

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PUBLIC WORKS STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR IS TO 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: 410-313-2366
 AT&T CABLE LOCATION DIVISION: 1-800-333-3553
 B.G.&E. CO. CONTRACTOR SERVICES: 410-850-4620
 B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 410-787-4620
 STATE HIGHWAY ADMINISTRATION: 410-531-5533
 THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL PHOTOGRAPHIC SURVEY PREPARED BY WINGS AERIAL MAPPING COMPANY, INC. PHOTOGRAPHED MARCH 1995.
- THE PROJECT BOUNDARY SHOWN FOR PARCEL 95 IS BASED ON A BOUNDARY SURVEY PREPARED BY FISHER COLLETT & GARDNER ENGINEERS, INC. 2005 WHICH WAS VERIFIED AS CORRECT BY ROBERT H. VOGEL ENGINEERING, INC. IN MARCH 2010. ROBERT H. VOGEL ENGINEERING, INC. SURVEYED PARCELS 56 & 309 IN MARCH 2010.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- 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.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
- STORM WATER MANAGEMENT IS TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO BIO-RETENTION FACILITIES, GRASS SWALES, BIO-SWALE, RAIN BARRELS AND ROOFTOP MICRO-BIOPRETENTION FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. THE PERFORATED UNDER DRAINS, FEEDERS, PLANTINGS AND SWALES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE MICRO-BIOPRETENTION FACILITY ADJACENT TO THE RIGHT-OF-WAY.
- 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.
- THIS FINAL ROAD CONSTRUCTION PLAN IS SUBJECT TO THE FOLLOWING DPZ FILE: SP-06-101, F-09-036, WP-10-030, WP-11-145, WP-12-165, WP-12-185, ECP-12-012, SP-12-003, PB 382, AND CONT. #14-4737-D.
- PLANNING BOARD CASE NO. 396 APPROVED BY PLANNING BOARD ON JANUARY 17, 2013.
- THE SUBJECT PROPERTY IS ZONED "R-ED" IN ACCORDANCE WITH THE 2010 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING REGULATIONS EFFECTIVE 7-29-00.
- STRUCTURES PREVIOUSLY ON MAP 25, PARCEL 95 WERE LISTED ON THE HISTORIC SITES INVENTORY AS HO-8557. HAZELHURST COTTAGES THESE BUILDINGS CAME BEFORE THE HISTORIC DISTRICT COMMISSION FOR ADVISORY COMMENTS AS HDC-06-02 FOR PLAN SP-06-10, WEAVER'S COURT. ALL STRUCTURES HAVE BEEN REMOVED, SPRING 2013.
- THE STRUCTURE PREVIOUSLY ON MAP 25, PARCEL 309 WAS LISTED ON THE HISTORIC SITES INVENTORY AS HO-856. THE STRUCTURE HAS BEEN REMOVED.
- ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.06.
- 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 (10 FEET SERVING MORE THAN ONE RESIDENCE).
 b) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CLIP 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 (H2S 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.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC. WATER WILL BE PROVIDED THROUGH #14-4737-D & CONTRACT #134-W. SEWER WILL BE PROVIDED THROUGH CONTRACT #61-WAS & #14-4737-D.
- 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. 2411 AND 2413 WERE USED FOR THIS PROJECT.
- THERE IS NO 100-YR FLOODPLAIN WITHIN THE LIMITS OF THIS SITE.
- SEDMIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SUBDIVISION.
- COLLEGE AVENUE IS A STATE ROAD.
- WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PREPARED BY MCCARTHY & ASSOC., INC., DATED MAY, 2011 AND ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 24, 2006 & CONFIRMED MAY 27, 2011. THERE ARE NO PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.
- MCCARTHY & ASSOCIATED PREPARED A REPORT AND ASSOCIATED EXHIBITS FOR THE "MCPHERSON PROPERTY" DATED MAY OF 2011. ON MAY 10, 2012 THE FOREST STAND DELINEATION EXHIBITS WERE SIGNED BY MR. WALLIS.
- ECO-SCIENCE PROFESSIONALS, INC. PREPARED A FOREST STAND DELINEATION PLAN AND COMBINATION WETLAND, FOREST STAND AND PRELIMINARY FOREST CONSERVATION REPORT FOR THE "WEAVER'S COURT" PROJECT DATED FEBRUARY 24, 2006. THIS WAS CONFIRMED IN A LETTER DATED MAY 27, 2011.
- A TOTAL OF 20 LOTS AND 4 OPEN SPACE LOTS ARE PROPOSED UNDER THIS PLAN.
- OPEN SPACE LOT 21 TO BE OWNED AND MAINTAINED BY THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
- OPEN SPACE LOTS 22-24 TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- 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.
- WETLANDS AND THEIR BUFFERS WILL NOT BE IMPACTED BY THE CONSTRUCTION OF THE PUBLIC SWM, DRAINAGE AND UTILITY EASEMENT AND ASSOCIATED RIP RAP.
- ROAD MODIFICATIONS ALONG COLLEGE AVENUE FRONTAGE INCLUDING, BUT NOT LIMITED TO GRADING, GEO-GRID SLOPE STABILIZATION REINFORCEMENT, STORM DRAIN SYSTEM, ETC. WILL BE DONE UNDER CAPITAL PROJECT J-4213 - COLLEGE AVENUE - SLOPE REPAIR.
- WP-12-165: A WAIVER PETITION HAS BEEN SUBMITTED AND APPROVED, DATED JULY 23, 2012, TO WAIVE SECTION 16.1205(a)(10) WHICH REQUIRES THE RETENTION OF SPECIMEN TREES (30"dbh OR GREATER) THAT ARE NOT CONTAINED WITHIN OTHER PRIORITY FOREST RETENTION AREAS AS OUTLINED IN SECTION 16.1205(a)(1-9). A WAIVER TO SECTION 16.116(b) WHICH PROHIBITS GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, STRUCTURES AND PAVING ON LAND WITH EXISTING STEEP SLOPES.
- APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 A. IMPACTS TO STEEP SLOPES (25% OR GREATER) MAY NOT BE GREATER THAN A TOTAL OF 0.23 ACRES OR EXISTING SLOPE UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED BY THE APPLICANT TO BE JUSTIFIED.
 B. WAIVER APPROVAL IS LIMITED TO THE REMOVAL OF SPECIMEN TREES #1, #3-6, #8, #14-17, #23 and #26-28 AS DEPICTED ON THE WAIVER EXHIBIT. ANY PROPOSAL TO REMOVE ADDITIONAL SPECIMEN TREES WILL REQUIRE A NEW WAIVER REQUEST OR AN AMENDMENT TO THIS WAIVER REQUEST.
 C. DETAILED PROTECTIVE MEASURES FOR SPECIMEN TREE #21 SHALL BE OUTLINED ON THE WAIVER EXHIBIT (SHEET 6 OF SP-12-003 WHICH ALSO SERVES AS THE LANDSCAPE AND FOREST CONSERVATION PLAN).
 D. THE ADDITIONAL LANDSCAPING PROPOSED BEHIND LOTS 1-6 WILL BE CONSIDERED MITIGATION TO THE REMOVAL OF THE 14 SPECIMEN TREES AND SHALL BECOME PART OF THE FINAL SITE DEVELOPMENT PLAN AND WILL BE BONDED ACCORDINGLY.
 E. LOTS 11-15 AND OPEN SPACE LOT 21 & 23 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. THE USE-IN-COMMON MAINTENANCE AGREEMENT WILL BE RECORDED SIMULTANEOUSLY WITH THE PLAN.
 F. THE TWO ROADWAYS IN THIS DEVELOPMENT ARE ONLY 24 FEET WIDE. FUTURE PARKING MAY HAVE TO BE RESTRICTED ALONG ONE SIDE OF EACH OF THESE ROADWAYS.
- TRAFFIC CONTROL DEVICES:
 A. THE R1-1(STOP) SIGNS AND STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE.
 B. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 C. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
 D. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, ("QUICK PUNCH") SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE - 3" LONG). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO ("QUICK PUNCH") HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.
 E. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY FOR THE PERIMETER LANDSCAPING IN THE AMOUNT OF \$8,250.00 FOR THE REQUIRED 24 SHADE TREES AND 7 EVERGREENS SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.
 A FINANCIAL SURETY IN THE AMOUNT OF \$9,000.00 FOR THE 24 SHADE TREES AND 12 EVERGREENS PROVIDED FOR THE ADDITIONAL LANDSCAPING REQUIRED ALONG PERIMETER 1 TO ADDRESS SCENIC ROAD CONCERNS, AND THE ADDITIONAL TREES PROVIDED BEHIND LOTS 1-6 AS MITIGATION TO THE REMOVAL OF 14 SPECIMEN TREES SHALL ALSO BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.
 LANDSCAPE SURETY WILL NOT BE RELEASED UNTIL ALL REQUIRED PLANTINGS AND RECREATIONAL AMENITY FEATURES HAVE BEEN INSTALLED.
- PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$15,900.00 SHALL BE PROVIDED FOR THE 53 REQUIRED STREET TREES.
- THE RECREATIONAL OPEN SPACE AREA IS DESIGNATED FOR THE RESIDENTS AND IS AN AREA AVAILABLE TO SIT, PICNIC, PLAY, DOG WALK OR ENJOY THE SURROUNDING WOODED AREA. REFER TO SHEET 4 AND 11 TWO (2) BENCHES, A DOGWALK STATION GAZEBO AND TRASH RECEPTACLE ARE SHOWN. RESIDENTS OF AUTUMN OVERLOOK SHALL HAVE ACCESS TO VILLAGE CREST AMENITIES.

COORDINATE TABLE

NO.	NORTH	EAST	NO.	NORTH	EAST
101	581040.4253	1370527.5225	119	581436.0508	1370334.2889
102	581080.6394	1370486.8765	120	581508.2194	1370403.3700
103	581104.0023	1370434.3340	121	581535.7680	1370374.4691
109	581155.5892	1370273.7569	122	581608.3829	1370443.3822
110	581179.8161	1370207.8393	123	581581.5144	1370471.8327
111	581204.9892	1370169.4040	124	581945.9950	1370820.6266
112	581229.0539	1370145.9300	125	581845.3414	1371006.3913
113	581268.5128	1370117.0432	126	581671.8672	1370931.3825
114	581310.0471	1370080.1145	805	581493.2020	1370927.3322
115	581333.2210	1370081.4236	806	581534.0373	1370899.5825
116	581357.4355	1370076.3030	808	581122.5049	1371174.2966
117	581410.8691	1370075.1585	809	581068.4834	1370838.2638
118	581415.4909	1370184.8061			

FINAL ROAD CONSTRUCTION PLAN

AUTUMN OVERLOOK

LOTS 1-20, & OPEN SPACE LOTS 21-24

PARCELS 56 & 309 (L. 12833 / F. 00446)
 PARCEL 95 (L. 13244 / F. 00037)

NOTE:

TENTATIVE ALLOCATIONS FOR 8 HOUSING UNITS FOR THIS SUBDIVISION FOR THE ELICOTT CITY PLANNING AREA AND THE YEAR 2015. NINE TENTATIVE ALLOCATIONS WERE GRANTED PREVIOUSLY FOR THE WEAVER'S COURT PROJECT, SP-06-010. THEREFORE, A TOTAL OF 17 TENTATIVE HOUSING ALLOCATIONS ARE AVAILABLE FOR THIS "AUTUMN OVERLOOK" PROJECT (SP-12-003).

"AUTUMN OVERLOOK" (SP-12-003), SUPERCEDES SP-08-010, "WEAVER'S COURT". ALL ALLOCATIONS PREVIOUSLY GRANTED UNDER "WEAVER'S COURT" HAVE BEEN TRANSFERRED TO THIS PROJECT "AUTUMN OVERLOOK" (SP-12-003). SP-06-010 ("WEAVER'S COURT"), IS VOID PER THE SIGNATURE APPROVAL OF SP-12-003, "AUTUMN OVERLOOK" ON MARCH 15, 2013.

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THE STRUCTURE PREVIOUSLY ON MAP 25, PARCEL 309 WAS LISTED ON THE HISTORIC SITES INVENTORY AS HO-856. THE STRUCTURE HAS BEEN REMOVED.

ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.06.

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 (10 FEET SERVING MORE THAN ONE RESIDENCE).
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 c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% CHANGE AND MINIMUM OF 45-FOOT DEPTH TURNING RADIUS.
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THERE IS NO 100-YR FLOODPLAIN WITHIN THE LIMITS OF THIS SITE.

SEDMIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.

A NOISE STUDY IS NOT REQUIRED FOR THIS SUBDIVISION.

COLLEGE AVENUE IS A STATE ROAD.

WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PREPARED BY MCCARTHY & ASSOC., INC., DATED MAY, 2011 AND ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 24, 2006 & CONFIRMED MAY 27, 2011. THERE ARE NO PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.

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OPEN SPACE LOTS 22-24 TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

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ROAD MODIFICATIONS ALONG COLLEGE AVENUE FRONTAGE INCLUDING, BUT NOT LIMITED TO GRADING, GEO-GRID SLOPE STABILIZATION REINFORCEMENT, STORM DRAIN SYSTEM, ETC. WILL BE DONE UNDER CAPITAL PROJECT J-4213 - COLLEGE AVENUE - SLOPE REPAIR.

WP-12-165: A WAIVER PETITION HAS BEEN SUBMITTED AND APPROVED, DATED JULY 23, 2012, TO WAIVE SECTION 16.1205(a)(10) WHICH REQUIRES THE RETENTION OF SPECIMEN TREES (30"dbh OR GREATER) THAT ARE NOT CONTAINED WITHIN OTHER PRIORITY FOREST RETENTION AREAS AS OUTLINED IN SECTION 16.1205(a)(1-9). A WAIVER TO SECTION 16.116(b) WHICH PROHIBITS GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, STRUCTURES AND PAVING ON LAND WITH EXISTING STEEP SLOPES.

APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

A. IMPACTS TO STEEP SLOPES (25% OR GREATER) MAY NOT BE GREATER THAN A TOTAL OF 0.23 ACRES OR EXISTING SLOPE UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED BY THE APPLICANT TO BE JUSTIFIED.

B. WAIVER APPROVAL IS LIMITED TO THE REMOVAL OF SPECIMEN TREES #1, #3-6, #8, #14-17, #23 and #26-28 AS DEPICTED ON THE WAIVER EXHIBIT. ANY PROPOSAL TO REMOVE ADDITIONAL SPECIMEN TREES WILL REQUIRE A NEW WAIVER REQUEST OR AN AMENDMENT TO THIS WAIVER REQUEST.

C. DETAILED PROTECTIVE MEASURES FOR SPECIMEN TREE #21 SHALL BE OUTLINED ON THE WAIVER EXHIBIT (SHEET 6 OF SP-12-003 WHICH ALSO SERVES AS THE LANDSCAPE AND FOREST CONSERVATION PLAN).

D. THE ADDITIONAL LANDSCAPING PROPOSED BEHIND LOTS 1-6 WILL BE CONSIDERED MITIGATION TO THE REMOVAL OF THE 14 SPECIMEN TREES AND SHALL BECOME PART OF THE FINAL SITE DEVELOPMENT PLAN AND WILL BE BONDED ACCORDINGLY.

E. LOTS 11-15 AND OPEN SPACE LOT 21 & 23 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. THE USE-IN-COMMON MAINTENANCE AGREEMENT WILL BE RECORDED SIMULTANEOUSLY WITH THE PLAN.

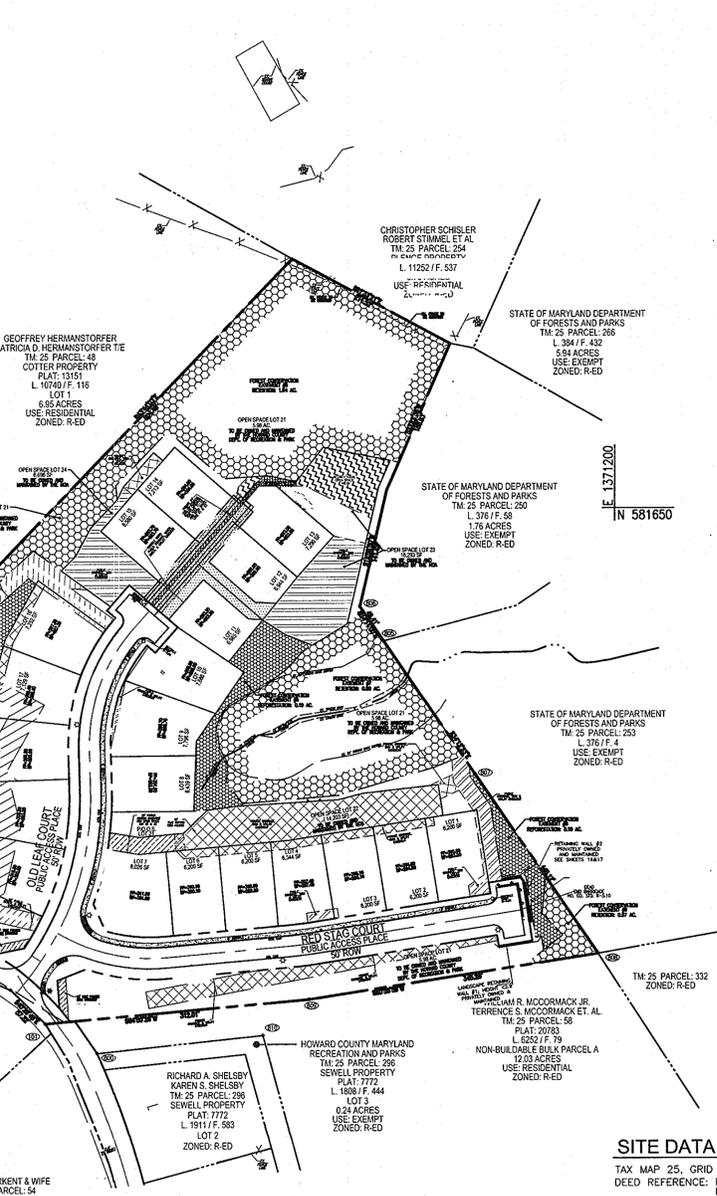
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TRAFFIC CONTROL DEVICES:
 A. THE R1-1(STOP) SIGNS AND STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE.
 B. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 C. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
 D. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, ("QUICK PUNCH") SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE - 3" LONG). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO ("QUICK PUNCH") HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.
 E. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

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 A FINANCIAL SURETY IN THE AMOUNT OF \$9,000.00 FOR THE 24 SHADE TREES AND 12 EVERGREENS PROVIDED FOR THE ADDITIONAL LANDSCAPING REQUIRED ALONG PERIMETER 1 TO ADDRESS SCENIC ROAD CONCERNS, AND THE ADDITIONAL TREES PROVIDED BEHIND LOTS 1-6 AS MITIGATION TO THE REMOVAL OF 14 SPECIMEN TREES SHALL ALSO BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.
 LANDSCAPE SURETY WILL NOT BE RELEASED UNTIL ALL REQUIRED PLANTINGS AND RECREATIONAL AMENITY FEATURES HAVE BEEN INSTALLED.

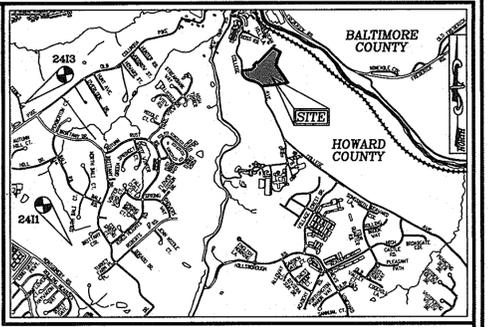
PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$15,900.00 SHALL BE PROVIDED FOR THE 53 REQUIRED STREET TREES.

THE RECREATIONAL OPEN SPACE AREA IS DESIGNATED FOR THE RESIDENTS AND IS AN AREA AVAILABLE TO SIT, PICNIC, PLAY, DOG WALK OR ENJOY THE SURROUNDING WOODED AREA. REFER TO SHEET 4 AND 11 TWO (2) BENCHES, A DOGWALK STATION GAZEBO AND TRASH RECEPTACLE ARE SHOWN. RESIDENTS OF AUTUMN OVERLOOK SHALL HAVE ACCESS TO VILLAGE CREST AMENITIES.



LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING SEWER AND UTILITY EASEMENT
- PUBLIC SEWER & UTILITY EASEMENT
- FOREST CONSERVATION
- RECREATIONAL OPEN SPACE
- PUBLIC SIGHT DISTANCE EASEMENT
- 20' PUBLIC ACCESS EASEMENT TO OPEN SPACE LOT 21
- PRIVATE 24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 11-15 AND OPEN SPACE LOTS 21 & 23
- PRIVATE DRAINAGE SWM & UTILITY EASEMENT
- PUBLIC DRAINAGE SWM & UTILITY EASEMENT
- VARIABLE WIDTH PUBLIC DRAINAGE, SEWER, WATER, & UTILITY EASEMENT
- 10' WIDE PRIVATE SIGN EASEMENT



VICINITY MAP
 SCALE: 1"=2,000'
 ADC MAP COORDINATE: 28, B-1

BENCHMARKS
 HOWARD COUNTY BENCHMARK 2411 (CONC. MON.)
 N 577298.65 E 1366075.16 ELEV. 437.12
 HOWARD COUNTY BENCHMARK 2413 (CONC. MON.)
 N 580648.90 E 1364974.47 ELEV. 463.77

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 17
EXISTING CONDITIONS, DEMOLITION AND CLEARING PLAN	2 OF 17
ROAD PROFILE AND PLAN DETAILS - RED STAG COURT	3 OF 17
ROAD PROFILE AND PLAN DETAILS - OLD LEAF COURT	4 OF 17
SOILS MAP & PHASE 1 GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN	5 OF 17
SOILS MAP & PHASE 2 GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN	6 OF 17
GRADING, SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	7 OF 17
GRADING, SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	8 OF 17
STORM DRAIN DRAINAGE AREA MAP	9 OF 17
STORM DRAIN PROFILES	10 OF 17
LANDSCAPE AND FOREST CONSERVATION PLAN	11 OF 17
LANDSCAPE AND FOREST CONSERVATION NOTES AND DETAILS	12 OF 17
STORMWATER MANAGEMENT DRAINAGE AREA MAP	13 OF 17
STORMWATER MANAGEMENT NOTES AND DETAILS	14 OF 17
STORMWATER MANAGEMENT NOTES AND DETAILS	15 OF 17
RETAINING WALL CONSTRUCTION DETAILS	16 OF 17
STORMWATER MANAGEMENT NOTES AND DETAILS	17 OF 17

LOT TABULATION

TOTAL NO. OF PROPOSED LOTS:	24
TOTAL NO. OF DWELLING UNITS:	20
NO. OF SINGLE FAMILY DETACHED:	4
NO. OF OPEN SPACE LOTS:	4

OWNER

MR.J. FAMILY LIMITED PARTNERSHIP-TAYLOR VILLAGE FAMILY, LLC
 MANAGING MEMBER PHILLIP OUGLIOTI, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELICOTT CITY, MD 21043
 (410) 465-3500

TAYLOR FAMILY LIMITED PARTNERSHIP 'A', VILLAGE CREST, LLC,
 MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELICOTT CITY, MD 21043
 (410) 465-3500

DEVELOPER
 AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPANH, PRESIDENT
 5401 TWIN KNOLLS ROAD, SUITE 7
 COLUMBIA, MD 21045
 (410) 465-3500

SCALE: 1"=100'

TAX MAP 25, GRID 14, PARCELS 56, 95, & 309
 DEED REFERENCE: PARCEL 56: L. 12833 / F. 00446
 PARCEL 95: L. 13244 / F. 00037

ELECTION DISTRICT: 2ND
 LOCATION: EAST SIDE OF COLLEGE AVENUE,
 JUST SOUTH OF ROSS ROAD

EXISTING ZONING:
 GROSS AREA: 11.71 AC
 AREA OF 100' YEAR FLOODPLAIN: N/A
 AREA OF STEEP SLOPES: 1.49 AC
 AREA OF STREAM/BUFFER: 1.17 AC
 AREA OF W

SOILS LEGEND					
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K-FACTOR	DRIFT FARMLAND
LeC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	B	NO	0.02	NO
McD	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	0.28	NO
MgF	MANOR-BANNERTOWN SANDY LOAMS, 25 TO 65 PERCENT SLOPES, ROCKY	B	NO	0.24	NO

NOTE:
THE STEEP SLOPE AREAS TO BE DISTURBED AS SHOWN HEREON WERE APPROVED AS PART OF WP 12-165

GERMAN E. FLORES RENGIFO
MARIA WALEWSKA RODRIGUEZ TIE
TM: 25 PARCEL: 48
COTTER PROPERTY
PLAT: 13151
L: 12497 / F: 276
LOT 2
0.79 ACRES
USE: RESIDENTIAL
ZONED: R-ED

RAYMOND R. SADLER
PATRICIA E. SADLER
TM: 25 PARCEL: 234
L: 1105 / F: 222
0.53 ACRES
USE: RESIDENTIAL
ZONED: R-ED

JEFFREY B. WYGANT
SHELLEY D. WYGANT TIE
TM: 25 PARCEL: 47
KENNEDY YOUNG PROP.
PLAT: 9961
LOT 1
ZONED: R-ED

WILLIAM R. DAVIS
SALLY A. DAVIS
TM: 25 PARCEL: 49
SWEARER PROPERTY
PLAT: 5347
LOT 2
ZONED: R-ED

GARY C. BROWER
CHERYL M. BROWER TIE
TM: 25 PARCEL: 49
SWEARER PROPERTY
PLAT: 5347
LOT 2
ZONED: R-ED

DALLAS KNUDSON
TM: 25 PARCEL: 22
L: 9173 / F: 587
1.25 ACRES
USE: RESIDENTIAL
ZONED: R-ED

GEORGEY HERMANSTORFER
PATRICIA D. HERMANSTORFER TIE
TM: 25 PARCEL: 48
COTTER PROPERTY
PLAT: 13151
L: 10740 / F: 116
2.22 V1 OT
76.95 ACRES
USE: RESIDENTIAL
ZONED: R-ED

RONALD L. SPAHN
GAIL A. SPAHN
TM: 25 PARCEL: 95
L: 1758 / F: 432
6.75 ACRES
ZONED: R-ED

STATE OF MARYLAND DEPARTMENT
OF FORESTS AND PARKS
TM: 25 PARCEL: 266
L: 384 / F: 432
5.94 ACRES
USE EXEMPT
ZONED: R-ED

STATE OF MARYLAND DEPARTMENT
OF FORESTS AND PARKS
TM: 25 PARCEL: 250
L: 376 / F: 58
1.76 ACRES
USE: EXEMPT
ZONED: R-ED

WILLIE ANN MCPHERSON
MCPHERSON PROPERTY
TM: 25 PARCEL: 56
L: 1421 / F: 182
4.95 ACRES
ZONED: R-ED

STATE OF MARYLAND DEPARTMENT
OF FORESTS AND PARKS
TM: 25 PARCEL: 253
L: 376 / F:
USE EXEMPT
ZONED: R-ED

WILLIAM R. MCCORMACK JR.
TERRENCE S. MCCORMACK ET AL.
TM: 25 PARCEL: 58
PLAT: 20783
L: 6252 / F: 79
NON-BUILDABLE BULK PARCELA
12.03 ACRES
USE: RESIDENTIAL
ZONED: R-ED

HOWARD COUNTY MARYLAND
RECREATION AND PARKS
TM: 25 PARCEL: 296
SEWELL PROPERTY
PLAT: 7772
TM: 25 PARCEL: 296

LEGEND:	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	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 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING FENCE
	CENTERLINE OF EXISTING STREAM
	PROPOSED TREELINE
	EXISTING SEWER AND UTILITY EASEMENT
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED LIMIT OF DISTURBANCE
	SPECIMEN TREE
	EX-SPECIMEN TREE TO BE REMOVED
	EXISTING MODERATE SLOPES
	EXISTING STEEP SLOPES
	PORTIONS OF CONTRACT 661-165 TO BE REMOVED, INCLUDES ALL STRUCTURES AND PIPE

SPECIMEN TREE CHART				
NO.	SIZE	COMMON NAME	CONDITION	COMMENTS
ST-1	31" DBH	NORWAY MAPLE	FAIR	TO BE REMOVED
ST-2	47" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-3	48" DBH	NORWAY MAPLE	POOR	TO BE REMOVED
ST-4	41" DBH	WHITE ASH	FAIR-POOR	TO BE REMOVED
ST-5	48" DBH	WHITE OAK	FAIR-POOR	TO BE REMOVED
ST-6	36" DBH	TULIP POPLAR	FAIR	TO BE REMOVED
ST-7	45" DBH	AMERICAN SYCAMORE	GOOD	TO REMAIN
ST-8	41" DBH	TULIP POPLAR	FAIR	TO BE REMOVED
ST-9	37" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-10	31" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-11	30" DBH	TULIP POPLAR	FAIR	TO REMAIN
ST-12	30" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-13	31" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-14	32" DBH	AMERICAN SYCAMORE	FAIR	TO BE REMOVED
ST-15	31" DBH	AMERICAN SYCAMORE	GOOD	TO BE REMOVED
ST-16	33" DBH	WHITE ASH	POOR	TO BE REMOVED
ST-17	37" DBH	TULIP POPLAR	GOOD	TO BE REMOVED
ST-18	35" DBH	MOCKERNUT HICKORY	GOOD	TO REMAIN
ST-19	44" DBH	AMERICAN SYCAMORE	FAIR	TO REMAIN
ST-20	44" DBH	AMERICAN BEECH	GOOD	TO REMAIN
ST-21	40" DBH	WHITE PINE	GOOD	TO REMAIN
ST-22	50" DBH	WHITE OAK	GOOD	TO REMAIN
ST-23	52" DBH	POPLAR	POOR	TO BE REMOVED
ST-24	41" DBH	POPLAR	GOOD	TO REMAIN
ST-25	38" DBH	POPLAR	GOOD	TO REMAIN
ST-26	32" DBH	POPLAR	GOOD	TO BE REMOVED
ST-27	31.5" DBH	POPLAR	GOOD	TO BE REMOVED
ST-28	37" DBH	POPLAR	GOOD	TO BE REMOVED

NOTE: 1. FOR SPECIMEN TREES 9, 12, 13, 21, 24 & 25 TREE PROTECTION FENCING WILL BE REQUIRED. SPECIMEN TREE #21 WILL REQUIRE EITHER BARB WIRE OR BOARD ON BOARD FENCING. GENERALLY PRUNING MAY BE REQUIRED AND WILL BE DETERMINED PRIOR TO CONSTRUCTION BY DEVELOPER'S REPRESENTATIVE. ASSESSMENT OF #21 WILL BE REQUIRED AT BEGINNING, MIDDLE AND END OF CONSTRUCTION TO DETERMINE STATUS.
2. REFER TO WP 12-165 REGARDING THE ALLOWED STEEP SLOPE DISTURBANCE AND SPECIMEN TREE REMOVAL.
3. DUE TO CONSTRUCTION ACTIVITIES; SPECIMEN TREES # 9, 12 AND 13 CRITICAL ROOT ZONES MAY BE NEGATIVELY IMPACTED.

OWNER
MR. & MRS. FAMILY LIMITED PARTNERSHIP; TAYLOR VILLAGE FAMILY, LLC
MANAGING MEMBER PHILIP GUGLIEMINI, AUTHORIZED PERSON
4100 COLLEGE AVENUE
ELLICOTT CITY, MD 21043
(410) 465-3500

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MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
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ELLICOTT CITY, MD 21043
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DEVELOPER
AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPAHN, PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21045
(410) 465-3500

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
EXISTING CONDITIONS, DEMOLITION
AND CLEARING PLAN
AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
PARCELS 56 & 309 (L. 12833 / F. 00446)
PARCEL 95 (L. 13244 / F. 00037)

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

DESIGN BY: RHY/EDS
DRAWN BY: JMR/EDS
CHECKED BY: RHY
DATE: DECEMBER 2013
SCALE: AS SHOWN
W.O. NO.: 10-30

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193
EXPIRATION DATE: 09-27-2014

2 OF 17

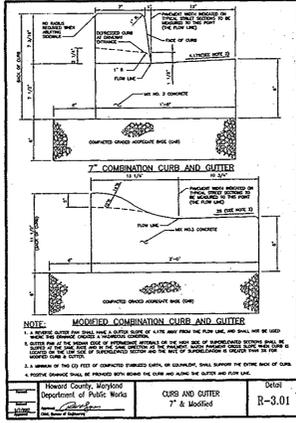
DEMOLITION / CLEARING PLAN
SCALE: 1"=50'



APPROVED: DEPARTMENT OF PUBLIC WORKS
Michael J. Walsh 2-27-14
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Edmonson 3-14-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

W.D. Schindler 3-17-14
CHIEF, DIVISION OF LAND DEVELOPMENT

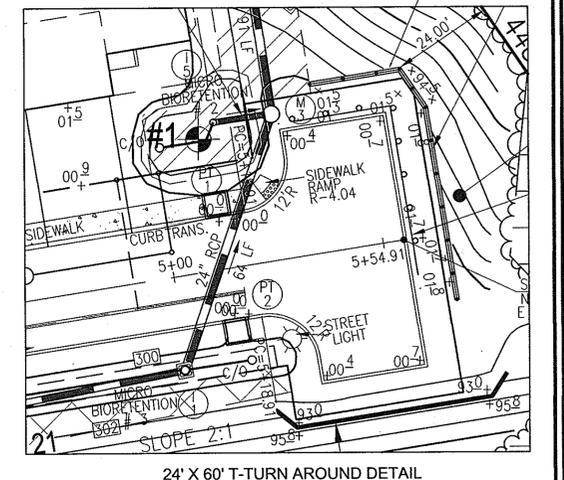
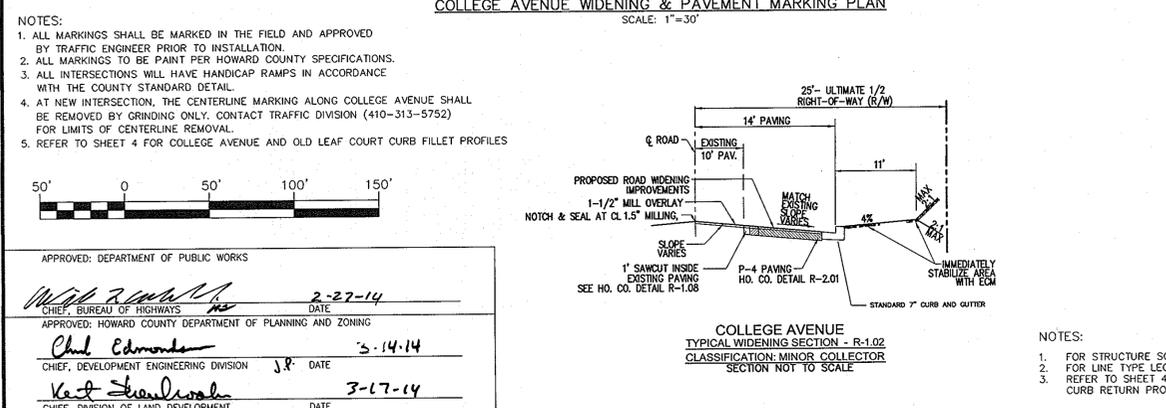
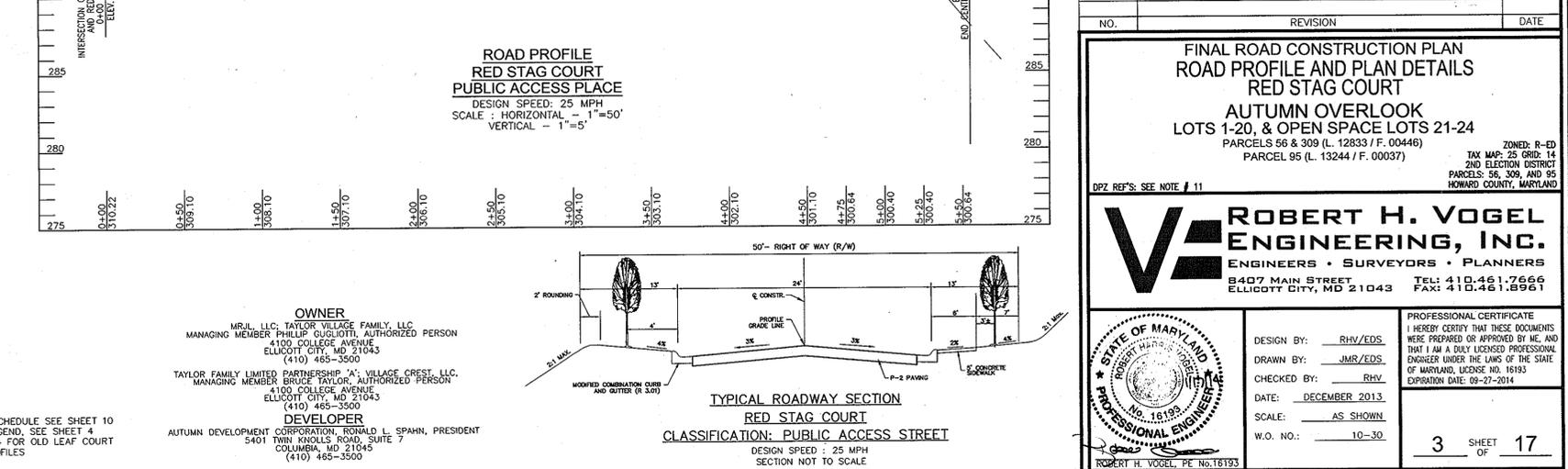
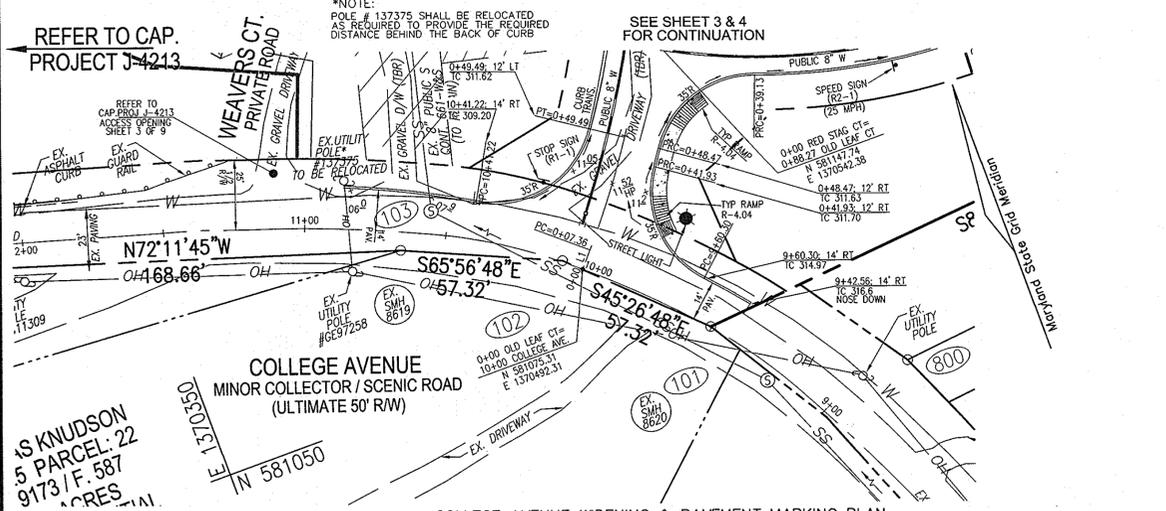
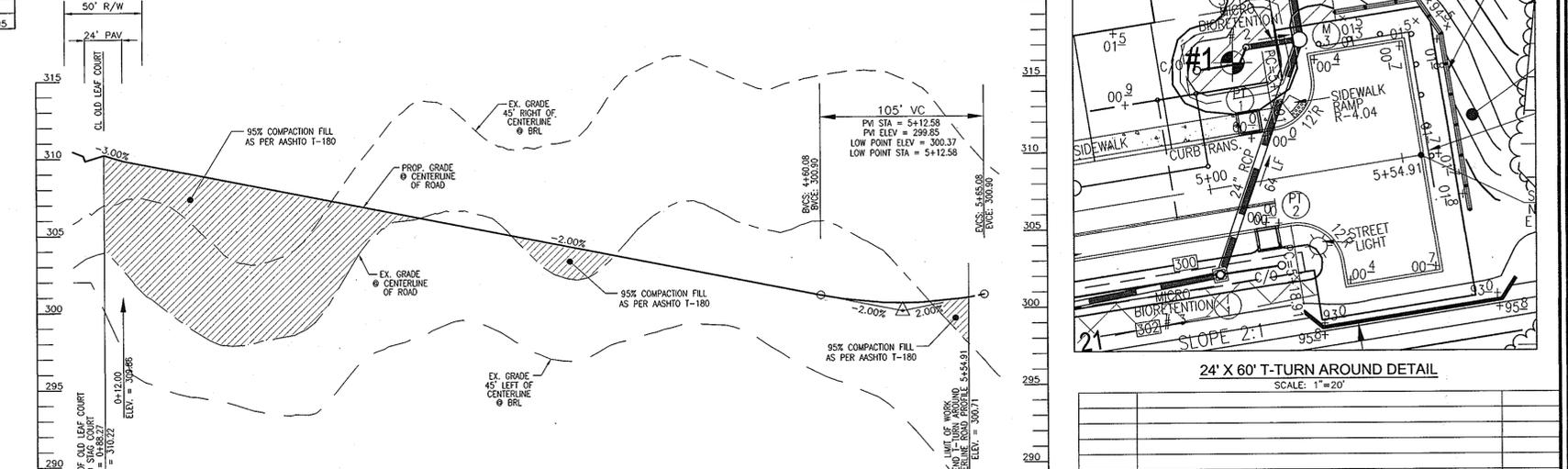
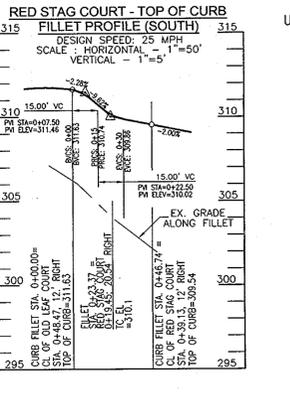
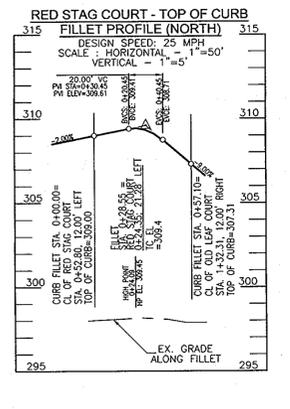
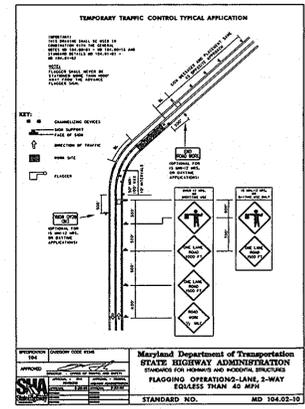
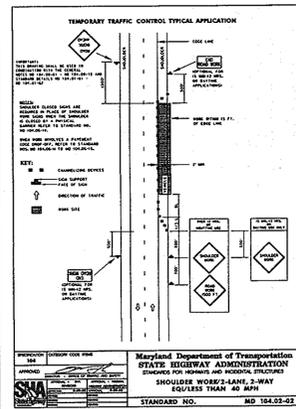
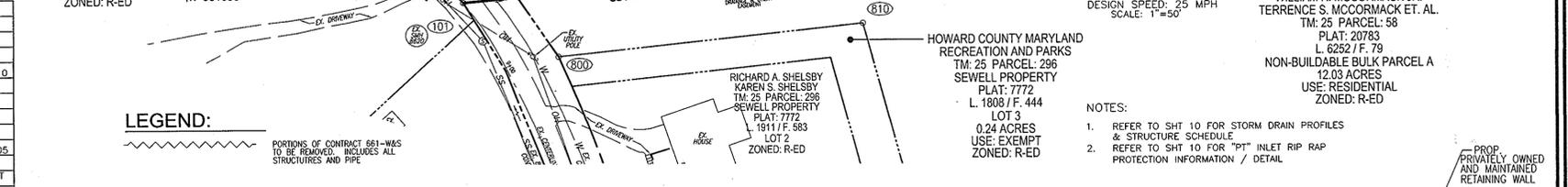
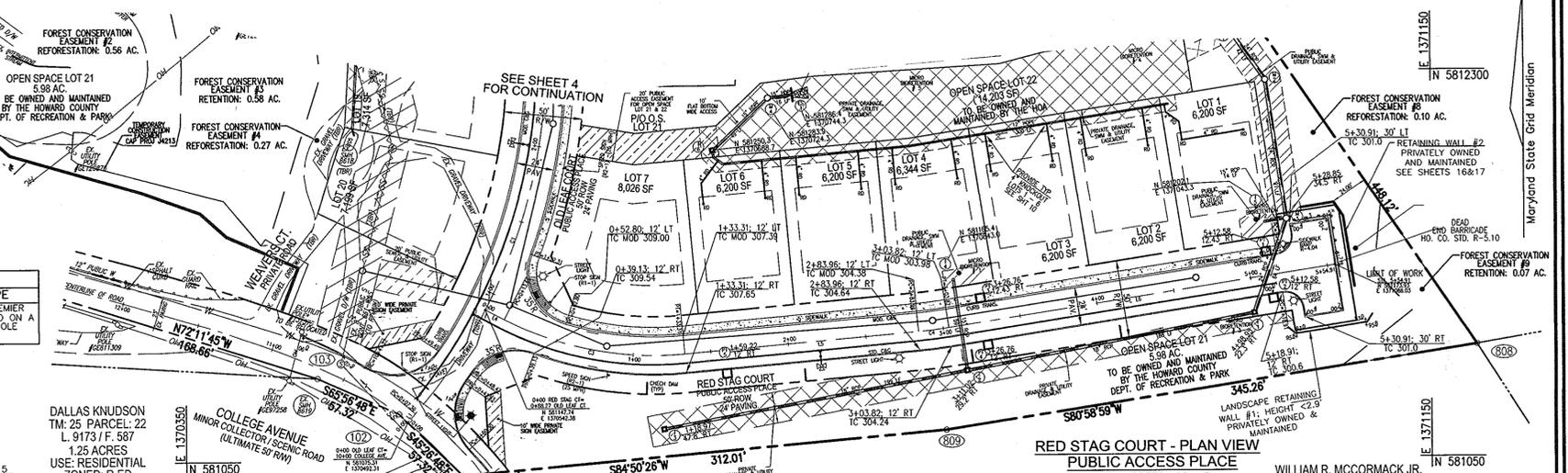


STATION	LINE BEARING	DISTANCE
P-1	N40°43'56"E	7.35'
P-2	N41°12'16"E	116.35'
P-3	S62°30'50"E	13.66'
P-4	N84°50'26"E	150.65'
P-5	N60°58'59"E	251.09'

CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	CHORD LENGTH
C1	259.57	350.00	136.08	42°29'34"	S19°29'09"W	253.67
C2	157.66	210.00	82.75	43°00'54"	S19°44'49"W	153.98
C3	119.65	210.00	61.50	32°38'44"	S78°50'12"E	118.04
C4	19.86	295.00	9.93	3°51'27"	S82°54'42"W	19.86

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
RED STAG COURT	0+37	22' LT.	STOP SIGN (R1-1) STREET SIGN (D3-1)
RED STAG COURT	0+86	15' RT.	SPEED LIMIT SIGN (R2-1)

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
RED STAG COURT	2+70.00	16.00' RT.	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
RED STAG COURT	5+25.00	19.00' RT.	



NOTES:
 1. ALL MARKINGS SHALL BE MARKED IN THE FIELD AND APPROVED BY TRAFFIC ENGINEER PRIOR TO INSTALLATION.
 2. ALL MARKINGS TO BE PAINT PER HOWARD COUNTY SPECIFICATIONS.
 3. ALL INTERSECTIONS WILL HAVE HANDICAP RAMPS IN ACCORDANCE WITH THE COUNTY STANDARD DETAIL.
 4. AT NEW INTERSECTION, THE CENTERLINE MARKING ALONG COLLEGE AVENUE SHALL BE REMOVED BY GRINDING ONLY. CONTACT TRAFFIC DIVISION (410-313-5752) FOR LIMITS OF CENTERLINE REMOVAL.
 5. REFER TO SHEET 4 FOR COLLEGE AVENUE AND OLD LEAF COURT CURB FILLET PROFILES

OWNER
 MRJL, LLC, TAYLOR VILLAGE FAMILY, LLC
 MANAGING MEMBER PHILLIP GUGLIOTTI, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 (410) 465-3500
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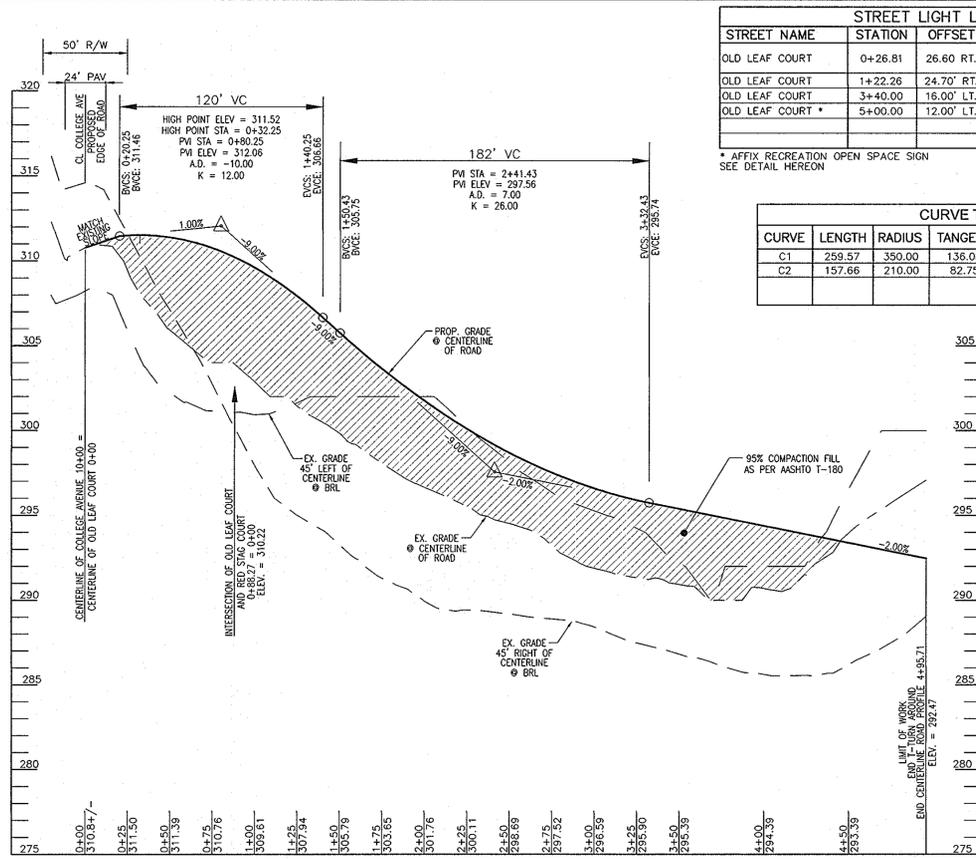
FINAL ROAD CONSTRUCTION PLAN
 ROAD PROFILE AND PLAN DETAILS
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 PARCEL 95 (L. 13244 / F. 00037)

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PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2014

DESIGN BY: RHV/EDS
 CHECKED BY: JMR/EDS
 DATE: DECEMBER 2013
 SCALE: AS SHOWN
 W.O. NO.: 10-30

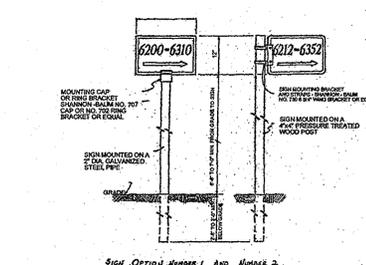
3 SHEET OF 17



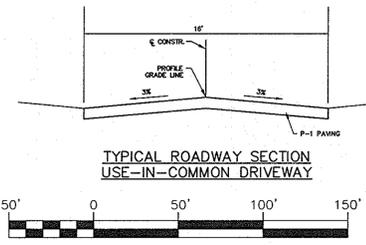
STREET LIGHT LOCATION CHART			
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
OLD LEAF COURT	0+26.81	26.60 RT.	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
OLD LEAF COURT	1+22.28	24.70' RT.	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
OLD LEAF COURT	3+40.00	18.00' LT.	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
OLD LEAF COURT	5+00.00	12.00' LT.	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE

CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING
C1	259.57	350.00	138.08	42°29'34"	S19°29'09"W
C2	157.66	210.00	82.75	43°00'54"	S19°44'49"W

ROAD PROFILE
OLD LEAF COURT
PUBLIC ACCESS PLACE
 DESIGN SPEED: 25 MPH
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

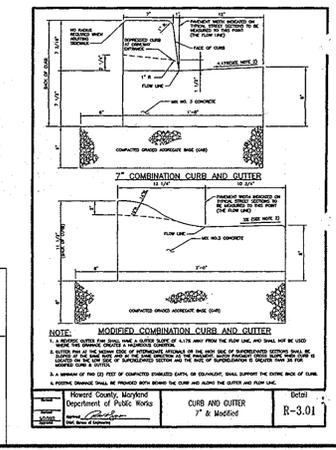


TYP. RANGE OF ADDRESS SIGN DESIGN AND INSTALLATION - DETAIL
 SCALE: NTS

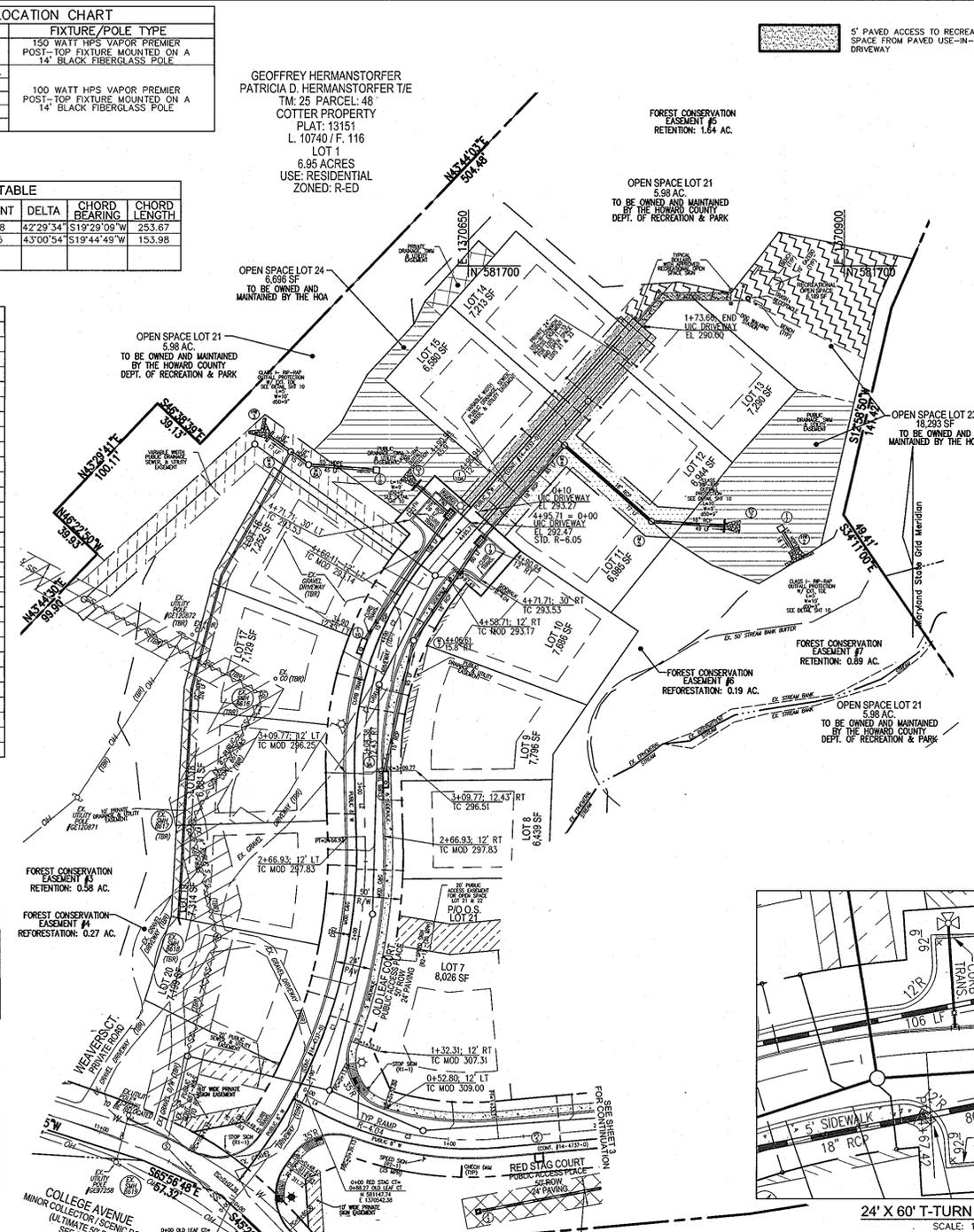


TYPICAL ROADWAY SECTION
USE-IN-COMMON DRIVEWAY
 50' - RIGHT OF WAY (R/W)
 DESIGN SPEED: 25 MPH
 SECTION NOT TO SCALE

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	COLORADO BORING CODE (CBC)	1 TO 10	10 TO 20	20 TO 30	30 TO 40	40 TO 50	50 TO 60	60 TO 70	70 TO 80	80 TO 90	90 TO 100
P-1	FRONTAGE ROAD - NON-RESIDENTIAL	FRONTAGE ROAD (FRONT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-2	FRONTAGE ROAD - NON-RESIDENTIAL WITH NO HOV	FRONTAGE ROAD (FRONT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-3	FRONTAGE ROAD - NON-RESIDENTIAL WITH HOV	FRONTAGE ROAD (FRONT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-4	FRONTAGE ROAD - NON-RESIDENTIAL WITH HOV	FRONTAGE ROAD (FRONT)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



TYPICAL ROADWAY SECTION
OLD LEAF COURT
CLASSIFICATION: PUBLIC ACCESS STREET
 DESIGN SPEED: 25 MPH
 SECTION NOT TO SCALE



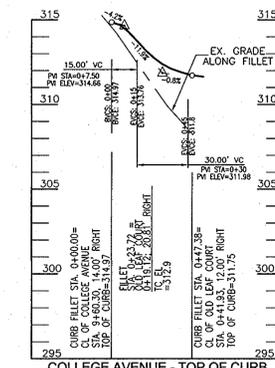
OLD LEAF COURT - PLAN VIEW
PUBLIC ACCESS PLACE
 DESIGN SPEED: 25 MPH
 SCALE: 1"=50'

STREET SIGN LOCATION CHART			
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
OLD LEAF COURT	0+25	23' RT.	STOP SIGN (R1-1) STREET SIGN (O3-1)
OLD LEAF COURT	1+90	19' RT.	SPEED LIMIT SIGN (R2-1)

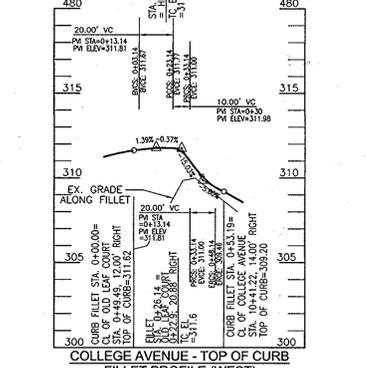
LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- 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 FENCE
- CENTERLINE OF EXISTING STREAM
- PROPOSED STORMDRAIN
- PROPOSED STORMDRAIN INLET
- PROPOSED SIDEWALK
- PROPOSED CURB
- PROPOSED STREET LIGHT

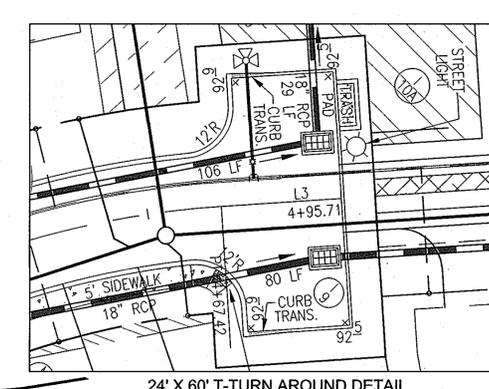
- EXISTING SEWER AND UTILITY EASEMENT
- PROPOSED PUBLIC SEWER & UTILITY EASEMENT
- RECREATIONAL OPEN SPACE
- 20' PUBLIC ACCESS EASEMENT TO OPEN SPACE LOT 21
- PRIVATE 24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 11-15 AND OPEN SPACE LOTS 21 & 23
- PRIVATE DRAINAGE, SWM & UTILITY EASEMENT
- PUBLIC DRAINAGE, SWM & UTILITY EASEMENT
- VARIABLE WIDTH PUBLIC DRAINAGE, SEWER, WATER, & UTILITY EASEMENT
- 10' WIDE PRIVATE SIGN EASEMENT
- PORTIONS OF CONTRACT 661-1165 TO BE REMOVED, INCLUDES ALL STRUCTURES AND PIPE



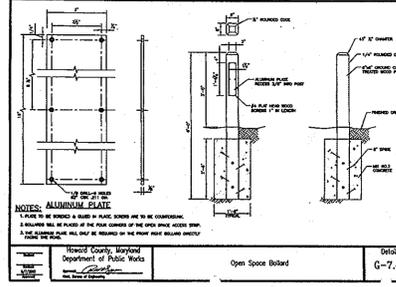
COLLEGE AVENUE - TOP OF CURB FILLET PROFILE (EAST)
 DESIGN SPEED: 25 MPH
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'



COLLEGE AVENUE - TOP OF CURB FILLET PROFILE (WEST)
 DESIGN SPEED: 25 MPH
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'



24' X 60' T-TURN AROUND DETAIL
 SCALE: 1"=20'



RECREATION OPEN SPACE SIGN DETAIL
 NOT TO SCALE

FINAL ROAD CONSTRUCTION PLAN
ROAD PROFILE AND PLAN DETAILS
OLD LEAF COURT
AUTUMN OVERLOOK
 LOTS 1-20, & OPEN SPACE LOTS 21-24
 PARCELS 56 & 309 (L. 12833 / F. 00446)
 PARCEL 95 (L. 13244 / F. 00037)

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

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2014.

DESIGN BY: RHV/EDS
 DRAWN BY: JMR/EDS
 CHECKED BY: RHV
 DATE: DECEMBER 2013
 SCALE: AS SHOWN
 W.O. NO.: 10-30

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 NO. 16193
 EXPIRES 09-27-2014

4 SHEET OF 17

SOILS LEGEND					
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K-FACTOR	PRIME FARMLAND
LeC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	B	NO	0.02	NO
McD	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	0.28	NO
MgF	MANOR-BANNERTOWN SANDY LOAMS, 25 TO 65 PERCENT SLOPES, ROCKY	B	NO	0.24	NO

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

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

- NOTES**
- REFER TO SHEET 8 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 8 FOR TRAP SCHEDULE
 - REFER TO SHEETS 7 & 8 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - REFER TO SHEETS 6 FOR STANDARD STABILIZATION NOTE.

LEGEND:	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	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 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS
	EXISTING TREELINE
	EXISTING TREES
	EXISTING MODERATE SLOPES
	EXISTING STEEP SLOPES
	EXISTING FENCE
	CENTERLINE OF EXISTING STREAM
	PROPOSED TREELINE
	EXISTING SEWER AND UTILITY EASEMENT
	PROPOSED PUBLIC SITE EASEMENT
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED SUPER SILT FENCE
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED TREE PROTECTION FENCE
	PROPOSED DRAINAGE DITCH
	EXISTING DRAINAGE DITCH
	EARTH DIKE

SEDIMENT TRAP #2 TSSW DATA
 REFER TO SHEET 8 FOR TRAP SCHEDULE

EX. Q1	1.6 CFS
PROP. Q1	1.4 CFS
Q1 STORAGE PROVIDED:	13,200 CF ± @ 271.33

SEDIMENT TRAP #3 TSSW DATA
 REFER TO SHEET 8 FOR TRAP SCHEDULE

EX. Q1	2.5 CFS
PROP. Q1	0.3 CFS
Q1 STORAGE PROVIDED:	13,280 CF ± @ 278.00

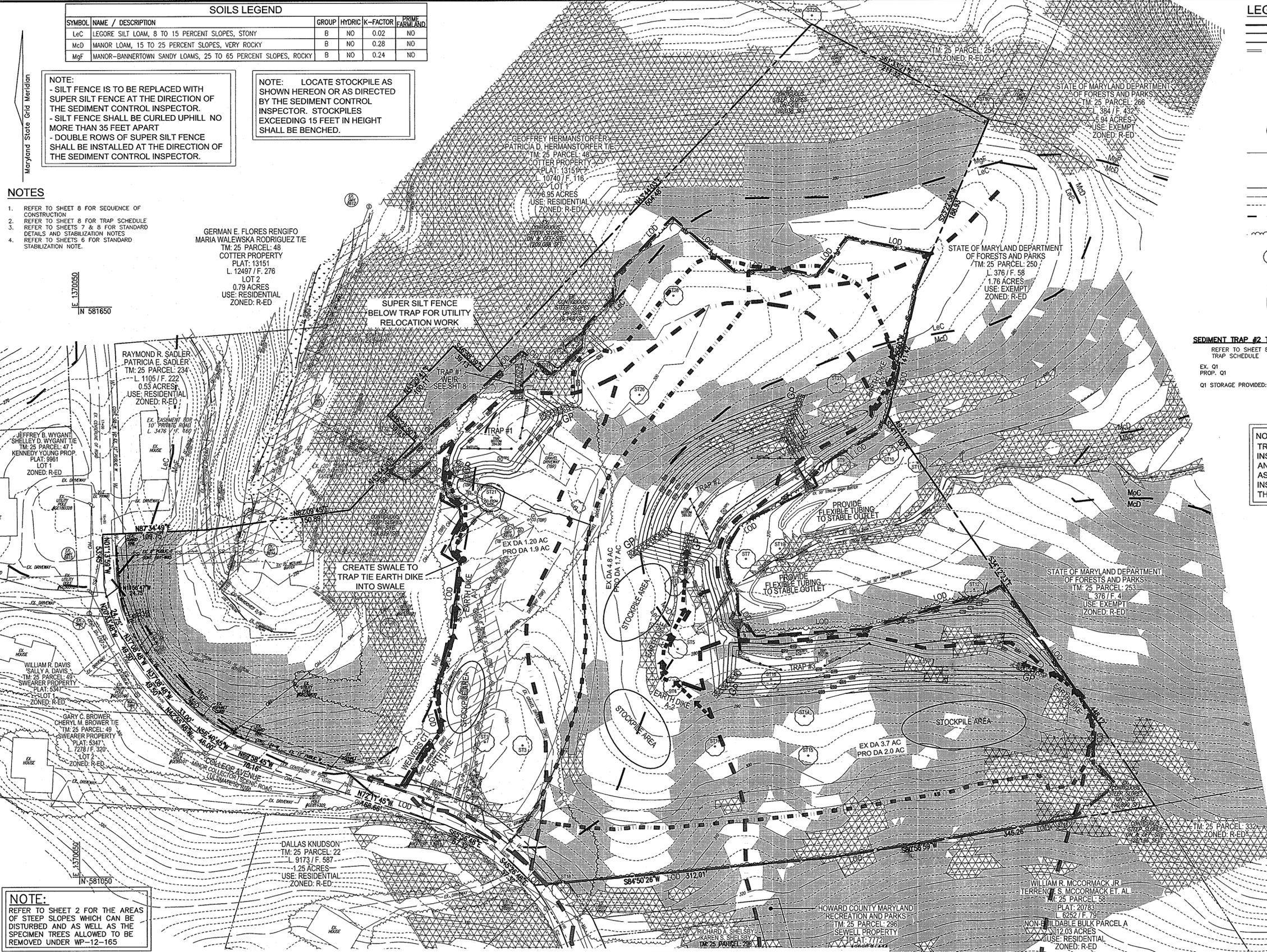
NOTE:
 TRAP #2 AND TRAP #3 SHALL HAVE FLEXIBLE TUBING INSTALLED TO THE OUTFALL OF THE P.O.S.T. BARREL AND SHALL FOLLOW THE PATH SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR THROUGH THE STREAM BUFFER, DOWN THE SLOPES TO AN ACCEPTABLE OUTLET.

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

OWNER
 MR./JL FAMILY LIMITED PARTNERSHIP; TAYLOR VILLAGE FAMILY, LLC
 MANAGING MEMBER PHILLIP BUSIOLTI, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 (410) 465-3500

TAYLOR FAMILY LIMITED PARTNERSHIP "A"; VILLAGE CREST, LLC.
 MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 (410) 465-3500

DEVELOPER
 AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPAHN, PRESIDENT
 5401 TWIN KNOLLS ROAD, SUITE 7
 COLUMBIA, MD 21046
 (410) 465-3500



NOTE:
 REFER TO SHEET 2 FOR THE AREAS OF STEEP SLOPES WHICH CAN BE DISTURBED AND AS WELL AS THE SPECIMEN TREES ALLOWED TO BE REMOVED UNDER WP-12-165

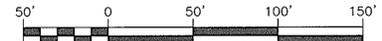
APPROVED: DEPARTMENT OF PUBLIC WORKS
 2-27-14
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 3/14/14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 APPROVED: 3-17-14
 CHIEF, DIVISION OF LAND DEVELOPMENT

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.
 12-6-13
 SIGNATURE OF DEVELOPER

BY THE ENGINEER:
 I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 1/17/14
 SIGNATURE OF ENGINEER

GRADING PLAN
 SCALE: 1" = 50'
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 2/11/14
 HOWARD S.C.D.

NOTE:
 CONTRACTOR TO PROVIDE IMMEDIATE REPAIR OF ANY EARTH DIKES INTERRUPTED DURING CONSTRUCTION.

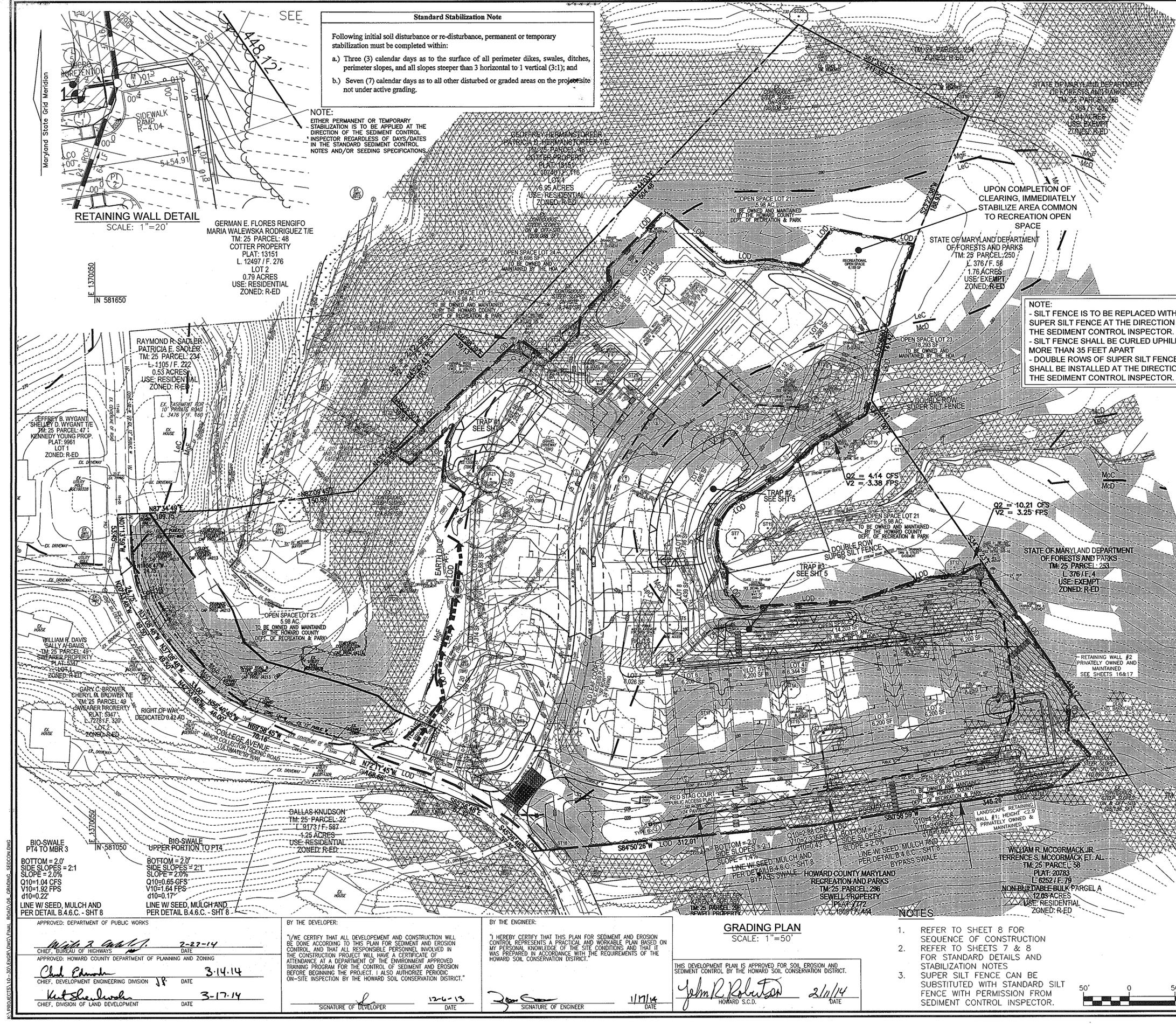


NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
SOILS MAP, PHASE 1 GRADING AND SOIL EROSION,
AND SEDIMENT CONTROL PLAN
AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
 PARCELS 56 & 309 (L. 12833 / F. 00446)
 PARCEL 95 (L. 13244 / F. 00037)
 ZONED: R-ED
 TAX MAP: 25 GRD. 14
 2ND ELECTION DISTRICT
 PARCELS: 56, 309, AND 95
 HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2014.
 DESIGN BY: RHV/EDS
 DRAWN BY: JMR/EDS
 CHECKED BY: RHV
 DATE: DECEMBER 2013
 SCALE: AS SHOWN
 W.O. NO.: 10-30
 5 SHEET OF 17



Standard Stabilization Note

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

- Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
- Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

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

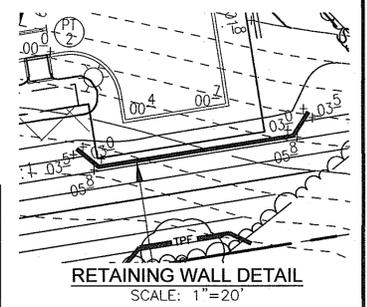
UPON COMPLETION OF CLEARING, IMMEDIATELY STABILIZE AREA COMMON TO RECREATION OPEN SPACE

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

LEGEND:

---	PROPERTY LINE	---	EXISTING SEWER AND UTILITY EASEMENT
---	RIGHT-OF-WAY LINE	---	PROPOSED PUBLIC SEWER
---	ADJACENT PROPERTY LINE	---	PROPOSED 24" PUBLIC PROCESS EASEMENT TO OPEN SPACE LOT 21
---	EXISTING CURB AND GUTTER	---	PROPOSED PRIVATE DRAINAGE SWM & UTILITY EASEMENT
---	EXISTING UTILITY POLE	---	PROPOSED PUBLIC DRAINAGE SWM & UTILITY EASEMENT
---	EXISTING LIGHT POLE	---	PROPOSED PUBLIC DRAINAGE SWM & UTILITY EASEMENT
---	EXISTING MAILBOX	---	PROPOSED PUBLIC DRAINAGE SWM & UTILITY EASEMENT
---	EXISTING SIGN	---	10' WIDE PRIVATE SIGN EASEMENT
---	EXISTING SANITARY MANHOLE	---	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
---	EXISTING SANITARY LINE	---	PROPOSED SUPER SILT FENCE
---	EXISTING CLEANOUT	---	PROPOSED LIMIT OF DISTURBANCE
---	EXISTING FIRE HYDRANT	---	PROPOSED CURB INLET PROTECTION
---	EXISTING WATER LINE	---	PROPOSED STANDARD INLET PROTECTION
---	EXISTING 10' CONTOUR	---	PROPOSED TREE PROTECTION FENCE
---	EXISTING 2' CONTOUR	---	EARTH DIKE
---	SOILS	---	PERMANENT SOIL STABILIZATION MATTING - CHANNEL
---	EXISTING TREELINE	---	PERMANENT SOIL STABILIZATION MATTING - SLOPE
---	EXISTING TREES	---	
---	EXISTING MODERATE SLOPES	---	
---	EXISTING STEEP SLOPES	---	
---	EXISTING FENCE	---	
---	CENTERLINE OF EXISTING STREAM	---	
---	PROPOSED STORMDRAIN	---	
---	PROPOSED STORMDRAIN INLET	---	
---	PROPOSED SIDEWALK	---	
---	PROPOSED TREELINE	---	
---	PROPOSED CURB	---	
---	PROPOSED STREET LIGHT	---	
---	PROPOSED 10' CONTOUR	---	
---	PROPOSED 2' CONTOUR	---	

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.



SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K-FACTOR	DRIVE PATTERN
LcC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	B	NO	0.02	NO
McD	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	0.28	NO
MgF	MANOR-BANNERTOWN SANDY LOAMS, 25 TO 65 PERCENT SLOPES, ROCKY	B	NO	0.24	NO

NOTE:
REFER TO SHEET 2 FOR THE AREAS OF STEEP SLOPES WHICH CAN BE DISTURBED AND AS WELL AS THE SPECIMEN TREES ALLOWED TO BE REMOVED UNDER WP-12-165

OWNER
MR.JL FAMILY LIMITED PARTNERSHIP; TAYLOR VILLAGE FAMILY, LLC
MANAGING MEMBER PHILLIP GUGLIOTTI, AUTHORIZED PERSON
4100 COLLEGE AVENUE
ELLICOTT CITY, MD 21043
(410) 465-3500

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPANIN, PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21045
(410) 465-3500

NO.	REVISION	DATE

**FINAL ROAD CONSTRUCTION PLAN
SOILS MAP, PHASE 2 GRADING AND SOIL EROSION
AND SEDIMENT CONTROL PLAN
AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
PARCELS 56 & 309 (L. 12833 / F. 00446)
PARCEL 95 (L. 13244 / F. 00037)**

DPZ REF: SEE NOTE # 11

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

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DESIGN BY: RHV/EDS
DRAWN BY: JMR/EDS
CHECKED BY: RHV
DATE: DECEMBER 2013
SCALE: AS SHOWN
W.O. NO.: 10-30

6 SHEET OF 17

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 2-27-14
DATE: 3-14-14
DATE: 3-17-14

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."

SIGNATURE OF DEVELOPER: [Signature]
DATE: 12-6-13

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

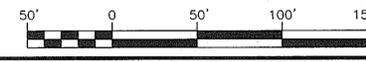
SIGNATURE OF ENGINEER: [Signature]
DATE: 1/17/14

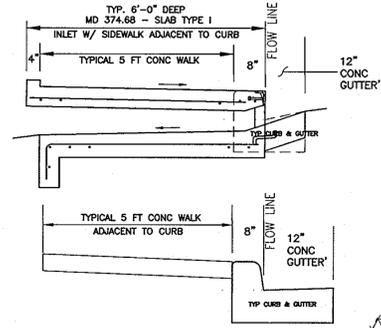
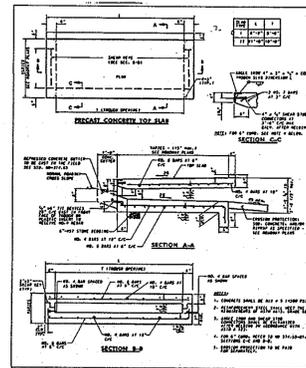
GRADING PLAN
SCALE: 1"=50'

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

SIGNATURE: [Signature]
DATE: 2/10/14
HOWARD S.C.D.

- NOTES**
- REFER TO SHEET 8 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEETS 7 & 8 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - SUPER SILT FENCE CAN BE SUBSTITUTED WITH STANDARD SILT FENCE WITH PERMISSION FROM SEDIMENT CONTROL INSPECTOR.





TYPICAL CURB OPENING INLETS (PT-1 - PT-5)

MD STANDARD 374.68 (NOT TO SCALE)

GERMAN E. FLORES RENGIFO
MARIA WALEWSKA RODRIGUEZ I/E
TM: 25 PARCEL: 48
COTTER PROPERTY
PLAT: 13151
L: 12497 / F: 276
LOT 2
0.79 ACRES
USE: RESIDENTIAL
ZONED: R-ED

RAYMOND R. SADLER
PATRICIA E. SADLER
TM: 25 PARCEL: 234
L: 1105 / F: 222
0.53 ACRES
USE: RESIDENTIAL
ZONED: R-ED

JEFFREY B. WYGANI
SHELLEY D. WYGANI
TM: 25 PARCEL: 47
KENNEDY YOUNG PROP.
PLAT: 9961
LOT 1
ZONED: R-ED

WILLIAM R. DAVIS
SALLY A. DAVIS
TM: 25 PARCEL: 49
SWEAREY PROPERTY
PLAT: 5347
LOT 2
ZONED: R-ED

GARY C. BROWER
CHERYL M. BROWER I/E
TM: 25 PARCEL: 49
SWEAREY PROPERTY
PLAT: 5347
LOT 2
ZONED: R-ED

DALLAS KNUDSON
TM: 25 PARCEL: 22
L: 9173 / F: 687
4.25 ACRES
USE: RESIDENTIAL
ZONED: R-ED

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS
DATE: 2-27-14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 3-14-14

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 3-17-14

NOTES

1. ASSUMED TC TO INLETS = WORST CASE 5 MINUTES
2. REFER TO SHT 10 FOR STORM DRAIN PROFILES & STRUCTURE SCHEDULE
3. REFER TO SHT 10 FOR "PT" INLET RIP RAP PROTECTION INFORMATION / DETAIL

STORM DRAIN DRAINAGE AREA MAP
SCALE: 1"=50'

LEGEND:

---	PROPERTY LINE	XXXX	EXISTING STEEP SLOPES
---	RIGHT-OF-WAY LINE	XXXX	EXISTING MODERATE SLOPES
---	ADJACENT PROPERTY LINE	XXXX	EXISTING SEWER AND UTILITY EASEMENT
---	EXISTING CURB AND GUTTER	XXXX	PUBLIC SEWER & UTILITY EASEMENT
---	EXISTING UTILITY POLE	XXXX	PUBLIC DRAINAGE EASEMENT
---	EXISTING LIGHT POLE	XXXX	20' PUBLIC ACCESS EASEMENT TO OPEN SPACE LOT 21
---	EXISTING MAILBOX	XXXX	PRIVATE 24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 11-15 AND OPEN SPACE LOTS 21 & 23
---	EXISTING SIGN	XXXX	PRIVATE DRAINAGE, SWM & UTILITY EASEMENT
---	EXISTING SANITARY MANHOLE	XXXX	PUBLIC DRAINAGE, SWM & UTILITY EASEMENT
---	EXISTING SANITARY LINE	XXXX	PUBLIC DRAINAGE & UTILITY EASEMENT
---	EXISTING CLEANOUT	XXXX	10' WIDE PRIVATE SIGN EASEMENT
---	EXISTING FIRE HYDRANT	XXXX	
---	EXISTING WATER LINE	XXXX	
---	EXISTING 10' CONTOUR	XXXX	
---	EXISTING 2' CONTOUR	XXXX	
---	SOILS	XXXX	
---	EXISTING TREELINE	XXXX	
---	EXISTING TREES	XXXX	
---	EXISTING FENCE	XXXX	
---	CENTERLINE OF EXISTING STREAM	XXXX	
---	PROPOSED STORMDRAIN	XXXX	
---	PROPOSED STORMDRAIN INLET	XXXX	
---	PROPOSED SIDEWALK	XXXX	
---	PROPOSED TREELINE	XXXX	
---	PROPOSED CURB	XXXX	
---	PROPOSED STREET LIGHT	XXXX	
---	PROPOSED 10' CONTOUR	XXXX	
---	PROPOSED 2' CONTOUR	XXXX	
---	PROPOSED DRAINAGE AREAS	XXXX	

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K-FACTOR	PERCENT IMPERVIOUS
LeC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	B	NO	0.02	NO
McD	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	0.28	NO
MgF	MANOR-BANNERTOWN SANDY LOAMS, 25 TO 65 PERCENT SLOPES, ROCKY	B	NO	0.24	NO

OWNER

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DEVELOPER

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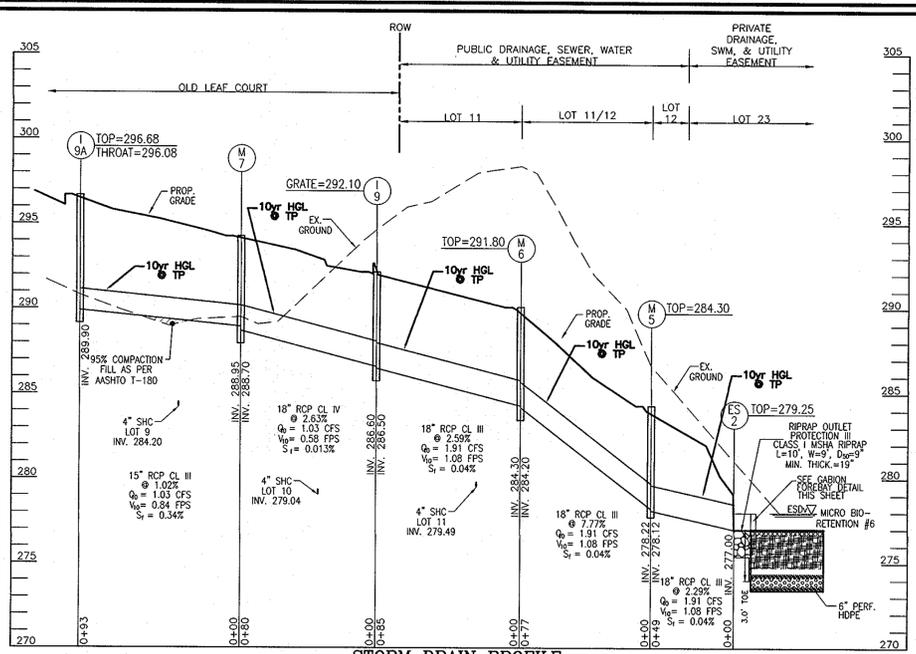
FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN - DRAINAGE AREA MAP
AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
PARCELS 56 & 309 (L. 12833 / F. 00446) ZONED: R-ED
PARCEL 95 (L. 13244 / F. 00037) TAX MAP: 25 GRID: 14
3RD ELECTION DISTRICT
PARCELS 56, 309, AND 95
HOWARD COUNTY, MARYLAND
DPZ REF'S: SEE NOTE # 11

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TEL: 410.461.7666
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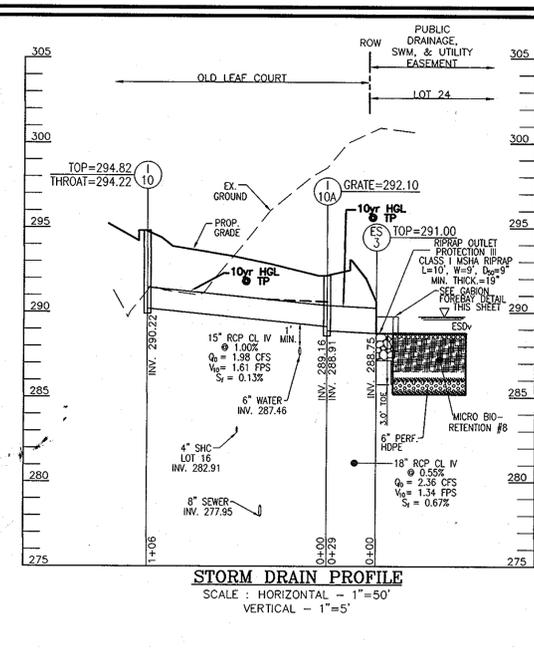
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193
EXPIRATION DATE: 09-27-2014

DESIGN BY: RHW/EDS
DRAWN BY: JMR/EDS
CHECKED BY: RHW
DATE: DECEMBER 2013
SCALE: AS SHOWN
W.O. NO.: 10-30

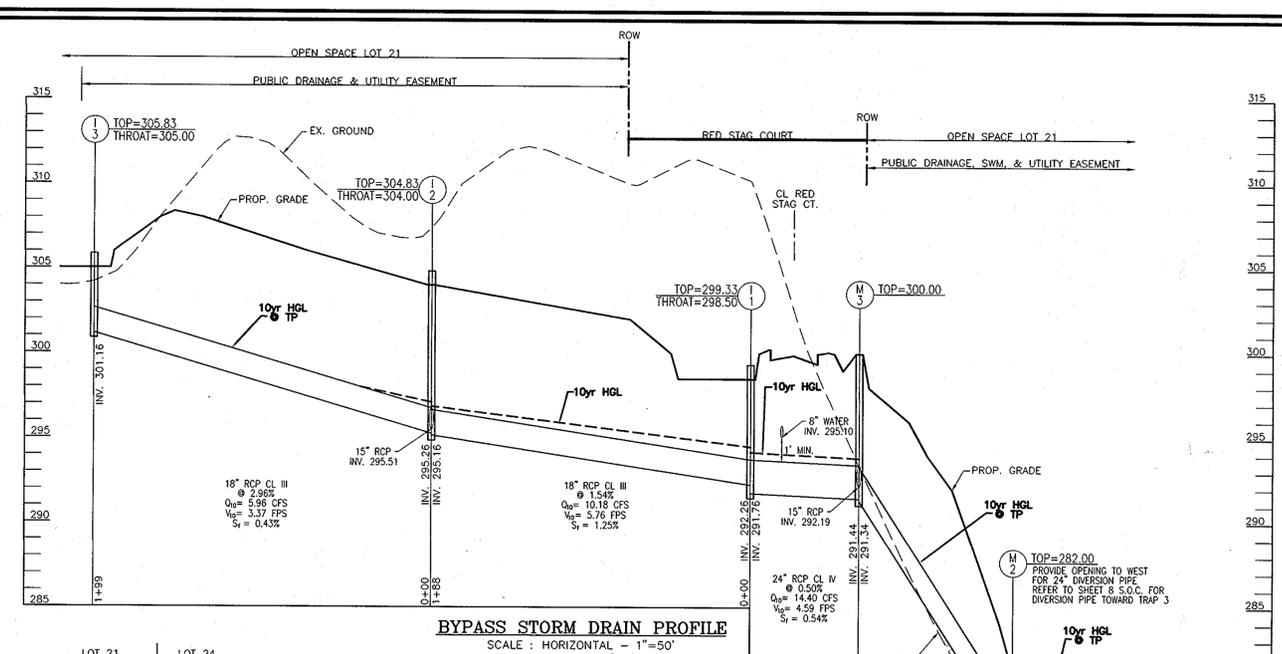
9 SHEET OF 17



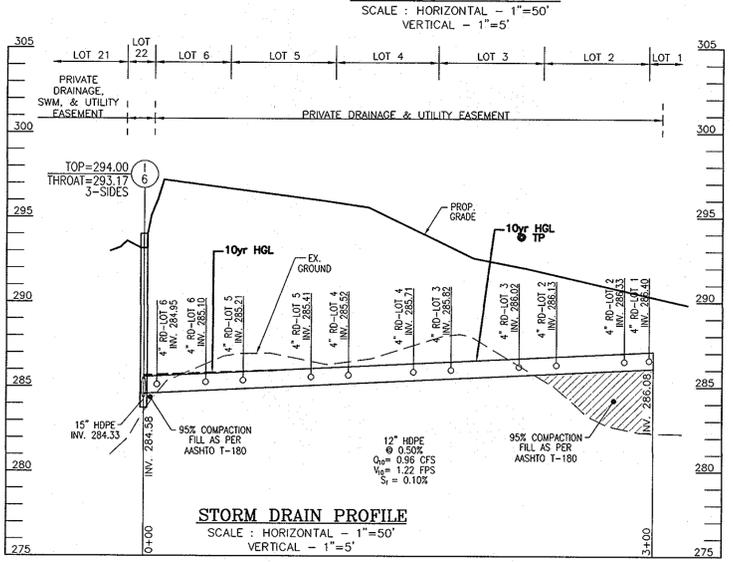
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



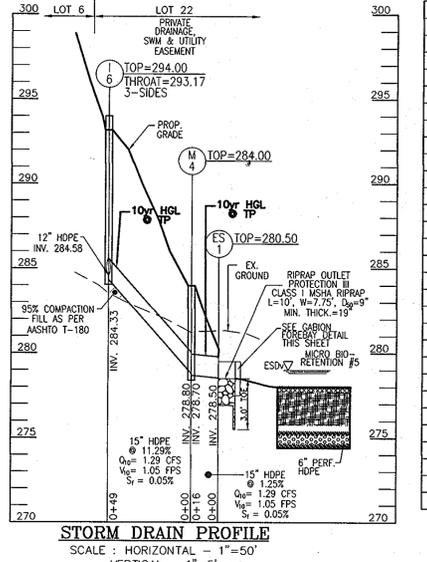
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



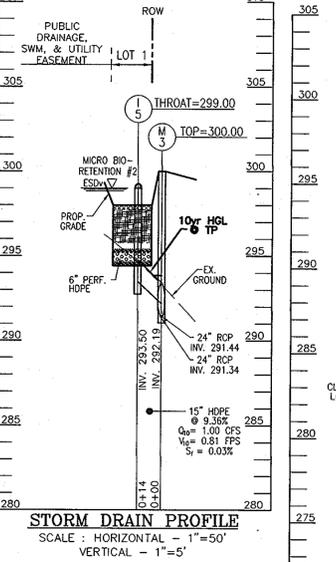
BYPASS STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



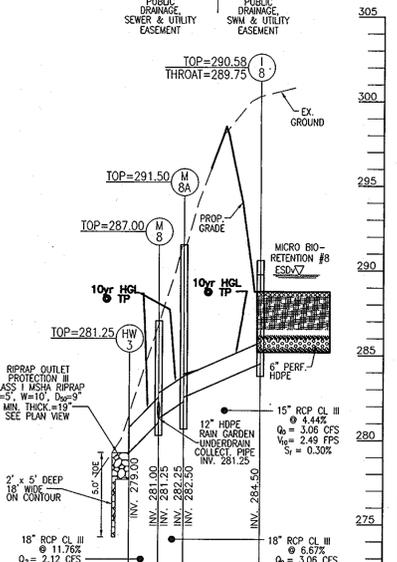
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



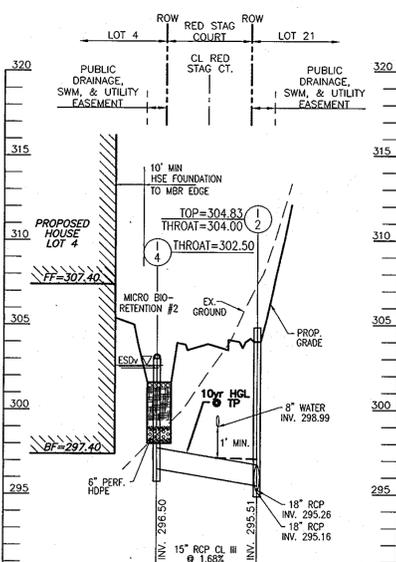
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



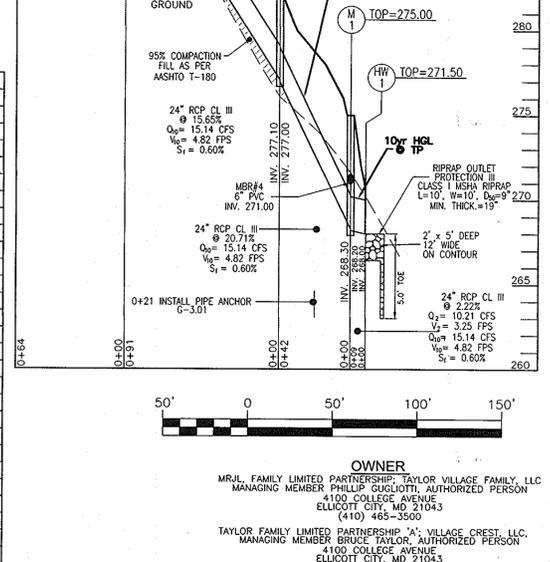
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

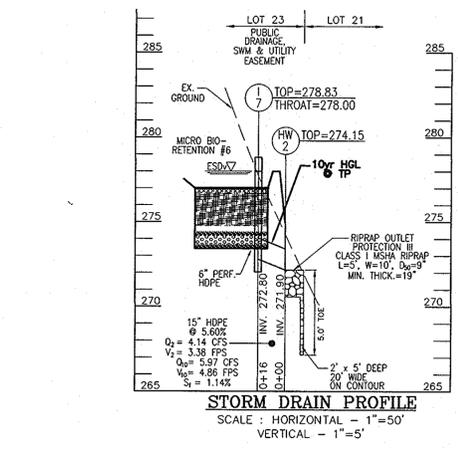


STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

OWNER
MR. & MRS. PHILIP P. TAYLOR, AUTHORIZED PERSON
4100 COLLEGE AVENUE
ELLSWORTH CITY, MD 21043
(410) 465-3500

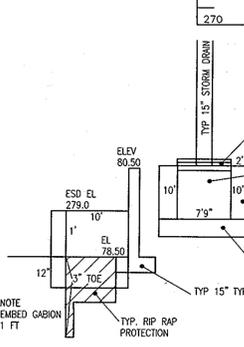
TAYLOR FAMILY LIMITED PARTNERSHIP "A", VILLAGE CREST, LLC.
MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
4100 COLLEGE AVENUE
ELLSWORTH CITY, MD 21043
(410) 465-3500

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPAHN, PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21046
(410) 465-3500



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

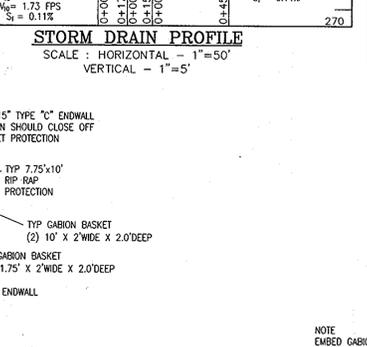
STRUCTURE SCHEDULE							
STR #	TYPE	INV. IN	INV. OUT	TOP OR	DETAIL	LOCATION	REMARKS
I-1	D	292.26	291.76	299.33	D-4.10	N 581143.2 E 1371036.3	Throat Open 4 Sides
I-2	D	285.26/295.51	295.16	304.83	D-4.10	N 581106.9 E 1370851.7	Throat Open 1 Side
I-3	D	-	301.16	305.83	D-4.10	N 581069.9 E 1370657.0	Throat Open 4 Sides
I-4	Nyloplast Dome	-	296.50	THROAT 302.5	-	N 581165.4 E 1370843.0	Bio-Retention #1
I-5	Nyloplast Dome	-	293.50	THROAT 289.0	-	N 581202.1 E 1371043.3	Bio-Retention #2
I-6	D	284.58	284.33	294.00	D-4.10	N 581253.3 E 1370868.7	Throat Open 3 Sides
I-7	D	272.80	272.80	278.83	D-4.10	N 581627.7 E 1370868.4	NER #6 - Throat Open 4 Sides
I-8	D	284.50	284.50	290.58	D-4.10	N 581563.9 E 1370588.9	NER #6 - Throat Open 4 Sides
I-9	DBL S	286.60	286.60	292.10	D-4.23	4+90.94; 12' RT	SUMP INLET
I-9A	A-10	289.90	289.90	296.68*	D-4.03	3+04.38; 12.43' RT	
I-10	A-10	290.22	290.22	294.82*	D-4.03	3+90; 12.43' LT	
I-10A	DBL S	289.16	288.91	292.10	D-4.23	4+90.94; 12' LT	SUMP INLET
PT-1	PASS THRU	-	-	300.59*	MD 374.68	5+12.58; 12.43' LT	Top L=6' Depth=6'
PT-2	PASS THRU	-	-	300.59*	MD 374.68	5+12.58; 12.43' RT	Top L=6' Depth=6'
PT-3	PASS THRU	-	-	303.79*	MD 374.68	3+26.76; 12.43' LT	Top L=6' Depth=6'
PT-4	PASS THRU	-	-	303.79*	MD 374.68	3+26.76; 12.43' RT	Top L=6' Depth=6'
PT-5	PASS THRU	-	-	307.14*	MD 374.68	1+59.22; 12.43' RT	Top L=6' Depth=6'
M-1	48" MANHOLE	268.30	268.20	275.00	G 5.12	N 581328.4 E 1371019.2	(1)
M-2	48" MANHOLE	277.10	277.00	282.00	G 5.12	N 581293.9 E 1371043.5	(1)
M-3	48" MANHOLE	291.44	291.34	300.00	G 5.12	N 581204.0 E 1371056.9	(1)
M-4	48" MANHOLE	278.80	278.70	284.00	G 5.12	N 581283.9 E 1370724.3	(1)
M-5	48" MANHOLE	278.22	278.12	284.30	G 5.12	N 581529.7 E 1370711.9	(1)
M-6	48" MANHOLE	284.30	284.20	291.80	G 5.12	N 581680.3 E 1370714.2	(1)
M-7	48" MANHOLE	288.85	288.70	294.20	G 5.12	4+06.91; 15.75' RT	(1)
M-8A	48" MANHOLE	282.50	282.25	291.50	G 5.12	N 581565.6 E 1370542.8	(1)
M-8	48" MANHOLE	281.25	281.00	287.00	G 5.12	N 581576.1 E 1370531.9	(1)
HW-1	24" END SEC	-	268.00	271.50	D-5.11	N 581337.4 E 1371018.6	(2) 24" TYPE A
HW-2	15" END SEC	-	273.90	273.90	D-5.21	N 581510.2 E 1370967.0	(2) 15" TYPE C
HW-3	15" END SEC	-	279.00	281.25	D-5.21	N 581596.5 E 1370517.7	(2) 15" TYPE C
ES-1	15" ENDWALL	-	278.50	280.50	D-5.21	N 581285.9 E 1370740.3	(2) 15" EndWall
ES-2	18" ENDWALL	-	277.00	279.25	D-5.21	N 581526.7 E 1370920.7	(2) 18" EndWall
ES-3	18" ENDWALL	-	288.75	291.00	D-5.21	N 581554.1 E 1370615.3	(2) 18" EndWall



BIORETENTION GATION FOREBAY DETAIL @ ES-1
N.T.S.

PIPE SCHEDULE		
Size	Class	Total Length*
12"	HDPE	300
15"	HDPE	99
18"	RCP CL III	197
15"	RCP CL IV	106
18"	RCP CL III	637
18"	RCP CL IV	112
24"	RCP CL III	142
24"	RCP CL IV	64

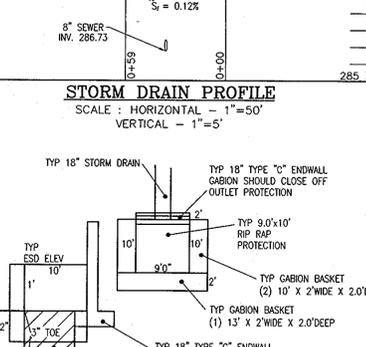
* The total length of pipe is linear feet only.



BIORETENTION GATION FOREBAY DETAIL @ ES-2 & ES-3
N.T.S.

GABION NOTES:

- ALL WIRE USED IN GABION CONSTRUCTION SHALL BE GALVANIZED AND PLASTIC COATED.
- FILTER CLOTH SHALL BE PLACED WHEREVER GABIONS COME INTO CONTACT WITH SOIL.
- STONE FILL SHALL CONSIST OF HARD, DURABLE, CLEAN STONE 4"-8" IN DIAMETER.
- CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



TYPICAL RIP RAP PROTECTION AT ALL STD MD 374.68 INLETS
(NOT TO SCALE)

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 DATE: 2-27-14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 DATE: 3-14-14

Chief, Division of Land Development
 DATE: 3-17-14

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN PROFILES
 AUTUMN OVERLOOK
 LOTS 1-20 & OPEN SPACE LOTS 21-24
 PARCELS 56 & 309 (L 12833/F 00446)
 PARCEL 95 (L 13244/F 00037)

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

DESIGN BY: RHV/EDS
 DRAWN BY: JMR/EDS
 CHECKED BY: RHV
 DATE: DECEMBER 2013
 SCALE: AS SHOWN
 W.O. NO.: 10-30

PROFESSIONAL CERTIFICATE
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 WERE PREPARED OR APPROVED BY ME, AND
 THAT I AM A DULY LICENSED PROFESSIONAL
 ENGINEER UNDER THE LAWS OF THE STATE
 OF MARYLAND, LICENSE NO. 16193
 EXPIRATION DATE: 09-27-2014

10 SHEET OF 17

SPECIMEN TREE CHART				
NO.	SIZE	COMMON NAME	CONDITION	COMMENTS
ST-1	31" DBH	NORWAY MAPLE	FAIR	TO BE REMOVED
ST-2	47" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-3	46" DBH	NORWAY MAPLE	POOR	TO BE REMOVED
ST-4	41" DBH	WHITE ASH	FAIR-POOR	TO BE REMOVED
ST-5	48" DBH	WHITE OAK	FAIR-POOR	TO BE REMOVED
ST-6	36" DBH	TULIP POPLAR	FAIR	TO BE REMOVED
ST-7	45" DBH	AMERICAN SYCAMORE	GOOD	TO REMAIN
ST-8	41" DBH	TULIP POPLAR	FAIR	TO BE REMOVED
ST-9	37" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-10	31" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-11	30" DBH	TULIP POPLAR	FAIR	TO REMAIN
ST-12	30" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-13	31" DBH	TULIP POPLAR	GOOD	TO REMAIN
ST-14	32" DBH	AMERICAN SYCAMORE	FAIR	TO BE REMOVED
ST-15	31" DBH	AMERICAN SYCAMORE	GOOD	TO BE REMOVED

FOREST STAND TOTALS
FOR THE MCPHERSON PORTION OF THE PROPERTY
PARCELS 56 AND 309

STAND A = 4.32 ACRES

GENERAL NOTES:

- THERE ARE NO STATE CHAMPION TREES ON SITE. SPECIMEN TREES HAVE BEEN IDENTIFIED ABOVE WITH CHART.
- THERE ARE NO RARE, THREATENED OR ENDANGERED SPECIES ON SITE.
- BASED ON THE SITE VISIT BY ENVIRONMENTAL CONSULTANT THERE WERE NO PRESENCE OF FOREST INTERIOR DWELLING BIRDS NESTING.
- THERE ARE NO CEMETERIES OR HISTORIC FEATURES ON SITE.
- SURROUNDING LAND USE IS MEDIUM/HIGH DENSITY RESIDENTIAL AND FOREST.

WETLAND DATA		
WETLAND SYSTEM	COWARDIN CLASSIFICATION	DOMINANT VEGETATION
A	PEMTA R3/4UB1	IMPATIENS CAPENSIS, BOEHMERIA CYLINDRICA, GLYCERIA CYLINDRICA

GERMAN E. FLORES RENGIFO
MARIA WALEWSKA RODRIGUEZ T/E
TM: 25 PARCEL: 48
COTTER PROPERTY
PLAT: 13151
L: 12497 / F: 276
0.79 ACRES
USE: RESIDENTIAL
ZONED: R-ED

LEGEND:

	PROPERTY LINE		PROPOSED SIDEWALK
	RIGHT-OF-WAY LINE		PROPOSED TREE LINE
	ADJACENT PROPERTY LINE		PROPOSED CURB
	EXISTING CURB AND OUTLET		PROPOSED STREET LIGHT
	EXISTING UTILITY POLE		PROPOSED FOREST CONSERVATION
	EXISTING LIGHT POLE		PROPOSED 10' CONTOUR
	EXISTING MAILBOX		PROPOSED 2' CONTOUR
	EXISTING SIGN		PROPOSED SHADE TREES
	EXISTING SANITARY MANHOLE		PROPOSED EVERGREEN TREES
	EXISTING SANITARY LINE		PROPOSED LANDSCAPE BUFFER
	EXISTING CLEANOUT		FOREST CONSERVATION SIGNS
	EXISTING FIRE HYDRANT		PROPOSED STORM DRAIN
	EXISTING WATER LINE		PROPOSED STORM DRAIN INLET
	EXISTING 10' CONTOUR		LIMITS OF DISTURBANCE
	EXISTING 2' CONTOUR		PROPOSED FOREST CLEARING
	SOILS		EXISTING STEEP SLOPES (25% AND GREATER)
	EXISTING TREE LINE		EXISTING MODERATE SLOPES (15%-24.99%)
	EXISTING FENCE		EX. SPECIMEN TREE TO BE REMOVED
	CENTERLINE OF EXISTING STREAM		EX. SPECIMEN TREE
	EXISTING SEWER AND UTILITY EASEMENT		
	PROPOSED PUBLIC SITE DISTANCE EASEMENT		

NOTE

- THIS SHEET SHALL NOT BE USED FOR GRADING PURPOSES
- FOR RECREATION OPEN SPACE AMENITY DETAILS, REFER TO SHEET 12

SITE DATA

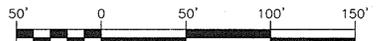
GROSS AREA:	11.71 AC
AREA OF 100 YEAR FLOODPLAIN:	0.00 AC
AREA OF STEEP SLOPES:	1.49 AC
AREA OF STREAM/BUFFER:	1.17 AC
AREA OF WETLANDS/BUFFER:	0.15 AC
NET AREA:	10.22 AC

EXISTING ZONING: R-ED

SPECIMEN TREE CHART

NO.	SIZE	COMMON NAME	CONDITION	COMMENTS
ST-16	33" DBH	WHITE ASH	POOR	TO BE REMOVED
ST-17	37" DBH	TULIP POPLAR	GOOD	TO BE REMOVED
ST-18	35" DBH	MOCKERNUT HICKORY	GOOD	TO REMAIN
ST-19	44" DBH	AMERICAN SYCAMORE	FAIR	TO REMAIN
ST-20	44" DBH	AMERICAN BEECH	GOOD	TO REMAIN
ST-21	40" DBH	WHITE PINE	GOOD	TO REMAIN
ST-22	50" DBH	WHITE OAK	GOOD	TO REMAIN
ST-23	52" DBH	POPLAR	POOR	TO BE REMOVED
ST-24	41" DBH	POPLAR	GOOD	TO REMAIN
ST-25	38" DBH	POPLAR	GOOD	TO REMAIN
ST-26	32" DBH	POPLAR	GOOD	TO BE REMOVED
ST-27	31.5" DBH	POPLAR	GOOD	TO BE REMOVED
ST-28	37" DBH	POPLAR	GOOD	TO BE REMOVED

NOTE: FOR SPECIMEN TREES 9, 12, 13, 21, 24 & 25 TREE PROTECTION FENCING WILL BE REQUIRED. SPECIMEN TREE #21 WILL REQUIRE EITHER BARB WIRE OR BOARD ON BOARD FENCING. GENERALLY PRUNING MAY BE REQUIRED AND WILL BE DETERMINED PRIOR TO CONSTRUCTION BY DEVELOPER'S REPRESENTATIVE. ASSESSMENT OF #21 WILL BE REQUIRED AT BEGINNING, MIDDLE AND END OF CONSTRUCTION TO DETERMINE STATUS.



OWNER
MRJL FAMILY LIMITED PARTNERSHIP; TAYLOR VILLAGE FAMILY, LLC
MANAGING MEMBER PHILLIP CUGLIOTTI, AUTHORIZED PERSON
4100 COLLEGE AVENUE
ELLCOTT CITY, MD 21043
(410) 465-3500

TAYLOR FAMILY LIMITED PARTNERSHIP 'A'; VILLAGE CREST, LLC
MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
1100 COLLEGE AVENUE
ELLCOTT CITY, MD 21043
(410) 465-3500

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION; RONALD L. SPAHN, PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLLEGE PARK, MD 21045
(410) 465-3500

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LANDSCAPE AND FOREST CONSERVATION PLAN

AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
PARCELS 56 & 309 (L. 12833 / F. 00446)
PARCEL 95 (L. 13244 / F. 00037)

ZONED: R-ED
TAX MAP: 25 GRID: 14
2ND ELECTION DISTRICT
PARCELS 56, 309, AND 95
HOWARD COUNTY, MARYLAND

DPZ REF'S: SEE NOTE # 11

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

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DRAWN BY: JMR/EDS
CHECKED BY: RHW
DATE: DECEMBER 2013
SCALE: AS SHOWN
W.O. NO.: 10-30

11 SHEET OF 17

APPROVED: DEPARTMENT OF PUBLIC WORKS
DATE: 2-27-14
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 3-14-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 3-17-14
CHIEF, DIVISION OF LAND DEVELOPMENT

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.

SIGNATURE OF DEVELOPER: [Signature]
DATE: 12-4-13

LANDSCAPE PLAN
SCALE: 1"=50'

FOREST STAND DATA FOR THE PREVIOUS WEAVER'S COURT PORTION OF THE PROPERTY, PARCEL 95

KEY	COMMUNITY TYPE	ACREAGE	DOMINANT VEGETATION	GENERAL CONDITION	PRIORITY ACREAGE
F1	POPULAR	4.4	LIRIODENDRON TULIPIFERA, ACER RUBRUM, FAGUS GRANDIOSA, PRUNUS SEROTINA, ALANTISSIMA	GOOD	1.5 = BUFFERS SLOPES

AS PREPARED BY: [Name], [Title], [Firm]

FOREST CONSERVATION NOTES

- PRE-CONSTRUCTION ACTIVITIES**
- PRIOR TO THE START OF ANY CONSTRUCTION DEFINE THE LIMITS OF DISTURBANCE AND THE SOIL PROTECTION ZONE (CRITICAL ROOT AREA) FOR THE FOREST RETENTION AREAS. (SEE APPENDIX 'G' OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL).
 - PRIOR TO THE START OF ANY CONSTRUCTION (INCLUDING CLEARING) ADJACENT TO THE SOIL PROTECTION ZONE, INSTALL BLAZE ORANGE FENCE.
 - INSTALL ALL FOREST CONSERVATION AREA SIGNS AS SHOWN ON THIS SP.
 - ALL SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PRIOR TO CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING THE FOREST CONSERVATION AREAS. SUPER SILT FENCE SHALL BE INSTALLED ON THE UPHILL SIDE OF ALL FOREST RETENTION AREAS. BECAUSE THE LOD OCCURS WITHIN 50 FEET OF ALL PROPOSED FOREST CONSERVATION RETENTION AREAS FOR THIS PROJECT, SUPER SILT FENCE SHALL BE INSTALLED ALONG THE LOD ADJACENT TO ALL FIVE FOREST CONSERVATION EASEMENT AREAS.
 - ALL FENCING, BLAZE ORANGE OR "SUPER" SILT, SHALL BE CLEANED AND MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS SITUATION WARRANTS ON A REGULAR BASIS THROUGH THE CONSTRUCTION PERIOD.
 - A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- CONSTRUCTION PHASE**
- DURING CONSTRUCTION, MONITOR ANY UNAUTHORIZED USE OF FOREST RETENTION AREAS. ANY USE OF FOREST RETENTION AREAS FOR THE FOLLOWING ACTIVITIES OR OTHER INTRUSIONS SHALL BE A VIOLATION OF THE APPROVED FOREST CONSERVATION PLAN:
 - STORAGE OF EQUIPMENT AND MATERIALS
 - DISPOSAL OF CONSTRUCTION MATERIALS
 - WASHING OF EQUIPMENT, DISPOSAL OF WASTEWATER FROM CONCRETE OPERATIONS, ETC.
 - EMPLOYEE PARKING
 - TEMPORARY STRUCTURES SUCH AS TRAILERS, SANITARY FACILITIES, ETC.
 - SOIL COMPACTION
 - ROOT INJURY
 - FLOODED CONDITIONS
 - DROUGHT CONDITIONS
 - DURING CONSTRUCTION, INSPECT AND ENFORCE THE LIMITS OF DISTURBANCE AND REQUIRED PROTECTION MEASURES.
 - IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.
 - ANY DAMAGES TO REMAINED TREES DUE TO CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT THE DISCRETION OF THE QUALIFIED PROFESSIONAL.
 - FOREST CONSERVATION AREAS TO BE INSPECTED AND CERTIFIED FOR COMPLETION OF THE FOREST CONSERVATION PLAN REQUIREMENTS BY A QUALIFIED PROFESSIONAL.
- POST CONSTRUCTION**
- POST CONSTRUCTION ACTIVITIES TO BE PROVIDED FOR A MINIMUM OF 2 YEARS.
 - INSPECTIONS SHALL BE CARRIED OUT AT THE BEGINNING AND END OF THE GROWING SEASON TO PINPOINT ANY PROBLEMS, MONITOR SURVIVAL RATES, AND SPECIFY REMEDIAL ACTIONS NEEDED TO CORRECT EXISTING PROBLEMS.
 - POST CONSTRUCTION MANAGEMENT PROGRAMS OF FOREST CONSERVATION AREAS MUST BE ESTABLISHED AND INCLUDE MAINTENANCE OF ALL FENCES, SIGNS AND OTHER DEVICES DELINEATING FOREST CONSERVATION AREAS, AS WELL AS THE FOLLOWING OTHER MEASURES:

A. Total Tract Area	A = 11.71
B. Dedications	B = 0.00
C. Net Tract Area	C = 11.71

Land Use Category

ARA	MDR	IDA	HDR	MPD	CIA
0	1	0	0	0	0

Existing Forest Cover

D. Afforestation Threshold (Net Tract Area x 20%)	D = 2.34
E. Conservation Threshold (Net Tract Area x 25%)	E = 2.93
F. Existing Forest Cover within the Net Tract Area	F = 8.66
G. Area of Forest Above Conservation Threshold	G = 5.73

Break Even Point

H. Break Even Point	H = 4.07
I. Forest Clearing Permitted Without Mitigation	I = 4.59

Proposed Forest Clearing

J. Total Area of Forest to be Cleared	J = 5.48
K. Total Area of Forest to be Retained	K = 3.18

Planting Requirements

L. Reforestation for Clearing Above the Conservation Threshold	L = 1.37
M. Reforestation for Clearing Below the Conservation Threshold	M = 0.00
N. Credit for Retention above the Conservation Threshold	N = 0.25
P. Total Reforestation Required	P = 1.12
Q. Total Afforestation Required	Q = 0.00
R. Total Planting Requirement	R = 1.12

1.12 Acres to be addressed via reforestation on site

FOREST CONSERVATION REQUIREMENTS AS SET FORTH IN SECTION 16.1222 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.

THE FOREST CONSERVATION OBLIGATION HAS BEEN FULLY FILLED BY THE RETENTION OF 3.18 AC. OF CREDITED EASEMENT, AND 1.12 ACRES OF REFORESTATION.

BOND FOR THE REQUIRED FOREST CONSERVATION HAS BEEN PAID IN THE AMOUNT \$24,394.00

REFORESTATION - (1.12 AC) 48,767.20 SF x .50 = \$24,394.00

AFFORESTATION / REFORESTATION PLANTING NOTES

- AFFORESTATION AREAS MAY BE PLANTED AS SOON AS REASONABLE TO DO SO. LATE WINTER-EARLY SPRING PLANTINGS ARE PREFERRED. EARLIEST PLANTING DATES WILL VARY FROM YEAR TO YEAR BUT PLANTING MAY GENERALLY BEGIN AS SOON AS THE GROUND IS NO LONGER FROZEN. ALTERNATE PLANTING DATES MAY BE CONSIDERED AS CONDITION WARRANTS.
- SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND PH. IF REQUIRED, FERTILIZER WILL BE PROVIDED USING A SLOW RELEASE, SOLUBLE 16-8-16 ANALYSIS DESIGNED TO LAST 5-8 YEARS CONTAINED IN POLYETHYLENE PERFORATED BAGS SUCH AS MANUFACTURED BY ADCO WORKS, P.O. BOX 310 HOLLIS, N.Y. 11423 OR APPROVED EQUAL.
- PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
- PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, FORM, VIGOR, OR ROOTS, OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE MUST BE REPLACED.
- PLANTING STOCK MUST BE PROTECTED FROM DESICCATION AT ALL TIMES PRIOR TO PLANTING. MATERIALS HELD FOR PLANTING SHALL BE MOISTENED AND PLACED IN COOL SHADED AREAS UNTIL READY FOR PLACEMENT.
- NEWLY PLANTED TREES MAY REQUIRE WATERING AT LEAST ONCE PER WEEK DURING THE FIRST GROWING SEASON DEPENDING ON RAINFALL IN ORDER TO GET ESTABLISHED. THE INITIAL PLANTING OPERATION SHOULD ALLOW FOR WATERING DURING INSTALLATION TO COMPLETELY SOAK BACKFILL MATERIAL.
- MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDED HARDWOOD BARK MULCH, FREE OF WOOD ALCOHOL.
- ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONTAINING BITREX, SUCH AS REPELLEX. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPELLEX TABLETS.

AFFORESTATION / REFORESTATION AREA MONITORING NOTES

- MONTHLY VISITS DURING THE FIRST GROWING SEASON ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING, PEST CONTROL OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DOCUMENT WINTER KILL AND AUTUMN VISITS WILL DOCUMENT SUMMER KILL.
- THE MINIMUM SURVIVAL RATE SHALL BE 75% OF THE TOTAL NUMBER OF TREES PLANTED PER ACRE AT THE END OF THE TWO YEAR MAINTENANCE PERIOD. WILD TREE SEEDLINGS FROM NATURAL REGENERATION ON THE PLANTING SITE MAY BE COUNTED UP TO 50% TOWARD THE TOTAL SURVIVAL NUMBER IF THE ARE HEALTHY NATIVE SPECIES AT LEAST 12 INCHES TALL.
- SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE PLANTINGS. THE SPECIES COMPOSITION OF THE SAMPLE POPULATION SHOULD BE PROPORTIONATE TO THE AMOUNT OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.
- EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVABILITY DURING THE FIRST GROWING SEASON AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

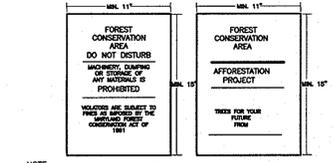
STRESS REDUCTION:

- ROOT PRUNING
- CROWN REDUCTION OR PRUNING
- WATERING
- FERTILIZATION
- MULCHING
- PEST CONTROL
- CONTROL UNDESIRABLE COMPETING SPECIES
- THINNING AND PRUNING TO ENCOURAGE PROPER GROWTH

REPAIR OF TREE DAMAGES:

- ROOT REPAIR
- REMOVAL OF DEAD OR DAMAGED MATERIAL/LIMBS
- SOIL AERATION
- REMOVAL OF DEAD OR DYING TREES POSING AN IMMEDIATE SAFETY HAZARD

- AS PER THE SEDIMENT CONTROL PLAN, AND UNDER THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE TEMPORARY SEDIMENT CONTROL MEASURES AND FENCING. FOREST CONSERVATION SIGNS SHALL NOT BE REMOVED.
- AN INSPECTION SHALL TAKE PLACE AT THE END OF YEAR ONE OR BEFORE THE SECOND ENROLLING SEASON TO EVALUATE SURVIVAL RATES AND APPROPRIATE ACTIONS TAKEN TO ACHIEVE REQUIRED SURVIVAL RATES.
- AT THE CONCLUSION OF THE POST-CONSTRUCTION PERIOD, THE QUALIFIED PROFESSIONAL SHALL CERTIFY ALL FOREST SURVIVAL RATES, AND SPECIFY REMEDIAL ACTIONS NEEDED TO CORRECT EXISTING PROBLEMS.
- VERIFY ALL PERTINENT PROTECTION MEASURES AND IN PLACE. UPON INSPECTION BY LOCAL STATE AGENCY APPROVAL, THE DEVELOPER SHALL BE RELEASED OF ALL SURETIES AND FUTURE OBLIGATIONS.
- EDUCATION MATERIAL MUST BE PROVIDED TO OWNERS AND/OR OCCUPANTS ABOUT PROPER USE OF FOREST CONSERVATION AREAS. SUCH EDUCATION MATERIAL SHOULD INCLUDE A PLAN LOCATING ALL PROTECTED AREAS ON-SITE AND A DESCRIPTION OF PERMITTED AND PROHIBITED ACTIVITIES WITHIN OR ACTIVITIES SUCH AREAS.



- NOTE:**
- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 - SIGNS TO BE PLACED AT A MAXIMUM SPACING OF 50-100 FEET.
 - CONDITIONS ON-SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 - SIGN LOCATION SYMBOL.
- SIGNAGE DETAIL**
NOT TO SCALE

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION

- PRECONSTRUCTION MEETING / SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- INSTALL TREE PROTECTION FENCING; FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE COUNTY ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
- PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
- TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

REFORESTATION PROVIDED

1.12 ACRES
2" CALIPER TREES
224 TREES @ 200 TREES PER ACRE

BOTANICAL NAME	AREA 1	SIZE	SPACING (FT)
Quercus phellos	56	2" Cal.	15 X 15
Willow Oak			
Fagus grandifolia	56	2" Cal.	15 X 15
American Beech			
Cornus florida	56	2" Cal.	15 X 15
White Flowering Dogwood			
Liriodendron tulipifera	56	2" Cal.	15 X 15
Tulip Poplar			

APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

2-22-14
 3-14-14
 3-18-14

DATE
 DATE
 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.

SIGNATURE OF DEVELOPER
 DATE

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	1	2	3	4	5	6	7	8	TOTAL
PERIMETER/FRONTAGE DESIGNATION									
LANDSCAPE TYPE									
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	628'	828'	211'	504'	179'	337'	550'	55'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES 85'	YES 466'	YES 211'	YES 504'	YES 179'	YES 118'	YES 359**	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED (IF REMAINING)	543	362				218	191	55	24
SHADE TREES	1,60	9	1,80	6		1,80	4	1,50	1
EVERGREEN TREES							1,40	5	2
SHRUBS									7
NUMBER OF PLANTS PROVIDED									
SHADE TREES	9	6				4	4	1	24
EVERGREEN TREES									7
OTHER TREES (2:1 SUBSTITUTION)									
SHRUBS (10:1 SUBSTITUTION)									

DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED.

** THE PLANTING REQUIREMENTS FOR PERIMETER 6 WERE MOVED TO WITHIN PERIMETER 1 DUE TO THE LOCATION OF THE FOREST CONSERVATION AREA

** FUTURE REFORESTATION PLANTING ONE CAPITAL PROJECT J-4213 HAS BEEN COMPLETED.

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
OLD LEAF COURT	992/40	25	25
RED STAG COURT	1,110/40	28	28

PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$15,900.00 FOR THE REQUIRED 53 STREET TREES. DEED WILL BUILD THE COST OF THE PUBLIC STREET TREES INTO THEIR COST ESTIMATE FOR ROAD CONSTRUCTION.

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
AR	30	ACER RUBRUM OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & R
GT	17	GLEDITSIA TRIACANTHOS INERMIS IMPERIAL THORNLESS HONEYLOCUST	2 1/2"-3" CAL.	B & R
PS	17	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.	B & R
QP	53	QUERCUS PHELLOS WILLOW OAK (STREET TREES)	2 1/2"-3" CAL.	B & R
NS	4	ILEX 'NELLIE R. STEVENS' NELLIE R. STEVENS HOLLY (BGE COMPLIANT)	5'-6" HT.	B & R
LT	2	LACERATROEMIA TUSCARORA TUSCARORA CRAPE MYRTLE (BGE COMPLIANT)	4'-6" HT. (MAX. HEIGHT=25')	B & R

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY FOR THE PERIMETER LANDSCAPING IN THE AMOUNT OF \$8,250.00 FOR THE REQUIRED 24 SHADE TREES AND 7 EVERGREENS SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.

A FINANCIAL SURETY IN THE AMOUNT OF \$9,000.00 FOR THE 24 SHADE TREES AND 12 EVERGREENS PROVIDED FOR THE ADDITIONAL LANDSCAPING REQUIRED ALONG PERIMETER 1 TO ADDRESS SCENIC ROAD CONCERNS, AND THE ADDITIONAL TREES PROVIDED BEHIND LOTS 1-6 AS MITIGATION TO THE REMOVAL OF 14 SPECIMEN TREES SHALL ALSO BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.

NOTE: LANDSCAPE SURETY WILL NOT BE RELEASED UNTIL ALL REQUIRED PLANTINGS AND RECREATIONAL AMENITY FEATURES HAVE BEEN INSTALLED.

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

LANDSCAPE 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 DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 8 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.

Landscaping Brands

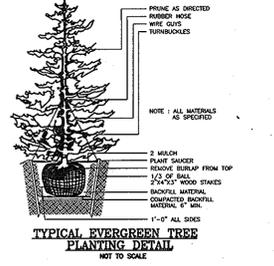
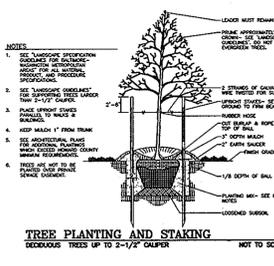
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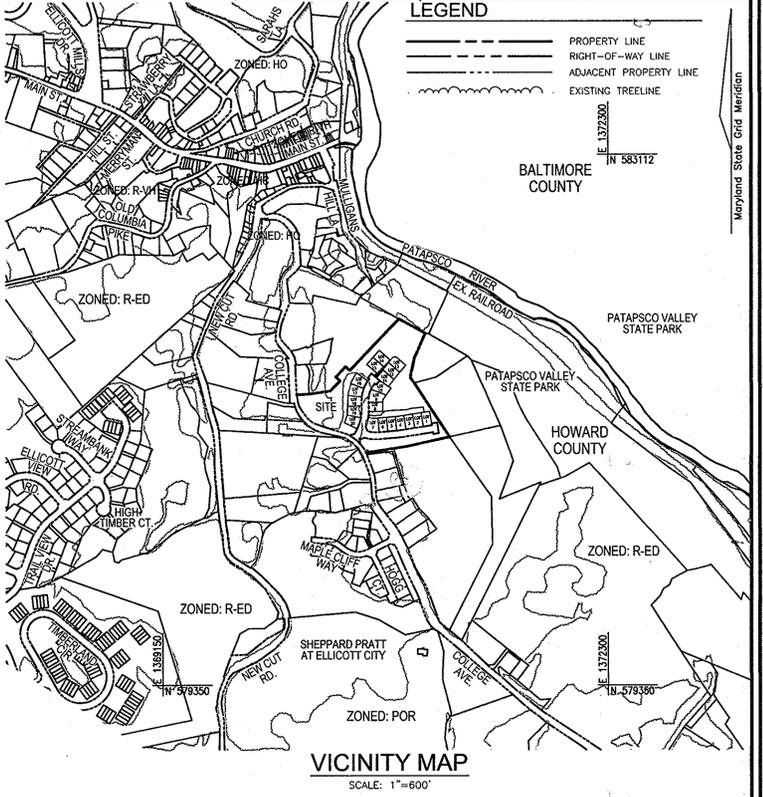
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- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 8 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.

JOHN CANDLES, ECO-SCIENCE PROFESSIONAL



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 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 UNDERSTANDING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

DPZ'S POLICIES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET OF-WAY ARE BASED ON BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH SPECIFIES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES. AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

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

OWNER
 MRJL FAMILY LIMITED PARTNERSHIP, TAYLOR VILLAGE FAMILY, LLC
 MANAGING MEMBER PHILLIP GIUGLIOTTI, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELICOTT CITY, MD 21043
 410 465-3500

TAYLOR FAMILY LIMITED PARTNERSHIP 'A', VILLAGE CREST, LLC
 MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELICOTT CITY, MD 21043
 410 465-3500

DEVELOPER
 AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPAHN, PRESIDENT
 5401 TWIN KNOLLS ROAD, SUITE 7
 COLUMBIA, MD 21046
 410 465-3500

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN

LANDSCAPE AND FOREST CONSERVATION NOTES AND DETAILS

AUTUMN OVERLOOK

LOTS 1-20, & OPEN SPACE LOTS 21-24

PARCELS 56 & 309 (L. 12833 / F. 00446)

PARCEL 95 (L. 13244 / F. 00037)

ZONED: R-ED
 TAX MAP: 25 GRID: 14
 HOWARD COUNTY DISTRICT
 PARCELS 56, 309, AND 95
 HOWARD COUNTY, MARYLAND

DPZ REF'S: SEE NOTE # 11

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
 ELICOTT CITY, MD 21043

TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: RHV/EDS
 DRAWN BY: JMR/EDS
 CHECKED BY: RHV
 DATE: DECEMBER 2013
 SCALE: AS SHOWN
 W.O. NO.: 10-30

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 09-27-2014

12 SHEET OF 17

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

1. MATERIAL SPECIFICATIONS
 THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
2. FILTERING MEDIA OR PLANTING SOIL
 THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOxious WEEDS AS SPECIFIED UNDER ITEM 15.01(6).
 THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
 • SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).
 • ORGANIC CONTENT - MINIMUM 10% BY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) & COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (20%), AND COMPOST (40%).
 • CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
 • PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PENT SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
 THERE SHALL BE AT LEAST ONE SOIL TEST PER PRACTICE. 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 STANDARDIZED SOIL TEST. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
 COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE PREPARING (ROTOTILLING) BASE.
 WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 12 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FIVE (5) GRADE INCHES. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE PREPARING (ROTOTILLING) BASE.
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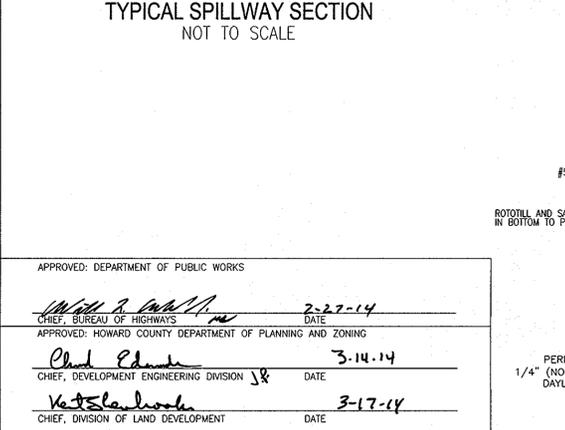
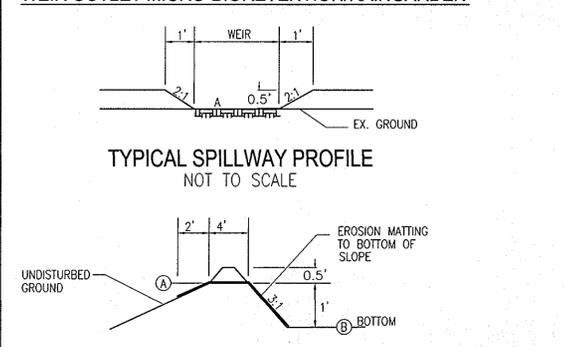
4. PLANT MATERIAL
 RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.
5. PLANT INSTALLATION
 COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
 ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THROUGHOUT WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.
 GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLOTS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

6. UNDERDRAINS
 UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
 • PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM 758, TYPE 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HOPE).
 • 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" (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH.
 • GRAVEL - THE GRAVEL LAYER (NO. 57 STONE) SHOULD BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
 • THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
 • A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
 • A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".
 THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1,000 SQUARE FEET OF SURFACE AREA).

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

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

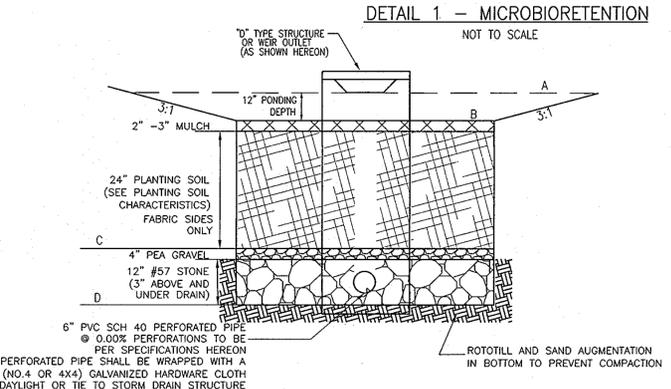
DETAIL 2 WEIR OUTLET MICRO-BIORETENTION/RAINGARDEN



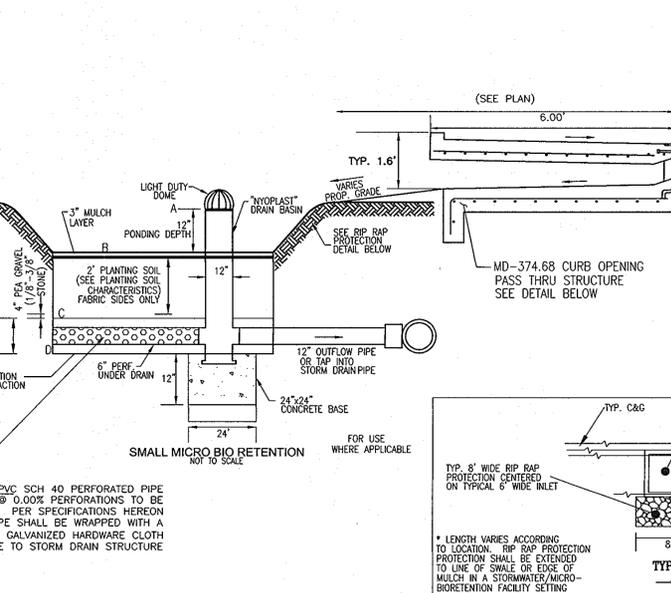
Appendix B.4. Construction Specifications for Environmental Site Design Practices

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

Material	Specification	Size	Notes
Planting soil	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil	SEE ITEM 5 (2' to 4' deep)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	n/a	or sandy loam (30%), coarse sand (30%) & compost (40%)
Mulch	shredded hardwood	NO. 8 OR NO. 9 (1/8" TO 3/8")	aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	AASHTO M-43	n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
Underdrain piping	F 758, Type FS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe, 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Placed in place concrete (if required)	MISHA Mix No. 3, P. = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressure); and analysis of potential cracking. Sand substitutions such as Diabase and Gneiss (AASHTO #10) are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	

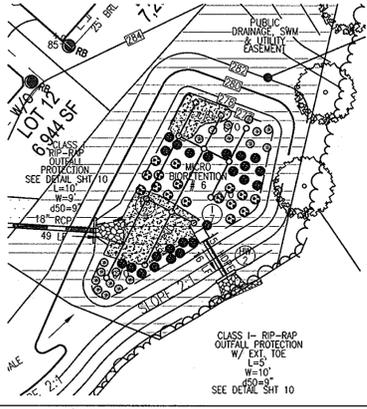


MBR FACILITY	A	B	C	D	SURFACE AREA	APPROX. DIMENSIONS	TYPE
MBR #1	302.50	301.50	299.25	297.92	450 SF	SEE PLAN	SMALL
MBR #2	299.00	298.00	295.75	294.42	375 SF	SEE PLAN	SMALL
MBR #3	299.40	298.40	296.15	294.82	340 SF	SEE PLAN	DETAIL 1
MBR #4	277.00	276.00	273.75	272.42	900 SF	SEE PLAN	DETAIL 2
MBR #5	279.00	278.00	275.75	274.42	1080 SF	SEE PLAN	DETAIL 2
MBR #6	278.00	277.00	274.75	273.42	2280 SF	SEE PLAN	DETAIL 1
MBR #7	289.00	288.00	285.75	284.42	485 SF	SEE PLAN	DETAIL 2
MBR #8	289.75	288.75	286.50	285.17	1470 SF	SEE PLAN	DETAIL 1

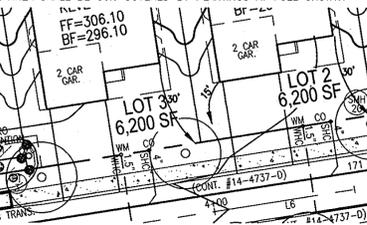


"MICRO-BIORETENTION" PLANTING SCHEDULE NOTES:

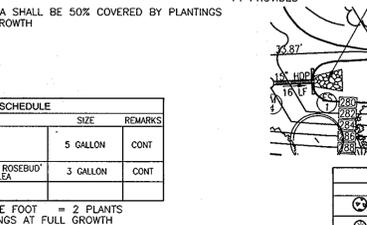
- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF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



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
16	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
18	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
24	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
650	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.

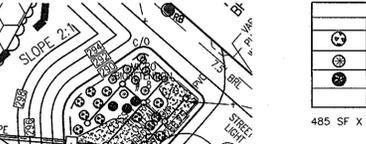
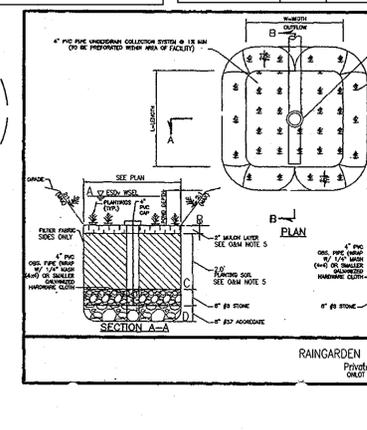


QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
6	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
6	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
6	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
250	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.

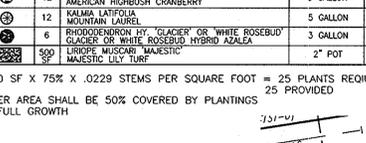


QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
9	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
9	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
1000	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.

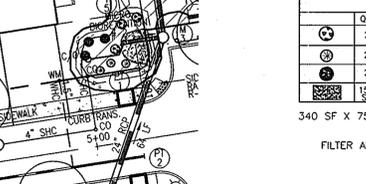
FACILITY #	A	B	C	D	SURFACE AREA	APPROX. DIMENSIONS
RG #1	286.0	285.0	282.83	281.5	75 SF	SEE PLAN
RG #2	292.0	291.0	288.83	287.5	75 SF	SEE PLAN
RG #3	293.0	292.0	289.83	288.5	75 SF	SEE PLAN
RG #4	296.0	295.0	292.83	291.5	75 SF	SEE PLAN
RG #5	299.0	298.0	295.83	294.5	75 SF	SEE PLAN



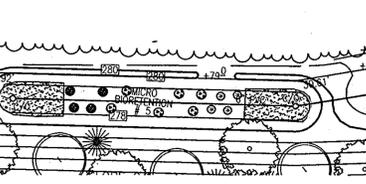
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
12	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
12	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
6	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
500	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
2	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
2	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
150	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.

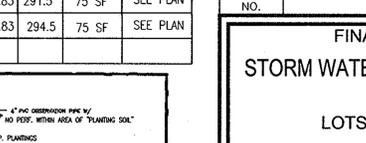


QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
9	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
9	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
1000	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.

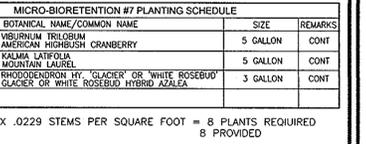
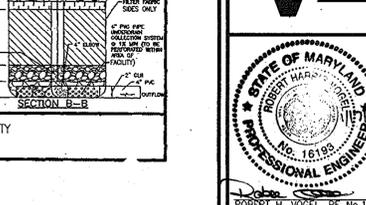


QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
9	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
9	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
1000	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.

FACILITY #	A	B	C	D	SURFACE AREA	APPROX. DIMENSIONS
RG #1	286.0	285.0	282.83	281.5	75 SF	SEE PLAN
RG #2	292.0	291.0	288.83	287.5	75 SF	SEE PLAN
RG #3	293.0	292.0	289.83	288.5	75 SF	SEE PLAN
RG #4	296.0	295.0	292.83	291.5	75 SF	SEE PLAN
RG #5	299.0	298.0	295.83	294.5	75 SF	SEE PLAN



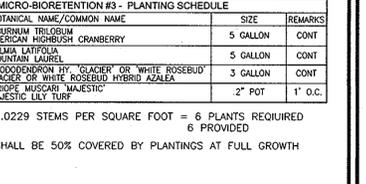
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
9	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
9	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
1000	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.



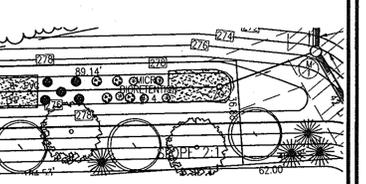
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
12	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
12	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
6	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
500	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
2	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
2	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
150	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
9	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
9	RHOCHODENDRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
1000	LIRIOPE MUSCARI MAJESTIC MAJESTIC LILY TURF	2" POT	1" O.C.



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
10	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	5 GALLON	CONT
9	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
9	RHOCHODENDRON		

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 SPECIAL PROJECTS AND SPECIFIC CONDITIONS.

- 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 MAY BE DESIGNED USING OTHER STANDARD PAVEMENT PROCEDURES (E.G., AASHTO A3.05, A3.05R, A3.05S) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES.
 MAX & INSTALLATION - TRADITIONAL PORTLAND CEMENTS (ASTM C 150, C 1157) MAY BE USED IN PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADMIXTURES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TENSILE STRENGTH) PRIOR TO CONSTRUCTION SO THAT CRITICAL PROPERTIES (E.G., SETTING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY, PERMEABILITY) CAN BE DETERMINED.
 AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE CONTENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO. 16) AND NO. 29 (1/4 IN. TO NO. 60) SIZES. SINGLE-SIZE AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED.
 WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.27 AND 0.30 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADMIXTURES. WATER QUALITY SHOULD MEET A3.05 AS A GENERAL RULE. POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 94 OR A310 M 157 MAY ALSO BE USED.
 ADMIXTURES - CHEMICAL ADMIXTURES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADMIXTURES SHOULD MEET ASTM C 494 (CHEMICAL ADMIXTURES) AND ASTM C 260 (AIR ENTRAINING ADMIXTURES) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS.
 BASE COURSE - THE BASE COURSE SHALL BE ASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
- PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP)**
 PAVEMENT BLOCKS - BLOCKS SHOULD BE EITHER 3/4 IN. OR 4 IN. THICK AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (40% PREFERRED) OF THE SURFACE AREA OPEN. INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED.
 INFILL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED 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 ASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
- REINFORCED TURF**
 REINFORCED GRASS PAVEMENT (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.

A-2. PERMEABLE PAVEMENTS

CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH PERMEABLE PAVEMENT:

- EROSION AND SEDIMENT CONTROL: FINAL GRADING FOR INSTALLATION SHOULD NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED AROUND PROPOSED PAVEMENT LOCATIONS.
 - SOIL COMPACTION: SUB SOILS SHALL NOT BE COMPACTED. CONSTRUCTION SHOULD BE PERFORMED WITH LIGHTWEIGHT, WIDE TRACKED EQUIPMENT TO MINIMIZE COMPACTION. EXCAVATED MATERIALS SHOULD BE PLACED IN A CONTAINED AREA.
 - DISTRIBUTION SYSTEMS: OVERDRAIN, UNDERDRAIN, AND DISTRIBUTION PIPES SHALL BE CHECKED TO ENSURE THAT BOTH THE MATERIAL AND PERFORATIONS MEET SPECIFICATIONS (SEE APPENDIX B. 4). THE UPSTREAM ENDS OF PIPES SHOULD BE CAPPED PRIOR TO INSTALLATION. ALL UNDERDRAIN OR DISTRIBUTION PIPES USED SHOULD BE INSTALLED FLAT ALONG THE BED BOTTOM.
 - SUBBASE INSTALLATION: SUBBASE AGGREGATE SHALL BE CLEAN AND FREE OF FINES. THE SUBBASE SHALL BE PLACED IN LIFTS AND LIGHTLY ROLLED ACCORDING TO THE SPECIFICATIONS (SEE APPENDIX B.4).
- INSPECTION:**
- REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:
- DURING EXCAVATION TO SUB GRADE.
 - DURING PLACEMENT AND BACKFILL OF ANY DRAINAGE OR DISTRIBUTION SYSTEM(S).
 - DURING PLACEMENT OF THE CRUSHED STONE SUBBASE MATERIAL.
 - DURING PLACEMENT OF THE SURFACE MATERIAL.
 - UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

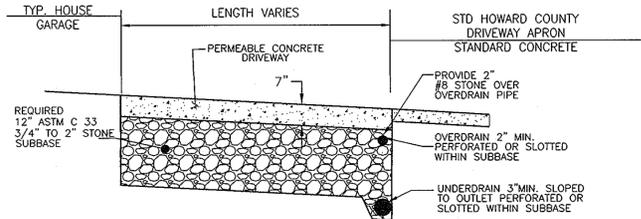
MAINTENANCE CRITERIA:

THE FOLLOWING PROCEDURES SHOULD BE CONSIDERED ESSENTIAL FOR MAINTAINING PERMEABLE PAVEMENT SYSTEMS:

- PAVEMENTS SHOULD BE USED ONLY WHERE REGULAR MAINTENANCE CAN BE PERFORMED. MAINTENANCE AGREEMENTS SHOULD CLEARLY SPECIFY HOW TO CONDUCT ROUTINE TASKS TO ENSURE LONG-TERM PERFORMANCE.
- PAVEMENT SURFACES SHOULD BE SWEEPED AND VACUUMED TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING SYSTEMS AND COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- DRAINAGE PIPES, INLETS, STONE EDGE DRAINS, AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED OUT AT REGULAR INTERVALS.
- TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND DIRT AND GRIT INTO THE POROUS SURFACES, LEADING TO CLOGGING AND PREMATURE FAILURE. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.
- DECIDERS SHOULD BE USED IN MODERATION. WHEN USED, DECIDERS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT. SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

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

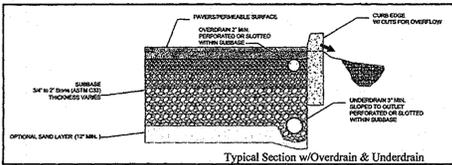
- THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED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



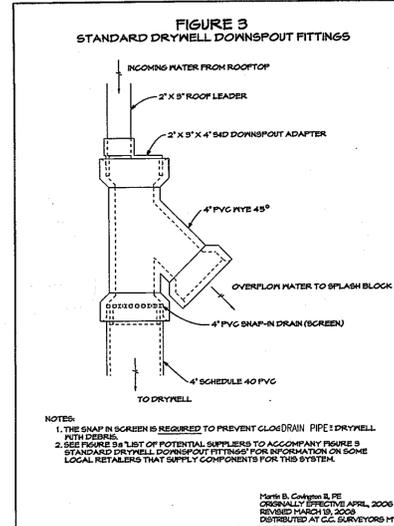
- NOTE:**
- PAVEMENT CROSS SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
 - UNDERDRAIN SHALL BE LOCATED SUCH THAT IT CAN DAYLIGHT TO THE CURB, INTO A BIO-RETENTION FACILITY OR TO THE REAR OF THE LOT
 - OVERDRAIN SHALL COMBINE WITH UNDERDRAIN OR DAYLIGHT AS DETAILED FOR UNDERDRAIN, SEE NOTE 2.

DETAIL - PERMEABLE CONCRETE DRIVEWAY - 5% OR LESS

NOT TO SCALE
 ALL PERMEABLE CONCRETE THICKNESS, MIX AND SUB-BASE TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE.



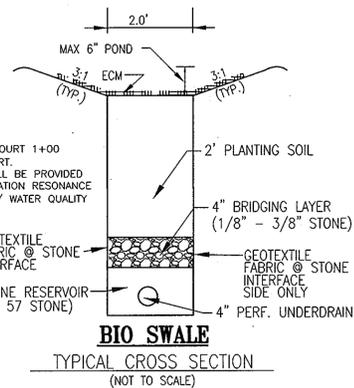
PERMEABLE SURFACE TYPICAL SECTION
 NOT TO SCALE



- NOTES:**
- THE SNAP-IN SCREEN IS REQUIRED TO PREVENT GROUND PIPE DRYWELL WITH OVERFLOW.
 - SEE FIGURE 5a LIST OF POTENTIAL SUPPLIERS TO ACCOMPANY FIGURE 5 STANDARD DRYWELL DOWNSPOUT FITTINGS FOR INFORMATION ON SOME LOCAL RETAILERS THAT SUPPLY COMPONENTS FOR THIS SYSTEM.

DOWNSPOUT OVERFLOW

- PROVIDE ABOVE FITTING FOR ALL DOWNSPOUTS FEEDING REAR YARD PIPE SYSTEM TO MICROBIORETENTION FACILITIES # 4 & 5.



- NOTE:**
- SEE RED STAG COURT 1+00 TO 5+00; 21+1/2 - RT.
 - CHECK DAMS SHALL BE PROVIDED TO PROVIDE INFILTRATION RESONANCE TIME FOR RUNOFF / WATER QUALITY

BIO SWALE
 TYPICAL CROSS SECTION
 (NOT TO SCALE)

AUTUMN OVERLOOK - FINAL PLAN ESDv COMPUTATIONS													
SITE AREA: 5.85 AC		254900		TARGET Pn: 1.80 IN		PERCENT		SITE IMPV: 0.3647		CF +/-			
DA #	% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.8\"/>						
1	65.35	0.6381	17200	0.39	915	2378	1646	961	11240	0.26	0.34	ALT SURFACE/NON-STR/MICROSCALE MICRO-BIO 600 400 SF MICRO BIO 282 PERM SURFACE PARKING PAD @ .196 32 15\"/>	
2	60.27	0.5924	12735	0.29	629	1635	1132	759	7675	0.18	0.22	ALT SURFACE/NON-STR/MICROSCALE MICRO-BIO 500 375 SF MICRO BIO 212 PERM SURFACE PARKING PAD @ .196 16 15\"/>	
3	65.64	0.6407	13940	0.32	744	1935	1340	915	9150	0.21	0.11	MICROSCALE: BIOSWALE & MICRO-BIO 465 700 SF BIOSWALE 60.5\"/>	
4	17.55	0.2079	14705	0.34	255	662	459	1200	2500	0.06	0.28	MICROSCALE MICRO-BIO RETENTION 1200 900 SF MICRO BIO	
5	16.41	0.1977	32715	0.75	539	1402	970	1485	5370	0.12	0.63	MICROSCALE PRACTICES 1420 1080 SF MICRO BIO 55 RAIN BARREL	
6	37.76	0.3898	61415	1.41	1995	5187	3591	3818	23190	0.53	0.88	ALT SURFACE/NON-STR/MICROSCALE PRACTICES 3030 2,280 SF MICRO BIO 106 PERM SURFACE PARKING PAD @ .196 141 PERM SURFACE PARKING PAD @ .196 141 PERM SURFACE PARKING PAD @ .196 329 RAIN BARREL 40 15\"/>	
7	36.22	0.3760	14620	0.34	458	1191	824	824	5295	0.12	0.21	ALT SURFACE/NON-STR/MICROSCALE PRACTICES 648 485 SF MICRO BIO 71 PERM SURFACE PARKING PAD @ .196 82 RAIN BARREL 36 15\"/>	
8	48.65	0.4878	30833	0.71	1253	3259	2256	2476	15000	0.34	0.36	ALT SURFACE/NON-STR/MICROSCALE PRACTICES 3590 1,470 SF MICRO BIO 393 PERM SURFACE PARKING PAD @ .196 141 PERM SURFACE PARKING PAD @ .196 36 15\"/>	
9	20.93	0.2383	23105	0.53	459	1193	826	877	4835	0.11	0.42	NON-STR/MICROSCALE PRACTICES 274 RAIN BARREL 500 75 SF RAIN GARDENS (1 PER 5 LOTS) 40 15\"/>	
PROJECT TOTALS		38.1	0.3930	221268	5.08	7247	18842	13045	13315	84335	1.94	3.14	

DISCONNECTION OF ROOFTOP RUNOFF - (N-1)

CONSTRUCTION CRITERIA:

- THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED ROOFTOP DISCONNECTIONS:
- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF
 - SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:

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

MAINTENANCE CRITERIA:

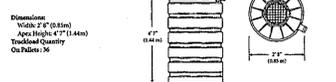
MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.



BRT205 Round Tank

The new BRT205 Round Tank from Bushman is designed for above ground installation against a wall, on the ground or on a stand at virtually any depth and location to your property. The tank has a 205 U.S. gallon (775 liter) capacity and is available in several popular colors with UV stabilizers to avoid color fading. The BRT205 can be ordered as a bare tank or with additional package accessories.

- Features & Benefits:**
- Water capacity of four 50 gallon rain barrels
 - High quality rotational-molded polyethylene construction ensures maximum strength
 - One-piece construction and horizontal ribs around the tank provide added wall strength
 - Inter-connector with mosquito screen and cover
 - Overflow assembly provided with mosquito screen and 90 degree elbow
 - Tank openings are pre-drilled for easy installation
 - Bushman 5 Year Warranty



- Package:**
- F1 - Bushman Tank System, Package 1
 - F2 - Primer System, Package 2
- Includes Bushman Rainwater Harvesting and Tank System Package Brochure.
- Example: BRT205CF2 - BRT205 tank, 205 U.S. Gallons capacity, Forest Green, Primer Package.

BUSHMAN
 LIVING CONCEPTS AND AMBIENT VIBES

Canada: Bushman, Canada
 4165 Keele Street, Unit 3-5
 Markham, Ontario M3J 3K3, Canada
 Tel: 905.949.8282
 www.bushmaninc.com

American: Bushman, USA
 2000 West Road, Box 89551
 Columbus, Ohio 43289-0511
 Tel: 614.299.4444 (R245) Fax: 614.299.4123
 www.bushmaninc.com

BUSHMAN BRT205 (205 GALLON) RAIN HARVESTING SYSTEM OR EQUIVALENT RAIN BARREL DETAIL
 NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED Rainwater Harvesting (M-1)

- The Owner shall empty barrels on a monthly basis and clean barrel with a hose.
- The Owner shall verify integrity of leaf screens, gutters, downspouts, spigots, and mosquito screens, and clean and remove any debris.
- The Owner shall replace damaged components as needed.
- The Owner shall disconnect the barrel prior to winter, or allow the barrel to drain by bottom spigot during the winter season.

OWNER
 MR./J. FAMILY LIMITED PARTNERSHIP, TAYLOR VILLAGE FAMILY, LLC
 MANAGING MEMBER PHILIP CUGLIOTTI, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 (410) 465-3500

TAYLOR FAMILY LIMITED PARTNERSHIP "AS" VILLAGE CREST, LLC,
 MANAGING MEMBER BRUCE TAYLOR, AUTHORIZED PERSON
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 (410) 465-3500

DEVELOPER
 AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPAHN, PRESIDENT
 5401 TWIN KNOWLES ROAD, SUITE 7
 COLUMBIA, MD 21045
 (410) 465-3500

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
STORM WATER MANAGEMENT NOTES AND DETAILS

AUTUMN OVERLOOK
 LOTS 1-20, & OPEN SPACE LOTS 21-24
 PARCELS 56 & 309 (L. 12833 / F. 00446)
 PARCEL 95 (L. 13244 / F. 00037)

ZONED: R-ED
 TAX MAP: 25 GRD: 14
 2ND ELECTION DISTRICT
 PARCELS 56, 309, AND 95
 HOWARD COUNTY, MARYLAND

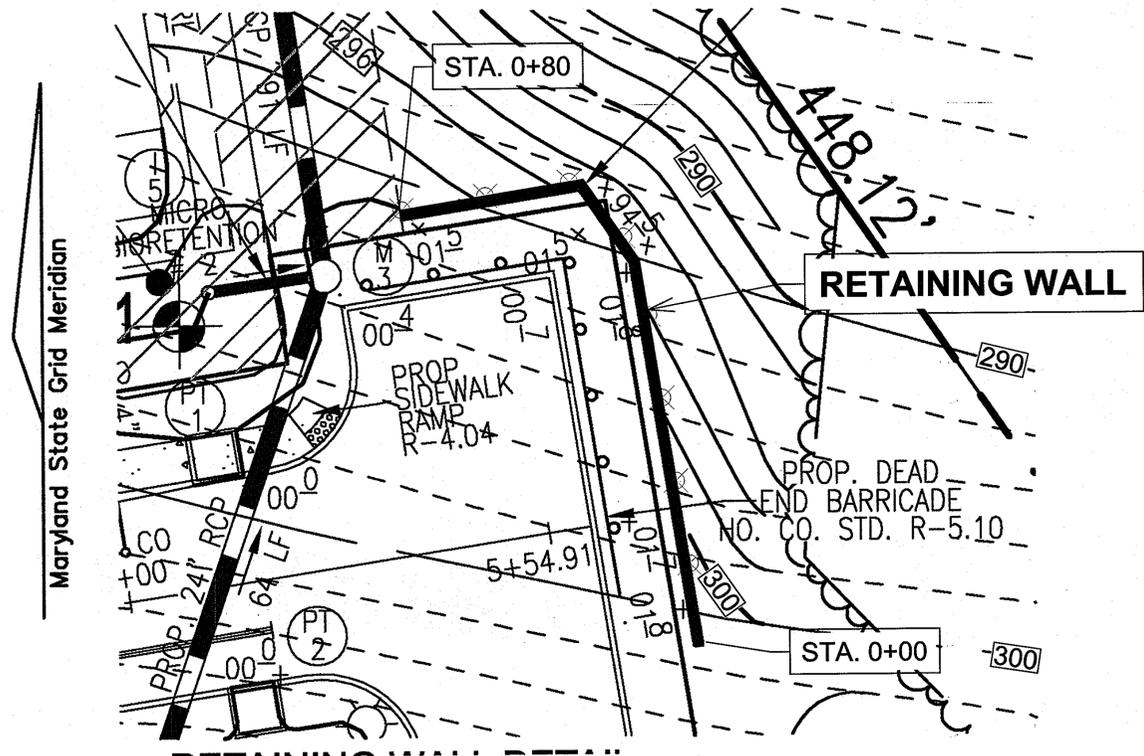
DPZ REF'S: SEE NOTE # 11

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.1961

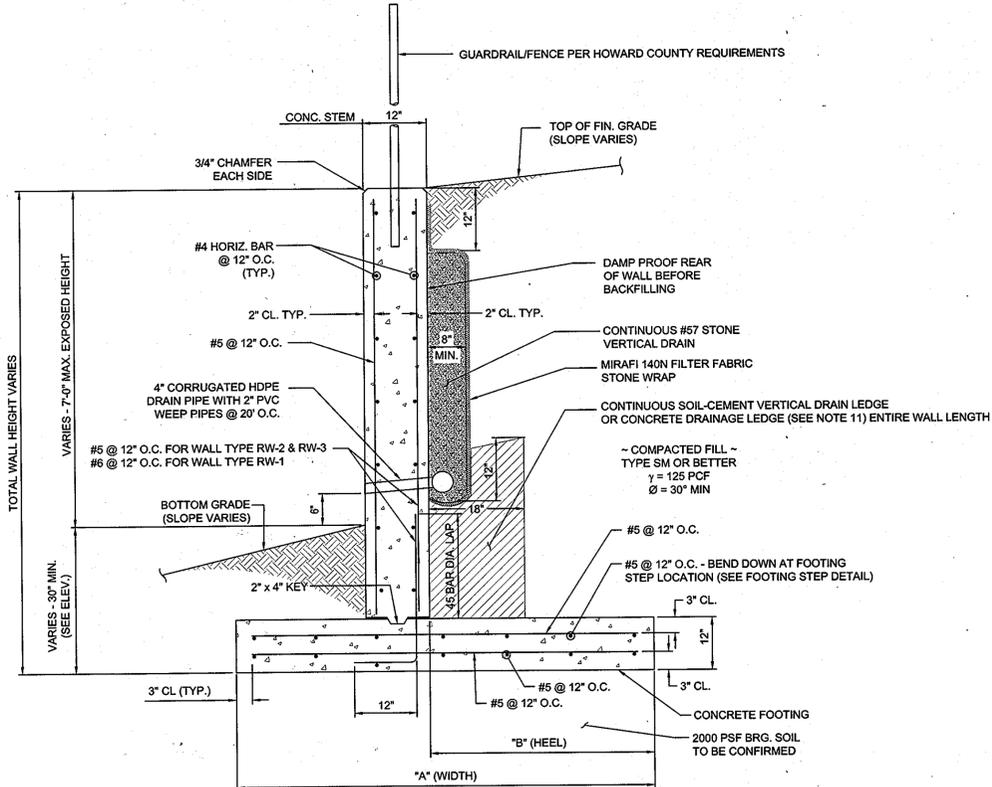
DESIGN BY: RHW/EDS
 DRAWN BY: JMS/EDS
 CHECKED BY: RHW
 DATE: DECEMBER 2013
 SCALE: AS SHOWN
 W.D. NO.: 10-30

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2014

15 SHEET OF 17



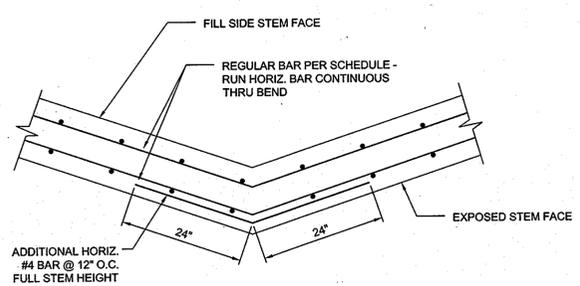
WALL LOCATION PLAN
1" = 10'



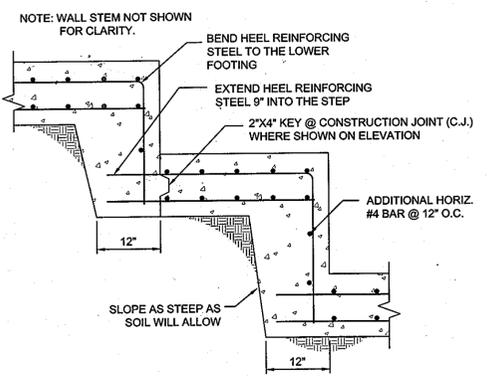
TYPICAL CONCRETE WALL SECTION
NOT TO SCALE

- NOTES:
- ALL RETAINING WALL CONCRETE SHALL BE 4000 PSI WITH AIR ENTRAINMENT.
 - REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60.
 - WALL BACKFILL SHALL BE COMPACTED TO 95% OF T-99.
 - CONCRETE WORK SHALL COMPLY WITH THE LATEST ACI 318 BUILDING CODE FOR CONCRETE STRUCTURES.
 - ALL REBAR SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAM.
 - ALL WALL EXPOSED SURFACES SHALL BE MORTAR PATCHED AND SACK-RUBBED FINISHED WITH GROUT AND BURLAP, (RUB FINISH PER OWNER'S SPECIFICATIONS).
 - DESIGN SOIL BEARING VALUE OF 2000 PSF TO BE FIELD VERIFIED.
 - ALL WALL DIMENSIONS, ANGLES, BEND LOCATIONS, TW/BW GRADES AND LAYOUT SHALL BE FIELD VERIFIED.
 - REFER TO GEOTECHNICAL EVALUATION FOR SITE PREPARATION AND EARTHWORK RECOMMENDATIONS.
 - 2-PLY MEMBRANE WATERPROOFING PER SHA. STANDARD DETAIL NO. BR-SB(6.47)-05-362.
 - CONTINUOUS SOIL-CEMENT VERTICAL DRAIN LEDGE AS SHOWN OR CONCRETE DRAINAGE LEDGE PER SHA. STANDARD DETAIL NO. BR-SB(0.01)-80-101. SOIL-CEMENT SHALL CONSIST OF A RATIO OF 270 LBS. PORTLAND CEMENT MIXED WITH 1 CU. YD. TYPE SM SOIL AT 5% OVER OPTIMUM MOISTURE.

CONCRETE WALL SCHEDULE		
Wall Type	Wall Footing Width "A"	Wall Footing Heel "B"
RW-1	6'-9"	3'-9"
RW-2	5'-6"	3'-0"
RW-3	4'-6"	2'-0"



WALL BEND REINFORCEMENT DETAIL
NOT TO SCALE



CONCRETE WALL FOOTING STEP DETAIL
NOT TO SCALE

- GENERAL NOTES:
- No trees shall be planted within 10 feet of the top of the retaining wall.
 - Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
 - The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
 - The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
 - Walls shall not be constructed on uncertified fill materials.
 - Walls shall not be constructed within a Howard Co. right-of-way or easement.

OWNER
MRJL FAMILY LIMITED PARTNERSHIP, TAYLOR VILLAGE FAMILY, LLC
MANAGING MEMBER PHILLIP GUGLIOTTI, AUTHORIZED PERSON
4100 COLLEGE AVENUE
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ELLCOTT CITY, MD 21043
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DEVELOPER
AUTUMN DEVELOPMENT CORPORATION, RONALD L. SPAHN, PRESIDENT
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COLUMBIA, MD 21045
(410) 465-3500

NO.	REVISION	DATE

**RETAINING WALL
CONSTRUCTION DETAILS**

AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
PARCELS 56 & 309 (L. 12833 / F. 00446)
PARCEL 95 (L. 13244 / F. 0037)

ZONED: R-ED
TAX MAP #25 GRID 14
2ND ELECTION DISTRICT

PARCELS: 56, 309, AND 95
HOWARD COUNTY, MARYLAND

**HILLIS-CARNES
ENGINEERING ASSOCIATES**
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William A. Mall 2-27-14
CHIEF, BUREAU OF HIGHWAYS DATE

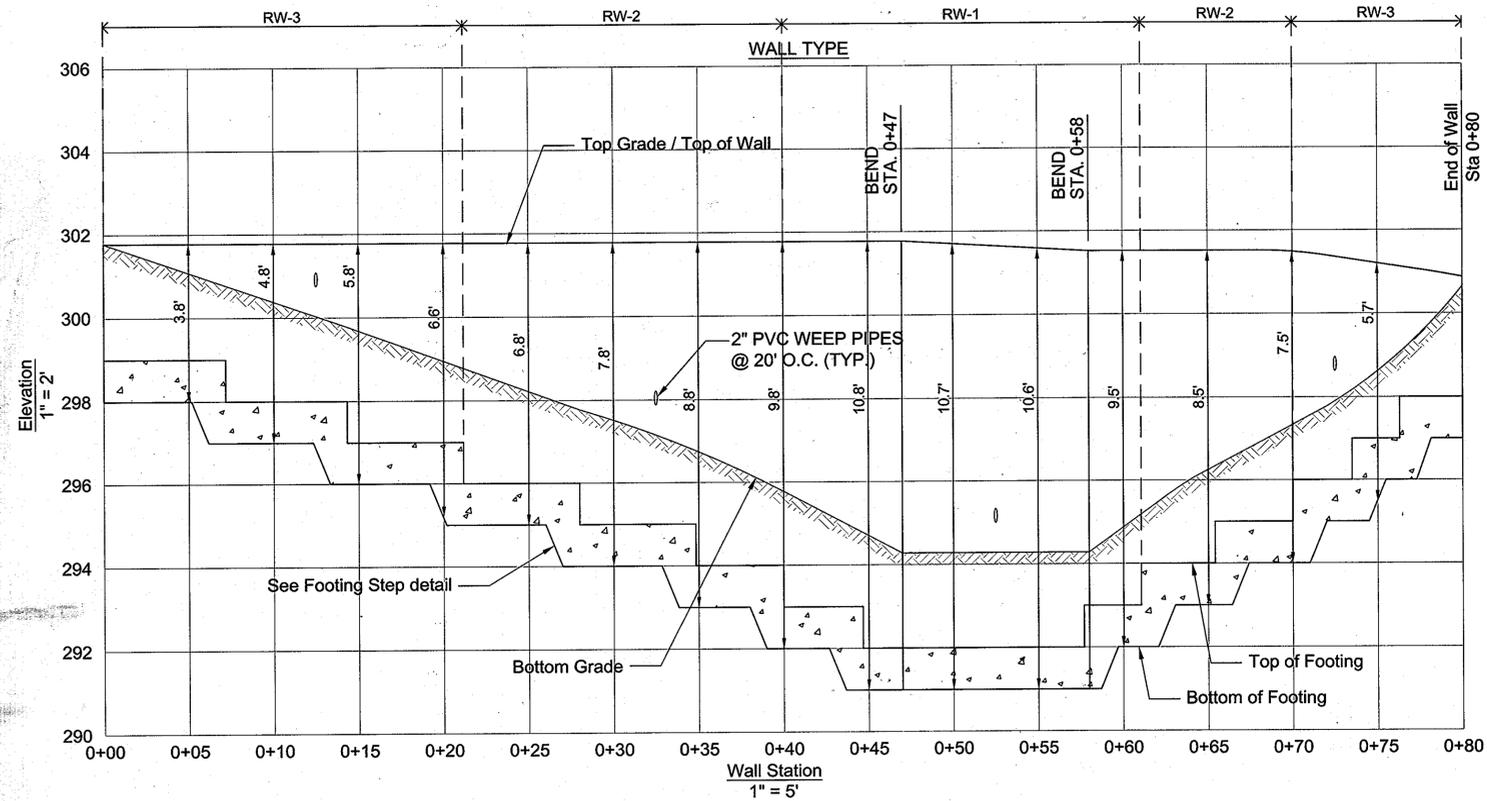
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Robert DeLoach 3-17-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chad Edwards 3-14-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 14434, EXPIRATION DATE: 05/13/15.

DESIGN BY: HM
DRAWN BY: HM
CHECKED BY: RWS
DATE: DECEMBER 2013
SCALE: AS SHOWN
HCEA NO.: 13454-A

16 SHEET OF 17



WALL ELEVATION
1" = 5'

OWNER
MR.JL FAMILY LIMITED PARTNERSHIP, TAYLOR VILLAGE FAMILY, LLC
MANAGING MEMBER PHILLIP GUGLIOTTI, AUTHORIZED PERSON
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5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21045
(410) 465-3500

NO.	REVISION	DATE

**RETAINING WALL
CONSTRUCTION DETAILS**
AUTUMN OVERLOOK
LOTS 1-20, & OPEN SPACE LOTS 21-24
PARCELS 56 & 309 (L. 12833 / F. 00446)
PARCEL 95 (L. 13244 / F. 0037)

ZONED: R-ED
TAX MAP #25 GRID 14
2ND ELECTION DISTRICT

PARCELS: 56, 309, AND 95
HOWARD COUNTY, MARYLAND

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(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4088

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AND THAT I AM A DULY LICENSED
PROFESSIONAL ENGINEER UNDER THE
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EXPIRATION DATE: 05/13/15.



DESIGN BY: HM
DRAWN BY: HM
CHECKED BY: RWS
DATE: DECEMBER 2013
SCALE: AS SHOWN
HCEA NO.: 13454-A

17 SHEET OF 17

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Michael J. ... 2-27-14
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Keith ... 3-17-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chad ... 3-14-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE