

LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- EXISTING TREE LINE
- SOIL LINES AND TYPES
- EXISTING WELL
- PROPOSED HOUSE
- 15%-24.9% SLOPES
- 25% AND GREATER SLOPE
- 1500 Sq.Ft. ALTERNATE WELL SITE
- PROPOSED PRIVATE SEWERAGE EASEMENT
- EXISTING PRIVATE SEWERAGE EASEMENT RECORD PLAT NO. 5073
- PRIVATE 24' WIDE USE-IN-COMMON DRIVEWAY ACCESS EASEMENT
- SPECIMEN TREES
- PROPOSED PERIMETER LANDSCAPE TREES

LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
38	○	ACER RUBRUM 'OCTOBER GLODY' (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, BAB

At The Time Of Plant Installation All Shrubs And Trees Listed And Approved On The Landscape Plan, Shall Comply With The Proper Height Requirement In Accordance With The Howard County Landscape Manual. In Addition, No Substitutions Or Relocations Of The Required Plantings May Be Made Without Prior Review And Approval From The Department Of Planning And Zoning. Any Deviation From The Approved Landscape Plan May Result In Denial Or Delay In The Release Of Landscape Surety Until Such Time As All Required Materials Are Planted And/Or Revision Are Made To The Applicable Plans.

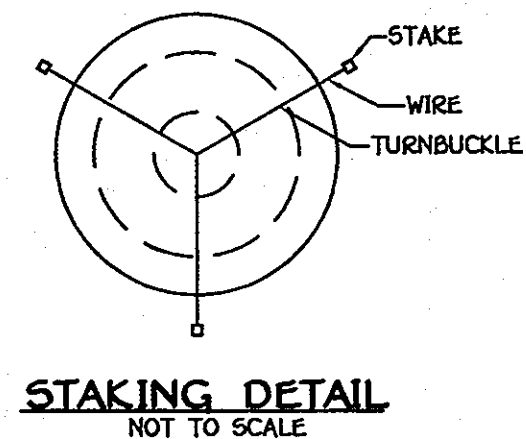
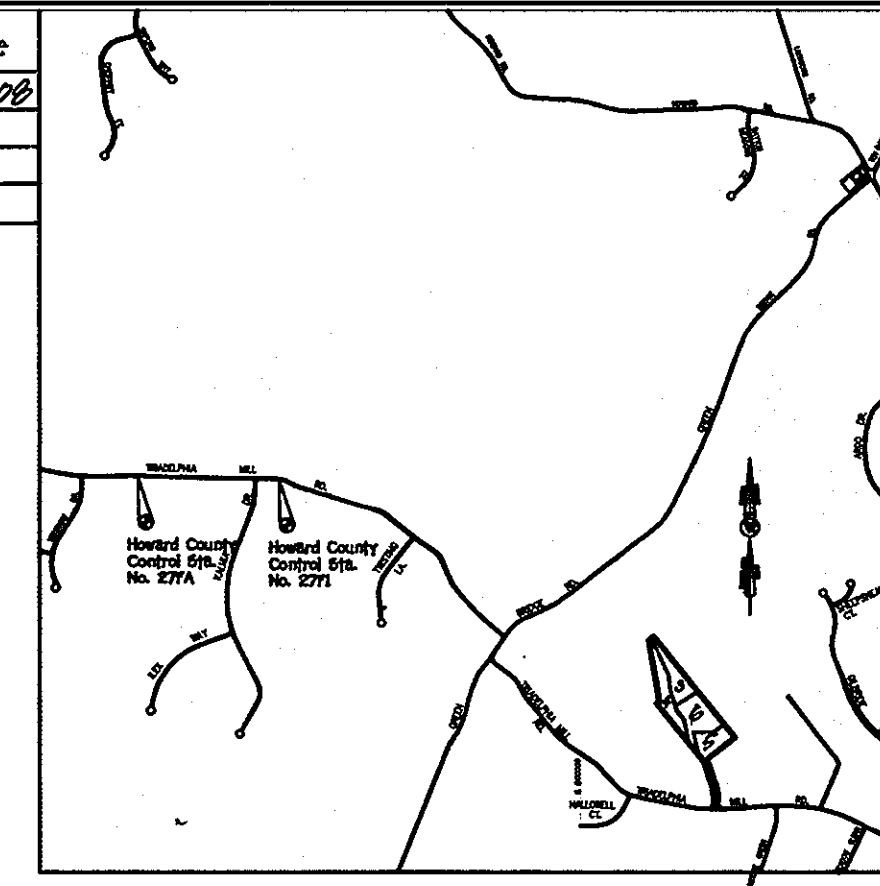
The Owner, Tenants And/Or Their Agents Shall Be Responsible For Maintenance Of The Required Landscaping Including Both Plant Materials And Berms, Fences And Walls. All Plant Materials Shall Be Maintained In Good Growing Conditions, And When Necessary, Replaced With New Materials To Ensure Continued Compliance With Applicable Regulations. All Other Required Landscaping Shall Be Permanently Maintained In Good Condition, And When Necessary, Repaired Or Replaced.

SOILS LEGEND

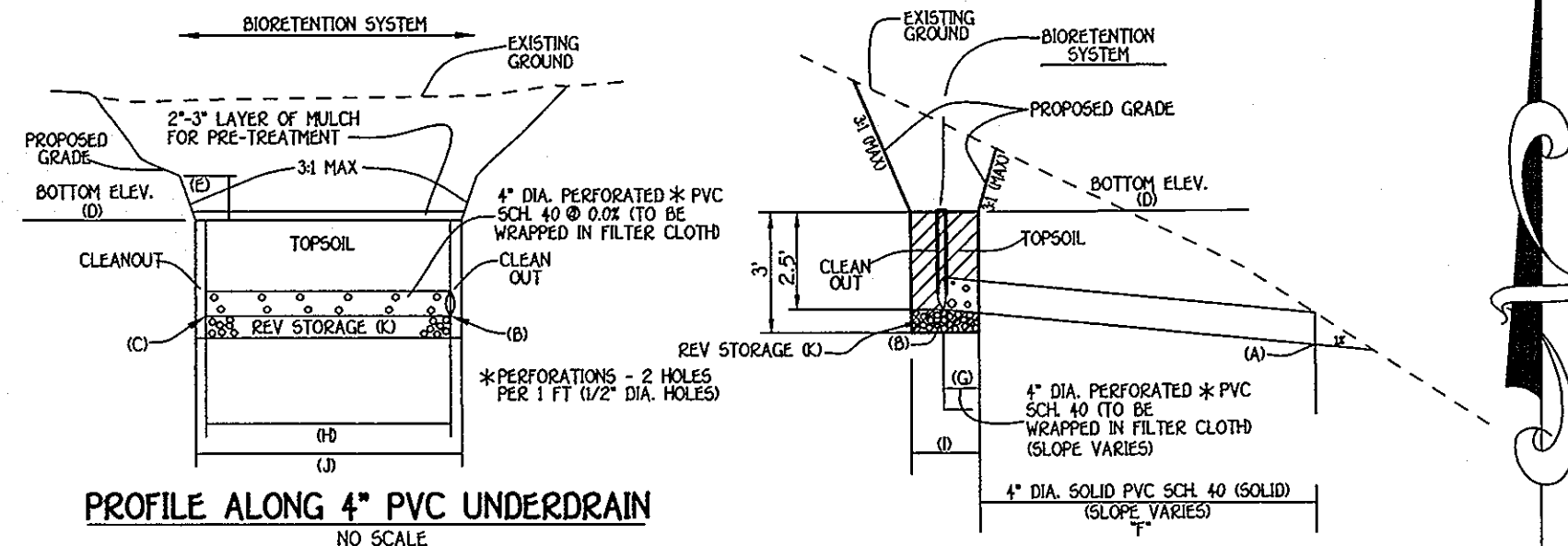
SOIL	NAME	CLASS
GIB2	Glenelg loam, 3 to 8 percent slopes, moderately eroded	B
GIC3	Glenelg loam, 8 to 15 percent slopes, severely eroded	B
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
MBE	Manor loam, 25 to 45 percent slopes	B
MB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	B

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

No.	Revision	Date
1	Relocate the common lot line between Lot 5 & 6, formerly Lots 1 & 2, remove the existing private sewer easement on Lots 5 & 6 recorded on Plat 5073, revised lot numbers in Gen. Notes 20, 21 & 24.	12-10-08

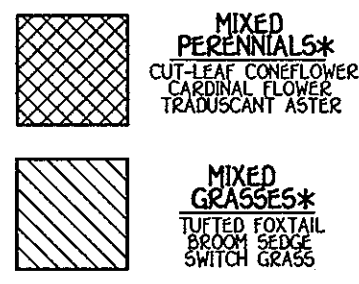


STAKING DETAIL
NOT TO SCALE



PROFILE ALONG 4" PVC UNDERDRAIN
NO SCALE

PROFILE ALONG 4" PVC OUTLET
NO SCALE



BIORETENTION FILTER PLANT MATERIAL
NO SCALE

QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	MIXED PERENNIALS	1 FT.
45	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

BIORETENTION FILTER	BIORETENTION FILTER DATA										
	A	B	C	D	E	F	G	H	I	J	K
1	605.50	606.50	N/A	599.00	599.50	59'	5'	N/A	10'	10'	100'
2	469.50	470.50	470.50	473.00	473.50	40'	5'	10'	10'	20'	100'
3	475.85	476.0	476.0	478.50	479.0	30'	5'	10'	10'	20'	100'

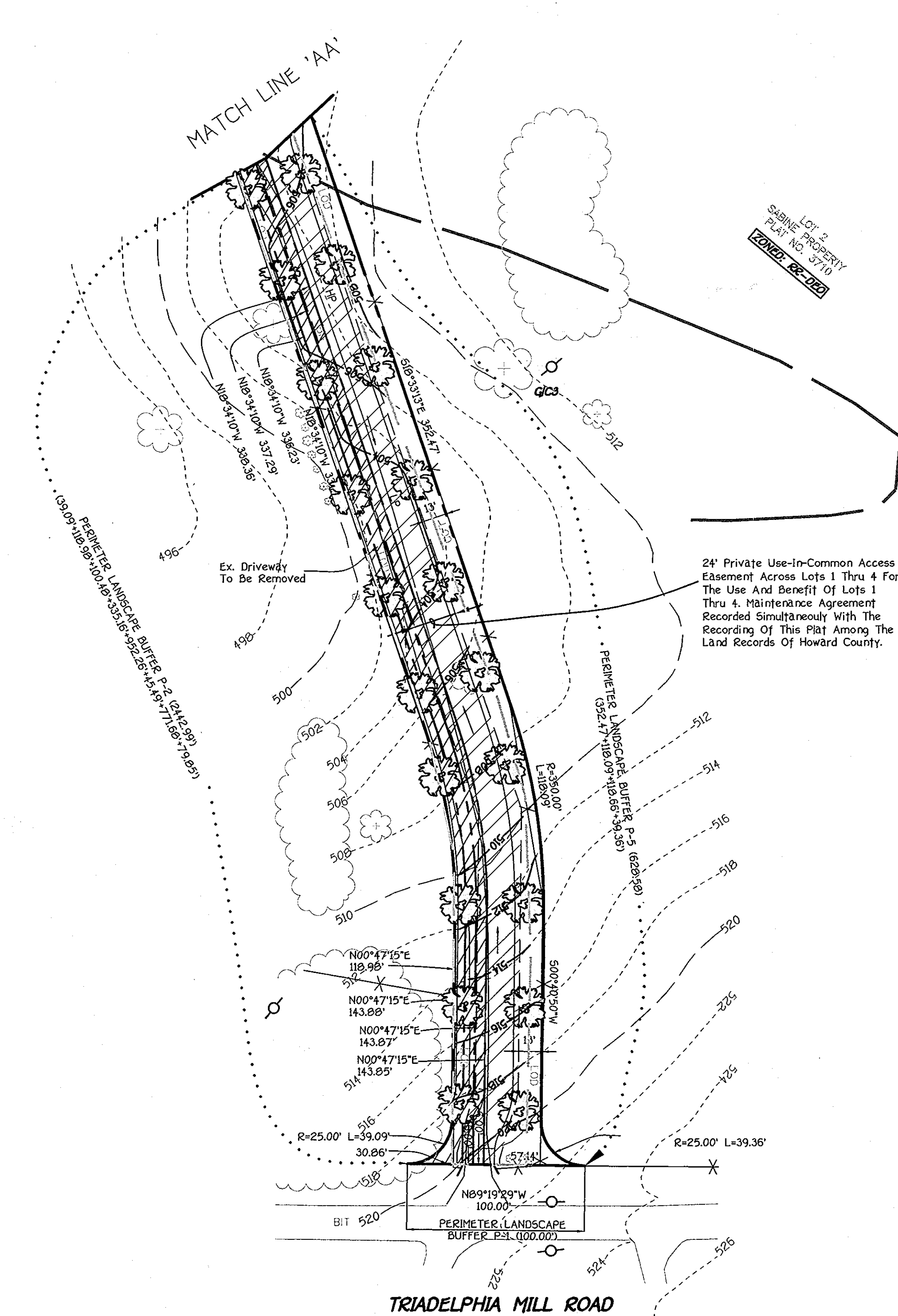
PRIVATE BIORETENTION FILTER OPERATION & MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYERS IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS REQUIRED TO PREVENT AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION AND REPLACEMENT OF ALL DEFICIENT PLANTS AND WEEDS.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER. CHECK EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

BIORETENTION FILTER PLANTING DETAIL
NOT TO SCALE

TREE PLANTING
NOT TO SCALE

GRADING FOR PLANTING ON SLOPES
NOT TO SCALE



TRIADELPHIA MILL ROAD

PERIMETER	SCHEDULE A - PERIMETER LANDSCAPE EDGE					TOTALS
	P-1 ADJACENT TO ROADWAY	P-2 ADJACENT TO PERIMETER PROPERTIES	P-3 ADJACENT TO PERIMETER PROPERTIES	P-4 ADJACENT TO PERIMETER PROPERTIES	P-5 ADJACENT TO PERIMETER PROPERTIES	
CATEGORY						
LANDSCAPE TYPE	NONE	A	A	A	A	
LINEAR FEET OF PERIMETER	100.00 L.F.	2442.99' L.F.	1631.99' L.F.	445.22 L.F.	628.50 L.F.	
CREDIT FOR EXISTING VEGETATION (NO, YES AND 2)	NO	YES (462.02')	YES (995'+150')	YES (65.0')	NO	YES 46
CREDIT FOR WALL, FENCE OR BERM (NO, YES AND 2)	NO	NO	NO	NO	NO	
NUMBER OF TREES REQUIRED		2442.99'/TREE= 40	1631.99'/TREE= 27	(445.22'/TREE= 7)	(628.50'/TREE= 10)	84
SHADE TREES	0	40	27	7	10	0
EVERGREEN TREES	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED		40+24 CREDIT= 16	27+09 CREDIT= 8	7+3 CREDIT= 4	10	38
SHADE TREES	0	0	0	0	0	0
EVERGREEN TREES	0	0	0	0	0	0

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- LOT 1 - LANDSCAPE SURETY IN THE AMOUNT OF \$4200.00 (4 SHADE TREES @ 300/EA)
LOT 4 - LANDSCAPE SURETY IN THE AMOUNT OF \$4800.00 (6 SHADE TREES @ 300/EA)
LOT 3 - LANDSCAPE SURETY IN THE AMOUNT OF \$2400.00 (8 SHADE TREES @ 300/EA)

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion of Certification of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Neal A. Phelps
Date: 9/18/07
Linda Westland Phelps
Date: 9/18/07



OWNER/DEVELOPER

Neal A. Phelps & Linda Westland Phelps
13760 Triadelphia Mill Road
Clarksville, Maryland 21029-1022
(410) 531-7908



SUPPLEMENTAL PLAN, STORMWATER MANAGEMENT, FOREST CONSERVATION, LANDSCAPE TOPOGRAPHIC AND SOILS

Phelps Estates
LOTS 3 THRU 6
(A RESUBDIVISION OF LOT 7, SABINE PLAT NO. 5073)

TAX MAP #28
3RD ELECTION DISTRICT
SCALE: 1" = 50'
SHEET 1 OF 3

PARCEL: 300
HOWARD COUNTY, MARYLAND
DATE: September 16, 2007

F-07-030

PLANTING SCHEDULE

FCE # 1 - 2.00 acres
 Planting units Required 1400
 Planting units Provided 1400

Qty	Species	Size	Spacing	Total FCA Units
100	Acer rubrum - Red maple	2-3" whip	11' o.c.	
25	Diospyros virginiana - Persimmon	2-3" whip	11' o.c.	
150	Liriodendron tulipifera - Tulip poplar	2-3" whip	11' o.c.	
50	Prunus serotina - Black cherry	2-3" whip	11' o.c.	
90	Platanus occidentalis - Sycamore	2-3" whip	11' o.c.	
100	Fraxinus americana - White oak	2-3" whip	11' o.c.	
60	Ulmus rubra - Slippery Elm	2-3" whip	11' o.c.	
75	Viburnum prunifolium - Blackhaw	2-3" whip	11' o.c.	
700				1400
Total whip plantings x 2 whip Price = FCA unit credit				1400

**FOREST CONSERVATION WORKSHEET
 VERSION 1.0**

BASIC SITE DATA:		
A. TOTAL TRACT AREA		15.5 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN		0
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION		75.8 AC
D. NET TRACT AREA		75.8 AC
LAND USE CATEGORY: (from table 3.2.1, page 40, H99a8)		
AREA	HDG	IDA HDR HPD CIA
INFORMATION FOR CALCULATIONS:		
E. AFFORESTATION THRESHOLD	0.25 x D =	3.36
F. FOREST CONSERVATION THRESHOLD	0.25 x D =	3.92
EXISTING FOREST COVER:		
G. EXISTING FOREST COVER EXCLUDING FLOODPLAIN		6.6
H. AREA OF FOREST ABOVE REFORESTATION THRESHOLD		3.44
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD		2.62
PLANTING REQUIREMENTS:		
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION		0.53
K. CLEARING PERMITTED WITHOUT MITIGATION	BREAK-EVEN POINT	4.48
L. TOTAL AREA OF FOREST TO BE CLEARED		3.32
M. TOTAL AREA OF FOREST TO BE RETAINED		3.20
PLANTING REQUIREMENTS:		
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD		0.66
O. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD		1.34
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD		2.20
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD		0
R. TOTAL REFORESTATION REQUIRED		2.0
S. TOTAL AFFORESTATION REQUIRED		0
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED		2.0

FCP NOTES

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT, NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- 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.
- THESE 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 FORESTED AREAS.
- 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 BOUNDARIES OF ALL AREAS INCLUDED IN THE FOREST CONSERVATION OBLIGATION OF 2.0 ACRES PLANTING TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOREST CONSERVATION ACT IS PROVIDED BY OFF-SITE PLANTING ON PROPERTY OF HOBART MULLINEUX, TAX MAP 6, GRID B, TAX PARCEL NO. 15, A FOREST CONSERVATION SURETY IN THE AMOUNT OF \$43,560.00 BASED ON 2.0 ACRES X \$43,560.00/ACRES X \$0.50/ACRES WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT ASSOCIATED WITH PHELPS ESTATES RECORDED PLAT #7-07-30.
- THE UNENCUMBERED AREA OF WETLAND AND STREAM BUFFER BETWEEN THE EXISTING AND PROPOSED EASEMENT AREAS IS MAINTAINED AS ACCESS FOR FARM EQUIPMENT.

MULTIFLORA ROSE CONTROL NOTE:

PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. REMOVAL OF THE ROSE MAY BE PERFORMED WITH MOWING AND HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWING BY A PERIODIC HERBICIDE TREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN THE ROSE THICKETS SHOULD BE RETAINED WHEREVER POSSIBLE. HERBICIDE TREATMENTS SHALL OCCUR ON 2 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR SUBSEQUENT YEARS. HERBICIDE USED SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS. CARE SHOULD BE TAKEN NOT SPRAY PLANTED TREES OR NATURALLY OCCURRING NATIVE TREE/SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING.

PLANTING NOTES:

PLANTING DENSITY BASED ON 700 PLANTING UNITS PER ACRE. 2" CALIPER TREES = 7 PLANTING UNITS, 1" CALIPER TREES = 3.5 PLANTING UNITS, WHIPS WITH SHELTER = 2 PLANTING UNITS.

1" CALIPER TREES SHOULD BE STAGGERED ALONG THE OUTER PERIMETER OF THE PLANTING AREA TO SERVE AS DEMARCATION OF THE BOUNDARY. THE TREES SHOULD BE NO CLOSER THAN 15 FOOT SPACING.

PLANTING SHALL BE MADE IN A CURVILINEAR FASHION ALONG CONTOUR. THE PLANTING SHOULD AVOID A GRID APPEARANCE BUT SHOULD BE SPACED TO FACILITATE MAINTENANCE.

MULTIFLORA ROSE/HEAVY BRUSH REMOVAL/CONTROL MAY BE REQUIRED PRIOR TO INSTALLATION OF PLANTING.

ALL WHIPS ARE REQUIRED TO BE INSTALLED WITH TREE SHELTERS PER HOWARD COUNTY FCA REQUIREMENTS.

PLANTING/SOIL SPECIFICATIONS

- PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15th AND APRIL 30th OR SEPTEMBER 15th AND NOVEMBER 15th.
- A TWELVE (12) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL FORESTATION AREAS IMPACTED BY SITE GRADING TO ASSURE A SUITABLE PLANTING AREA. DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL HAVE NO ADDITIONAL TOPSOIL INSTALLED.
- ALL BARE-ROOT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED INTO AN ANTI-DESICCANT GEL PRIOR TO PLANTING.
- PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. BACKFILL IN THE PLANTING PITS SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART FINE FINES OR EQUIVALENT.
- FERTILIZER SHALL CONSIST OF AGRIFORM 22-0-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S SPECIFICATIONS.
- A TWO (2) INCH LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANTINGS.
- PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.
- ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

- SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE GRADED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLANS.
- PROPOSED FORESTATION AREAS IMPACTED BY SITE GRADING SHALL BE TOPSOILED AND STABILIZED AS PER NOTE NO. 2 OF PLANTING/SOIL SPECIFICATIONS FOR PROJECT.
- PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND THE PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.
- UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.
- PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

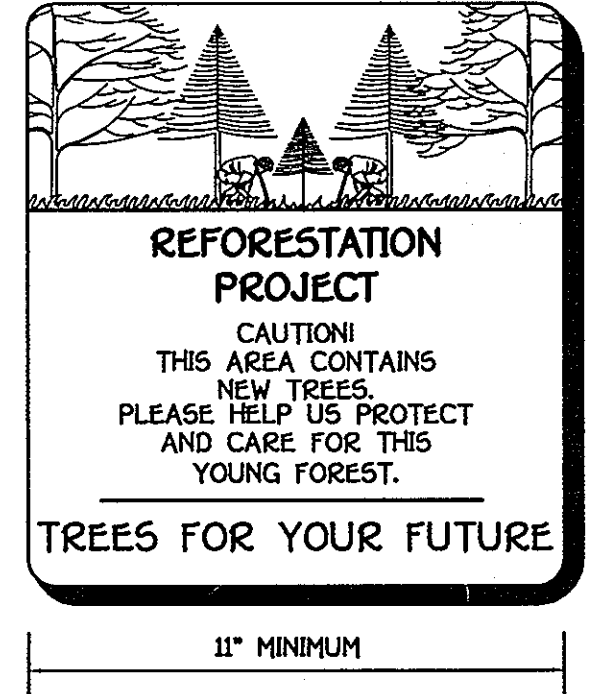
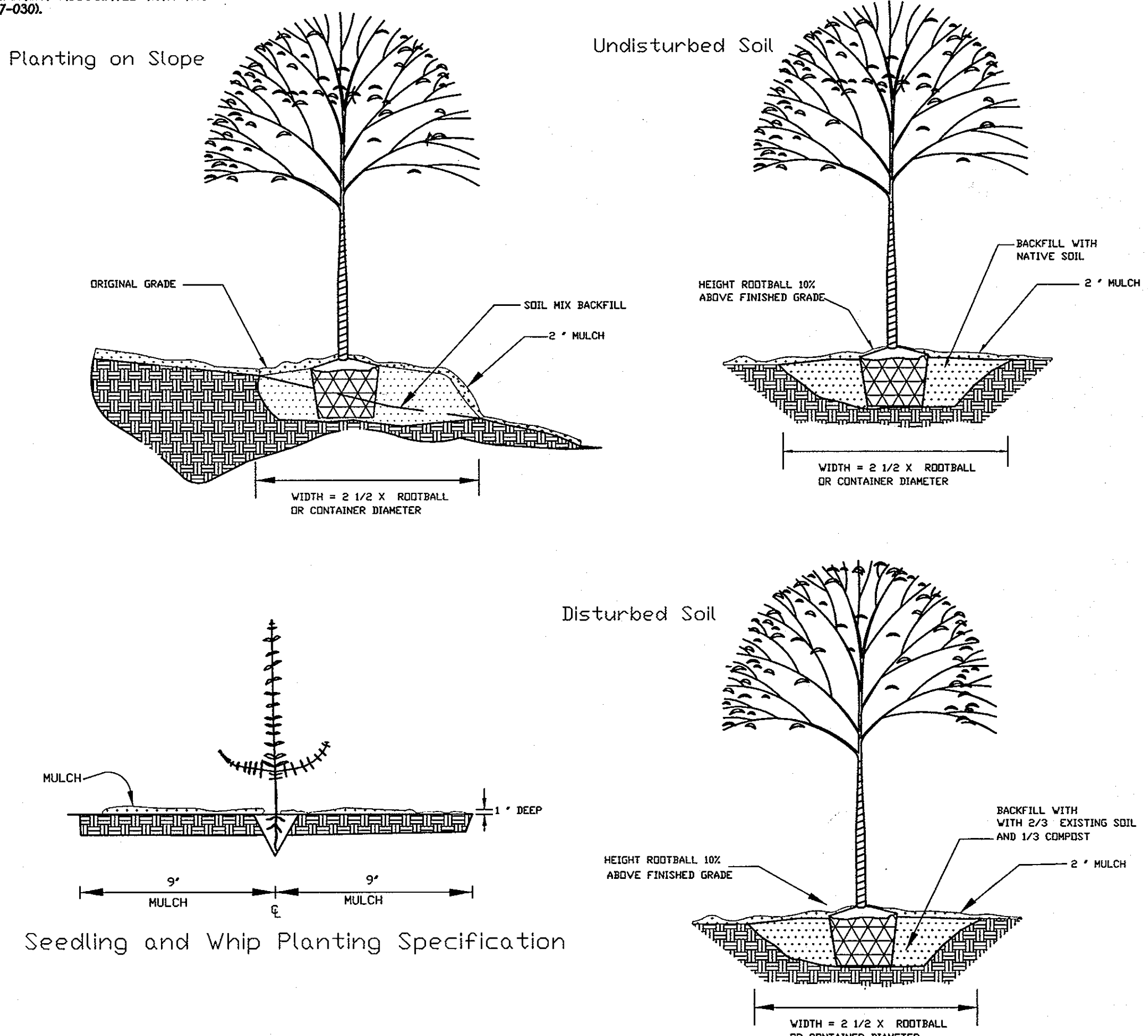
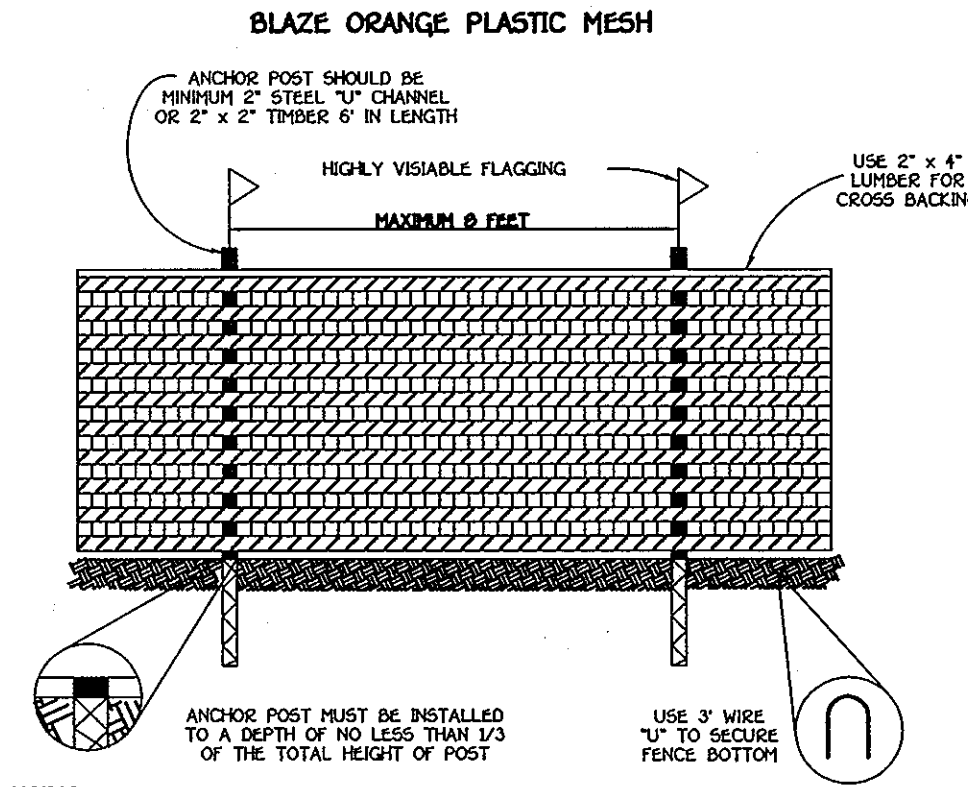
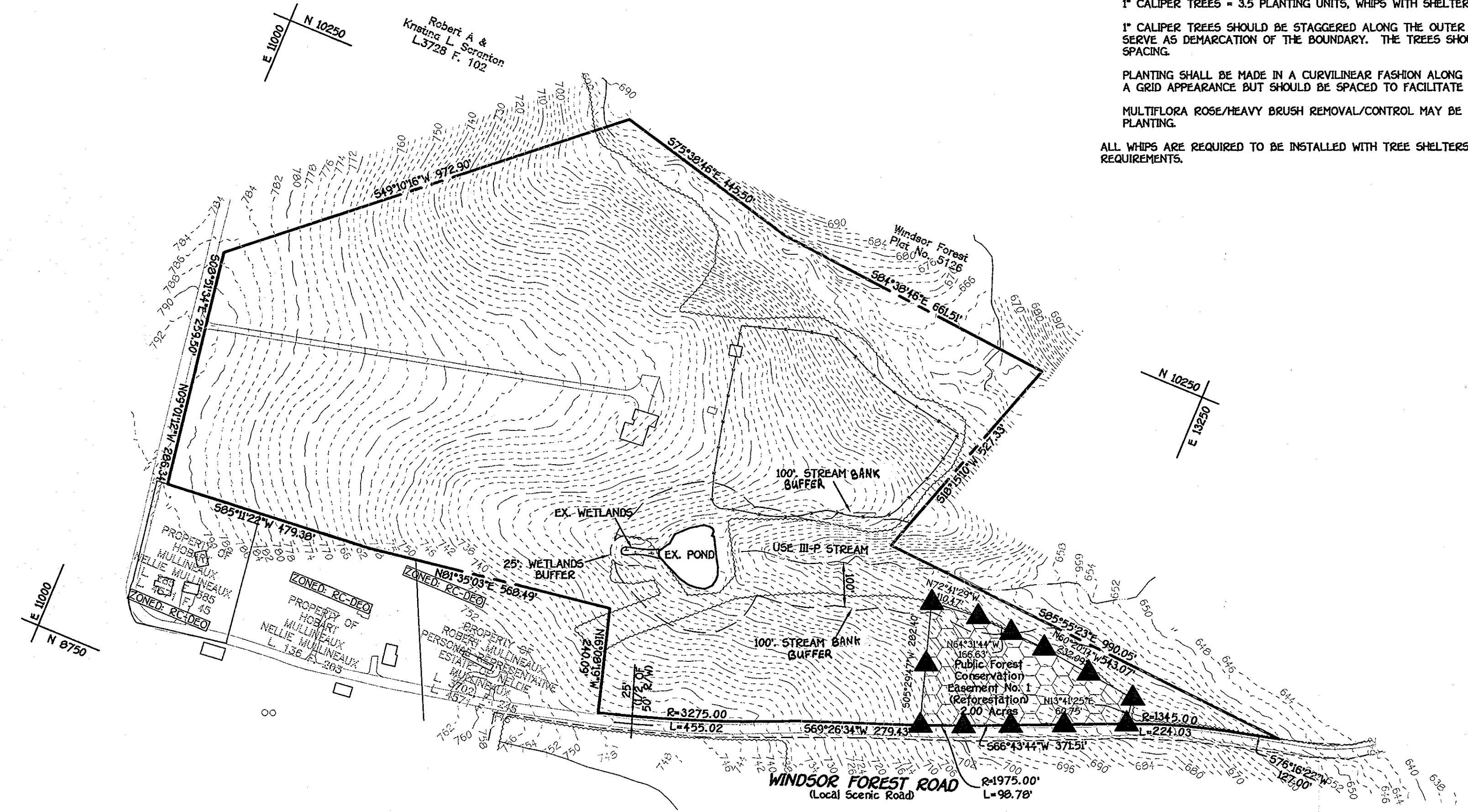
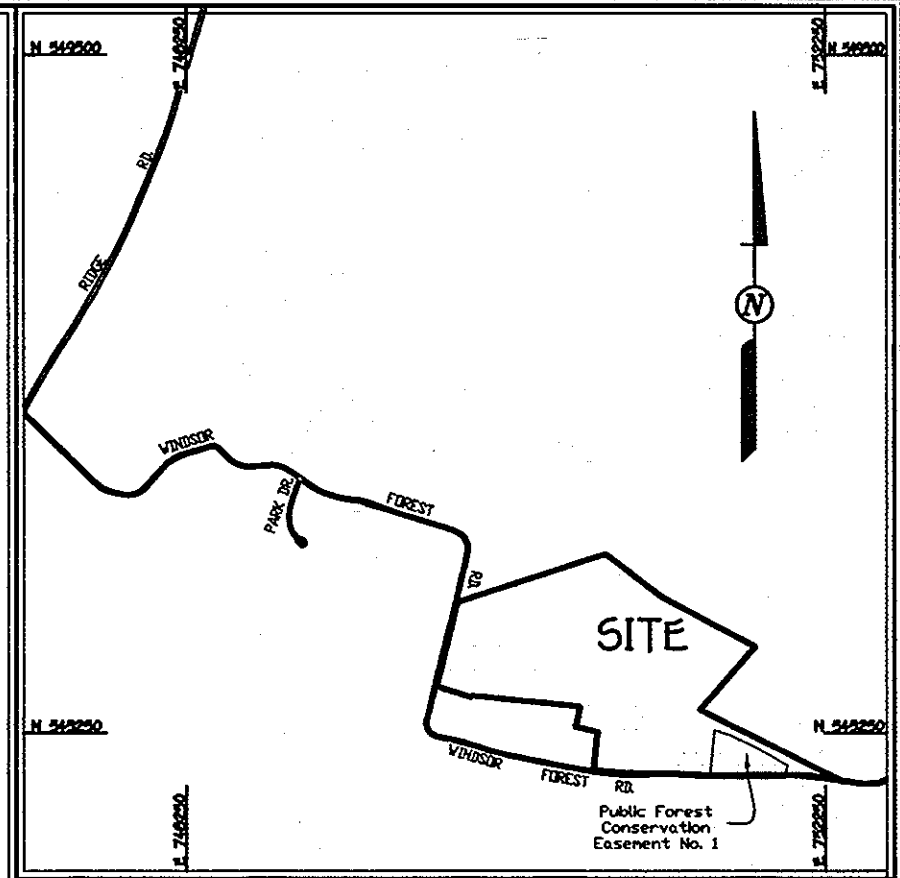
- MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF 26 MONTHS.
- ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1st GROWING SEASON. WATERING MAY BE MORE OR LESS FREQUENT DEPENDING ON WEATHER CONDITIONS. DURING 2nd GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.
- INVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED FROM FORESTATION AREAS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.
- PLANTS WILL BE EXAMINED A MINIMUM TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.
- DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS

- A 75 PERCENT SURVIVAL RATE OF FORESTATION PLANTINGS WILL BE REQUIRED AT THE END OF THE 24 MONTH MAINTENANCE PERIOD. ALL PLANT MATERIAL BELOW THE 75 PERCENT THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON.

SURETY FOR REFORESTATION

- THE DEVELOPER SHALL POST A SURETY (BOND, LETTER OF CREDIT) TO ENSURE THAT REFORESTATION PLANTINGS ARE COMPLETED, UPON ACCEPTANCE OF THE PLANTINGS BY THE COUNTY. THE BOND SHALL BE RELEASED.
- SURETY FOR OFF-SITE REFORESTATION (2.0 AC. X \$43,560/AC. X 0.50/Sq.Ft. = \$43,560.00) IS POSTED WITH THE DEVELOPER'S AGREEMENT ASSOCIATED WITH THE PHELPS ESTATES RECORDED PLAT #7-07-30.



**OFF-SITE REFORESTATION PLAN
 FOREST CONSERVATION PLAT OF EASEMENT
 HOBART MULLINEUX PROPERTY
 TAX MAP 6, GRID B, PARCEL 15
 FOURTH ELECTION DISTRICT
 ZONED: RC-DEO
 REFORESTATION PLANTING PLAN
 NOTES AND SPECIFICATIONS**

OFF-SITE FOREST REFORESTATION TABULATION

REFORESTATION EASEMENT NUMBERS	F.C.E. NO. 1
REFORESTATION EASEMENT AREA	2.00 AC.
OFF-SITE SUBDIVISION REFORESTATION OBLIGATION	PHELPS ESTATES (7-07-030) TH. #28, GRID 19, PAR. #300 LIBER 8228, FOLIO 653

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/24/07 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 10/18/07 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACOE Wetland Delineator
 Certification # WDCP93400610048
 [Signature]
 JOHN P. CANOLES

PHELPS ESTATES
 OWNER/DEVELOPER
 Neal A. Phelps & Linda Westland Phelps
 13750 Tridaphnia Hill Road
 Clarksville, Maryland 21029-1022
 (410) 531-7908

HOBART MULLINEUX PROPERTY
 OWNER
 Robert Arthur Scranton
 10950 Windsor Forest Road
 Mount Airy Maryland, 21771
 410-549-1669

DATE: OCTOBER 10, 2007
 SHEET 3 OF 3