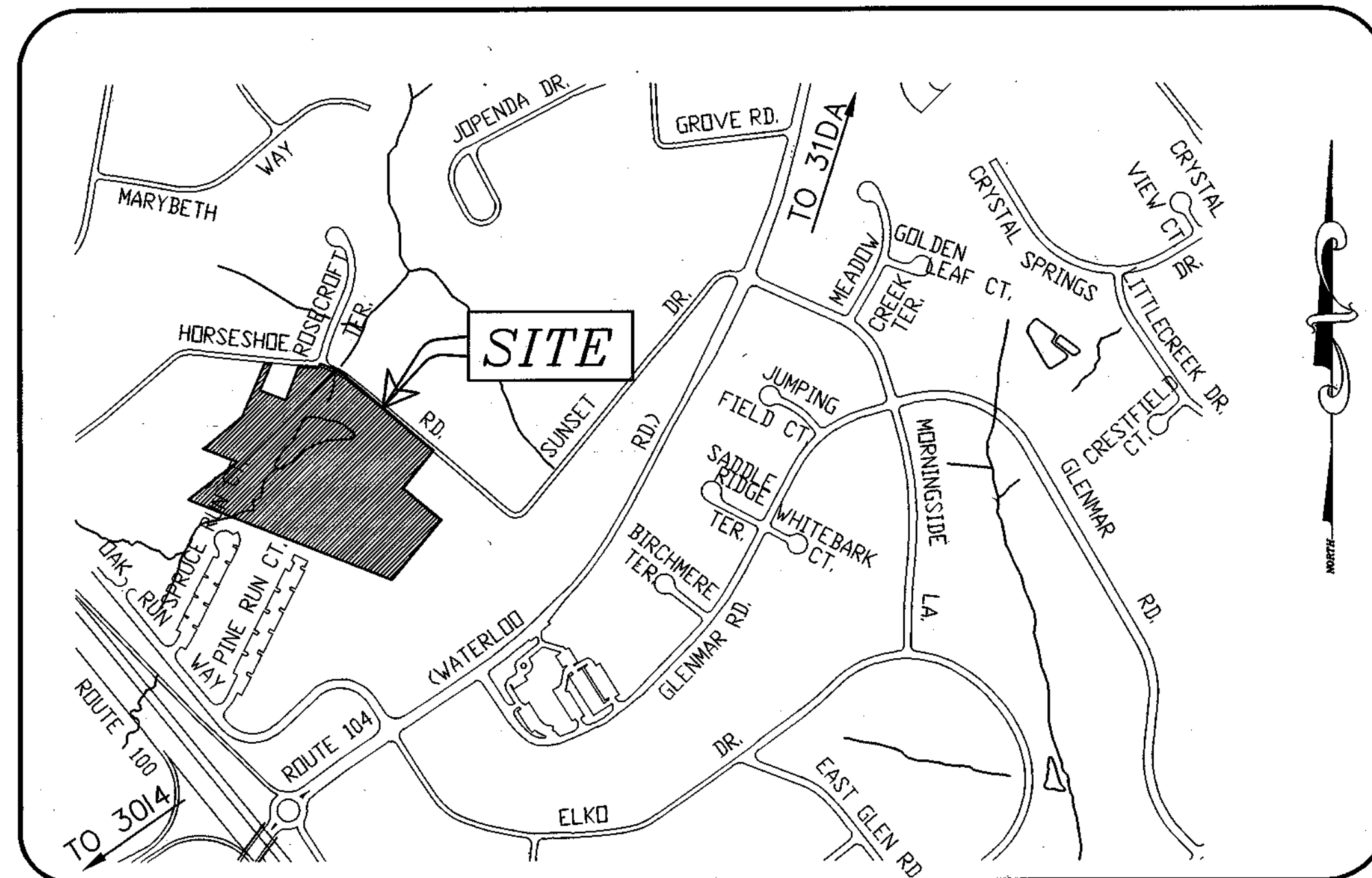


SHEET INDEX

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ROAD CONSTRUCTION PLANS RED HILL BRANCH OVERLOOK LOTS 1 THRU 21 & OPEN SPACE LOTS 22-24 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE 1"=500'

OWNER/DEVELOPER

MORRIS L.L.C.
5072 DORSEY HALL DRIVE, SUITE 202
ELLCOTT CITY, MARYLAND 21043
(410) 997-0296

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

8/11/02
DATE

JACOB HILMAT, AUTHORIZED MANAGER
PRINTED NAME OF DEVELOPER

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

8/13/02
DATE

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
8/13/02
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
9/4/02
DATE

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION
8/13/02
DATE

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	(410) 725-9976
HOWARD COUNTY BUREAU OF UTILITIES	(410) 313-4900
AT&T CABLE LOCATION DIVISION	(410) 393-3533
BALTIMORE GAS & ELECTRIC	(410) 685-0123
STATE HIGHWAY ADMINISTRATION	(410) 531-5533
HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTIONS DIVISION	(410) 313-1880
- PROJECT BACKGROUND:

LOCATION:	TAX MAP 31, PARCEL 60, & LOT 5 OF KOCH PROPERTY
ZONING:	R-20
ELECTION DISTRICT:	2ND
TOTAL AREA:	11.62 AC ±
DPZ FILES:	SP-01-02 APPROVED 2/15/01 WP-01-08 APPROVED 12/26/00
- TOPOGRAPHIC INFORMATION IS BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING CO., INC. FLOWN ON JANUARY 6, 2000. VERTICAL DATUM IS NAD 83.
- COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 301A AND 310A.

STA. 301A	N567750.955, E1364842.701	EL.499.821
STA. 310A	N571700.681, E1369606.396	EL.495.181
- BOUNDARY INFORMATION IS BASED ON MONUMENTED FIELD RUN SURVEY BY MILDENBERG, BOENDER AND ASSOC., INC. PERFORMED IN OR ABOUT MARCH, 2000.
- STORMWATER MANAGEMENT CONTROL WILL BE PROVIDED BY THE METHOD OF EXTENDED DETENTION STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY H.O.A.
- HOUSES NOT CONTROLLED BY THE SWM PONDS TO HAVE DRY WELLS AT SDP STAGE.
- WETLANDS AND STREAM DELINEATION IS BY WILDMAN ENVIRONMENTAL SERVICES, DATED APRIL, 2000. APPROVED UNDER SP-01-02 ON FEBRUARY 15, 2001.
- FLOODPLAIN STUDY PERFORMED BY MILDENBERG, BOENDER & ASSOC., INC. IN APRIL, 2000. APPROVED UNDER SP-01-02 ON FEBRUARY 15, 2001.
- GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNES ENGINEERING ASSOC. INC. IN OCTOBER 1999.
- DEED REFERENCE: L 481, F 690.
- NO CEMETERIES OR HISTORIC STRUCTURES EXIST ON SITE.
- ALL EXISTING STRUCTURES AND DRIVEWAYS ARE TO BE REMOVED UNLESS OTHERWISE NOTED.
- TRAFFIC STUDY BY MARS TRAFFIC GROUP, DATED JANUARY 10, 2001.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER ARE PUBLIC WATER CONTRACT NO. 64-W. SEWER CONTRACT NO. 302-S.
- PROPOSED WATER AND SEWER ARE PUBLIC, CONTRACT # 24-4013-D
- ALL LOTS WILL HAVE A MINIMUM OF 2 ON-SITE PARKING SPACES. NO STREET PARKING SPACES ARE REQUIRED.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- ALL STORM DRAIN PIPES TO BE HDPE PIPES UNLESS OTHERWISE NOTED.
- ALL DRIVEWAYS ENTRANCES TO BE H.C.STD. R-6.03 UNLESS OTHERWISE NOTED.
- STREET LIGHTS WILL BE REQUIRED IN THE DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III(1993) AND AS MODIFIED BY GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 2993) THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. PROVIDE A 100-WATT HPS VAPOR LAMP WITH A POST FIXTURE MOUNTED ON 14' BLACK FIBERGLASS POLE AT STA. 0+20, 25' RT; STA. 4+10, 13' RT; L.P.STA. 0+90, 3' BEHIND CURB.
- ALL ROADS ARE TO HAVE MOUNTABLE CURBS.
- AREA TABULATION:

TOTAL TRACT AREA:	11.62 AC ±
MINIMUM LOT AREA:	14,000 S.F.
AREA OF PROPOSED BUILDABLE LOTS:	7.07 AC ±
AREA OF PROPOSED ROADS (R/W):	0.97 AC ±
REQUIRED OPEN SPACE (30%):	3.49 AC ±
PROVIDED OPEN SPACE:	3.61 AC ±
REQUIRED RECREATIONAL OPEN SPACE 200 S.F./UNIT:	4,200 S.F.
PROVIDED RECREATIONAL OPEN SPACE:	4,400 S.F.
NUMBER OF PROPOSED BUILDABLE LOTS:	21
NUMBER OF PROPOSED OPEN SPACE LOTS:	3
TOTAL NUMBER OF PROPOSED LOTS:	24
- THIS PROJECT IS SUBJECT TO W.P.-01-18 APPROVED ON DECEMBER 26, 2000, TO WAIVE SECTION 16.115(c), 16.116(a)(1) AND 16.116(a)(2)(ii) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATION. THIS WAIVER ALLOWS GRADING AND REMOVAL OF VEGETATION WITHIN THE FLOODPLAIN AREA, WITHIN 25 FEET OF WETLANDS AND WITHIN 75 FEET OF PERENNIAL STREAM, SUBJECT TO: PERMIT REQUIREMENT (AT FINAL PLAN) OF SCD AND MDE. DISTURBANCE SHALL BE THE MINIMUM NECESSARY. A CLEAR LOD SHALL BE SET PRIOR TO WORK, AND MAINTAINED DURING WORK RELATED TO THE EXISTING POND AND TO THE PROPOSED SWM POND. THIS WAIVER ALLOWED FOR REMOVAL OF AN EXISTING POND, RECONSTRUCTION OF THE STREAM UPON REMOVAL OF THE POND, AND CONSTRUCTION OF A NEW STORM WATER MANAGEMENT FACILITY.
- MDE PERMIT TRACKING NO. 200261017
- 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 1.03 ACRES OF CREDITED EASEMENT AND 0.51 ACRES OF NON-CREDITED (FLOODPLAIN) EASEMENT TO TOTAL 1.54 ACRES OF FOREST CONSERVATION EASEMENT (RETENTION), REFORESTATION IN THE AMOUNT OF 0.84 ACRES, AND OFF-SITE REFORESTATION (LISTON FARM, MAP 2, PARCEL 17) IN THE AMOUNT OF 2.30 ACRES. FINANCIAL SURETY HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT FOR THE ON-SITE RETENTION (1.03 ACRES OR 44,866 SQ. FT.) IN THE AMOUNT OF \$29,313.30, ON-SITE REFORESTATION (0.84 ACRES OR 40,946 SQ. FT.) IN THE AMOUNT OF \$20,473.20, AND OFF-SITE REFORESTATION (2.29 ACRES OR 100,148 SQ. FT.) IN THE AMOUNT OF \$20,094.00.
- THIS PROJECT IS SUBJECT TO THE 4TH EDITION SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND TO THE 1993 ZONING REGULATIONS, AS AMENDED 7-12-01.
- THIS PROJECT IS SUBJECT TO W.P.-02-89, APPROVED ON APRIL 26, 2002 TO WAIVE SECTION 16.147 REQUIRING SUBMITTAL OF A RECORD PLAT TO RECONFIGURE PARCELS.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (43 SHADE TREES, 15 EVERGREENS) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$15,150.00.

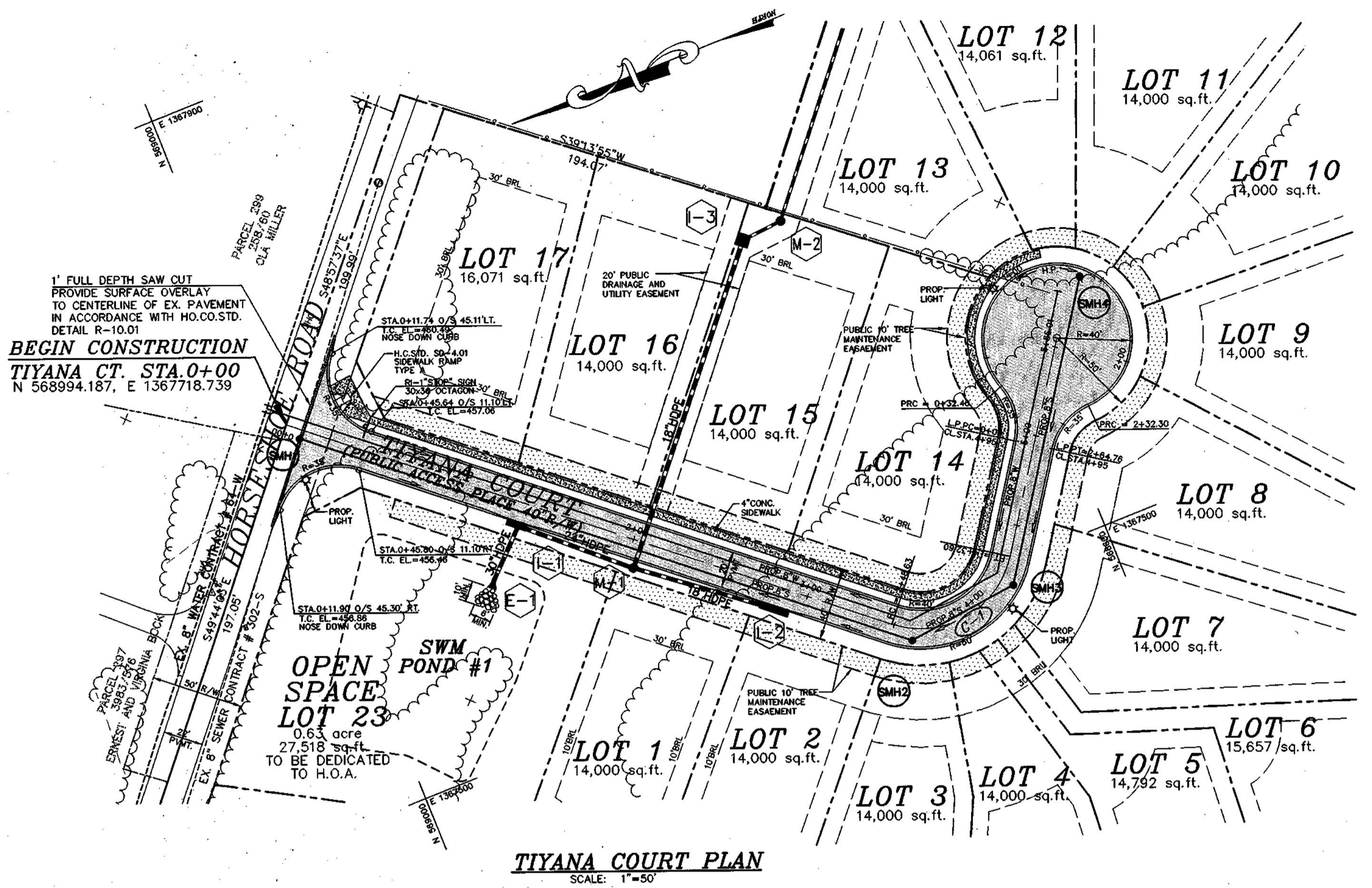
Project	99080	date	JUNE 2002
Structure	M&P	approval	JBM
Scale	NTS		

REV SHEET INDEX & TOTAL SHEET NOS	/E/O/S	date
NO.		
description		
revisions		

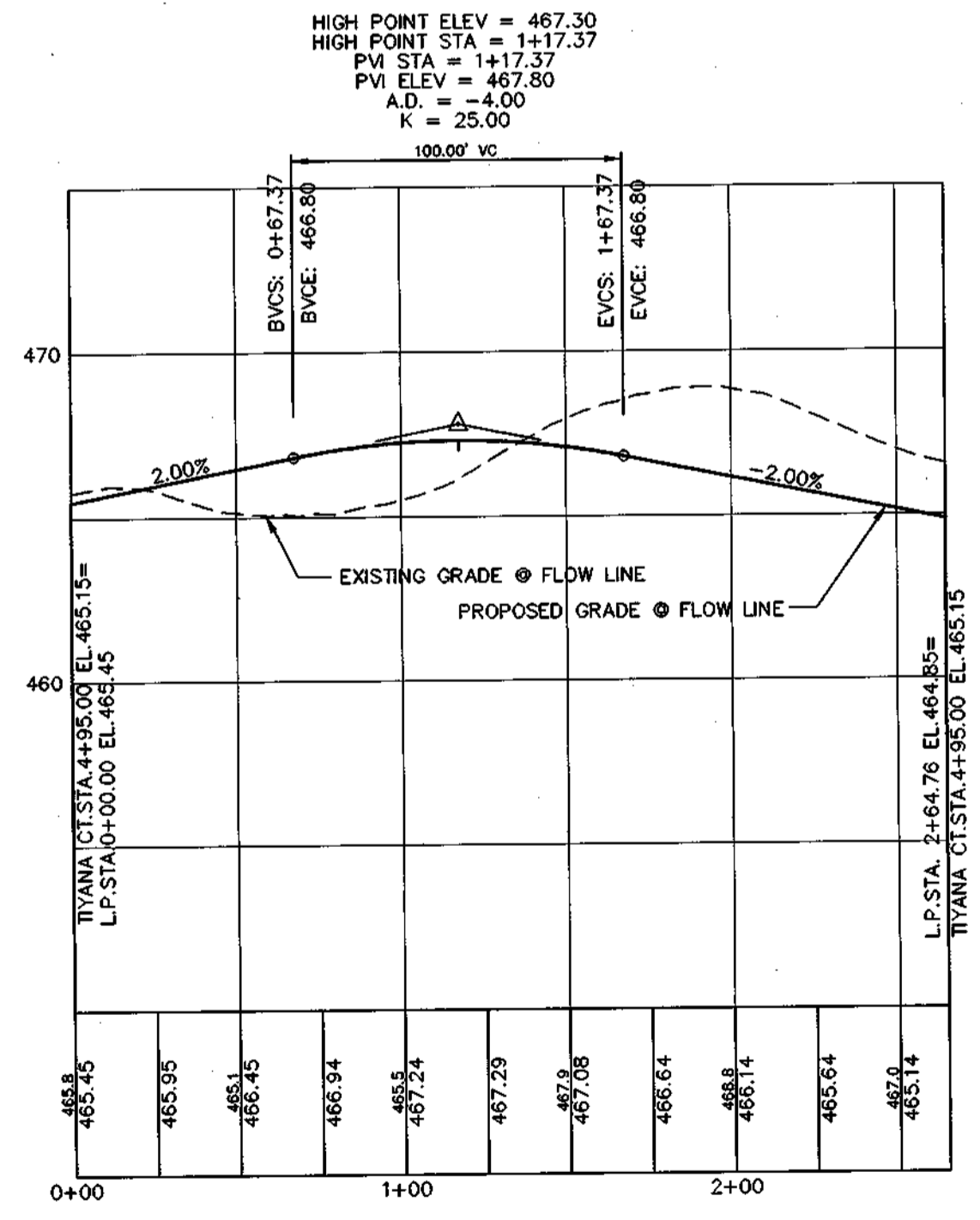
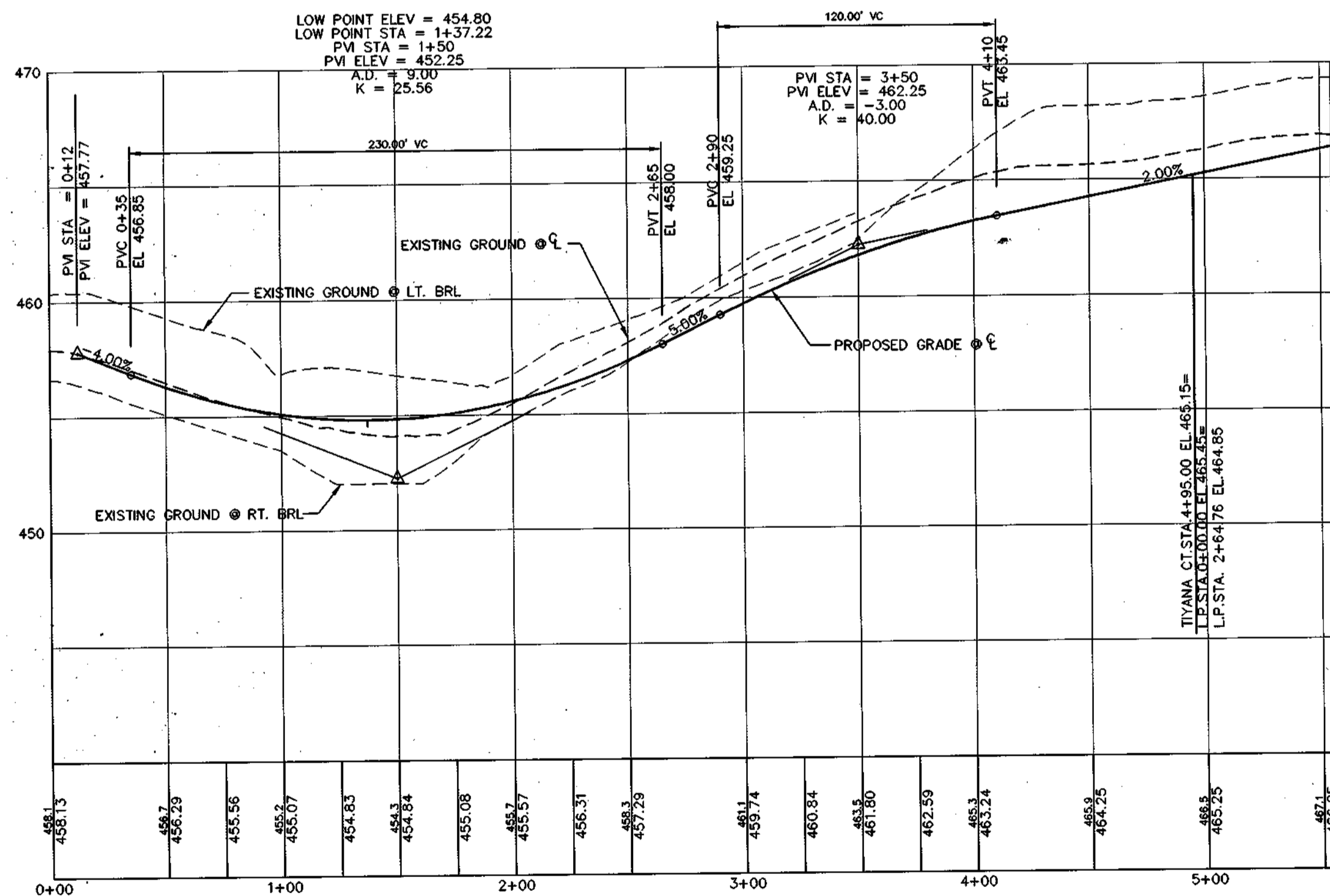
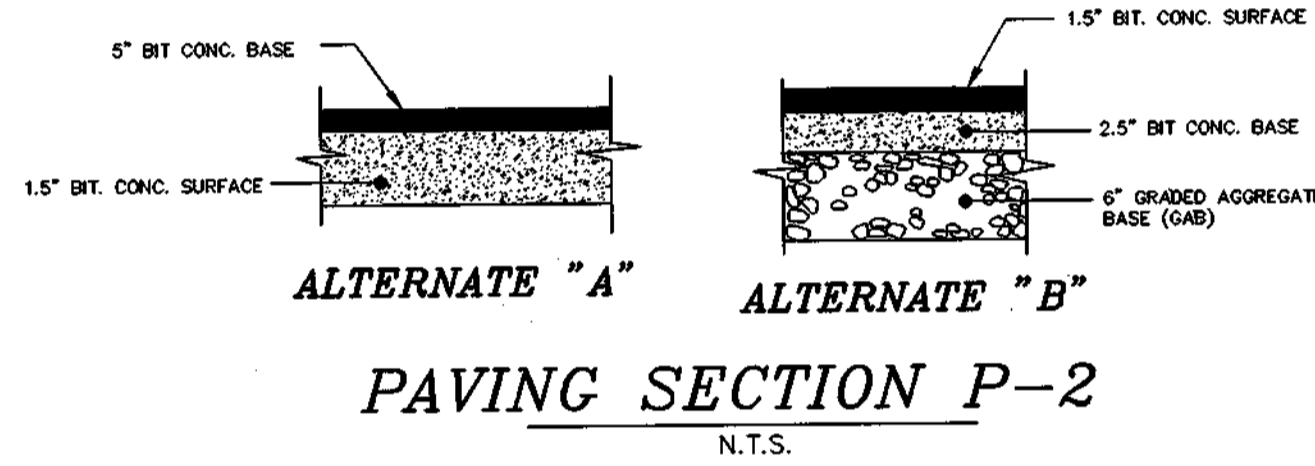
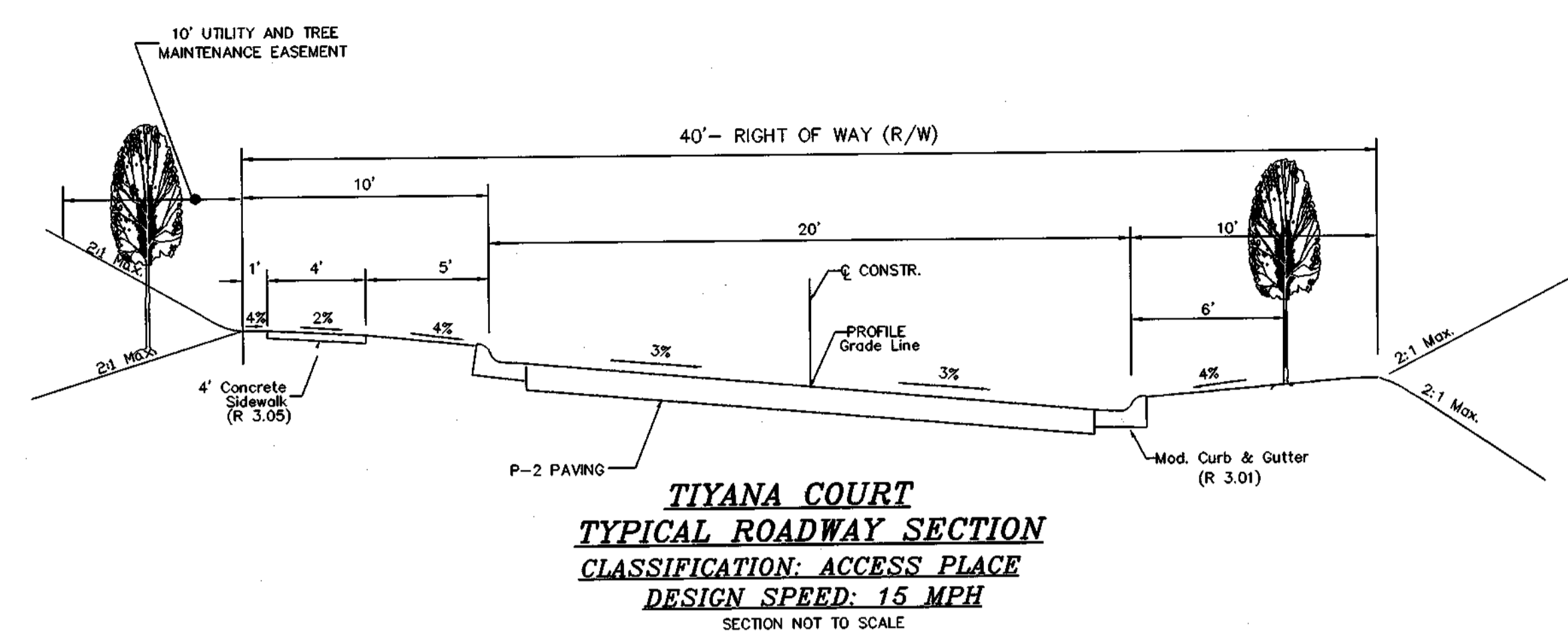
RED HILL BRANCH OVERLOOK
LOTS: 1-21 AND OPEN SPACE LOTS: 22-24
TAX MAP 31, PARCEL 60 AND LOT 5
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 997-0296 Fax: (301) 821-5521 Wash. (410) 997-0298 Fax.

BEGIN CONSTRUCTION
TIYANA CT. STA 0+00
 N 568994.187, E 1367718.739



CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	50.00'	83.97'	55.75'	74.44'	S07°50'40"E	98°13'15"



H:\199080\DWG\FINAL-1\PLAN-PROF.DWG

APPROVED: DEPARTMENT OF PUBLIC WORKS
Howard S. H. 9/1/02
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Emily K... 9/1/02
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF ENGINEERING
... 9/1/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

OWNER/DEVELOPER
 MORRIS L.L.C.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21072
 (410) 997-0296

project	date	description
99080	JUNE 2002	engineering
MMP	MMP	approval
scale	1"=50'	IBM

REV.	DATE	DESCRIPTION
1	1/21/03	REV. TOTAL SHEET NOS.

RED HILL BRANCH OVERLOOK
 LOTS: 1-21 AND OPEN SPACE LOTS: 22-24
 TAX MAP 31, PARCEL 60 AND LOT 5
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 ROAD PLAN, PROFILES AND TYPICAL SECTIONS

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 997-0296 Fax (301) 621-5621 Wash. (410) 997-0296 Fax

LEGEND

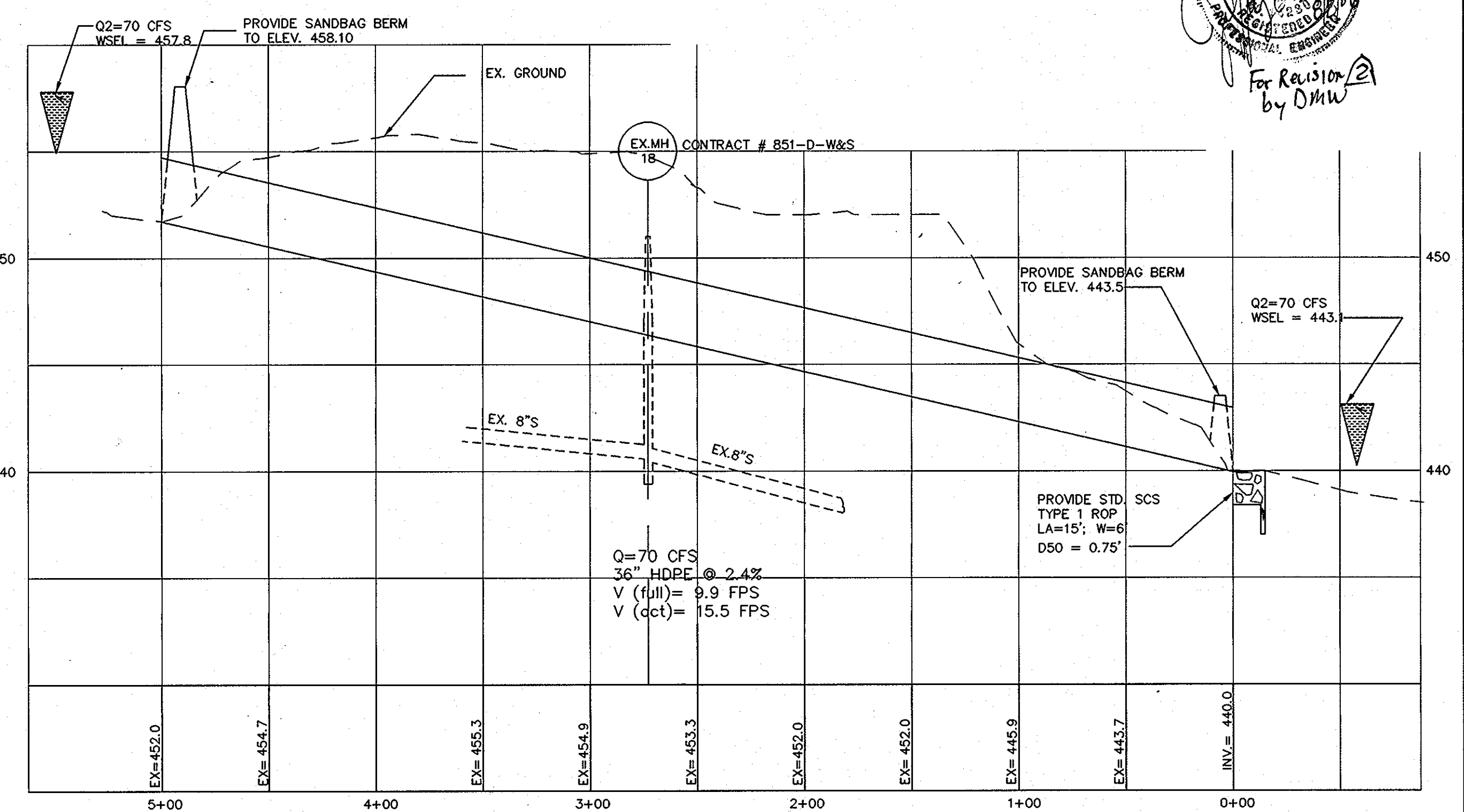
- DENOTES FLOODPLAIN
- DENOTES 15-24.99% SLOPES.
- DENOTES RIGHT-OF-WAY DEDICATION.
- DENOTES WETLANDS
- DENOTES STABILIZED CONSTRUCTION ENTRANCE
- DENOTES SILT FENCE
- DENOTES EARTH DIKE
- DENOTES WILLOW BUNDLE*
- DENOTES SOD MAT*
- SCS STANDARD REMOVABLE PUMPING STATION*
- WETLAND SEED MIX*

NOTE* SEE STREAM RESTORATION TYPICAL DETAILS FOR LOCATION AND DIMENSIONS OF STREAM STABILIZATION METHODS SHOWN



PLAN
SCALE: 1"=50'

OWNER/DEVELOPER
MORRIS L.L.C.
5072 DORSEY HALL DRIVE SUITE 202
ELICOTT CITY, MARYLAND 21043
(410)997-0296



36" H.D.P.E. PIPE PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 8/11/02
 PRINTED NAME OF DEVELOPER: R. JACOB HENRAT, AUTHORIZED MEMBER

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Signature: *[Signature]* DATE: 6/28/02
 PRINTED NAME OF ENGINEER: J. MROGALA

USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE: 8/13/02
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT DATE: 8/13/02

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *[Signature]* DATE: 8/14/02
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 9/4/02
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* DATE: 8/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

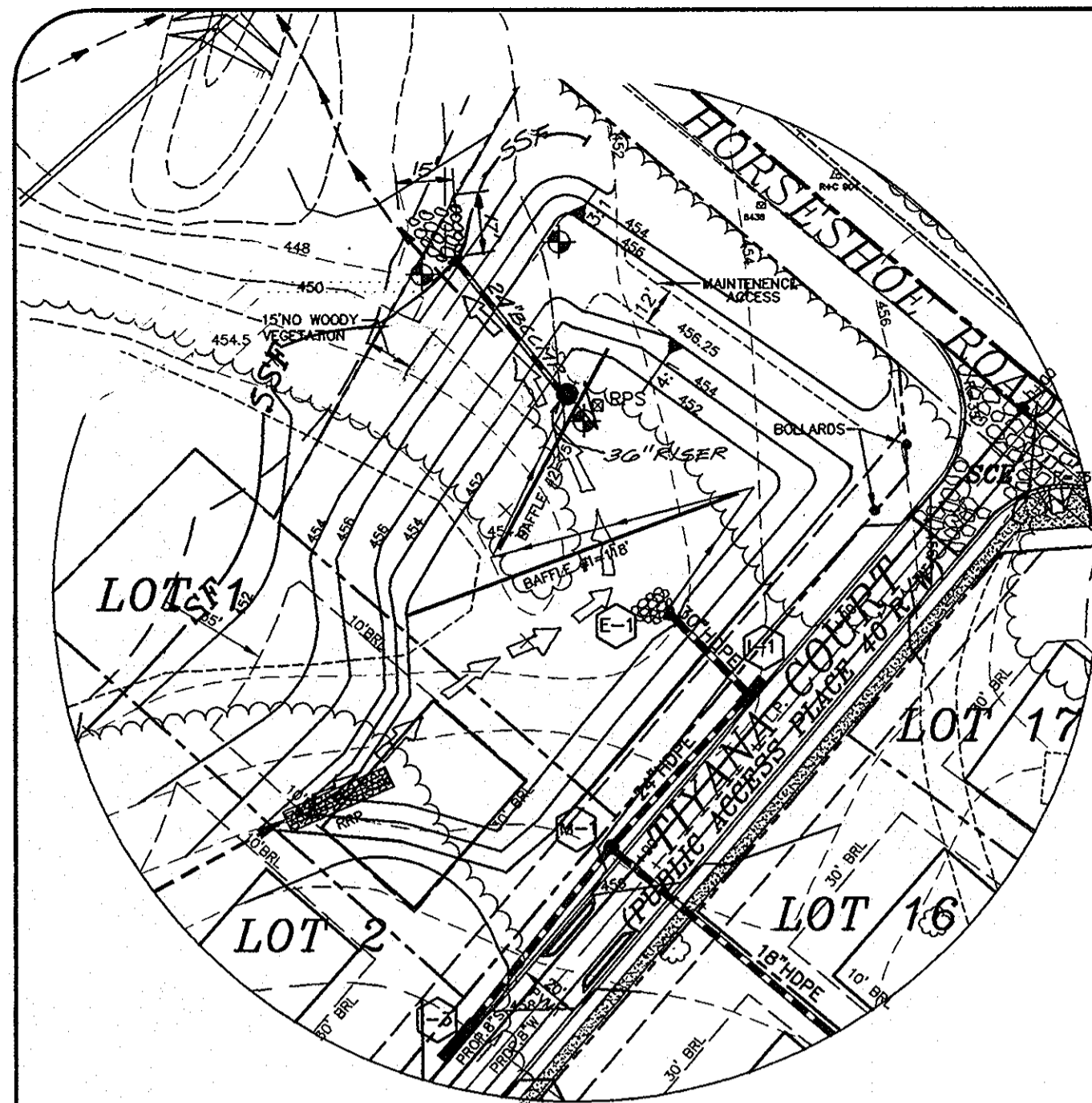


Project	99080	Date	JUNE 2002
Illustration	MMP	Engineering	JBM
Scale	1"=50'	Approval	JBM

1	Removed FCE area and added a 20' Public Sewer Util. Easement in this place	7/26/02	
2	REV. TOTAL SHEET NDS. REV. GRADING IN THE STREAM	1/21/03	
3			
4			

RED HILL BRANCH OVERLOOK
 LOTS: 1-21 AND OPEN SPACE LOT 22-24
 TAX MAP 31, PARCEL 60 AND LOT 5
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 STREAM RESTORATION SEDIMENT CONTROL PLAN - PHASE ONE

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



TEMPORARY STORMWATER MANAGEMENT AND SEDIMENT BASIN DETAIL
SCALE: 1"=50'

SEDIMENT BASIN DATA:

DRAINAGE AREA: =12.3 AC.
TOTAL REQUIRED STORAGE: =44,280 C.F.
REQUIRED WET STORAGE: =22,140 C.F.
NET STORAGE EL.: =452.70
TOTAL STORAGE EL.: =454.30
CLEAN-OUT EL.: =451.50

TEMPORARY SWM DATA:

EX. 1 YR. STORM: =1.4 CFS AT OUTFALL
TSMW 1 YR. STORM: =1.0 CFS AT OUTFALL
TSMW 1 YR. EL.: =452.70
TSMW 10 YR. STORM: =2.3 CFS AT OUTFALL
TSMW 10 YR. EL.: =455.19

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 8/1/02
SIGNATURE OF DEVELOPER: *R. JACOB HIKMAT*
PRINTED NAME OF DEVELOPER: R. JACOB HIKMAT, AUTHORIZED MEMBER

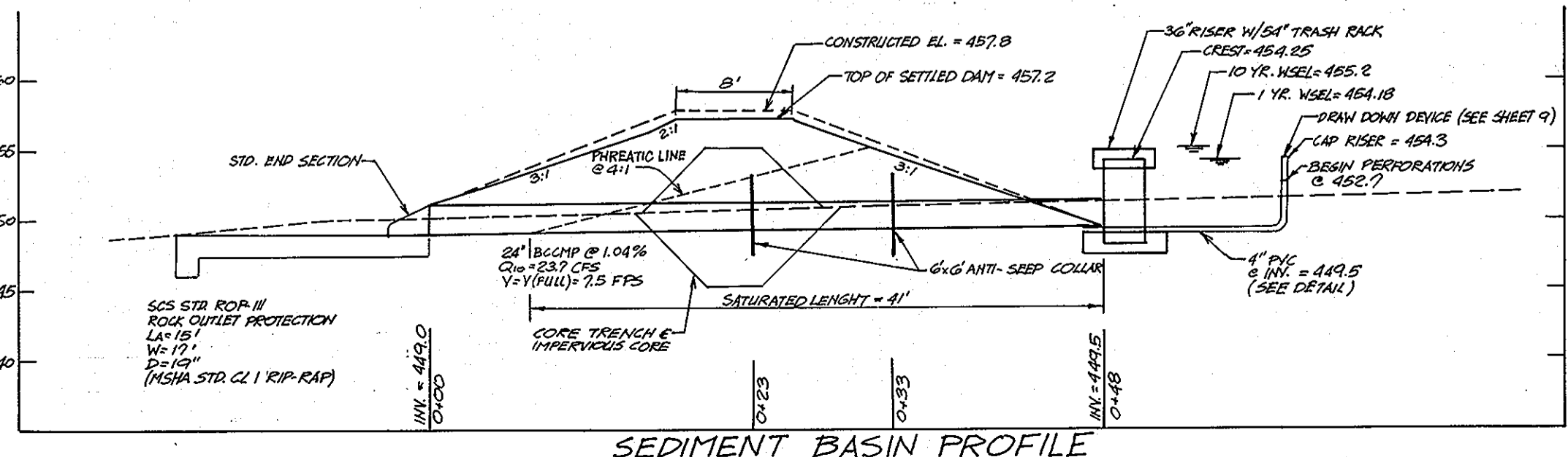
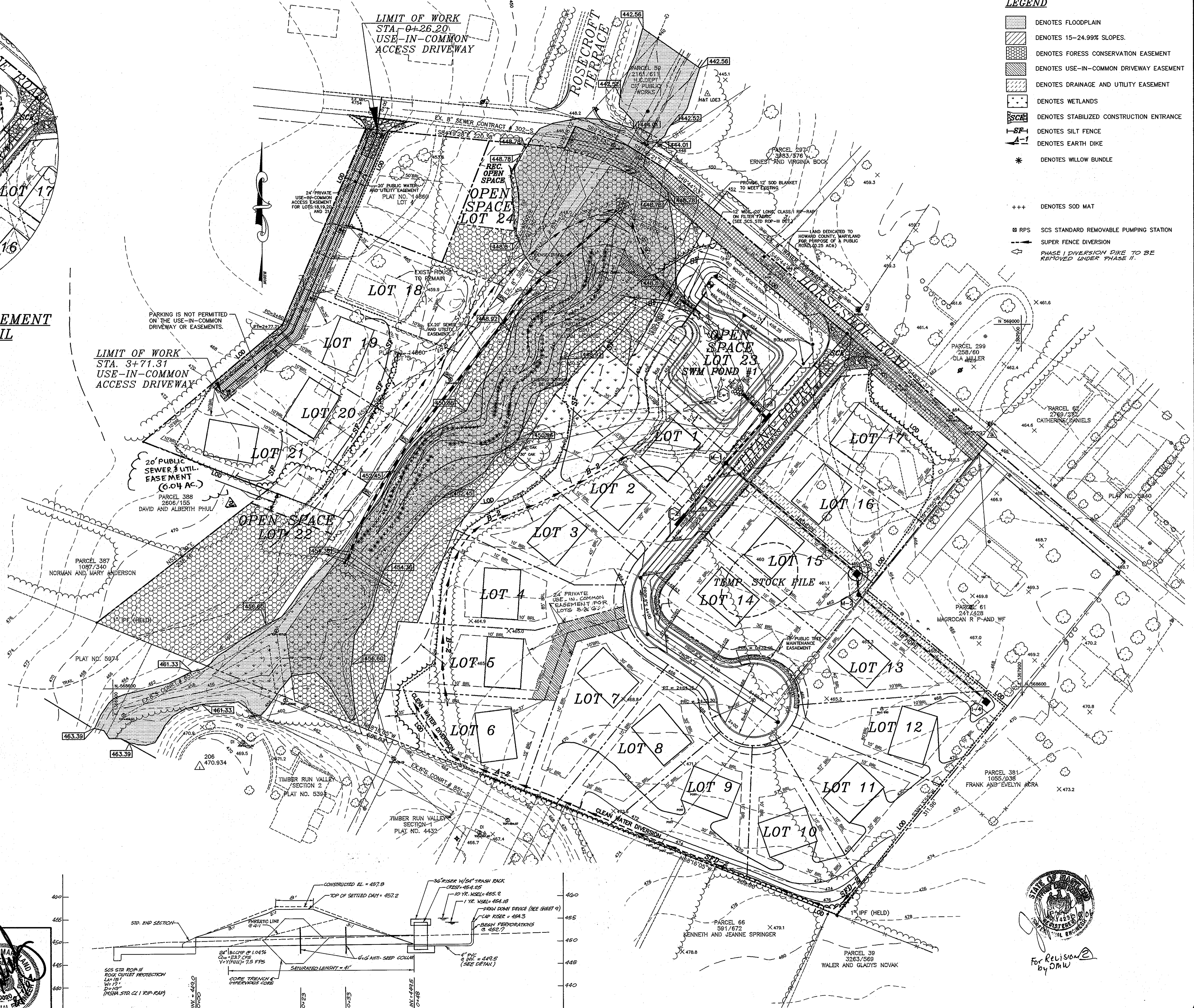
BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DATE: 8/1/02
SIGNATURE OF ENGINEER: *John M. Henderson*
PRINTED NAME OF ENGINEER: John M. Henderson

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE: 8/13/02
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT DATE: 8/13/02

APPROVED: DEPARTMENT OF PUBLIC WORKS
DATE: 8/13/02
APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 9/4/02
APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8/21/02



LEGEND

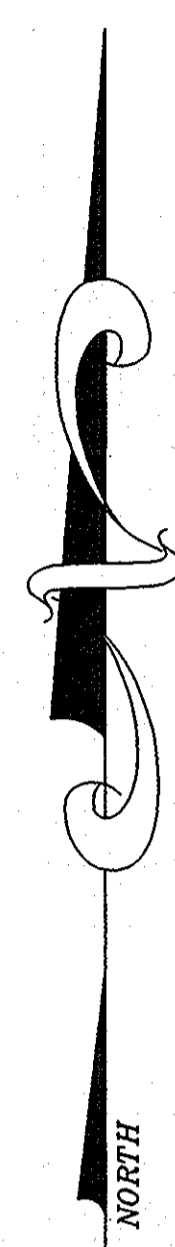
- Denotes FLOODPLAIN
- Denotes 15-24.99% SLOPES.
- Denotes FORESS CONSERVATION EASEMENT
- Denotes USE-IN-COMMON DRIVEWAY EASEMENT
- Denotes DRAINAGE AND UTILITY EASEMENT
- Denotes WETLANDS
- Denotes STABILIZED CONSTRUCTION ENTRANCE
- Denotes SILT FENCE
- Denotes EARTH DIKE
- Denotes WILLOW BUNDLE
- Denotes SOD MAT
- Denotes SCS STANDARD REMOVABLE PUMPING STATION
- Denotes SUPER FENCE DIVERSION
- Denotes PHASE I DIVERSION DIKE TO BE REMOVED UNDER PHASE II.

Project	98080	Date	JUNE 2002
Illustration	MMP	Engineering	JBM
Scale	1"=50'	Approval	JBM

NO.	1	DATE	7/26/02	DESCRIPTION	REVISIONS
	2			REMOVED FENCE EASEMENT AREA & ADDED A 20' PUBLIC SEWER & UTIL. EASEMENT IN ITS PLACE	
	3			REV. GRADING & SEDIMENT CONTROL BASIN	

RED HILL BRANCH OVERLOOK
LOTS: 1 - 21 AND OPEN SPACE LOTS 22-24
TAX MAP 31, PARCEL 60 AND LOT 5
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
GRADING AND SEDIMENT CONTROL PLAN - PHASE TWO

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 997-0296 Balt. (301) 821-5521 Wash. (410) 997-0288 Fax



SUBAREA	DRAINAGE AREA
I-3A	0.81AC
I-3B	0.91AC
I-3C	0.96AC

SOILS DESCRIPTION

SYMBOL	DESCRIPTION
AgB2	AURA GRAVELLY LOAM, 1% TO 5% SLOPES, MODERATELY ERODED --- TYPE B
AgC2	AURA GRAVELLY LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE B
AgE3	AURA GRAVELLY LOAM, 10% TO 30% SLOPES, SEVERELY ERODED --- TYPE B
BeA	BELTSVILLE SILT LOAM, 0% TO 1% SLOPES --- TYPE C
BeB2	BELTSVILLE SILT LOAM, 1% TO 5% SLOPES, MODERATELY ERODED --- TYPE C
BeC2	BELTSVILLE SILT LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE C
BrC3	BRANDYWINE LOAM, 8% TO 15% SLOPES, SEVERELY ERODED --- TYPE C
BrD3	BRANDYWINE LOAM, 15% TO 25% SLOPES, SEVERELY ERODED --- TYPE C
CiC3	CHILLUM GRAVELLY LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE B
CmB2	CHILLUM SILT LOAM, 1% TO 5% SLOPES, MODERATELY ERODED --- TYPE B
CmC2	CHILLUM SILT LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE B
CmD3	CHILLUM-FAIRFAX LOAMS, 5% TO 10% SLOPES, SEVERELY ERODED --- TYPE B
Fa	FALLSINGTON LOAM --- TYPE D
GiB2	GLENELC LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
GiC2	GLENELC LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1% TO 5% SLOPES --- TYPE C
Lj	LEONARDSTOWN SILT LOAM --- TYPE D
NbB2	NESHAMINY SILT LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
NbD3	NESHAMINY SILTY CLAY LOAM, 15% TO 25% SLOPES, SEVERELY ERODED --- TYPE B
SiB2	SASSAFRAS GRAVELLY SANDY LOAM, 1% TO 5% SLOPES, MODERATELY ERODED --- TYPE B
SiC2	SASSAFRAS GRAVELLY SANDY LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE B
SiD2	SASSAFRAS GRAVELLY SANDY LOAM, 10% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
SiE2	SASSAFRAS LOAM, 1% TO 5% SLOPES, MODERATELY ERODED --- TYPE B
SiF2	SASSAFRAS LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE B

BY THE DEVELOPER:

I, THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 8/11/02
PRINTED NAME OF DEVELOPER: MORRIS L.L.C. AUTHORIZED MEMBER

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Signature: *[Signature]* DATE: 6/28/02
PRINTED NAME OF ENGINEER: JENNIFER M. BOENDER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE: *[Signature]*

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE: *[Signature]*

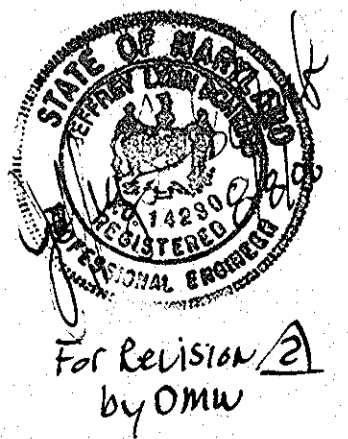
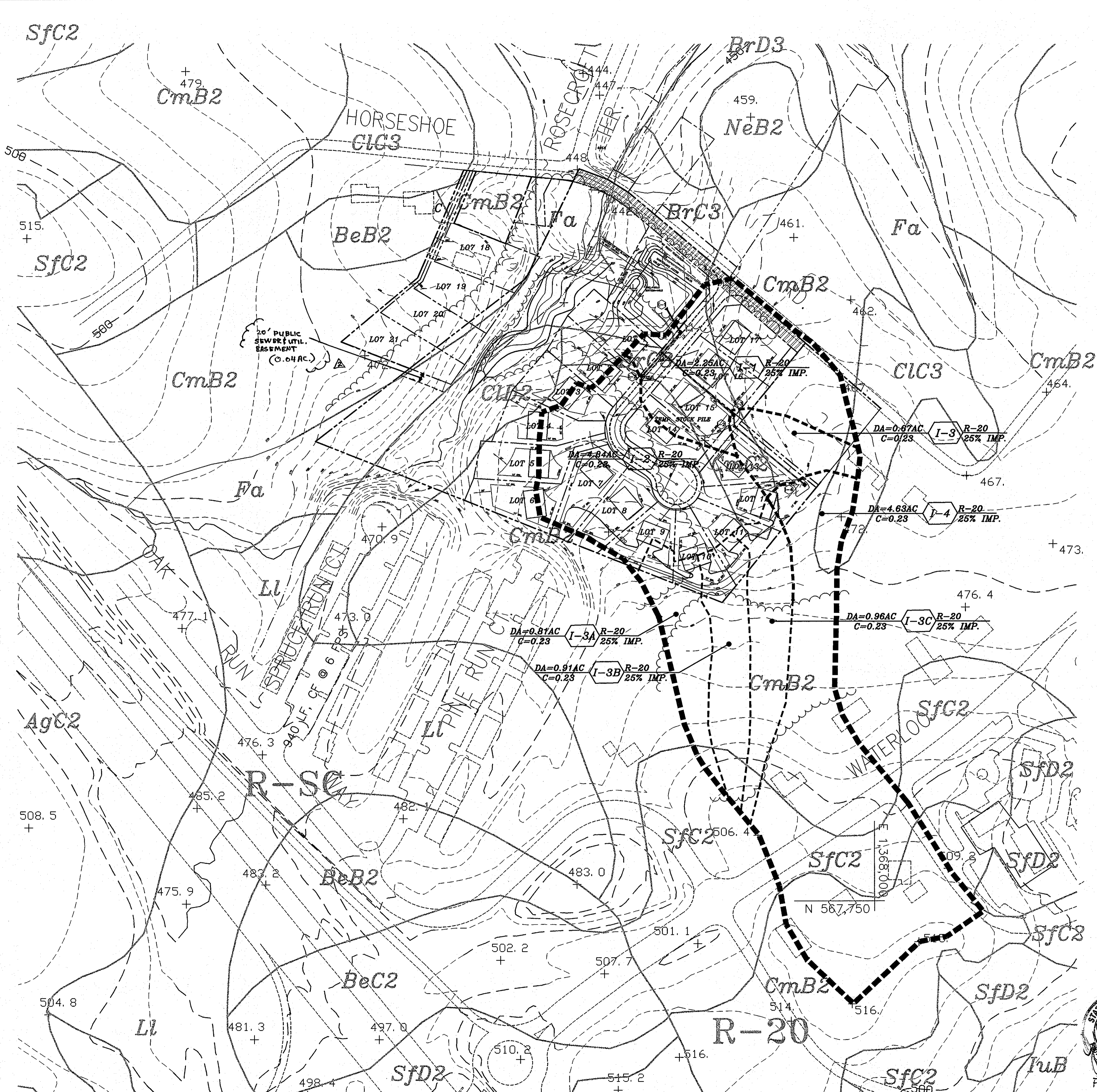
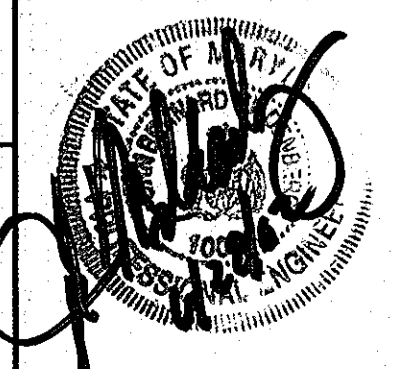
APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: *[Signature]* DATE: *[Signature]*

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: *[Signature]* DATE: 9/4/02

Signature: *[Signature]* DATE: *[Signature]*

Signature: *[Signature]* DATE: *[Signature]*

OWNER/DEVELOPER
MORRIS L.L.C.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21072
(410)997-0296



Project	date
90080	JUNE 2002
Illustration	engineering
MMP	MMP
scale	1"=100'

1. REV. TOTAL SHEET NO. 25.	description	date
2. REMOVED PCE EASEMENT AREA & ADDED A 30' PUBLIC SEWER & UTILITY EASEMENT IN ITS PLACE.		7/26/06
1.	no.	1/27/03
	revisions	

RED HILL BRANCH OVERLOOK
LOTS: 1 - 21 AND OPEN SPACE LOTS 22-24
TAX MAP 31, PARCEL 60 AND LOT 5
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
STORMDRAIN DRAINAGE AREA MAP

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

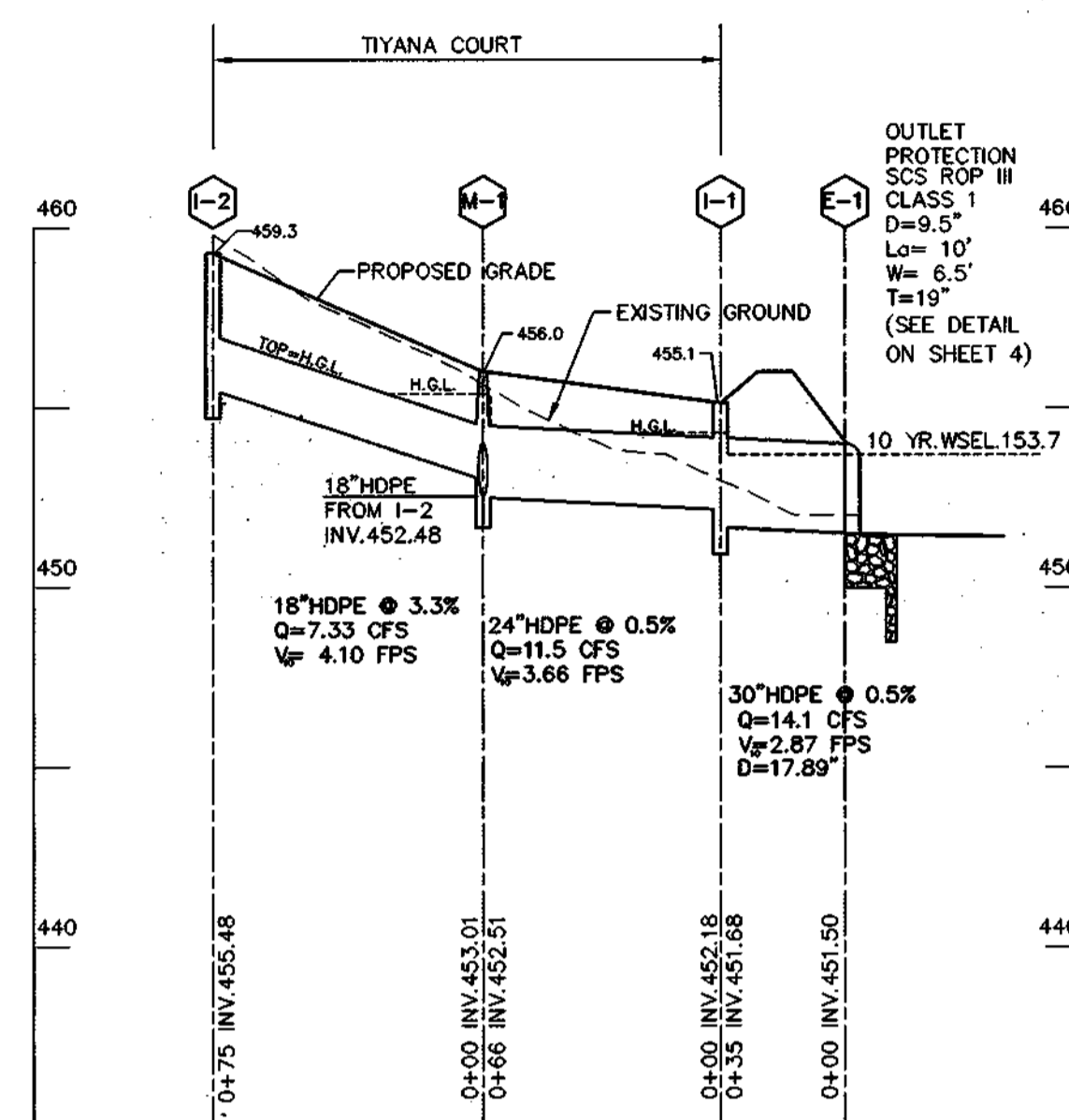
STRUCTURE SCHEDULE

NO.	LOCATION	TOP EL.	INV. IN	INV. OUT	COMMENTS
I-1	TIYANA CT. STA. 1+37, O/S 10.52' RT.	455.10	452.18	451.38	TYPE A-10, H.C.STD. SD-4.02
I-2	TIYANA CT. STA. 2+85, O/S 10.52' RT.	459.30	-	455.48	TYPE A-15, H.C.STD. SD-4.02
I-3	N 568725, E 1367719	459.50	458.44	456.32	TYPE WR, H.C.STD. SD-4.37
I-4	N 568577, E 1367870	467.50	-	462.05	TYPE WR, H.C.STD. SD-4.37
M-1	TIYANA CT. STA. 2+05, O/S 15.0' RT.	456.00	453.01	452.51	H.C.STD. G-5.12
M-2	N 568702, E 1367721	462.20	457.50	457.40	H.C.STD. G-5.12
E-1	TIYANA CT. STA. 1+34, O/S 47.0' RT.	-	451.50	-	H.C.STD. SD-5.61*

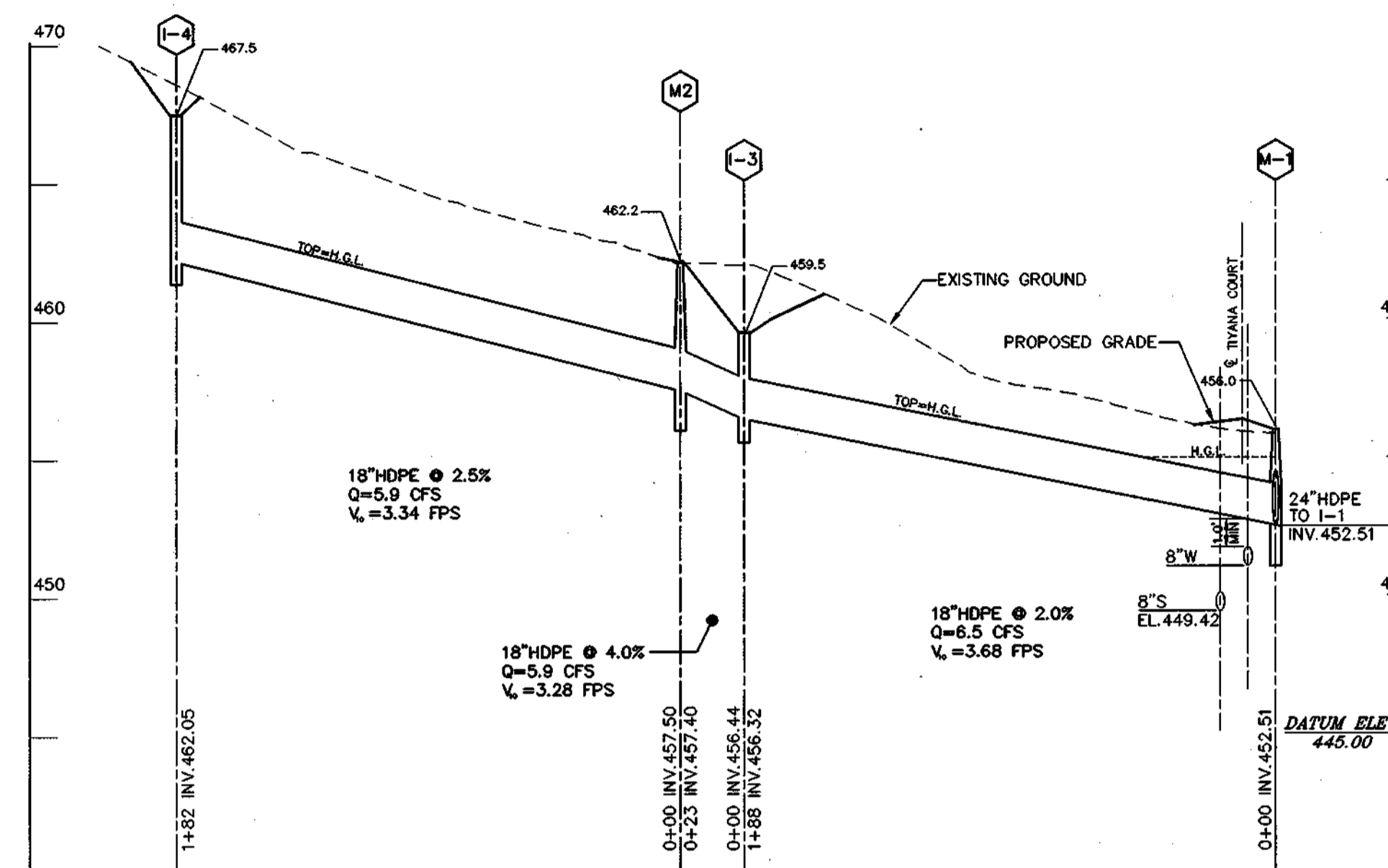
*NOTE: USE H.C.STANDARD CONNECTION SD-5.62

PIPE SCHEDULE

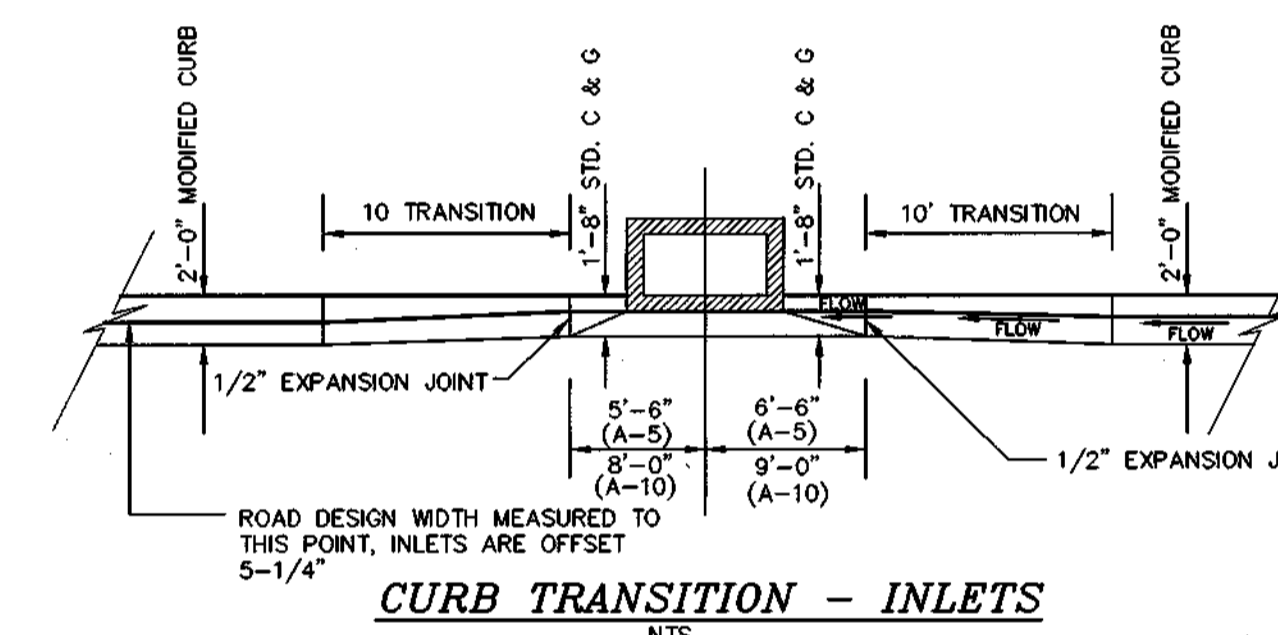
QUANTITY	PIPE SIZE
468'	18" HDPE
66'	24" HDPE
35'	30" HDPE



STORM DRAIN PROFILE



STORM DRAIN PROFILE



BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 8/11/02
DATE
E. JACOB HIKMAT, ANTHONY ZED M.B.M.B.M.
PRINTED NAME OF DEVELOPER

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

[Signature] 4/28/02
DATE
John McQuinn
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

[Signature] 5/16/02
DATE
BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 7/1/02
DATE
CINDY HANWITZ
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 8/1/02
DATE
MILLENBERG, BOENDER & ASSOC., INC.
CHIEF, DEVELOPMENT/ENGINEERING DIVISION

OWNER/DEVELOPER
MORRIS L.L.C.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042
(410)997-0296

project	99080	date	JUNE 2002
illustration	MMP	engineering	MMP
scale	AS SHOWN	approval	IBM

REV.	DESCRIPTION	DATE
1	TOTAL SHEET AMTS.	1/21/03

RED HILL BRANCH OVERLOOK
LOTS: 1-21 AND OPEN SPACE LOTS: 22-24
TAX MAP 81, PARCEL 60, AND LOT 5
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
STORM DRAIN PROFILES AND DETAILS

MILLENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax (410) 997-0298 Fax

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 D (RETENTION) 0.23 ACRES (0.10 ACRES CREDITED & 0.13 ACRES NON-CREDITED)

FOREST CONSERVATION EASEMENT D (RETENTION) 0.14 ACRES (0.03 ACRES CREDITED & 0.11 ACRES NON-CREDITED)

NOTE: A FEE IN LIEU IS TO BE PAID FOR REFORESTATION OF 20' WIDE PUBLIC SEWER & UTILITY EASEMENT

LEGEND

- DENOTES FLOODPLAIN
- DENOTES 15-24.99% SLOPES.
- DENOTES RIGHT-OF-WAY DEDICATION.
- DENOTES WETLANDS
- DENOTES PERIMETER LANDSCAPE EDGE
- DENOTES WILLOW BUNDLE
- DENOTES ROOT WAD
- DENOTES ROCK VANE
- DENOTES CROSS VANE
- DENOTES SOD MAT
- DENOTES CROSS WEIR

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

NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (43 SHADE TREES, 15 EVERGREENS) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$15,150.00.

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	115 LF (PERIMETER A)	125 LF (PERIMETER B)	110 LF (PERIMETER C)	115 LF (PERIMETER D)
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A	N/A	N/A	YES, 35 LF OF EXISTING TREES TO REMAIN
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A	N/A	N/A	N/A
NUMBER OF TREES REQUIRED	3 SHADE TREES 3 EVERGREEN TREES	3 SHADE TREES 3 EVERGREEN TREES	2 SHADE TREES 3 EVERGREEN TREES	2 SHADE TREES 2 EVERGREEN TREES
NUMBER OF TREES PROVIDED	3 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES	3 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES	2 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES	2 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES

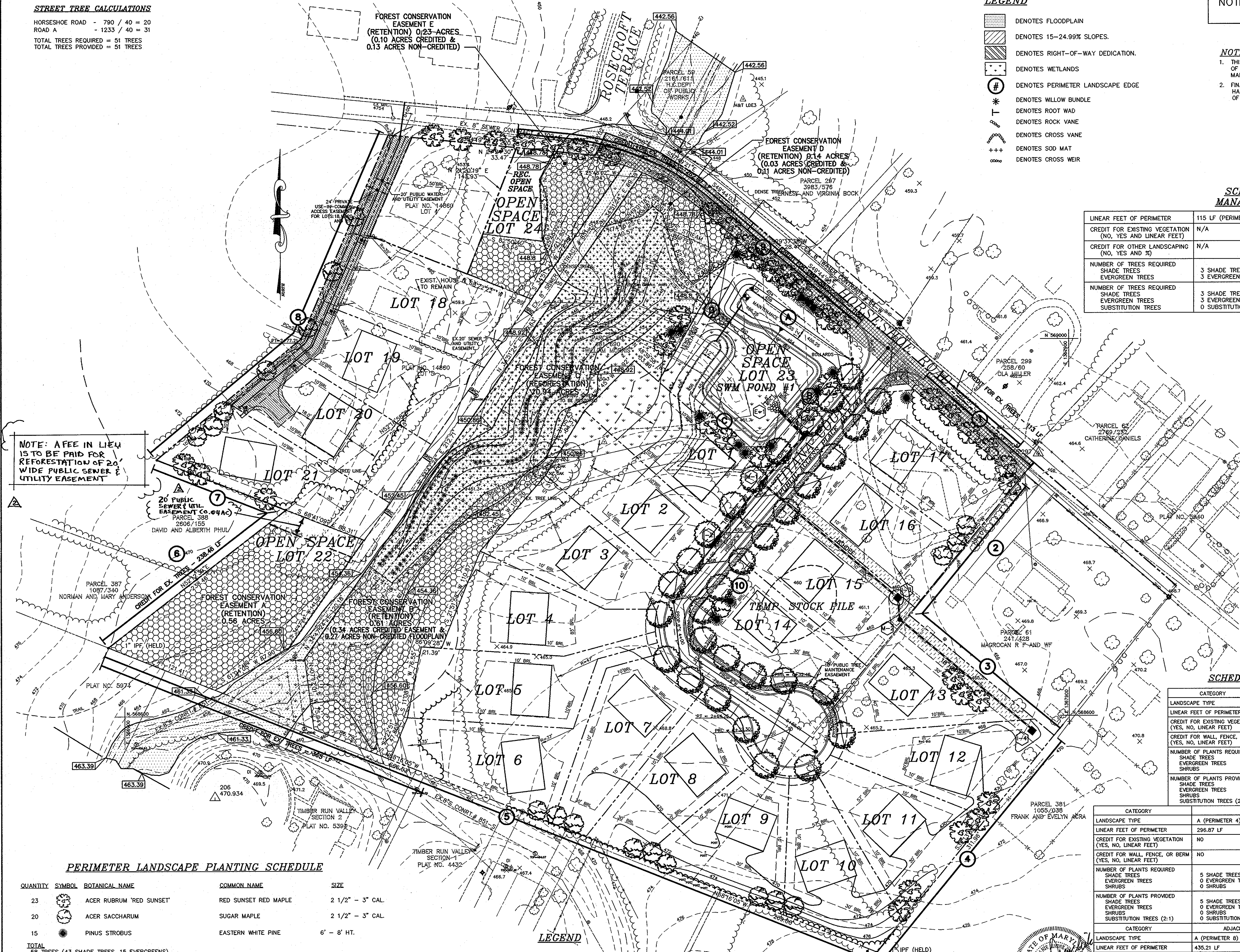
LINEAR FEET OF PERIMETER	TOTAL (465 LF)
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 115 LF OF EXISTING TREES TO REMAIN
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES REQUIRED	10 SHADE TREES 11 EVERGREEN TREES
NUMBER OF TREES PROVIDED	10 SHADE TREES 11 EVERGREEN TREES 0 SUBSTITUTION TREES

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES		
	B (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)
LANDSCAPE TYPE	146.23 LF	184.15 LF	199.89 LF
LINEAR FEET OF PERIMETER	146.23 LF	184.15 LF	199.89 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 113 LF OF EXISTING TREES TO REMAIN	NO	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO
NUMBER OF PLANTS PROVIDED	1 SHADE TREE 1 EVERGREEN TREE 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
NUMBER OF TREES REQUIRED	1 SHADE TREE 1 EVERGREEN TREE 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			
	A (PERIMETER 4)	A (PERIMETER 5)	A (PERIMETER 6)	A (PERIMETER 7)
LANDSCAPE TYPE	296.87 LF	875.63 LF	238.46 LF	146.90 LF
LINEAR FEET OF PERIMETER	296.87 LF	875.63 LF	238.46 LF	146.90 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	YES, 365 LF OF EXISTING TREES TO REMAIN	YES, 238.46 LF OF EXISTING TREES TO REMAIN	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO
NUMBER OF PLANTS PROVIDED	5 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	9 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
NUMBER OF TREES REQUIRED	5 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	9 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			
	A (PERIMETER 8)	B (PERIMETER 9)	B (PERIMETER 10)	TOTAL
LANDSCAPE TYPE	435.21 LF	417.19 LF	68.63 LF	
LINEAR FEET OF PERIMETER	435.21 LF	417.19 LF	68.63 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	YES, 202.87 LF OF EXISTING TREES TO REMAIN	NO	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	YES, 115 LF OF SWM LANDSCAPING	NO	
NUMBER OF PLANTS PROVIDED	7 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	1 SHADE TREE 1 EVERGREEN TREE 0 SHRUBS	1 SHADE TREE 2 EVERGREEN TREES 0 SHRUBS	33 SHADE TREES 4 EVERGREEN TREES 0 SHRUBS
NUMBER OF TREES REQUIRED	7 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	1 SHADE TREE 1 EVERGREEN TREE 0 SHRUBS	1 SHADE TREE 2 EVERGREEN TREES 0 SHRUBS	33 SHADE TREES 4 EVERGREEN TREES 0 SHRUBS



LEGEND

PERIMETER LANDSCAPE PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
23		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
20		ACER SACCHARUM	SUGAR MAPLE	2 1/2" - 3" CAL.
15		PINUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
TOTAL 58 TREES (43 SHADE TREES, 15 EVERGREENS)				

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 'REDSPIRE'	REDSPIRE PEAR	2 1/2" - 3" CAL.
TOTAL 51 STREET TREES				

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature]
 CHIEF BUREAU OF HIGHWAYS
 DATE: 7/4/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 7/4/02

APPROVED: [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 7/4/02

OWNER/DEVELOPER
 MORRIS L.L.C.
 5072 DORSEY HALL DRIVE, SUITE 202
 ELLIOTT CITY, MARYLAND 21043
 (410) 997-0298



date	JUNE 2002
project	99080
illustration	MAP/SID
scale	1"=50'
approval	JBM

removed fee area added a 20' public sewer & util. easement in its place	7/26/04
rev. total sheet nos.	1/2/03
description	
revisions	

RED HILL BRANCH OVERLOOK
 LOTS: 1-21 AND OPEN SPACE LOTS: 22-24
 TAX MAP 31, PARCEL 60, AND LOT 5
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 LANDSCAPE & STREET TREE PLAN

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

FOREST CONSERVATION DATA

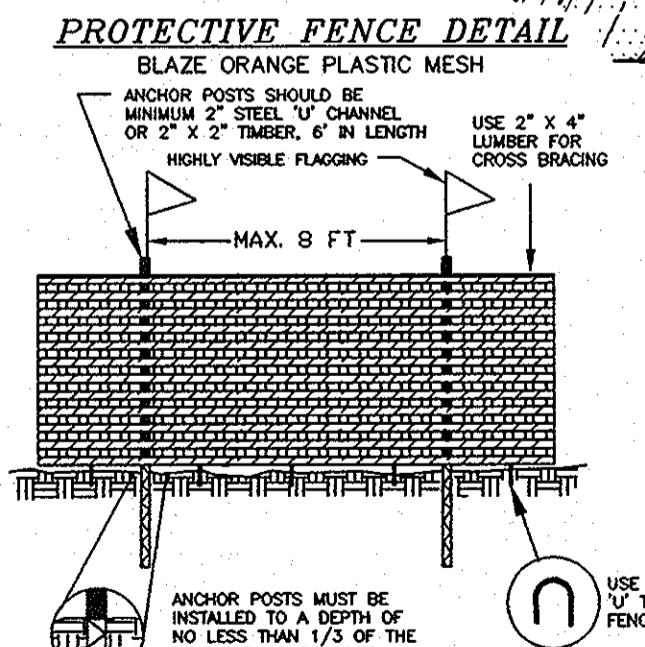
I. BASIC SITE DATA	ACRES
GROSS SITE AREA	11.62
AREA WITHIN 100 YEAR FLOODPLAIN	1.48
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0.00
NET TRACT AREA	10.14
LAND USE CATEGORY	RESIDENTIAL-SUBURBAN
II. FOREST CONSERVATION WORKSHEET DATA SUMMARY	
B. REFORESTATION THRESHOLD (20%)	2.03
C. AFFORESTATION MINIMUM (15%)	1.52
D. EXISTING FOREST ON NET TRACT AREA	6.98
E. FOREST AREAS TO BE CLEARED	5.95
F. FOREST AREAS TO BE RETAINED	1.03
IV. REFORESTATION CALCULATIONS	
G. FOREST CLEARED ABOVE REFORESTATION THRESHOLD	4.95
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	1.00
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	0.00
REFORESTATION FOR CLEARING ABOVE THRESHOLD	
REFORESTATION FOR CLEARING BELOW THRESHOLD	1.24
TOTAL REFORESTATION REQUIRED	2.00
TOTAL REFORESTATION PROVIDED	0.94
TOTAL OFF-SITE REFORESTATION REQUIRED	2.30

REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.H.C.	SIZE & REMARKS
20	Acer negundo Box Elder	L	M-W	FAC+	8'	CONT/B & B 1" CALIPER
60	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
10	Lindera benzoin Spicebush	T	M	FACW	6'	CONT/B & B 3" 5' HGT.
38	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
20	Quercus phellos Willow Oak	I	M-W	FAC+	20'	CONT/B & B 1" CALIPER
9	Prunus serotina Black cherry	I	M	FACU	11'	CONT/B & B 1" CALIPER

TOTAL 197 TREES & SHRUBS (188 TREES REQUIRED)
 NOTE: WHIPS OR SEEDLINGS WITH TREE SHELTERS MAY BE SUBSTITUTED FOR THE 1" CALIPER OR 3" 5' TREES. IF WHIPS OR SEEDLINGS WITH TREE SHELTERS ARE TO BE USED, MULTIPLY THE QUANTITIES BY 1.75 TO DETERMINE THE NUMBER OF TREES REQUIRED.

NOTE: A FEE IN LIEU IS TO BE PAID FOR REFORESTATION OF 20' WIDE PUBLIC SEWER & UTILITY EASEMENT

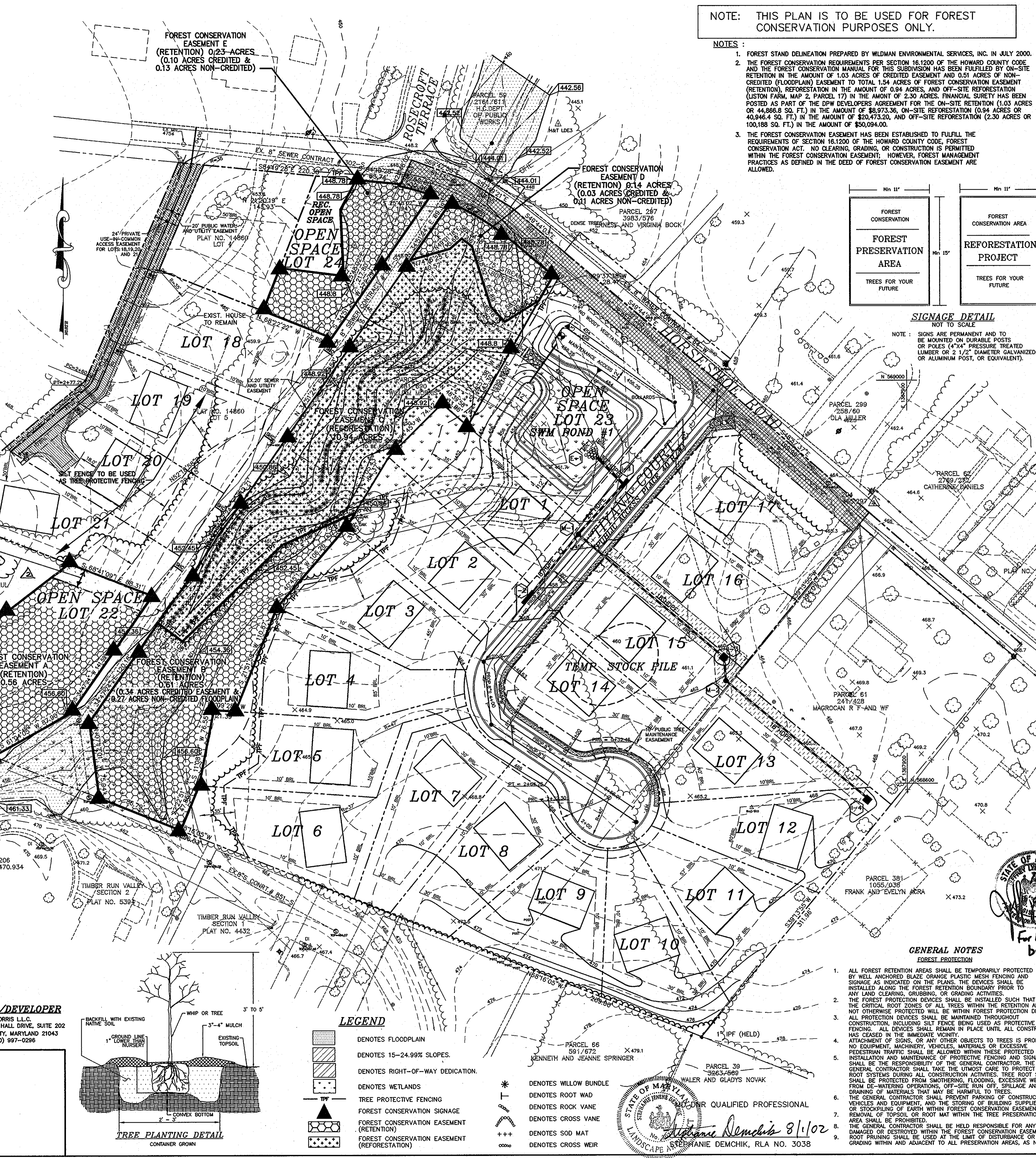


OWNER/DEVELOPER
 MORRIS LLC
 5072 DORSEY HALL DRIVE, SUITE 202
 ELIJAH CITY, MARYLAND 21043
 (410) 997-0296

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 8/14/02

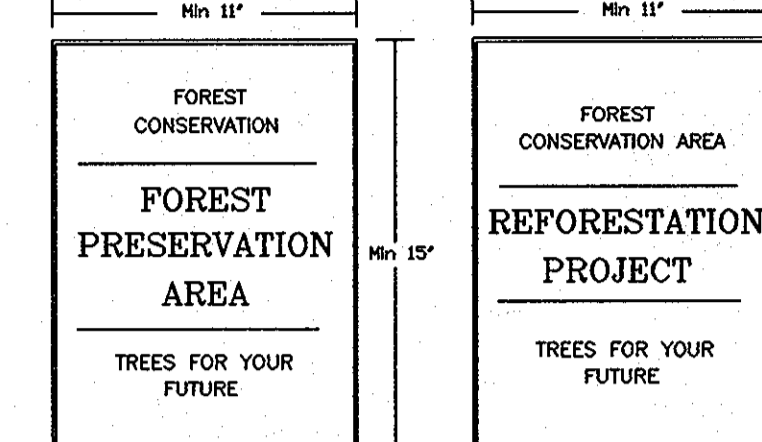
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/14/02

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 8/14/02

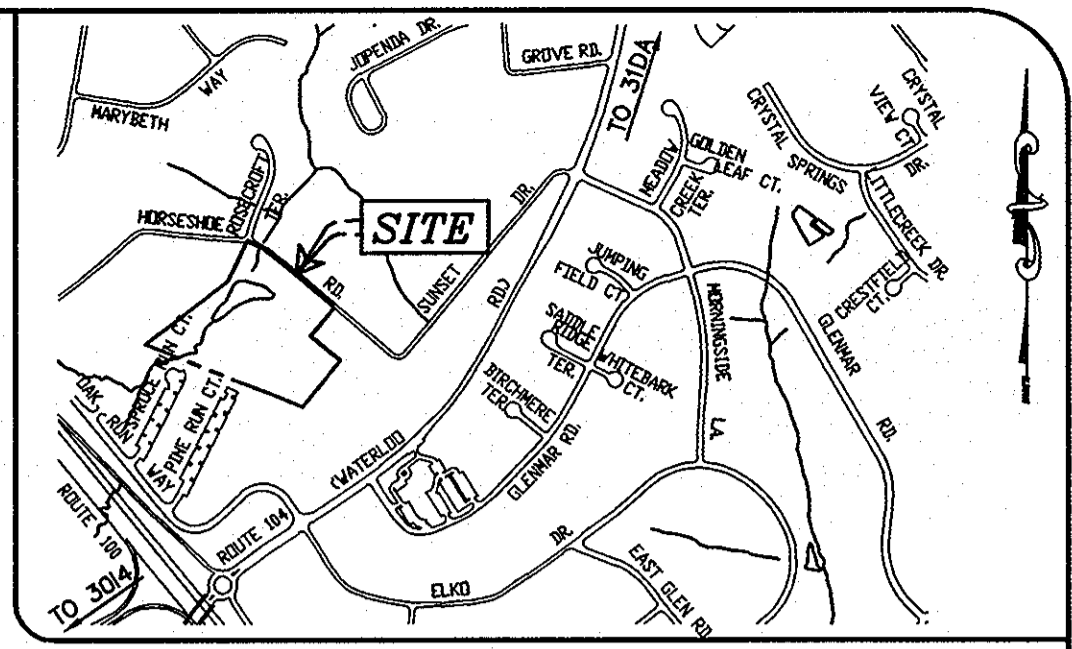


NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

- NOTES:**
- FOREST STAND DELINEATION PREPARED BY WILDAN ENVIRONMENTAL SERVICES, INC. IN JULY 2000.
 - THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY ON-SITE RETENTION IN THE AMOUNT OF 1.03 ACRES OF CREDITED EASEMENT AND 0.51 ACRES OF NON-CREDITED (FLOODPLAIN) EASEMENT TO TOTAL 1.54 ACRES OF FOREST CONSERVATION EASEMENT (RETENTION). REFORESTATION IN THE AMOUNT OF 0.94 ACRES, AND OFF-SITE REFORESTATION (LISTON FARM, MAP 2, PARCEL 17) IN THE AMOUNT OF 2.30 ACRES, FINANCIAL SURETY HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT FOR THE ON-SITE RETENTION (1.03 ACRES OR 44,868.8 SQ. FT.) IN THE AMOUNT OF \$5,973.36, ON-SITE REFORESTATION (0.94 ACRES OR 40,946.4 SQ. FT.) IN THE AMOUNT OF \$20,473.20, AND OFF-SITE REFORESTATION (2.30 ACRES OR 100,188 SQ. FT.) IN THE AMOUNT OF \$50,094.00.
 - THE FOREST CONSERVATION EASEMENT HAS 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 EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.



NOTE: SIGNS ARE PERMANENT AND TO BE MOUNTED ON DURABLE POSTS OR POLES (1 1/2" DIA. GALVANIZED LUMBER OR 2 1/2" DIA. 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 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, SPECIFIC TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF DISTURBANCE, LIMITS OF FOREST CONSERVATION AREAS AND EQUIPMENT STAGING AREAS;
 - INSPECT ALL EXISTING FOUNDATIONS 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, STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
 - ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE DAMAGE MAY REQUIRE CONSULTATION 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 FOREST CONSERVATION TREES OR CRITICAL 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, THE PROTECTIVE FIELD OF RADIUS = 2 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 OF COMPOSTED SLUDGE.
 - 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 OF 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 FOR EACH PLANT. AFTER PLANT INSTALLATION, TAKE 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 OCCURS DURING OPERATION NEAR EXISTING FOREST.
 - CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO SHOULDER THROUGH LARGER EXISTING ROOTS FROM EXISTING NATURAL TREES. 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 ARE NOT IN THE ROOT BALL. SUBSTITUTION IS STRONGLY RECOMMENDED.
 - SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
 - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL CORK 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 ONLY DISPOSE SPECIES IN GROUPS OF TWO TO FIVE (5). OTHER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
 - ADDITIONAL PLANTING IN A STRAIGHT GRID PATTERN, THERE SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LIST 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 DRAINED 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 GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
 - SOIL 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 AWKWARD 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 NEGATIVELY EFFECTING THE PLANTED STOCK.
 - REMOVE THROUGH MANUAL MEANS, INCLUDING PULLING, CUTTING) AGGRESSIVE, NUISANCE, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FEET RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
 - REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE 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 SECTION 16.190.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, FOREST LANDS AND FORESTRY DIVISION.

LEGEND

[Symbol]	DENOTES FLOODPLAIN	[Symbol]	DENOTES WILLOW BUNDLE
[Symbol]	DENOTES 15-24.99% SLOPES.	[Symbol]	DENOTES ROOT WAD
[Symbol]	DENOTES RIGHT-OF-WAY DEDICATION.	[Symbol]	DENOTES CROSS VANE
[Symbol]	DENOTES WETLANDS	[Symbol]	DENOTES SOD MAT
[Symbol]	DENOTES TREE PROTECTIVE FENCING	[Symbol]	DENOTES CROSS WEIR
[Symbol]	DENOTES FOREST CONSERVATION SIGNAGE	[Symbol]	
[Symbol]	DENOTES FOREST CONSERVATION EASEMENT (RETENTION)	[Symbol]	
[Symbol]	DENOTES FOREST CONSERVATION EASEMENT (REFORESTATION)	[Symbol]	

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 SPLIT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE, NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- THE GENERAL CONTRACTOR SHALL TAKE THE MOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINAGE 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 STOCKPILING OF EARTH 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.

DATE: 8/1/02
 [Signature]
 LANDSCAPE ARCHITECT

MILDENBERG, BOENDER & ASSOC., INC.
 Surveyors
 5012 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax: (301) 621-5521 Wash. (301) 621-5521

PROJECT
 99080
 date: JULY 2002
 engineering: [Signature]
 illustration: [Signature]
 MPP/SID: [Signature]
 scale: 1"=60'
 approval: [Signature]

REVISIONS

1	REMOVE F.C.E. AREA FROM 20' WIDE PUBLIC SEWER & UTILITY EASEMENT IN ITS PLACE BY LOT 1	7-28-06	[Signature]
2	REV. TOTAL SHEET ACES	1/11/09	[Signature]
3	REV. TOTAL SHEET ACES	1/11/09	[Signature]

RED HILL BRANCH OVERLOOK
 LOTS: 1-21 AND OPEN SPACE LOTS: 22-24
 TAX MAP 31, PARCEL 60, AND LOT 5
 SECOND ELECTION DISTRICT
 FOREST CONSERVATION PLAN

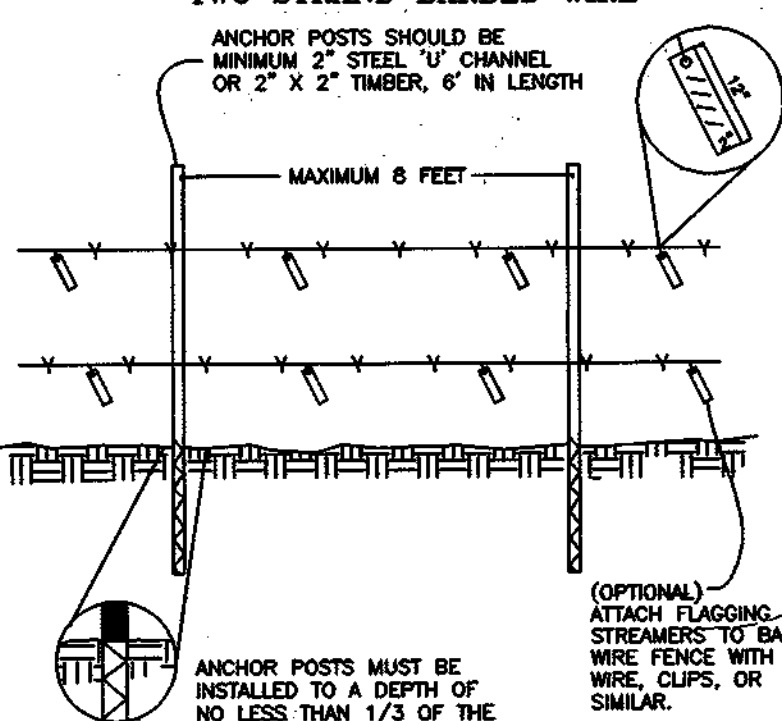
13 OF 17
 F-02-64

REFORESTATION PLANT LIST						
QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
83	Prunus serotina Wild Black Cherry	I	M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
83	Robinia pseudoacacia Black Locust	VI	D-M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
83	Liriodendron tulipifera Tulip Poplar	I	D-M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
83	Quercus rubra Red Oak	MT	D-M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER
83	Fraxinus americana White Ash	MT	D-M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
83	Nyssa sylvatica Black Gum	T	M-W	FAC	11'	SEEDLING/WHIP W/TREE SHELTER
83	Juglans nigra Black Walnut	VT	M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
83	Acer rubrum Red Maple	VT	D-W	FAC	11'	SEEDLING/WHIP W/TREE SHELTER
83	Cercis canadensis Eastern Redbud	T	M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER
83	Diostyros virginiana Persimmon	I	D-M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER

Quantities of Individual Species And Species Composition May Change Depending On Availability At Time Of Planting. Total Quantity of Trees For Entire Easement Area Will Not Change. Any Species Substitution Must Be Listed On The Howard County Forest Association List. If Quantities Are Changed, A Minimum Of Five (5) Species Must Be Planted.

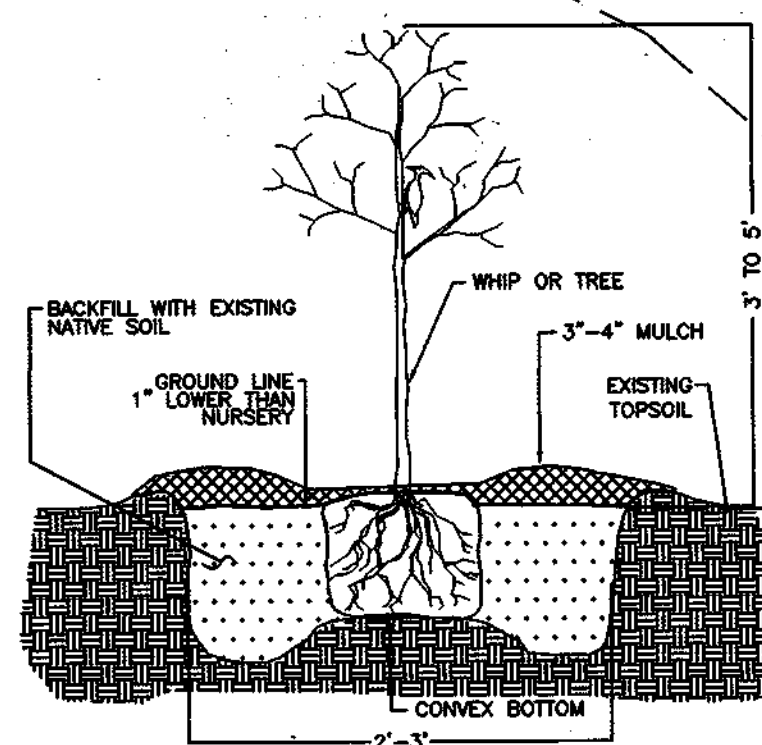
PROTECTIVE FENCE DETAIL

TWO STRAND BARBED WIRE



1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION TO DEVICE'S NEEDS.
7. BARBED WIRE SHOULD BE ATTACHED SECURELY TO POSTS.

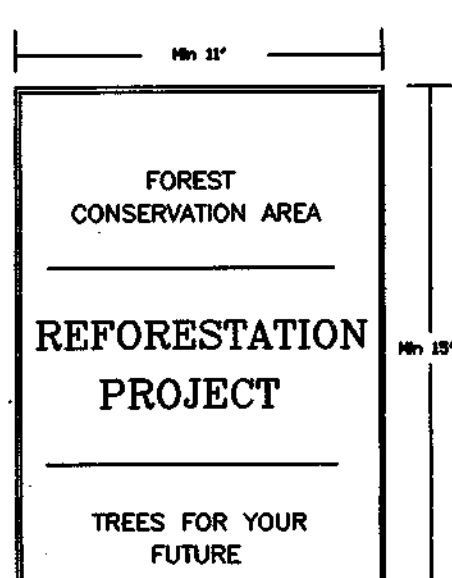
CHARLES ALAN SHARP & DENISE RODRIGUEZ SHARP
L 4667, R 0485
PARCEL #246
AMENDED PLAT OF EASEMENT
Stn. Farm 2, Plat No. 13985



TREE PLANTING DETAIL

CONTAINER GROWN

AUTOCAD FILE NAME C:\DRAWINGS\Land Projects\LISTON PROPERTY\DWG\LISTONREF2.dwg



SIGNAGE DETAIL

NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Hemets 9/1/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
William Morris 8/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

COMBINED FOREST CONSERVATION EASEMENT TABLE

LINE	BEARING	DISTANCE
L1	S 42° 57' 11" E	466.66
L2	S 37° 38' 29" W	120.97
L3	N 39° 49' 28" W	507.72
L4	N 23° 03' 15" E	101.86
L5	S 48° 30' 05" W	51.26
L6	N 40° 34' 28" W	79.84
L7	S 49° 23' 28" W	52.72
L8	S 87° 08' 25" W	160.03
L9	N 36° 59' 41" W	105.92
L10	N 53° 00' 19" E	255.31
C1	61.98	02° 38' 25" 1345.00 61.97 S 41° 37' 58" E 30.99
C2	269.24	15° 03' 00" 1025.00 268.47 S 39° 58' 24" E 135.40

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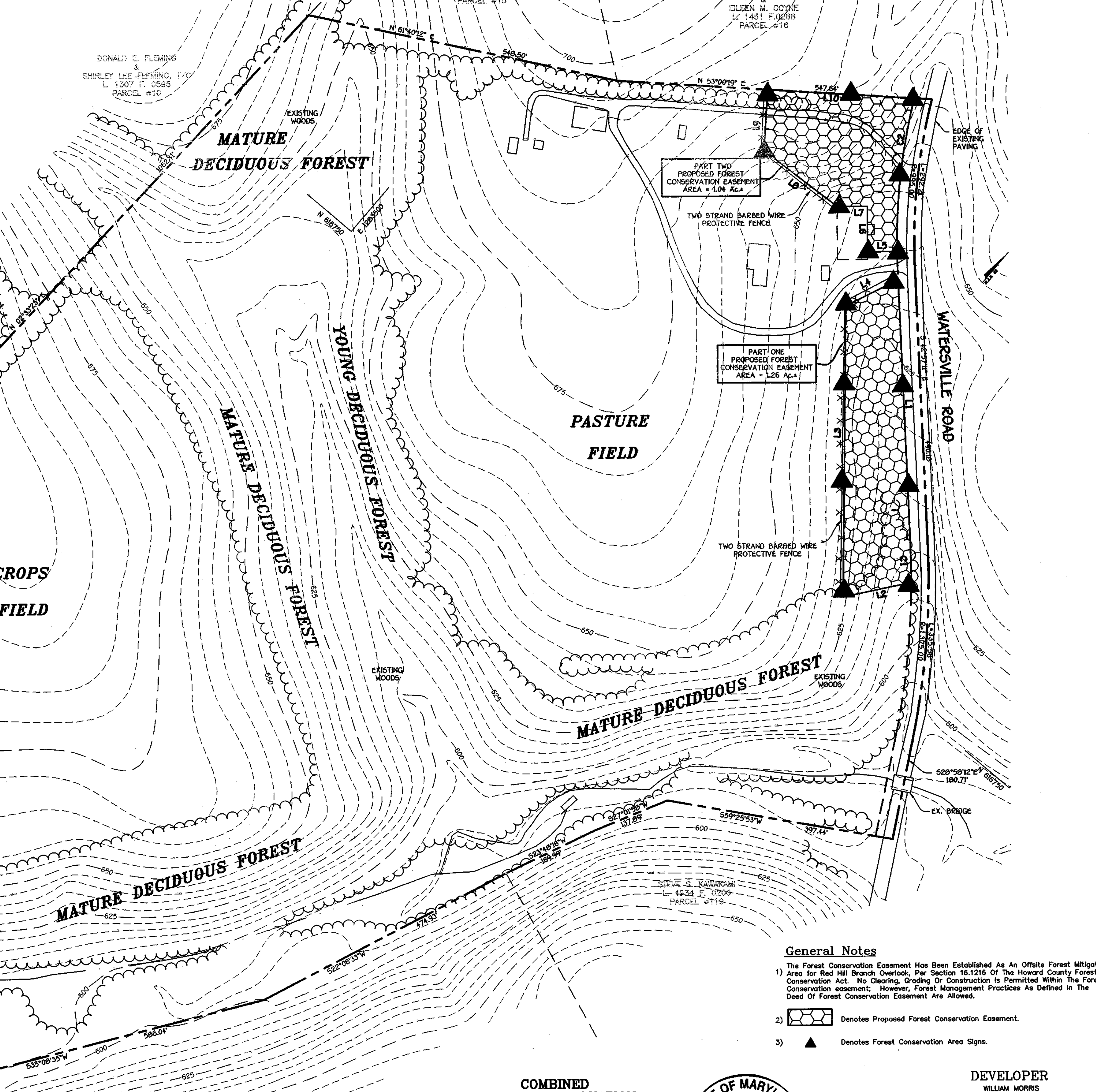
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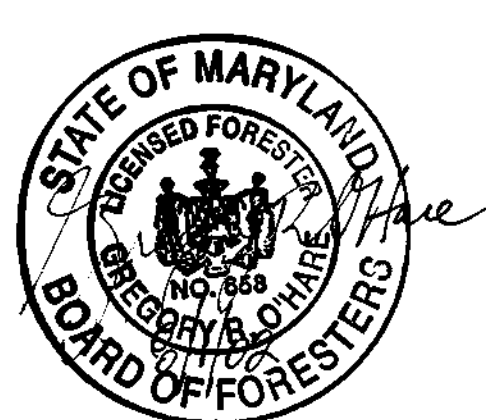
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General Notes

1. The Forest Conservation Easement Has Been Established As An Offsite Forest Mitigation Area for Red Hill Branch Overlook, Per Section 16.1218 Of The Howard County 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.
2. [Symbol] Denotes Proposed Forest Conservation Easement.
3. [Symbol] Denotes Forest Conservation Area Signs.



DEVELOPER
 WILLIAM MORRIS
 C/O MILDBERG, BOENDER & ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

OWNER/GRANTOR
 WILLIAM & BARBARA LISTON
 P.O. BOX 228
 342 WATERSVILLE ROAD
 MT. AIRY, MARYLAND 21771

THIS PLAN IS FOR FOREST CONSERVATION EASEMENT PLANTING PURPOSES ONLY

PLANTING SPECIFICATIONS AND NOTES

1. PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
2. DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANTING LOCATION. THE PLANTING FIELD IS A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
3. 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 SLUDGE.
4. 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.
5. CONTAINER GROWN NURSERY STOCK: PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE. PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
6. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.
7. 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 SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
8. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.
9. 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. 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.
10. 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 FOREST.
11. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU 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.
12. CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ARE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED.
13. SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
14. FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEB BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
15. FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE SPACING AS INDICATED ON PLANT LIST AT PROPER SPACING INDICATED ON PLANT LIST.
16. AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LIST TO OBTAIN A MORE NATURAL APPEARANCE.
17. NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE WELL DRAINED NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. IF 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.
18. 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 DO NOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
19. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
20. IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. IF SYNTHETIC OR SEAMED-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.
21. MAINTENANCE SCHEDULE: ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
22. ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTING STOCK.
23. VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
24. REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NODDUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
25. 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.
26. 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.
27. 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 COMAR 08.18.02.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

11/20/03 1. REV. TOTAL SHEET NOS.
 DATE NO. REVISION

PROJECT:
RED HILL BRANCH OVERLOOK
 PARCEL 60 & RESUB OF LOT 3, TAX MAP 31, BLK. 13
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
OFF-SITE FOREST MITIGATION PLAN

AREA:
LISTON FARM
 PRESERVATION PARCEL
 TAX MAP 2 - PARCEL 17
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:
**REFORESTATION PLANTING PLAN
 VEGETATIVE COVER SUMMARY**

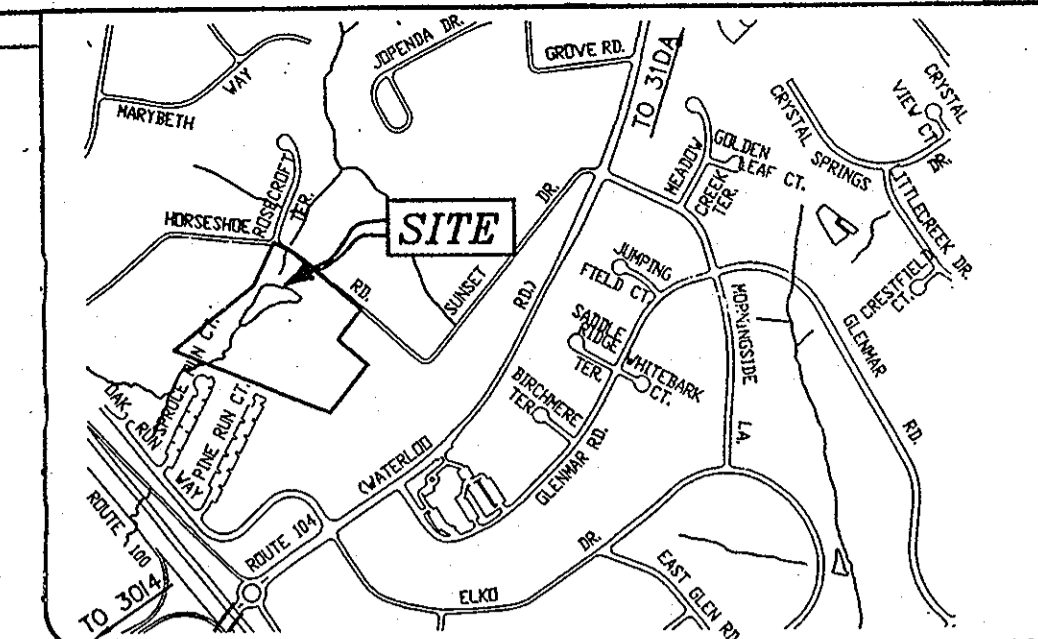
WILDMAN ENVIRONMENTAL SERVICES
 4747 BONNIE BRANCH RD.
 ELLICOTT CITY, MD. 21043
 PHONE: (410) 869-9999
 FAX: (410) 869-9901

DESIGNED BY: R.B.W.
 DRAWN BY: J.E.P.
 PROJECT NO.
 DATE: 7/30/02
 SCALE: 1" = 100'
 SHEET NO. 14 OF 17

F-02-64

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



VICINITY MAP
Scale: 1"=2000'

BY THE DEVELOPER:
"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE STREAM CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE STREAM WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 8/13/02
PRINTED NAME OF DEVELOPER: JOHN MORRIS

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR STREAM RESTORATION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE STREAM RESTORATION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF STREAM WITHIN 30 DAYS OF COMPLETION."

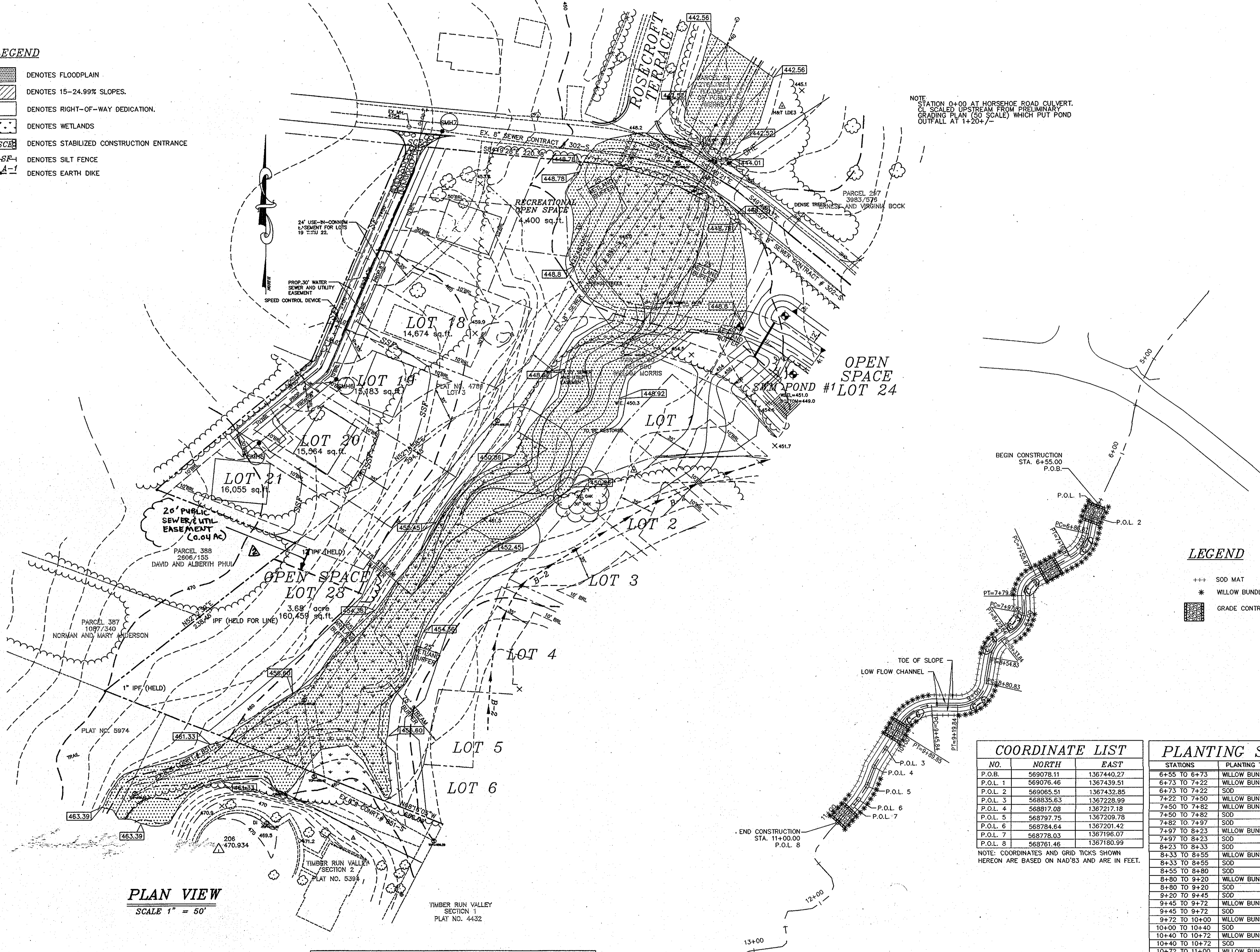
SIGNATURE OF ENGINEER: *[Signature]* DATE: 8/13/02
PRINTED NAME OF ENGINEER: JOHN MORRIS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR STREAM RESTORATION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE: 8/13/02

THESE PLANS FOR STREAM RESTORATION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE: 8/13/02



NOTE: STATION 0+00 AT HORSESHOE ROAD CULVERT. CL SCALED UPSTREAM FROM PRELIMINARY GRADING PLAN (60 SCALE) WHICH PUT POND OUTFALL AT 1+20+7."

LEGEND

- +++ SOD MAT
- * WILLOW BUNDLE
- GRADE CONTROL STRUCTURE

COORDINATE LIST

NO.	NORTH	EAST
P.O.B.	569078.11	1367440.27
P.O.L. 1	569076.46	1367439.51
P.O.L. 2	569065.51	1367432.85
P.O.L. 3	568835.63	1367228.99
P.O.L. 4	568817.08	1367217.18
P.O.L. 5	568797.75	1367209.78
P.O.L. 6	568784.64	1367201.42
P.O.L. 7	568778.03	1367196.07
P.O.L. 8	568761.46	1367180.99

NOTE: COORDINATES AND GRID TICKS SHOWN HEREON ARE BASED ON NAD'83 AND ARE IN FEET.

PLANTING SCHEDULE

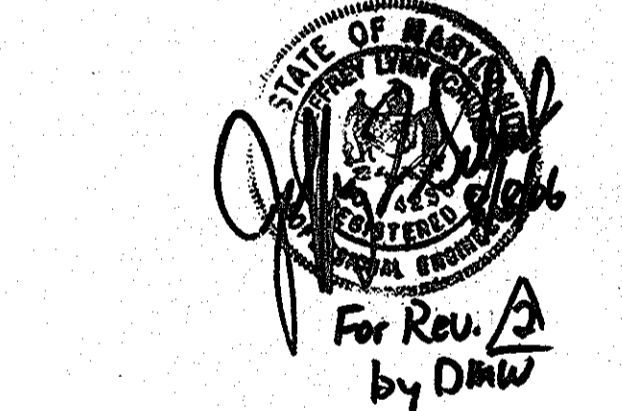
STATIONS	PLANTING TYPE	LOCATION (SIDE OF STREAM)
6+55 TO 6+73	WILLOW BUNDLES	BOTH
6+73 TO 7+22	WILLOW BUNDLES	EAST
6+73 TO 7+22	SOD	WEST
7+22 TO 7+50	WILLOW BUNDLES	BOTH
7+50 TO 7+82	WILLOW BUNDLES	WEST
7+50 TO 7+82	SOD	EAST
7+82 TO 7+97	SOD	BOTH
7+97 TO 8+23	WILLOW BUNDLES	EAST
7+97 TO 8+23	SOD	WEST
8+23 TO 8+33	SOD	BOTH
8+33 TO 8+55	WILLOW BUNDLES	WEST
8+33 TO 8+55	SOD	WEST
8+55 TO 8+80	SOD	EAST
8+80 TO 9+20	WILLOW BUNDLES	EAST
8+80 TO 9+20	SOD	WEST
9+20 TO 9+45	SOD	BOTH
9+45 TO 9+72	WILLOW BUNDLES	WEST
9+45 TO 9+72	SOD	EAST
9+72 TO 10+00	WILLOW BUNDLES	BOTH
10+00 TO 10+40	SOD	BOTH
10+40 TO 10+72	WILLOW BUNDLES	EAST
10+40 TO 10+72	SOD	WEST
10+72 TO 11+00	WILLOW BUNDLES	BOTH

PROPOSED STREAM RESTORATION & GEOMETRY
SCALE: 1"=50'

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.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 9/1/02
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 8/21/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION



7-28-06 2. REMOVED FEE AREA & ADDED A 20' PUBLIC SEWER & UTIL. EASEMENT IN IT'S PLACE (BY DMW)
1/2/03 1. REV. PROP. STREAM GRADING & GEOMETRY REV. PLANTING SCHEDULE
DATE: NO. REVISION

OWNER/DEVELOPER: WILLIAM MORRIS
C/O MILDENBERG, BOENDER & ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

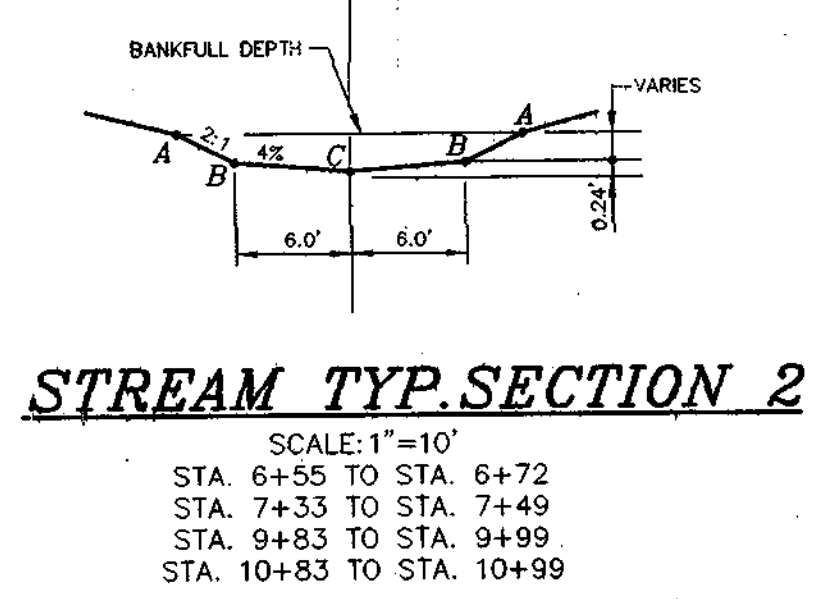
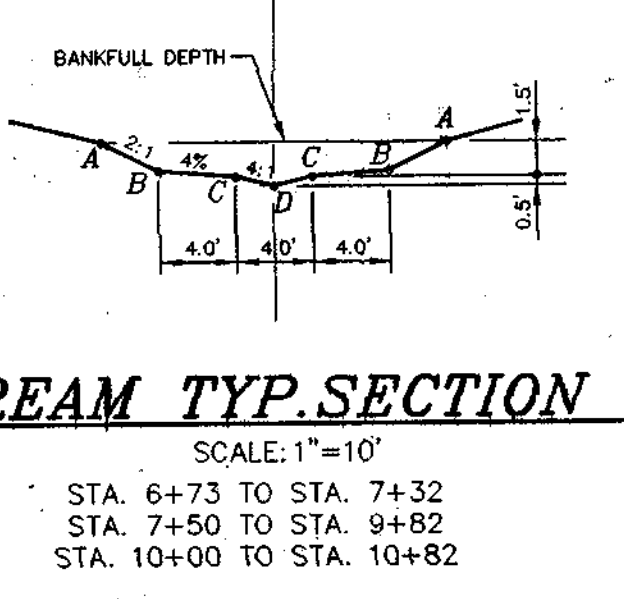
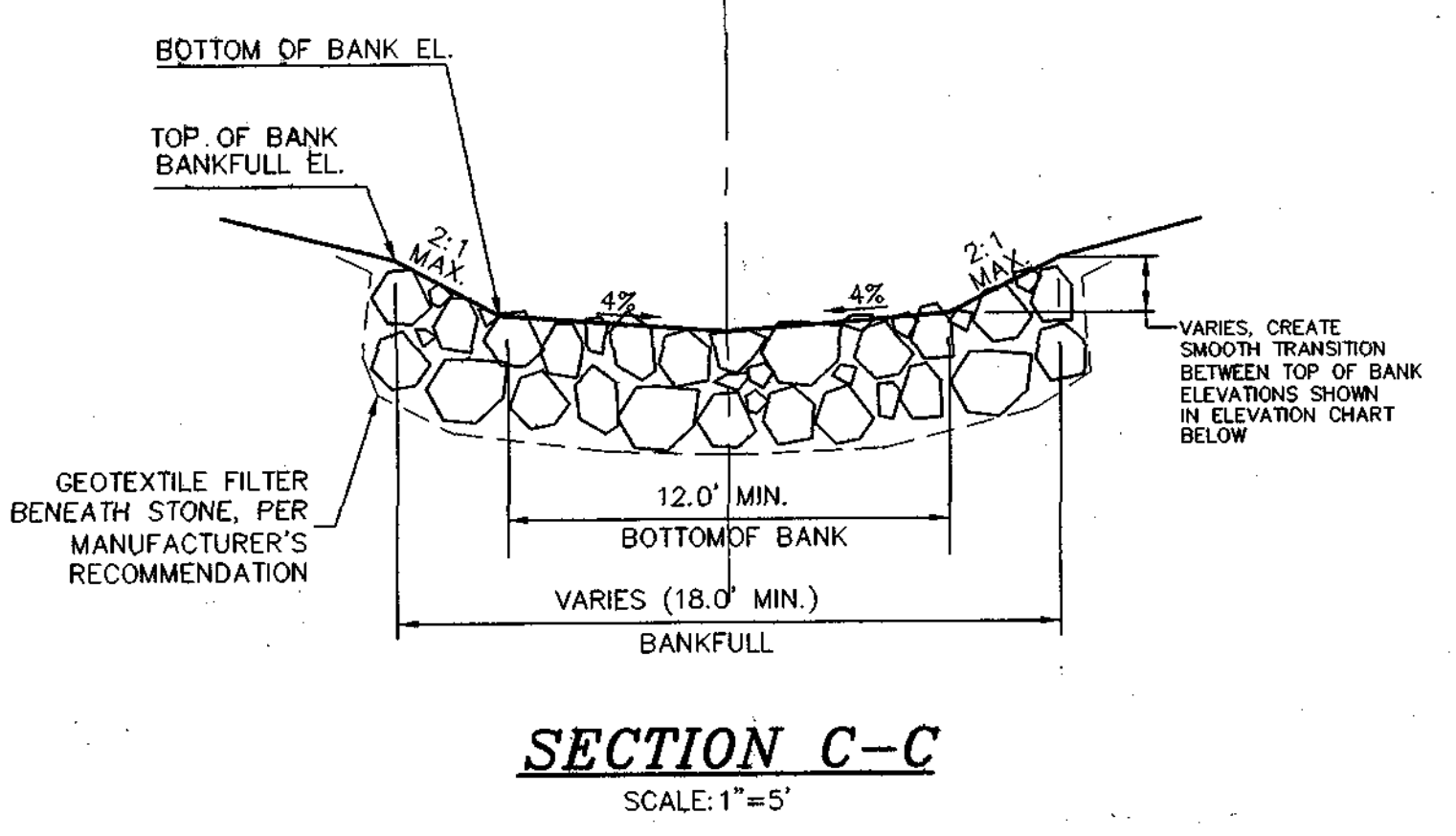
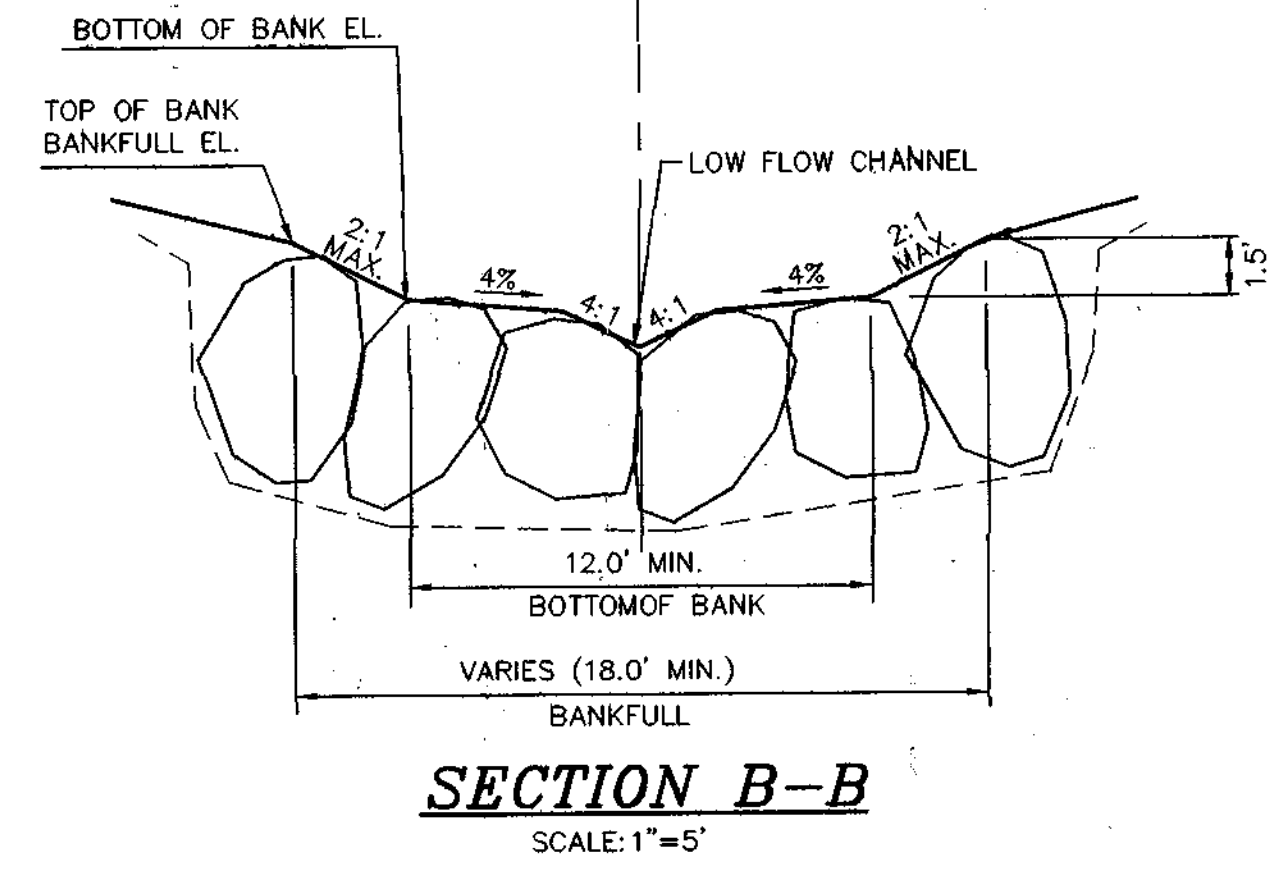
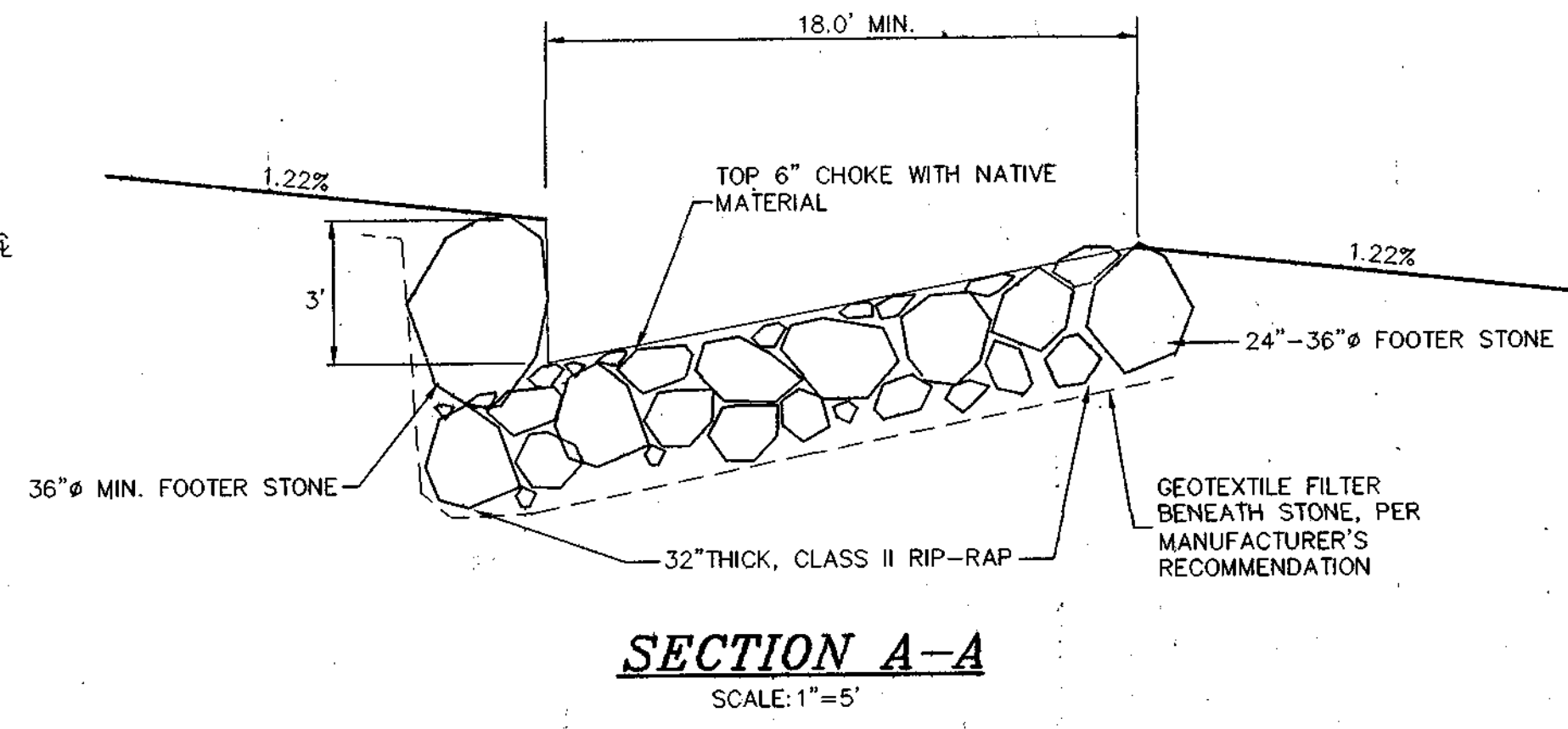
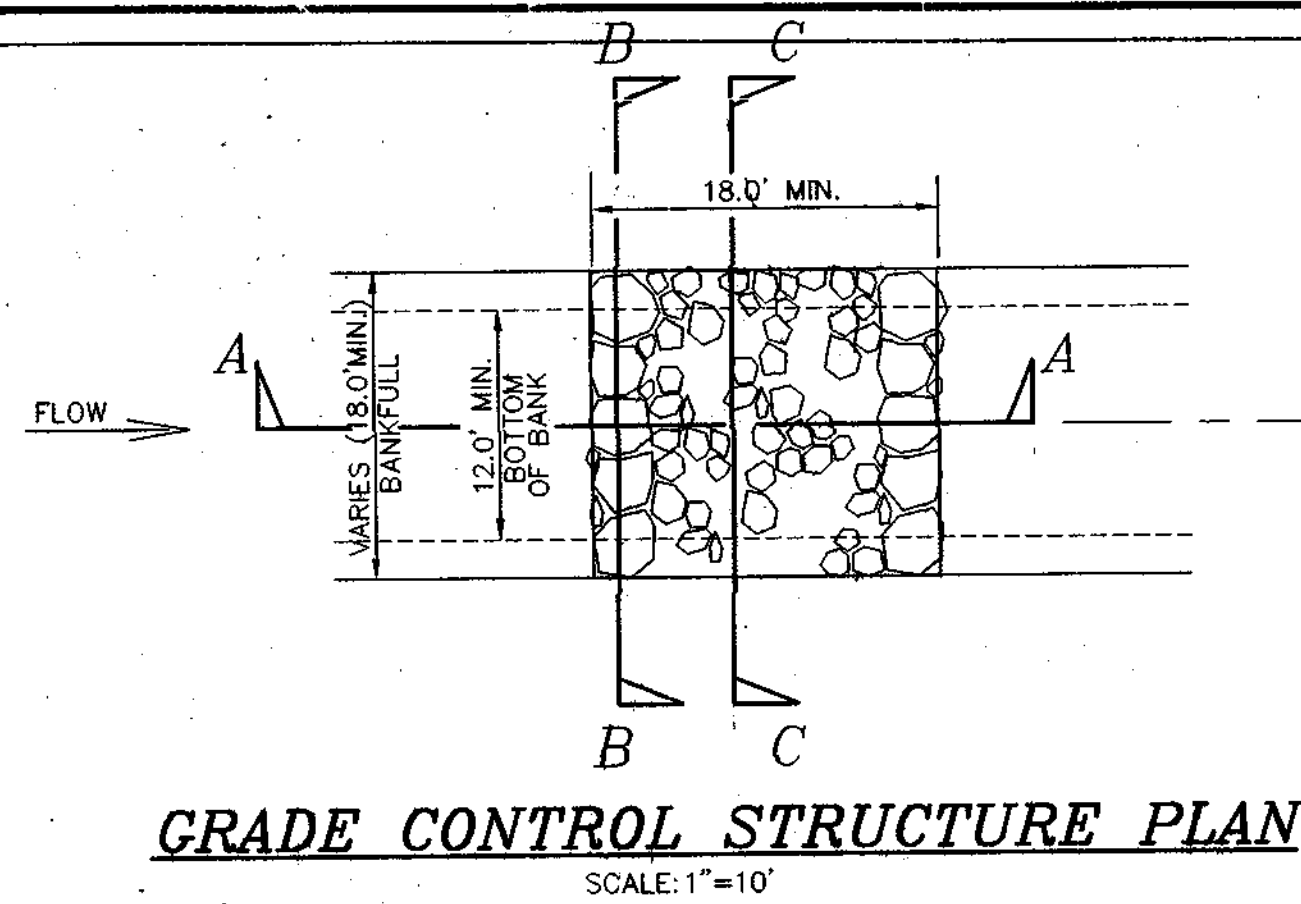
PROJECT: RED HILL BRANCH OVERLOOK
RED HILL BRANCH
STREAM RESTORATION

AREA: TAX MAP 31, PARCEL 60 & Reub. of LOT 3, BLK. 13
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: PLAN

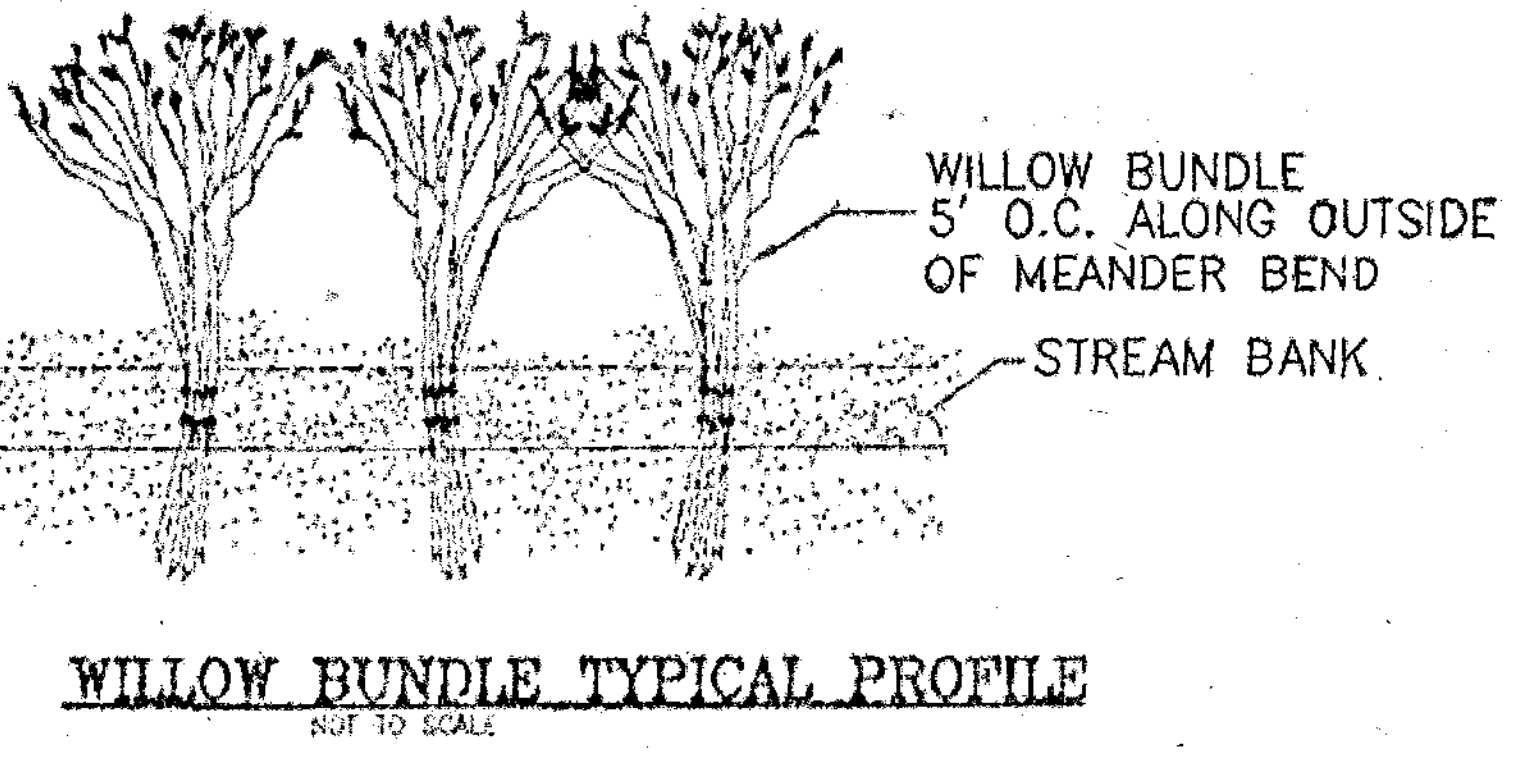
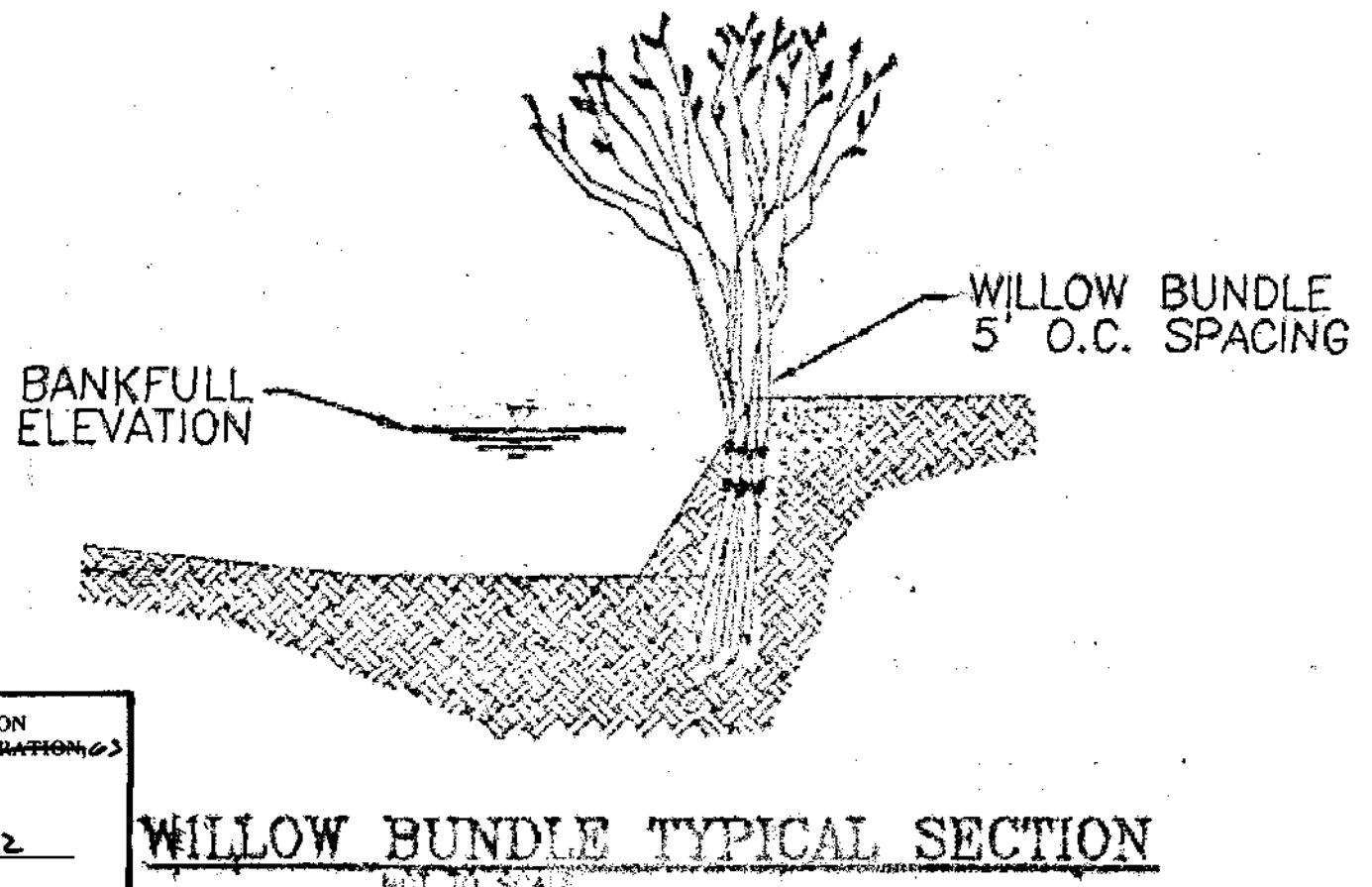
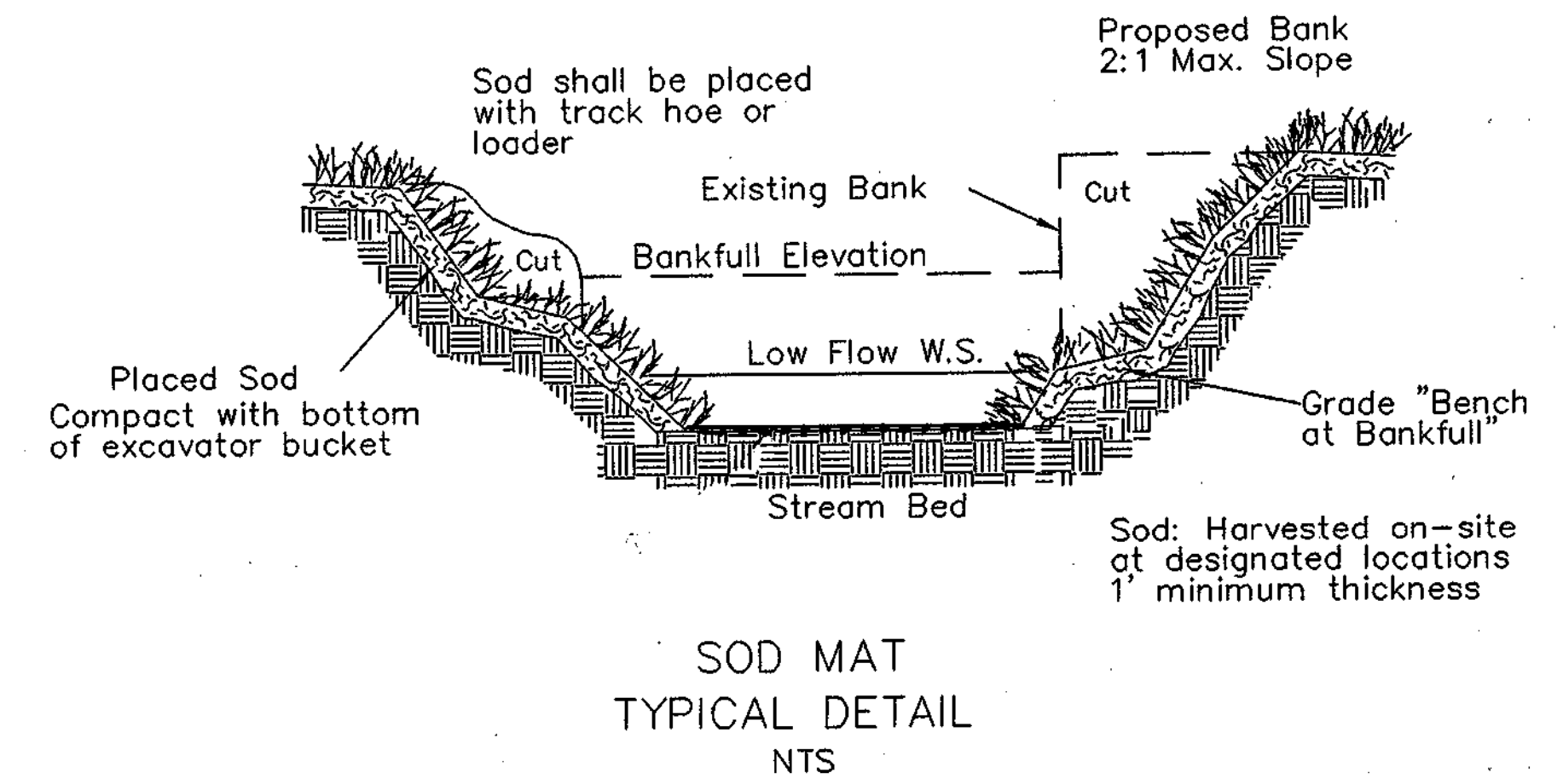
WILDMAN ENVIRONMENTAL SERVICES
4747 BONNIE BRIDGE RD.
ELLICOTT CITY, MD. 21043
PHONE: (410) 869-8989
FAX: (410) 869-8088

DESIGNED BY: M.E./R.B.W.
DRAWN BY: M.E./B.E.
PROJECT NO.:
DATE: 12/05/00
SCALE: 1"=50'
SHEET NO. 15 OF 17



GRADE CONTROL STRUCTURES ELEVATION CHART

GRADE CONTROL STRUCTURE NO.	STREAM & STATION	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D
1	11+00	452.71	451.87	451.71	451.20
	10+99	452.64	448.44	448.20	N/A
	10+82	451.50	450.66	450.50	450.00
2	10+00	450.49	449.65	449.49	448.99
	9+99	450.42	446.24	446.00	N/A
	9+82	449.28	448.44	448.28	447.78
3	7+50	446.50	445.66	445.50	445.00
	7+49	446.42	442.24	442.00	N/A
	7+32	445.11	444.27	444.11	443.61
4	6+73	444.50	443.66	443.50	443.00
	6+72	444.42	440.24	440.00	N/A
	6+55	443.02	442.18	442.02	441.52



THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim M... 8/13/02
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR STREAM RESTORATION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Mark... 8/13/02
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Howard... 8/16/02
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Ham... 9/4/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mark... 8/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

WILLOW BUNDLE TYPICAL SECTION

WILLOW BUNDLE TYPICAL PROFILE

BY THE DEVELOPER:

"I HAVE CERTIFIED THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE STREAM RESTORATION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE STREAM WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 8/11/02
 DATE

E. JACOB HIKMAT, AUTHORIZED MEMBER
 PRINTED NAME OF DEVELOPER

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR STREAM RESTORATION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE STREAM RESTORATION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE STREAM WITHIN 30 DAYS OF COMPLETION."

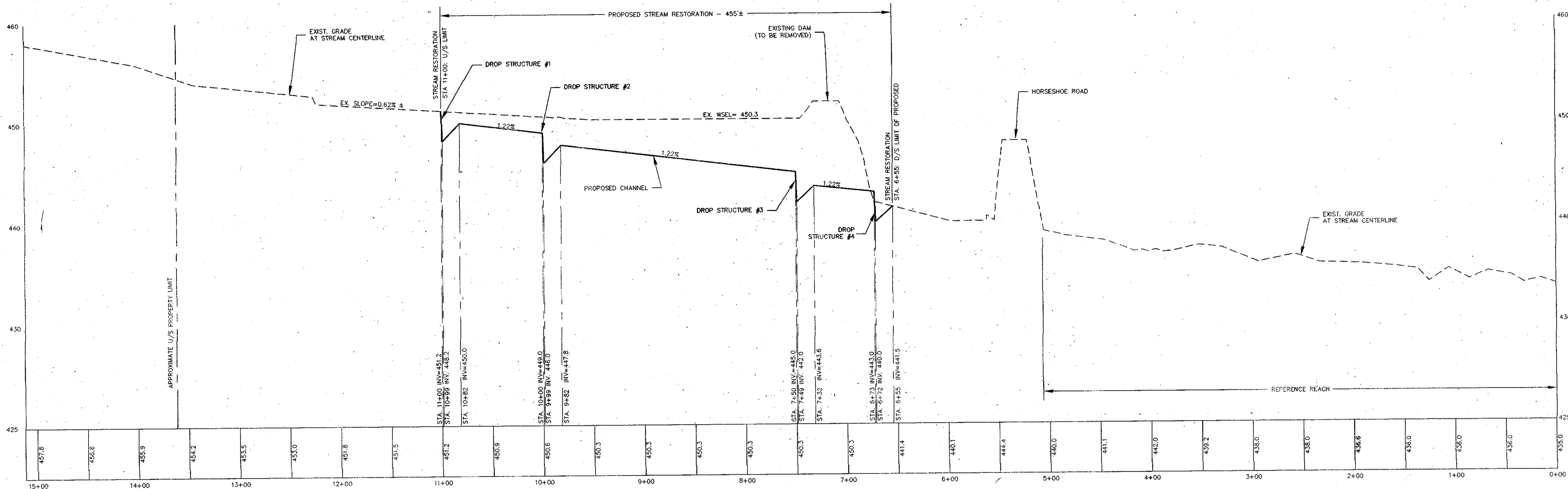
[Signature]
 SIGNATURE OF ENGINEER

LEMO MILDENBERG
 PRINTED NAME OF THE ENGINEER

OWNER/DEVELOPER
 MORRIS L.L.C.
 5072 DORSEY HALL DRIVE, SUITE 202
 ELLICOTT CITY, MARYLAND 21043
 (410) 997-0296

REVISED	REV. TYP. DETAILS & SECTIONS, REV. TOTAL SHEET NOS.
DATE NO.	REVISION
OWNER/DEVELOPER	WILLIAM MORRIS
	C/O MILDENBERG, BOENDER & ASSOC., INC. 5072 DORSEY HALL DRIVE SUITE 202 ELLICOTT CITY, MARYLAND 21042
PROJECT:	RED HILL BRANCH OVERLOOK RED HILL BRANCH STREAM RESTORATION
AREA:	TAX MAP 31, PARCEL 80 & Resub. of LOT 3, BLK. 13 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	TYPICAL DETAILS
	WILDMAN ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. ELLICOTT CITY, MD. 21048 PHONE: (410) 869-8999 FAX: (410) 869-8999
	DESIGNED BY: M.E./R.B.W. DRAWN BY: M.E./BEI PROJECT NO. DATE: 12/05/00 SCALE: 1"=50' SHEET NO. 16 OF 16

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



STREAM PROFILE

HORZ. SCALE: 1"=20'
VERT. SCALE: 1"=2'

OWNER/DEVELOPER

MORRIS L.L.C.
5072 DORSEY HALL DRIVE SUITE 202
ELLCOTT CITY, MARYLAND 21043
(401)997-0296

**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.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT *AK* DATE _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE _____

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE STREAM RESTORATION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE STREAM WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

DATE: 8/11/02
SIGNATURE OF DEVELOPER: *[Signature]*
PRINTED NAME OF DEVELOPER: R. JAMES BIKMAT, ANTHONY ZED MEABER

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR STREAM RESTORATION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE STREAM RESTORATION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE STREAM WITHIN 30 DAYS OF COMPLETION."

DATE: 8/13/02
SIGNATURE OF ENGINEER: *[Signature]*
PRINTED NAME OF THE ENGINEER: *[Name]*

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR STREAM RESTORATION, SOIL EROSION AND SEDIMENT CONTROL.

DATE: 8/13/02
SIGNATURE: *[Signature]*
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
DATE: 8/13/02
SIGNATURE: *[Signature]*
CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 9/4/02
SIGNATURE: *[Signature]*
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 9/1/02
SIGNATURE: *[Signature]*
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE	NO.	REVISION
12/03	1	REV. STREAM PROFILE, CHANGE SHEET No. 1, REV. TOTAL SHEET NOS.
OWNER/DEVELOPER		
WILLIAM MORRIS C/O MILDENBERG, BOENDER & ASSOC., INC. 5072 DORSEY HALL DRIVE SUITE 202 ELLCOTT CITY, MARYLAND 21042		
PROJECT:		
RED HILL BRANCH OVERLOOK RED HILL BRANCH STREAM RESTORATION		
AREA:		
TAX MAP 31, PARCEL 60 & Resub. of LOT 3, BLK. 13 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE:		
TYPICAL DETAILS		
WILDMAN ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. ELLCOTT CITY, MD. 21043 PHONE: (410) 869-9999 FAX: (410) 869-9999		
DESIGNED BY: M.E./R.B.W.		
DRAWN BY: M.E./BEI		
PROJECT NO.		
DATE: 2/05/00		
SCALE: 1"= 50'		
SHEET NO. 17 OF 17		

F-02-64