

ROAD CONSTRUCTION PLANS RAUSCH PROPERTY, LOTS 3 THRU 40 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

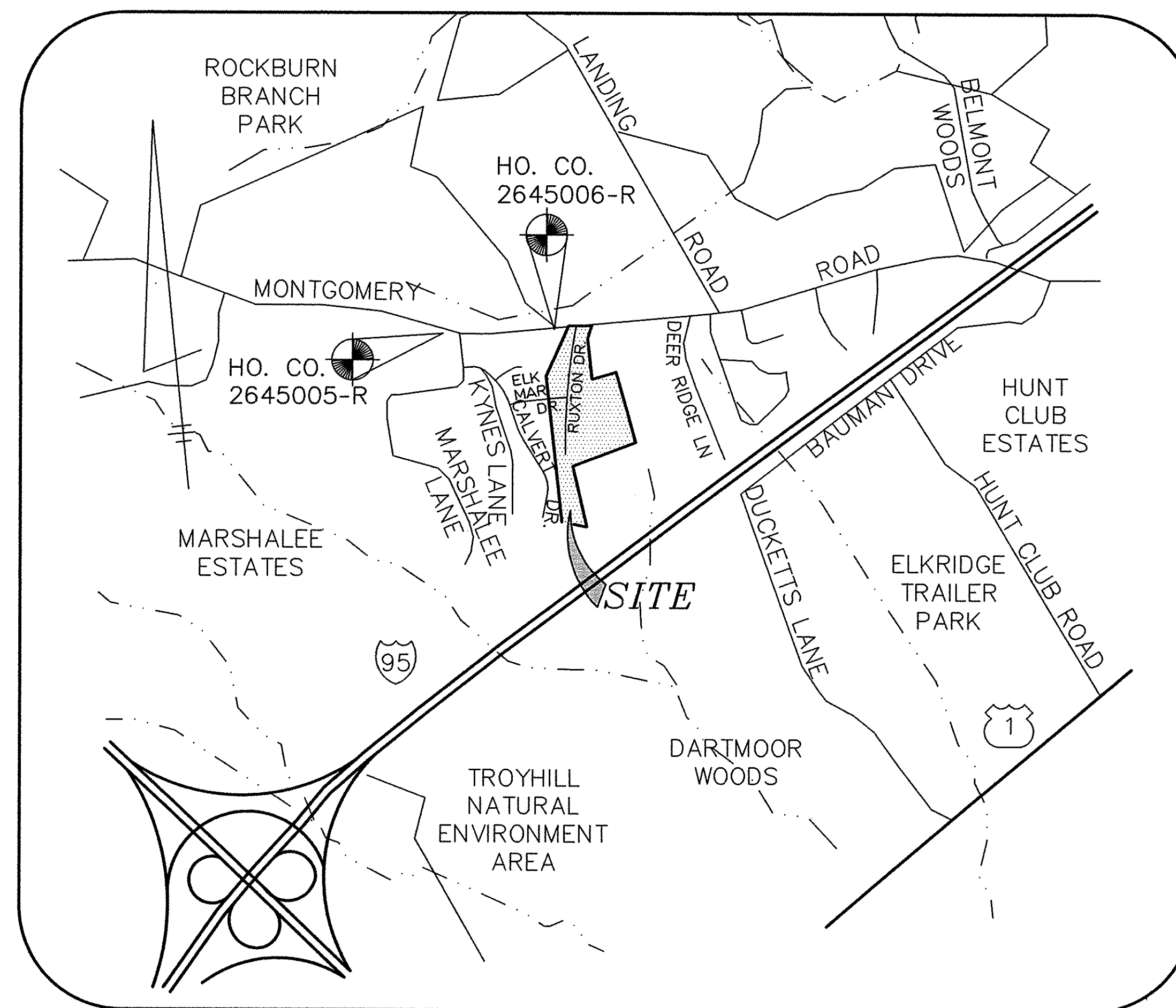
GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. 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.
3. 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 INSPECTION DIVISION	(410) 313-1880
4. PROJECT BACKGROUND:
LOCATION: 1ST ELECTION DISTRICT, TAX MAP 37, PARCEL 95
ZONING: R-20
TOTAL TRACT AREA: 19.88 ACRES ±
NUMBER OF PROPOSED LOTS: 38 (35 BUILDABLE)
ACREAGE OF PROPOSED LOTS: 11.94 ACRES ±
OPEN SPACE REQUIRED: 5.96 ACRES ± (30%)
OPEN SPACE PROVIDED: 5.96 ACRES ±
PROPOSED ROAD DEDICATION: 1.98 ACRES ±
DPZ REFERENCE #:
 - F-84-160
 - F-84-54
 - S-94-34
 - P-96-09
 - WP-98-40
5. TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON FIELD RUN TOPOGRAPHIC SURVEY BY MILDENBERG, BOENDER AND ASSOCIATES, INC. ON MAY 1997.
6. HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD'27) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.

STA No. 2645005-R	N 501,966.231	EL = 291.93
	E 869,452.612	
STA No. 2645006-R	N 501,884.354	EL = N/A
	E 869,482.835	
7. STREET LIGHTS WILL BE REQUIRED IN THIS 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 1993)." 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.
8. WATER AND SEWER ARE PUBLIC, CONTRACT # 14-3529-D
9. STORMWATER MANAGEMENT CONTROL WILL BE PROVIDED BY THE METHOD OF EXTENDED DETENTION AND BIOTENTION. BIOTENTION FACILITY IS PRIVATE. STORMWATER MANAGEMENT POND IS PUBLICLY OWNED AND PRIVATELY MAINTAINED.
10. GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNES ENGINEERING ASSOCIATES INC, ON MAY 1997
11. EXISTING UTILITIES LOCATIONS ARE BASED ON AS-BUILT DRAWINGS ON RECORD AT HOWARD COUNTY.
12. 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.
13. HOUSES NOT CONTROLLED BY THE SWM POND WILL HAVE DRY WELLS AT SDP STAGE.
14. COMPACTION IN FILL AREAS TO BE 95% DETERMINED PER AASHTO T-180.
15. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
16. FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.200 OF HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OR CONSERVATION EASEMENT ARE ALLOWED.
17. A PORTION OF THE FOREST CONSERVATION OBLIGATIONS INCURRED BY THIS SUBDIVISION (6.53 ACRES OF REFORESTATION) WILL BE MET BY PAYMENT OF \$ 88,606.10 TO THE HOWARD COUNTY FOREST CONSERVATION FUND.
18. WETLANDS REPORT AND FOREST STAND DELINEATION BY EXPLORATION RESEARCH, ON MAY 1997.
19. THE STREET LIGHT LOCATIONS AND TYPES OF LIGHTS SHOWN ON SHEETS 2 AND 3 ARE AS FOLLOWS :
 - 150-WATT HPS VAPOR PENDANT (CUTOFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12" ARM ANGLED RADIAL TO THE FILLET AT RUXTON DRIVE, STATION 0+32, 26' RIGHT.
 - 100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14' BLACK FIBERGLASS POLE AT RUXTON DRIVE, STATION 6+83, 27' RIGHT AND STATION 13+35, 18' LEFT, AND ELK MAR DRIVE, STATION 3+85, 18' LEFT.

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VICINITY MAP

SCALE: 1"=1000'

DEVELOPER
ELLCOTT LAND, LLC
C/O LAND DESIGN & DEVELOPMENT INC.
10805 HICKORY RIDGE ROAD
COLUMBIA, MARYLAND 21044
(410) 740-2100

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] 10/31/97
DATE

ELLCOTT LAND, LLC
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] 10/31/97
DATE

R. JACOB HIKMAT
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 11-12-97
DATE

USDA - NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/10/97
DATE

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS

[Signature] 1-27-98
DATE

CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/4/98
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 2/3/98
DATE

CHIEF, DEVELOPMENT ENG. DIVISION MK



Project	87027	Date	OCT 1997
Illustration	MMP	Engineering	RJH
Scale	NTS	Approval	

No.		Description	Revisions	Date

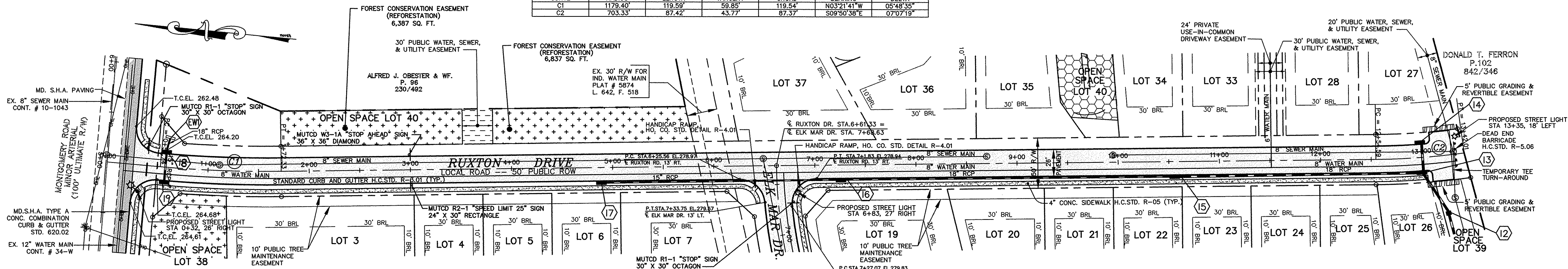
COVER SHEET

RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

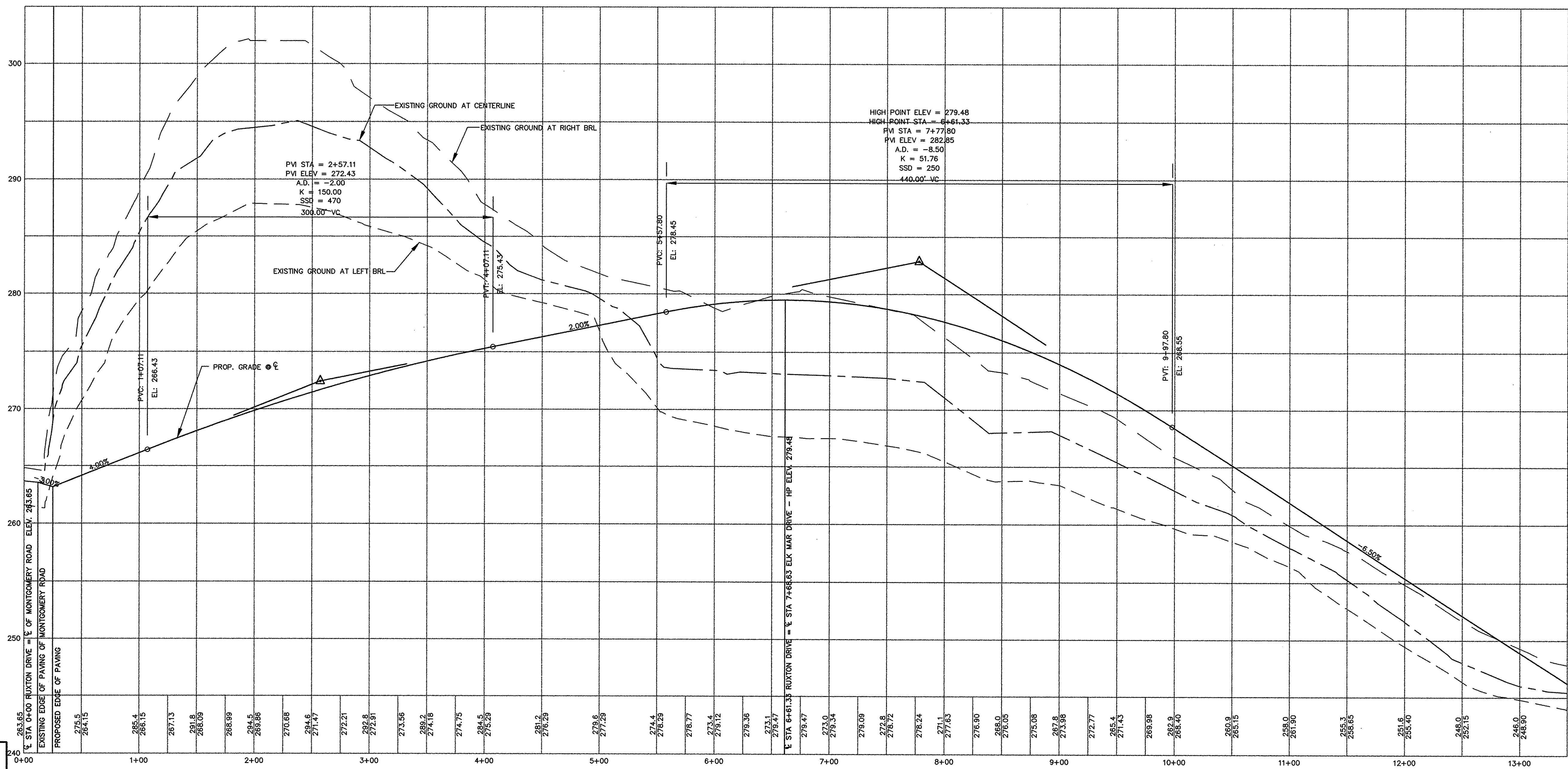
MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1178.40'	119.59'	59.85'	119.54'	N03°21'41"W	05°48'35"
C2	703.33'	87.42'	43.77'	87.37'	S09°50'38"E	07°07'19"



NOTE: FOR STREET LIGHT TYPES SEE NOTE 19 ON SHEET 1 OF 17.



RUXTON DRIVE PROFILE

LOCAL ROAD
 DESIGN SPEED 30 MPH
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Quady 1-27-98
 CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hamilton 2/3/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

Mark Danvers 2/3/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 DATE

project	97027	date	OCT 1997
illustration	MAP/SSD	engineering	SJD
scale	AS SHOWN	approval	

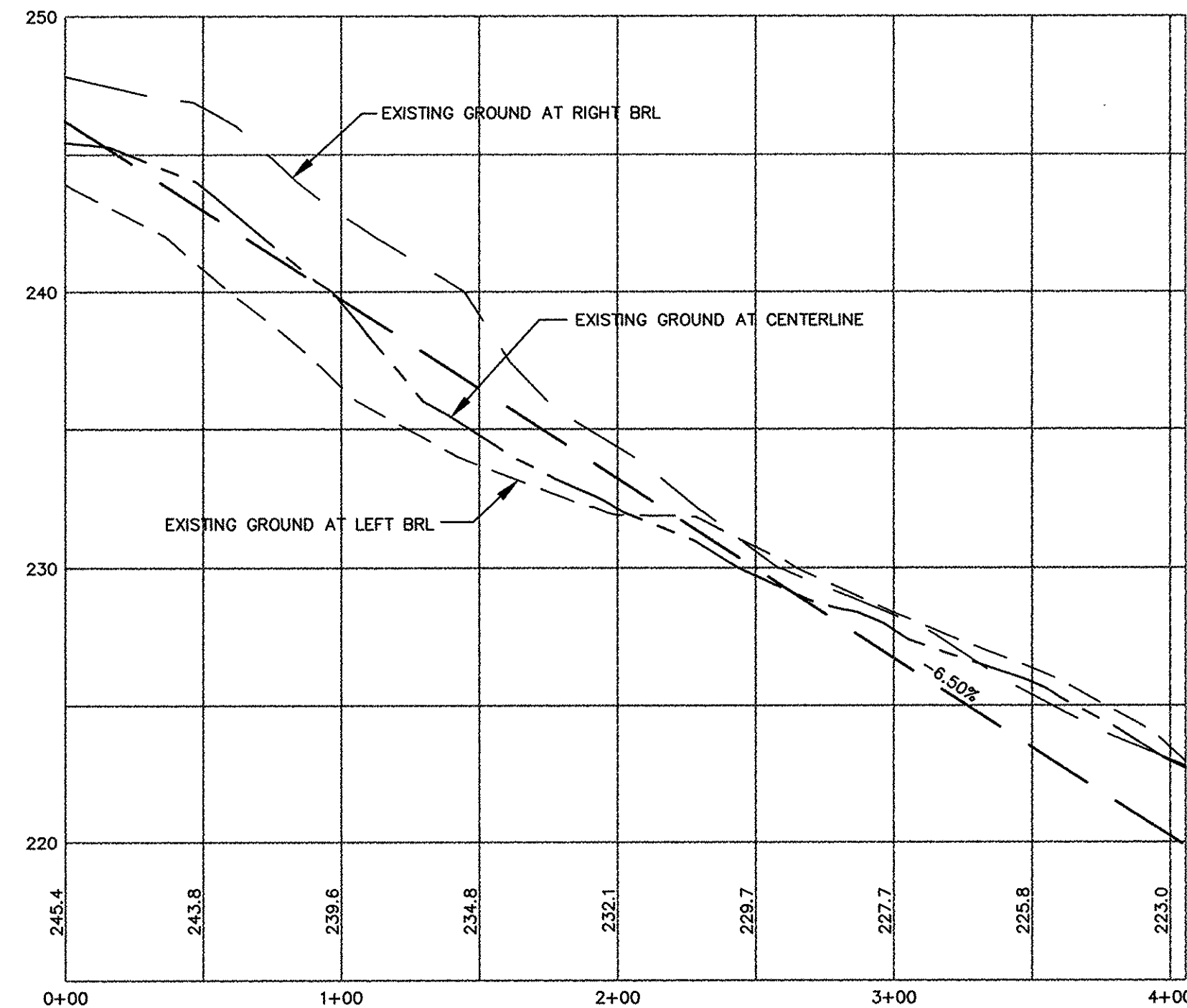
no.	description	date
	revisions	

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 ROAD PLAN AND PROFILE

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 987-0296 Fax. (301) 621-5521 Wash. (410) 987-0299 Fax.

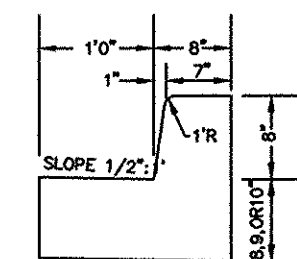
CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C3	446.94'	102.49'	51.47'	102.27'	N77°12'28"E	13°08'21"
C4	700.80'	168.73'	84.77'	168.32'	N77°33'29"E	13°47'56"

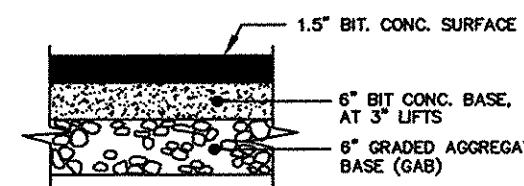


RUXTON DRIVE PROFILE (FUTURE EXTENSION)

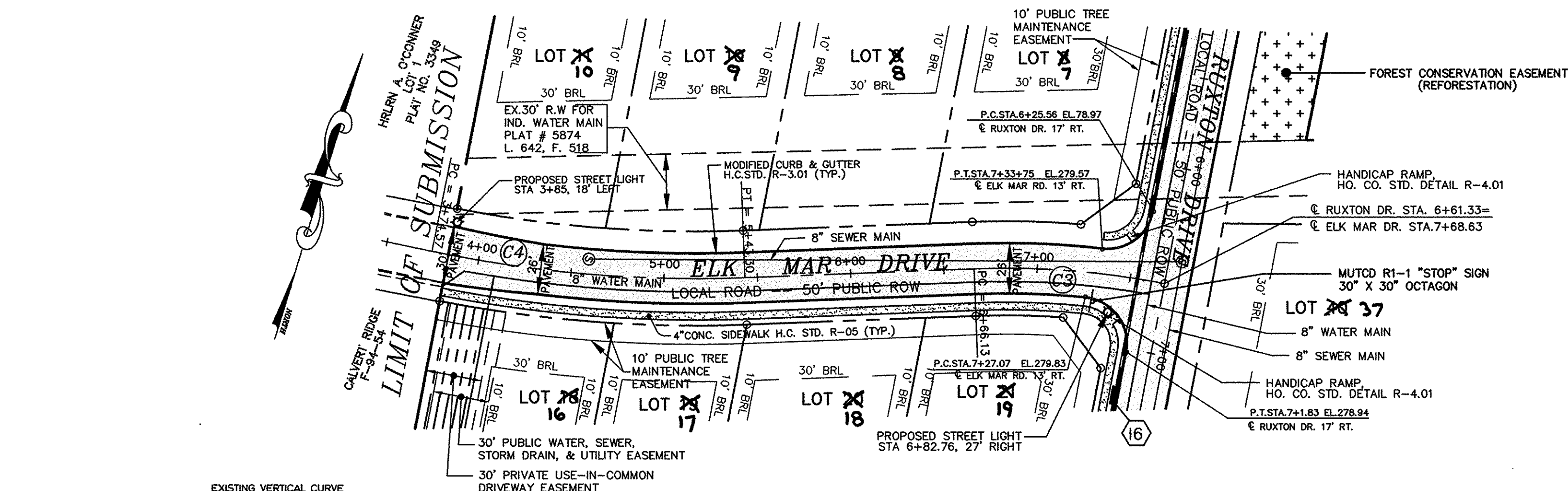
LOCAL ROAD
DESIGN SPEED 30 MPH
HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



MD. S.H.A. TYPE "A" CONCRETE COMBINATION CURB & GUTTER STANDARD NO. MD. 620.02
NOT TO SCALE

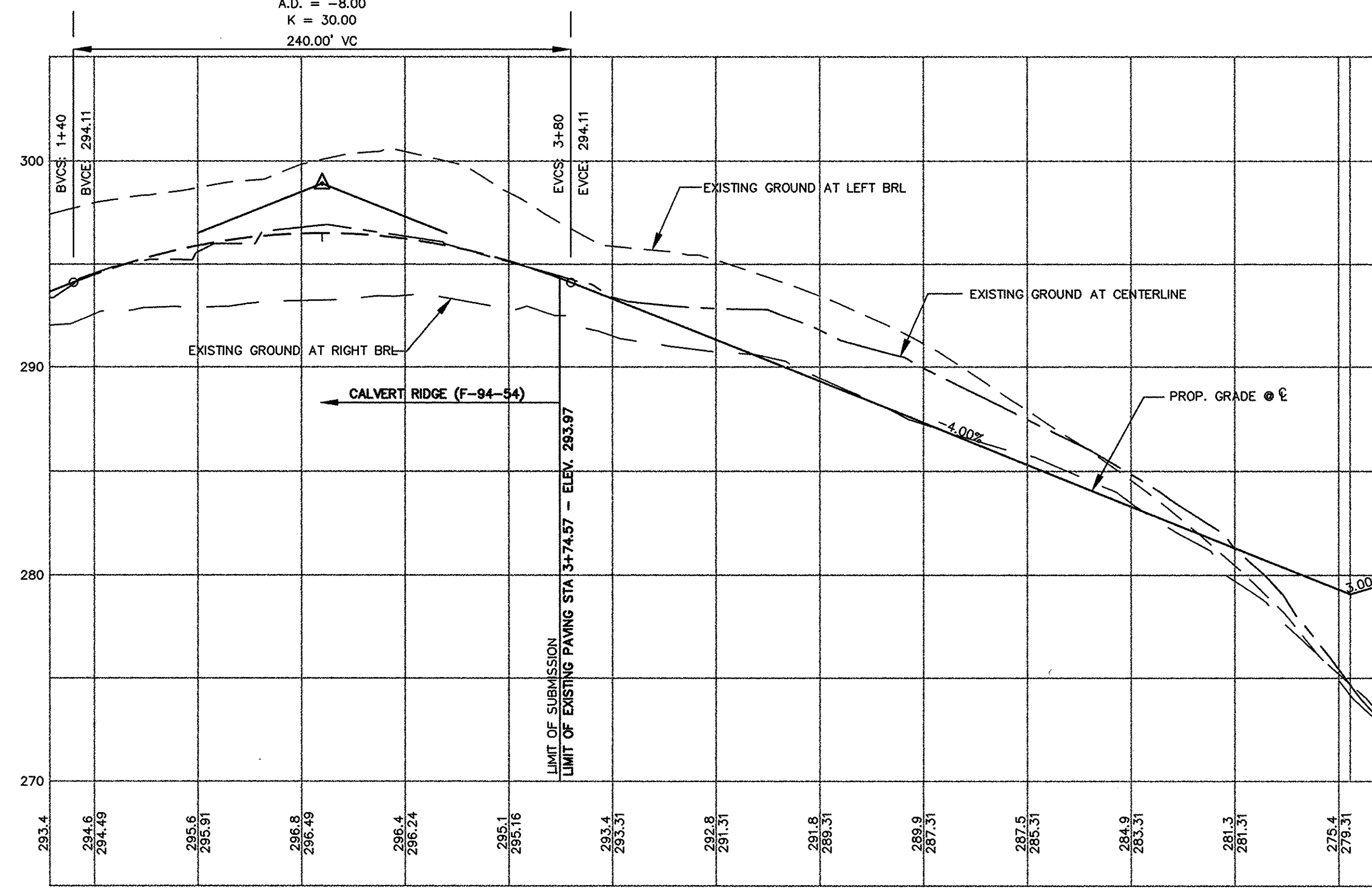


MD. S.H.A. PAVING SECTION
NOT TO SCALE



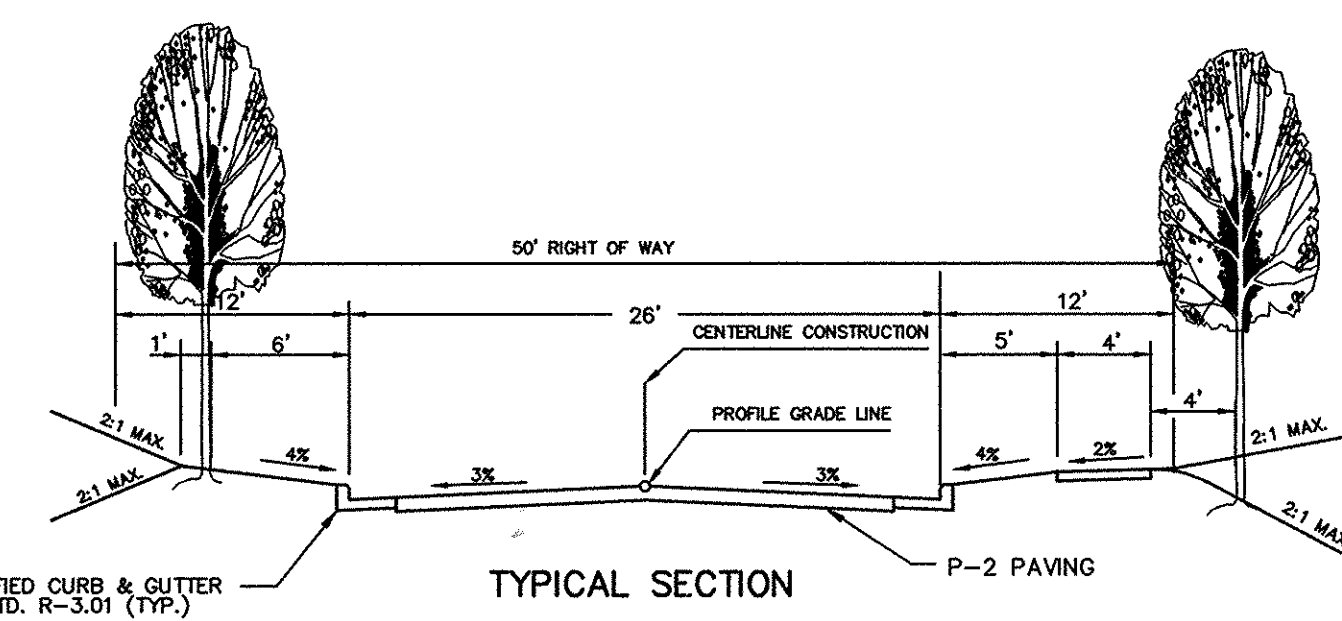
EXISTING VERTICAL CURVE
HIGH POINT ELEV = 296.51
HIGH POINT STA = 2+60
PVI STA = 2+60
PVI ELEV = 298.91
A.D. = -8.00
K = 30.00
240.00' VC

NOTE : FOR STREET LIGHT TYPES SEE NOTE 19 ON SHEET 1 OF 17.

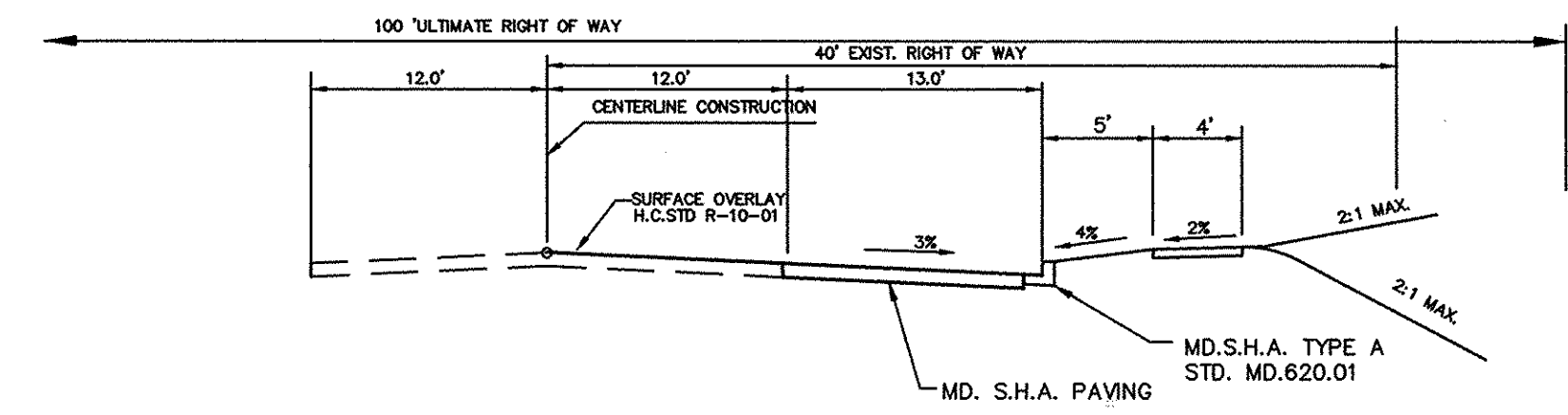


ELK MAR DRIVE PROFILE

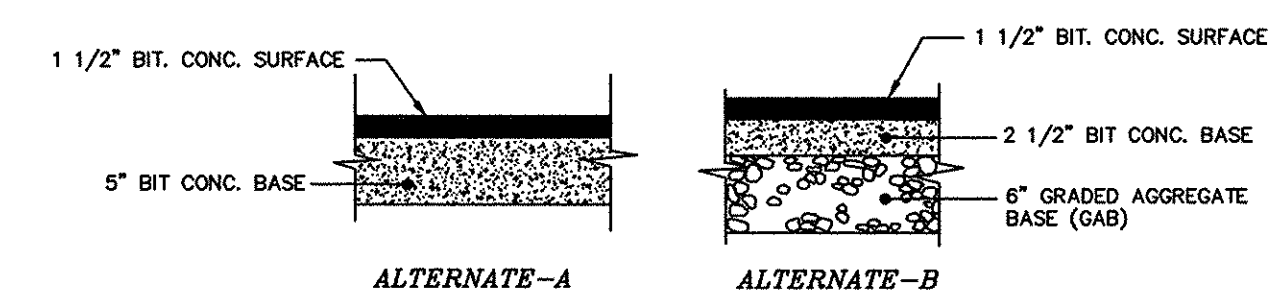
LOCAL ROAD
DESIGN SPEED 30 MPH
HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



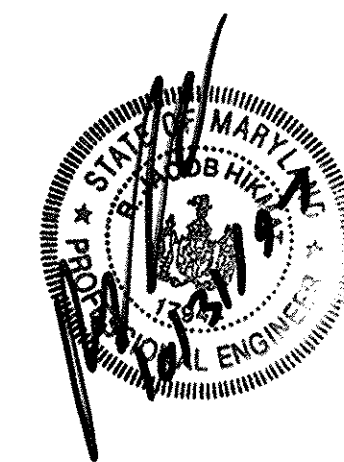
TYPICAL SECTION DESIGN SPEED: 30 MPH CLASSIFICATION: LOCAL ROAD
N.T.S.



TYPICAL SECTION MONTGOMERY ROAD WIDENING
N.T.S.



PAVING SECTIONS
P-2
N.T.S.



APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Quach 1-27-98
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hammit 2/1/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Dommar 2/3/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE



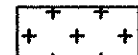
date	OCT 1997	approval
project	97027	engineering
illustration	MMP/SID	scale
AS SHOWN		

no.		description	revisions

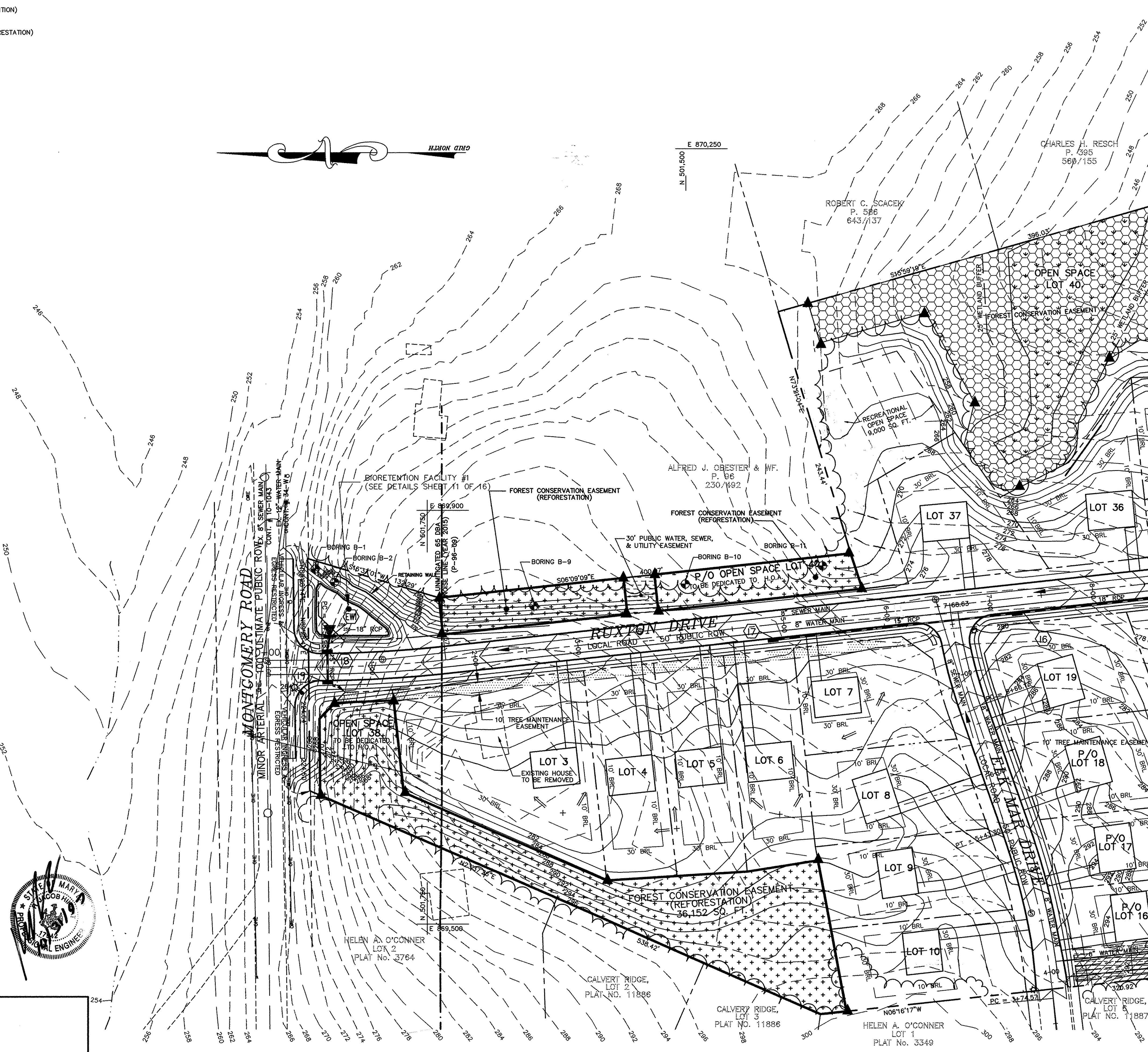
RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ROAD PLAN AND PROFILE

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

LEGEND

-  DENOTES FOREST PRESERVATION SIGNAGE
-  DENOTES FOREST CONSERVATION AREA (RETENTION)
-  DENOTES FOREST CONSERVATION AREA (REFORESTATION)

APPROVED: DEPARTMENT OF PUBLIC WORKS	
<i>Andrew M. Daniels</i> CHIEF, BUREAU OF HIGHWAYS	1-27-98 DATE
DEVELOPERS CERTIFICATE	
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.	
<i>ESD</i> SIGNATURE OF DEVELOPER	10/31/97 DATE
ELICOTT LAND, LLC PRINTED NAME OF DEVELOPER	
ENGINEER'S CERTIFICATE	
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.	
<i>R. Jacob Hikmat</i> SIGNATURE OF ENGINEER	10/31/97 DATE
R-JACOB HIKMAT PRINTED NAME OF ENGINEER	
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.	
USDA - NATURAL RESOURCE CONSERVATION SERVICE	DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
HOWARD SOIL CONSERVATION DISTRICT	DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Michelle Harrison</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/5/98 DATE
<i>Condo Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/1/98 DATE



MATCH SHEET 5 OF 17

project	97027	date	OCT 1997
illustration	JS	engineering	JS/SJD
scale	1"=50'	approval	JS/SJD


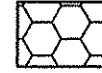
NO.	DESCRIPTION	DATE
1	REMOVED WATER & ASSOCIATED EBMAT	1-20-98
	revisions	

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 GRADING PLAN

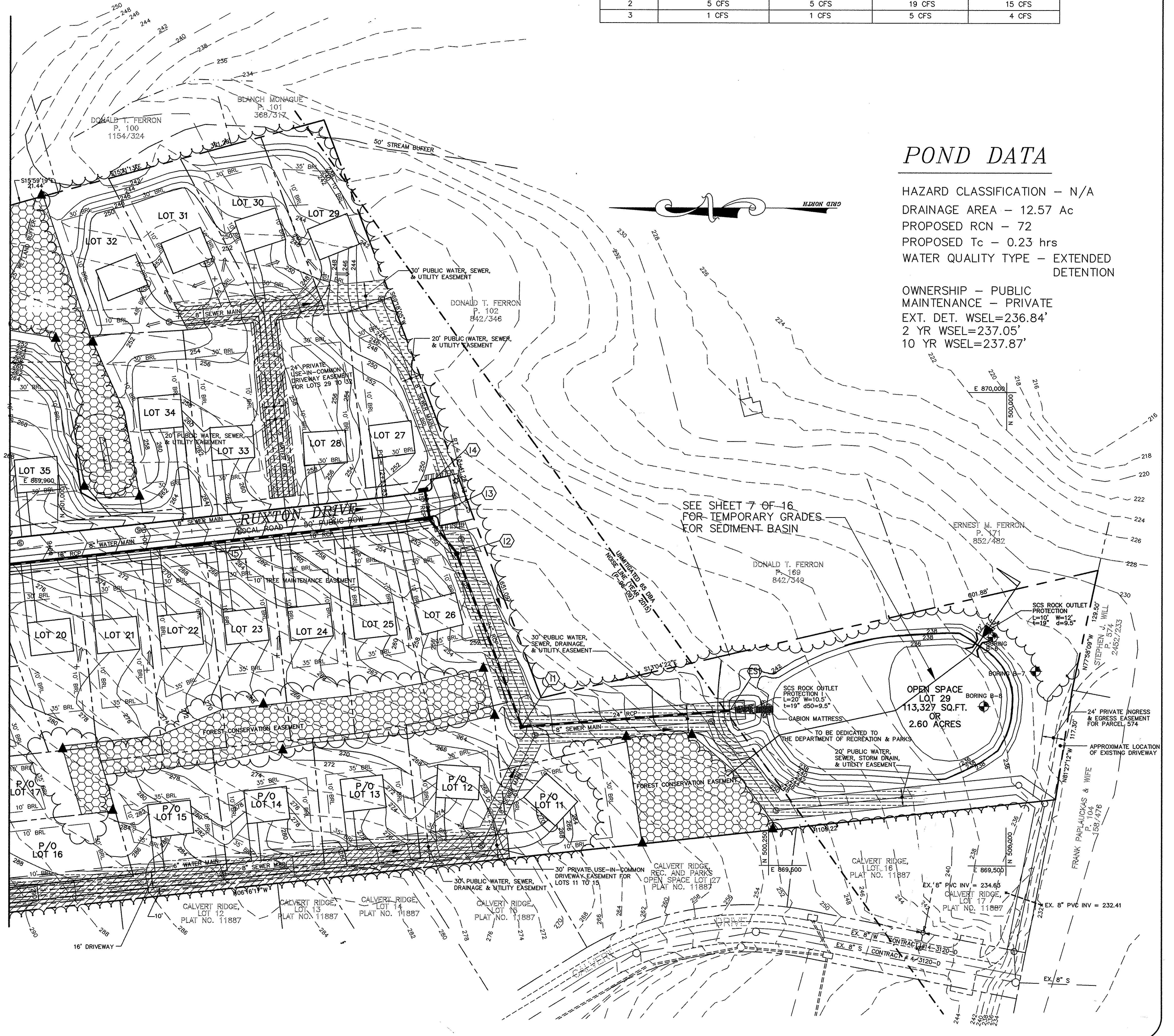
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

STUDY POINT	Q(2)-EXISTING	Q(2)-PROPOSED	Q(10)-EXISTING	Q(10)-PROPOSED
1	3 CFS	2 CFS	9 CFS	7 CFS
2	5 CFS	5 CFS	19 CFS	15 CFS
3	1 CFS	1 CFS	5 CFS	4 CFS

LEGEND

-  DENOTES FOREST PRESERVATION SIGNAGE
-  DENOTES FOREST CONSERVATION AREA (RETENTION)

MATCH SHEET 4 OF 17



POND DATA

HAZARD CLASSIFICATION - N/A
 DRAINAGE AREA - 12.57 Ac
 PROPOSED RCN - 72
 PROPOSED Tc - 0.23 hrs
 WATER QUALITY TYPE - EXTENDED DETENTION

OWNERSHIP - PUBLIC
 MAINTENANCE - PRIVATE
 EXT. DET. WSEL=236.84'
 2 YR WSEL=237.05'
 10 YR WSEL=237.87'

SEE SHEET 7 OF 16 FOR TEMPORARY GRADES FOR SEDIMENT BASIN

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Quale 1-27-98
 CHIEF, BUREAU OF HIGHWAYS

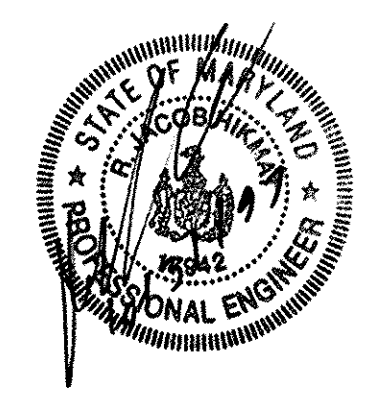
DEVELOPERS CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.
[Signature] 11/4/97
 SIGNATURE OF DEVELOPER
 SWICOTT LAND, LLC
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.
[Signature] 1/23/98
 SIGNATURE OF ENGINEER
 R. JAGOB HIKMAT
 PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 USDA - NATURAL RESOURCE CONSERVATION SERVICE
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 2/26/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 2/4/98
 CHIEF, DIVISION OF LAND DEVELOPMENT



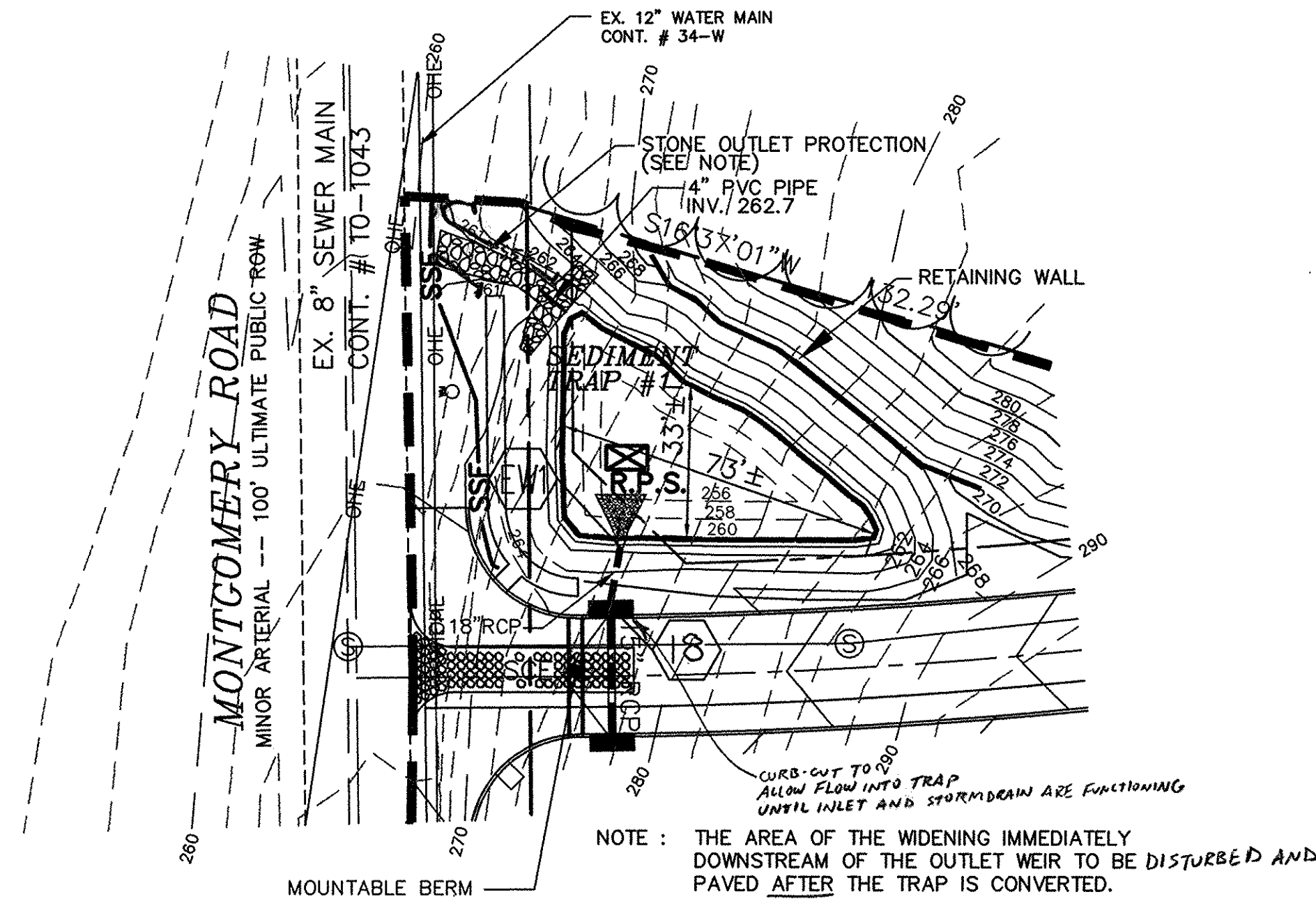
Project	date	description	scale	approval
97027	OCT 1997	engineering	AS/SID	
AS	AS	AS	1"=50'	

no.	description	date
1	MOVE SEWER LINE IN O.S. LOT 29	1-30-98

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 GRADING 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.

NOTE : THIS PLAN IS FOR THE PURPOSE OF SEDIMENT CONTROL ONLY.



SEDIMENT TRAP 1 DETAIL
SCALE : 1" = 30'

LEGEND

- SILT FENCE
- SUPER SILT FENCE
- EARTH DIKE
- REMOVABLE PUMPING STATION
- STABILIZED CONSTRUCTION ENTRANCE
- AREAS WITH SLOPES > 33% WHICH ARE TO BE IMMEDIATELY STABILIZED WITH SEED AND EROSION CONTROL MATTING
- DENOTES FOREST PRESERVATION SIGNAGE
- DENOTES FOREST CONSERVATION AREA (RETENTION)
- DENOTES FOREST CONSERVATION AREA (REFORESTATION)

SED. TRAP #1

TYPE: ST-II
 DRAINAGE AREA: 3.25 AC
 STORAGE REQ'D: 11,700 CU. FT.
 OUTLET ELEV.: 261.00
 SIDE SLOPES: 2:1
 WEIR CREST ELEV.: 264.00'
 STORAGE PROVIDED: 17,650 CU. FT.
 TOP OF EMBANK.: 265.00
 WEIR LENGTH: 13 FT
 EXIST. ELEV. AT WEIR: 265.00'
 BOTTOM ELEV.: 256.00'
 WET STORAGE DEPTH: 5.0 FT
 WET STORAGE PROVIDED: 6,293 CU. FT.
 CLEANOUT ELEV.: 257.50
 DRY STORAGE DEPTH: 3 FT
 DRY STORAGE PROVIDED: 5,850 CU. FT. ELEV. 262.7
 4" PVC PIPE: INV. 262.7

DEVELOPERS CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 11/4/97
 PRINTED NAME OF DEVELOPER: **FLUCCOTT LAND, LLC**

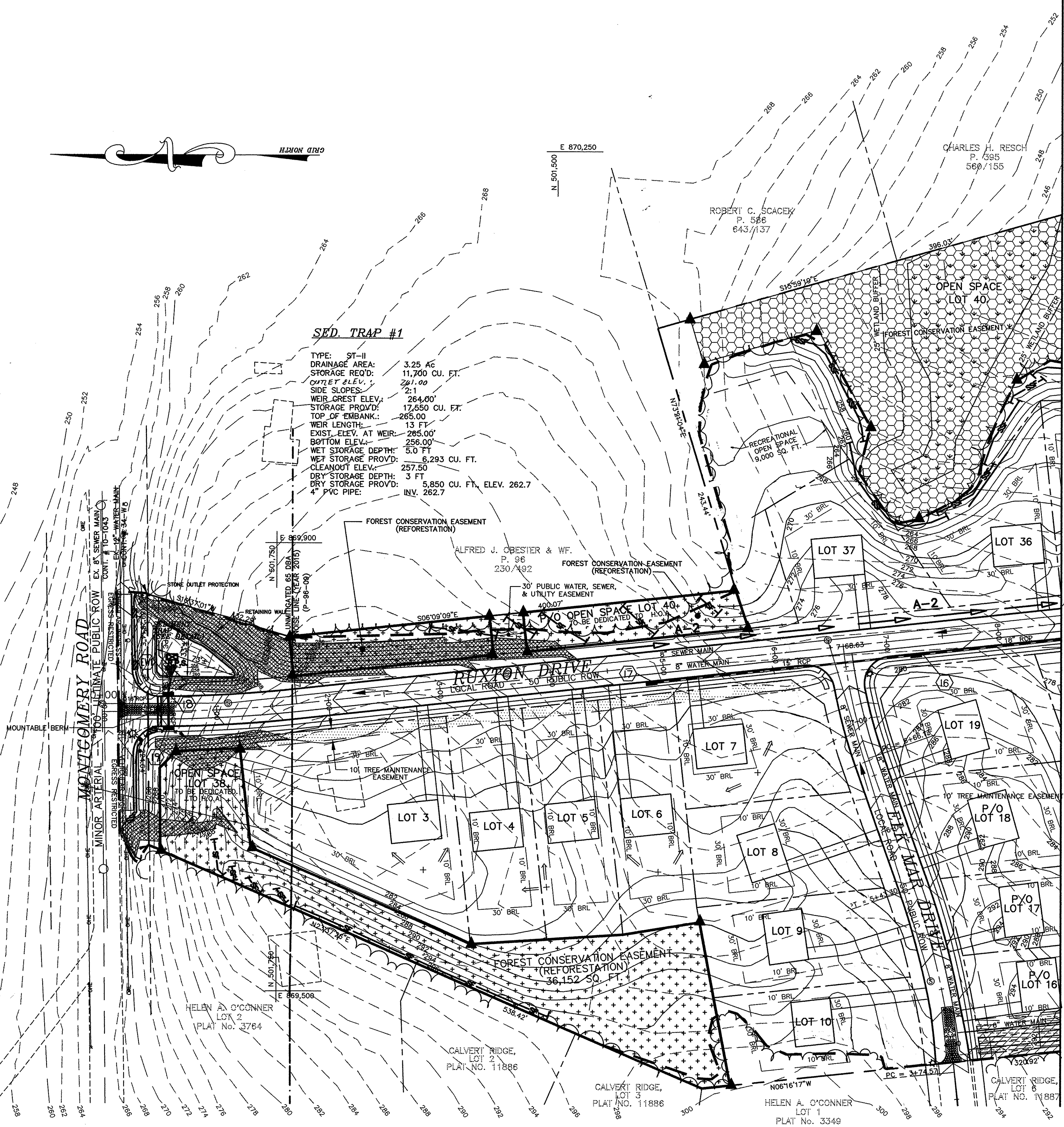
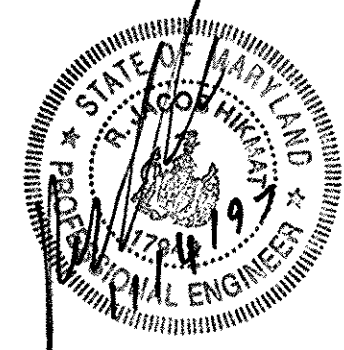
ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 11/4/97
 PRINTED NAME OF ENGINEER: **R. JACOB HIKMAT**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
[Signature] DATE: 11/12/97
 USDA - NATURAL RESOURCE CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] DATE: 4/10/97
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 2/3/98
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 2/12/98

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS: *[Signature]* DATE: 1-27-98



MATCH SHEET 7 OF 17

Project	date	approval
97027	OCT 1997	JS
Illustration	engineering	approval
IS/SID	JS	approval
scale	1" = 50'	

1	CHANGE CLEARING AT ENTRANCE - REMOVE	1-30-98	date
	RESOURCES		revisions

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
 EROSION AND SEDIMENT CONTROL PLAN

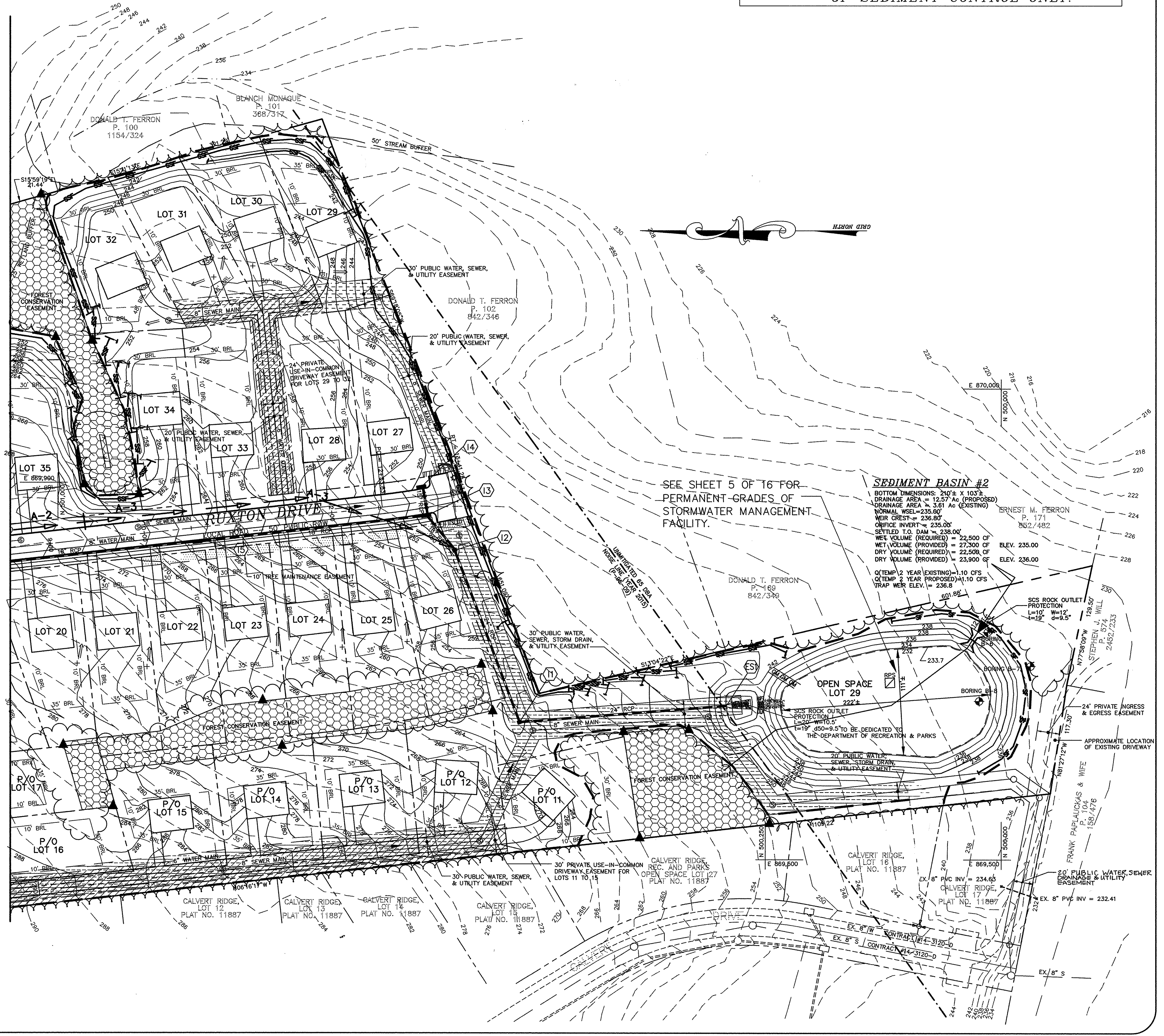
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsley Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

NOTE : THIS PLAN IS FOR THE PURPOSE OF SEDIMENT CONTROL ONLY.

LEGEND

- SILT FENCE
- SUPER SILT FENCE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- AREAS WITH SLOPES > 33% WHICH ARE TO BE IMMEDIATELY STABILIZED WITH SEED AND EROSION CONTROL MATTING
- DENOTES FOREST PRESERVATION SIGNAGE
- DENOTES FOREST CONSERVATION AREA (RETENTION)

MATCH SHEET 6 OF 17



SEE SHEET 5 OF 16 FOR PERMANENT GRADES OF STORMWATER MANAGEMENT FACILITY.

SEDIMENT BASIN #2
 BOTTOM DIMENSIONS: 240' X 103'
 DRAINAGE AREA = 12.57 AC (PROPOSED)
 NORMAL WSEL = 235.00'
 WEIR CREST = 236.80'
 OFFICE INVERT = 235.00'
 SETTLED T.O. DAM = 238.00'
 WET VOLUME (REQUIRED) = 22,500 CF
 WET VOLUME (PROVIDED) = 27,300 CF
 DRY VOLUME (REQUIRED) = 22,500 CF
 DRY VOLUME (PROVIDED) = 23,900 CF
 Q (TEMP 2 YEAR EXISTING) = 1.10 CFS
 Q (TEMP 2 YEAR PROPOSED) = 1.10 CFS
 TRAP WEIR ELEV. = 236.8

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature: *[Signature]* DATE: 11/4/97
 ELICOTT LAND, LLC
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature: *[Signature]* DATE: 10/31/97
 R. JACOB HIKMAT
 PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY NATURAL RESOURCE CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: *[Signature]* DATE: 11/12/97
 USDA - NATURAL RESOURCE CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY NATURAL RESOURCE CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 11/10/97
 HOWARD COUNTY NATURAL RESOURCE CONSERVATION DISTRICT

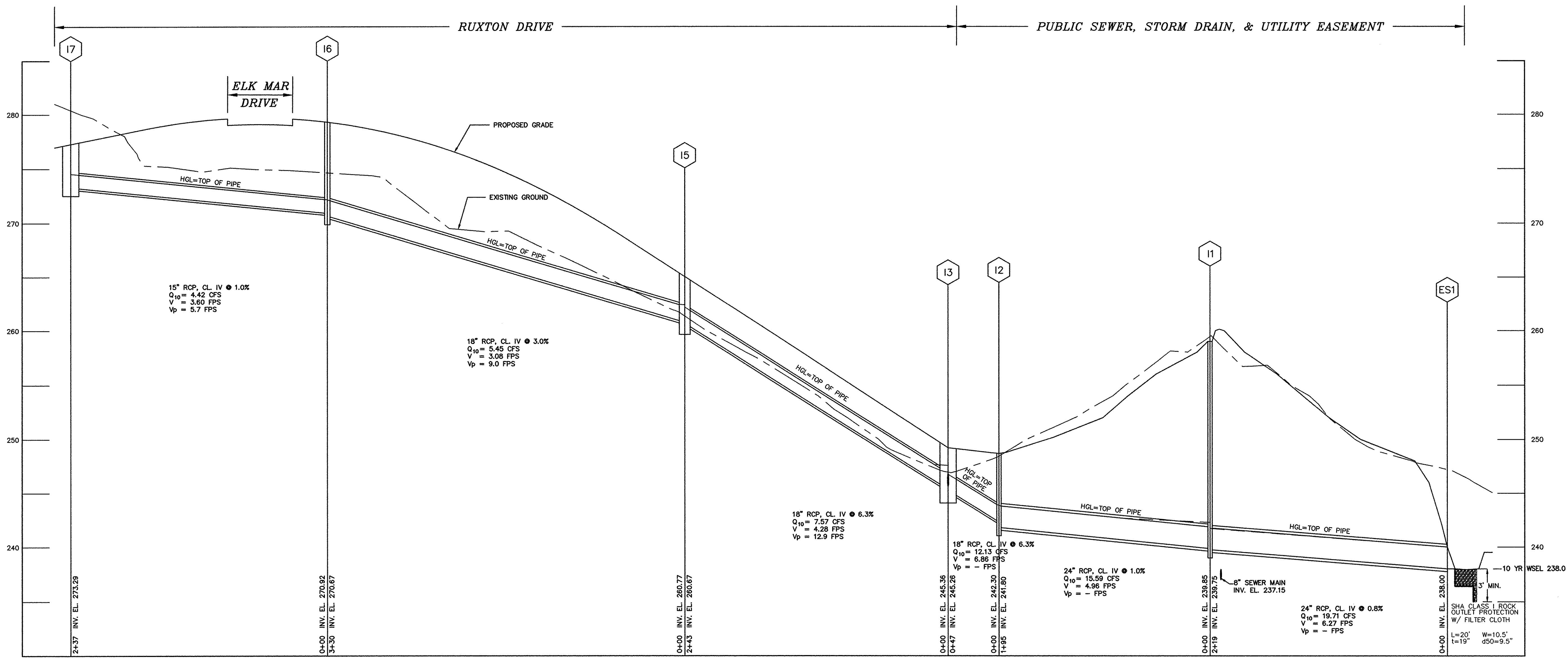
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 2/3/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 Signature: *[Signature]* DATE: 2/4/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 Signature: *[Signature]* DATE: 1-27-98
 CHIEF, BUREAU OF HIGHWAYS



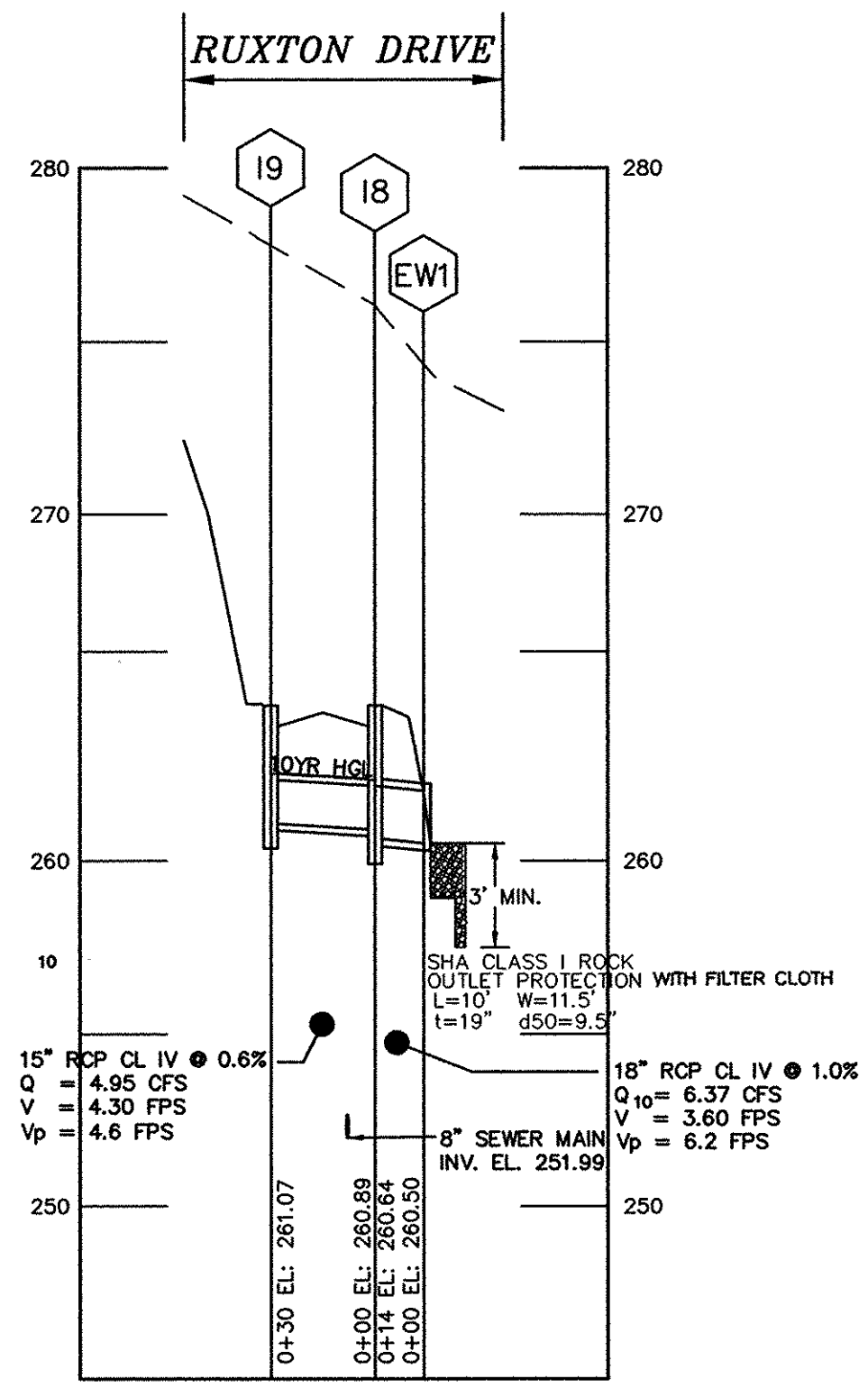
project	97027	date	OCT 1997
illustration	JS	engineering	JS/SSD
scale	1"=50'	approval	
no.		description	revisions

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 EROSION AND SEDIMENT CONTROL PLAN

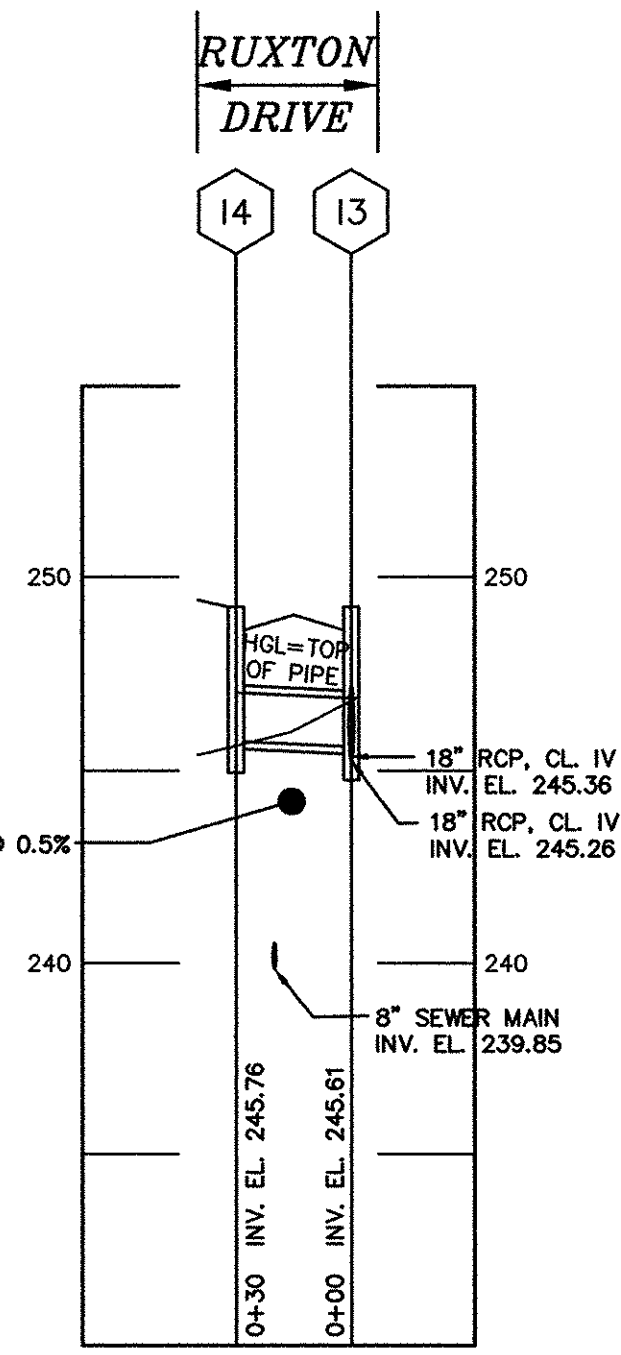
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax. (301) 621-5521 Wash. (410) 997-0298 Fax.



STORM DRAIN PROFILE FROM I-7 TO ES-1
 HORIZONTAL SCALE : 1" = 50'
 VERTICAL SCALE : 1" = 5'



STORM DRAIN PROFILE FROM I-9 TO EW-1
 HORIZONTAL SCALE : 1" = 50'
 VERTICAL SCALE : 1" = 5'



STORM DRAIN PROFILE FROM I-4 TO I-3
 HORIZONTAL SCALE : 1" = 50'
 VERTICAL SCALE : 1" = 5'

STRUCTURE SCHEDULE

NO.	LOCATION	TOP**	INV. IN	INV. OUT	COMMENTS
I-1	N 500,518.069 E 869,666.094	259.00'	239.85'	239.75'	INLET TYPE K (HO. CO. STD SD 4.13) - SUMP
I-2	N 500,579.350 E 869,828.283	248.70'	242.30'	241.80'	INLET TYPE K (HO. CO. STD SD 4.13) - SUMP
I-3	RUXTON DRIVE STA 12+98.36 - 13' RIGHT	249.22'	245.36'	245.26'	INLET TYPE A-15 (HO. CO. STD SD 4.03) - 92% EFF.
I-4	RUXTON DRIVE STA 12+98.36 - 13' LEFT	249.22'	-----	245.76'	INLET TYPE A-10 (HO. CO. STD SD 4.02) - 100% EFF.
I-5	RUXTON DRIVE STA 10+55 - 13' RIGHT	265.04'	260.77'	260.67'	INLET TYPE A-10 (HO. CO. STD SD 4.02) - 85% EFF.
I-6	RUXTON DRIVE STA 7+25 - 13' RIGHT	279.30'	270.92'	270.67'	INLET TYPE A-5 (HO. CO. STD SD 4.01) - 93% EFF.
I-7	RUXTON DRIVE STA 4+88 - 13' RIGHT	277.26'	-----	273.29'	INLET TYPE A-15 (HO. CO. STD SD 4.03) - 99% EFF.
I-8	RUXTON DRIVE STA 0+52 - 13' LEFT	264.44'	260.89'	260.64'	INLET TYPE A-10 (HO. CO. STD SD 4.02) - 100% EFF.
I-9	RUXTON DRIVE STA 0+52 - 13' RIGHT	264.44'	-----	261.07'	INLET TYPE A-15 (HO. CO. STD SD 4.03) - 94% EFF.
ES-1	N 500,251.950 E 869,660.786	-----	-----	238.00'	24" Ø END SECTION (HO. CO. STD. SD 5.51)
EW-1	RUXTON DRIVE STA 0+59.37 - 28.85' LEFT	-----	-----	260.50'	18" Ø TYPE "C" ENDWALL (HO. CO. STD. SD 5.21)

* STATIONS GIVEN TO CENTERLINE OF INLET AT FACE OF CURB FOR INLETS LOCATED WITHIN THE ROAD RIGHT-OF-WAY. STATIONS FOR "K" INLETS TO CL OF INLET. LOCATION OF END SECTION AND ENDWALL GIVEN TO THE CENTERLINE OF PIPE AT THE CONNECTION OF THE STORM DRAIN PIPE TO THE END SECTION OR ENDWALL.
 ** ELEVATIONS MEASURED TO CENTER OF SUMP INLETS AND TO DOWNSTREAM SIDE OF INLETS ON GRADE

DEVELOPER'S CERTIFICATE
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Signature: *[Signature]* DATE: 10/31/97
 PRINTED NAME OF DEVELOPER: **ELK MAR LAND, LLC**

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature: *[Signature]* DATE: 10/31/97
 PRINTED NAME OF ENGINEER: **R. JACOB HIKMAT**

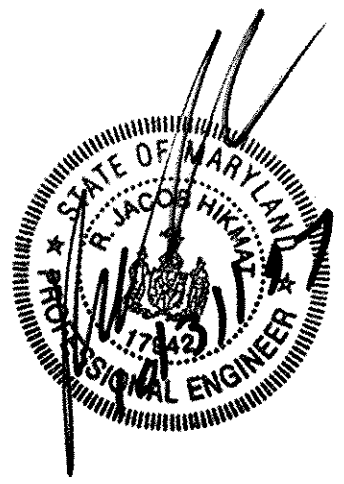
Signature: *[Signature]* DATE: 11/12/97
 USDA - NATURAL RESOURCE CONSERVATION SERVICE

Signature: *[Signature]* DATE: 11/10/97
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 2/2/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION - FMK

Signature: *[Signature]* DATE: 2/4/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* DATE: 1-27-98
 CHIEF, BUREAU OF HIGHWAYS

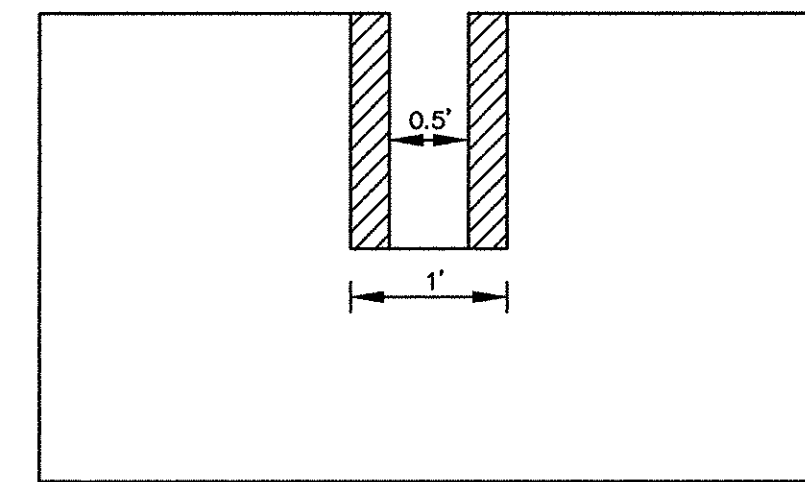
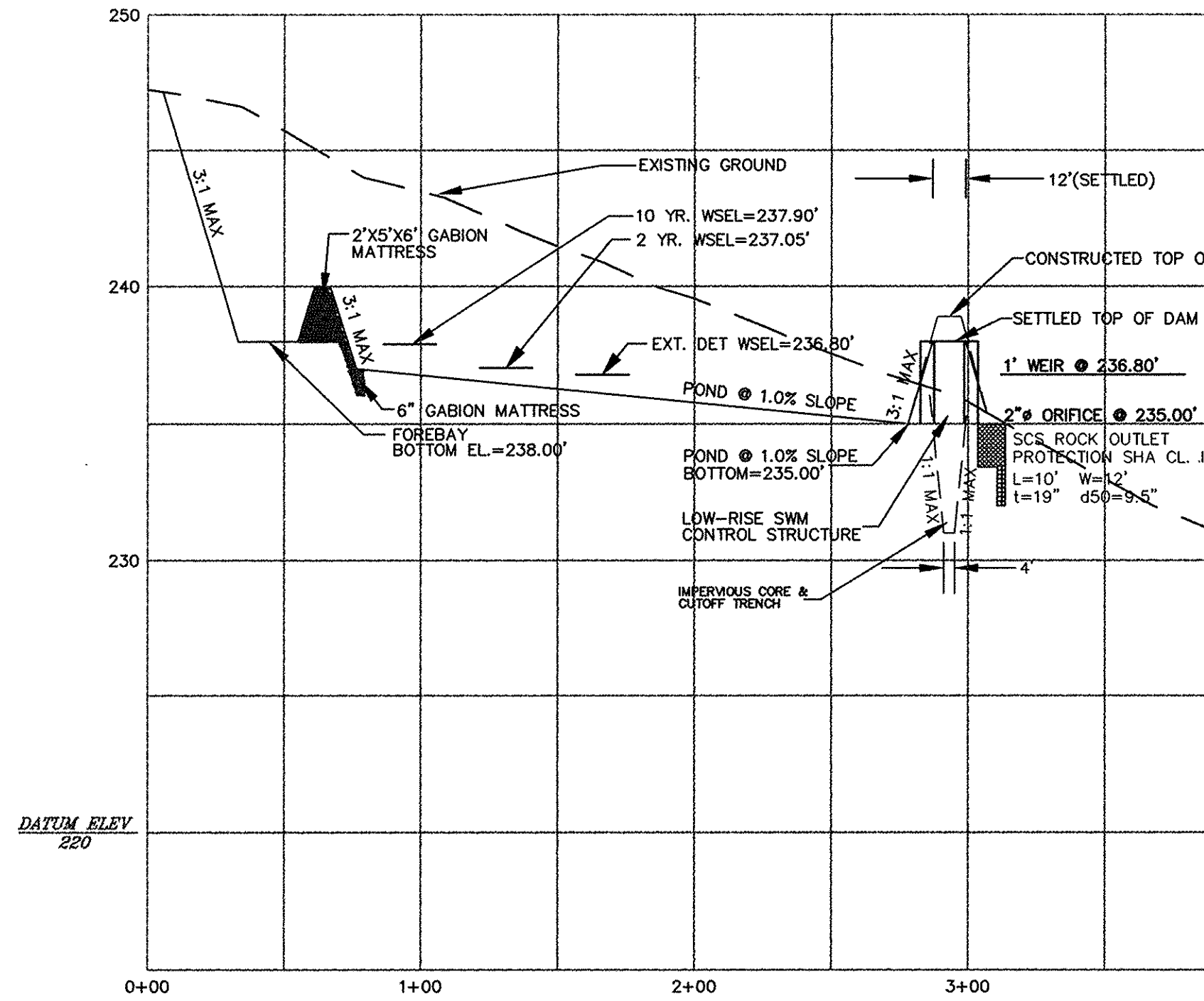


date	OCT 1997
project	97027
illustration	SJD
scale	AS SHOWN
approval	SJD

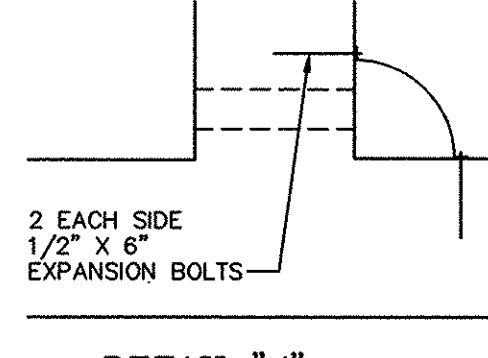
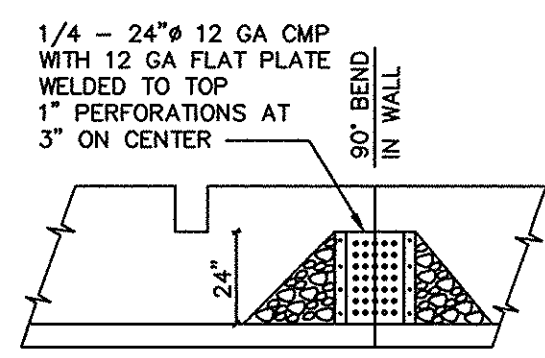
no.		description	date

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
STORM DRAIN PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
 Surveyors
 Planners
 Engineers
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0256 Fax. (301) 621-5521 Wash. (410) 997-0298 Fax.



INDICATES AREA OF WEIR TO BE BLOCKED FOR SEDIMENT CONTROL PURPOSES.



TRASH RACK DETAIL
(ADD TO STD DETAIL SD-7.00)

NOTE: WRAP RACK WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC AND PLACE STONE AT 3:1 SLOPES UP AGAINST THE RACK DURING CONSTRUCTION.

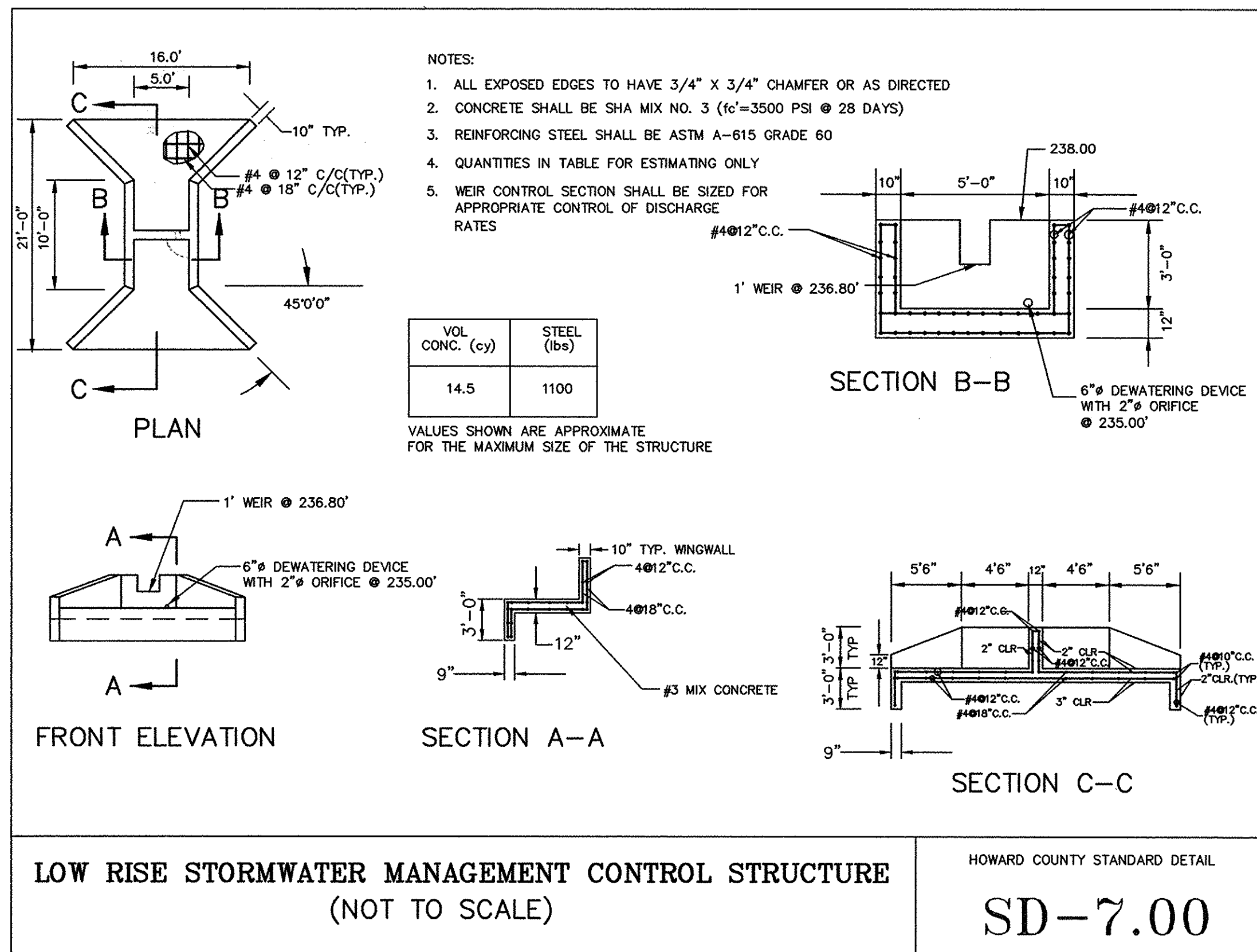
SWM POND MAINTENANCE REQUIREMENTS

- SILT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS SIX (6) INCHES IN BASIN OR FOUR (4) INCHES IN THE FOREBAY.
- ACCUMULATED PAPER, TRASH AND DEBRIS SHALL BE REMOVED AS NECESSARY.
- ANNUAL INSPECTION AND REPAIR, IF REQUIRED, OF THE STRUCTURE SHALL BE PERFORMED.

- NOTES:
- ALL EXPOSED EDGES TO HAVE 3/4" X 3/4" CHAMFER OR AS DIRECTED
 - CONCRETE SHALL BE SHA MIX NO. 3 (f_c=3500 PSI @ 28 DAYS)
 - REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60
 - QUANTITIES IN TABLE FOR ESTIMATING ONLY
 - WEIR CONTROL SECTION SHALL BE SIZED FOR APPROPRIATE CONTROL OF DISCHARGE RATES

VOL CONC. (cy)	STEEL (lbs)
14.5	1100

VALUES SHOWN ARE APPROXIMATE FOR THE MAXIMUM SIZE OF THE STRUCTURE



DEVELOPER'S CERTIFICATE

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Signature of Developer: *[Signature]* 10/31/97
DATE

Signature of Engineer: *[Signature]* 10/31/97
DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature of Engineer: *[Signature]* 10/31/97
DATE

Signature of Engineer: *[Signature]* 11/2/97
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature of Engineer: *[Signature]* 11/2/97
DATE

Signature of Engineer: *[Signature]* 11/6/97
DATE

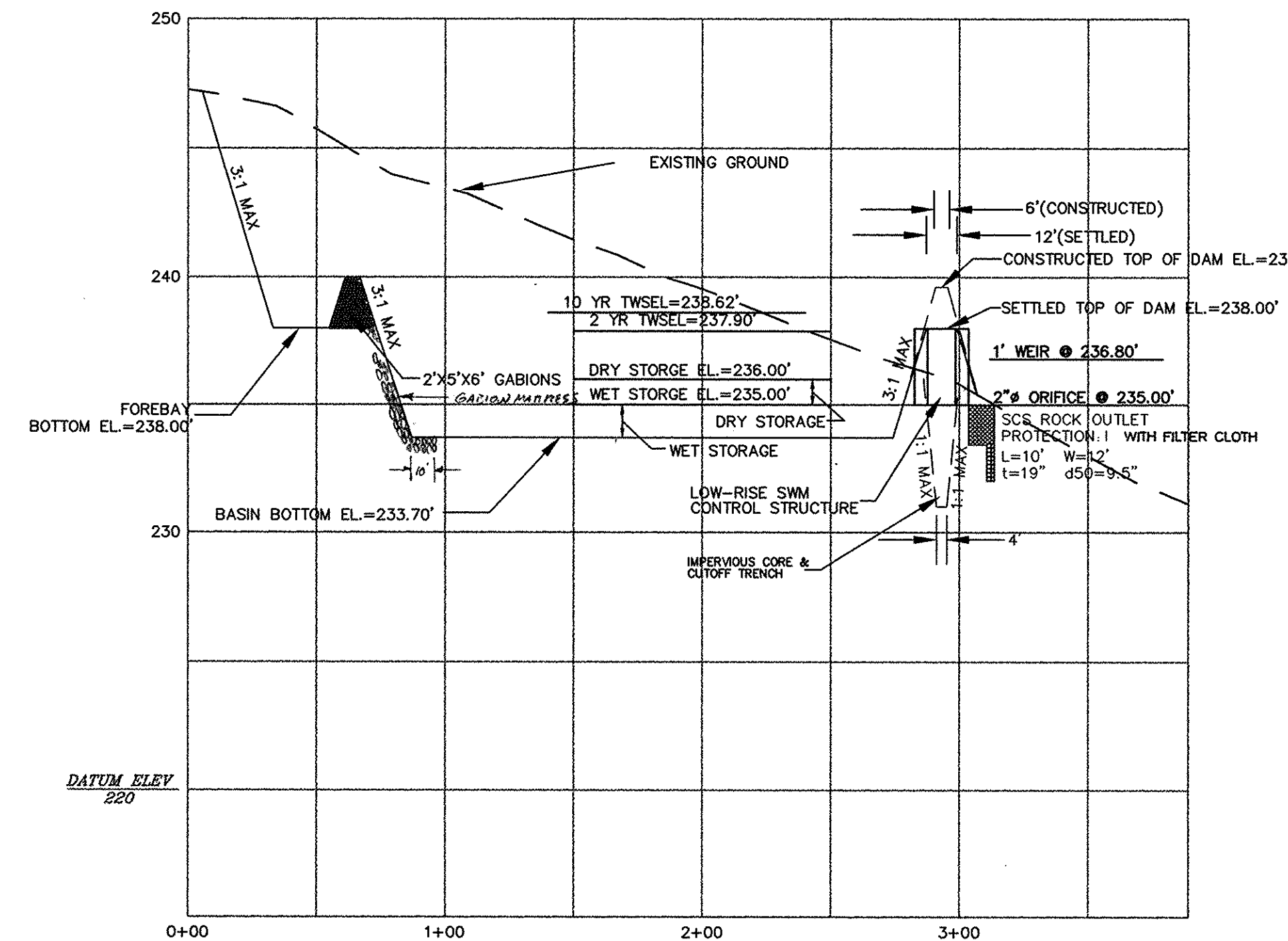
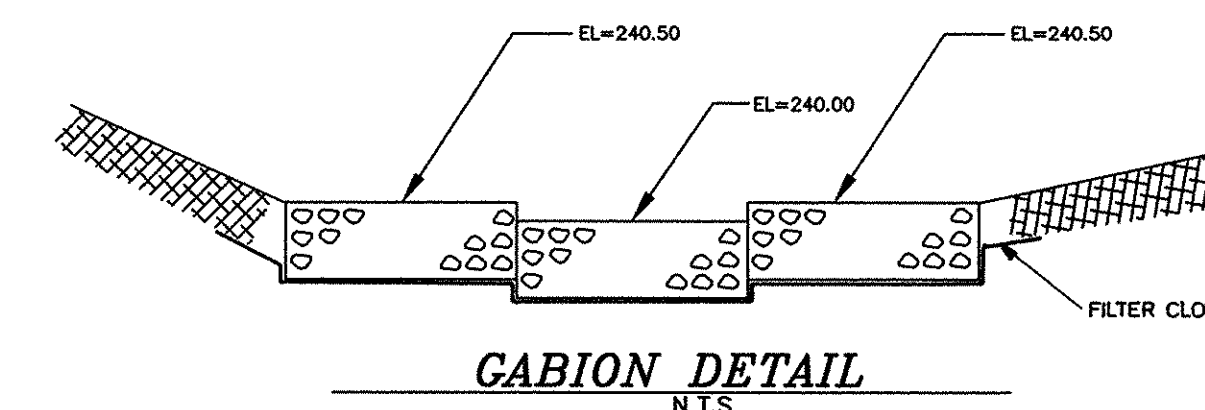
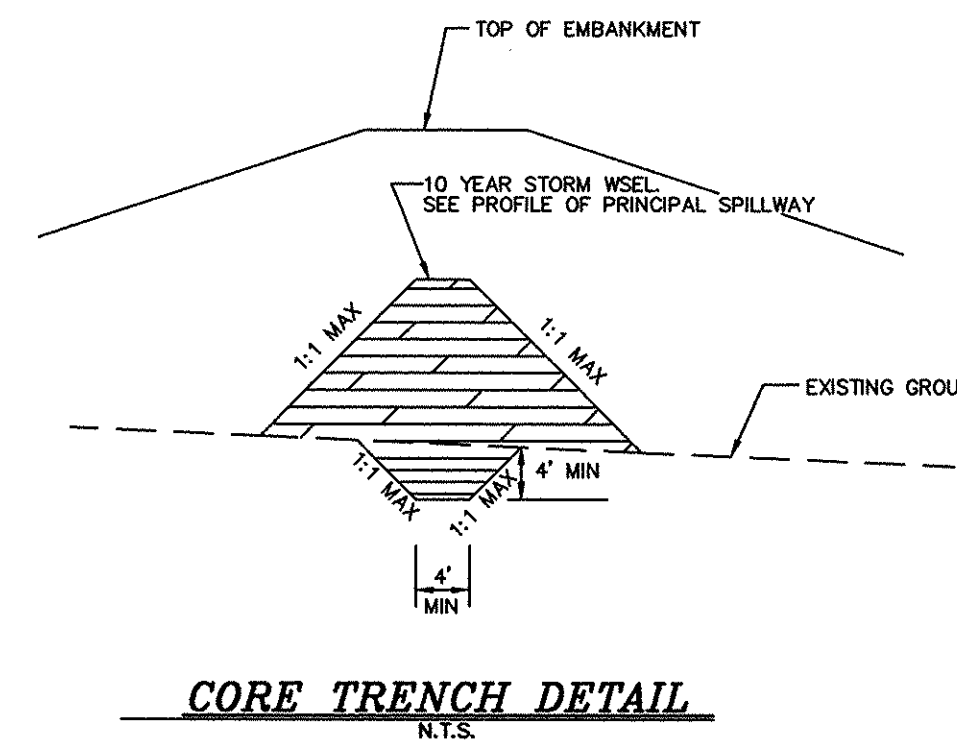
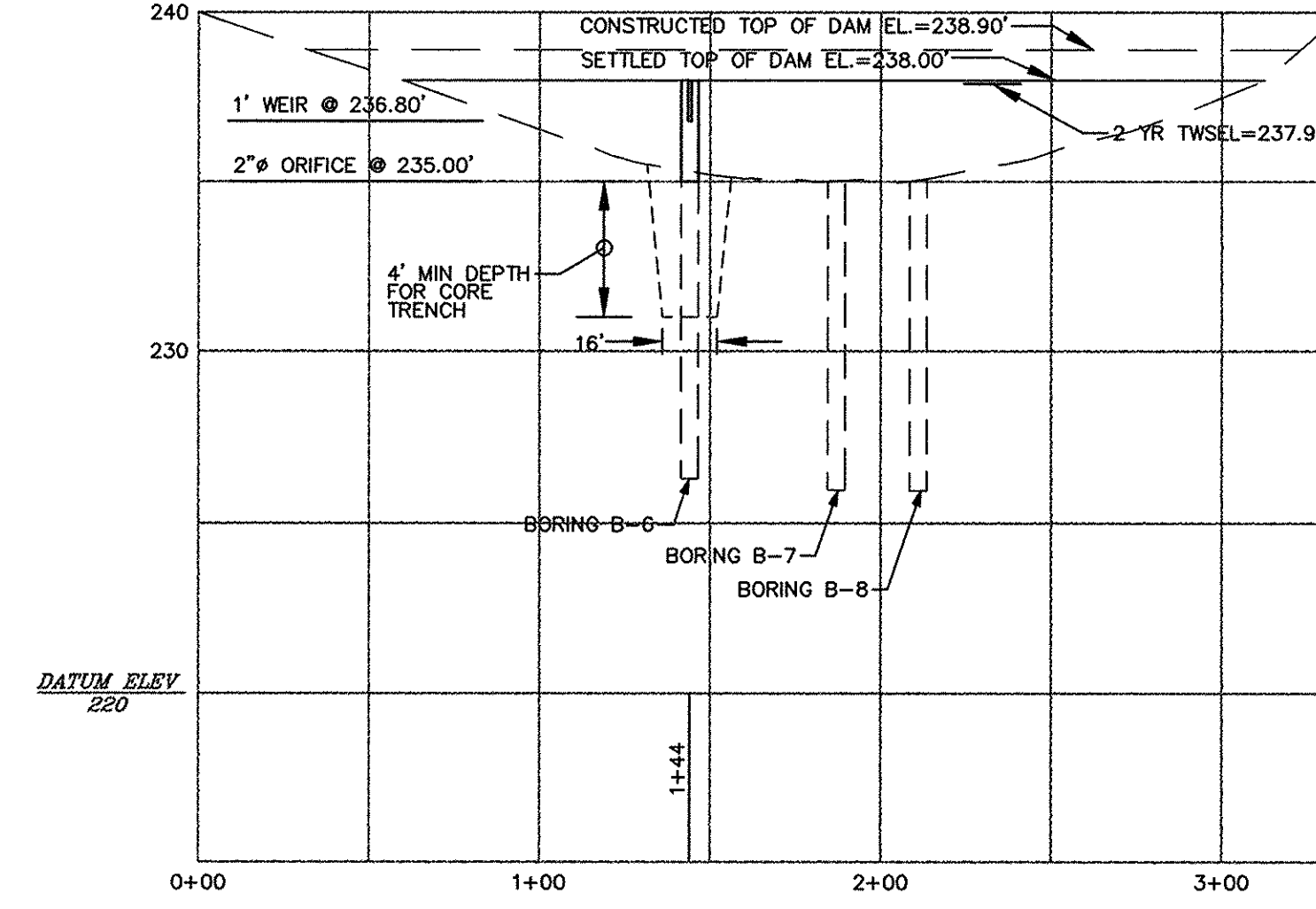
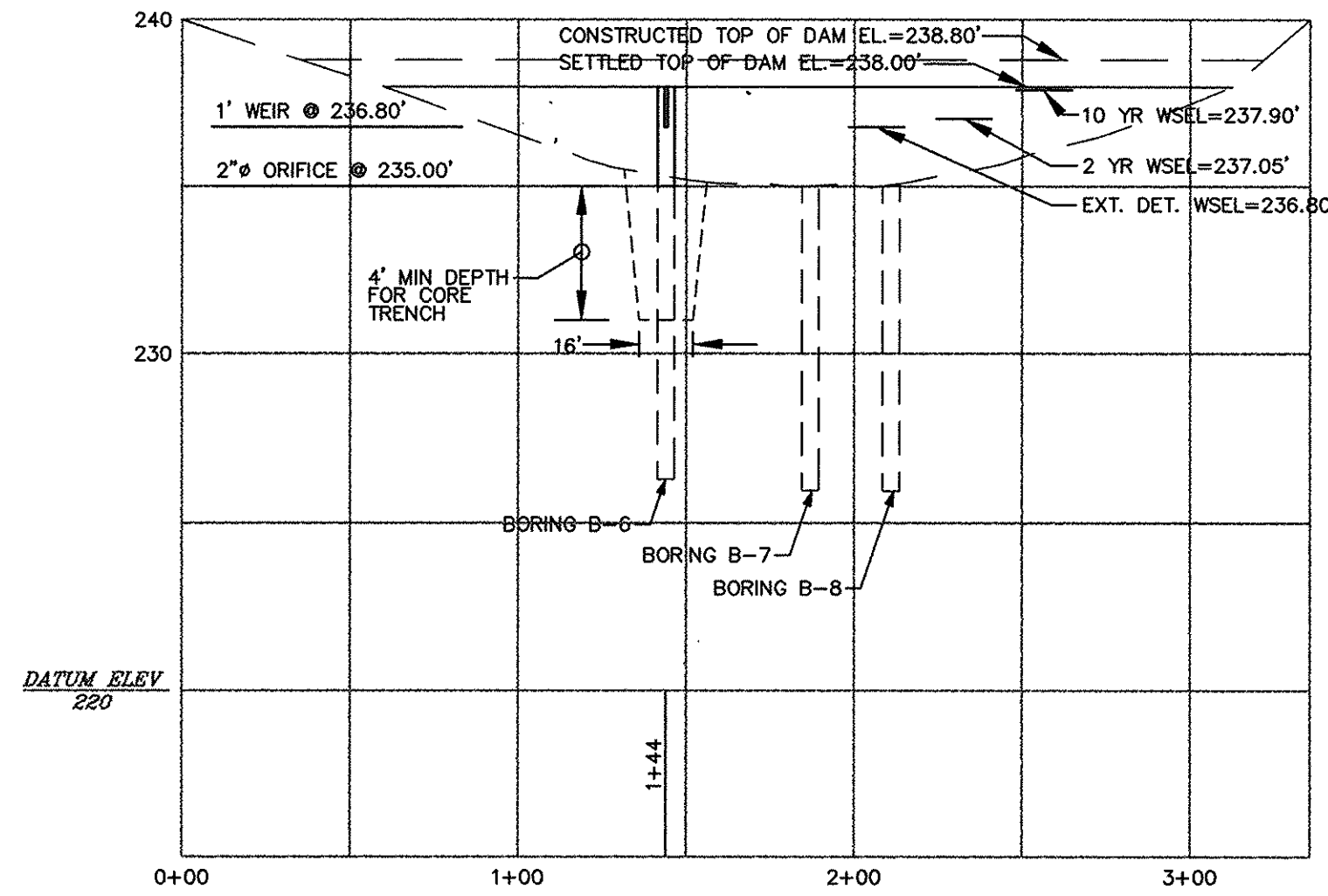
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature of Chief: *[Signature]* 2/3/98
DATE

Signature of Chief: *[Signature]* 2/4/98
DATE

Signature of Chief: *[Signature]* 1-27-98
DATE

F:\197027.DWG FINAL 27-5.MXD



date	OCT 1997	approval	AS SHOWN
project	97027	scale	AS SHOWN
illustration	JS	description	
		revisions	

no.		date	

RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT DETAILS & PROFILES

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.

SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED TO THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6" FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT - AREAS ON WHICH FILL IS TO BE SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSE BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR JOINTS SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN + 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

CUT OFF TRENCH - THE CUT OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADDING FILL MATERIAL. THE FILL MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. IT NO WORKING OF THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:
1. MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A WITH WATER TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THE FOLLOWING COATINGS OR AN APPROVED EQUAL MAY BE USED: NEXON, PLASTI-COTE, BLAC-KLAD, AND BETH-OU-LOY. COATED CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M-245 AND M-246.

MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.

MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC. MUST BE COMPOSED OF THE SAME MATERIAL AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATERTIGHT. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATERTIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE ROLLED AND ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPE LESS THAN 24" IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE, A 12" WIDE STANDARD LAP TYPE BAND WITH 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET; AND A 12" WIDE HUGGER TYPE BAND WITH O-RING GASKETS HAVING MINIMUM DIAMETER OF 1/2" GREATER THAN THE CORRUGATION DEPTH. PIPES 24" IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24" LONG ANNUAL CORRUGATED BAND USING RODS AND LUGS. A 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED ON THE END OF EACH PIPE FOR A TOTAL OF 24"

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

4. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361.

2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL BE A HIGH STRENGTH CONCRETE PLACED UNDER THE PIPE AND THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

POLYVINYL CHLORIDE (PVC) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:

1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 905.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

CONCRETE

WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

THE RIPRAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIPRAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE REPLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON THE PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF THE REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL AND CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTION OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE MARYLAND SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

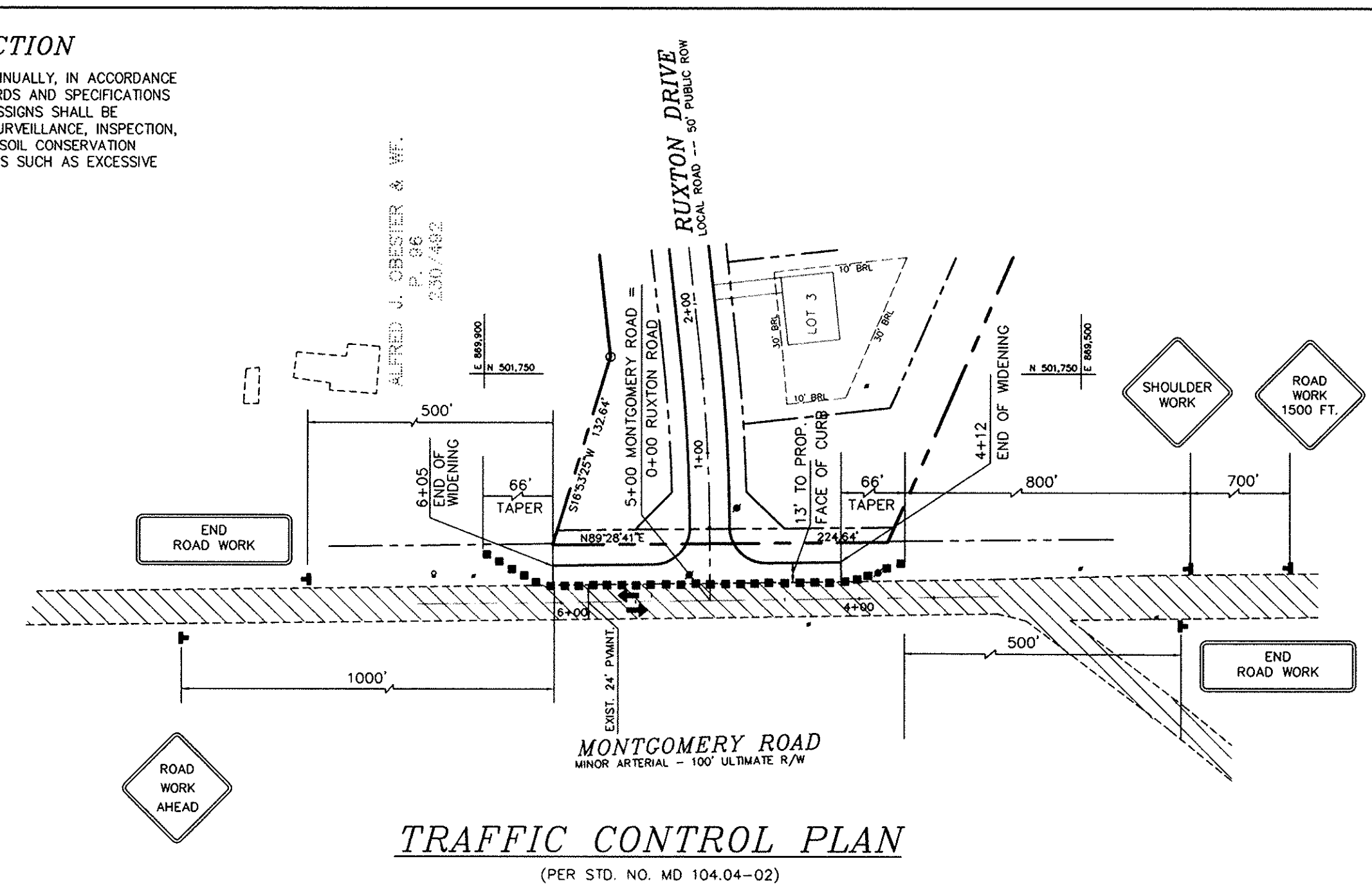
CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND THE HEIRS SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

LEGEND:

- REFLECTORIZED TRAFFIC CONTROL CONES (CHANNELIZING DEVICES)
- SPIN FACE
- DIRECTION OF TRAFFIC
- EXIST. POLE TO BE RELOCATED
- EXIST. PAVEMENT
- PROPOSED PAVEMENT



TRAFFIC CONTROL PLAN
(PER STD. NO. MD 104.04-02)

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Rausch Property, Location: Howard County, Maryland, Boring #: B-10, Job #: 97138A

Date: 05-05-97, Foreman: J.P. Gregory

ELEV.	SOIL DESCRIPTION	STRAT. DEPTH	DEPTH SCALE	CON.	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
Surf.	Color: Moist. Darker. Silty. Pebbles. SURFACE	0.0						
0.5	Dark brown to orange brown, moist, very loose to loose fine to medium sand, trace silt, trace quartz fragments (SP) (Sand)	0.0			1-1-2	1	12"	1" Topsoil
5.5	Yellow-brown, very moist, medium dense, fine to medium sand, some clay (trace fine gravel (S)) (Sandy Clay Loam)	5.5			4-5-4	2	18"	Groundwater encountered at 10' while drilling
8.0	Reddish brown, dry, very stiff to hard (silt, some sand and clay) (Clay loam)	8.0			6-8-10	3	18"	Caved in to 9' at completion
10		10			6-10-14	4	18"	Caved in to 4'5" after 24 hours
12.0		12.0			12-14-18	5	18"	
15		15						
Bottom of Hole at 12.0'								

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Rausch Property, Location: Howard County, Maryland, Boring #: B-11, Job #: 97138A

Date: 05-05-97, Foreman: J.P. Gregory

ELEV.	SOIL DESCRIPTION	STRAT. DEPTH	DEPTH SCALE	CON.	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
Surf.	Color: Moist. Darker. Silty. Pebbles. SURFACE	0.0						
0.5	Orange brown, moist, very loose to medium dense fine to medium sand, trace silt, trace quartz fragments (SP) (Sand)	0.0			2-1-2	1	18"	5' Topsoil
5.5	Orange brown to tan, moist, medium dense, silty fine sand (SF) (Sandy Loam)	5.5			4-5-8	2	18"	Groundwater encountered at 9.5' while drilling
8.0	tan, very moist to wet, medium dense, medium to coarse sand (SP) (Sand)	8.0			6-7-10	3	18"	Caved in to 6'7" at completion
10		10			4-6-7	4	18"	Caved in to 6'5" after 24 hours
12.0		12.0			4-7-6	5	18"	
15		15						
Bottom of Hole at 12.0'								

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

[Signature] 10/31/97 DATE
ELLICOTT LAND, LLC PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

[Signature] 10/21/97 DATE
R. JACOB NIKMAT PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 11/14/97 DATE
USDA - NATURAL RESOURCE CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/16/97 DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/3/98 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 2/4/98 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

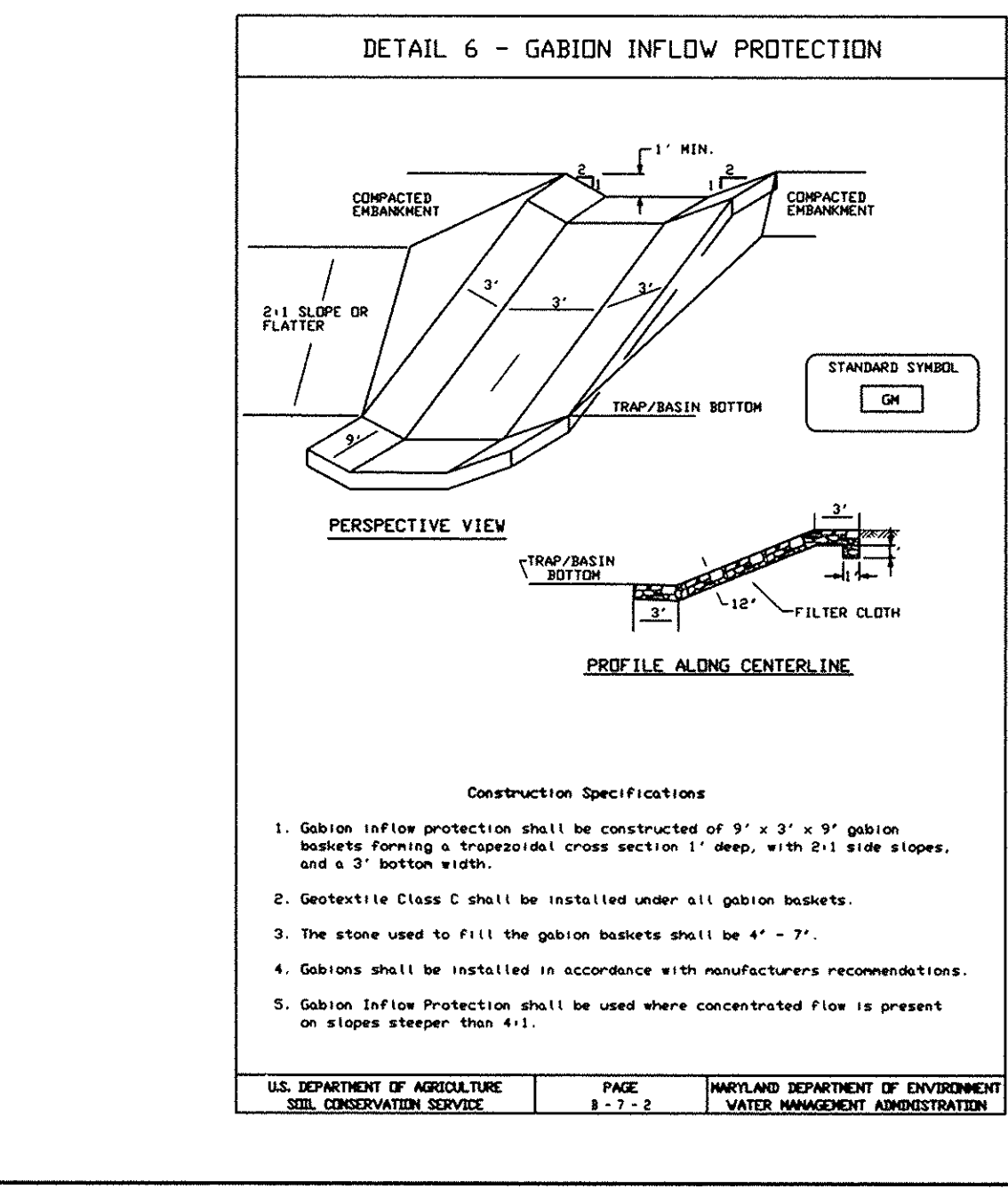
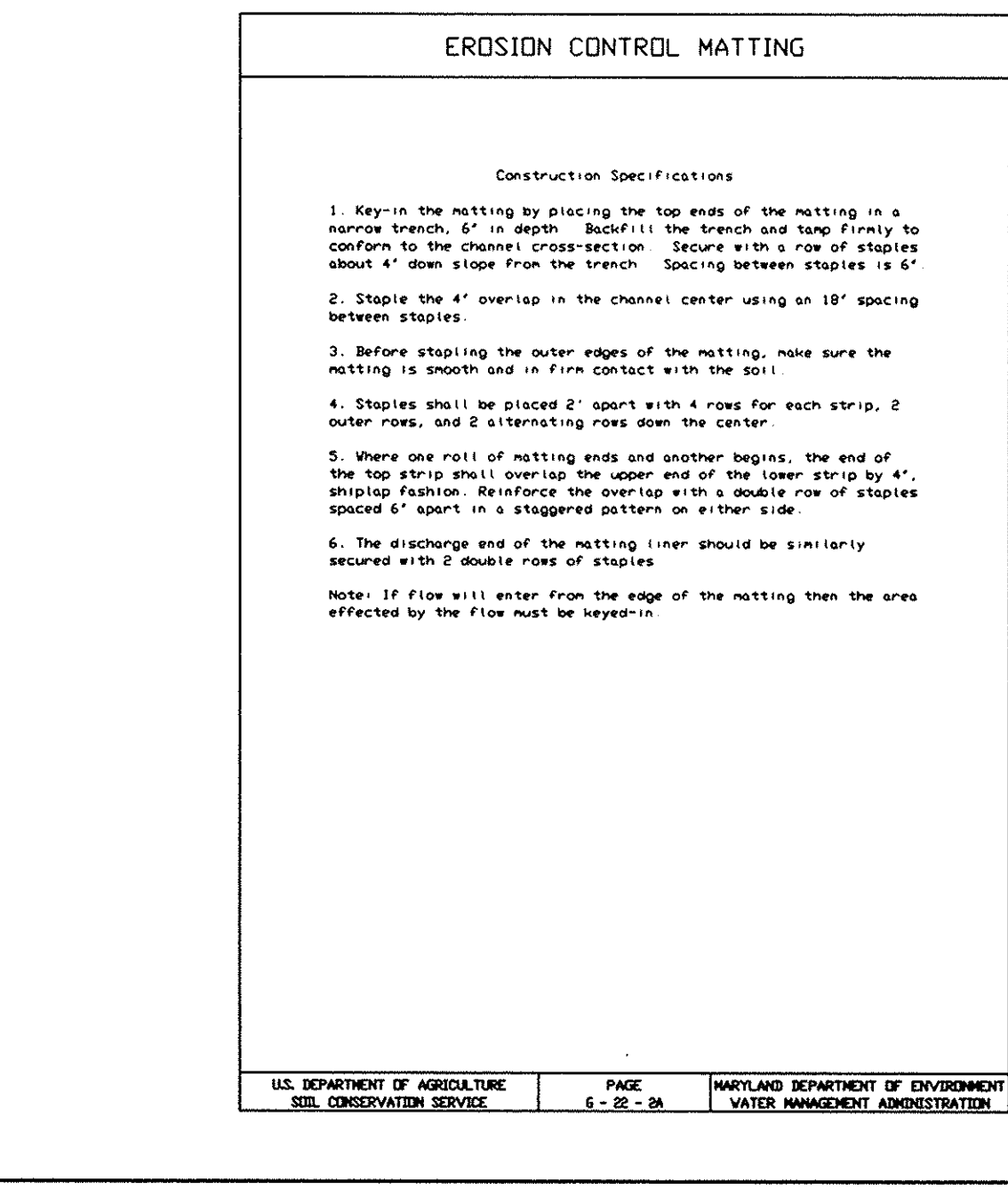
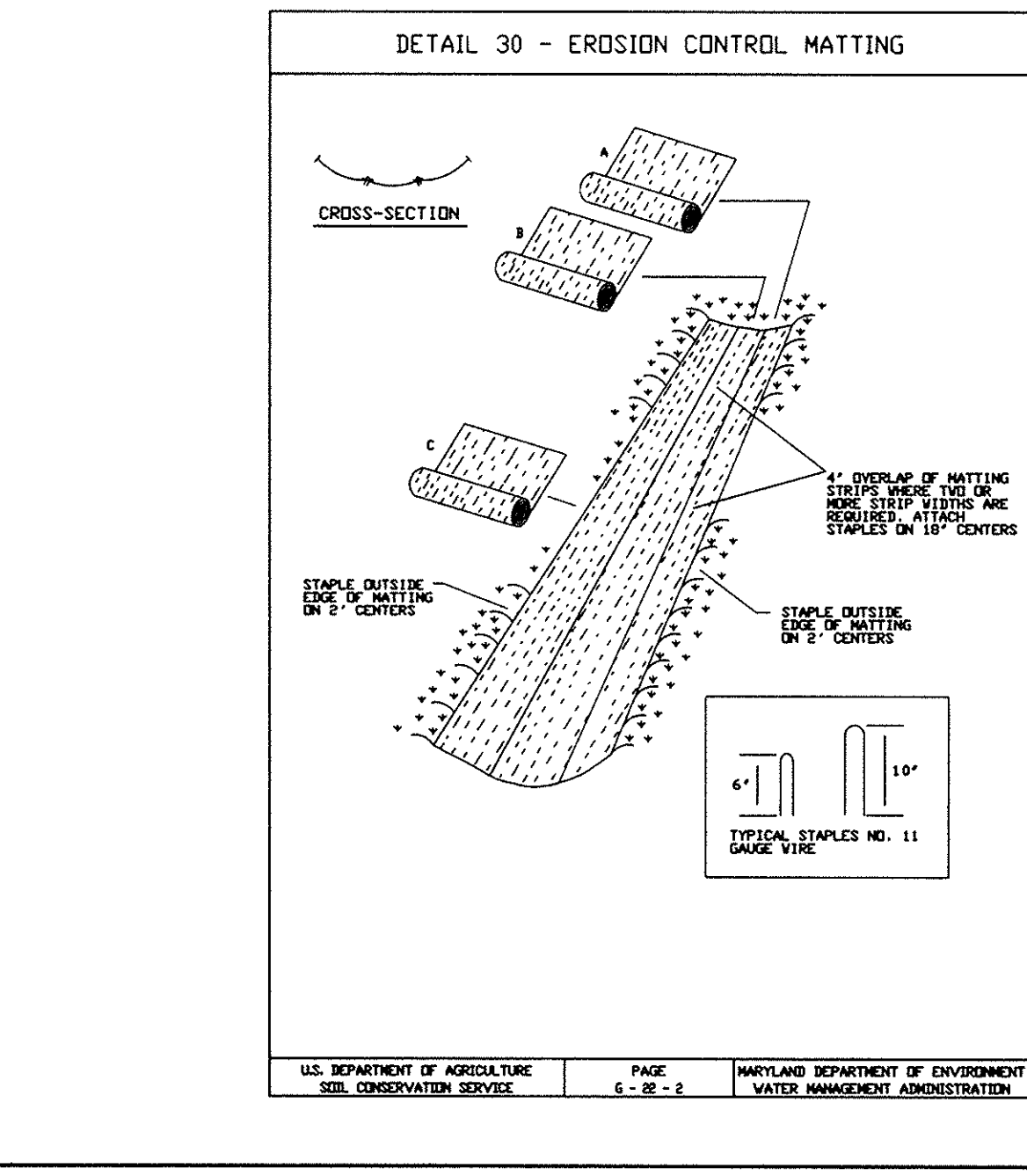
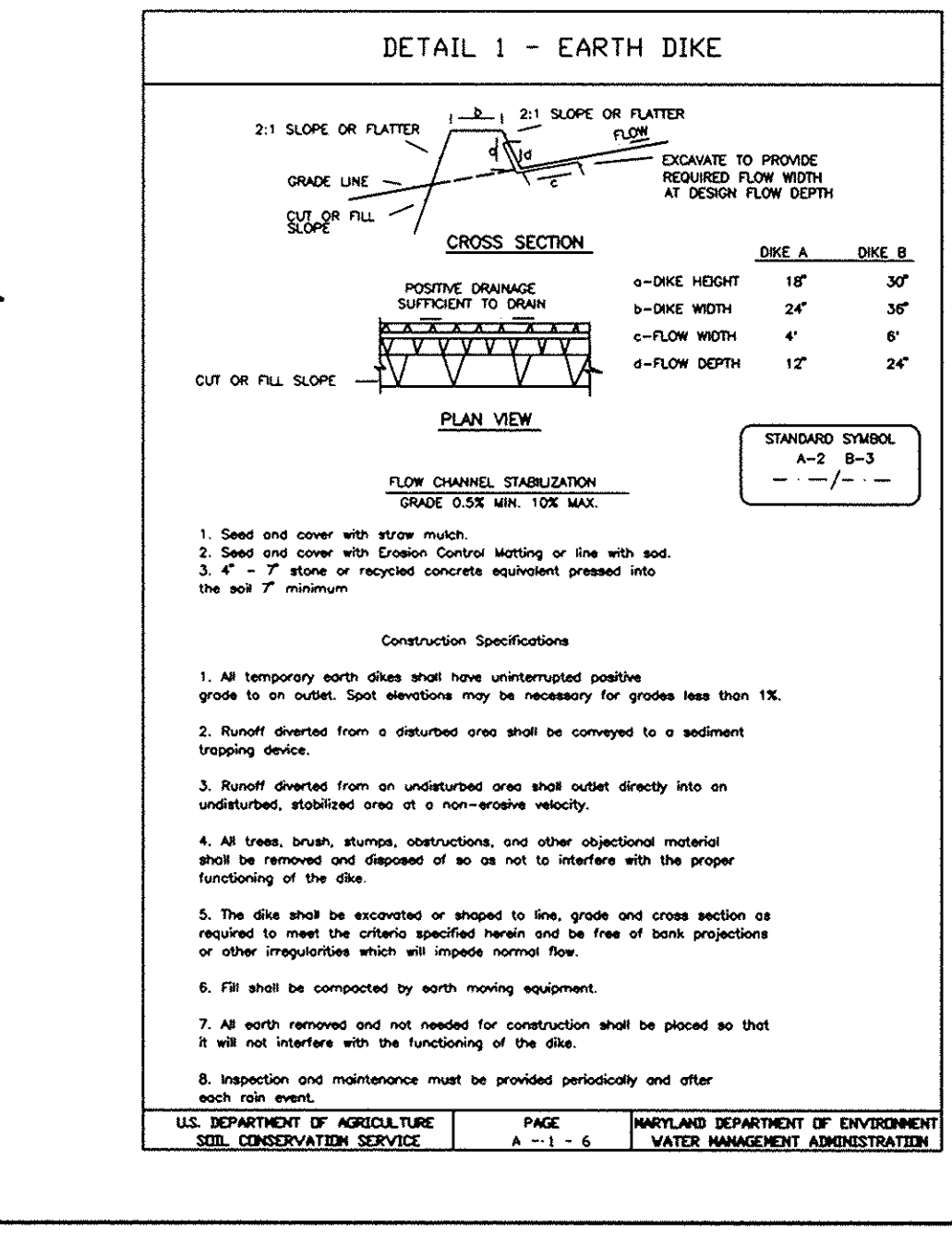
APPROVED: DEPARTMENT OF PUBLIC WORKS

[Signature] 1-27-98 DATE
CHIEF, BUREAU OF HIGHWAYS

STATE OF MARYLAND PROFESSIONAL ENGINEER

17542

[Signature]



Project date: 97027, 08/1997
Illustration: engineering
Scale: SJD
Approval: NTS

RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

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

13 OF 17
F-96-165

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

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES	
	B (PERIMETER 3)	A (PERIMETERS 1,2,5,6,7)	B (PERIMETER 4)	
LANDSCAPE TYPE	B (PERIMETER 3)	A (PERIMETERS 1,2,5,6,7)	B (PERIMETER 4)	
LINEAR FEET OF PERIMETER	198.40 LF	1820.91 LF	132.29 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 88 LF OF CREDIT FOR BIORETENTION PLANTINGS	YES, 519.06 LF OF CREDIT FOR EXISTING TREES	YES, 132.29 LF OF CREDIT FOR BIORETENTION PLANTINGS	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	2 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS	22 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	
NUMBER OF PLANTS PROVIDED	2 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	22 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
50		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
3		PINUS STROBUS	EASTERN WHITE PINE	2 1/2" - 3" CAL.
21		QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
19		TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LITTLELEAF LINDEN	2 1/2" - 3" CAL.
TOTAL				
93 TREES (90 SHADE TREES, 3 EVERGREEN TREES)				

- 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 HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 9,000.00.

STREET TREE CALCULATIONS

MONTGOMERY ROAD - 198 / 40 = 5
 RUXTON DRIVE - 1882 / 40 = 47
 ELK MAR DRIVE - 744 / 40 = 19
TOTAL TREES REQUIRED = 66 TREES
TOTAL TREES PROVIDED = 66 TREES

PERIMETER	EDGE TYPE
PERIMETER 1	N/A
ENTRANCE - 26 LF	
SFD TO SFD - 135 LF	A
EXISTING TREES TO REMAIN	
SFD TO SFD - 159.92 LF	A
1 SHADE TREE / 60 LF	3
PERIMETER 2	A
SFD TO SFD - 538.42 LF	
1 SHADE TREE / 60 LF	9
PERIMETER 3	N/A
ENTRANCE - 26 LF	
SWM TO ROAD - 88 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
SFD SIDE TO ROAD - 110.40 LF	B
1 SHADE TREE / 50 LF	2
1 EVERGREEN / 40 LF	3
PERIMETER 4	B
SWM TO SFD - 132.29 LF	
CREDIT FOR BIORETENTION PLANTINGS	
PERIMETER 5	A
OPEN SPACE TO SFD - 400.07 LF	
1 SHADE TREE / 60 LF	7
PERIMETER 6	A
OPEN SPACE TO SFD - 40 LF	
EXISTING TREES TO REMAIN	
OPEN SPACE TO SFD - 203.44 LF	A
1 SHADE TREE / 60 LF	3
PERIMETER 7	N/A
EASEMENT - 30 LF	
OPEN SPACE TO SFD - 344.06 LF	A
EXISTING TREES TO REMAIN	
TOTAL PLANTING OBLIGATION	
SHADE TREES	25
EVERGREEN TREES	4
SHRUBS	0

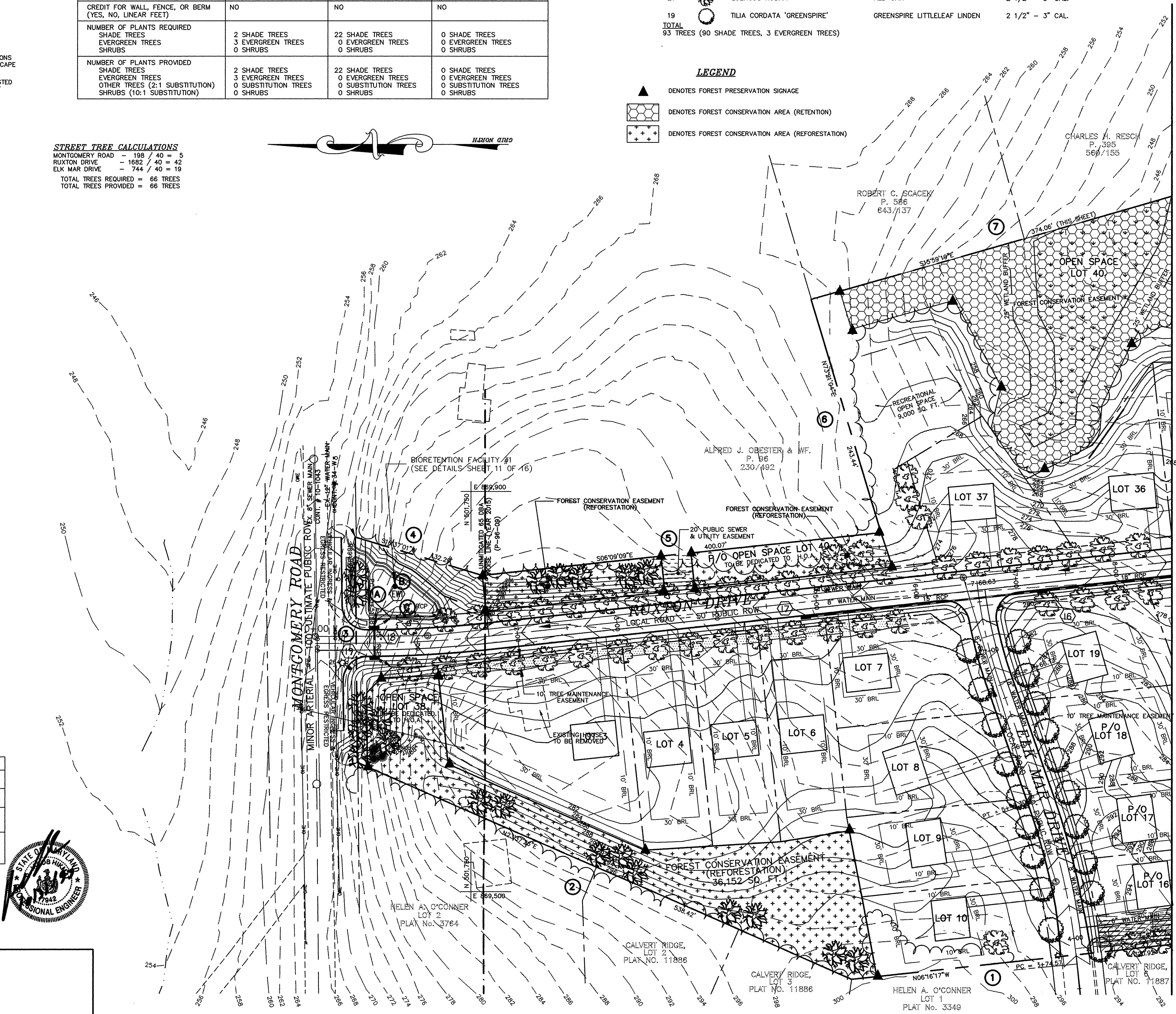
SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 60 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
SWM PERIMETER B - 90 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
SWM PERIMETER C - 75 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
TOTAL PLANTING OBLIGATION	
SHADE TREES	0
EVERGREEN TREES	0
SHRUBS	0

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	225 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	YES, CREDIT FOR BIORETENTION PLANTINGS
NUMBER OF TREES REQUIRED	0 SHADE TREES 0 EVERGREEN TREES
NUMBER OF TREES PROVIDED	0 SHADE TREES 0 EVERGREEN TREES 0 OTHER TREES (2:1 SUBSTITUTION)

LEGEND

- DENOTES FOREST PRESERVATION SIGNAGE
- DENOTES FOREST CONSERVATION AREA (RETENTION)
- DENOTES FOREST CONSERVATION AREA (REFORESTATION)

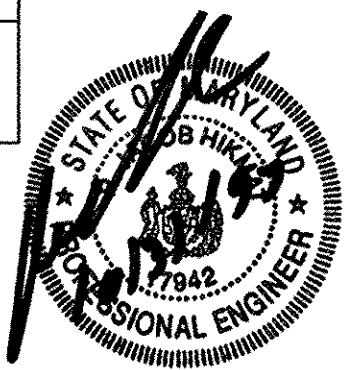


MATCH SHEET 5 OF 16

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 1-27-98
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Hamilton 2/3/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Damann 2/3/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE



date	project	illustration	scale	approval
OCT 1997	97027		1"=50'	

no.	description	date
1	REMOVED EXISTING WATER & ES-VT	1-30-98

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 LANDSCAPE 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) 997-0238 Fax.

NOTE: THIS DRAWING IS TO BE USED FOR 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 HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 9,000.00.

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
48		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
18		PINUS STROBUS	EASTERN WHITE PINE	2 1/2" - 3" CAL.
21		QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
TOTAL				
87 TREES (69 SHADE TREES, 18 EVERGREEN TREES)				

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES	
LANDSCAPE TYPE	A (PERIMETERS 8 & 9, P/O 10, 11, & 12)	B (PERIMETERS P/O 10, 11, & 12)
LINEAR FEET OF PERIMETER	2006.63 LF	949 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 146 LF OF CREDIT FOR EX. TREES	YES, 949 LF OF CREDIT FOR EX. TREES & SWM LANDSCAPING
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO
NUMBER OF PLANTS REQUIRED	31 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED	31 SHADE TREES 0 EVERGREEN TREES 0 OTHER TREES (2:1 SUBSTITUTION) 0 SHRUBS (10:1 SUBSTITUTION)	0 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS

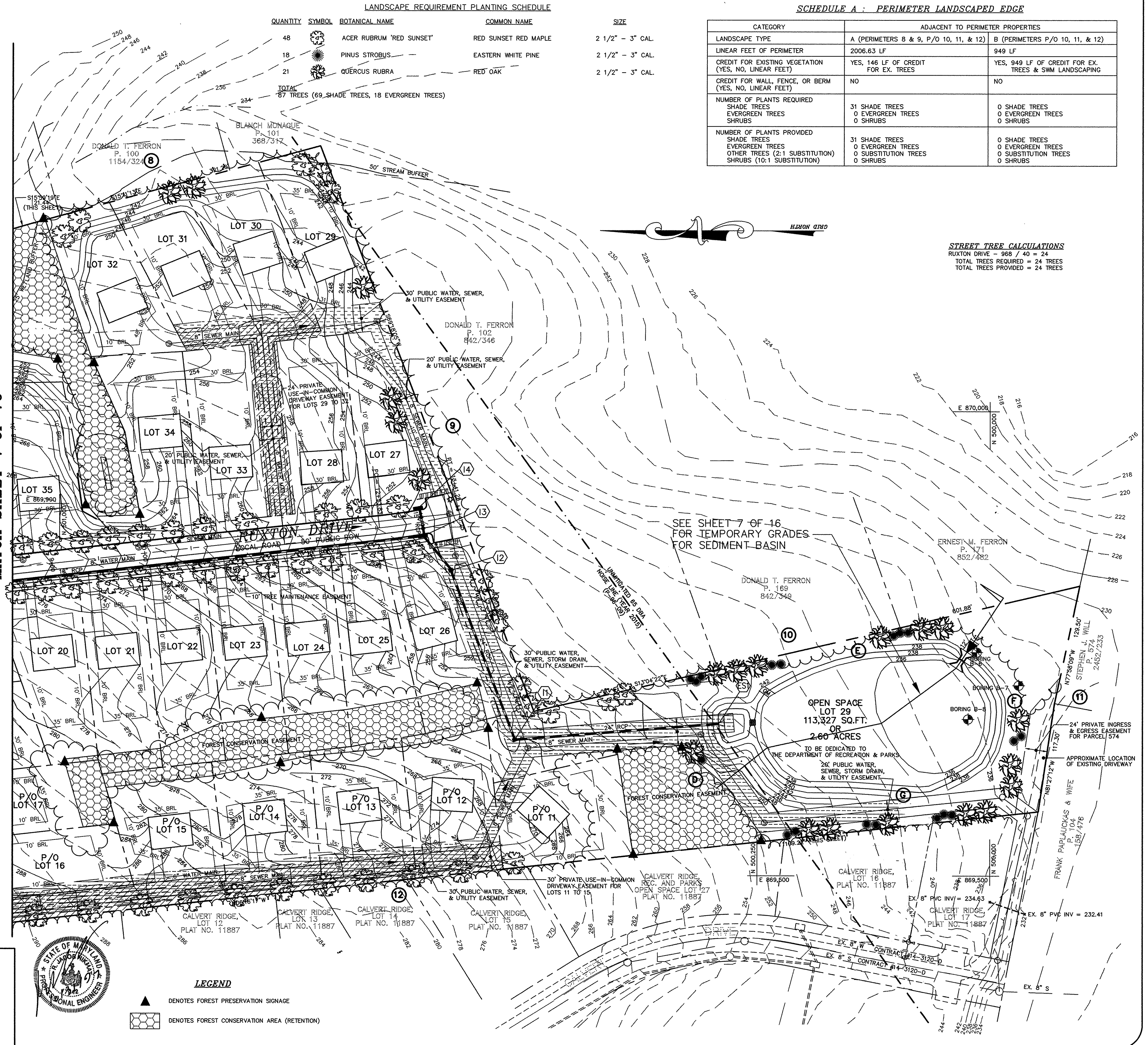
PERIMETER	EDGE TYPE
PERIMETER 8 OS TO SFD - 36 LF EXISTING TREES TO REMAIN	A
SFD TO SFD - 306.64 LF 1 SHADE TREE / 60 LF	A
PERIMETER 9 SFD TO SFD - 651.09 LF 1 SHADE TREE / 60 LF	A
PERIMETER 10 OS TO SFD - 110 LF EXISTING TREES TO REMAIN	A
SWM TO SFD - 310 LF CREDIT FOR SWM LANDSCAPING	B
OS TO SFD - 181.88 LF 1 SHADE TREE / 60 LF	A
PERIMETER 11 OS & SWM TO SFD - 140 LF EXISTING TREES TO REMAIN	B
SWM TO SFD - 70 LF CREDIT FOR SWM LANDSCAPING	B
OS TO SFD - 36.80 LF 1 SHADE TREE / 60 LF	A
PERIMETER 12 OS TO SFD & OS - 144 LF EXISTING TREES TO REMAIN	B
SWM TO SFD & OS - 285 LF CREDIT FOR SWM LANDSCAPING	B
SFD & OS TO SFD & OS - 684.22 LF 1 SHADE TREE / 60 LF	A
TOTAL PLANTING OBLIGATION	
SHADE TREES	31
EVERGREEN TREES	0
SHRUBS	0

PERIMETER	EDGE TYPE
SWM PERIMETER D - 90 LF EXISTING TREES TO REMAIN	B
SWM TO SFD - 50 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER E - 310 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER F - 90 LF EXISTING TREES TO REMAIN	B
SWM TO SFD - 70 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER G - 285 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
TOTAL PLANTING OBLIGATION	
SHADE TREES	14
EVERGREEN TREES	18
SHRUBS	0

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	895 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 180 LF
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES REQUIRED	14 SHADE TREES 18 EVERGREEN TREES
NUMBER OF TREES PROVIDED	14 SHADE TREES 18 EVERGREEN TREES 0 OTHER TREES (2:1 SUBSTITUTION)

MATCH SHEET 4 OF 16



STREET TREE CALCULATIONS
 RUXTON DRIVE - 968 / 40 = 24
 TOTAL TREES REQUIRED = 24 TREES
 TOTAL TREES PROVIDED = 24 TREES

SEE SHEET 7 OF 16 FOR TEMPORARY GRADES FOR SEDIMENT BASIN

OPEN SPACE LOT 29
 113,327 SQ.FT.
 2.60 ACRES

LEGEND
 DENOTES FOREST PRESERVATION SIGNAGE
 DENOTES FOREST CONSERVATION AREA (RETENTION)

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Onelli 1-27-98
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hananta 2/9/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Pannunzio 2/2/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

F:\97027\DWG\FINAL\27-LP-DWG

date	description	approval
OCT 1997 <td>engineering <td>SID</td> </td>	engineering <td>SID</td>	SID
97027 <td>illustration <td>SID</td> </td>	illustration <td>SID</td>	SID
	scale	1" = 50'

no.	description	revisions
1	MOVE SEWER LINE ON OS #2	2-2-98

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 LANDSCAPE PLAN

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

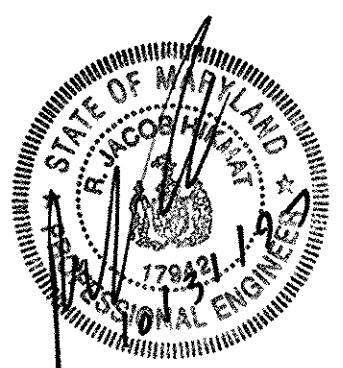
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<p>BY THE DEVELOPER:</p> <p>I, THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A 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.</p> <p><i>[Signature]</i> 11/4/97 SIGNATURE OF DEVELOPER DATE ELLSOTT LAND, LLC PRINTED NAME OF DEVELOPER</p>	
<p>BY THE ENGINEER:</p> <p>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.</p> <p><i>[Signature]</i> 10/31/97 SIGNATURE OF ENGINEER DATE R. ALI HIKMAT PRINTED NAME OF ENGINEER</p>	
<p>THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.</p> <p><i>[Signature]</i> 11/2/97 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE</p>	
<p>THIS DEVELOPMENT PLAN IS APPROVED FOR SOILS EROSION AND SEDIMENT CONTROL, BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>[Signature]</i> 4/10/97 HOWARD SOIL CONSERVATION DISTRICT DATE</p>	
<p>APPROVED: DEPARTMENT OF PUBLIC WORKS</p> <p><i>[Signature]</i> 1-27-98 CHIEF BUREAU OF HIGHWAYS DATE</p>	
<p>APPROVED: DEPARTMENT OF PLANNING AND ZONING</p> <p><i>[Signature]</i> 2/19/98 CHIEF, DIVISION OF LAND DEVELOPMENT DATE</p>	
<p><i>[Signature]</i> 2/3/98 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE</p>	

LEGEND

	DRAINAGE AREA DIVIDE
	DRAINAGE AREA SUB-DIVIDE
	INLET DRAINAGE AREA SUB-DIVIDE
	TIME OF CONCENTRATION PATH



THIS PLAN IS FOR THE DELINEATION OF DRAINAGE AREAS ONLY

date	OCT 1997
project	97027
illustration	SJD
scale	1"=100'
approval	SJD

no.	1	description	REVISE EX. WATER & SEWER & EIGHT AND MOVE SEWER & EIGHT ON OPEN SPACE AT	date	1-22-98
no.		description		date	

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DRAINAGE AREA MAP

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0286 Fax: (301) 621-6521 Wash. (410) 997-0288 Fax.

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

NOTE: FEE-IN-LIEU OF REFORESTATION HAS BEEN REQUESTED FOR THE REMAINING AREA REQUIRED TO BE REFORESTED BY THE HOWARD COUNTY FOREST CONSERVATION MANUAL, SEE FOREST CONSERVATION CALCULATIONS THIS SHEET. (7.68 ACRES OF REFORESTATION IS REQUIRED. 1.15 ACRES OF REFORESTATION HAS BEEN SHOWN ON-SITE. THE REMAINING 6.53 ACRES WILL BE A PART OF THE FEE-IN-LIEU REQUEST.)

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 SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

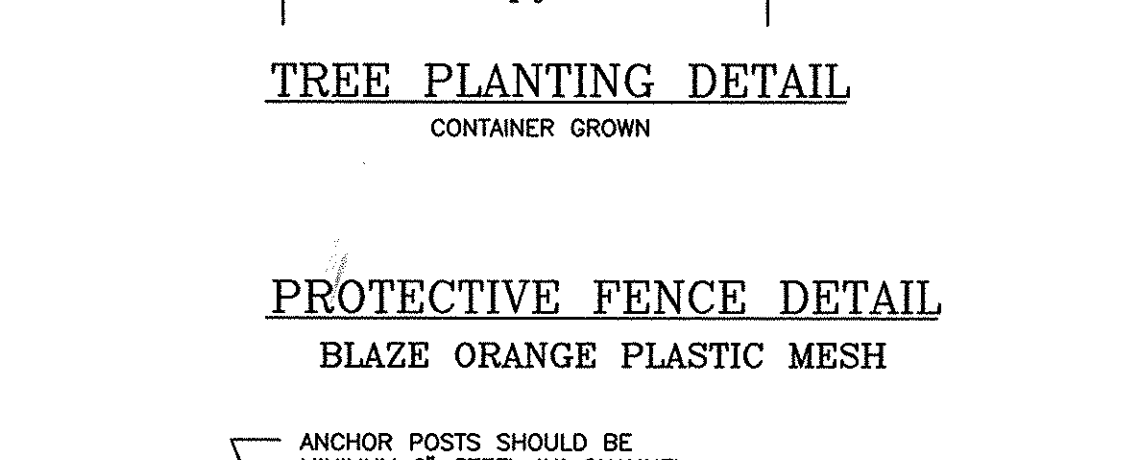
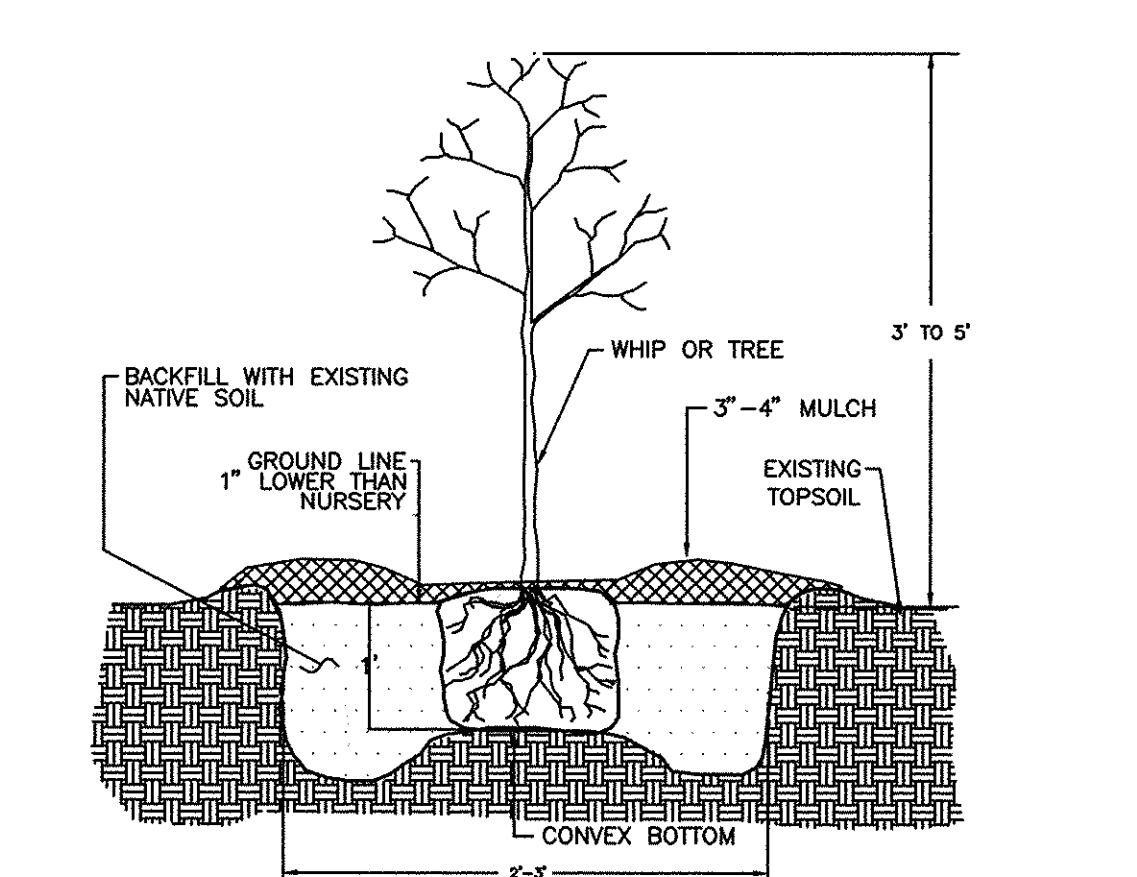
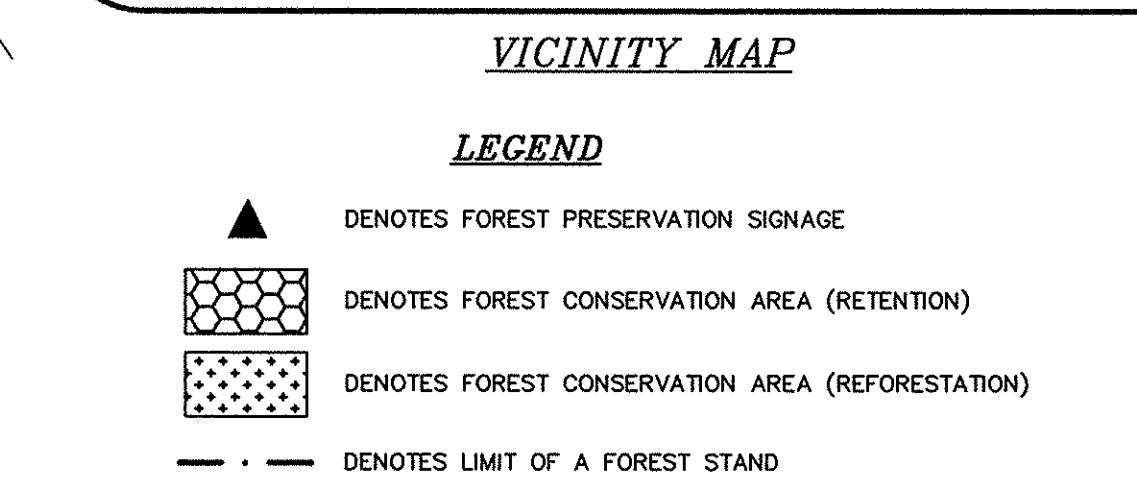
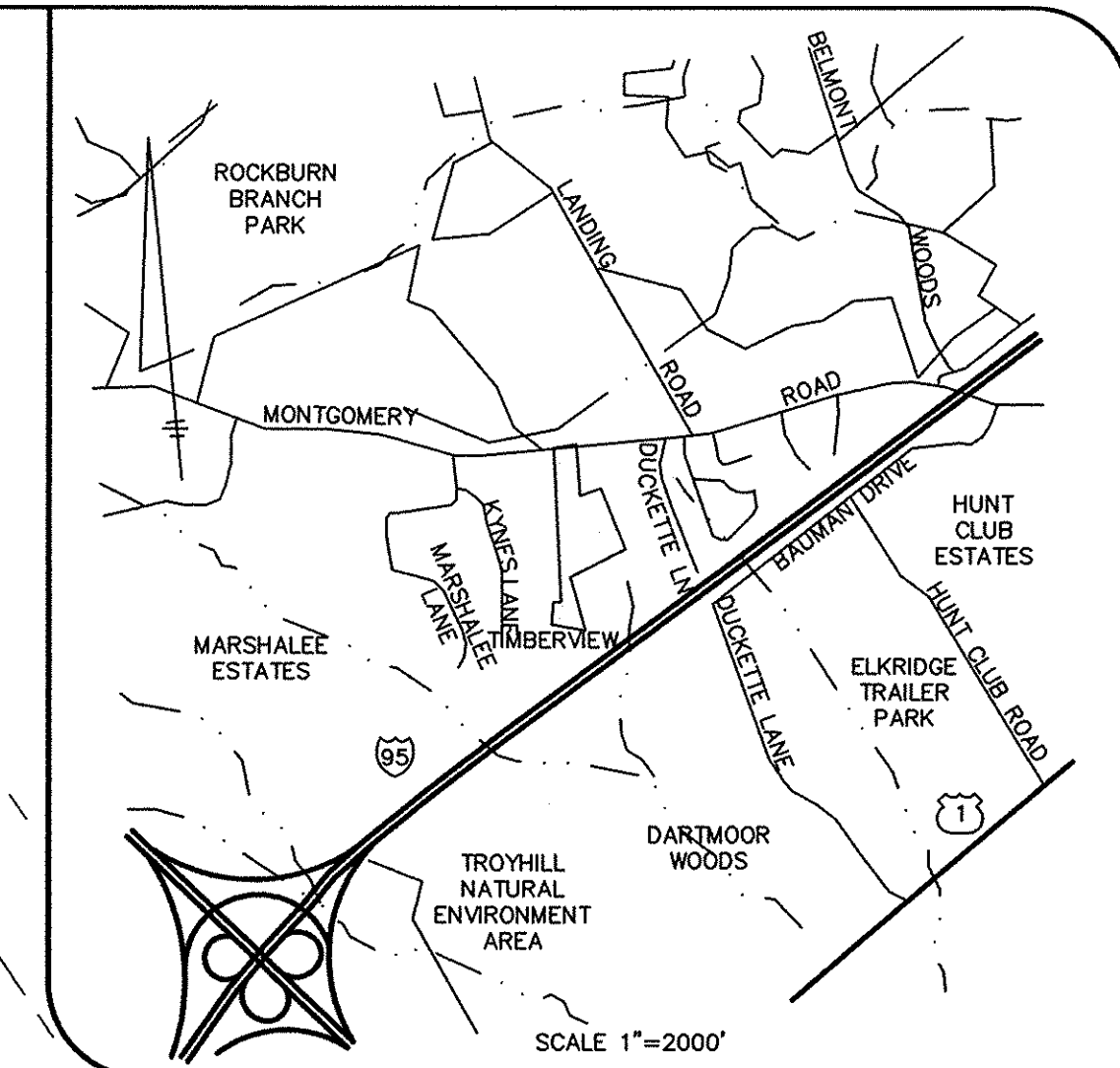
BASIC SITE DATA	ACRES
GROSS SITE AREA	19.88 ACRES
AREA WITHIN 100 YEAR FLOODPLAIN	---
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	---
NET TRACT AREA	19.88 ACRES
LAND USE CATEGORY (R-RD, R-RMD, R-S, C1/O, I)	R-S

INFORMATION FOR CALCULATIONS	ACRES
A. NET TRACT AREA	19.88 ACRES
B. REFORESTATION THRESHOLD (20% X A)	3.98 ACRES
C. EXISTING FOREST ON NET TRACT AREA	17.75 ACRES
D. FOREST AREAS TO BE CLEARED	2.13 ACRES
E. FOREST AREAS TO BE RETAINED	15.90 ACRES
F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD	1.85 ACRES
G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	---
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	---

INFORMATION FOR CALCULATIONS	ACRES
A. NET TRACT AREA	19.88 ACRES
B. REFORESTATION THRESHOLD (20% X A)	3.98 ACRES
C. AFORESTATION MINIMUM (15% X A)	2.98 ACRES
D. EXISTING FOREST ON NET TRACT AREA	19.88 ACRES
E. FOREST AREAS TO BE CLEARED	17.75 ACRES
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GENERAL NOTES

- 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 MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT 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 DRAINING 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.

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 DROUGHT CONDITIONS. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS 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 LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

PLANTING SPECIFICATIONS AND NOTES

- PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT NECESSARILY ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT.
- 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 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.

MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A MINIMUM OF TWO (2) YEAR PERIOD.
- INSPECT PLANTED STOCK FOR MORTALITY. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- EXPECT VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION TO OCCUR. DO NOT DISCOURAGE THIS GROWTH UNLESS IT NEGATIVELY AFFECTS THE PLANTED STOCK.
- MANUALLY REMOVE AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF ANY 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 OR INTERFERES WITH THE REFORESTATION PLANTING.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS WILL BE REQUIRED TO BRING THE PLANTED STOCK SURVIVAL RATE UP TO 75%.

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, BRACK SOILS EXISTING OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
- CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCIKLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-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 BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY. THE CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5) PER SPECIES, OVER THE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED IN PLANT LIST.
- A STRAIGHT GRID PATTERN SPACING IS TO BE AVOIDED. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED IN THE PLANT LIST TO OBTAIN MORE NATURAL APPEARANCE.
- NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONE 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.

REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
35	Acer rubrum Red Maple	VT	D-W	FAC	15'	CONT/B & 1" CAL
32	Nyssa sylvatica Black Gum	T	M-W	FAC	15'	CONT/B & 1" CAL
30	Pinus virginiana Virginia Pine	MT	M	-	10'	CONT/B & 8"-10" HT.
32	Prunus serotina Black Cherry	I	M-W	FAC+	15'	CONT/B & 1" CAL
35	Quercus alba White Oak	I	M-W	FAC+	15'	CONT/B & 1" CAL
35	Quercus rubra Red Oak	MT	D-M	UPL	15'	CONT/B & 1" CAL
35	Quercus velutina Black Oak	MT	M	FAC+	15'	CONT/B & 1" CAL

TOTAL 234 TREES

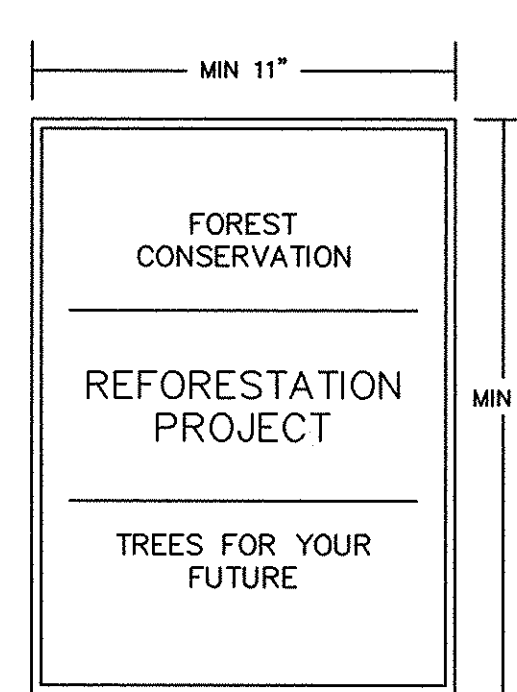
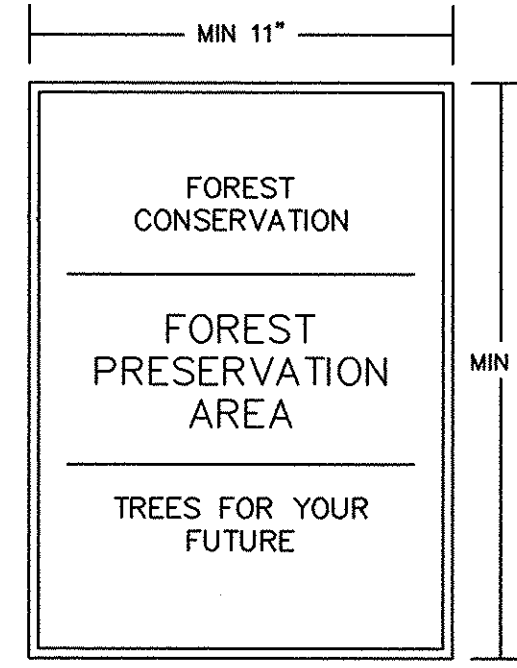
SUPERVISION

- 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 08.19.08.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
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TOTAL 234 TREES



SIGNAGE DETAILS NOT TO SCALE

MD DNR QUALIFIED PROFESSIONAL

Stephanie Demchik STEPHANIE DEMCHIK

APPROVED: DEPARTMENT OF PUBLIC WORKS
Stephanie Demchik 1-27-98
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Handley 2/9/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

F:\970227\DWG\FINAL\27-FCP.DWG

OWNERS
 FREDERICK G. RAUSCH, JR. & NOREEN MARY RAUSCH
 MONTGOMERY ROAD
 ELK RIDGE, MARYLAND 21227

DEVELOPER
 LAND DESIGN & DEVELOPMENT
 10805 HICKORY RIDGE ROAD, SUITE 202
 COLUMBIA, MARYLAND 21044
 (410) 740-2100

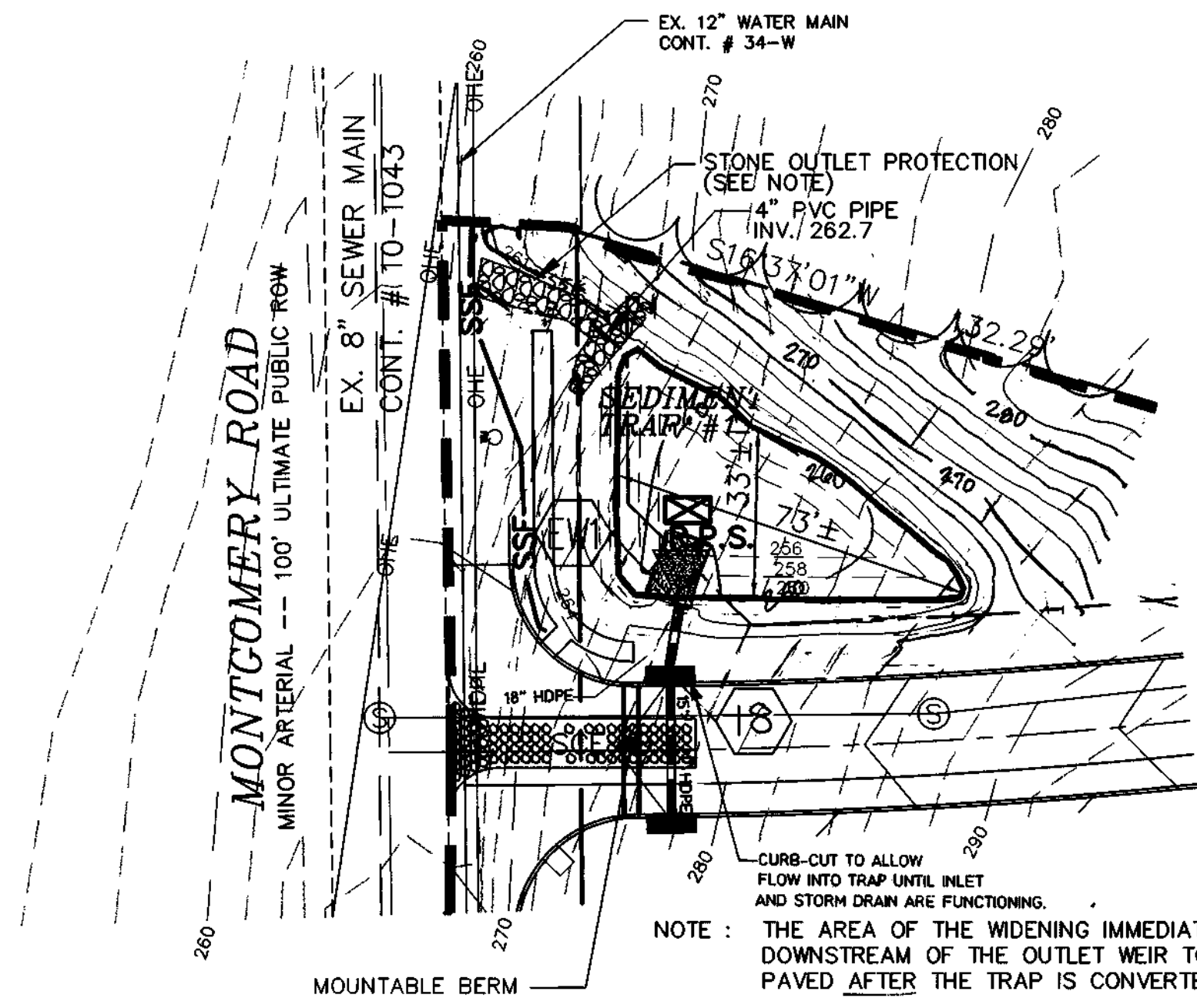
AND
 PATRICIA M. DITMAN
 6564 MONTGOMERY ROAD
 ELK RIDGE, MARYLAND 21227

project date: SEPT 1997
 97027 engineering illustration
 scale: 1"=100'
 description: RAUSCH PROPERTY, LOTS 3 THRU 40 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOREST CONSERVATION AND REFORESTATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Surveyors Planners Engineers
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 (410) 997-0296 Fax. (301) 651-5521 Wash. (410) 997-0298 Fax.

17 OF 17
 F-96-165

NOTE : THIS PLAN IS FOR THE PURPOSE OF SEDIMENT CONTROL ONLY.



SEDIMENT TRAP 1 DETAIL

SCALE: 1" = 30'

LEGEND

- SF SILT FENCE
- SSF SUPER SILT FENCE
- A-2 EARTH DIKE
- SR.P.S. REMOVABLE PUMPING STATION
- STABILIZED CONSTRUCTION ENTRANCE
- AREAS WITH SLOPES > 33% WHICH ARE TO BE IMMEDIATELY STABILIZED WITH SEED AND EROSION CONTROL MATTING
- DENOTES FOREST PRESERVATION SIGNAGE
- DENOTES FOREST CONSERVATION AREA (RETENTION)
- DENOTES FOREST CONSERVATION AREA (REFORESTATION)

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

11/4/97 DATE

PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

11/4/97 DATE

PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

11/12/97 DATE

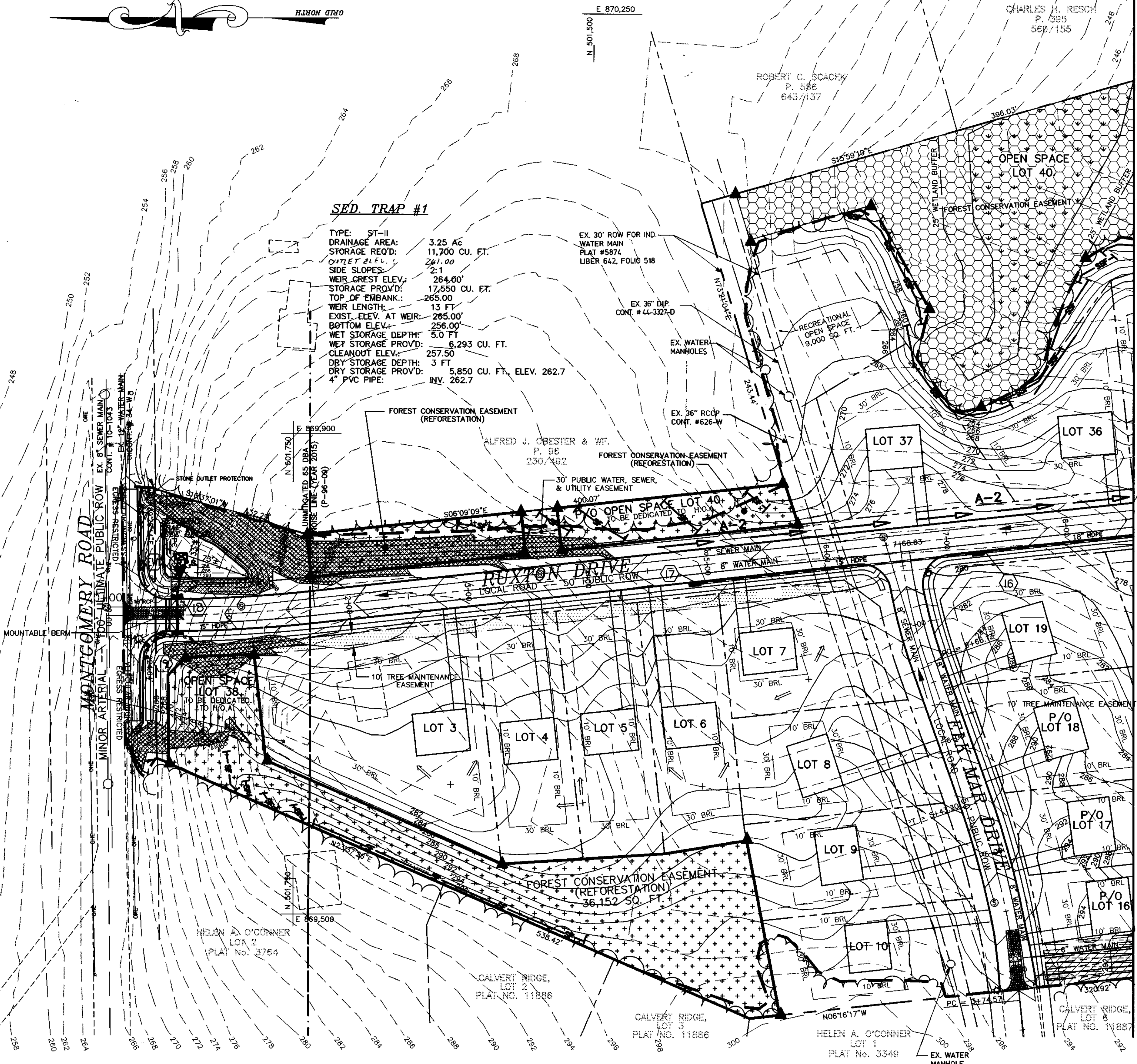
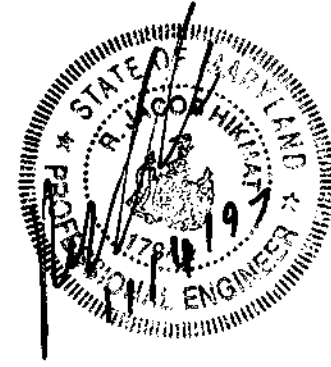
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

2/3/98 DATE

2/9/98 DATE

1-27-98 DATE



MATCH SHEET 7 OF 17

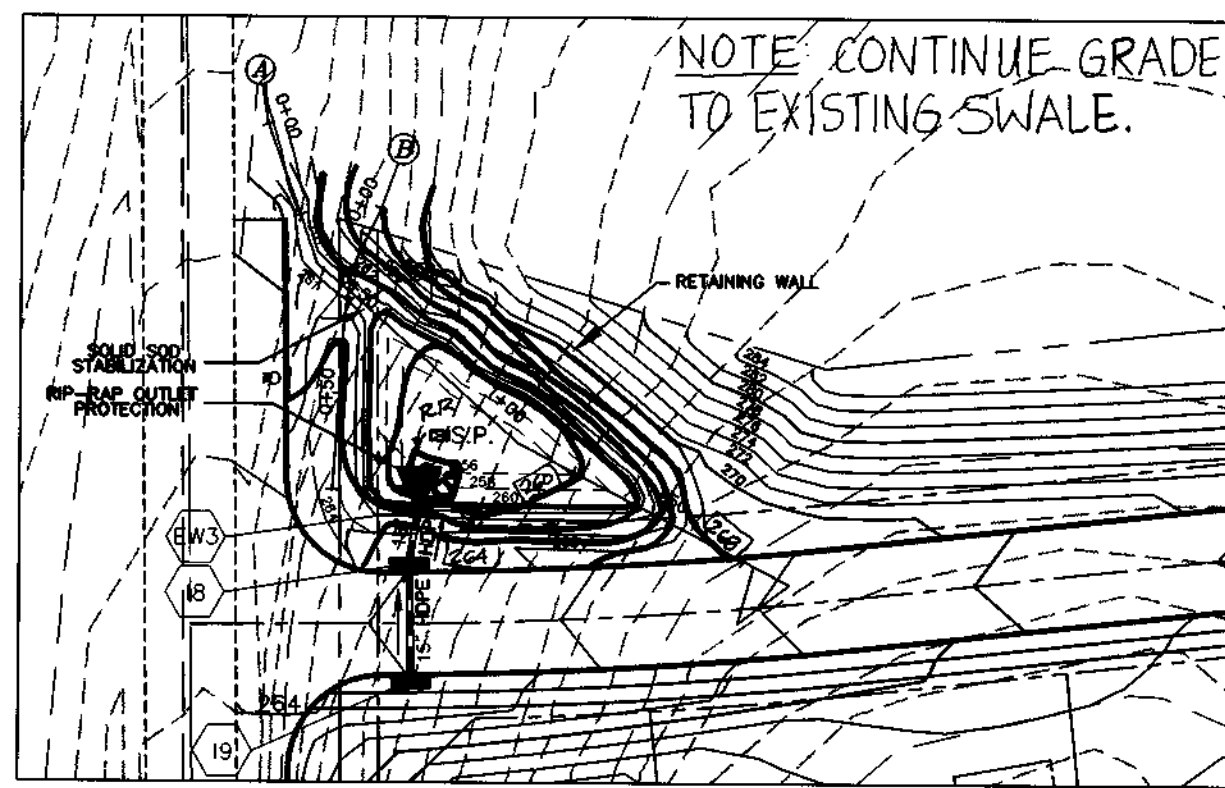
PROJECT	97027	DATE	OCT 1997
ILLUSTRATION	IS/SID	ENGINEERING	IS
SCALE	1"=50'	APPROVAL	

NO.	DESCRIPTION	DATE
1	ELIMINATE WALL NEXT TO SWAMP #1	02/12/02
2	ADD EX. WATER & SEWER REVERSE STORM DRAIN TYPE	02/12/02
	REVISED	02/12/02
	DESCRIPTION	DATE
	REVISED	02/12/02

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT

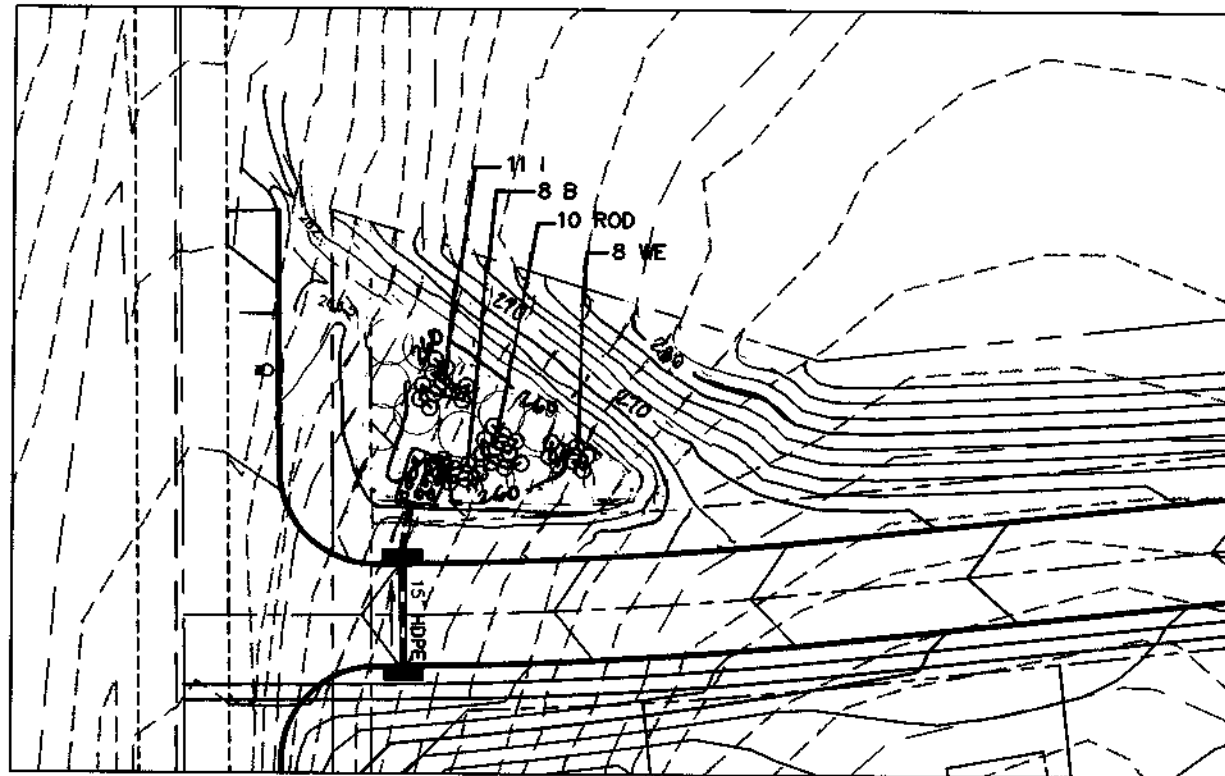
EROSION AND SEDIMENT CONTROL PLAN

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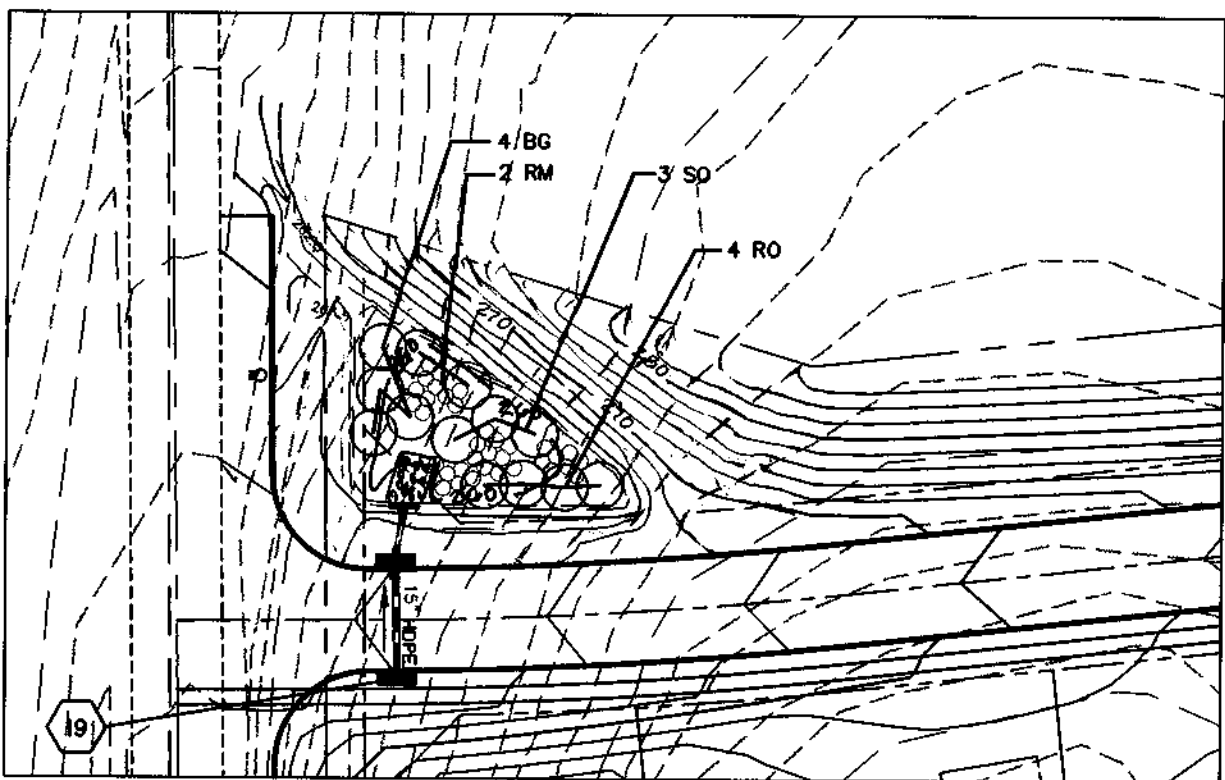


NOTE: CONTINUE GRADE TO EXISTING SWALE.

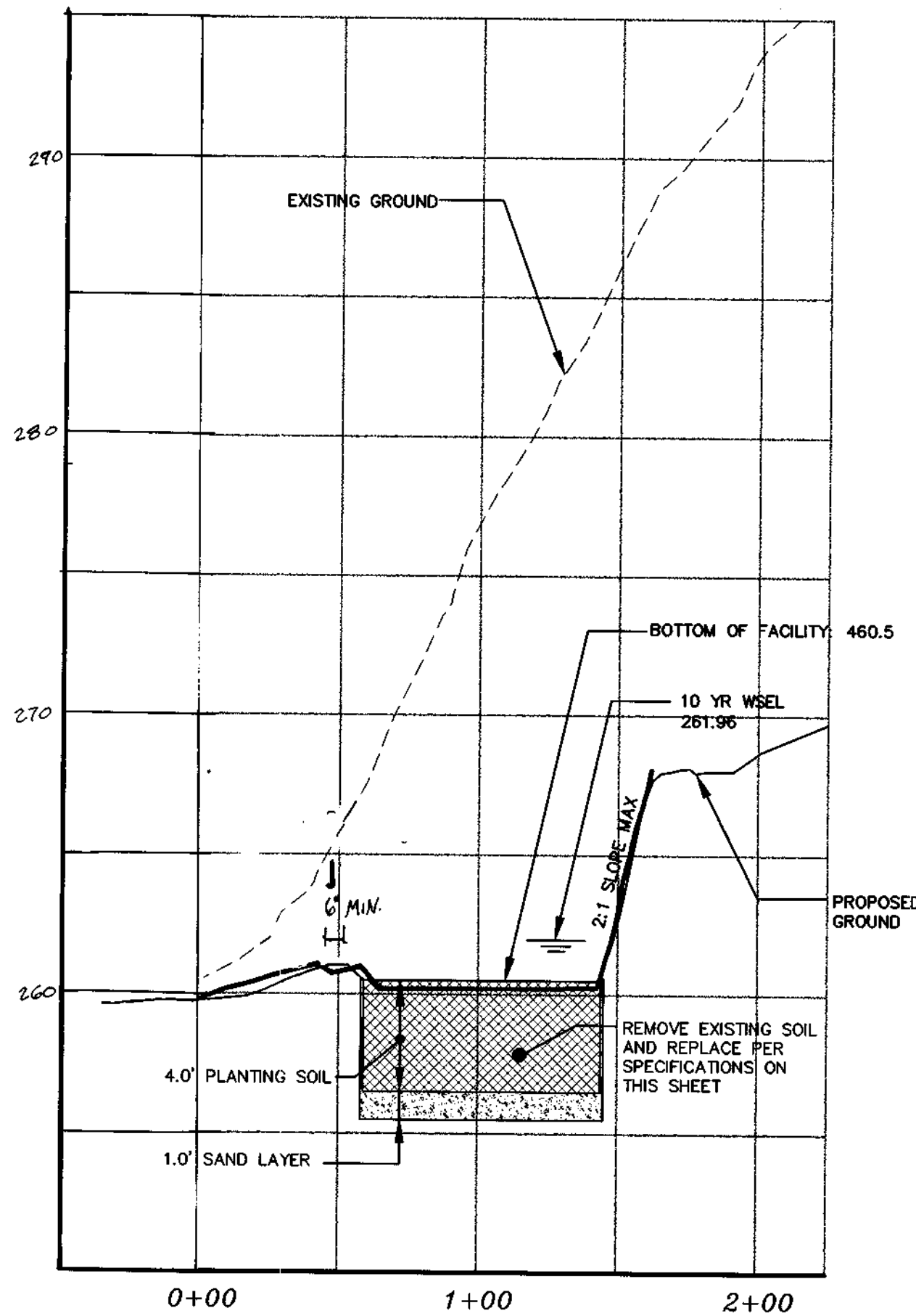
PLAN VIEW
GRADING PLAN
SCALE: 1" = 50'



PLAN VIEW
SHRUB PLANTING PLAN
SCALE: 1" = 50'



PLAN VIEW
TREE PLANTING PLAN
SCALE: 1" = 50'



PROFILE
CENTERLINE OF FACILITY
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

PLANT MATERIAL GUIDELINES

BALLED AND BURLAPPED AND CONTAINERIZED TREES AND SHRUBS SHOULD BE PLANTED BETWEEN MARCH 15 AND JUNE 30 OR BETWEEN SEPTEMBER 15 AND NOVEMBER 15. GROUNDCOVERS FOLLOW TREE AND SHRUB PLANTING DATES. GRASSES AND LEGUMES SHOULD BE PLANTED IN THE SPRING.

FOR ALL PLANT INSTALLATION, THE CONTRACTOR SHALL PROVIDE A ONE (1) YEAR 80% CARE AND REPLACEMENT WARRANTY. THIS WARRANTY SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND CONTINUE FOR ONE (1) YEAR. REPLACEMENT OF PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE MAINTENANCE SCHEDULE.

INSTALLATION AND MAINTENANCE SCHEDULE

SOILS:
PROVIDE A MINIMUM OF FOUR (4) FEET OF PLANTING SOIL WITH A ONE (1) FOOT SAND LAYER BENEATH. SOILS SHALL BE SAND, LOAM SAND, OR LOAM TEXTURE. SOIL SHALL HAVE A COMPOSITION OF AT LEAST 10 TO 25 PERCENT CLAY. LOAMY SOILS MAYBE UTILIZED BUT MUST CONSIST OF 35% SAND. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH, BRUSH, OR ANY OTHER MATERIAL OR SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH. PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, OR OTHER SUCH NUISANCE MATERIAL. SOILS SHALL HAVE AN INFILTRATION RATE IN EXCESS OF 0.5 IN./HR. AND A SOIL ACIDITY (PH) BETWEEN 5.5 AND 6.5.

THE FOLLOWING IS THE MINIMUM ACCEPTABLE CRITERIA FOR SOILS:
PH RANGE: 5.5 - 6.5
ORGANIC MATTER: 1.5% - 3.0%
MAGNESIUM (MG): 35 LBS./ACRE
PHOSPHORUS (P2O5): 100 LBS./ACRE
POTASSIUM (K2O): 85 LBS./ACRE
SOLUBLE SALTS: NOT TO EXCEED 500 PPM

SOIL SHOULD BE PLACED WITHIN THE PLANTING AREA IN LIFTS OF 18 INCHES OR LESS AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR BACKHOE.
MAINTENANCE SHALL CONSIST OF INSPECTION AND REPAIR OF EROSION ON A MONTHLY BASIS.

SAND:
SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN 1 INCH IN DIAMETER AND SHALL CONFORM TO MSHA SECTION 901, FINE AGGREGATE/SAND.

ORGANIC LAYER:
ONCE TREES AND SHRUBS HAVE BEEN INSTALLED, A MULCH LAYER SHOULD BE ADDED. MULCH SHOULD BE FREE OF WEED SEEDS, SOIL, ROOTS OR ANY OTHER SUBSTANCE NOT CONSISTING OF EITHER BOLE OR BRANCH WOOD AND SHALL BE UNIFORMLY APPLIED APPROXIMATELY 2 TO 3 INCHES IN DEPTH, AND WILL CONSIST OF EITHER A STANDARD LANDSCAPE FINE SHREDED HARDWOOD MULCH OR SHREDED HARDWOOD CHIPS. MULCH WHICH CONTAINS LEAF LITTER AND GRASS CLIPPINGS IS NOT ACCEPTABLE. ANY GROUNDCOVERS SPECIFIED AS PLUGS MAY BE INSTALLED ONCE THE MULCH HAS BEEN LAID DOWN. GROUNDCOVERS ESTABLISHED BY SEEDING AND/OR CONSISTING OF GRASSES SHOULD NOT BE COVERED WITH A MULCH LAYER.

ONCE A YEAR IN THE SPRING, THE ORGANIC LAYER SHALL BE TESTED TO DETERMINE THE PH OF THE SOIL. IF THE PH IS OUTSIDE THE RANGE OF 5.5 TO 6.5, THE ORGANIC LAYER SHALL BE TREATED TO RETURN THE LAYER TO ACCEPTABLE LIMITS. ANNUAL SOIL TESTING SHOULD BE CONDUCTED TO DETECT AND PREVENT THE ACCUMULATION OF TOXINS AND HEAVY METALS.

ONCE A YEAR IN THE SPRING, REMOVE THE PVIOUS MULCH LAYER AND APPLY NEW MULCH LAYER AS NEEDED.

PLANT MATERIAL:
ONCE PLANTING HAS BEEN COMPLETED, PLANT MATERIAL SHOULD BE WATERED BY HAND AT THE END OF EACH DAY FOR FOURTEEN CONSECUTIVE DAYS. ANNUAL MAINTENANCE WILL BE REQUIRED FOR ALL PLANT MATERIAL. INSPECTION OF ALL VEGETATION SHALL OCCUR TWICE A YEAR. PLANT MATERIAL MAINTENANCE AND UPKEEP SHALL INCLUDE PREVENTION AND TREATMENT OF DISEASE OR INSECT INFESTATIONS. PRUNING TO MAINTAIN THE HEALTH OF THE PLANTS SHALL BE COMPLETED AS REQUIRED. DEAD PLANT MATERIAL SHALL BE REMOVED AND REPLACED BETWEEN MARCH 15 AND APRIL 30 OR BETWEEN OCTOBER 1 AND NOVEMBER 30.

DEFICIENT STAKES AND WIRES SHOULD BE REPLACED BY HAND. STAKES SHOULD BE REPLACED ONCE A YEAR IN THE SPRING.

REFER TO THE "DESIGN MANUAL FOR THE USE OF BIORETENTION IN STORMWATER MANAGEMENT", AS PUBLISHED BY THE PRINCE GEORGE'S COUNTY, MARYLAND, DEPARTMENT OF ENVIRONMENTAL RESOURCES FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

PLANT SPECIFICATIONS:

- ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE UNTIL PLANTED.
- WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THAN THE DIAMETER OF THE BALL OF THE TREE.
- PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4" OF THE BALL TO BE ABOVE THE FINAL GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
- FERTILIZER SHALL BE PLACED AT THE BOTTOM OF THE PIT AS INDICATED BELOW.
- PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL.
- SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT THE TOP OF THE BALL IS APPROXIMATELY 1/4" ABOVE FINAL GRADE.
- BACKFILL PLANTING PIT WITH APPROVED SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING.
- TREES SHALL BE BRACED BY USING 2" X 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS, ON THE OUTSIDE OF THE TREE BALL. THE TREE IS TO BRACED TO THE STAKES WITH HOSE AND WIRE.

FERTILIZATION:
TREE AND SHRUB FERTILIZER SHALL BE A 21 GM. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2 YEAR) FERTILIZER TABLET WITH A MINIMUM GUARANTEED ANALYSIS OF 20-10-5:

TOTAL NITROGEN (N)	20%
WATER SOLUBLE ORGANIC NITROGEN	7%
WATER IN SOLUBLE ORGANIC NITROGEN	13%
AVAILABLE PHOSPHORIC ACID (P2 O5)	10%
SOLUBLE POTASH (K2 O)	5%

FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:

1 GAL. CONTAINER	1 EA. 21 GM TABLET
3 GAL. CONTAINER	2 EA. 21 GM TABLETS
5 GAL. CONTAINER	3 EA. 21 GM TABLETS
7 GAL. CONTAINER	5 EA. 21 GM TABLETS

NON-GRASS GROUND COVER:

- GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE.
- BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEM OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.
- GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. ROOTS OF BARE ROOT PLANTS SHALL BE COVERED TO THE CROWN.
- THE MULCHED AND PLANTED GROUND COVER BED SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE.
- THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

PLANT MATERIAL GUIDELINES

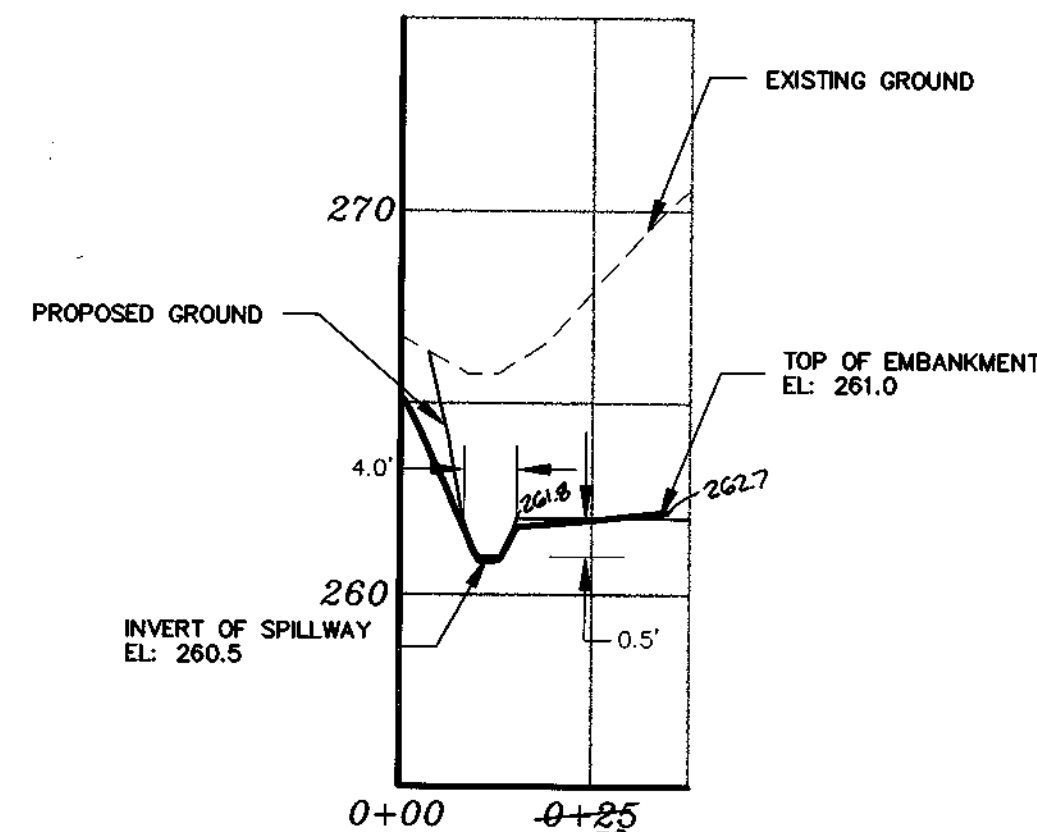
BALLED & BURLAPPED AND CONTAINERIZED TREES AND SHRUBS SHOULD BE PLANTED BETWEEN MARCH 15 AND JUNE 30 OR SEPTEMBER 15 AND NOVEMBER 15 AS SPECIFIED ON THE ROAD PLAN DRAWINGS. GROUNDCOVERS FOLLOW TREE AND SHRUB PLANTING DATES. GRASSES AND LEGUMES SHOULD BE PLANTED IN THE SPRING.

FOR ALL PLANT INSTALLATION, THE CONTRACTOR SHALL PROVIDE A ONE (1) YEAR 80% CARE AND REPLACEMENT WARRANTY. THIS WARRANTY SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND CONTINUE FOR ONE (1) YEAR. REPLACEMENT OF PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE MAINTENANCE SCHEDULE.

BIORETENTION AREA PLANTING SCHEDULE

50 TREES & SHRUBS (13 TREES, 37 SHRUBS)

TOTAL QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
37 SHRUBS				
10	ROD	CORNUS STOLINIFERA	RED OSIER DOGWOOD	2 1/2' - 3' HT.
8	EA	EUONYMUS ALATUS	WINGED EUONYMUS	2 1/2' - 3' HT.
11	I	ILEX GLABRA	INKBERRY	2 1/2' - 3' HT.
8	B	MYRICA PENNSYLVANICA	BAYBERRY	2' - 2 1/2' HT.
13 TREES				
4	BG	NYSSA SYLVATICA	BLACK GUM	2 1/2" - 3" CAL.
3	SO	QUERCUS COCCINEA	SCARLET OAK	2 1/2" - 3" CAL.
4	RO	QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
2	RM	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.



PROFILE
SPILLWAY AND EMBANKMENT
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

AS-BUILT

G. SCOTT SHANBERGER
PROF. L.S. # 10849

SHANBERGER & LANE
8725 TOWN & COUNTRY BLVD.
SUITE 201
ELLICOTT CITY, MARYLAND 21043

OPERATION & MAINTENANCE SCHEDULE FOR THE BIORETENTION FACILITY

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

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 of Developer: *[Signature]* DATE: 10/31/97
SILVACOTT LAND LLC
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 of Engineer: *[Signature]* DATE: 10/31/97
G. SCOTT SHANBERGER
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.

Signature: *[Signature]* DATE: 11/2/97
USDA - NATURAL RESOURCES CONSERVATION SERVICE

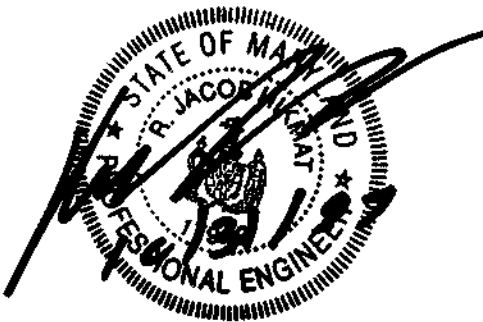
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 11/10/97
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: *[Signature]* DATE: 1-27-98
CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: *[Signature]* DATE: 2/9/98
CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* DATE: 2/3/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION



Project	date	approval
97027	OCT 1997	SD
illustration	engineering	SD
scale	SD	SD
1" = 50'		

no.	description	revisions
2	ELIMINATE WALL NEXT TO SWYMT #1	
1	REMOVE STORM DRAIN PIPE 1 AND RETAINING WALL NOTE	

RAUSCH PROPERTY
A RESUBDIVISION OF RAUSCH PROP. LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT DETAILS & PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 987-0296 Ext. (301) 621-5521 Wash. (410) 987-0296 Fax.

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

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES	
	B (PERIMETER 3)	A (PERIMETERS 1,2,5,6,7)	B (PERIMETER 4)	
LINEAR FEET OF PERIMETER	198.40 LF	1820.91 LF	132.29 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 88 LF OF CREDIT FOR BIORETENTION PLANTINGS	YES, 519.06 LF OF CREDIT FOR EXISTING TREES	YES, 132.29 LF OF CREDIT FOR BIORETENTION PLANTINGS	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	2 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS	22 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	
NUMBER OF PLANTS PROVIDED	2 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS (10:1 SUBSTITUTION)	22 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
50		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
3		PINUS STROBUS	EASTERN WHITE PINE	2 1/2" - 3" CAL.
21		QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
19		TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LITTLELEAF LINDEN	2 1/2" - 3" CAL.
TOTAL				
93 TREES (90 SHADE TREES, 3 EVERGREEN TREES)				

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 HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 9,000.00.

STREET TREE CALCULATIONS
 MONTGOMERY ROAD - 198 / 40 = 5
 RUXTON DRIVE - 1882 / 40 = 42
 ELK MAR DRIVE - 744 / 40 = 19
 TOTAL TREES REQUIRED = 66 TREES
 TOTAL TREES PROVIDED = 66 TREES

PERIMETER	EDGE TYPE
PERIMETER 1	N/A
ENTRANCE - 26 LF	
SFD TO SFD - 135 LF	A
EXISTING TREES TO REMAIN	
SFD TO SFD - 159.92 LF	A
1 SHADE TREE / 60 LF	3
PERIMETER 2	A
SFD TO SFD - 538.42 LF	
1 SHADE TREE / 60 LF	9
PERIMETER 3	N/A
ENTRANCE - 26 LF	
SWM TO ROAD - 88 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
SFD SIDE TO ROAD - 110.40 LF	B
1 SHADE TREE / 50 LF	2
1 EVERGREEN / 40 LF	3
PERIMETER 4	B
SWM TO SFD - 132.29 LF	
CREDIT FOR BIORETENTION PLANTINGS	
PERIMETER 5	A
OPEN SPACE TO SFD - 400.07 LF	
1 SHADE TREE / 60 LF	7
PERIMETER 6	A
OPEN SPACE TO SFD - 40 LF	
EXISTING TREES TO REMAIN	
OPEN SPACE TO SFD - 203.44 LF	A
1 SHADE TREE / 60 LF	3
PERIMETER 7	N/A
EASEMENT - 30 LF	
OPEN SPACE TO SFD - 344.06 LF	A
EXISTING TREES TO REMAIN	
TOTAL PLANTING OBLIGATION	
SHADE TREES	25
EVERGREEN TREES	4
SHRUBS	0

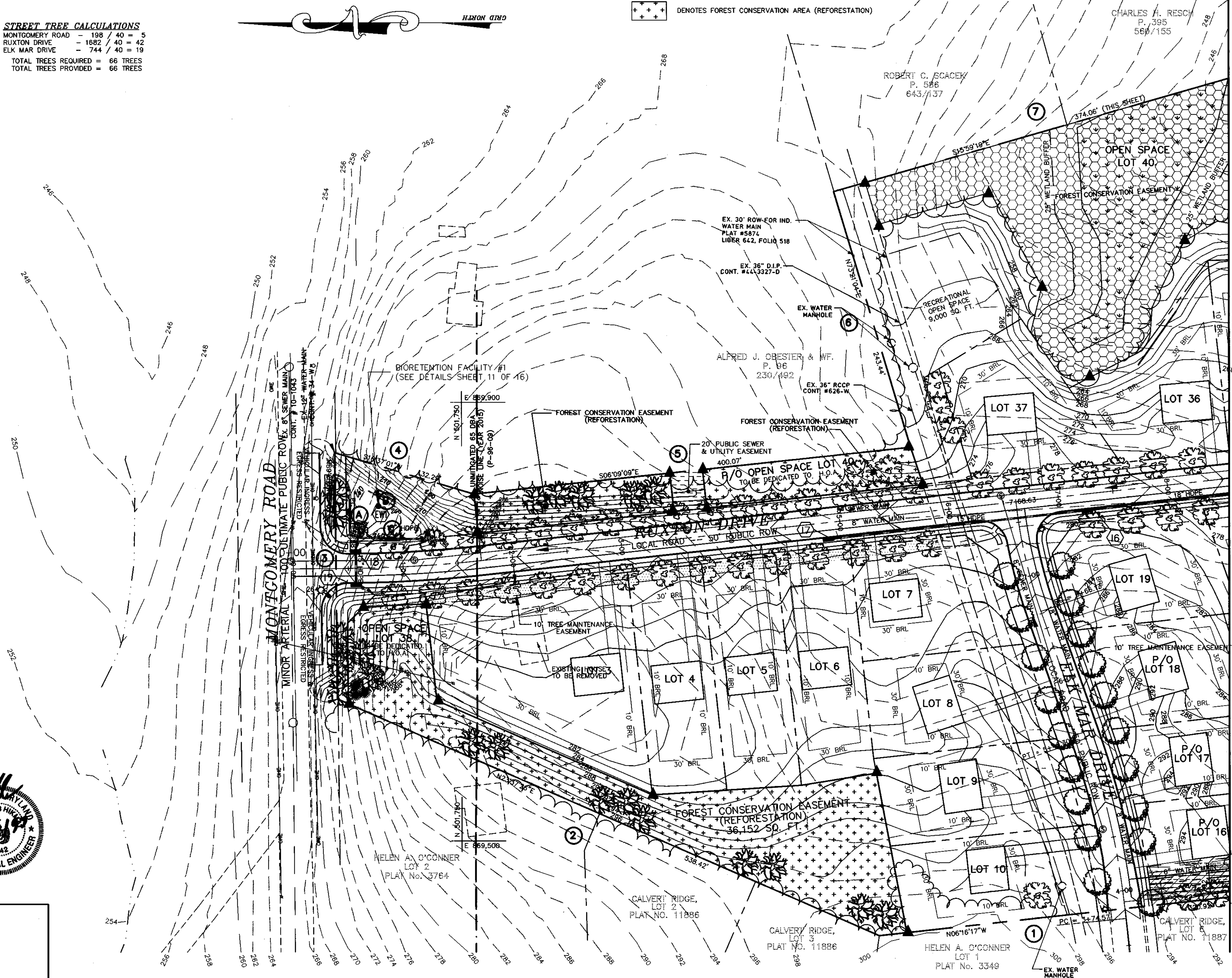
SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 60 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
SWM PERIMETER B - 90 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
SWM PERIMETER C - 75 LF	B
CREDIT FOR BIORETENTION PLANTINGS	
TOTAL PLANTING OBLIGATION	
SHADE TREES	0
EVERGREEN TREES	0
SHRUBS	0

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	225 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND X)	YES, CREDIT FOR BIORETENTION PLANTINGS
NUMBER OF TREES REQUIRED	0 SHADE TREES 0 EVERGREEN TREES
NUMBER OF TREES PROVIDED	0 SHADE TREES 0 EVERGREEN TREES 0 TREES (0 SUBSTITUTION)

LEGEND

- DENOTES FOREST PRESERVATION SIGNAGE
- DENOTES FOREST CONSERVATION AREA (RETENTION)
- DENOTES FOREST CONSERVATION AREA (REFORESTATION)



MATCH SHEET 5 OF 16

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 1-27-98
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hamilton 2/1/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Dammann 2/1/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



date: OCT 1997
 project: 97027
 illustration: SJD
 scale: 1"=50'

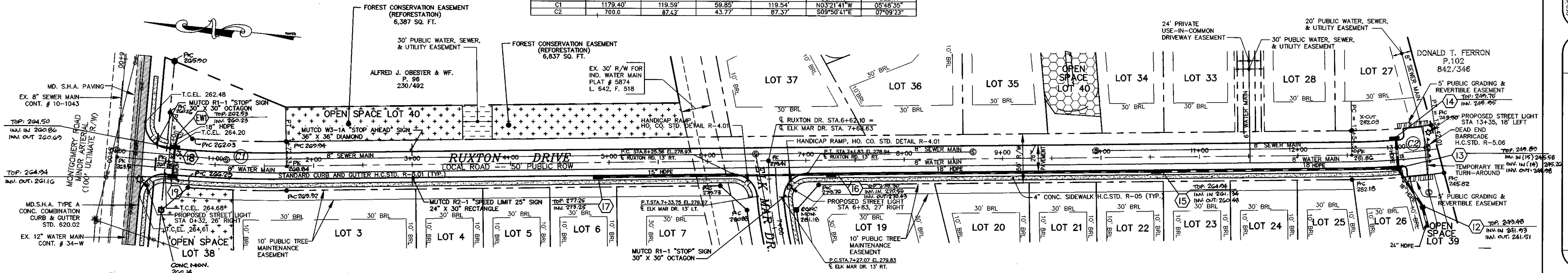
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 revisions: 1

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 LANDSCAPE PLAN

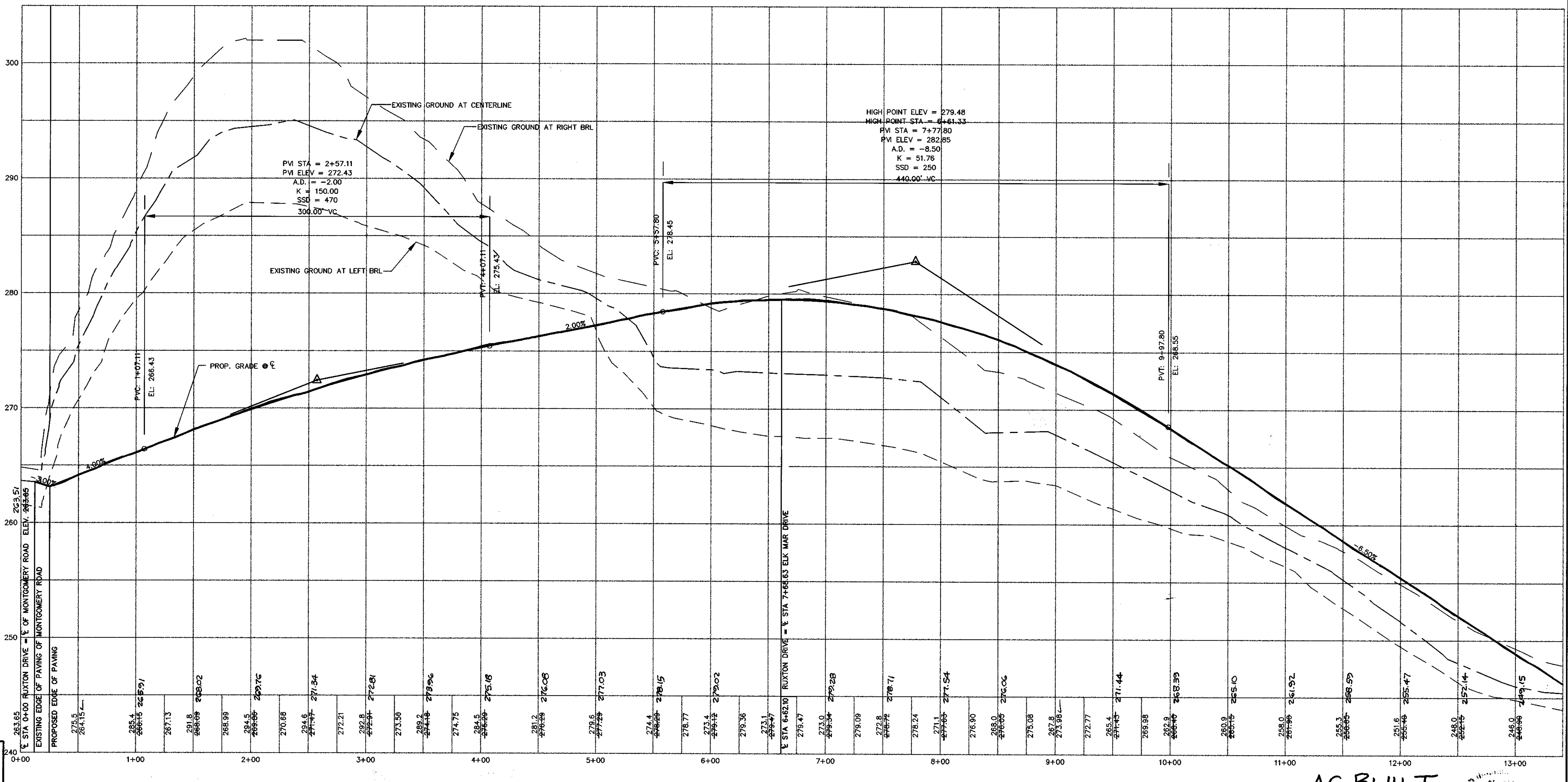
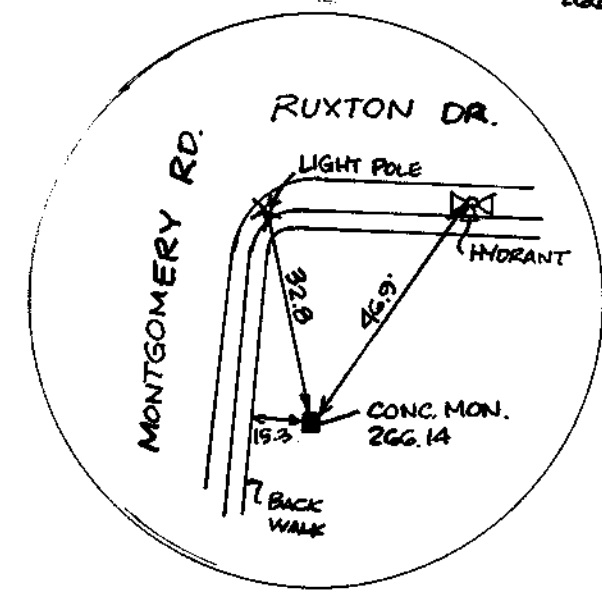
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Elkoort City, Maryland 21042
 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 897-0298 Fax.

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	119.54'	119.59'	59.85'	119.54'	N03°21'41"W	05°48'35"
C2	700.0	87.43'	43.77'	87.37'	S09°50'41"E	07°09'23"



NOTE: FOR STREET LIGHT TYPES SEE NOTE 19 ON SHEET 1 OF 17.



RUXTON DRIVE PROFILE

LOCAL ROAD
DESIGN SPEED 30 MPH
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELlicott CITY, MARYLAND 21043

AS-BUILT

G. SCOTT SHANABERGER
PROF. L.S. # 10849

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Deane 1-27-98
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 2/1/98
CHIEF, DIVISION OF LAND DEVELOPMENT

Mark J. ... 2/3/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

project	97027	date	OCT 1997
illustration	MMP/SJD	engineering	SJD
scale	AS SHOWN	approval	AS SHOWN

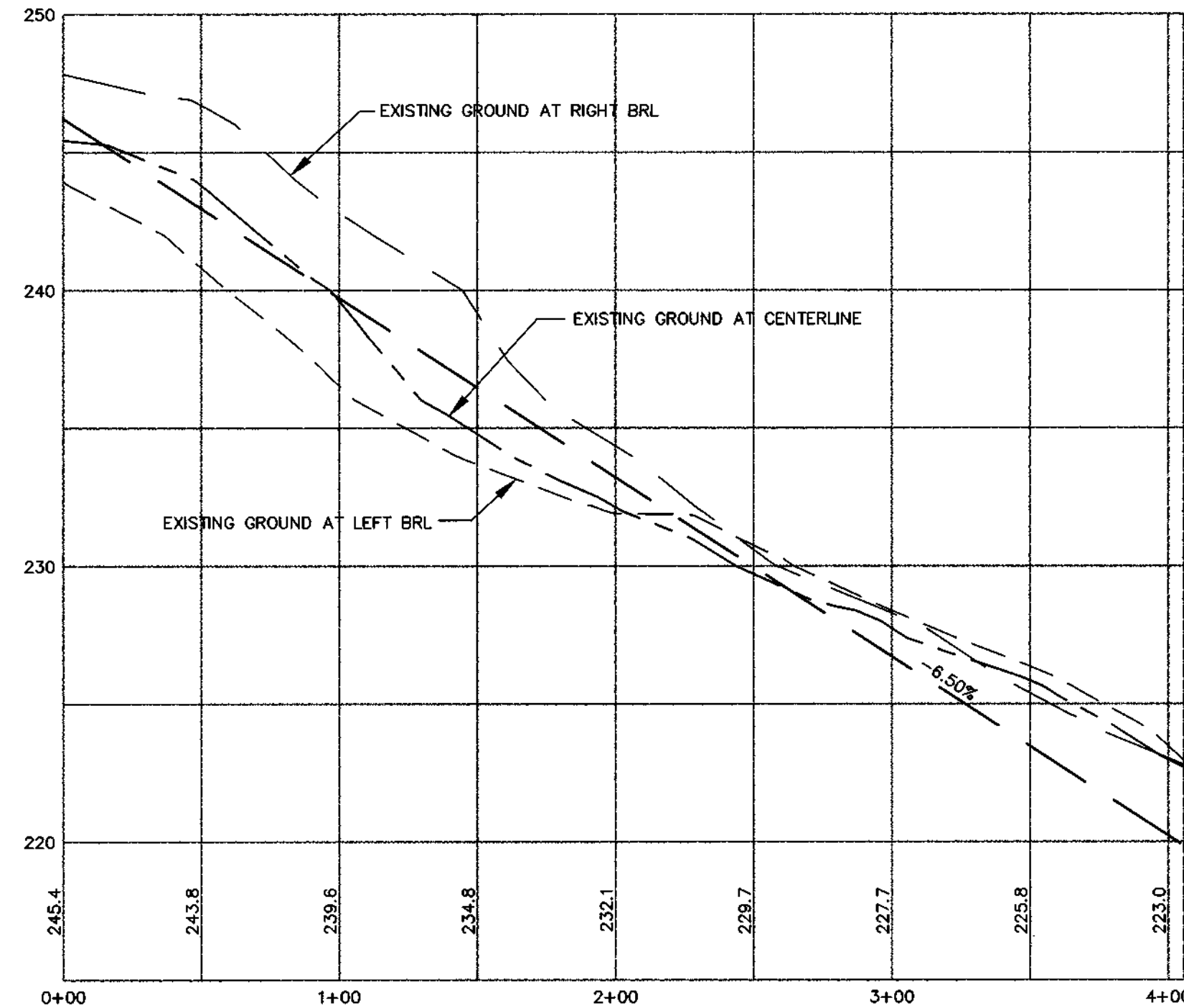
revision	1	description	REPLACE CURVE DATA & STORM DRAIN PIPE TYPE
date	2-21-98	by	BCJ

RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
ROAD PLAN AND PROFILE

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 987-0996 Fax: (410) 987-0998 Fax

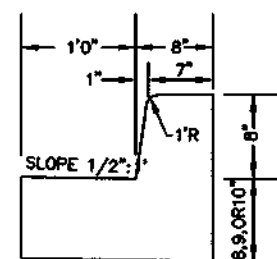
CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C3	448.93'	102.50'	51.47'	102.28'	N77°11'40"E	13°04'54"
C4	700.00'	168.73'	86.78'	168.32'	N77°33'28"E	13°48'38"

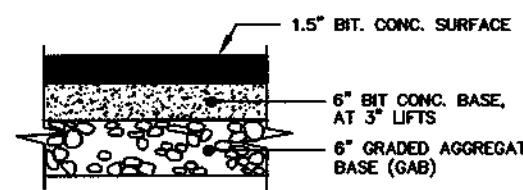


RUXTON DRIVE PROFILE (FUTURE EXTENSION)

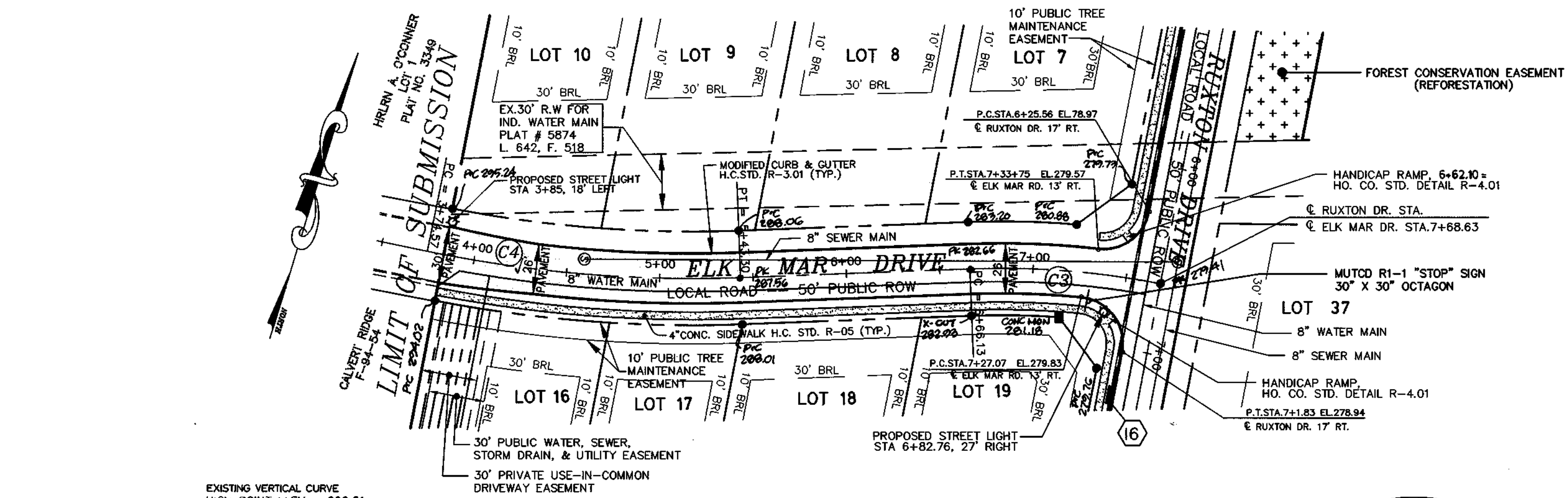
LOCAL ROAD
DESIGN SPEED 30 MPH
HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



MD. S.H.A. TYPE "A" CONCRETE COMBINATION CURB & GUTTER STANDARD NO. MD. 620.02
NOT TO SCALE

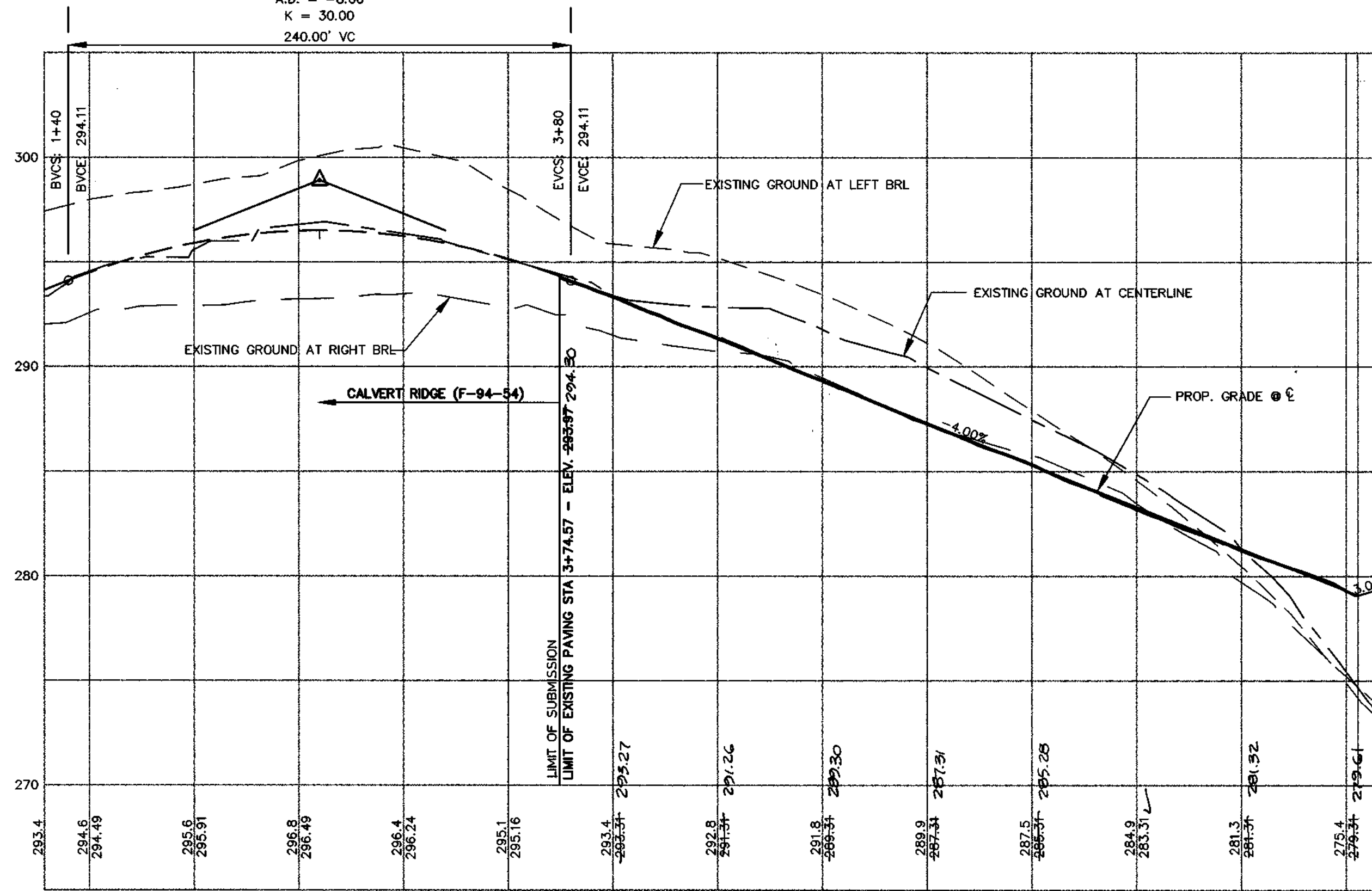


MD. S.H.A. PAVING SECTION
NOT TO SCALE



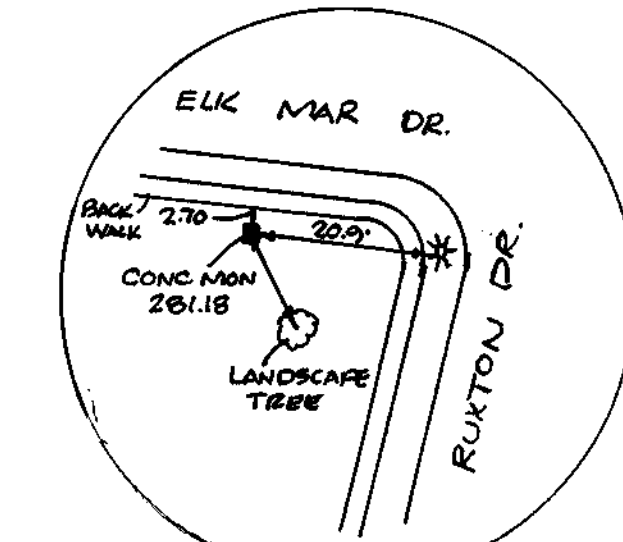
EXISTING VERTICAL CURVE
HIGH POINT L/EV = 296.51
HIGH POINT STA = 2+60
PVI STA = 2+60
PVI ELEV = 298.91
A.D. = -8.00
K = 30.00
240.00' VC

NOTE : FOR STREET LIGHT TYPES SEE NOTE 19 ON SHEET 1 OF 17.

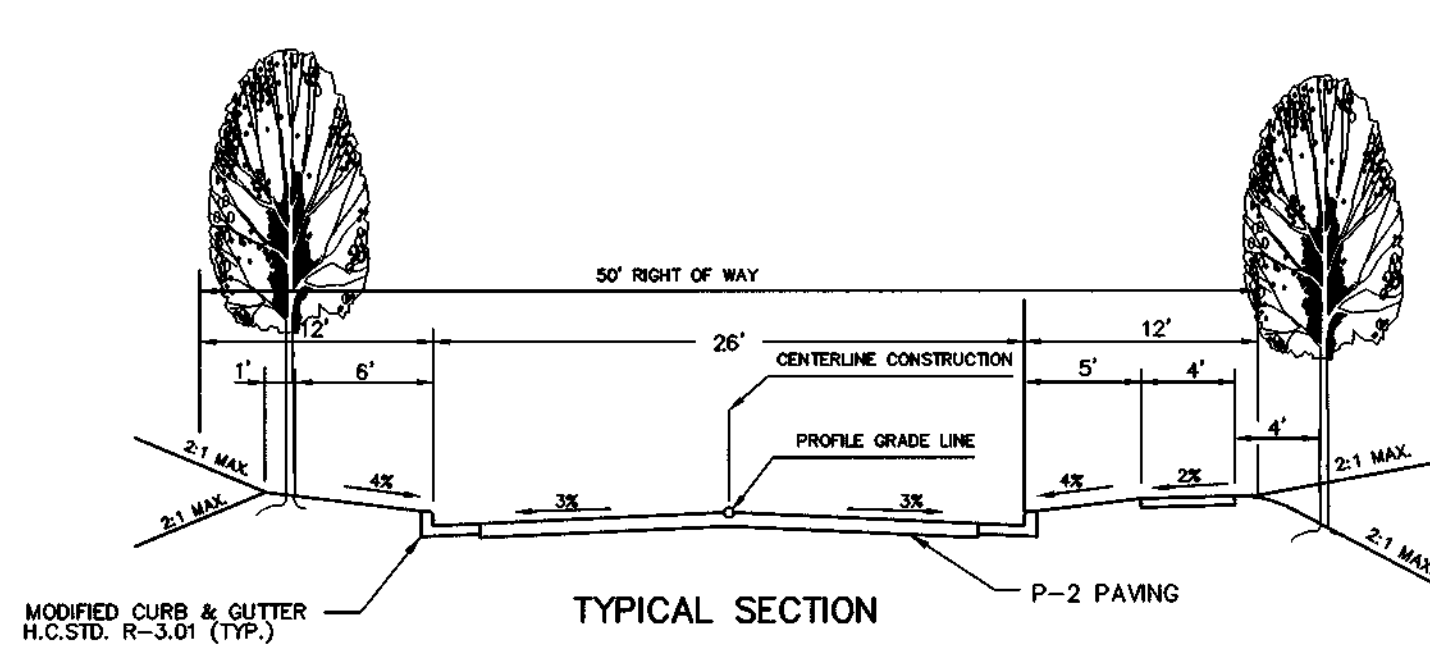


ELK MAR DRIVE PROFILE

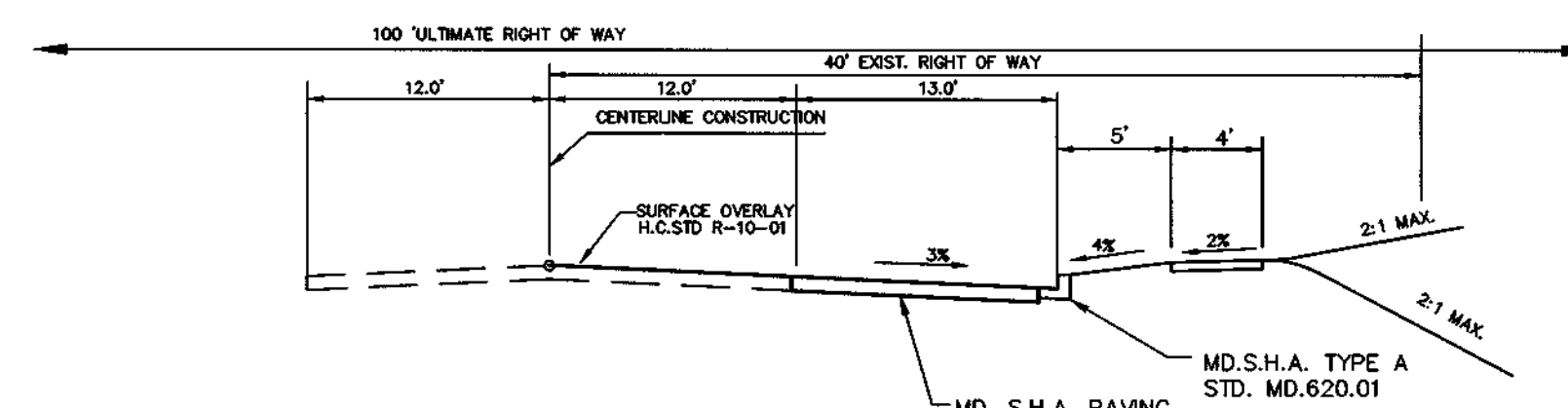
LOCAL ROAD
DESIGN SPEED 30 MPH
HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



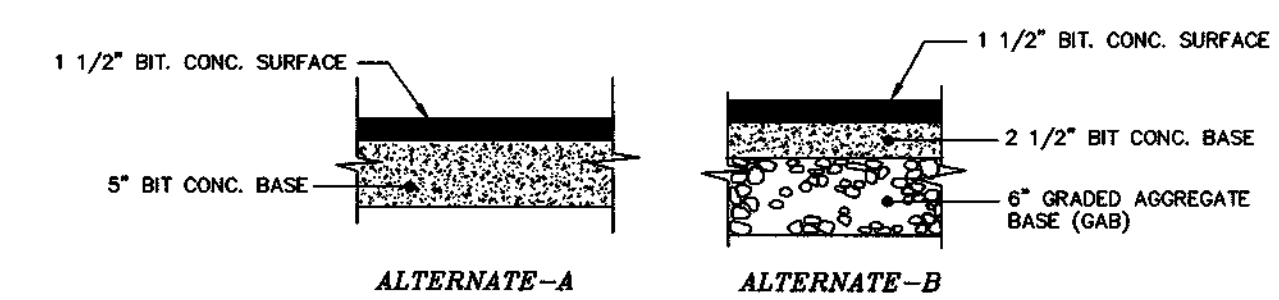
MONUMENT RECOVERY SKETCH N.T.S.



TYPICAL SECTION DESIGN SPEED: 30 MPH CLASSIFICATION: LOCAL ROAD N.T.S.



TYPICAL SECTION MONTGOMERY ROAD WIDENING N.T.S.

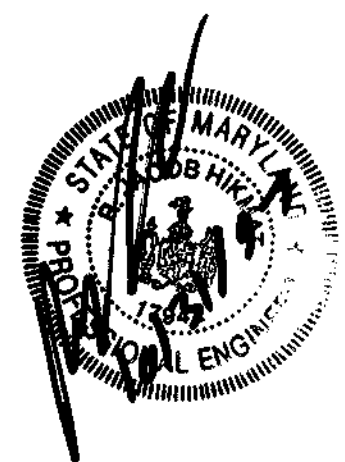


PAVING SECTIONS P-2 N.T.S.

AS-BUILT

G. Scott Shanaberger
DATE 10/2/2001
PROF. L.S. #10849

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLCOTT CITY, MARYLAND 21042



APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Quilty 1-27-98
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Hematta 2/1/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John De... .. 2/3/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

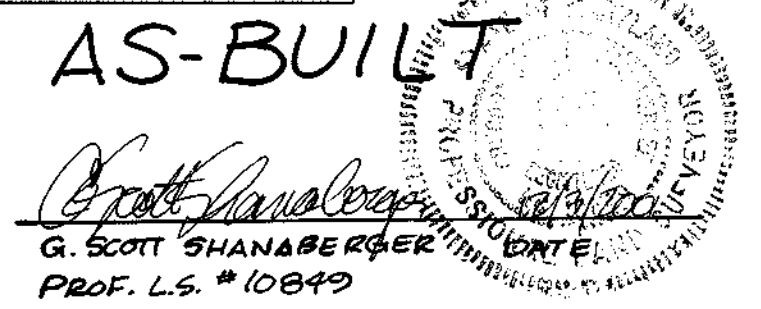
date	OCT 1997	approval
project	97027	illustration
scale	MMP/STD	scale
AS SHOWN		

no.	1	description	RCU	7-26-98
revisions		REVERSE CURVE DATA & STORM DRAIN PIPE TYPE		date

RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ROAD PLAN AND PROFILE

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

STUDY POINT	Q(2)-EXISTING	Q(2)-PROPOSED	Q(10)-EXISTING	Q(10)-PROPOSED
1	3 CFS	2 CFS	9 CFS	7 CFS
2	5 CFS	5 CFS	19 CFS	15 CFS
3	1 CFS	1 CFS	5 CFS	4 CFS



AS-BUILT
SHANABERGER & LANE
 8726 TOWN & COUNTRY BLVD.
 SUITE 201
 ELLICOTT CITY, MARYLAND 21043

POND DATA

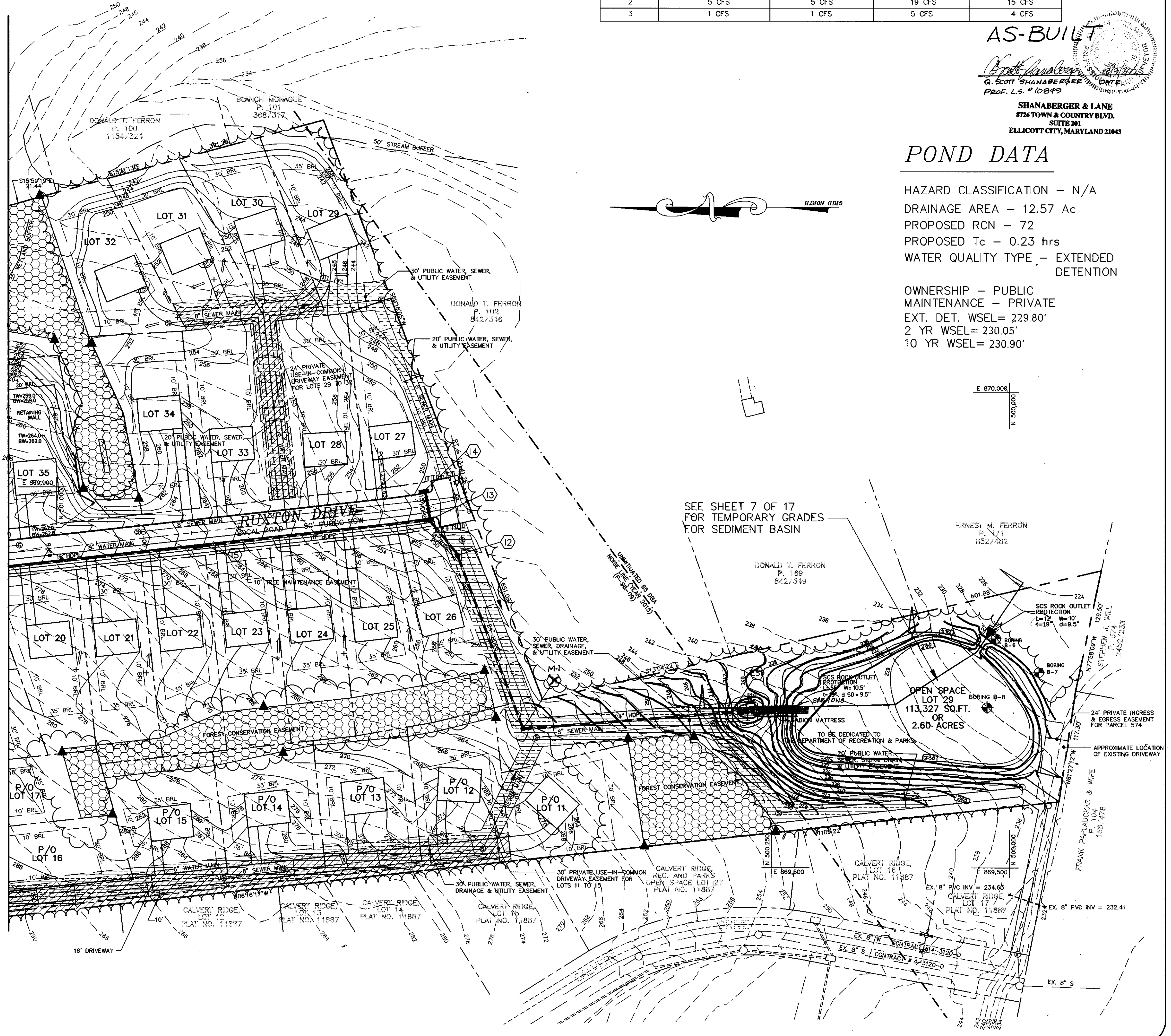
HAZARD CLASSIFICATION - N/A
 DRAINAGE AREA - 12.57 Ac
 PROPOSED RCN - 72
 PROPOSED Tc - 0.23 hrs
 WATER QUALITY TYPE - EXTENDED DETENTION

OWNERSHIP - PUBLIC
 MAINTENANCE - PRIVATE
 EXT. DET. WSEL= 229.80'
 2 YR WSEL= 230.05'
 10 YR WSEL= 230.90'



E 870,000
 N 500,000

MATCH SHEET 4 OF 17



LEGEND
 ▲ DENOTES FOREST PRESERVATION SIGNAGE
 [Hatched Box] DENOTES FOREST CONSERVATION AREA (RETENTION)

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Dando 1-27-98
 CHIEF, BUREAU OF HIGHWAYS

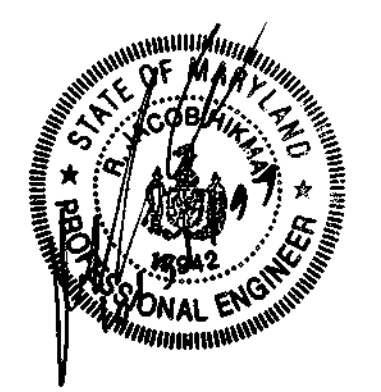
DEVELOPERS CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.
[Signature] 11/4/97
 SIGNATURE OF DEVELOPER
ELLICOTT LAND, LLC
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.
[Signature] 1/31/98
 SIGNATURE OF ENGINEER
R. JAGS HIKMAT
 PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 USDA - NATURAL RESOURCE CONSERVATION SERVICE
 DATE: *[Signature]*

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: *[Signature]*

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 2/6/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 2/9/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

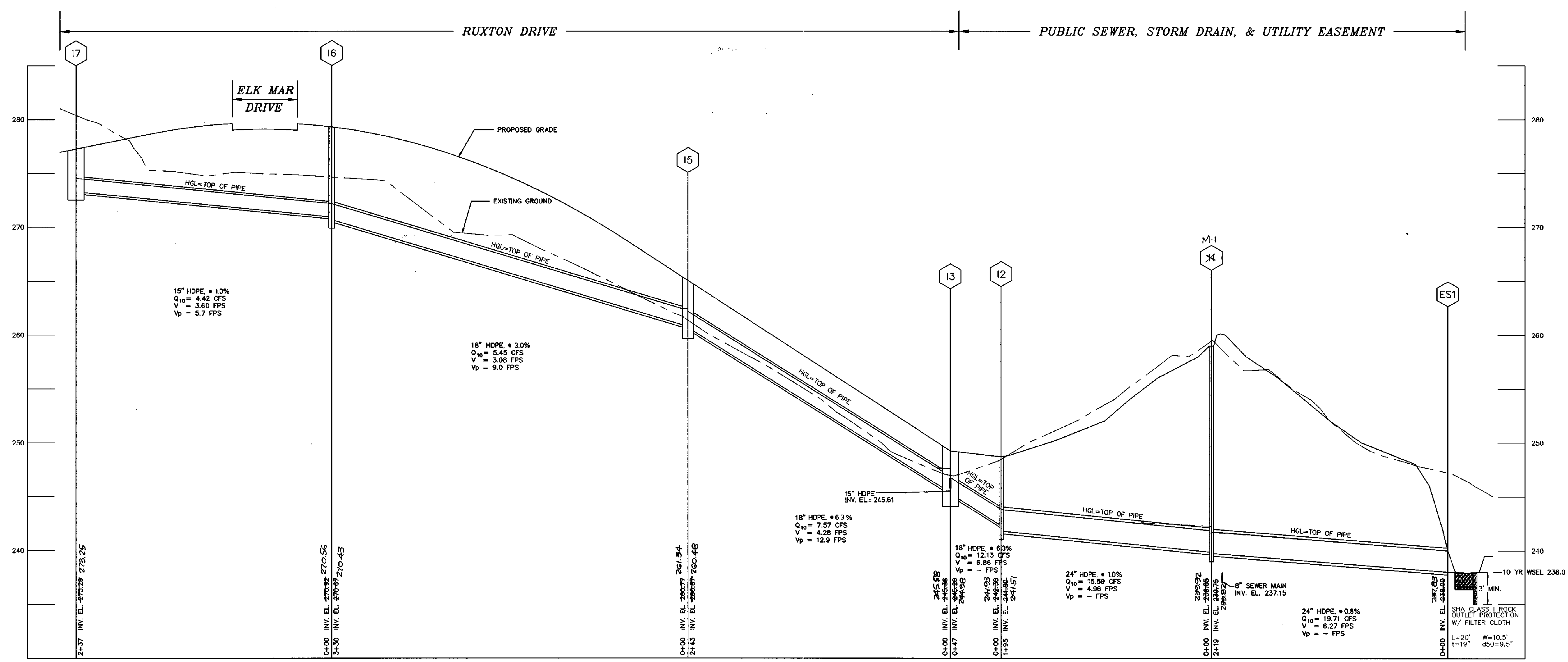


date	OCT 1997	engineering
project	97027	illustration
scale	1" = 50'	approval
date	8-4-98	approval

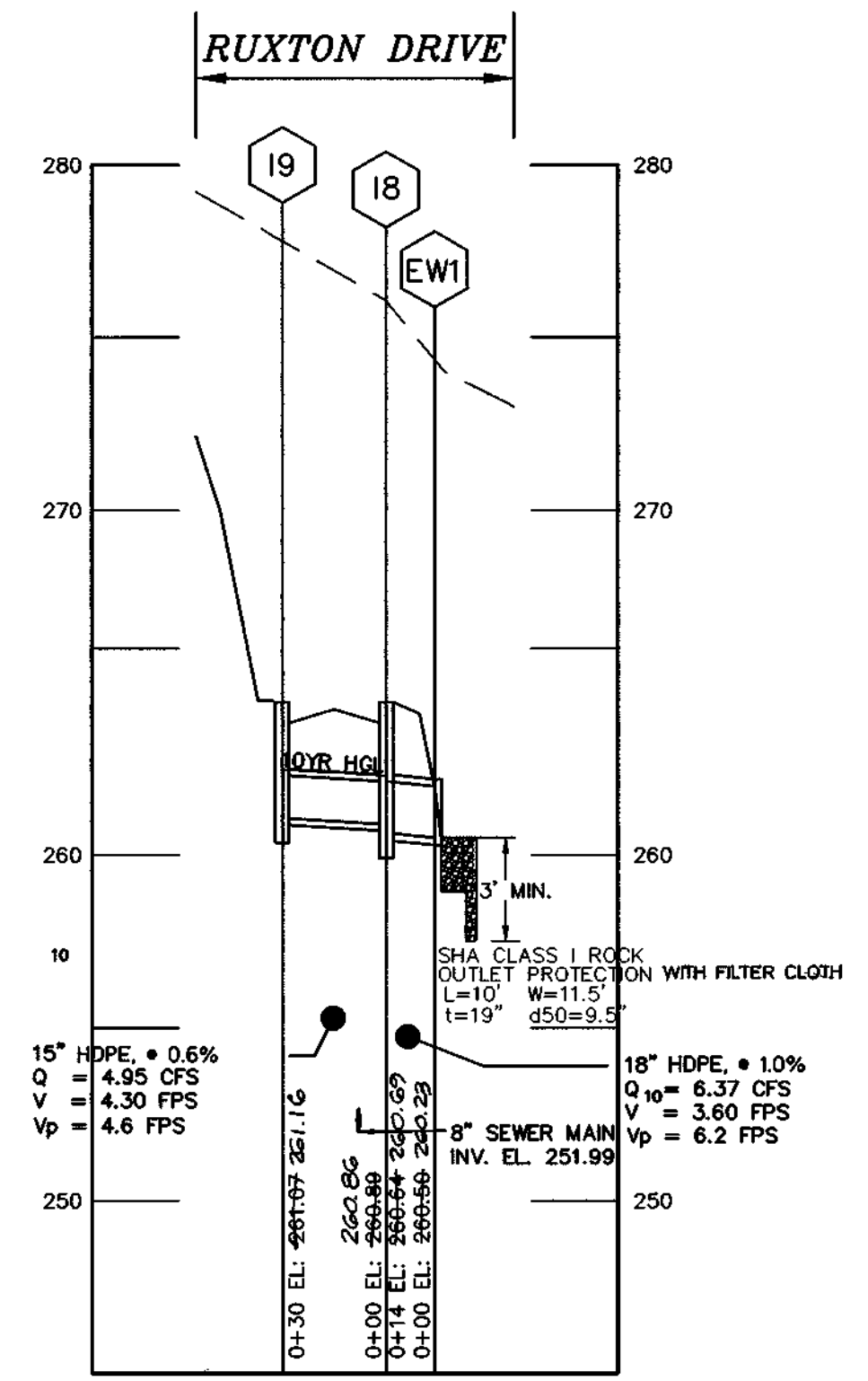
ADD RETAINING WALL LABEL & ELEV. REVERSE EXISTING GRADE & POND	description	revisions
1		

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 GRADING PLAN

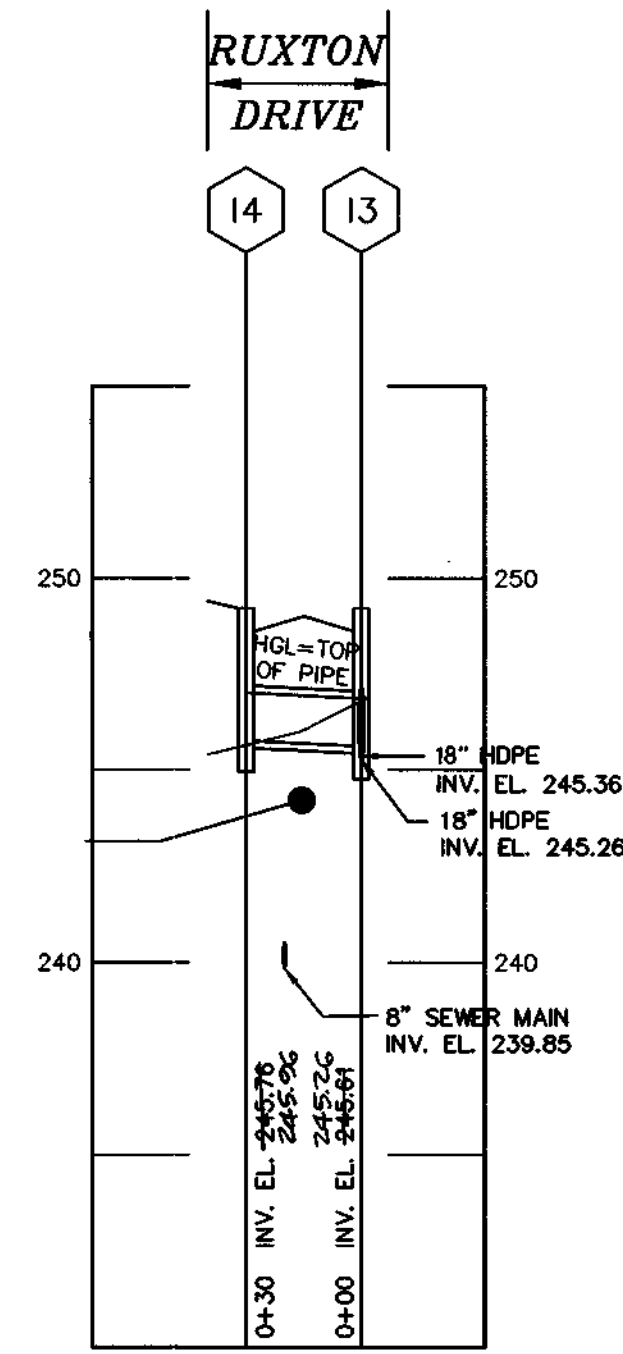
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0266 Balt. (301) 621-5521 West. (410) 997-0268 Fax.



STORM DRAIN PROFILE FROM I-7 TO ES-1
 HORIZONTAL SCALE : 1" = 50'
 VERTICAL SCALE : 1" = 5'



STORM DRAIN PROFILE FROM I-9 TO EW-1
 HORIZONTAL SCALE : 1" = 50'
 VERTICAL SCALE : 1" = 5'



STORM DRAIN PROFILE FROM I-4 TO I-3
 HORIZONTAL SCALE : 1" = 50'
 VERTICAL SCALE : 1" = 5'

STRUCTURE SCHEDULE

NO.	LOCATION	TOP**	INV. IN	INV. OUT	COMMENTS
M-1	N-500,518.069 E-869,000.094 N 500520 E 069245	260.00 252.12	230.00 232.52	239.75 262	INLET TYPE K (HO. CO. STD SD 4.13) - SUMP STD. M.H.
I-2	N-600,579.350 E-869,020.285 N 500520 E 069228	248.70 242.48	242.30 241.92	241.80 251	INLET TYPE K (HO. CO. STD SD 4.13) - SUMP
I-3	RUXTON DRIVE STA 12+98.36 ⁹² 13" RIGHT	249.22 ⁹²	245.80 ⁹² 245.41 ⁹²	245.20 ⁹² 244.58 ⁹²	INLET TYPE A-15 (WSSC STD SD 1.0) - 92% EFF.
I-4	RUXTON DRIVE STA 12+98.36 ⁹² 13" LEFT	249.22 ⁹²	245.80 ⁹² 245.41 ⁹²	245.20 ⁹² 244.58 ⁹²	INLET TYPE A-10 (HO. CO. STD SD 4.02) - 100% EFF.
I-5	RUXTON DRIVE STA 10+50.92 13" RIGHT	260.00 ⁹² 252.12 ⁹²	250.00 ⁹² 242.52 ⁹²	260.00 ⁹² 244.58 ⁹²	INLET TYPE A-10 (HO. CO. STD SD 4.02) - 85% EFF.
I-6	RUXTON DRIVE STA 7+25 13" RIGHT	279.30 ⁹²	270.00 ⁹² 260.00 ⁹²	270.00 ⁹² 260.00 ⁹²	INLET TYPE A-5 (HO. CO. STD SD 4.01) - 93% EFF.
I-7	RUXTON DRIVE STA 4+88 13" RIGHT	277.20 ⁹²	273.20 ⁹²	273.20 ⁹²	INLET TYPE A-15 (WSSC STD SD 1.6) - 99% EFF.
I-8	RUXTON DRIVE STA 0+82.80 13" LEFT	264.44 ⁹²	260.00 ⁹² 250.00 ⁹²	260.00 ⁹² 250.00 ⁹²	INLET TYPE A-10 (HO. CO. STD SD 4.02) - 100% EFF.
I-9	RUXTON DRIVE STA 0+82.80 13" RIGHT	264.44 ⁹²	260.00 ⁹² 250.00 ⁹²	261.00 ⁹² 251.60 ⁹²	INLET TYPE A-15 (WSSC STD SD 1.6) - 94% EFF.
ES-1	N-500,251.950 E-869,600.788 N 500207 E 069663	---	---	230.00 237.83	24" Ø END SECTION (HO. CO. STD. SD 5.51)
EW-1	RUXTON DRIVE STA 0+59.37 - 28.85' LEFT N 501043 E 802778	---	---	260.00 ⁹² 250.00 ⁹²	18" Ø TYPE "C" ENDWALL (HO. CO. STD. SD 5.21)

* STATIONS GIVEN TO CENTERLINE OF INLET AT FACE OF CURB FOR INLETS LOCATED WITHIN THE ROAD RIGHT-OF-WAY. STATIONS FOR "X" INLETS TO CL OF INLET. LOCATION OF END SECTION AND ENDWALL GIVEN TO THE CENTERLINE OF PIPE AT THE CONNECTION OF THE STORM DRAIN PIPE TO THE END SECTION OR ENDWALL.
 ** ELEVATIONS MEASURED TO CENTER OF SUMP INLETS AND TO DOWNSTREAM SIDE OF INLETS ON GRADE.

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature of Developer: *[Signature]* DATE: 10/31/97
 ELICOTT LAND, LLC
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature of Engineer: *[Signature]* DATE: 10/31/97
 R. JACOB HIKMAT
 PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: *[Signature]* DATE: 11/12/97
 USDA - NATURAL RESOURCE CONSERVATION SERVICE

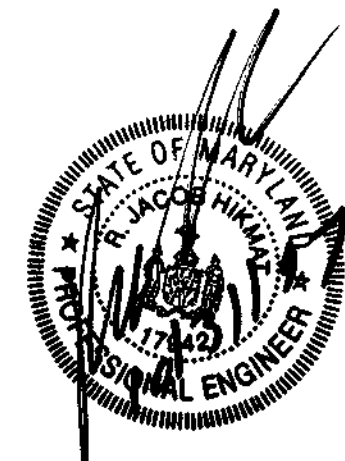
THIS DEVELOPMENT PLAN IS APPROVED FOR THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 11/10/97
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 2/2/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

Signature: *[Signature]* DATE: 2/4/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* DATE: 1-27-98
 CHIEF, BUREAU OF HIGHWAYS



AS-BUILT

Signature: *[Signature]* DATE:
 G. SCOTT SHANABERGER
 PROF. L.S.# 10249

SHANABERGER & LANE
 8726 TOWN & COUNTRY BLVD.
 SUITE 201
 ELLICOTT CITY, MARYLAND 21043

Project: 97027, Date: OCT 1997, Engineering: SJD, Illustration: SJD, Scale: AS SHOWN, Approval: SJD

Project Description: REVERSE STORM DRAIN TYPE & STANDARD FOR L-15 INLET

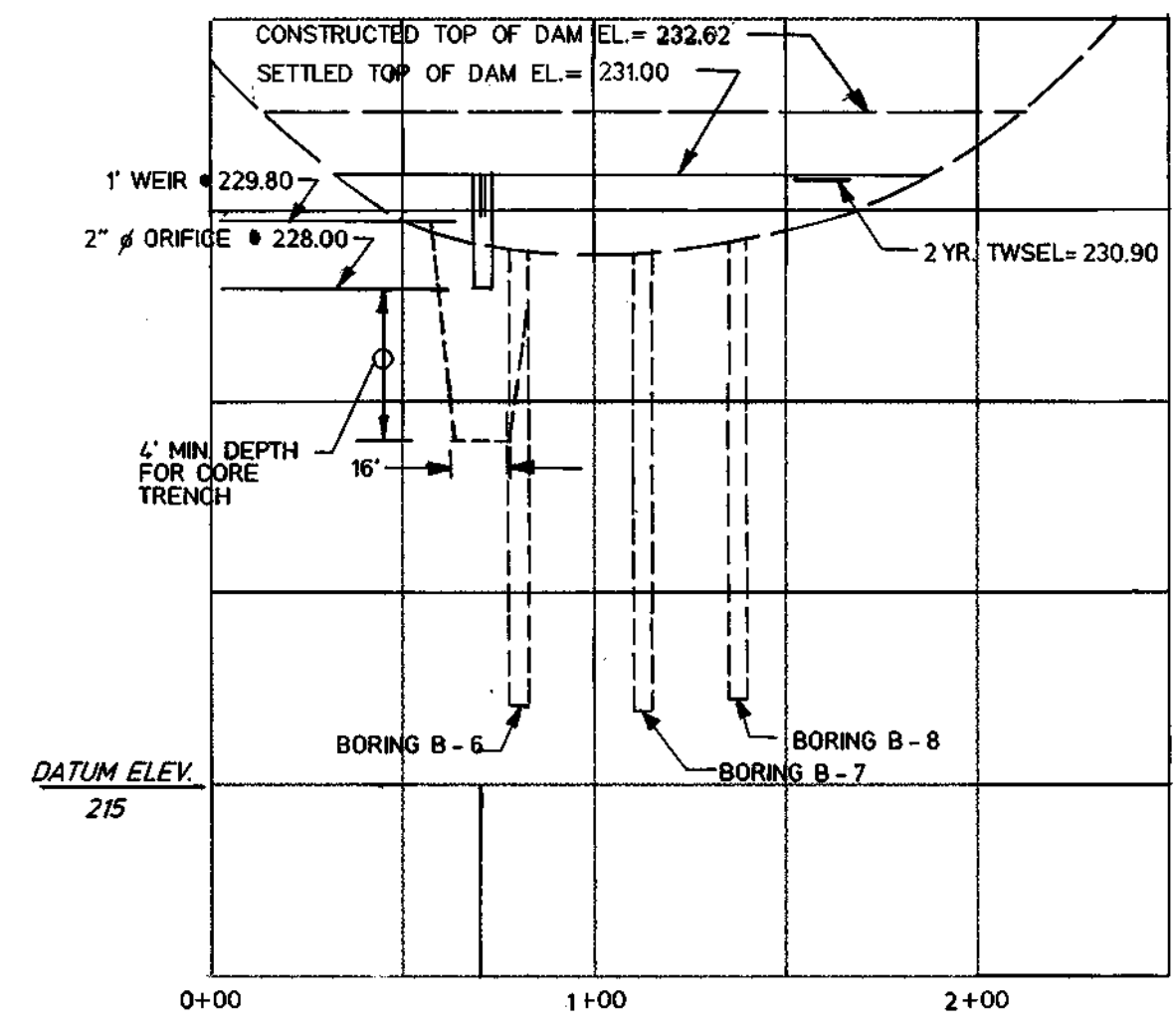
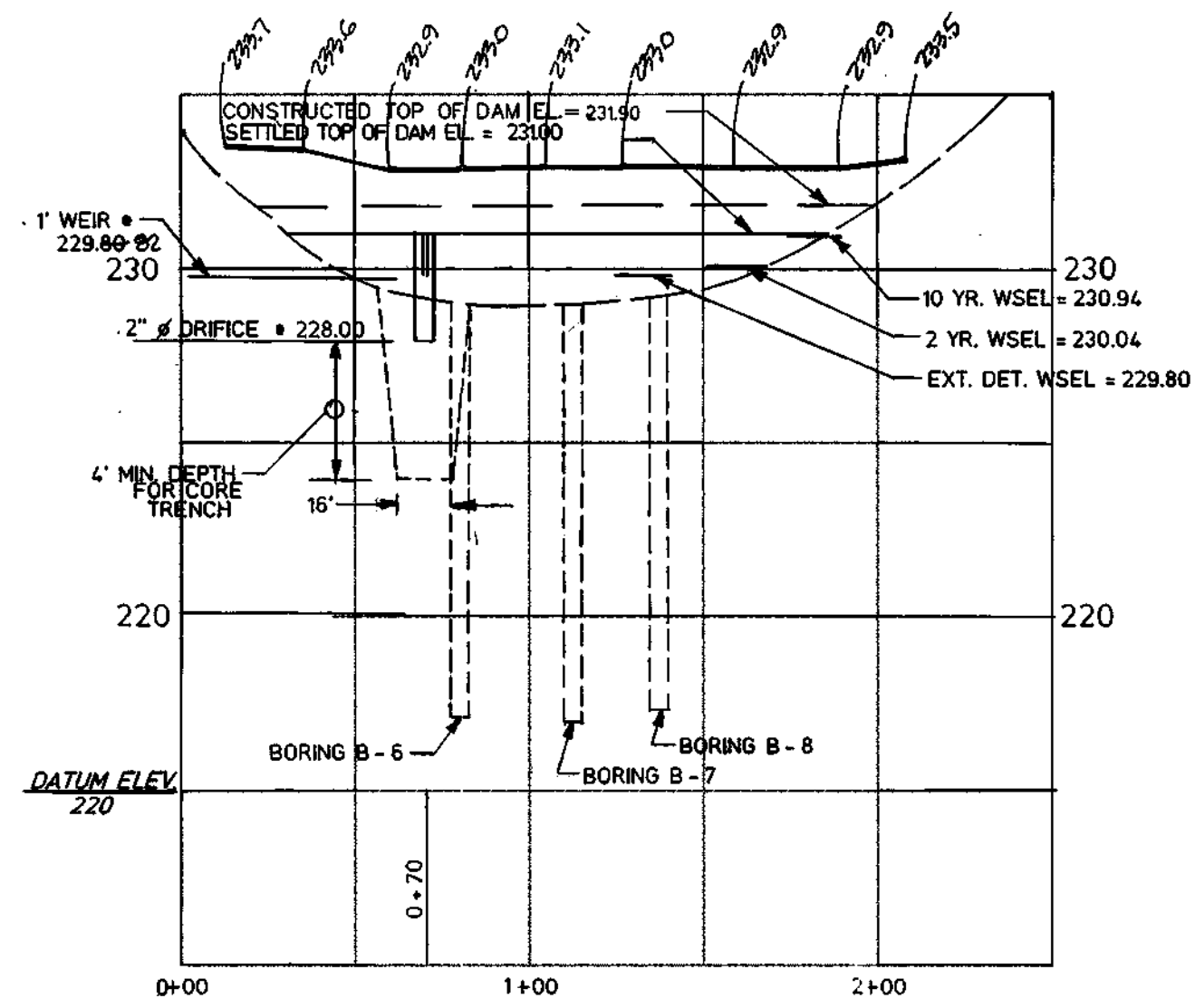
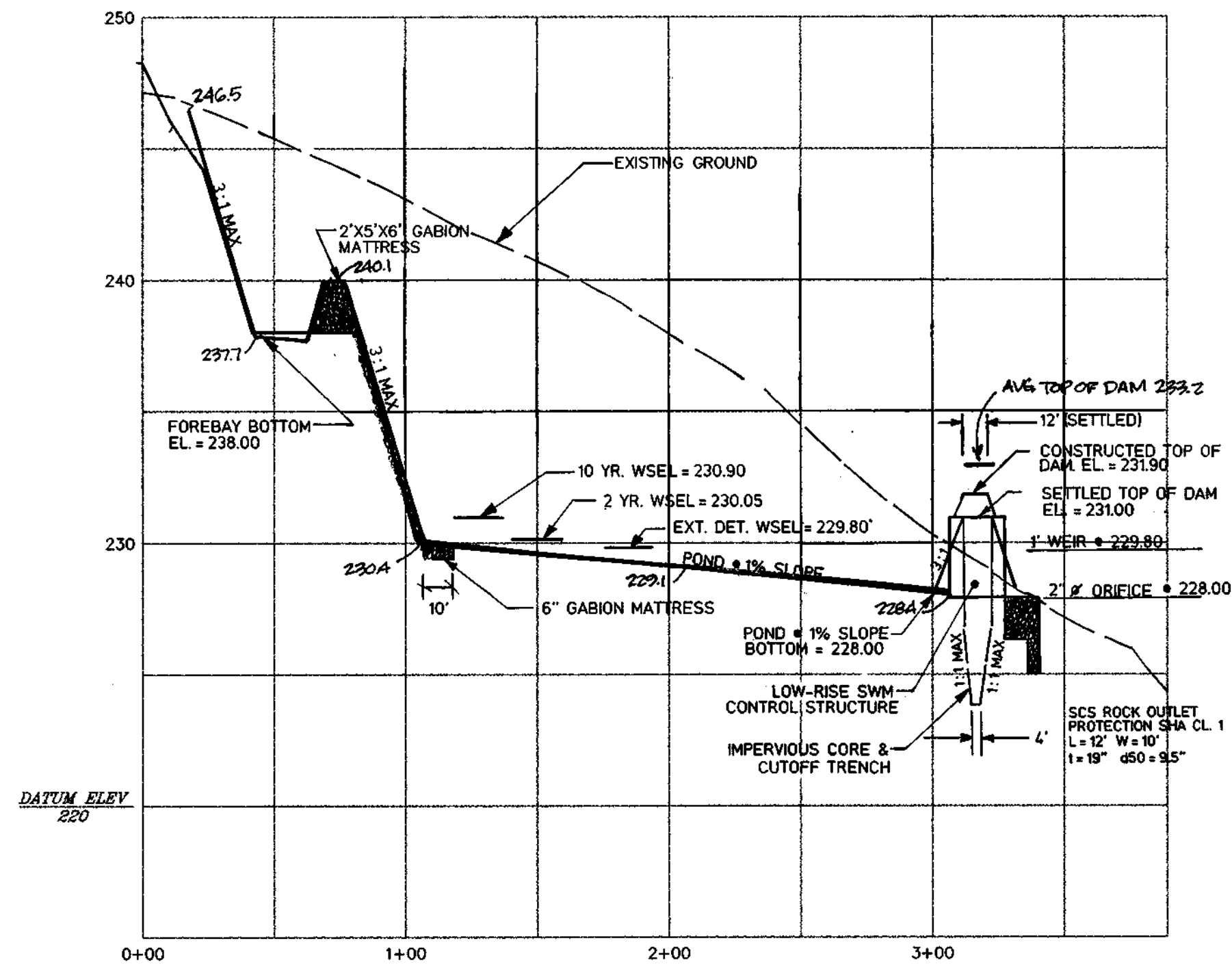
RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 HOWARD COUNTY, MARYLAND

FIRST ELECTION DISTRICT

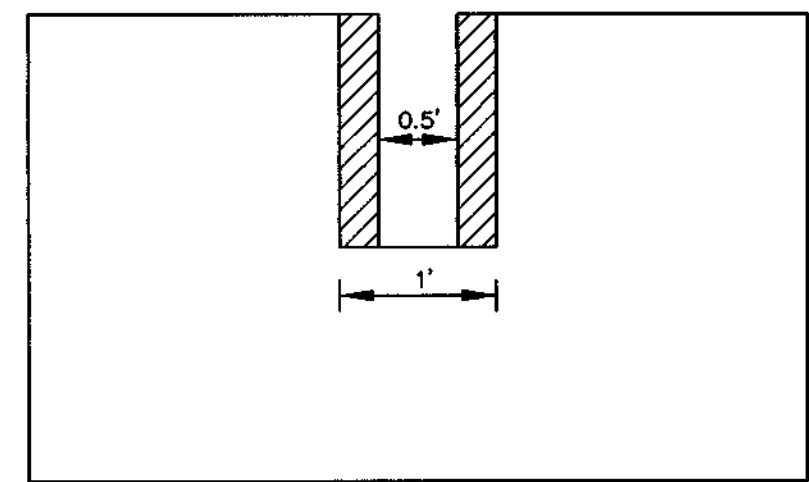
STORM DRAIN PROFILES

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

9 OF 17
 F-96-165

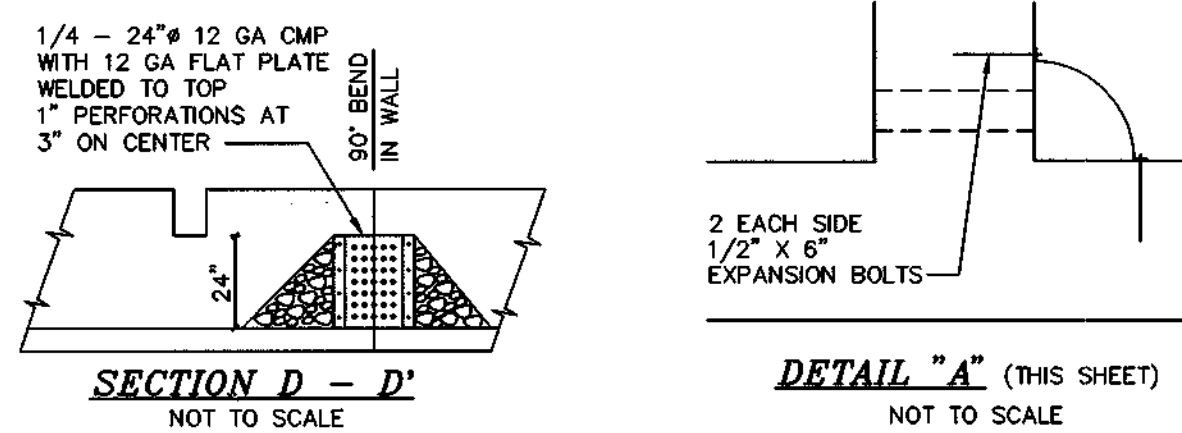


PROFILE - PRINCIPLE SPILLWAY
(FOR PERMANENT SWM)



SCALE: 1"=50' HOR
1"=5' VER

INDICATES AREA OF WEIR TO BE BLOCKED FOR SEDIMENT CONTROL PURPOSES.

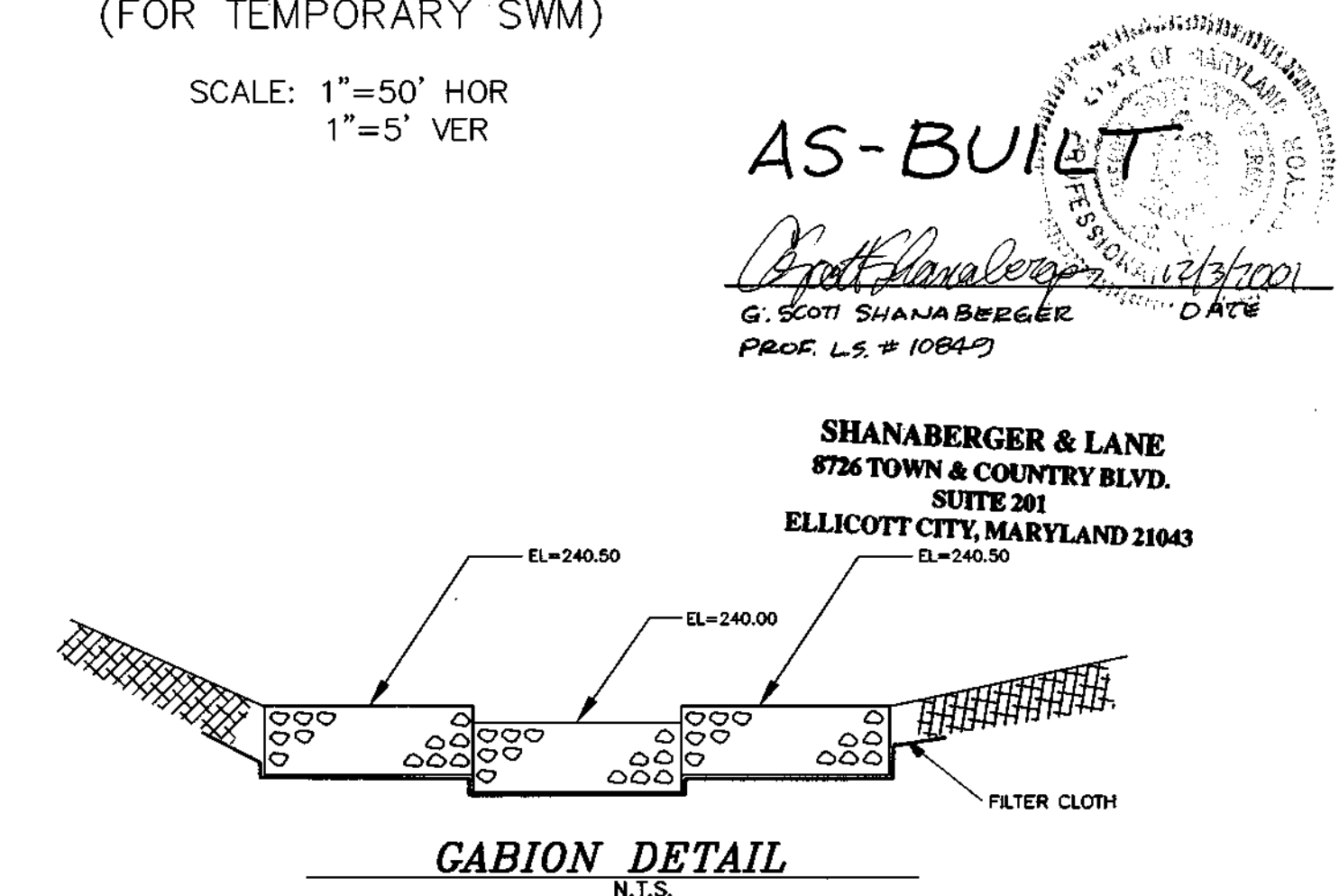
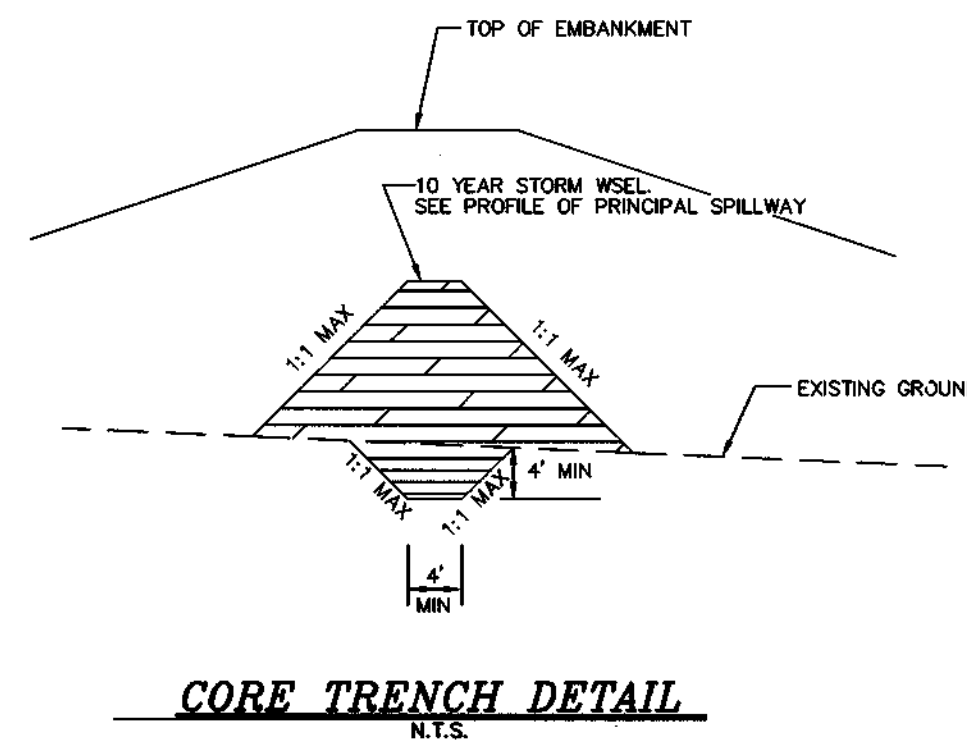


TRASH RACK DETAIL
(ADD TO STD DETAIL SD-7.00)

NOTE: WRAP RACK WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC AND PLACE STONE AT 3:1 SLOPES UP AGAINST THE RACK DURING CONSTRUCTION.

SWM POND MAINTENANCE REQUIREMENTS

- SILT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS SIX (6) INCHES IN BASIN OR FOUR (4) INCHES IN THE FOREBAY.
- ACCUMULATED PAPER, TRASH AND DEBRIS SHALL BE REMOVED AS NECESSARY.
- ANNUAL INSPECTION AND REPAIR, IF REQUIRED, OF THE STRUCTURE SHALL BE PERFORMED.



AS-BUILT
G. SCOTT SHANABERGER
PROF. L.S. # 10847

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLCOTT CITY, MARYLAND 21043

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

[Signature] 10/21/97
SIGNATURE OF DEVELOPER DATE
ELLCOTT LAND, LLC
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

[Signature] 10/31/97
SIGNATURE OF ENGINEER DATE
R. JACOB HIKMAT
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 11/2/97
USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

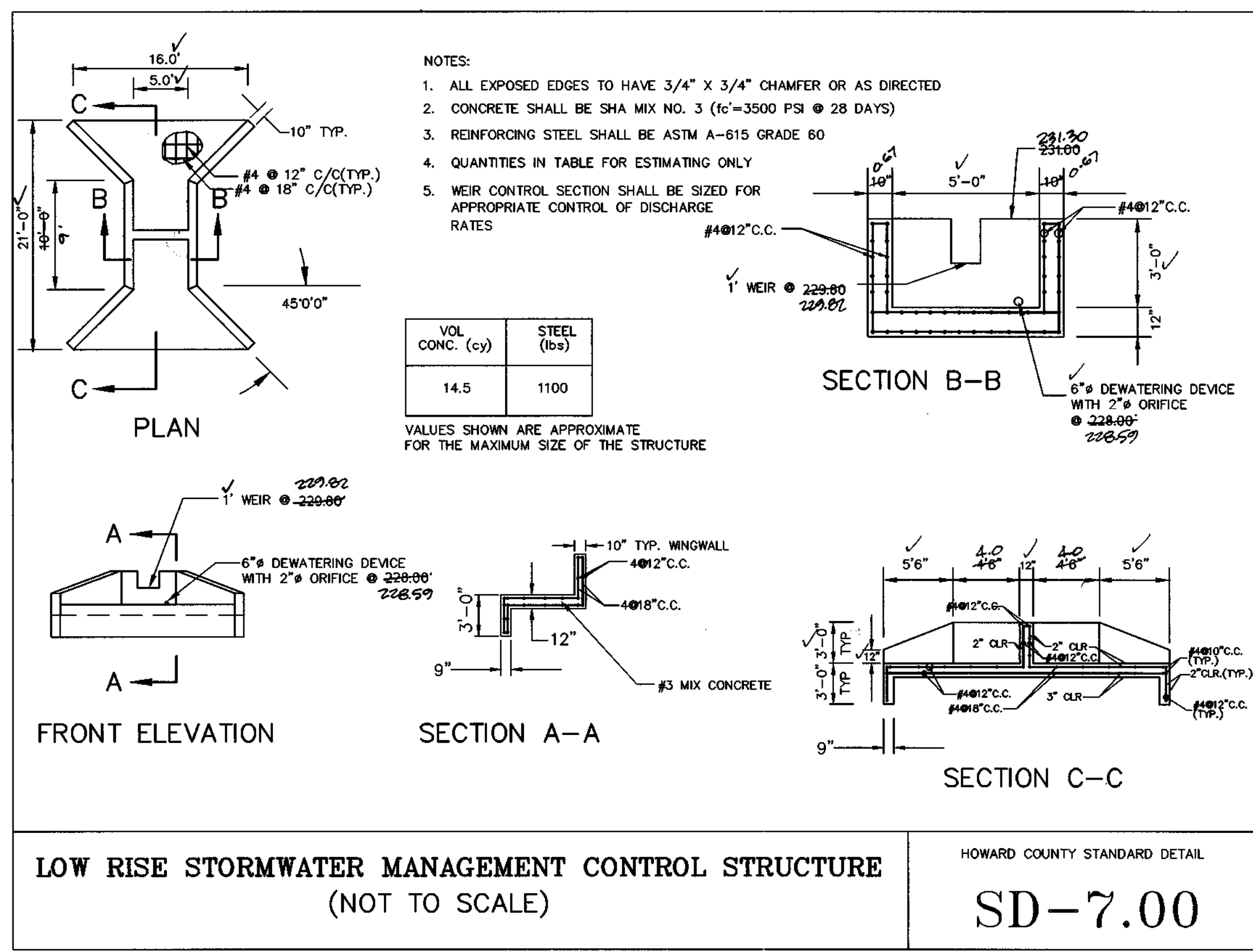
[Signature] 11/6/97
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/3/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 2/4/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

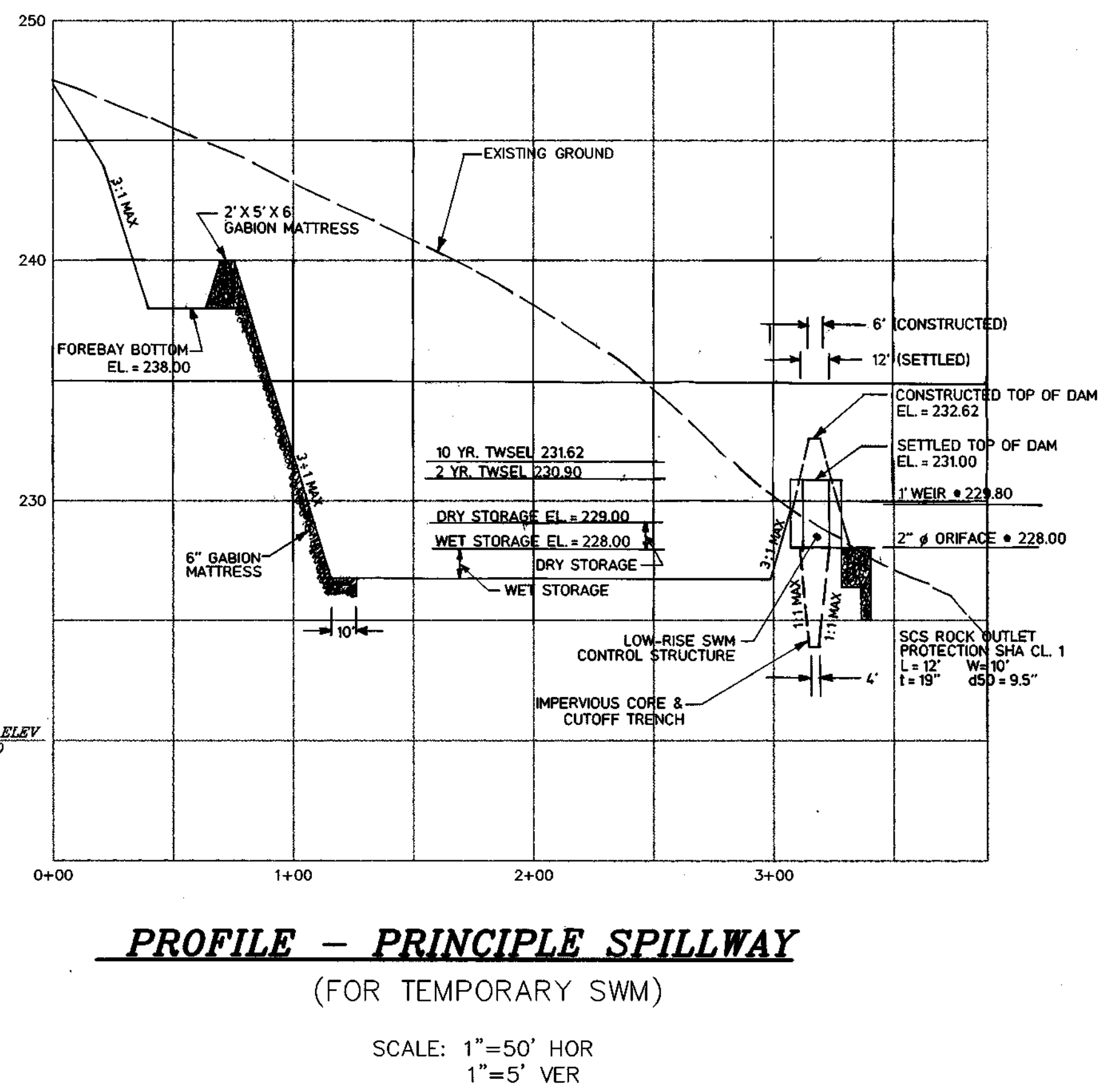
[Signature] 1-27-98
CHIEF, BUREAU OF HIGHWAYS DATE



- NOTES:
- ALL EXPOSED EDGES TO HAVE 3/4" X 3/4" CHAMFER OR AS DIRECTED
 - CONCRETE SHALL BE SHA MIX NO. 3 (f_c'=3500 PSI @ 28 DAYS)
 - REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60
 - QUANTITIES IN TABLE FOR ESTIMATING ONLY
 - WEIR CONTROL SECTION SHALL BE SIZED FOR APPROPRIATE CONTROL OF DISCHARGE RATES

VOL CONC. (cy)	STEEL (lbs)
14.5	1100

VALUES SHOWN ARE APPROXIMATE FOR THE MAXIMUM SIZE OF THE STRUCTURE

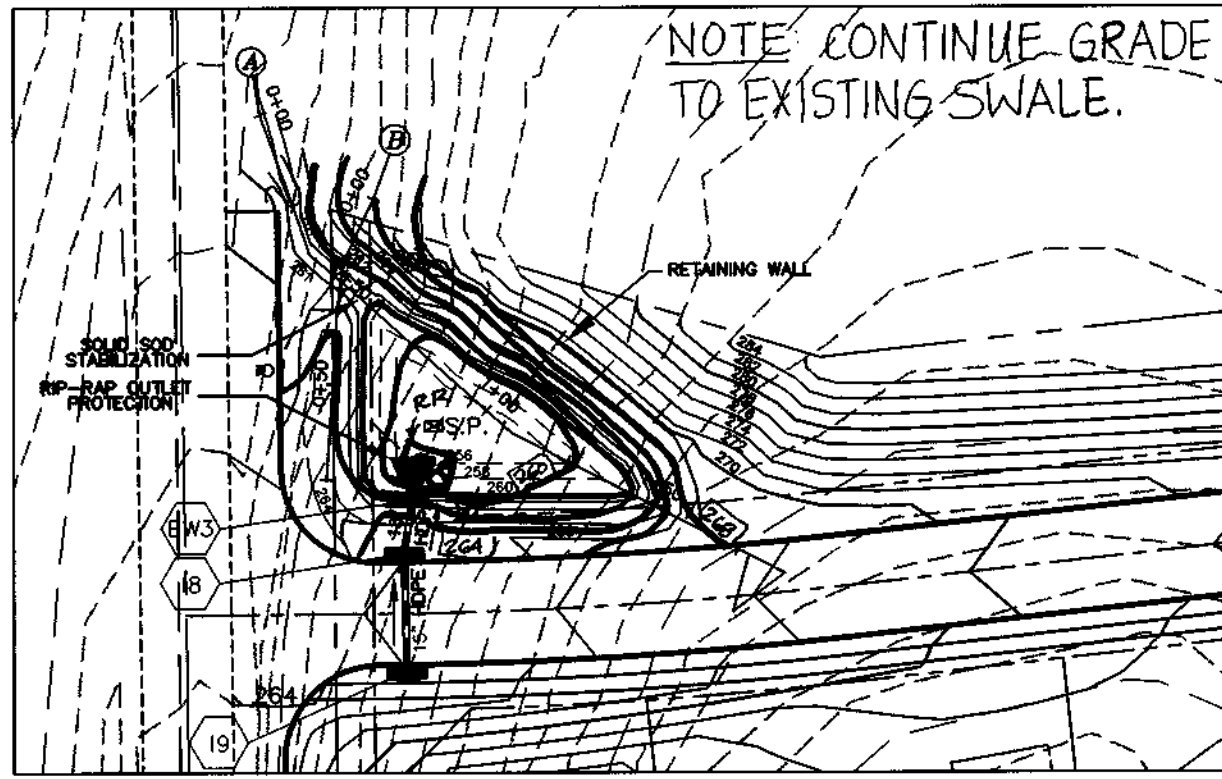


project	date	approval
97027	OCT 1997	engineering
illustration	JS	scale
AS SHOWN	AS SHOWN	AS SHOWN

no.	description	date
1	LOWER ELEVATIONS ON PRINCIPLE SPILLWAY PROFILES	8-5-98

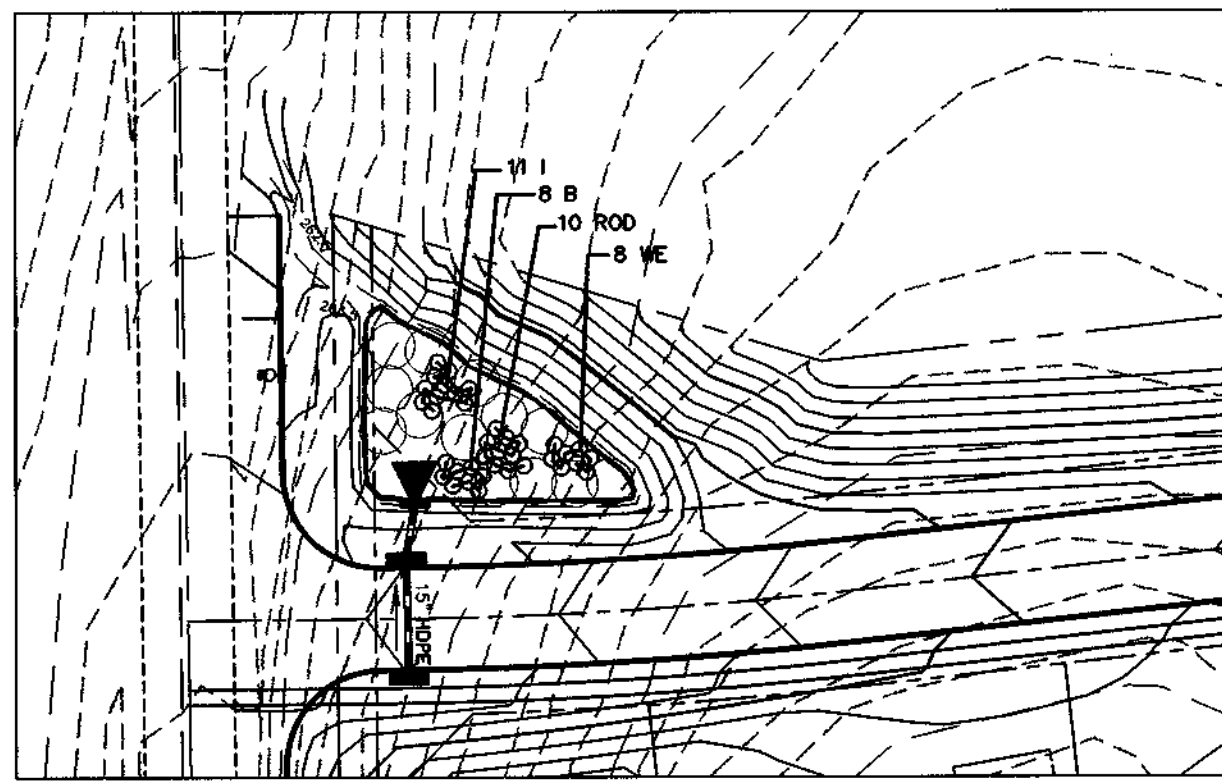
RAUSCH PROPERTY, LOTS 3 THRU 40
A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT
STORMWATER MANAGEMENT DETAILS & PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Fax: (410) 997-0288 Fax

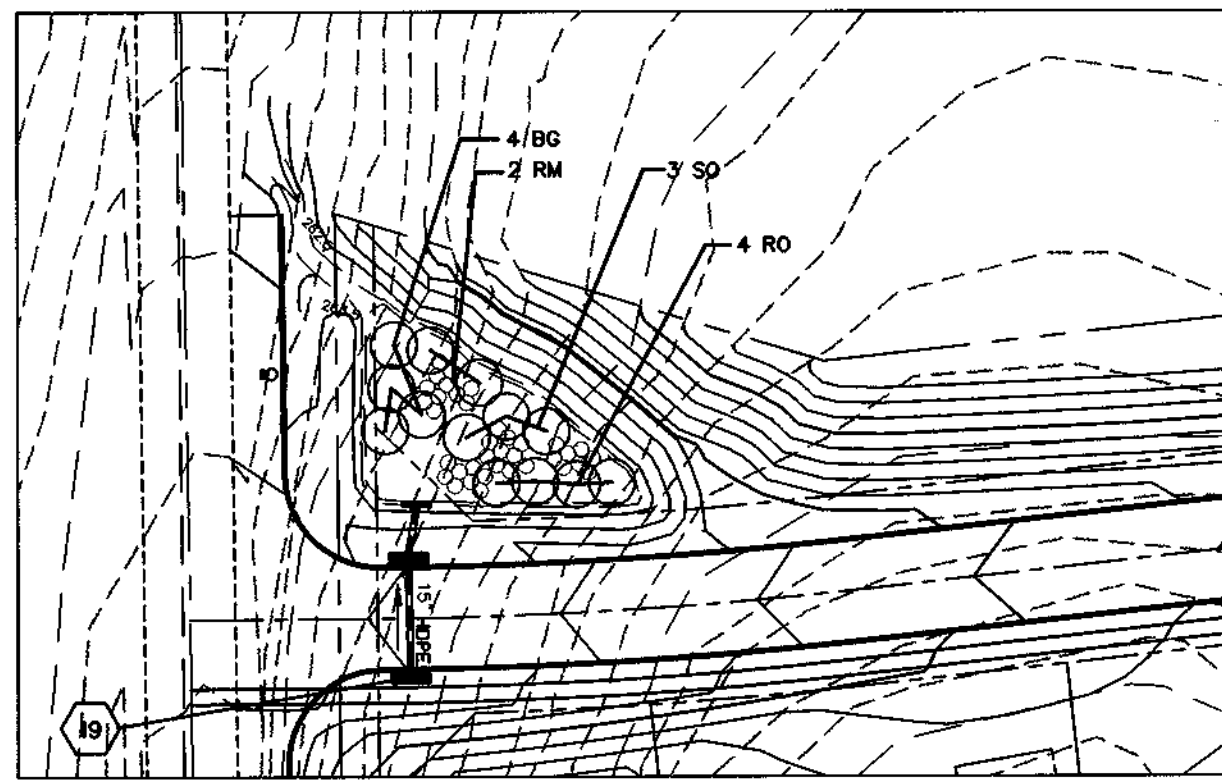


NOTE: CONTINUE GRADE TO EXISTING SWALE.

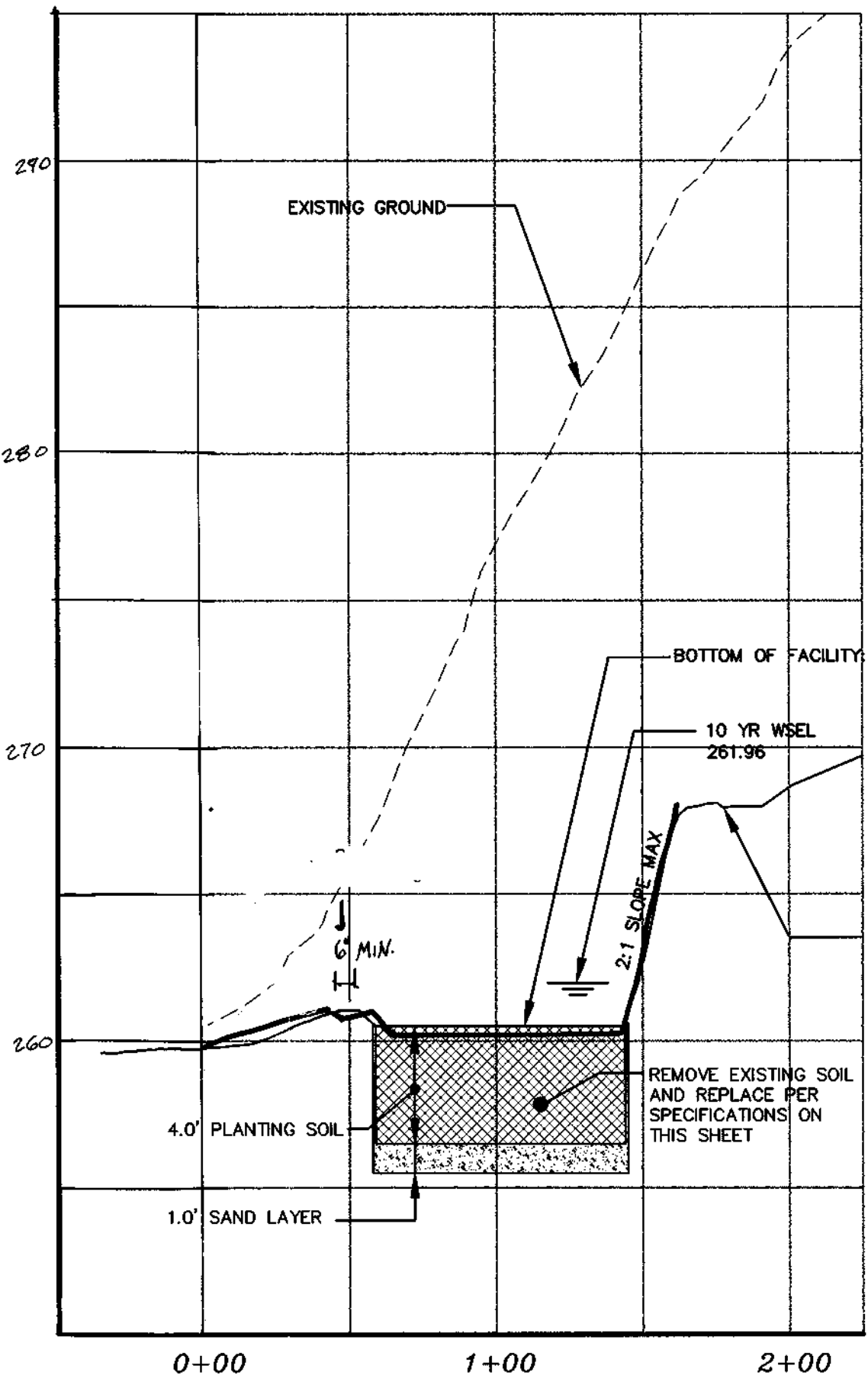
PLAN VIEW
GRADING PLAN
SCALE: 1" = 50'



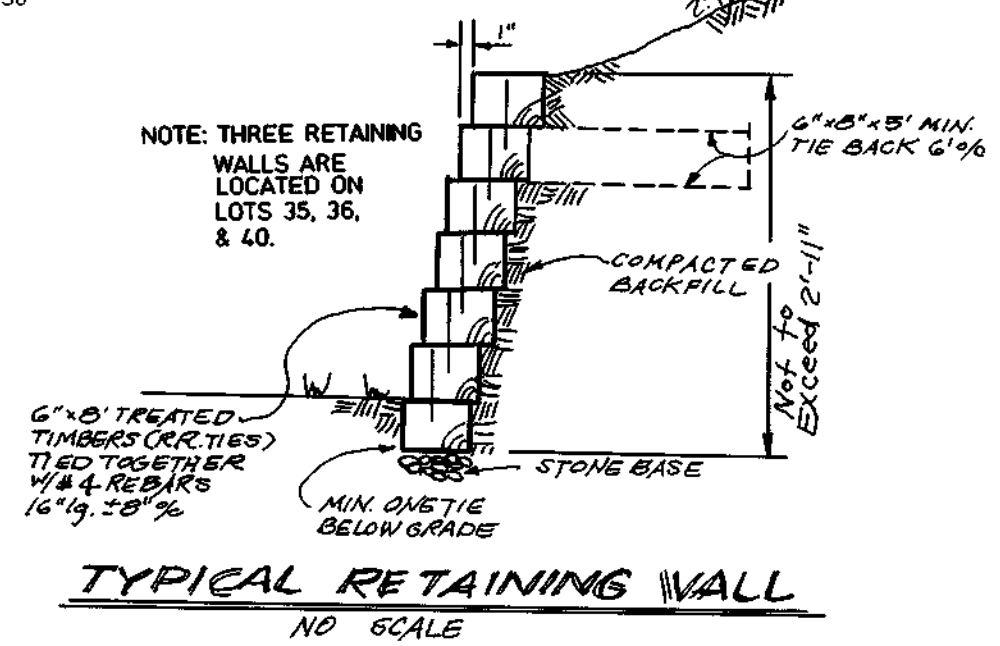
PLAN VIEW
SHRUB PLANTING PLAN
SCALE: 1" = 50'



PLAN VIEW
TREE PLANTING PLAN
SCALE: 1" = 50'



PROFILE
CENTERLINE OF FACILITY
SCALE: HOR. 1"=50'
VERT. 1"=5'

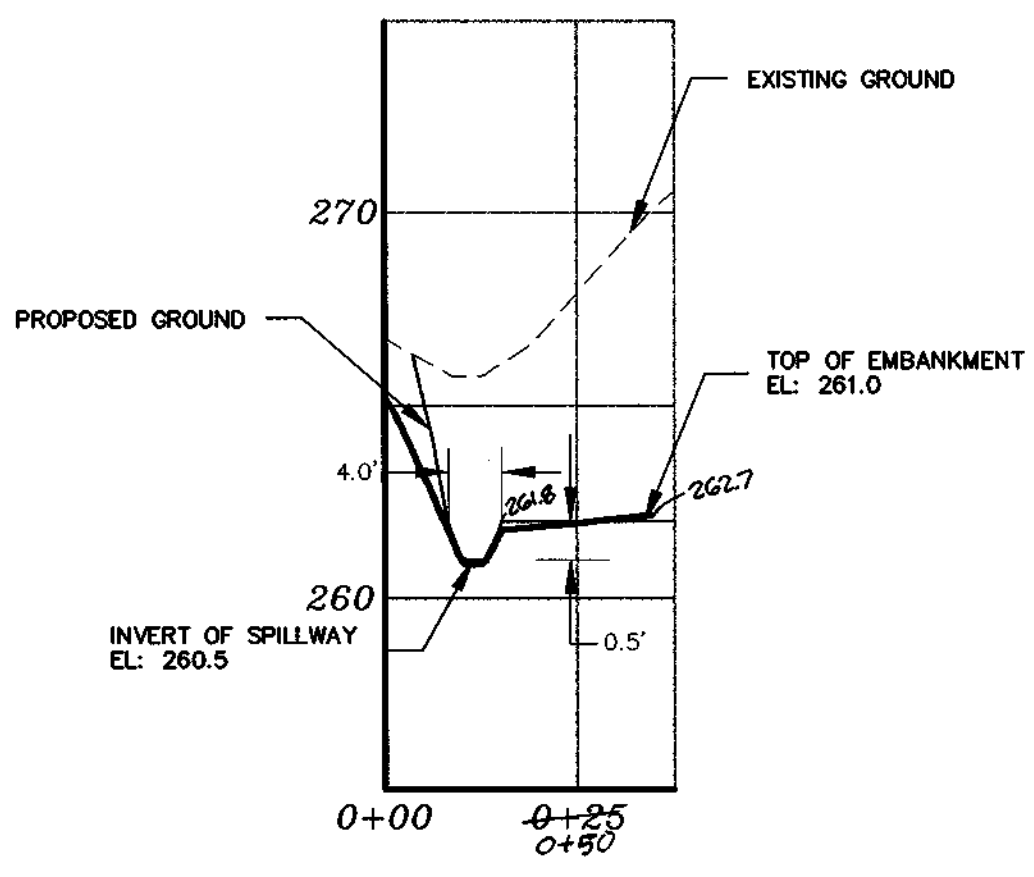


TYPICAL RETAINING WALL
NO SCALE

BIORETENTION AREA PLANTING SCHEDULE

50 TREES & SHRUBS (13 TREES, 37 SHRUBS)

TOTAL QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
37 SHRUBS				
10	ROD	CORNUS STOLONIFERA	RED OSIER DOGWOOD	2 1/2' - 3' HT.
8	EA	EUONYMUS ALATUS	WINGED EUONYMUS	2 1/2' - 3" HT.
11	I	ILEX GLABRA	INKBERRY	2 1/2' - 3' HT.
8	B	MYRICA PENNSYLVANICA	BAYBERRY	2' - 2 1/2' HT.
13 TREES				
4	BC	NYSSA SYLVATICA	BLACK GUM	2 1/2" - 3" CAL.
3	SO	QUERCUS COCCINEA	SCARLET OAK	2 1/2" - 3" CAL.
4	RO	QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
2	RM	ACER RUBRUM RED SUNSET	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.



PROFILE
SPILLWAY AND EMBANKMENT
SCALE: HOR. 1"=50'
VERT. 1"=5'

AS-BUILT

OPERATION & MAINTENANCE SCHEDULE FOR THE BIORETENTION FACILITY

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

PLANT MATERIAL GUIDELINES

BALLED AND BURLAPPED AND CONTAINERIZED TREES AND SHRUBS SHOULD BE PLANTED BETWEEN MARCH 15 AND JUNE 30 OR BETWEEN SEPTEMBER 15 AND NOVEMBER 15. GROUNDCOVERS FOLLOW TREE AND SHRUB PLANTING DATES. GRASSES AND LEGUMES SHOULD BE PLANTED IN THE SPRING.

FOR ALL PLANT INSTALLATION, THE CONTRACTOR SHALL PROVIDE A ONE (1) YEAR 80% CARE AND REPLACEMENT WARRANTY. THIS WARRANTY SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND CONTINUE FOR ONE (1) YEAR. REPLACEMENT OF PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE MAINTENANCE SCHEDULE.

INSTALLATION AND MAINTENANCE SCHEDULE

SOILS:
PROVIDE A MINIMUM OF FOUR (4) FEET OF PLANTING SOIL WITH A ONE (1) FOOT SAND LAYER BENEATH. SOILS SHALL BE SANDY LOAM, OR LOAM TEXTURE. SOIL SHALL HAVE A COMPOSITION OF AT LEAST 10 TO 25 PERCENT CLAY. LOAMY SOILS MAY BE UTILIZED BUT MUST CONSIST OF 35% SAND. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH, BRUSH, OR ANY OTHER MATERIAL OR SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH. PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, OR OTHER SUCH NUISANCE MATERIAL. SOILS SHALL HAVE AN INFILTRATION RATE IN EXCESS OF 0.5 IN./HR. AND A SOIL ACIDITY (PH) BETWEEN 5.5 AND 6.5.

THE FOLLOWING IS THE MINIMUM ACCEPTABLE CRITERIA FOR SOILS:

PH RANGE:	5.5 - 6.5
ORGANIC MATTER:	1.5% - 3.0%
MAGNESIUM (MG):	35 LBS./ACRE
PHOSPHORUS (P2O5):	100 LBS./ACRE
POTASSIUM (K2O):	85 LBS./ACRE
SOLUBLE SALTS:	NOT TO EXCEED 500 PPM

SOIL SHOULD BE PLACED WITHIN THE PLANTING AREA IN LIFTS OF 18 INCHES OR LESS AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR BACKHOE.

MAINTENANCE SHALL CONSIST OF INSPECTION AND REPAIR OF EROSION ON A MONTHLY BASIS.

SAND:

SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN 1 INCH IN DIAMETER AND SHALL CONFORM TO MSHA SECTION 901, FINE AGGREGATE/SAND.

ORGANIC LAYER:

ONCE TREES AND SHRUBS HAVE BEEN INSTALLED, A MULCH LAYER SHOULD BE ADDED. MULCH SHOULD BE FREE OF WEED SEEDS, SOIL, ROOTS OR ANY OTHER SUBSTANCE NOT CONSISTING OF EITHER BOLE OR BRANCH WOOD AND BARK. MULCH SHALL BE UNIFORMLY APPLIED APPROXIMATELY 2 TO 3 INCHES IN DEPTH, AND WILL CONSIST OF EITHER A STANDARD LANDSCAPE FINE SHREDDED HARDWOOD MULCH OR SHREDDED HARDWOOD CHIPS. MULCH WHICH CONTAINS LEAF LITTER AND GRASS CLIPPINGS IS NOT ACCEPTABLE. ANY GROUNDCOVERS SPECIFIED AS PLUSS MAY BE INSTALLED ONCE THE MULCH HAS BEEN LAID DOWN. GROUNDCOVERS ESTABLISHED BY SEEDING AND/OR CONSISTING OF GRASSES SHOULD NOT BE COVERED WITH A MULCH LAYER.

ONCE A YEAR IN THE SPRING, THE ORGANIC LAYER SHALL BE TESTED TO DETERMINE THE PH OF THE SOIL. IF THE PH IS OUTSIDE THE RANGE OF 5.5 TO 6.5, THE ORGANIC LAYER SHALL BE TREATED TO RETURN THE LAYER TO ACCEPTABLE LIMITS. ANNUAL SOIL TESTING SHOULD BE CONDUCTED TO DETECT AND PREVENT THE ACCUMULATION OF TOXINS AND HEAVY METALS.

ONCE A YEAR IN THE SPRING, REMOVE THE PVIOUS MULCH LAYER AND APPLY NEW MULCH LAYER AS NEEDED.

PLANT MATERIAL:

ONCE PLANTING HAS BEEN COMPLETED, PLANT MATERIAL SHOULD BE WATERED BY HAND AT THE END OF EACH DAY FOR FOURTEEN CONSECUTIVE DAYS. ANNUAL MAINTENANCE WILL BE REQUIRED FOR ALL PLANT MATERIAL. INSPECTION OF ALL VEGETATION SHALL OCCUR TWICE A YEAR. PLANT MATERIAL MAINTENANCE AND UPKEEP SHALL INCLUDE PREVENTION AND TREATMENT OF DISEASE OR INSECT INFESTATIONS. PRUNING TO MAINTAIN THE HEALTH OF THE PLANTS SHALL BE COMPLETED AS REQUIRED. DEAD PLANT MATERIAL SHALL BE REMOVED AND REPLACED BETWEEN MARCH 15 AND APRIL 30 OR BETWEEN OCTOBER 1 AND NOVEMBER 30.

DEFICIENT STAKES AND WIRES SHOULD BE REPLACED BY HAND. STAKES SHOULD BE REPLACED ONCE A YEAR IN THE SPRING.

REFER TO THE "DESIGN MANUAL FOR THE USE OF BIORETENTION IN STORMWATER MANAGEMENT", AS PUBLISHED BY THE PRINCE GEORGE'S COUNTY, MARYLAND, DEPARTMENT OF ENVIRONMENTAL RESOURCES FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

PLANT SPECIFICATIONS:

- ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE UNTIL PLANTED.
- WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THAN THE DIAMETER OF THE BALL OF THE TREE.
- PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4" OF THE BALL TO BE ABOVE THE FINAL GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
- FERTILIZER SHALL BE PLACED AT THE BOTTOM OF THE PIT AS INDICATED BELOW.
- PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL.
- SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT THE TOP OF THE BALL IS APPROXIMATELY 1/4" ABOVE FINAL GRADE.
- BACKFILL PLANTING PIT WITH APPROVED SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING.
- TREES SHALL BE BRACED BY USING 2" X 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS, ON THE OUTSIDE OF THE TREE BALL. THE TREE IS TO BRACED TO THE STAKES WITH HOSE AND WIRE.

FERTILIZATION:

- TREE AND SHRUB FERTILIZER SHALL BE A 21 GM. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2 YEAR) FERTILIZER TABLET WITH A MINIMUM GUARANTEED ANALYSIS OF 20-10-5:
- | | |
|-----------------------------------|-----|
| TOTAL NITROGEN (N) | 20% |
| WATER SOLUBLE ORGANIC NITROGEN | 7% |
| WATER IN SOLUBLE ORGANIC NITROGEN | 13% |
| AVAILABLE PHOSPHORIC ACID (P2 O5) | 10% |
| SOLUBLE POTASH (K2 O) | 5% |

- FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:

1 GAL. CONTAINER	1 EA. 21 GM TABLET
3 GAL. CONTAINER	3 EA. 21 GM TABLETS
5 GAL. CONTAINER	3 EA. 21 GM TABLETS
7 GAL. CONTAINER	5 EA. 21 GM TABLETS

NON-GRASS GROUND COVER:

- GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE.
- BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEM OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMBLD.
- GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. ROOTS OF BARE ROOT PLANTS SHALL BE COVERED TO THE CROWN.
- THE MULCHED AND PLANTED GROUND COVER BED SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE.
- THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

PLANT MATERIAL GUIDELINES

BALLED & BURLAPPED AND CONTAINERIZED TREES AND SHRUBS SHOULD BE PLANTED BETWEEN MARCH 15 AND JUNE 30 OR SEPTEMBER 15 AND NOVEMBER 15 AS SPECIFIED ON THE ROAD PLAN DRAWINGS. GROUNDCOVERS FOLLOW TREE AND SHRUB PLANTING DATES. GRASSES AND LEGUMES SHOULD BE PLANTED IN THE SPRING.

FOR ALL PLANT INSTALLATION, THE CONTRACTOR SHALL PROVIDE A ONE (1) YEAR 80% CARE AND REPLACEMENT WARRANTY. THIS WARRANTY SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND CONTINUE FOR ONE (1) YEAR. REPLACEMENT OF PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE MAINTENANCE SCHEDULE.

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: 10/31/97
SIGNATURE OF DEVELOPER: [Signature]
PRINTED NAME OF DEVELOPER: ELLICOTT LAND LLC

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 NOTICED 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: 10/31/97
SIGNATURE OF ENGINEER: [Signature]
PRINTED NAME OF ENGINEER: KACAR HIKMAT

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.

DATE: 11/12/97
SIGNATURE: [Signature]
USDA - NATURAL RESOURCES CONSERVATION SERVICE

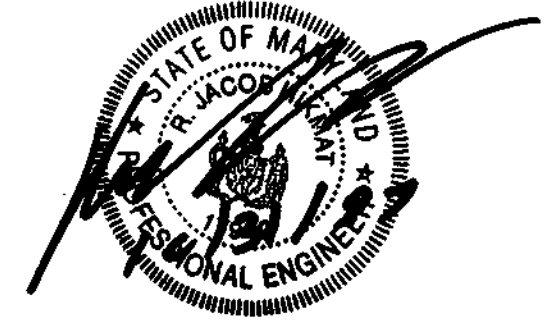
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 11/10/97
SIGNATURE: [Signature]
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
DATE: 1-27-98
SIGNATURE: [Signature]
CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 2/9/98
SIGNATURE: [Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 2/16/98
SIGNATURE: [Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION



DATE: 12/9/2000
SIGNATURE: [Signature]
C. SCOTT SHANABERGER
PROF. L.S.# 10849

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLICOTT CITY, MARYLAND 21043

date	OCT 1997
project	97027
illustration	SD
scale	1"=50'
approval	SD

revision	1	REUSE STORM DRAIN PIPE TYPE & ADD RETAINING WALL NOTE	8-4-98
description			
revisions			

RAUSCH PROPERTY
A RESUBDIVISION OF RAUSCH PROP. LOTS 1 & 2
TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT DETAILS & PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 987-0288 Fax (410) 987-0288

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

NOTE: FEE-IN-LIEU OF REFORESTATION HAS BEEN REQUESTED FOR THE REMAINING AREA REQUIRED TO BE REFORESTED BY THE HOWARD COUNTY FOREST CONSERVATION MANUAL, SEE FOREST CONSERVATION CALCULATIONS THIS SHEET. (7.68 ACRES OF REFORESTATION IS REQUIRED. 1.15 ACRES OF REFORESTATION HAS BEEN SHOWN ON-SITE. THE REMAINING 6.53 ACRES WILL BE A PART OF THE FEE-IN-LIEU REQUEST.)

#2 The forest conservation calculations have been adjusted to reflect that 10 acres of reforestation retention is being met onsite and a fee-in-lieu has been paid for the remaining 6.68 acres for a total reforestation obligation of 7.68 acres.

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 SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

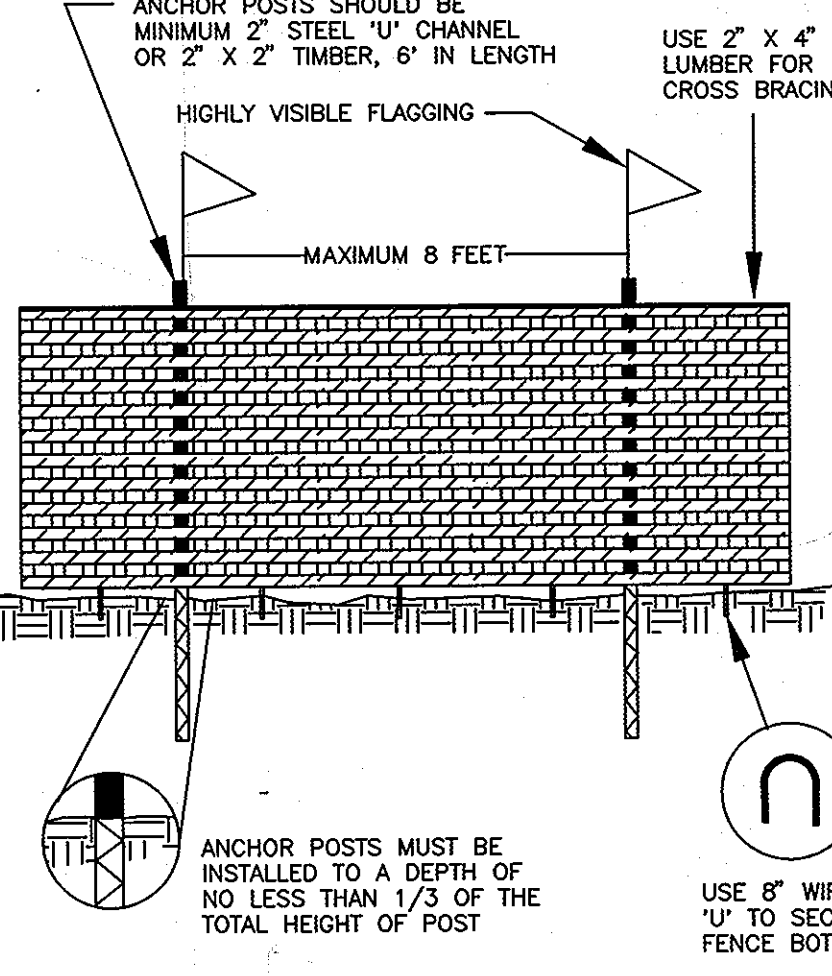
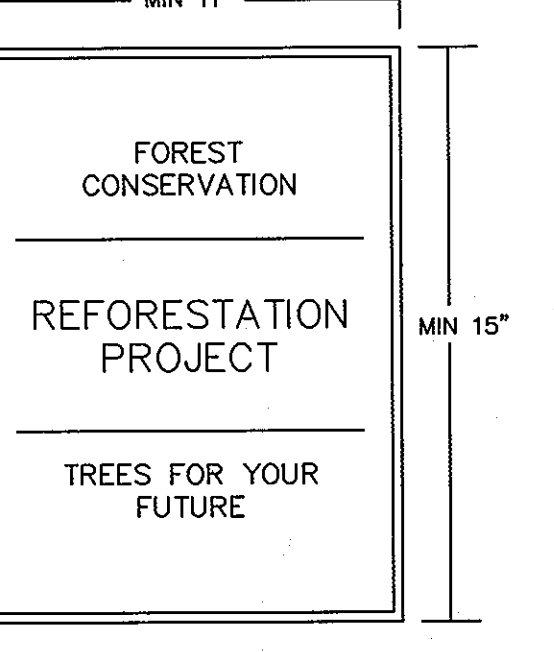
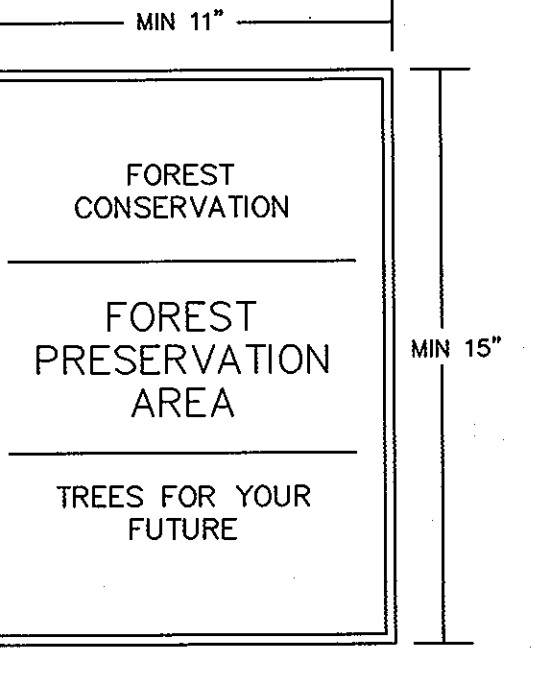
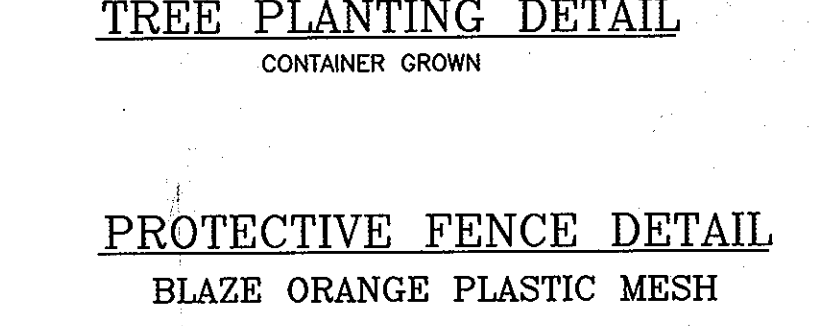
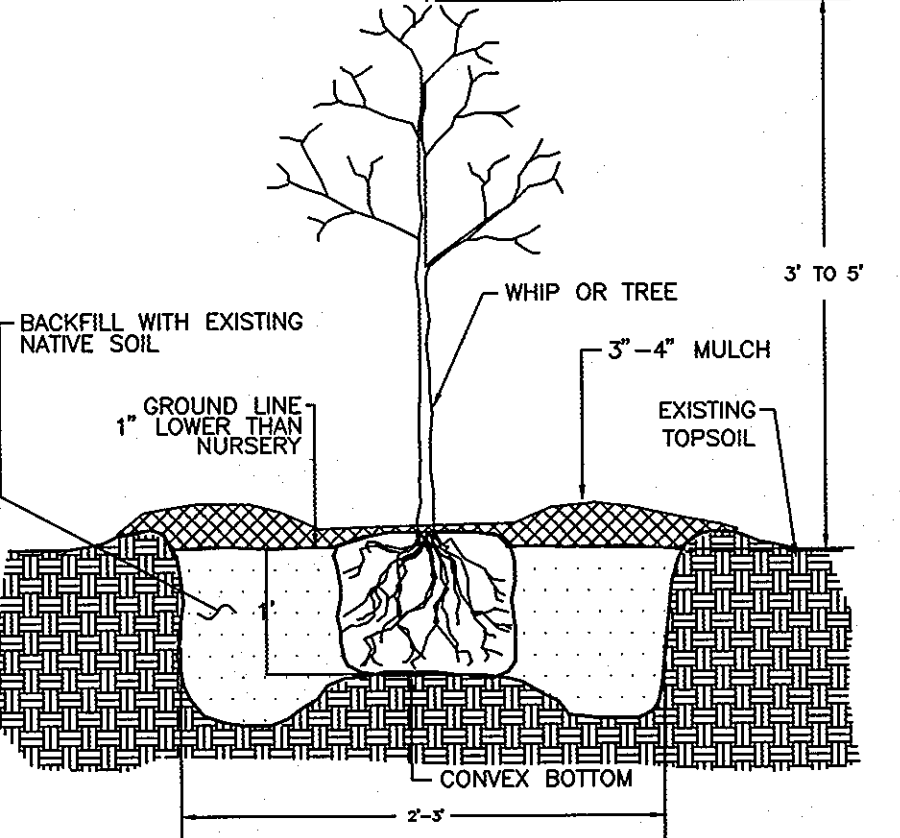
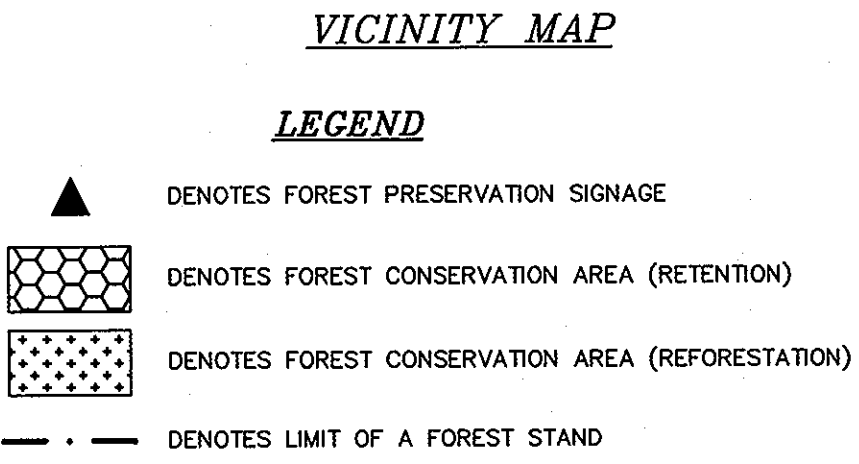
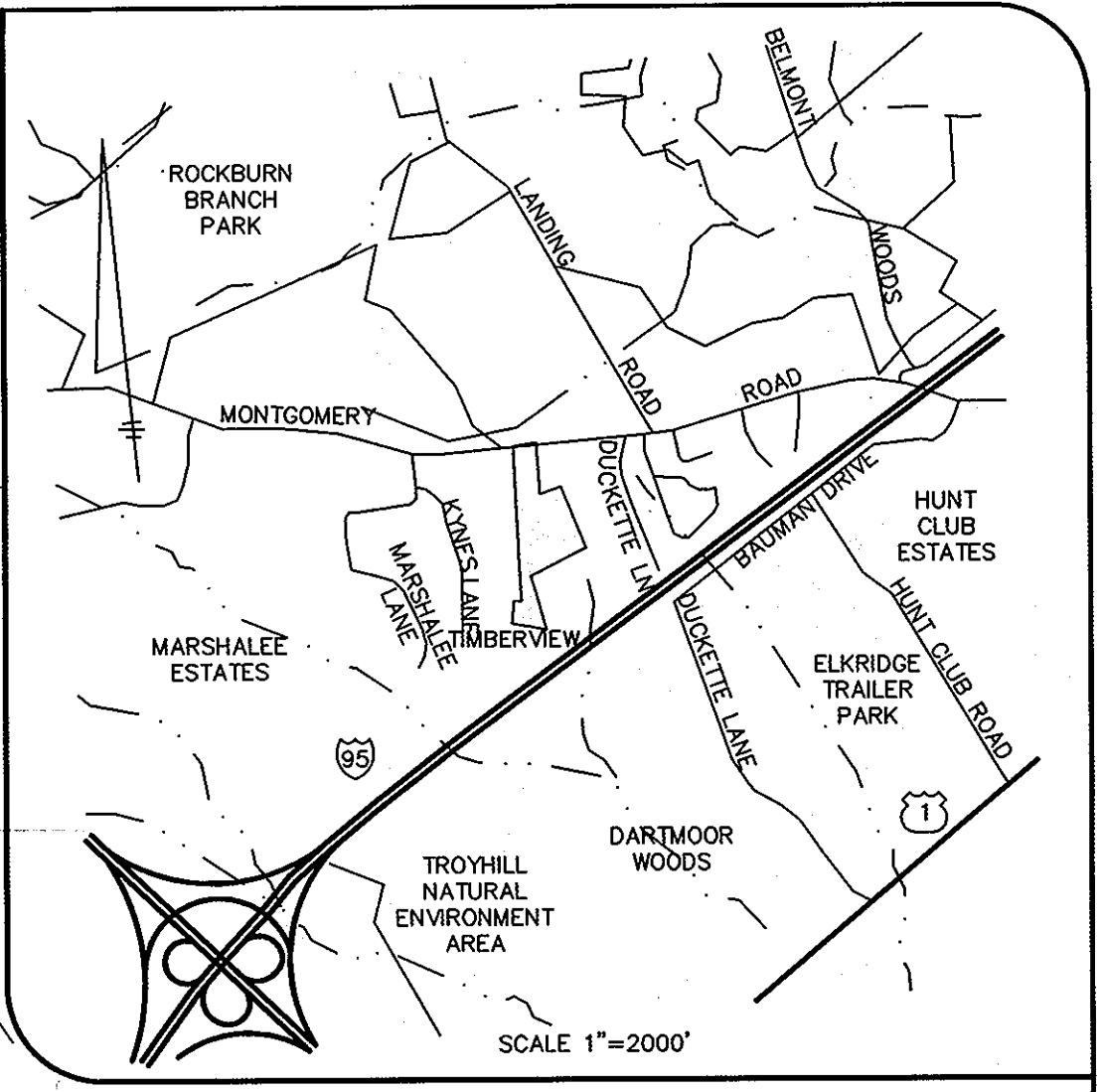
BASIC SITE DATA	ACRES
GROSS SITE AREA.....	19.88 ACRES
AREA WITHIN 100 YEAR FLOODPLAIN.....	---
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL.....	---
NET TRACT AREA.....	19.88 ACRES
LAND USE CATEGORY (R-1D, R-1MD, R-5, C1/Q, I).....	R-5

INFORMATION FOR CALCULATIONS	ACRES
A. NET TRACT AREA.....	19.88 ACRES
B. REFORESTATION THRESHOLD (20% X A).....	3.98 ACRES
C. AFFORESTATION MINIMUM (15% X A).....	2.98 ACRES
D. EXISTING FOREST ON NET TRACT AREA.....	17.75 ACRES
E. FOREST AREAS TO BE CLEARED.....	17.75 ACRES
F. FOREST AREAS TO BE RETAINED.....	1.85 ACRES
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD.....	---
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD.....	---
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD.....	---

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Clark, Pinefrock & Sackett, Inc.
 Engineers - Planners - Surveyors
 7125 Minefield Way, Columbia, MD 21045
 (410) 981-7500 (9am) (301) 621-2100 (Nash)

Revision #2 is the responsibility of Clark, Pinefrock & Sackett in accordance with Plat of Revision F-09-048.



- MAINTENANCE SCHEDULE**
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A MINIMUM OF TWO (2) YEAR PERIOD.
 - INSPECT PLANTED STOCK FOR MORTALITY. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
 - EXPECT VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION TO OCCUR. DO NOT DISCOURAGE THIS GROWTH UNLESS IT NEGATIVELY EFFECTS THE PLANTED STOCK.
 - MANUALLY REMOVE AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
 - REMOVE AND DISPOSE OF ANY MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURAL OCCURRING OR ACCUMULATING UNLESS IT IS SMOTHERING PLANTING STOCK OR INTERFERES WITH THE REFORESTATION PLANTING.
 - A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS WILL BE REQUIRED TO BRING THE PLANTED STOCK SURVIVAL RATE UP TO 75%.

- 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 08.18.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
115	Acer rubrum Red Maple	VT	D-W	FAC	10'	SEEDLING/WHIP
115	Nyssa sylvatica Black Gum	T	M-W	FAC	8'	SEEDLING/WHIP
115	Sassafras, Albium Common Sassafras	MT	D-W	FACU	8'	SEEDLING/WHIP
115	Prunus serotina Black Cherry	I	M-W	FAC+	8'	SEEDLING/WHIP
115	Quercus alba White Oak	I	M-W	FAC+	10'	SEEDLING/WHIP
115	Quercus rubra Red Oak	MT	D-M	UPL	10'	SEEDLING/WHIP
115	Quercus velutina Black Oak	MT	M	FAC+	10'	SEEDLING/WHIP
TOTAL						805 SEEDLING/WHIPS

- SIGNAGE DETAILS**
NOT TO SCALE
- FOREST CONSERVATION**
FOREST PRESERVATION AREA
TREES FOR YOUR FUTURE
- FOREST CONSERVATION**
REFORESTATION PROJECT
TREES FOR YOUR FUTURE
- OWNERS**
FREDERICK G. RAUSCH, JR. & NOREEN MARY RAUSCH
MONTGOMERY ROAD
ELK RIDGE, MARYLAND 21227
- DEVELOPER**
LAND DESIGN & DEVELOPMENT
10805 HICKORY RIDGE ROAD, SUITE 202
COLUMBIA, MARYLAND 21044
(410) 740-2100
- AND**
PATRICIA M. DITMAN
6564 SPANTRY COUNTRY ROAD
ELK RIDGE, MARYLAND 21227

MIN 11"
MIN 15"
MIN 11"
MIN 15"

STEPHANIE DEMCHIK

GENERAL NOTES

- 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 SILT 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 DRAINING 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.

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 DROUGHT CONDITIONS. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS 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 LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

PLANTING SPECIFICATIONS AND NOTES

- PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT BE INSTALLED ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT.
- 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 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.
- PLANTED 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.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 1-23-98
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Handley 2/4/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

Mike Damman 2/10/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

date	SPT 1997	approval
project	97027	approval
illustration	SID	approval
scale	1"=100'	approval

Remove forest Cons. Easmt from lot 12
 11-25-08
 8-4-98
 REVISION: PLANT SIZE, ADD EX. WATER EASEMENTS, REVISION EX. GRADE & FENCE
 1
 2

RAUSCH PROPERTY, LOTS 3 THRU 40
 A RESUBDIVISION OF RAUSCH PROP., LOTS 1 & 2
 TAX MAP 37 - PARCEL 95 - BLOCKS 6 & 12
 FIRST ELECTION DISTRICT
 FOREST CONSERVATION AND REFORESTATION PLAN

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