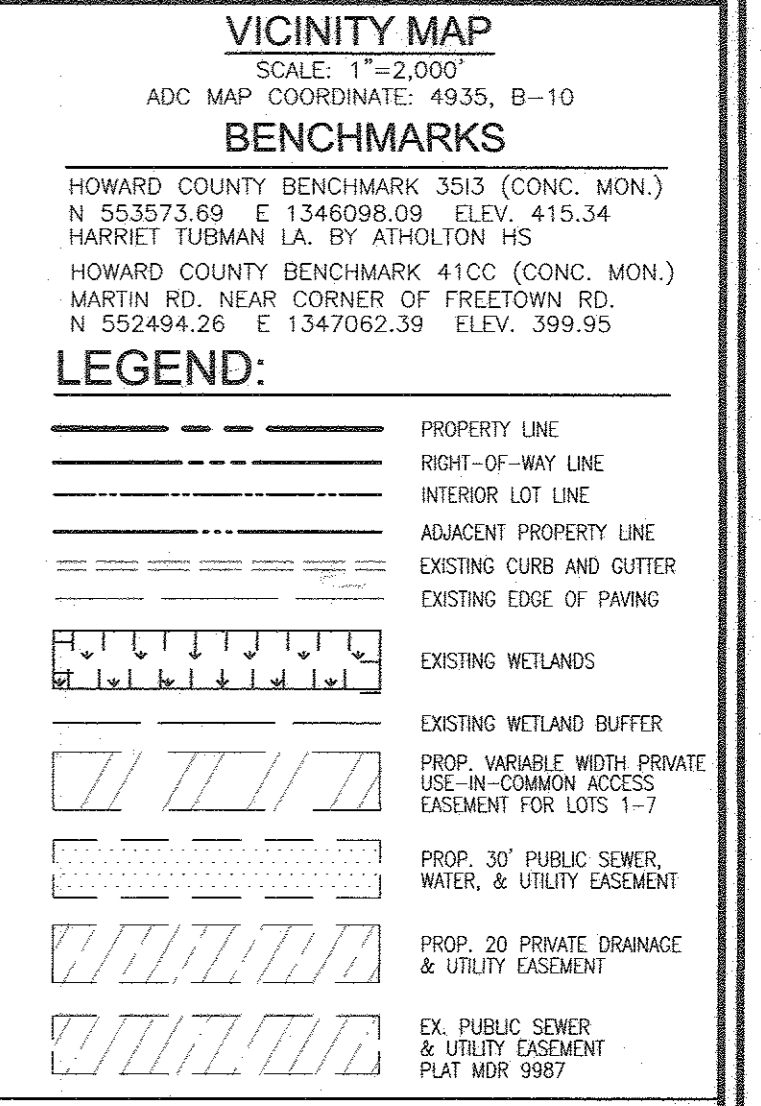
NOTES:
1. ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE METER SETTINGS.

SITE DEVELOPMENT PLAN
STELLA GLEN
LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7)
AND P/O LOTS 8, 12 & 13 (F-15-105)

COORDINATE TABLE
Table with columns: NO., NORTH, EAST



MINIMUM LOT SIZE CHART
Table with columns: LOT, GROSS AREA, PIPESTEM AREA, NET AREA, MIN. LOT SIZE



ADDRESS CHART
Table with columns: LOT NO., STREET ADDRESS

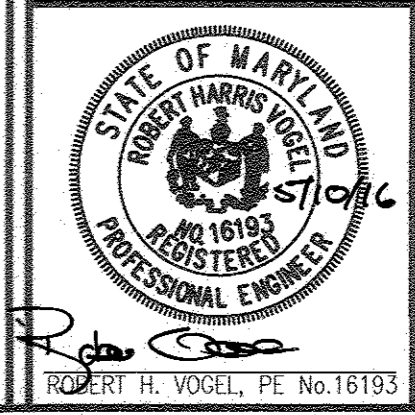
PERMIT INFORMATION CHART
SUBDIVISION NAME, NAME, SECTION/AREA, LOT/ PARCELS, PLAT REF #, BLOCK NO., ZONE, TAX MAP #, ELECT DIST, CENSUS TR

OWNER: MARY THERESE PFAU
DEVELOPER: TRINITY QUALITY HOMES, INC.

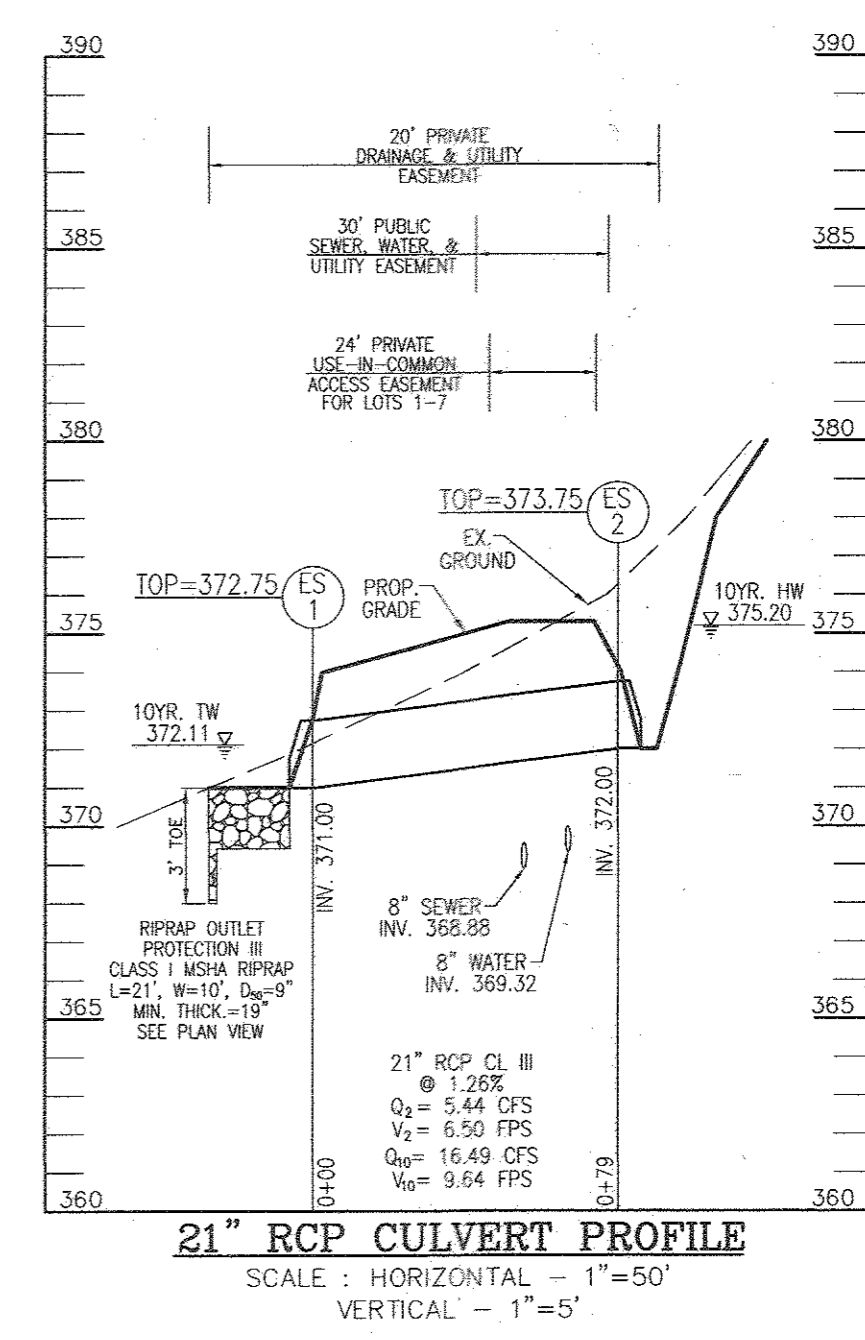
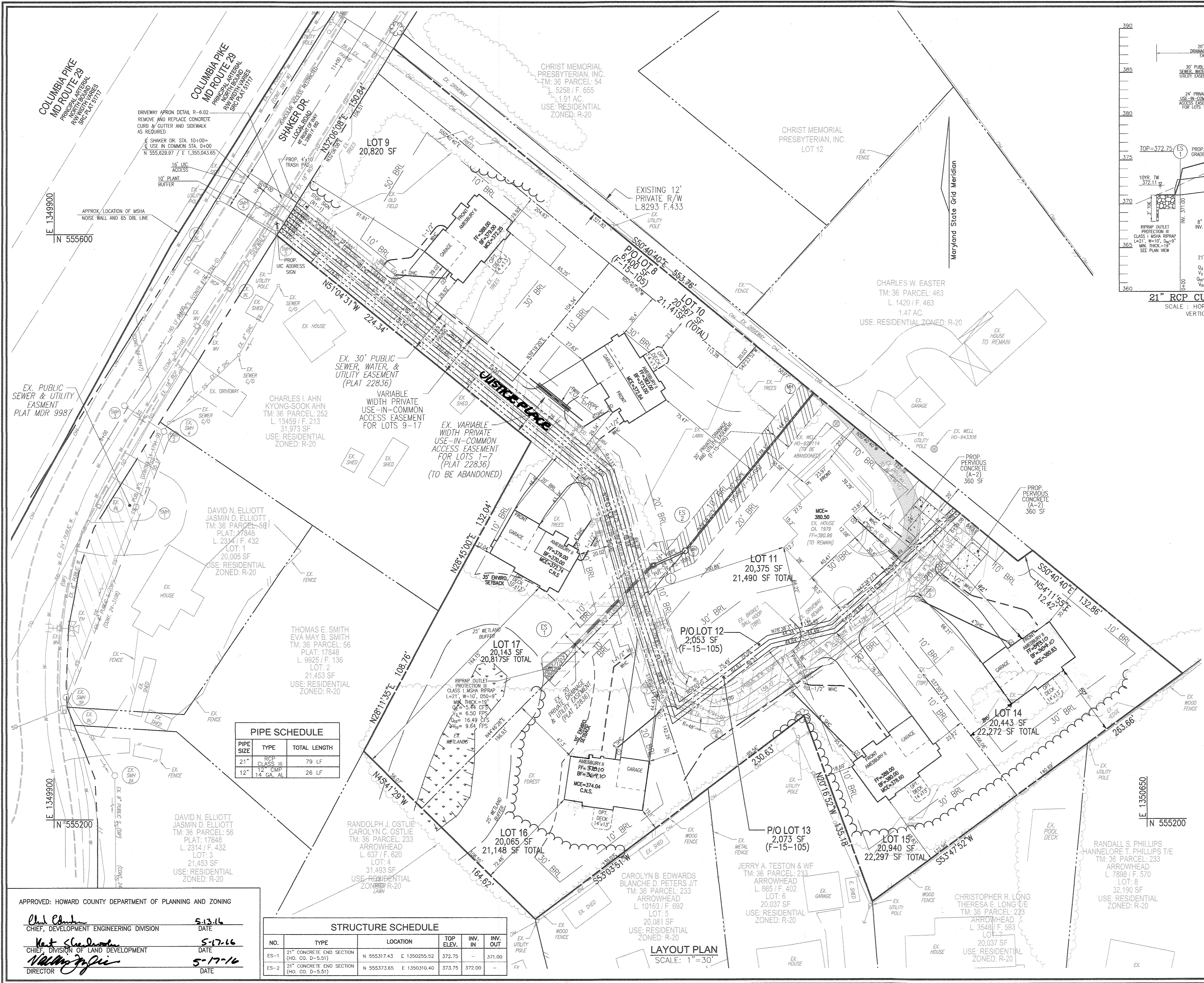
REVISIONS table with columns: NO., REVISION, DATE

REVISED SITE DEVELOPMENT PLAN
STELLA GLEN
LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7)
AND P/O LOTS 8, 12 & 13 (F-15-105)
RESIDENTIAL SINGLE FAMILY DETACHED

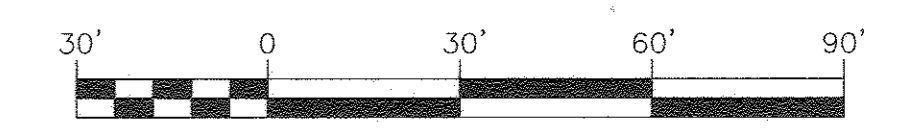
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS - SURVEYORS - PLANNERS
8407 MAIN STREET, ELLICOTT CITY, MD 21043



DESIGN BY: RHV
DRAWN BY: JMR/GAH
CHECKED BY: RHV
DATE: DECEMBER 2015
SCALE: AS SHOWN
W.O. NO.: 12-23
1 SHEET OF 8



- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - INTERIOR LOT LINE
 - ADJACENT PROPERTY LINE
 - EXISTING CURB AND CUTTER
 - EXISTING EDGE OF PAVING
 - EXISTING WETLANDS
 - EXISTING WETLAND BUFFER
 - PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7
 - PROP. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT
 - PROP. 20' PRIVATE DRAINAGE & UTILITY EASEMENT
 - 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 CLEANTH
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING TREELINE
 - EXISTING TREES
 - EXISTING FENCE
 - PROPOSED STORMDRAIN
 - PROPOSED SIDEWALK
 - PROPOSED TREELINE



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

PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
21"	RCP CLASS III	79 LF
12"	12" CMP AL	26 LF

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
ES-1	21" CONCRETE END SECTION (HO. CO. D-5.51)	N 555317.43 E 1350255.52	372.75	-	371.00
ES-2	21" CONCRETE END SECTION (HO. CO. D-5.51)	N 555373.65 E 1350310.40	373.75	372.00	-

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 5-13-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walt Schneider 5-17-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Nancy Griffin 5-17-16
 DIRECTOR DATE

NO.	REVISION	DATE
2	REVISE LOTS 14 AND 16 FLOOR ELEVATIONS	1/9/17
1	REVISE LOT LINES, BRL'S EASEMENTS AND HOUSES PER NEW LAYOUT	09/03/15

REVISED SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN
STELLA GLEN
 LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7)
 AND P/O LOTS 8, 12 & 13 (F-15-105)
 RESIDENTIAL SINGLE FAMILY DETACHED

TAX MAP: 36 GRID: 19
 6TH ELECTION DISTRICT
 DPZ REF'S: ECP-13-024, CONT.#24-3108, PARCELS: 57, 58 & 417; L 9293 / F 433
 WP-13-138, SP-13-009 & F-14-049, F-15-105. ZONED: R-20

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

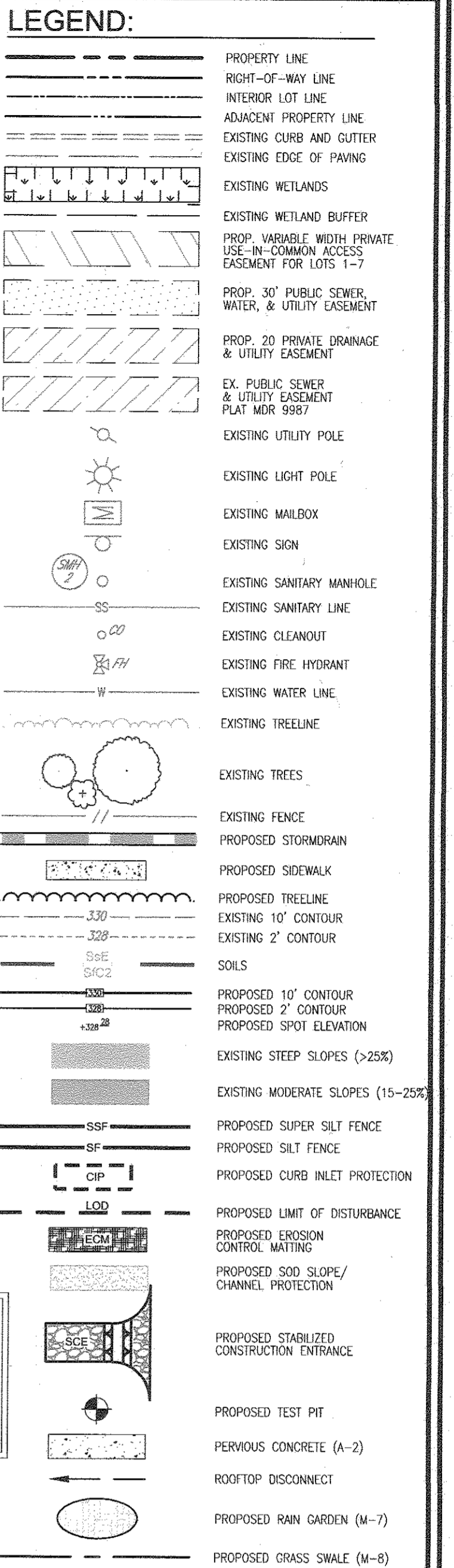
DESIGN BY: RHW
 DRAWN BY: JMR/GAH
 CHECKED BY: RHW
 DATE: DECEMBER 2015
 SCALE: AS SHOWN
 W.O. NO.: 12-23

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. 18143 EXPIRATION DATE: 06-27-2018

2 OF 8



- NOTES:**
- ROAD AND CULVERT CONSTRUCTION AND THEIR CORRESPONDING EROSION AND SEDIMENT CONTROLS TO BE PERMITTED AND CONSTRUCTED UNDER F-14-049. THIS PLAN FOR HOUSE CONSTRUCTION ONLY. SEE SHEETS 4 AND 5 OF 8 FOR ADDITIONAL DETAILS.
 - STOCKPILES EXCEEDING 15' IN HEIGHT MUST BE BENCHED.
 - EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE MINIMUM INTERVALS REQUIRED BY THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION & SEDIMENT CONTROL, WHICHEVER IS MORE RESTRICTIVE. ANY SEDIMENT CONTROLS THAT ARE DAMAGED OR INTERRUPTED BY CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.



NOTE:
ROAD AND CULVERT CONSTRUCTION AND THEIR CORRESPONDING EROSION AND SEDIMENT CONTROLS TO BE PERMITTED AND CONSTRUCTED UNDER F-14-049. THIS PLAN FOR HOUSE CONSTRUCTION ONLY.

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
2	REVISE LOTS 14 AND 16 FLOOR ELEVATIONS	1/9/17
1	REVISE LOT LINES, BRL'S EASEMENTS AND HOUSES PER NEW LAYOUT	09/03/15

REVISED SITE DEVELOPMENT PLAN
GRADING, EROSION, AND SEDIMENT CONTROL PLAN & SOIL MAP
STELLA GLEN
LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7)
AND P/O LOTS 8, 12 & 13 (F-15-105)
RESIDENTIAL: SINGLE FAMILY DETACHED

TAX MAP: 36 GRID: 19
6TH ELECTION DISTRICT
DPZ REF'S: ECP-13-024, CONT-24-3108, PARCELS: 57, 58 & 417; L.8293 / F.433
WP-13-138, SP-13-009 & F-14-049, F-15-105. HOWARD COUNTY, MARYLAND

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8407 MAIN STREET
ELlicott CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

STATE OF MARYLAND
ROBERT H. VOGEL
No. 16192
REGISTERED PROFESSIONAL ENGINEER

DESIGN BY: RHY
DRAWN BY: JMR/GAH
CHECKED BY: RHY
DATE: DECEMBER 2015
SCALE: AS SHOWN
W.O. NO.: 12-23

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
EXPIRATION DATE: 08-27-2018

3 SHEET OF 8

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

John R. Webster
SIGNATURE OF ENGINEER
5/13/16
DATE

BY THE DEVELOPER:
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.

Mary J. Pfau
SIGNATURE OF DEVELOPER
5/10/16
DATE

NOTE: SEE SHEETS 4 AND 5 OF 8 FOR ADDITIONAL NOTES AND DETAILS.

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

John R. Webster
HOWARD S.C.D.
5/13/16
DATE

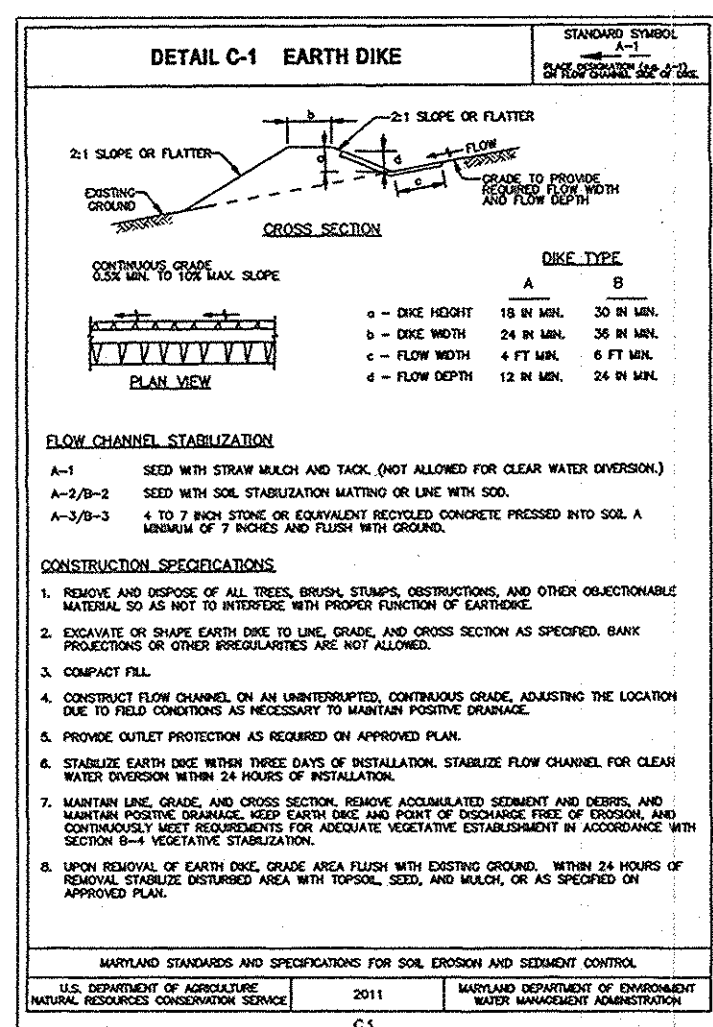
GRADING, EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 30'
SCALE 1" = 30'

NOTE: BASEMENT SEWER SERVICE FOR LOTS 16 & 17 PROVIDED BY EJECTOR PUMPS.

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR
G8B	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20
G8B	GLENVILLE-URBAN LAND-UDOROTHENS COMPLEX, 0 TO 8 PERCENT SLOPES	C	0.37
U8F	UDOROTHENS, HIGHWAY, 0 TO 65 PERCENT SLOPES	-	-



B-3.3 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION
A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

DETAILS
To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

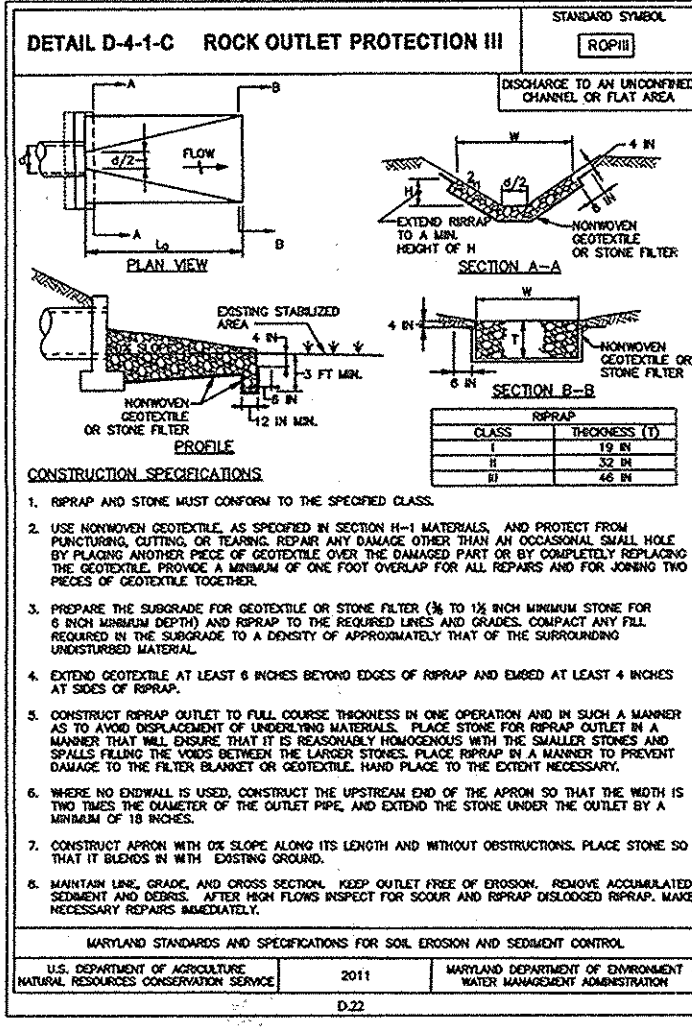
Conditions Where Practice Applies
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Details

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The height of the stockpile must be clearly to accommodate the anticipated volume of material and based on a 50% slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3.3 Land Grading.
- Benches from the stockpile area must drain to a suitable sediment control practice.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, improved grade or diversion ditches. Practices must be made for discharging accumulated flow in a non-erosive manner.
- When runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpile areas must be stabilized in accordance with the 5:1 slope stabilization requirements as well as Standard B-3.3.3 Erosion and Sedimentation Control and Standard B-4.4 Temporary Stabilization.
- The stockpile is located on an impervious surface, a site must be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impervious sheeting.

Maintainance
The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4.4 Vegetative Establishment. Site cleanup must be completed as no longer than a 2:1 slope. The stockpile must be kept free of erosion. If the vertical height of a stockpile exceeds 30 feet for 2:1 slopes, 20 feet for 3:1 slopes, or 10 feet for 4:1 slopes, benching must be provided in accordance with Section B-3.3 Land Grading.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES CONSTRUCTION SERVICE 2011 WATER MANAGEMENT ADMINISTRATION

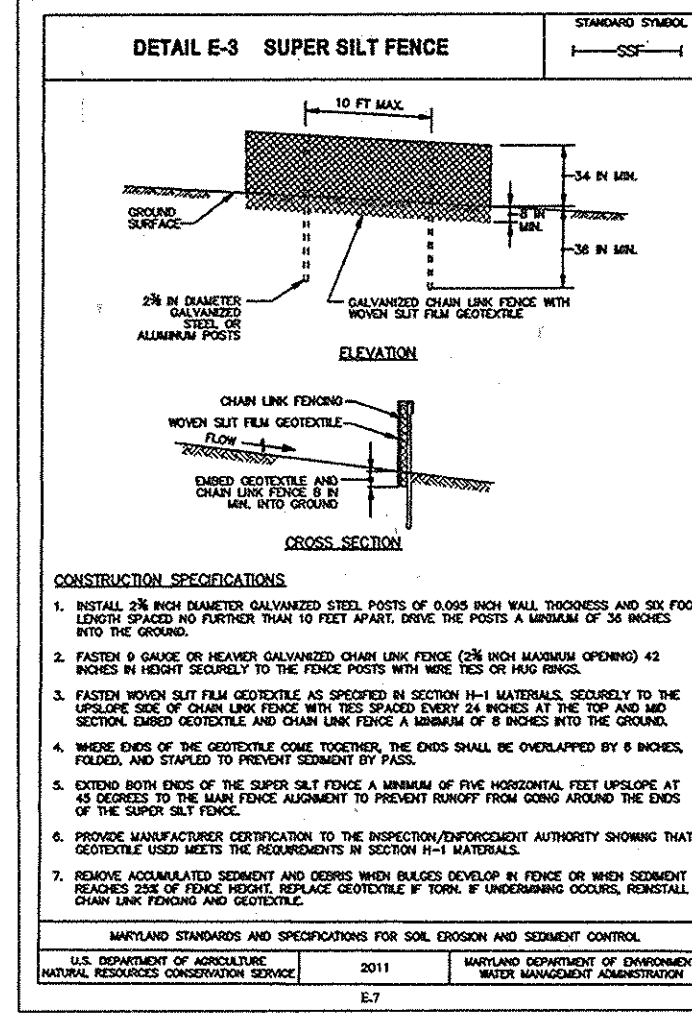


DETAIL B-4-1-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

CONSTRUCTION SPECIFICATIONS

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR GREATER THAN THE SHEAR STRESS CAPACITY OF APPROVED MATS.
- USE PERMANENT SOIL STABILIZATION MATTING WITHIN THE CHANNEL AND ON BOTH SIDES OF THE CHANNEL TO PROTECT THE CHANNEL FROM EROSION AND SEDIMENTATION. THE MATTING MUST BE INSTALLED TO PROTECT THE CHANNEL FROM EROSION AND SEDIMENTATION. THE MATTING MUST BE INSTALLED TO PROTECT THE CHANNEL FROM EROSION AND SEDIMENTATION. THE MATTING MUST BE INSTALLED TO PROTECT THE CHANNEL FROM EROSION AND SEDIMENTATION.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL STAPLES WITH A MINIMUM LENGTH OF 1 1/2 IN. STAPLES MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE MATTING. STAPLES MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE MATTING. STAPLES MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE MATTING.
- INSTALL MATTING IN SECTIONS OF WATER FLOW. THE FIRST ROW OF MATTING MUST BE INSTALLED AT THE HEAD OF THE CHANNEL. THE MATTING MUST BE INSTALLED IN SECTIONS OF WATER FLOW. THE FIRST ROW OF MATTING MUST BE INSTALLED AT THE HEAD OF THE CHANNEL. THE MATTING MUST BE INSTALLED IN SECTIONS OF WATER FLOW.
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U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES CONSTRUCTION SERVICE 2011 WATER MANAGEMENT ADMINISTRATION

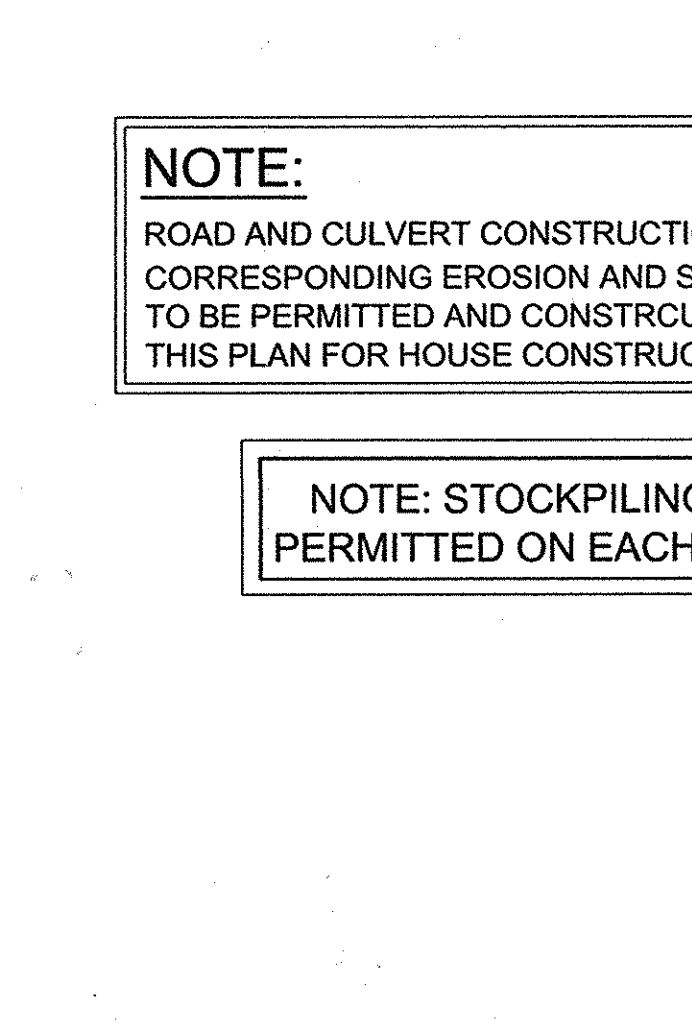


DETAIL E-3 SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

- INSTALL 24 IN HIGH GALVANIZED STEEL POSTS OF 24 IN HIGH WALL THICKNESS AND 50 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. BURY THE POSTS A MINIMUM OF 24 INCHES INTO THE GROUND.
- FASTEN 24 IN HIGH GALVANIZED STEEL FENCE TO THE GALVANIZED STEEL POSTS WITH 1/2 IN DIA. GALVANIZED STEEL BOLTS AND 1/2 IN DIA. GALVANIZED STEEL WASHERS. THE BOLTS MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE FENCE. THE BOLTS MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE FENCE. THE BOLTS MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE FENCE.
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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES CONSTRUCTION SERVICE 2011 WATER MANAGEMENT ADMINISTRATION



DETAIL C-9 DIVERSION FENCE

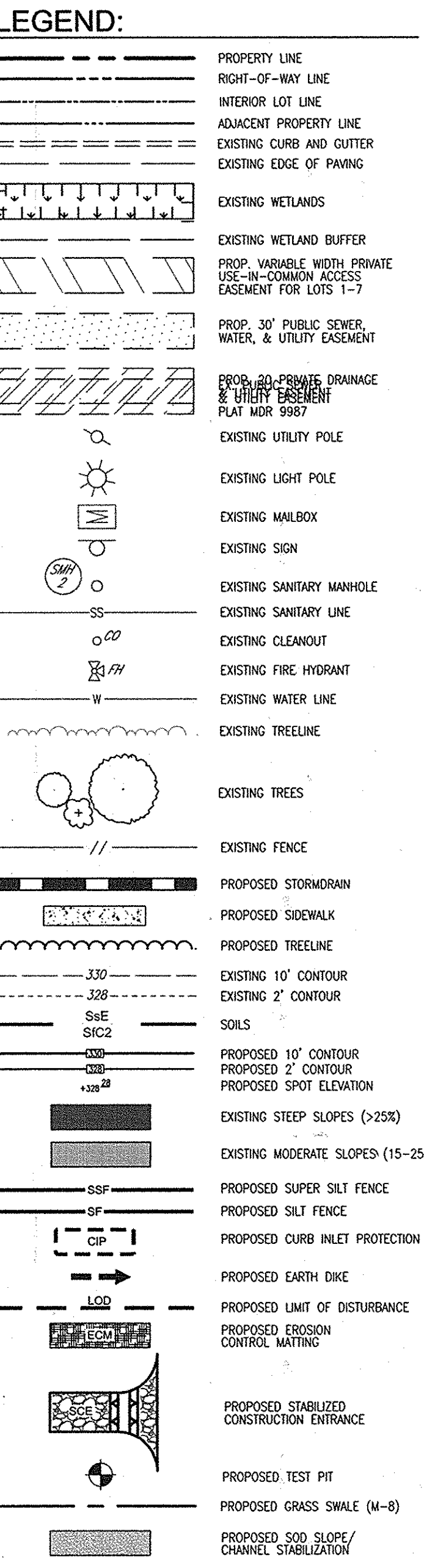
CONSTRUCTION SPECIFICATIONS

- INSTALL 24 IN HIGH GALVANIZED STEEL POSTS OF 24 IN HIGH WALL THICKNESS AND 50 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. BURY THE POSTS A MINIMUM OF 24 INCHES INTO THE GROUND.
- FASTEN 24 IN HIGH GALVANIZED STEEL FENCE TO THE GALVANIZED STEEL POSTS WITH 1/2 IN DIA. GALVANIZED STEEL BOLTS AND 1/2 IN DIA. GALVANIZED STEEL WASHERS. THE BOLTS MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE FENCE. THE BOLTS MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE FENCE. THE BOLTS MUST BE PLACED AT A MINIMUM OF 12 IN. ON CENTER ALONG THE PERIMETER OF THE FENCE.
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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES CONSTRUCTION SERVICE 2011 WATER MANAGEMENT ADMINISTRATION

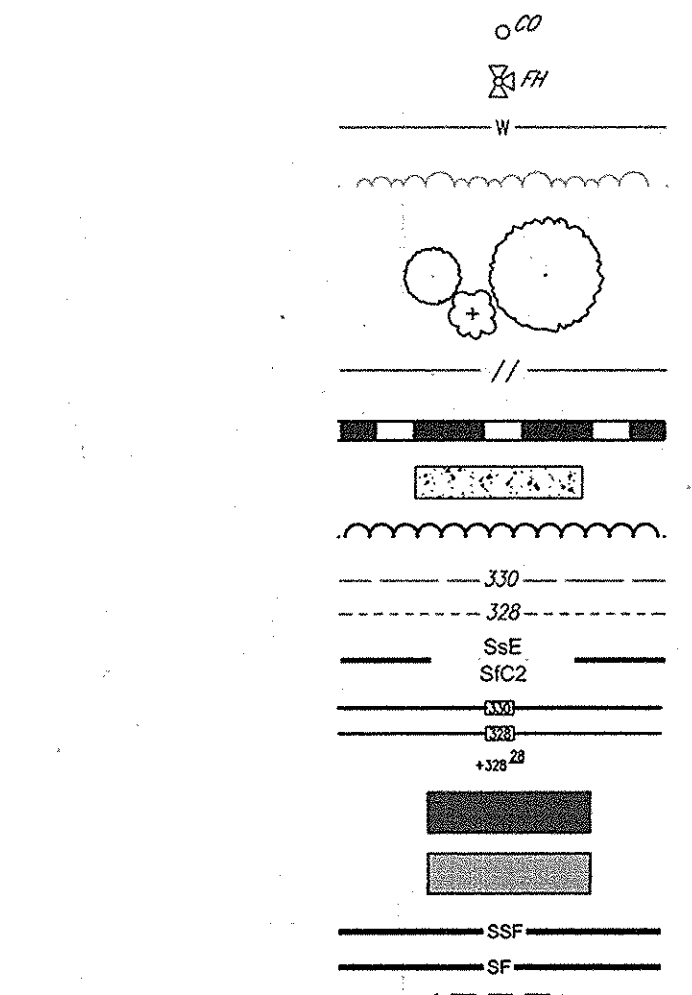
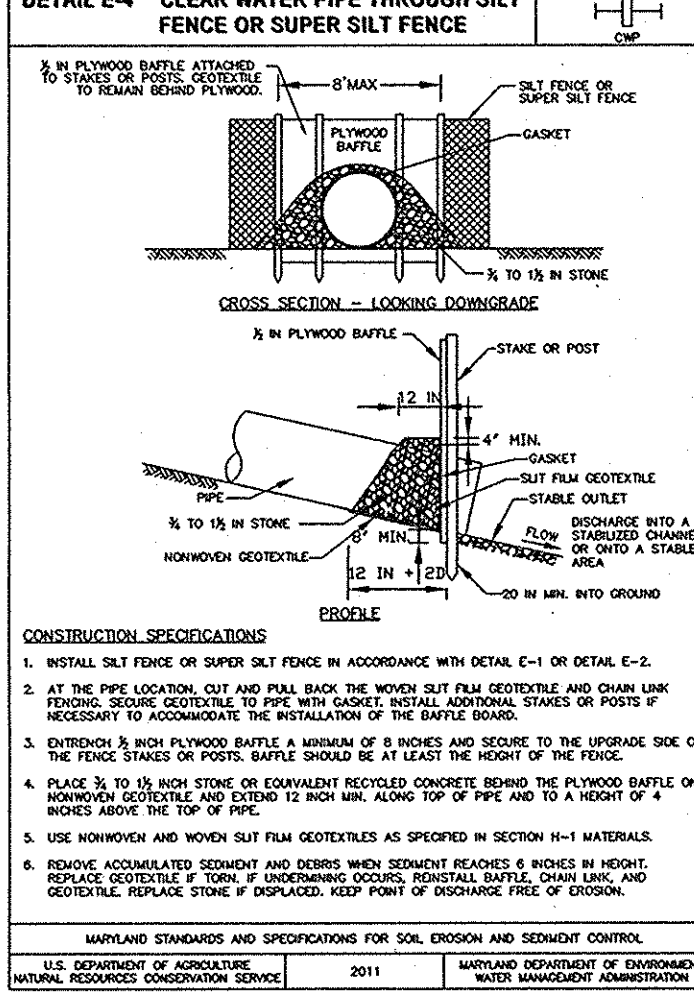
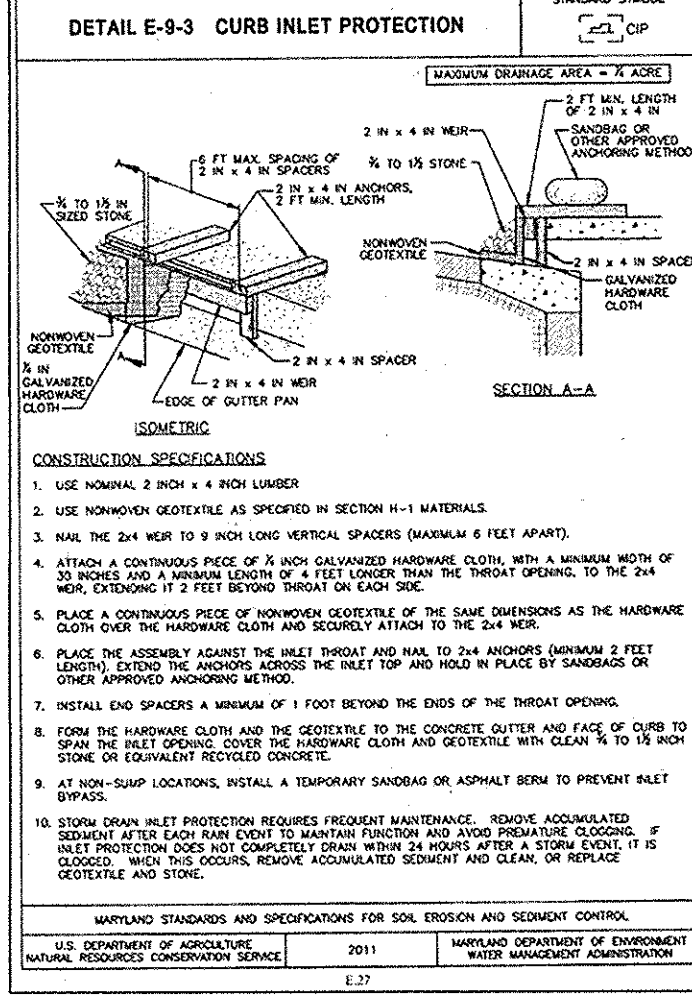
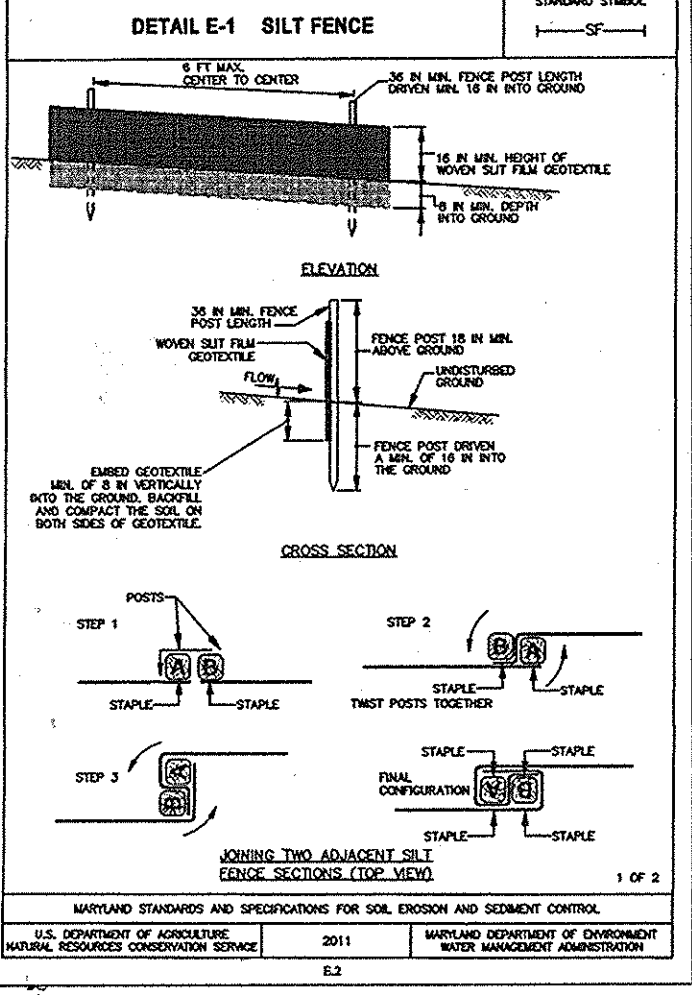
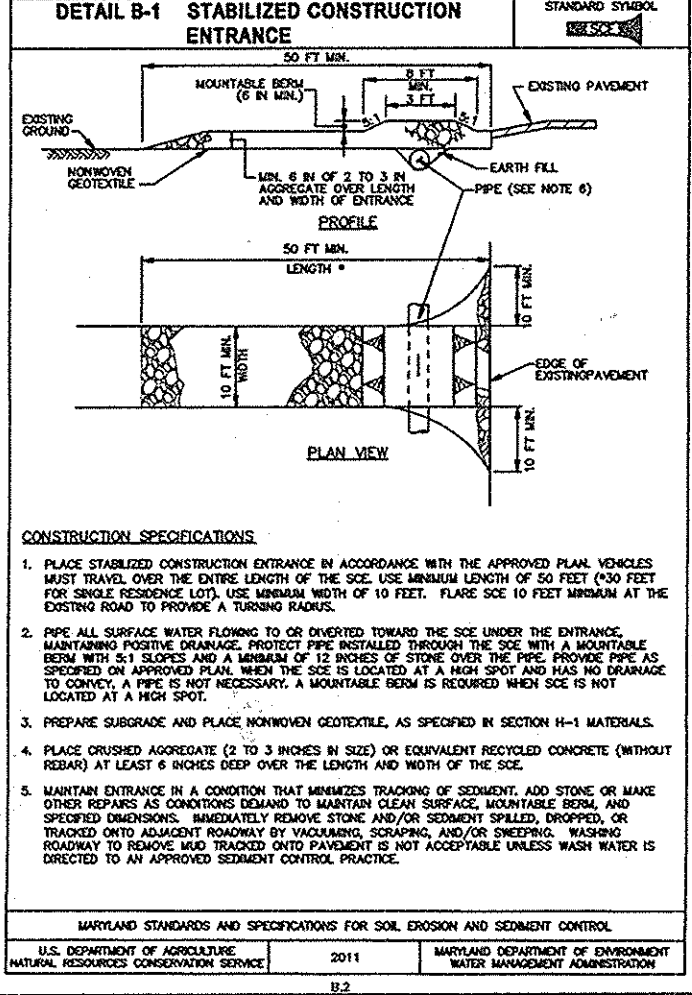
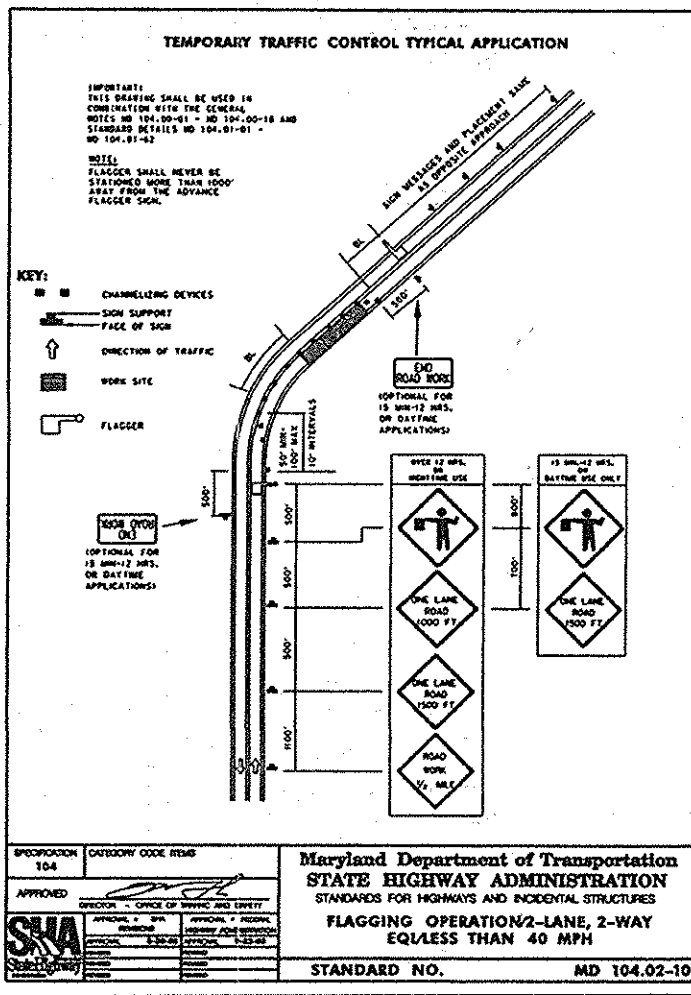
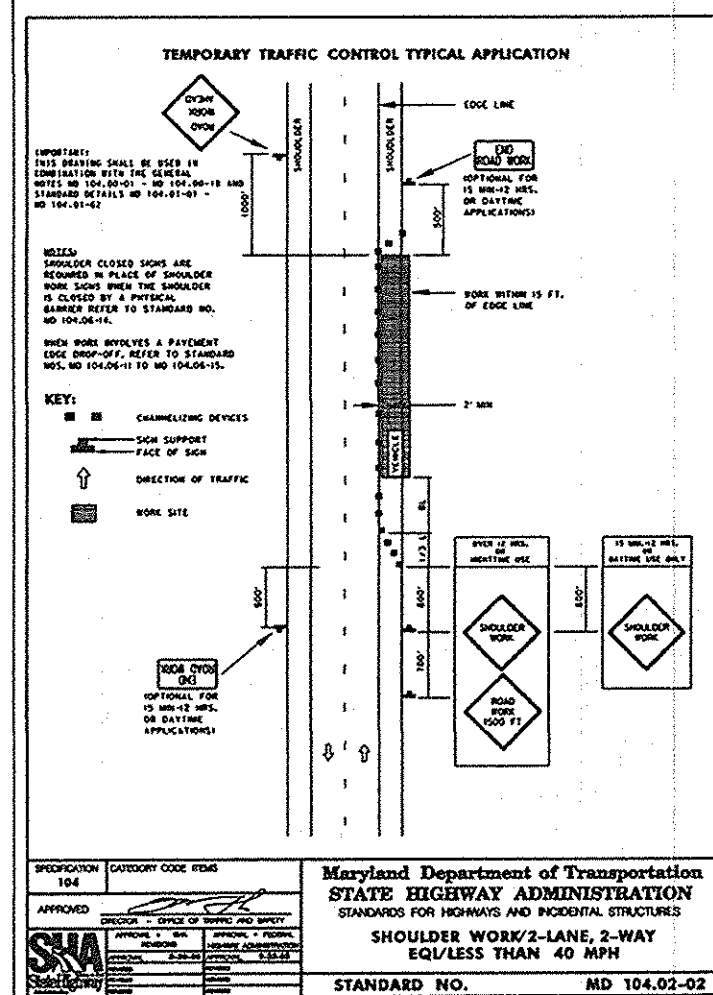
NOTE:
ROAD AND CULVERT CONSTRUCTION AND THEIR CORRESPONDING EROSION AND SEDIMENT CONTROLS TO BE PERMITTED AND CONSTRUCTED UNDER F-14-049, THIS PLAN FOR HOUSE CONSTRUCTION ONLY.

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

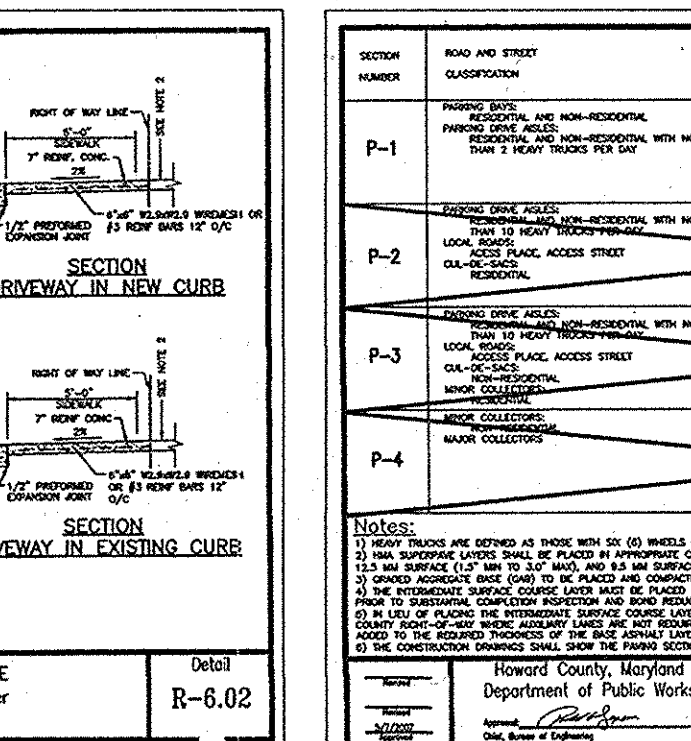
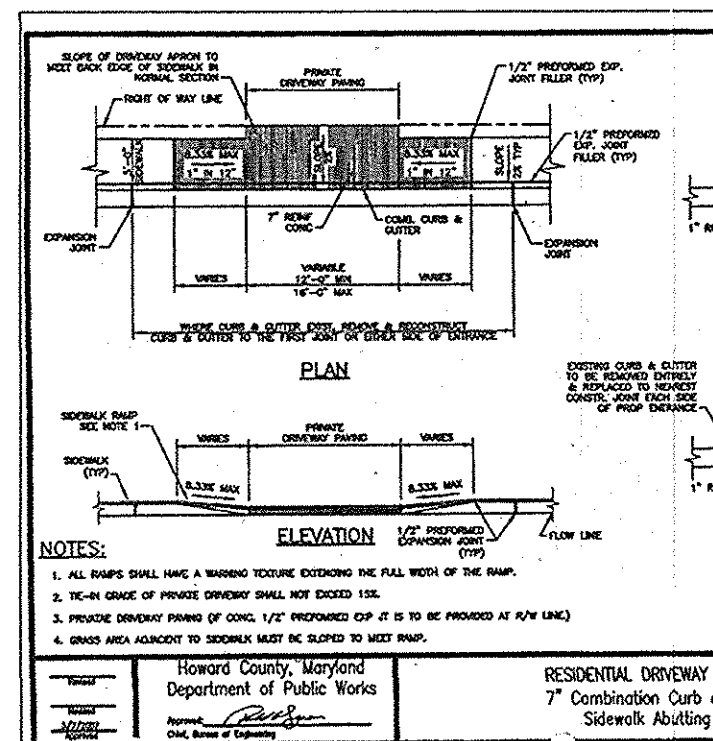


OWNER
MARY THERESA PFAU
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

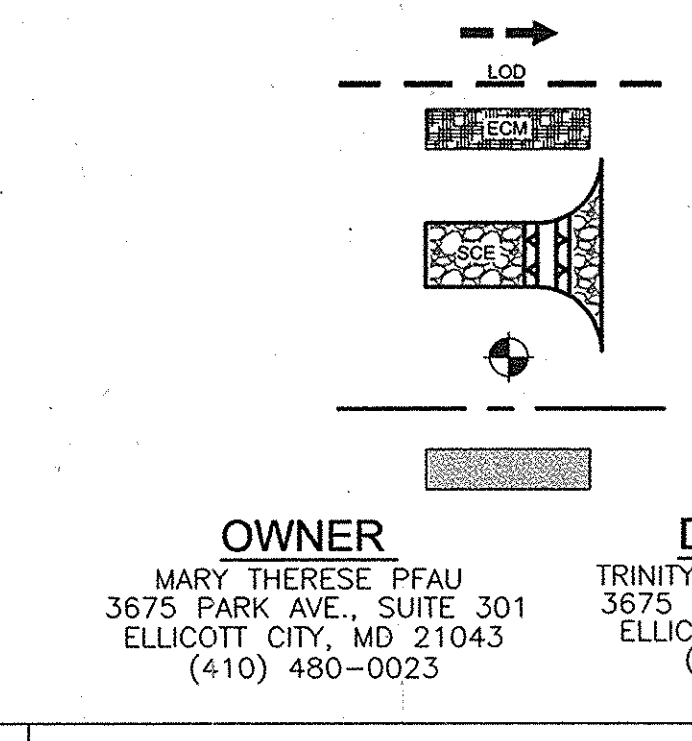
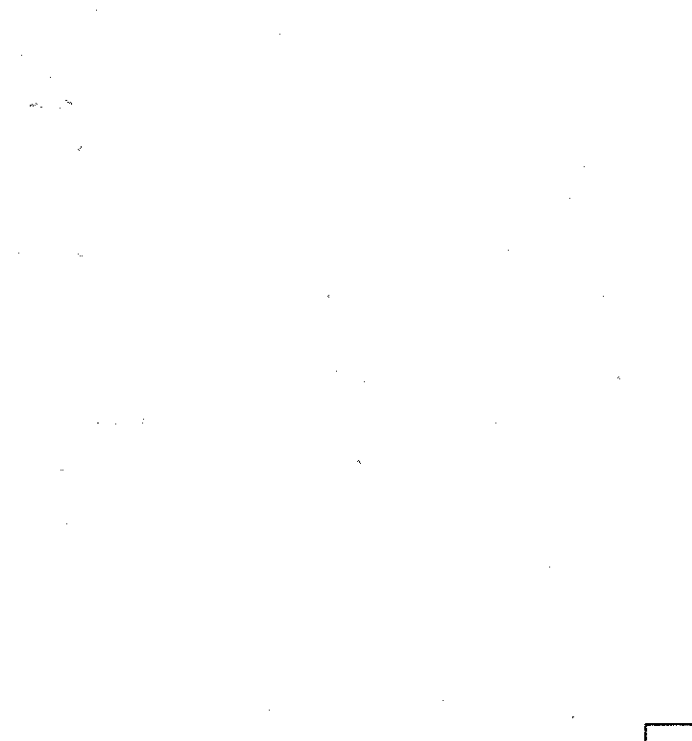
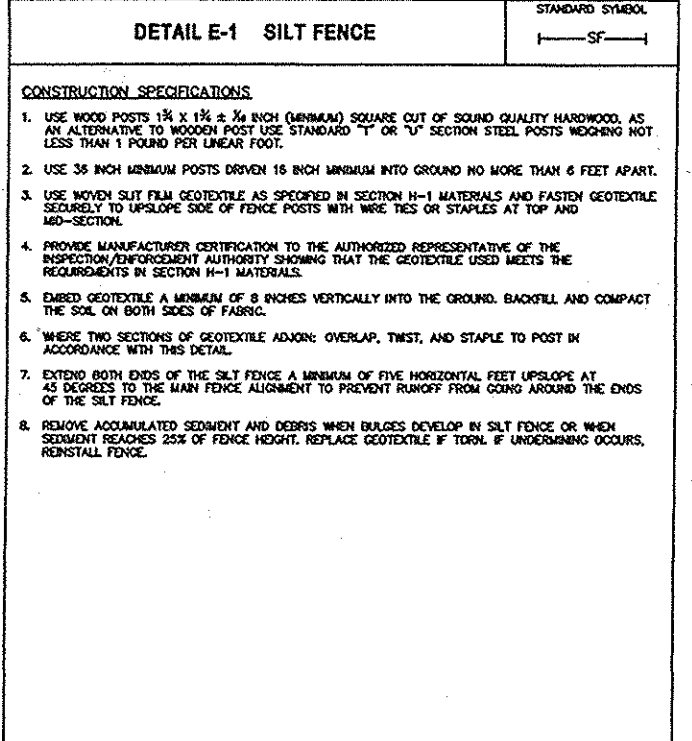
DEVELOPER
TRINITY QUALITY HOMES, INC.
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023



NO.	REVISION	DATE
1	REVISE PLAN PER LAYOUT ON F-15-105	11/2/15



SECTION	NO.	DATE	BY	DATE	BY
P-1	1	10/23/14	J.R. Rahn	10/23/14	J.R. Rahn
P-2	1	10/23/14	J.R. Rahn	10/23/14	J.R. Rahn
P-3	1	10/23/14	J.R. Rahn	10/23/14	J.R. Rahn
P-4	1	10/23/14	J.R. Rahn	10/23/14	J.R. Rahn



OWNER
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(410) 480-0023

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

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

J.R. Rahn / vs. 10/23/14
HOWARD S.C.D. DATE

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

Michael H. Vogel 9/10/14
DIRECTOR

APPROVED BY PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edlin 10/30/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Michael H. Vogel 10/31/14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael H. Vogel 10/31/14
DIRECTOR DATE

BY THE DEVELOPER:
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.

Michael H. Vogel 9/17/14
SIGNATURE OF DEVELOPER DATE

NOTES:

- ROAD AND CULVERT CONSTRUCTION AND THEIR CORRESPONDING EROSION AND SEDIMENT CONTROLS TO BE PERMITTED AND CONSTRUCTED UNDER F-14-049.
- SEE SHEETS 3 AND 5 OF 8 FOR PLAN VIEW AND ADDITIONAL NOTES AND DETAILS.
- STOCKPILES EXCEEDING 15' IN HEIGHT MUST BE BENCHED.
- EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE MINIMUM INTERVALS REQUIRED BY THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION & SEDIMENT CONTROL, WHICHEVER IS MORE RESTRICTIVE.
- ANY SEDIMENT CONTROLS THAT ARE DAMAGED OR INTERRUPTED BY CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.

SITE DEVELOPMENT PLAN
SITE, GRADING, EROSION, AND SEDIMENT CONTROL DETAILS
STELLA GLEN
LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7)
AND PLO LOTS 8, 12, & 13 (F-15-105)

TAX MAP: 36 GRID: 18
ELECTION DISTRICT: DPZ REF'S: ECP-13-024, CONT.#24-3108, PARCELS: 57, 58 & 417; L.8293 / F.433
WP-13-138, SP-13-008 & F-14-049, F-15-105
ZONED: R-20
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLCOTT CITY, MD 21043
TELL: 410.461.7666 FAX: 410.461.8911

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, EXPIRES SEPTEMBER 2014.

DESIGN BY: RHV
DRAWN BY: JMB/GAH
CHECKED BY: RHV
DATE: SEPTEMBER 2014
SCALE: AS SHOWN
W.O. NO.: 12-23

4 SHEET OF 8

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR
G/B	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20
G/uB	GLENVILLE-URBAN LAND-UDORTHERMS COMPLEX, 0 TO 8 PERCENT SLOPES	C	0.37
U/B	UDORTHERMS, HIGHWAY, 0 TO 65 PERCENT SLOPES	-	-

A-2. PERMEABLE PAVEMENTS

CONSTRUCTION CRITERIA

- EROSION AND SEDIMENT CONTROL: FINAL CONSTRUCTION OF PERMEABLE PAVEMENTS SHOULD BE COMPLETED PRIOR TO THE START OF PERMEABLE PAVEMENT CONSTRUCTION...

INSPECTION:

- DURING CONSTRUCTION OF SUB GRADE
- DURING PLACEMENT AND BACKFILL OF ANY DRAINAGE OR DISTRIBUTION SYSTEMS...

MAINTENANCE CRITERIA:

- PERMEABLE PAVEMENTS SHOULD BE MAINTAINED TO PREVENT CLOGGING AND TO MAINTAIN PROPER DRAINAGE CAPACITY...

N-1. DISCONNECTION OF ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.S.C.) SHOULD NOT BE LOCATED IN VEGETATED AREAS...

INSPECTION:

- A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAS BEEN MET...

MAINTENANCE CRITERIA:

- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS...

N-2. DISCONNECTION OF NON-ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.S.C.) SHOULD NOT BE LOCATED IN AREAS DESIGNATED FOR NON-ROOFTOP DISCONNECTIONS...

INSPECTION:

- A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT ADEQUATE TREATMENT AREAS 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...

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

- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS...

PROJECT: STELLA GLEN

DESIGNER: ROY DATE: 03/07/14

ROBERT H. VOGEL ENGINEERING, INC.

Table with 10 columns: DRAINAGE AREA #, TREATED AREA, FACILITY, ROOFTOP, NONROOFTOP, GRASS, RAINGARDEN, PERVIOUS, PAVEMENT, X1, X2, ISDV. Includes summary row: TOTAL AREA 7232.5 SF, TOTAL ESDV PROVIDED 2699.

PROJECT: STELLA GLEN

DESIGNER: ROY DATE: 03/07/14

ROBERT H. VOGEL ENGINEERING, INC.

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

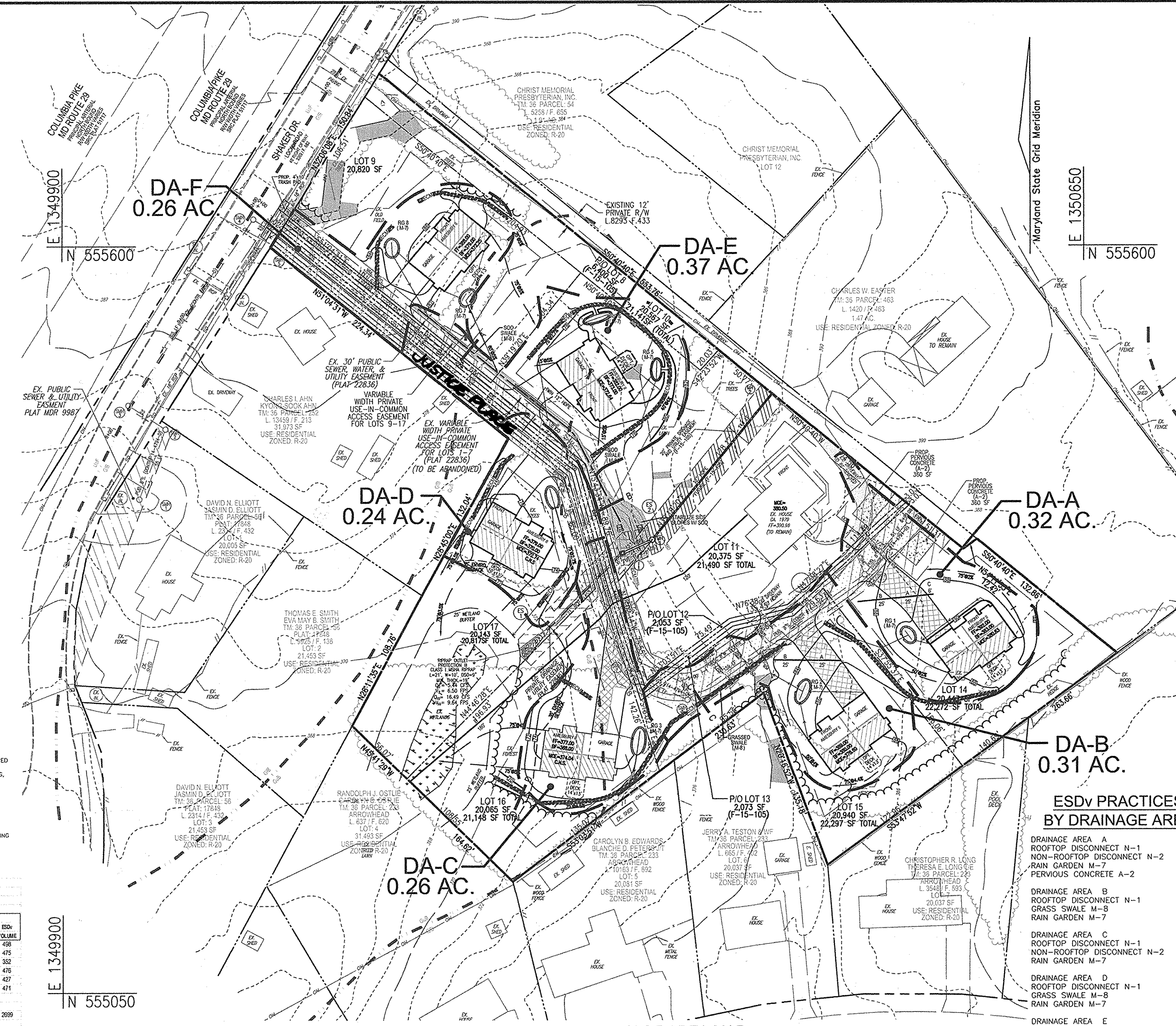
Table with 10 columns: DRAINAGE AREA, IMPERVIOUS AREA, GRASS AREA, TOTAL AREA, PERCENT IMPERVIOUS, R/V, MIN, MAX, ISDV, COMPACTED. Includes summary row: TOTAL AREA 7232.5 SF, TOTAL ESDV PROVIDED 2699.

SOILS LEGEND

Table with 3 columns: SYMBOL, NAME / DESCRIPTION, GROUP K-FACTOR. Includes entries for CLB, CLS, and UDF.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: 5-13-16
Chief, Division of Land Development: 5-17-16
Director: 5-17-16



APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BEDS

1. MATERIAL SPECIFICATIONS

- FILTERING MEDIA OR PLANTING SOIL: THE SOIL SHALL BE A UNIFORM MIXTURE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES...

3. CONSTRUCTION

- IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL...

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...

6. UNDERDRAINS

- UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA: PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE...

7. MISCELLANEOUS

- THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

B.4.B SPECIFICATIONS FOR PERMEABLE PAVEMENTS & REINFORCED TURF

- THESE SPECIFICATIONS INCLUDE INFILTRATION OF ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING...

1. PERVIOUS CONCRETE SPECIFICATIONS

- DESIGN THICKNESS - PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE CONCRETE SLAB SHALL SUPPORT THE TRAFFIC AND VEHICLE LOADS...

2. PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP)

- PAPER BLOCKS - BLOCKS SHOULD BE EITHER 3/8" OR 1/2" THICK, AND MEET ASTM C-336 OR ASTM A2321 REQUIREMENTS...

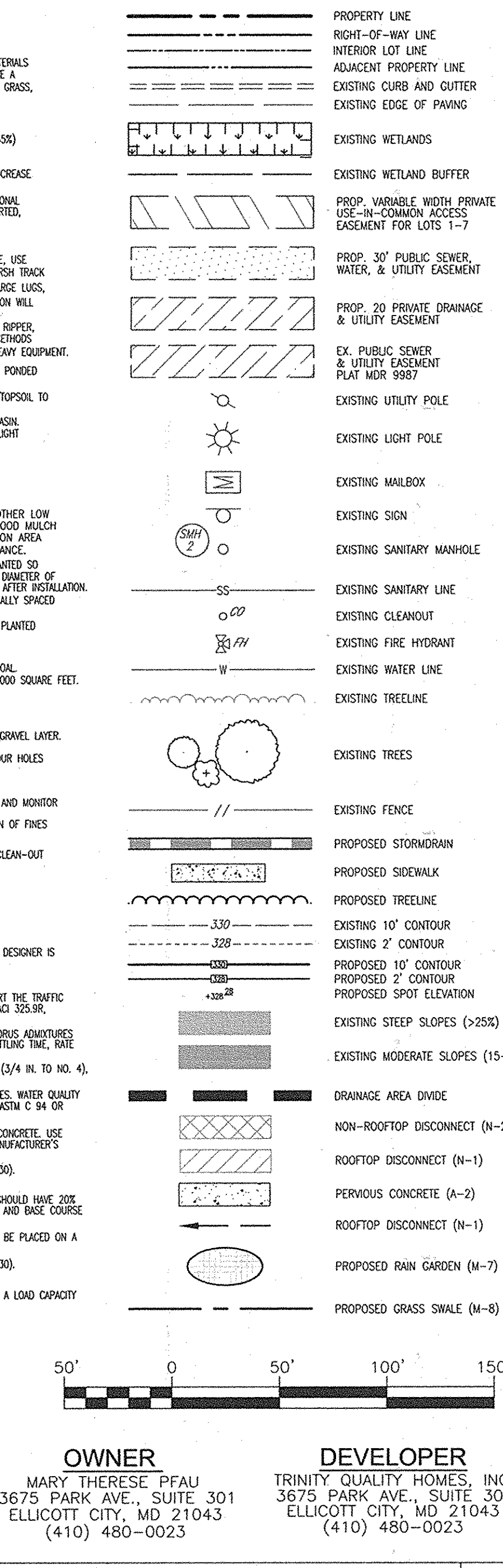
3. REINFORCED TURF

- REINFORCED GRASS PREVENTION (RGP) - WHETHER USED WITH GRASS OR GRAVEL, THE RGP THICKNESS SHALL BE AT LEAST 1-3/4" THICK WITH A LOAD CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.

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)

- 1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY...

LEGEND:



OWNER: MARY THERESE PFUA, 3675 PARK AVE., SUITE 301, ELLICOTT CITY, MD 21043, (410) 480-0023

DEVELOPER: TRINITY QUALITY HOMES, INC., 3575 PARK AVE., SUITE 100, ELLICOTT CITY, MD 21043, (410) 480-0023

Table with 3 columns: NO., REVISION, DATE. Includes entry: 1. REVISE LOT LINES, BRL'S EASEMENTS AND HOUSES PER NEW LAYOUT... 09/03/15

REVISED SITE DEVELOPMENT PLAN DRAINAGE AREA MAP AND SWM PLAN STELLA GLEN

LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7) AND P/O LOTS 8, 12 & 13 (F-15-105) RESIDENTIAL: SINGLE FAMILY DETACHED

TAX MAP: 36 GRID: 19, 6TH ELECTION DISTRICT, DPZ REF: ECP-13-024, CONT.#24-3108, PARCELS: 57, 58 & 417, L8293 / F.433, WP-13-138, SP-13-009 & F-14-049, F-15-105. ZONED: R-20

ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET, ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

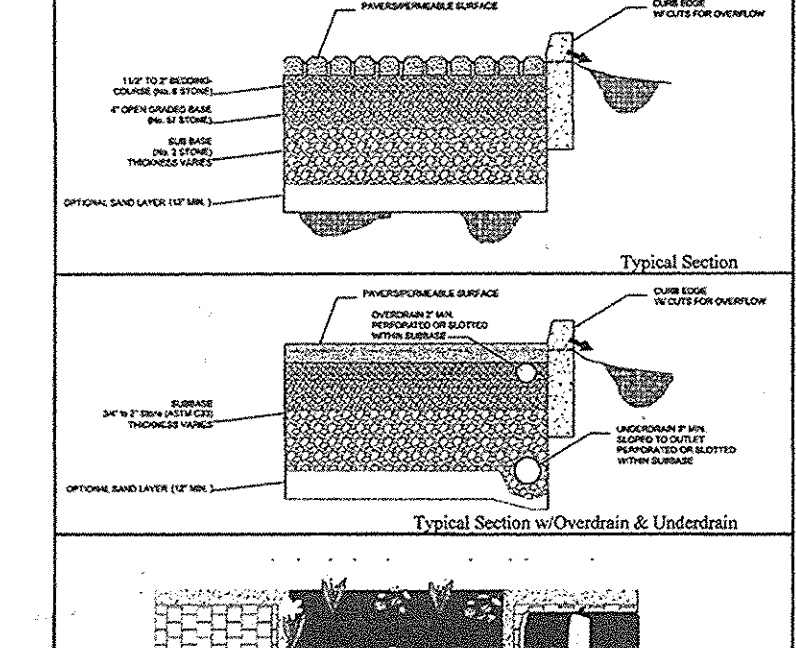
DESIGN BY: RHV, DRAWN BY: JMR/GAH, CHECKED BY: RHV, DATE: DECEMBER 2015, SCALE: AS SHOWN, W.O. NO.: 12-23, 6 SHEET OF 8

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. 1983, EXPIRATION DATE: 08-27-2018

STATE OF MARYLAND PROFESSIONAL ENGINEER ROBERT H. VOGEL, PE No.16193

FIGURE 5.3 Examples of Permeable Pavements



PERMEABLE PAVEMENT (A-2) DETAIL NOT TO SCALE

NOTE: GEOTECHNICAL ENGINEER TO PROVIDE SPECIFICATION AND MONITOR INSTALLATION.

TEST PITS

Table with 7 columns: TEST PIT, EAST GROUND ELEV., PROP. GROUND ELEV., # DEP. TO GROUNDWATER, MAX. ELEV. FOR GROUND WATER, MIN. TEST EXCAVATION FEET, FIELD EXCAVATION FEET. Includes rows for RGT, RGS, RGA, RGR, RGA, RGR.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

- 1. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

NOTE: THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGES, DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBGRADE.

3. THE OWNER SHALL USE DECISERS IN EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SLAB.

4. THE OWNER SHALL USE DECISERS IN EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SLAB.

5. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

6. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

7. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

8. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

9. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

10. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

11. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

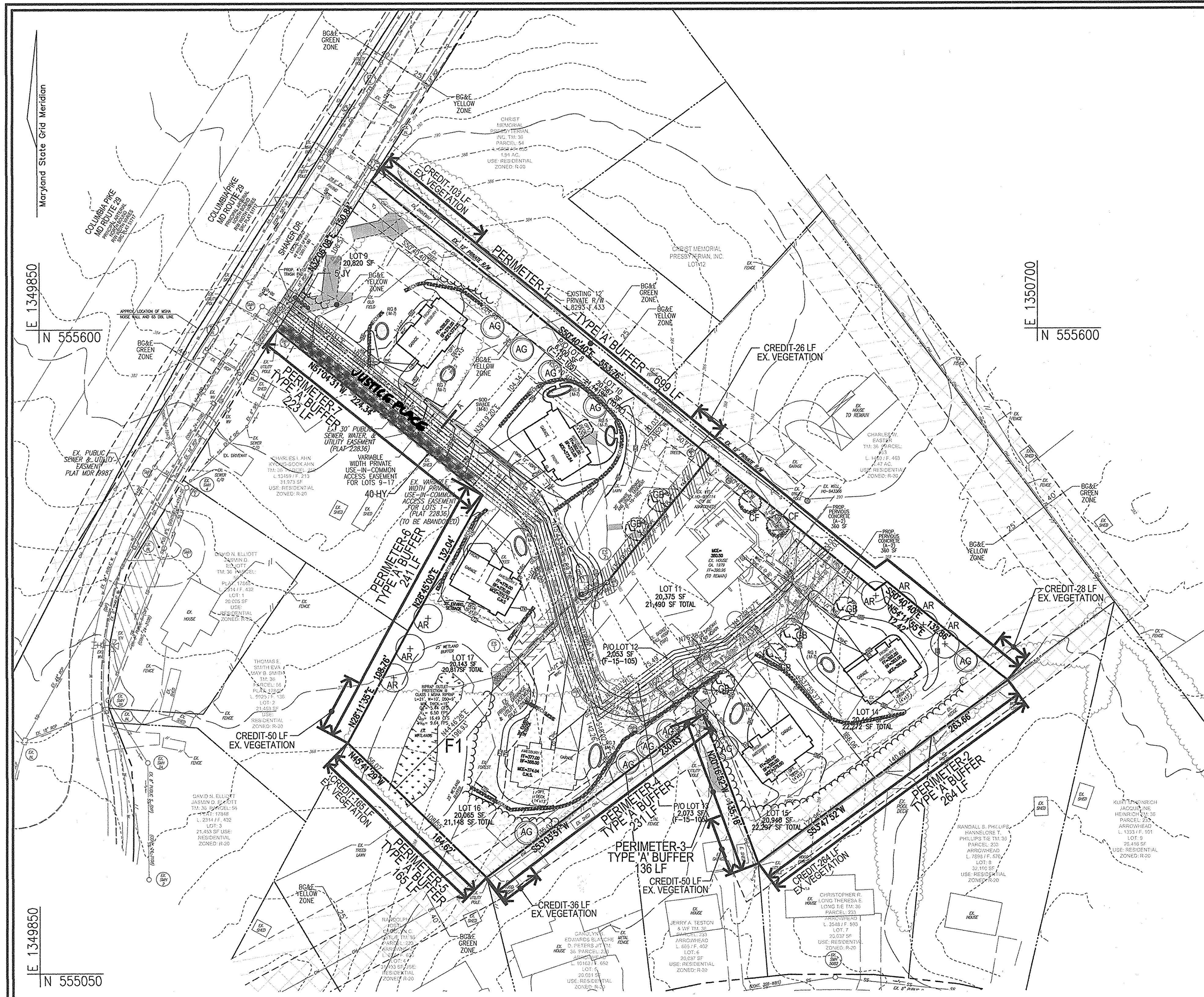
12. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

13. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

14. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

15. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...

16. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REMOVE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY...



LANDSCAPE & FOREST CONSERVATION PLAN
SCALE: 1"=50'



WETLAND DATA			
WETLAND SYSTEM	COMBINATION CLASSIFICATION	DOMINANT VEGETATION	SIZE
A	PFO/EM1A	ACER RUBRUM, IMPATIENS CAPENSIS, JUNCUS EFFUSUS, CAREX LURIDA, GLYCERIA STRATA, ONOCLEA SENSIBILIS	0.2 ACRES

FSD NOTES:
 1. NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR APPROPRIATE HABITAT WERE OBSERVED ON THE PROPERTY.
 2. SURROUNDING LAND USE IS MEDIUM-HIGH DENSITY RESIDENTIAL DEVELOPMENT.
 3. ALL FOREST ON THE SITE IS WITHIN STAND F-1.
 4. NO SPECIMEN TREES ARE PRESENT ON THE SUBJECT PROPERTY.

FOREST STAND DATA				
KEY	COMMUNITY TYPE	ACREAGE	DOMINANT VEGETATION	PRIORITY ACREAGE
F1	SUCCESSIONAL	0.6 NTA	ACER RUBRUM, ACER SACCHARINUM, ACER NEGUNDO, PRUNUS SEROTINA, JUGLANS NIGRA	0.6 WETLANDS AND BUFFERS

John Canoles
 5/10/16
 DNR QUALIFIED FOREST PROFESSIONAL
 JOHN CANOLES

FOREST CONSERVATION:
 FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY THE PLACEMENT OF 2.76 AC. (2:1 RATIO) OF RETENTION INTO AN OFF-SITE FOREST CONSERVATION BANK IDENTIFIED AS DENSITY SOLUTIONS, APPROVED UNDER SDP-13-059FC, WHICH IS SUFFICIENT TO MEET THE 1.28 AC. OF REQUIRED REFORESTATION AND 0.10 AC. OF REQUIRED AFFORESTATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Eshen 5-13-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Vest Sedovan 5-17-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Walter J. Joffe 5-17-16
 DIRECTOR DATE

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 EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
Mary J. Paw 5/10/16
 SIGNATURE OF DEVELOPER DATE

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 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 HED 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 G & 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 CONVEYANCE ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- INTERIOR LOT LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVING
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7
- PROP. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT
- PROP. 20' PRIVATE DRAINAGE & UTILITY EASEMENT
- EX. PUBLIC SEWER & UTILITY EASEMENT PLAT NO. 3987
- 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 TRENCHLINE
- EXISTING TREES
- EXISTING FENCE
- PROPOSED STORMDRAIN
- PROPOSED SIDEWALK
- PROPOSED TRENCHLINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING STEEP SLOPES (>25%)
- EXISTING MODERATE SLOPES (15-25%)
- EXISTING BGE GREEN ZONE
- EXISTING BGE YELLOW ZONE
- PROPOSED FOREST CLEARING 0.38 ACRES
- PROPOSED FOREST CONSERVATION SIGN
- PROPOSED RAIN GARDEN (4-7')

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$8,850.00 FOR THE REQUIRED 17 SHADE TREES AND 45 SHRUBS SHALL BE POSTED WITH F-14-049.
- THERE IS NO 100-YEAR FLOODPLAIN WITHIN THE LIMITS OF THIS PROJECT.
- WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 12, 2012, AND APPROVED JUNE 20, 2013. THERE ARE NO PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.
- 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 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JUNE, 2012 BY ROBERT H. VOGEL ENGINEERING, INC.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AN FIELD RUN TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOURS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 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.
- BGE HAS REVIEWED AND APPROVED PROPOSED TRASH PAD SCREENING AND PERIMETER TREE PLANTINGS.

Forest Conservation Worksheet 2.2

Net Tract Area								
A. Total Tract Area								A = 3.68
B. Deductions								B = 0.00
C. Net Tract Area								C = 3.68
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	1	0	0	0	0		
D. Afforestation Threshold (Net Tract Area x 20%)								D = 0.74
E. Conservation Threshold (Net Tract Area x 25%)								E = 0.92
Existing Forest Cover	Existing Forest Cover within the Net Tract Area							
F. Area of Forest Above Conservation Threshold								F = 0.64
G. Area of Forest Above Conservation Threshold								G = 0.00
Break Even Point	Break Even Point							
H. Forest Clearing Permitted Without Mitigation								H = 0.64
I. Total Area of Forest to be Retained								I = 0.00
Proposed Forest Clearing	Total Area of Forest to be Cleared							
J. Total Area of Forest to be Cleared								J = 0.64
K. Total Area of Forest to be Retained								K = 0.00
Planting Requirements	Reforestation for Clearing Above the Conservation Threshold							
L. Reforestation for Clearing Above the Conservation Threshold								L = 0.00
M. Reforestation for Clearing Below the Conservation Threshold								M = 1.28
N. Credit for Retention above the Conservation Threshold								N = 0.00
P. Total Reforestation Required								P = 1.28
Q. Total Afforestation Required								Q = 0.10
R. Total Planting Requirement								R = 1.38

2.76 Acres to be addressed via purchase of off site forest retention bank

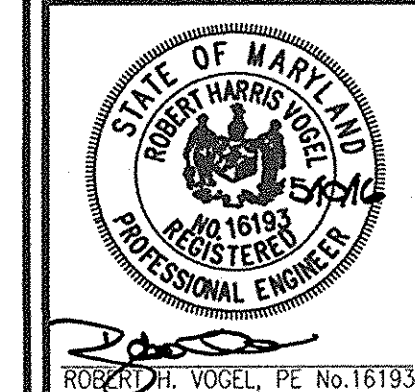
OWNER
 MARY THERESE PFALU
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER
 TRINITY QUALITY HOMES, INC.
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
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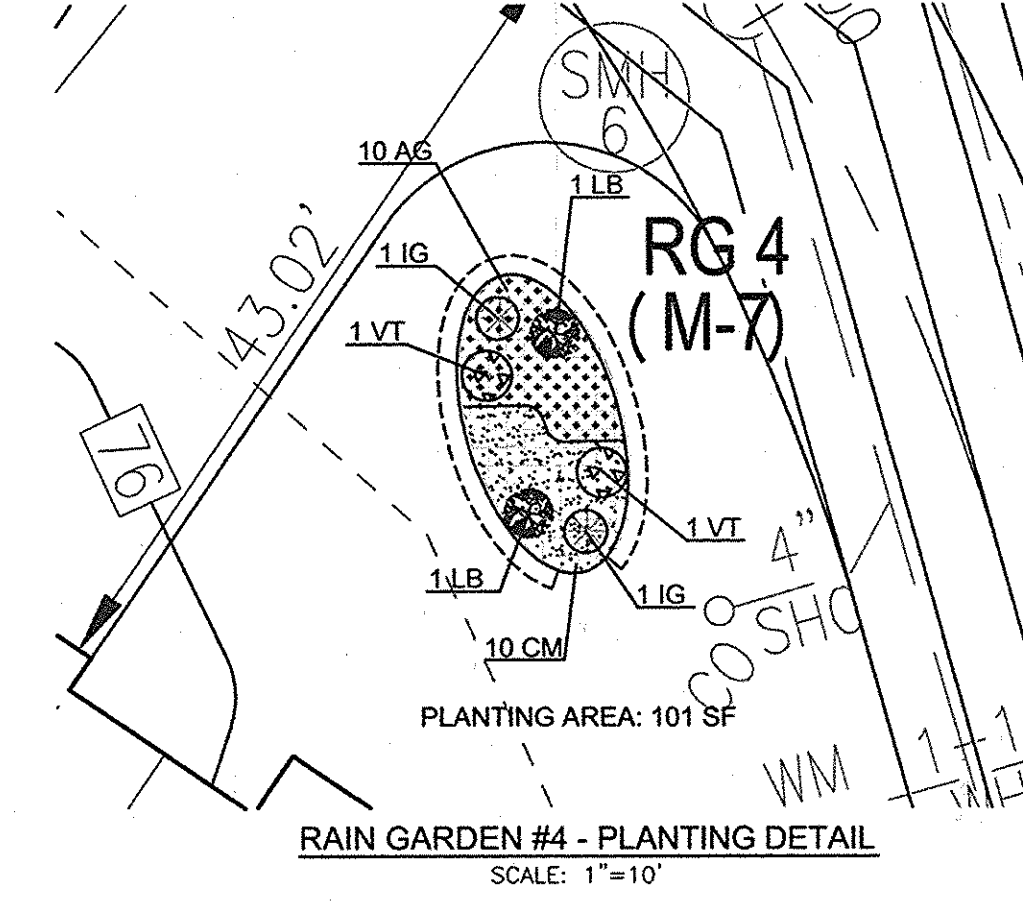
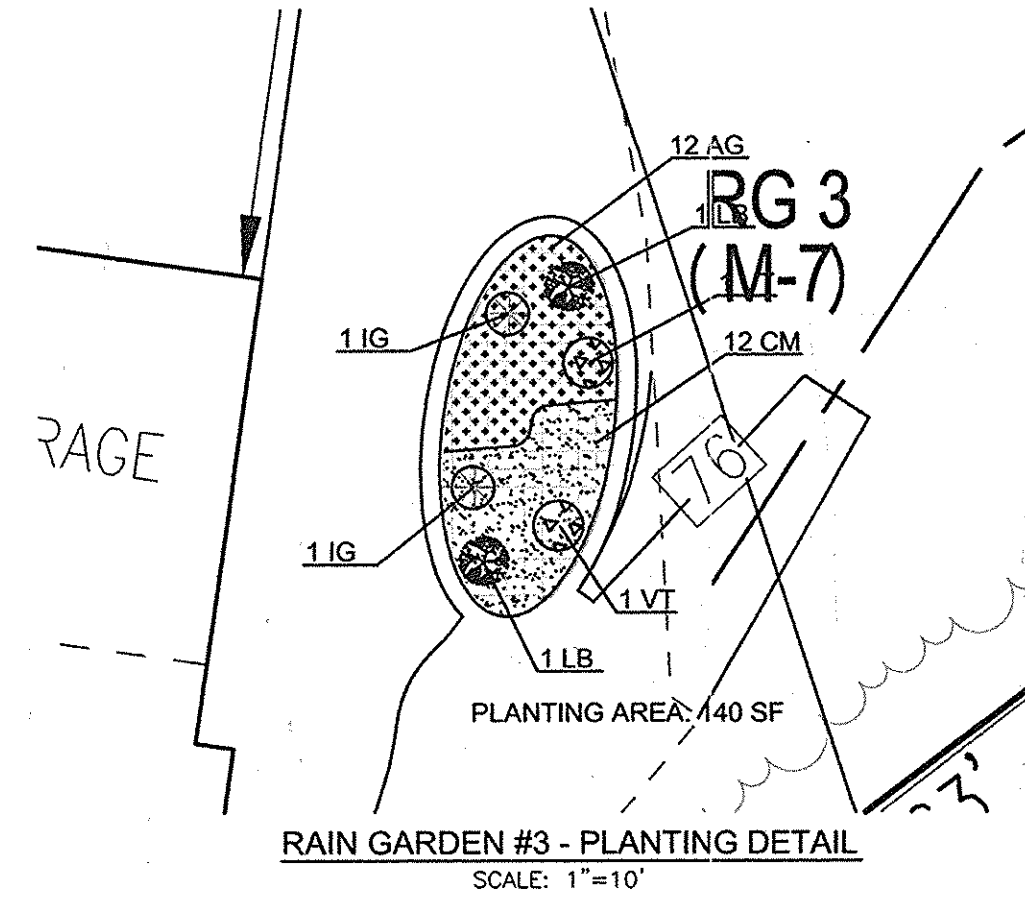
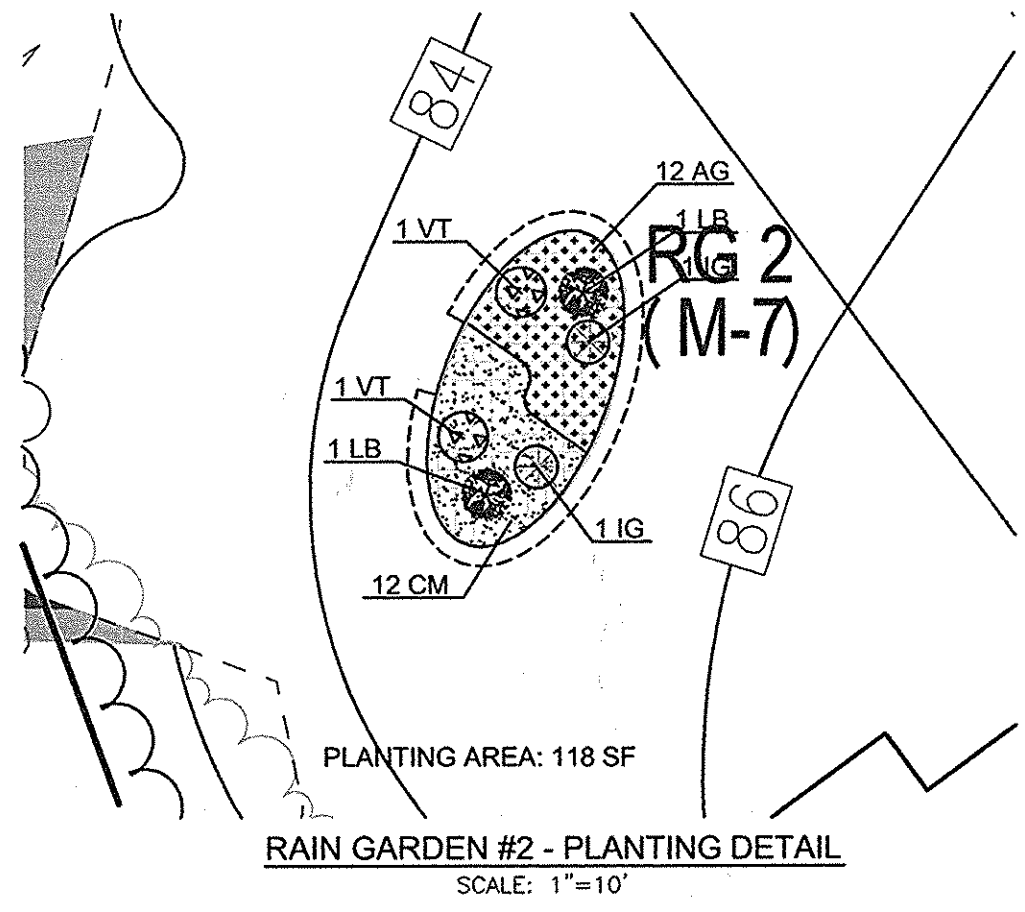
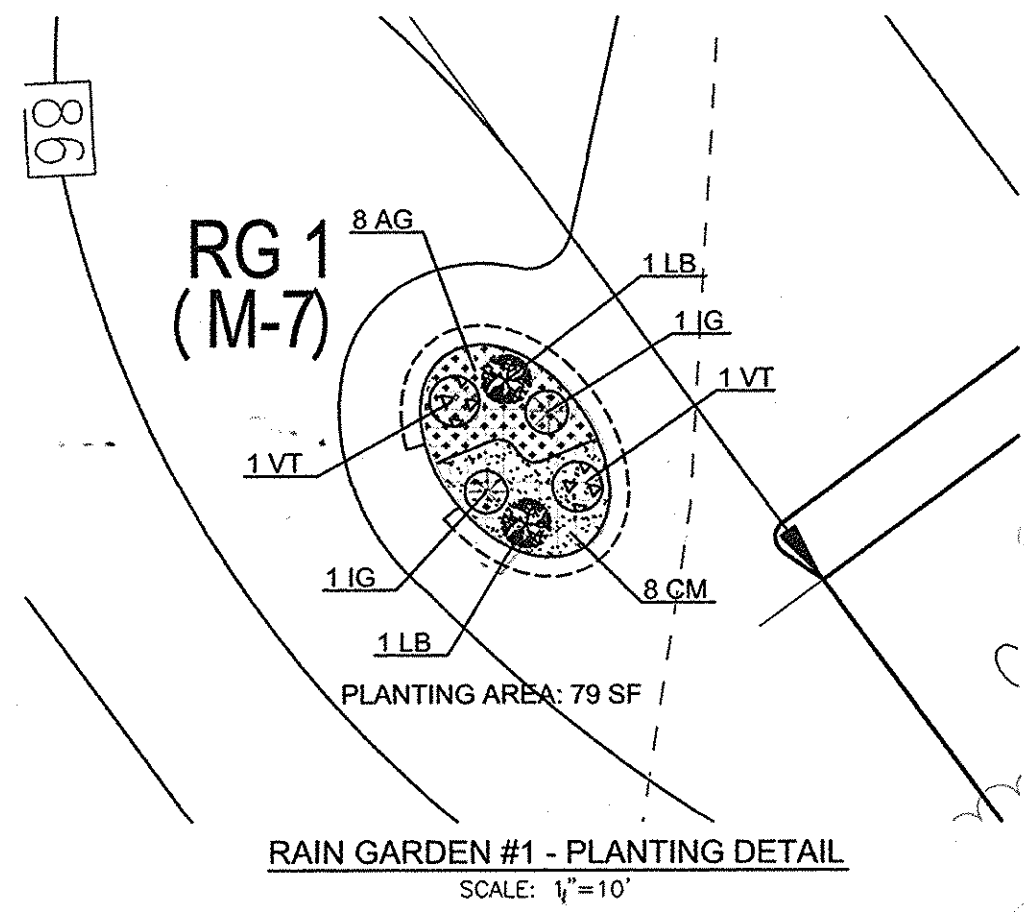
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1	REVISE LOT LINES, BRL'S EASEMENTS AND HOUSES PER NEW LAYOUT	09/03/15

REVISED SITE DEVELOPMENT PLAN
LANDSCAPE AND FOREST CONSERVATION PLAN
STELLA GLEN
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 DESIGN BY: RHV
 DRAWN BY: JMR/GAH
 CHECKED BY: RHV
 DATE: DECEMBER 2015
 SCALE: AS SHOWN
 W.O. NO.: 12-23
 7 SHEET OF 8



RAIN GARDEN #1 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
8	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
8	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

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

RAIN GARDEN #2 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
12	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
12	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

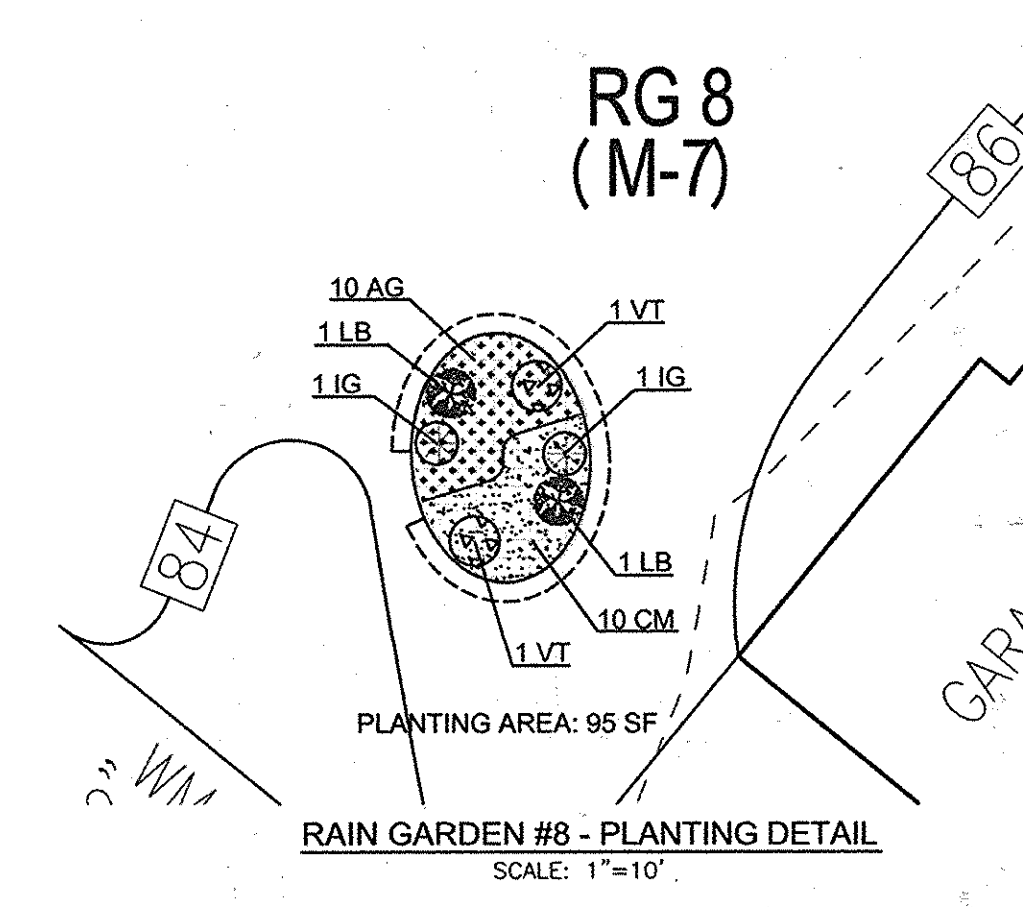
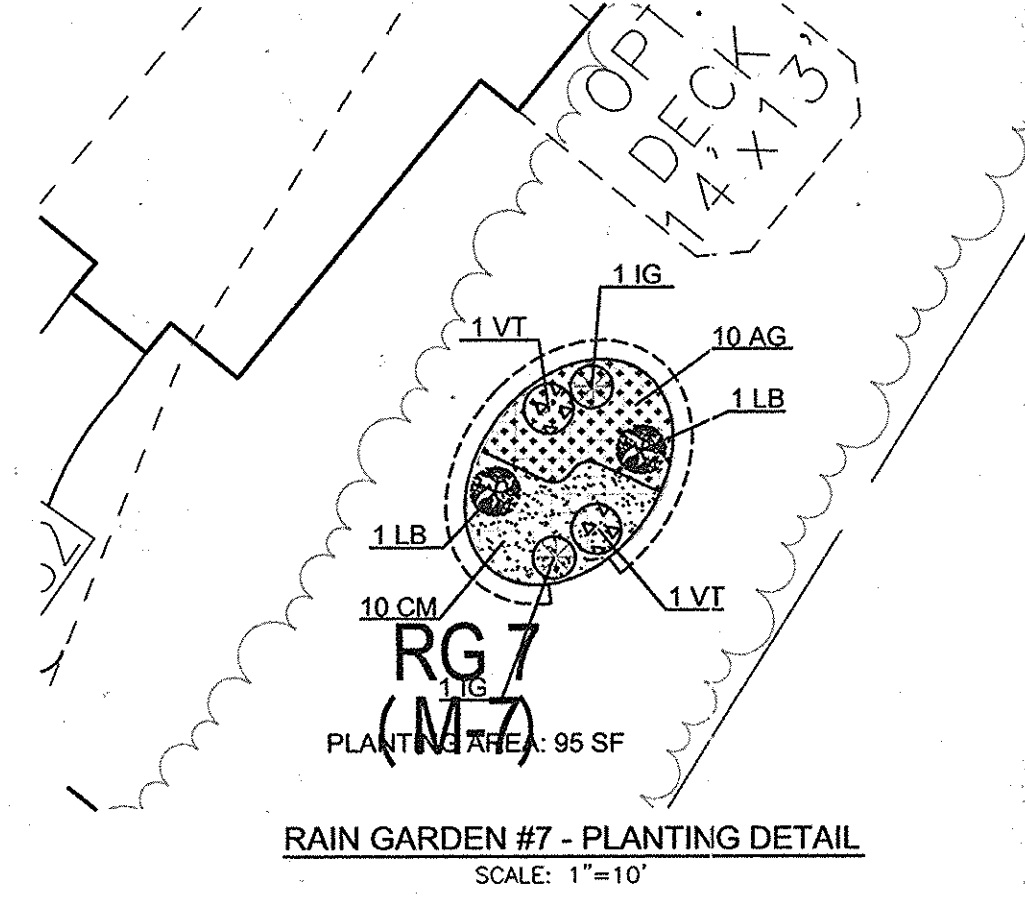
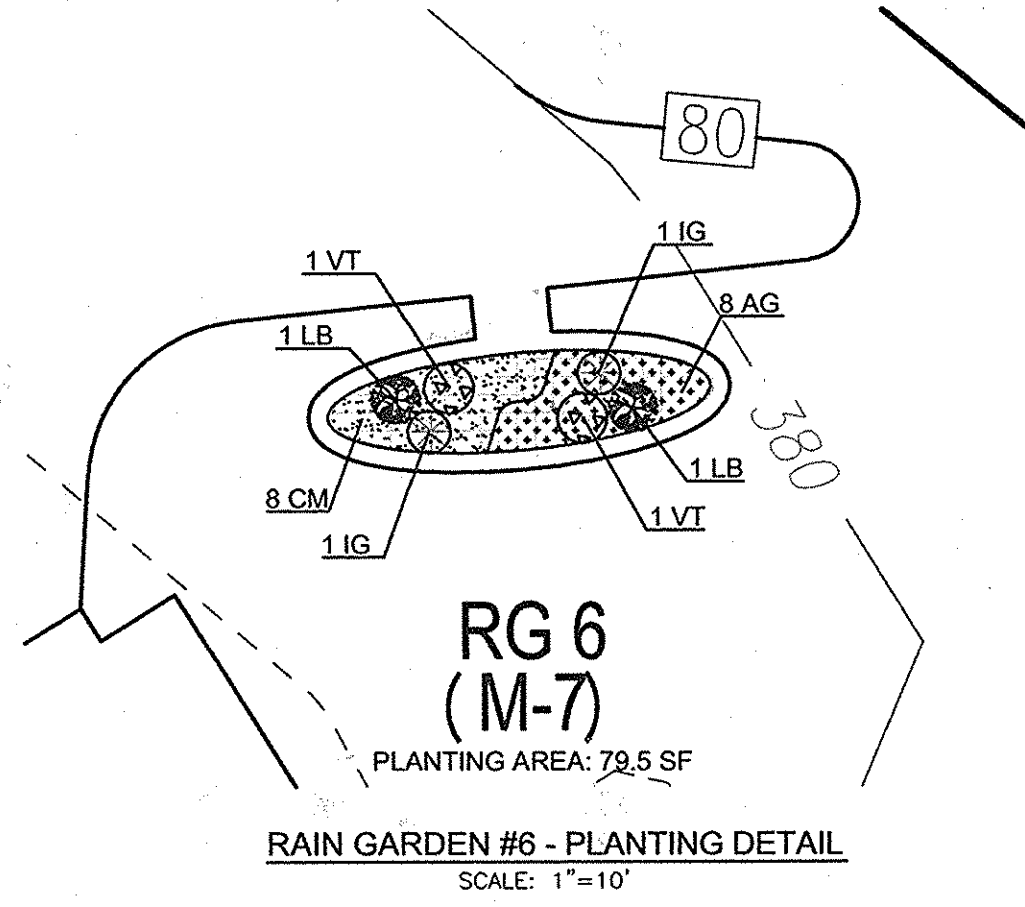
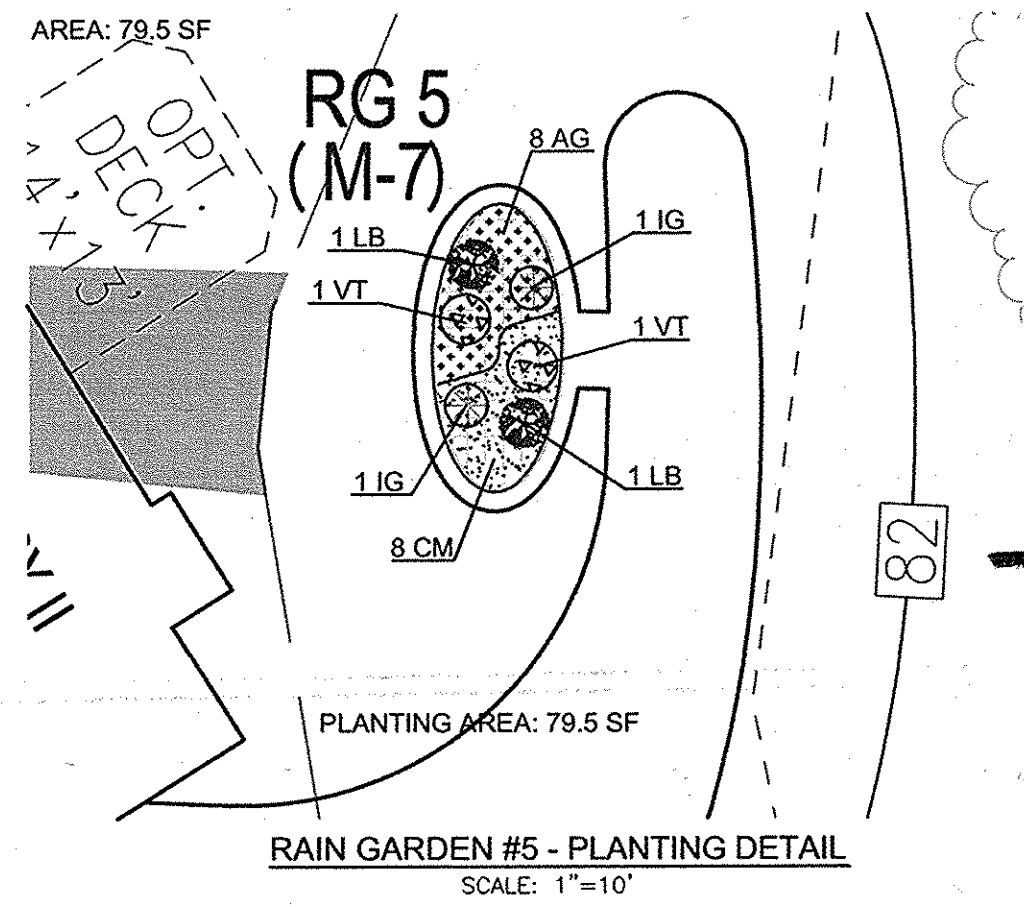
118 SF X 75% X .0229 STEMS PER SQUARE FOOT = 2 PLANTS REQUIRED
2 PROVIDED

RAIN GARDEN #3 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
12	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
12	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

140 SF X 75% X .0229 STEMS PER SQUARE FOOT = 3 PLANTS REQUIRED
3 PROVIDED

RAIN GARDEN #4 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
10	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
10	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

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



RAIN GARDEN #5 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
8	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
8	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

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

RAIN GARDEN #6 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
8	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
8	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

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

RAIN GARDEN #7 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
10	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
10	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

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

RAIN GARDEN #8 PLANTING SCHEDULE				
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS	
2	VIBURNUM TRILOBUM AMERICAN Highbush Cranberry	5 GALLON	CONT	
2	ILEX GLABRA 'COMPACTA' Compact Inkberry	3 GALLON	CONT	
2	LINDEN BENZON Spicebush	3 GALLON	CONT	
10	CONVALLARIA MAJALIS Lily-of-the-Valley	1 QT.	12" O.C.	
10	ACORUS GRAMINEUS 'OGON' Golden Variegated Sweet Flag	1 QT.	12" O.C.	

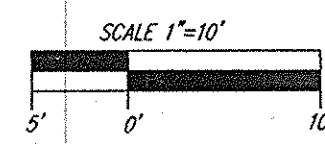
95 SF X 75% X .0229 STEMS PER SQUARE FOOT = 2 PLANTS REQUIRED
2 PROVIDED

"RAIN GARDEN" PLANTING SCHEDULE NOTES:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT MAN 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.
- RAIN GARDEN AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (.0229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESSD SUMMARY.
- FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10-30-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 10-31-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 10/31/14
 DIRECTOR DATE



NOTE:
SEE SHEET 6 FOR RAIN GARDEN SECTION DETAIL.

NO.	REVISION	DATE
1	REVISE PLAN PER LAYOUT ON F-15-105	11-12-15

**SITE DEVELOPMENT PLAN
RAIN GARDEN PLANTING DETAILS
STELLA GLEN
LOTS 9-11 & 14-17 (FORMERLY LOTS 1-7)
AND PLO LOTS 8, 12, & 13 (F-15-105)**

TAX MAP: 36 GRID: 19 ZONED: R-20
6TH ELECTION DISTRICT
DPZ REF'S: ECP-13-024, CONT.#24-3108, PARCELS: 57, 58 & 417; L8293 / F.433
WP-13-138, SP-13-009 & F-14-049, F-15-105 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS**
8407 MAIN STREET TEL: 410-461-2666
ELLICOTT CITY, MD 21043 FAX: 410-461-2666

OWNER: MARY THERESE 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
 DESIGN BY: RHV
 DRAWN BY: JMS/GAH
 CHECKED BY: RHV
 DATE: SEPTEMBER 2014
 SCALE: AS SHOWN
 W.O. NO.: 12-23
 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. MY LICENSE NO. IS 91214 AND MY EXPIRATION DATE IS 09-30-2014.
 8 SHEET OF 8