



NOTE:  
AREA OF FCE  
TOTAL = 3.45 AC.

**LEGEND**

- Wetland
- Wetland buffer
- Wetland symbol
- Ex. treeline
- Head of stream
- Stream
- Stream buffer
- 100 Year flood plain
- Adjacent property line
- Property boundary
- Ex. major contour
- Ex. minor contour
- Ex. structure
- Ex. utility right-of-way
- Utility right-of-way setback
- Soil delineation
- Min. building setback line (if shown)
- L.O.D.
- Limit of disturbance
- Ex. S.R.A.
- 100' well buffer
- Steep slopes (15%-25%)
- Steep slopes (25%+)
- Specimen tree with critical root zone
- 1.00 AC Forest clearing area
- Temporary tree protection fence
- Wetland investigation observation point
- 3.45 AC Forest conservation easement
- Permanent forest protection signs
- 1.60 AC Reforestation Planting Zone A
- 3/4" PROP. OR UNRESOLVED PERC TEST LOCATION
- 3/4" FAILED PERC TEST LOCATION

**DATA SOURCES:**

TOPOGRAPHIC DATA OBTAINED FROM HOWARD COUNTY GIS DATED MARCH 1998. BOUNDARY INFORMATION FIELD RUN SURVEY BY DMW DATED JUNE 2005.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*[Signature]* 12/15/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*[Signature]* 12/15/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Date	No.	Revision Description

Minor Subdivision  
 16780 A.E. Mullinix Road  
 Supplemental Sheet  
 Howard County, Maryland

**DMW**  
 Daft-McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3333  
 Fax 296-4706

A Team of Land Planners,  
 Landscape Architects,  
 Engineers, Surveyors &  
 Environmental Professionals

TAX MAP 7 Grid 22 PARCEL 323,512  
 4th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

**TITLE**  
**FOREST CONSERVATION PLAN**

Des. By	CH, JS	Scale	1" = 100'	Proj. No.	04034.A
Dwn. By	MDT	Date	12/8/06	<b>1 of 2</b>	
Chk. By	MJP	Approved			

12/13/06  
 Date

LICENSED LANDSCAPE ARCHITECT  
 3173  
*[Signature]*  
 THOMAS S. WALKER  
 STATE OF MARYLAND

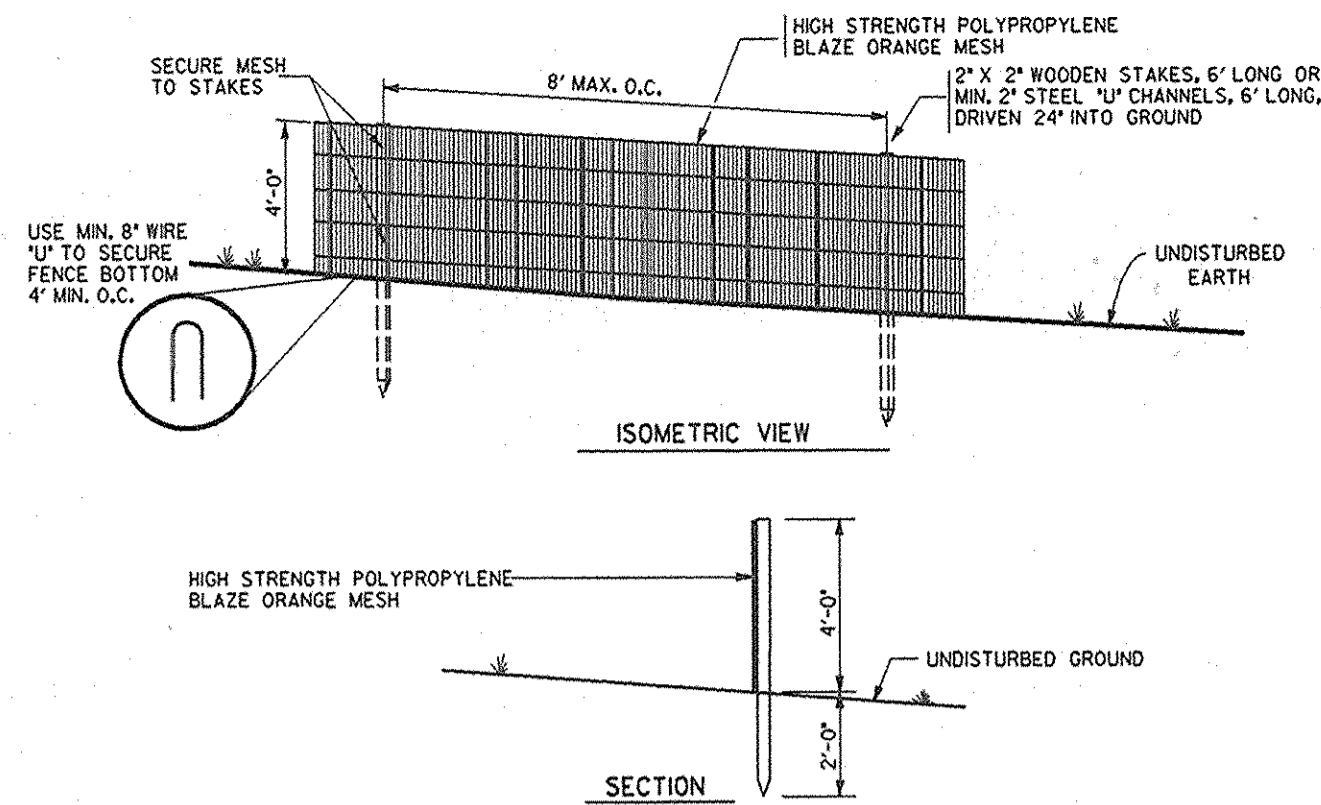
Landscape Architect No. 3173

**SPECIMEN TREE CHART**

TREE	DESCRIPTION	CONDITION	PROPOSED STATUS
1	48" Quercus rubra	Fair	To be retained
2	32" Quercus rubra	Fair	To be retained
3	46" Twin Quercus prinus	Poor	To be retained
4	43" Twin Quercus prinus	Poor	To be retained
5	33" Quercus prinus	Fair	To be retained
6	35" Twin Quercus prinus	Poor	To be removed
7	34" Quercus prinus	Fair	To be removed
8	34" (estimated) Quercus alba	Poor	To be removed

11/03/04/rev-4





- NOTES:
- THIS DETAIL IS FOR FOREST PROTECTION DEVICE ONLY
  - FOREST RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS
  - BOUNDARIES OF FOREST RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING THE DEVICE
  - ROOT DAMAGE SHALL BE AVOIDED
  - PROTECTION SIGNAGE MAY ALSO BE USED
  - FOREST PROTECTION FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION

### Forest Protection Fence

Not To Scale

\* WHERE SUPER SILT FENCE (S.S.F.) IS TO BE INSTALLED ADJACENT TO FOREST RETENTION AREAS, ATTACH HIGH VISIBILITY TAPE OR FLAGGING TO THE TOP EDGE OF S.S.F. AT 5' INTERVALS AND USE S.S.F. IN LIEU OF BLAZE ORANGE FENCE. TEMPORARY FOREST PROTECTION SIGNAGE MAY BE ATTACHED TO S.S.F.

### FOREST CONSERVATION CALCULATIONS

NET TRACT AREA	ACRES (UND)
A. TOTAL TRACT AREA	23.42
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.28
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00
D. NET TRACT AREA	22.54

### LAND USE CATEGORY (FROM TABLE 3.2.1, PAGE 40, MANUAL)

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.

AREA	MOR	IDA	HOR	MFD	G/A
0	1	0	0	0	0

E. AFFORESTATION THRESHOLD 20% x A = 4.51  
 F. CONSERVATION THRESHOLD 25% x A = 5.63

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	2.25
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD	0.00
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	0.00

BREAK EVEN POINT:

J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	0.00
K. CLEARING PERMITTED WITHOUT MITIGATION	0.00

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED	1.00
M. TOTAL AREA OF FOREST TO BE RETAINED	1.25

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	0.00
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	2.20
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	0.00
R. TOTAL REFORESTATION REQUIRED	2.20
S. TOTAL AFFORESTATION REQUIRED	1.66
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	3.66
PLANTINGS PROVIDED	3.66 ACRES*

\* 1.6 AC AFFORESTATION WILL BE PROVIDED ON-SITE AND 2.1 AC REFORESTATION WILL BE PROVIDED OFF-SITE AT CLARK'S MEADOW F-06-28.

### GOALS and OBJECTIVES

The goals and objectives of this Forest Conservation Plan are to account for the clearing of approximately 1.0 acres of forest for the construction of a new home on proposed Lot 1. The amount of existing forest on site is 2.25 acres. 1.0 acre of existing forest is to be cleared. The amount of afforestation/reforestation required is 3.66 acres. The amount of reforestation provided on site is 1.66 acres. The amount and location of forest conservation provided by an off-site easement is 2.1 acres at Clark's Meadow. The surety amount breaks down as follows:  
 1.25 acres of on-site retention @ \$0.20/ft<sup>2</sup> = \$16,127.20  
 1.6 acres of on-site afforestation/reforestation @ \$0.50/ft<sup>2</sup> = \$43,440.00  
 2.1 acres are being provided by a mitigation bank on Clark's Meadow Property (F-06-029) = zero surety.  
 Total Surety = \$59,567.20

### PRECONSTRUCTION MEETING/CONSTRUCTION PERIOD PRACTICES

Any changes to the plan due to on-site conditions must be approved by the Howard County Department of Planning and Zoning. No grading, excavation, utility placement, sediment and erosion control activities, or vehicular traffic will occur within forest retention areas. Storage of equipment and materials shall not be permitted in the forest retention areas. There will be no burial or disposal of discarded material on-site within the retention areas. There will be no open burning within 100 feet of woodlands. Temporary structures including, but not limited to construction trailers, sanitary facilities, etc. shall not be placed within the forest retention areas. Employee parking shall not be permitted in the forest retention areas.

### POST CONSTRUCTION MANAGEMENT/MAINTENANCE BY CONTRACTOR

All dead trees or tree limbs which pose an immediate safety hazard will be felled. Trees dropped within the forest retention area will not be removed. All temporary forest protection structures will be removed after construction and permanent signage will be placed where indicated on the plan. A 2-year Contractor's Maintenance and Monitoring Period shall begin at mobilization. Seventy five percent survivorship must be guaranteed for this period. The site shall be inspected at the end of the two year period to ascertain survivorship and provide for replacement if necessary. The Contractor's maintenance of new planting shall consist of watering, cultivating, weeding, and mulching as necessary to insure survival. Contractor shall protect planting areas and plants at all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection barriers and signs as required for protection. If any plants become damaged or injured, because sufficient protection was not provided, treat or replace as directed by Landscape Architect at no additional cost to Owner.

ALL REFORESTATION AREAS SHOWN ON THIS PLAN TO BE PLACED IN FOREST CONSERVATION EASEMENT. TREE SHELTERS SHALL BE USED FOR ALL REFORESTATION PLANTINGS.

### STANDARDS AND SPECIFICATIONS FOR PLANTING

1. PLANT MATERIAL SELECTION 1" CALIBER OR GREATER  
 Nursery grown plant materials should meet or exceed the requirements of the American Nurserymen Specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well functioning root systems, and be free of diseases, insect pests and mechanical injuries.

2. PLANTING SITE PREPARATION  
 Soils shall not be disturbed outside the area necessary for planting individual specimens and the removal of exotic invasive plant material. These areas should be stabilized as shown on the temporary seeding notes on sheet 8.

3. PLANTING PERIOD  
 All material shall be planted between September 15 and May 31. Material shall not be installed when ground is frozen.

4. PLANT MATERIAL STORAGE  
 Plants should be planted within 24 hours of delivery if possible. Plant material which are left unplanted for more than 24 hours shall be protected from direct sun and weather and kept moist. Nursery stock should not be left unplanted for more than two weeks.

5. ON-SITE INSPECTION  
 Prior to planting, planting stock shall be inspected by the landscape architect or other qualified professional familiar with this plan. Plant material not conforming to standard nurseryman specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced.

6. TOPSOIL FOR PLANTING SOIL  
 A. On-site material or imported from same source as topsoil used on site for finish grading.  
 1. Uniform composition, free of subsoil, clay lumps, stones, stumps, roots or similar objects larger than 1 inch.  
 2. Topsoil must be free of plants or plant parts of burndown, quackgrass, Johnsongrass, nutgrass, poison ivy, Canada thistle, or others as specified.  
 3. All topsoil shall be tested by a recognized laboratory for pH and soluble salts. A pH of 4.5 to 7.5 is required. Soluble salts shall not be higher than 500 parts per million.

### 7. ADDITIVE FOR BACKFILL SOIL

- A. Wood Residuals:  
 1. Source shall be well composted, not chemically treated.  
 2. Physical Properties - grading:  
 U.S. Sieve Dry Weight Percent Passing  
 No. 4 100  
 No. 10 95 - 100  
 No. 20 90 - 100  
 No. 40 80 - 100  
 No. 60 0 - 50  
 No. 100 0 - 30  
 No. 200 0 - 7
3. Organic content by ash analysis: 90 - 100 percent dry weight  
 4. Chemistry:  
 Range:  
 a. Saturation Extract Conductivity (EC) NI - 3.5  
 b. Reaction (pH) 3.0 - 5.5  
 c. Available calcium - sodium acetate extractable - ppm NI - 2000 dry weight

- B. Sand  
 1. Physical Properties - Grading:  
 U.S. Sieve Dry Weight Percent Passing  
 No. 4 100  
 No. 10 95 - 100  
 No. 20 90 - 100  
 No. 40 80 - 100  
 No. 60 0 - 50  
 No. 100 0 - 30  
 No. 200 0 - 7
2. Chemistry:  
 Saturation Extract Conductivity (EC) NI - 3.0  
 Sodium Absorption Ratio (SAR) NI - 6.0  
 Boron - ppm in saturation extract solution NI - 1.0  
 Reaction (pH) 6.0 - 7.5  
 Available calcium - sodium acetate extractable - ppm NI - 2000 dry weight
- C. Treble Superphosphate: Commercial product containing 19 to 20 percent available phosphoric acid.

8. MULCH  
 A. Shredded long fiber hardwood.  
 B. Mulch shall have been shredded within the last six (6) months.

9. LAYOUT AND EXCAVATION OF PLANTING AREAS  
 A. Plants shall be placed in each zone at random locations shown as indicated on the plan.  
 B. The Landscape Architect or qualified professional will check location of plants in the field and shall adjust to exact position before planting begins.  
 C. Subsoil shall not be worked when moisture content is so great that excessive compaction will occur nor when it is so dry that clods will not readily break. Water shall be applied, if necessary, to bring soils to an optimum moisture content before sifting and planting.  
 D. Tree pits shall not be excavated more than 24 hours in advance of planting operation. Tree pits shall be excavated to the following dimensions:

Excavation for	Width	Depth
Container Trees	Can + 12 in.	Can + 4 in.
B&B Trees	Ball + 12 in.	Ball + 4 in.

E. Excavate shrub pits to the following depths:

Excavation for	Width	Depth
Shrubs	Ball or Can + 8 in.	Can + 4 in., not less than 12 in.

10. PREPARING PLANT MATERIALS FOR PLANTING  
 A. Container stock shall be removed carefully after cans have been cut on two sides with approved cutter. Do not use spade to cut cans. Do not lift or handle container plants by tops, stems or trunks at any time.  
 B. Do not bind or handle any plants with wire or rope at any time so as to damage bark or break branches. Lift and handle plants only from bottom of ball.  
 C. Baled and burlapped (B&B) plants shall have firm balls of earth. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations. B&B material shall be dug only when dormant. Pre-dug B&B material shall be inspected and approved at the storage site.  
 D. Do not force roots for bare rooted trees into excavated pits - custom dig pits to receive roots without deformation, during the mixing process.

12. INSTALLATION OF CONTAINERIZED PLANT MATERIAL  
 A. Scarify the walls and bottom of all plant pits immediately prior to the placement of plant and backfill mix. The Contractor shall remove all glazing of soil caused by an auger or mechanical hole digger.  
 B. Wells around trees and shrubs: after planting is complete, form a soil well 3 inches high around each plant, extending to the outer limit of the plant pit in accordance with planting details shown on the drawings.  
 C. Smooth planted areas to conform to specified grades after full settlement as occurred. Contractor shall bear final responsibility for proper surface drainage of planted areas. Any discrepancy in the drawings or specifications, obstructions on the site or prior work done by another party, which Contractor feels precludes establishing proper drainage, shall be brought to the attention of the Landscape Architect in writing.  
 D. Water all plants immediately after planting.  
 E. Spread mulch in required areas to the compacted depth of 2 inches.  
 F. Install tree shelters around new plantings.

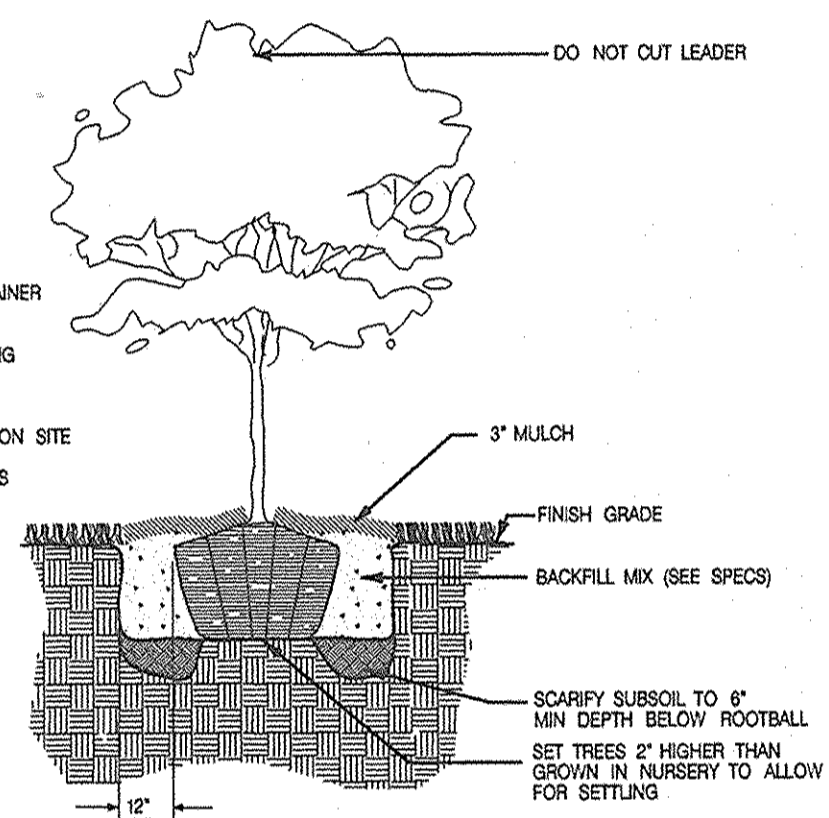
GUARANTEE:  
 A MINIMUM SURVIVAL RATE OF 75% IS TO BE GUARANTEED BY THE DEVELOPER AT THE END OF THE TWO YEAR MAINTENANCE PERIOD.

## REFORESTATION AREA PLANTING PLAN

Zone A Trees required = 320 (1.60 acres x 200/acre)

SPECIES	COMMON NAME	SPACING*	SIZE	QUANTITY	INDICATOR STATUS
Acer rubrum	red maple	15' x 15'	1" Cal.	80	FAC
Juglans nigra	black walnut	15' x 15'	1" Cal.	50	FACU
Liquidambar styraciflua	sweet gum	15' x 15'	1" Cal.	75	FAC
Nyssa sylvatica	black gum	15' x 15'	1" Cal.	50	FAC
Platanus occidentalis	sycamore	15' x 15'	1" Cal.	65	FACW
				320	

\* Tree shelters shall be used.



### Typical Tree Planting (For container grown)

Not To Scale

- NOTE:
- THE PRECISE LOCATION OF PLANT MASSINGS WILL BE LOCATED IN THE FIELD BY LANDSCAPE ARCHITECT.
  - GRID PATTERNS WILL BE AVOIDED
  - PLANT MATERIAL MAY BE GROUPED IN CLUSTERS OF NO MORE THAN 5 TO 7 INDIVIDUAL PLANTS OF THE SAME SPECIES. PLANTS WILL BE INSTALLED IN A RANDOM FASHION WITHIN SPECIFIED ZONES.
  - ALL PROPOSED SPECIES ARE TREES, NO SHRUBS SHALL BE PLANTED.
  - ALL WELLS NEED TO BE DRILLED PRIOR TO FINAL PLAT SIGNATURE. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED GOVERNMENT DELAY IF THE WELL DRILLING HOLDS-UP THE HEALTH DEPARTMENT SIGNATURE ON THE RECORD PLAT.
  - ALL EXISTING STRUCTURES LOCATED ON THE PRESERVATION PARCEL TO BE RAZED NEED TO BE REMOVED PRIOR TO FINAL PLAT SIGNATURE.
  - THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PUBLIC SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.
- NOTE:
- ALL SHOWN HOUSE SITES COMPLY WITH MINIMUM BUILDING RESTRICTION REGULATIONS.
  - ALL WELLS SHALL BE DRILLED PRIOR TO SUBMITTAL OF THE RECORD PLAT FOR SIGNATURE. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO THE FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED GOVERNMENT DELAY IF THE WELL DRILLING DELAYS THE HEALTH DEPARTMENT SIGNATURE ON THE RECORD PLAT. A WELL SUCCESS RATE IS ACCOMPLISHED AT THE OPTION TO REQUEST RELIEF FROM DRILLING THE REMAINING WELLS PRIOR TO PLAT RECORDATION.
  - ALL SEPTIC RESERVE AREAS ARE 10,000 SQUARE FEET UNLESS NOTED OTHERWISE.
  - GROUND WATER APPROPRIATION PERMIT SHALL BE ISSUED PRIOR TO SUBMITTAL OF FINAL RECORD PLAT FOR SIGNATURE AND PRIOR TO DRILLING OF WELLS.
  - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
  - ALL SEPTIC & WELL SYSTEMS TO BE ABANDONED MUST BE PROPERLY ABANDONED PRIOR TO FINAL PLAT APPROVAL.
  - EXISTING WELL ON PRESERVATION PARCEL IS THE REMAIN.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 [Signature] 12/18/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
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TAX MAP 7 Grid 22 PARCEL 323, 512  
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### FOREST CONSERVATION PLAN

Des. By	CH, JS	Scale	AS SHOWN	Proj. No.	04034.A
Dm. By	MDT	Date	12/18/06		
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