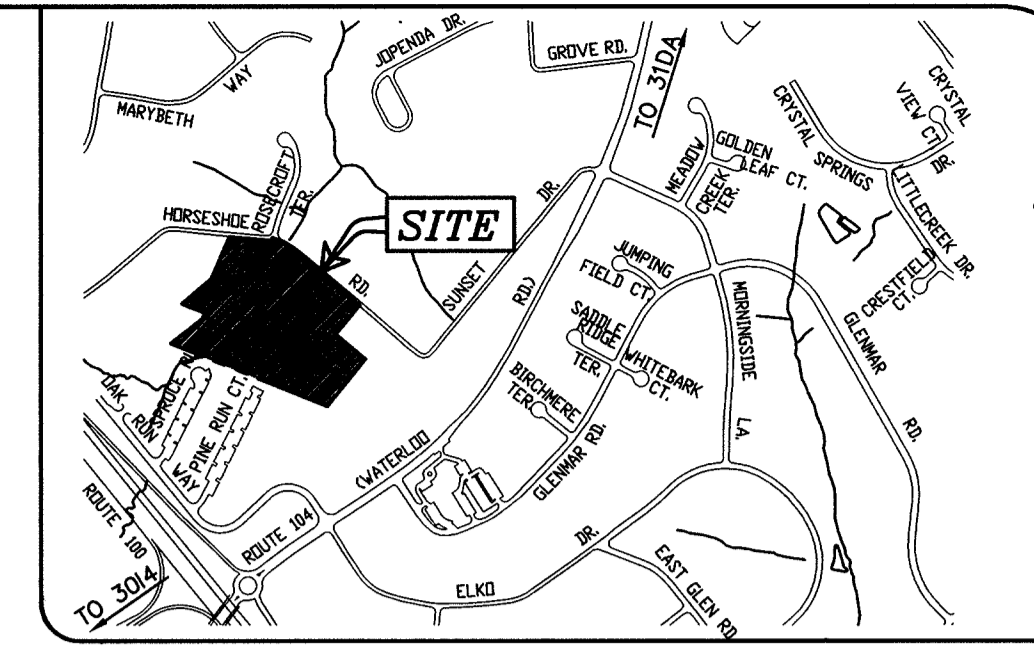


**MINIMUM LOT SIZE (CHART)**

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
5	14,792 SQ.FT.	792 SQ.FT.	14,000 SQ.FT.
6	15,657 SQ.FT.	1,657 SQ.FT.	14,000 SQ.FT.
12	15,476 SQ.FT.	1,476 SQ.FT.	14,000 SQ.FT.
19	14,674 SQ.FT.	674 SQ.FT.	14,000 SQ.FT.
20	15,183 SQ.FT.	1,183 SQ.FT.	14,000 SQ.FT.
21	15,564 SQ.FT.	1,564 SQ.FT.	14,000 SQ.FT.
22	16,055 SQ.FT.	2,055 SQ.FT.	14,000 SQ.FT.

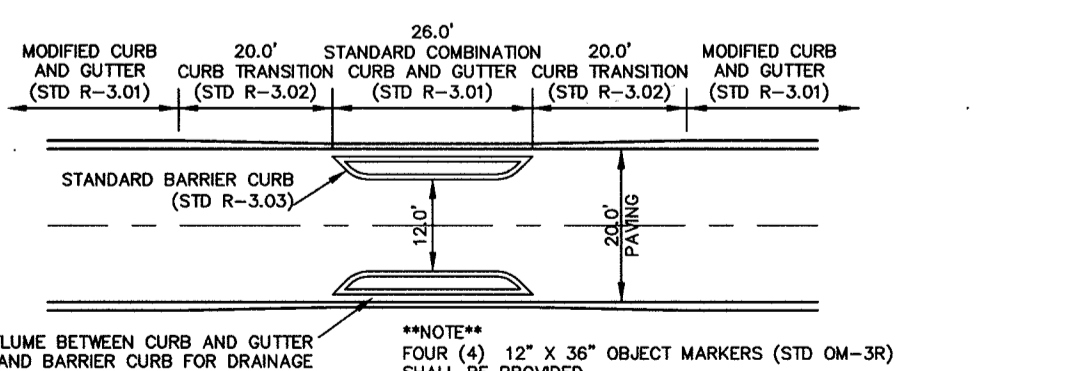


**GENERAL NOTES:**

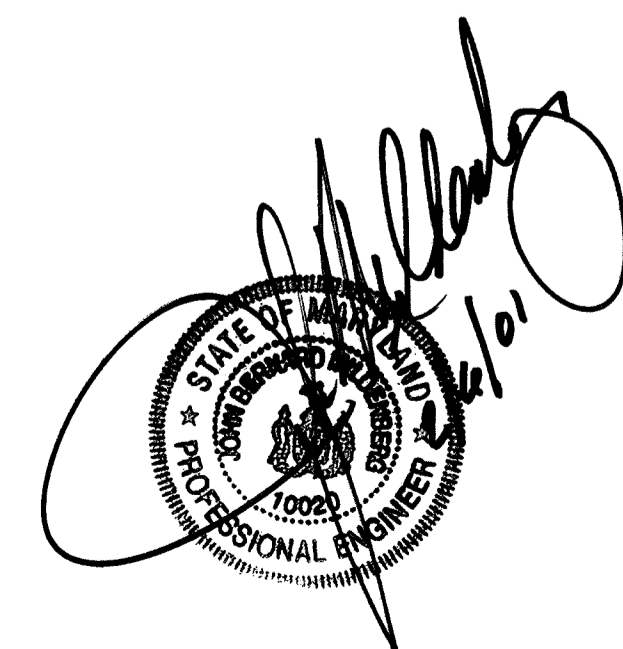
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN GRANTED.
- PROJECT BACKGROUND:  
LOCATION: TAX MAP 31 PARCEL 60 AND LOT 3  
ZONING: R-20  
ELECTION DISTRICT: 2ND  
DPZ No.
- COORDINATES BASED ON NAD'83 MARYLAND COORDINATES SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 30A AND 31D4  
STA. 30A N 567750.955 E 1364842.701 EL.499.821  
STA. 31D4 N 571700.681 E 1369606.396 EL.495.181
- TOPOGRAPHIC INFORMATION ARE BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING CO. FLOWN ON 1-6-2000.
- BOUNDARY INFORMATION IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT MARCH 2000 BY MILDBERG, BOENDER AND ASSOCIATES, INC.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER ARE PUBLIC.
- STORMWATER MANAGEMENT WILL BE PROVIDED VIA EXTENDED DETENTION FACILITY. SWM WILL BE PRIVATE.
- EXISTING UTILITIES WERE LOCATED BASED ON HOWARD COUNTY'S AS-BUILT DRAWINGS.
- WETLANDS STUDY AND FOREST STATED DELINEATION IS BY WILDMAN ENVIRONMENTAL SERVICES, INC. DATED APRIL, 2000.
- FLOODPLAIN DELINEATION IS BASED ON STUDY BY MILDBERG BOENDER AND ASSOCIATES, INC. DATED: APRIL, 2000.
- DEED REFERENCE: 481/690 AND 241/428.
- NO CEMETERIES OR HISTORIC STRUCTURES EXIST ON SITE.
- NO STEEP SLOPES EXIST ON SITE.
- ALL ROADS ARE TO HAVE MOUNTABLE CURBS.
- HOUSES NOT DRAINING TO SWM FACILITIES ARE TO HAVE DRY WELLS OR APPROVED MEASURES FOR WATER QUALITY.

AREA TABULATION:

TOTAL TRACT AREA:	11.97 AC ±
MINIMUM LOT AREA:	14,000 S.F.
AREA OF PROPOSED BUILDABLE LOTS:	7.33 AC ±
AREA OF PROPOSED ROADS (R/W):	0.97 AC ±
REQUIRED OPEN SPACE (30%):	3.58 AC ±
PROVIDED OPEN SPACE:	3.67 AC ±
REQUIRED RECREATIONAL OPEN SPACE 200 S.F./UNIT:	4,400 S.F.
PROVIDED RECREATIONAL OPEN SPACE:	4,400 S.F.
NUMBER OF PROPOSED BUILDABLE LOTS:	22
NUMBER OF PROPOSED OPEN SPACE LOTS:	3
TOTAL NUMBER OF PROPOSED LOTS:	25



**ROAD "A"**  
**SINGLE LINE SLOW POINT (SHOKER)**  
**SPEED CONTROL DEVICE**  
**(PUBLIC ACCESS PLACE)**  
 TENTATIVELY APPROVED  
 DEPT. OF PLANNING AND ZONING OF  
 HOWARD COUNTY  
 PLANNING DIRECTOR  
 DATE: 2/15/01



**CURVE TABLE**

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	50.00'	83.97'	55.75'	74.44'	S07°50'40"E	96°13'15"
C2	35.00'	16.48'	8.40'	16.33'	N36°36'10"E	26°58'55"
C3	50.00'	52.36'	28.87'	50.00'	N20°05'37"E	60°00'00"

H:\199080\DMG\PRELIM\REV-SUBMISSION-NOV\PRELIM

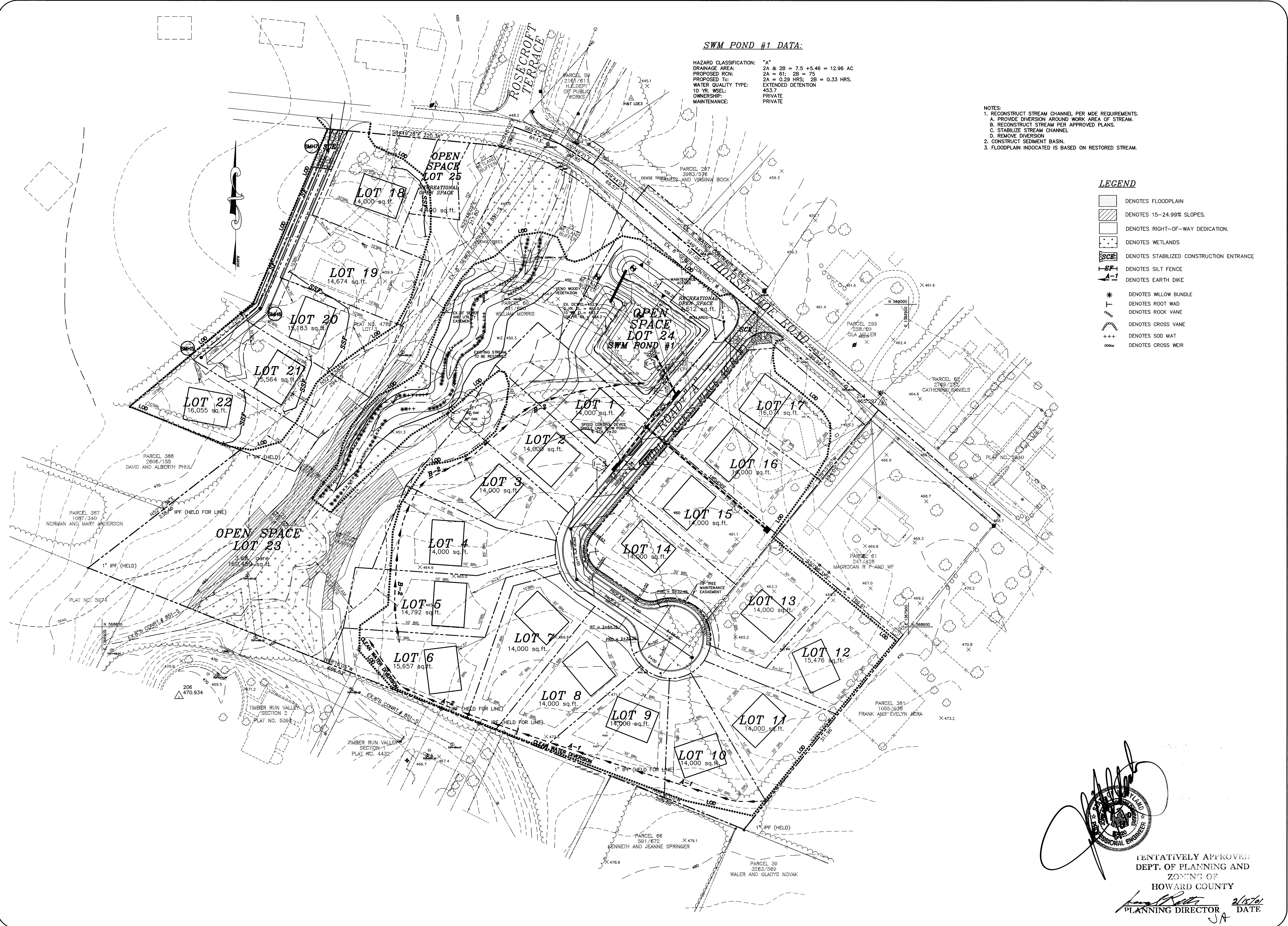
date	description	revisions
FEB. 2001	engineering	
99080	illustration	
MMP	approval	
scale	1"=50'	

no.	date

**MORRIS PROPERTY**  
 TAX MAP 31, PARCEL 60 AND RESUBDIVISION OF LOT 3, BLOCK 13  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 PRELIMINARY EQUIVALENT SKETCH PLAN

**MILDBERG, BOENDER & ASSOC., INC.**  
 Planners Surveyors  
 Engineers  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0286 Balt. (301) 621-5521 Wash. (410) 997-0288 Fax.

H: 139080 DWG (PRELIM) REV - SUBMISSION - NOV. GRADING



**SWM POND #1 DATA:**

HAZARD CLASSIFICATION: "A"  
 DRAINAGE AREA: 2A & 2B = 7.5 + 5.46 = 12.96 AC  
 PROPOSED RCN: 2A = 61; 2B = 75  
 PROPOSED Tc: 2A = 0.29 HRS; 2B = 0.33 HRS.  
 WATER QUALITY TYPE: EXTENDED DETENTION  
 10 YR. WSEL: 453.7  
 OWNERSHIP: PRIVATE  
 MAINTENANCE: PRIVATE

**NOTES:**

1. RECONSTRUCT STREAM CHANNEL PER MDE REQUIREMENTS.
2. PROVIDE DIVERSION AROUND WORK AREA OF STREAM.
3. RECONSTRUCT STREAM PER APPROVED PLANS.
4. STABILIZE STREAM CHANNEL.
5. REMOVE DIVERSION.
6. CONSTRUCT SEDIMENT BASIN.
7. FLOODPLAIN INDICATED IS BASED ON RESTORED STREAM.

- LEGEND**
- DENOTES FLOODPLAIN
  - DENOTES 15-24.99% SLOPES.
  - DENOTES RIGHT-OF-WAY DEDICATION.
  - DENOTES WETLANDS
  - DENOTES STABILIZED CONSTRUCTION ENTRANCE
  - DENOTES SILT FENCE
  - DENOTES EARTH DIKE
  - DENOTES WILLOW BUNDLE
  - DENOTES ROOT WAD
  - DENOTES ROCK VANE
  - DENOTES CROSS VANE
  - DENOTES SOD MAT
  - DENOTES CROSS WEIR

date	FEB 2001
project	99080
illustration	MMP
scale	1" = 50'
approval	JBM

no.	description	date

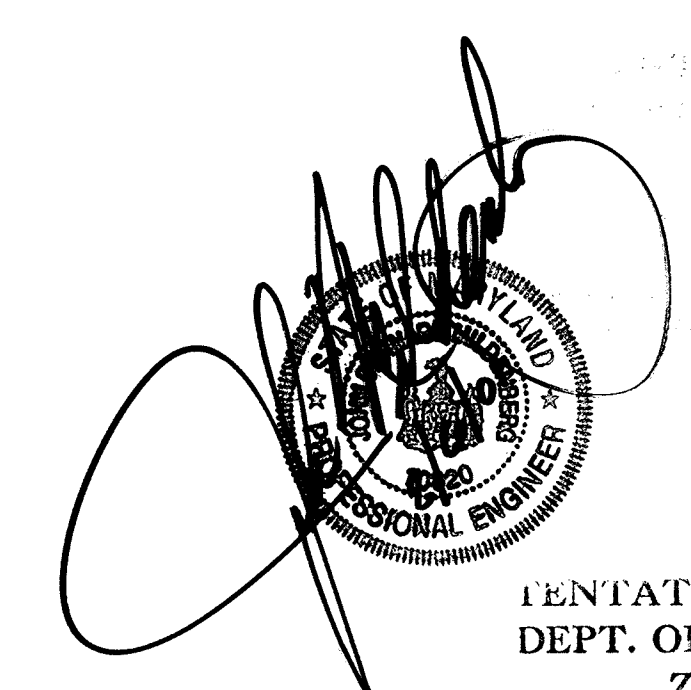
**MORRIS PROPERTY**

TAX MAP 31, PARCEL 60 AND RESUBDIVISION OF LOT 3, BLOCK 13  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**PRELIMINARY GRADING & SEDIMENT CONTROL PLAN**

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors

5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0236 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.



TENTATIVELY APPROVED  
 DEPT. OF PLANNING AND ZONING OF  
 HOWARD COUNTY

*Paul R. Pitzer* 2/15/01  
 PLANNING DIRECTOR DATE  
 JA

**STREET TREE CALCULATIONS**

HORSESHOE ROAD - 790 / 40 = 20  
 ROAD A - 1233 / 40 = 31  
 TOTAL TREES REQUIRED = 51 TREES  
 TOTAL TREES PROVIDED = 51 TREES

FOREST CONSERVATION EASEMENT F (RETENTION) 0.19 ACRES (0.07 ACRES CREDITED & 0.12 ACRES NON-CREDITED)  
 FOREST CONSERVATION EASEMENT F (REFORESTATION) 0.04 ACRES

**LEGEND**

- DENOTES FLOODPLAIN
- DENOTES 15-24.99% SLOPES.
- DENOTES RIGHT-OF-WAY DEDICATION.
- DENOTES WETLANDS
- DENOTES PERIMETER LANDSCAPE EDGE

NOTE: THIS DRAWING IS TO BE USED FOR PRELIMINARY LANDSCAPE PLAN PURPOSES ONLY.

**NOTES:**

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IS TO BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT.
3. AT FINAL PLAN STAGE, LANDSCAPE PLANTING OPTION TO BE USED FOR FOREST CONSERVATION EASEMENT F.

**STREET TREE PLANTING SCHEDULE**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
20		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
31		PYRUS CALLERYANA 'RED SPIRE'	RED SPIRE PEAR	2 1/2" - 3" CAL.
<b>TOTAL</b>				<b>51 STREET TREES</b>

PERIMETER	EDGE TYPE
PERIMETER 1 SFD SIDE TO ROAD - 113 LF EXISTING TREES TO REMAIN	B
SFD SIDE TO ROAD - 33.23 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
PERIMETER 2 SFD TO SFD - 194.07 LF 1 SHADE TREE / 60 LF	A
PERIMETER 3 SFD TO SFD - 199.91 LF 1 SHADE TREE / 60 LF	A
PERIMETER 4 SFD TO SFD - 311.96 LF 1 SHADE TREE / 60 LF	A
PERIMETER 5 SFD TO SFD - 365 LF EXISTING TREES TO REMAIN	A
SFD TO SFD - 510.63 LF 1 SHADE TREE / 60 LF	A
PERIMETER 6 SFD TO SFD - 238.46 LF EXISTING TREES TO REMAIN	A
PERIMETER 7 SFD TO SFD - 146.90 LF 1 SHADE TREE / 60 LF	A
PERIMETER 8 SFD TO SFD - 435.21 LF 1 SHADE TREE / 60 LF	A
PERIMETER 9 DRIVEWAY ENTRANCE - 25.14 LF	N/A
SFD FRONT TO ROAD - 111.49 LF	N/A
SWM TO ROAD - 231.59 LF EXISTING TREES TO REMAIN	B
SWM TO ROAD - 115 LF CREDIT FOR SWM LANDSCAPING	B
SFD SIDE TO ROAD - 70 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
PERIMETER 10 SFD SIDE TO ROAD - 68.63 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
<b>TOTAL PLANTING OBLIGATION</b>	
SHADE TREES	33
EVERGREEN TREES	5
SHRUBS	0

**SCHEDULE A : PERIMETER LANDSCAPED EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B (PERIMETERS 1,9, & 10)	A (PERIMETERS 2 THRU 8)
LINEAR FEET OF PERIMETER	631.45 LF	2402.14 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 344.59 LF OF EXISTING TREES TO REMAIN	YES, 603.46 LF OF EXISTING TREES TO REMAIN
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	YES, 115 LF OF SWM LANDSCAPING	NO
NUMBER OF PLANTS REQUIRED		
SHADE TREES	3 SHADE TREES	30 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS

SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 115 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER B - 125 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER C - 110 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER D - 115 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
<b>TOTAL PLANTING OBLIGATION</b>	
SHADE TREES	10
EVERGREEN TREES	12
SHRUBS	0

**SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING**

LINEAR FEET OF PERIMETER	465 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES REQUIRED	10 SHADE TREES 12 EVERGREEN TREES

date	description	revision
FEB.2001	engineering	
99080	illustration	
	MMP/SID	
	scale	1" = 50'

date	description	revision

MORRIS PROPERTY  
 TAX MAP 31, PARCEL 60 AND RESUBDIVISION OF LOT 3, BLOCK 13  
 HOWARD COUNTY, MARYLAND  
 SECOND ELECTION DISTRICT  
 PRELIMINARY LANDSCAPE PLAN

MILDENBERG, BOENDER & ASSOC., INC.  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

**I. BASIC SITE DATA**

DESCRIPTION	ACRES
GROSS SITE AREA	11.97
AREA WITHIN 100 YEAR FLOODPLAIN	1.48
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0.00
NET TRACT AREA	10.49
LAND USE CATEGORY	RESIDENTIAL-SUBURBAN

**II. FOREST CONSERVATION WORKSHEET DATA SUMMARY**

B. REFORESTATION THRESHOLD (20%)	2.10
C. AFFORESTATION MINIMUM (15%)	1.57
D. EXISTING FOREST ON NET TRACT AREA	7.08
E. FOREST AREAS TO BE CLEARED	6.08
F. FOREST AREAS TO BE RETAINED	1.00

**IV. REFORESTATION CALCULATIONS**

G. FOREST CLEARED ABOVE REFORESTATION THRESHOLD	4.98
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	1.10
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	0.00

REFORESTATION FOR CLEARING ABOVE THRESHOLD: 1.25  
 REFORESTATION FOR CLEARING BELOW THRESHOLD: 2.20  
 TOTAL REFORESTATION REQUIRED: 3.45

TOTAL REFORESTATION PROVIDED: 0.89  
 TOTAL OFF-SITE REFORESTATION REQUIRED: 2.56

**REFORESTATION PLANT LIST**

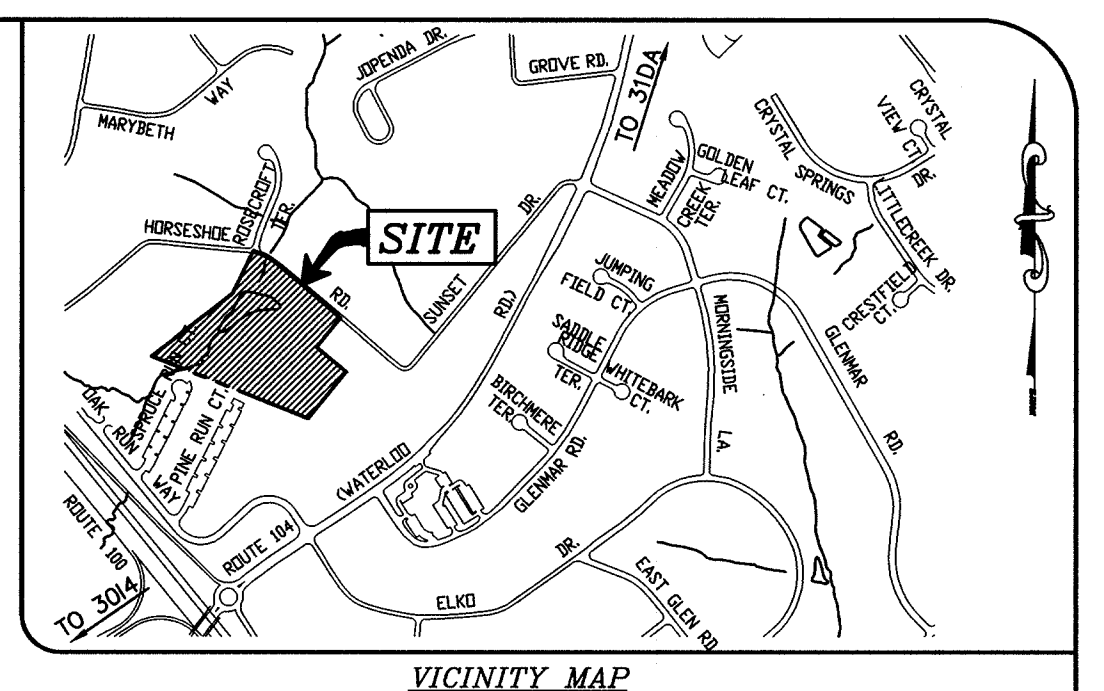
QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN. Q.C. SPACING	SIZE & REMARKS
26	Acer negundo Box Elder	T	M-W	FAC+	8'	CONT/B & B 1" CALIPER
20	Acer rubrum Red Maple	VT	D-W	FAC	20'	CONT/B & B 1" CALIPER
20	Fraxinus pennsylvanica Green Ash	I-MT	M-W	FACW	11'	CONT/B & B 1" CALIPER
26	Lindera benzoin Spicebush	T	M	FACW-	6'	CONT/B & B 3" - 5" HT.
20	Nyssa sylvatica Black Gum	T	M-W	FAC	20'	CONT/B & B 1" CALIPER
20	Platanus occidentalis American Sycamore	MT	M-W	FACW-	11'	CONT/B & B 1" CALIPER
26	Quercus phellos Willow Oak	I	M-W	FAC+	20'	CONT/B & B 1" CALIPER
20	Viburnum dentatum Southern Arrowwood	T	M	FACW-	6'	CONT/B & B 3" - 4" HT.

TOTAL 178 TREES

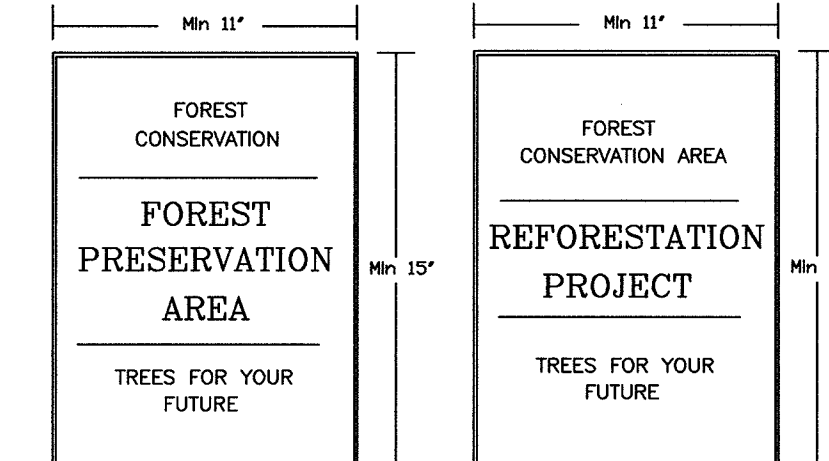
NOTE: WHIPS OR SEEDLINGS MAY BE SUBSTITUTED FOR THE 1" CALIPER OR 3" - 5" TREES, IF WHIPS OR SEEDLINGS ARE TO BE USED, MULTIPLY THE QUANTITIES BY 3.5 TO DETERMINE THE NUMBER OF TREES REQUIRED.

NOTE: THIS PLAN IS TO BE USED FOR PRELIMINARY FOREST CONSERVATION PURPOSES ONLY.

- NOTES:**
- FOREST STAND DELINEATION PREPARED BY WILDMAN ENVIRONMENTAL SERVICES, INC. IN JULY 2000.
  - THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY ON-SITE RETENTION IN THE AMOUNT OF 1.00 ACRES OF CREDITED EASEMENT AND 0.59 ACRES OF NON-CREDITED (FLOODPLAIN) EASEMENT TO TOTAL 1.59 ACRES OF FOREST CONSERVATION EASEMENT (RETENTION), REFORESTATION IN THE AMOUNT OF 0.89 ACRES, AND OFF-SITE REFORESTATION IN THE AMOUNT OF 2.56 ACRES (SITE TO BE DETERMINED AT FINAL PLAN STAGE).
  - THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1202 OF THE HOWARD COUNTY CODE, 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 EASEMENT ARE ALLOWED.
  - AT FINAL PLAN STAGE, LANDSCAPE PLANTING OPTION TO BE USED FOR FOREST CONSERVATION EASEMENT F.



project	date	description	scale	revision
98080	FEB. 2001	engineering	MMP/SJD	
		illustration	MMP/SJD	
		approval		



**SIGNAGE DETAIL**  
NOT TO SCALE

NOTE: SIGNS ARE PERMANENT AND TO BE MOUNTED ON DURABLE POSTS OR POLES (4"x4" PRESSURE TREATED LUMBER OR 2 1/2" DIAMETER GALVANIZED OR ALUMINUM POST, OR EQUIVALENT).

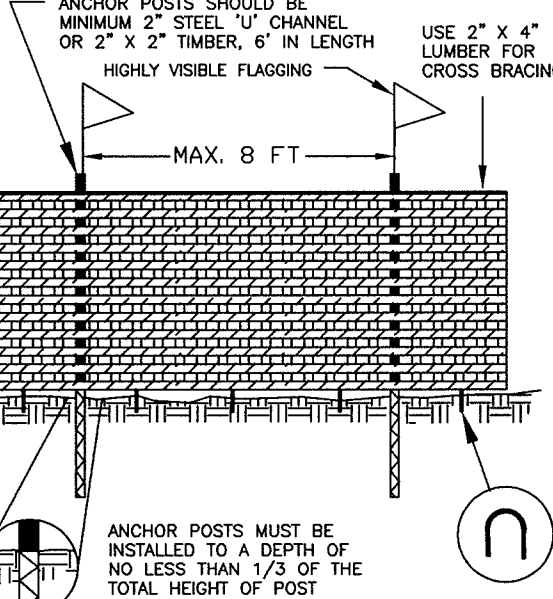
- PRE-CONSTRUCTION MEETING**
- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
    - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, STREAM TRENDS WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, BOUNDARIES OF PROTECTED FOREST AREAS AND EQUIPMENT STAGING AREAS;
    - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
    - MAKE ALL NECESSARY ADJUSTMENTS;
    - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.
- CONSTRUCTION MONITORING**
- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DRAINAGE.
  - ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS SHALL BE CONSULTED WITH A PROFESSIONAL ARBORIST.
  - THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.
- NOTE:** THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIES, TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

**PLANTING SPECIFICATIONS AND NOTES**

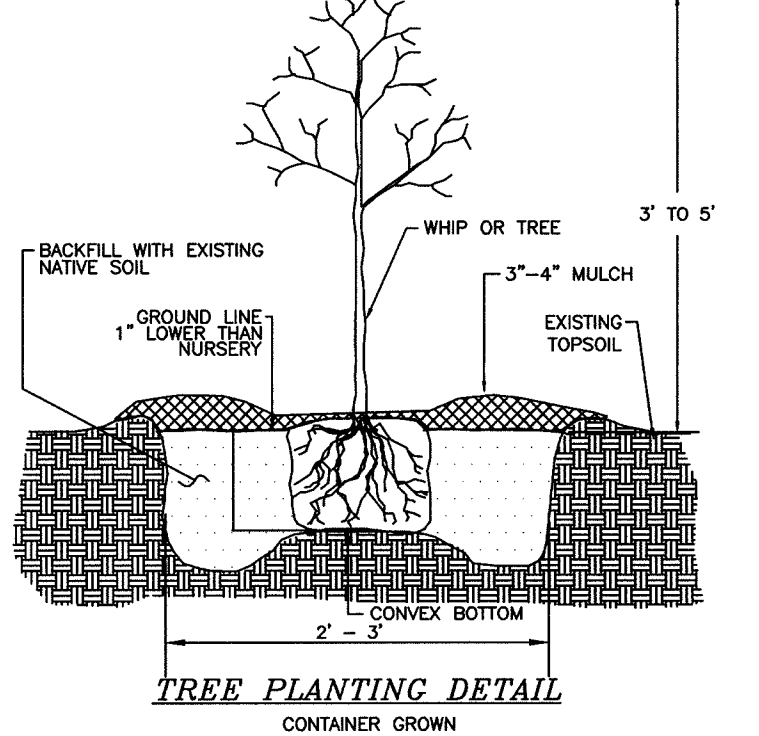
- SITE PREPARATION AND SOILS**
- PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
  - DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 5 x DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
  - SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL. SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME COMPOSTED LEAF LITTER. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
  - ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.
- PLANT STORAGE AND INSPECTION**
- FOR CONTAINER GROWN NURSERY STOCK PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
  - FOR BALL AND BURLAP NURSERY STOCK PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
  - PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
  - UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.
- PLANT INSTALLATION**
- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
  - PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING TREES.
  - CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
  - CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. U-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCE OF SOIL BORNE DISEASES.
  - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
  - FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA. MAINTAIN AVERAGE SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
  - AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
  - NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINING NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.
- FERTILIZING**
- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL STRESS TO THE ALREADY DISTURBED PLANT.
  - NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
  - IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.
- MAINTENANCE SCHEDULE**
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
  - ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
  - VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS ACTIVELY EFFECTING THE PLANTED STOCK.
  - REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
  - REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
  - A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.
- SUPERVISION**
- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMING REGS. 10.01.01 AND THE MARSHLAND DISTRICT DEPT. OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

**PROTECTIVE FENCE DETAIL**

BLAZE ORANGE PLASTIC MESH



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



**LEGEND**

- DENOTES FLOODPLAIN
- DENOTES 15-24.99% SLOPES.
- DENOTES RIGHT-OF-WAY DEDICATION.
- DENOTES WETLANDS
- TREE PROTECTIVE FENCING
- FOREST CONSERVATION SIGNAGE
- FOREST CONSERVATION EASEMENT (RETENTION)
- FOREST CONSERVATION EASEMENT (REFORESTATION)

MD DNR QUALIFIED PROFESSIONAL  
 Stephanie Demchik  
 STEPHANIE DEMCHIK

DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY  
 PLANNING DIRECTOR  
 DATE: 2/16/01

**GENERAL NOTES**

**FOREST PROTECTION**

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SALT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAWING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPIILING OF MATERIAL WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

**MILDENBERG & ASSOC., INC.**  
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 (410) 997-0296 Fax: (301) 651-5521 Wash. (410) 997-0298 Fax.

TAX MAP 31, PARCEL 60 AND RESUBDIVISION OF LOT 3, BLOCK 13  
 HOWARD COUNTY, MARYLAND  
 PRELIMINARY FOREST CONSERVATION PLAN

SECOND ELECTION DISTRICT  
 MORRIS PROPERTY

date FEB. 2001  
 illustration MMP/SJD  
 scale 1"=50'  
 approval

date  
 description  
 revision

4 OF 4  
 SP-01-02