

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	REVISED PERCOLATION CERTIFICATION PLAN AND PRELIMINARY EQUIVALENT SKETCH PLAN & LANDSCAPE PLAN
4-5	SCHEMATIC GRADING AND SEDIMENT CONTROL PLAN
6-7	PRELIMINARY FOREST CONSERVATION PLAN
8-9	DRAINAGE AREA MAP
10	DETAIL SHEET

PRELIMINARY EQUIVALENT SKETCH PLAN

FULTON MANOR VALLEY

LOTS 1 THRU 9, BUILDABLE PRESERVATION PARCEL 'A' & NON-BUILDABLE PRESERVATION PARCEL 'B'

ZONING: RR-DEO

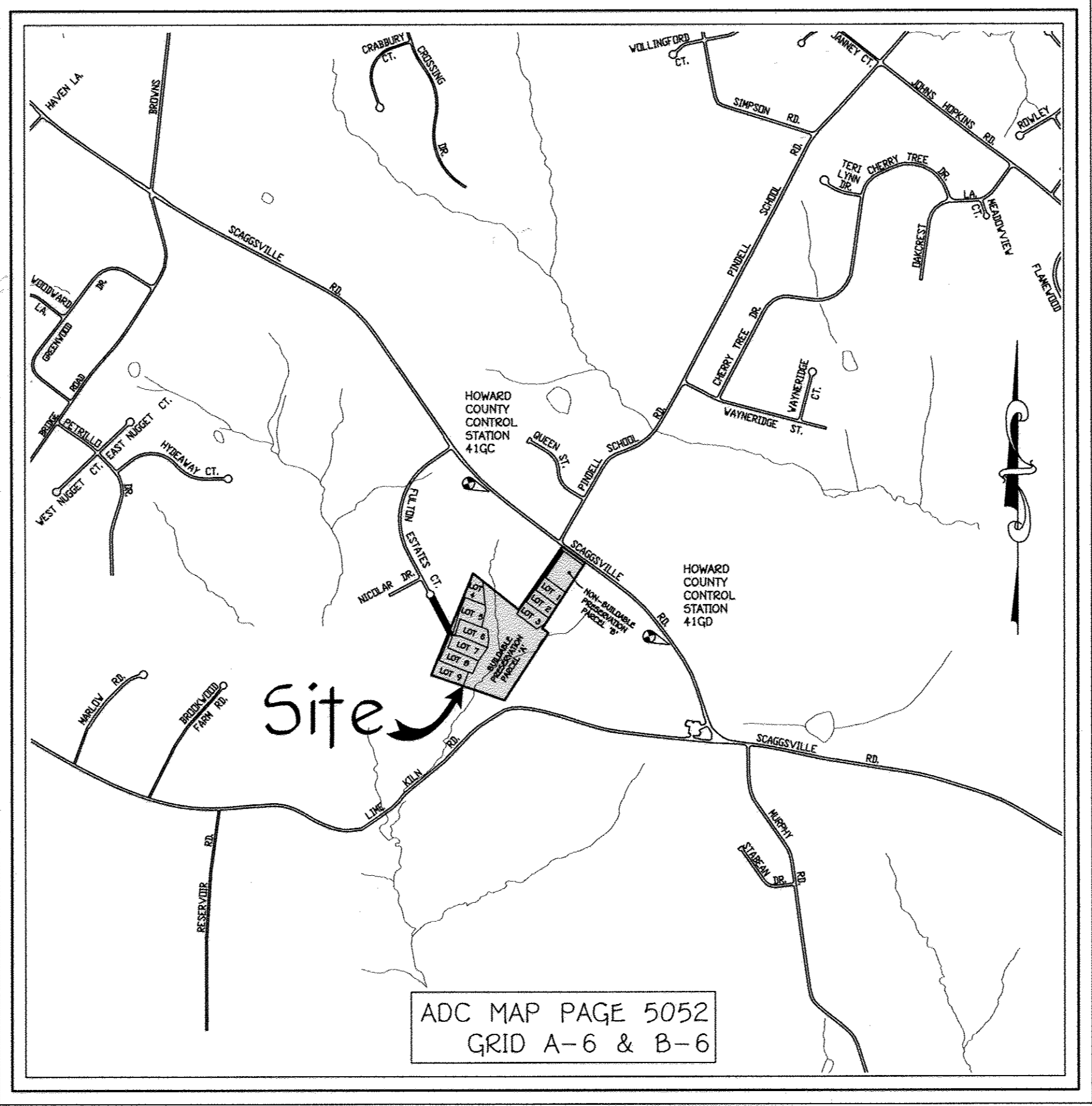
TAX MAP No. 41 GRID No. 19 PARCEL Nos. 78 AND 456

Coordinate Table		
POINT NUMBER	NORTH	EAST
113	542455.8097	1332769.3905
122	541967.1353	1332072.0839
126	542346.9524	1331995.2757
145	541287.3885	1331155.5981
159	541022.8157	1331923.3468
160	541722.3512	1332382.7971
161	541771.6670	1332320.2915
401	542626.0284	1332532.0323
406	541778.3431	1331359.3251
407	541718.3196	1331334.4160
408	542108.1161	1331189.8211
409	542084.8377	1331141.5772
420	541134.9571	1331597.9302

MINIMUM LOTS SIZE CHART			
LOT No.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	48,074 SQ.FT.	3,356 SQ.FT.	44,718 SQ.FT.
2	51,103 SQ.FT.	4,993 SQ.FT.	46,110 SQ.FT.
3	50,224 SQ.FT.	6,602 SQ.FT.	43,622 SQ.FT.
4	57,631 SQ.FT.	13,215 SQ.FT.	44,416 SQ.FT.
5	67,010 SQ.FT.	8,521 SQ.FT.	58,497 SQ.FT.
6	57,656 SQ.FT.	3,926 SQ.FT.	53,730 SQ.FT.
7	62,733 SQ.FT.	3,823 SQ.FT.	58,910 SQ.FT.
8	65,650 SQ.FT.	7,812 SQ.FT.	58,038 SQ.FT.
9	66,569 SQ.FT.	9,702 SQ.FT.	56,867 SQ.FT.

ROADWAY INFORMATION CHART			
ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH
DRIVEWAY 'A'	USE-IN-COMMON	-	24'
DRIVEWAY 'B'	USE-IN-COMMON	-	35'

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING 2' CONTOURS
	EXISTING 10' CONTOURS
	PROPOSED CONTOUR
	SPOT ELEVATION
	LIMITS OF DISTURBANCE
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED PAVING
	EXISTING PAVING TO BE REMOVED
	SOILS LINES AND TYPE
	SUPER SILT FENCE
	STABILIZES CONSTRUCTION ENTRANCE
	PROPOSED SWM DRYWELL (M-5)
	PROPOSED MICRO BIORETENTION (M-6)
	GRASS SWALE (M-8)
	NON-ROOFTOP DISCONNECTION (N-2)
	ROOFLEADERS
	UNDERDRAIN PIPE
	15% TO 24.9% STEEP SLOPES
	25% AND GREATER STEEP SLOPES
	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
	DRAINAGE AREA FOR STORM DRAIN
	TREE PROTECTION
	FOREST CONSERVATION EASEMENT



VICINITY MAP
SCALE: 1" = 1200'

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DENSITY TABULATIONS

- BASE DENSITY: 26.372 ACRES / 4.25 = 6.205 UNITS OR 6 SINGLE FAMILY DETACHED HOMES
- MAXIMUM DENSITY (1 LOT PER 2 NET ACRES): 24.724 NET ACRES / 2 = 12.362 UNITS OR 12 SINGLE FAMILY DETACHED HOMES.
NET TRACT AREA = GROSS AREA - FLOODPLAIN - STEEP SLOPES
NET TRACT AREA = 26.372 ACRES - 1.208 AC. - 0.440 AC.
NET TRACT AREA = 24.724 AC.
- TOTAL NUMBER OF PROPOSED DWELLING UNITS = 9 CLUSTER LOTS + 1 BUILDABLE PRESERVATION PARCEL = 10 UNITS.
- DEVELOPMENT RIGHTS WILL BE TRANSFERRED TO THIS SUBDIVISION PURSUANT TO THE DEO DENSITY TRANSFER PROVISION SECTION 106.B.2 OF THE ZONING REGULATIONS FOR THIS PROPERTY'S UNDERLYING RR ZONING DISTRICT. (10 PROPOSED - 6 BY-RIGHT = 4 DEO RIGHTS REQUIRED)

- GENERAL NOTES**
- THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2004 ZONING REGULATIONS PER COUNCIL BILL NO. 45-2000 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL NO. 79-2000. DEPARTMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING PERMIT APPLICATION.
 - THE SUBJECT PROPERTY IS ZONED RR-DEO PER THE 7/2/04 COMPREHENSIVE ZONING PLAN AND THE "COMP LIT" ZONING AMENDMENTS EFFECTIVE 7/28/06.
 - AREA TABULATION:
 - GROSS AREA OF TRACT = 26.372 AC.
 - AREA OF FLOODPLAIN = 1.208 AC.
 - AREA OF 25% OR GREATER SLOPES = 0.440 AC. (OUTSIDE FLOODPLAIN)
 - NET AREA OF TRACT = 24.724 AC.
 - AREA OF PROPOSED ROAD R/W = 0.213 AC.
 - AREA OF PROPOSED BUILDABLE LOTS = 12.099 AC.
 - AREA OF PROPOSED BUILDABLE PRESERVATION PARCELS = 12.072 AC.
 - AREA OF PROPOSED NON-BUILDABLE PRESERVATION PARCELS = 1.997 AC.
 - NUMBER OF LOTS = 9
 - BUILDABLE LOTS = 9
 - NON-BUILDABLE PRESERVATION PARCELS = 1
 - RELATED DEPT FILE NUMBERS: ECP-12-040 AND WP-13-092
 - PRIVATE WATER AND SEWER SHALL BE UTILIZED WITHIN THIS DEVELOPMENT.
 - SOILS INFORMATION TAKEN FROM SOIL MAP NO. 12, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY, 1968/69.
 - THIS AREA DESIGNATES A PRIVATE EASEMENT OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWER DISPOSAL IMPROVEMENT OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT VARIANCES FOR ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
 - BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. DATED MAY 2011.
 - TOPOGRAPHY SHOWN IS FROM HOWARD COUNTY GIS AND SUPPLEMENTED WITH FIELD RUN TOPO BY FISHER, COLLINS & CARTER, INC. DATED MAY 2011.
 - NO REVISIONS ARE REQUIRED FOR THIS PROJECT.
 - STORMWATER MANAGEMENT WILL BE IN ACCORDANCE WITH THE HIC STORM DRAIN DESIGN MANUAL, VOLUMES 1 & 2, REVISED 2009. USE OF M-5 MICRO BIORETENTION, M-6 DRY WELLS, N-2 RECONNECTION OF NON-ROOFTOP RUNOFF, AND M-8 GRASS CHANNELS ARE PROPOSED FOR THIS PROJECT.
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED JUNE 25, 2012 AND WAS APPROVED ON SEPTEMBER 18, 2012.
 - THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DURING DECEMBER 2011 WITH REPORT DATED JANUARY 30, 2012.
 - THIS PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.
 - FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL, AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD R/W LINE AND NOT THE PIPESTEM LOT DRIVEWAY.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY GEODETIC CONTROL STATIONS: HOWARD COUNTY MONUMENT NO. 4100 N 543690.6303 E 1337781.8129 HOWARD COUNTY MONUMENT NO. 4100 N 541496.6266 E 1337471.1799
 - THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS ON JANUARY 30, 2012.
 - ALL EXISTING BUILDINGS, WELLS AND SEPTIC SYSTEMS WHICH ARE TO BE REMOVED SHALL BE REMOVED PRIOR TO FINAL PLAT SIGNATURE.
 - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
 - ALL EXISTING WELLS AND SEPTIC FIELDS WITHIN 100 FEET OF SUBJECT PROPERTY HAVE BEEN SHOWN.
 - ALL WELLS SHALL BE DRILLED PRIOR TO FINAL PLAT RECORDATION. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS UP HEALTH DEPARTMENT SIGNATURE OF THE SECOND PLAT.
 - ANY CHANGES TO A PRIVATE SEWERAGE AREA SHALL REQUIRE REVISED PERC CERTIFICATION PLAN.
 - THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY ON-SITE REFORESTATION (PLANTING) OF 1.45 ACRES AND RETENTION OF 7.18 ACRES OF FOREST. THE TOTAL AREA ON-SITE REFORESTATION PROVIDED IS 8.59 AC.
 - NO CONTIGUOUS OR HISTORIC SITES ARE LOCATED ON THIS PROPERTY.
 - THESE ARE STEEP SLOPES OF 25% OR GREATER ON-SITE.
 - THE FULFILLING THEREOF WILL BE OBTAINED FROM THE STABLE ON PRESERVATION PARCEL 'A'. ALSO, THE STABLES SEWER CONNECTION WILL BE SEALED WITH CONCRETE BY AN ENVIRONMENTAL SANITARIAN PRIOR TO RECORD PLAT SUBMITTAL. THERE ARE EXISTING BUILDABLE PRESERVATION PARCEL 'A' TO REMAIN EXISTING STRUCTURE ON NON-BUILDABLE PRESERVATION PARCEL 'B' TO BE REMOVED PRIOR TO RECORDATION OF FINAL PLAT.
 - BUILDABLE PRESERVATION PARCEL 'A' IS PRIVATELY OWNED AND ENCUMBERED BY AN EASEMENT AGREEMENT WITH THE FULTON MANOR VALLEY HOMEOWNERS ASSOCIATION, INC. AND HOWARD COUNTY, MARYLAND. NON-BUILDABLE PRESERVATION PARCEL 'B' IS PRIVATELY OWNED AND ENCUMBERED BY AN EASEMENT AGREEMENT WITH THE FULTON MANOR VALLEY HOMEOWNERS ASSOCIATION, INC. AND HOWARD COUNTY, MARYLAND.
 - LOTS 5 THRU 9 EXCEED THE 50,000 SQUARE FOOT MAXIMUM FOR CLUSTER LOTS. THE HEALTH DEPARTMENT HAS APPROVED LARGER LOTS DUE TO PERCOLATION, STORMWATER MANAGEMENT AND WELL SETBACKS.
 - ADDRESS RANGES FOR PARCEL 'A' AND PARCEL 'B' AT THE INTERSECTION OF SCAGGSVILLE ROAD AND THE USE-IN-COMMON DRIVEWAY AND FOR LOTS 4-9 AT THE INTERSECTION OF FULTON ESTATES COURT AND THE USE-IN-COMMON DRIVEWAY. THE PRIVATE RANGE OF ADDRESS SIGNS SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATE. THERE SHALL BE AN ADDRESS SIGN AT THE POINT WHERE EACH INDIVIDUAL DRIVEWAY INTERSECTS WITH THE USE-IN-COMMON DRIVEWAY.
 - ALL LOT/PARCEL AREAS ARE MORE OR LESS.
 - DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO MVD '83 GRID.
 - DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
 - WIDTH - 12 FEET (16 FEET SEWER HOSE THAN ONE RESIDENCE)
 - SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1 - 1/2" MINIMUM)
 - GEOMETRIC - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE;
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET;
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
 - A PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON JUNE 16, 2011.
 - THE BIORETENTION FACILITY (F-6) LOCATED ON LOT 6 AND THE MICRO-BIORETENTION FACILITY LOCATED ON PRESERVATION PARCEL 'A' WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. ALL OTHER FACILITIES WILL BE OWNED AND MAINTAINED BY THE OWNER ON WHICH THAT PARTICULAR FACILITY IS LOCATED.
 - TRASH AND RECYCLING COLLECTION WILL BE PROVIDED AT SCAGGSVILLE ROAD AND FULTON ESTATES COURT WITHIN 5' OF THE COUNTY ROADWAY.
 - THE PURPOSE OF PRESERVATION PARCELS: BUILDABLE PRESERVATION PARCEL 'A' IS DESIGNED TO ACCOMMODATE THE EXISTING DWELLING AND OUTBUILDINGS AS WELL AS THE STREAMS AND FORESTED AREA IN PROXIMITY TO THE STREAMS. THESE FEATURES ARE PREFERRED ON PRESERVATION PARCELS RATHER THAN ON RESIDENTIAL LOTS. THERE ARE NO COMMERCIAL FARM OPERATIONS ON THIS PROPERTY AND THE OPEN AREA IN PROPOSED PRESERVATION PARCEL 'A' WOULD NOT SUPPORT A FARM OPERATION. THEREFORE, THERE WILL BE NO CONFLICTS WITH AGRICULTURAL USE TRAFFIC ON THE COMMON DRIVEWAY. NON-BUILDABLE PRESERVATION PARCEL 'B' PROVIDES A BUFFER FROM SCAGGSVILLE ROAD AND AN OPEN AREA IN PROXIMITY TO THE EXISTING HOUSES ON VERY NARROW LOTS BOTH EAST AND WEST OF THE PRESERVATION PARCEL. THIS PARCEL MAY BE PROPOSED AS A FUTURE FOREST CONSERVATION EASEMENT TO PROVIDE FOR OFF-SITE PLANTING FOR ANOTHER PROJECT. THIS AREA PRESERVES THE VIEW FROM SCAGGSVILLE ROAD.
 - ANY VEGETATION WITHIN OR NEAR THE BOUNDARIES OF A SEPTIC SEWERAGE AREA (ASA, SEWERAGE OR SEPTIC EASEMENT) IS SUBJECT TO DAMAGE OR DESTRUCTION DURING THE INSTALLATION OF SEPTIC SYSTEM DRAINFIELDS.
 - ON JANUARY 22, 2013 THE PLANNING DIRECTOR APPROVED A WAIVER TO SECTION 16.1200(B)(7) FOR REMOVAL OF FIVE (5) OF THE SIXTEEN (16) SPECIMEN TREES IDENTIFIED ON THE PROPERTY SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE DEVELOPER SHALL PLANT A TOTAL OF TEN (10) EVERGREEN TREES ALONG LANDSCAPE PERIMETERS P-8 AND P-12 (SEE PERIMETER AS IDENTIFIED ON THE LANDSCAPE PLAN, SP-13-003) AS REPLACEMENT MITIGATION FOR THE REMOVAL OF THE FIVE (5) SPECIMEN TREES (TREES H, I, J, K, L & M) IDENTIFIED ON THE FOREST STAND DELINEATION PLAN AND THE WAIVER PETITION. THESE TREES TO BE REMOVED - THESE TEN (10) EVERGREEN TREES WILL AUGMENT THE REQUIRED 10 PERIMETER SHADE TREES SITUATED ALONG THESE PERIMETERS. THIS ADDITIONAL LANDSCAPING WILL PROVIDE AN ENHANCED LANDSCAPE BUFFER BETWEEN THE EXISTING 3 ACRES LOTS AND THE PROPOSED 1 ACRE CLUSTER LOTS.
 - THE REMOVAL OF ANY OF THE REMAINING ELEVEN (11) SPECIMEN TREES (TREES A, B, C, D, E, F, G, H, N, O & P) NOT DESIGNATED FOR REMOVAL UNDER THIS WAIVER PETITION WP-13-092, WOULD REQUIRE WAIVER PETITION APPROVAL IN ACCORDANCE WITH SECTION 16.1200(B.007) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
 - NO VABLE ANIMAL FARMING OPERATIONS WILL BE POSSIBLE ON PRESERVATION PARCEL 'A'.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
GALLOTT CITY, MARYLAND 21042
(410) 461-2995

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Frank P. Leight 7/3/12
PLANNING DIRECTOR DATE

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

Briden M. Mauro-Rosenan 6/14/2013
COUNTY HEALTH OFFICER DATE

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PAL DEVELOPMENT, LLC
5300 DORSEY HALL DRIVE, SUITE 102
ELICOTT CITY, MARYLAND 21042
443-367-0422



TITLE SHEET
FULTON MANOR VALLEY
LOTS 1 THRU 9 AND
BUILDABLE PRESERVATION PARCEL 'A'
& NON-BUILDABLE PRESERVATION PARCEL 'B'

11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP NO. 41 GRID NO. 19 PARCEL NO. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: February 12, 2013
SHEET 1 OF 10

SP-13-003

SCHEDULE A PERIMETER LANDSCAPE EDGE								
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR SCREEN (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO PERIMETER	A	336.31'	NO	NO	6	-	-
P-2	ADJACENT TO PERIMETER	A	262.76'	NO	NO	4	-	-
P-3	ADJACENT TO PERIMETER	A	495.83'	YES - 100%	NO	0	-	-
P-4	ADJACENT TO PERIMETER	A	290.96'	YES - 45'	NO	4	-	-
P-5	ADJACENT TO PERIMETER	A	772.83'	NO	NO	13	-	-
P-6	ADJACENT TO ROADWAY	N/A	40'	NO	NO	-	-	-
P-7	ADJACENT TO PERIMETER	A	372.63'	YES - (3 EX. TREES)	NO	3	-	-
P-8	ADJACENT TO PERIMETER	A	615.62'	NO	NO	10	5	SEE NOTE 13
P-9	ADJACENT TO PERIMETER	A	130.01'	YES - 100%	NO	0	-	-
P-10	ADJACENT TO PERIMETER	A	1262.50'	YES - 100% (F.C.E.)	NO	0	-	-
P-11	ADJACENT TO PERIMETER	A	354.18'	NO	NO	6	-	-
P-12	ADJACENT TO PERIMETER	A	466.56'	NO	NO	8	5	SEE NOTE 13
P-13	ADJACENT TO PERIMETER	A	414.16'	NO	NO	7	-	-
P-14	ADJACENT TO ROADWAY	N/A	52.35'	NO	NO	-	-	-

NOTE: A TOTAL OF TEN (10) EVERGREEN TREES ALONG P-8 AND P-12 ARE REPLACEMENT FOR THE REMOVAL OF FIVE (5) SPECIMEN TREES (H, L, J, K, AND L) AS A CONDITION OF APPROVAL OF WP-13-092

LEGEND	
SYMBOL	DESCRIPTION
(Dashed line)	EXISTING 2' CONTOURS
(Dashed line)	EXISTING 10' CONTOURS
(Dashed line)	PROPOSED CONTOUR
(Dot)	SPOT ELEVATION
(Line with dots)	LIMITS OF DISTURBANCE
(Dashed line)	EXISTING TREELINE
(Dashed line)	PROPOSED TREELINE
(Hatched area)	PROPOSED PAVING
(Hatched area)	EXISTING PAVING TO BE REMOVED
(Line with dots)	SOILS LINES AND TYPE
(Line with dots)	SUPER SILT FENCE
(Line with dots)	STABILIZES CONSTRUCTION ENTRANCE
(Line with dots)	PROPOSED SMM DRYWELL (M-5)
(Line with dots)	PROPOSED MICRO BIORETENTION (M-6)
(Line with dots)	GRASS SWALE (M-8)
(Line with dots)	NON-ROOFTOP DISCONNECTION (N-2)
(Line with dots)	ROOFLEADERS
(Line with dots)	UNDERGROUND PIPE
(Line with dots)	15% TO 24.9% STEEP SLOPES
(Line with dots)	25% AND GREATER STEEP SLOPES
(Line with dots)	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
(Line with dots)	DRAINAGE AREA FOR STORM DRAIN
(Line with dots)	TREE PROTECTION
(Line with dots)	FOREST CONSERVATION EASEMENT

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERS, CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK 10272 MULTIPURPOSE NATIONAL PLACE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY
Paul K. Leyle 2/3/13
 PLANNING DIRECTOR DATE

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT.
Baljeet Kaur Roshan 6/14/2013
 COUNTY HEALTH OFFICER DATE

MATCH LINE SEE SHEET 3

PLAN
 SCALE: 1" = 50'

OWNER
 DEBRA E. TAYLOR
 P.O. BOX 535
 FULTON, MARYLAND 21044
 410-977-1327

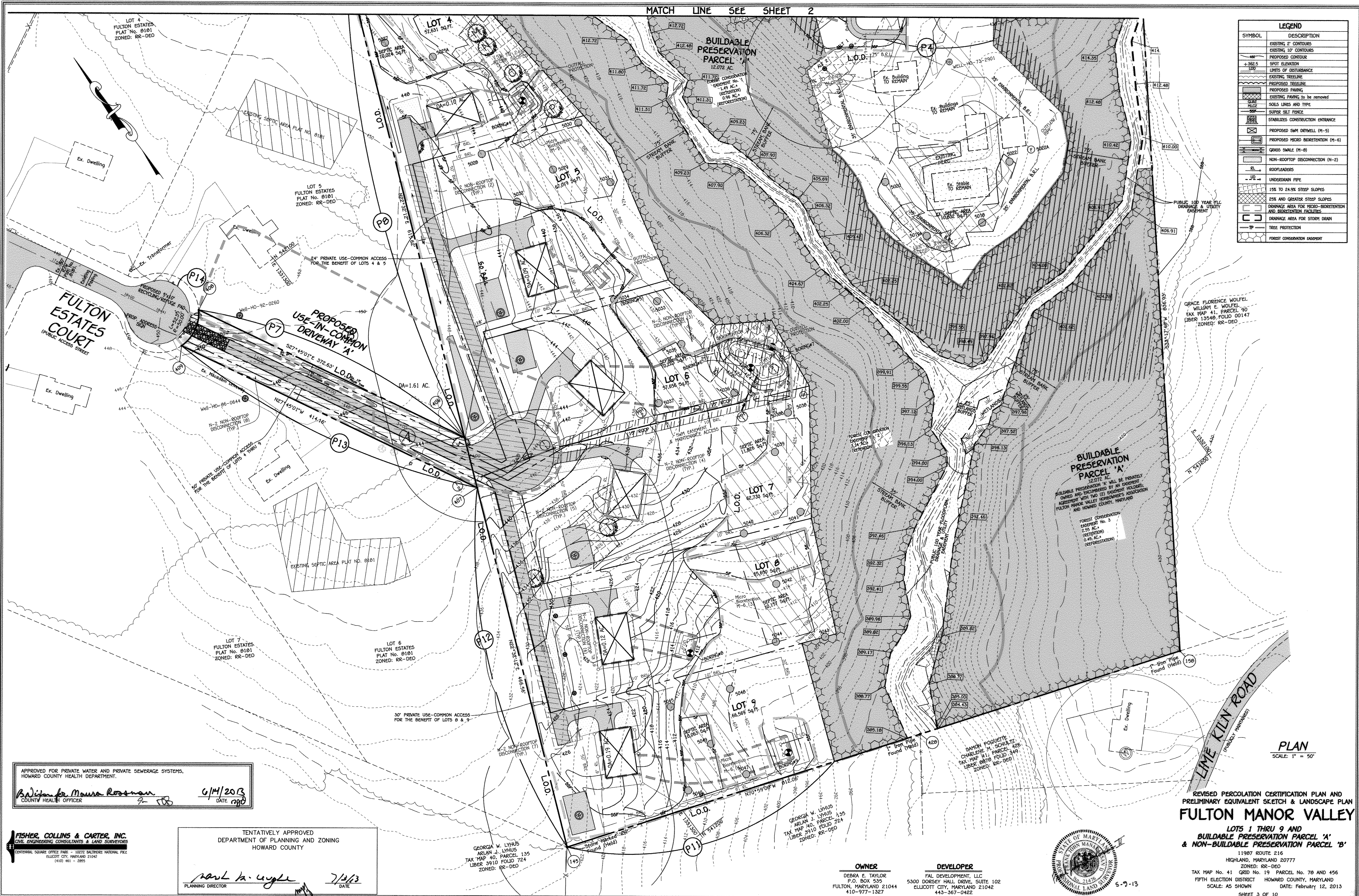
DEVELOPER
 FAL DEVELOPMENT, LLC
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 443-367-0422



REVISED PERCOLATION CERTIFICATION PLAN AND
 PRELIMINARY EQUIVALENT SKETCH & LANDSCAPE PLAN
FULTON MANOR VALLEY
 LOTS 1 THRU 9 AND
 BUILDABLE PRESERVATION PARCEL 'A'
 & NON-BUILDABLE PRESERVATION PARCEL 'B'
 11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEO
 TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: February 12, 2013
 SHEET 2 OF 10



SYMBOL	DESCRIPTION
(Solid line)	EXISTING 2' CONTOURS
(Dashed line)	EXISTING 10' CONTOURS
(Dotted line)	PROPOSED CONTOUR
(Number)	SPOT ELEVATION
(Shaded area)	LIMITS OF DISTURBANCE
(Hatched area)	EXISTING TREELINE
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(Symbol)	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
(Symbol)	DRAINAGE AREA FOR STORM DRAIN
(Symbol)	TREE PROTECTION
(Symbol)	FOREST CONSERVATION EASEMENT



GRACE FLORENCE WOLFEL
WILLIAM E. WOLFEL
TAX MAP 41, PARCEL 90
LIBER 13548 FOLIO 00147
ZONED: RR-DEO

BUILDABLE PRESERVATION PARCEL 'A'
12.072 AC
BUILDABLE PRESERVATION 'A' WILL BE PRIVATELY OWNED AND DEVELOPED BY AN EASEMENT AGREEMENT WITH TWO (2) EASEMENT HOLDERS, FULTON MANOR VALLEY HOMEOWNERS ASSOCIATION AND HOWARD COUNTY, MARYLAND

FOREST CONSERVATION EASEMENT No. 3
2.59 AC.
(RETENTION)
0.49 AC.
(REPRESENTATION)

DAMON POQUETTE
CHARLENE M. SCHULTZ
TAX MAP 40, PARCEL 426
LIBER 9878 FOLIO 349
ZONED: RR-DEO

GEORGIA W. LYHUS
ARLAN J. LYHUS
TAX MAP 40, PARCEL 135
LIBER 3910 FOLIO 724
ZONED: RR-DEO

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

Balita M. Rossman
COUNTY HEALTH OFFICER

6/14/2013
DATE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

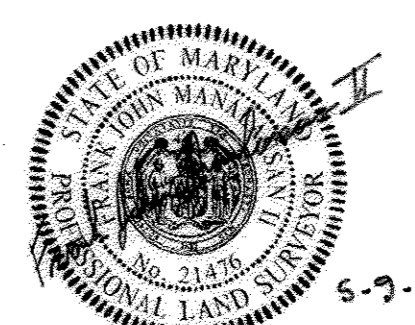
Paul A. Uyle
PLANNING DIRECTOR

7/3/13
DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALDORRE NATIONAL PIKE
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P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
FAL DEVELOPMENT, LLC
5300 DORSEY HALL DRIVE, SUITE 102
ELICOTT CITY, MARYLAND 21042
443-367-0422



REVISED PERCOLATION CERTIFICATION PLAN AND
PRELIMINARY EQUIVALENT SKETCH & LANDSCAPE PLAN
FULTON MANOR VALLEY
LOTS 1 THRU 9 AND
BUILDABLE PRESERVATION PARCEL 'A'
& **NON-BUILDABLE PRESERVATION PARCEL 'B'**

11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: February 12, 2013
SHEET 3 OF 10

PLAN
SCALE: 1" = 50'



LEGEND	
SYMBOL	DESCRIPTION
(Symbol)	EXISTING 2' CONTOURS
(Symbol)	EXISTING 10' CONTOURS
(Symbol)	PROPOSED CONTOUR
(Symbol)	SPOT ELEVATION
(Symbol)	LIMITS OF DISTURBANCE
(Symbol)	EXISTING TRESLINE
(Symbol)	PROPOSED TRESLINE
(Symbol)	PROPOSED PAVING
(Symbol)	EXISTING PAVING TO BE REMOVED
(Symbol)	SOILS LINES AND TYPE
(Symbol)	SUPER SILT FENCE
(Symbol)	STABILIZES CONSTRUCTION ENTRANCE
(Symbol)	PROPOSED SWM DRYWELL (M-5)
(Symbol)	PROPOSED MICRO BIORETENTION (M-6)
(Symbol)	GRASS SWALE (M-8)
(Symbol)	NON-ROOFTOP DISCONNECTION (N-2)
(Symbol)	ROOFLEADERS
(Symbol)	UNDERDRAIN PIPE
(Symbol)	15% TO 24.9% STEEP SLOPES
(Symbol)	25% AND GREATER STEEP SLOPES
(Symbol)	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
(Symbol)	DRAINAGE AREA FOR STORM DRAIN
(Symbol)	TREE PROTECTION

MATCH LINE SEE SHEET 5

PLAN
SCALE: 1" = 50'

OWNER
DEBA & TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
FAL DEVELOPMENT, LLC
5300 DORSY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
443-367-0422



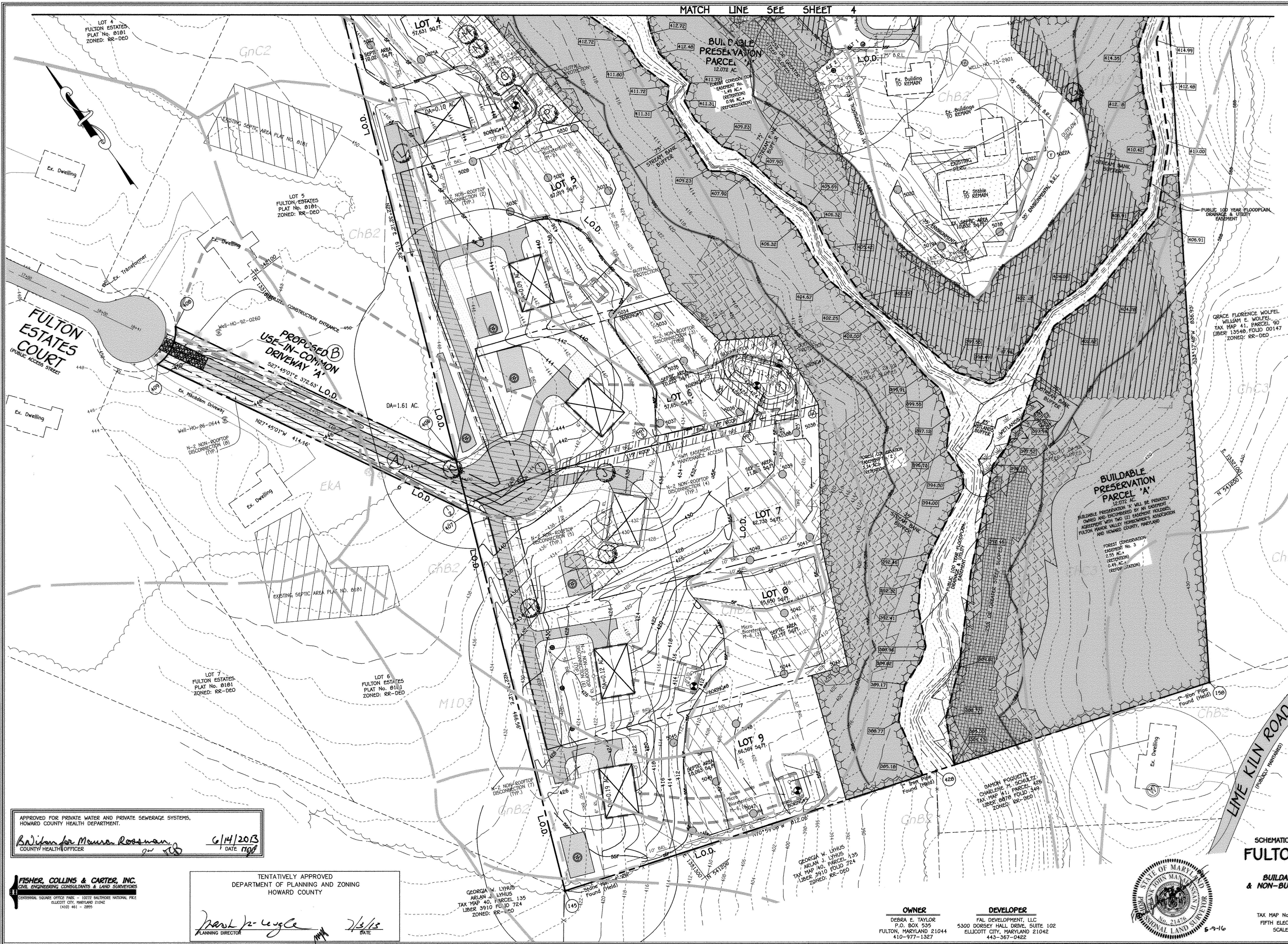
SHEMATIC GRADING & SEDIMENT CONTROL PLAN
FULTON MANOR VALLEY
LOTS 1 THRU 9 AND
BUILDABLE PRESERVATION PARCEL 'A'
& NON-BUILDABLE PRESERVATION PARCEL 'B'
11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: February 12, 2013
SHEET 4 OF 10

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
Mark K. Wyle
PLANNING DIRECTOR
7/5/13
DATE

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.
B. Widen for Mousa Rotman
COUNTY HEALTH OFFICER
6/14/2013
DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK 10772 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2295

LEGEND	
SYMBOL	DESCRIPTION
(Dashed line)	EXISTING 2' CONTOURS
(Dashed line)	EXISTING 10' CONTOURS
(Dashed line)	PROPOSED CONTOUR
(Dashed line)	SPOT ELEVATION
(Dashed line)	L.O.D.
(Dashed line)	LIMITS OF DISTURBANCE
(Dashed line)	EXISTING TREELINE
(Dashed line)	PROPOSED TREELINE
(Dashed line)	PROPOSED PAVING
(Dashed line)	EXISTING PAVING TO BE REMOVED
(Dashed line)	SOILS LINES AND TYPE
(Dashed line)	SUPER SILT FENCE
(Dashed line)	STABILIZES CONSTRUCTION ENTRANCE
(Dashed line)	PROPOSED SHM DRYWELL (M-5)
(Dashed line)	PROPOSED MICRO BIORETENTION (M-6)
(Dashed line)	GRASS SWALE (M-8)
(Dashed line)	NON-ROOFTOP DISCONNECTION (N-2)
(Dashed line)	ROOFLEADERS
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(Dashed line)	25% AND GREATER STEEP SLOPES
(Dashed line)	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
(Dashed line)	DRAINAGE AREA FOR STORM DRAIN
(Dashed line)	TREE PROTECTION



GRACE FLORENCE WOLFEL
WILLIAM E. WOLFEL
TAX MAP 41, PARCEL 90
LIBER 1354B FOLIO 00147
ZONED: RR-DEO

BUILDABLE PRESERVATION PARCEL 'A'
12,072 AC.
BUILDABLE PRESERVATION 'A' WILL BE PRIVATELY OWNED AND ENCUMBERED BY AN EASEMENT AGREEMENT WITH THE 123 EASEMENT HOLDERS, FULTON MANOR VALLEY HOMEOWNERS ASSOCIATION AND HOWARD COUNTY, MARYLAND
FOREST CONSERVATION EASEMENT NO. 3
2.55 AC.
(RETENTION)
0.49 AC.
(REFORESTATION)

PLAN
SCALE: 1" = 50'

SCHMATIC GRADING & SEDIMENT CONTROL PLAN
FULTON MANOR VALLEY
LOTS 1 THRU 9 AND
BUILDABLE PRESERVATION PARCEL 'A'
& **NON-BUILDABLE PRESERVATION PARCEL 'B'**
11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: February 12, 2013
SHEET 5 OF 10



OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
FAL DEVELOPMENT, LLC
5300 DORSEY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
443-367-0422

GEORGIA W. LYHUS
ARLAN J. LYHUS
TAX MAP 40, PARCEL 135
LIBER 3910 FOLIO 724
ZONED: RR-LUD

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT.
Walter for Maureen Rosman
COUNTY HEALTH OFFICER
6/14/2013
DATE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
Mark Jr. Leyle
PLANNING DIRECTOR
7/3/13
DATE

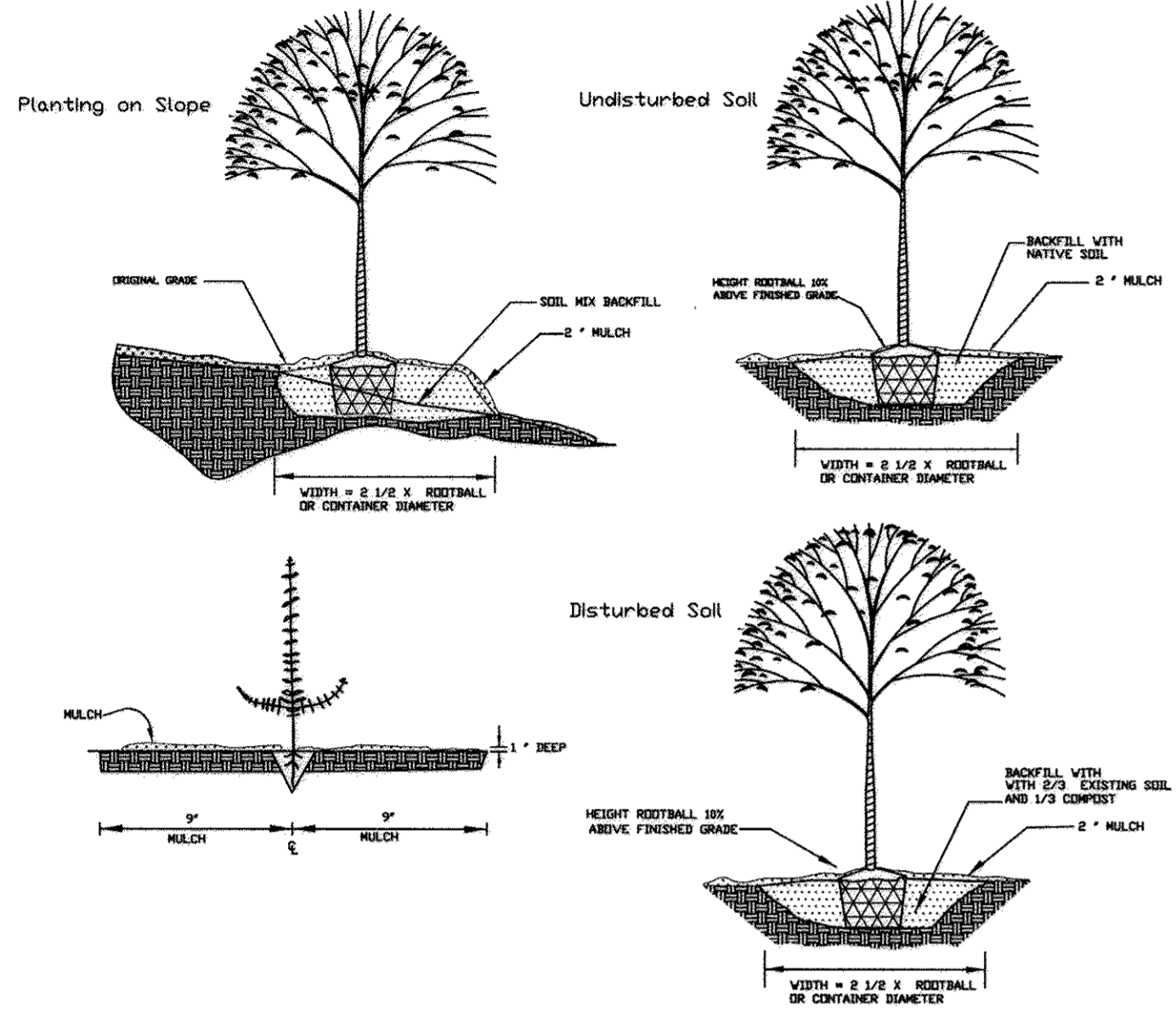
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTHORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2895

FCE Planting Area # 1 - 1.60 acres

Planting units required: 1120 (560 whips)
Planting units provided: 1120 (455 whips and 60 trees)

Qty	Species	Size	Spacing	Total FCA Units
30	Acer x Fraxinifolia 'Autumn Blaze' - Freeman Maple	1" cal.	15' o.c.	1120
50	Ulmus Americana 'Valley Forge' Valley Forge American Elm	1" cal.	15' o.c.	1120
60	Total 1" caliper trees (3.5 planting units per tree)			210 Total FCA unit credit
60	Acer x Fraxinifolia 'Autumn Blaze' - Freeman Maple	2-3" whip	11' o.c.	1120
60	Cercis canadensis - Red Bud	2-3" whip	11' o.c.	1120
60	Carolina caroliniana - American Hornbeam	2-3" whip	11' o.c.	1120
55	Liquidambar styraciflua - Sweetgum	2-3" whip	11' o.c.	1120
55	Betula nigra 'Heritage' - Silver Birch	2-3" whip	11' o.c.	1120
55	Osyris virginiana - American Hopbloom	2-3" whip	11' o.c.	1120
55	Ulmus Americana 'Valley Forge' Valley Forge American Elm	2-3" whip	11' o.c.	1120
55	Acer corymbosum - Hedge Maple	2-3" whip	11' o.c.	1120
455	Total whip plantings (2 planting units per tree)			910 Total FCA unit credit
				210

1" CAL TREES = 200/ACRE (60 TREES/200 = 0.30 AC)
WHIP5 w/headers = 350/ACRE = 350 x 1.3 AC = 455 WHIP5
3.5 Planting units = 1 - 1" Cal. Tree
2 Planting units = 1 Whip



Seeding and Whip Planting Specification

LEGEND

SYMBOL	DESCRIPTION
---	EXISTING 2' CONTOURS
---	EXISTING 10' CONTOURS
---	PROPOSED CONTOUR
+	SPOT ELEVATION
---	LIMITS OF DISTURBANCE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	EXISTING PAVING TO BE REMOVED
---	SOILS LINES AND TYPE
---	SUPER SALT FENCE
---	STABILIZES CONSTRUCTION ENTRANCE
---	PROPOSED SWM DRYWELL (M-5)
---	PROPOSED MICRO BIORETENTION (M-6)
---	GRASS SWALE (M-8)
---	NON-ROOFTOP DISCONNECTION (N-2)
---	ROOFLEAKERS
---	UNDERDRAIN PIPE
---	15% TO 24.9% STEEP SLOPES
---	25% AND GREATER STEEP SLOPES
---	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
---	DRAINAGE AREA FOR STORM DRAIN
---	TREE PROTECTION

Specimen Tree Chart

Key	Species, Size (dbh)	Comment	Status
A	Quercus rubra, 35"	good condition	to remain
B	Quercus rubra, 33"	good condition	to remain
C	Quercus bicolor, 31.5"	good condition	to remain
D	Quercus alba, 33.5"	good condition	to remain
E	Quercus velutina, 33.5"	good condition	to remain
F	Quercus velutina, 31.5"	good condition	to remain

**FOREST CONSERVATION WORKSHEET
VERSION 1.0**

PROJECT: FULTON MANOR VALLEY
DATE: APRIL 17, 2012

NET TRACT AREA	ACRES
A. TOTAL TRACT AREA	26.4
B. DEDUCTIONS (AREA WITHIN 100 YEAR FLOODPLAIN)	1.9
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0
D. NET TRACT AREA	24.5

LAND USE CATEGORY: MEDIUM DENSITY RESIDENTIAL

E. AFFORESTATION THRESHOLD (NET TRACT AREA (C) x 20%)	4.9
F. CONSERVATION THRESHOLD (NET TRACT AREA (C) x 25%)	6.1

EXISTING FOREST COVER

G. EXISTING FOREST COVER WITHIN THE NET TRACT AREA	16.9
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD	12.0
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	10.8

BREAK-EVEN POINT

J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	8.3
BREAK-EVEN POINT	0

C. CLEARING PERMITTED WITHOUT MITIGATION

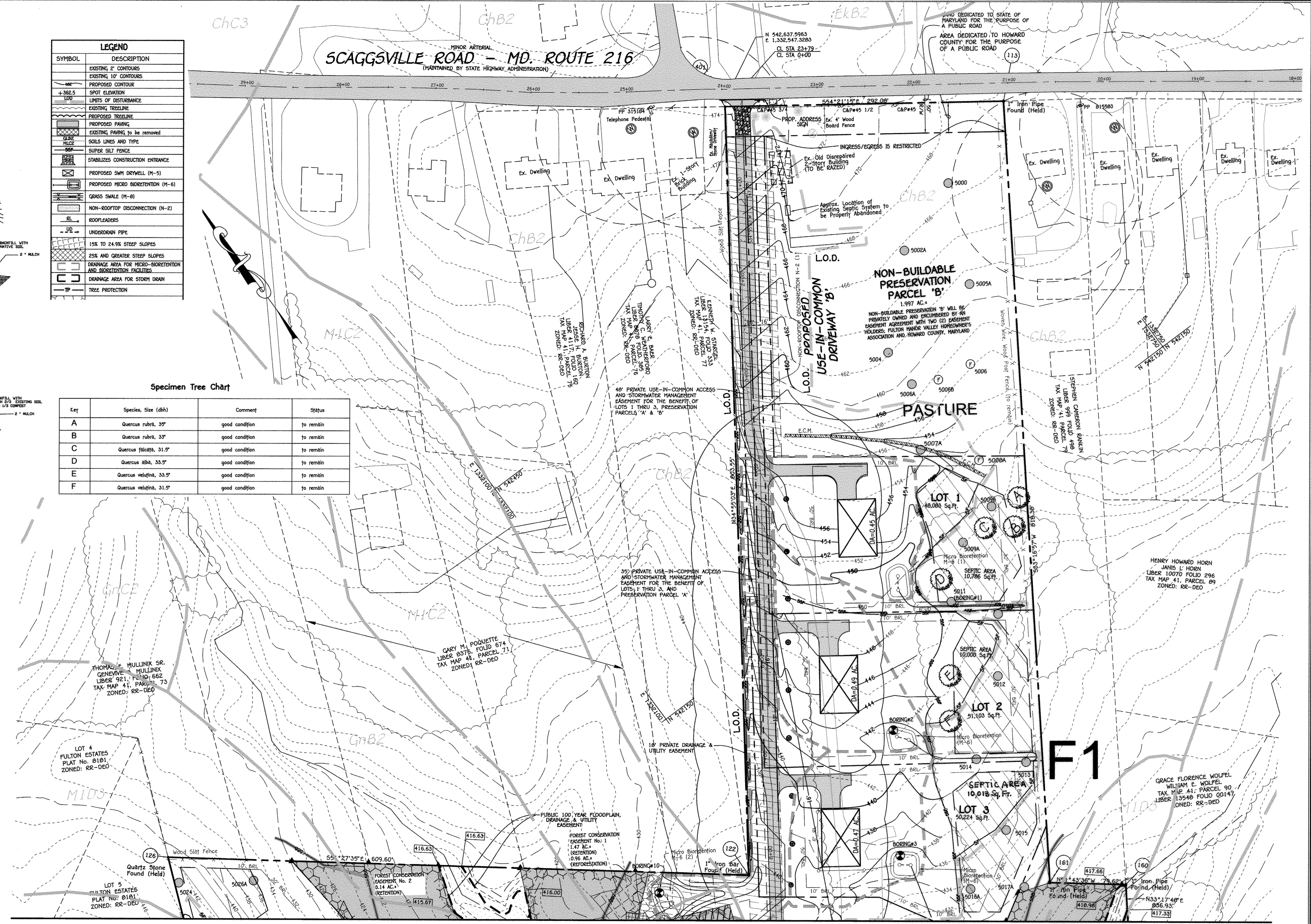
K. CLEARING PERMITTED WITHOUT MITIGATION	8.6
--	-----

PROPOSED FOREST CLEARING

L. TOTAL AREA OF FOREST TO BE CLEARED OR RETAINED OUTSIDE FCE	9.9
M. TOTAL AREA OF FOREST TO BE RETAINED	7.2

PLANTING REQUIREMENTS

N. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD	2.4
P. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD	0
Q. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD	1.0
R. TOTAL REFORESTATION REQUIRED	1.4
S. TOTAL AFFORESTATION REQUIRED	0
T. TOTAL PLANTING REQUIREMENT	1.4



MATCH LINE SEE SHEET 7

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.

Maureen Roseman
COUNTY HEALTH OFFICER

6/14/2012
DATE

PLAN
SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
CIVIL, ENGINEERING, CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BATHURSTON NATIONAL PARK
ELLIOTT CITY, MARYLAND 21042
(410) 461-2255

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Paul K. Leigh
PLANNING DIRECTOR

2/6/13
DATE

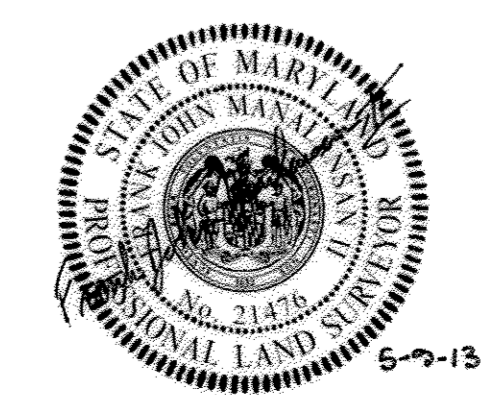
Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Delimitator
Certification # WDC006100448

John P. Canoles
JOHN P. CANOLES

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
FAL DEVELOPMENT, LLC
5300 DOORSEY HALL DRIVE, SUITE 102
ELLIOTT CITY, MARYLAND 21042
443-367-0422



**PRELIMINARY FOREST CONSERVATION PLAN
FULTON MANOR VALLEY**

LOTS 1 THRU 9 AND
BUILDABLE PRESERVATION PARCEL 'A'
& NON-BUILDABLE PRESERVATION PARCEL 'B'

11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO

TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: February 12, 2013

SHEET 6 OF 10

Wetland Data			
WETLAND SYSTEM	COWARDIN CLASSIFICATION	DOMINANT VEGETATION	ACREAGE
A	PF01A	Acer rubrum, Liriodendron benzoin, Cinna arundinacea	200 sq. ft.

- FSD NOTES:**
- No rare, threatened or endangered species or their appropriate habitat were observed on the property.
 - Surrounding land use is primarily residential.
 - Approximately 4.0 acres of forest extends onto adjacent offsite property within 100 feet of the subject property.

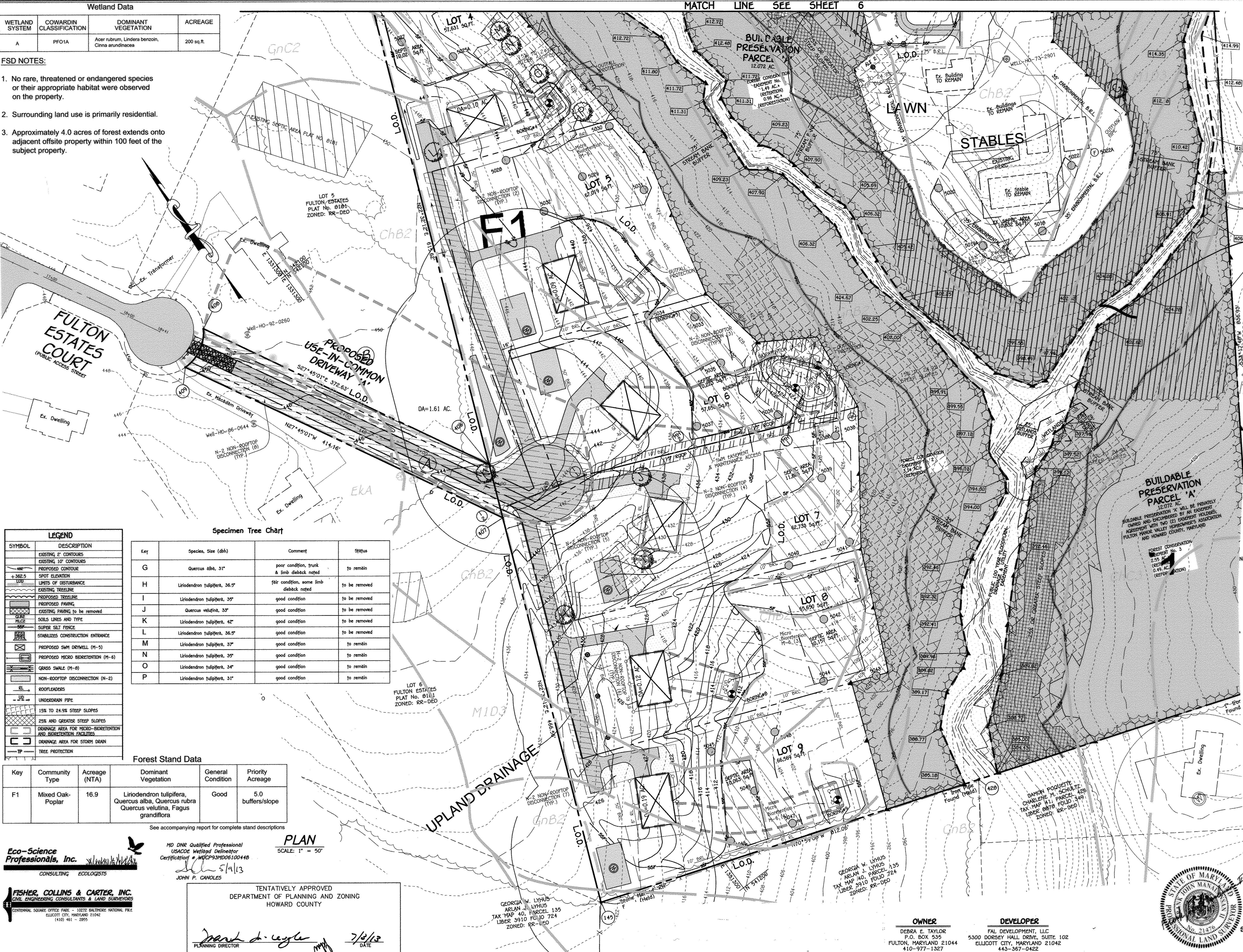
FOREST CONSERVATION EASEMENT

UNAUTHORIZED DISTURBANCE OF VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1991.

TREES FOR YOUR FUTURE

15" MINIMUM

11" MINIMUM



- FCFP NOTES**
- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
 - Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
 - Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
 - There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
 - No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
 - Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
 - Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.
 - The Forest Conservation Act requirements will be met through the onsite retention of 7.0 acres of forest and 1.6 acres of onsite reforestation. Total Forest Conservation Obligation = 8.6 ac. Final locations, details and specifications of the reforestation will be determined in the Final Forest Conservation Plan.

LEGEND

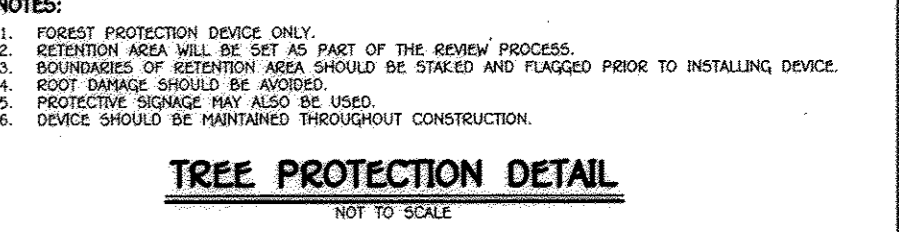
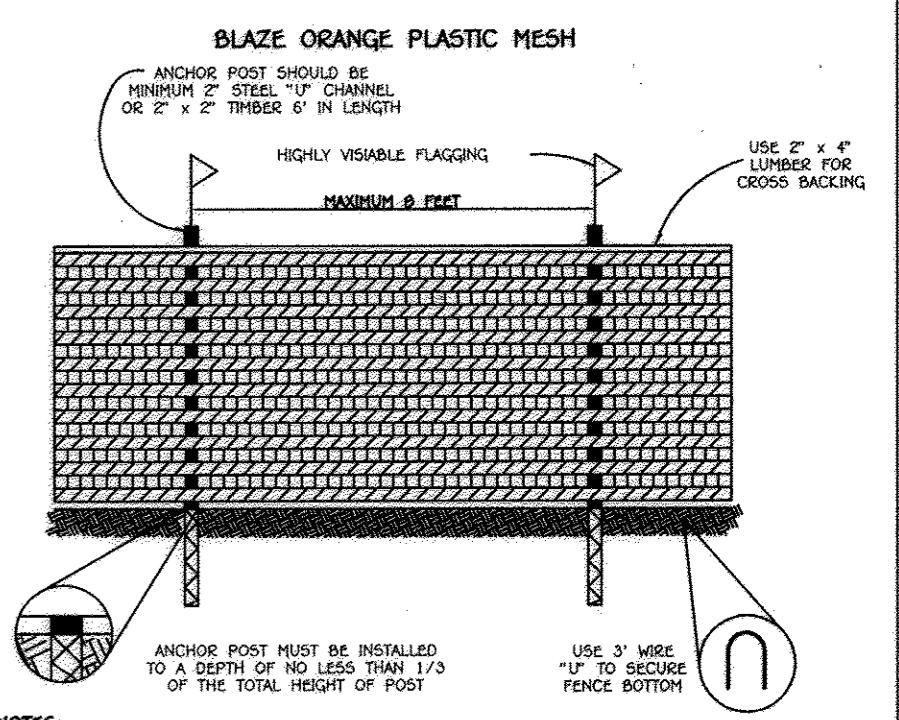
SYMBOL	DESCRIPTION
[Symbol]	EXISTING 2' CONTOURS
[Symbol]	EXISTING 10' CONTOURS
[Symbol]	PROPOSED CONTOUR
[Symbol]	SPOT ELEVATION
[Symbol]	L.O.D.
[Symbol]	LIMITS OF DISTURBANCE
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[Symbol]	PROPOSED TREELINE
[Symbol]	PROPOSED PAVING
[Symbol]	EXISTING PAVING TO BE REMOVED
[Symbol]	SOILS LINES AND TYPE
[Symbol]	SUPER SILT FENCE
[Symbol]	STABILIZES CONSTRUCTION ENTRANCE
[Symbol]	PROPOSED SWM DRYWELL (M-5)
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[Symbol]	ROOFLEADERS
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[Symbol]	15% TO 24.9% STEEP SLOPES
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[Symbol]	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
[Symbol]	DRAINAGE AREA FOR STORM DRAIN
[Symbol]	TREE PROTECTION

Specimen Tree Chart

Key	Species, Size (dbh)	Comment	Status
G	Quercus alba, 31"	poor condition, trunk & limb dieback noted	to remain
H	Liriodendron tulipifera, 36.5"	fair condition, some limb dieback noted	to be removed
I	Liriodendron tulipifera, 39"	good condition	to be removed
J	Quercus velutina, 33"	good condition	to be removed
K	Liriodendron tulipifera, 42"	good condition	to be removed
L	Liriodendron tulipifera, 36.5"	good condition	to be removed
M	Liriodendron tulipifera, 37"	good condition	to remain
N	Liriodendron tulipifera, 39"	good condition	to remain
O	Liriodendron tulipifera, 34"	good condition	to remain
P	Liriodendron tulipifera, 31"	good condition	to remain

Forest Stand Data

Key	Community Type	Acreage (NTA)	Dominant Vegetation	General Condition	Priority Acreage
F1	Mixed Oak-Poplar	16.9	Liriodendron tulipifera, Quercus alba, Quercus rubra, Quercus velutina, Fagus grandiflora	Good	5.0 buffers/slope



Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS

PLAN
SCALE: 1" = 50'

MD DNR Qualified Professional
USACE Wetland Delimitator
Certification # NJCF93M006100448

5/1/13
JOHN P. CANOLES

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

7/8/13
DATE

GEORGIA W. LYHUS
ARLAN J. LYHUS
TAX MAP 40, PARCEL 135
LIBER 3910 FOLIO 724
ZONED: RR-DEO

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
FAL DEVELOPMENT, LLC
5300 DORSEY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
443-367-0422



PRELIMINARY FOREST CONSERVATION PLAN
FULTON MANOR VALLEY
LOTS 1 THRU 9 AND
BUILDABLE PRESERVATION PARCEL 'A'
& NON-BUILDABLE PRESERVATION PARCEL 'B'

11987 ROUTE 216
HIGHLAND, MARYLAND 20777
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TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: February 12, 2013

SHEET 7 OF 10

SOILS LEGEND		
SOIL	NAME	CLASS
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
•CuB	Comus silt loam, local alluvium, 3 to 8 percent slopes	B
EA	Elloak silt loam, 0 to 3 percent slopes	C
EA2	Elloak silt loam, 3 to 8 percent slopes, moderately eroded	C
EA3	Elloak silty clay loam, 8 to 15 percent slopes, moderately eroded	C
GC3	Glenely loam, 8 to 15 percent slopes, severely eroded	B
•GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
•GnC2	Glenville silt loam, 8 to 15 percent slopes, moderately eroded	C
MB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MD3	Manor loam, 15 to 25 percent slopes, severely eroded	B

NOTES:
 • Hydric soils and/or contains hydric inclusions
 ** May contain hydric inclusions
 † Generally only within 100-year floodplain areas

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	C	ZONED	% IMP.
1-1	A	0.13 AC.	0.39	RR-DEO	45%
1-2	B	1.38 AC.	0.39	RR-DEO	15%

Stormwater Management Summary Table

Total Site Area=Developable Area=12.552 acre/Impervious Area=1.87 acre
 Target SCS=95
 Target P=1.00 inches

AREA ID	ESDV Req. Cu.Ft.	ESDV Pvd. Cu.Ft.	% Impervious	Remarks
Lot 1	423	869	23%	Micro-Bioretentation
Lot 2	407	739	20%	Micro-Bioretentation
Lot 3	394	831	20%	Micro-Bioretentation
UIC Driveway to serve Lots 1 thru 3	1,247	1,629	68%	Micro-Bioretentation
Totals	2,471	4,068		

LEGEND	
SYMBOL	DESCRIPTION
(Solid line)	EXISTING 2' CONTOURS
(Dashed line)	EXISTING 10' CONTOURS
(Dotted line)	PROPOSED CONTOUR
(Spot)	SPOT ELEVATION
(Line with dashes)	LIMITS OF DISTURBANCE
(Line with dots)	EXISTING TREELINE
(Line with triangles)	PROPOSED TREELINE
(Line with squares)	PROPOSED PAVING
(Line with crosses)	EXISTING PAVING TO BE REMOVED
(Line with stars)	SOILS LINES AND TYPE
(Line with diamonds)	SUPER SILT FENCE
(Line with circles)	STABILIZES CONSTRUCTION ENTRANCE
(Line with squares)	PROPOSED SWP DRYWELL (M-5)
(Line with triangles)	PROPOSED MICRO BIORETENTION (M-6)
(Line with diamonds)	GRASS SWALE (M-8)
(Line with circles)	NON-ROOFTOP DISCONNECTION (N-2)
(Line with squares)	ROOFLEADERS
(Line with diamonds)	UNDERDRAIN PIPE
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(Line with triangles)	DRAINAGE AREA FOR STORM DRAIN
(Line with circles)	TREE PROTECTION



MATCH LINE SEE SHEET 9

PLAN
 SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
 CIVIL, ENGINEERING, CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 CLOTT CITY, HOWARD COUNTY, MARYLAND 21042
 (410) 461-2955

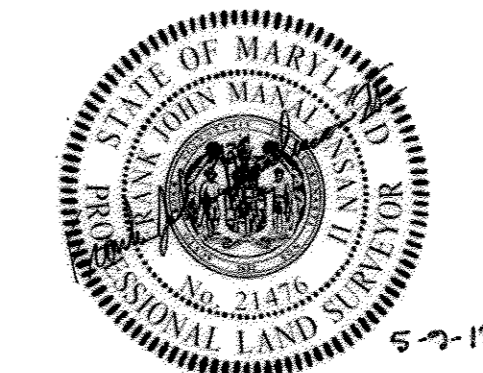
TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Mark H. Lege
 PLANNING DIRECTOR

[Signature] 2/12/12
 DATE

OWNER
 DEBRA E. TAYLOR
 P.O. BOX 535
 FULTON, MARYLAND 21044
 410-977-1327

DEVELOPER
 FAL DEVELOPMENT, LLC
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 443-367-0422



DRAINAGE AREA MAP & SOILS MAP
FULTON MANOR VALLEY
 LOTS 1 THRU 9 AND
 BUILDABLE PRESERVATION PARCEL 'A'
 & NON-BUILDABLE PRESERVATION PARCEL 'B'
 11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEO
 TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: February 12, 2013
 SHEET 8 OF 10

Stormwater Management Summary Table

Total Site Area=Developable Area=12.952 acre/Impervious Area=1.87 acre
 Design 50-year
 Target P=1.00 inches

AREA ID	ESDV Summary Table			Remarks
	ESDV Req. Cu.Ft.	ESDV Pvd. Cu.Ft.	% Impervious	
Lot 4	200	613	57%	Micro-Bioretenion, Non-Rooftop Disconnection
Portion of UIC Driveway which serves lot 4 & 5	157	157	100%	Non-Rooftop Disconnection
Lot 5	196	613	59%	Micro-Bioretenion,
Portion of UIC Driveway which serves lot 5 & 6	210	210	100%	Non-Rooftop Disconnection
Lot 6	155	155	100%	Non-Rooftop Disconnection
Lot 7	166	166	100%	Non-Rooftop Disconnection
Portion of UIC Driveway which serves lot 7 & 8	184	184	100%	Non-Rooftop Disconnection
Lot 8	490	901	46%	Micro-Bioretenion, Non-Rooftop Disconnection
Lot 9	362	764	29%	Micro-Bioretenion, Non-Rooftop Disconnection
UIC Driveway to serve lots 4 thru 9 (Contains rooftop for lots 6 & 7)	1,002	2,721	50%	Bioretenion
Totals	4,010	6,492		

SYMBOL	DESCRIPTION
(Symbol)	EXISTING 2' CONTOURS
(Symbol)	EXISTING 10' CONTOURS
(Symbol)	PROPOSED CONTOUR
(Symbol)	SPOT ELEVATION
(Symbol)	LIMITS OF DISTURBANCE
(Symbol)	EXISTING TREELINE
(Symbol)	PROPOSED TREELINE
(Symbol)	EXISTING PAVING TO BE REMOVED
(Symbol)	SOILS LINES AND TYPE
(Symbol)	SUPER SILT FENCE
(Symbol)	STABILIZES CONSTRUCTION ENTRANCE
(Symbol)	PROPOSED SWM DRYWELL (M-5)
(Symbol)	PROPOSED MICRO BIORETENTION (M-6)
(Symbol)	GRASS SWALE (M-8)
(Symbol)	NON-ROOFTOP DISCONNECTION (N-2)
(Symbol)	ROOFLEADERS
(Symbol)	UNDERDRAIN PIPE
(Symbol)	15% TO 24.9% STEEP SLOPES
(Symbol)	25% AND GREATER STEEP SLOPES
(Symbol)	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
(Symbol)	DRAINAGE AREA FOR STORM DRAIN
(Symbol)	TREE PROTECTION

SOIL	NAME	CLASS
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
ChC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded	B
*CuB	Cornus silt loam, local alluvium, 3 to 8 percent slopes	B
EKA	Elioak silt loam, 0 to 3 percent slopes	C
EkB2	Elioak silt loam, 3 to 8 percent slopes, moderately eroded	C
EkC3	Elioak silty clay loam, 8 to 15 percent slopes, moderately eroded	C
GIC3	Glenelig loam, 8 to 15 percent slopes, severely eroded	B
*GrB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
*GrC2	Glenville silt loam, 8 to 15 percent slopes, moderately eroded	C
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MIB3	Manor loam, 15 to 25 percent slopes, severely eroded	B

NOTES:
 * Hydric soils and/or contains hydric inclusions
 ** May contain hydric inclusions
 † Generally only within 100-year floodplain areas

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 (410) 461 - 8895

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Mark A. Cagle
 PLANNING DIRECTOR

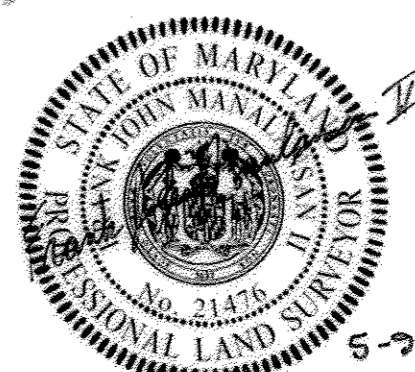
[Signature]
 DATE

GEORGIA W. LYHUS
 ARLAN J. LYHUS
 TAX MAP 40, PARCEL 135
 LIBER 3910 FOLIO 724
 ZONED: RR-DEO

PLAN
 SCALE: 1" = 50'

OWNER
 DEBRA E. TAYLOR
 P.O. BOX 535
 FULTON, MARYLAND 21044
 410-977-1327

DEVELOPER
 FAL DEVELOPMENT, LLC
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 443-367-0422



DRAINAGE AREA MAP & SOILS MAP
FULTON MANOR VALLEY
 LOTS 1 THRU 9 AND
 BUILDABLE PRESERVATION PARCEL 'A'
 & NON-BUILDABLE PRESERVATION PARCEL 'B'
 11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEO
 TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: February 12, 2013
 SHEET 9 OF 10

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC, and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
- > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
- > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
- > Test soil conditions to determine if soil amendments are necessary.
- > Plants shall be located so that access is possible for structure maintenance.
- > Stabilize heavy flow areas with erosion control mats or sod.
- > Temporarily divert flows from seeded areas until vegetation is established.
- > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993). Soils should fall within the SM, ML, SC classifications of the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

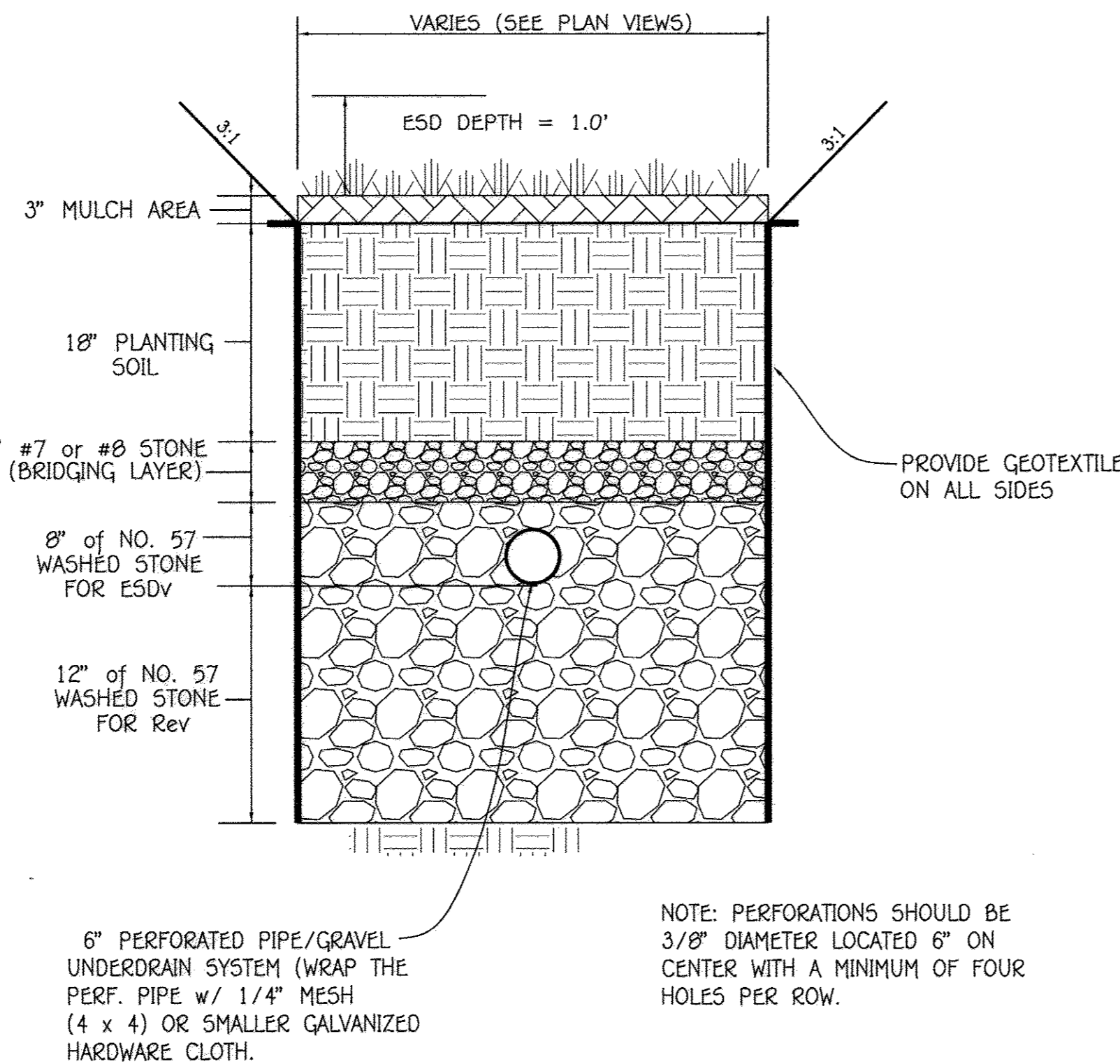
Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge

is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Clayton and Schueler, 1997.

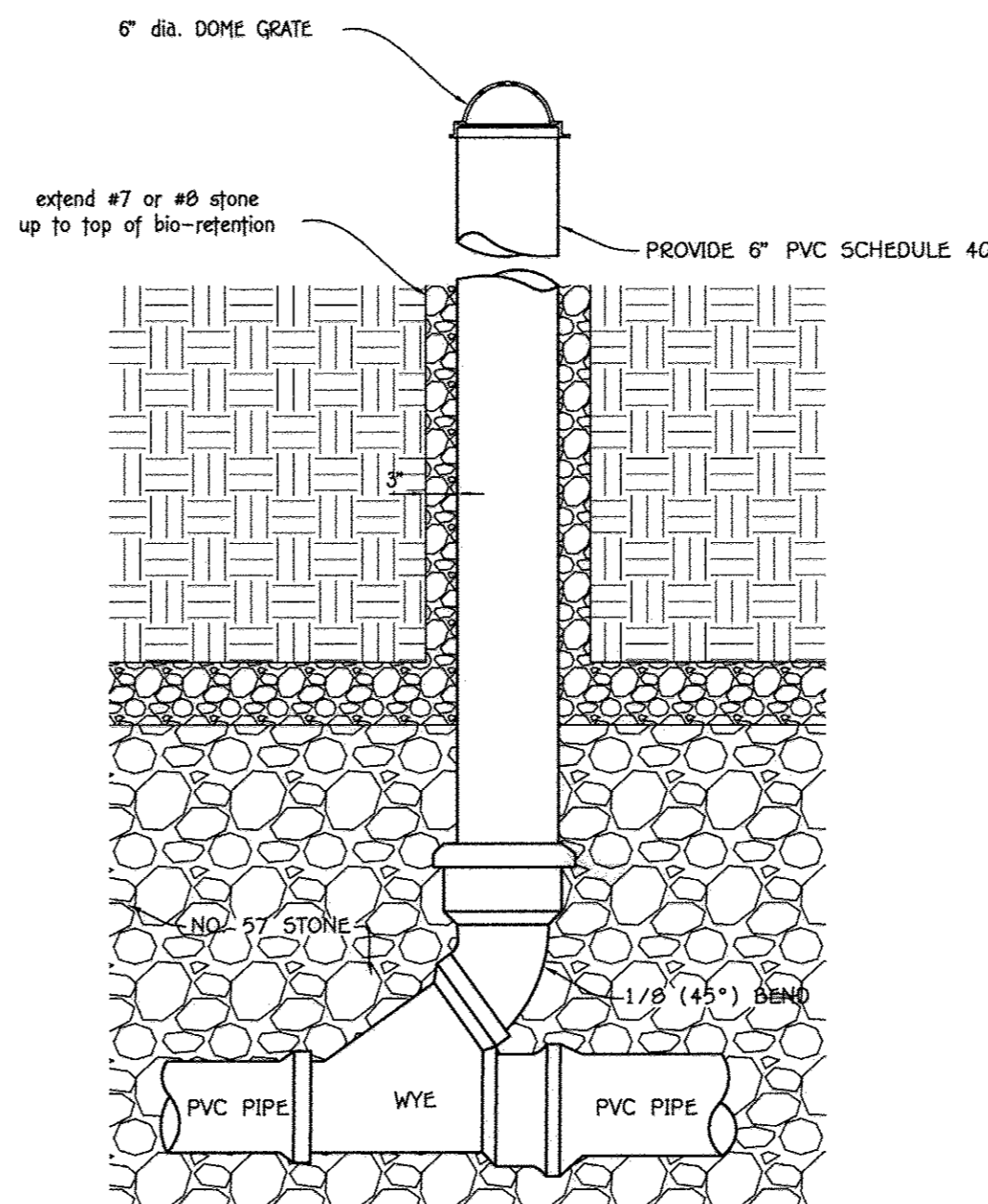
Operation and Maintenance Schedule For Bio-Retention Areas (M-6)

- The owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year. During the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material. Treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.



Micro Bio-Retention (M-6) Section

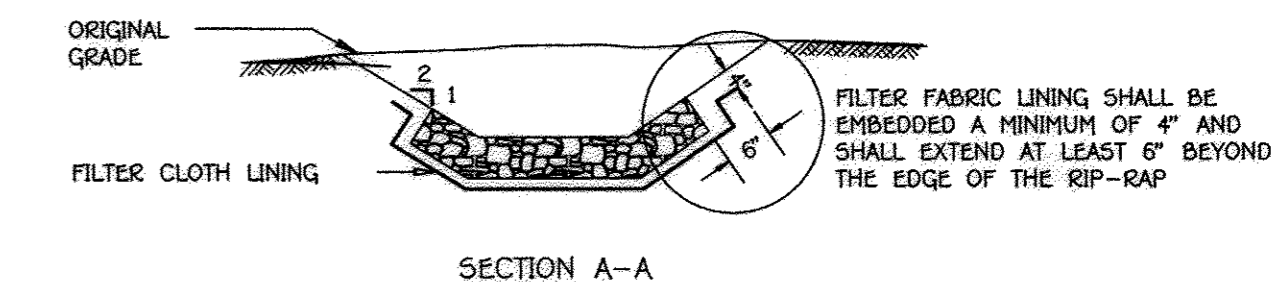
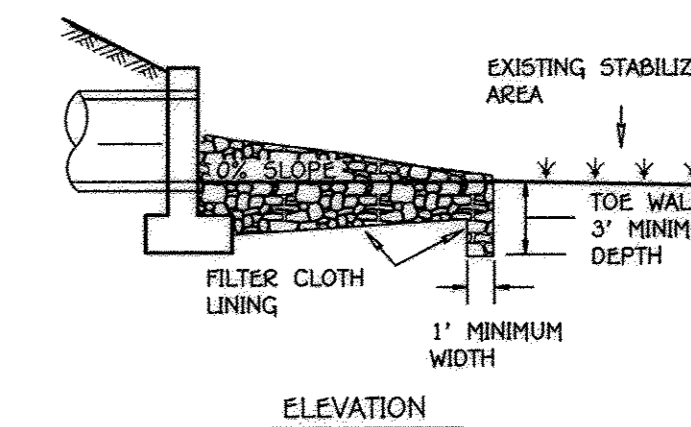
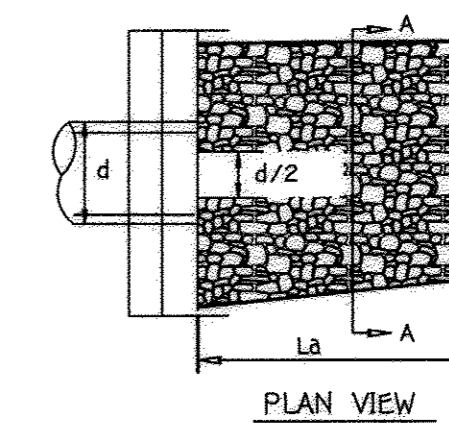
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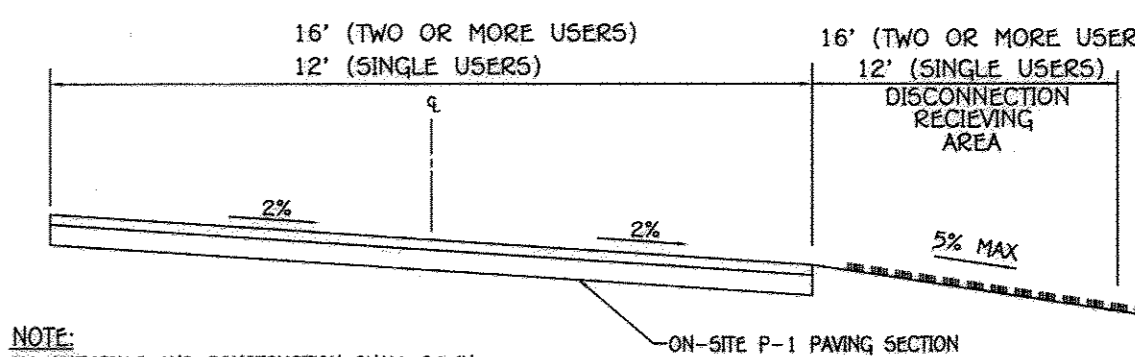
Typical Clean-Out Detail

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ROCK OUTLET PROTECTION III



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C



Typical Private Drive Cross Slope Section

NOT TO SCALE

Operation & Maintenance Schedule For Privately Owned And Maintained Disconnection Of Nonrooftop Runoff (N-2)

- Maintenance Of Areas Receiving Disconnection Runoff Is Generally No Different Than That Required For Other Lawn Or Landscaped Areas. The Areas Receiving Runoff Should Be Protected From Future Compaction Or Development Of Impervious Area. In Commercial Areas, Foot Traffic Should Be Discouraged As Well.

STORMWATER MANAGEMENT DETAILS FULTON MANOR VALLEY

LOTS 1 THRU 9 AND BUILDABLE PRESERVATION PARCEL 'A' & NON-BUILDABLE PRESERVATION PARCEL 'B'

11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
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TENTATIVELY APPROVED
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HOWARD COUNTY
Mark A. Lytle
PLANNING DIRECTOR
7/3/12
DATE

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