

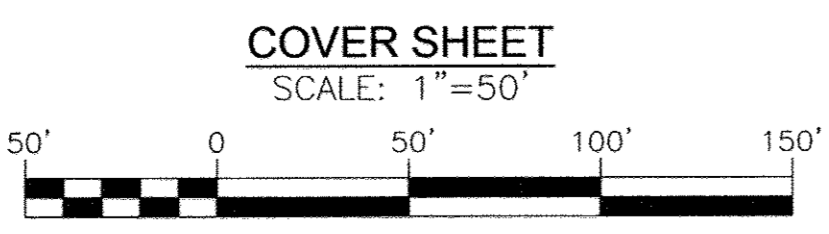
GENERAL NOTES

- 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 MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
3. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
MISS UTILITY 1-800-257-7777
VERIZON TELEPHONE COMPANY 1-410-954-6281
HOWARD COUNTY BUREAU OF UTILITIES 1-800-393-3553
A&T CABLE LOCATION DIVISION 410-590-4620
B.G.&E. CO. CONTRACTOR SERVICES 410-590-4620
B.G.&E. CO. UNDERGROUND DAMAGE CONTROL 410-590-4620
STATE HIGHWAY ADMINISTRATION 410-531-5533
4. THIS PRELIMINARY EQUIVALENT SKETCH PLAN IS SUBJECT TO THE FOLLOWING DPZ FILES: ECP-13-024 (APPROVED 01/14/2013), CONT. #24-3108, WP-13-138
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 2012.
6. THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 2012.
7. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
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 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 TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO BIO-RETENTION FACILITIES (M-6), GRASS SWALES (M-8), ROOFTOP DISCONNECTS (N-1), NON-ROOFTOP DISCONNECTS (N-2), AND PERVIOUS CONCRETE (A-2) AT THE END OF THE USE-IN-COMMON DRIVEWAY. FACILITIES TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
12. WATER PROVIDED FOR THIS PROJECT IS PUBLIC. CONTRACT NUMBER 24-3108.
13. SEWER PROVIDED FOR THIS PROJECT IS PUBLIC. CONTRACT NUMBER 24-3108.
14. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
15. 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.
16. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
17. THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL HAVE MINIMAL IMPACT ON EXISTING ENVIRONMENTAL FEATURES AND BUFFERS.
18. 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. CONTRACTORS 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.
19. 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.
20. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY.
21. THERE IS NO 100-YR FLOODPLAIN WITHIN THE LIMITS OF THIS SITE.
22. SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
23. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 12, 2012. THERE ARE NO PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.
24. FOREST STAND DELINEATION PLAN WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 12, 2012. A TOTAL OF 7 LOTS ARE PROPOSED UNDER THIS PLAN.
25. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
26. 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 SPECIMEN TREES LOCATED ON THIS SITE.
29. FOREST CONSERVATION REQUIREMENTS AS SET FORTH IN SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL: NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
30. THE FOREST CONSERVATION OBLIGATION TO BE FULFILLED BY THE PLACEMENT OF 2.76 AC. (2:1 RATIO) INTO RETENTION EASEMENT, WITHIN AN EXISTING FOREST CONSERVATION BANK IDENTIFIED AS BEHAVIOR SOLUTIONS, APPROVED UNDER SEP-13-061FC.
31. UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.02 FOR THE USE-IN-COMMON DRIVEWAY ENTRANCE AT SHAKER DRIVE.
32. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY 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.
c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% CHANGE AND MINIMUM OF 45-FOOT DEPTH TURNING RADIUS.
d) STRUCTURES (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.
33. THERE IS AN EXISTING HOUSE TO REMAIN WHICH SHALL BE LOCATED ON LOT 3. THE EXISTING DRIVEWAY TO LOT 3 SHALL BE REMOVED PRIOR TO RELOCATION OF THE FINAL PLAT AND ACCESS TO LOT 3 SHALL BE FROM UIC SHARED DRIVEWAY FOR LOTS 1 TO 7. ANY NEW ADDITIONS OR NEW CONSTRUCTION TO THE EXISTING HOUSE SHALL CONFORM TO SETBACKS AS SHOWN ON THE FINAL PLAT FOR THIS SUBDIVISION.
34. SHAKER DRIVE IS NOT A SCENIC ROAD.
35. LOTS 1-7 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. A USE-IN-COMMON MAINTENANCE AGREEMENT FOR THE SHARED DRIVEWAY SHALL BE RECORDED SIMULTANEOUSLY WITH THE FINAL PLAN.
36. PERIMETER LANDSCAPING AND TRASH PAD SCREENING FOR THIS DEVELOPMENT SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. POSTING OF FINANCIAL SURETY IS DEFERRED UNTIL FINAL PLAT SUBMISSION.
37. DEED REFERENCE: L 8293/F. 433
38. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC., DATED JULY 12, 2012, AND WAS APPROVED ON 6/19/2013
39. THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT.
40. REFUSE COLLECTION, SNOW REMOVAL AND MAINTENANCE FOR LOTS 1-7 SHALL BE PROVIDED AT THE JUNCTION OF THE PRIVATE USE-IN-COMMON ACCESS EASEMENT AND THE EXISTING ROAD RIGHT-OF-WAY.
41. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT EACH DRIVEWAY ACCESS POINT ONTO SHAKER DRIVE AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-513-5752 FOR DETAILS AND COST ESTIMATES.
42. CERTIFIED TEST PITS HAVE BEEN PROVIDED TO VERIFY THAT GROUNDWATER AND ROCK ARE NOT PRESENT AT RAIN GARDEN AND MICRO-BIORETENTION LOCATIONS.
43. 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.
44. REFERENCE: WP-13-138, DENIED ON MARCH 25, 2013, TO ALLOW FOREST CONSERVATION EASEMENTS ON LOTS LESS THAN 10 ACRES.
45. B.G.&E HAS APPROVED PERIMETER LANDSCAPING FOR THIS PROJECT.
46. A FEE-IN-LIEU OF OPEN SPACE FOR SIX LOTS SHALL BE PROVIDED WITH THE FINAL PLAN SUBMISSION.
47. 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.

SHEET INDEX table with columns: DESCRIPTION, SHEET NO. Rows include COVER SHEET (1 OF 5), SITE LAYOUT PLAN (2 OF 5), SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN (3 OF 5), DRAINAGE AREA MAP (4 OF 5), LANDSCAPE AND FOREST CONSERVATION PLAN (5 OF 5).

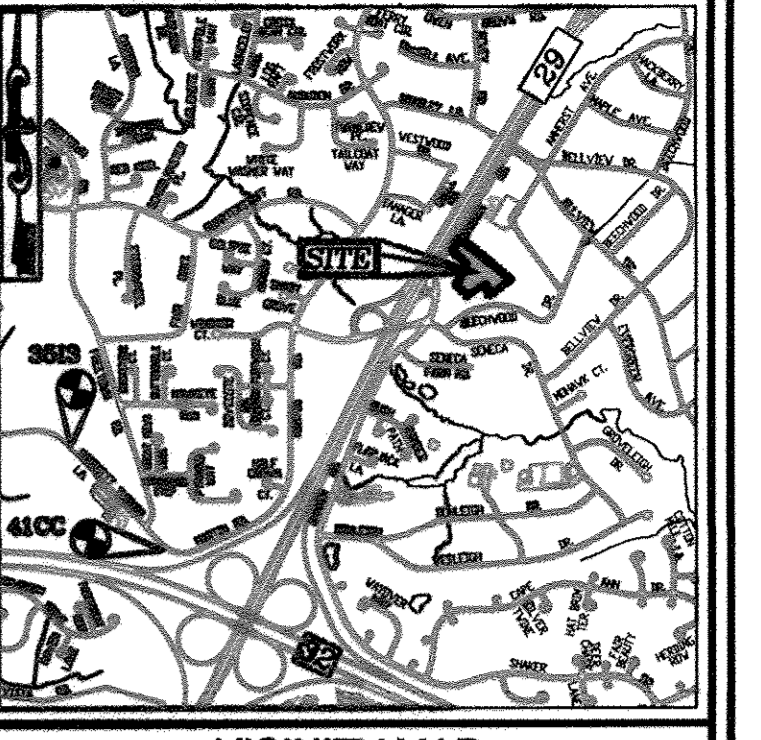
MINIMUM LOT SIZE CHART table with columns: LOT, GROSS AREA, PIPESTEM AREA, NET AREA, MIN. LOT SIZE. Rows 1-7 with corresponding area values.

TENTATIVELY APPROVED DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY. Signature of Planning Director, Date 9/25/12.



PRELIMINARY EQUIVALENT SKETCH PLAN
STELLA GLEN
LOTS 1-7
TAX MAP: 36 PARCELS: 57, 58 & 417
HOWARD COUNTY, MARYLAND

COORDINATE TABLE with columns: NO., NORTH, EAST. Rows 104-314 with coordinate values.



VICINITY MAP SCALE: 1"=2,000'. ADC MAP COORDINATE: 4935, B-10. BENCHMARKS: HOWARD COUNTY BENCHMARK 3515 (CONC. MON.) N 55373.68 E 1346098.09 ELEV. 415.34

LEGEND table defining symbols for PROPERTY LINE, RIGHT-OF-WAY LINE, ADJACENT PROPERTY LINE, EXISTING CURB AND GUTTER, EXISTING EDGE OF PAVING, EXISTING WETLANDS, EXISTING WETLAND BUFFER, PROP. VARIABLE WIDTH PRIVATE 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. 9987.

SITE DATA

LOCATION: TAX MAP 36, BLOCK 19 PARCEL: 57, 58 & 417. 10580 SHAKER DRIVE, COLUMBIA, MARYLAND. DEED REFERENCE: L 8293 / F. 433. 6TH ELECTION DISTRICT. PRESENT ZONING: R-20. GROSS AREA OF PROJECT: 3.68 AC. LIMIT OF DISTURBANCE: 2.32 AC. PROPOSED USE OF SITE: RESIDENTIAL (SFD). NUMBER OF RESIDENTIAL LOTS PROPOSED: 7 LOTS. AREA OF RESIDENTIAL LOTS PROPOSED: 3.68 AC. AREA OF PROPOSED ROADS AND OPEN SPACE DEDICATION: 0.00 AC. OPEN SPACE REQUIRED: 0.00 AC. OPEN SPACE PROVIDED: 0.00 AC. IMPERVIOUS AREA: 0.79 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.

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

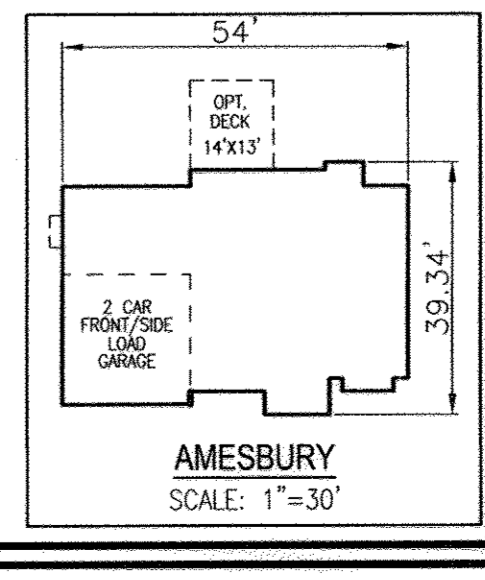
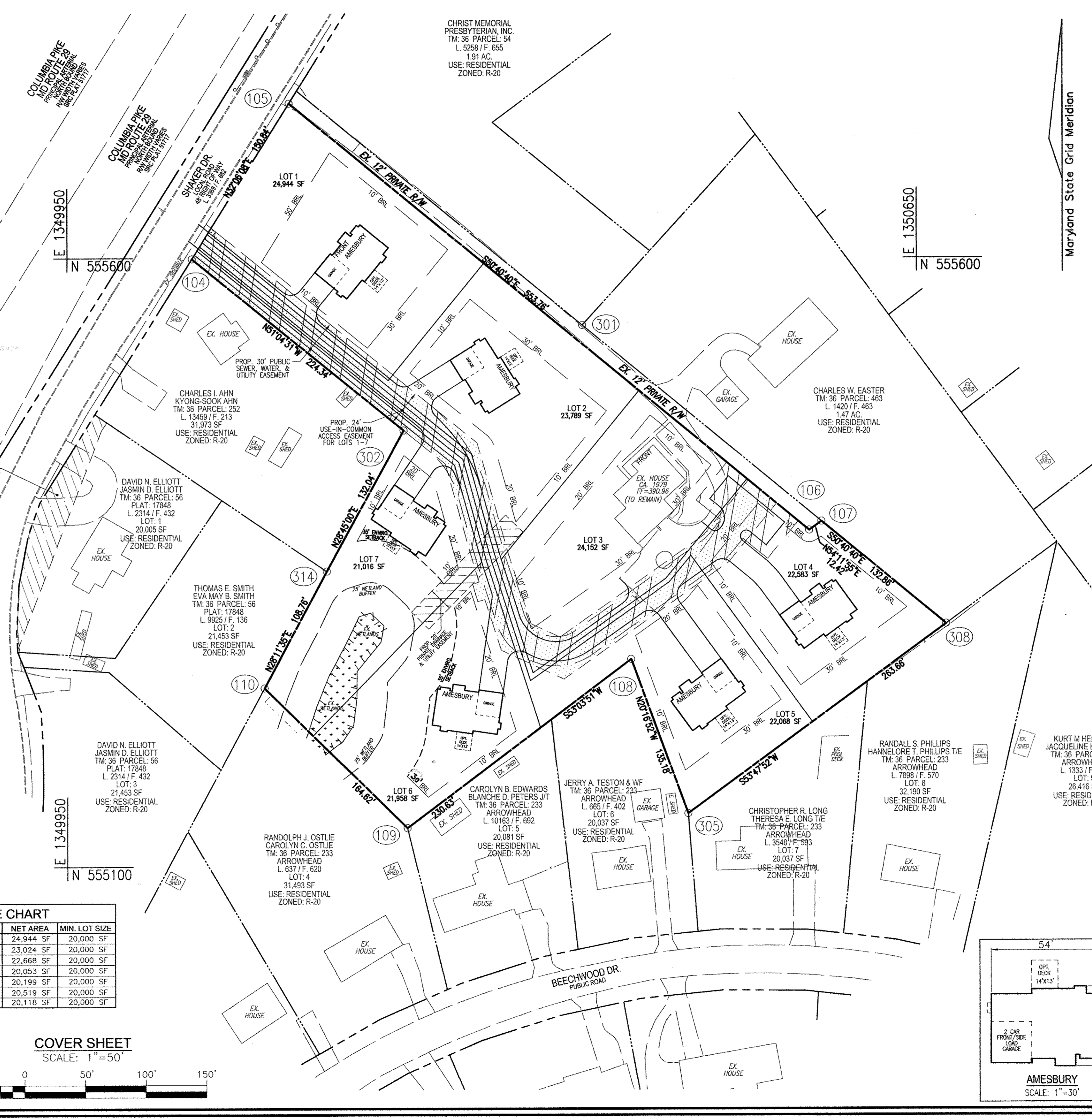
Table with columns: NO., REVISION, DATE. Multiple rows for revisions.

PRELIMINARY EQUIVALENT SKETCH PLAN COVER SHEET STELLA GLEN LOTS 1-7 TAX MAP: 36 PARCELS: 57, 58 & 417 HOWARD COUNTY, MARYLAND ZONED: R-20

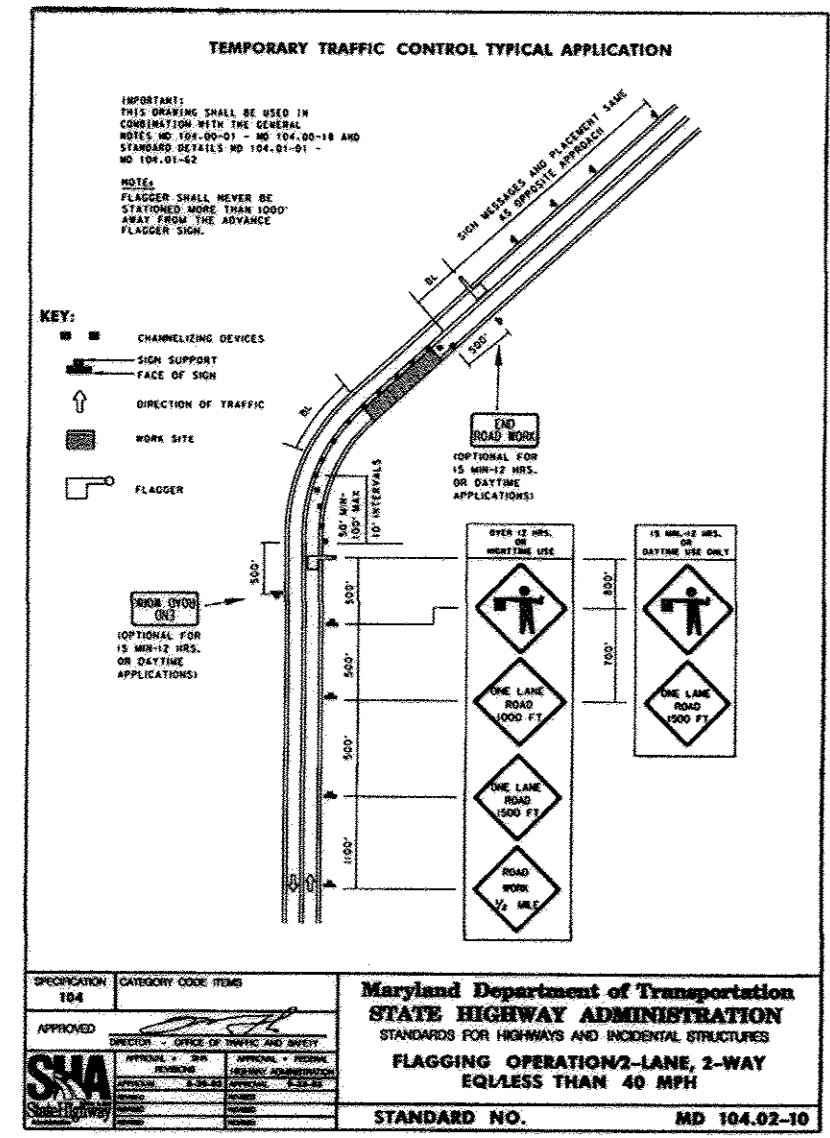
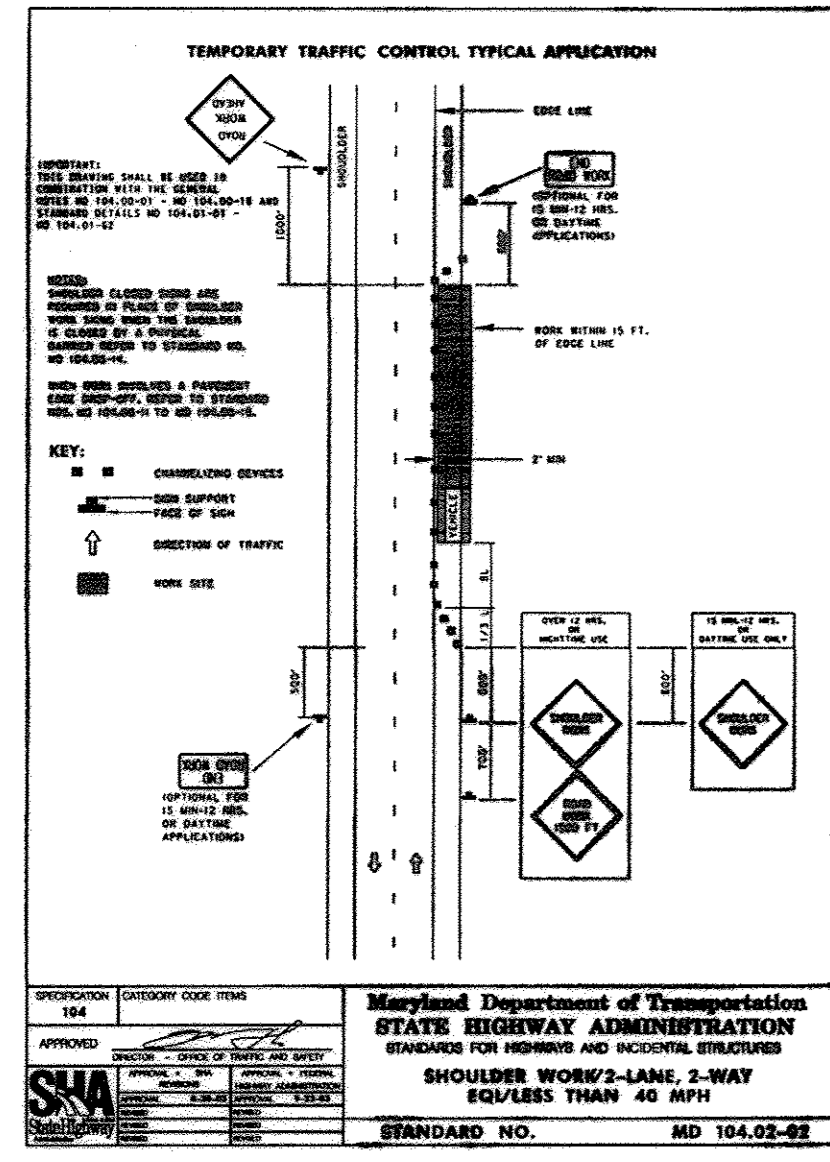
ROBERT H. VOGEL ENGINEERS - SURVEYORS - PLANNERS 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8961

DESIGN BY: RHV, DRAWN BY: JMR, CHECKED BY: RHV, DATE: August 2013, 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. 16183, EXPIRATION DATE: 09-27-2014. 1 SHEET OF 5



LOT	GROSS AREA	PIPESTEM AREA	NET AREA	MIN. LOT SIZE
1	24,944 SF	N/A	24,944 SF	20,000 SF
2	23,789 SF	785 SF	23,024 SF	20,000 SF
3	24,152 SF	1,484 SF	22,668 SF	20,000 SF
4	22,583 SF	2,530 SF	20,053 SF	20,000 SF
5	22,068 SF	1,869 SF	20,199 SF	20,000 SF
6	21,958 SF	1,439 SF	20,519 SF	20,000 SF
7	21,016 SF	898 SF	20,118 SF	20,000 SF



LEGEND:	
[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	EXISTING EDGE OF PAVING
[Symbol]	EXISTING WETLANDS
[Symbol]	EXISTING WETLAND BUFFER
[Symbol]	PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7
[Symbol]	PROP. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT
[Symbol]	PROP. 20' PRIVATE DRAINAGE & UTILITY EASEMENT
[Symbol]	EX. PUBLIC SEWER & UTILITY EASEMENT PLAT MDR 9987
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING TREENE
[Symbol]	EXISTING TREES
[Symbol]	EXISTING FENCE
[Symbol]	PROPOSED STORMDRAIN
[Symbol]	PROPOSED SIDEWALK
[Symbol]	PROPOSED TREENE

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

PRELIMINARY EQUIVALENT SKETCH PLAN
SITE LAYOUT PLAN
STELLA GLEN
LOTS 1-7
 TAX MAP: 36 PARCELS: 57, 58 & 417
 HOWARD COUNTY, MARYLAND
 ZONED: R-20
 PARCELS: 57, 58 & 417
 HOWARD COUNTY, MARYLAND

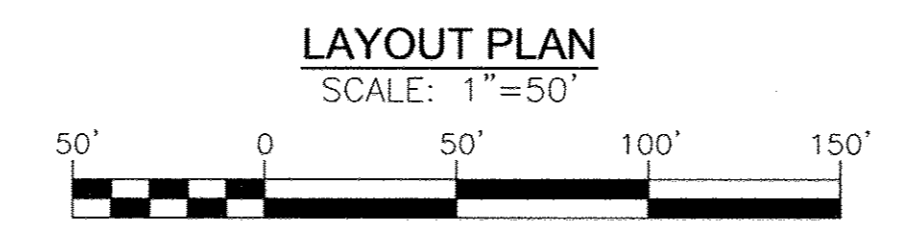
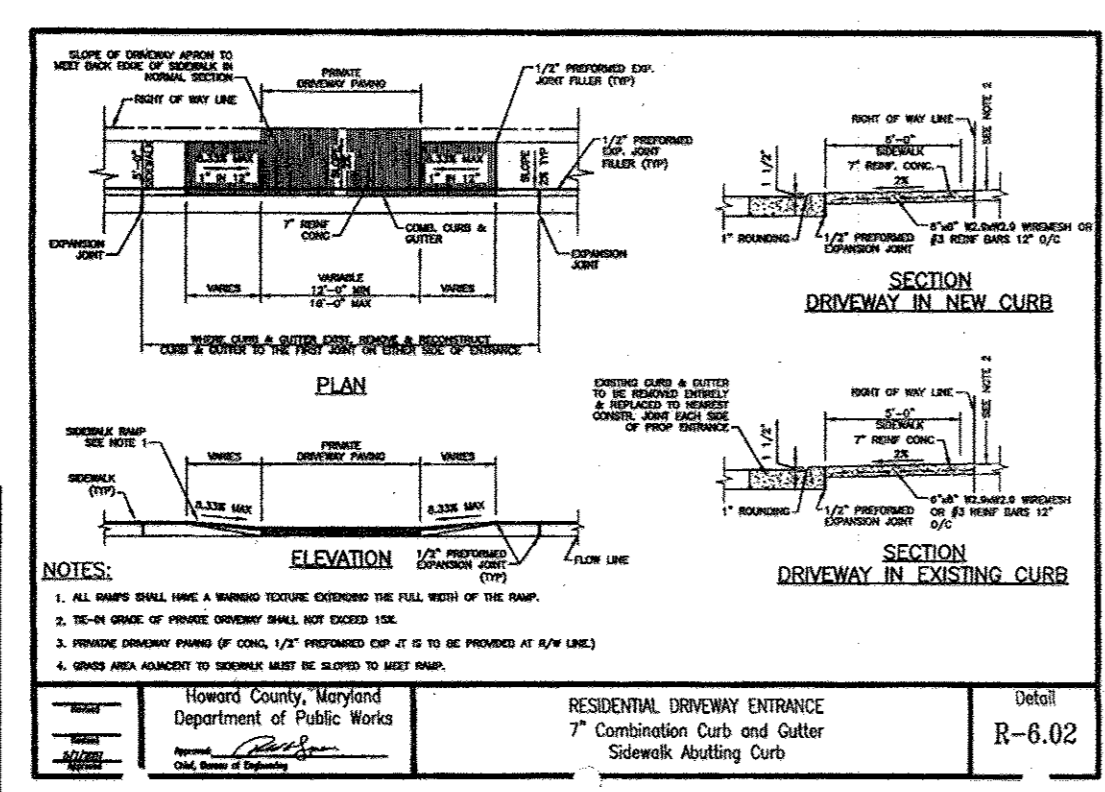
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET, ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: August 2013
 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 QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2014.

2 SHEET OF 5



SECTION NUMBER	ROAD AND STREET	DESCRIPTION	PROPOSED WIDTH (FEET)	EXISTING WIDTH (FEET)	PROPOSED CURB TO CURB (FEET)	EXISTING CURB TO CURB (FEET)
P-1	SHAKER DR	PROPOSED DRIVEWAY	12.0	12.0	12.0	12.0
P-2	SHAKER DR	PROPOSED DRIVEWAY	12.0	12.0	12.0	12.0
P-3	SHAKER DR	PROPOSED DRIVEWAY	12.0	12.0	12.0	12.0
P-4	SHAKER DR	PROPOSED DRIVEWAY	12.0	12.0	12.0	12.0

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Mark J. Lytle
 PLANNING DIRECTOR
 9/25/13
 DATE

Howard County, Maryland
 Department of Public Works
 Residential Driveway Entrance
 7' Combination Curb and Gutter
 Sidewalk Abutting Curb
 Detail
 R-6.02

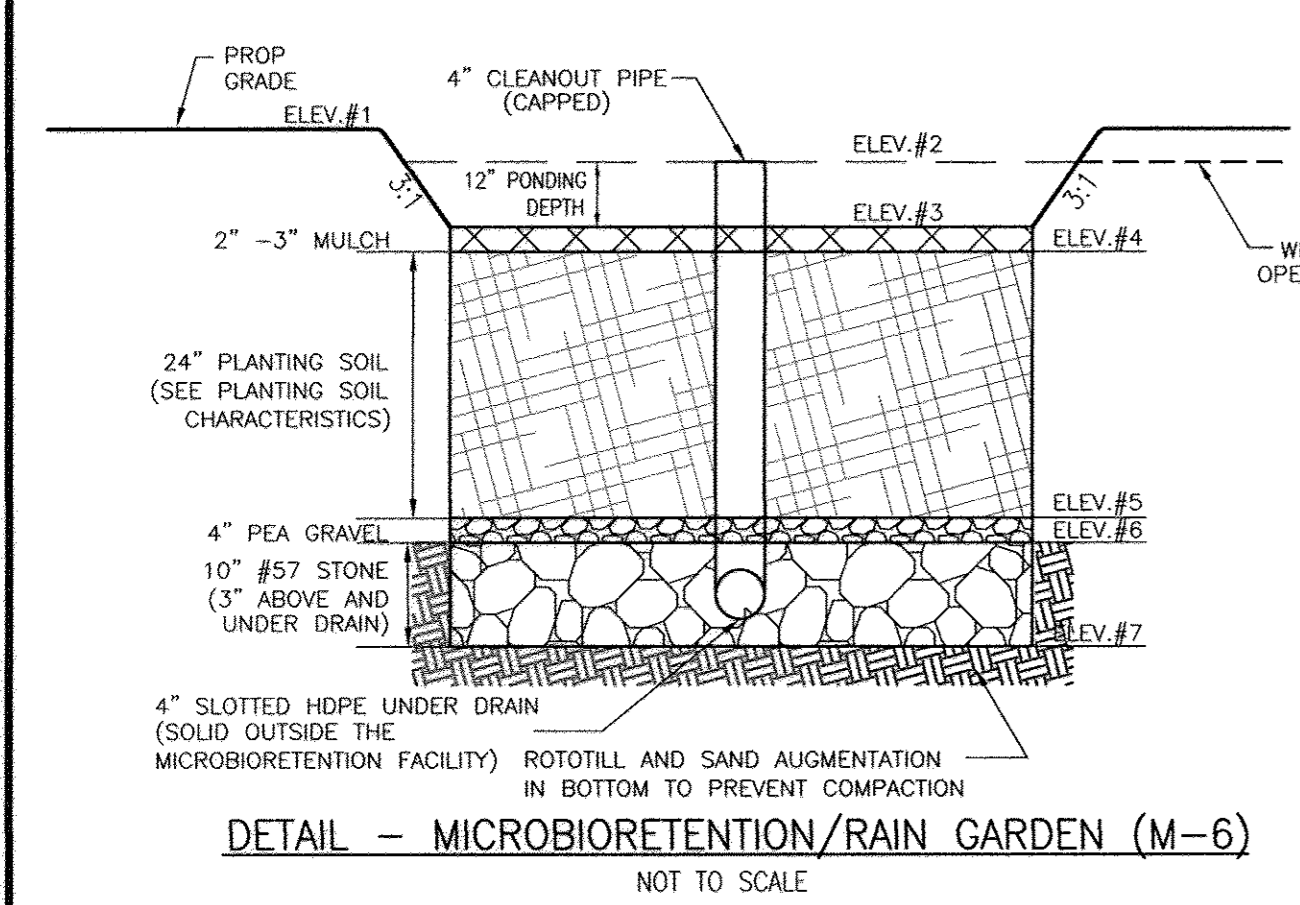
APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIOTRETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

- 1. MATERIAL SPECIFICATIONS**
THE ALTERNATE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
- 2. FILTERING MEDIA OR PLANTING SOIL**
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR LOADED WITHIN THE MICRO-BIOTRETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE AN OBSTACLE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.
THE PLANTING SOIL SHALL MEET THE FOLLOWING CRITERIA:
• SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (FROM 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 (50%-65%) AND COMPOST (5% TO 10%) OR SANDY LOAM (20%), LOAMY SAND (10%), AND COMPOST (40%).
• CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 3%.
• PH BUFFER - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, ION 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 TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.
- 3. COMPACTION**
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIOTRETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION TOES TO BROWNE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MASH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TYPES. 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 AVOIDED AT THE BASE OF THE BIOTRETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL FLOW 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. ROTOTILLING TYPICALLY DOES 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 BIOTRETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP AND POND WATER BEFORE PREPARING (ROTOTILLING) BASE.
WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 2 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A COMPACTION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINISH GRADE.
WHEN BACKFILLING THE BIOTRETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIOTRETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BIOTRETENTION FACILITY TO SUPPLY SOILS AND SAND. GRADE BIOTRETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MESH TRACKS.
- 4. PLANT MATERIAL**
RECOMMENDED PLANT MATERIAL FOR MICRO-BIOTRETENTION 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. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIOTRETENTION FACILITY DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL KEPT (8 TO 12 MONTHS) FOR ACCEPTANCE.
ROOTS OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED 50% BELOW THE GRADE SURFACE. THE DRAINAGE OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRONG DURING THE PLANTING PROCESS. THERE SHALL BE AN INCH LAYER OF MULCH OVER THE PLANT BALL. 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 PLUS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.
THE TOPSOIL SPECIFICATIONS PROVIDE ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIOTRETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, AT A MINIMUM, THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL AREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.
- 6. UNDERDRAINS**
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
• PPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F758, TYPE PS 28, OR AASHTO M-279) IN A GRAVEL LAYER. THE PERFORATED 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 FOOT. PIPE SHALL BE WRAPPED WITH A 1/4" OR 4 OR 40 GA GALVANIZED METAL FABRIC CLOTH.
• GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 1/4" THICK ABOVE AND BELOW THE UNDERDRAIN.
• THE MAIN COLLECTOR PIPE SHALL BE A MINIMUM 12" DIAMETER AND SHALL BE A MINIMUM OF 2% SLOPE TO THE STREET OR OTHER DRAINAGE FACILITY.
• A RIGID NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE UNDERDRAIN.
• A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONES) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN.
• THE FILTER BED SHALL BE AT LEAST 6" THICK. IF THE FILTER BED THICKNESS EXCEEDS 24", THE FILTER BED SHALL BE LAYERED.
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.

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

- THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING. THE DESIGNER IS RESPONSIBLE FOR DEVELOPING SPECIFICATIONS FOR INDIVIDUAL PROJECTS AND SPECIFIC CONDITIONS.
- 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 TYPES THAT WILL BE CARRIED. APPLICATIONS SHOULD BE DESIGNED TO MEET EITHER STANDARD PAVEMENT PROCEDURES (E.G., AASHTO, A13 325.96, A13 330.07) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES.
MIX & INSTALLATION - FRACTURED, QUANTIFIED, QUANTIFIED MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIOTRETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, AT A MINIMUM, THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL AREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.
AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE CONTENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN TO NO. 40), NO. 8 (3/8 IN TO NO. 16) AND NO. 89 (3/8 IN TO NO. 20) SIZES. SINGLE-SIZED AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED.
WATER CONTENT - WATER-TO-CEMENT RATIO BETWEEN 0.27 AND 0.30 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADJUSTERS. WATER QUALITY SHOULD MEET A13 300 AS A GENERAL RULE. POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 94 OR AASHTO 157 MAY ALSO BE USED.
ADJUSTERS - CHEMICAL ADJUSTERS (E.G., RETARDERS OR HYDRATION-SHALLIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADJUSTERS SHOULD MEET ASTM C 494 (CHEMICAL ADJUSTERS) AND ASTM C 260 (AN ENHANCING ADJUSTERS) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS.
BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
 - 2. PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP)**
FRIDGE BLOCKS - BLOCKS SHOULD BE EITHER 8" IN THICK AND MEET ASTM C 936 OR 12" THICK AND MEET ASTM C 937 REQUIRMENTS. APPLICATIONS SHOULD HAVE 20% OPEN PORE SPACE (PREFERRED). THE SURFACE AREA OF THE SURFACE AREA, INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, CURB THICKNESS AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED.
WELL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRAD SAND OR SANDY LOAM. PICP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33 SAND.
BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
 - 3. REINFORCED TURF**
REINFORCED GRASS FRACTION (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.

LOT #	RAIN GARDEN	1	2	3	4	5	6	7	4" INV. OUTFALL
LOT 1	RG 8	384.50	384.10	383.10	382.85	380.85	380.52	379.69	379.94
	RG 7	380.50	380.10	379.10	378.85	376.85	376.52	375.69	375.94
	RG 6	380.20	379.80	378.80	378.55	376.55	376.22	375.39	375.64
LOT 2	RG 5	380.20	379.80	378.80	378.55	376.55	376.22	375.39	375.64
	RG 4	389.50	389.10	388.10	387.85	385.85	385.52	384.69	384.94
	RG 3	384.90	384.50	383.50	383.25	381.25	380.92	380.09	380.34
LOT 6	RG 3	374.20	373.80	372.80	372.55	370.55	370.22	369.39	369.64
	RG 4	375.30	374.90	373.90	373.65	371.65	371.32	370.49	370.74



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

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

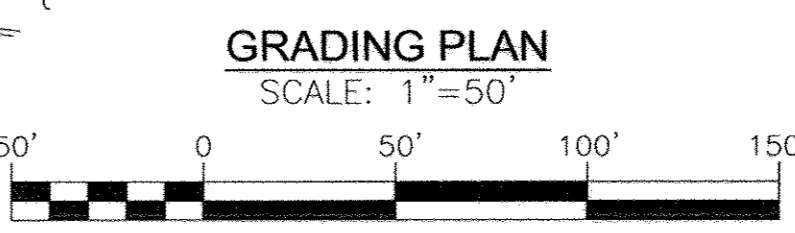
PLANNING DIRECTOR
DATE

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR
GIB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20
GUB	GLENVILLE-URBAN LAND-UDORTHENTHS COMPLEX, 0 TO 8 PERCENT SLOPES	C	0.37
UF	UDORTHENTHS, HIGHWAY, 0 TO 65 PERCENT SLOPES	-	-

[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	EXISTING EDGE OF PAVING
[Symbol]	EXISTING WETLANDS
[Symbol]	EXISTING WETLAND BUFFER
[Symbol]	PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7
[Symbol]	PROP. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT
[Symbol]	PROP. 20' PRIVATE DRAINAGE & UTILITY EASEMENT
[Symbol]	EX. PUBLIC SEWER & UTILITY EASEMENT
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING TREELINE
[Symbol]	EXISTING TREES
[Symbol]	EXISTING FENCE
[Symbol]	PROPOSED STORMDRAIN
[Symbol]	PROPOSED SIDEWALK
[Symbol]	PROPOSED TREELINE
[Symbol]	EXISTING 10' CONTOUR
[Symbol]	EXISTING 2' CONTOUR
[Symbol]	SOILS
[Symbol]	PROPOSED 10' CONTOUR
[Symbol]	PROPOSED 2' CONTOUR
[Symbol]	PROPOSED SPOT ELEVATION
[Symbol]	EXISTING STEEP SLOPES
[Symbol]	EXISTING MODERATE SLOPES
[Symbol]	PROPOSED SUPER SALT FENCE
[Symbol]	PROPOSED SALT FENCE
[Symbol]	PROPOSED LIMIT OF DISTURBANCE
[Symbol]	PROPOSED EROSION CONTROL MATTING
[Symbol]	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
[Symbol]	PROPOSED TEST PIT
[Symbol]	PERVIOUS CONCRETE (A-2)
[Symbol]	ROOFTOP DISCONNECT
[Symbol]	PROPOSED RAIN GARDEN (M-6)
[Symbol]	PROPOSED GRASS SWALE (M-8)

OWNER
MARY THERESE PFAU
3675 PARK AV., SUITE 301
ELlicott CITY, MD 21043
(410) 480-0023

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



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 REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT, WASHING OR COMPRESSED AIR SYSTEMS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
2. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.
3. THE OWNER SHALL USE DECISERS IN MODERATION. DECISERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.
4. THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE-INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIOTRETENTION (M-6), RAIN GARDENS (M-7), BIOTRETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

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

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

Material	Specifications	Notes
Planting Soil	See Appendix A, Table A.4	Plantings are site-specific.
Planting mat (2" to 4" deep)	Styrene foam (10% D_{10} max 0.425) or other foam (10% D_{10} max 0.425)	USDA soil type loamy sand or sandy loam; clay content <math>< 5%</math>
Organic content	Min. 10% by dry weight (ASTM D 2974)	
Mulch	Shredded hardwood	Apply 6 in. min., minimum no piles or wood chips.
Pev gravel discharge	per gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")
Curtain drain	mechanical stone: washed cobble	stone: 2" to 5"
Concrete	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (1/2" to 3/4")
Ground maintenance and infiltration berm	F758, Type PS 28 or AASHTO M-279	4" to 6" rigid schedule 60 PVC or HDPE
Underdrain piping	F758, Type PS 28 or AASHTO M-279	4" to 6" rigid schedule 60 PVC or HDPE
Placed in place concrete (if required)	MSHA Min No. 3, F _c = 3500 psi @ 28 days, normal weight, non-shrink, non-sagging, non-staining, non-cracking, meeting ASTM A615-60	Shaded or perforated pipe, 3/8" perf. @ 6" on center, 4 holes per foot. Minimum of 7" of gravel over pipe, no necessary professional structural engineer stamped in the State of Maryland - design to include meeting ACS Code 230.8(b)(9); vertical loading (0.1 lb per sq ft @ 24-hr allowable horizontal loading (based on soil pressure); and analysis of potential cracking.
Sand	AASHTO M-6 or ASTM C-137	0.075 to 0.08"

NO.	REVISION	DATE

PRELIMINARY EQUIVALENT SKETCH PLAN
SOILS MAP, GRADING, EROSION, AND
SEDIMENT CONTROL PLAN
STELLA GLEN
LOTS 1-7
TAX MAP: 36 PARCELS: 57, 58 & 417
HOWARD COUNTY, MARYLAND
ZONED: R-20
PARCELS: 57, 58 & 417
HOWARD COUNTY, MARYLAND

TAX MAP: 36 GRID: 19
8TH ELECTION DISTRICT
DPZ REF'S: SEE GENERAL NOTE #4 ON COVER SHEET

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

DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: August 2013
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 DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 11933, EXPIRATION DATE: 09-27-2014

PROFESSIONAL CERTIFICATE
3 SHEET OF 5

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR
GfB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20
GuB	GLENVILLE-URBAN LAND-UDORTHTENTS COMPLEX, 0 TO 8 PERCENT SLOPES	C	0.37
UoF	UDORTHTENTS, HIGHWAY, 0 TO 65 PERCENT SLOPES	-	-



LEGEND:	
[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	EXISTING EDGE OF PAVING
[Symbol]	EXISTING WETLANDS
[Symbol]	EXISTING WETLAND BUFFER
[Symbol]	PROP. VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 1-7
[Symbol]	PROP. 30' PUBLIC SEWER, WATER, & UTILITY EASEMENT
[Symbol]	PROP. 20' PRIVATE DRAINAGE & UTILITY EASEMENT
[Symbol]	EX. PUBLIC SEWER & UTILITY EASEMENT PLAT MDR 9987
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING TREELINE
[Symbol]	EXISTING TREES
[Symbol]	EXISTING FENCE
[Symbol]	PROPOSED STORMDRAIN
[Symbol]	PROPOSED SIDEWALK
[Symbol]	PROPOSED TREELINE
[Symbol]	EXISTING 10' CONTOUR
[Symbol]	EXISTING 2' CONTOUR
[Symbol]	PROPOSED 10' CONTOUR
[Symbol]	PROPOSED 2' CONTOUR
[Symbol]	PROPOSED SPOT ELEVATION
[Symbol]	EXISTING STEEP SLOPES
[Symbol]	EXISTING MODERATE SLOPES
[Symbol]	DRAINAGE AREA DIVIDE
[Symbol]	NON-ROOFTOP DISCONNECT (N-2)
[Symbol]	ROOFTOP DISCONNECT (N-1)
[Symbol]	PERVIOUS CONCRETE (A-2)
[Symbol]	ROOFTOP DISCONNECT
[Symbol]	PROPOSED RAIN GARDEN (M-6)
[Symbol]	PROPOSED GRASS SWALE (M-8)

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

ESDv PRACTICES BY DRAINAGE AREA

Drainage Area A	
Rooftop Disconnect N-1	962 sf
Non-rooftop Disconnect N-2	1100 sf
Micro Bioretention M-6	962 sf
Pervious Concrete A-2	196 sf
Drainage Area B	
Rooftop Disconnect N-1	962 sf
Grass Swale M-8	1680 sf
Micro Bioretention M-6	1488 sf
Drainage Area C	
Rooftop Disconnect N-1	1441 sf
Non-rooftop Disconnect N-2	1100 sf
Micro Bioretention M-6	782 sf
Drainage Area D	
Rooftop Disconnect N-1	1925 sf
Grass Swale M-8	1600 sf
Micro Bioretention M-6	1001 sf
Drainage Area E	
Rooftop Disconnect N-1	1925 sf
Grass Swale M-8	1600 sf
Micro Bioretention M-6	962 sf
Drainage Area F	
Rooftop Disconnect N-1	1445 sf
Grass Swale M-8	1920 sf
Micro Bioretention M-6	962 sf

DRAINAGE AREA MAP
 SCALE: 1"=50'
 50' 0 50' 100' 150'

PROJECT STELLA GLEN		DESIGNER RHV		DATE 01/04/13		ROBERT H. VOGEL ENGINEERING, INC.				
ENVIRONMENTAL SITE DESIGN PRACTICE										
DRAINAGE AREA #	TREATED AREA	FACILITY NUMBER	ROOFTOP DISCONNECT N-1	NONROOFTOP DISCONNECT N-2	GRASS SWALE M-8	BIORETENTION M-6	PERVIOUS CONCRETE A-2	X	X	ESDv VOLUME
A	13454	1	64	73	0	79	282	0	0	498
B	13970	2	64	0	166	245	0	0	0	475
C	11000	3	120	92	0	140	0	0	0	352
D	10817	4	160	0	158	158	0	0	0	476
E	12210	5	79	0	158	190	0	0	0	427
F	11781	6	112	0	106	253	0	0	0	471
TOTAL AREA	73232 SF									TOTAL ESDv PROVIDED 2699
	1.68 AC									

PROJECT: STELLA GLEN		TOTAL AREA: 3.68 AC		NET DEVELOPABLE AREA 3.36 AC		TARGET Pe: 1.20 IN		
DRAINAGE AREA	IMPERVIOUS AREA	GRASS AREA	TOTAL AREA	PERCENT IMPERVIOUS	RV	ESDv MIN	ESDv MAX	ESDv COMPUTED
A	4789	8665	13454	0.36	0.37	415	1080	498
B	4405	9565	13970	0.32	0.33	389	1010	466
C	3326	7674	11000	0.30	0.32	295	768	354
D	2700	8117	10817	0.25	0.27	248	644	297
E	4125	8085	12210	0.34	0.35	360	937	432
F	4545	7236	11781	0.39	0.40	390	1014	468
TOTAL AREA	73232 SF		73232 SF					2516 CF
	1.68 AC							

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Mark W. ...
 PLANNING DIRECTOR
 9/27/13
 DATE

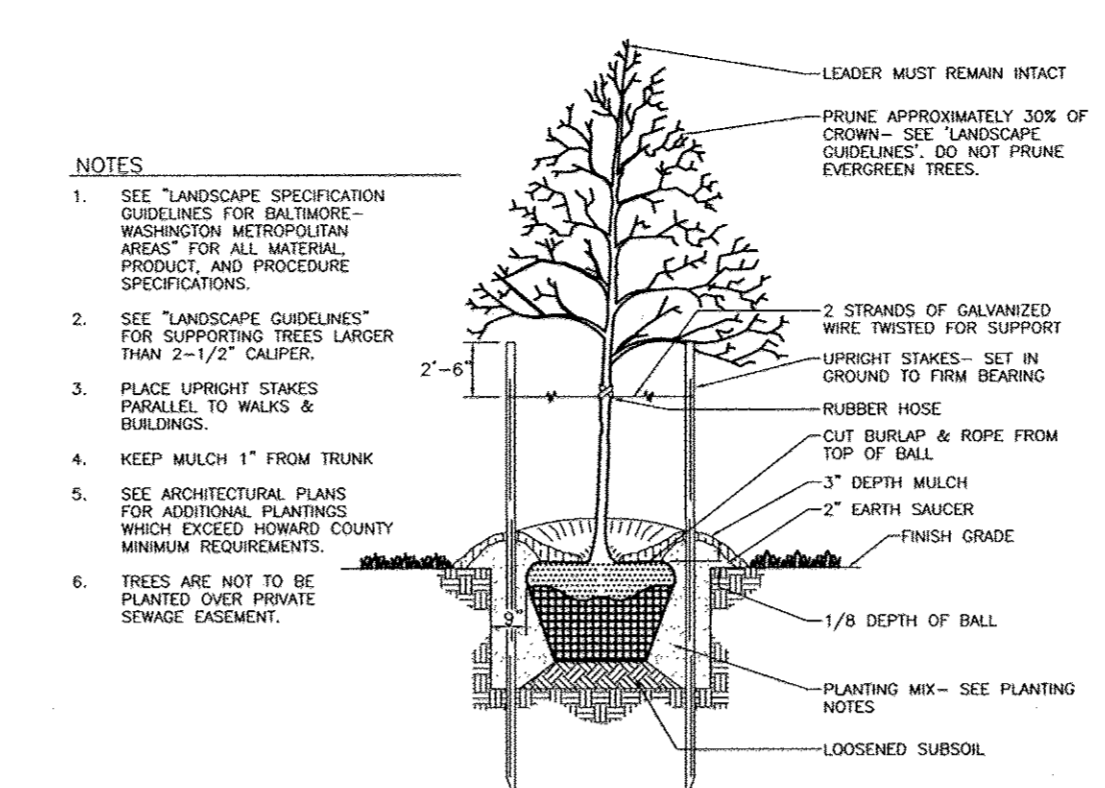
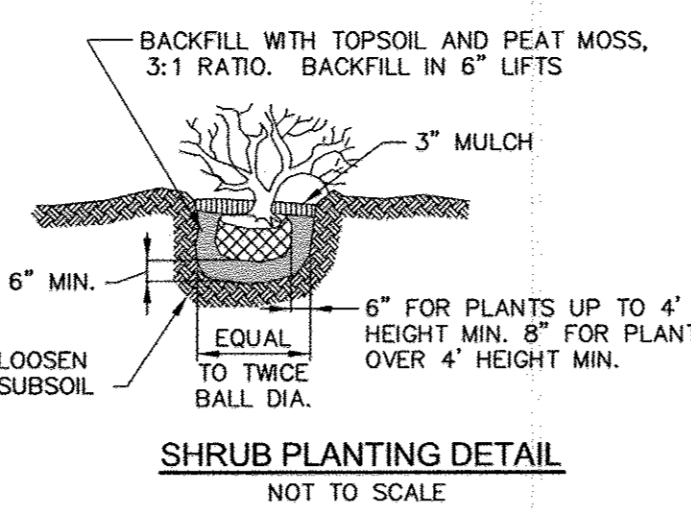
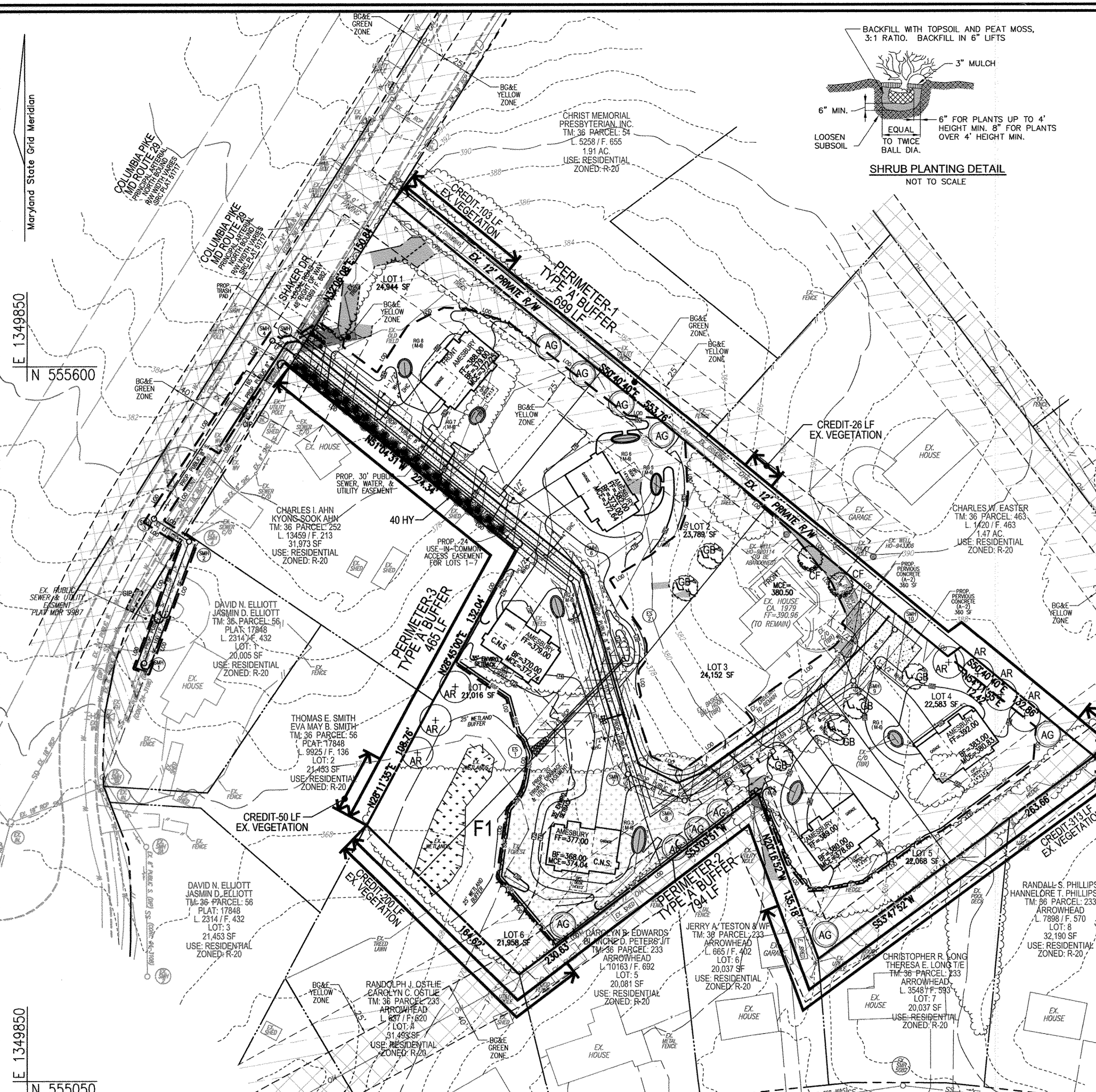
PRELIMINARY EQUIVALENT SKETCH PLAN
 DRAINAGE AREA MAP
 STELLA GLEN
 LOTS 1-7
 TAX MAP: 36 PARCELS: 57, 58 & 417
 HOWARD COUNTY, MARYLAND
 TAX MAP: 36 GRID: 19
 8TH ELECTION DISTRICT
 DPZ REF'S: SEE GENERAL NOTE #4 ON COVER SHEET
 ZONED: R-20
 PARCELS: 57, 58 & 417
 HOWARD COUNTY, MARYLAND

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

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: AUGUST 2013
 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. 18193
 EXPIRATION DATE: 09-27-2014

4 SHEET OF 5



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER

TRASH PAD LANDSCAPING

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

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

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

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

- GENERAL NOTES:**
- PERIMETER LANDSCAPING AND TRASH PAD SCREENING FOR THIS DEVELOPMENT SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. POSTING OF FINANCIAL SURETY IS DEFERRED UNTIL FINAL PLAT SUBMISSION.
 - 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. 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, WETLANDS BUFFER, STREAM BANK BUFFER OR FOREST CONSERVATION EASEMENTS.
 - 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 BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 2012.
 - THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN A FIELD R/W 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.

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			INTERIOR PLANTINGS					TOTAL
	A	A	A	LOT 2	LOT 3	LOT 4	LOT 5		
PERIMETER/FRONTAGE DESIGNATION	2	3	3						
LANDSCAPE TYPE	A	A	A	LOT 2	LOT 3	LOT 4	LOT 5		
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	699'	794'	465'	N/A	N/A	N/A	N/A		
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES	YES	YES	NO	NO	NO	NO		
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO		
NUMBER OF PLANTS REQUIRED (IF REMAINING) DESCRIBE BELOW IF NEEDED	542'	281'	415'						
SHADE TREES	1:60	9	1:60	7	2	2	2	29	
EVERGREEN TREES	-	-	-	-	-	-	-	-	
SHRUBS	-	-	-	-	-	-	-	-	
NUMBER OF PLANTS PROVIDED	9	5	3	2	2	2	2	25	
SHADE TREES	-	-	-	-	-	-	-	-	
EVERGREEN TREES	-	-	-	-	-	-	-	-	
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-	-	-	-	
SHRUBS (10:1 SUBSTITUTION)	-	-	40	-	-	-	-	40	
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)									

Forest Conservation Worksheet 2.2

Net Tract Area

A. Total Tract Area = 3.68
 B. Deductions = 0.00
 C. Net Tract Area = 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%) = 0.74
E. Conservation Threshold (Net Tract Area x 25%) = 0.92

Existing Forest Cover

F. Existing Forest Cover within the Net Tract Area = 0.64
 G. Area of Forest Above Conservation Threshold = 0.00

Break Even Point

H. Break Even Point = 0.84
 I. Forest Clearing Permitted Without Mitigation = 0.00

Proposed Forest Clearing

J. Total Area of Forest to be Cleared = 0.84
 K. Total Area of Forest to be Retained = 0.00

Planting Requirements

L. Reforestation for Clearing Above the Conservation Threshold = 1.28
 M. Reforestation for Clearing Below the Conservation Threshold = 1.28
 N. Credit for Retention above the Conservation Threshold = 0.00
 P. Total Reforestation Required = 1.28
 Q. Total Afforestation Required = 0.10
 R. Total Planting Requirement = 1.38

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

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND CUTTER
- EXISTING EDGE OF PAVING
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- PROP. VARIABLE WIDTH PRIVATE 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 MOR 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 TREES
- EXISTING FENCE
- PROPOSED STORMDRAIN
- PROPOSED SIDEWALK
- PROPOSED TREELINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING STEEP SLOPES
- EXISTING MODERATE SLOPES
- EXISTING BGE GREEN ZONE
- EXISTING BGE YELLOW ZONE
- PROPOSED FOREST CLEARING 0.38 ACRES
- PROPOSED FOREST CONSERVATION SIGN

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

LANDSCAPE SCHEDULE

SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
(Symbol)	AR	7	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2"-3" CAL.	B & B
(Symbol)	AG	10	ACER GINNALA AMUR MAPLE	2 1/2"-3" CAL.	B & B
(Symbol)	CF	2	CORNUS FLORIDA WHITE FLOWERING DOGWOOD	8"-10" HGT.	B & B
(Symbol)	GB	6	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2-1/2"-3" CAL.	B & B
(Symbol)	HY	40	TAXUS MEDIA 'HICKSI' HICKS YEW	2-1/2"-3" HGT.	B & B

WETLAND DATA

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

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

FOREST STAND DATA

KEY	COMMUNITY TYPE	ACREAGE	DOMINANT VEGETATION	GENERAL CONDITION	PRIORITY ACREAGE
F1	SUCCESSIONAL	0.6 NTA	ACER RUBRUM, ACER SACCHARINUM, ACER NEGUNDO, PRUNUS SEROTINA, JUGLANS NIGRA	GOOD	WETLANDS AND BUFFERS

FOREST CONSERVATION:

FOREST CONSERVATION REQUIREMENTS AS SET FORTH IN SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL: CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

THE FOREST CONSERVATION OBLIGATION TO BE FULFILLED BY THE PLACEMENT OF 2.76 AC. (2:1 RATIO) INTO RETENTION BASEMENT INTO AN OFF-SITE FOREST CONSERVATION BANK IDENTIFIED AS BENEFIT SOLUTIONS, APPROVED UNDER SDP-15-0576.

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Mark J. Wells
 PLANNING DIRECTOR

9/25/13
 DATE

John Canoles
 DNR QUALIFIED FOREST PROFESSIONAL
 JOHN CANOLES

PRELIMINARY EQUIVALENT SKETCH PLAN

LANDSCAPE AND FOREST CONSERVATION PLAN

STELLA GLEN
 LOTS 1-7
 TAX MAP: 36 PARCELS: 57, 58 & 417
 HOWARD COUNTY, MARYLAND

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
 HOWARD COUNTY, MARYLAND

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

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: AUGUST 2013
 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. 19194
 EXPIRATION DATE 09-27-2014

5 SHEET OF 5