

GENERAL SITE NOTES:

- 1. DEVELOPER/ OWNER: HOWARD COUNTY BUREAU OF PUBLIC WORKS
2. WATER PLANNING CATEGORY: F09
3. SEWERAGE PLANNING CATEGORY: 5750615
4. SUBJECT PROPERTY IS LOCATED ON TAX MAP NO. 30, PARCELS 383 AND 387.

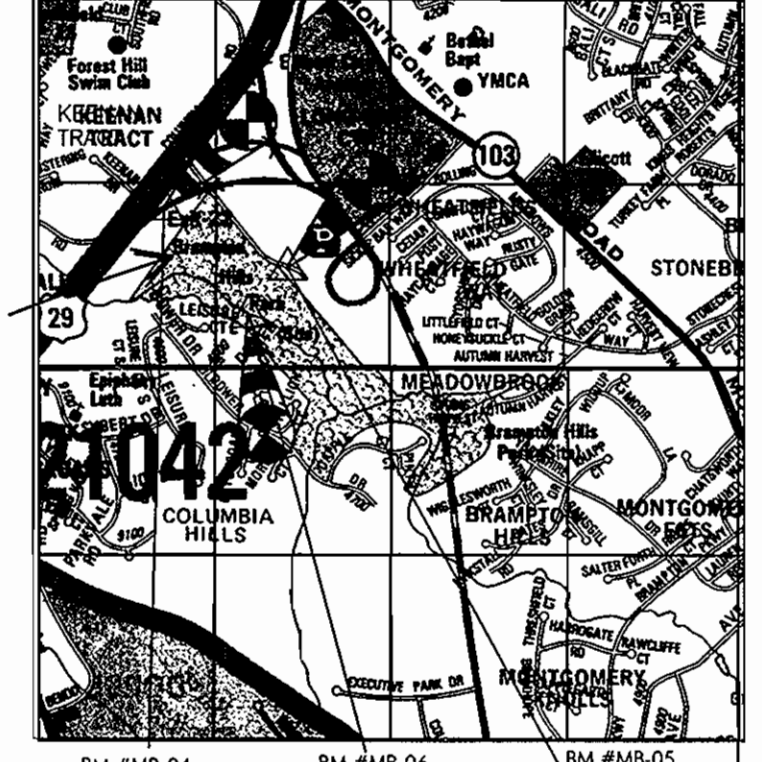
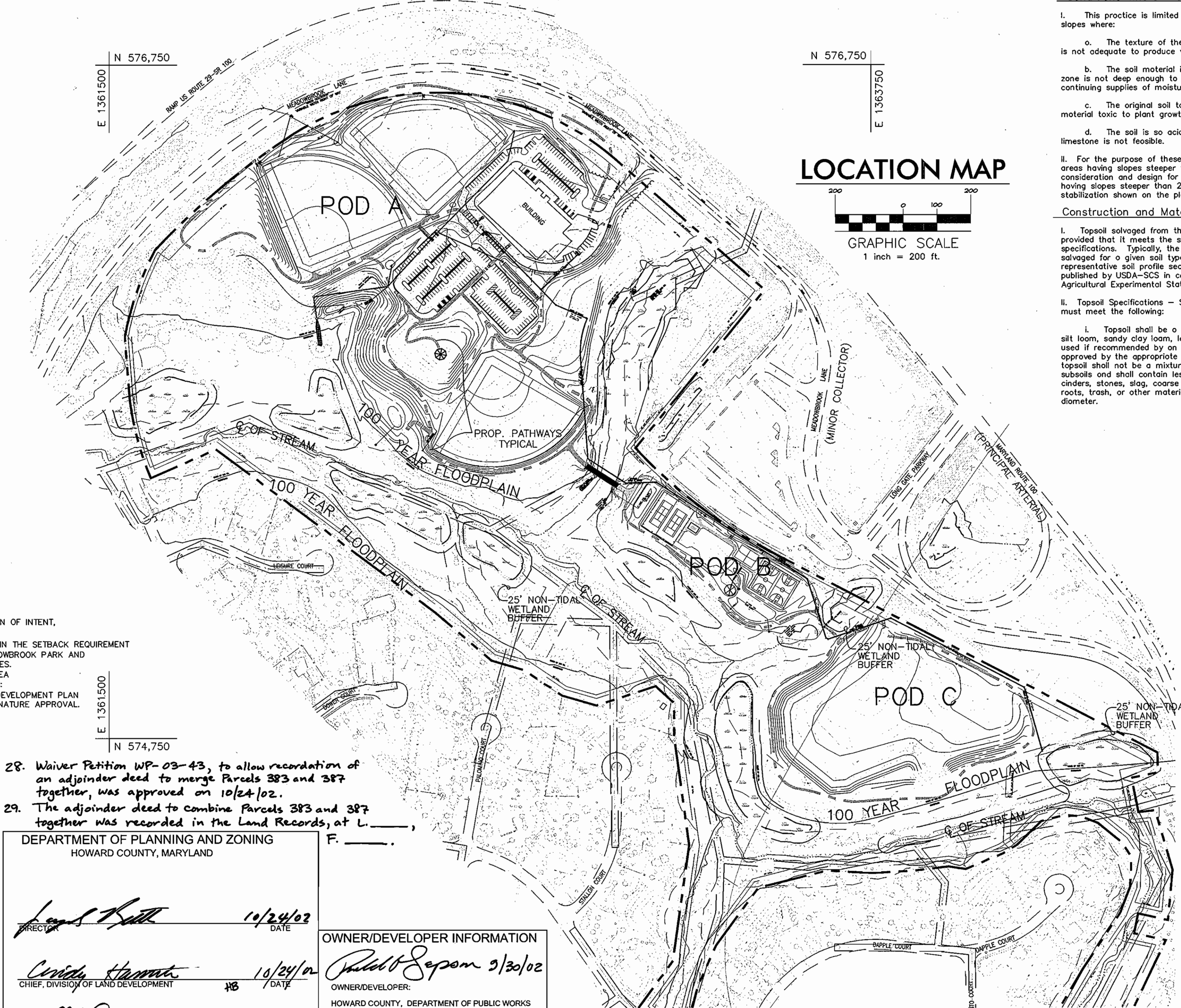
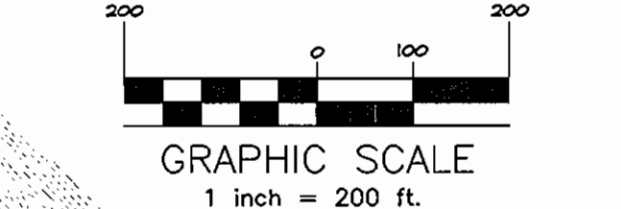
MEADOWBROOK PARK

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
Purpose: To provide a suitable soil medium for vegetable growth.
Conditions Where Practice Applies: This practice is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

LOCATION MAP



VICINITY MAP

SCALE: 1"=200'
ADC LIC.#21097504

SHEET INDEX table with columns for SHEET NUMBER and DESCRIPTION, listing sheets 1 through 30.

SEDIMENT CONTROL NOTES

- 1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
SEEDING PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

TEMPORARY SEEDING NOTES

SEEDING: For periods March 1 thru April 30 and from August 15 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre

28. Waiver Petition WP-03-43, to allow recordation of an adjoining deed to merge Parcels 383 and 387 together, was approved on 10/24/02.
29. The adjoining deed to combine Parcels 383 and 387 together was recorded in the Land Records, at L. F. _____

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Signatures and dates for Department of Planning and Zoning officials: 10/24/02, 10/24/02, 10/26/02.

OWNER/DEVELOPER INFORMATION
OWNER/DEVELOPER: [Signature] 9/30/02
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLCOTT CITY, MARYLAND 21043

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE
10/12/02 DATE

Gary J. Arthur, Director
10/22/02 DATE

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

HOWARD SOIL CONSERVATION DISTRICT
10/17/02 DATE

Signatures and dates for Howard Soil Conservation District officials: 10/17/02.



Revision table with columns: DES, DRN, CHK, DATE, BY, No., REVISION, DATE.

LEGEND table with columns: EXISTING, PROPOSED, and descriptions of various site features like contours, wetlands, and roads.

ADDRESS CHART table with columns: PARCEL NUMBER, STREET ADDRESS, listing parcels 383 & 387 at 5001 MEADOWBROOK LANE.

COVER SHEET

SITE DEVELOPMENT PLAN MEADOWBROOK PARK

TAX MAP 30 SECOND ELECTION DISTRICT
PROJECT # N-3105 BLOCK 5
PARCELS 383 & 387 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 30



LEGEND:

- EX. DRAINAGE AREA LINE
- PROP. DRAINAGE AREA LINE
- PROP. SEDIMENT TRAPS & BASIN



DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Scott Butler 10/24/02
DIRECTOR DATE

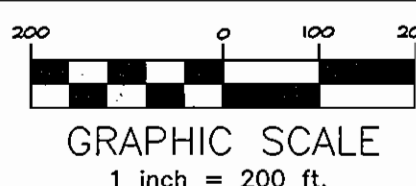
Cristy Hamble 11/16/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris DeMunn 10/21/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

Gregory J. Arthur 10.2.02
DIRECTOR DATE

EXISTING SEDIMENT & EROSION CONTROL DRAINAGE AREA MAP



OWNER/DEVELOPER INFORMATION

Paul J. Soper 2/30/02
OWNER/DEVELOPER:

HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLCOTT CITY, MARYLAND 21043

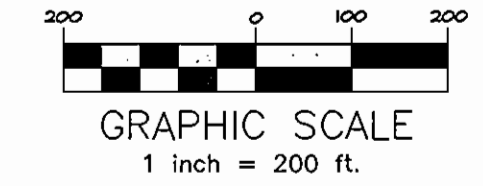
MICRONE
ENGINEERING & ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES
20 RIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8621
Fax (410) 267-9922



DES: J.S.	JS	1	REDLINE REVISION	7/08
DRN: J.S.				
CHK: V.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

EXISTING & PROPOSED DRAINAGE AREA MAP

PROPOSED SEDIMENT & EROSION CONTROL DRAINAGE AREA MAP



**SITE DEVELOPMENT PLAN
MEADOWBROOK PARK**

TAX MAP 30 SECOND ELECTION DISTRICT
PROJECT N-3105 BLOCK 5
PARCEL 383 & 387 HOWARD COUNTY, MARYLAND

SCALE
1"=200'

SHEET
3 OF 30

Plot Date and Time: Sep 25, 2002, 2:33pm

CADD FILE: C:\1010081 - Meadowbrook Park\Final Development\03-SED-DRAINAGE AREA MAP.dwg

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown, moist, soft, clayey silt, trace fine sand (ML-CL)	2.0	
Brown, moist, medium dense to dense silty sand, trace mica and decomposed rock fragments (SM)	5.0	5.0
Gray, white and tan, moist, dense to very dense silty sand, trace mica, with rock fragments (SM) Decomposed Rock	10.6	10.0

BORING DETAIL
B-4

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown, moist, loose, sandy silt, some clay, trace quartz fragments in S-4 and trace root material and organics in S-1 and S-4 (ML) (Fill)	5.0	5.0
Brown and grayish tan, moist, loose to medium dense, sandy silt, trace mica and fine gravel (ML)	15.0	15.0

BORING DETAIL
B-5

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown and grayish tan, moist, loose to medium dense, sandy silt, trace mica and fine gravel (ML)	5.0	5.0
Brown and grayish tan and speckled black, moist, medium dense, silty sand, trace mica and decomposed rock fragments (SM)	15.0	15.0

BORING DETAIL
B-9

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown, moist, very loose, silty sand, trace mica, little clay (SM-ML)	2.0	
Brown, tan and grayish white, moist, medium dense, fine to medium silty sand, trace mica, trace decomposed rock fragments (SM)	5.0	5.0
Gray, white and tan, moist, dense to very dense silty sand, trace mica, with rock fragments (SM) Decomposed Rock	10.0	10.0

BORING DETAIL
B-10

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown, moist, soft, clayey silt, trace fine sand (ML-CL)	2.0	
Brown, moist, medium dense to dense silty sand, trace mica and decomposed rock fragments (SM)	5.0	5.0
Gray, white and tan, moist, dense to very dense silty sand, trace mica, with rock fragments (SM) Decomposed Rock	10.6	10.0

BORING DETAIL
B-14



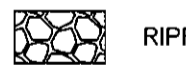
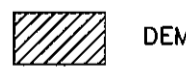

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown, moist, loose, sandy silt, some clay, trace quartz fragments in S-4 and trace root material and organics in S-1 and S-4 (ML) (Fill)	5.0	5.0
Brown and grayish tan, moist, loose to medium dense, sandy silt, trace mica and fine gravel (ML)	10.0	10.0

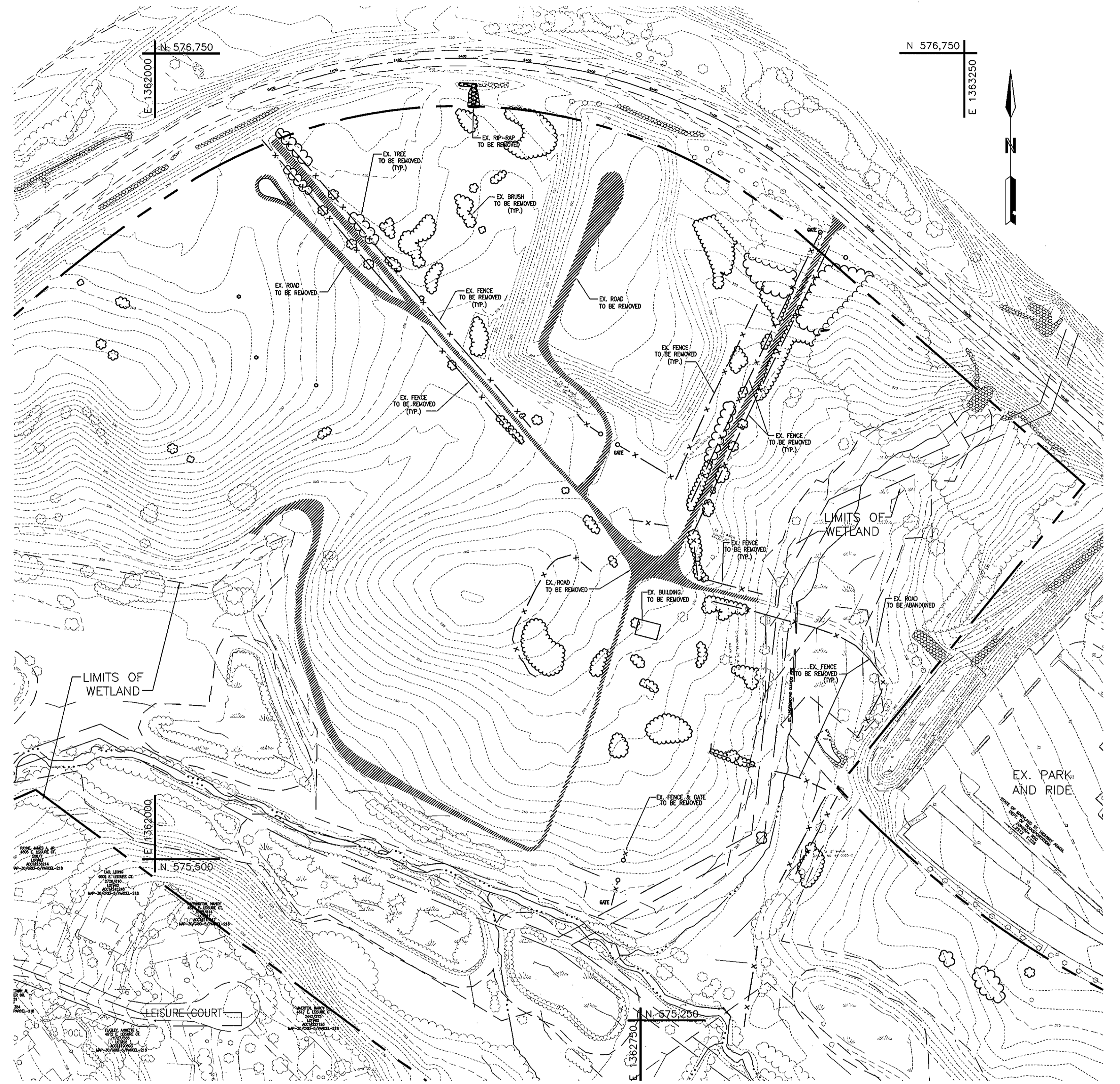
BORING DETAIL
B-15

SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	STRA. DEPTH	DEPTH SCALE
SURFACE	0.0	
Brown and grayish tan, moist, loose to medium dense, sandy silt, trace mica and fine gravel (ML)	5.0	5.0
Brown and grayish tan and speckled black, moist, medium dense, silty sand, trace mica and decomposed rock fragments (SM)	15.0	15.0

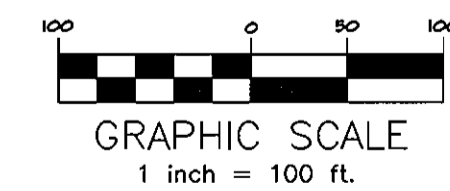
BORING DETAIL
B-19

DEMOLITION LEGEND

-  TREE
-  BRUSH
-  RIPRAP
-  DEMO AREA
-  FENCE



DEMOLITION PLAN



OWNER/DEVELOPER INFORMATION

Robert J. Sepem 9/30/02
OWNER/DEVELOPER:
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLCOTT CITY, MARYLAND 21043

Paul R. Rutter 10/24/02
DIRECTOR

Wanda Hancock 1/4/02
CHIEF, DIVISION OF LAND DEVELOPMENT

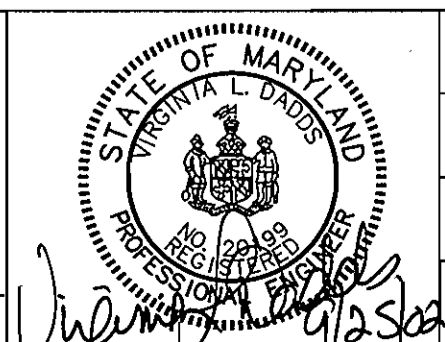
Mike DeMunnich 10/21/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

Gary J. Arthur 10-2-02
DIRECTOR

NOTE: All soil borings were performed by Hillis-Carnes Engineering Associates, Inc.
All borings were performed on January 23rd and 25th of 2001.

McCRONE
ENGINEERING: ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING: CONSTRUCTION SERVICES
20 RIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8831
Fax (410) 267-9922
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES:	J.S.	JS	1	REDLINE REVISION		
DRN:	J.S.					
CHK:	V.L.D.					
DATE:	MAY, 2001	BY	No.	REVISION	DATE	

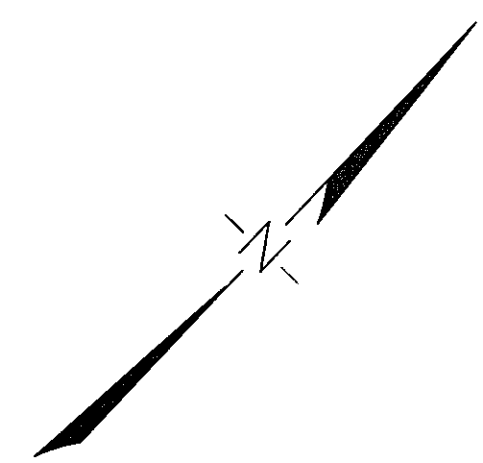
DEMOLITION & SOIL BORING PLAN

**SITE DEVELOPMENT PLAN
MEADOWBROOK PARK**

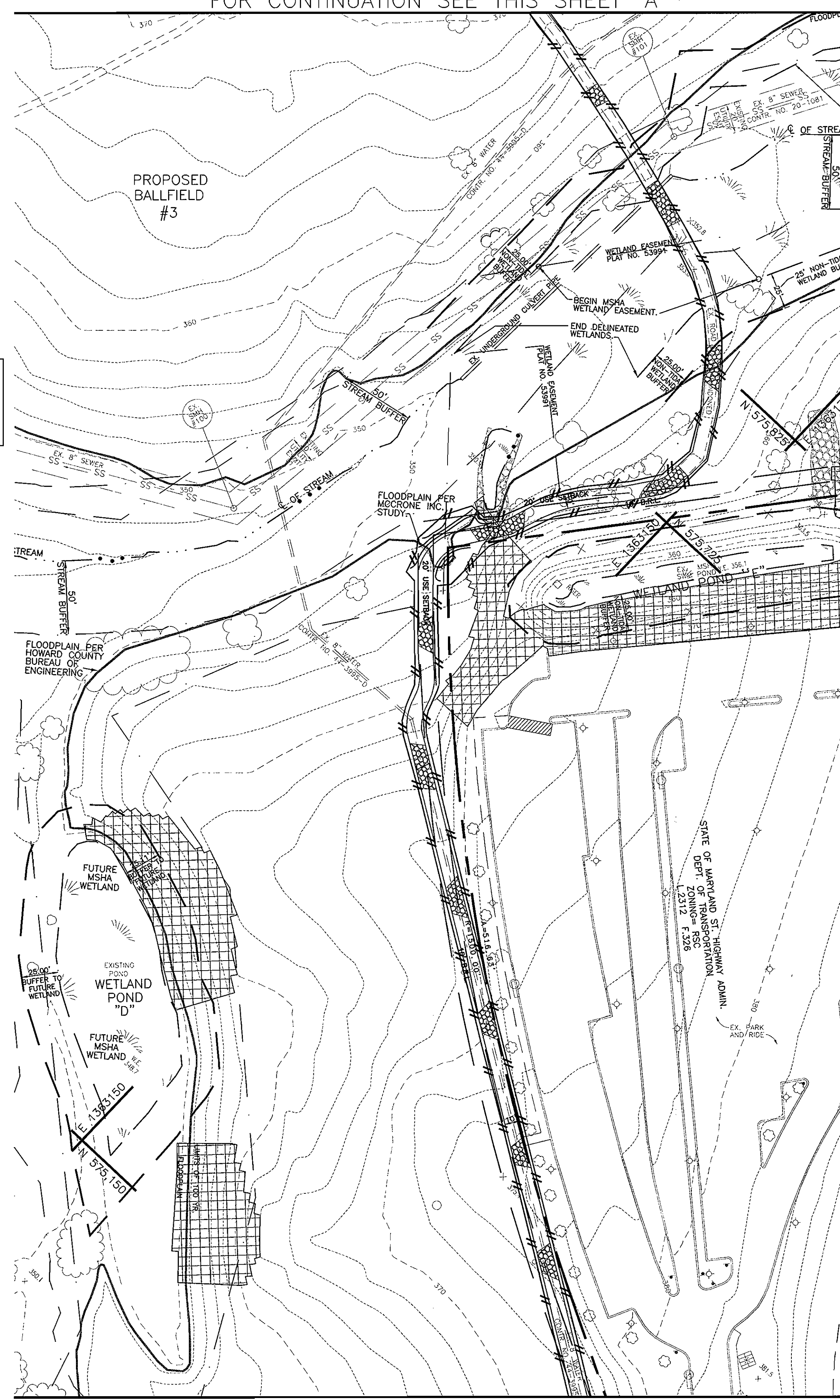
TAX MAP 30 SECOND ELECTION DISTRICT
PROJECT N-3105 BLOCK 5
PARCEL 383 & 387
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 30

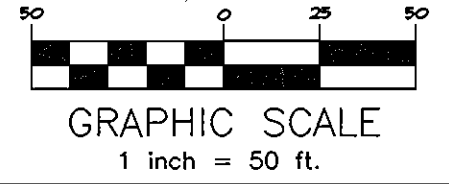
FOR CONTINUATION SEE THIS SHEET 'A'



Note:
THE EX. FARM LANE SHALL BE USED AS A TEMPORARY HAUL ROAD DURING PHASE I AND II CONSTRUCTION PER THE TEMPORARY HAUL ROAD DETAIL ON SHEET 15.



MATCHLINE SEE SHEET 6
MASS GRADING PLAN



OWNER/DEVELOPER INFORMATION
Robert Sapon 2/30/02
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Paul R. Rutter 10/24/02
 DIRECTOR DATE

Christy Hunter 10/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mark Dammann 10/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

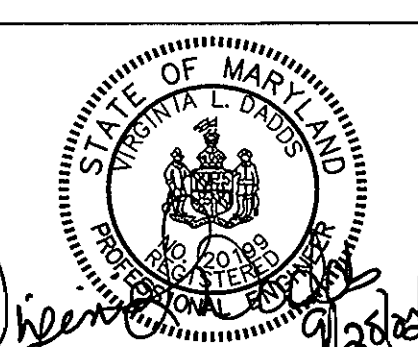
DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

Laurel Arthur 10-2-02
Gary S. Arthur, Director DATE

PROJECT MEADOWBROOK PARK	SECTION/AREA N/A	MAP NO. MAP 30 PARCELS 383 & 387
PLAT NO. N/A	GRID NO. 5	ZONE R-20
TAXZONE 2	ELEC. DIST. 2	CENSUS TR. 602302
WATER CODE F09	SEWER CODE 5750615	

McCRONE
 ENGINEERING: ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
 20 BRIDGLEY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 267-8631
 Fax (410) 267-9932

ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES: J.S.	JS	1	REDLINE REVISION	
DRN: J.S.				
CHK: V.L.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

MASS GRADING & SEDIMENT CONTROL PLAN
PHASE I
SHEET 1

SITE DEVELOPMENT PLAN
MEADOWBROOK PARK

TAX MAP 30
 SECOND ELECTION DISTRICT

PROJECT NO. N-3105
 BLOCK 5

PARCEL 383 & 387
 HOWARD COUNTY, MARYLAND

SCALE
1"=50'

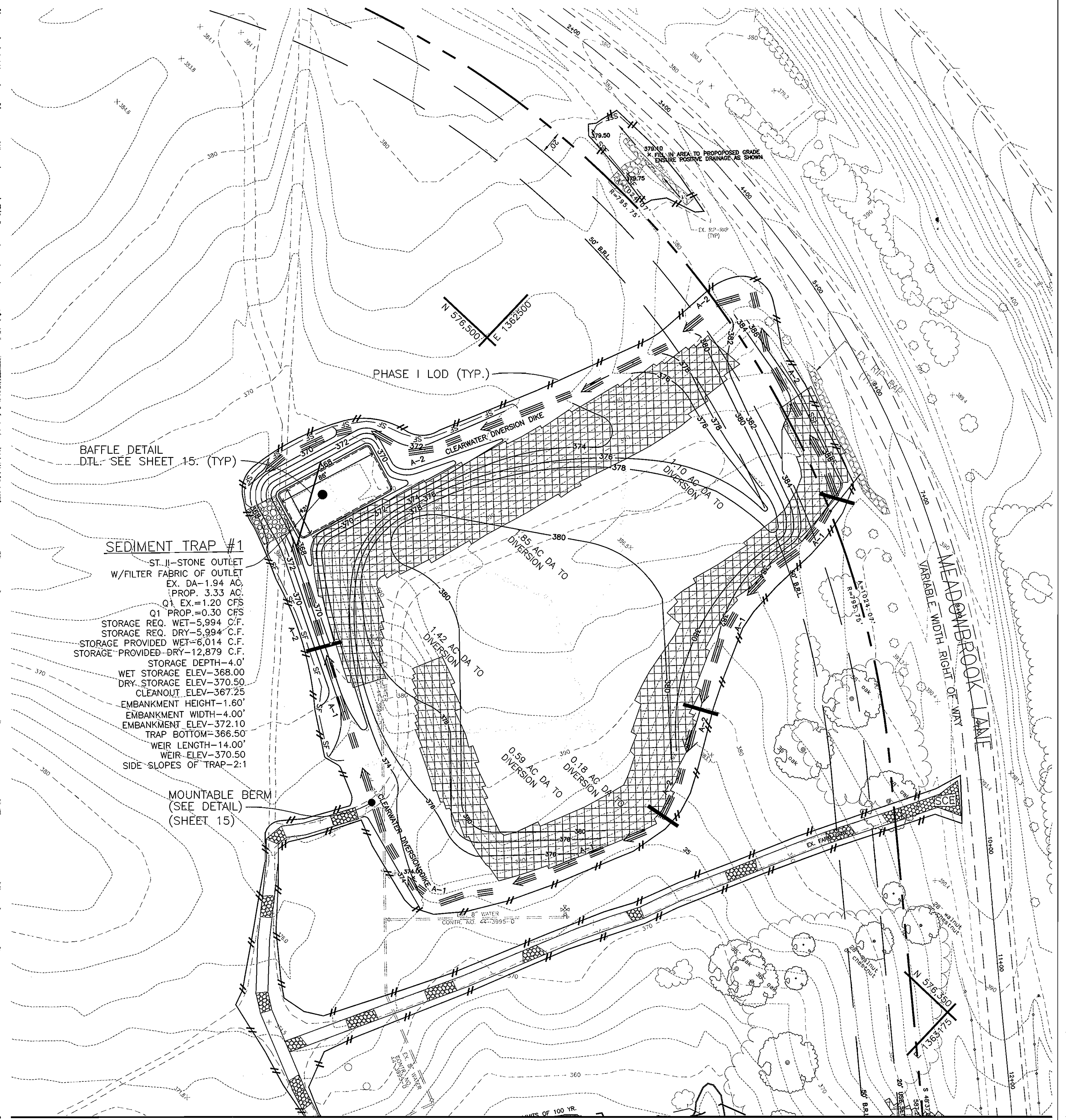
SHEET
5 OF 30

SEDIMENT TRAP #1
 ST. II-STONE OUTLET
 W/FILTER FABRIC OF OUTLET
 EX. DA=1.94 AC.
 PROP. 3.33 AC.
 Q1 EX.=1.20 CFS
 Q1 PROP.=0.30 CFS
 STORAGE REQ. WET=5,994 C.F.
 STORAGE REQ. DRY=5,994 C.F.
 STORAGE PROVIDED WET=6,014 C.F.
 STORAGE PROVIDED DRY=12,879 C.F.
 STORAGE DEPTH=4.0'
 WET STORAGE ELEV.=368.00
 DRY STORAGE ELEV.=370.50
 CLEANOUT ELEV.=367.25
 EMBANKMENT HEIGHT=1.60'
 EMBANKMENT WIDTH=4.00'
 EMBANKMENT ELEV.=372.10
 TRAP BOTTOM=366.50
 WEIR LENGTH=14.00'
 WEIR ELEV.=370.50
 SIDE SLOPES OF TRAP=2:1

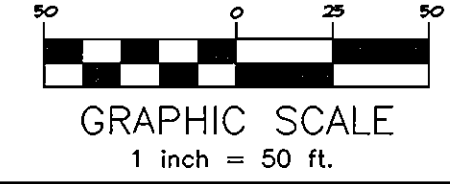
BAFFLE DETAIL
 DTL- SEE SHEET 15: (TYP)

MOUNTABLE BERM
 (SEE DETAIL)
 (SHEET 15)

PHASE I LOD (TYP.)



FOR CONTINUATION SEE THIS SHEET 'A'
MASS GRADING PLAN



Note:
 THE EX. FARM LANE SHALL BE USED AS A TEMPORARY HAUL ROAD DURING PHASE I AND II CONSTRUCTION PER THE TEMPORARY HAUL ROAD DETAIL ON SHEET 15.



SEDIMENT TRAP #2
 ST I-PIPE OUTLET
 EX. DA-1.35 AC
 PROP. DA-4.85 AC
 Q1 EX=0.14 CFS
 Q1 PROP=1.10 CFS
 STORAGE REQ. WET-8,730 C.F.
 STORAGE PROVIDED DRY-8,730 C.F.
 STORAGE PROVIDED WET-10,390 C.F.
 STORAGE PROVIDED DRY-12,082 C.F.
 STORAGE DEPTH-3.05'
 WET STORAGE ELEV-374.35
 DRY STORAGE ELEV-376.05
 CLEANOUT ELEV-373.68
 EMBANKMENT WIDTH-4.00'
 EMBANKMENT ELEV-378.00
 TRAP BOTTOM-373.00
 RISER-27" CMP
 BARREL-24" CMP
 TOP OF RISER ELEV-376.05
 SIDE SLOPES OF TRAP-2:1

SEDIMENT BASIN #1
 EX. DA-14.58 AC
 PROP. 11.23 AC
 Q1 EX=2.80 CFS
 Q1 PROP=0.90 CFS
 STORAGE REQ. WET-26,244 C.F.
 STORAGE PROVIDED DRY-29,285 C.F.
 STORAGE PROVIDED WET-61,689 C.F.
 STORAGE DEPTH-4.5'
 WET STORAGE ELEV-349.75
 DRY STORAGE ELEV-352.50
 CLEANOUT ELEV-348.88
 EMBANKMENT HEIGHT-1.50'
 EMBANKMENT WIDTH-8.00'
 EMBANKMENT ELEV-355.00
 BASIN BOTTOM-348.00'
 EMERGENCY SPILLWAY WIDTH-20.00'
 W/10:1 SIDE SLOPES
 EMERGENCY SPILLWAY ELEV-353.50
 RISER-12" PVC
 BARREL-10" PVC
 TOP OF RISER ELEV-352.50
 4" DRAW DOWN ORIFICE INV.-349.00
 SIDE SLOPES OF BASIN (COMBINED)-5:1

OWNER/DEVELOPER INFORMATION

Robert Segam 9/30/02
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Les S. Butler 10/24/02
 DIRECTOR

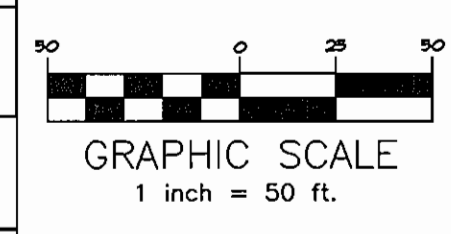
Cathy Hamilton 10/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT

Chris Drummond 10/24/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

Gary J. Arthur 10-2-02
 DIRECTOR

PROJECT	SECTION/AREA	MAP NO.
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387
FLAT NO.	GRID NO.	ZONE
N/A	5	R-20
TAXZONE	ELEC. DIST.	CENSUS TR.
2	2	602302
WATER CODE	SEWER CODE	
F09	5750615	



McCRONE
 ENGINEERING, ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
 30 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21401
 410 267-8621
 FAX (410) 267-9932
 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES: J.S.	JS	I	REDLINE REVISION	7/08
DRN: J.S.				
CHK: V.L.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

MASS GRADING & SEDIMENT CONTROL PLAN
 PHASE II
 SHEET 1

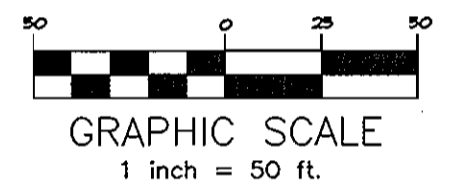
SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
 PROJECT NO. N-3105
 BLOCK 5
 PARCEL 383 & 387
 HOWARD COUNTY, MARYLAND

SCALE
 1"=50'
 SHEET
 7 OF 30

MATCHLINE SEE SHEET 8
MASS GRADING PLAN



MASS GRADING PLAN



Note:
THE EX. FARM LANE SHALL BE USED AS A TEMPORARY HAUL ROAD DURING PHASE I AND II CONSTRUCTION PER THE TEMPORARY HAUL ROAD DETAIL ON SHEET 15.

OWNER/DEVELOPER INFORMATION

Paul S. Seaman 9/30/02
OWNER/DEVELOPER:
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

Paul Butler 10/24/02
DIRECTOR DATE

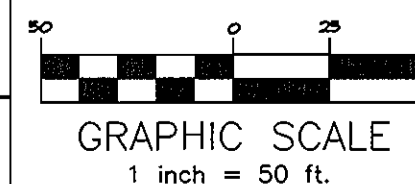
Arvidy Khatami 1/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mark Cummings 10/2/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS HOWARD COUNTY, MARYLAND

Gary S. Arthur 10-2-02
DIRECTOR DATE

PROJECT MEADOWBROOK PARK		SECTION/AREA N/A	MAP NO. MAP 30 PARCELS 383 & 387
PLAT NO. N/A	GRID NO. 5	ZONE R-20	TAXZONE 2
WATER CODE F09		SEWER CODE 5750615	ELEC. DIST. 2
		CENSUS TR. 602202	



McCRONE
ENGINEERING & ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES
20 BRIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 247-8431
Fax (410) 247-9922
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES: J.S.	J9	1	REDLINE REVISION	7/08
DRN: J.S.				
CHK: V.L.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

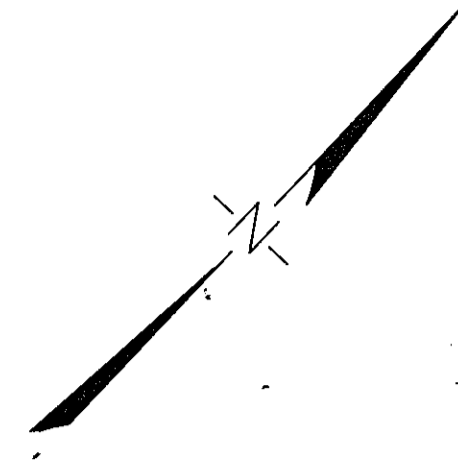
**MASS GRADING & SEDIMENT CONTROL PLAN
PHASE II
SHEET 2**

**SITE DEVELOPMENT PLAN
MEADOWBROOK PARK**
PROJECT NO. N-3105
BLOCK 5
PARCEL 383 & 387
HOWARD COUNTY, MARYLAND

SCALE
1"=50'
SHEET
8 OF 50

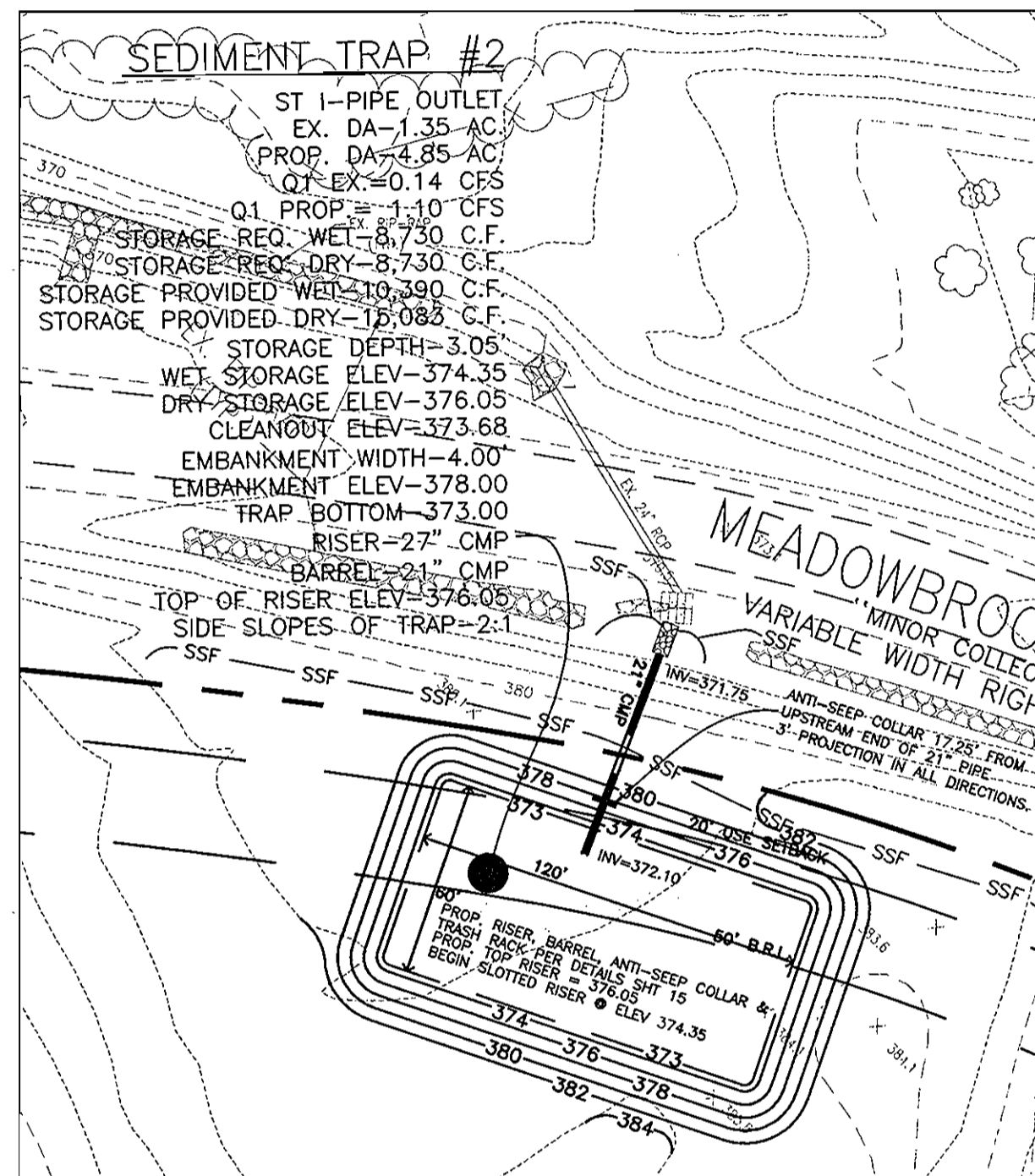
GRADING PLAN

MATCHLINE SEE SHEET 8

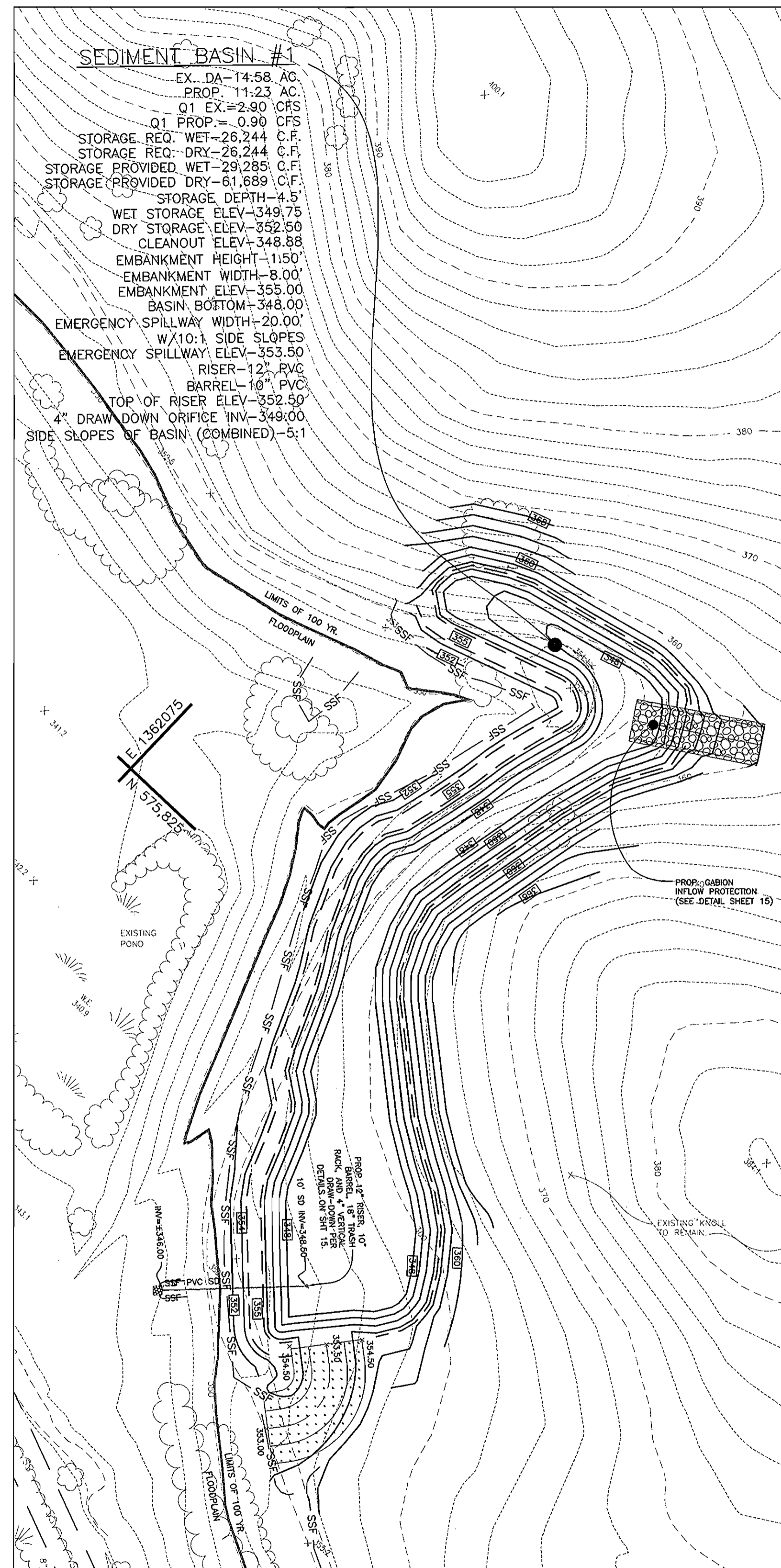


Note:

THE EX. FARM LANE SHALL BE USED AS A TEMPORARY HAUL ROAD DURING PHASE I AND II CONSTRUCTION PER THE TEMPORARY HAUL ROAD DETAIL ON SHEET 15.



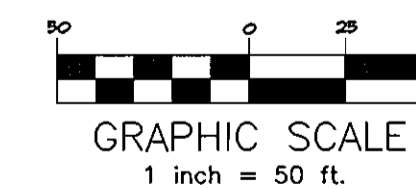
TRAP #2 CONSTRUCTION BEGINNING OF PHASE II
 SCALE: 1"=50'



BASIN #1 CONSTRUCTION BEGINNING OF PHASE II
 SCALE: 1"=50'



MASS GRADING PLAN



OWNER/DEVELOPER INFORMATION

Robert Egan 2/30/02
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Joseph A. ... 10/24/02
 DIRECTOR
Cindy Hanck 10/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT
Chad ... 10/24/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

Gary S. ... 10.2.02
 DIRECTOR

PROJECT MEADOWBROOK PARK		SECTION/AREA N/A	MAP NO. MAP 30 PARCELS 383 & 387
PLAT NO. N/A	GRID NO. 5	ZONE R-20	ELEC. DIST. 2
WATER CODE F09		SEWER CODE 5750615	
CENSUS TR. 602302			

McCRONE
 ENGINEERING ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
 20 BRIDGLEY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 267-8451
 Fax (410) 267-9232
 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES: J.S.	JS	1	REDLINE REVISION	7/08
DRN: J.S.				
CHK: V.L.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

MASS GRADING & SEDIMENT CONTROL PLAN
PHASE II
SHEET-3

SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
 PROJECT NO. N-3105
 BLOCK 21
 TAX MAP 30
 SECOND ELECTION DISTRICT
 PARCELS 383 & 387
 HOWARD COUNTY, MARYLAND

SCALE
 1"=50'
 SHEET
 9 OF 30

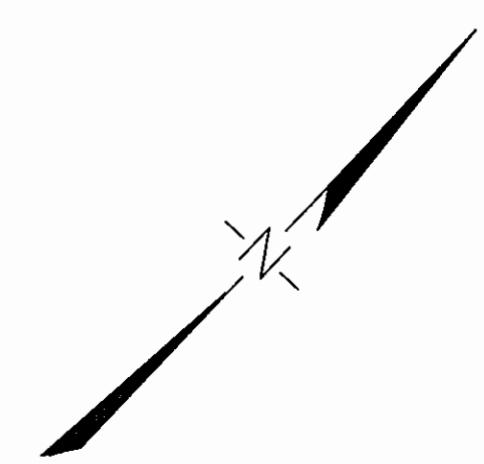
Plot Date and Time: Sep 25, 2002, 3:04pm

CADD FILE: C:\1010081 - Meadowbrook Park\Final Development\09-SITE& MASS GRADING PH-2.dwg

MATCHLINE SEE SHEET 13

NOTE:
1. SEE SHEET 11 FOR
GENERAL SITE NOTES.

REFER TO SHEETS 21, 22 & 23 FOR
ADDITIONAL PLANTING INFORMATION.



OWNER/DEVELOPER INFORMATION

Russell Seaman 9/30/02
OWNER/DEVELOPER:
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLCOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Paul Smith 10/24/02
DIRECTOR DATE

Cindy Hammett 10/24/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

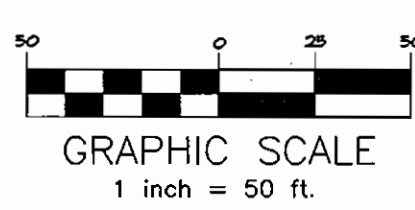
John Dammann 10/21/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

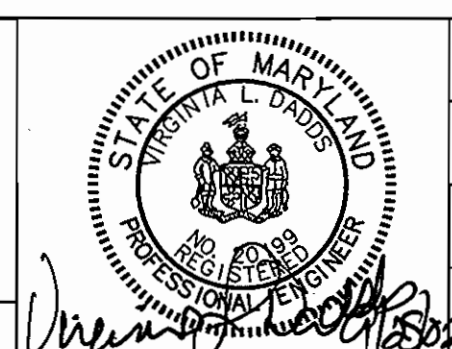
Gary J. Arthur 10-2-02
DIRECTOR DATE

PROJECT MEADOWBROOK PARK	SECTION/AREA N/A	MAP NO. MAP 30 PARCELS 383 & 387
PLAT NO. N/A	GRID NO. 5	ZONE R-20
TAX/ZONE 2	ELEC. DIST. 2	CENSUS TR. 602302
WATER CODE F09	SEWER CODE 5750615	

SITE PLAN



McCRONE
ENGINEERING & ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES
20 RIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8621
Fax (410) 267-9932
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES: J.S.	JS	1	REDLINE REVISION	7/08
DRN: J.S.				
CHK: V.L.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

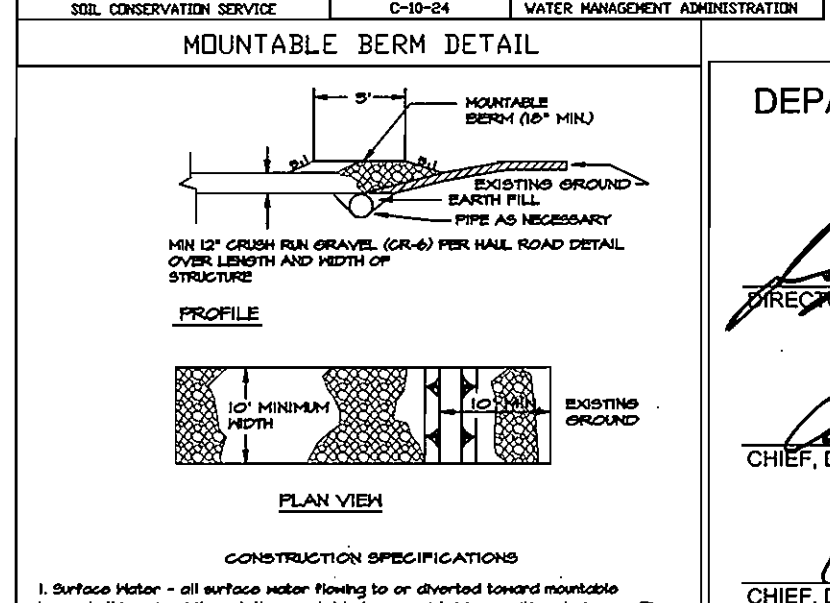
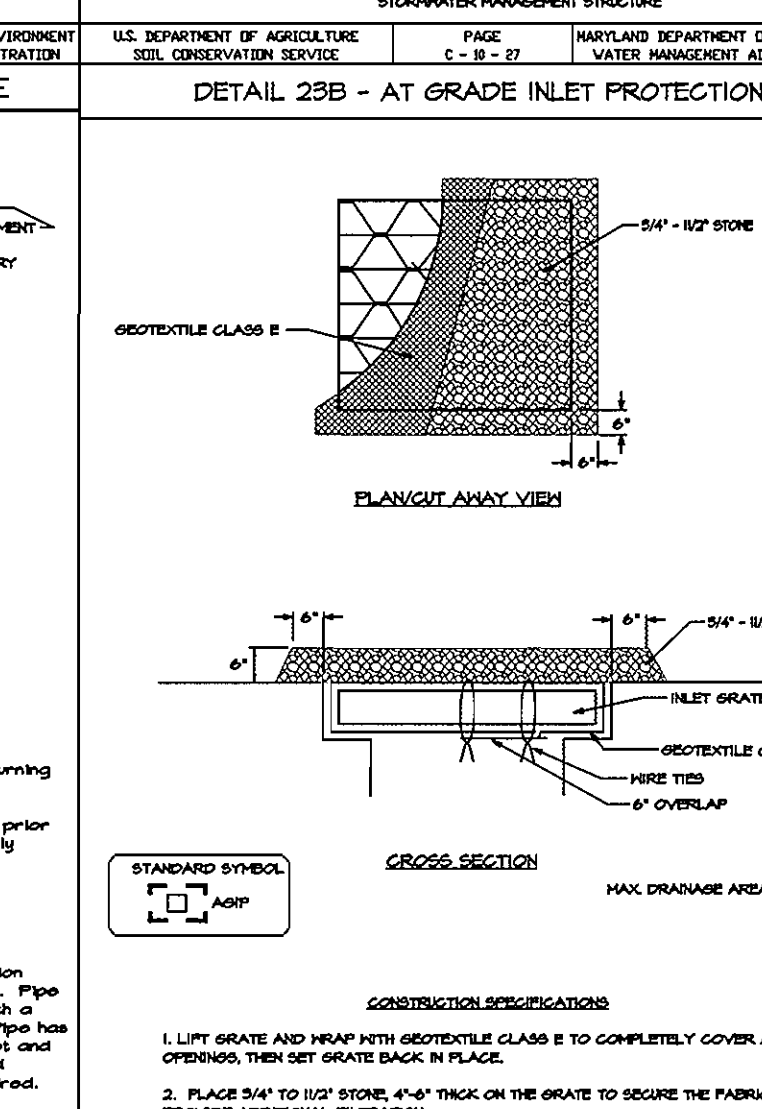
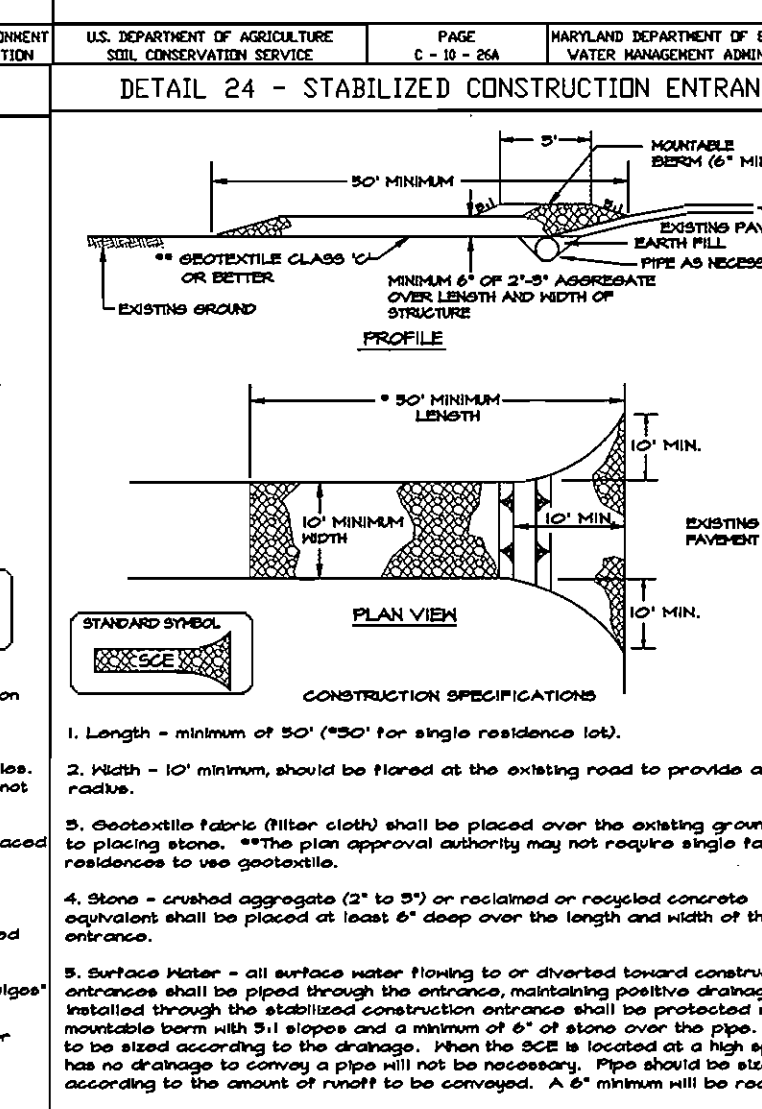
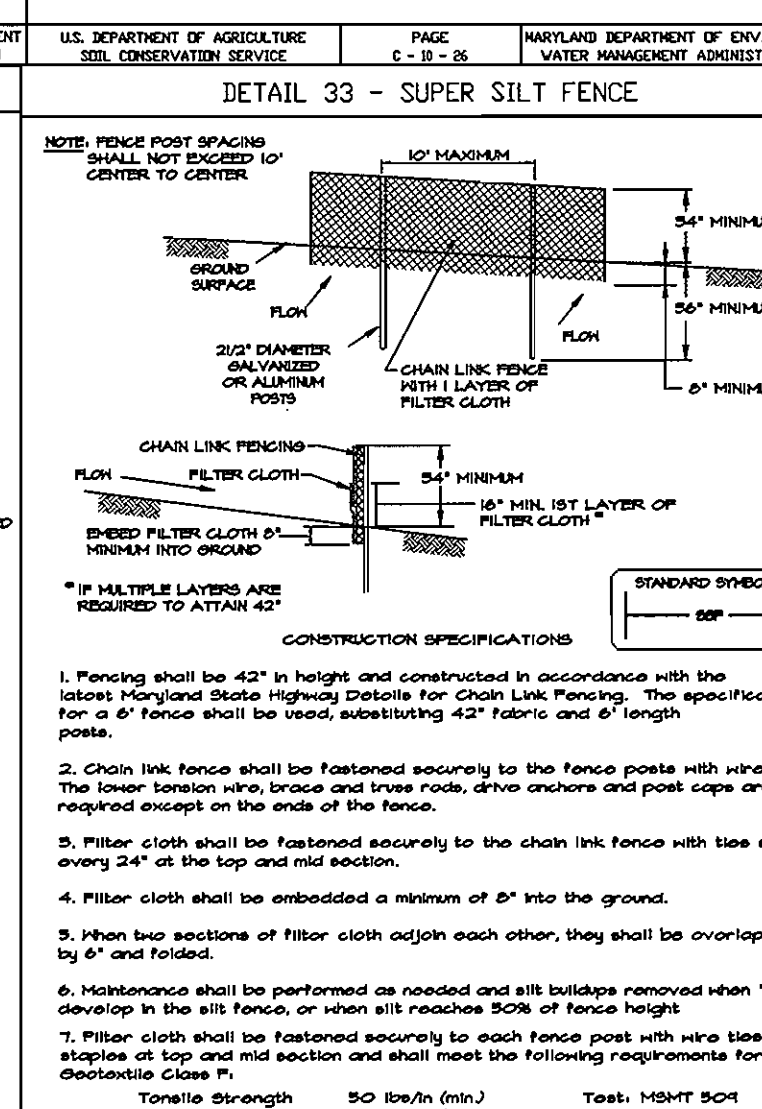
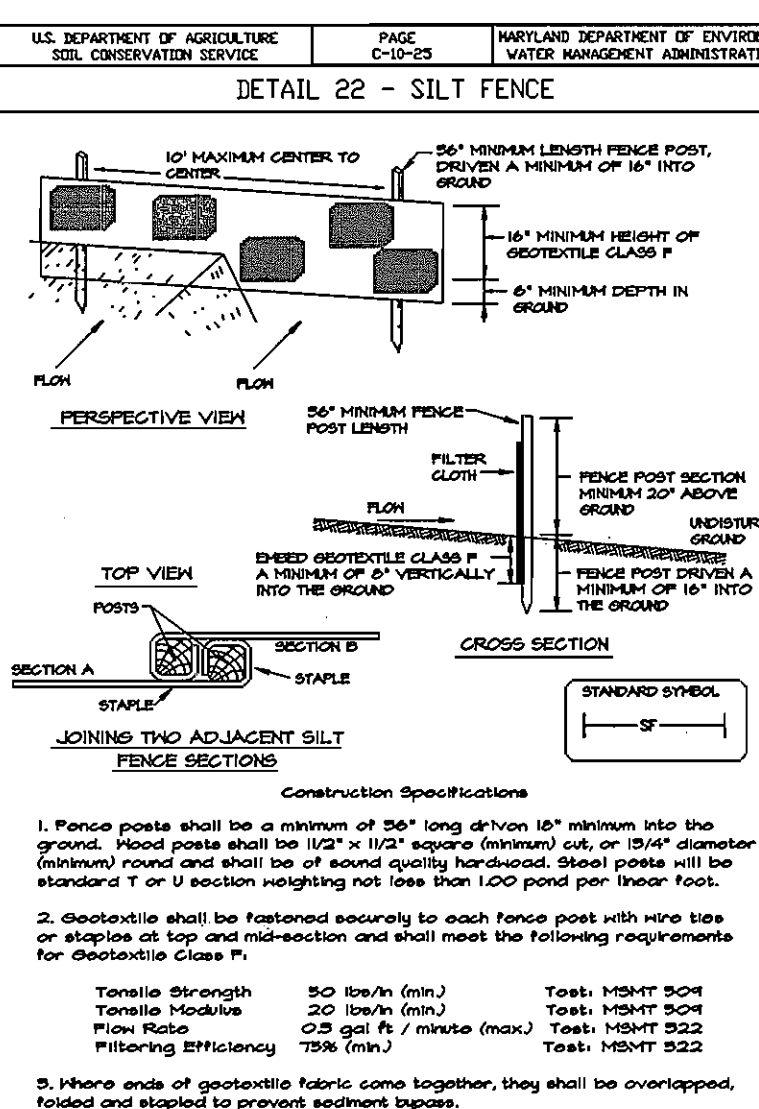
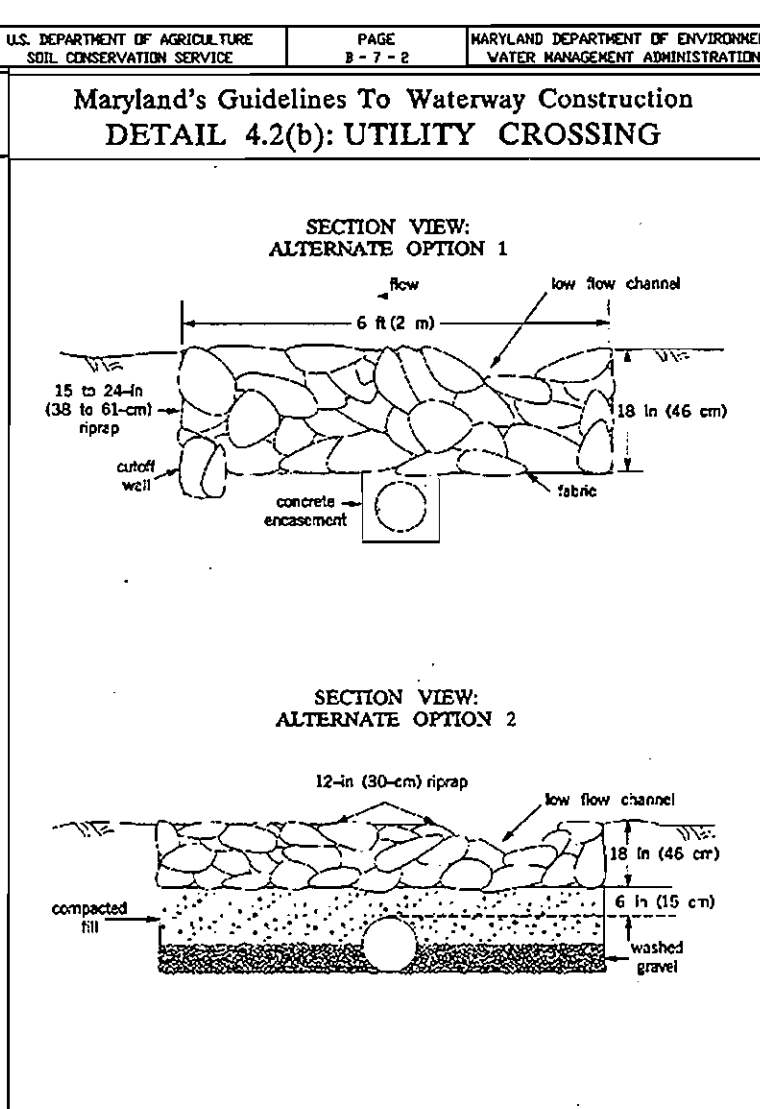
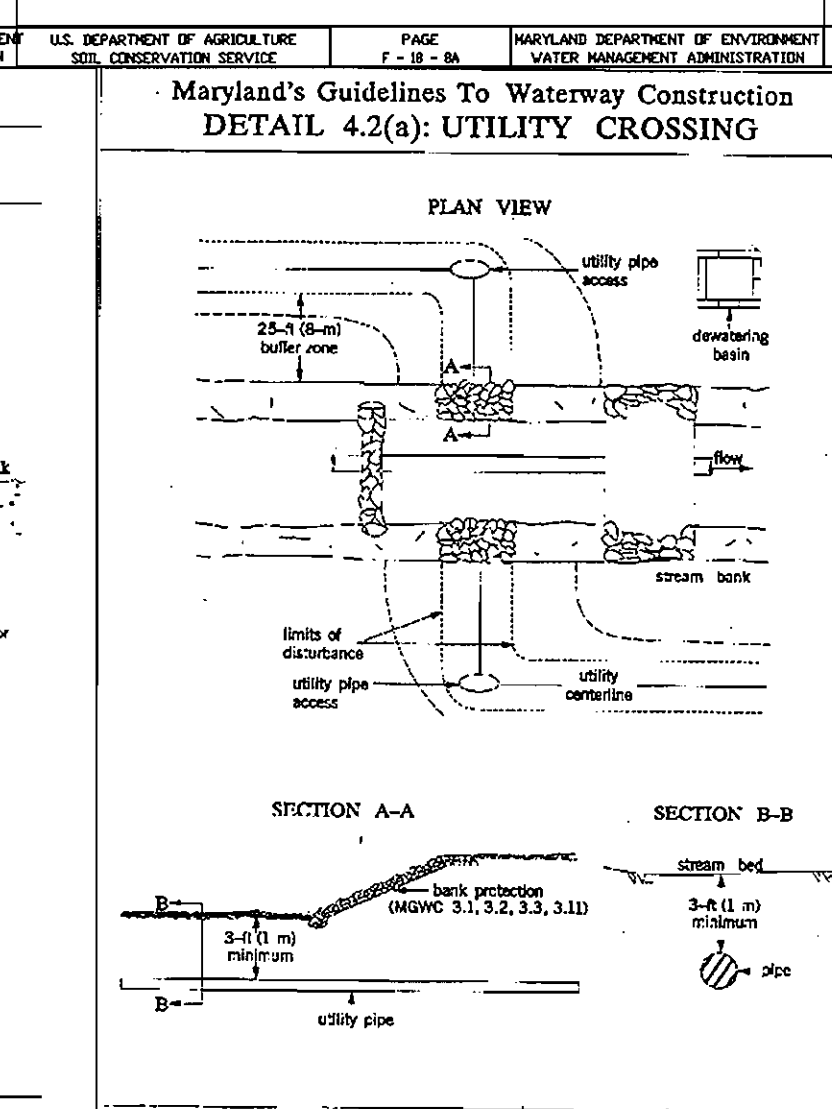
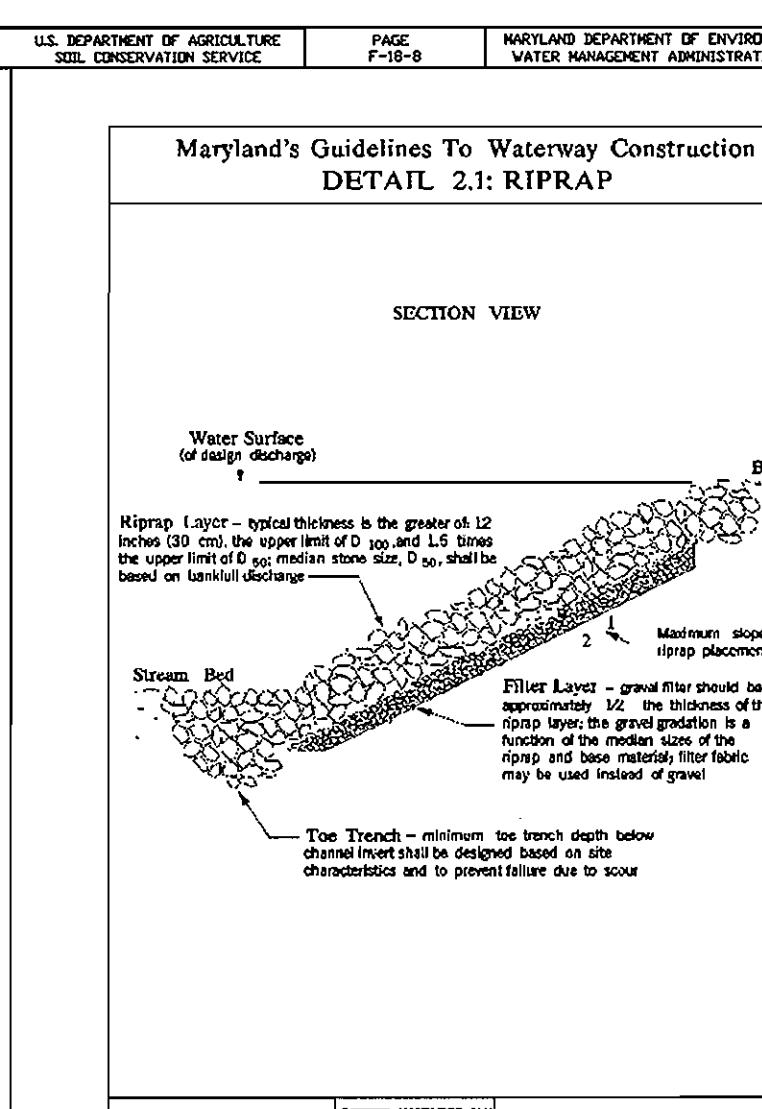
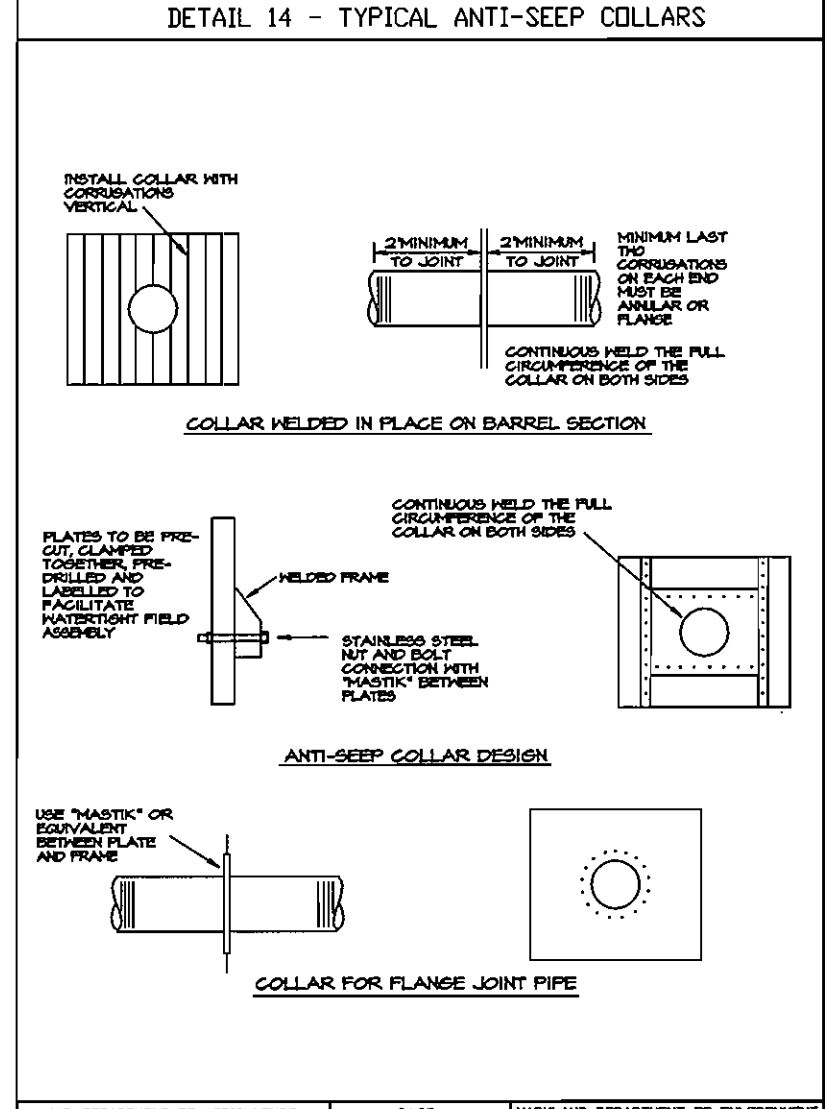
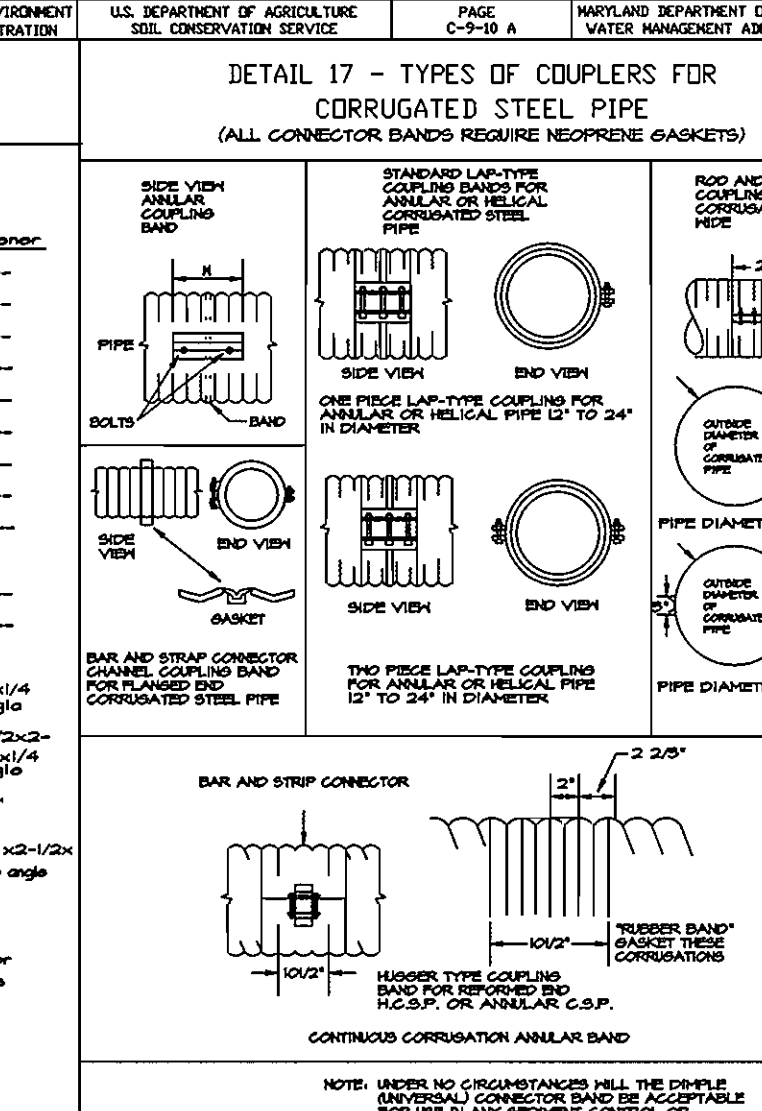
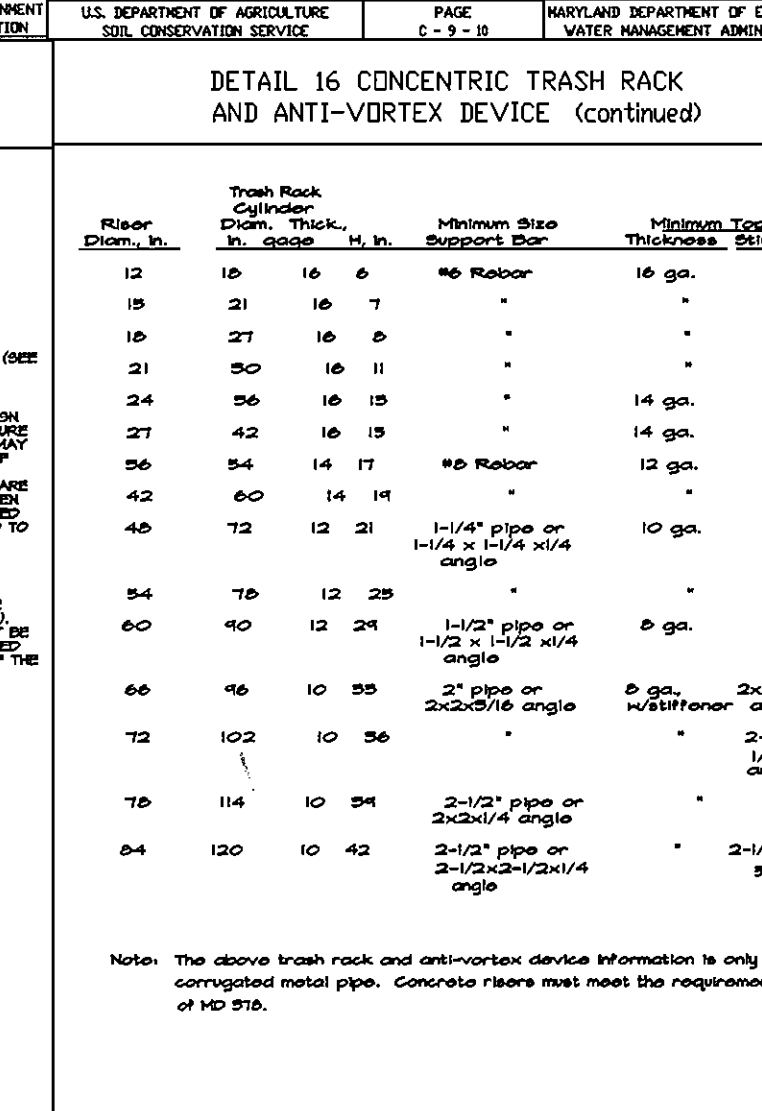
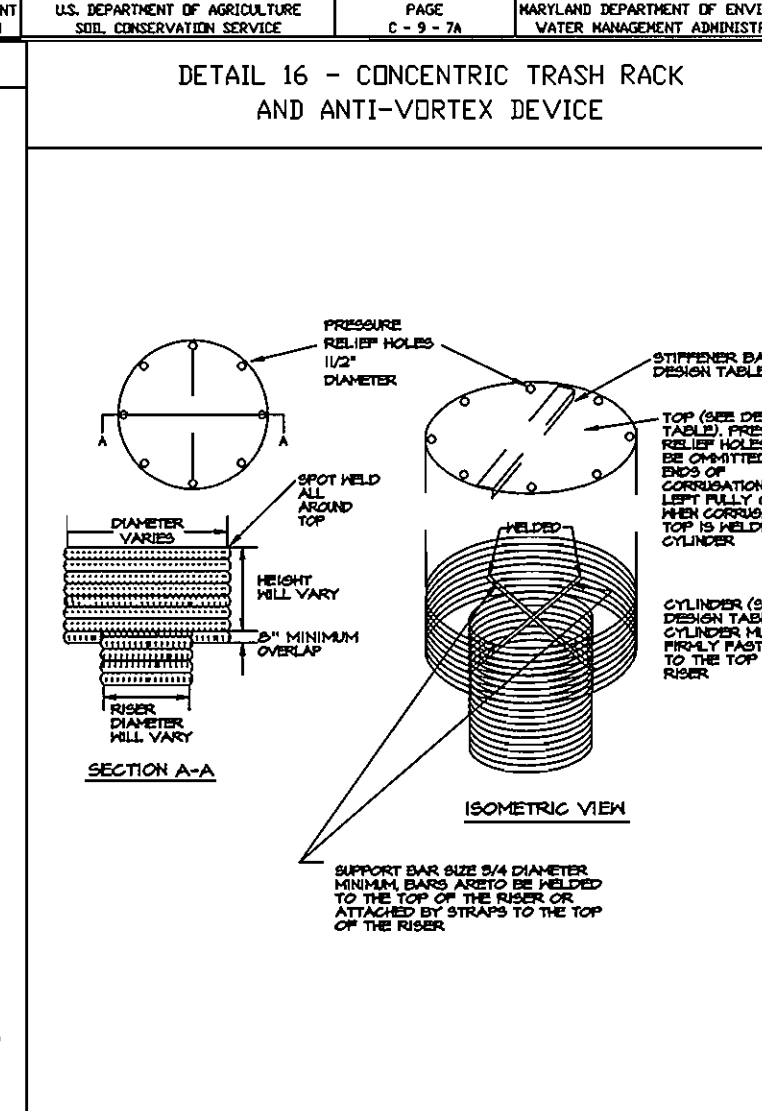
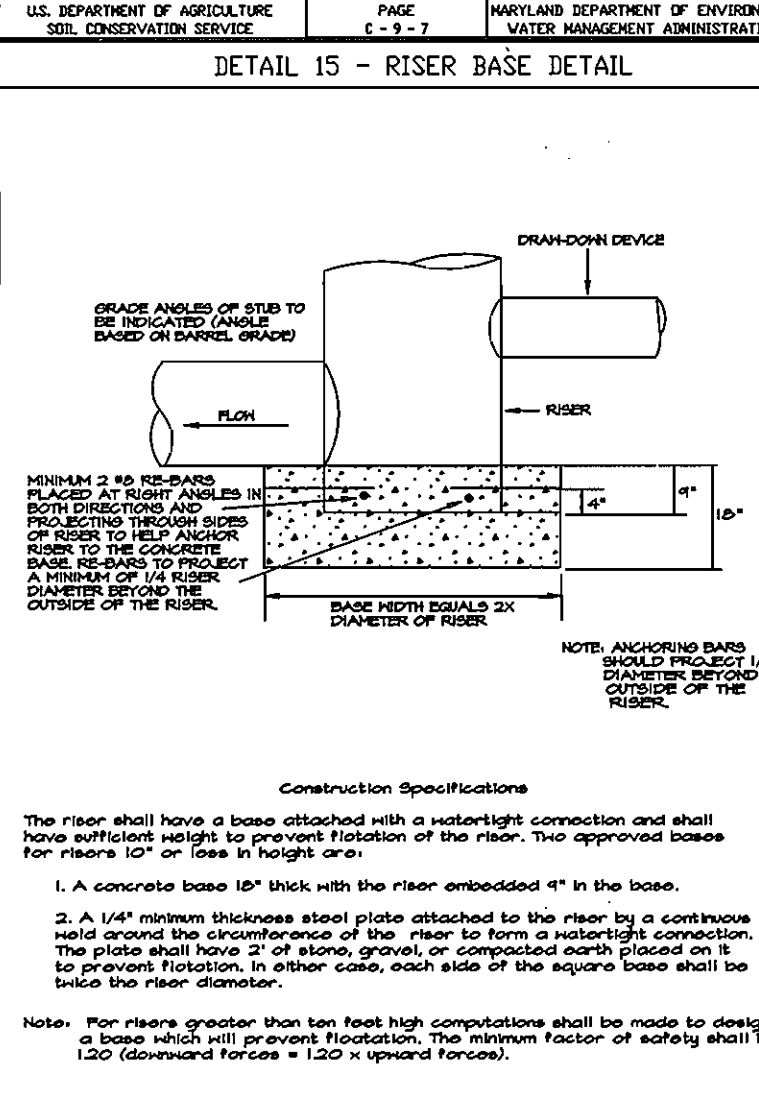
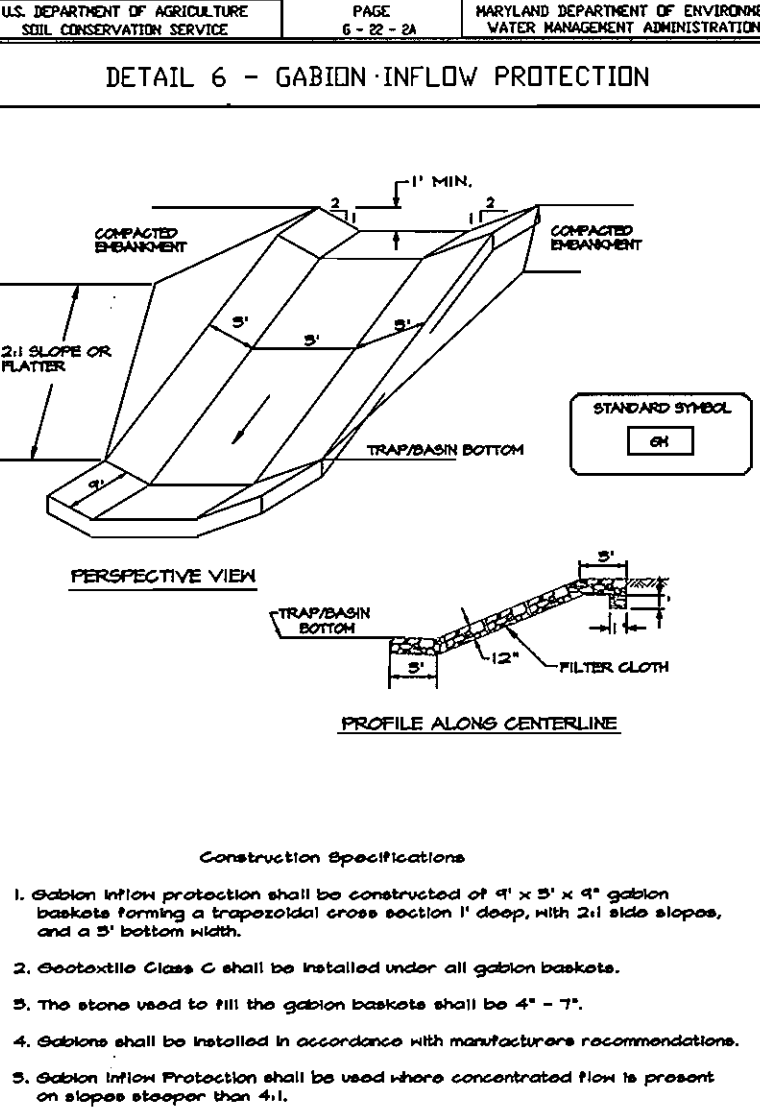
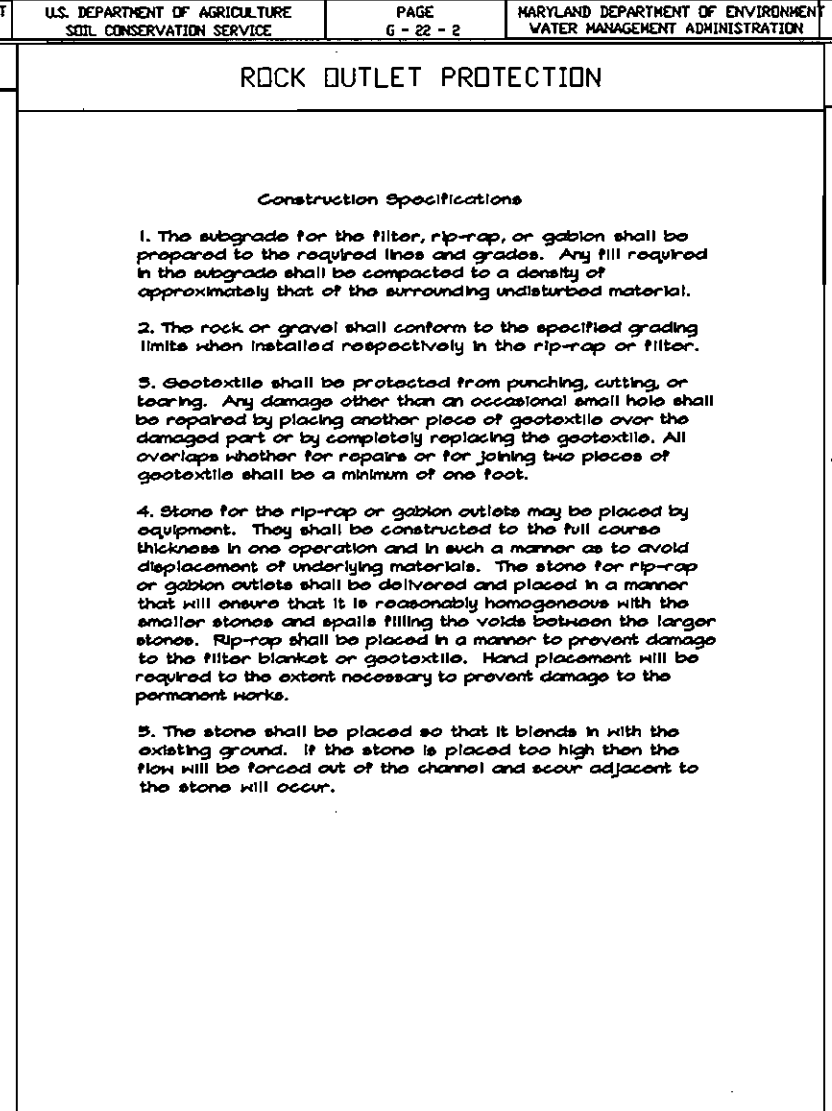
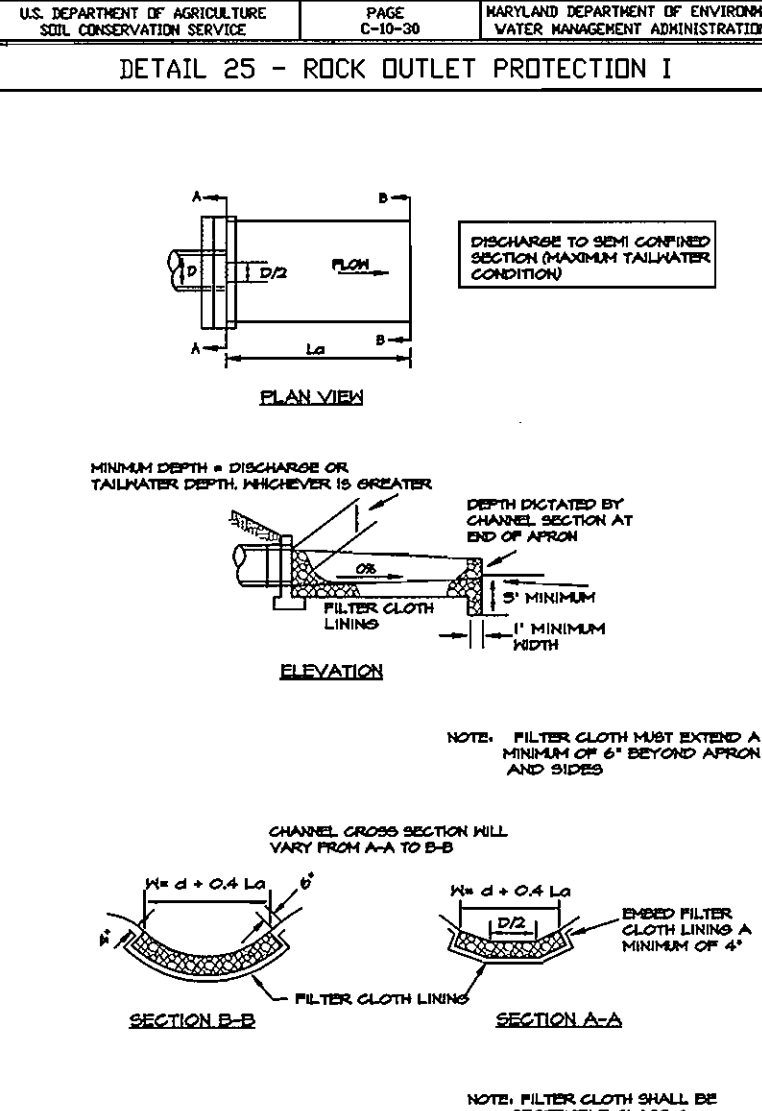
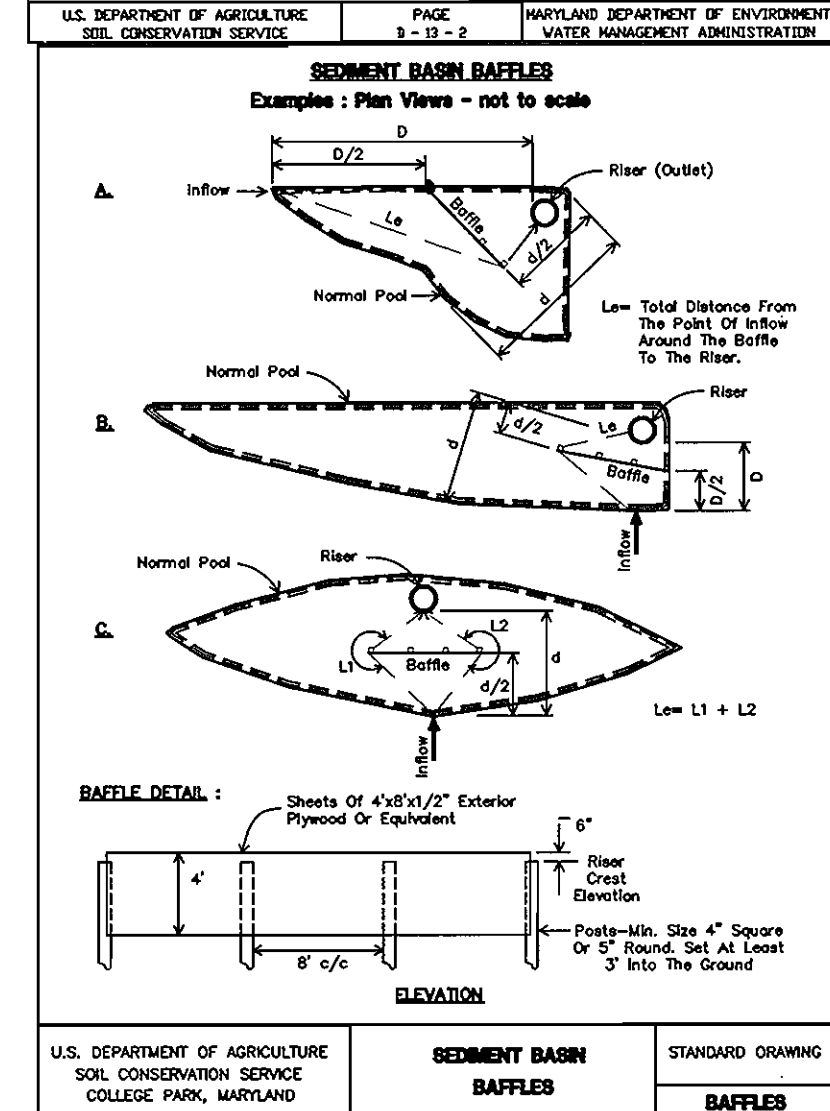
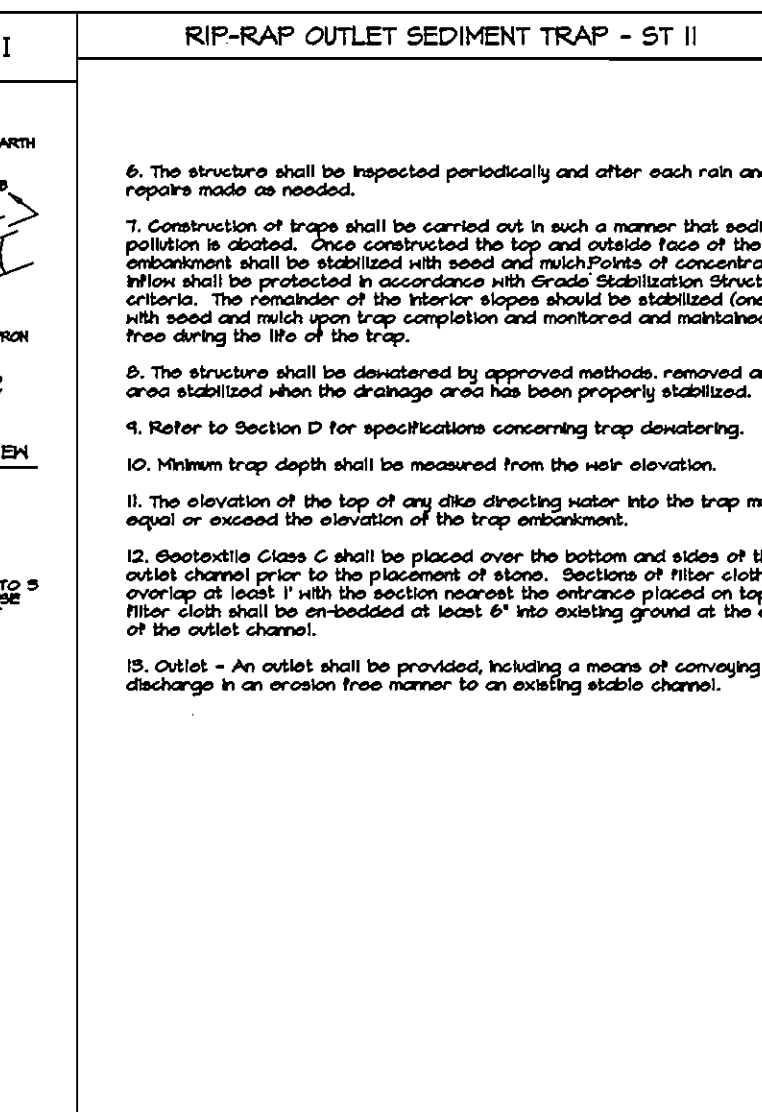
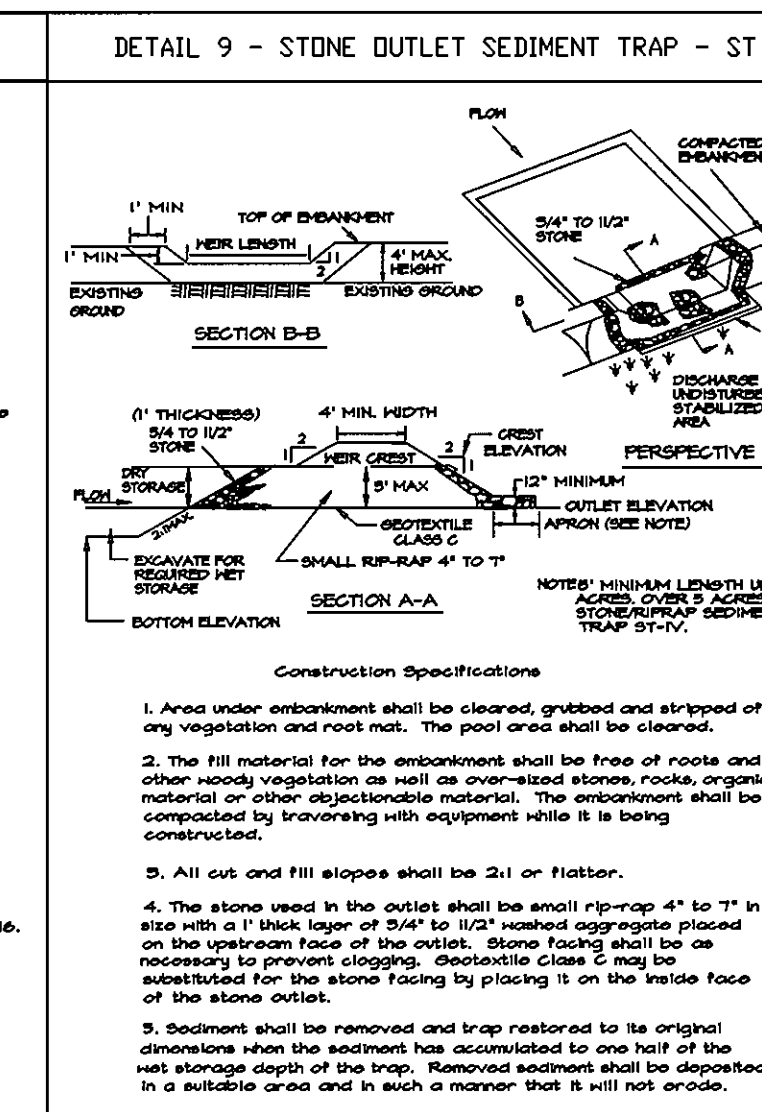
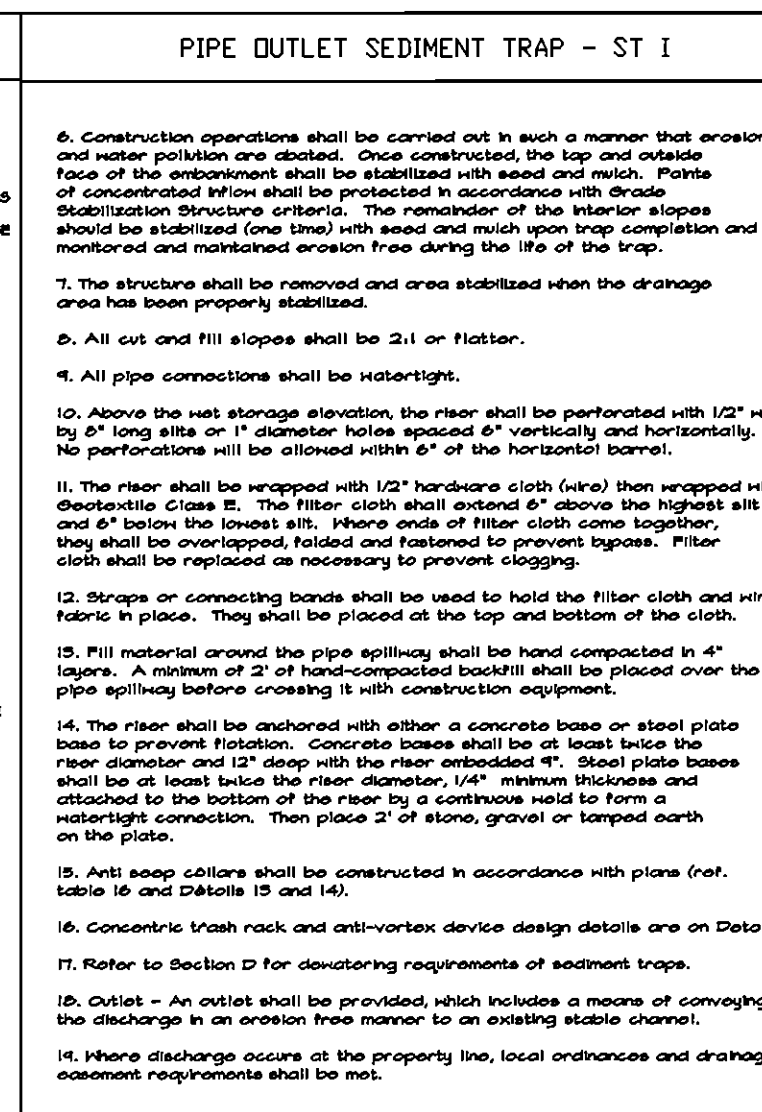
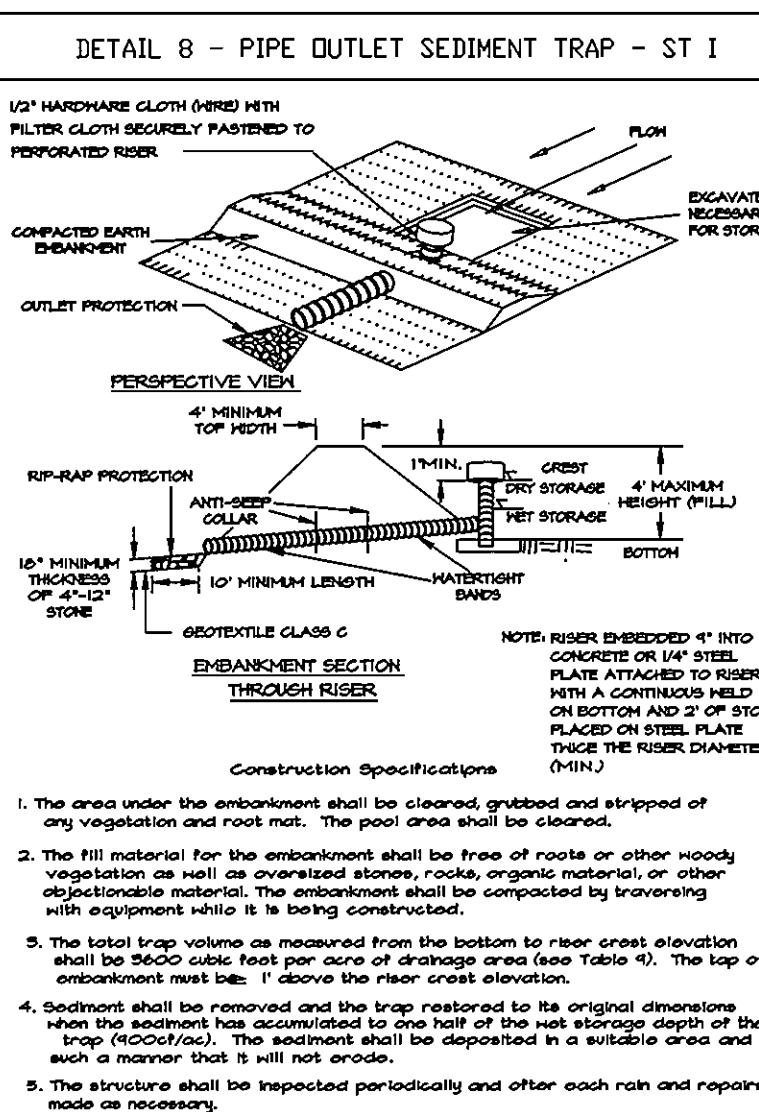
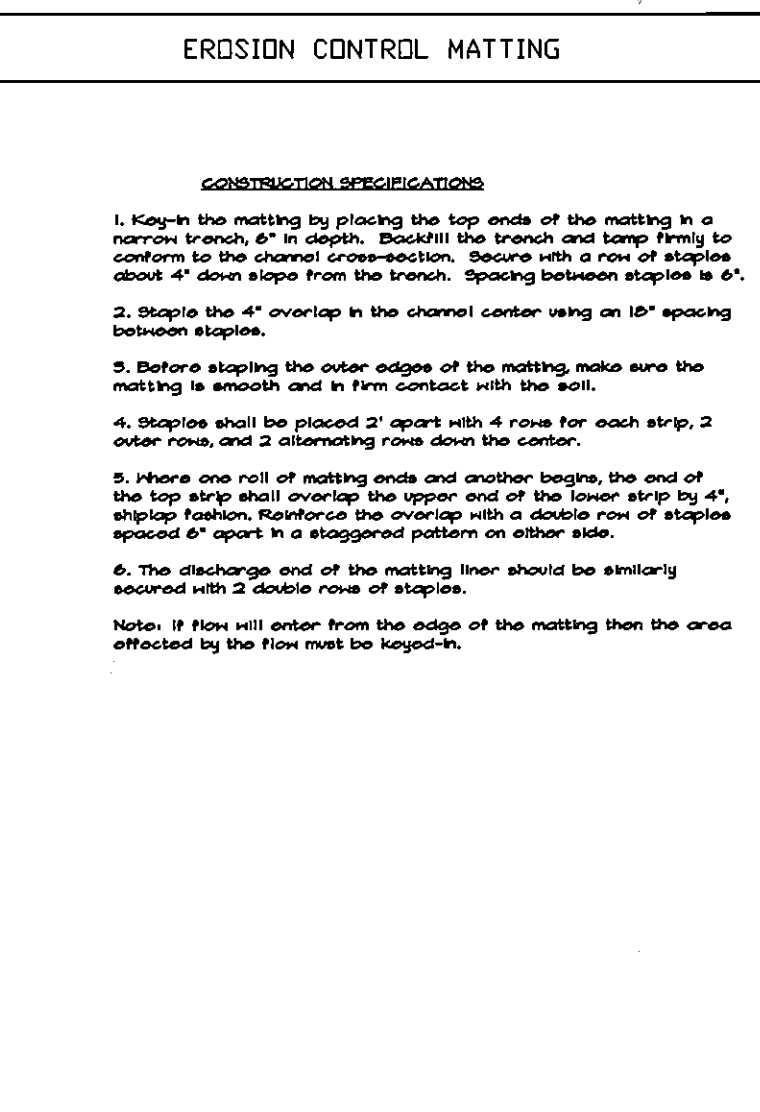
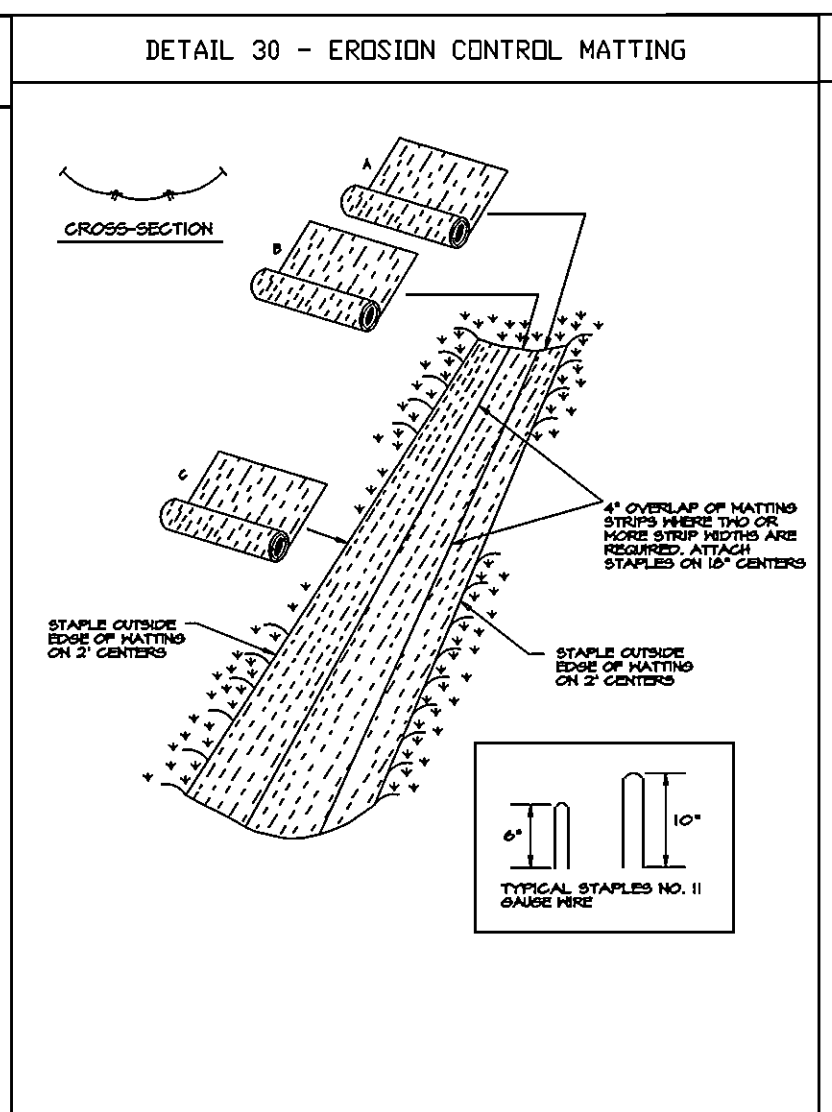
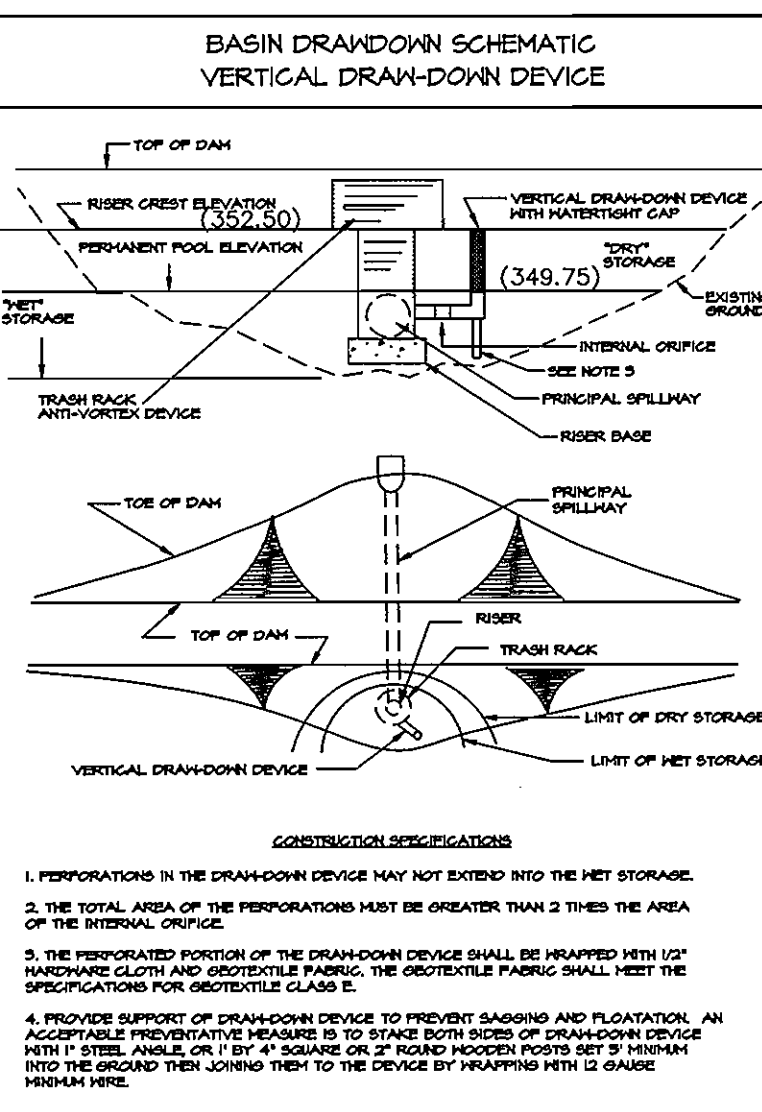
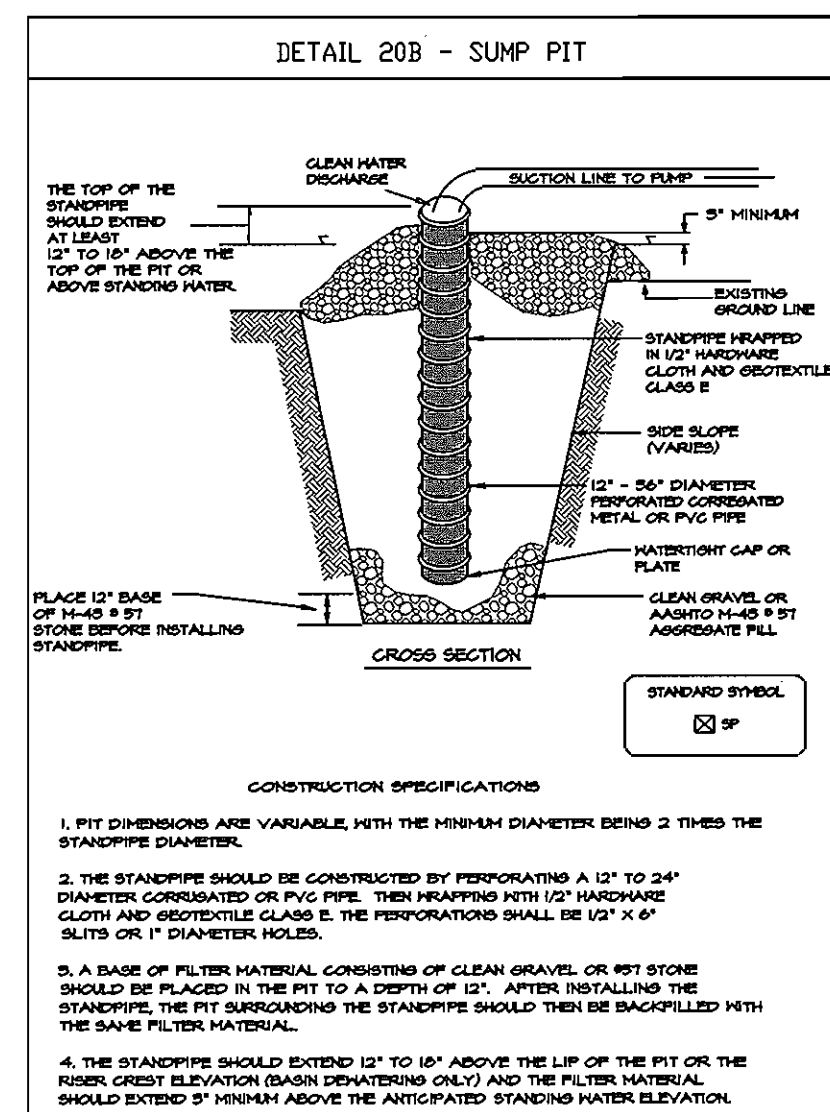
SITE & FINAL GRADING PLAN
SHEET 4

SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
PROJECT NO. N-3105
TAX MAP 30 SECOND ELECTION DISTRICT
BLOCK 21
PARCELS 383 & 387
HOWARD COUNTY, MARYLAND

SCALE
1"=50'
SHEET
14 OF 30

Plot Date and Time: Sep 25, 2002, 3:30pm

CADD FILE: G:\1010081 - Meadowbrook Park\Final Development\14 - GRADING PLAN.dwg



DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Joseph R. ... 10/24/02
DIRECTOR

Andy Hamilton 10/24/02
CHIEF, DIVISION OF LAND DEVELOPMENT

William ... 10/24/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION

OWNER/DEVELOPER INFORMATION
Robert ... 2/30/02

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

Gary J. ... 10-2-02
DIRECTOR

PROJECT: MEADOWBROOK PARK
SECTION/AREA: N/A
MAP NO: MAP 30 PARCELS 383 & 387

FLAT NO.: N/A
GRID NO.: 5
ZONE: R-20
TAXZONE: 2
ELEC. DIST.: 2
CENSUS TR.: 602302

WATER CODE: F09
SEWER CODE: 5750615

DEVELOPER'S CERTIFICATION

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR SEDIMENT AND EROSION CONTROL. BEFORE BEGINNING THE PROJECT, I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

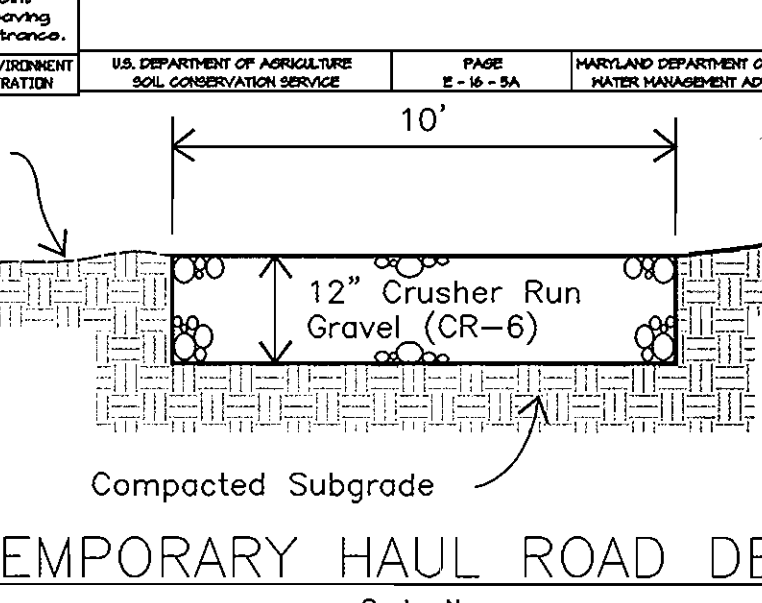
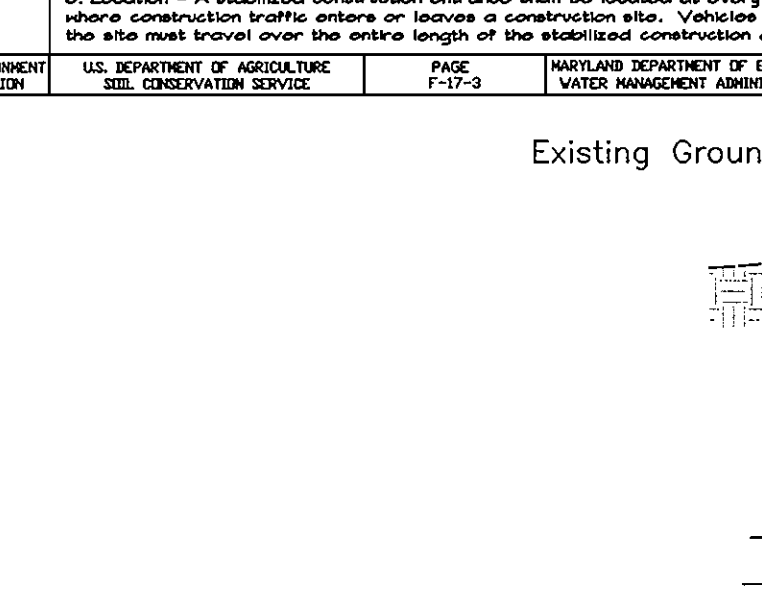
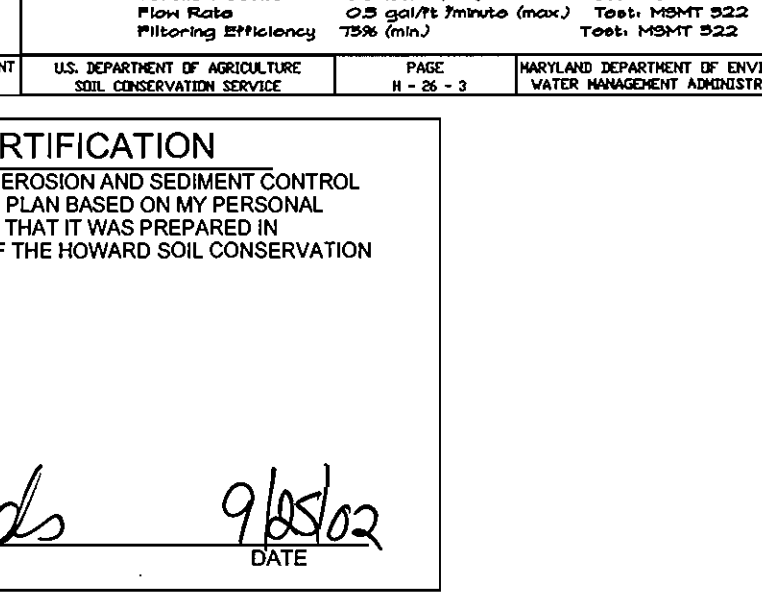
"SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARD SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS."

Robert ... 2/30/02
DATE

ENGINEER'S CERTIFICATION

"I HEREBY 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 HOWARD SOIL CONSERVATION DISTRICT."

Virginia ... 9/28/02
DATE



CONSTRUCTION SPECIFICATIONS

1. Surface Water - all surface water flowing to or diverted toward mountable berms shall be piped through the mountable berm, maintaining positive drainage. Pipe installed through the mountable berm shall be protected with a mountable berm with 1/2" slope and a minimum of 10' of stone over the pipe. Pipe has to be sized according to the drainage. A 6" minimum shall be required.

2. Refer to the sediment erosion control plans for the location of the mountable berm.

OWNER/DEVELOPER INFORMATION

HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9220 BENDIX ROAD
ELLCOTT CITY, MARYLAND 21043

MCRONE
ENGINEERING ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING CONSTRUCTION SERVICES

20 RIDGEBY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8231
Fax: (410) 267-9932

DES: J.S.	JS	1	KEDLINE REVISION	7/08
DRN: J.S.				
CHK: V.L.D.				
DATE: MAY, 2001	BY No.		REVISION	DATE

SEDIMENT & EROSION CONTROL DETAILS

TAX MAP 30
SECOND ELECTION DISTRICT

SITE DEVELOPMENT PLAN
MEADOWBROOK PARK

PROJECT NO. N-3105
BLOCK 5
PARCELS 383 & 387
HOWARD COUNTY, MARYLAND

SCALE 1"=50'

SHEET 15 OF 30

SDF-01-145

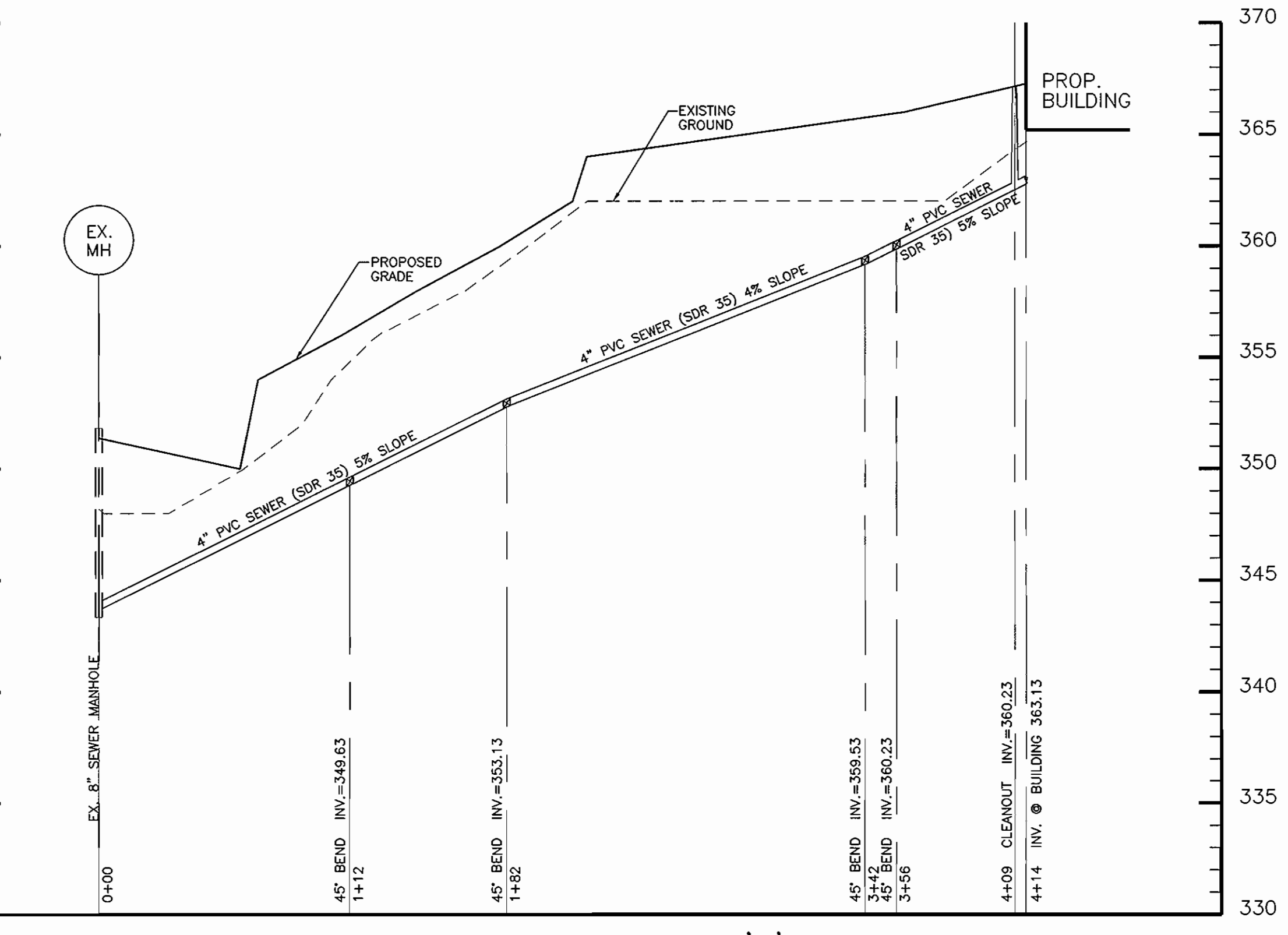
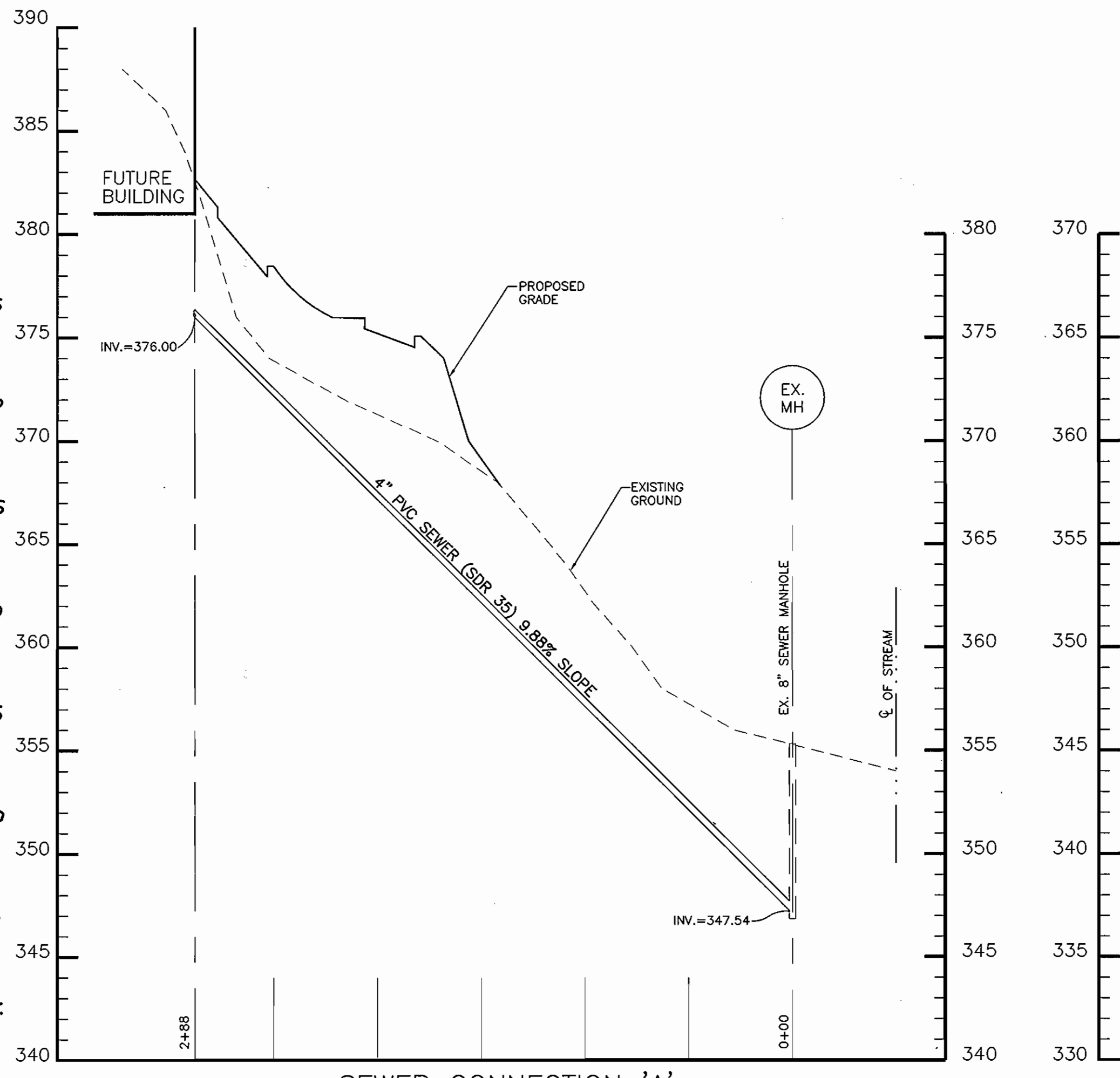
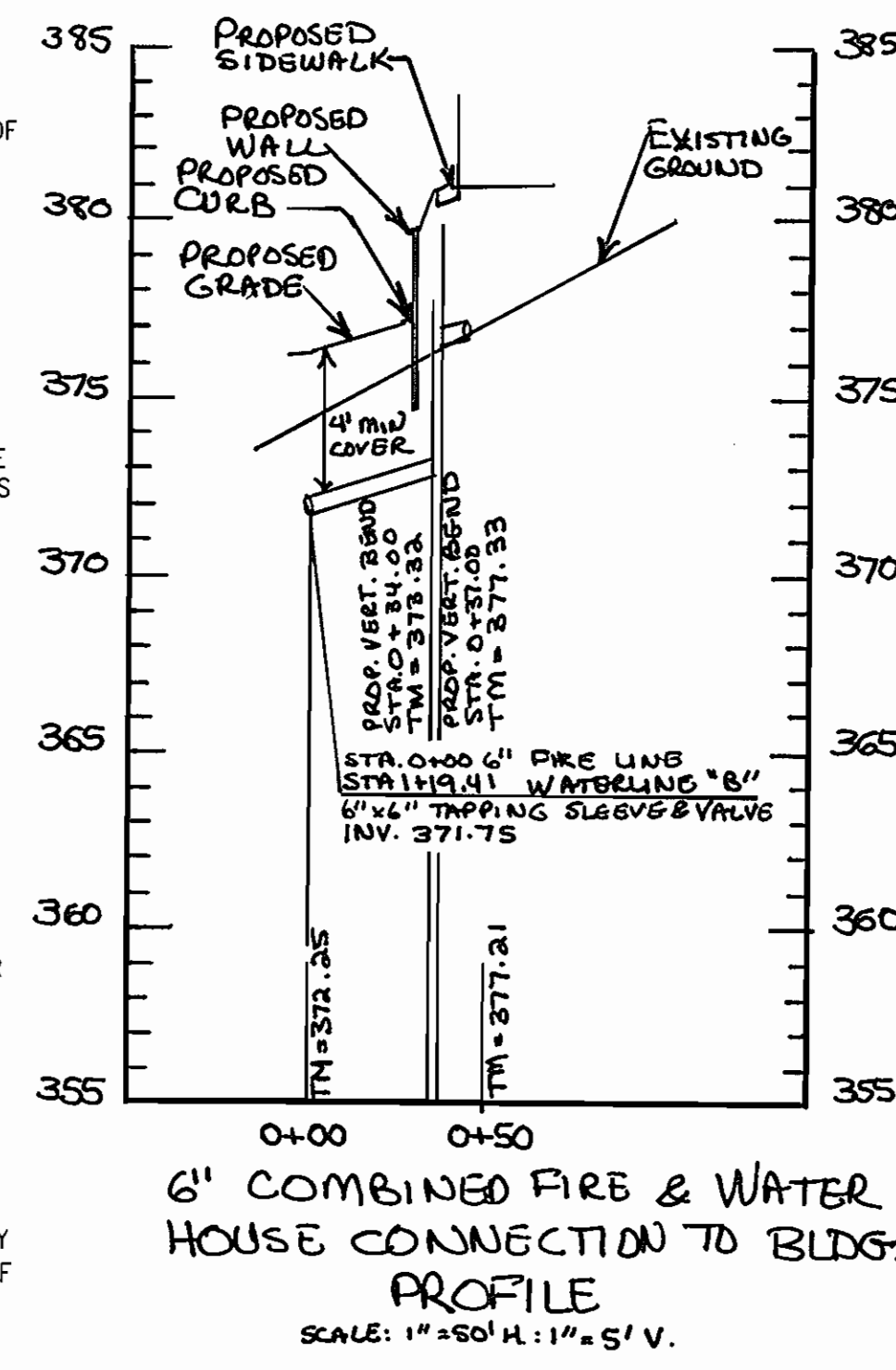
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

10/24/02
10/24/02
10/24/02

NOTES

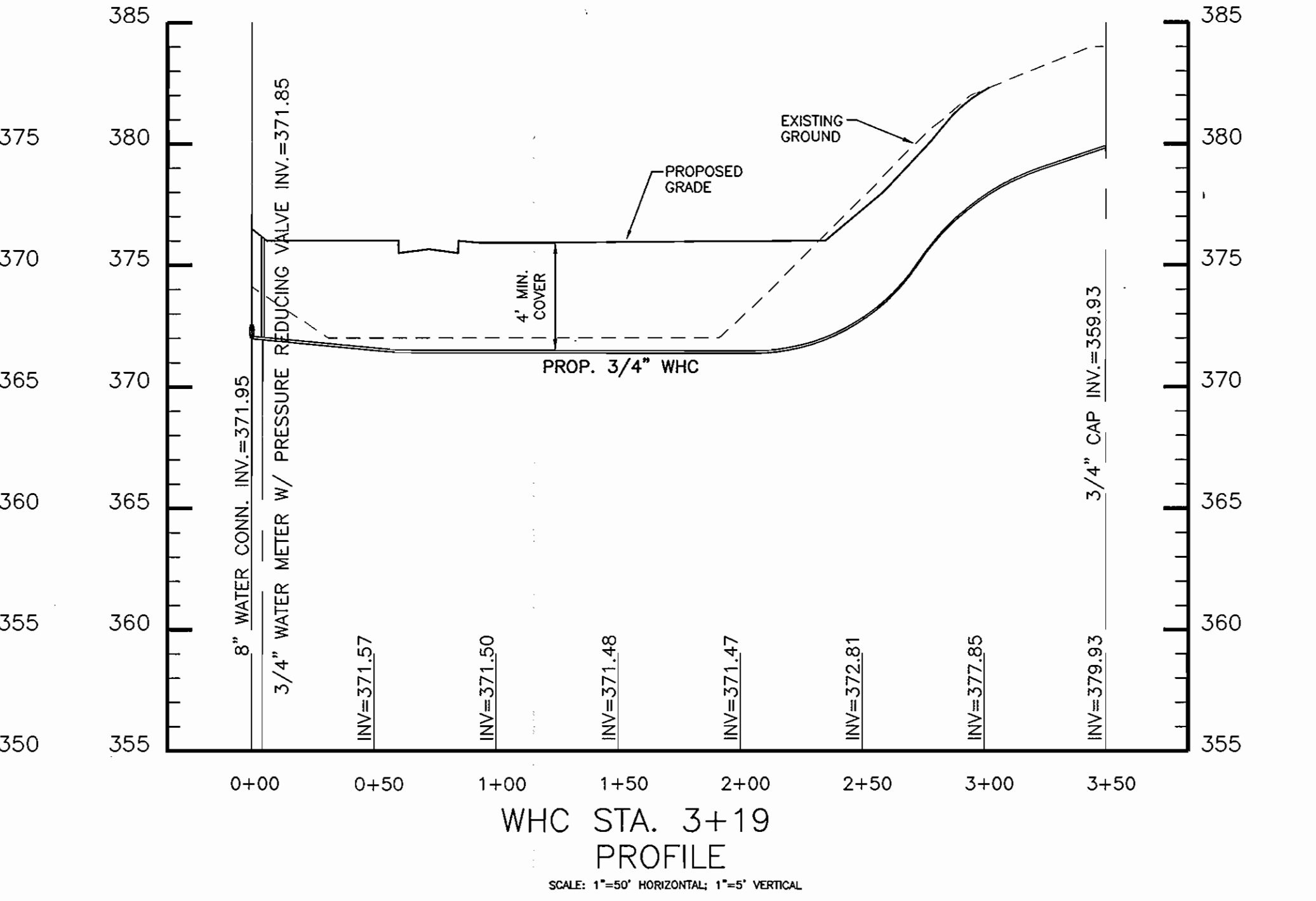
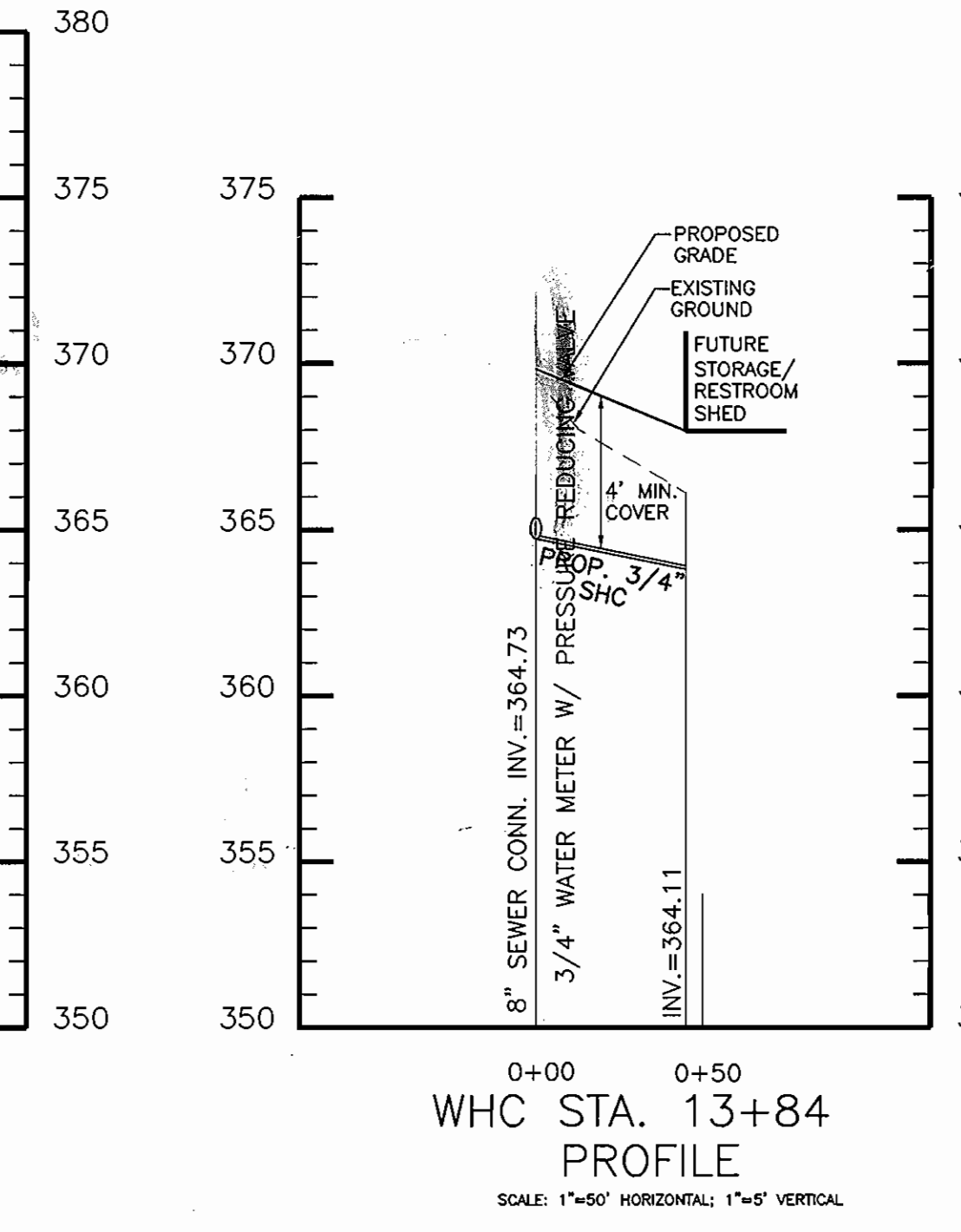
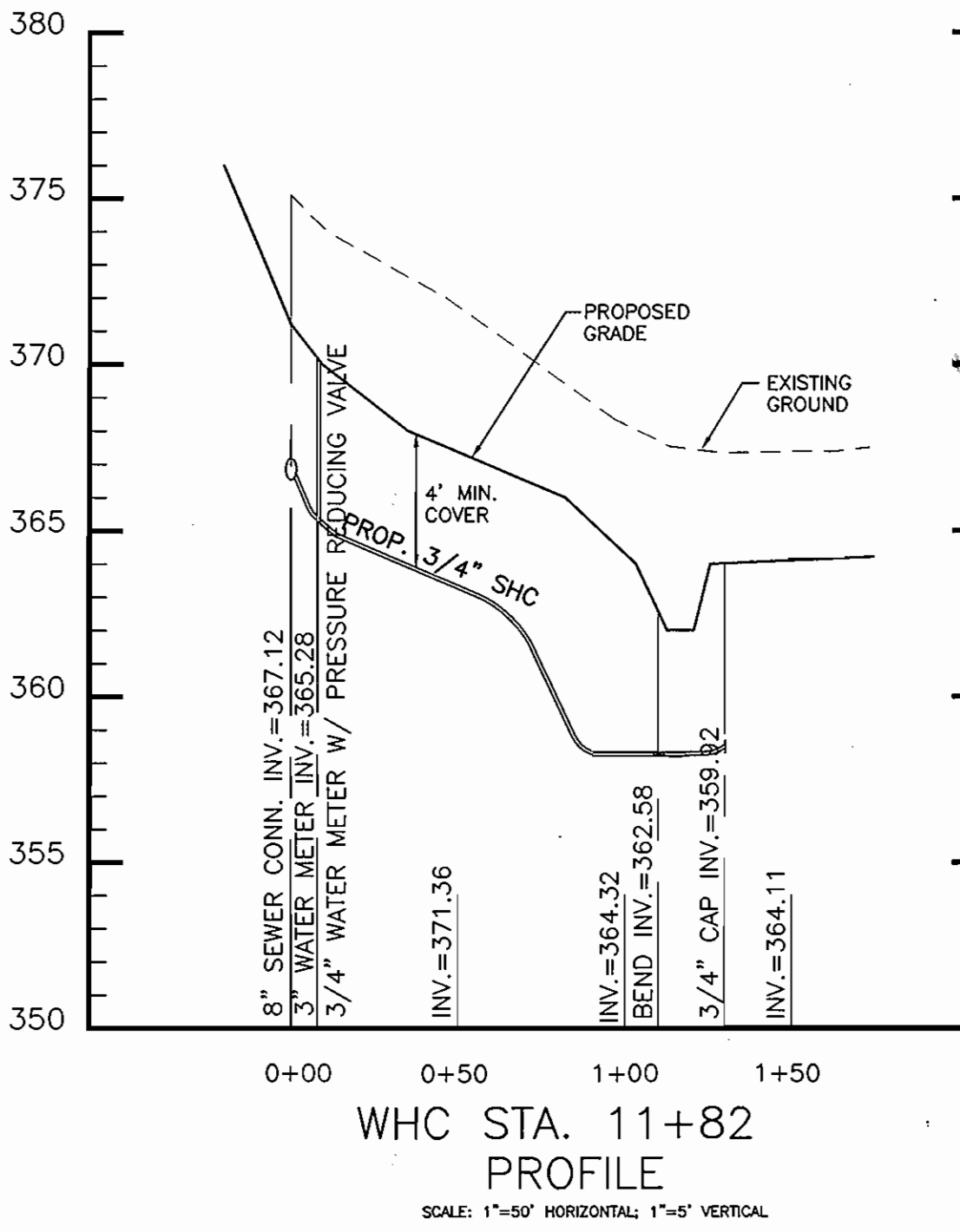
PART 1

- APPROXIMATE LOCATIONS OF EXISTING MAINS OR POTENTIALLY CONCURRENT WORK BY OTHERS IS SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING OR CONSTRUCTED MAINS AND SERVICES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE TO EXISTING OR CONSTRUCTED MAINS SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83, PER A SURVEY BY McCRONE, INC. BENCHMARK POINTS MB-04, MB-05, AND MB-06 ARE AS SHOWN ON SHEET 1.
- ALL VERTICAL CONTROLS ARE BASED ON NAVD 83 PER THE BENCHMARK POINTS NOTED IN ITEM 2 ABOVE.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY A MINIMUM OF 5'-0" OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS NOT MADE ARRANGEMENTS FOR BRACING OF ANY POLES. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- NO TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 AT&T 1-800-526-2000
 BGE (CONTRACTOR SERVICES) 410-850-4620
 BGE (UNDERGROUND DAMAGE CONTROL) 410-787-9068
 BUREAU OF UTILITIES 410-313-4900
 BELL ATLANTIC MARYLAND, INC. 1-800-621-9900
 COLONIAL PIPELINE CO. 410-795-1390
 MISS UTILITY 1-800-257-7777
 STATE HIGHWAY ADMINISTRATION 410-531-5533
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR WITHOUT GIVING NOTIFICATION TO THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DEVELOPMENT ENGINEERING DIVISION.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.
- THE CONTRACTOR SHALL STABILIZE ALL WORK AT THE END OF EACH CONSTRUCTION DAY.



PART 2

- ALL WATER MAINS SHALL BE D.I.P. CLASS 50 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- SANITARY SEWER SERVICE CONNECTIONS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL S 2.11.
- CLEANOUTS FOR SANITARY SEWER HOUSE CONNECTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL S 2.22.
- SANITARY SEWER MAIN LINE CLEANOUT SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL S 3.21.
- TRENCH BEDDING AND TRENCH PAYMENT WIDTHS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS G 2.01 & G 2.02-A.



OWNER/DEVELOPER INFORMATION
 [Signature] 2/30/02
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

[Signature] 10/24/02 DATE
 DIRECTOR

[Signature] 10/24/02 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/21/02 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

[Signature] 10.2.02 DATE
 Gary J. Arthur, Director

PROJECT	SECTION/AREA	MAP NO.
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387
PLAT NO.	GRID NO.	ZONE
N/A	5	R-20
TAXZONE	ELEC. DIST.	CENSUS TR.
2	2	602302
WATER CODE	SEWER CODE	
F09	5750615	

McCRONE
 ENGINEERING/ ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING/ CONSTRUCTION SERVICES
 20 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 287-8471
 Fax (410) 287-9932

ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY

DES:	J.S.	JS	I	REDLINE REVISION	7/08
DRN:	J.S.				
CHK:	V.L.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

WATER & SEWER HOUSE CONNECTION PROFILES

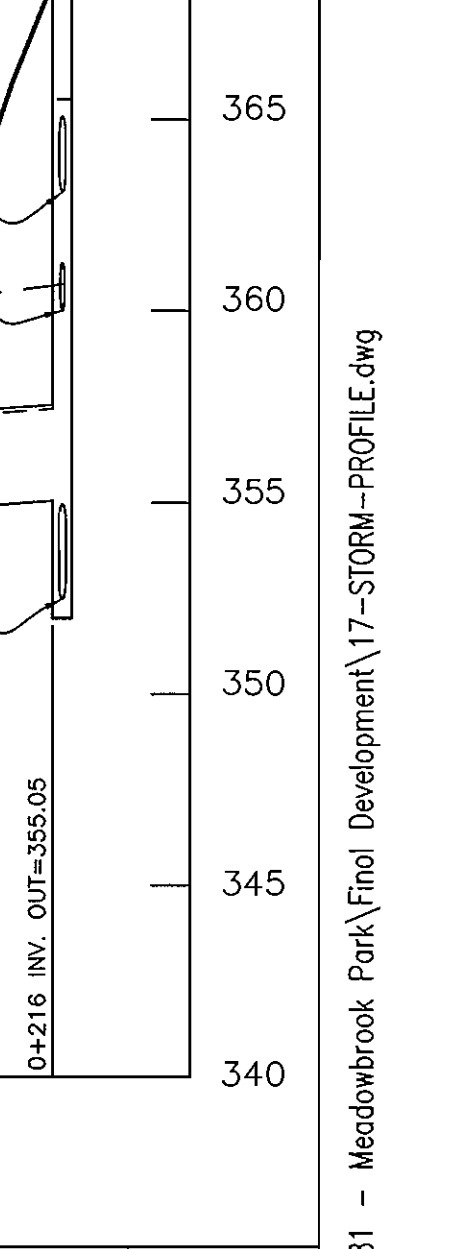
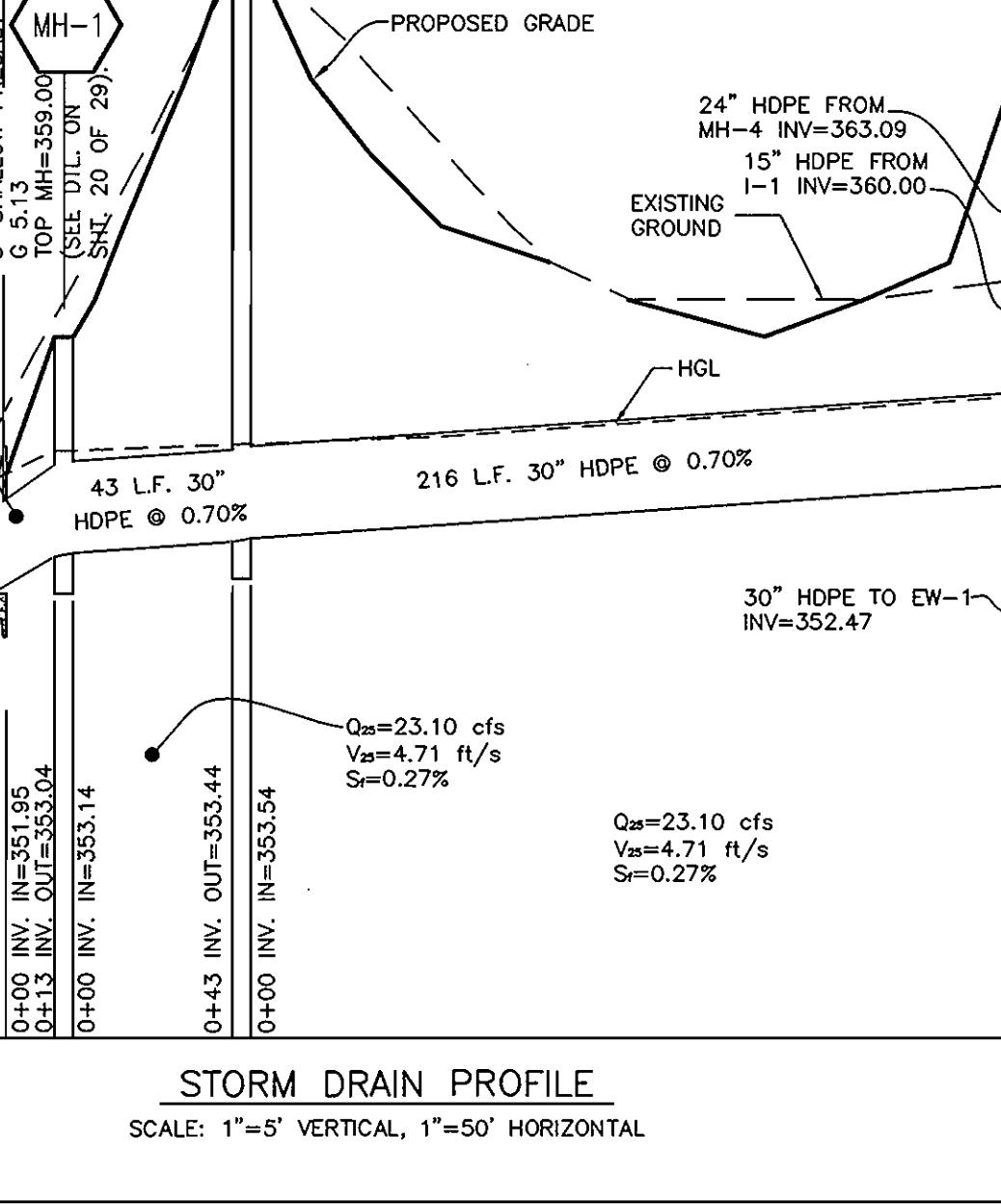
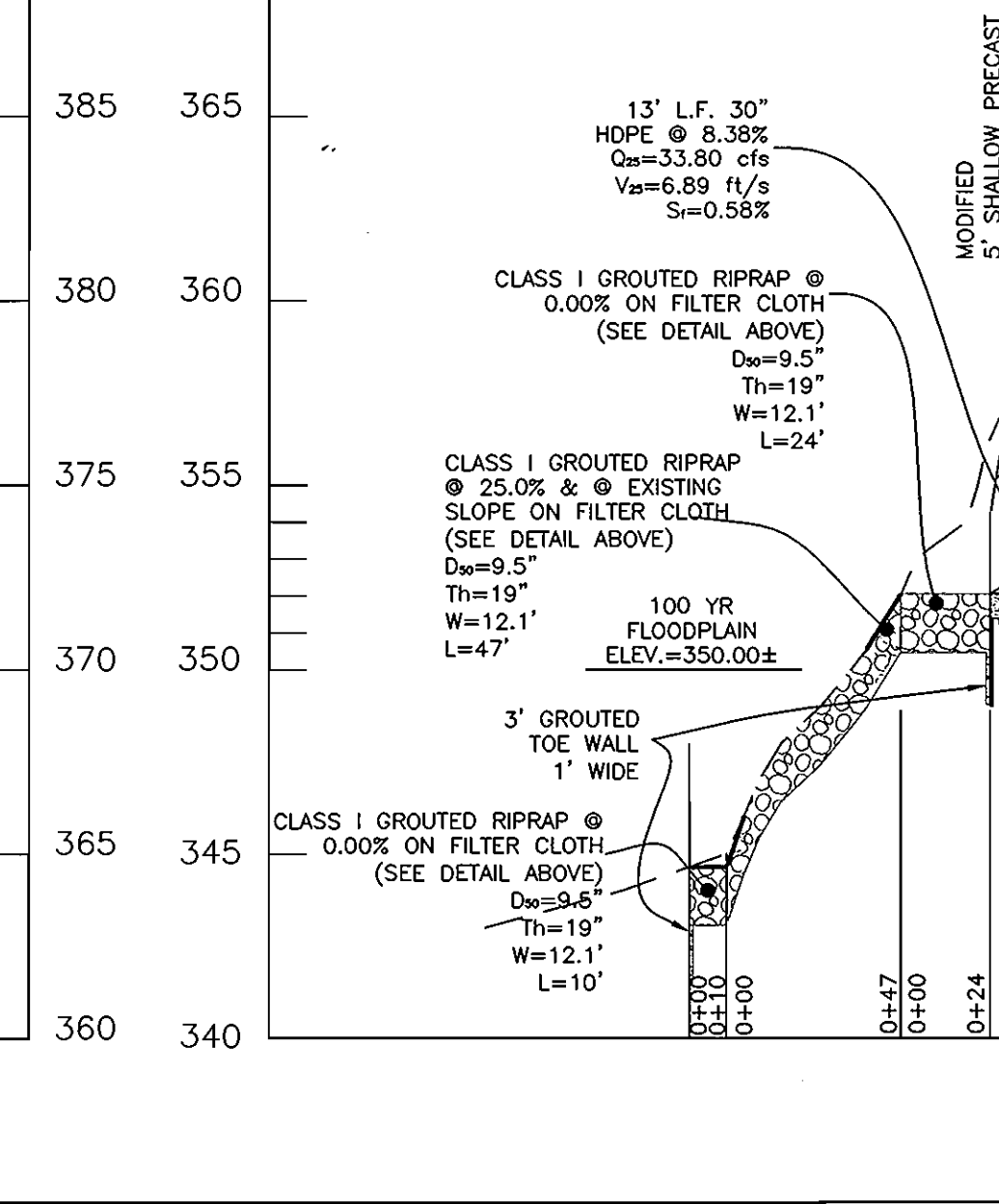
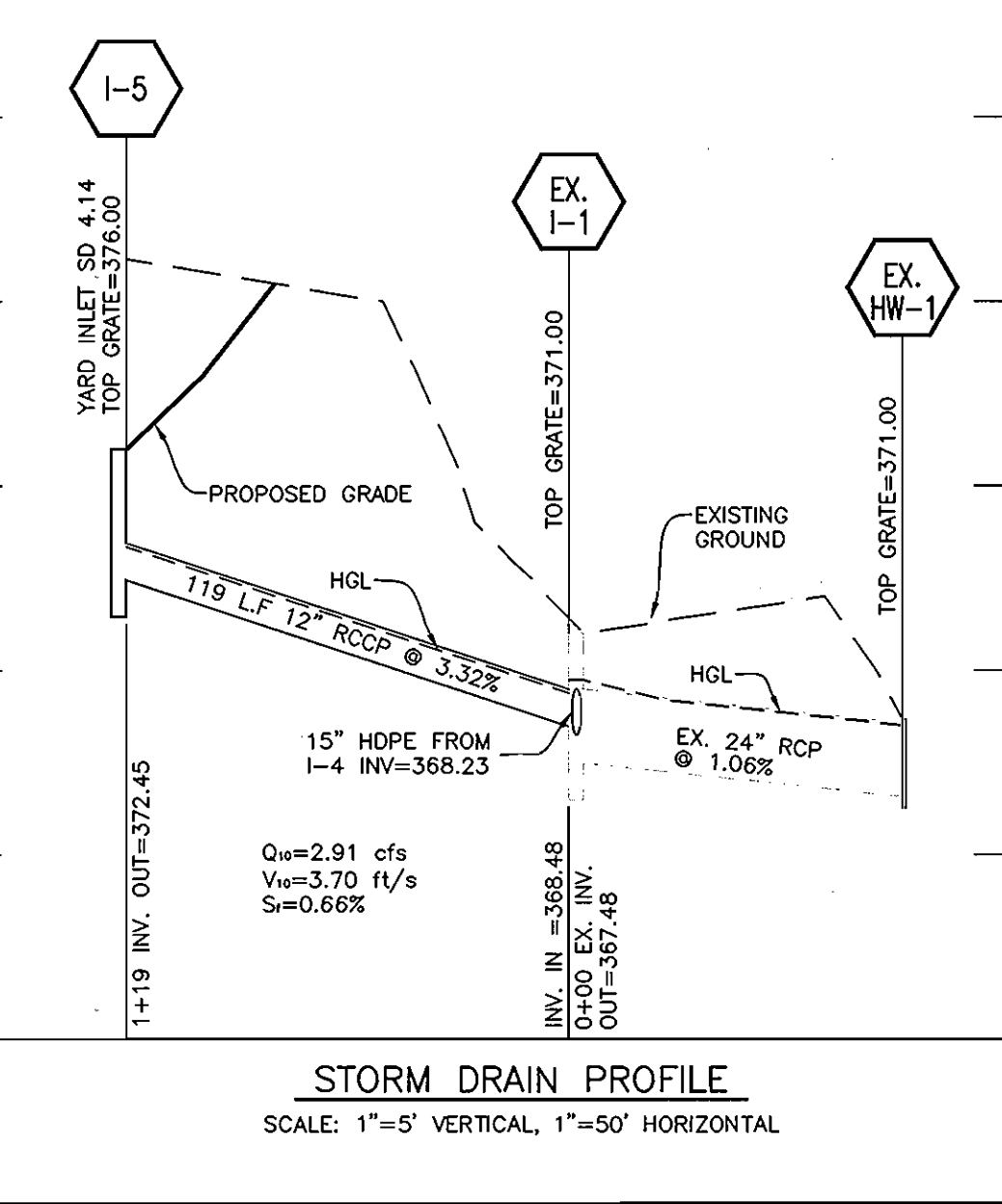
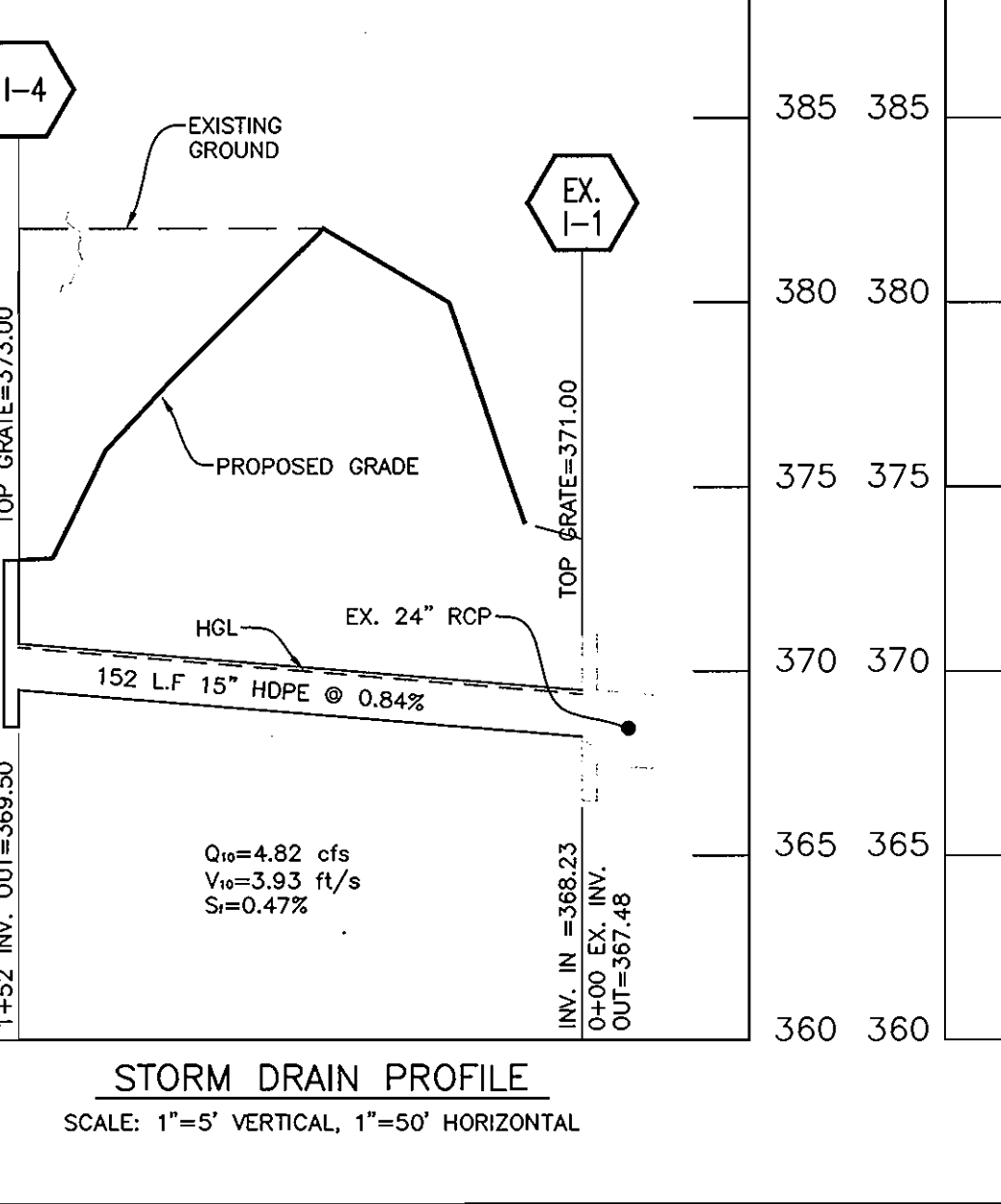
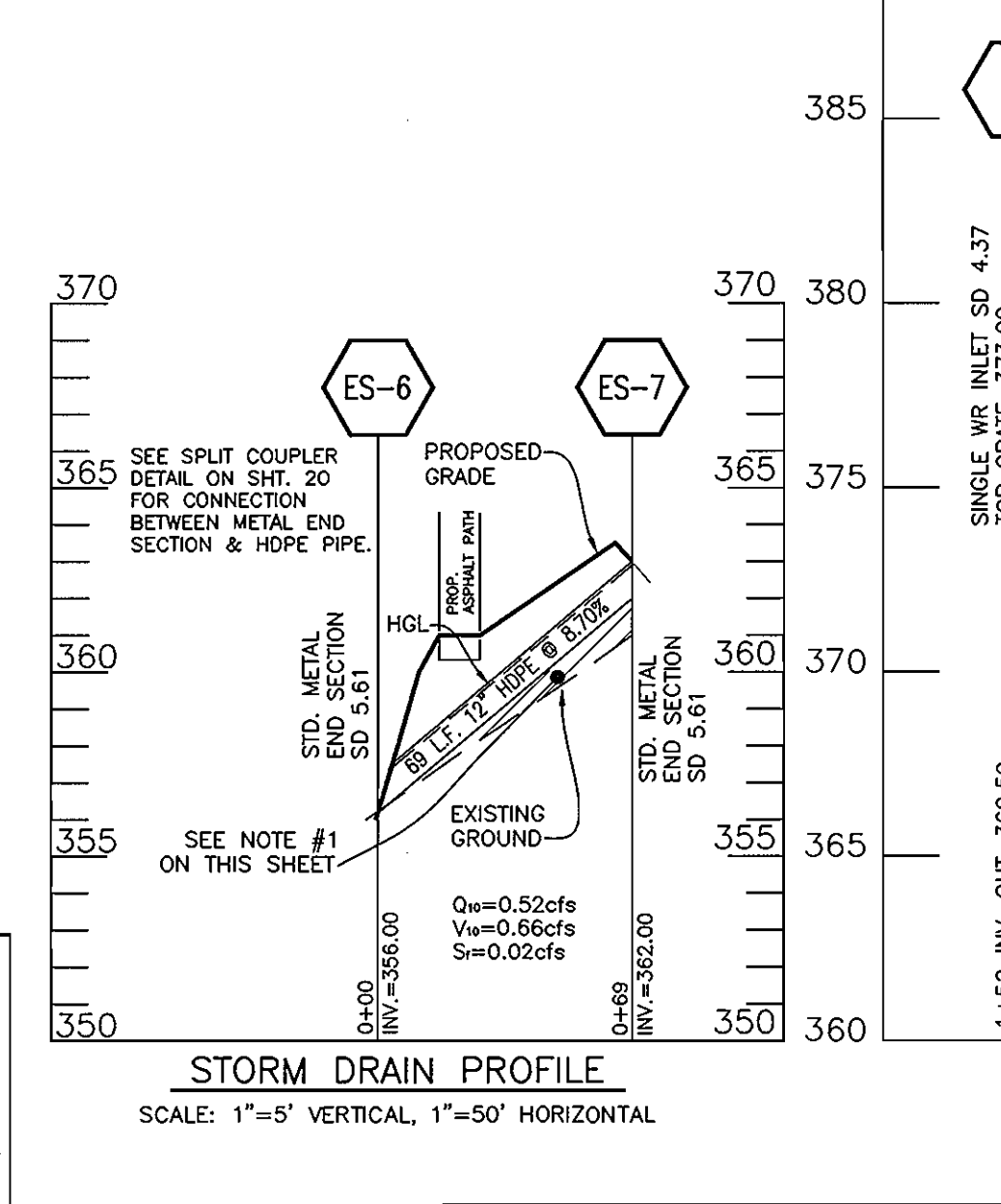
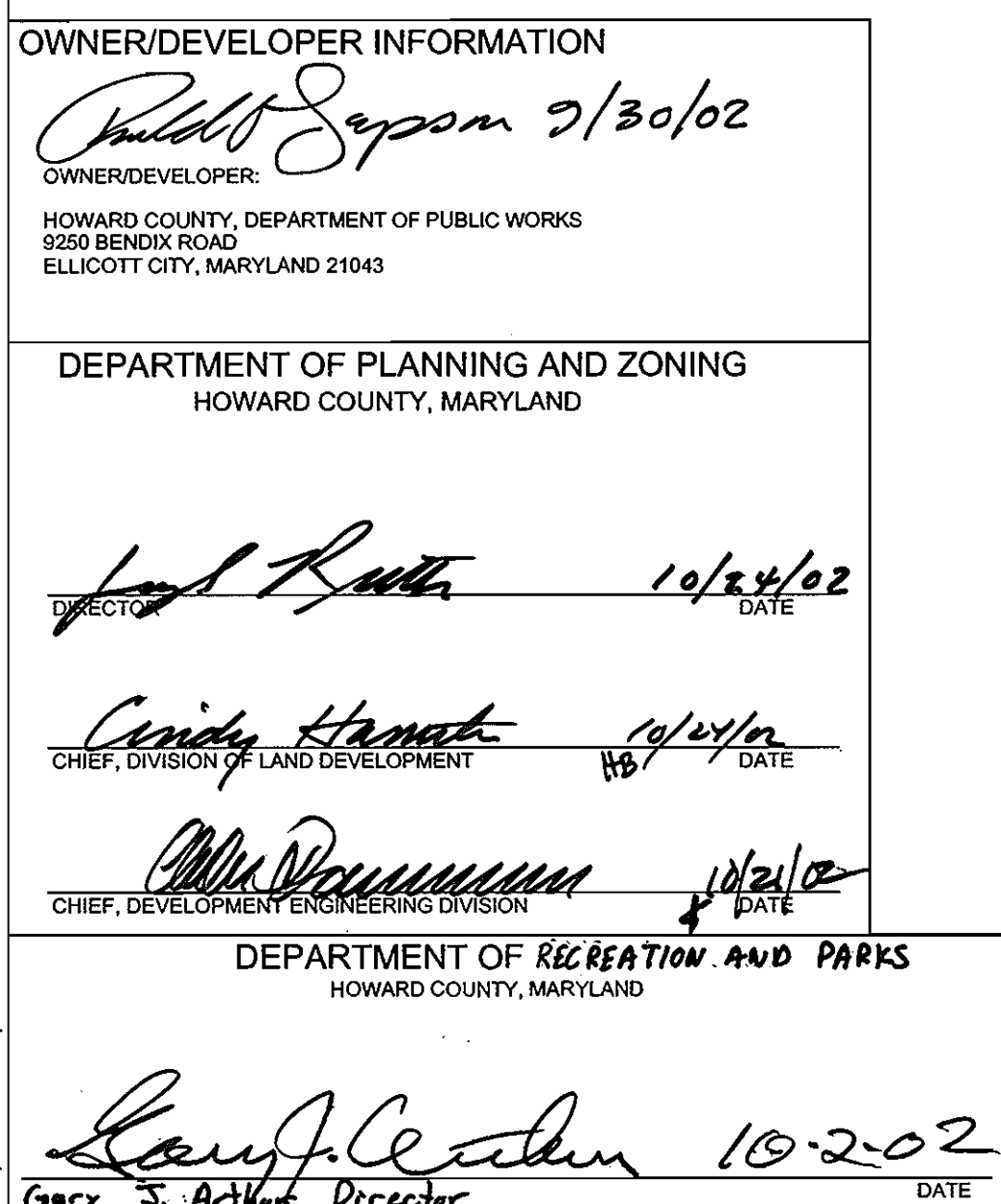
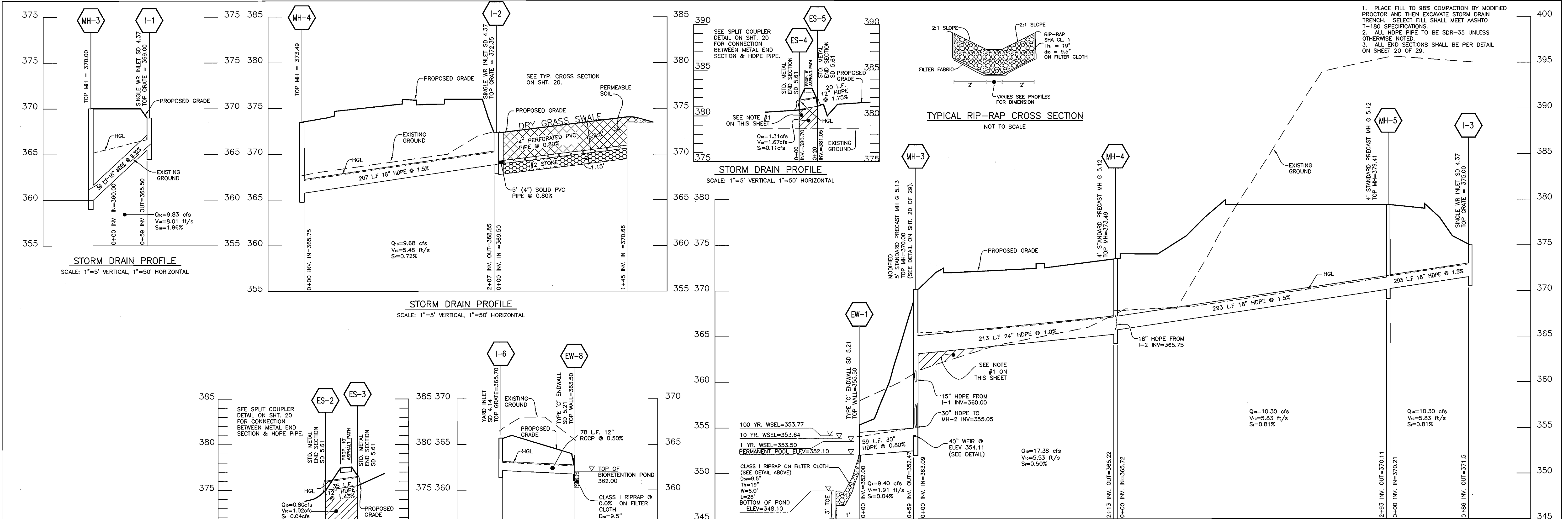
SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
 PROJECT NO. N-3105
 BLOCK 5
 TAX MAP 30
 SECOND ELECTION DISTRICT

PARCELS 383 & 387
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 16 OF 30
 SDP-01-145

For Draw and Time: Sep 25, 2002 - 3:35pm

CADD FILE: c:\1010081 - Meadowbrook Park\Info\Development\16-UTILITY-PROFILE.dwg

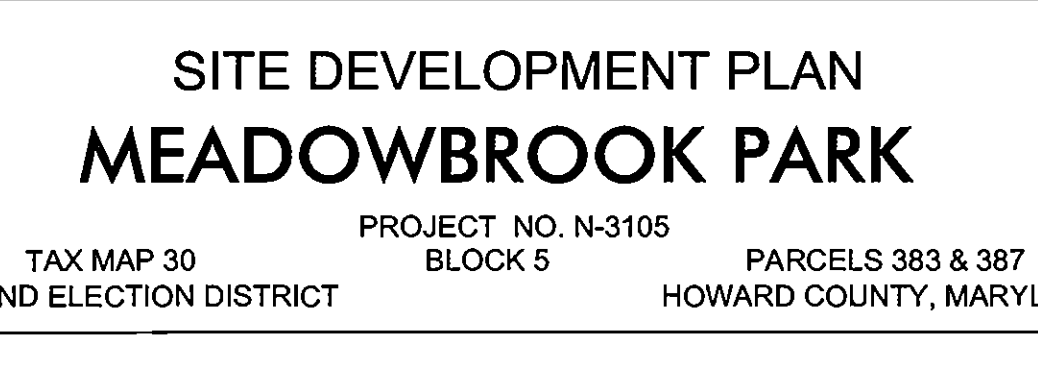
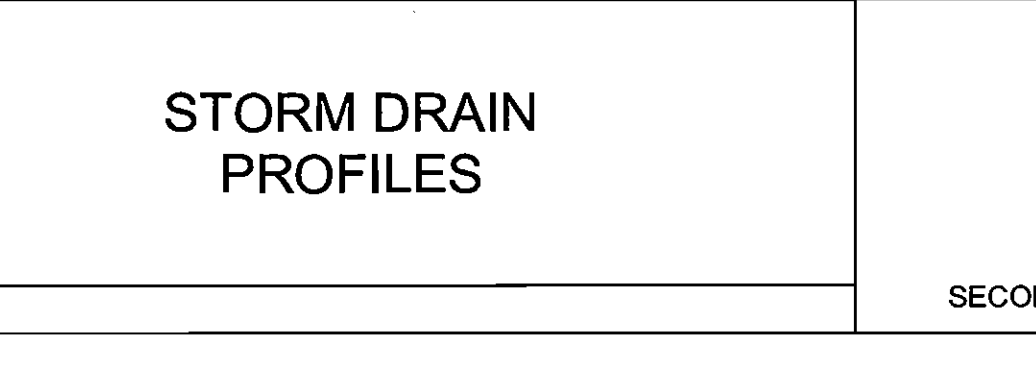
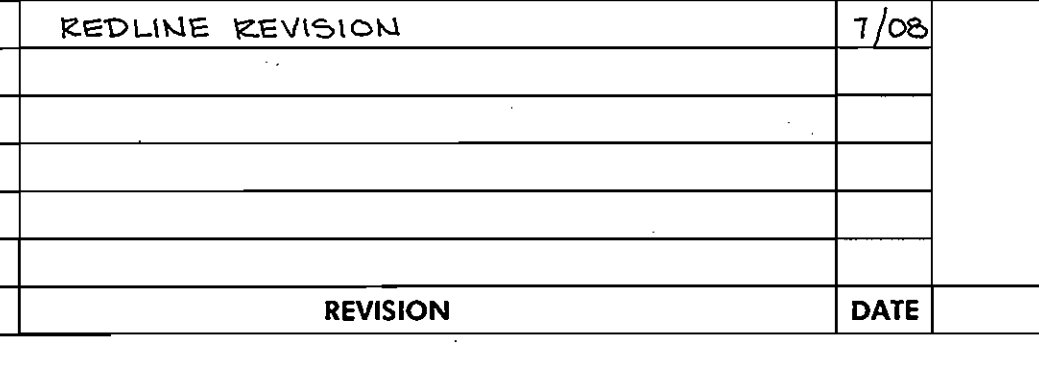
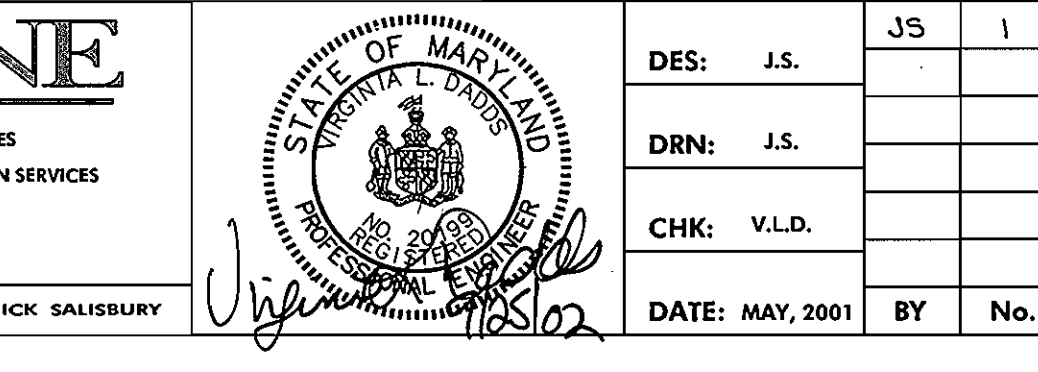
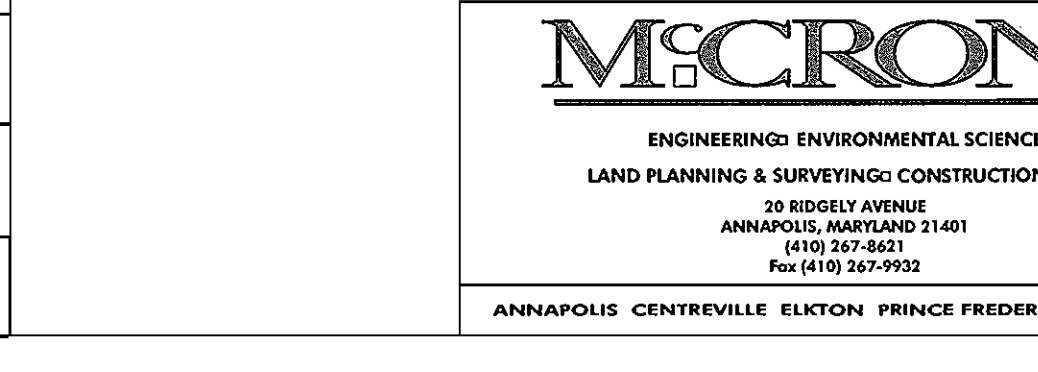


OWNER/DEVELOPER INFORMATION
 OWNER/DEVELOPER: *Paul J. Sapon* 2/30/02
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MARYLAND 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 DIRECTOR: *Paul Rutter* 10/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *Chris Hamish* 10/24/02

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND
Gary S. Acker 10-2-02
 DIRECTOR

PROJECT	SECTION/AREA	MAP NO.
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387
PLAT NO.	GRID NO.	ZONE
1	5	R-20
TAXZONE	ELEC. DIST.	CENSUS TR.
2	2	602302
WATER CODE	SEWER CODE	
F09	5750615	



DES:	J.S.	JS	1	REDLINE REVISION	7/08
DRN:	J.S.				
CHK:	V.L.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

WATER QUALITY SUMMARY						
D.A.	Area (Ac.)	WQv	Rev	Cpv	Qp10	Qp100
A	0.44	Pond	Grass Swale	Pond	N/A	N/A
B	1.86	Pond	Grass Swale	Pond	N/A	N/A
EE	1.80	Pond	Grass Swale	Pond	N/A	N/A
C	1.87	Pond	Dry Grass Swale	Pond	N/A	N/A
D	0.29	Pond	Grass Swale	Pond	N/A	N/A
E	2.04	Pond	Grass Swale	Pond	N/A	N/A
F	0.34	*Grass Swale	Grass Swale	N/A (<2.0 cfs)	N/A	N/A
G	2.93	Pond	Grass Swale	Pond	N/A	N/A
H	2.51	*Grass Swale	Grass Swale	N/A (<2.0 cfs)	N/A	N/A
DD	1.20	*Grass Swale	Grass Swale	N/A (<2.0 cfs)	N/A	N/A
I	1.55	*Grass Swale	Grass Swale	N/A (<2.0 cfs)	N/A	N/A
J	5.09	Existing	Existing	Existing	N/A	N/A
AA	0.43	Bio B-East	Bio B-East	Bio B-East	N/A	N/A
BB	1.2	Bio B-East	Bio B-East	Bio B-East	N/A	N/A
CC	0.54	Bio B-West	Bio B-West	Bio B-West	N/A	N/A
Offsite Imperv. Trails	1.59	Sheet flow to Buffer	Sheet flow to Buffer	N/A (<2.0 cfs)	N/A	N/A

* V1 <= 1.0 fps

Grass Swales/Dry Grass Swales	
Required (Ac.-Ft)	Provided (Ac. Ft)
Rv	0.08
Grass Swales/Dry Grass Swale (all Rv provided)	
Proposed Pond #1	
Required (Ac.-Ft)	Provided (Ac. Ft)
WQv	0.30
Rv	0.08
Cpv	0.54
Qp10	N/A
Qp100	N/A
By Grass Swales/Dry Grass Swale	
Cpv	0.55
Qp10	N/A
Qp100	N/A
Proposed Bioretention Area A	
Required (Ac.-Ft)	Provided (Ac. Ft)
WQv	0.03
Cpv	N/A
Rv	0.007
Qp10	N/A
Qp100	N/A
Proposed Bioretention Area B	
Required (Ac.-Ft)	Provided (Ac. Ft)
WQv	0.06
Cpv	0.08
Rv	0.016
Qp10	N/A
Qp100	N/A

Proposed Pond #1 - Extended Shallow Detention Wetland Pond (W-2)
 Proposed Bioretention Area A - Bioretention Filter (F6)
 Proposed Bioretention Area B - Bioretention Filter (F6)

Proposed pond #1 was selected based on its suitability to provide Cpv and WQv, space available, ease of maintenance, cost, community acceptance, and a high quality for the wetland habitat.

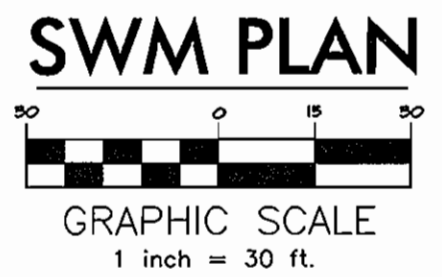
Both of the proposed bioretention areas were selected based on the small drainage areas being conveyed, space available, suitability to provide Rev, WQv, and Cpv, ease of maintenance, cost, and community acceptance.

- OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (F-6)
- Annual maintenance of plant material, mulch layer and soil 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 events.
 - Soil erosion to be addressed on an as needed basis, with a minimum of once per month and after heavy storm events.

- OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER WETLANDS (W-1 THROUGH W-4)
- The stormwater wetland facility shall be inspected annually after major storms. Inspection shall be performed during wet weather to determine if the facility is functioning properly.
 - The top and side slopes of the embankment shall be moved a minimum of once per year, when vegetation reaches 18" in height or as needed.
 - Debris and litter shall be removed during regular mowing operations and as needed.
 - Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
 - Remove silt when it exceeds four (4) inches deep in the forebay.
 - If a minimum coverage of 50% is not achieved in the planted wetland zones after the second growing season, reinforcement planting shall be provided.

COORDINATE TABLE

POINT	NORTHING	EASTING
C1	576033.06	1362276.18
C2	576040.09	1362253.84
C3	576001.24	1362247.60
C4	575949.06	1362230.38
C5	575878.44	1362216.34
C6	575792.15	1362261.33
C7	575704.86	1362342.82
C8	575641.12	1362352.42
C9	575677.34	1362342.97



OWNER/DEVELOPER INFORMATION
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELICOTT CITY, MD 21043
 OWNER/DEVELOPER
Samuel S. Joseph 9/30/02

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

ENGINEER'S CERTIFICATION
 I HEREBY 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 HOWARD SOIL CONSERVATION DISTRICT.

Virginia Dadds 10/18/02
 VIRGINIA DADDS DATE

Leah Butler 10/24/02
 DIRECTOR DATE

Cindy Hamrick 10/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

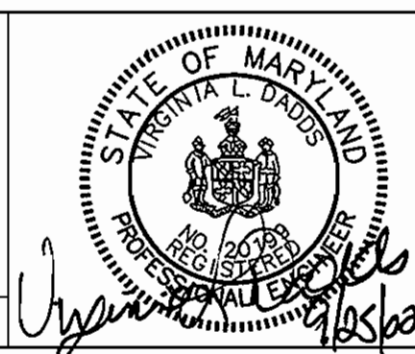
Chad Drummond 10/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

Gary J. Arthur 10-2-02
 GARY J. ARTHUR, DIRECTOR DATE

PROJECT	SECTION/AREA	MAP NO.			
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387			
PLAT NO.	GRID NO.	ZONE	TAXZONE	ELEC. DIST.	CENSUS TR.
N/A	5	R-20	2	2	602302
WATER CODE	SEWER CODE				
F09	5750615				

McCRONE
 ENGINEERING ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
 20 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 267-8621
 Fax (410) 267-9932
 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



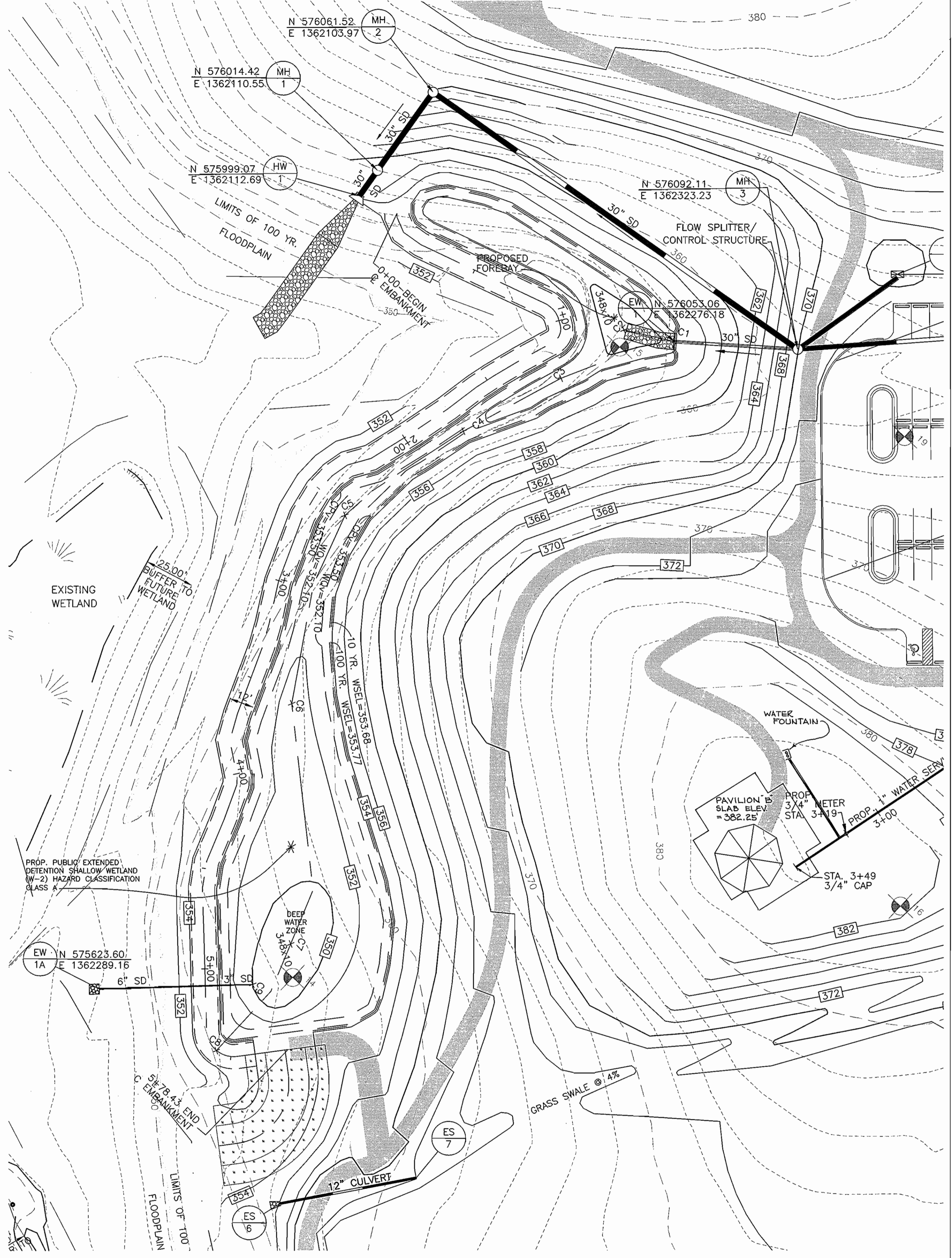
DES:	DRN:	CHK:	DATE:	BY:	REVISION:	DATE:
J.S.	J.S.	V.D.	MAY, 2001	No.	REVISION	

SWM WATER QUALITY WETLAND PLAN & NOTES

SITE DEVELOPMENT PLAN MEADOWBROOK PARK

PROJECT NO. N-3105
 TAX MAP 30 SECOND ELECTION DISTRICT
 BLOCK 5
 PARCELS 383 & 387
 HOWARD COUNTY, MARYLAND

SCALE 1"=30'
 SHEET 18 OF 30
 SDP-01-145



Plot Date and Time: Sep 25, 2002, 3:38pm

CADD FILE: C:\1010081 - Meadowbrook Park\Final Development\18-SWM WATER QUALITY WETLAND PLAN.dwg

24.0 Materials Specifications Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	900
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

* US STD SIEVE CW-02215
 THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
 - APPARENT OPENING SIZE MSMT 323
 - GRAB TENSILE STRENGTH ASTM D 1682: 4x8" SPECIMEN, 1x2" CLAMPS, 12"/MIN. STRAIN RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.
 - BURST STRENGTH ASTM D 3786

THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MILDEW RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS, AND COMPOSED OF A MINIMUM OF 85% BY WEIGHT OF POLYOLEPHINS, POLYESTERS, OR POLYAMIDES. THE GEOTEXTILE FABRIC SHALL RESIST DEGRADATION FROM ULTRAVIOLET EXPOSURE.

IN ADDITION, CLASSES A THROUGH E SHALL HAVE A 0.01 CM./SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND AN APPARENT MINIMUM ELONGATION OF 20 PERCENT (20%) WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.

SILT FENCE
 CLASS F GEOTEXTILE FABRICS FOR SILT FENCE SHALL HAVE A 50 LB./IN. MINIMUM TENSILE STRENGTH AND A 20 LB./IN. MINIMUM TENSILE MODULES WHEN TESTED IN ACCORDANCE WITH MSMT 509. THE MATERIAL SHALL ALSO HAVE A 0.3 GAL./FT.²/MIN. FLOW RATE AND SEVENTY-FIVE PERCENT (75%) MINIMUM FILTERING EFFICIENCY WHEN TESTED IN ACCORDANCE WITH MSMT 322.

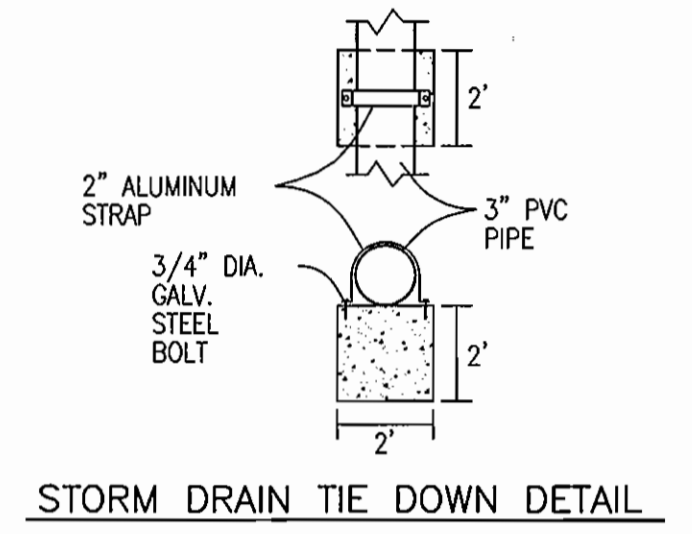
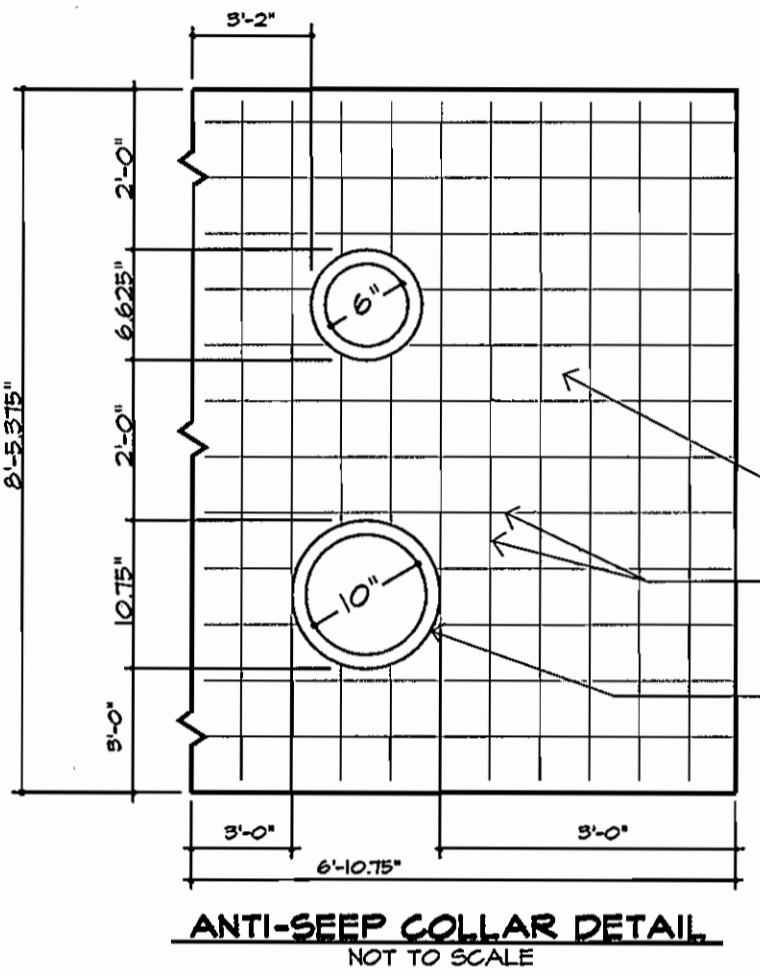
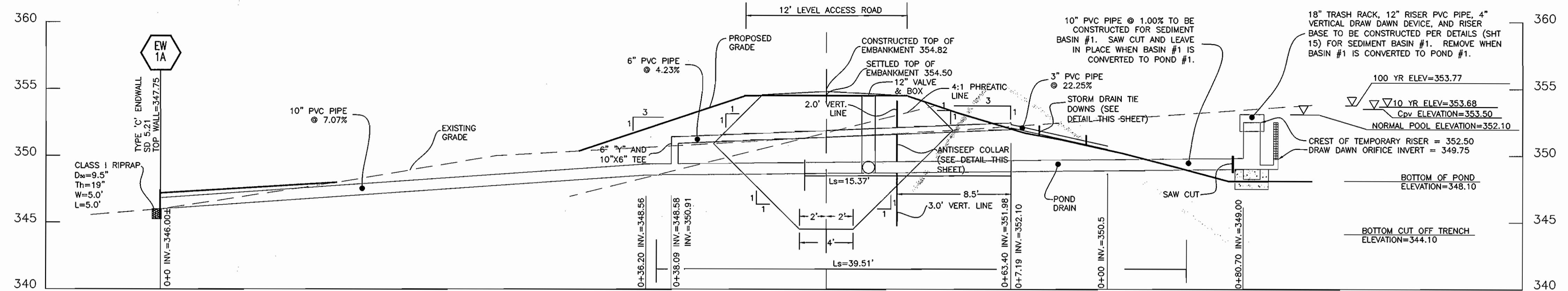
GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF SILT FENCE SHALL RESIST DEGRADATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 DEGREES F.

Table 28 Stone Size

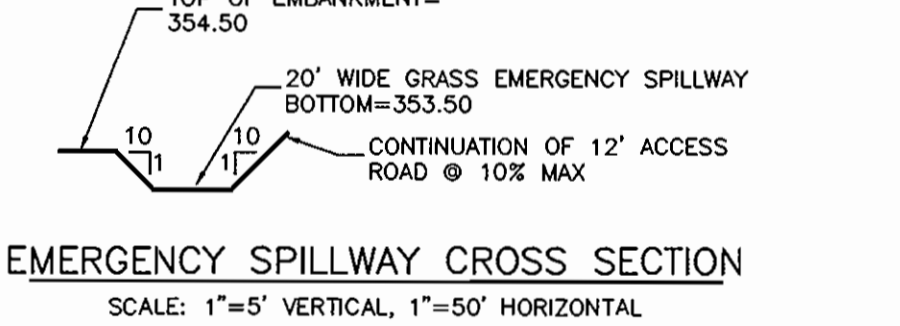
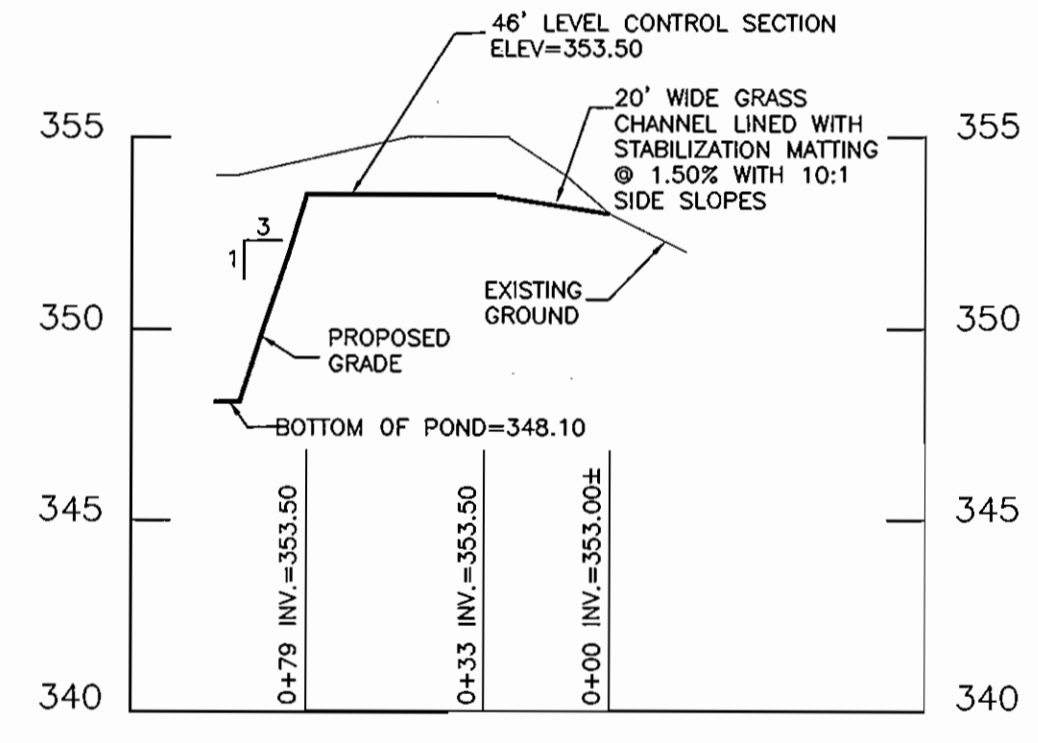
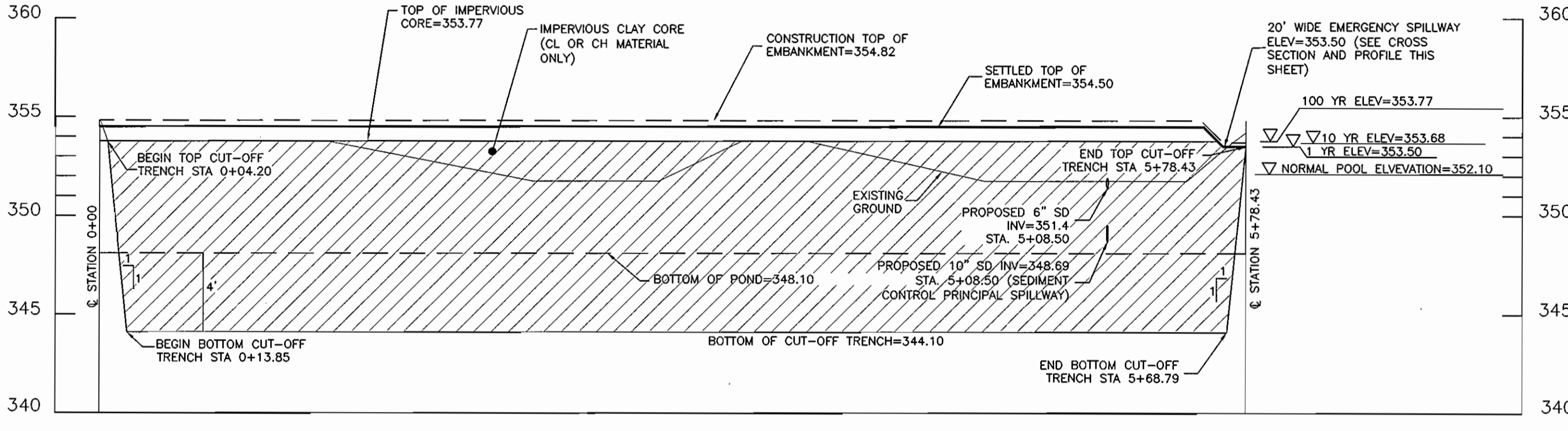
NUMBER	SIZE RANGE	D ₅₀	D ₈₅	AKSHTO	WEIGHT
NUMBER 57	3/8"-1 1/2"	1/2"	1 1/2"	M-43	N/A
NUMBER 1	2"-3"	2 1/2"	3"	M-43	N/A
RIPRAP **	4"-7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150 LB MAX
CLASS II	N/A	16"	24"	N/A	700 LB MAX
CLASS III	N/A	23"	34"	N/A	2000 LB MAX

* THIS CLASSIFICATION IS TO BE USED ON THE INSIDE FACE OF STONE OUTLETS AND CHECK DAMS.
 ** THIS CLASSIFICATION IS TO BE USED WHENEVER SMALL RIP-RAP IS REQUIRED. THE STATE HIGHWAY ADMINISTRATION REGULATION FOR THIS STONE IS STONE FOR GABIONS (905.01.04).

NOTE: RECYCLED CONCRETE EQUIVALENT MAY BE SUBSTITUTED FOR ALL STONE CLASSIFICATIONS. RECYCLED CONCRETE EQUIVALENT SHALL BE CONCRETE BROKEN INTO THE SIZES MEETING THE APPROPRIATE CLASSIFICATION, SHALL CONTAIN NO STEEL REINFORCEMENT, AND SHALL HAVE A DENSITY OF 150 POUNDS PER CUBIC FOOT.



NOTES:
 1. SEE PROFILE THIS SHEET FOR LOCATION OF COLLAR.
 2. POSITION ANTI-SEEP COLLAR A MINIMUM OF 2'-0" FROM PIPE SEAM.
 3. MINIMUM WALL THICKNESS IS 8" USING 3000 PSI CONCRETE.
 4. REINFORCING STEEL - GRADE 60 DEFORMED BARS (ASTM-A-615); #4 BARS AT 12" C/O EACH WAY CENTERED IN WALL; MAINTAIN A MINIMUM OF 3" CLEARANCE FROM ALL SURFACES.
 5. POUR #1 - BOTTOM OF ANTI-SEEP COLLAR AND CONCRETE CRADLE AROUND PRINCIPAL SPILLWAY PIPE AND EXTEND VERTICAL STEEL A MINIMUM OF 1'-0" ABOVE CONSTRUCTION JOINT FOR SPLICE.
 6. PLACE EXPANSION JOINT AROUND PIPE AS SHOWN.
 7. POUR #2 - UPPER PORTION OF ANTI-SEEP COLLAR.



WETLAND POND

ELEVATION STORAGE VOLUME WORKSHEET

Water Quantity Volume from Deepwater						
Surface Area (Sq. Ft.)	Elevation (Ft.)	Surface Area (Ac.)	Average Surface area (Ac.)	Difference In Elevation (Ft.)	Incremental Storage (Ac.-Ft.)	Sum Storage (Ac.-Ft.)
1015	348.10	0.02			0.000	0.000
1015	349.00	0.02	0.02	0.90	0.021	0.021
1015	350.00	0.02	0.02	1.00	0.023	0.044
1015	351.00	0.02	0.02	1.00	0.023	0.068
1015	352.00	0.02	0.02	1.00	0.023	0.091
1015	352.10	0.02	0.02	0.10	0.002	0.093

Water Quantity Surface Area <= to 6"			
Surface Area (Sq. Ft.)	Elevation (Ft.)	Surface Area (Ft.^2)	Surface area (Ft.^2)
7428	351.60	7428.00	7172.00
14600	352.10	14600.00	7172.00

Water Quantity Surface Area <= to 18"			
Surface Area (Sq. Ft.)	Elevation (Ft.)	Surface Area (Ft.^2)	Surface area (Ft.^2)
3174	350.60	3174.00	
7428	351.60	7428.00	4254.00
14600	352.10	14600.00	7172.00
SUM= 11426.00			

Sizing Criteria	Guidelines for Facility		Provided by Facility	
	Volume Allocation Percent	Surface Area Allocation Percent	Volume Allocation Percent	Surface Area Allocation Percent
Deepwater	25%	N/A	28.2%	-
6" Deep or less	N/A	35%	-	49.12%
18" Deep or less	N/A	65%	-	78.26%

WETLAND POND - STORAGE REQUIREMENTS

ELEV. feet	SURFACE AREA square feet	AVG. SURFACE AREA square feet	DIFF IN ELEV. feet	INTERVAL STORAGE cubic feet	SUM STORAGE cubic feet	SUM STORAGE acre-feet	SUM STORAGE ABOVE 352.1 acre-feet
354.5	TOP OF EMBANKMENT						
354.0	21461	20553	0.5	10277	48574	1.115	0.786
353.5	19645	18739	0.5	9370	38298	0.879	0.550
353.0	17833	16934	0.5	8467	28928	0.664	0.335
352.5	16035	15318	0.4	6127	20461	0.470	0.141
352.1	14600	12266	0.1	1227	14334	0.329	0.000
352.0	9931	8802	1.0	8802	6306	0.145	
351.0	3673	3050	1.0	3050	3256	0.075	
349.0	1607	2017	1.0	2017	1240	0.028	
348.5	1298	1453	0.5	726	513	0.012	
348.1	1015	1157	0.4	463	51	0.001	

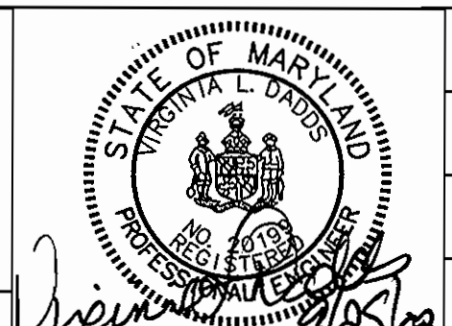
OWNER/DEVELOPER INFORMATION
Paul J. Sponer 2/30/02
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
Paul R. Roth 10/24/02
 DIRECTOR
Cindy Hammett 10/21/02
 CHIEF, DIVISION OF LAND DEVELOPMENT
Mike Dammann 10/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, Maryland
Gary J. Arthur 10/22/02
 DIRECTOR

PROJECT MEADOWBROOK PARK	SECTION/AREA N/A	MAP NO. MAP 30 PARCELS 383 & 387
PLAT NO. N/A	GRID NO. 5	ZONE R-20
TAXZONE 2	ELEC. DIST. 2	CENSUS TR. 602302
WATER CODE F09	SEWER CODE 5750615	

MICRONE
 ENGINEERING/ ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING/ CONSTRUCTION SERVICES
 30 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 267-8621
 Fax (410) 267-9932
 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY

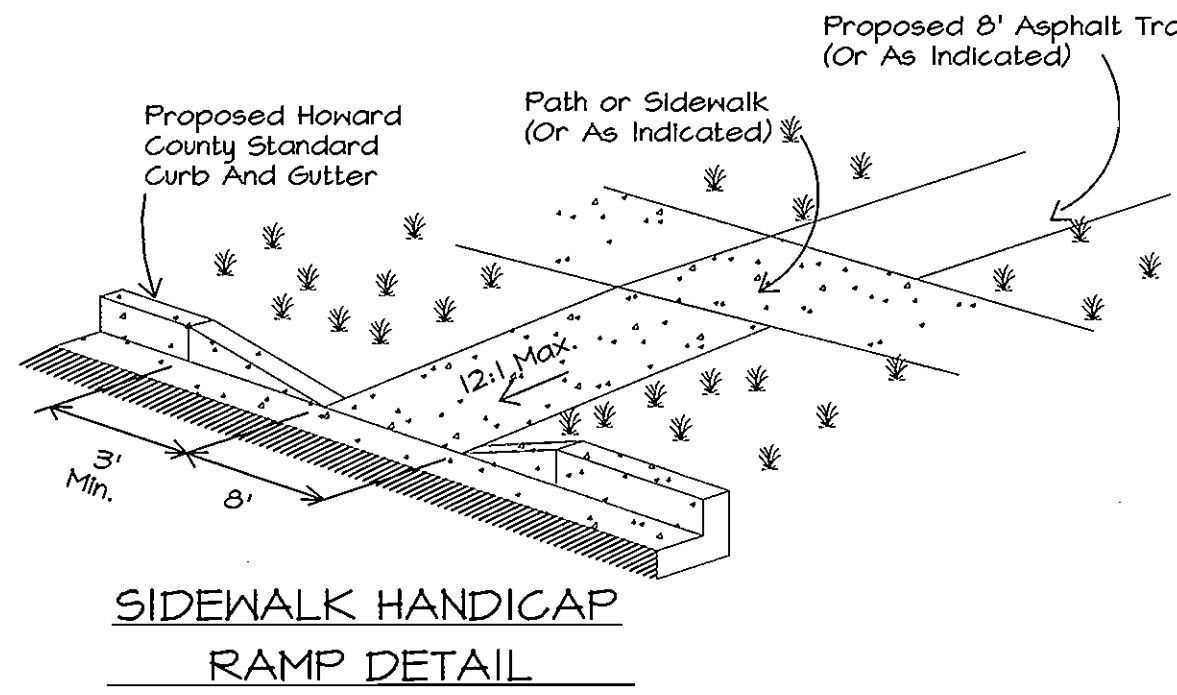
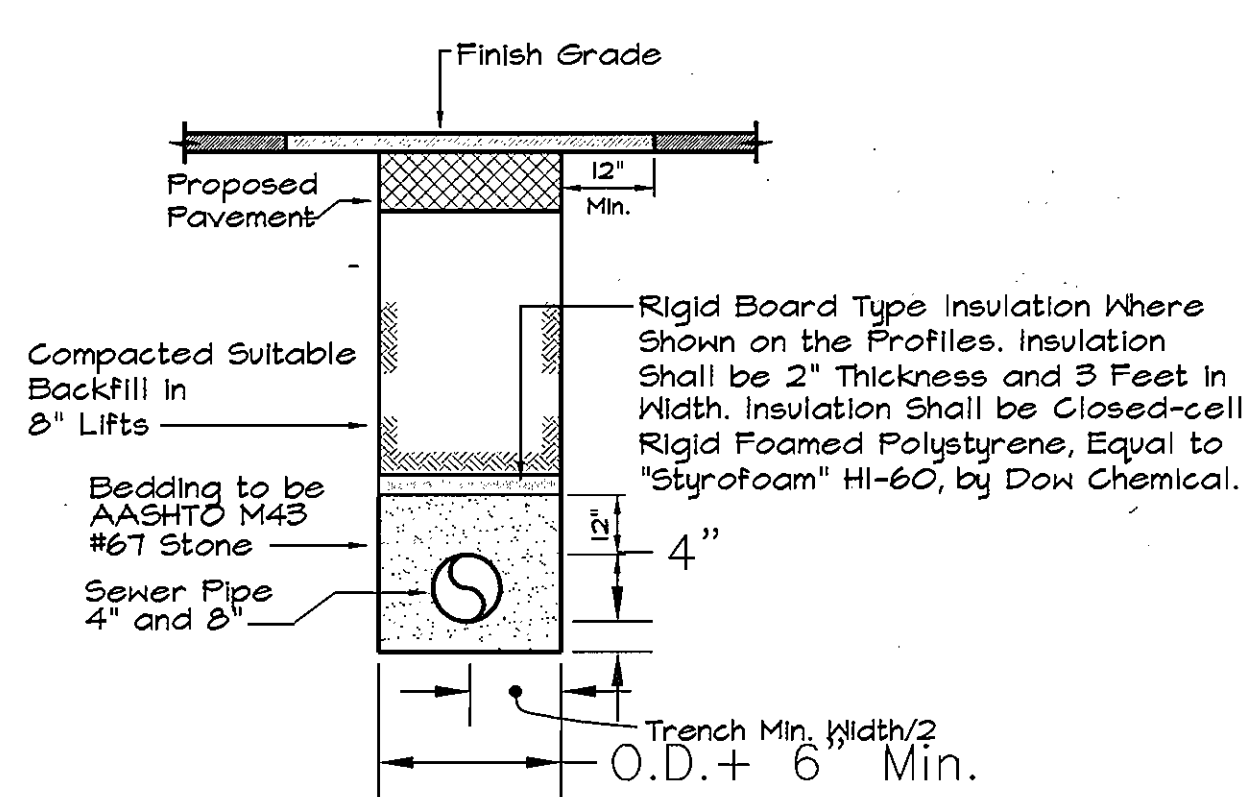


DES: J.S.	J.S.	I	REDLINE REVISION	7/05
DRN: J.S.				
CHK: V.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

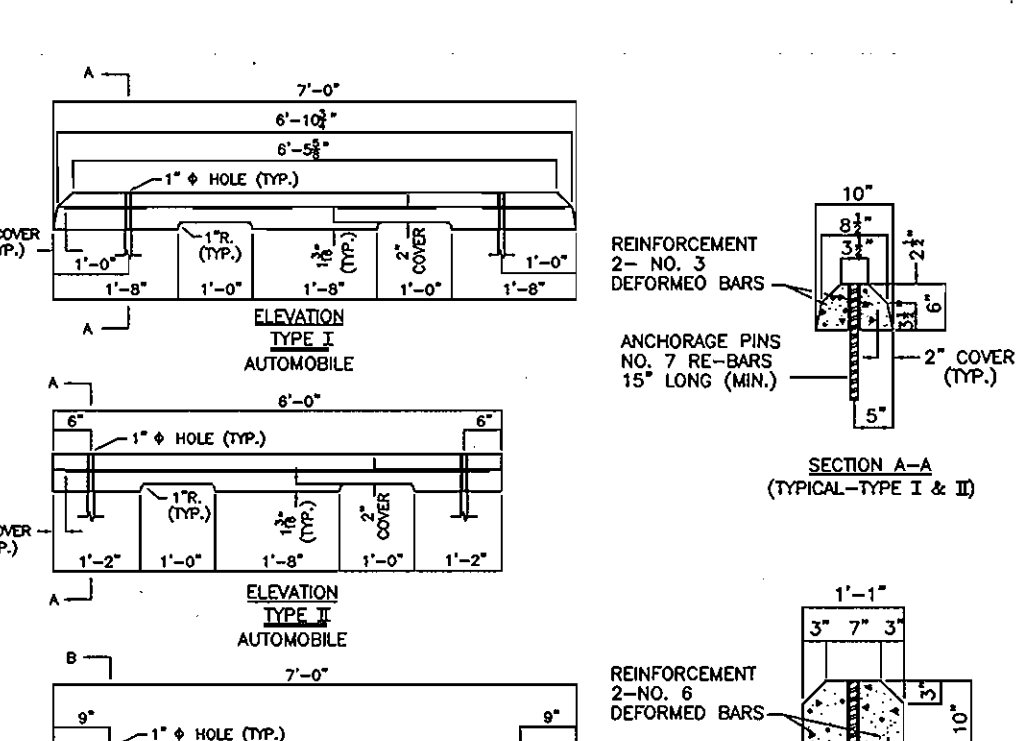
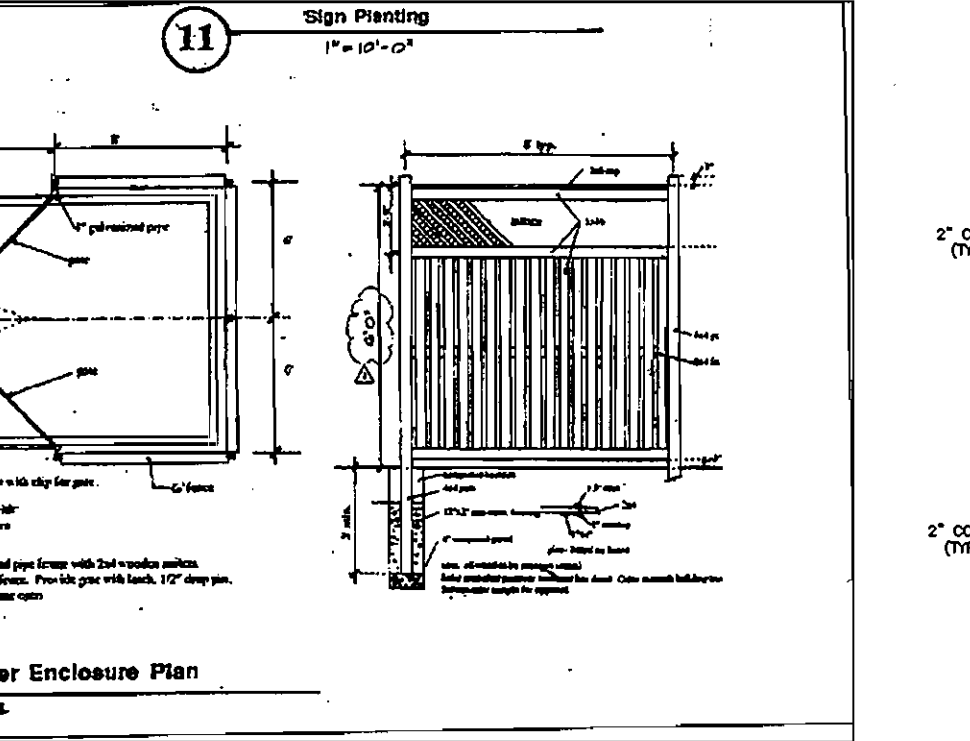
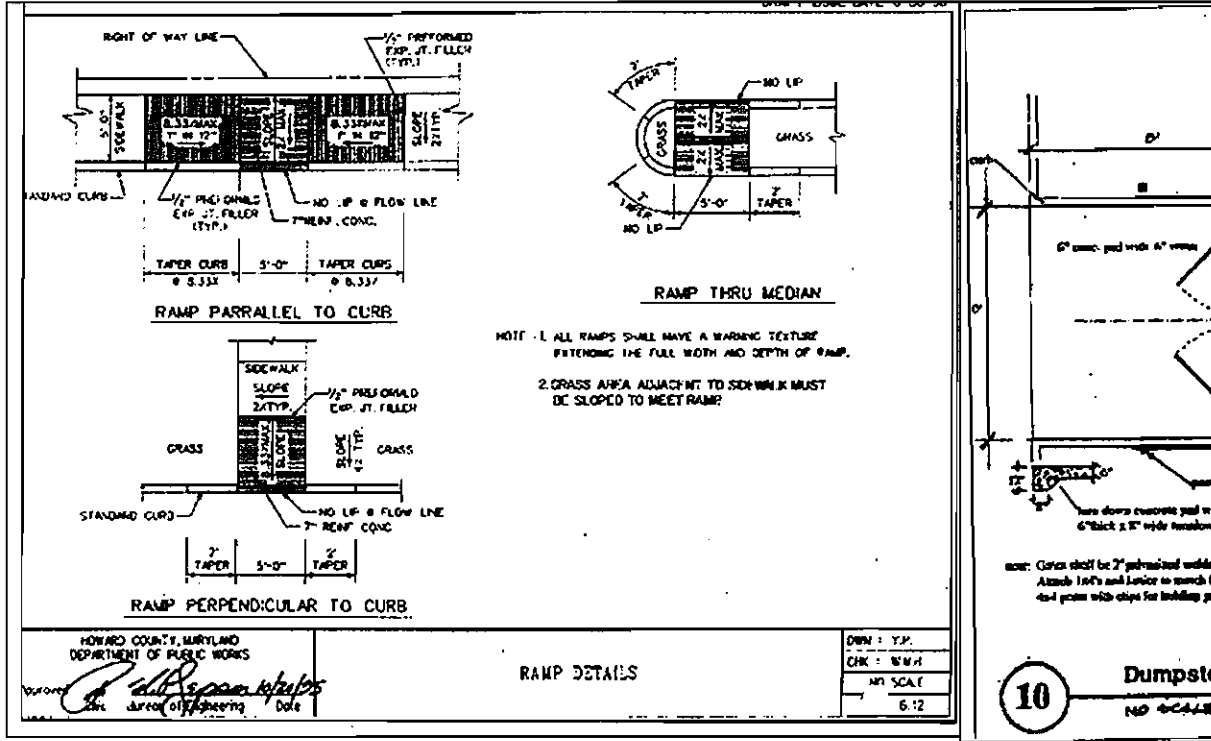
STORMWATER MANAGEMENT PROFILES & DETAILS

SITE DEVELOPMENT PLAN MEADOWBROOK PARK
 PROJECT NO. N-3105
 BLOCK 5
 PARCELS 383 & 387
 HOWARD COUNTY, MARYLAND
 TAX MAP 30
 SECOND ELECTION DISTRICT

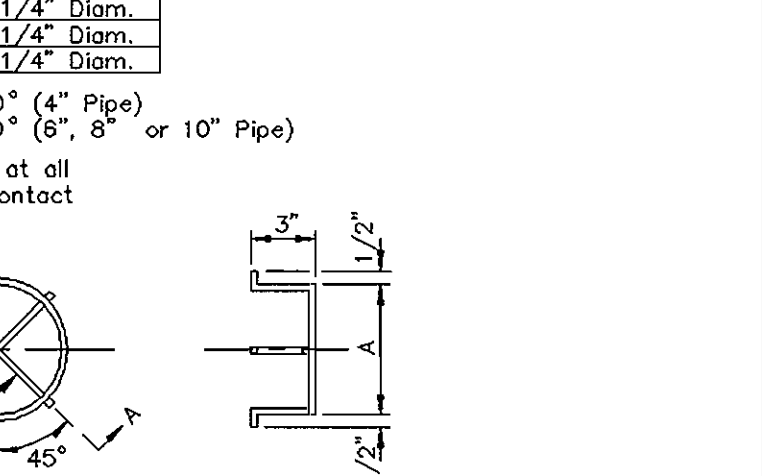
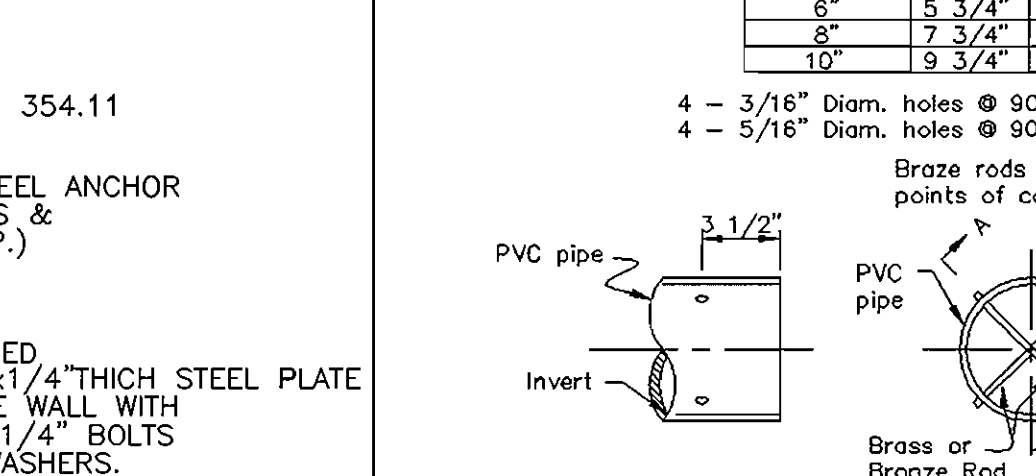
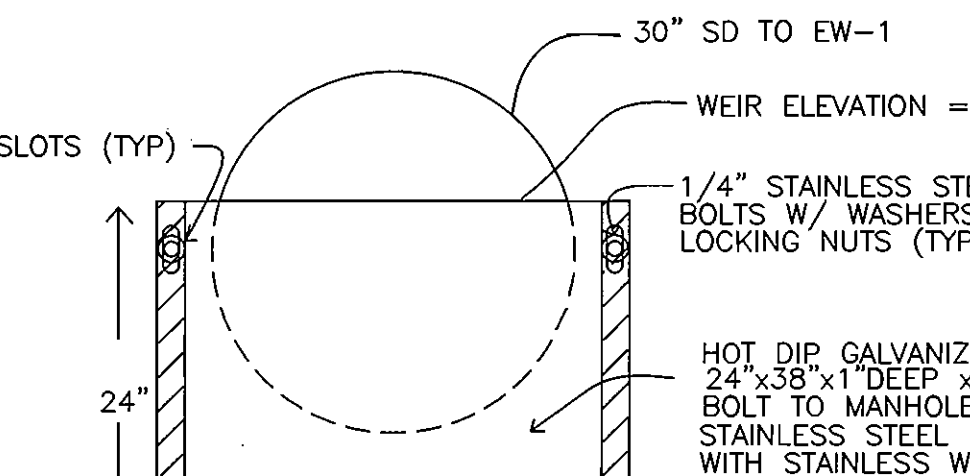
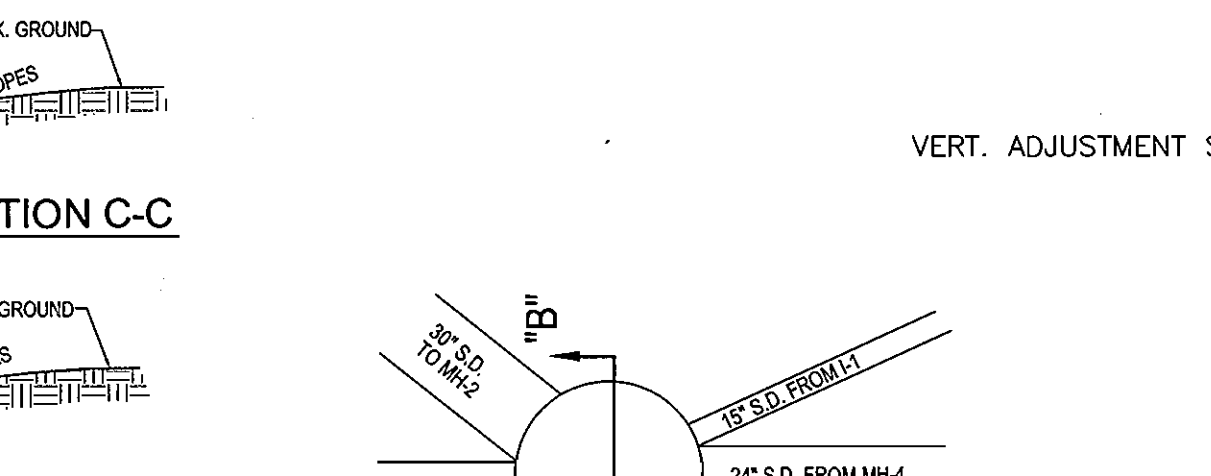
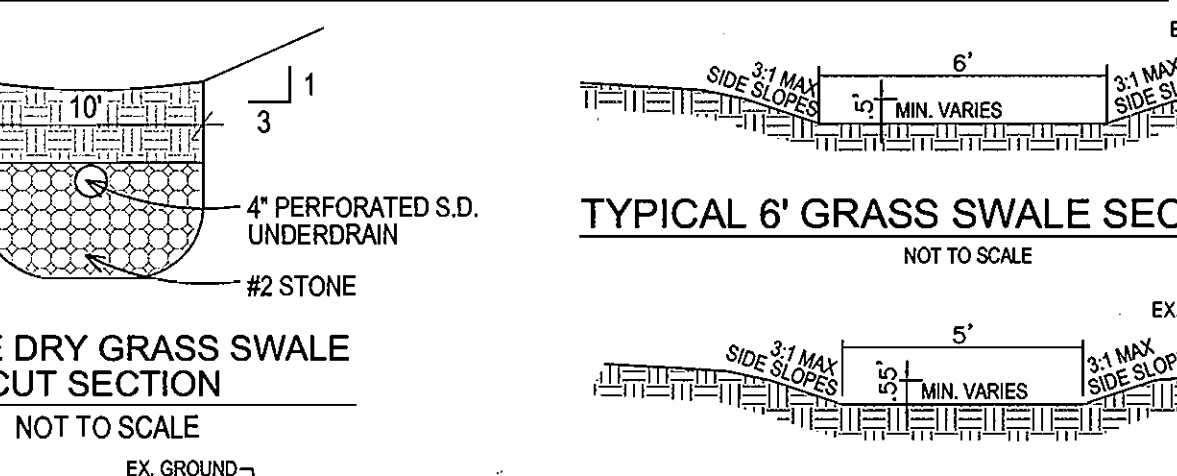
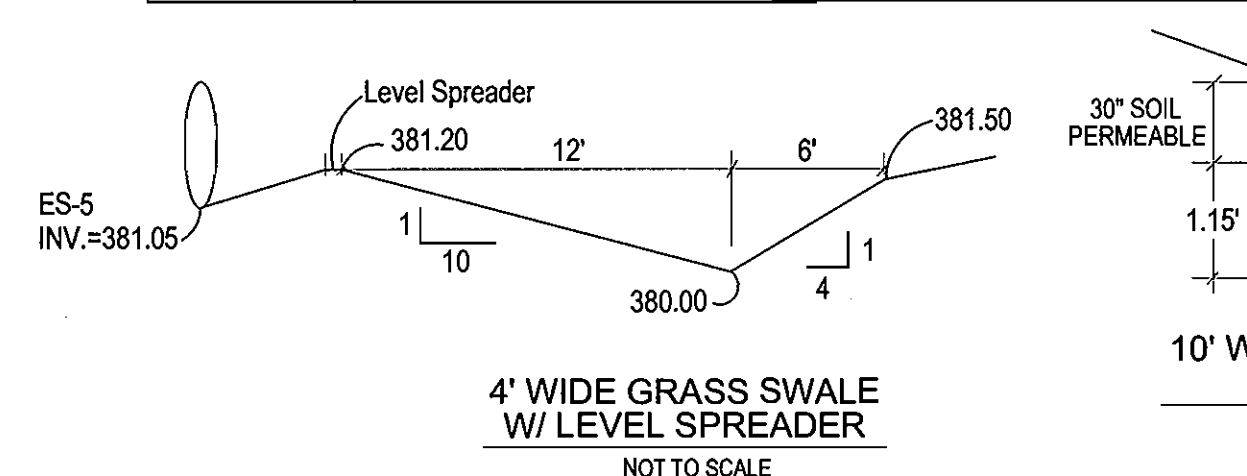
SCALE AS SHOWN
 SHEET 19 OF 30



SIZE	TYPE	LENGTH
12"	RCCP	166'
12"	HDPE	151'
15"	HDPE	299'
18"	HDPE	619'
24"	HDPE	216'
30"	HDPE	322'



NO.	TYPE	LOCATION	ELEVATIONS		INSIDE WIDTH*	STANDARD REFERENCE
			T/C OR T/G	INV. IN		
HW-1	TYPE 'A' HEADWALL	N.575,999.07 E.1,362,112.69	356.95	352.95	30" PIPE	SD = 5.11
MH-1	SHALLOW MANHOLE	N.576,014.42 E.1,362,110.55	359.00	353.14	30" PIPE	MODIFIED G = 5.13
MH-2	STANDARD MANHOLE	N.576,061.52 E.1,362,103.97	369.50	353.54	30" PIPE	G = 5.13
MH-3	STANDARD MANHOLE	N.576,092.11 E.1,362,323.23	370.00	363.04 360.00	15" 24" 30" PIPE	MODIFIED G = 5.13
EW-1	TYPE 'C' ENDWALL	N.576,053.06 E.1,362,276.18	355.50	352.00	30" PIPE	SD = 5.21
I-1	SINGLE WR INLET	N.576,153.35 E.1,362,333.63	369.00	365.50	15" PIPE	SD = 4.37
MH-4	STANDARD MANHOLE	N.576,252.75 E.1,362,470.29	373.49	365.72 365.75	18" 24" PIPE	G = 5.12
I-2	SINGLE WR INLET	N.576,164.99 E.1,362,662.08	372.35	368.85	18" PIPE	SD = 4.37
MH-5	STANDARD MANHOLE	N.576,465.32 E.1,362,677.86	379.41	370.21	18" PIPE	G = 5.12
I-3	SINGLE WR INLET	N.576,552.79 E.1,362,695.82	375.00	371.50	18" PIPE	SD = 4.37
I-4	SINGLE WR INLET	N.576,520.38 E.1,362,175.97	373.00	369.50	15" PIPE	SD = 4.37
I-5	YARD INLET	N.576,478.80 E.1,362,000.83	376.00	372.45	12" PIPE	SD = 4.14
I-6	YARD INLET	N.575,256.29 E.1,363,308.24	365.70	362.14	12" PIPE	SD = 4.14
EW-1A	TYPE 'C' ENDWALL	N.575,623.60 E.1,362,289.16	347.75	346.00	10" PIPE	SD = 5.21
EW-8	TYPE 'C' ENDWALL	N.575,194.12 E.1,363,358.57	363.50	361.75	12" PIPE	SD = 5.21
ES-4	12" END SECTION	N.576,354.88 E.1,362,951.05	382.05	381.05	12" PIPE	SD=5.61
ES-4	12" END SECTION	N.576,362.99 E.1,362,932.77	381.70	380.70	12" PIPE	SD=5.61
ES-7	12" END SECTION	N.575,662.75 E.1,362,467.96	363.00	362.00	12" PIPE	SD=5.61
ES-6	12" END SECTION	N.575,612.19 E.1,362,421.32	357.00	356.00	12" PIPE	SD=5.61
ES-3	12" END SECTION	N.576,331.49 E.1,362,514.06	376.50	375.50	12" PIPE	SD=5.61
ES-2	12" END SECTION	N.576,298.19 E.1,362,503.48	376.00	375.00	12" PIPE	SD=5.61



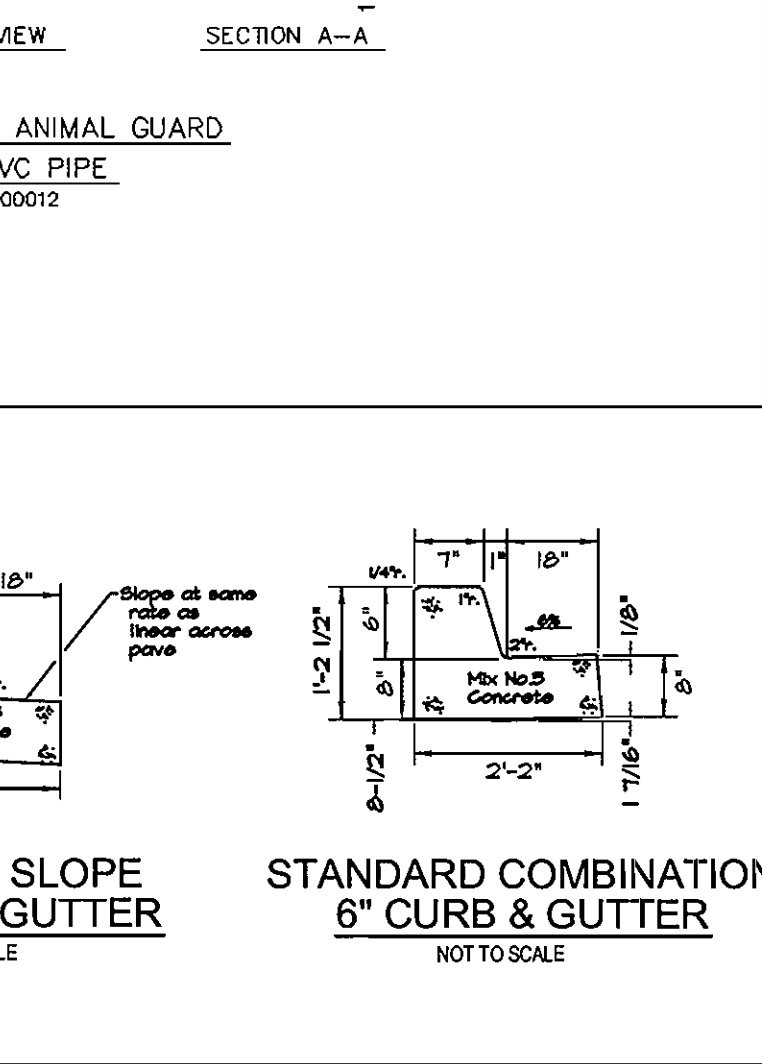
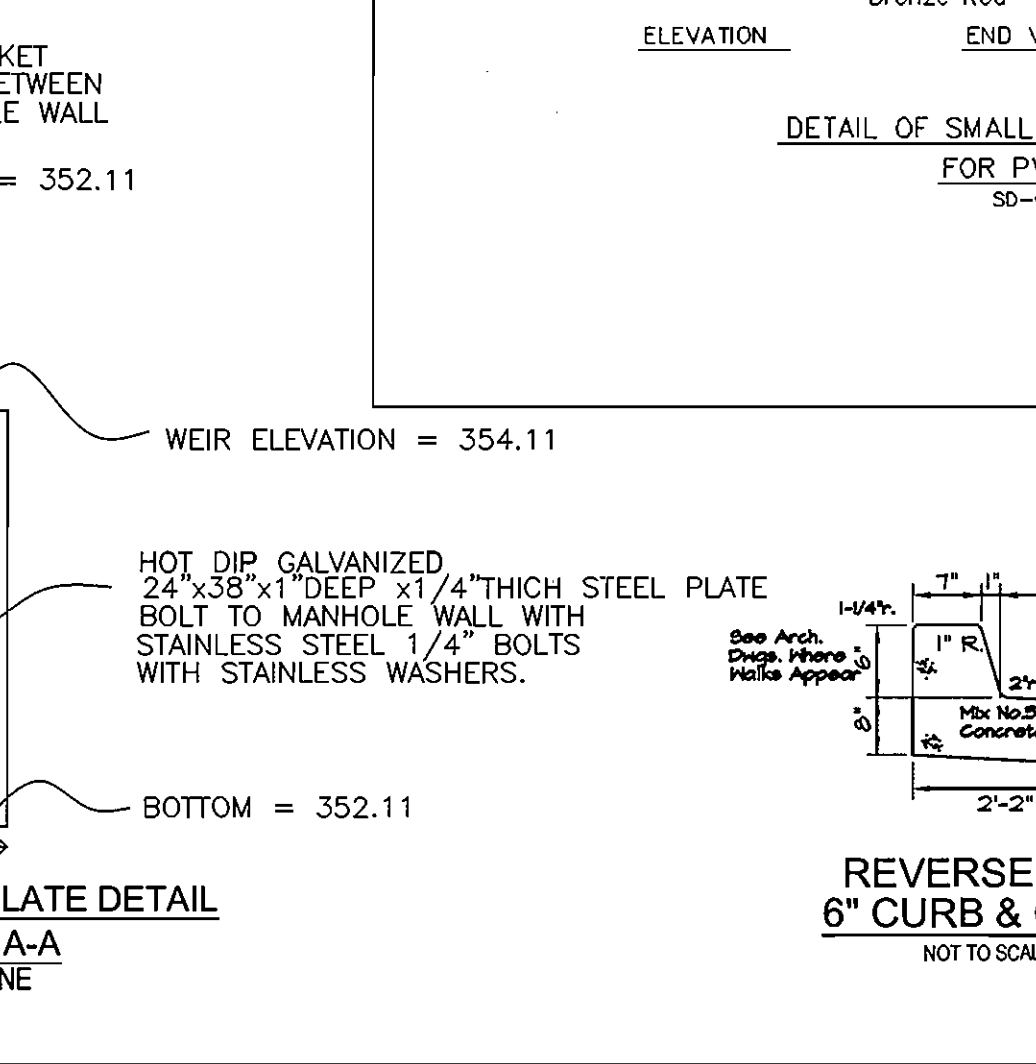
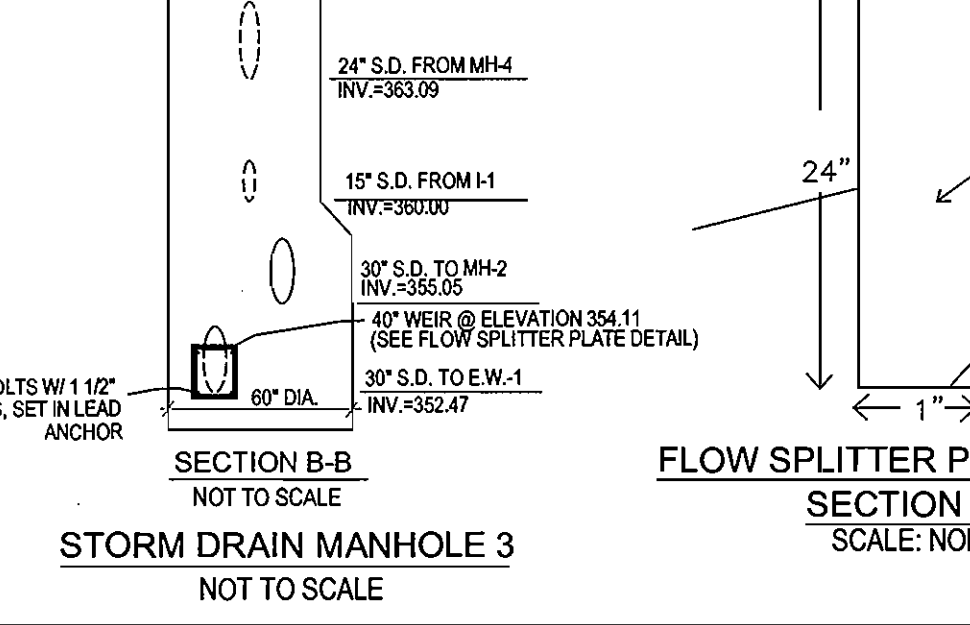
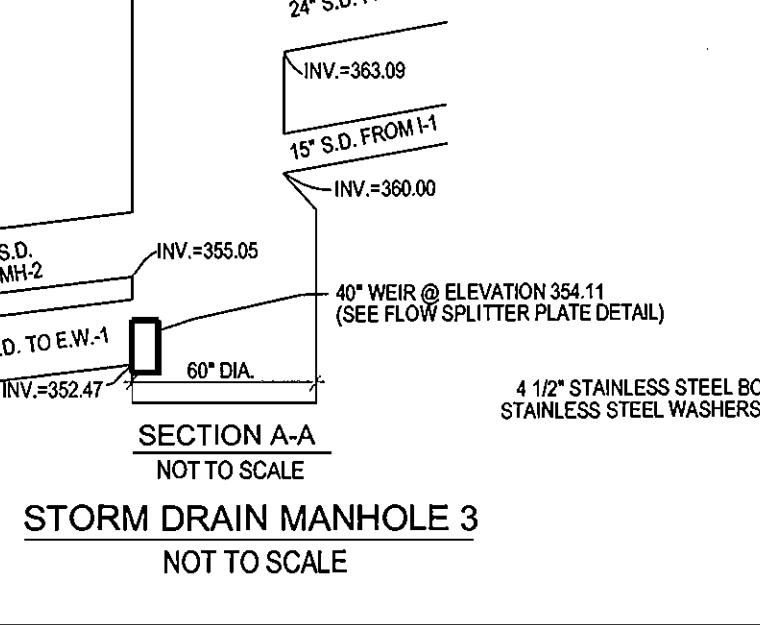
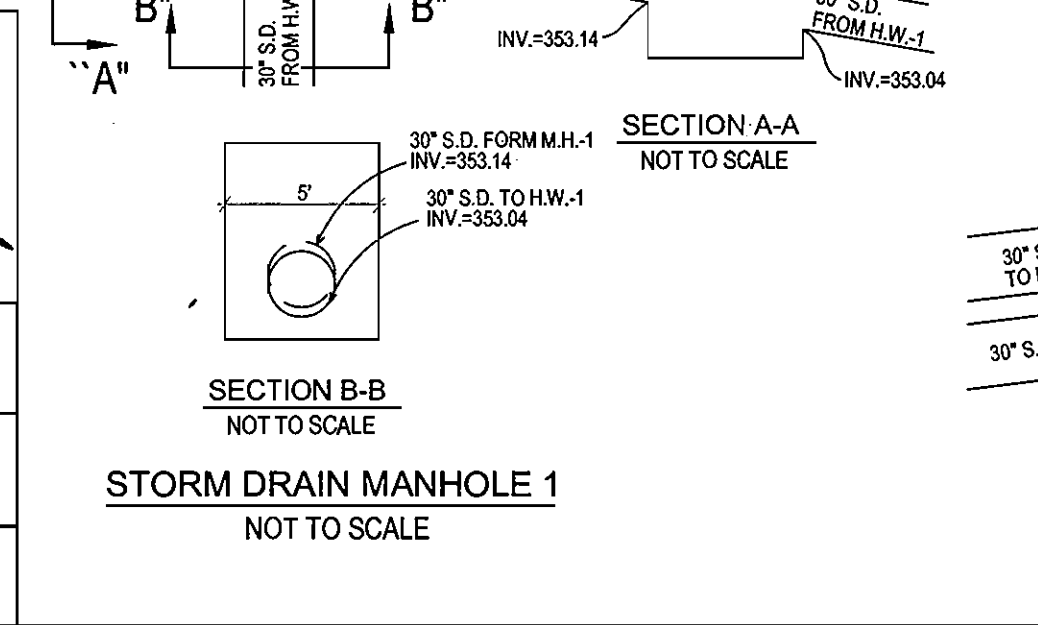
OWNER/DEVELOPER INFORMATION
Howard County, Department of Public Works
9250 BENDIX ROAD
ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

McCRONE
ENGINEERING: ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
30 BRIDGLEY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8631
Fax (410) 267-9922

DES:	J.S.	JS	I	REDLINE REVISION	7/08
DRN:	J.S.				
CHK:	V.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
PROJECT NO. N-3105
BLOCK 5
TAX MAP 30
SECOND ELECTION DISTRICT
PARCELS 383 & 387
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 20 OF 30



0/1a

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Paul Reuter 10/24/02
DIRECTOR DATE

Cindy Hamrick 10/24/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike DeMunnas 10/24/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER/DEVELOPER INFORMATION
Paul J. Sapsen 9/30/02
OWNER/DEVELOPER:
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLCOTT CITY, MARYLAND 21043

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

Gregory J. Anderson 10/24/02
DATE
Gregory J. Anderson
PROJECT MEADOWBROOK PARK

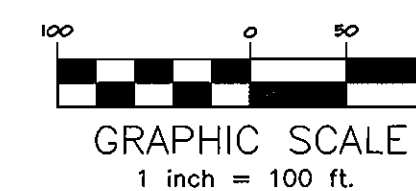
SECTION/AREA	MAP NO.				
N/A	MAP 30 PARCELS 383 & 387				
PLAT NO.	GRID NO.	ZONE	TAXZONE	ELEC. DIST.	CENSUS TR.
N/A	5	R-20	2	2	602302
WATER CODE	SEWER CODE				
F09	5750615				

**SCHEDULE 'A'
PERIMETER LANDSCAPE EDGE**

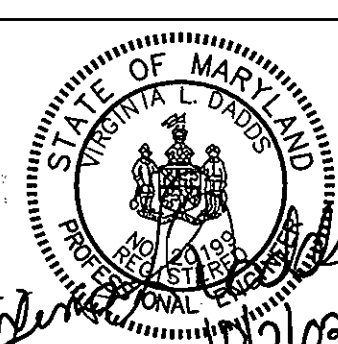
	P1 (TYPE B)	P2 (TYPE C)
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	5010 L.F.	4250 L.F.
CREDIT FOR EXISTING VEGETATION (YES LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	1050 L.F.	4250 L.F.
CREDIT FOR WALL, FENCE OR BERM (YES LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	0 L.F.	0 L.F.
NUMBER OF PLANTS REQUIRED SHADE TREES (1:50') EVERGREEN TREES (1:40') SHRUBS	81 101 0	0 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES (1:50') EVERGREEN TREES (1:40') SHRUBS (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	81 101 0	0 0 0

NOTE: NO LANDSCAPE SURETY IS REQUIRED SINCE THIS IS A HOWARD COUNTY DPW/DRP PROJECT.

BUFFER PLANTING PLAN



McCRONE
ENGINEERING, ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
20 BRIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8631
Fax (410) 267-9932



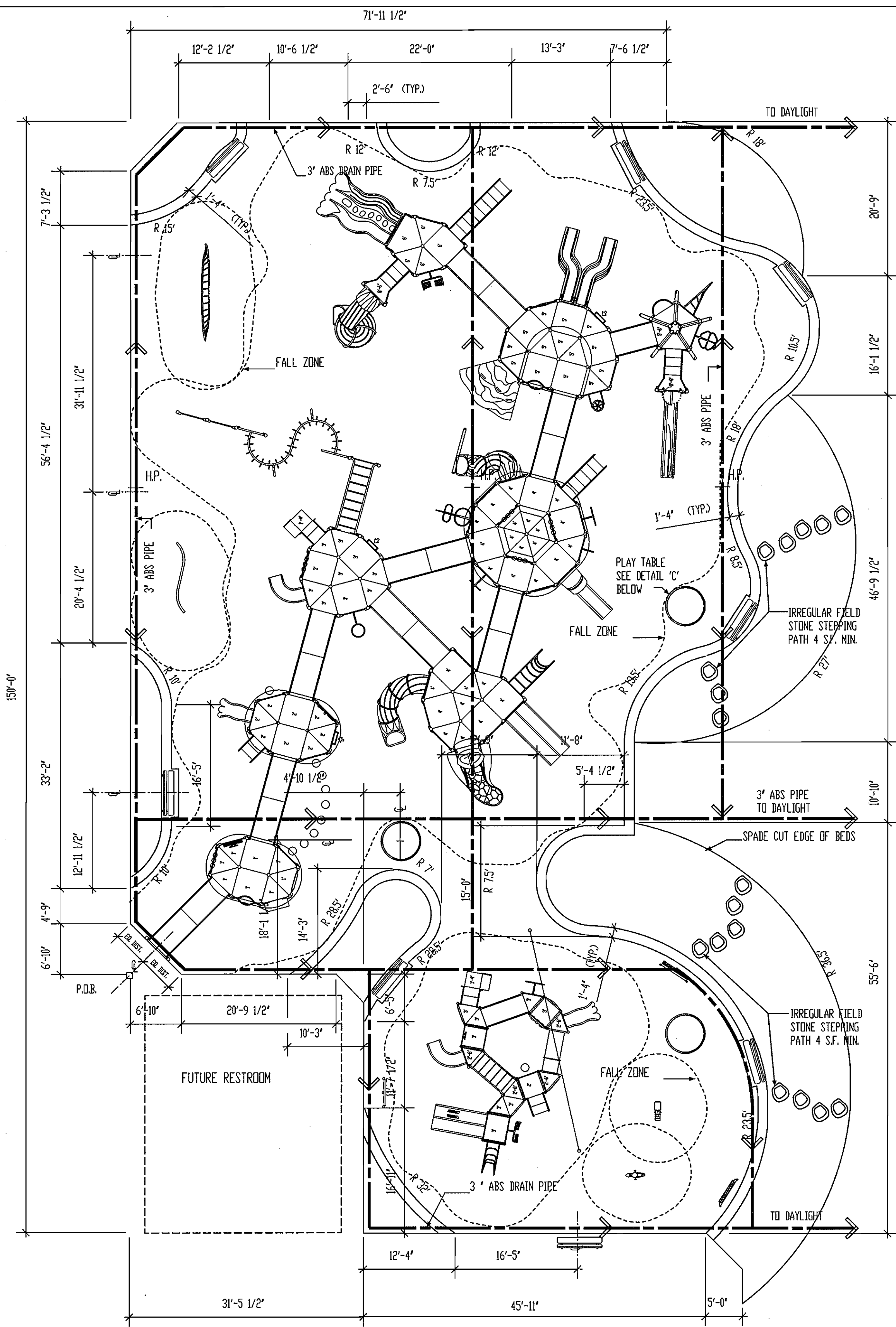
DES:	J.S.	J5	1	REDLINE REVISION	7/00
DRN:	J.S.				
CHK:	V.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

LANDSCAPE PLAN
BUFFER PLANTING PLAN

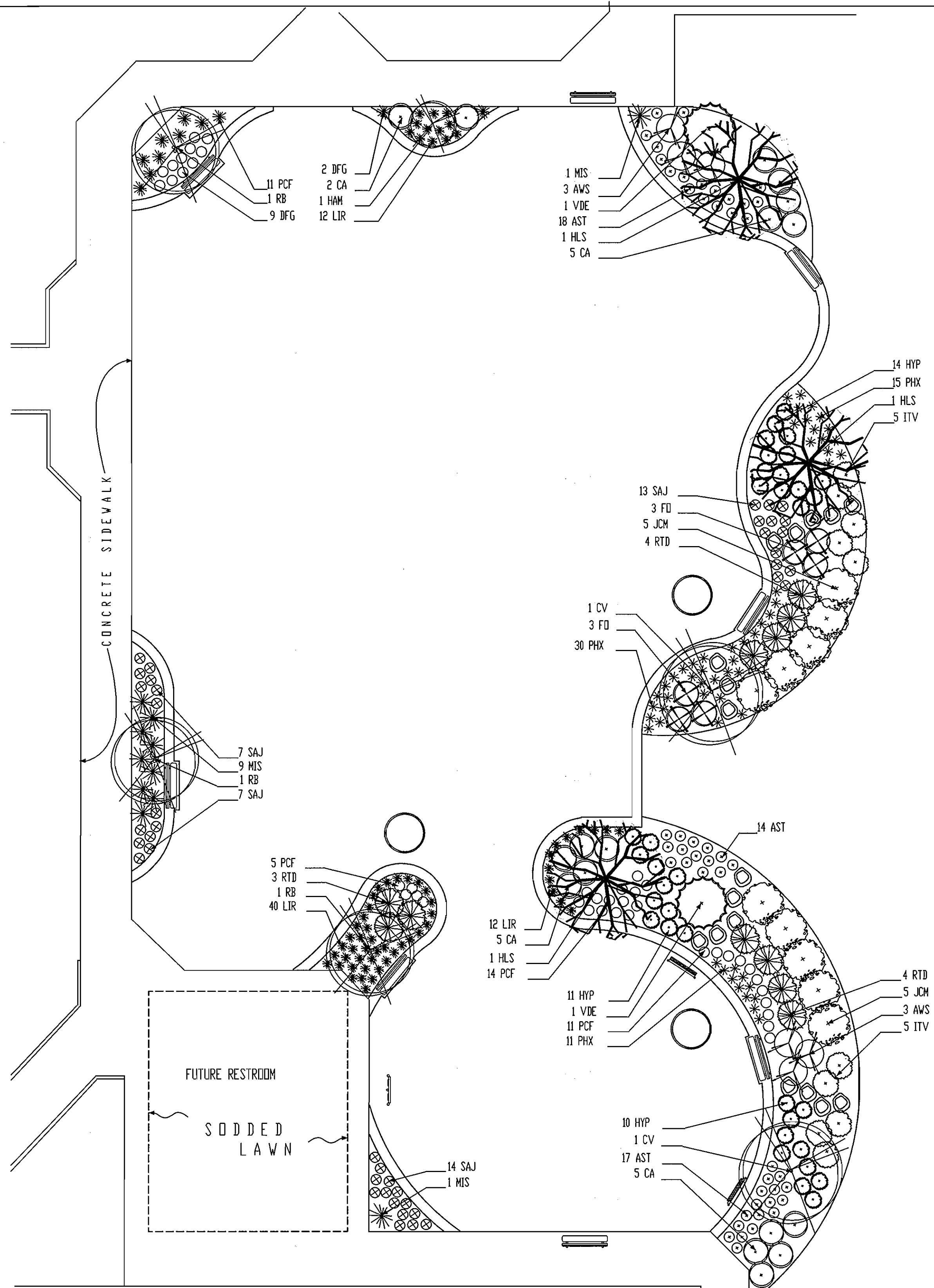
SITE DEVELOPMENT PLAN
MEADOWBROOK PARK

TAX MAP 30 SECOND ELECTION DISTRICT
PROJECT N-3105 BLOCK 5
PARCEL 383 & 387 HOWARD COUNTY, MARYLAND

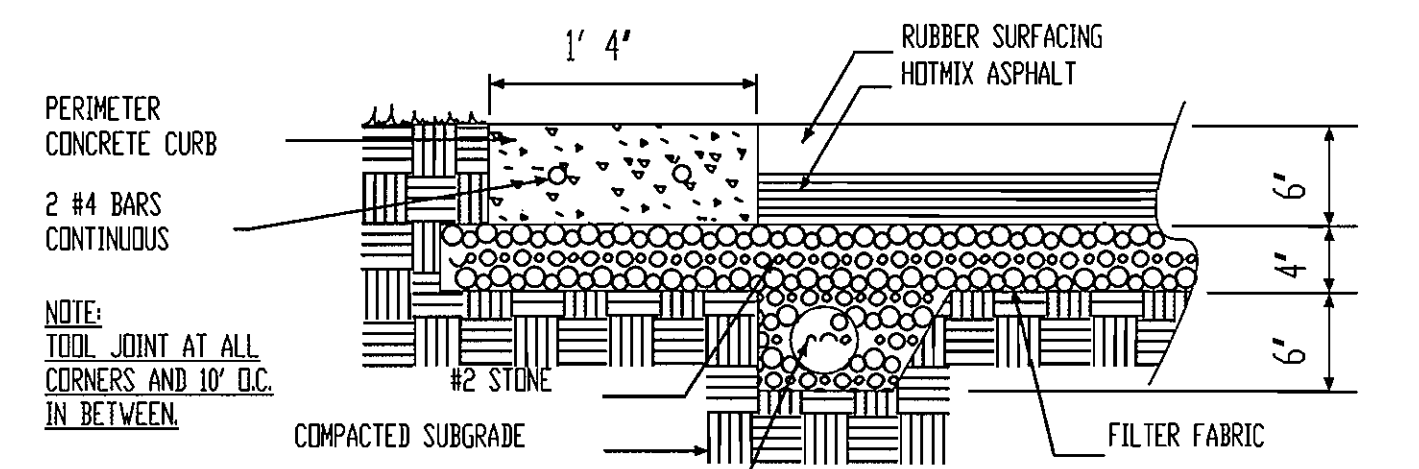
SCALE
1"=100'
SHEET
23 OF 30



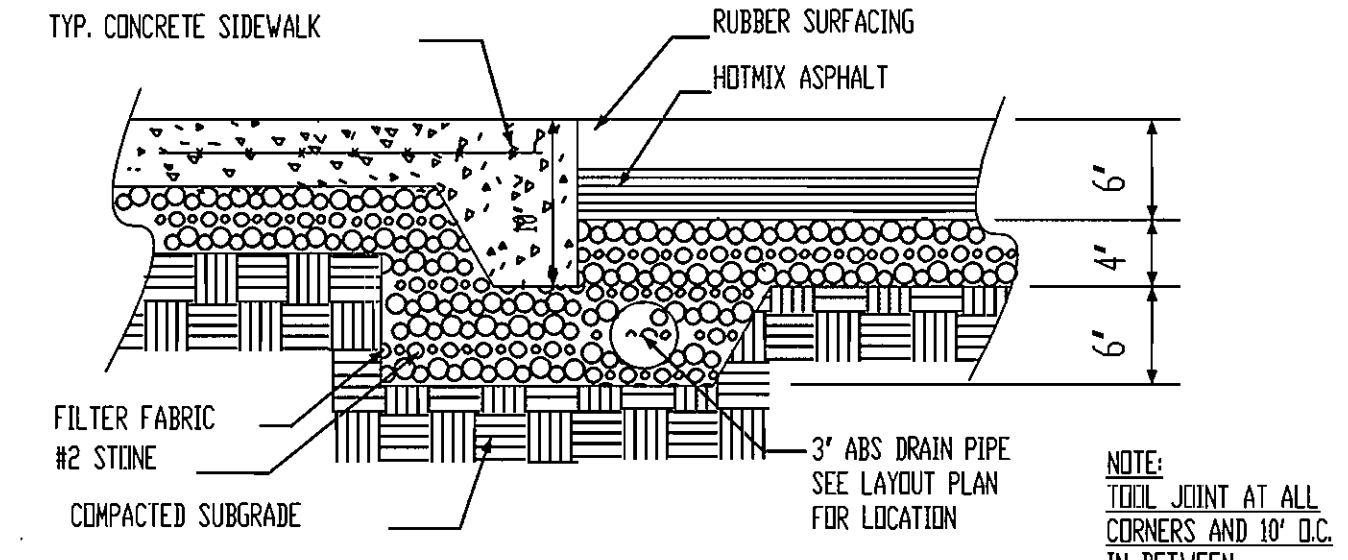
Layout Plan
Scale: 1" = 10'



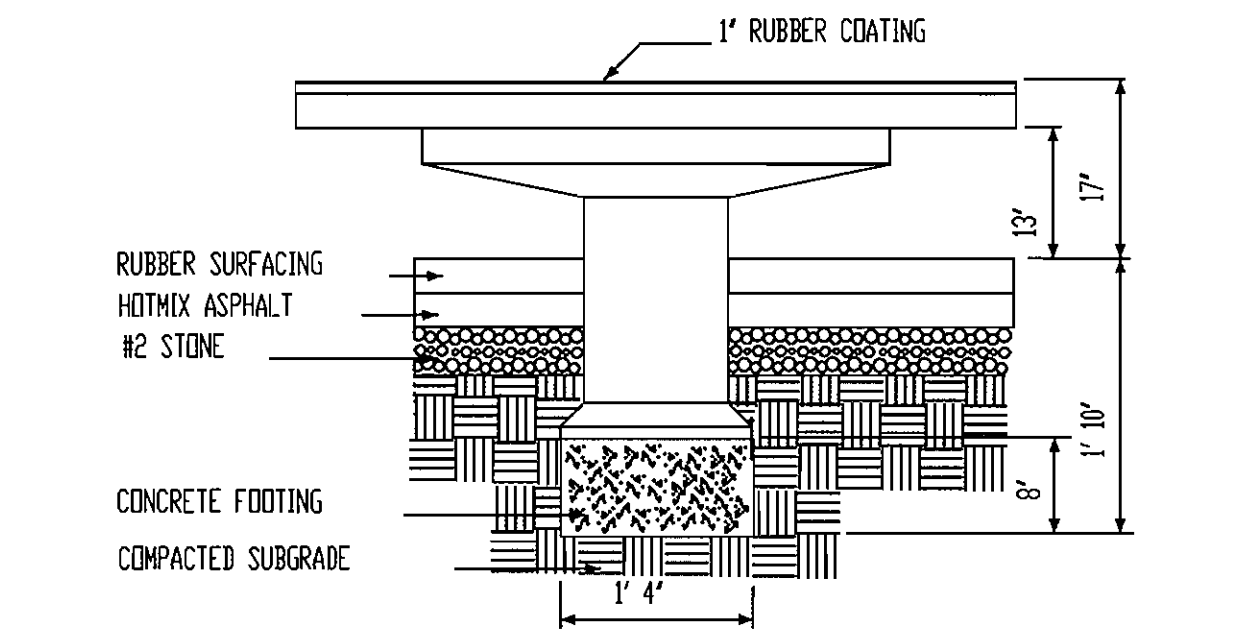
Planting Plan
Scale: 1" = 10'



PLAY AREA SURFACE AT PERIMETER CURB
SCALE: 1" = 1' 0"



PLAY AREA SURFACE AT SIDEWALK
SCALE: 1" = 1' 0"



PLAY AREA TABLES
SCALE: 3/4" = 1' 0"

Type	Symbol	Botanical Name	Common Name	Remarks
Trees	RB	Betula nigra	River Birch	1 3/4" - 2" cal, 8-10' hgt. B&B
	CV	Chionanthus virginicus	White Fringetree	1' cal, 7-8' hgt. B&B
	HLS	Gleditsia triacanthos inermis	Shadenaster Honey Locust	2 1/2" - 3" cal, 12-14' hgt. B&B
Shrubs	CA	Clethra alnifolia	Huntingbird Summernote	18-24' hgt., 3 gal.
	RTD	Cornus sericea	Redosier Dogwood	2-3' hgt., 3 gal.
	FD	Fothergilla gardenii	Dwarf Fothergilla	18-24' hgt., 3 gal.
	HMM	Hamamelis vernalis	Vernal Witch-hazel	4-5' hgt. B&B
	AVS	Spiraea x bunoides 'Anthony Waterer'	Anthony Waterer Spiraea	18-24' hgt., 3 gal.
	ITV	Ilex virginica 'Henry's Garnet'	Virginia Sweetpire	2-3' hgt., 3 gal.
	JCH	Juniperus chinensis 'Monlep'	Mint Julep Juniper	18-24' hgt., 3 gal.
	VDE	Viburnum dentatum	Arrowwood Viburnum	30-35' hgt. & sprd., B&B
Perennials	AST	Aster sp.	Aster	1 gal. cont., 16" o.c.
	PCF	Echinacea purpurea	Purple Coneflower	1 gal. cont., 16" o.c.
	HYP	Hypericum calycinum	St. John's-wort	1 gal. cont., 12" o.c.
	SAJ	Sedum spectabile 'Autumn Joy'	Autumn Joy Stonecrop	1 gal. cont., 16" o.c.
Groundcover	LIR	Liriope muscari 'Big Blue'	Liriope	1 gal. cont., 12" o.c.
	PHX	Phlox sp.	Creeping Phlox	1 gal. cont., 12" o.c.
Grasses	MIS	Miscanthus sinensis 'Morning Light'	Morning Light Maiden Grass	3 gal. cont., 3' o.c.
	DFG	Pennisetum alopecuroides	Fountain Grass	3 gal. cont., 3' o.c.

SLATER ASSOCIATES INC.
5560 Stenett Pl. Suite 302 Columbia, MD 21045
410.992.0001 - phone 410.992.0212 - fax slaterj@eros.com

McCRONE
ENGINEERING ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
20 RIDGELY AVENUE ANNAPOLIS, MARYLAND 21401
(410) 267-8621 Fax (410) 267-9922
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

[Signature] 10/24/02
DIRECTOR DATE

[Signature] 10/24/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/24/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

[Signature] 10-2-02
Director DATE

PROJECT: MEADOWBROOK PARK SECTION/AREA: N/A MAP NO.: MAP 30 PARCELS 383 & 387

PLAT NO.	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
N/A	5	R-20	2	2	602302

WATER CODE: F09 SEWER CODE: S750615

OWNER/DEVELOPER INFORMATION

[Signature] 9/30/02
OWNER/DEVELOPER

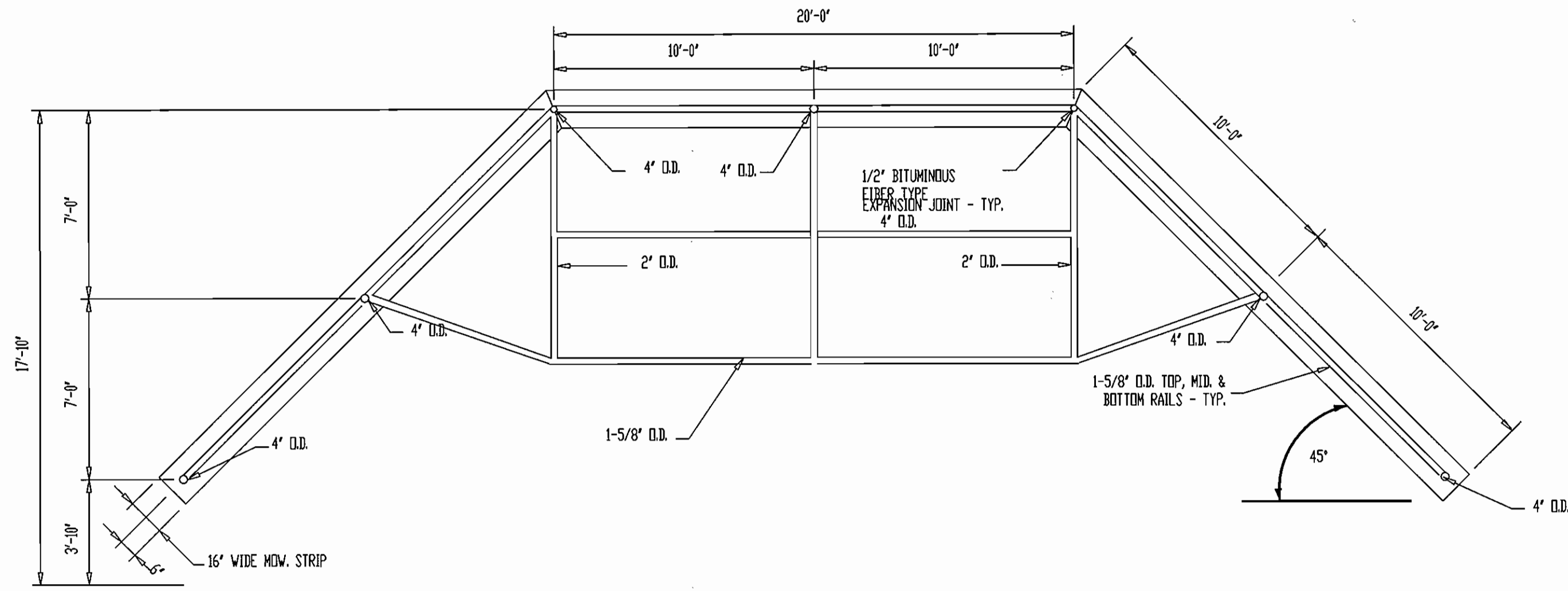
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLCOTT CITY, MD. 21043

DES:	J.S.	JS	1	REDLINE REVISION	7/06
DRN:	J.S.				
CHK:	V.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

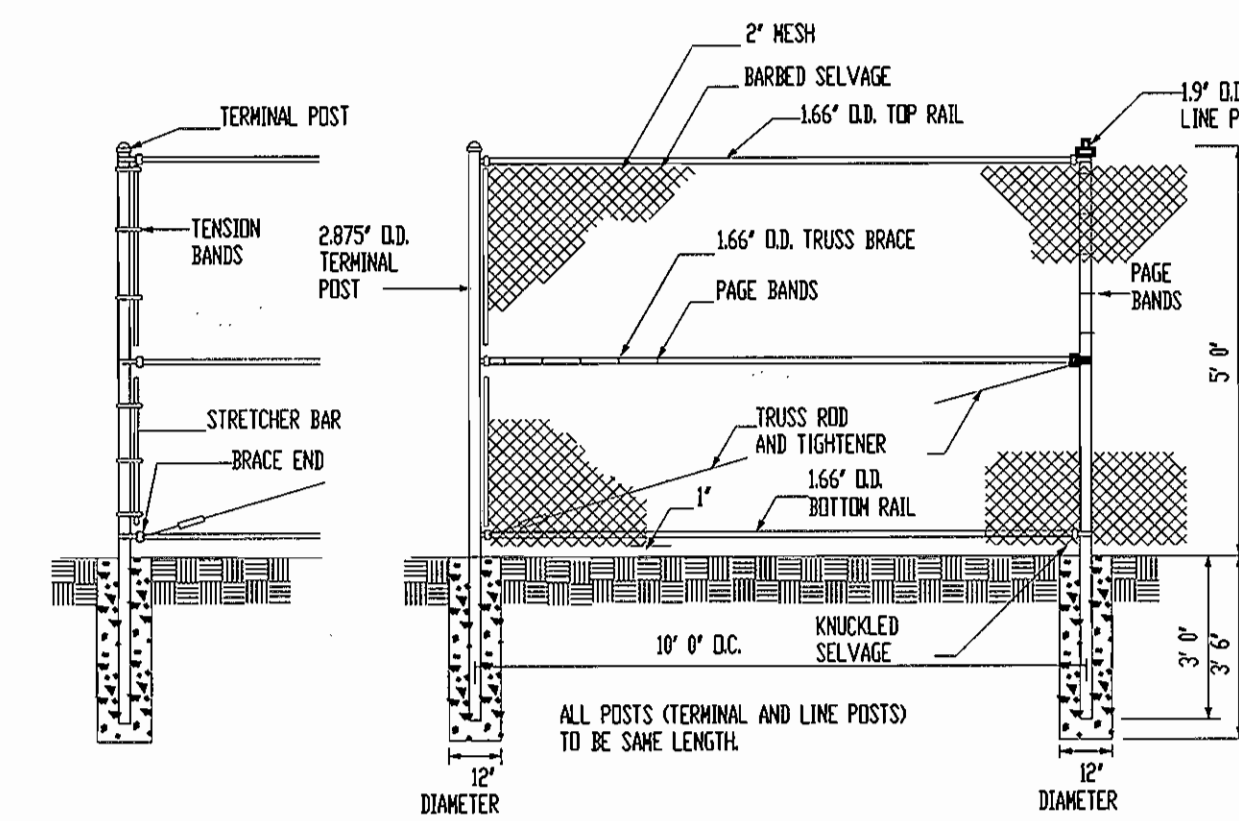
**LANDSCAPE PLAN
ADVENTURE PLAYGROUND
LAYOUT & PLANTING PLAN**

**SITE DEVELOPMENT PLAN
MEADOWBROOK PARK**

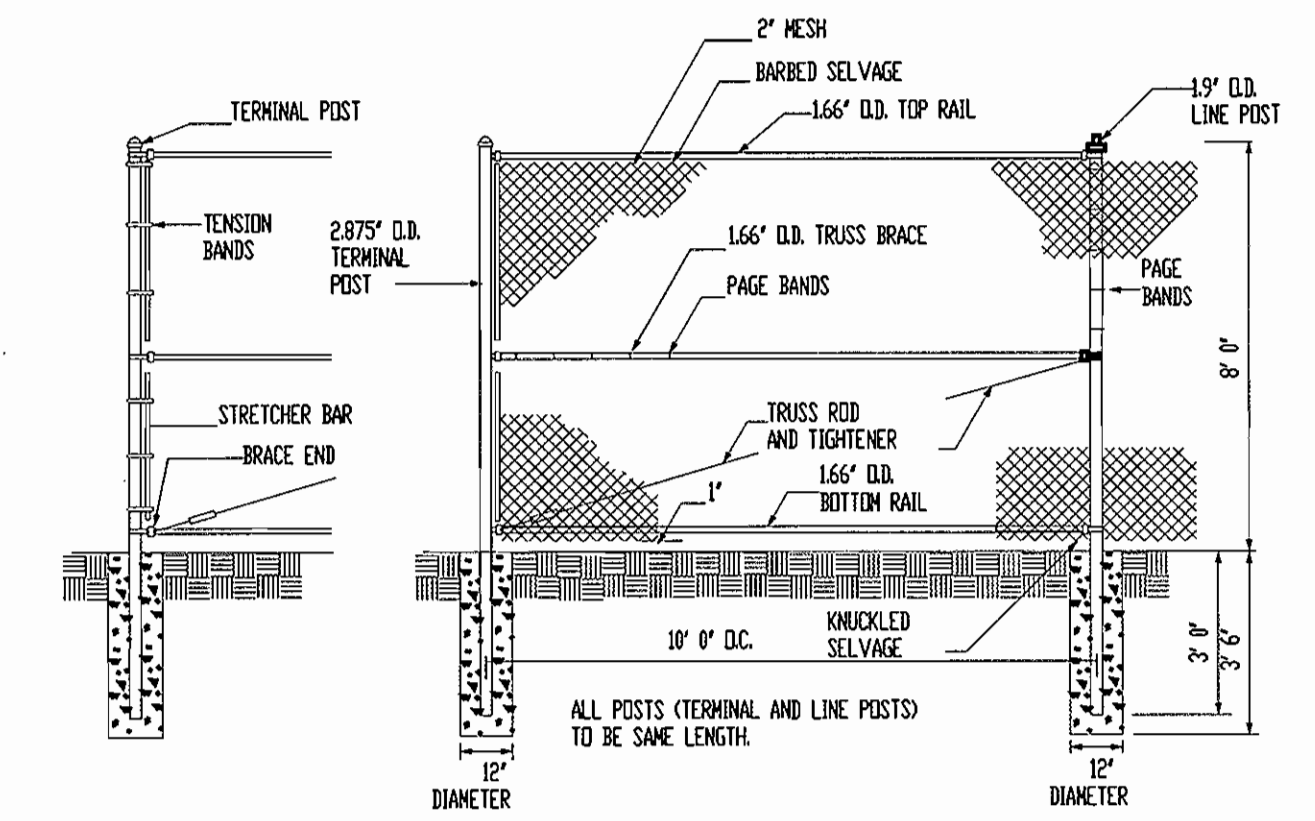
TAX MAP 30 SECOND ELECTION DISTRICT
PROJECT NO. N-3105 BLOCK 5
PARCELS 383 & 387 HOWARD COUNTY, MARYLAND



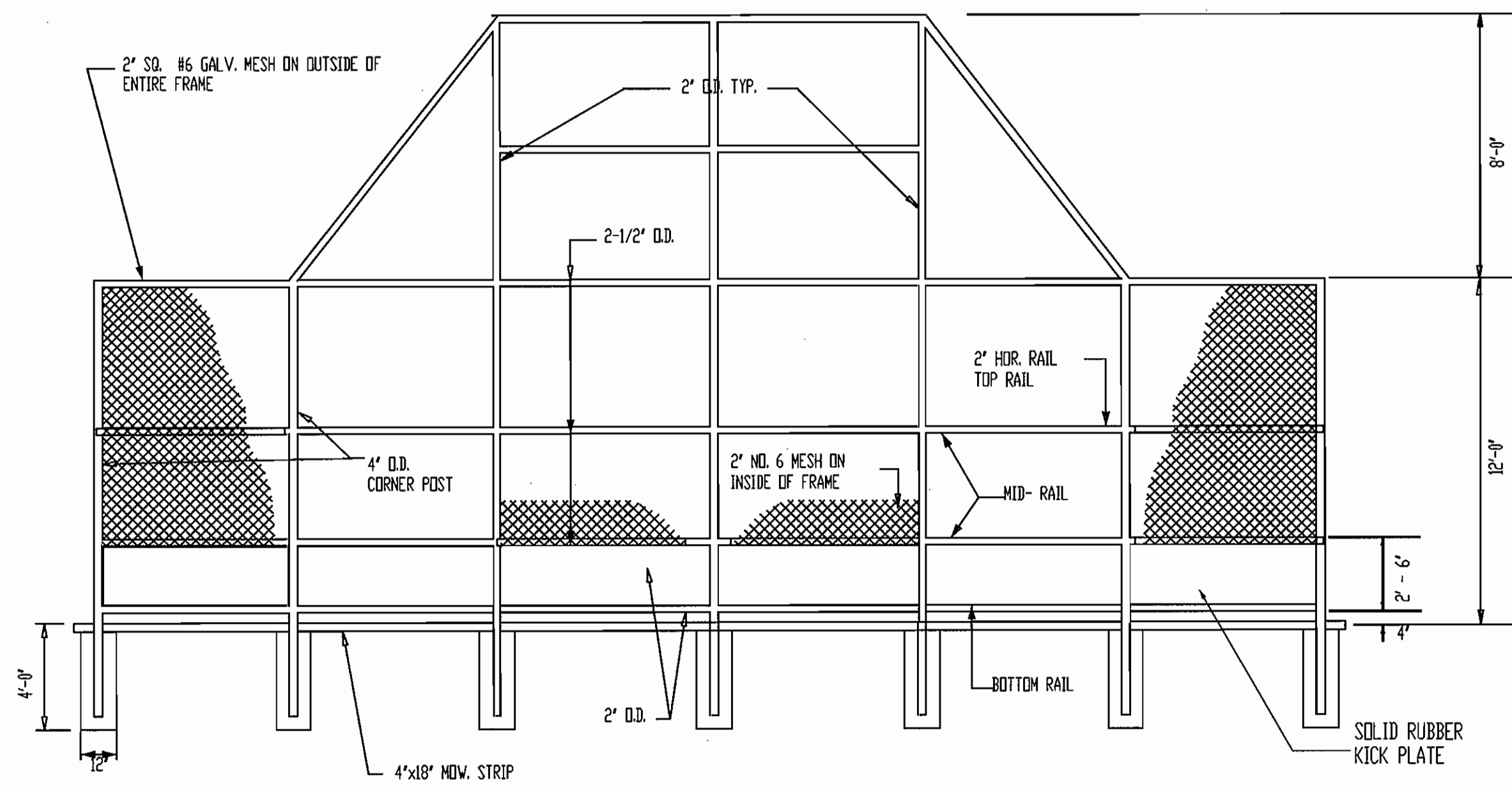
A HOODED BACKSTOP PLAN
SCALE: 1/4" = 1'-0"



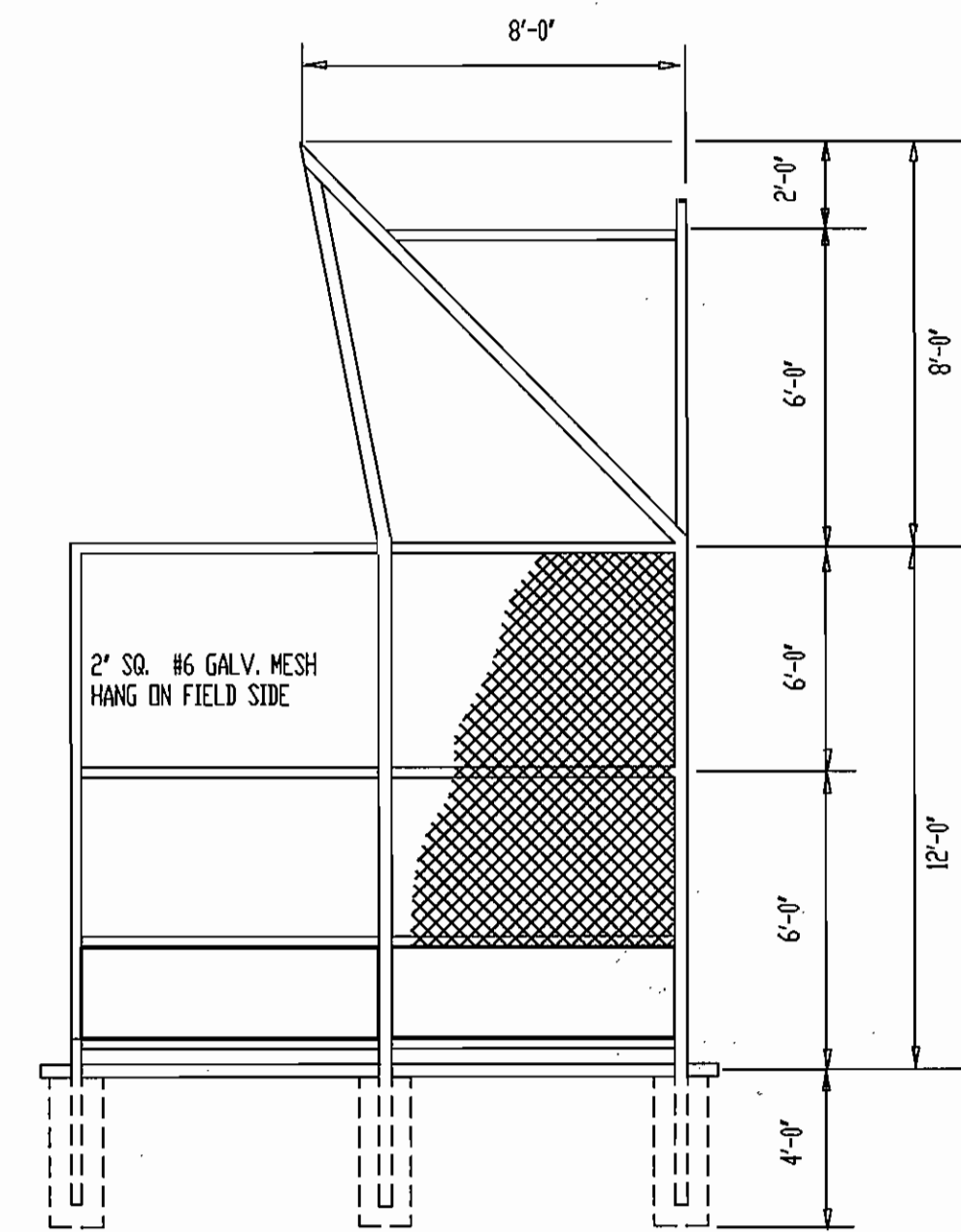
F OUTFIELD FENCE (FIELDS 1 AND 2)
N.T.S.



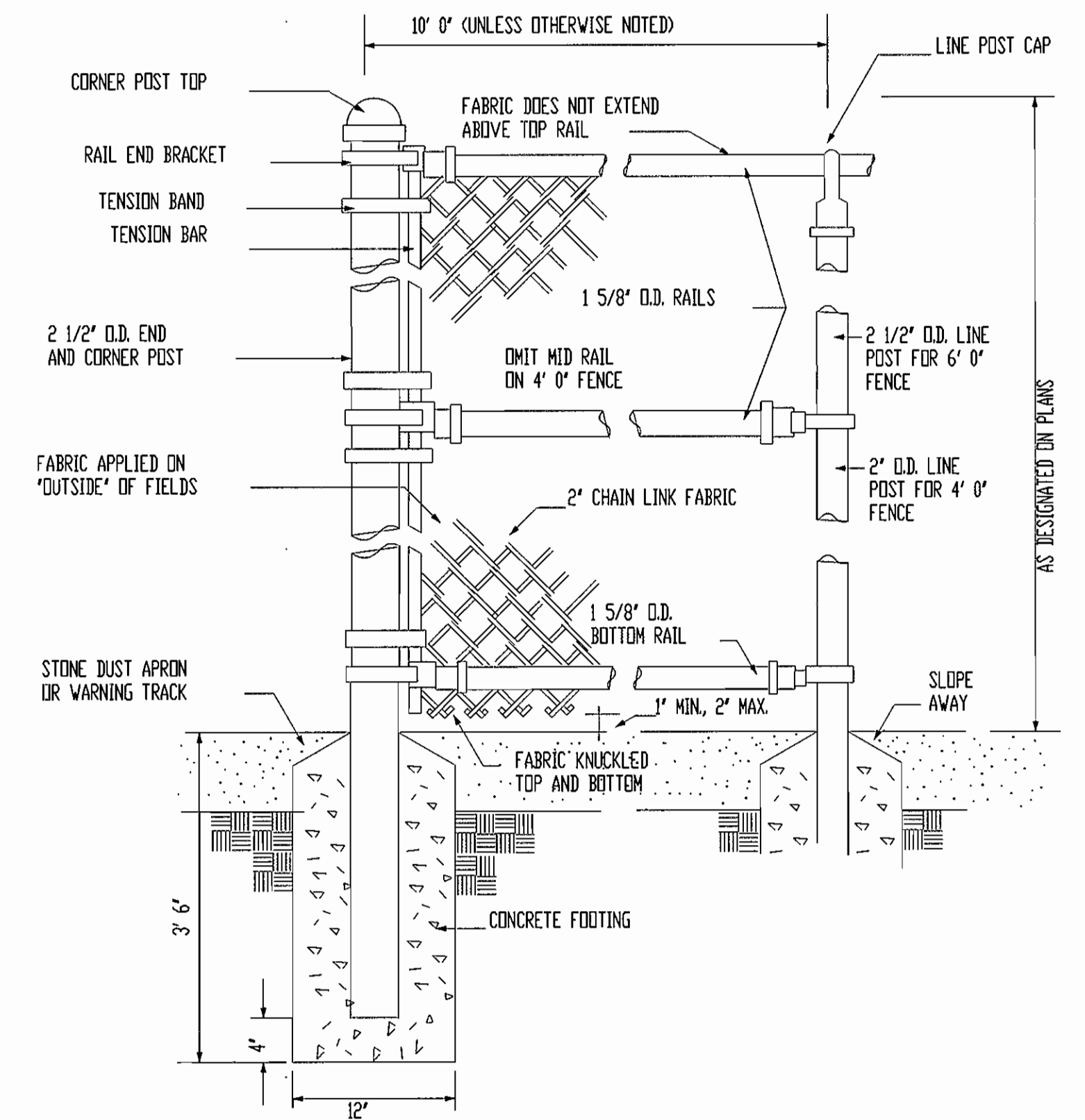
F OUTFIELD FENCE (FIELD 3)
N.T.S.



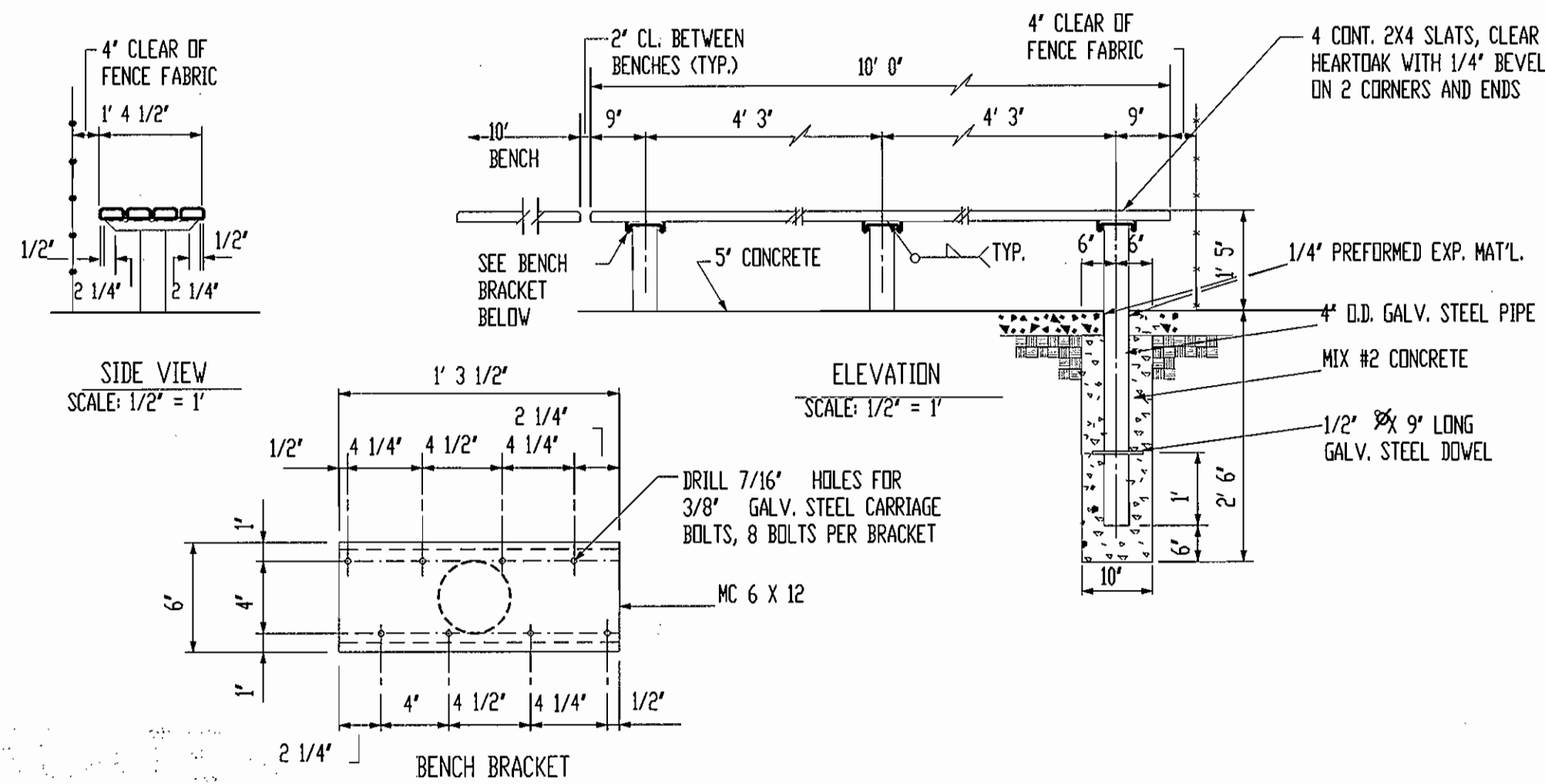
D HOODED BACKSTOP ELEVATION
SCALE: 1/4" = 1'-0"



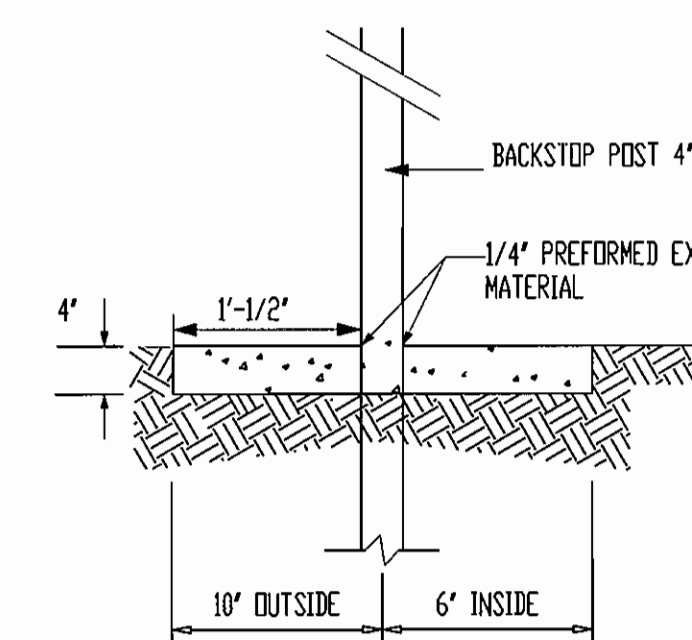
E HOODED BACKSTOP SECTION
SCALE: 1/4" = 1'-0"



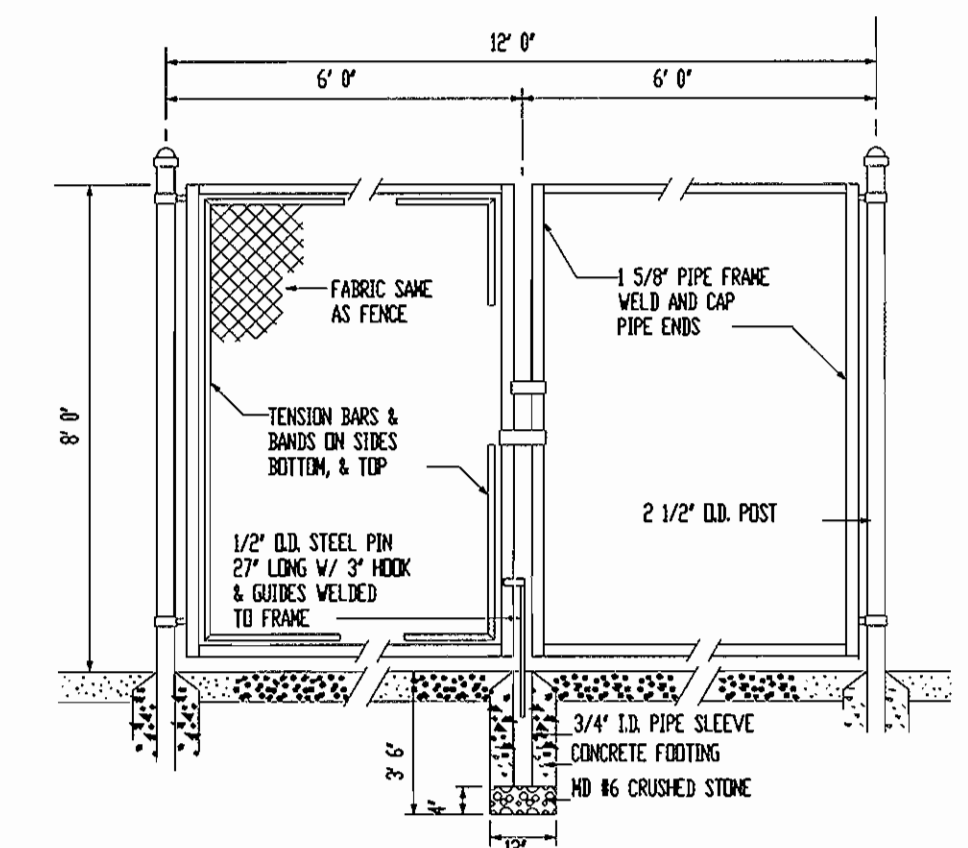
C BALL FIELD SIDELINE FENCE
N.T.S.



G PLAYERS BENCH
SCALE AS NOTED



E HOODED BACKSTOP MDW STRIP
N.T.S.



H BALL FIELD GATES
N.T.S.

OWNER/DEVELOPER INFORMATION
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9255 BENDIX ROAD
 ELLICOTT CITY, MD, 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

[Signature] 10/24/02
 DIRECTOR

[Signature] 11/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT

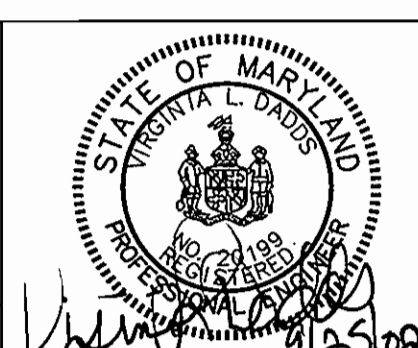
[Signature] 10/21/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

[Signature] 10-2-02
 GARY J. FLETCHER, Director

PROJECT	MEADOWBROOK PARK	SECTION/AREA	N/A	MAP NO.	MAP 30 PARCELS 383 & 387
PLAT NO.	N/A	GRID NO.	5	ZONE	R-20
TAX/ZONE	2	ELEC. DIST.	2	CENSUS TR.	602302
WATER CODE	F09	SEWER CODE	5750615		

McCRONE
 ENGINEERING/ ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING/ CONSTRUCTION SERVICES
 20 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21403
 (410) 267-8621
 Fax (410) 267-9922



DES:	J.S.	JS	1	KEDLINE REVISION	7/08
DRN:	J.S.				
CHK:	V.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

BALLFIELDS CONSTRUCTION DETAILS

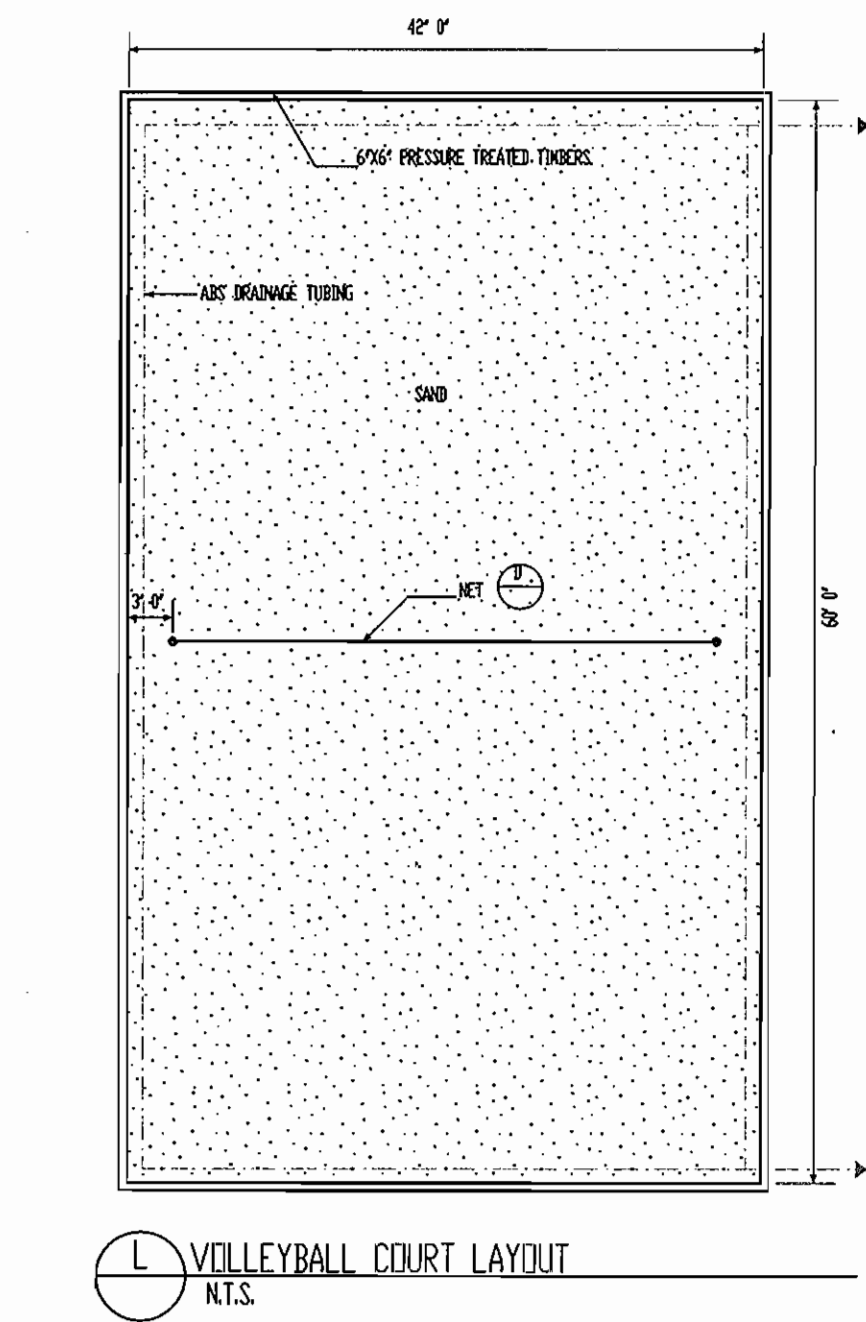
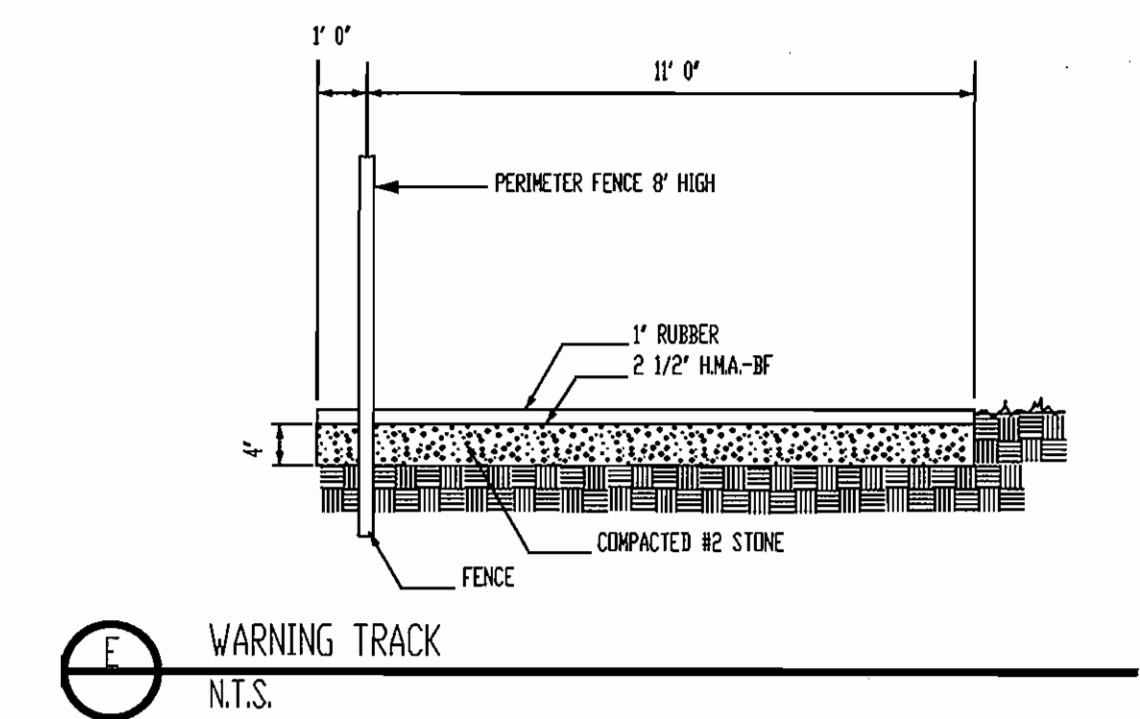
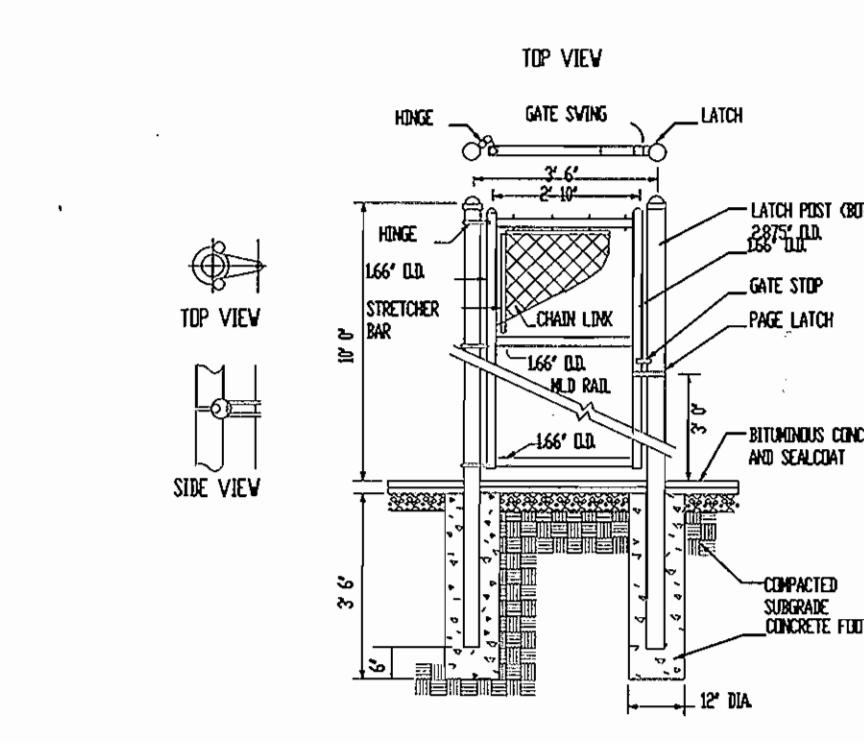
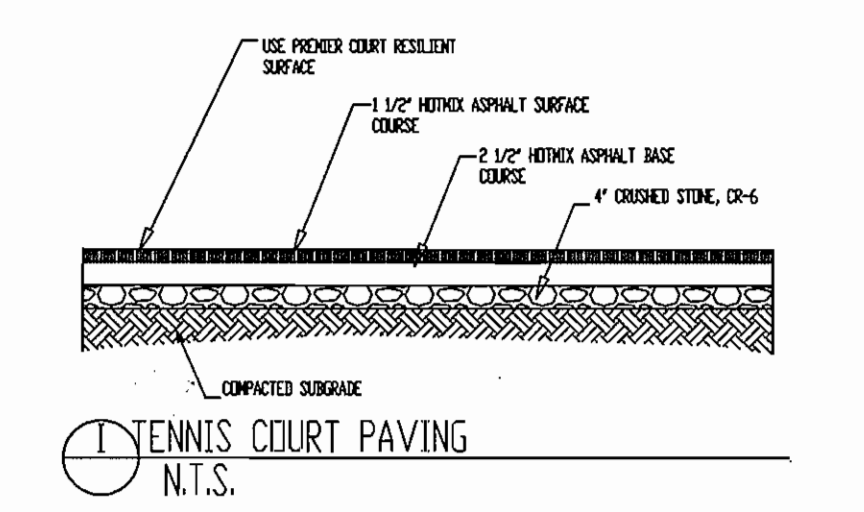
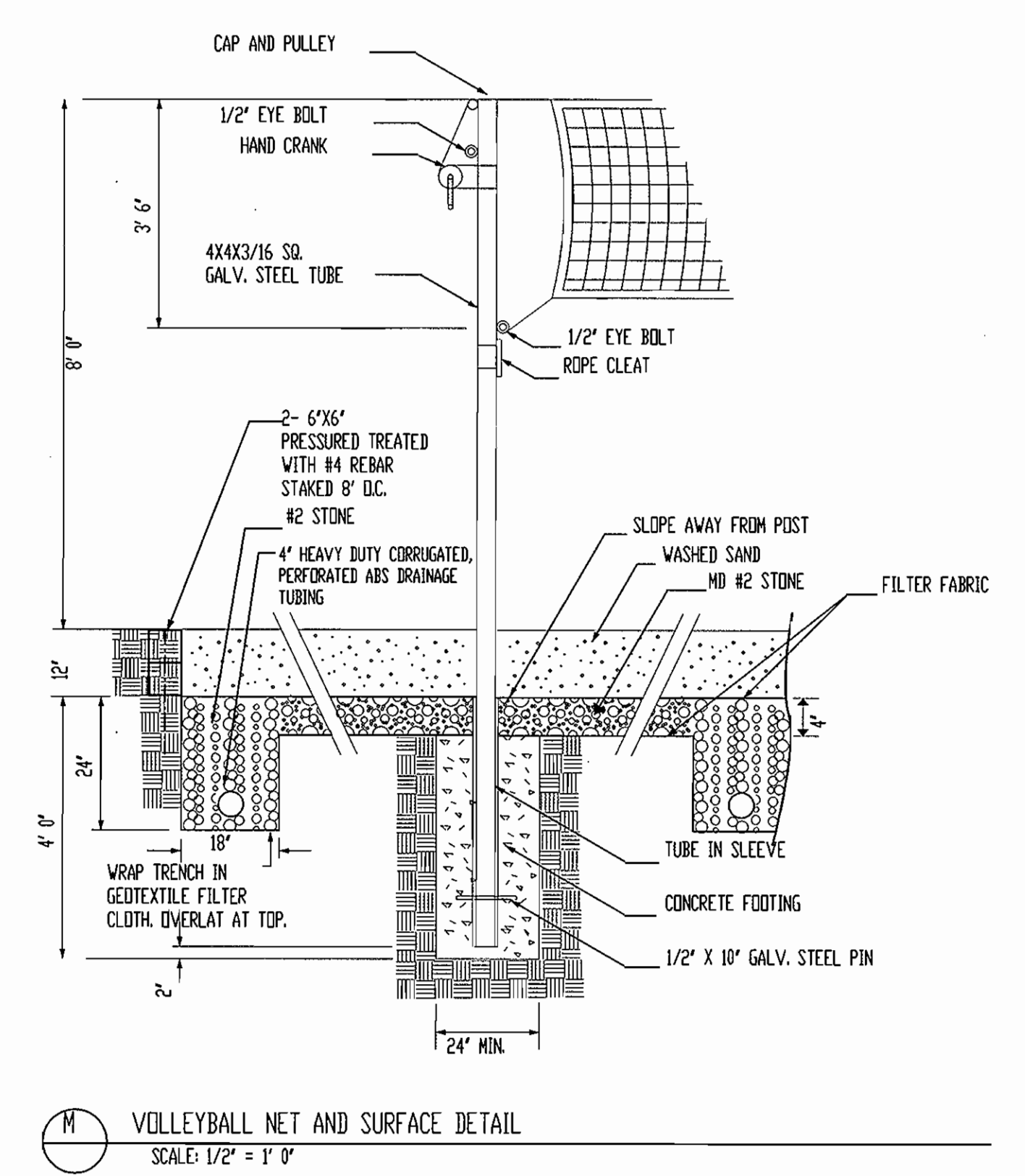
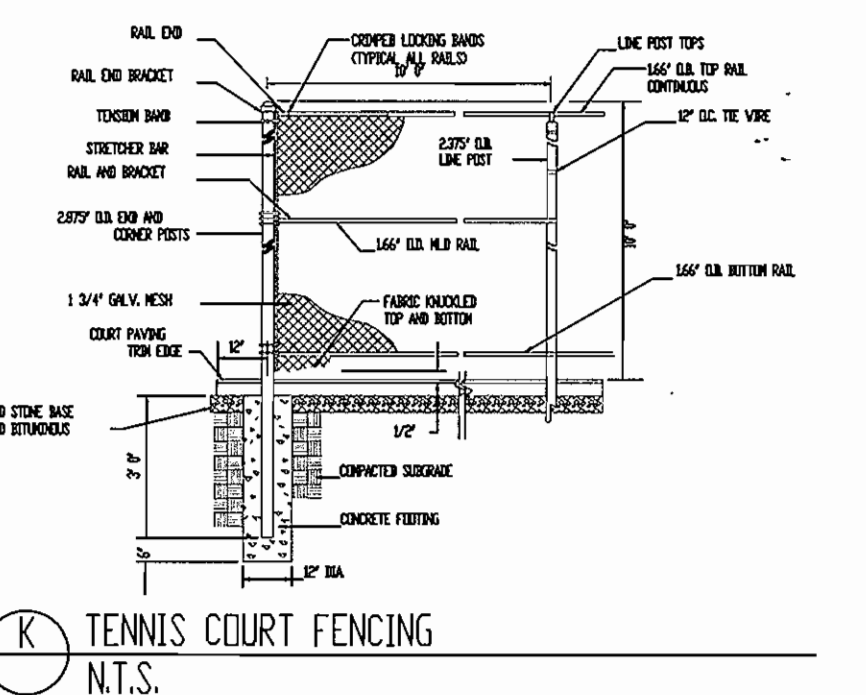
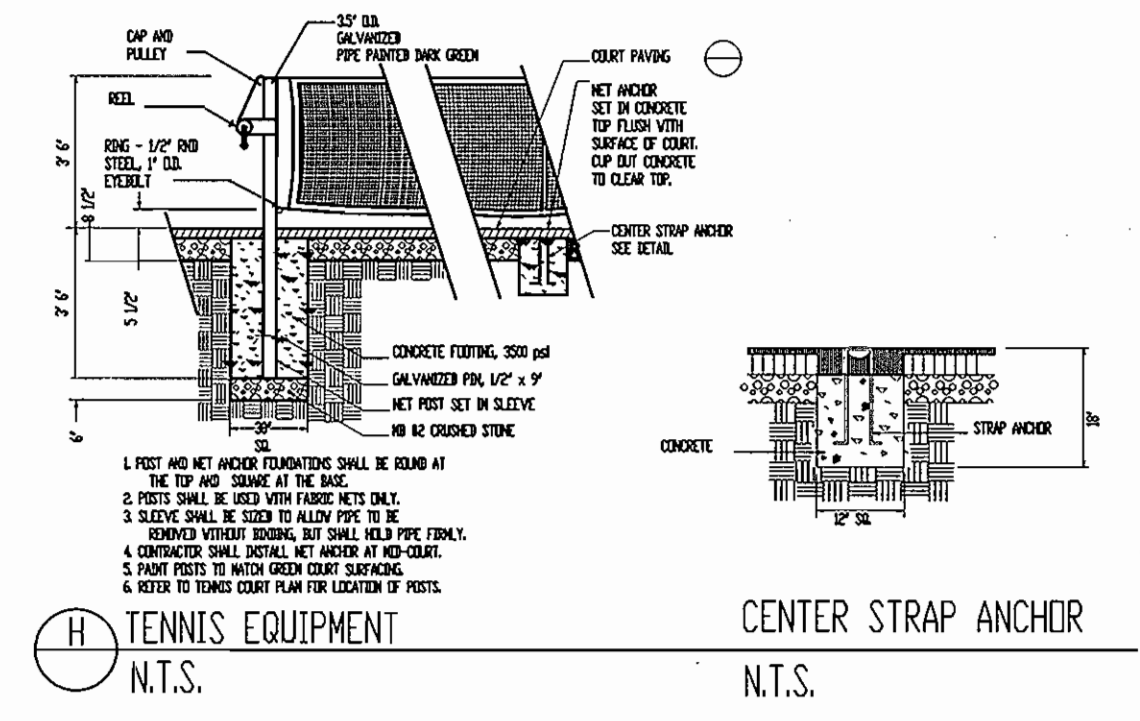
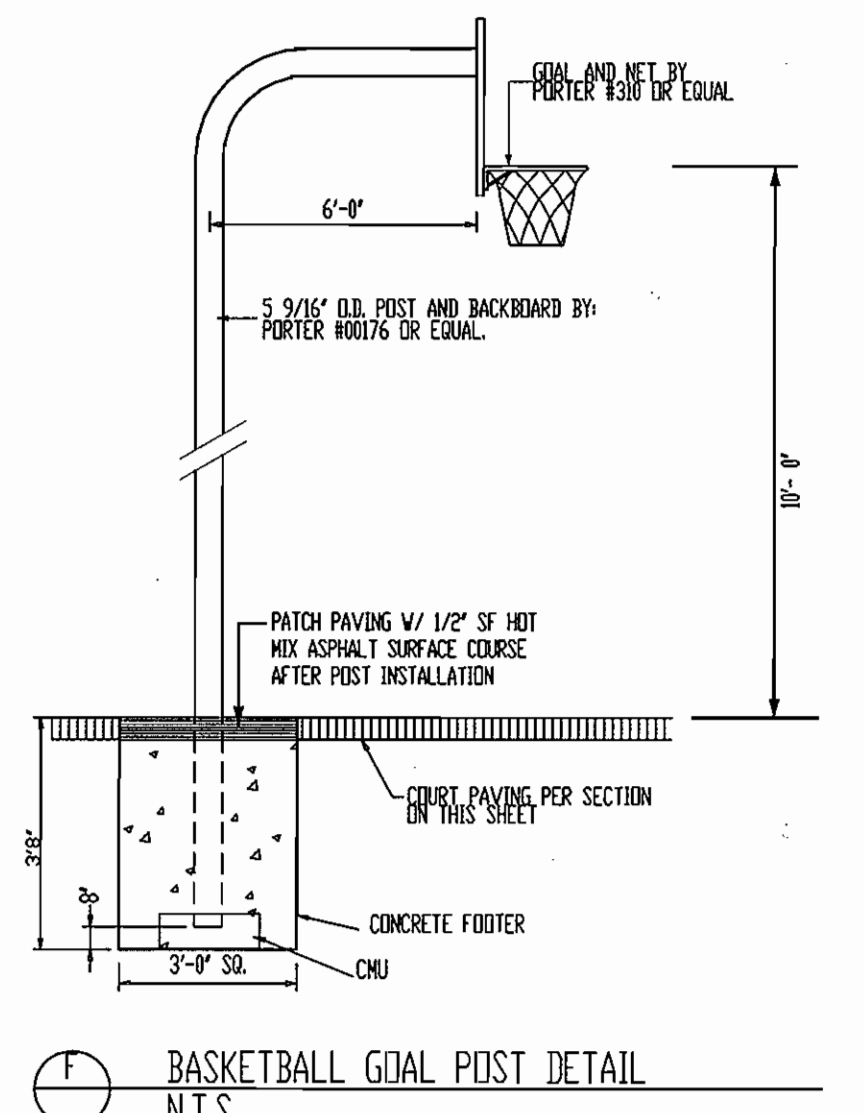
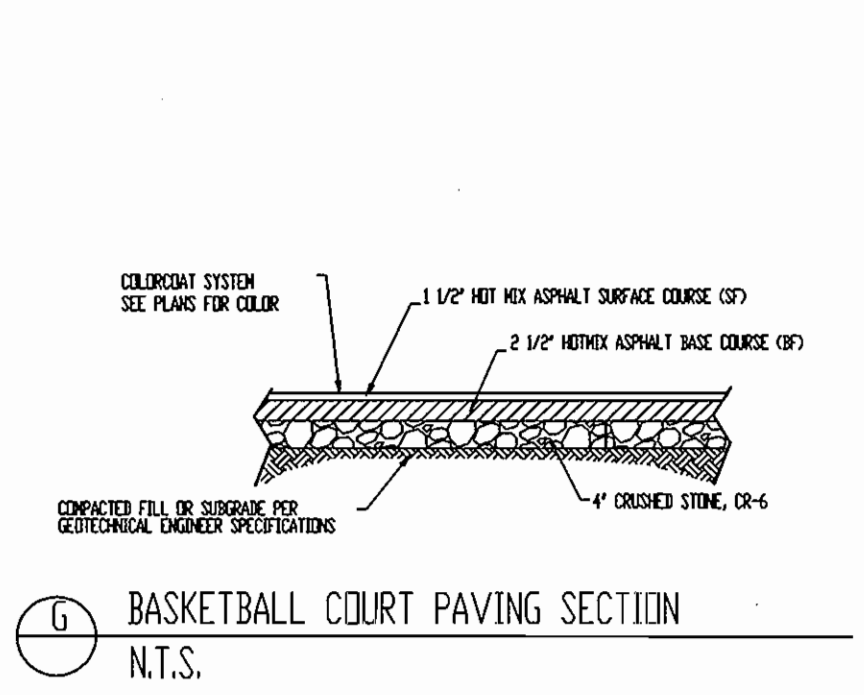
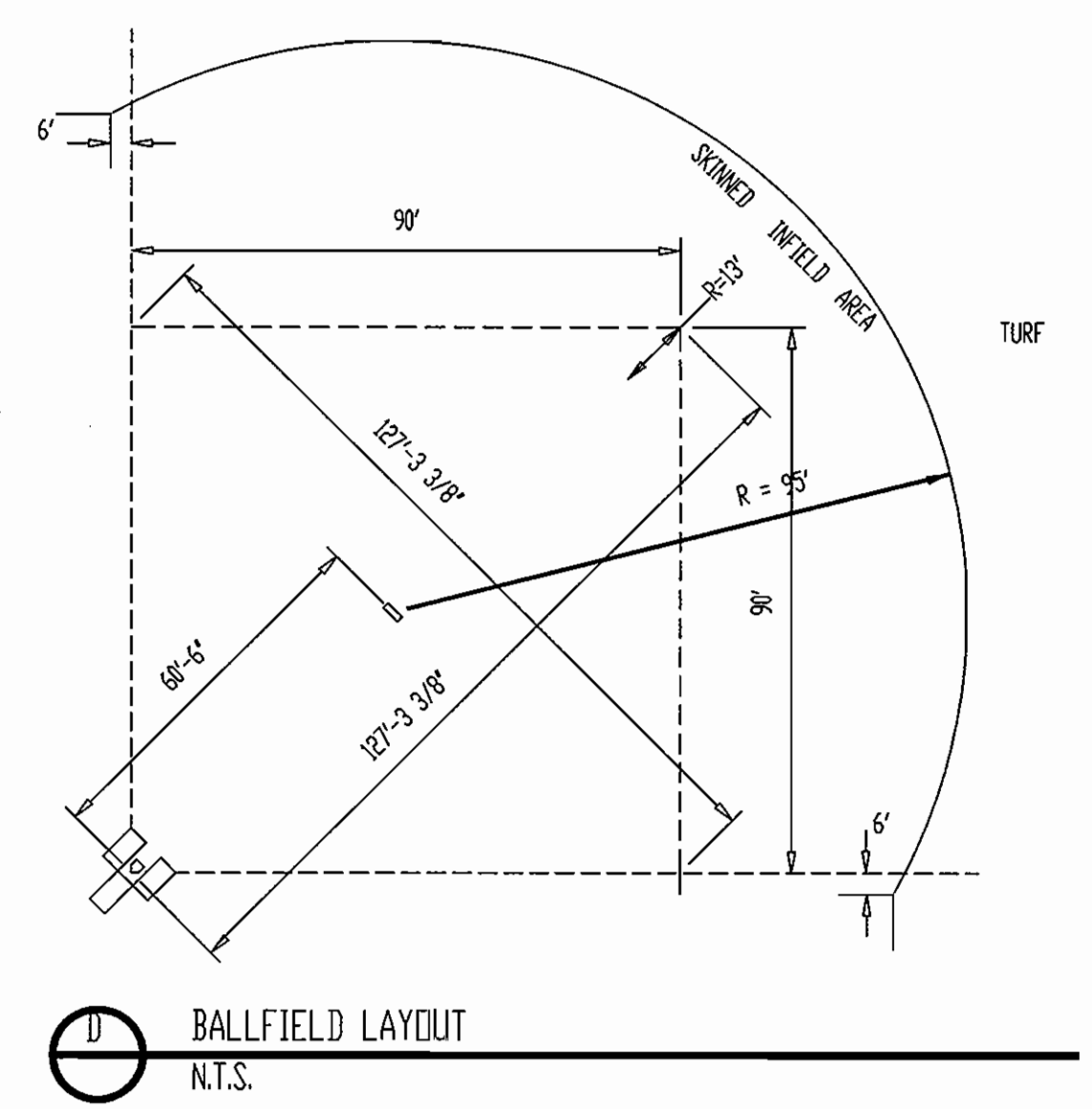
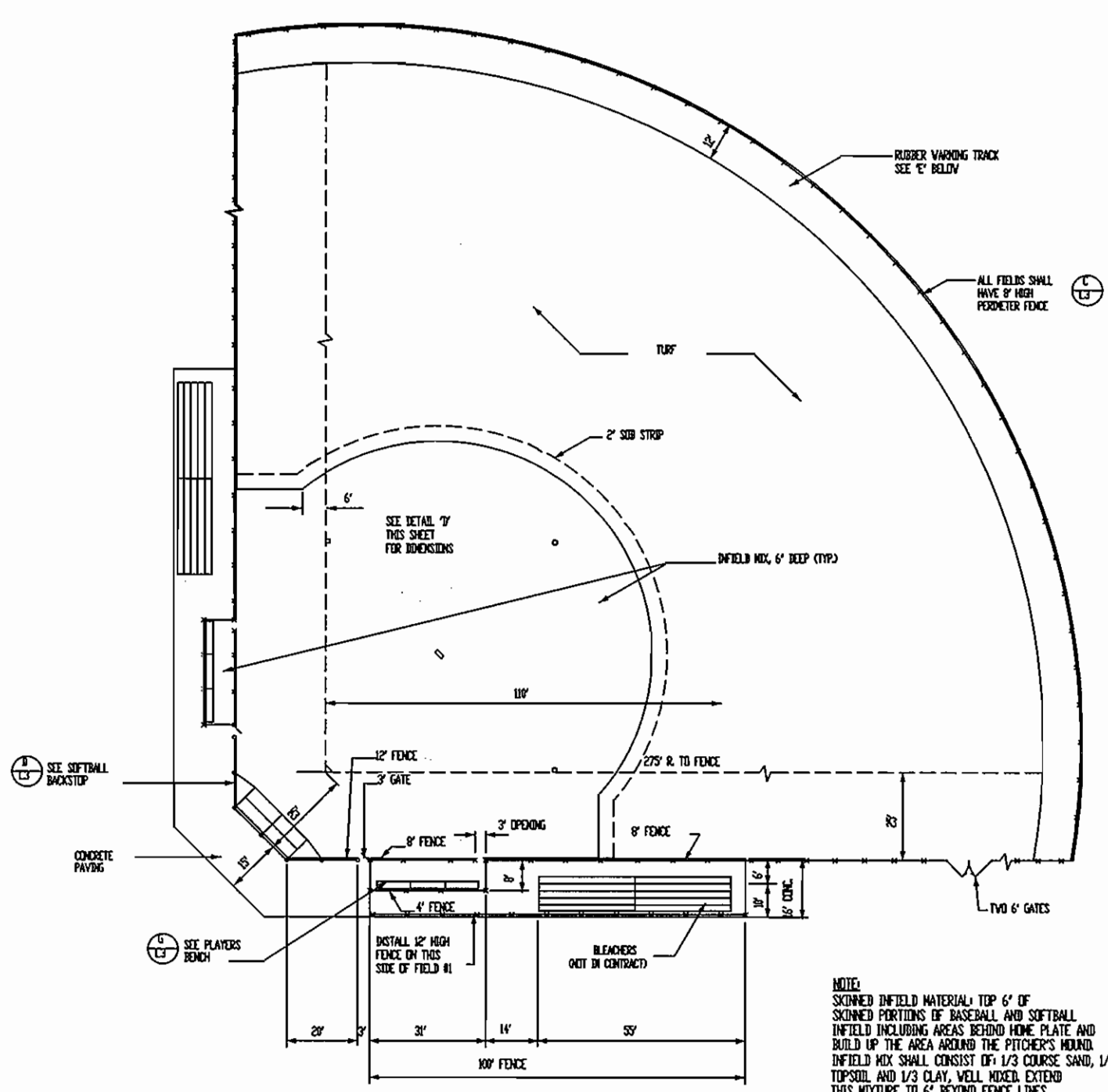
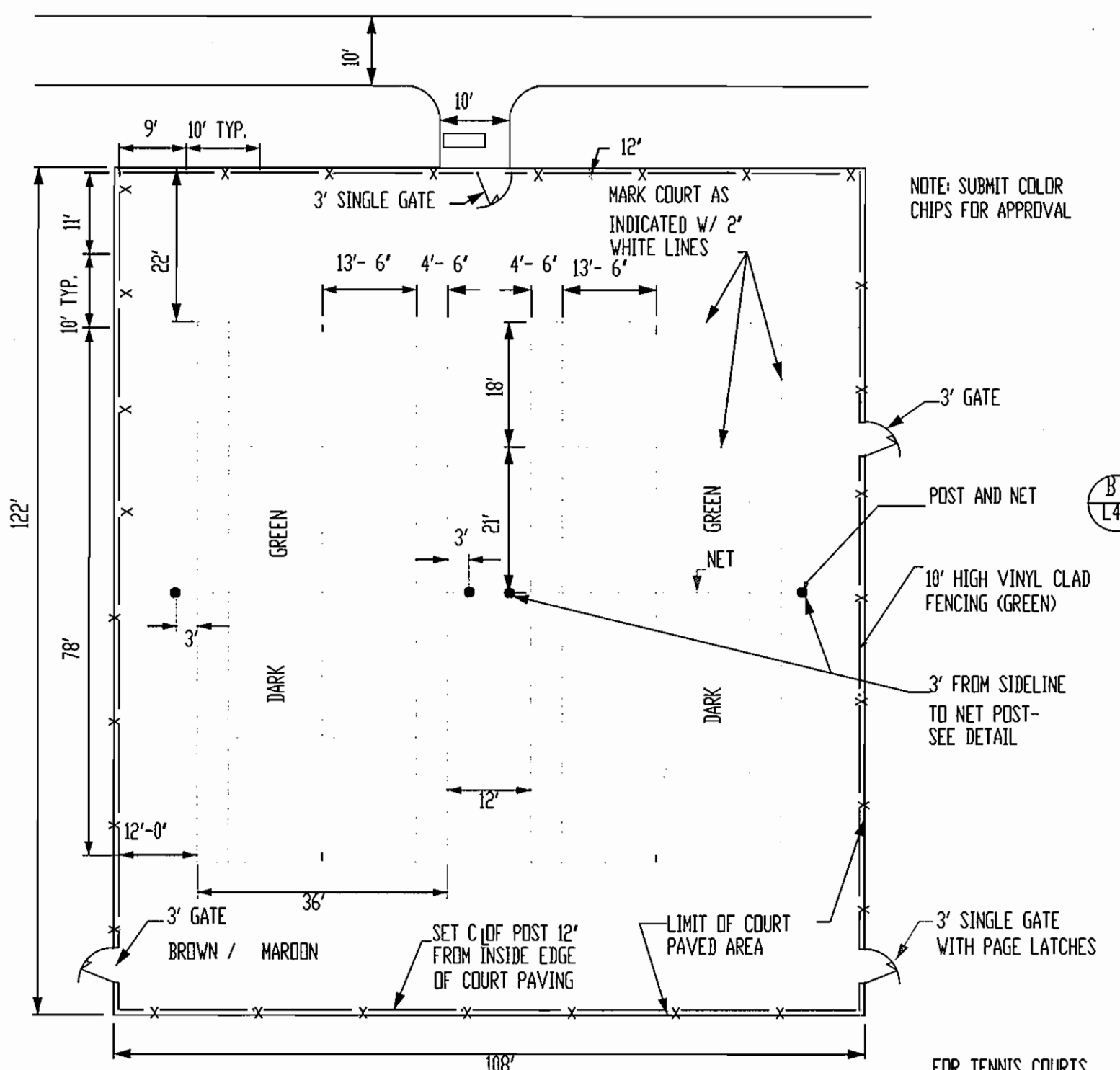
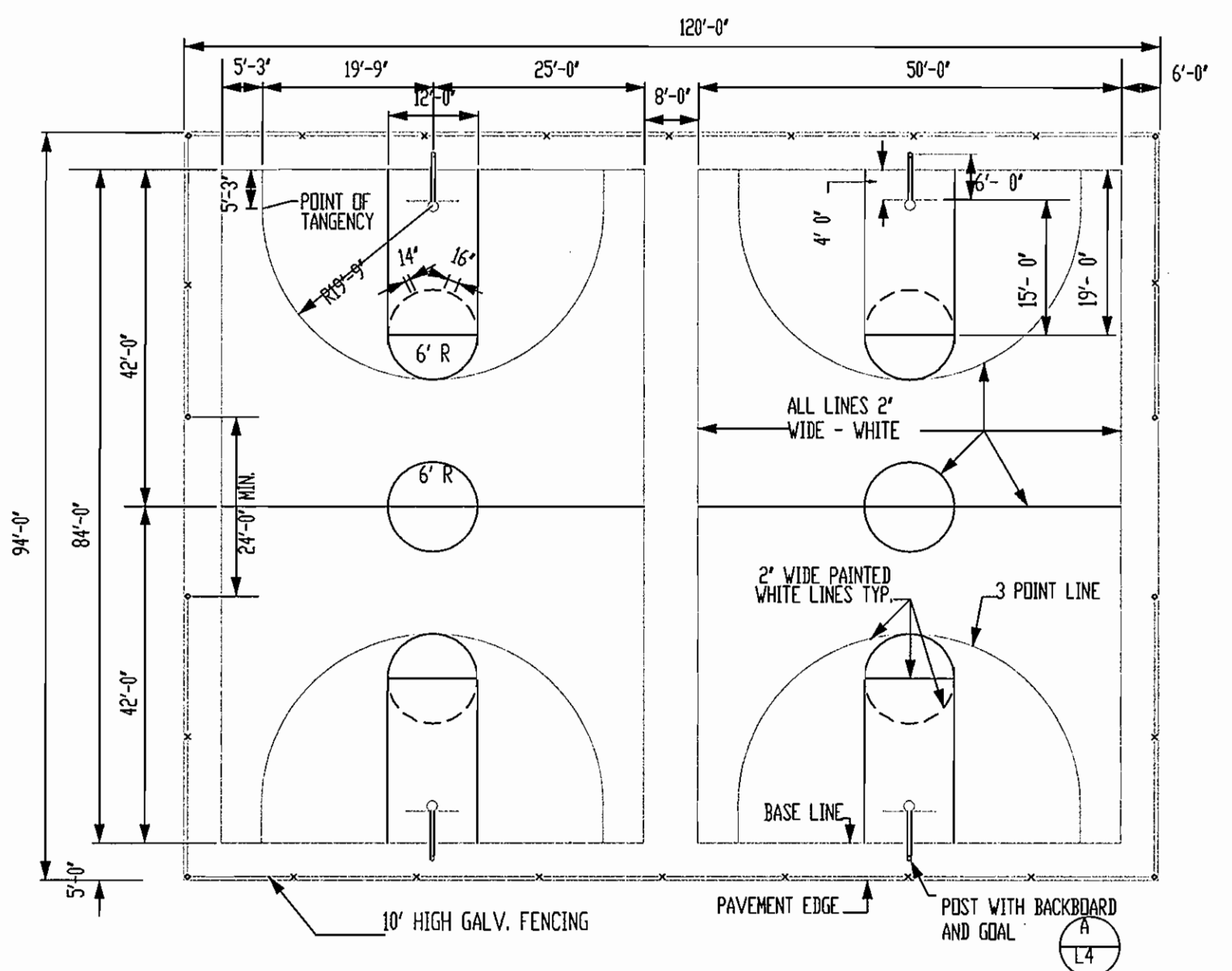
SITE DEVELOPMENT PLAN MEADOWBROOK PARK
 PROJECT NO. N-3105
 BLOCK 5
 PARCELS 383 & 387
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 26 OF 30

Plot Date and Time: Sep 25, 2002, 4:00pm

CADD FILE: G:\1010081 - Meadowbrook Park\Final Development\26-CONSTRUCTION-DETAILS.dwg

SDP-01-145



OWNER/DEVELOPER INFORMATION
 Daniel Sapon 9/30/02
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MARYLAND 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Fred K. Smith 10/24/02
 DIRECTOR

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Cindy Hamrick 10/24/02
 CHIEF, DIVISION OF LAND DEVELOPMENT

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND
 Gary J. Arthur 10-20-02
 DIRECTOR

PROJECT	SECTION/AREA	MAP NO.
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387
PLAT NO.	GRID NO.	ZONE
N/A	5	R-20
TAXZONE	ELEC. DIST.	CENSUS TR.
2	2	602302
WATER CODE	SEWER CODE	
F09	5750615	

McCRONE
 ENGINEERING ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING CONSTRUCTION SERVICES
 20 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 267-8621
 Fax: (410) 267-9932
 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES:	J.S.	JS	I	REDLINE REVISION	7/08
DRN:	J.S.				
CHK:	V.D.				
DATE:	MAY, 2001	BY	No.	REVISION	DATE

COURT GAMES AND SOFTBALL CONSTRUCTION DETAILS

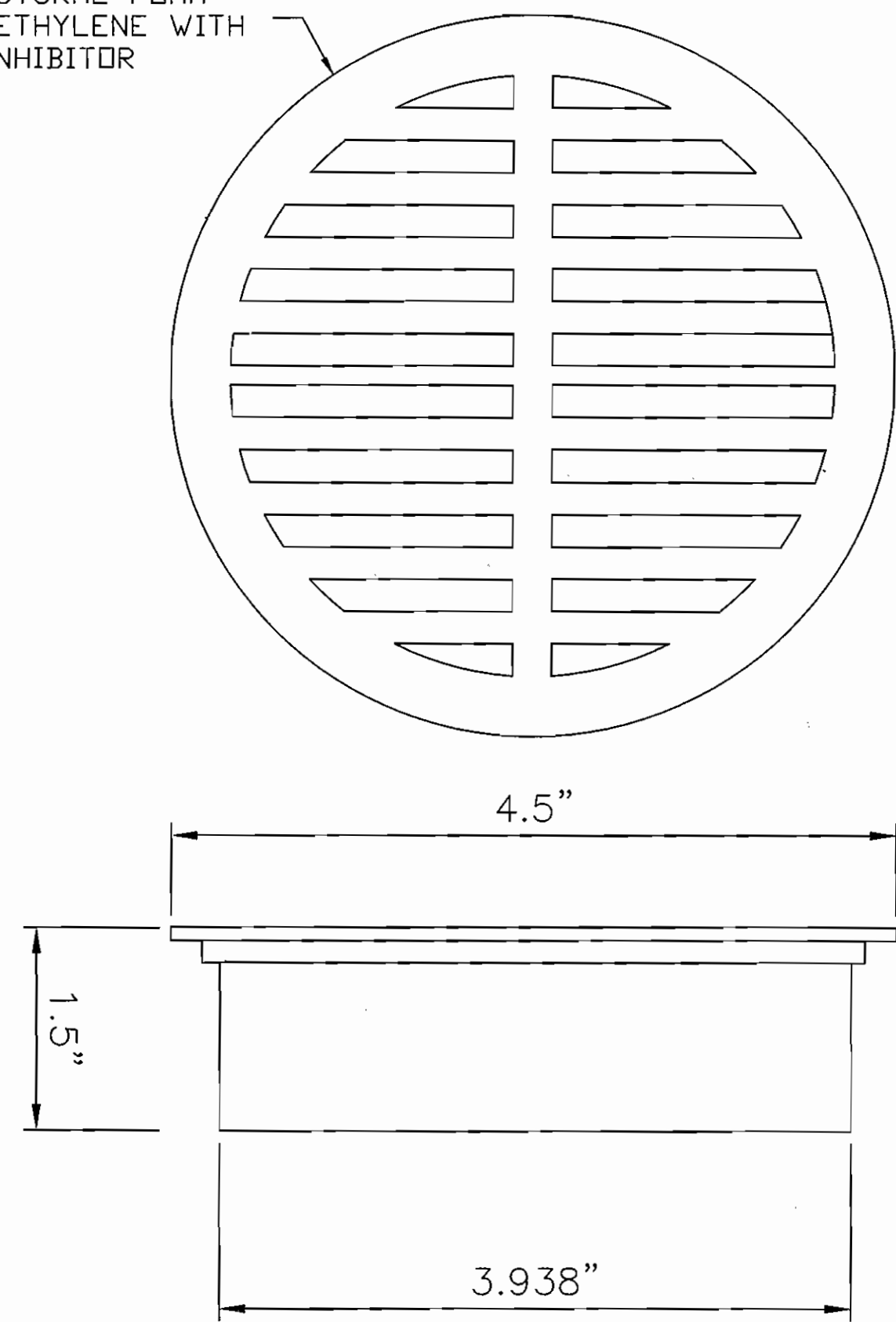
SITE DEVELOPMENT PLAN MEADOWBROOK PARK
 PROJECT NO. N-3105
 BLOCK 5 PARCELS 383 & 387
 TAX MAP 30 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE 1"=50'
 SHEET 28 OF 30
 SDP-01-145

Plot Date and Time: Sep 25, 2002, 4:01pm

CADD FILE: G:\010081 - Meadowbrook Park\Final Development\28-CONSTRUCTION DETAILS.dwg

STRUCTURAL FOAM
POLYETHYLENE WITH
UV INHIBITOR



4" ROUND GRATE
NOT TO SCALE

NOTES

1. THE PROPOSED WALL CONSTRUCTION SHALL BE PERFORMED UNDER THE OBSERVATION OF A MARYLAND REGISTERED PROFESSIONAL ENGINEER.
2. THE FOUNDATION SOIL MUST BE EXAMINED BY THE ENGINEER TO ASSURE THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN STRENGTH.

OWNER/DEVELOPER INFORMATION

Robert Sepom 9/30/02
OWNER/DEVELOPER
HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
ELLICOTT CITY, MD. 21043

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Jack Raths 10/24/02
DIRECTOR DATE

Cindy Harsh 11/2/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael Pennington 10/21/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

Gary S. Arthur 10-2-02
Gary S. Arthur, Director DATE

PROJECT	SECTION/AREA	MAP NO.
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387
PLAT NO.	GRID NO.	ZONE
N/A	5	R-20
TAXZONE	ELEC. DIST.	CENSUS TR.
2	2	602302
WATER CODE	SEWER CODE	
F09	5750615	

McCRONE
ENGINEERING & ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES
30 RIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-6621
Fax (410) 267-9932
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES: J.S.	JS	1	REDLINE REVISION	7/08
DRN: J.S.				
CHK: V.D.				
DATE: MAY, 2001	BY	No.	REVISION	DATE

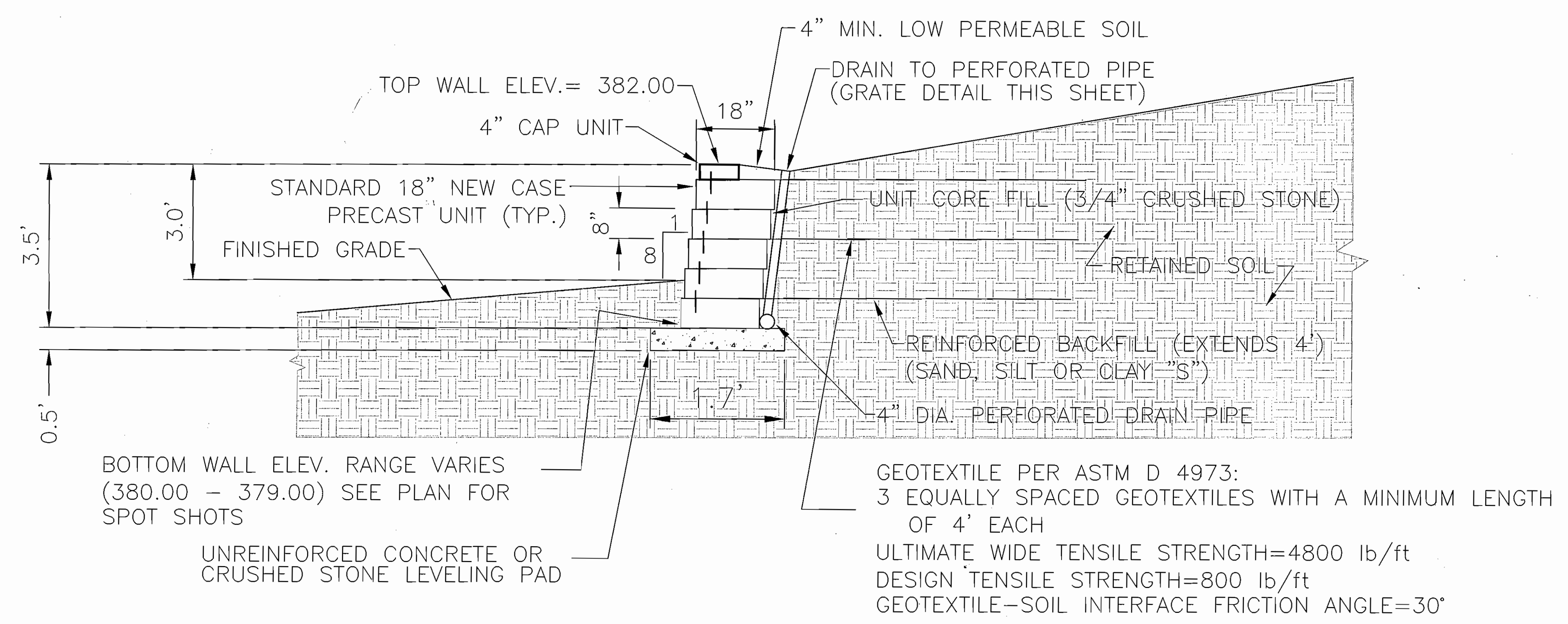
RETAINING WALL SECTION

SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
TAX MAP 30 SECOND ELECTION DISTRICT
PROJECT #N-3105 BLOCK 5
PARCEL 383 & 387
HOWARD COUNTY, MARYLAND

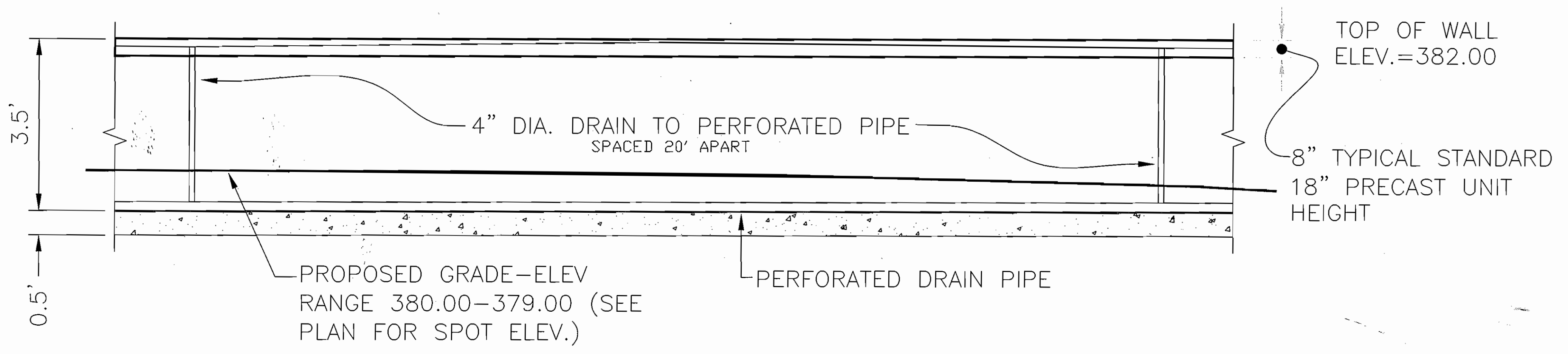
SCALE
NONE
SHEET
29 OF 30

Plot Date and Time: Sep 25, 2002, 4:02pm

CADD FILE: G:\1010081 - Meadowbrook Park\Final Development\29-RETAINING-WALL-SECTION.dwg



TYPICAL REINFORCED WALL SECTION
NOT TO SCALE



TYPICAL REINFORCED WALL ELEVATION
NOT TO SCALE

GENERAL STRUCTURAL NOTES

A. BUILDING CODES AND STANDARDS

- THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATION REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL, AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT.
 - "BOCA NATIONAL BUILDING CODE - 1999", BUILDING OFFICIALS AND CODE ADMINISTRATORS, INC.
 - "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES", (ANSI/ASCE 7-98 - 1998), AMERICAN SOCIETY OF CIVIL ENGINEERS.
- ADDITIONAL CODES FOR MATERIALS SHALL BE FOUND IN THE APPROPRIATE SECTIONS THAT FOLLOW. SEE THOSE SECTIONS FOR THE APPLICABLE CODES.

B. DESIGN LOADS

- DESIGN LOADS IN ACCORDANCE WITH REACTIONS INDICATED IN CALCULATIONS FOR PEDESTRIAN BRIDGE AS DESIGNED BY SPECIALTY ENGINEER. (NOT BY RATHGEBER/GOSS ASSOCIATES). DESIGN OF ABUTMENT TO BE VERIFIED FOLLOWING REVIEW OF BRIDGE CALCULATIONS.

C. FOUNDATION / EARTH WORK / GEOTECHNICAL REPORT

1. DESIGN DATA:

- FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNES DATED MARCH 30, 2001, REPORT NO. 010304. SEE THAT REPORT FOR ADDITIONAL REQUIREMENTS.
- ALL FOUNDATIONS SHALL BEAR A MINIMUM OF 2'-6" BELOW GRADE. IN CASE OF CONFLICT, NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.

2. FOUNDATION SYSTEM

- SPREAD FOOTINGS
 - BUILDING SPREAD AND STRIP FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL SOILS OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL WITH AN ALLOWABLE BEARING PRESSURE OF 2500 PSF.

3. GENERAL

- SEE THE SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS FOR EXCAVATION AND PREPARATION OF THE FOUNDATION SUBGRADE, INCLUDING COMPACTION PROCEDURES. REQUIREMENTS CONTAINED IN THE GEOTECHNICAL REPORT ARE PART OF THIS WORK.
- CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND PROTECTING ALL EXISTING UTILITIES, EXISTING STRUCTURES, ETC., WHETHER INDICATED OR NOT, WHICH MAY BE AFFECTED BY THE CONSTRUCTION PROCESS.
- BEARING ELEVATIONS INDICATED ON THE DRAWINGS ARE ESTIMATED FROM SOIL BEARING DATA INDICATED IN THE GEOTECHNICAL REPORT. PRIOR TO PLACING FOUNDATIONS, AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER SHALL MAKE DETERMINATION OF FINAL BEARING ELEVATIONS AND VERIFICATION OF ALLOWABLE BEARING PRESSURE.
- CONCRETE FOR FOUNDATIONS SHALL BE POURED ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.

4. BACKFILL

- ALL BACKFILL SHALL BE ACCOMPLISHED USING MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER, WITH OPTIMUM MOISTURE CONTENT FOR COMPACTING AND SHALL BE FREE OF DEBRIS.

5. STRUCTURAL FILL

- REFER TO SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS FOR COMPACTED STRUCTURAL FILL. REQUIREMENTS CONTAINED IN THIS GEOTECHNICAL REPORT ARE PART OF THIS WORK. INSPECTION OF THE PLACEMENT OF COMPACTED STRUCTURAL FILL SHALL BE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER.

D. CONSTRUCTION

1. GENERAL

- UNAUTHORIZED REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- SHOP DRAWINGS SUBMITTED FOR STRUCTURAL REVIEW SHALL CONSIST OF TWO SETS OF PRINTS AND ONE SET OF SEPIAS. ONLY ONE MARKED UP SET OF REPRODUCIBLE DRAWINGS WITH THE STRUCTURAL ENGINEER'S COMMENTS WILL BE RETURNED TO THE CONTRACTOR.
- SUBMIT SHOP DRAWINGS TO STRUCTURAL ENGINEER AT LEAST 15 BUSINESS DAYS BEFORE DATE REVIEWED SUBMITTALS WILL BE NEEDED. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT HE/SHE HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

E. CONCRETE

1. CODES

- "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318", AMERICAN CONCRETE INSTITUTE.
- "ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5".
- "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE.

2. MATERIALS

- THE FOLLOWING ASTM STANDARDS AND DESIGN STRESSES SHALL BE USED FOR THE APPROPRIATE MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT.

APPLICATION	f _c @ 28 DAYS	WEIGHT PCE	W/C (MAX)*
WALLS	3000	145	0.50
FOOTINGS	3000	145	0.55

b. CEMENT:

- ASTM C150; TYPE I OR III
- ASTM C150; TYPE II FOR CONCRETE IN CONTACT WITH EARTH

c. CEMENT SUBSTITUTES:

- ASTM C595, TYPE IS (LIMIT TO 50% MAX OF CEMENTITIOUS CONTENT BY WEIGHT)
- ASTM C33 (NORMAL WEIGHT)

d. AGGREGATES:

- AIR: ALL CONCRETE SHALL BE AIR-ENTRAINED 5% ± 1% BY VOLUME. ENTRAINING ADMIXTURE TO COMPLY WITH ASTM C260.

f. REINFORCEMENT:

- DEFORMED REINFORCING BARS: ASTM A615, GRADE 60

3. CAST-IN-PLACE

- REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

- NON-POST-TENSIONED CONCRETE:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #6 BARS AND LARGER: 2"
 - #5 BARS AND SMALLER: 1 1/2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - SLABS, WALLS AND JOISTS: #11 BARS AND SMALLER: 8"
 - BEAMS, AND COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, AND SPIRALS: 1 1/2"

- NO SPLICES OF REINFORCEMENT SHALL BE PERMITTED EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. MAKE BARS CONTINUOUS AROUND CORNERS. WHEN PERMITTED, SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES, UNLESS OTHERWISE NOTED.

- ALL FORMWORK, SHORING, AND RESHORING, SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMISSIONS SHALL BEAR THE ENGINEER'S SEAL AND SIGNATURE.

- CHAMFER ALL EXPOSED CONCRETE CORNERS, b" x b" MINIMUM.

4. INSPECTION AND TESTING

- THE OWNER WILL ENGAGE A TESTING AGENCY TO PROVIDE SERVICES AS INDICATED BELOW AND SUBMIT REPORTS.

b. CAST-IN-PLACE CONCRETE:

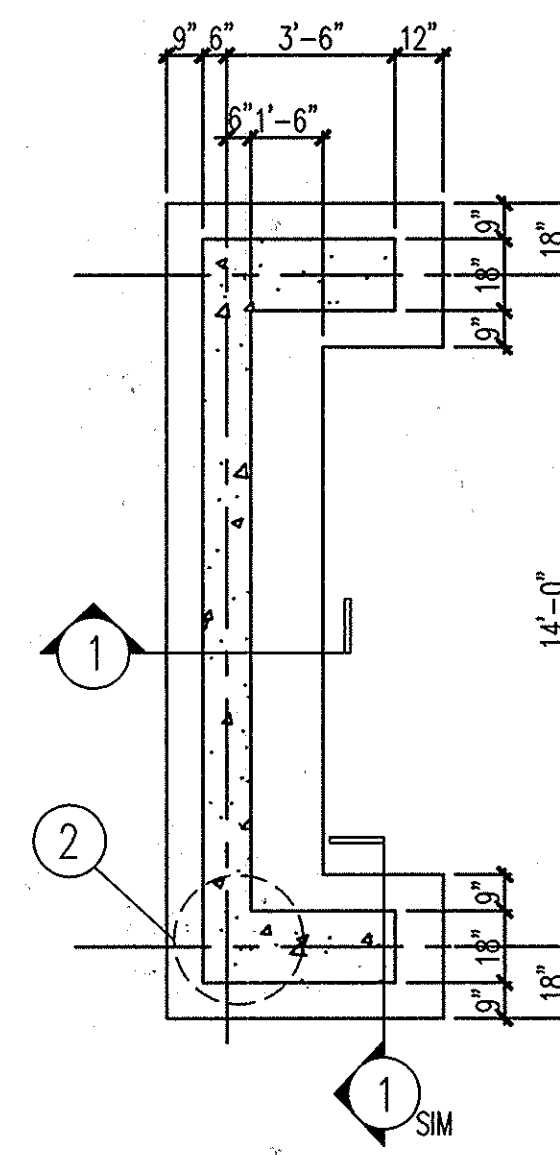
- THE AGENCY SHALL INSPECT THE FORM WORK AND REINFORCING STEEL PLACEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. THE AGENCY SHALL MONITOR ALL STRUCTURAL CONCRETE PLACEMENT FOR CONFORMANCE WITH APPLICABLE ACI REQUIREMENTS.
- SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31.
- THE FOLLOWING NUMBER OF TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EACH 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS.
 - FOR FOOTINGS AND OTHER STRUCTURAL CONCRETE:
 - 207 DAYS, LAB CURED
 - 2028 DAYS, LAB CURED
 - FOR WALLS:
 - 207 DAYS, LAB CURED
 - 207 DAYS, FIELD CURED
 - 2028 DAYS, LAB CURED
 - 2028 DAYS, FIELD CURED
- THE AGENCY WILL MAKE ADDITIONAL TESTS OF IN-PLACE CONCRETE AT THE CONTRACTOR'S EXPENSE WHEN THE TEST RESULTS INDICATE SPECIFIED CONCRETE STRENGTHS HAVE NOT BEEN ATTAINED, AS DIRECTED BY THE STRUCTURAL ENGINEER.

F. BRIDGE DESIGN

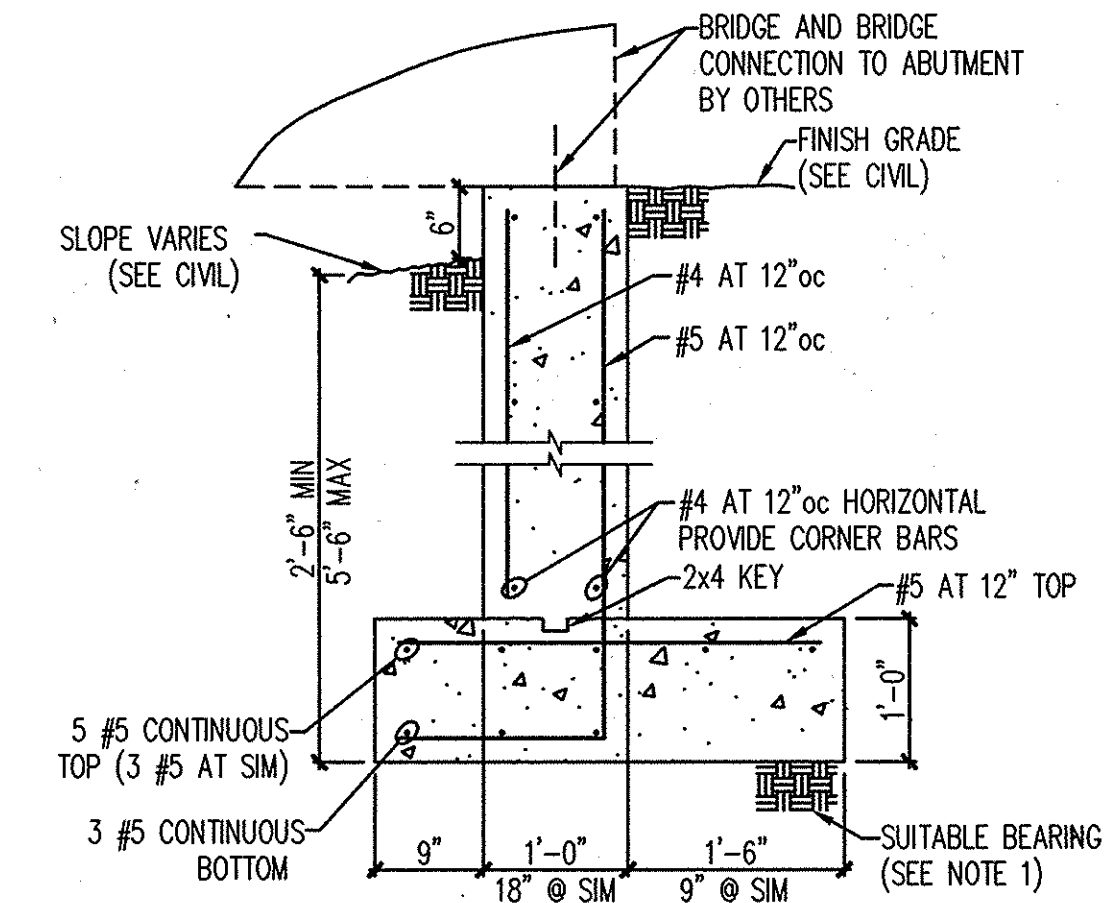
- DESIGN OF PEDESTRIAN BRIDGE TO BE BY SPECIALTY ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. BRIDGE SUPPLIER/DESIGNER TO SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS TO RATHGEBER/GOSS FOR REVIEW PRIOR TO BRIDGE FABRICATION.

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. _____, EXPIRATION DATE: _____"

NAME: _____



PLAN AT BRIDGE ABUTMENT (TYPICAL EACH END) SCALE: 1/4"=1'-0"

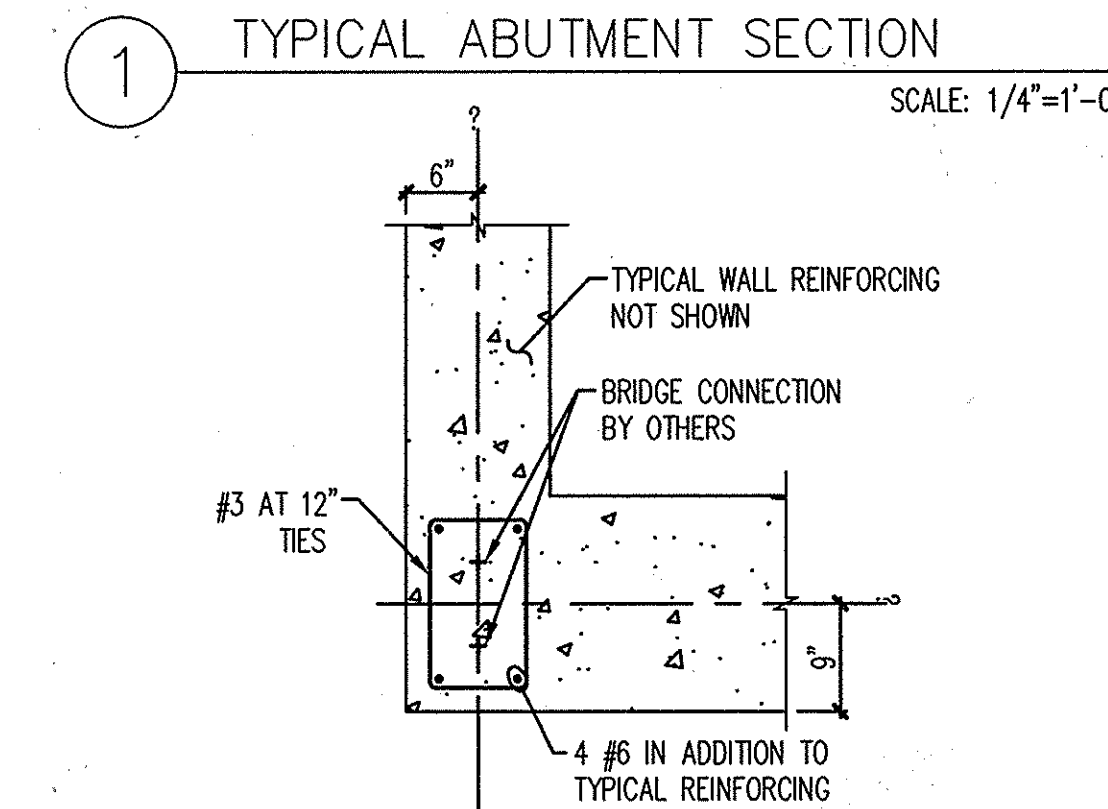


TYPICAL ABUTMENT SECTION SCALE: 1/4"=1'-0"

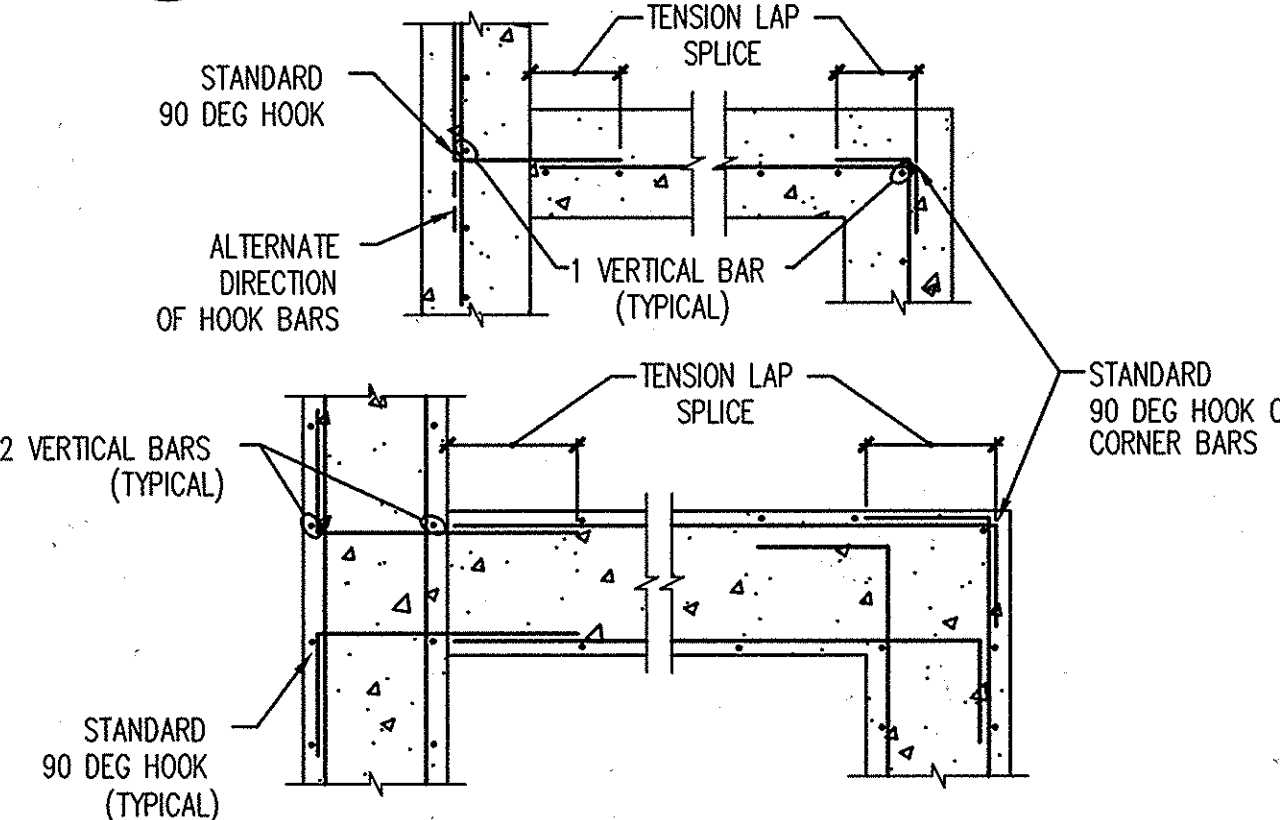
GRADE 60 BARS		CONCRETE STRENGTH, PSI			
		3000		4000	
BAR SIZE	CENTER TO CENTER BAR SPACING	LESS THAN 4db	4 DIA OR MORE	LESS THAN 4db	4 DIA OR MORE
	#3	TOP BARS	1'-9"	1'-9"	1'-6"
OTHER BARS		1'-4"	1'-4"	1'-4"	1'-4"
#4	TOP BARS	2'-6"	2'-4"	2'-2"	2'-0"
	OTHER BARS	1'-11"	1'-10"	1'-8"	1'-7"
#5	TOP BARS	3'-10"	2'-11"	3'-4"	2'-6"
	OTHER BARS	3'-0"	2'-3"	2'-7"	1'-11"
#6	TOP BARS	5'-5"	3'-6"	4'-9"	3'-0"
	OTHER BARS	4'-2"	2'-8"	3'-8"	2'-4"
#7	TOP BARS	7'-5"	4'-1"	6'-5"	3'-6"
	OTHER BARS	5'-9"	3'-2"	4'-11"	2'-9"
#8	TOP BARS	9'-9"	4'-11"	8'-6"	4'-3"
	OTHER BARS	7'-6"	3'-9"	6'-6"	3'-3"
#9	TOP BARS	12'-4"	6'-2"	10'-9"	5'-4"
	OTHER BARS	9'-6"	4'-9"	8'-3"	4'-2"
#10	TOP BARS	15'-8"	7'-10"	13'-7"	6'-10"
	OTHER BARS	12'-1"	6'-1"	10'-6"	5'-3"
#11	TOP BARS	19'-3"	9'-8"	16'-8"	8'-4"
	OTHER BARS	14'-10"	7'-5"	12'-10"	6'-5"

- NOTES:**
- THIS DETAIL DOES NOT APPLY TO COLUMN VERTICAL BARS.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
 - MINIMUM COVER FOR BARS SPACED 4db OR MORE IS TO BE GREATER THAN db. OTHERWISE, USE LENGTH FOR LESS THAN 4db SPACING.
 - FOR LIGHTWEIGHT AGGREGATE, MULTIPLY ABOVE VALUES BY 1.3.

4 TENSION LAP SPlice LENGTH FOR BEAM, WALL, AND CONCRETE JOIST REINFORCING BARS NTS



2 DETAIL AT ABUTMENT CORNER SCALE: 1/4"=1'-0"



- NOTES:**
- DOWEL BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.
 - SEE X-XX FOR TENSION LAP SPlice SCHEDULE.
 - CORNER BARS MAY BE SUBSTITUTED FOR 90 DEGREE HOOKS ON ENDS OF HORIZONTAL BARS FOR EACH LAYER OF REINFORCING. LENGTH OF EACH CORNER BAR LEG TO BE PER TENSION LAP SPlice SCHEDULE.

3 REINFORCING AT WALL CORNERS (TYPICAL DETAIL - ACTUAL CONDITIONS VARY, SEE PLAN) NTS

OWNER/DEVELOPER INFORMATION

Howard County 2/22/08
 OWNER/DEVELOPER:
 HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MARYLAND 21043

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

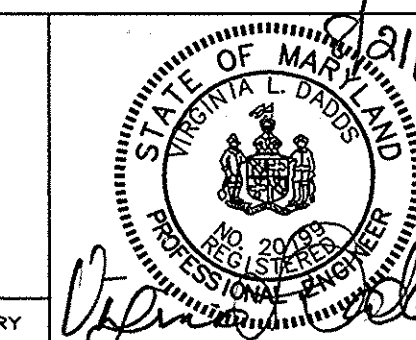
David L. Uzzell 9/5/08
 DIRECTOR
Wendy K. Hantz 9/14/08
 CHIEF, DIVISION OF LAND DEVELOPMENT
Michelle P. ... 9/30/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF RECREATION AND PARKS
 HOWARD COUNTY, MARYLAND

Gary Arthur 8-25-08
 GARY ARTHUR, DIRECTOR

PROJECT	SECTION/AREA	MAP NO.			
MEADOWBROOK PARK	N/A	MAP 30 PARCELS 383 & 387			
PLAT NO.	GRID NO.	ZONE	TAXZONE	ELEC. DIST.	CENSUS TR.
N/A	5	R-20	2	2	602302
WATER CODE	SEWER CODE				
F09	5750615				

McCRONE
 ENGINEERING & ENVIRONMENTAL SCIENCES
 LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES
 20 RIDGELY AVENUE
 ANNAPOLIS, MARYLAND 21401
 (410) 267-9921
 Fax: (410) 267-9932
 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



DES:	DRN:	CHK:	DATE:	BY:	REVISION	DATE:
J.S.	J.S.	V.D.	MAY, 2001	No.		

DATE:	BY:	REVISION	DATE:

REVISED SITE DEVELOPMENT PLAN
SITE DEVELOPMENT PLAN
MEADOWBROOK PARK
 TAX MAP 30 SECOND ELECTION DISTRICT
 PROJECT #N-3105 BLOCK 5
 PARCEL 383 & 387 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 30 OF 30

SDP-01-145