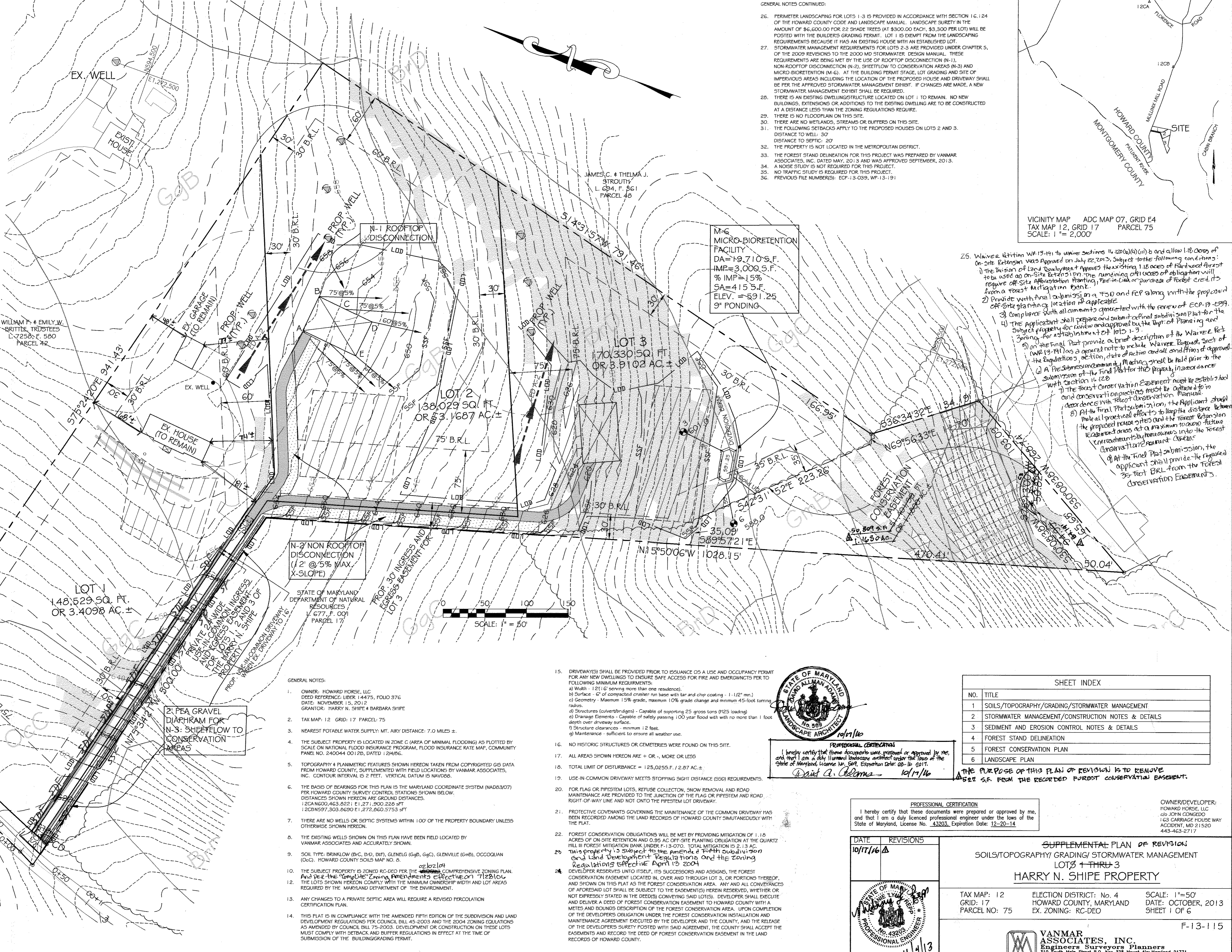


Practice	Area Treated	Methodology	Volume (ESDv)
N-1: Rooftop Disconnection (75' @ 5%)	A-C&F (Lot 2) 2000	ESDv=P <sub>r</sub> R <sub>v</sub> DA/12 where P <sub>r</sub> =1.0' & R <sub>v</sub> =0.95	222 cft
N-1: Rooftop Disconnection (60' @ 5%)	D-E (Lot 2) 1000	ESDv=P <sub>r</sub> R <sub>v</sub> DA/12 where P <sub>r</sub> =0.8' & R <sub>v</sub> =0.95	64 cft
N-2: Non Rooftop Disconnection	8,630	ESDv=P <sub>r</sub> R <sub>v</sub> DA/12 where P <sub>r</sub> =1.0' & R <sub>v</sub> =0.95	585 cft
N-3: Sheetflow to Conservation Area	2,940	ESDv=P <sub>r</sub> R <sub>v</sub> DA/12 where P <sub>r</sub> =1.0' & R <sub>v</sub> =0.95	233 cft
M-6: Micro-Bioretenion	19,710	Storage above filter media	311 cft
		Total ESDv Provided =	1,415 cft
		ESDv Required =	1,391 cft

ESDv (cft)	P <sub>r</sub> (in)	CPV (cft)	Q10	Q100
Required	1,391	1	n/a	n/a
Provided	1,415	1	n/a	n/a

SITE ANALYSIS DATA SHEET	ACRES
PROPOSED SITE USE	RESIDENTIAL
WETLANDS BUFFER	0.00
FLOODPLAIN	0.00
FORESTS	1.18
STEEP SLOPES (15-24%)	2.27
STEEP SLOPES (25% OR GREATER)	0.35
TOTAL PROJECT AREA	10.64
LOD AREA	9.35
GREEN OPEN SPACE AREA	0.29
EX. IMPERVIOUS AREA	0.40
PROP. IMPERVIOUS AREA	3.33

APPROVED  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development  
 DATE 11/26/13

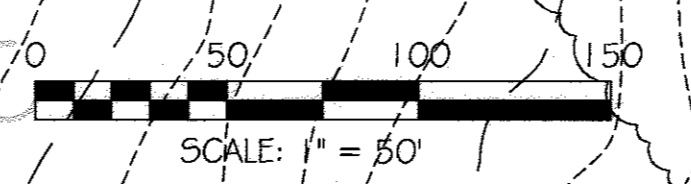


- GENERAL NOTES CONTINUED:
- PERIMETER LANDSCAPING FOR LOTS 1-3 IS PROVIDED IN ACCORDANCE WITH SECTION 16.1.24 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. LANDSCAPE SURETY IN THE AMOUNT OF \$6,000.00 FOR 22 SHADE TREES (AT \$300.00 EACH, \$3,300 PER LOT) WILL BE POSTED WITH THE BUILDERS GRADING PERMIT. LOT 1 IS EXEMPT FROM THE LANDSCAPING REQUIREMENTS BECAUSE IT HAS AN EXISTING HOUSE WITH AN ESTABLISHED LOT.
  - STORMWATER MANAGEMENT REQUIREMENTS FOR LOTS 2-3 ARE PROVIDED UNDER CHAPTER 5, OF THE 2009 REVISIONS TO THE 2000 MD STORMWATER DESIGN MANUAL. THESE REQUIREMENTS ARE BEING MET BY THE USE OF ROOFTOP DISCONNECTION (N-1), NON-ROOFTOP DISCONNECTION (N-2), SHEETFLOW TO CONSERVATION AREAS (N-3) AND MICRO-BIORETENTION (M-6). AT THE BUILDING PERMIT STAGE, LOT GRADING AND SITE OF IMPERVIOUS AREAS INCLUDING THE LOCATION OF THE PROPOSED HOUSE AND DRIVEWAY SHALL BE PER THE APPROVED STORMWATER MANAGEMENT EXHIBIT. IF CHANGES ARE MADE, A NEW STORMWATER MANAGEMENT EXHIBIT SHALL BE REQUIRED.
  - THERE IS AN EXISTING DWELLING/STRUCTURE LOCATED ON LOT 1 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS REQUIRE.
  - THERE IS NO FLOODPLAIN ON THIS SITE.
  - THERE ARE NO WETLANDS, STREAMS OR BUFFERS ON THIS SITE.
  - THE FOLLOWING SETBACKS APPLY TO THE PROPOSED HOUSES ON LOTS 2 AND 3:  
 DISTANCE TO WELL: 30'  
 DISTANCE TO SEPTIC: 20'
  - THE PROPERTY IS NOT LOCATED IN THE METROPOLITAN DISTRICT.
  - THE FOREST STAND DELINEATION FOR THIS PROJECT WAS PREPARED BY VANMAR ASSOCIATES, INC. DATED MAY, 2013 AND WAS APPROVED SEPTEMBER, 2013.
  - A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
  - NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
  - PREVIOUS FILE NUMBERS: ECF-13-039, WF-13-191

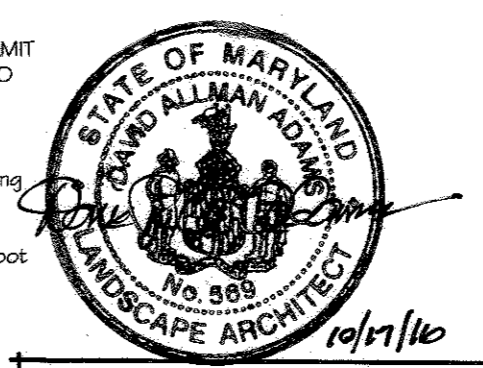
VICINITY MAP ADC MAP 07, GRID E4  
 TAX MAP 12, GRID 17 PARCEL 75  
 SCALE: 1" = 2,000'

25. Waiver letter WA-13-191 to waive sections 16.12(b)(4)(ii) and allow 1.18 acres of on-site retention was approved on July 22, 2013. Subject to the following conditions:  
 1) The Division of Land Development approves the existing 1.18 acres of hard wood forest to be used as on-site retention on the remaining 0.11 acres of application will require off-site mitigation planting, fee-in-lieu or purchase of forest credits from a forest mitigation bank.  
 2) Provide with the application a FSD and FCP along with the proposed off-site planting location if applicable.  
 3) Compliance with all comments generated with the review of ECF-13-191.  
 4) The applicant shall prepare and submit a final subdivision plat for the subject property for review and approval by the Dept. of Planning and zoning for establishment of lots 1-3.  
 5) On the final plat provide a brief description of the Waiver. Request, Section 16.12(b) as a general note to include Waiver Request, Section of the Regulations, Action, date of action and all conditions of approval.  
 6) A Submittal Agreement Meeting shall be held prior to the submission of the Final Plat for this property in accordance with section 16.12(b).  
 7) The Forest Conservation Easement must be established in accordance with Forest Conservation Manual.  
 8) At the final plat submission, the applicant shall include all practical effects to the forest retention. The proposed forest retention shall be located between the proposed house and the forest retention. The forest retention shall be located between the proposed house and the forest retention. The forest retention shall be located between the proposed house and the forest retention.  
 9) At the final plat submission, the applicant shall provide the required 35-foot BRL from the Forest Conservation Easements.

M-6 MICRO-BIORETENTION FACILITY  
 DA=19,710 S.F.  
 IMP=3,000 S.F.  
 % IMP=15%  
 SA=415 S.F.  
 ELEV.=591.25  
 9" PONDING



- GENERAL NOTES:
- OWNER: HOWARD HORSE, LLC  
 DEED REFERENCE: LIBR 14473, FOUO 376  
 DATE: NOVEMBER 15, 2012  
 GRANTOR: HARRY N. SHIPE & BARBARA SHIPE
  - TAX MAP: 12 GRID: 17 PARCEL: 75
  - NEAREST POTABLE WATER SUPPLY: MT. AIRY DISTANCE: 7.0 MILES ±
  - THE SUBJECT PROPERTY IS LOCATED IN ZONE C (AREA OF MINIMAL FLOODING) AS PLOTTED BY SCALE ON NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 240044 0012B, DATED 12/4/86.
  - TOPOGRAPHY & PLANIMETRIC FEATURES SHOWN HEREON TAKEN FROM COPYRIGHTED GIS DATA FROM HOWARD COUNTY, SUPPLEMENTED WITH FIELD LOCATIONS BY VANMAR ASSOCIATES, INC. CONTOUR INTERVAL IS 2 FEET. VERTICAL DATUM IS NAVD83.
  - THE BASIS OF BEARINGS FOR THIS PLAN IS THE MARYLAND COORDINATE SYSTEM (NAD83/07) PER HOWARD COUNTY SURVEY CONTROL STATIONS SHOWN BELOW. DISTANCES SHOWN HEREON ARE GROUND DISTANCES.  
 12CN1600.463.8221 E1.271.800.228 SPT  
 12CN597.303.8690 E1.272.860.5753 SPT
  - THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY BOUNDARY UNLESS OTHERWISE SHOWN HEREON.
  - THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES AND ACCURATELY SHOWN.
  - SOIL TYPE: BRINKFLOW (Bc, Bd, Bh), GLENELG (Gg, Gq), GLENVIEW (GgR), OCCOQUAN (Oq). HOWARD COUNTY SOILS MAP NO. 8.
  - THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 2009 COMPREHENSIVE ZONING PLAN. AND THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREAS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
  - ANY CHANGES TO A PRIVATE SEPTIC AREA WILL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
  - THIS PLAN IS IN COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE 2004 ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE BUILDING GRADING PERMIT.



PROFESSIONAL CERTIFICATION  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43203, Expiration Date: 08-16-2011.  
 David A. Adams 10/17/13

SHEET INDEX	
NO.	TITLE
1	SOILS/TOPOGRAPHY/GRADING/STORMWATER MANAGEMENT
2	STORMWATER MANAGEMENT/CONSTRUCTION NOTES & DETAILS
3	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
4	FOREST STAND DELINEATION
5	FOREST CONSERVATION PLAN
6	LANDSCAPE PLAN

THE PURPOSE OF THIS PLAN OF REVISION IS TO REMOVE 5522 S.F. FROM THE RECORDED FOREST CONSERVATION EASEMENT.

PROFESSIONAL CERTIFICATION  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43203, Expiration Date: 12-20-14.

DATE: 10/17/13 REVISIONS: 10/17/13

SUPPLEMENTAL PLAN OF REVISION  
 SOILS/TOPOGRAPHY/GRADING/STORMWATER MANAGEMENT  
 LOTS 1 THROUGH 3  
 HARRY N. SHIPE PROPERTY

TAX MAP: 12 ELECTION DISTRICT: No. 4 SCALE: 1"=50'  
 GRID: 17 HOWARD COUNTY, MARYLAND DATE: OCTOBER, 2013  
 PARCEL NO: 75 EX. ZONING: RC-DEO SHEET 1 OF 6

F-13-115

VANMAR ASSOCIATES, INC.  
 Engineers Surveyors Planners  
 163 CARRIAGE HOUSE WAY  
 ACCIDENT, MD 21520  
 (301) 828-2890 (301)831-5015 (410) 549-2751

**Specifications for Micro-Bioretenation, 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. PLANTING SOILS**

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-bioretenation practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under 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 1.0% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 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 (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

**3. COMPACTION**

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoists to remove original soil. If practices are excavated using a loader, the contractor should use 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. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base. When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

**4. PLANT MATERIAL**

Recommended plant material for micro-bioretenation practices can be found in Appendix A, Section A.2.3 SWM Design Manual.

**5. PLANT INSTALLATION**

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers, defecats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

**6. UNDERDRAINS**

Underdrains should meet the following criteria:

Pipe - Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 758, Type PS28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., 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 1/4" (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.

The main collector pipe shall be at a minimum 0.5% slope.

A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.

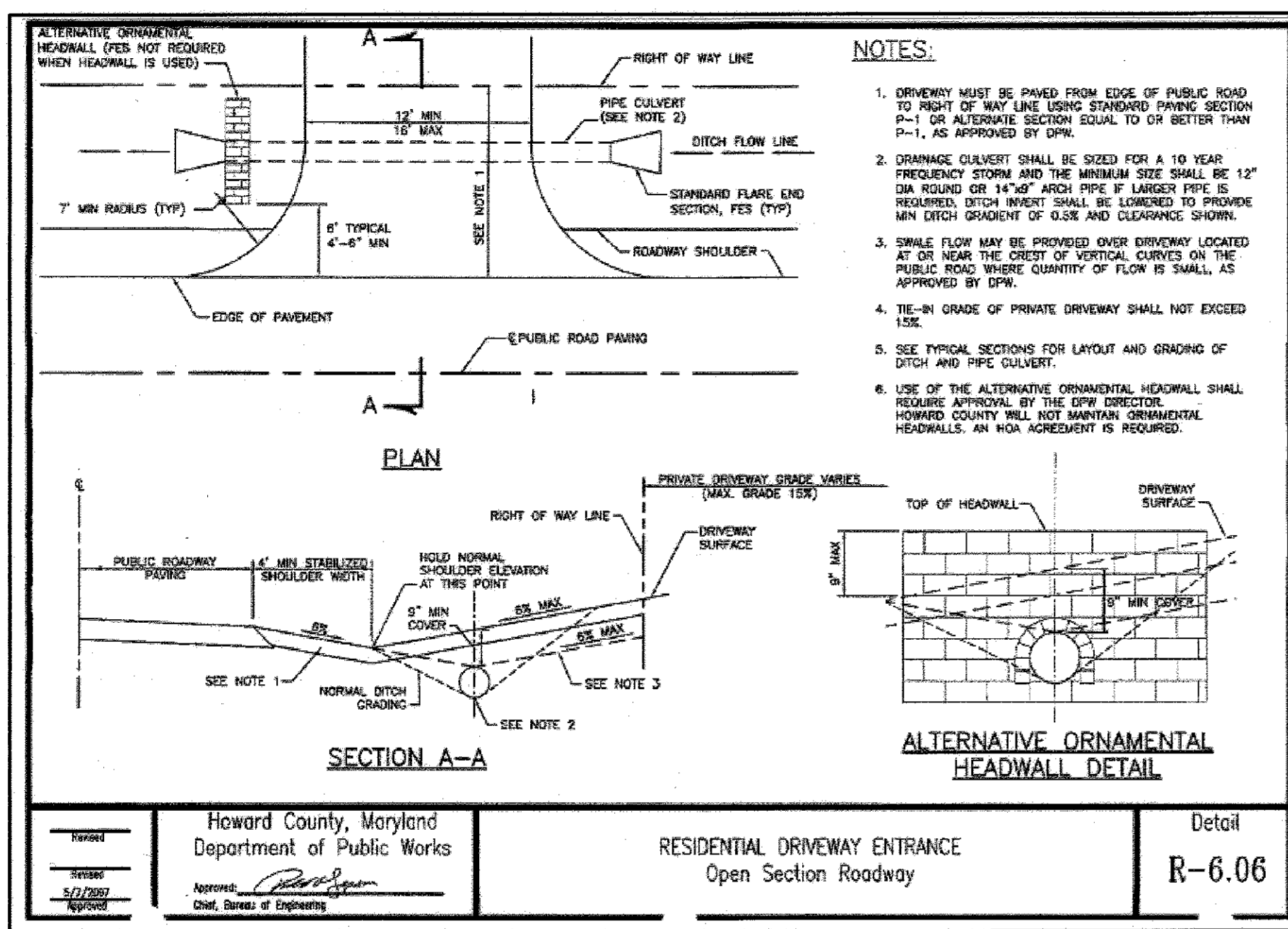
A 4" layer of pea gravel (3/4" to 1 1/2" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at minimum slope of 0.5%. Observation wells and/or clean-out ports must be provided (one minimum per every 1000 square feet of surface area).

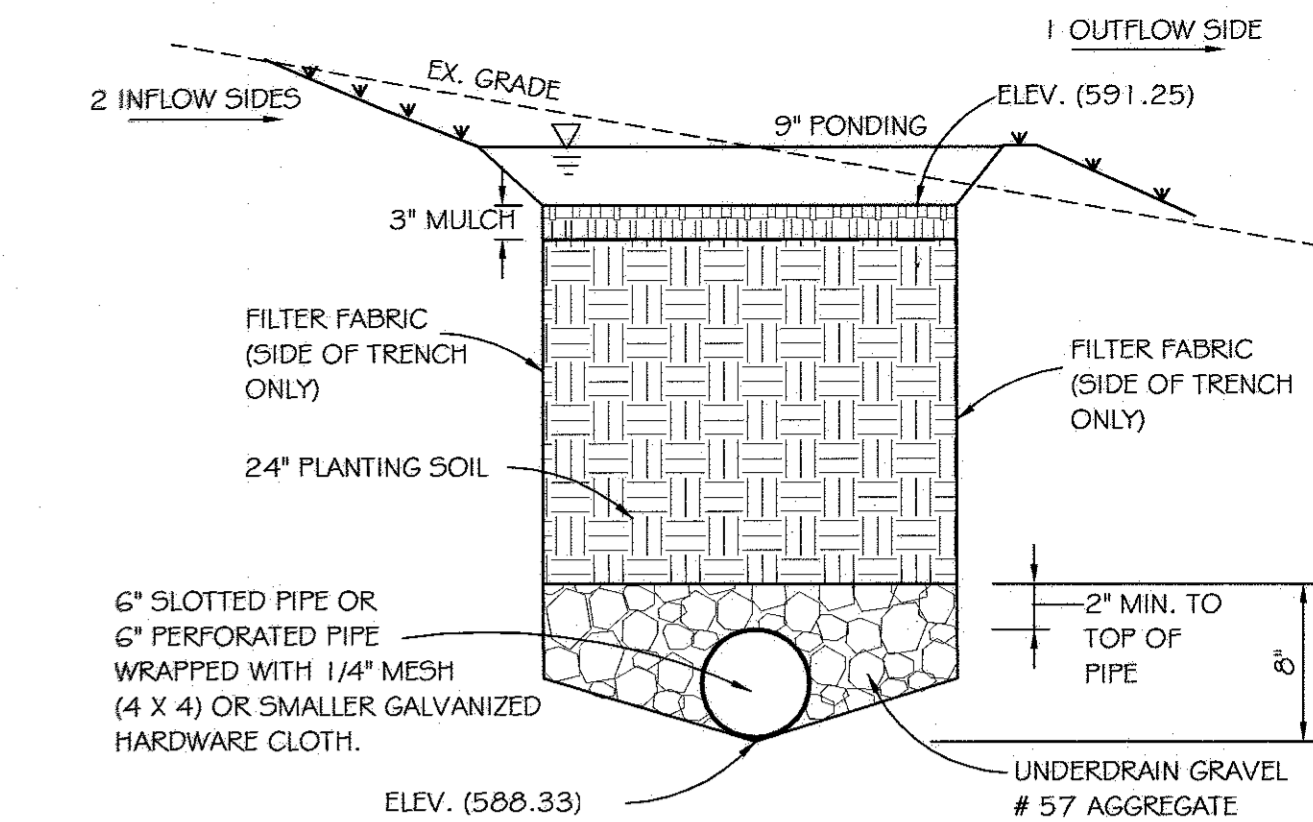
**7. MISCELLANEOUS**

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

Table B.4.1 Materials Specifications for Micro-Bioretenation, Rain Gardens & Landscape Infiltration-			
Material	Specification	Size	Notes
Plantings	see Appendix A, Table A-4 SWM Design Manual	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%), and compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 1.0% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimums no pine or wood chips
Pea gravel/diaphragm	pea gravel ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Current drain	ornamental stone/washed cobbles	stone: 2" to 5"	
Geotextile	AASHTO-M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Gravel (underdrains and infiltration berms)	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe, 3/8" perf. @ 6" on center, 4 holes per row; minimum of 5" of gravel over pipes; not necessary unless mesh pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Underdrain piping	MSHA Mix No. 3, F <sub>c</sub> = 3500 psi	n/a	28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACT Code S318.019; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Poured in place concrete (if required)	ASTM-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Dabbac and Gysstone (AASHTO) #10 are not acceptable. No calcium carbonate or dolomite sand substitutions are acceptable. No "rock dust" can be used for sand
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	



BIO RETENTION LANDSCAPE SCHEDULE					
SYMBOL	QNTY	COMMON NAME	SCIENTIFIC NAME	SIZE	REMARKS
SHADE TREES					
RM	1	RED MAPLE OCTOBER GLORY	ACER RUBRUM	2" - 2 1/2" CALIPER	B & B
RB	1	RIVER BIRCH (HERITAGE CLUMP BIRCH)	BETULA NIGRA HERITAGE	1'0" - 12" HT.	B & B
SHRUBS					
AZ	2	AZALEA	AZALEA SP	18" - 24" HT.	CONTAINER 3' O.C.
IB	8	INKBERRY	LIECH GLABRA	18" - 24" HT.	CONTAINER 3' O.C.
AW	5	ARROWWOOD	VIBURNUM DENTATUM	18" - 24" HT.	CONTAINER 3' O.C.



**OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION**

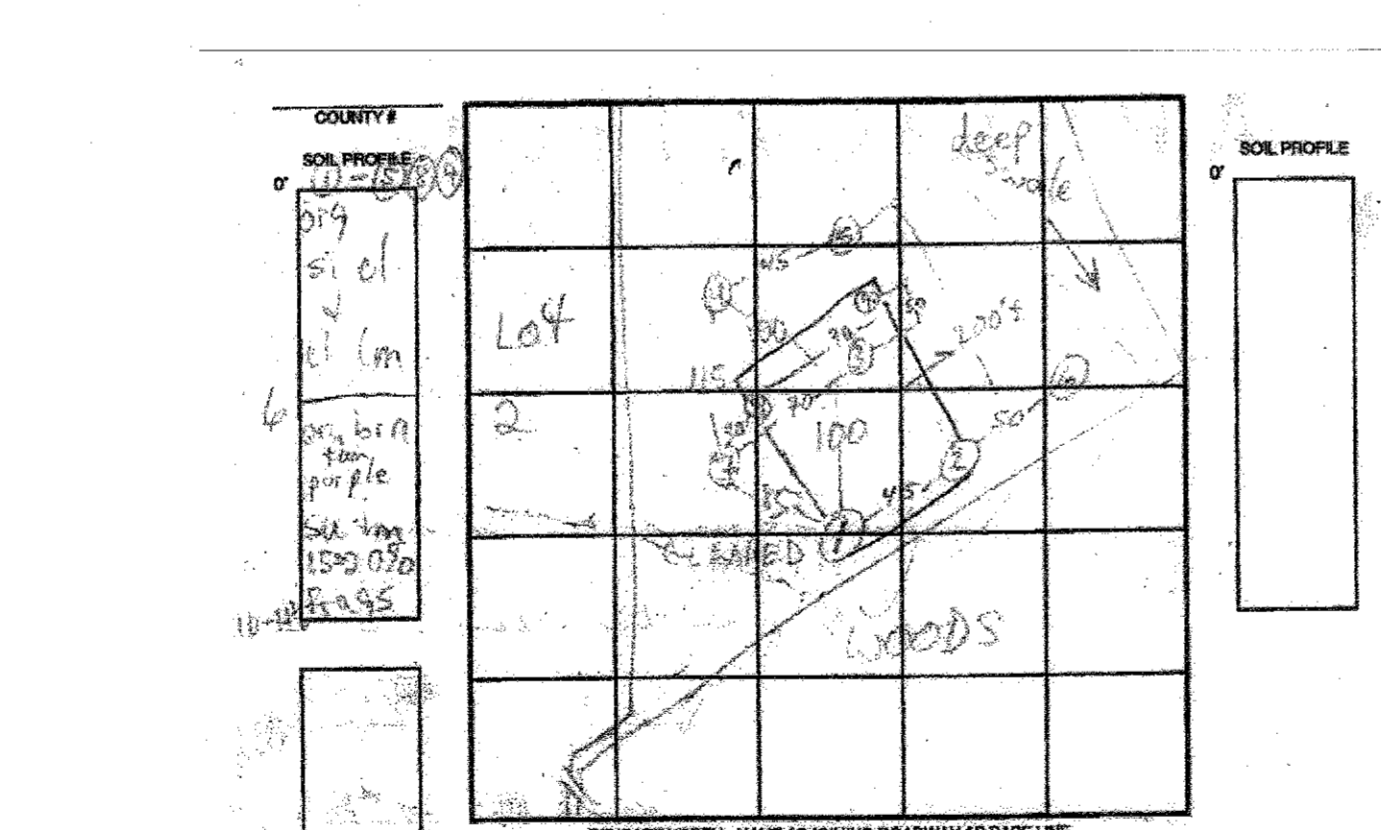
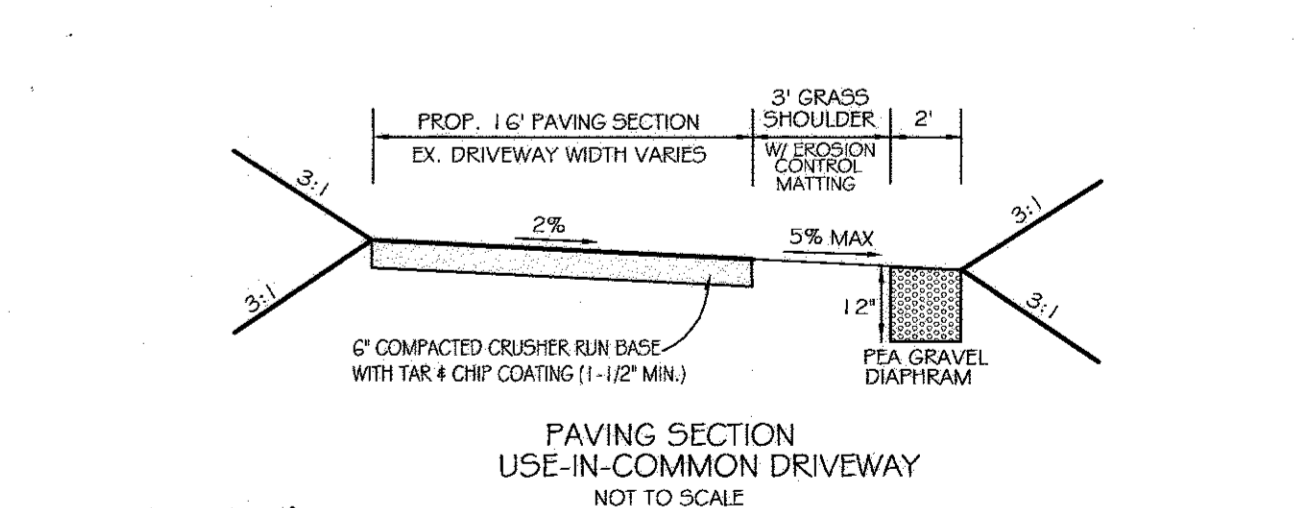
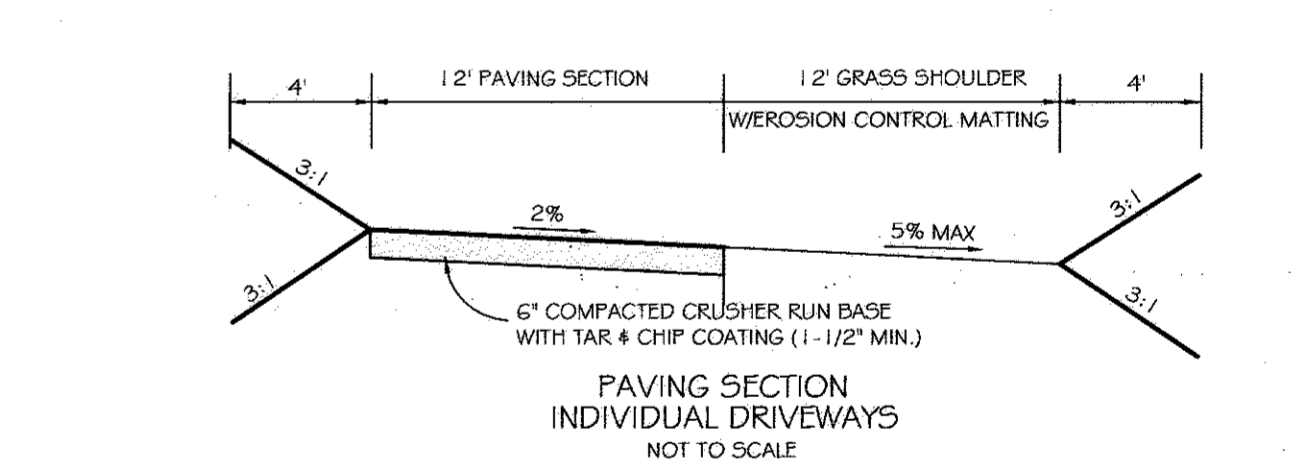
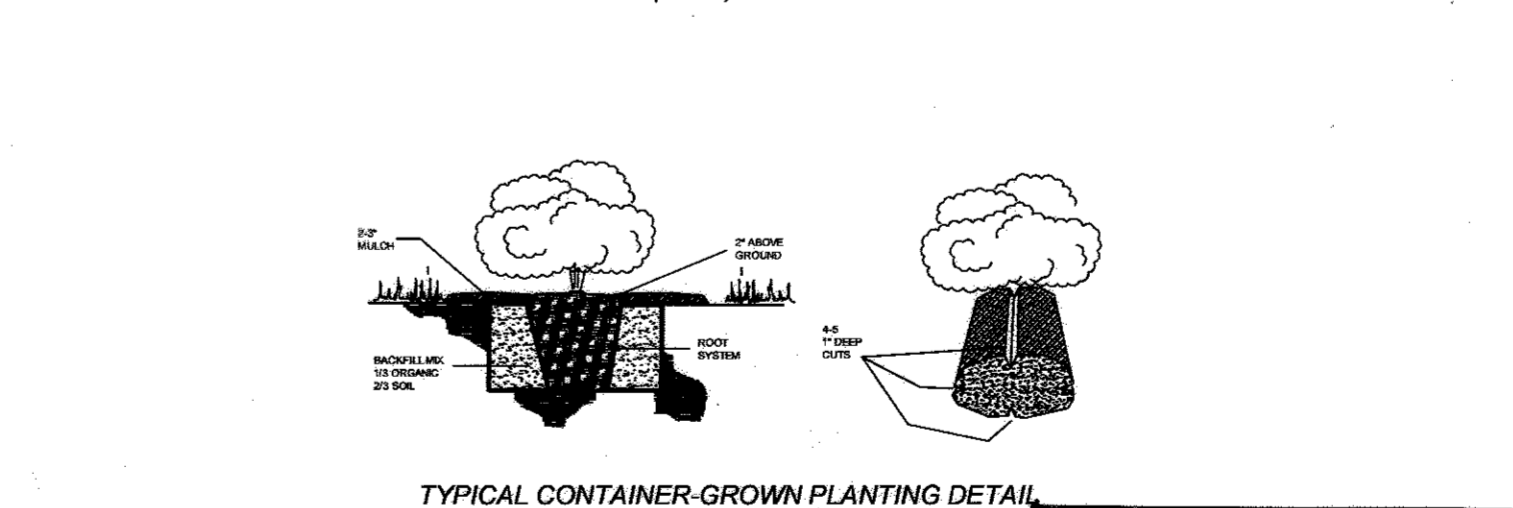
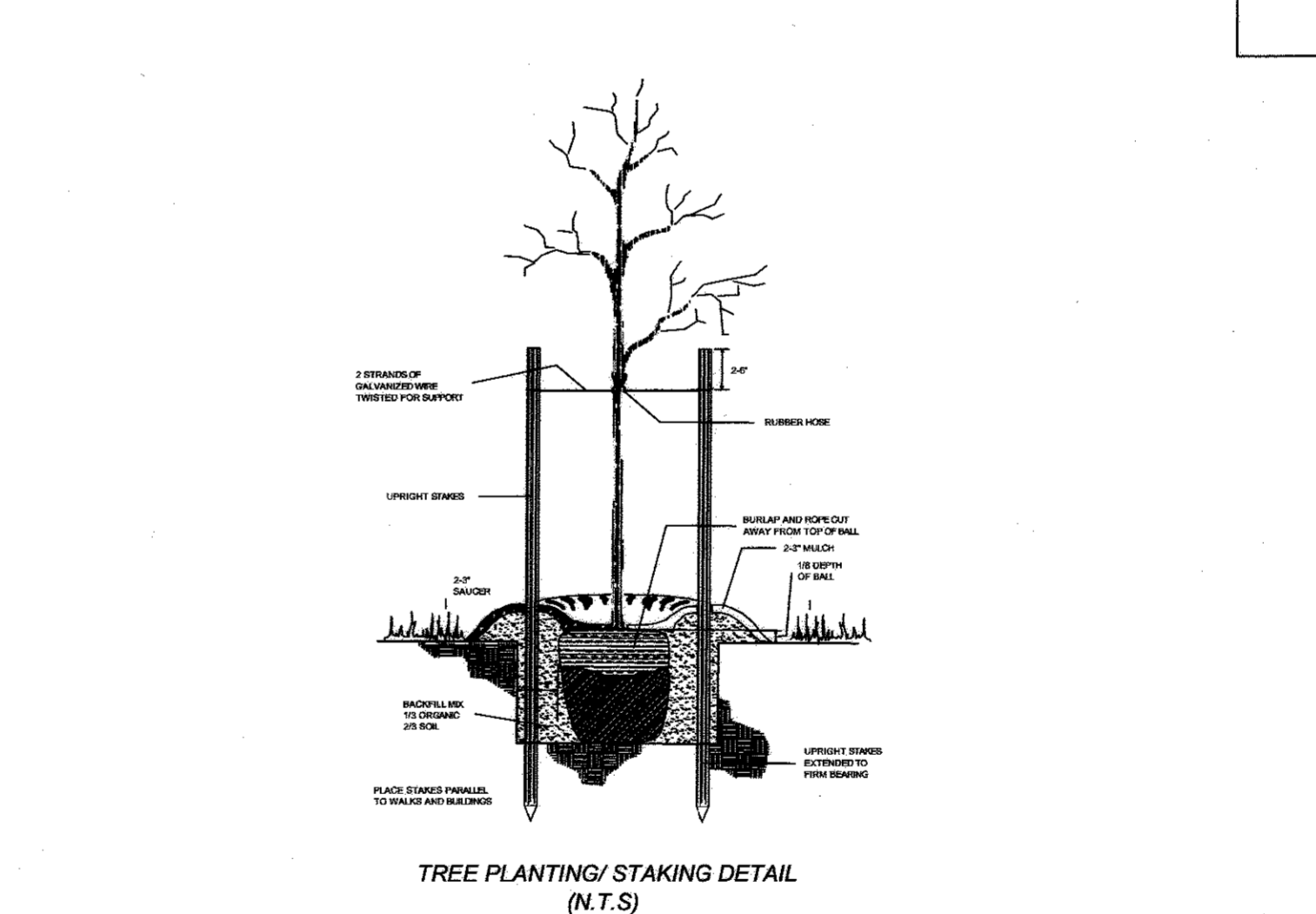
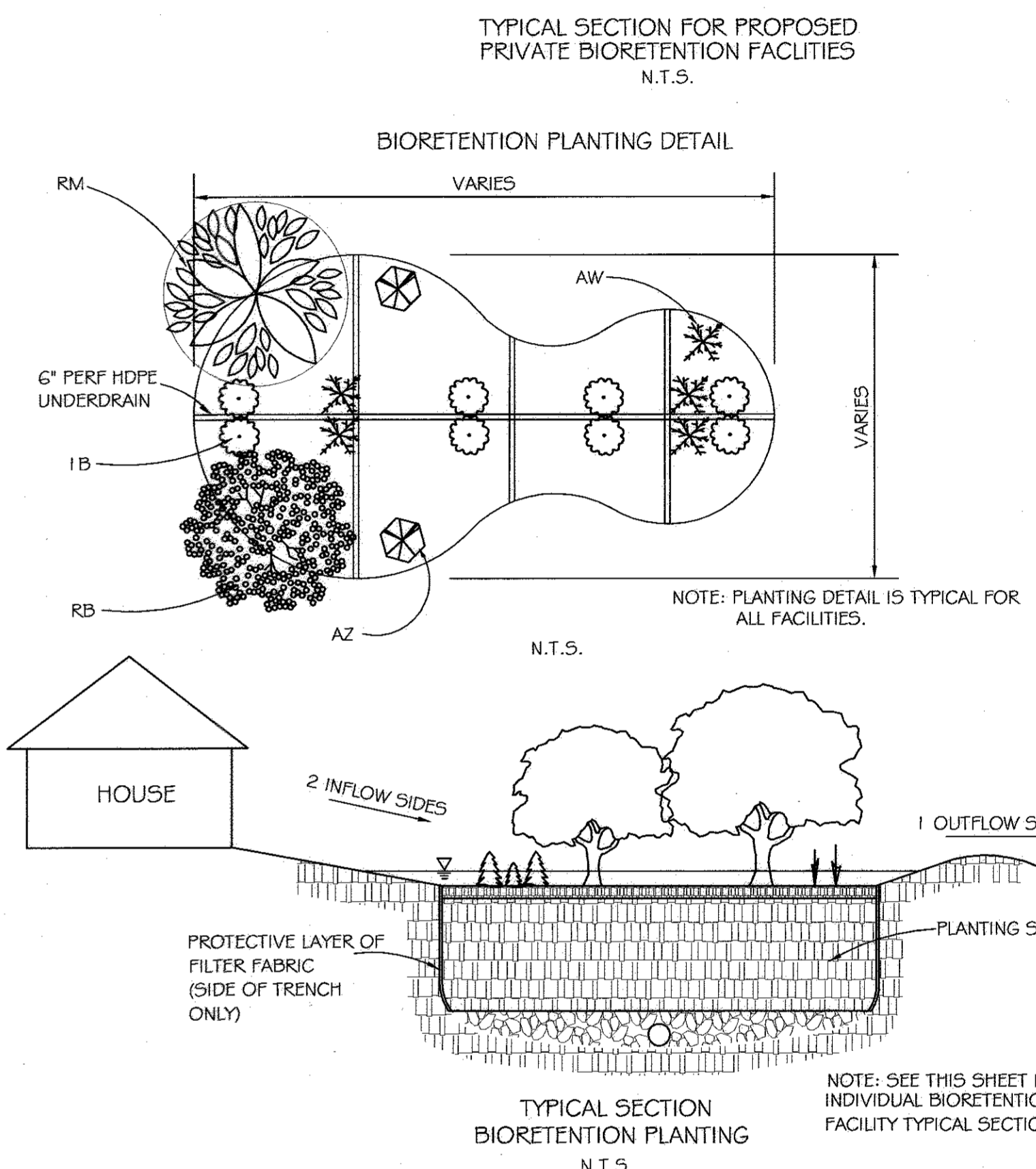
- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
  - MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER 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.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)**

- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREA, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SHEETFLOW TO CONSERVATION AREA (N-3)**

- CONSERVATION AREAS SHALL REMAIN UNDISTURBED AND UNMANAGED OTHER THAN ROUTINE DEBRIS REMOVAL AND REPAIRING AREAS OF CONCENTRATED FLOW. INVASIVE AND NOXIOUS PLANT REMOVAL AND BI-ANNUAL MOWING FOR MEADOW AREAS MAY BE NEEDED. SIGNS DELINEATING THE LIMITS OF THE CONSERVATION AREA SHOULD BE MAINTAINED AND SUPPLEMENTAL PLANTINGS PERFORMED AS NEEDED.



DATE	TEST NO.	DEPTH	START	STOP	TEST 'T' DUMP STOP	TIME
5/20/14	15	5'4"	1:30	2:25	2:45	2:05
	16	10'				
	17	15'	3:12	3:18	3:18	3:21
	18	11'				
	19	6'	3:35	3:49	4:49	4:02
	20	11'				
	21	6'	3:34	4:00	4:00	4:14
	22	10'				
	23	12'	4:00	4:17	4:17	4:20

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 961, Expiration Date: 08-16-2017. *10/17/16*

STATE OF MARYLAND PROFESSIONAL ENGINEER LANDSCAPE ARCHITECT

DATE REVISIONS: 10/17/16

**SUPPLEMENTAL PLAN OF REVISION**  
STORMWATER MANAGEMENT/CONSTRUCTION NOTES AND DETAILS  
LOTS 1-THRU 3  
**HARRY N. SHIPE PROPERTY**

TAX MAP: 12 ELECTION DISTRICT: No. 4 SCALE: NOT TO SCALE  
GRID: 17 HOWARD COUNTY, MARYLAND DATE: OCTOBER, 2013  
PARCEL NO: 75 EX. ZONING: RC-DEO SHEET 2 OF 6

APPROVED: *Ket Chadeau*  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 11-26-13

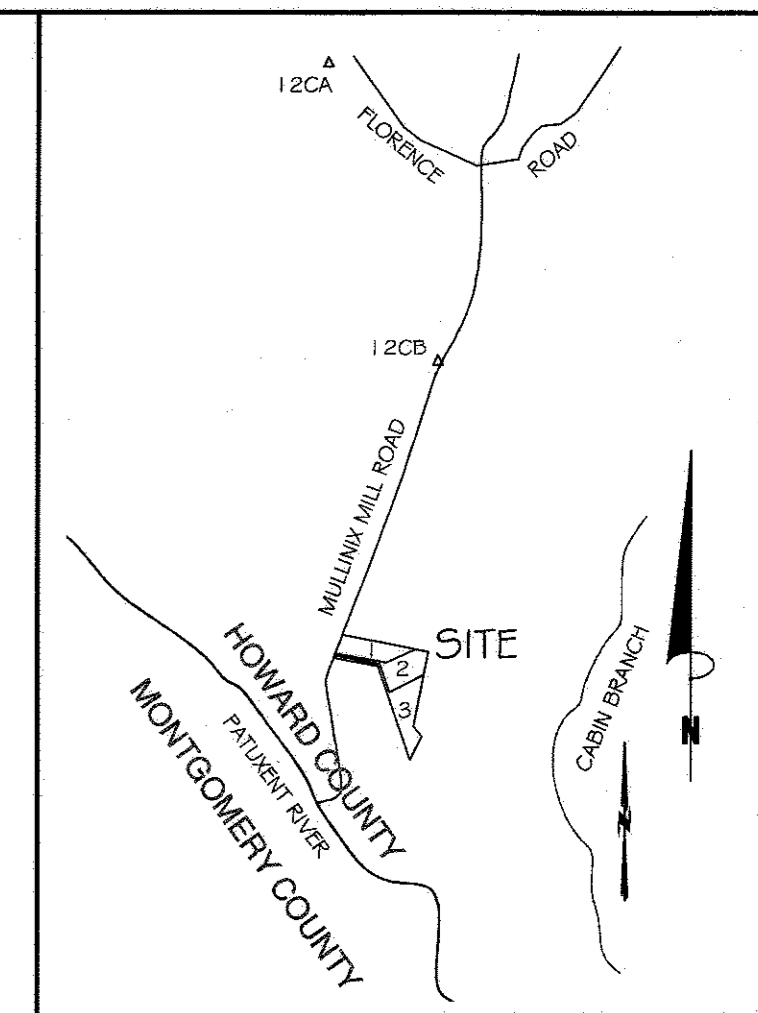
DATE: 11/26/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION



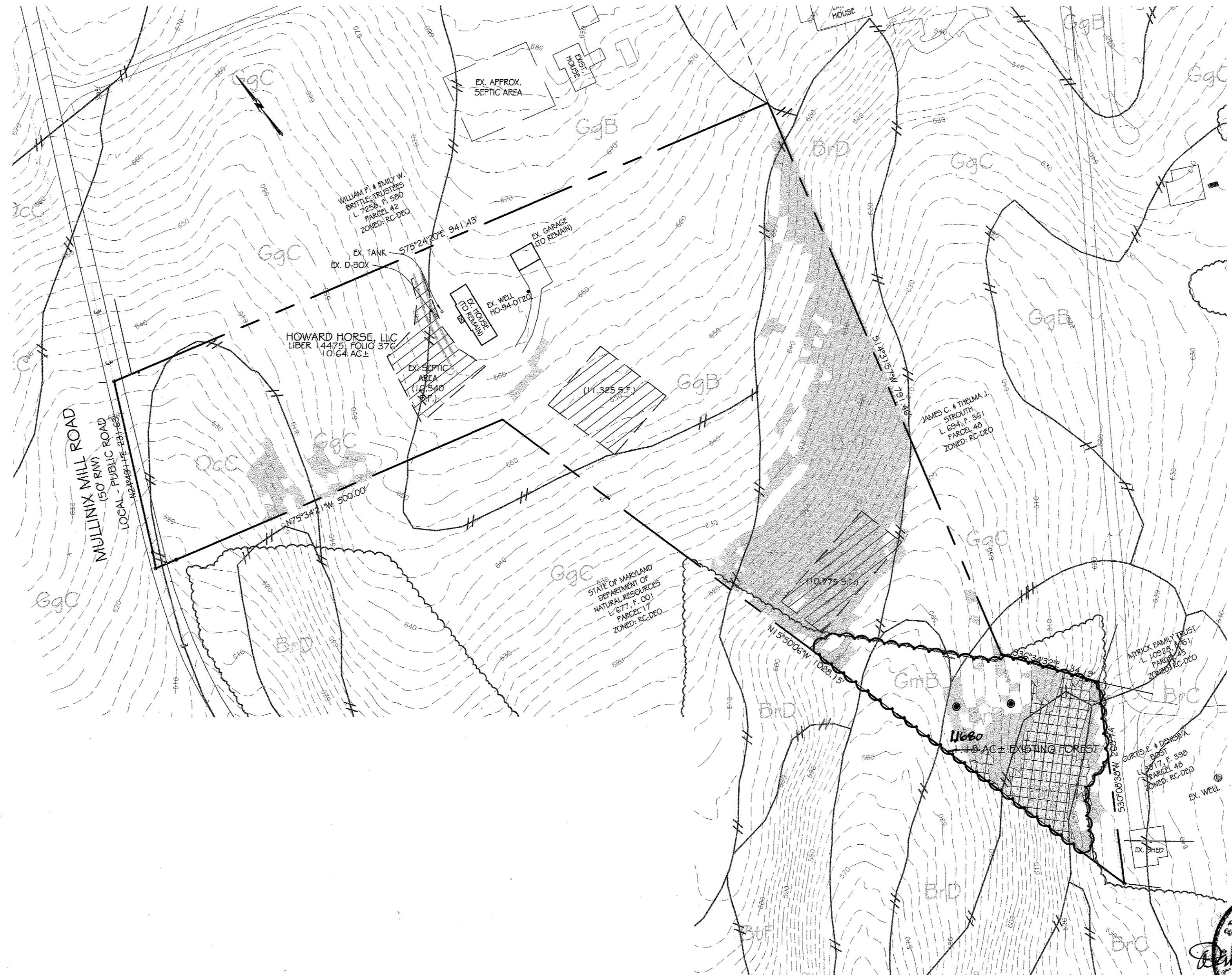


**FOREST STAND DELINEATION REPORT**

1. 1.18 ACRE OF HARDWOOD FOREST EXISTS ON THE SUBJECT PROPERTY.
2. THE FOREST CONDITION IS FAIR TO POOR. THE UNDERSTORY IS POORLY DEVELOPED AND THE LIMITED RANGE OF MATURE TREES INDICATES THAT THE FOREST WAS PREVIOUSLY FENCED FOR CATTLE.
3. TWO SPECIMEN OAKS EXIST WITHIN THE STAND. ONE IS IN SEVERE DECLINE WITH A 48" BASE THAT IS LARGELY DECAYED AND OPEN TO THE GROUND. THE OTHER IS A 30" OAK OF FAIR CONDITION. NO DISTURBANCE IS PROPOSED IN THE AREA OF THE FOREST.
4. THE FOREST IS MADE UP OF A MIX OF HARDWOODS INCLUDING OAK VARIETIES, SYCAMORE, AND RED MAPLE. SIZE CLASS RANGES FROM 6"-12" DBH. CANOPY CLOSURE IS 70%.



VICINITY MAP ADC MAP 07, GRID E4  
TAX MAP 12, GRID 17 PARCEL 75  
SCALE: 1" = 2,000'



**GENERAL NOTES:**

1. OWNER: HOWARD HORSE, LLC  
DEED REFERENCE: LIBER 14475, FOLIO 376  
DATE: NOVEMBER 15, 2012  
GRANTOR: HARRY N. SHIPE & BARBARA SHIPE
2. TAX MAP: 12 GRID: 17 PARCEL: 75
3. NEAREST POTABLE WATER SUPPLY: MT. AIRY DISTANCE: 7.0 MILES ±.
4. THE SUBJECT PROPERTY IS LOCATED IN ZONE C (AREA OF MINIMAL FLOODING) AS PLOTTED BY SCALE ON NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 240044 0012B, DATED 1/24/86.
5. TOPOGRAPHY & PLANIMETRIC FEATURES SHOWN HEREON TAKEN FROM COPYRIGHTED GIS DATA FROM HOWARD COUNTY, SUPPLEMENTED WITH FIELD LOCATIONS BY VANMAR ASSOCIATES, INC. CONTOUR INTERVAL IS 2 FEET. VERTICAL DATUM IS NAVD83.
6. THE BASIS OF BEARINGS FOR THIS PLAN IS THE MARYLAND COORDINATE SYSTEM (NAD83/07) PER HOWARD COUNTY SURVEY CONTROL STATIONS SHOWN BELOW. DISTANCES SHOWN HEREON ARE GROUND DISTANCES.  
12CA N600,463.8221 E1,271,900.228 sft  
12CB N597,303.8690 E1,272,860.5753 sft
7. THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY BOUNDARY UNLESS OTHERWISE SHOWN HEREON.
8. THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES AND ACCURATELY SHOWN.
9. SOIL TYPE: BRINKLOW (BrC, BrD, BrF), GLENELG (GgB, GgC), GLENVILLE (GmB), OCCOQUAN (OoC). HOWARD COUNTY SOILS MAP GRID NO. 334.
10. THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 02/02/04 COMPREHENSIVE ZONING PLAN AND PER THE "COMP LITE" ZONING AMENDMENTS EFFECTIVE ON 07/28/06. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004.
11. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREAS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
12. THERE ARE NO HISTORIC SITES OR CEMETERIES ON THIS PROPERTY.
13. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 3, 2004.
14. NO ENVIRONMENTAL FEATURES EXIST WITHIN THE LOD.
15. NO SPECIMEN TREES ARE PROPOSED FOR REMOVAL.
16. FOREST CONSERVATION OBLIGATIONS WILL BE MET BY PROVIDING MITIGATION OF 1.18 ACRES OF ON-SITE RETENTION, AND 0.95 AC OFF-SITE AFFORESTATION AT AN APPROVED FOREST BANK. TOTAL MITIGATION 2.13 AC ±.

**LEGEND**

NET TRACT FOREST	
EXISTING WELL:	
15 - 25% SLOPES	
25% OR GREATER SLOPES	

APPROVED  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*W. J. Schenck* 10/26/13  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*W. J. Schenck* 11/17/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

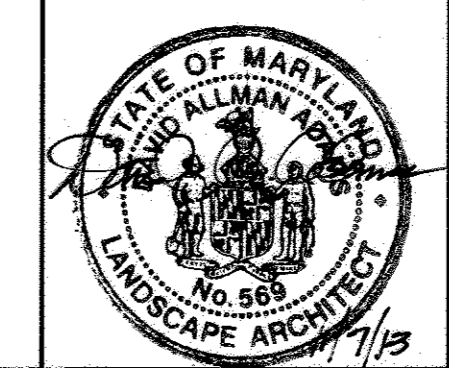
OWNER/DEVELOPER:  
HOWARD HORSE, LLC  
c/o JOHN CONGEDO  
163 CARRIAGE HOUSE WAY  
ACCIDENT, MD 21520  
443-463-2717

PROFESSIONAL CERTIFICATION  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date: 08-16-15.

PROFESSIONAL CERTIFICATION  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date: 08-16-2017.  
*David A. Adams* 10/17/16  
LANDSCAPE ARCHITECT

THE PURPOSE OF THIS PLAN OF REVISION IS TO REMOVE 522 SF FROM THE RECORDED FOREST CONSERVATION EASEMENT.

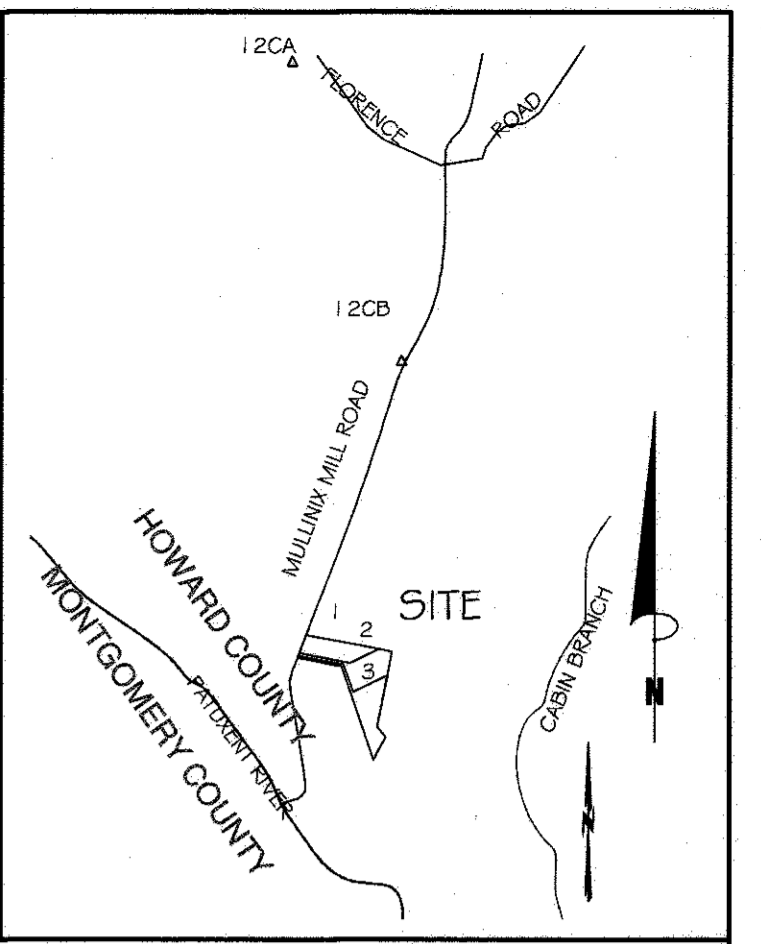
DATE	REVISIONS
10/17/16	Δ



FOREST STAND DELINEATION-PLAN OF REVISION  
LOTS 1 THRU 3  
HARRY N. SHIPE PROPERTY

TAX MAP: 12 ELECTION DISTRICT: No. 4 SCALE: 1"=100'  
GRID NO: 17 HOWARD COUNTY, MARYLAND DATE: OCT 2013  
PARCEL NO: 75 EX. ZONING: RCDEO SHEET: 4 OF 6

VANMAR ASSOCIATES, INC.  
Engineers Surveyors Planners  
310 South Main Street P.O. Box 338 Mount Airy, Maryland 21771  
(301) 829 2890 (301)851 5015 (410) 548 2751



VICINITY MAP ADC MAP 07 GRID E4  
 TAX MAP 12, GRID 17 PARCEL 75  
 SCALE: 1" = 2,000'

**FOREST CONSERVATION WORKSHEET**

**NET TRACT AREA**  
 A. TOTAL TRACT AREA: A= 10.64  
 B. DEDUCTIONS: B= 0.00  
 C. NET TRACT AREA: C= 10.64

**LAND USE CATEGORY**  
 INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.  
 ARA MDR IDA HDR MPD CIA  
 0 1 0 0 0  
 D. AFFORESTATION THRESHOLD (NET TRACT AREA x 20%): D= 2.13  
 E. CONSERVATION THRESHOLD (NET TRACT AREA x 25%): E= 2.66

**EXISTING FOREST COVER**  
 F. EXISTING FOREST COVER WITHIN THE NET TRACT AREA: F= 1.18  
 G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD: G= 0.00

**BREAK EVEN POINT**  
 H. BREAK EVEN POINT: H= 1.18  
 I. FOREST CLEARING PERMITTED WITHOUT MITIGATION: I= 0.00

**PROPOSED FOREST CLEARING**  
 J. TOTAL AREA OF FOREST TO BE CLEARED: J= 0.00  
 K. TOTAL AREA OF FOREST TO BE RETAINED: K= 1.18

**PLANTING REQUIREMENTS**  
 L. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD: L= 0.00  
 M. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD: M= 0.00  
 N. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD: N= 0.00  
 P. TOTAL REFORESTATION REQUIRED: P= 0.00  
 Q. TOTAL AFFORESTATION REQUIRED: Q= 0.95  
 R. TOTAL PLANTING REQUIRED: R= 0.95

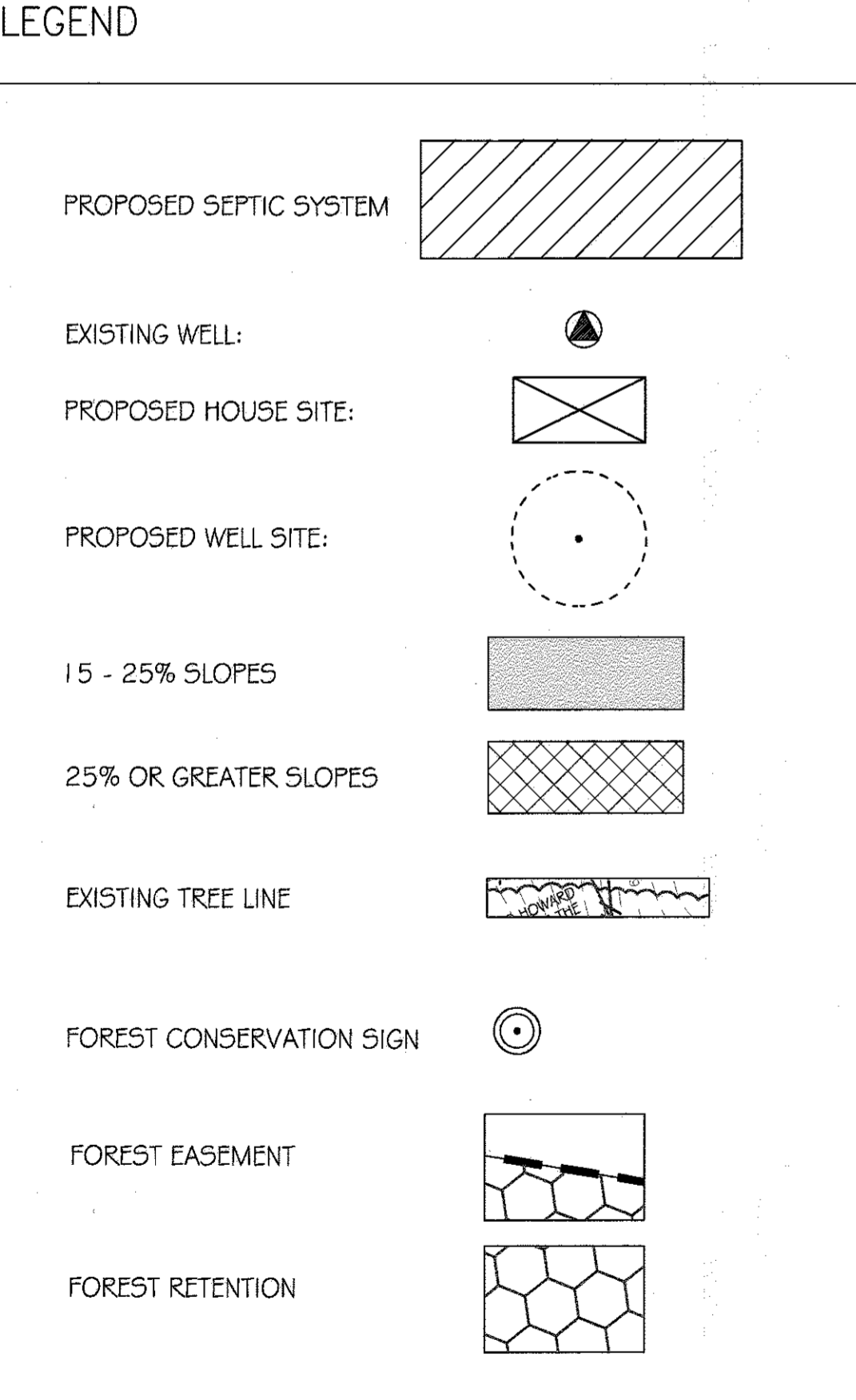
**SHIPE Forest Conservation Worksheet 2.1**

Note: Use 0 for all negative numbers that result from the calculations

A. Total Tract Area	A= 10.64
B. Deductions (Critical Area, area restricted by local ordinance or program)	B= 0.00
C. Net Tract Area = Total Tract (A) - Deductions (B)	C= 10.64
D. Afforestation Threshold (Net Tract Area (C) x 20%)	D= 2.13
E. Conservation Threshold (Net Tract Area (C) x 25%)	E= 2.66
F. Existing Forest Cover within the Net Tract Area	F= 1.18
G. Area of Forest Above Conservation Threshold If the Existing Forest Cover (F) is greater than the Conservation Threshold (E), then G = F - E. Otherwise G = 0.	G= 0.00
H. Break Even Point (Amount of forest that must be retained so that no mitigation is required) (1) If the Area of Forest Above the Conservation Threshold (G) is greater than 0, then H = (0.2 * the Area of Forest Above Conservation Threshold (G)) + the Conservation Threshold (E); (2) If the Area of Forest Above the Conservation Threshold (G) is equal to 0, then H = Existing Forest Cover (F)	H= 1.18
I. Forest Clearing Permitted Without Mitigation I = Existing Forest Cover (F) - Break Even Point (H)	I= 0.00
J. Total Area of Forest to be Cleared	J= 0.00
K. Total Area of Forest to be Retained K = Existing Forest Cover (F) - Forest to be Cleared (J)	K= 1.18
L. Reforestation for Clearing Above the Conservation Threshold If the Total Area of Forest to be Retained (K) is at or above the Break Even Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0). Otherwise, calculate the planting requirements as follows: L. Reforestation for Clearing Above the Conservation Threshold (1) If the Total Area of Forest to be Retained (K) is greater than the Conservation Threshold (E), then L = the Area of Forest to be Cleared (J) * 0.25; (2) If the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E), then L = Area of Forest Above Conservation Threshold (G) * 0.25 M. Reforestation for Clearing Below the Conservation Threshold (1) If Existing Forest Cover (F) is greater than the Conservation Threshold (E) and the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 * (Conservation Threshold (E) - Forest to be Retained (K)) (2) If Existing Forest Cover (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 * Forest to be Cleared (J)	L= 0.00 M= 0.00
N. Credit for Retention Above the Conservation Threshold If the Area of Forest to be Retained (K) is greater than the Conservation Threshold (E), then N = K - E	N= 0.00
P. Total Reforestation Required P = L + M + N	P= 0.00
Q. Total Afforestation Required If Existing Forest Cover (F) is less than the Afforestation Threshold (D), then Q = Afforestation threshold (D) - Existing Forest Cover (F)	Q= 0.95
R. Total Planting Requirement R = P + Q	R= 0.95

**SHIPE FORESTATION COST ESTIMATE**  
18-Apr-13

signs	unit cost	quantity	
posts	10	23	\$230.00
fence	2	0	\$0.00
planting	5227.2	0	\$0.00
region	5227.2	0	\$0.00
invasives	7500	0	\$0.00
subtotal			\$460.00
15% contingency			\$69.00
total			\$529.00



- GENERAL NOTES:**
- OWNER: HOWARD HORSE, LLC  
 DEED REFERENCE: LIBER 14475, FOLIO 376  
 DATE: NOVEMBER 15, 2012  
 GRANTOR: HARRY N. SHIPE & BARBARA SHIPE
  - TAX MAP: 12 GRID: 17 PARCEL: 75
  - NEAREST POTABLE WATER SUPPLY: MT. AIRY DISTANCE: 7.0 MILES ±.
  - THE SUBJECT PROPERTY IS LOCATED IN ZONE C (AREA OF MINIMAL FLOODING) AS PLOTTED BY SCALE ON NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 240044 001 2B, DATED 12/4/86.
  - TOPOGRAPHY & PLANIMETRIC FEATURES SHOWN HEREON TAKEN FROM COPYRIGHTED GIS DATA FROM HOWARD COUNTY, SUPPLEMENTED WITH FIELD LOCATIONS BY VANMAR ASSOCIATES, INC. CONTOUR INTERVAL IS 2 FEET. VERTICAL DATUM IS NAVD83.
  - THE BASIS OF BEARINGS FOR THIS PLAN IS THE MARYLAND COORDINATE SYSTEM (NAD83/07) PER HOWARD COUNTY SURVEY CONTROL STATIONS SHOWN BELOW.  
 DISTANCES SHOWN HEREON ARE GROUND DISTANCES.  
 12CA NG00,463,822'1 E1,271,900,228' FT  
 12CB N597,303,669'0 E1,272,600,575'3 FT
  - THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY BOUNDARY UNLESS OTHERWISE SHOWN HEREON.
  - THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES AND ACCURATELY SHOWN.
  - SOIL TYPE: BRINKLOW (BrC, BrD, BrF), GLENELG (GgB, GgC), GLENVILLE (GmB), OCCOQUAN (OcC). HOWARD COUNTY SOILS MAP GRID NO. 334.
  - THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 02/02/04 COMPREHENSIVE ZONING PLAN AND PER THE 'COMP LITE' ZONING AMENDMENTS EFFECTIVE ON 07/28/06. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004.
  - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREAS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
  - THERE ARE NO HISTORIC SITES OR CEMETERIES ON THIS PROPERTY.
  - NO ENVIRONMENTAL FEATURES EXIST WITHIN THE LOD.
  - NO SPECIMEN TREES ARE PROPOSED FOR REMOVAL.
  - BY APPROVAL OF WAIVER WPI 3-191, FOREST CONSERVATION OBLIGATIONS WILL BE MET BY PROVIDING MITIGATION OF 1.18 ACRES OF ON-SITE RETENTION AND 0.95 AC OF OFF-SITE PLANTING OBLIGATION AT THE QUARTZ HILL III FOREST MITIGATION BANK UNDER F-13-070. TOTAL MITIGATION 2.13 AC.

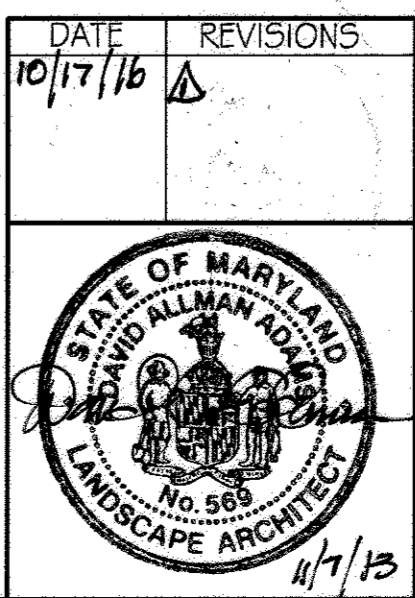
*Professional Certification*  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date 08-16-2015.  
 Harry N. Shipe 10/17/16

▲ THE PURPOSE OF THIS PLAN OF REVISION IS TO REMOVE 622 SF. FROM THE RECORDED FOREST CONSERVATION AGREEMENT.



OWNER/DEVELOPER:  
 HOWARD HORSE, LLC  
 c/o JOHN CONGDO  
 163 CARRIAGE HOUSE WAY  
 ACCIDENT, MD 21520  
 443-463-2717

PROFESSIONAL CERTIFICATION  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date: 08-16-2015.



DATE	REVISIONS
10/17/16	Δ

FINAL FOREST CONSERVATION PLAN OF REVISION  
 LOTS 4 THRU 3  
 HARRY N. SHIPE PROPERTY

TAX MAP: 12 ELECTION DISTRICT: No. 4 SCALE: AS SHOWN  
 GRID NO: 17 HOWARD COUNTY, MARYLAND DATE: OCT 2013  
 PARCEL NO: 75 EX. ZONING: RCDEO SHEET 5 OF 6

APPROVED  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Kate Schaefer* 11-26-13  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 11/16/13  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

VANMAR ASSOCIATES, INC.  
 Engineers Surveyors Planners  
 310 South Main Street P.O. Box 358 Mount Airy, Maryland 21771  
 (301) 829 2890 (301) 831 5015 (410) 548 2751

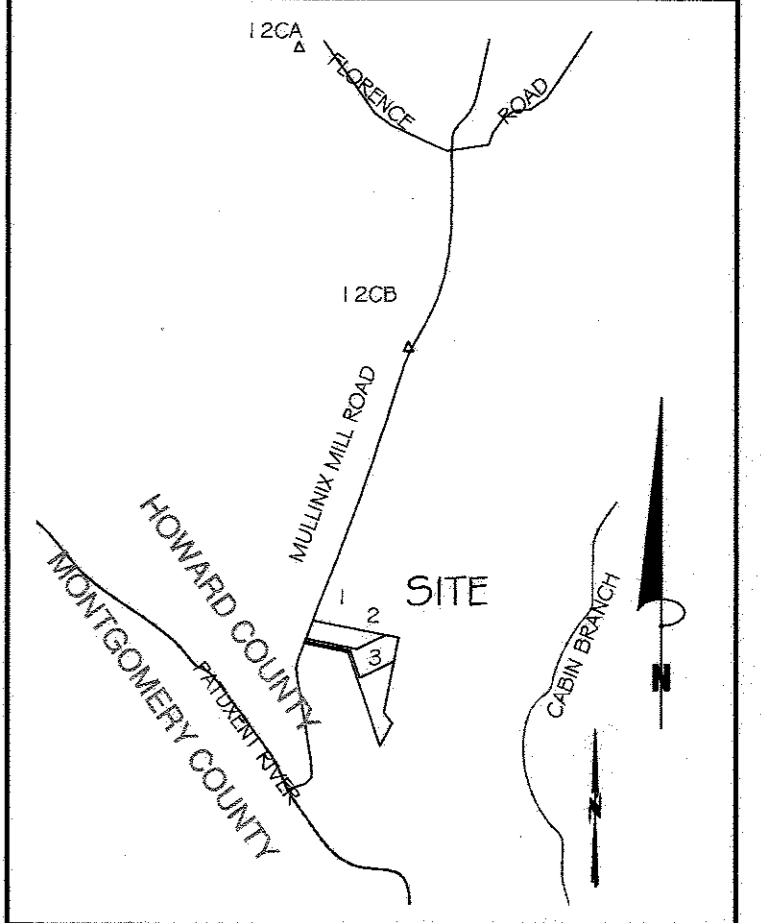
SCHEDULE A PERIMETER LANDSCAPE EDGE			
CATEGORY	ADJACENT TO PERIMETER PROPERTIES		TOTAL
	P1-A/1172'	P2-A/1028'	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	N/A	N/A	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 402'	NO 516'	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	
NUMBER OF PLANTS REQUIRED			
SHADE TREES	13	9	
EVERGREEN TREES	0	0	
SHRUBS	0	0	
NUMBER OF PLANTS PROVIDED			
SHADE TREES	13	9	22
EVERGREEN TREES	0	0	
SHRUBS	0	0	
OTHER TREES (2:1 SUBSTITUTION)	0	0	
SHRUBS (10:1 SUBSTITUTION)	0	0	
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)			

LANDSCAPE EDGE "A" = 1 SHADE TREE/80'

PLANTING SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
1M	6	Acer rubrum 'October Glory' October Glory Red Maple	2.5-3" CAL.	B&B	AS SHOWN
1S	16	Platanus occidentalis American Sycamore	2.5-3" CAL.	B&B	AS SHOWN



SCALE: 1"=100'

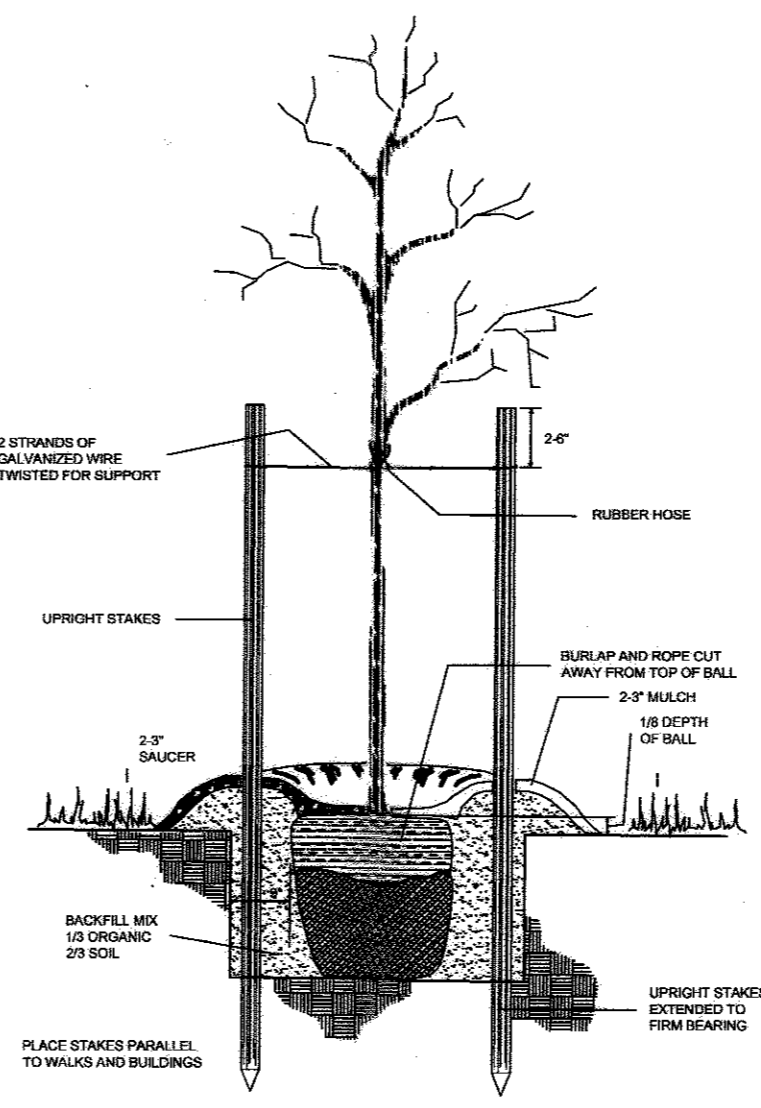


VICINITY MAP ADC MAP 07, GRID E4  
TAX MAP 12, GRID 17 PARCEL 75  
SCALE: 1"=2,000'

- LANDSCAPING NOTES:**
- Plants shall conform to current American Standards for Nursery Stock by American Association of Nurserymen (AAS), particularly with regards to site, growth, and size of ball and density of branch structure. Contractor to ensure conformance to national and local building codes and ordinances.
  - All plants (B&B or container) shall be properly identified by weatherproof labels securely attached hereto before delivery to the project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the owners representative.
  - Any material and/or work may be rejected by the owners representative if it does not meet the requirements of the specifications. The contractor shall remove all rejected materials from the site.
  - The contractor shall furnish all plants in quantities and sizes to complete the work as specified in plant schedule. The landscape contractor shall be responsible for identifying all plant quantities on the plans prior to commencement of work. Quantities in the plant schedule are for the contractors convenience only and do not constitute the final count.
  - Substitutions in plant species or size shall not be permitted except with the written approval of the owners representative.
  - Plants shall be located as shown on the drawings and by staking or as designated in the field by the owners representative. Tree locations to be field adjusted as required to maintain a 10' minimum clearance from all utilities, street lights, and driveways. All locations are to be approved by the owners representative before excavation. The contractor shall note that in the case of a discrepancy between the staked and figured dimensions shown on these plans, the figured dimensions shall govern.
  - The location of existing utilities shown hereon are approximate only. Contractor shall excavate to verify the existence, location, and depth of any utilities (constructed and existing) and shall notify the engineer of any discrepancies prior to the beginning of all work, excavation, grading, landscaping, etc.
  - Contractor shall locate and mark all underground utility lines and irrigation systems prior to excavating plant beds or pits. All utility assessment areas where no planting shall take place shall also be marked on the site, prior to locating and digging the tree pits. If utility lines are encountered in excavation of tree pits, other locations for the trees shall be selected by the owners representative. Such changes shall be made by the contractor without additional compensation. No charges of location shall be made without the approval of the owners representative. Any utility (whether shown or not) damaged due to construction shall be repaired immediately. The contractor shall be responsible for removing or existing fences, driveways, etc., damaged or removed by the contractor during construction. All affords disturbed areas shall be returned to their original condition.
  - All equipment and tools shall be placed so as not to interfere or hinder pedestrian and vehicular traffic flow.
  - During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
  - All tree pits are to be excavated to a minimum depth to allow the tree root ball to be a minimum of 4" higher than finish grade. The tree root ball is to rest on undisturbed soil, or a compacted bed must be prepared for the tree root ball to rest on which will not subside causing the tree to sink below finish grade. All tree pits are to be a minimum of 12" larger on every side of the tree root ball.
  - The topsoil to be used to fill the tree pits is to be plant specific. The topsoil for trees shall consist of a maximum of 2/3 existing topsoil from the site, which is cleaned and free of clay, a minimum of 1/3 organic material. These materials are to be mixed prior to backfilling when planting.
  - The contractor is responsible to ensure that all tree pits are well drained. The landscape contractor, without cost to the owner, will replace all plant material which is affected by poor drainage.
  - All lawn areas are to be seeded with grass seed appropriate for the soil conditions which exist on the site.
  - All lawn areas are to be tied to a depth of 6" and all foreign material removed which will inhibit the healthy growth of the lawn. All old grass and grass roots are to be removed from the site. New topsoil of a minimum 4" is to be placed over the area to be seeded. The grass areas are to be fine graded to ensure that no undulations occur on the lawn. The lawns are to be graded in such a way as to appear perfectly well tapered and even. The lawn topsoil is to be rolled and lightly irrigated prior to placing of the seed. The seed is not to be laid on frozen or soaked soil.
  - Existing trees are to be protected during the preparation of the lawn areas. The roots of the trees are to be undisturbed during the cleaning of the topsoil.
  - All plants are to be handled with the best care and attention to ensure that the plants are not bruised, broken, torn, or damaged in any way which will affect the plants general appearance and well being.
  - All trees are to be planted with the accepted standards of the American Association of Nurserymen. The trees are to be properly watered and backfilled during planting. All care must be taken to ensure that the trees are upright, a tree's best side is exposed to the point of greatest visibility. The trees must be staked in accordance with acceptable nursery practice to ensure that they are secure in the ground and will grow straight and uniform. The trees are to be wrapped if the contractor deems it necessary to protect the trees from sun scald or insect attack.
  - Contractor is to provide a 1-year guarantee for all plant material and other work done on site.
  - Quantities as shown on the plan shall govern over plant list quantities. Contractor to verify plant list totals with quantities shown on plan.
  - Do not plant within 20' of a property line abutting and agricultural use.
  - Plant material source: Within 100 mile radius of Maryland if possible.
  - VanMar Associates, Inc. is not responsible for the contractor's utilization of men, materials, equipment, or safety measures in performance of any work for this construction. The contractor assumes all responsibility for performing the work correctly and in conformance with all code requirements.
  - Should the contractor discover discrepancies between the plans and field conditions, the work shall be stopped immediately and the engineer notified immediately to resolve the situation. Should the contractor make field corrections or adjustments without notifying the engineer, then the contractor assumes all responsibility for those changes.
  - It is the intent of these plans and specifications to provide 100% completed work and this shall be the project scope. It shall be distinctly understood that failure to notify the engineer of discrepancies found on these plans and specifications, specifically and work which would naturally and/or normally be required to complete the project shall not relieve the contractor of his responsibility to perform such work.
  - At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape survey until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
  - The owner, tenant and/or their agents shall be responsible for maintenance of the required landscaping, including mow plant materials and berms, fences and walls. All plant material shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition and when necessary, repaired or replaced.
  - Perimeter landscaping for Lot 2, & 3 is provided in accordance with Section 16.124 of the Howard County Code and Landscape Manual. Landscape surty in the amount of \$6600.00 for 22 shade trees (at \$300.00 each, \$3,300 per lot) will be posted with the builder's grading permit. Lot 1 is exempt as an existing, established house and lot.

**LEGEND**

- PROPOSED SEPTIC SYSTEM: [Hatched box symbol]
- EXISTING WELL: [Circle with dot symbol]
- PROPOSED HOUSE SITE: [Square with X symbol]
- PROPOSED WELL SITE: [Circle with dot symbol]
- 15 - 25% SLOPES: [Diagonal line pattern]
- 25% OR GREATER SLOPES: [Cross-hatch pattern]
- EXISTING TREE LINE: [Dashed line with tree symbols]



PLANTING INSTALLATION DETAIL (N.T.S)

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 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.

*Sheila C. Crumble (Managing Member)* 11/13/13  
OWNER/DEVELOPER DATE

**APPROVED**

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Kathleen Book* 11-26-13  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 11/22/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**PROFESSIONAL CERTIFICATION**

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date: 08-16-2013 08-16-2017. *[Signature]*

**LANDSCAPE PLAN OF REVISION**  
LOTS 4 THRU 3  
HARRY N. SHIPLEY PROPERTY

TAX MAP: 12 ELECTION DISTRICT: No. 4  
GRID NO: 17 HOWARD COUNTY, MARYLAND  
PARCEL NO: 75 EX. ZONING: RCDEO

SCALE: AS SHOWN  
DATE: OCT 2013  
SHEET 6 OF 6

**VANMAR ASSOCIATES, INC.**  
Engineers Surveyors Planners  
510 South Street P.O. Box 308 Mount Airy, Maryland 21771  
(301) 629 2890 (301) 851 5015 (410) 549 2751

