

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	SUPPLEMENTAL TOPOGRAPHY & LANDSCAPE PLAN
4-5	SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	STORMWATER MANAGEMENT DETAILS
8	STORMWATER MANAGEMENT DETAILS AND SOIL BORINGS
9	STORMWATER DRAINAGE AREA MAP AND PROFILE
10-11	FOREST CONSERVATION PLAN
12	USE-IN-COMMON DRIVEWAY PROFILES

SUPPLEMENTAL PLAN TOPOGRAPHY, STORMWATER MANAGEMENT AND PERIMETER LANDSCAPING

FULTON MANOR VALLEY - PART ONE

**LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A'
NON-BUILDABLE PRESERVATION PARCEL 'B' AND
BULK PARCELS 'C' AND 'D'**

ZONING: RR-DEO

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

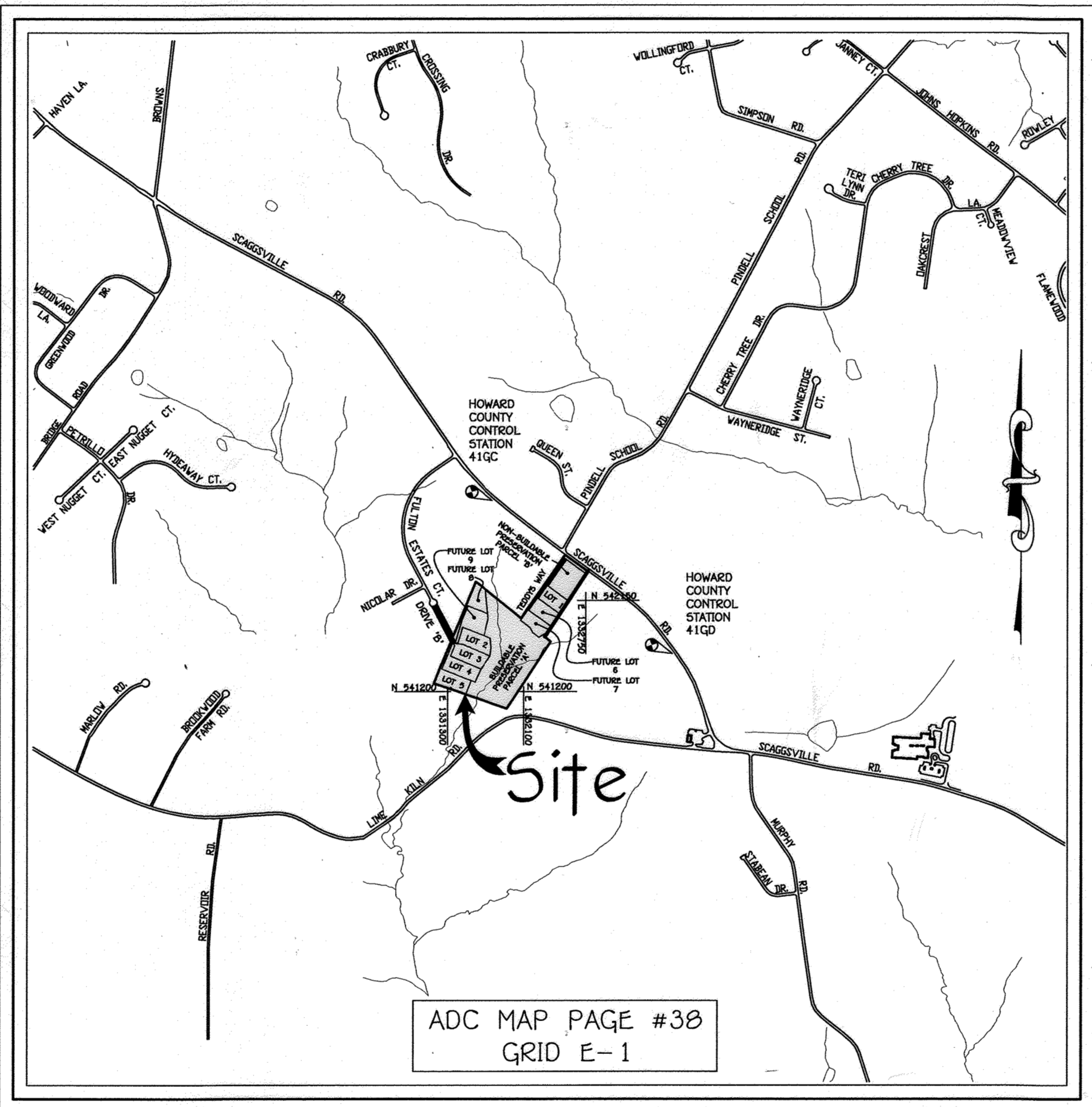
Description	Part One	Part Two	Total Site
Receiving Parcel Information	N/A	Fulton Manor Valley, F-14-43 T.M. 41, Grid 19, Parcel 78 & 456	Fulton Manor Valley, F-14-43 T.M. 41, Grid 19, Parcel 78 & 456
Gross Area	26,372 Ac.	26,372 Ac.	26,372 Ac.
Area of Steep Slopes	-----	0.440 Ac.	0.440 Ac.
Area of Floodplain	-----	1,208 Ac.	1,208 Ac.
Net Tract Area	-----	24,724 Ac.	24,724 Ac.
Allowed Base Density	6 Units (26,372 Ac. x 1 Unit/4,225)=6,205	0 Units	6 Units
Total Number of Proposed Units	6 Units	4 Units	10 Units
Total Number of Density Rights Required to be Transferred	0 Units	(Proposed Units - Allowed Units) (10 Units - 6 Units)	4 Units
Sending Parcel Information	N/A	2,000 Units - T.M. 13, Parcel 110 Property of Kelly and Leah Vignone 2,000 Units - T.M. 12, Parcel 78 Property of Chesapeake Building Preservation Parcel "D" F-14-056	2,000 Units - T.M. 13, Parcel 110 Property of Kelly and Leah Vignone 2,000 Units - T.M. 12, Parcel 78 Property of Chesapeake Building Preservation Parcel "D" F-14-056

- DENSITY TABULATIONS**
- BASE DENSITY: 26,372 ACRES / 4,225 = 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 DEED DENSITY TRANSFER PROVISION OF SECTION 106.B.2 OF THE ZONING REGULATIONS FOR THIS PROPERTY'S UNDERLYING RR ZONING DISTRICT. (10 PROPOSED - 6 BY-RIGHT = 4 DEED RIGHTS REQUIRED)

POINT NUMBER	NORTH	EAST
113	542459.8097	1332769.3905
122	541967.1353	1332072.0839
126	542346.9524	1331595.2797
145	541287.3005	1331155.9981
150	541022.0157	1331923.3468
160	541722.3512	1332382.7971
161	541771.6678	1332320.2915
401	542626.0284	1332532.0323
406	541778.3431	1331359.3251
407	541718.3156	1331334.4160
408	542108.1161	1331185.8211
409	542084.8377	1331141.5772
420	541134.9571	1331597.9302

- GENERAL NOTES**
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR OTHER REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
 - BULK PARCELS 'C' AND 'D' SHALL BE FURTHER SUBDIVIDED INTO FOUR (4) BUILDABLE RESIDENTIAL LOTS IN ACCORDANCE WITH SECTION 106.D DENSITY EXCHANGE OPTION OVERLAY DISTRICT OF THE HOWARD COUNTY ZONING REGULATIONS. SEE 14-046 FOR PRESERVATION PLAN INFORMATION.
 - DENSITY CALCULATIONS: SEE DENSITY CHART THIS SHEET.
 - COLLATIONS OF COMMENTS HAVE BEEN RECORDED SIMULTANEOUSLY WITH THIS PLAN.
 - THIS MAJOR SUBDIVISION IS LOCATED IN THE DESIGNATED TIER III GROWTH AREA OF HOWARD COUNTY, PER THE HOWARD 2030 TIER MAP AND WOULD BE SUBJECT TO THE STATE'S 58-236, HOWEVER, IT IS CONSIDERED TO BE GRANDFATHERED TO 58-236 BECAUSE THE PROPERTY OWNER HAD APPLIED FOR A SOIL PERCOLATION TEST APPLICATION AND HAD SUBMITTED A PERCOLATION TEST PLAN TO THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO JULY 2, 2010.
 - THE FOREST CONSERVATION EASEMENTS SHOWN ON THIS PLAN HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION ARE ALLOWED.
 - SHOULD DISTURBANCE OCCUR IN THE FOREST CONSERVATION EASEMENT AREAS DURING OR AFTER CONSTRUCTION, CIVIL PENALTIES OR RETENTION MAY BE IMPOSED.
 - THE ON-SITE FOREST CONSERVATION REFORESTATION EASEMENT PLANTINGS ARE NOT TO BE CONSIDERED LANDSCAPING. AS IT IS USUALLY PRACTICED, THE AFFORESTATION PLANTINGS ARE TO CREATE NEW FOREST COMMUNITIES THAT WILL REPLACE TO SOME DEGREE THE FOREST RESOURCES THAT HAVE BEEN LOST DURING RECENT DECADES OF FARMING AND LAND DEVELOPMENT. THEIR PRIMARY PURPOSE IS ENVIRONMENTAL AND NOT AESTHETIC. THESE REFORESTATION STANDS WILL REQUIRE SPECIAL MANAGEMENT AND INITIALLY MAY NOT LOOK ATTRACTIVE.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS HIS STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - THE CONSTRUCTION SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEER/CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "METS UTILITY" AT 1-800-297-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TRAFFIC CONTROL SIGNS, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO PLACEMENT OF ANY ASPHALT.
 - STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACE OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
 - ALL SIGNS POSTED USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2 INCH GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) 3 INCH LONG, A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

LOT No.	ADDRESS	NON-ROOFTOP DISCONNECTION (NUMBER)	MICRO BIO-RETENTION (NUMBER)	BIO RETENTION (NUMBER)
1	11805 TEDDY'S WAY	N-2 (3)	M-6 (1)	F-6 (1)
2	12163 FULTON ESTATES COURT	N-2 (4) & N-2 (5)	M-6 (1)	F-6 (1)
3	12171 FULTON ESTATES COURT	N-2 (6)	M-6 (3)	F-6 (1)
4	12175 FULTON ESTATES COURT	N-2 (7)	M-6 (4)	F-6 (1)
PAR. 'A'	12821 TEDDY'S WAY	N-2 (1)	M-6 (2)	F-6 (1)
PAR. 'B'				



VICINITY MAP
SCALE: 1" = 1200'

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND


LOT No.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	48,074 SQ.FT.	3,356 SQ.FT.	44,718 SQ.FT.
2	57,656 SQ.FT.	3,926 SQ.FT.	53,730 SQ.FT.
3	62,733 SQ.FT.	3,657 SQ.FT.	59,076 SQ.FT.
4	65,650 SQ.FT.	7,612 SQ.FT.	58,038 SQ.FT.
5	66,569 SQ.FT.	9,702 SQ.FT.	56,867 SQ.FT.

ROAD NAME	CLASSIFICATION	DESIGN SPEED	EASEMENT WIDTH
TEDDY'S WAY	USE-IN-COMMON	-	24'
DRIVEWAY 'B'	USE-IN-COMMON	-	35'

SYMBOL	DESCRIPTION
---400---	EXISTING 2' CONTOURS
---400---	EXISTING 10' CONTOURS
---	PROPOSED CONTOUR
432.5	SPOT ELEVATION
100	LOTS 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 DRAIN (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 (RETENTION)
---	FOREST CONSERVATION EASEMENT REFORESTATION
---	WETLAND AREA
---	25' WETLAND BUFFER
---	FLOODPLAIN ELEVATION
---	STREAM BANK BUFFER
---	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
---	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
---	SPECIMEN TREE REPAIR
---	SPECIMEN TREE REMOVAL
---	BORING (PERC) TEST HOLE
---	SPECIMEN TREE SIGNAGE
---	EROSION CONTROL MATTING

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.


 Paul Geararo
 Date: Dec 12, 2013
 PAUL GEARARO CAVAUGHAN #27020


AS-BUILT CERTIFICATION


I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15.

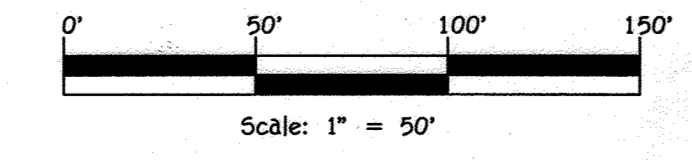

 Frank J. Malachuk
 Date: 4-8-14
 FRANK J. MALACHUK, L.S. 21476

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 4-24-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

 4-23-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



OWNER
DEBRA E. TAYLOR
P.O. BOX 435
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
FULTON, MARYLAND 21044
ATTN: MR. DONALD E. REUVER, JR., PRESIDENT
443-367-0422

**FULTON MANOR VALLEY
- PART ONE**

**LOTS 1 THRU 5, BUILDABLE PRESERVATION
PARCEL 'A', NON-BUILDABLE PRESERVATION
PARCEL 'B' AND BULK PARCELS 'C' AND 'D'**

11897 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: APRIL 1, 2014

SHEET 1 OF 12

"AS-BUILT" F-14-014

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 BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED
P-1	ADJACENT TO PERIMETER	A	336.31'	NO	NO	6
P-2	ADJACENT TO PERIMETER	A	262.75'	NO	NO	4
P-3	ADJACENT TO PERIMETER	A	499.83'	YES - (2 EX. TREES)	NO	6
P-4	ADJACENT TO PERIMETER	A	258.96'	NO	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	619.62'	NO	NO	10
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
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, E, AND I) AS A CONDITION OF APPROVAL OF WP-13-092

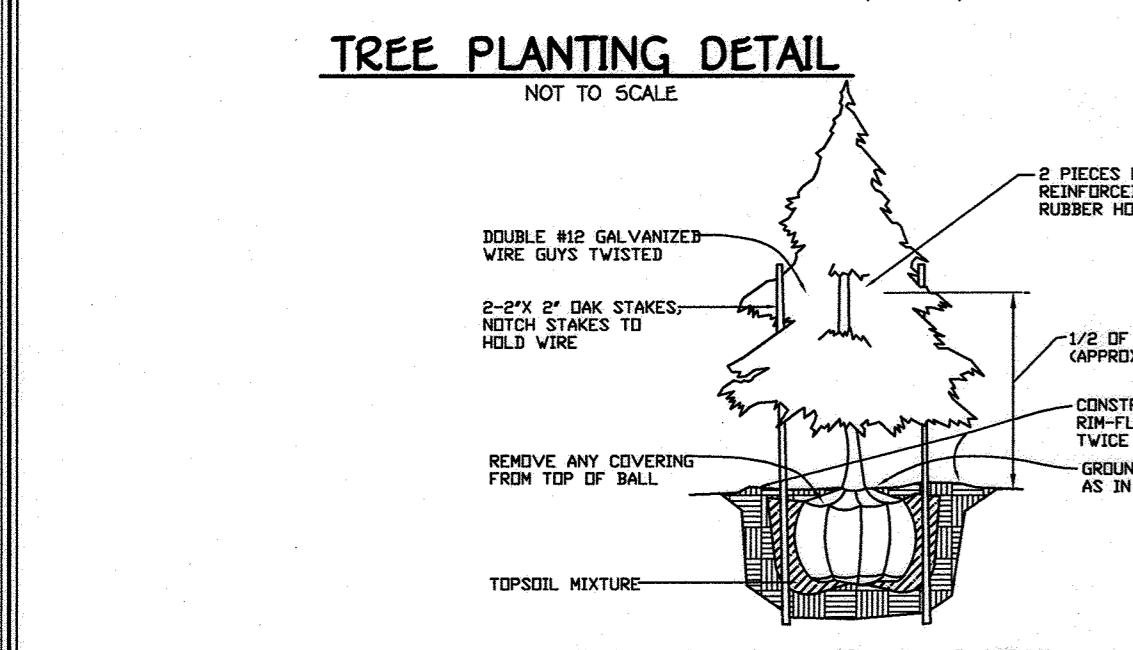
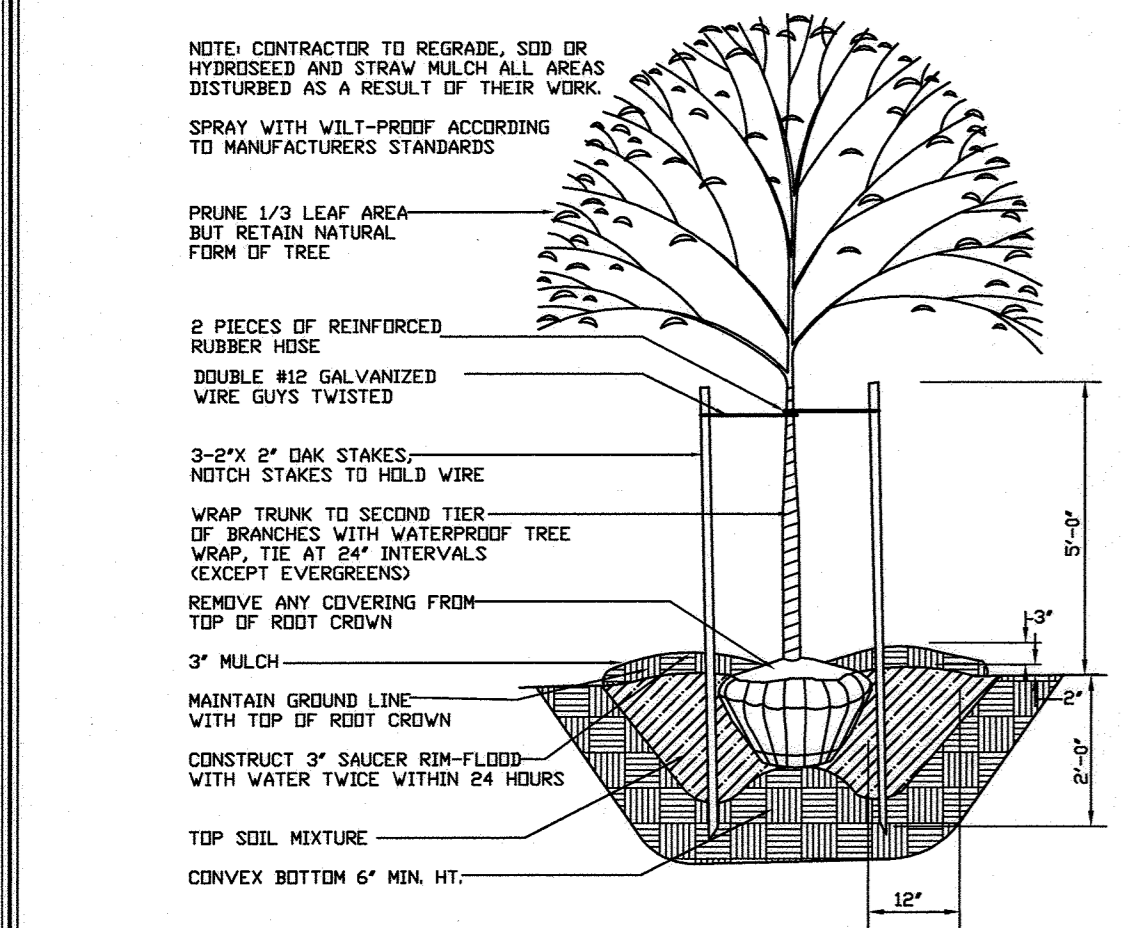
Stormwater Management Summary Table

Total Site Area=Developable Area=12,506 Acre/Impervious Area=1.39 Acre
Target RCM=25
Target Pm=1.00 inches

ESDV Summary Table				
AREA ID	ESDV Req. Cu.Ft.	ESDV Pvd. Cu.Ft.	% Impervious	Remarks
Lot 1	423	869	23%	Micro-Bioretenion
UIC Driveway which serves Lot 1, Non-Buildable Preservation Parcel 'B', Bulk Parcel 'C', and Buildable Preservation Parcel 'A'	1,247	1,629	39%	Micro-Bioretenion & Non-Rooftop Disconnection
Totals	1,670	2,498		

PLANT LIST			
SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE
	67	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" - 3" CAL.
	10	PINUS STROBUS EASTERN WHITE PINE	6' - 8' HT.

This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual. Financial surety for the required 67 shade and 10 evergreen trees will be posted as part of the Developer's Agreement in the amount of \$21,600.00.



FISHER, COLLINS & CARTER, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 4-23-14

SYMBOL	DESCRIPTION
	EXISTING 2' CONTOURS
	EXISTING 10' CONTOURS
	PROPOSED CONTOUR
	SPOT ELEVATION
	LIMITS OF DISTURBANCE
	PROPOSED TREE LINE
	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 (RETENTION)
	FOREST CONSERVATION EASEMENT REFORESTATION
	WETLAND AREA
	25' WETLAND BUFFER
	FLOODPLAIN ELEVATION
	STREAM BANK BUFFER
	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
	SPECIMEN TREE REMAIN
	SPECIMEN TREE REMOVED
	BORING (IPSC) TEST HOLE
	SPECIMEN TREE SIGNAGE
	EROSION CONTROL MATTING
	EXISTING PAVING



AS-BUILT CERTIFICATION
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

DATE: Dec 12, 2013
PAUL GEORGE CAVANAUGH #21020

LANDSCAPE DEVELOPER'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 year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

DATE: April 11, 2014

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

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DANBY, MD 20823
ATTN: MR. DONALD S. GEORGE, JR., PRESIDENT
443-367-0422

PROFESSIONAL ENGINEER
FRANK J. MANALANSAN, II, L.S. 21476
DATE: 4-2-14

Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15.

SUPPLEMENTAL PLAN TOPOGRAPHY, STORMWATER MANAGEMENT, PERIMETER LANDSCAPING AND GRADING PLAN
FULTON MANOR VALLEY - PART ONE
LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'

11907 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: APRIL 1, 2014



LEGEND	
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)	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
(Symbol)	FOREST CONSERVATION EASEMENT (RETENTION)
(Symbol)	FOREST CONSERVATION EASEMENT REFORESTATION
(Symbol)	WETLAND AREA
(Symbol)	25' WETLAND BUFFER
(Symbol)	FLOODPLAIN ELEVATION
(Symbol)	STREAM BANK BUFFER
(Symbol)	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
(Symbol)	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
(Symbol)	SPECIMEN TREE REMAIN
(Symbol)	SPECIMEN TREE REMOVED
(Symbol)	BORING (PERC) TEST HOLE
(Symbol)	SPECIMEN TREE SIGNAGE
(Symbol)	EROSION CONTROL MATING
(Symbol)	EXISTING PAVING

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Paul Gerard Cavanaugh
 Date: 12/17/2012
 PAUL GERARD CAVANAUGH #27020
 PROFESSIONAL ENGINEER

Stormwater Management Summary Table

Total Site Area=Developable Area=12.506 acre/Impervious Area=1.39 acre
 Target Runoff=50
 Target Permeability=100

AREA ID	ESOV Summary Table			Remarks
	ESOV Req. Cu.Ft.	ESOV Pvd. Cu.Ft.	% Impervious	
Portion of UIC Driveway which serves lots 3 thru 5	184	184	100%	Non-Rooftop Disconnection
Lot 2	158	158	100%	Non-Rooftop Disconnection
Lot 3	195	195	100%	Non-Rooftop Disconnection
Lot 4	403	901	45%	Micro-Bioretenation, Non-Rooftop Disconnection
Lot 5	430	764	56%	Micro-Bioretenation, Non-Rooftop Disconnection
UIC Driveway to serve Lots 2 thru 5 (Contains rooftop for lots 2 & 3)	1,882	2,721	50%	Bioretention
Totals	3,250	4,923		

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21046
 (410) 461 - 2895

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 No. 16135
 3/16/20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kate Anderson
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 4-24-14

Del Clark
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 4-23-14

REVISION #1-#2

No.	BY	REVISION	DATE
1	VTG	REVISE THE PLAN TO REVISE THE N-2 DISCONNECTION OF NON-ROOFTOP RUNOFF ON LOT 2 AND REVISE THE GRADING ON LOTS 2 AND 3 TO SHOW AS-BUILT CONDITIONS	2-11-20
2	VTG	REVISE THE PLAN TO CORRECT THE UNDER TYPE, GRADING AND SWM ON LOTS 3, 4 & 5	12-6-13

Scale: 1" = 50'

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

DEVELOPER
 PLEASANT PROSPECT FARM, INC.
 4401 JENNINGS CHAPEL ROAD
 DAVIS, MD 20833
 ATTN: MR. DONALD E. GELBERG, JR., PRESIDENT
 443-367-0422

STATE OF MARYLAND
 PROFESSIONAL LAND SURVEYOR
 No. 21476
 4-2-14

Professional certification, I hereby certify that these documents were prepared by me and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15.

PLAN
 SCALE: 1" = 50'

SUPPLEMENTAL PLAN
 TOPOGRAPHY, STORMWATER MANAGEMENT AND PERIMETER LANDSCAPING
FULTON MANOR VALLEY - PART ONE
 LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'

11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEO
 PARCEL No. 78 AND 486
 TAX MAP No. 41 GRID No. 19
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 DATE: APRIL 1, 2014
 SHEET 3 OF 12

SOILS LEGEND		
SOIL	NAME	CLASS
GaC	Galil loam, 0 to 15 percent slopes	B
GgB	Glenelg loam, 3 to 8 percent slopes	B
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	C
MaD	Manor loam, 15 to 25 percent slopes	B

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

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)
---	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 (RETENTION)
---	FOREST CONSERVATION EASEMENT REFORESTATION
---	WETLAND AREA
---	25' WETLAND BUFFER
---	FLOODPLAIN ELEVATION
---	STREAM BANK BUFFER
---	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
---	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
---	SPECIMEN TREE REMAIN
---	SPECIMEN TREE REMOVED
---	BORING (PESC) TEST HOLE
---	SPECIMEN TREE SIGNAGE
---	EROSION CONTROL MATING
---	EXISTING PAVING



PROFESSIONAL CERTIFICATE

I hereby certify that this Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.
 Signature of Surveyor: *Frank J. Manalansan* Date: 4-15-14

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents, As Are Deemed Necessary."
 Signature of Developer: *Debra E. Taylor* Date: 4/16/14

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.
 Signature of District Engineer: *John R. Pletzer* Date: 4/16/14
 District Howard Soil Conservation Dist.

AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.

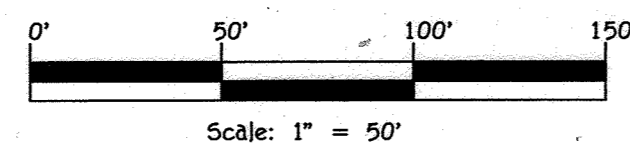
NOTE:

STANDARD SEDIMENT CONTROL PLAN MAY NOT BE USED FOR THIS PROJECT

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 GAITHERSBURG, MD 20878
 (410) 461-2895

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *Kurt Schuch* Date: 4-24-14
 CHIEF, DIVISION OF LAND DEVELOPMENT
 Signature: *Chad Clark* Date: 4-23-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



MATCH LINE SEE SHEET 5

PLAN
 SCALE: 1" = 50'



Signature: *Frank J. Manalansan* Date: 4-15-14
 FRANK J. MANALANSAN, II, L.S. 21476

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

DEVELOPER
 PLEASANT PROSPECT FARM, INC.
 4401 JENNINGS CHAPEL ROAD
 DAVIS, MD 20833
 ATTN: MR. DONALD E. ZEISLER, JR., PRESIDENT
 443-367-0422

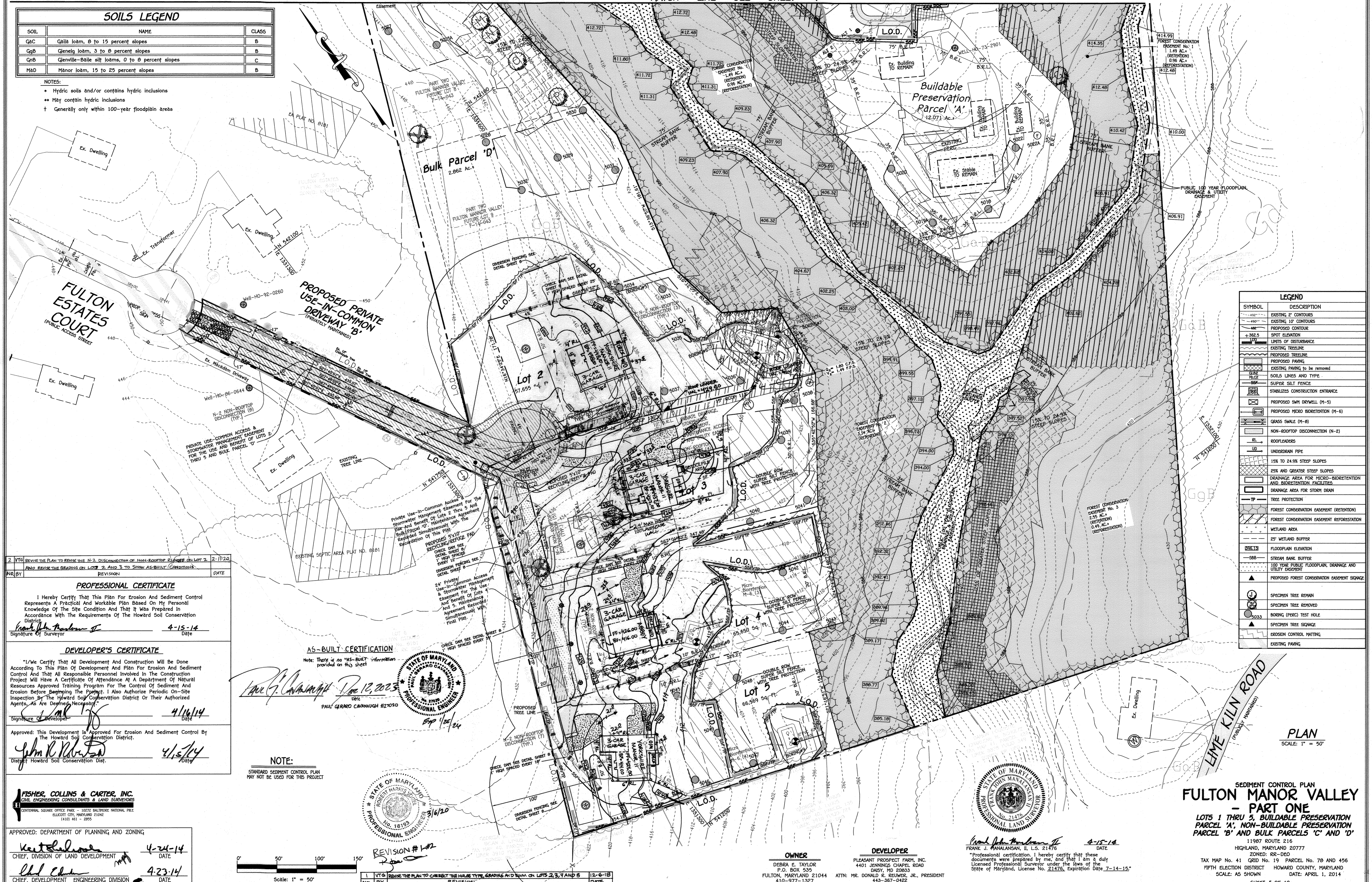
FOREST CONSERVATION EASEMENT No. 1
 1.49 AC. (RETENTION)
 0.96 AC. (REFORESTATION)

SEDIMENT CONTROL PLAN
FULTON MANOR VALLEY - PART ONE
 LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
 11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: R2-DEG
 TAX MAP No. 41 GRID No. 19 PARCEL No. 79 AND 456
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 1, 2014
 SHEET 4 OF 12

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET F-14-014

SOIL	NAME	CLASS
GaC	Gaia loam, 0 to 15 percent slopes	B
GgB	Glenelg loam, 3 to 8 percent slopes	B
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	C
MdD	Manor loam, 15 to 25 percent slopes	B

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



SYMBOL	DESCRIPTION
(dashed line)	EXISTING 2' CONTOURS
(dashed line)	EXISTING 10' CONTOURS
(solid line)	PROPOSED CONTOUR
(number)	SPOT ELEVATION
(dotted line)	LIMITS OF DISTURBANCE
(dashed line)	EXISTING TREELINE
(dashed line)	PROPOSED TREELINE
(hatched area)	EXISTING PAVING TO BE REMOVED
(hatched area)	SOILS LINES AND TYPE
(hatched area)	SUPER SILT FENCE
(hatched area)	STABILIZES CONSTRUCTION ENTRANCE
(hatched area)	PROPOSED SWM DRYWELL (M-5)
(hatched area)	PROPOSED MICRO BIODEGRADATION (M-6)
(hatched area)	GRASS SWALE (M-8)
(hatched area)	NON-ROOFTOP DISCONNECTION (N-2)
(hatched area)	ROOFLEADERS
(hatched area)	UNDERDRAIN PIPE
(hatched area)	15% TO 24.9% STEEP SLOPES
(hatched area)	25% AND GREATER STEEP SLOPES
(hatched area)	DRAINAGE AREA FOR MICRO-BIODEGRADATION AND BIODEGRADATION FACILITIES
(hatched area)	DRAINAGE AREA FOR STORM DRAIN
(hatched area)	TREE PROTECTION
(hatched area)	FOREST CONSERVATION EASEMENT (RETENTION)
(hatched area)	FOREST CONSERVATION EASEMENT REFORESTATION
(hatched area)	WETLAND AREA
(hatched area)	25' WETLAND BUFFER
(number)	FLOODPLAIN ELEVATION
(dashed line)	STREAM BANK BUFFER
(dashed line)	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
(hatched area)	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
(circle with 'R')	SPECIMEN TREE REMAIN
(circle with 'R')	SPECIMEN TREE REMOVED
(circle with 'X')	BORING (PERC) TEST HOLE
(circle with 'S')	SPECIMEN TREE SIGNAGE
(circle with 'E')	EROSION CONTROL MATTING
(hatched area)	EXISTING PAVING

NO.	BY	REVISION	DATE
2	VTG	REVISE THE PLAN TO REVISE THE N-2 DISCONNECTION OF NON-ROOFTOP DRAINAGE ON LOT 2	2-17-20
		AND REVISE THE GRADING ON LOTS 2 AND 3 TO SHOW AS-BUILT CONDITIONS	

PROFESSIONAL CERTIFICATE
 I Herby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.
 Signature of Surveyor: *Frank J. Hamlansky, II* Date: 4-15-14

DEVELOPER'S CERTIFICATE
 I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents, As Are Deemed Necessary.
 Signature of Developer: *John R. Roberts* Date: 4/15/14

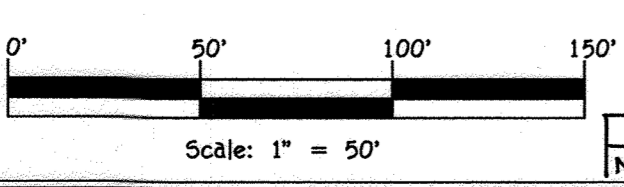
Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.
 District Howard Soil Conservation Dist. Date: 4/15/14

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

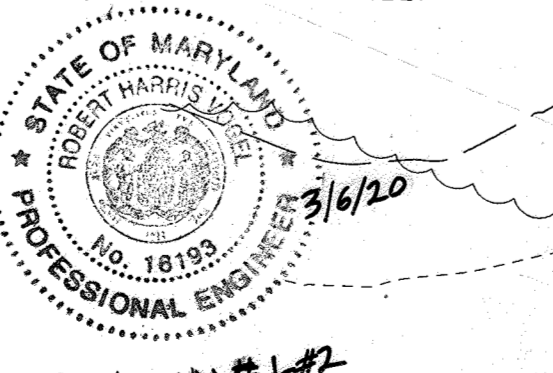
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development Date: 4-24-14
 Chief, Development Engineering Division Date: 4-23-14

AS-BUILT CERTIFICATE
 Note: There is no "AS-BUILT" information provided on this sheet.
 Signature of Professional Engineer: *Paul Gerardo Cavanaugh* Date: Dec 13, 2023
 PAUL GERARDO CAVANAUGH #27030

NOTE:
 STANDARD SEDIMENT CONTROL PLAN MAY NOT BE USED FOR THIS PROJECT

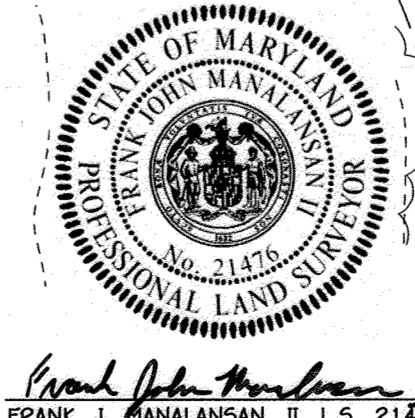


NO.	BY	REVISION	DATE
1	VTG	REVISE THE PLAN TO CORRECT THE HURDLE TYPE, GRADING AND SWM ON LOTS 2, 3, 4 AND 5	12-6-18



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

DEVELOPER
 PLEASANT PROSPECT FARM, INC.
 4401 JENNINGS CHAPEL ROAD
 DASH, MD 20833
 ATTN: MR. DONALD R. REUVER, JR., PRESIDENT
 443-367-0422



SEDIMENT CONTROL PLAN
FULTON MANOR VALLEY
- PART ONE
 LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
 11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEO
 TAX MAP No. 41 GRID No. 19 PARCEL No. 70 AND 456
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 1, 2014
 SHEET 5 OF 12

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET F-14-014

I:\2011\1015\030 SUPPLEMENTAL PLAN LOGS 1 THRU 5\11015-3001 Supplemental Plan.dwg, SHEET 5, 4/15/2014 11:57:39 AM, 1:1

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

TEMPORARY SEEDING NOTES (B-4-4)

Definition: To stabilize disturbed soils with vegetation for up to 6 months.
 Purpose: To use fast growing vegetation that provides cover on disturbed soils.
 Conditions Where Practice Applies: Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
 Criteria: 1. Select one or more of the species of seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
 2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw much alone as prescribed in Section B-4-3A.1.b and maintain until the next seeding season.

Temporary Seeding Summary				Fertilizer Rate (10-20-20)	Lime Rate
Hardness Zone (from Figure B.3): <u>6b</u>					
Seed Mixture (from Table B.1):					
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth		
BARLEY	95	3/1 - 5/15	1"	436 lb/ac (110 lb/1000 sq ft)	2 tons/ac (500 lb/1000 sq ft)
OATS	72	8/15 - 10/15	1"		
RYE	112		1"		

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures
 1. General Use: a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
 2. Turfgrass Mixtures: a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which require a medium to high level of maintenance.
 b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.
Notes: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
 c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardness Zones: 7a, 7b)
 d. Till rates to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
 e. If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
 3. Lime materials must be ground limestone (hydrated or burnt lime) may be substituted except when hydrosulfiding which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #200 mesh sieve.
 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

Permanent Seeding Summary				Fertilizer Rate (10-20-20)	Lime Rate	
Hardness Zone (from Figure B.3): <u>6b</u>						
Seed Mixture (from Table B.3):						
No.	Species	Application Rate (lb/ac)	Seeding Dates	N	P ₂ O ₅	K ₂ O
1	TALL FESCUE	100	Mar. - May 15 Aug. - Oct. 15	45 lb/acre (110 lb/1000 sq ft)	90 lb/ac (2 lb/1000 sq ft)	2 tons/ac (500 lb/1000 sq ft)

SEDIMENT & EROSION CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1895).
 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
 3) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
 4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED HEREON IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOO (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSIBILITY FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 6) SITE ANALYSIS:
 TOTAL AREA OF SITE: 26,372 ACRES
 AREA DISTURBED OR PAVED: 7.1 ACRES
 AREA TO BE ROOFED OR PAVED: 1.20 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 6.5 ACRES
 TOTAL CUT: 5,865 CU.YDS.
 TOTAL FILL: 11,959 CU.YDS.
 OFFSITE WASTE/BORROW AREA LOCATION: 6,093 CU.YDS.
 7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 8) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
 10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT. (2 WEEKS)
 2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF ENVIRONMENTAL PROTECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
 3. REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY. CLEAR AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS, INCLUDING THE INSTALLATION OF TREE PROTECTION FENCING (TP) AT ALL SPECIMEN TREES AND SPECIMEN TREE SIGNAGE (STS). (2 DAYS)
 4. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES, INSTALL ALL SUPER SILT FENCE INDICATED ON THE PLANS. (1 WEEK)
 5. REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS. MASS GRADE AREA WITHIN LOCAL INSTALL PRIVATE DRAIN SYSTEM WITH STANDARD INLET PROTECTION. BASE COURSE FOR USE-IN-COMMON DRAINS. AFTER SITE HAS BEEN STABILIZED INSTALL PRIVATE SEPTIC FIELDS AND BIO-RETENTION FACILITIES. (1 MONTH)
 6. INSTALL FINISHED SURFACE COURSE, AND PERIMETER LANDSCAPING. (2 WEEKS)
 7. CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH, AND DEBRIS FROM FORESTS, FLOODPLAIN, STREAMS, WETLANDS AND THEIR BUFFERS.
 8. OBTAIN APPROVAL OF APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (3 DAYS)
 9. REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.
 10. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM ALL SEDIMENT AND EROSION CONTROL DEVICES SHOWN HEREON.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Practice	Definition	Purpose
Soil Seeding	The application of seed and mulch to establish vegetative cover.	To protect disturbed soils from erosion during and at the end of construction.
Soil Mulching	The application of seed and mulch to establish vegetative cover.	To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

A. Seeding Specifications:
 1. All seed must meet the requirements of the Maryland Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 month period of the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed lots must be available upon request to the inspector to verify type of seed and quantity of seed.
 2. Mulch slope may be applied between the fall and spring seeding dates only if ground is frozen. The appropriate seeding mixture must be applied when the ground is frozen.
 3. Incubation: The incubation for treating seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Incubation must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydrosulfiding. Note: It is very important to keep inoculant cool as possible. Inoculant should be stored at 35 to 50 degrees Fahrenheit on wetted bacteria and make the inoculant less effective.
 4. Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

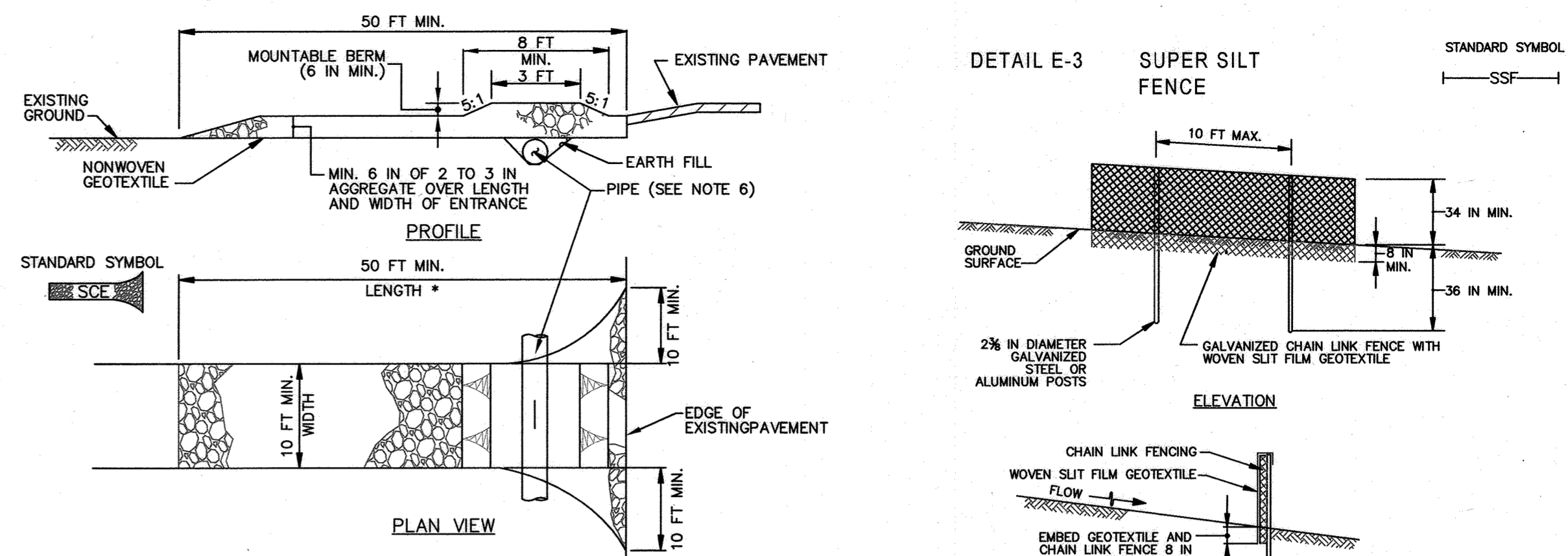
B. Application:
 1. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 a. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 b. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
 2. Hydroseeding: This includes use of mechanical seeders that apply seed and mulch together.
 a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 b. Apply seed in two directions, perpendicular to each other in each direction.
 c. Hydroseeding: Apply seed uniformly with hydrosprayer (spray includes seed and fertilizer).
 1. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P₂O₅ (phosphorus), 200 pounds per acre; K₂O (potassium), 200 pounds per acre.
 2. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydrosprayer). Normally, not more than 2 tons are applied by hydrosprayer at any one time. Do not use burnt or hydrated lime when hydrospraying.
 3. Mix seed and fertilizer on site and seed immediately and without interruption.
 4. When hydrospraying do not incorporate seed into the soil.

C. Mulching Materials (In order of preference):
 1. Straw consisting of thoroughly threshed wheat, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and is to contain no more than 0.5 percent of noxious weed seeds.
 2. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical states.
 a. WCFM is to be used in place of straw mulch and provide an equivalent level of protection against the uniformly applied mulch.
 b. WCFM, including dry, must contain no germination or growth inhibiting factors.
 c. WCFM must be free of noxious weed seeds and must be free of noxious weed seeds and must be free of noxious weed seeds.
 d. WCFM must be free of noxious weed seeds and must be free of noxious weed seeds.
 e. WCFM must be free of noxious weed seeds and must be free of noxious weed seeds.
 f. WCFM must be free of noxious weed seeds and must be free of noxious weed seeds.
 3. Synthetic mulches such as Acrylic Resin (Acrilan), Dura-Tex, Tere-Tex, etc. or other approved mulch may be used. Apply application rates as specified by the manufacturer's instructions. Synthetic mulches must be applied to a net dry weight of 1500 pounds per acre. Use of synthetic mulches is subject to the approval of the inspection agency.
 4. Lightweight plastic netting may be stepped over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

EROSION CONTROL MATTING
 NOT TO SCALE
 1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS OBSERVED ON APPROVED PLANS.
 2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC NON-DISINTEGRABLE FIBERS OR FILAMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-DANGEROUS TO THE SOIL. IF PRESENT, NETTING MUST BE EXTENDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2 1/2 INCHES AND SUFFICIENTLY SOLOID TO BE SEEN ON A NEAR CONTACT ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
 3. SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE 1/4" OR 1/2" SHARPED STEEL. STAPLES MUST BE PLACED AT A MINIMUM OF 8 INCHES LONG. 1/4" SHAPED STAPLES MUST HAVE A MINIMUM OF 8 INCHES LONG. 1/2" SHAPED STAPLES MUST HAVE A MINIMUM OF 12 INCHES LONG. 1/2" SHAPED STAPLES MUST BE PLACED AT A MINIMUM OF 8 INCHES LONG. 1/2" SHAPED STAPLES MUST BE PLACED AT A MINIMUM OF 12 INCHES LONG. 1/2" SHAPED STAPLES MUST BE PLACED AT A MINIMUM OF 12 INCHES LONG.
 4. PREPARE FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS. END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
 5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDING SURFACE. AVOID STRETCHING THE MATTING.
 6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL EDGES BY 8 INCHES (MINIMUM). WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
 7. KEY IN THE TOP OF SLOPE END OF MAT 8 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAPPING SOIL SECURE MAT END IN THE KEY.
 8. STAPLE/MAT END IN A STRAIGHTENED PATTERNS ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
 9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, USE 1/2 INCH (MINIMUM) WIRE WITH SHAPED STAPLES TO PLACE THE MAT OVER TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
 10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4-3 VEGETATIVE STABILIZATION.

STANDARD STABILIZATION NOTE
 FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
 A) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DICES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
 B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

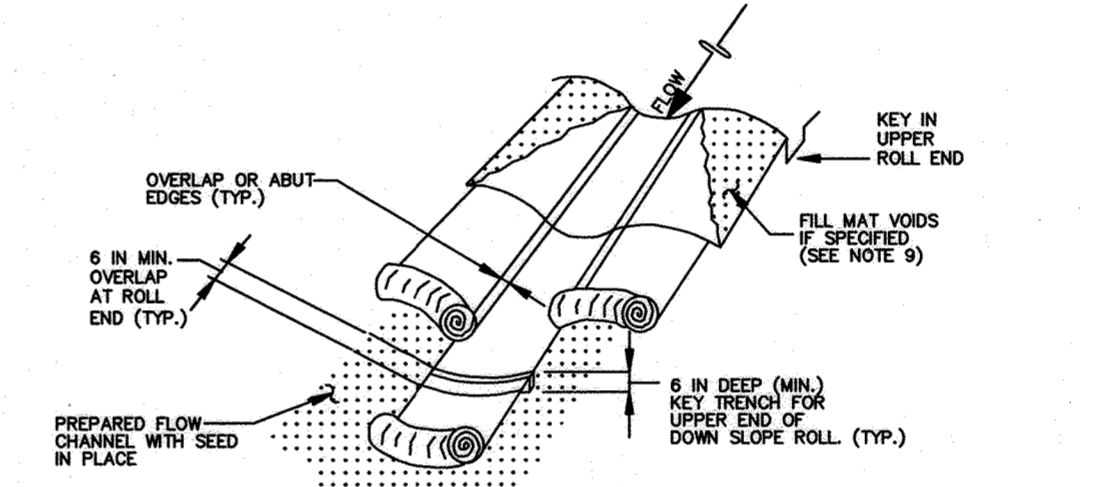
PROFESSIONAL CERTIFICATE
 I hereby certify that this Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.
 Signature of Surveyor: *Frank J. Manalansan II* Date: 4-15-14
 Signature of Developer: *Frank J. Manalansan II* Date: 4-15-14
 Signature of Owner: *Debra E. Taylor* Date: 4-15-14



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (430 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. PLACE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 2:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
 3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
 4. PLACE CROUCHED AGGREGATE TO 3 INCHES IN SIZE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 8 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
 5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADGE STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM, AND SPECIFIED DRAINAGES, IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ON ADJACENT ROADWAY BY VACUUMING, SCOPING AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

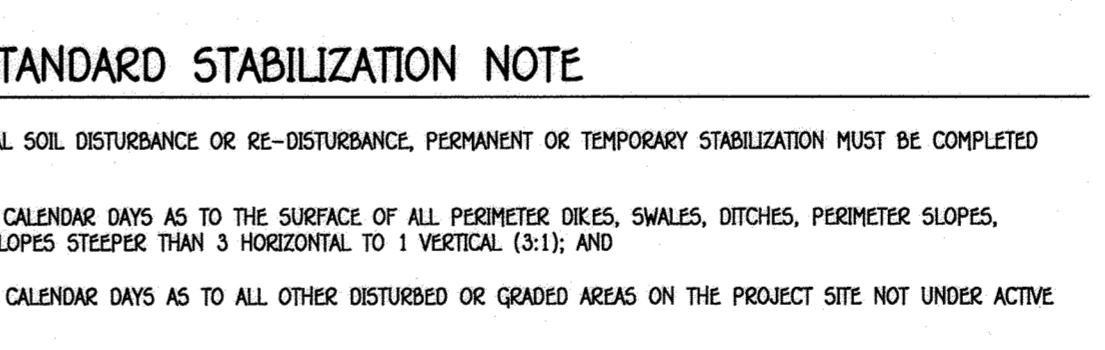
STABILIZED CONSTRUCTION ENTRANCE
 NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS OBSERVED ON APPROVED PLANS.
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 7. KEY IN THE TOP OF SLOPE END OF MAT 8 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAPPING SOIL SECURE MAT END IN THE KEY.
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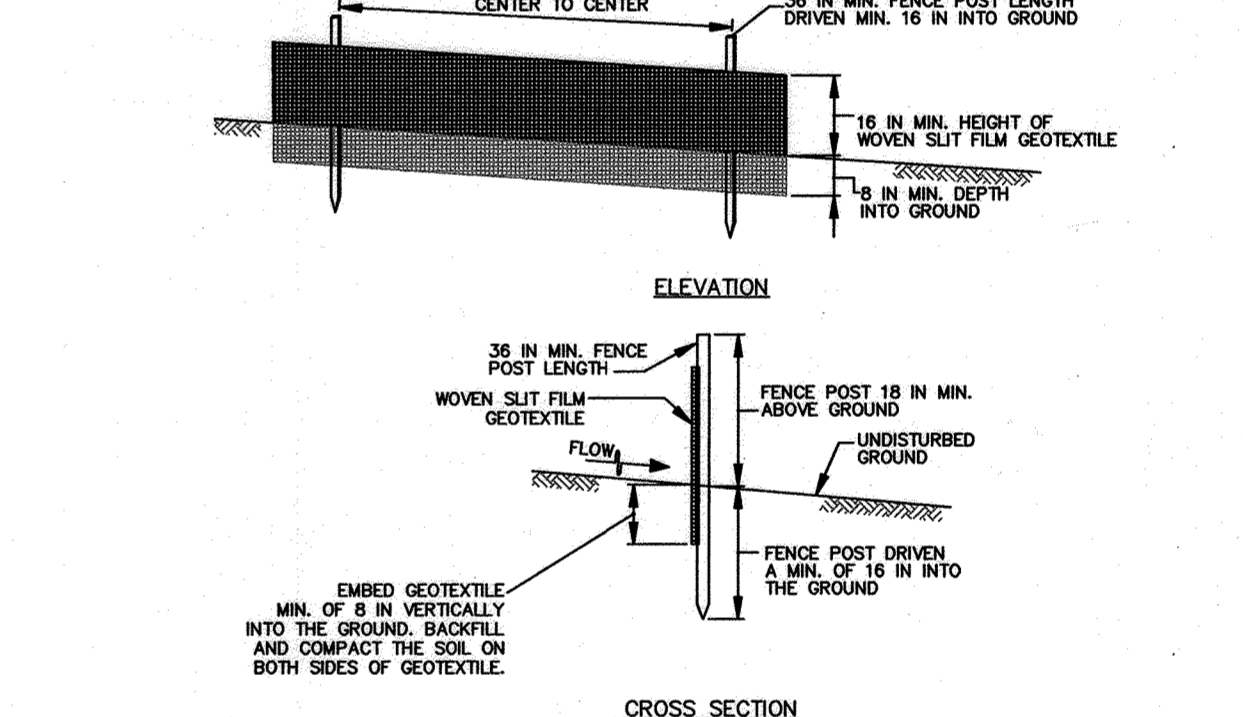
EROSION CONTROL MATTING
 NOT TO SCALE



NOTES:
 THIS PLAN IS NOT FOR THE CONSTRUCTION OF HOUSES

AS-BUILT CERTIFICATION
 Note: There is no "AS-BUILT" information provided on this sheet.
 Signature of Professional Engineer: *Paul Gerard Cavanaugh #27020* Date: 4/15/14
 State of Maryland Professional Engineer Seal.

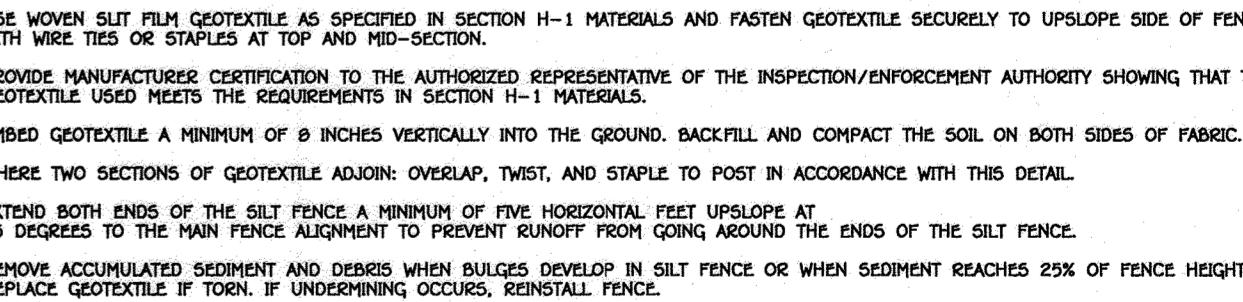
DETAIL E-1 SILT FENCE
 STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1 1/2 X 3/4 X 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE. WOOD POSTS MUST BE 36 INCH (MINIMUM) POST LENGTH. POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 2. USE 36 INCH (MINIMUM) POSTS DRIVEN 16 INCH (MINIMUM) INTO GROUND NO MORE THAN 6 FEET APART.
 3. USE WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FENCE.
 6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: ADJOIN, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)



SEDIMENT AND EROSION CONTROL NOTES & DETAILS FULTON MANOR VALLEY - PART ONE
 LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
 11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEG
 TAX MAP NO. 41
 FIFTH ELECTION DISTRICT
 SCALE: AS SHOWN
 SHEET 6 OF 12

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL OFFICE: 10732 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature of Chief: *John K. Carter* Date: 4-24-14
 Signature of Chief: *John K. Carter* Date: 4-23-14

DEVELOPER'S CERTIFICATE
 "I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents, As Are Deemed Necessary."
 Signature of Developer: *John K. Carter* Date: 4/16/14
 Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.
 Signature of District: *John K. Carter* Date: 4/16/14

PROFESSIONAL CERTIFICATE
 I hereby certify that this Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.
 Signature of Surveyor: *Frank J. Manalansan II* Date: 4-15-14
 Signature of Developer: *Frank J. Manalansan II* Date: 4-15-14
 Signature of Owner: *Debra E. Taylor* Date: 4-15-14

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 Signature of Owner: *Debra E. Taylor* Date: 4-15-14

THESE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET F-14-014

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 Op 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 phosphorus 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 loaded 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 or 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.

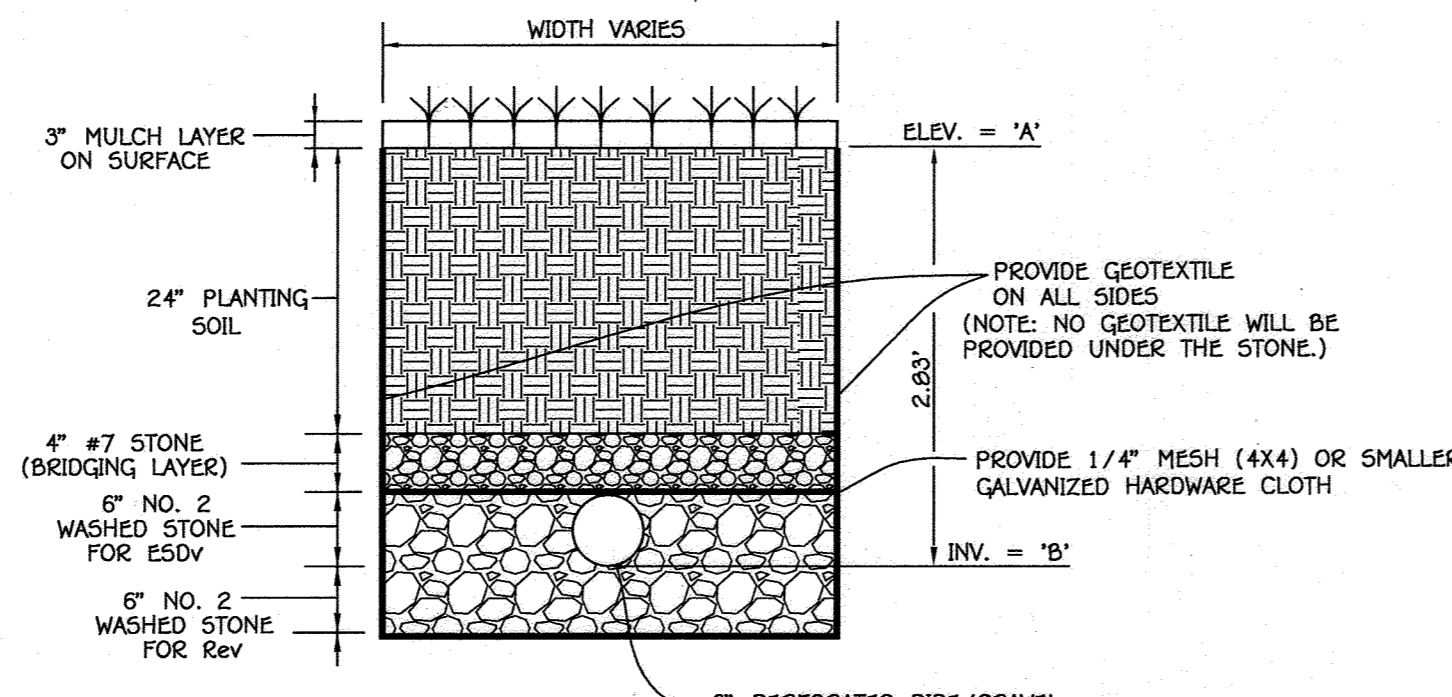
Planting Guidance

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 materials 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.

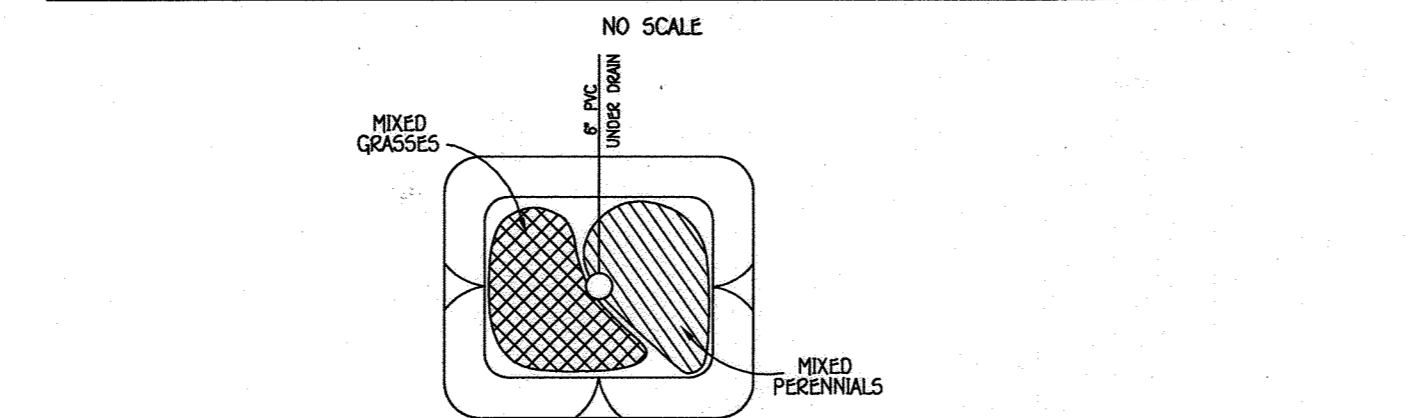
OPERATION AND MAINTENANCE SCHEDULE FOR MICRO BIO-RETENTION AREAS (M-6)

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 CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIGGS.
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 ADDRESS ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

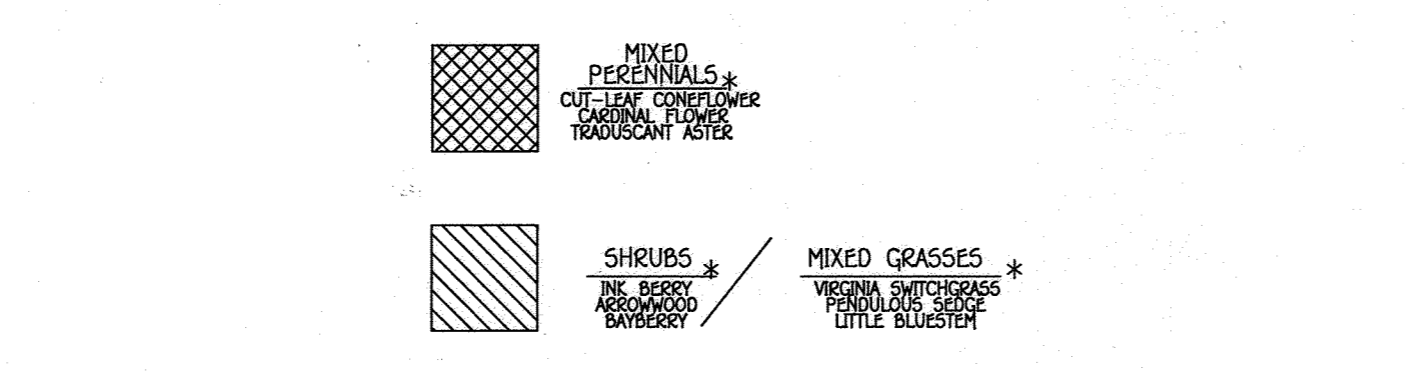


NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

TYPICAL SECTION - MICRO BIO-RETENTION FACILITY (M-6)



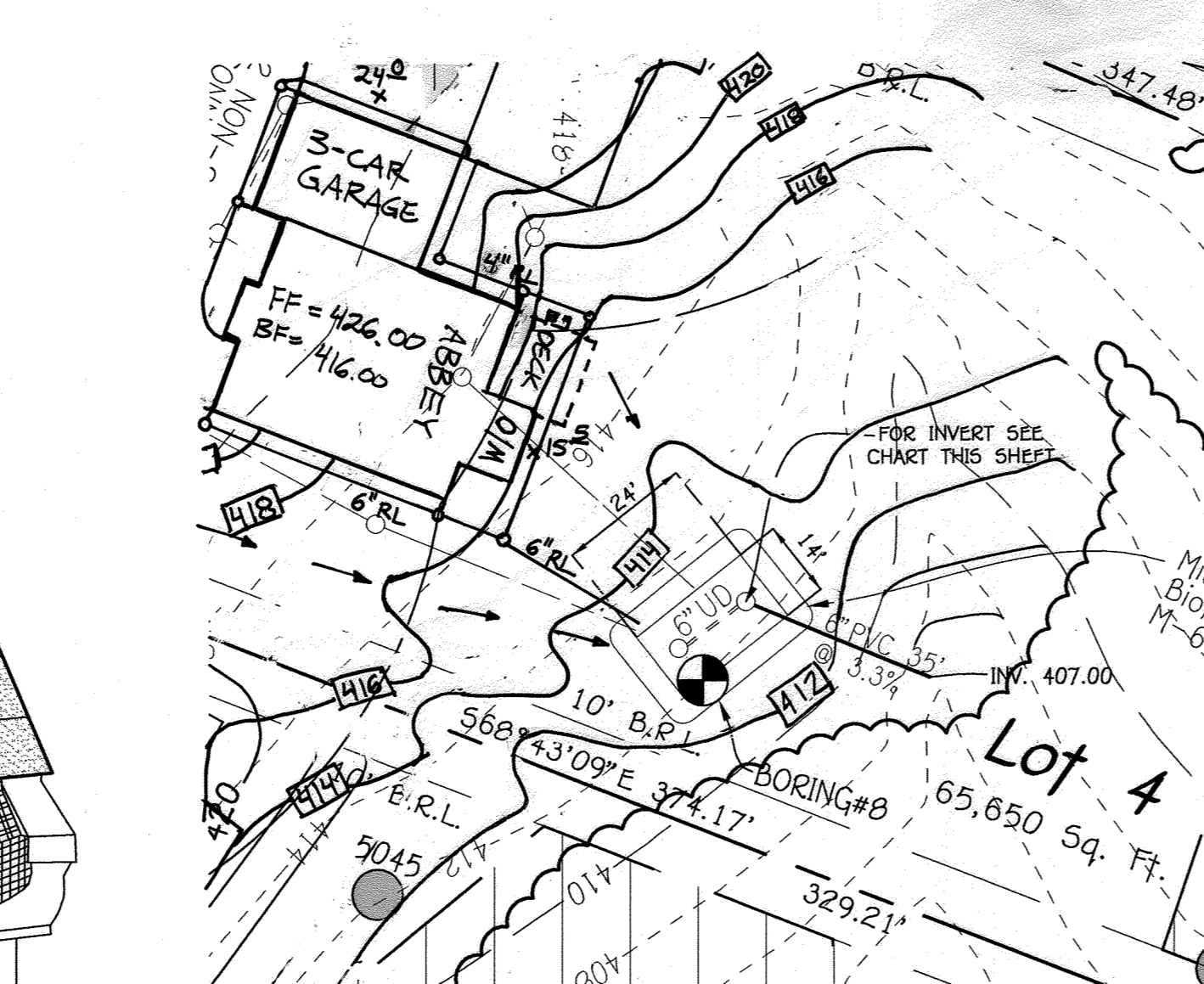
MICRO-BIORETENTION PLANTING DETAIL



* SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING.

(MICRO - BIORETENTION FACILITIES)

AS-BUILT NOTE:
M-6 (1), M-6 (3) AND M-6 (4) HAVE BEEN CERTIFIED WITH HOUSE CONSTRUCTION



M-6 (3)

(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 5,269 sqft.
FILTER AREA: 344 sqft.
ELEVATION 411.00
PERIMETER 77'
WEIR ELEVATION 412.00

REVISION #1

APPROVED: DEPARTMENT OF PLANNING AND ZONING

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2925

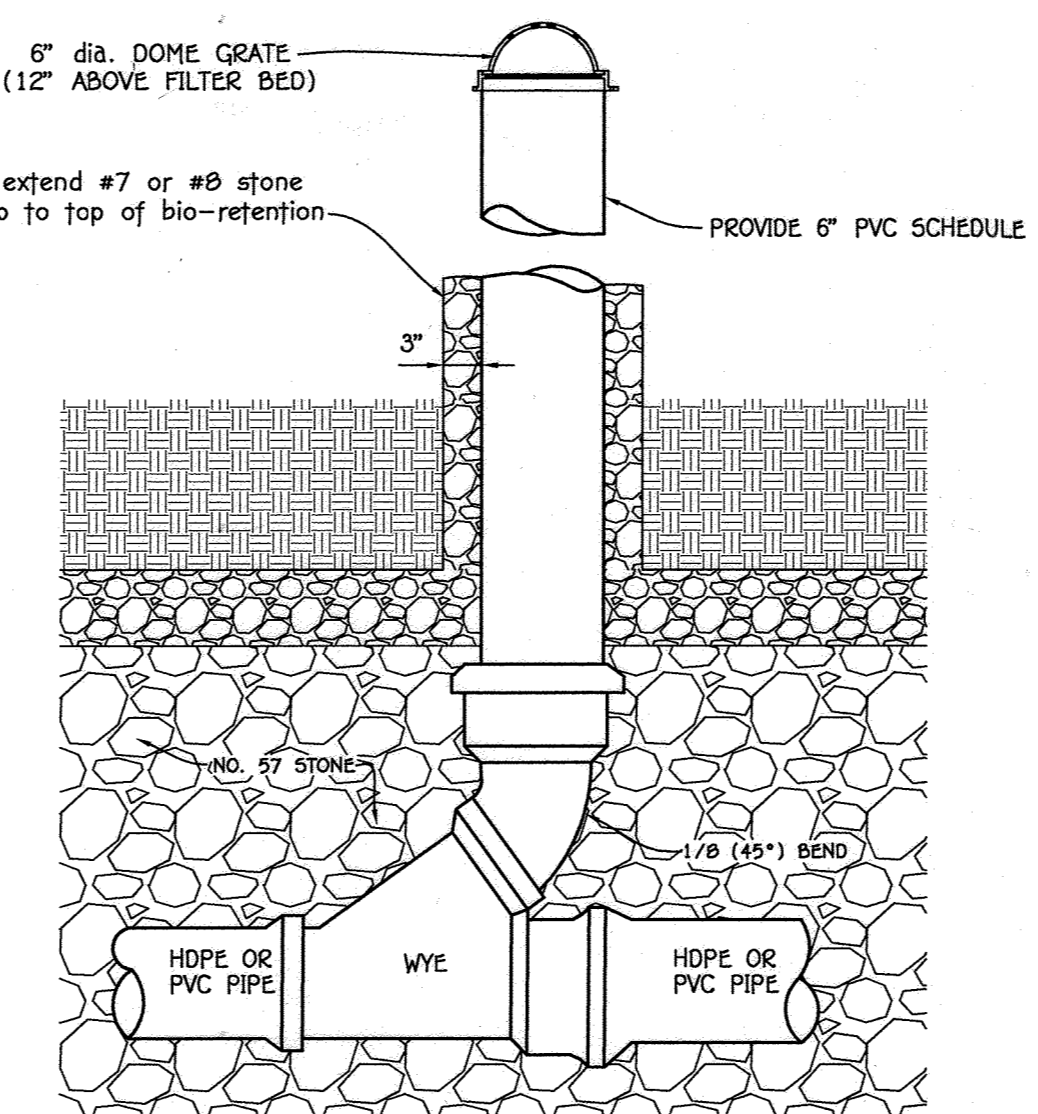
APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 4-24-14

DATE: 4-23-14

NO. BY DATE

NO. BY DATE



TYPICAL CLEAN-OUT DETAIL

NO SCALE

DRAINAGE AREA M-6 (1)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
130	MIXED PERENNIALS	1 FT.
65	SHRUBS	2 FT.

DRAINAGE AREA M-6 (2)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
169	MIXED PERENNIALS	1 FT.
85	SHRUBS	2 FT.

DRAINAGE AREA M-6 (3)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
86	MIXED PERENNIALS	1 FT.
43	SHRUBS	2 FT.

DRAINAGE AREA M-6 (4)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
86	MIXED PERENNIALS	1 FT.
43	SHRUBS	2 FT.

DRAINAGE AREA F-6 (1)
BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
396	MIXED PERENNIALS	1 FT.
198	SHRUBS	2 FT.

STORMWATER MANAGEMENT FOR LOTS 1 THRU 5 SHALL BE INSTALLED UNDER THE RESIDENTIAL GRADING PLAN (68-15-053). THESE NOTED LOTS ARE TO BE AS-BUILT AS PART OF THE INDIVIDUAL GRADE CERTIFICATION FOR EACH LOT.

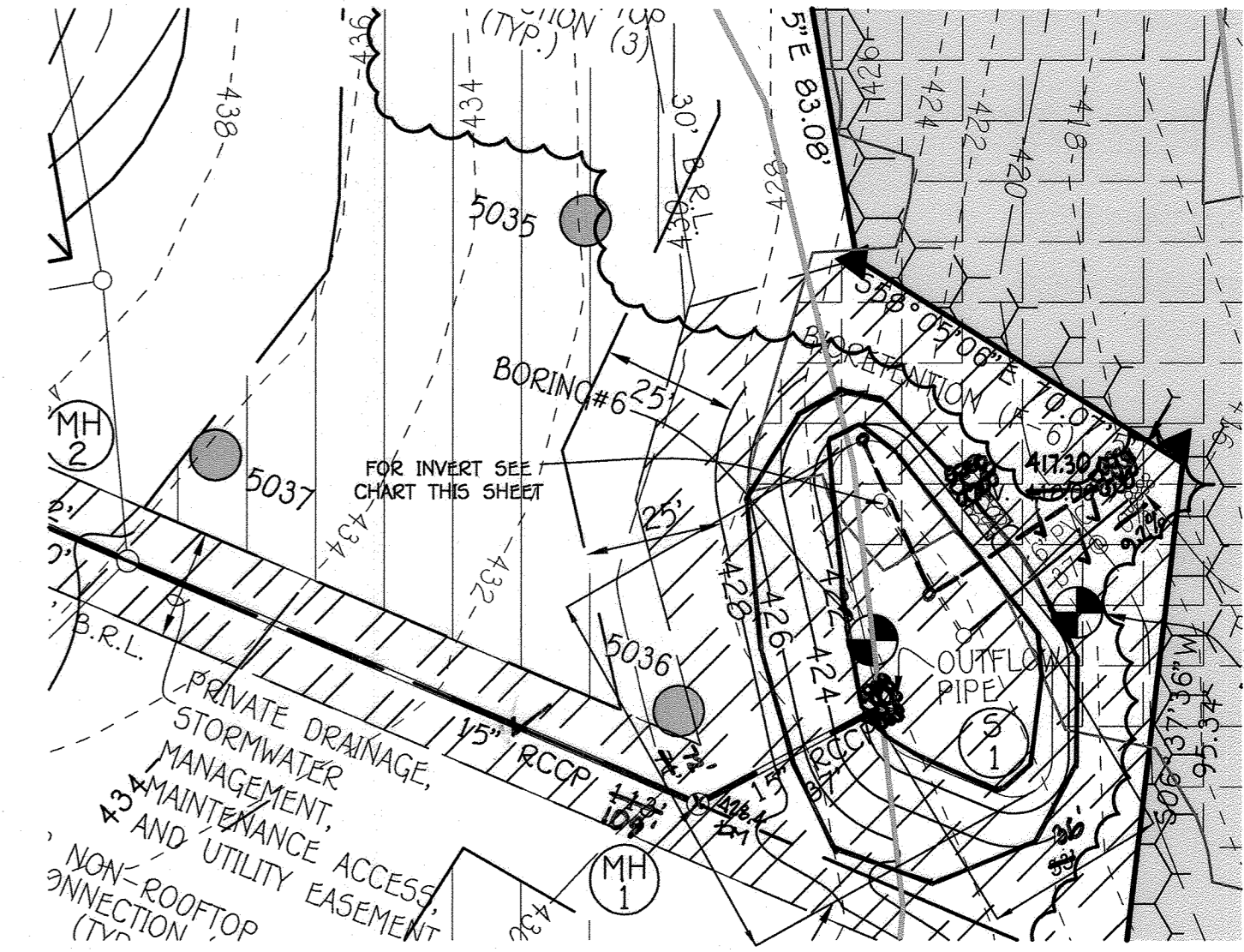
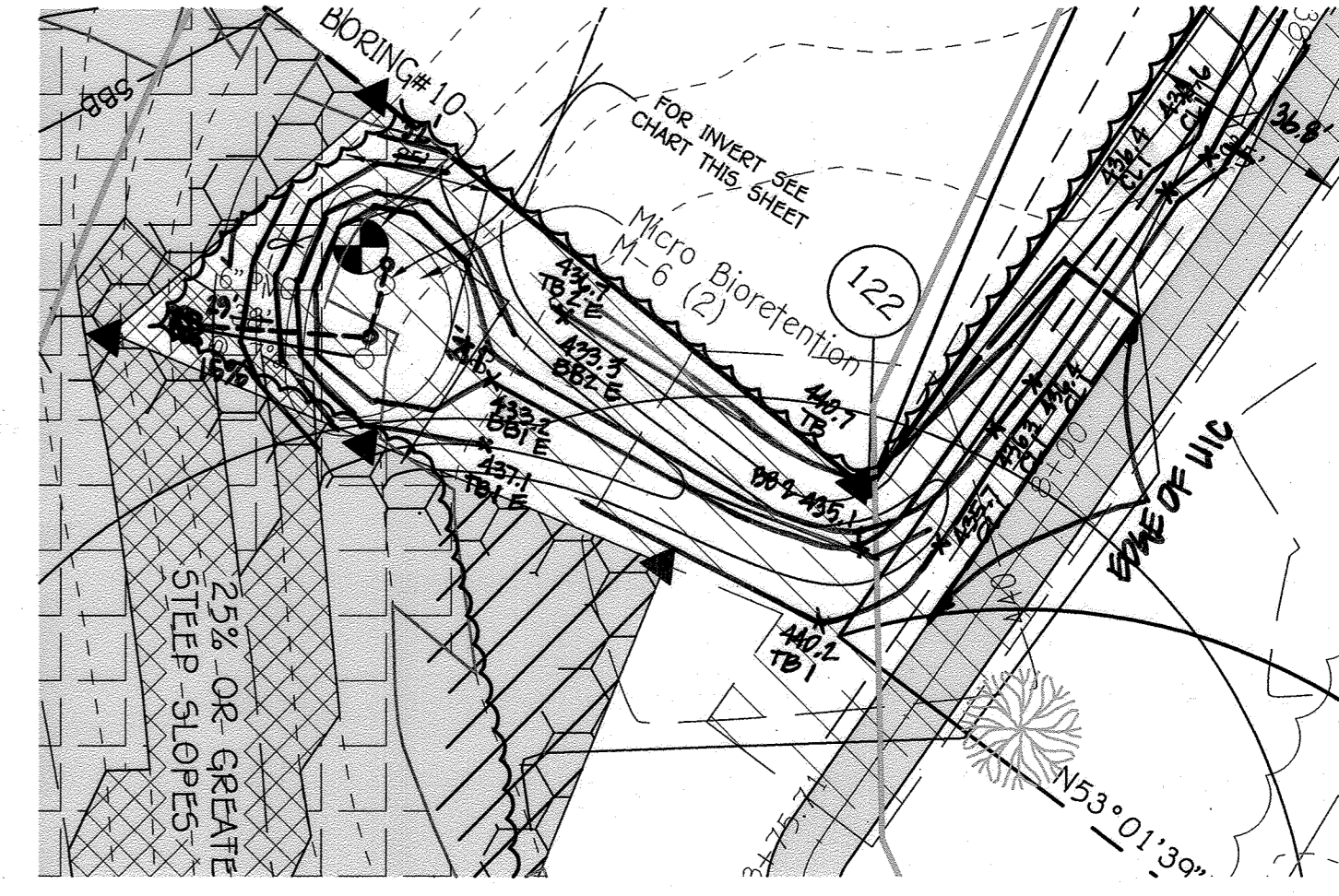
M-6 (1)

(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 19,512 sqft.
FILTER AREA: 520 sqft.
ELEVATION 447.00
PERIMETER 282'
WEIR ELEVATION 448.00

FACILITY NO.	A	B
M-6 (1)	477.00	444.17
M-6 (2)	433.00	430.44
M-6 (3)	411.00	408.17
M-6 (4)	397.00	394.17
F-6 (1)	424.00	418.17

M-6 (2)

(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 21,436 sqft.
FILTER AREA: 677 sqft.
ELEVATION 433.00
PERIMETER 99.102'
WEIR ELEVATION 434.88-13



F-6 (1)

(BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 83,782 sqft.
FILTER AREA: 1,583 sqft.
ELEVATION 428.00
PERIMETER 167'
WEIR ELEVATION 428.00-197

GUTTER DRAIN FILTER DETAIL

NOT TO SCALE



NO. BY DATE

NO. BY DATE

PAUL GERARD CANAUGH #17010
DATE: Dec 12, 2003

DATE: 1/28/04

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

DEVELOPER: PLEASANT PROSPECT FARM, INC., 4401 JENNINGS CHAPEL ROAD, DOWS, MD 20833, ATTN: MR. DONALD R. REINER, JR., PRESIDENT, 443-367-0422

FRANK J. MANALANSAN, II, L.S. 21476
DATE: 4-3-14

Professional certification, I hereby certify that these documents were prepared by me and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15.

STORMWATER MANAGEMENT NOTES & DETAILS FULTON MANOR VALLEY - PART ONE

LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'

11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP No. 41 GRD No. 19 PARCEL No. 78 AND 156
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DATE: APRIL 1, 2014
SHEET 7 OF 12

"AS-BUILT" F-14-014

B.4.C Specifications for Micro-Bioretenion, Rain Gardens, Landscape Infiltration & Infiltration Berms

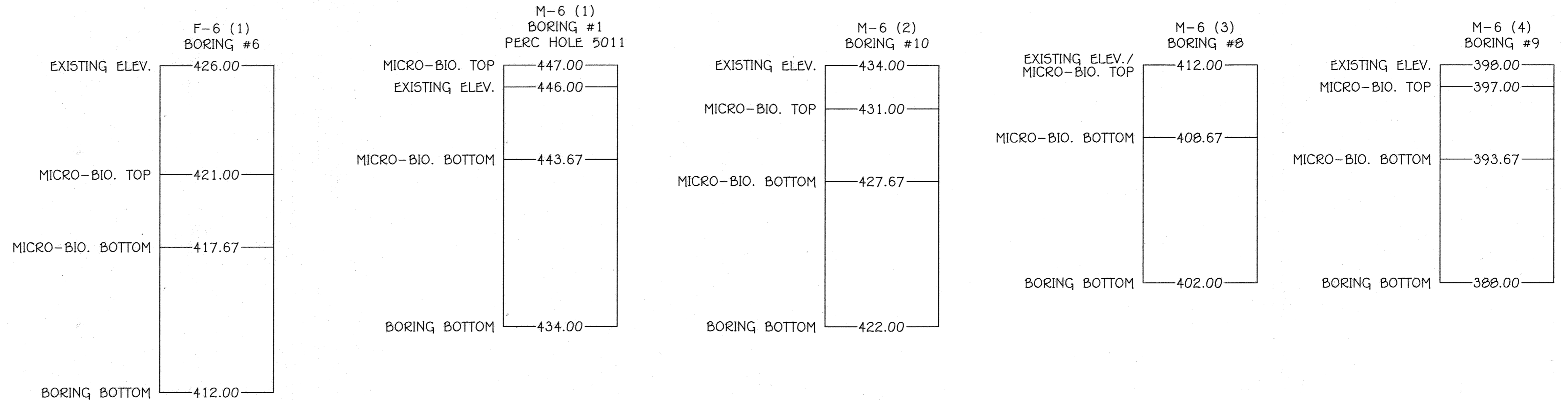
1. Material Specifications
The allowable materials to be used in these practices are detailed in Table B.4.1

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-bioretenion practice that may be harmful to plant growth, or prove a hindrance to the plantings or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.
The planting soil shall be tested and shall meet the following criteria:
- Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
- Organic Content - minimum 10% by dry weight (ASTM D 2974). In general this can be met with a mixture of loamy sand (50%-65%) and compost (35%-40%) or sandy loam (30%), coarse sand (30%), 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 (eg. Lime, Iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

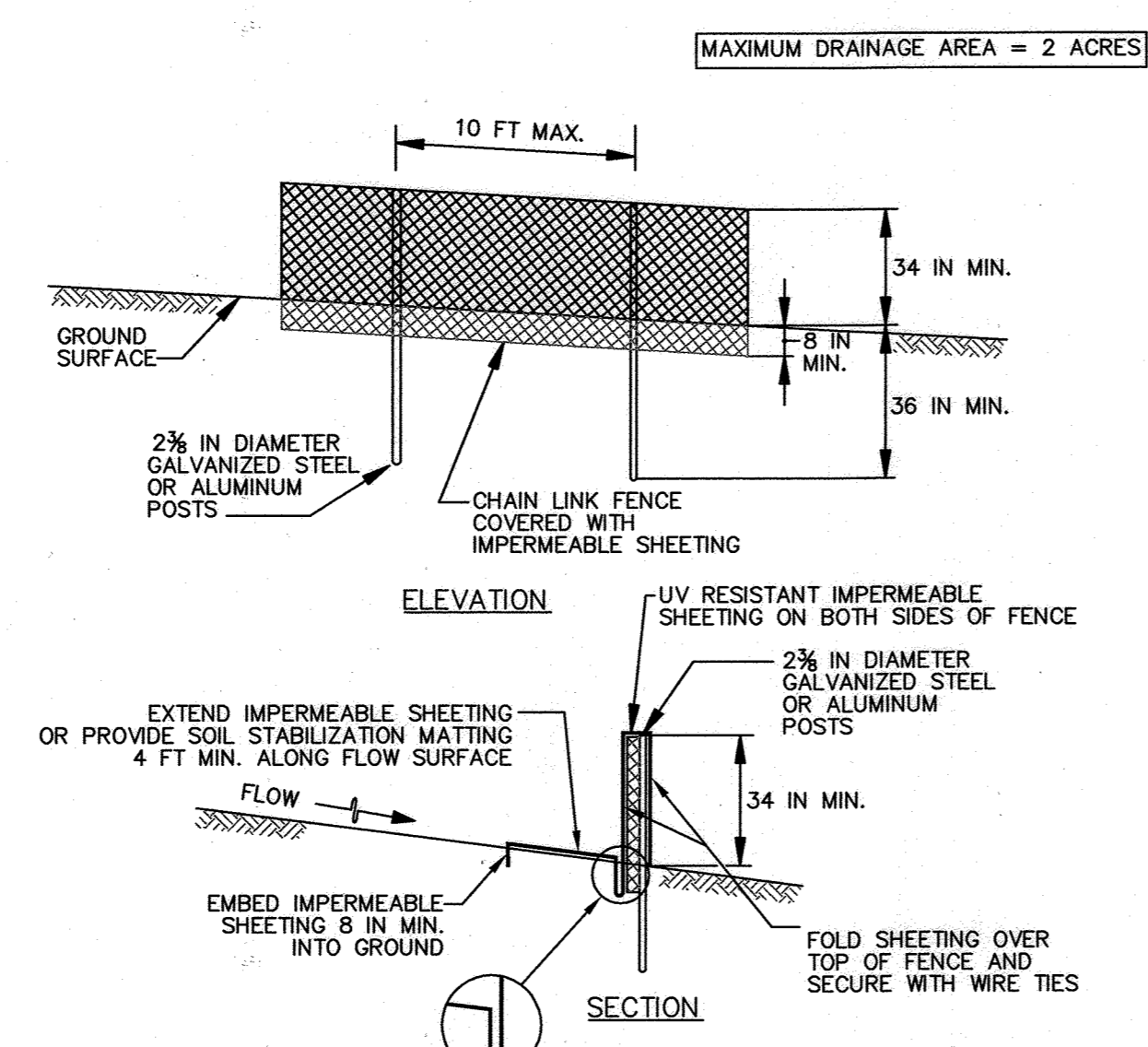
3. Compaction
It is very important to minimize compaction of both the base of the bioretention practices and the required backfill. When possible use excavation hoses to remove original soil. If practices are excavated using a loader, the contractor should use a wide track or marsh track equipment, or light equipment with turf type 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. Compactions will significantly contribute to design failure.

4. Plant Material
Recommended plant material for micro-bioretenion practices can be found in Appendix A, Section A.2.3.
5. 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.
6. Underdrains
Underdrains should meet the following criteria:
- Pipe - should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 756, Type P5 2B, or AASHTO-M-276) in a gravel layer. The preferred material is slotted pipe (PVC or HDPE).
- Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 3" (No. 4 or 4x4) galvanized hardware cloth.
- Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
- A rigid, non-perforated observation well must be provided (one per every 1,000) 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 filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".
The main collector pipe for underdrain system shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet or surface area).

7. Miscellaneous
These practices may not be constructed until all contributing drainage area has been stabilized.



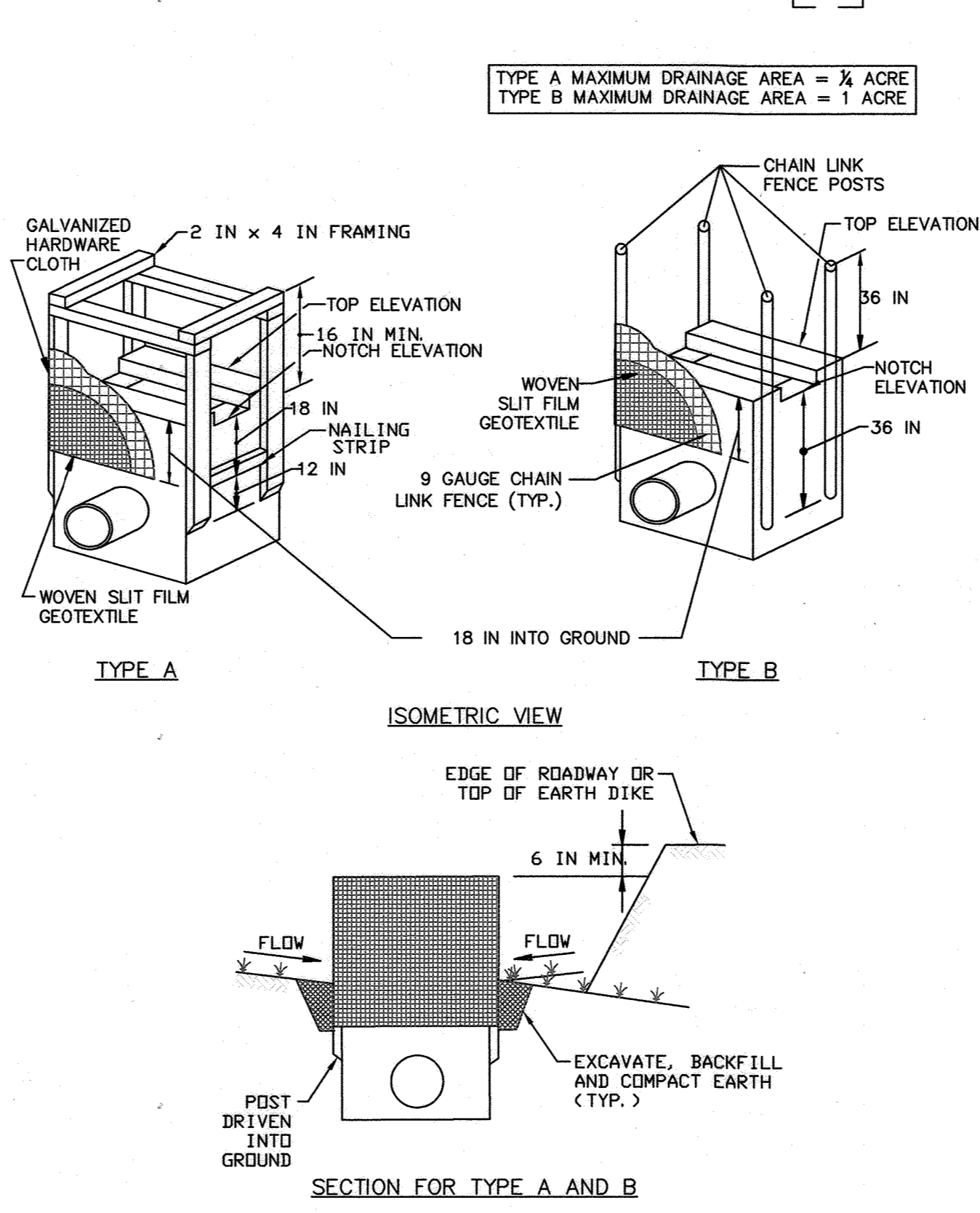
DETAIL C-9 DIVERSION FENCE
STANDARD SYMBOL
MAXIMUM DRAINAGE AREA = 2 ACRES



- CONSTRUCTION SPECIFICATIONS
- USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2 1/2 INCH MAXIMUM OPENING).
 - USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
 - FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
 - EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
 - WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
 - KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

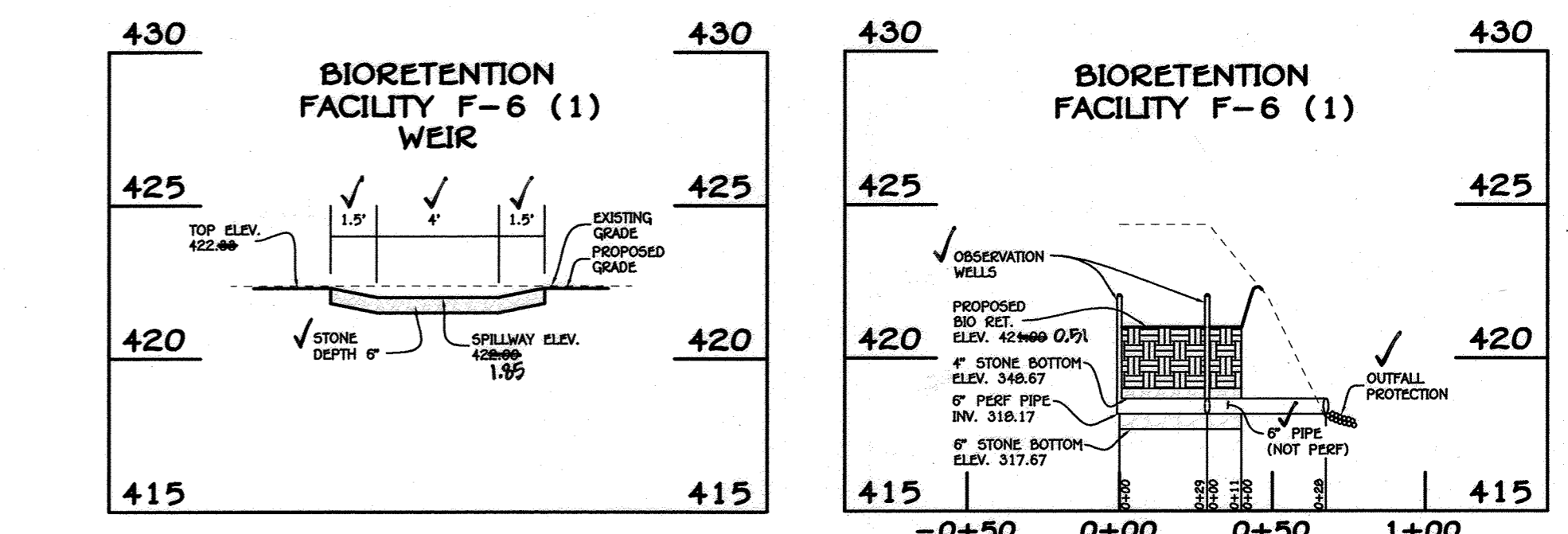
DETAIL E-9-1 STANDARD INLET PROTECTION
STANDARD SYMBOL
TYPE A MAXIMUM DRAINAGE AREA = 1/4 ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE

DETAIL D-2 STONE CHECK DAM
STANDARD SYMBOL



AS-BUILT CERTIFICATION
I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plans was constructed as shown on this 'AS-BUILT' plan meet the approved plans and specifications.

- CONSTRUCTION SPECIFICATIONS
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
 - EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
 - FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN, STRETCH 1/2 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
 - FOR TYPE B, USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
 - BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
 - STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

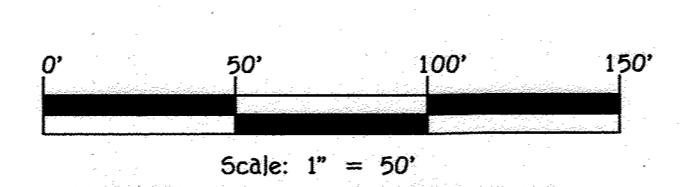


MATERIAL	SPECIFICATION	SIZE	NOTES
Plantings	see Appendix A, Table A.4	n/a	
Planting Soil (2' to 4' deep)	loamy sand (60-65%)& compost (35-40%) or sandy loam (30%), coarse sand (30%)& compost (40%)	n/a	
Organic Content	Min. 1% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; 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		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
Underdrain piping	F 756, Type P5 2B or AASHTO M-276	4" to 6" rigid schedule 40 PVC to SDR35	Slotted or perforated pipe: 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f'c=3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured in-place concrete required: 28 day strength and slump test; all concrete design/cast-in-place or pre-cast) not using previous approved state or local standards requires design drawings sealed and approved by professional structural engineer licensed in the state of Maryland - design to include meeting ACI Code 350R/99; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutes such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10772 SALTHERS NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 451-2295

APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. J. [Signature] 4-24-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
C. [Signature] 4-23-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

STATE OF MARYLAND
FRANK J. MANALANSAN II, L.S. 21476
PROFESSIONAL LAND SURVEYOR
PAUL GEORGE CAVANAUGH #27020
DATE: Dec 12, 2003
6/12/04



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

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DANSY, MD 20833
MR. DONALD R. REIDWISER, JR., PRESIDENT
443-367-0422

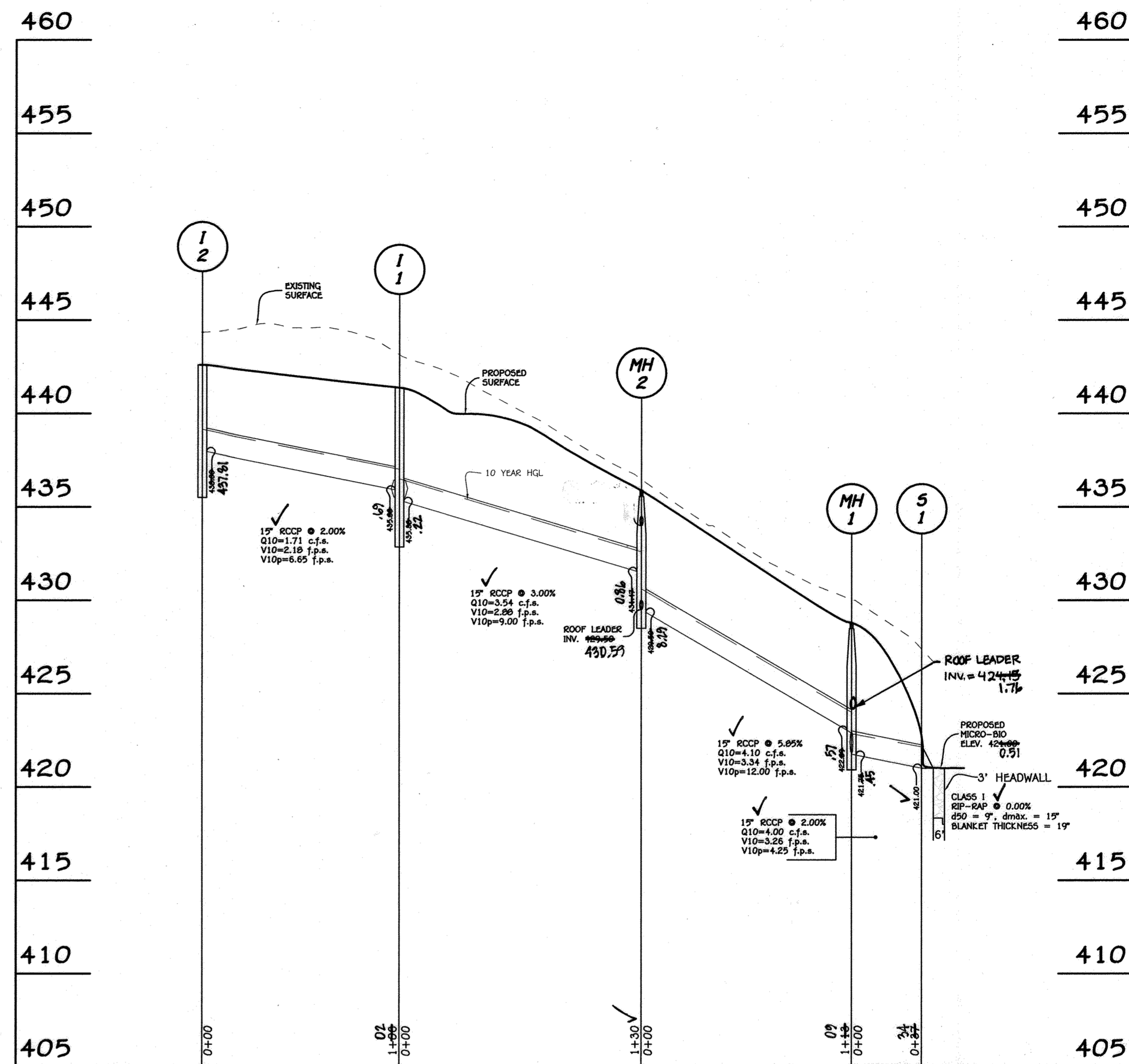
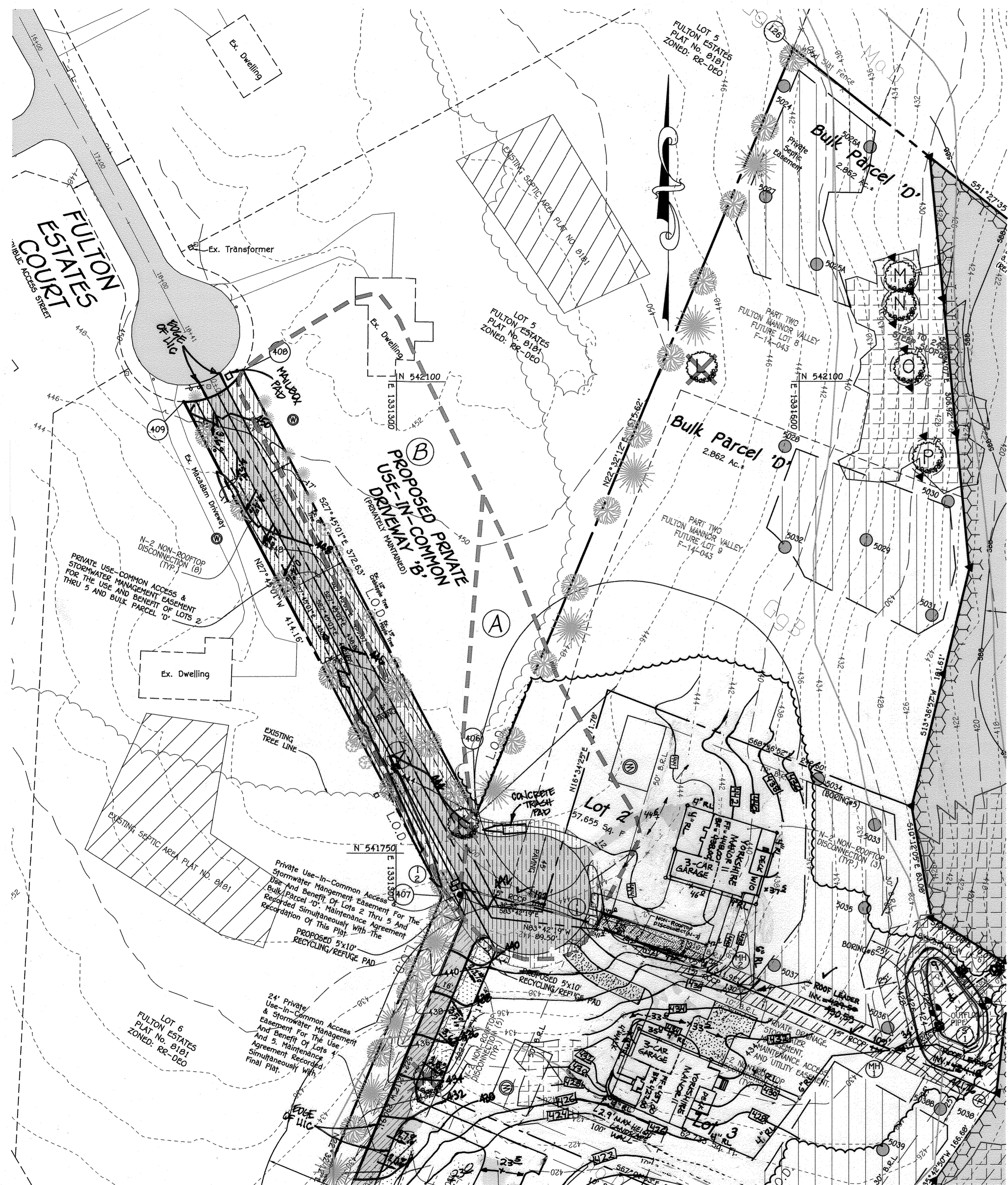
STATE OF MARYLAND
FRANK J. MANALANSAN II, L.S. 21476
PROFESSIONAL LAND SURVEYOR

Professional certification, I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15"

STORMWATER MANAGEMENT DETAILS & BORINGS
FULTON MANOR VALLEY
- PART ONE
LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
11987 ROUTE 216
HIGHLAND, MARYLAND 20777
ZONED: RR-DEO
TAX MAP No. 41 GEO No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 1, 2014
SHEET 8 OF 12

"AS-BUILT" F-14-014

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	0.59 AC.	0.50	RR-DEO	37%
I-2	B	0.91 AC.	0.06	RR-DEO	6%
M-2	C	0.11 AC.	0.95	RR-DEO	100%



PROFILE 5-1 TO 1-5
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

STRUCTURE SCHEDULE								
STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV. IN	INV. OUT	COORDINATES	WIDTH	TYPE	REMARKS
I-1	PRIVATELY OWNED AND MAINTAINED	441.44	435.00	435.00	N 541697 E 1331446	-	D INLET	SD 4.10
I-2	PRIVATELY OWNED AND MAINTAINED	442.60	-	436.00	N 541725 E 1331344	-	D INLET	SD 4.10
MH-1	PRIVATELY OWNED AND MAINTAINED	428.09	422.09	421.75	N 541603 E 1331670	-	MANHOLE	SD 4.10
MH-2	PRIVATELY OWNED AND MAINTAINED	435.09	431.00	429.00	N 541647 E 1331566	-	MANHOLE	SD 4.22
5-1	PRIVATELY OWNED AND MAINTAINED	422.25	421.00	421.00	N 541621 E 1331703	-	CONC. END SECTION	SD 5.51

PIPE SCHEDULE		
SIZE	CLASS	LENGTH
6"	PVC	1,337'
6" PERFORATED	PVC	46'
15"	RCCP, CL. IV	371'

NOTE: RCCP, CL. IV MAY BE SUBSTITUTED WITH HDPE PIPE MATERIAL.
NOTE: ALL PIPES TO BE PRIVATELY OWNED AND MAINTAINED

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Paul Gerard Cavanaugh
Date: 4/12/2014
PAUL GERARD CAVANAUGH #21020

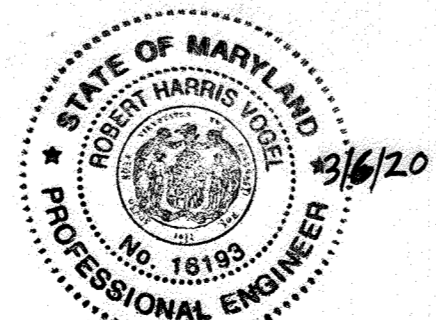


FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21041
(410) 461-2295

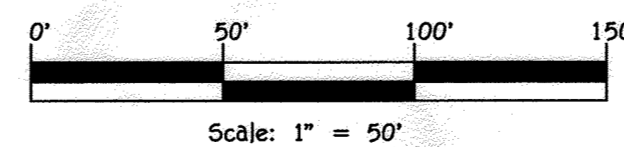
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kevin Stalder 4-24-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Paul Elmer 4-23-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	BY	REVISION	DATE
1	VTG	REVISE THE PLAN TO REVISE THE N-2 DISSECTION OF NON-BUILDABLE PARCELS ON LOTS 2 AND 5 AND REVISE THE GRADING ON LOTS 2 AND 5 TO SHOW AS-BUILT CONDITIONS	2-17-20
2	VTG	REVISE THE PLAN TO CORRECT THE HOUSE TYPE, GRADING AND SWM ON LOTS 2, 3, 4 AND 5	12-6-13



REVISION #1-#2



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

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DARY, MD 20833
ATTN: MR. DONALD R. REUBEN, JR., PRESIDENT
443-367-0422



Frank J. Manalansan II 4-3-14
FRANK J. MANALANSAN, II, L.S. 21476 DATE

STORMDRAIN DRAINAGE AREA MAP AND PROFILE
FULTON MANOR VALLEY
- PART ONE
LOTS 1 THRU 5, BUILDABLE PRESERVATION
PARCEL 'A', NON-BUILDABLE PRESERVATION
PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
11987 ROUTE 216
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SHEET 9 OF 12

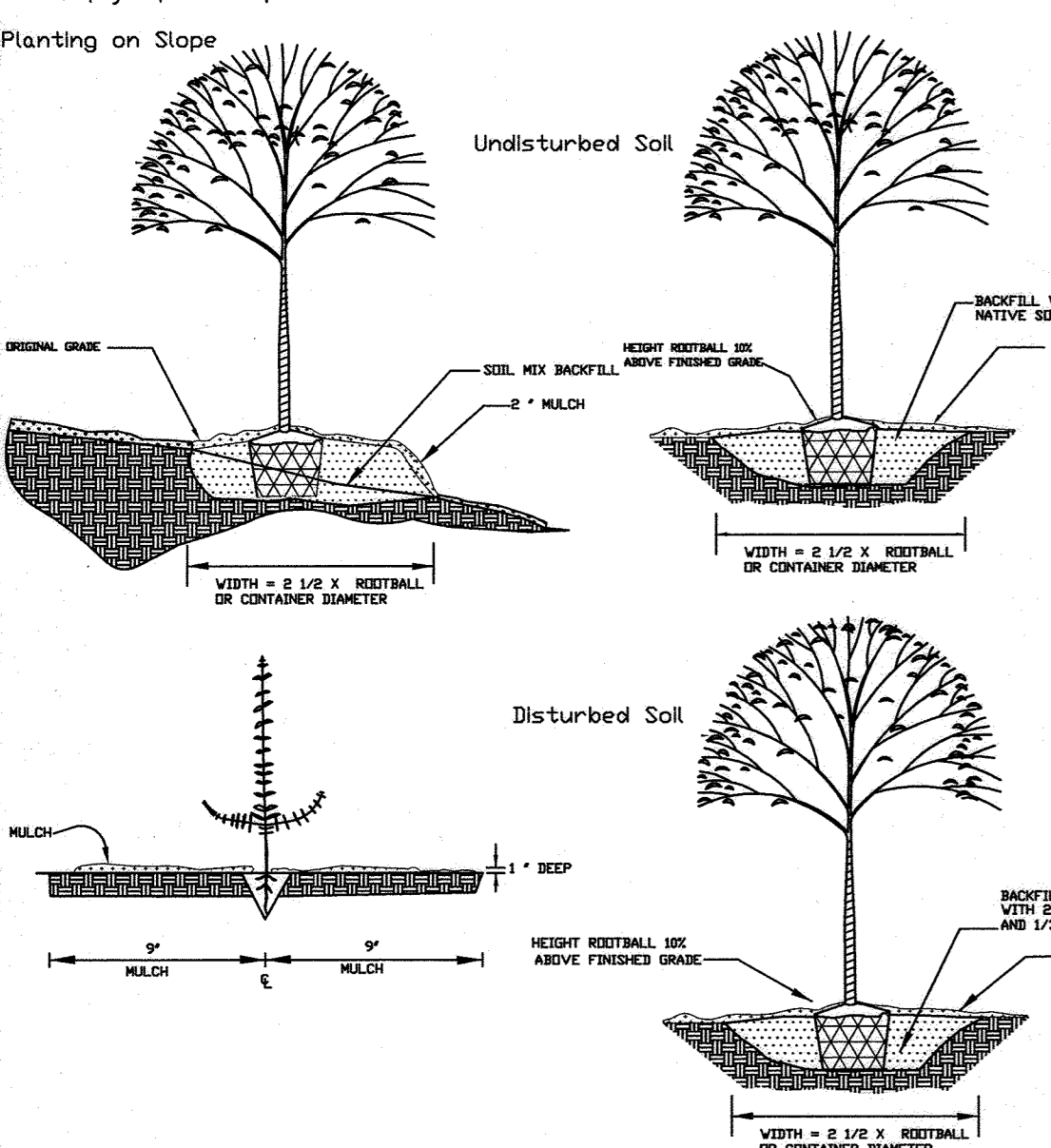
"AS-BUILT" F-14-014

FCE Planting Area # 1 - 1.45 acres

Planting units required: 1015 (508 whips w/ shelters) and 60 trees
 Planting units provided: 1020 (1405 whips w/ shelters and 60 trees)

Qty	Species	Size	Spacing	Total FCA Units
30	Acer x Fraxinella 'Autumn Blaze' - Freeman Maple	1" cal.	15' o.c.	
30	Ulmus Americana 'Valley Forge' Valley Forge American Elm	1" cal.	15' o.c.	
60 Total 1" caliper trees (3.5 planting units per tree) = 210 Total FCA unit credit				
60	Acer x Fraxinella 'Autumn Blaze' - Freeman Maple	2-3" whip	11' o.c.	
60	Cornus canadensis - Red bud	2-3" whip	11' o.c.	
60	Carpinus canadensis - American Hornbeam	2-3" whip	11' o.c.	
45	Liriodendron tulipifera - Tulip poplar	2-3" whip	11' o.c.	
45	Betula nigra 'Heritage' - Silver Birch	2-3" whip	11' o.c.	
45	Ostrya virginiana - American Hophornbeam	2-3" whip	11' o.c.	
45	Ulmus Americana 'Valley Forge' Valley Forge American Elm	2-3" whip	11' o.c.	
45	Acer chlorophyllum - Hedge Maple	2-3" whip	11' o.c.	
405 Total whip plantings (2 planting units per tree) = 810 Total FCA unit credit				
Total Unit Credit: (210 + 810) = 1020				

1" CAL TREES = 200/ACRE (60 TREES/200 = 0.30 AC.)
 WHIPS w/shelters = 350/ACRE = 350 x 1.15 AC. = 403 WHIPS
 3.5 Planting units = 1 - 1" Cal. Tree
 2 Planting units = 1 Whip



Seeding and Whip Planting Specification

**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
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
O. 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

*NOTE: NO. 1 TOTAL FOREST TO BE CLEARED IS 9.9 ACRES WHICH IS BASED ON FULTON MANOR VALLEY, PART ONE AND PART TWO.

LEGEND

SYMBOL	DESCRIPTION
---	EXISTING 2" CONTOURS
---	EXISTING 10" CONTOURS
---	PROPOSED CONTOUR
---	SPOT ELEVATION
---	LIMITS OF DISTURBANCE
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	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 SHALE (M-6)
---	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 (RETENTION)
---	FOREST CONSERVATION EASEMENT REFORESTATION
---	WETLAND AREA
---	25' WETLAND BUFFER
---	FLOODPLAIN ELEVATION
---	STREAM BANK BUFFER
---	100 YEAR FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
---	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
---	SPECIMEN TREE REMAIN
---	SPECIMEN TREE REMOVED
---	BORING (PERC) TEST HOLE
---	SPECIMEN TREE SIGNAGE



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 alba, 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

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] DATE: 4-24-14
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] DATE: 4-23-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

AS-BUILT CERTIFICATION
 Note: There is no "AS-BUILT" information provided on this sheet.

[Signature] DATE: Dec 12, 2023
 PAUL GERARD CAVANAUGH #27020

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS
 MD DNR Qualified Professional
 USACOE Wetland Delimitator
 Certification # WDC993M006100448
 JOHN P. CANOLES

MATCH LINE SEE SHEET 11

Scale: 1" = 50'

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

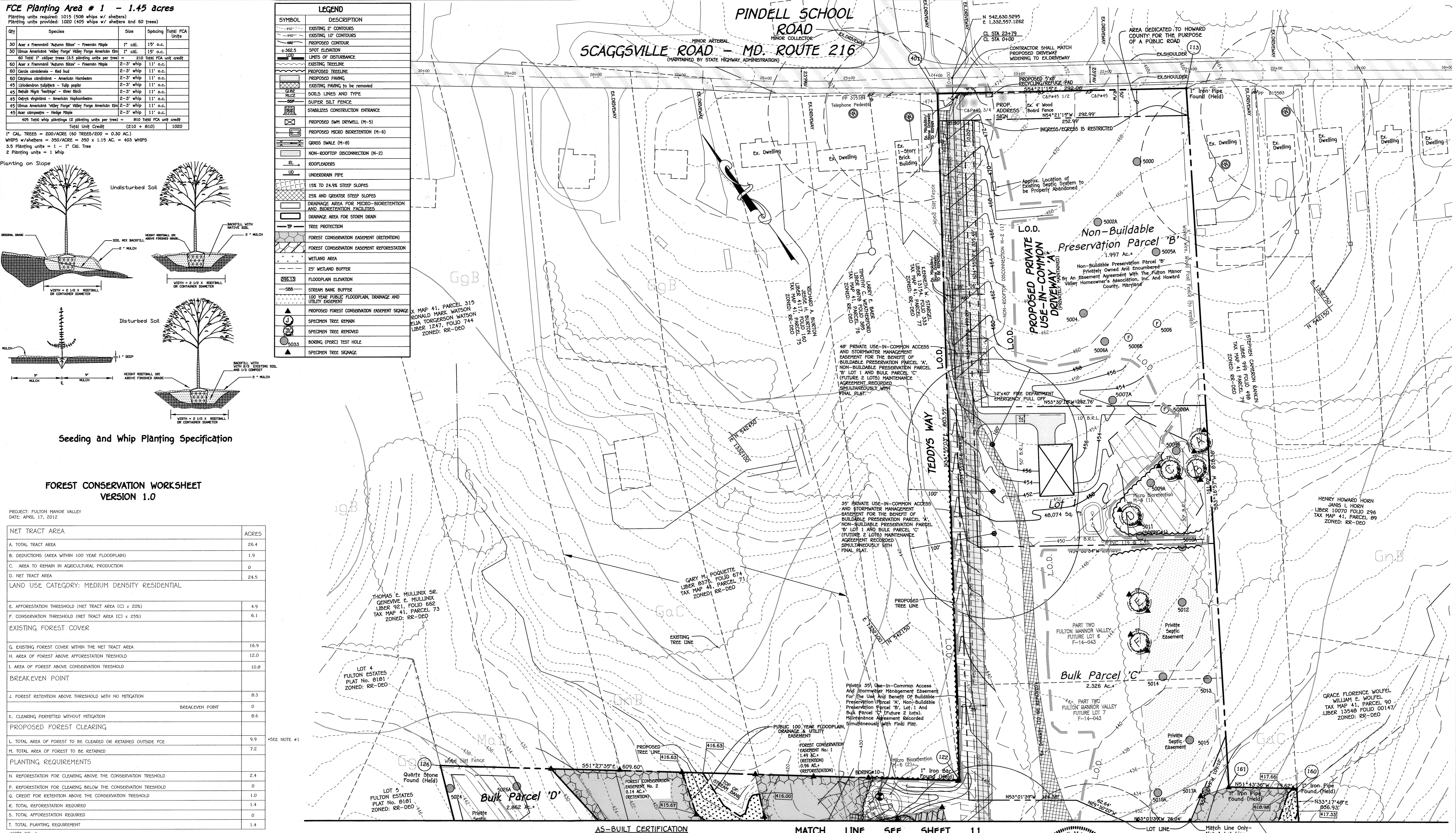
DEVELOPER
 PLEASANT PROSPECT FARM, INC.
 4401 JENNINGS CHAPEL ROAD
 DUNY, MD 20833
 ATTN: MR. DONALD E. SEWELL, JR., PRESIDENT
 443-367-0422

STATE OF MARYLAND
 PROFESSIONAL LAND SURVEYOR
 FRANK J. MANALANSAN, II, L.S. 21476
 DATE: 4-3-14

"Professional certification. I hereby certify that these documents were prepared by me and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

**FOREST CONSERVATION PLAN
FULTON MANOR VALLEY
- PART ONE**
 LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'

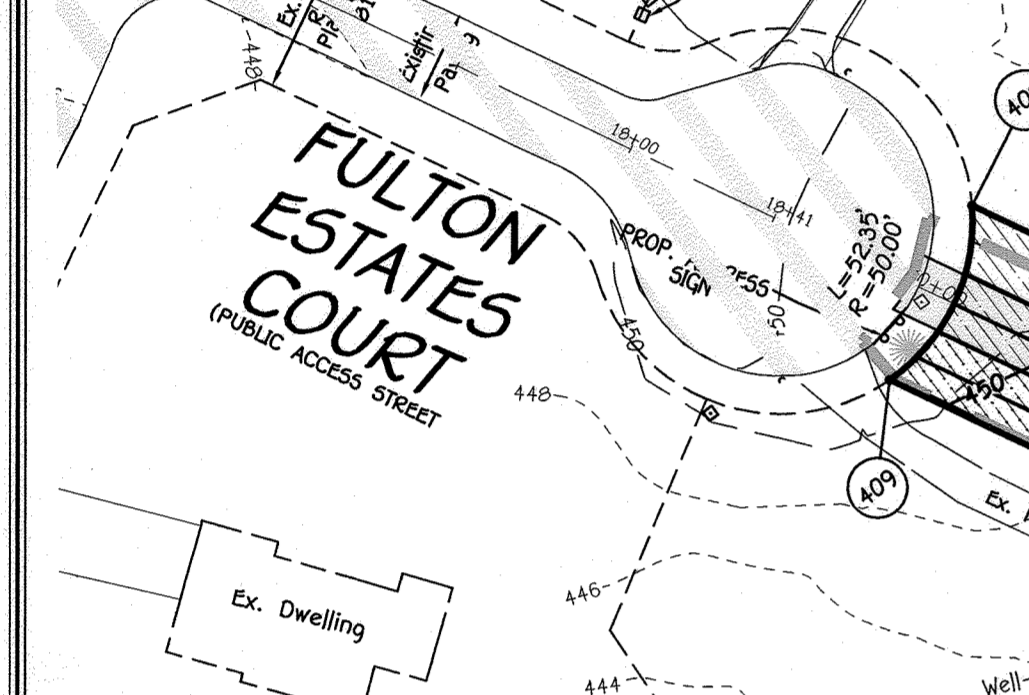
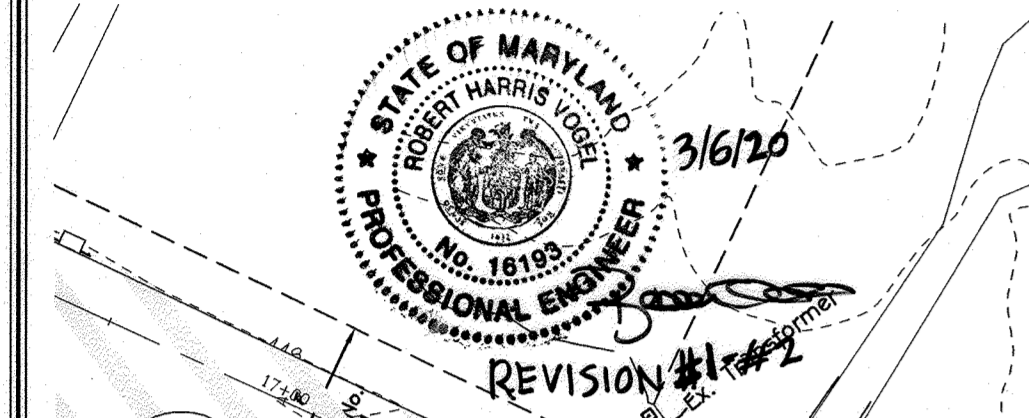
11987 ROUTE 216
 HIGHLAND, MARYLAND 20777
 ZONED: RR-DEO
 TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 1, 2014
 SHEET 10 OF 12



Wetland Data			
WETLAND SYSTEM	COWARDIN CLASSIFICATION	DOMINANT VEGETATION	ACREAGE
A	FF01A	Acer rubrum, Lindera 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.

2	VTG	REVISE THE PLAN TO REVISE THE N-2 DISCONNECTION OF NON-ROOFTOP RUNOFF ON LOT 2 AND REVISE THE GRADING ON LOTS 2 AND 3 TO SHOW AS-BUILT CONDITIONS	2-11-20
1	VTG	REVISE THE PLAN TO CORRECT THE TREE TYPES, GRADING AND SIGN ON LOTS 2, 3, 4, 5	12-6-18
	NO. BY	REVISION	DATE



SPECIMEN TREE
DO NOT REMOVE

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991.

ON-SITE SIGNAGE

NOTE: SIGNAGE SHALL BE PLACED ADJACENT TO SPECIMEN TREE AND SHALL REMAIN IN PLACE PERPETUITY

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, 35"	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, 35"	good condition	to remain
O	Liriodendron tulipifera, 34"	good condition	to remain
P	Liriodendron tulipifera, 31"	good condition	to remain

Forest Stand Data

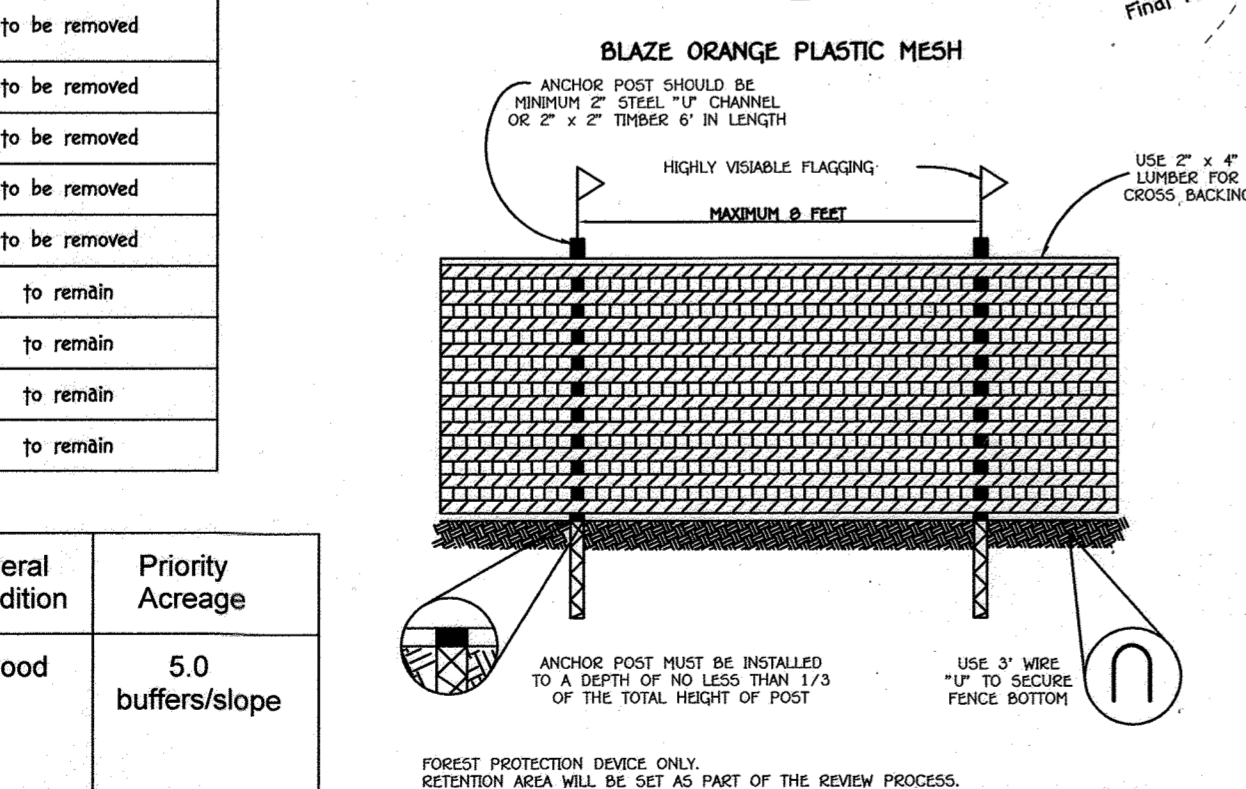
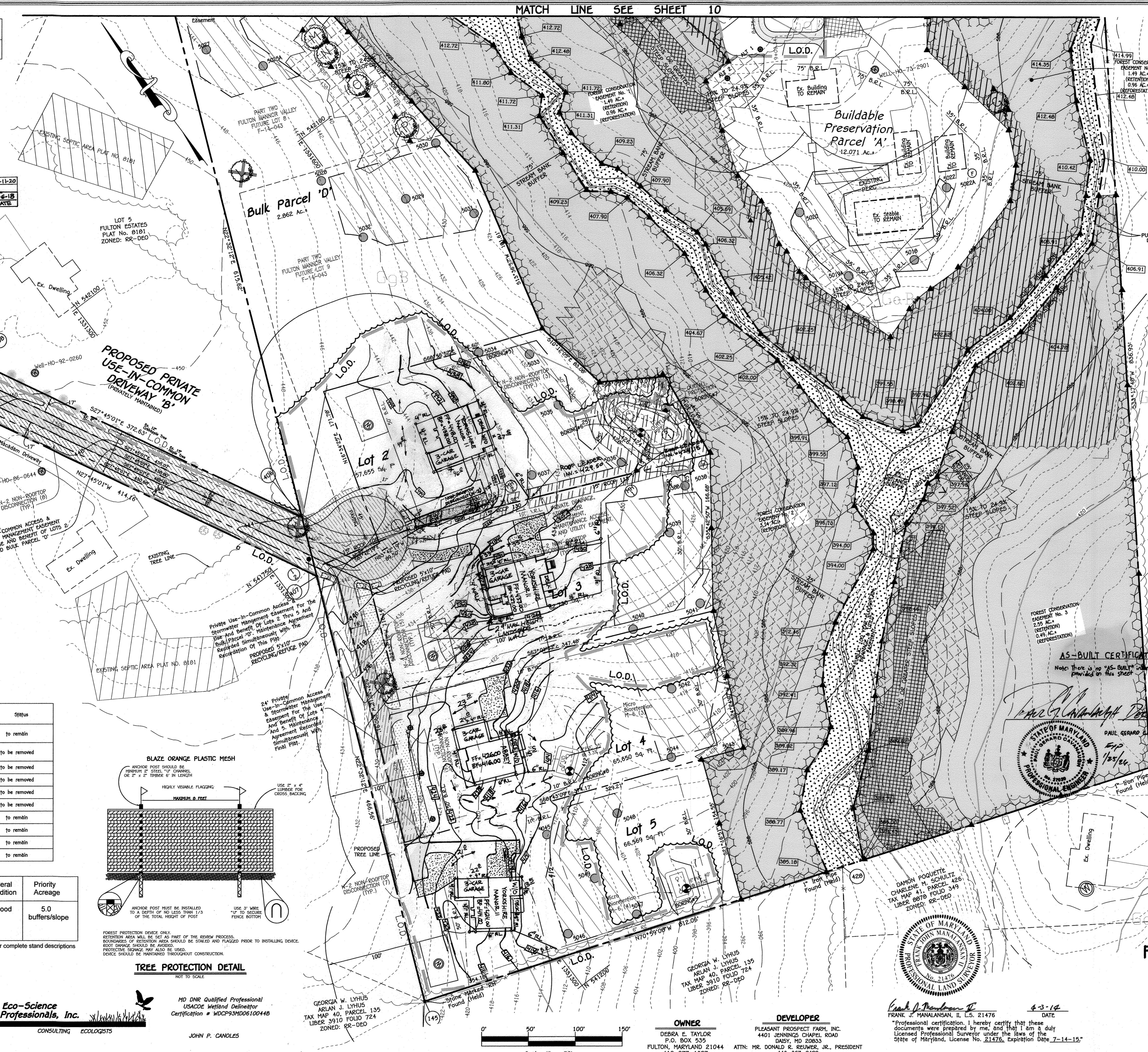
Key	Community Type	Acreage (NTA)	Dominant Vegetation	General Condition	Priority Acreage
F1	Mixed Oak-Poplar	16.9	Liriodendron tulipifera, Quercus alba, Quercus rubra, Quercus velutina, Fagus grandifolia	Good	5.0 buffers/slope

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 4-24-14

DATE: 4-23-14



TREE PROTECTION DETAIL

NOT TO SCALE

ANCHOR POST MUST BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3 OF THE TOTAL HEIGHT OF POST

USE 3" WIRE 1/2" TO SECURE FENCE BOTTOM

- PFCCP NOTES**
- Any Forest Conservation Easement (FCE) area shown herein 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 7.10 acres of forest and 1.45 acres of onsite reforestation. Total Forest Conservation Obligation = 8.6 ac.
- THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

ON-SITE SIGNAGE

FOREST CONSERVATION EASEMENT

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

TREES FOR YOUR FUTURE

LEGEND

SYMBOL	DESCRIPTION
---	EXISTING 2' CONTOURS
---	EXISTING 10' CONTOURS
---	PROPOSED CONTOUR
+	SPOT ELEVATION
---	LIMITS OF DISTURBANCE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	PROPOSED PAWING
---	EXISTING PAWING 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 (RETENTION)
---	FOREST CONSERVATION EASEMENT REFORESTATION
---	WETLAND AREA
---	25' WETLAND BUFFER
---	FLOODPLAIN ELEVATION
---	STREAM BANK BUFFER
---	100 YEAR PUBLIC FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT
---	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
---	SPECIMEN TREE REMAIN
---	SPECIMEN TREE REMOVED
---	BORING (PERC) TEST HOLE
---	SPECIMEN TREE SIGNAGE
---	EROSION CONTROL MATTING
---	EXISTING PAWING

FOREST CONSERVATION PLAN
FULTON MANOR VALLEY - PART ONE
LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'

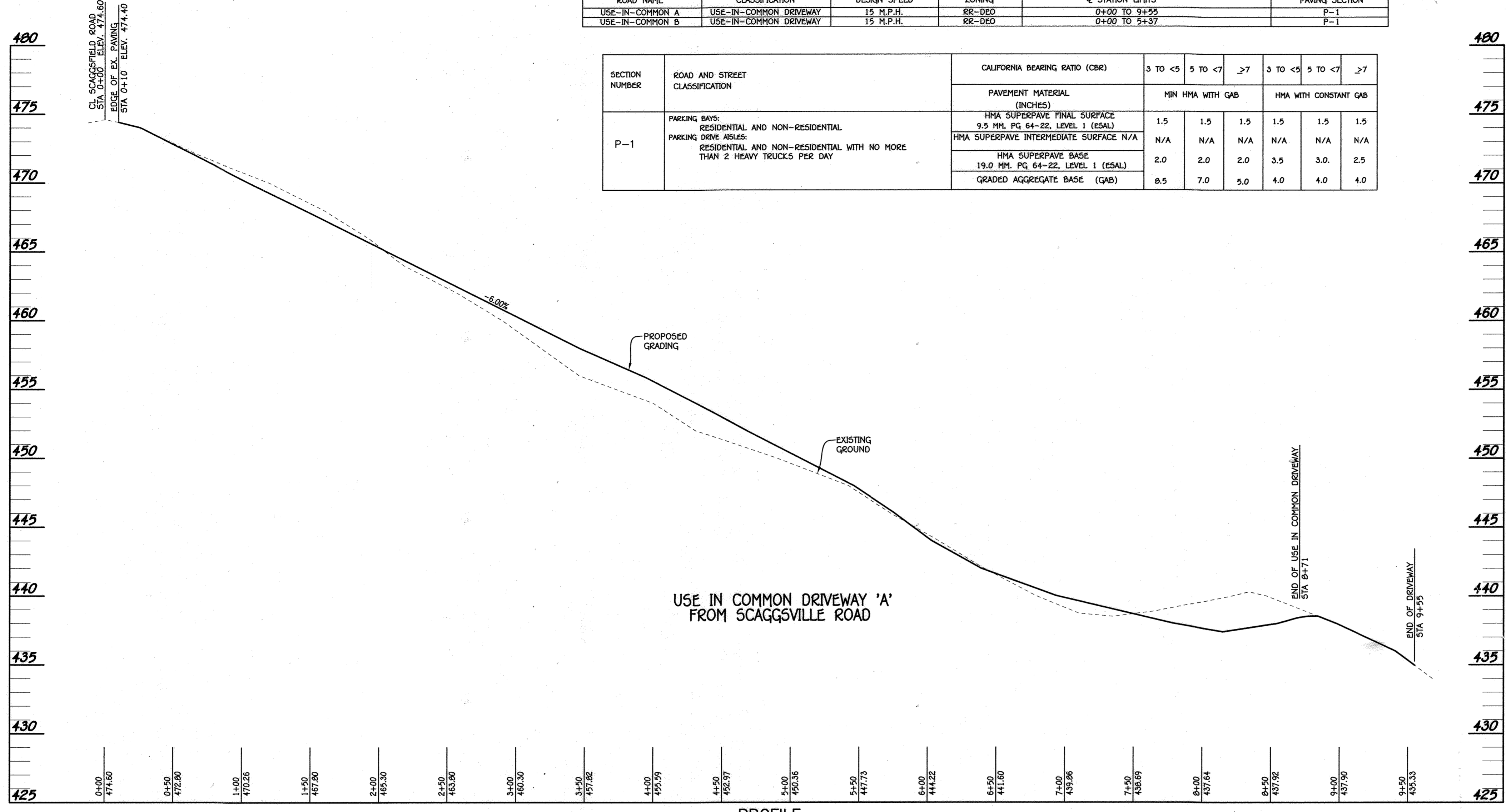
11987 ROUTE 216
HIGHLAND, MARYLAND 20777

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: APRIL 1, 2014
SHEET 11 OF 12

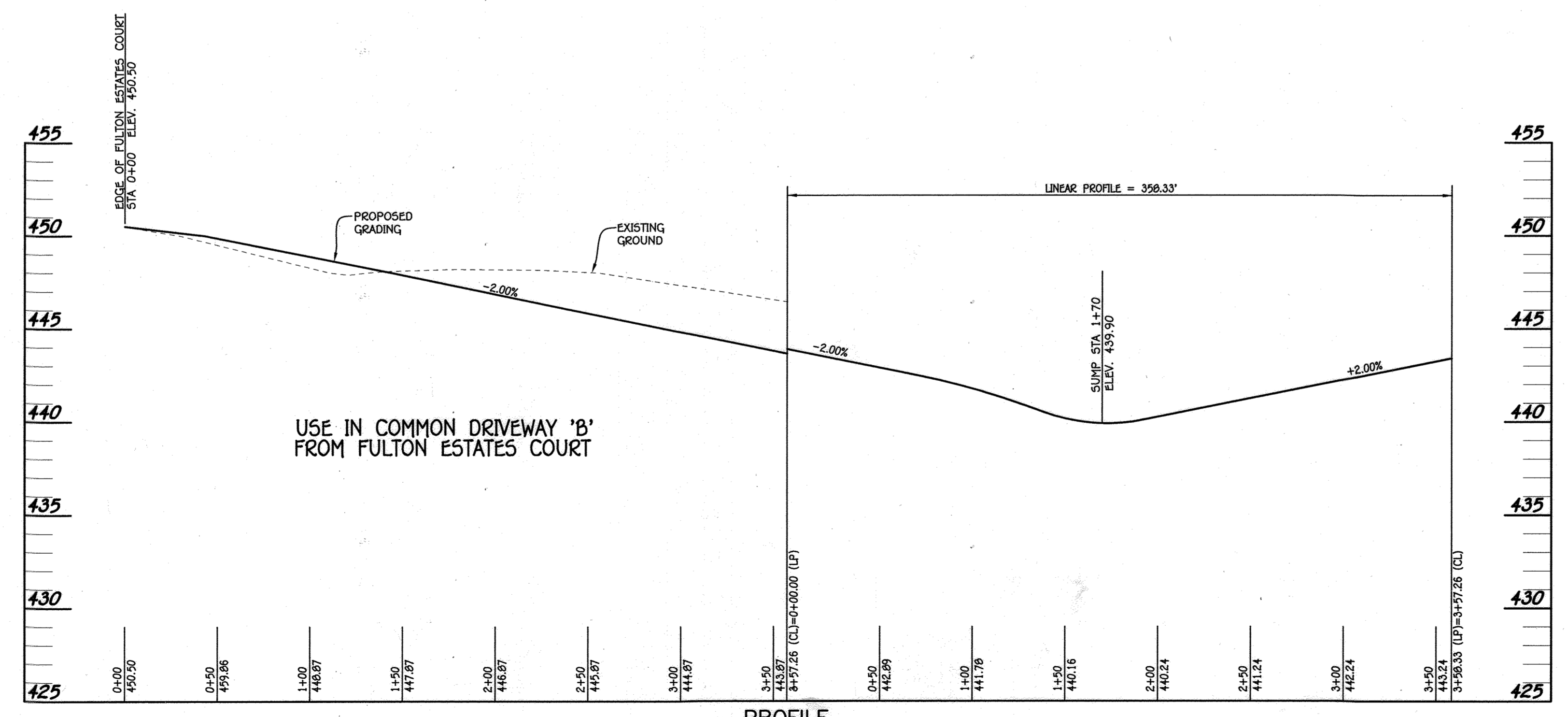
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET F-14-014

ROADWAY INFORMATION CHART					
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
USE-IN-COMMON A	USE-IN-COMMON DRIVEWAY	15 M.P.H.	RR-DEO	0+00 TO 9+55	P-1
USE-IN-COMMON B	USE-IN-COMMON DRIVEWAY	15 M.P.H.	RR-DEO	0+00 TO 5+37	P-1

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5			5 TO <7			7 TO >7		
			MIN HMA WITH GAB	HMA WITH CONSTANT GAB	MIN HMA WITH GAB	HMA WITH CONSTANT GAB	MIN HMA WITH GAB	HMA WITH CONSTANT GAB			
P-1	PARKING BAYS: RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
		HMA SUPERPAVE INTERMEDIATE SURFACE N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	3.0	2.5			
		GRADED AGGREGATE BASE (GAB)	8.5	7.0	5.0	4.0	4.0	4.0			



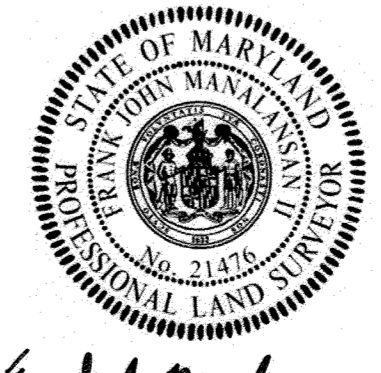
PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

LEGEND	
SYMBOL	DESCRIPTION
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---	PROPOSED FOREST CONSERVATION EASEMENT SIGNAGE
---	SPECIMEN TREE REMAIN
---	SPECIMEN TREE REMOVED
---	BORING (PERC) TEST HOLE

AS-BUILT CERTIFICATION
Note: There is no "AS-BUILT" information provided on this sheet.
Paul Gerard Cavanaugh
DATE: Dec 13 2023
PAUL GERARD CAVANAUGH #21020
PROFESSIONAL ENGINEER



USE-IN-COMMON DRIVEWAY PROFILES
FULTON MANOR VALLEY
- PART ONE
LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
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SHEET 12 OF 12

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21116
(410) 461-2955

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Neil Sanderson
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 4-24-14

Chad Edwards
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 4-23-14

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

DEVELOPER: PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DANSY, MD 20833
ATTN: MR. DONALD R. REINISZ, JR., PRESIDENT
443-367-0422

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET F-14-014