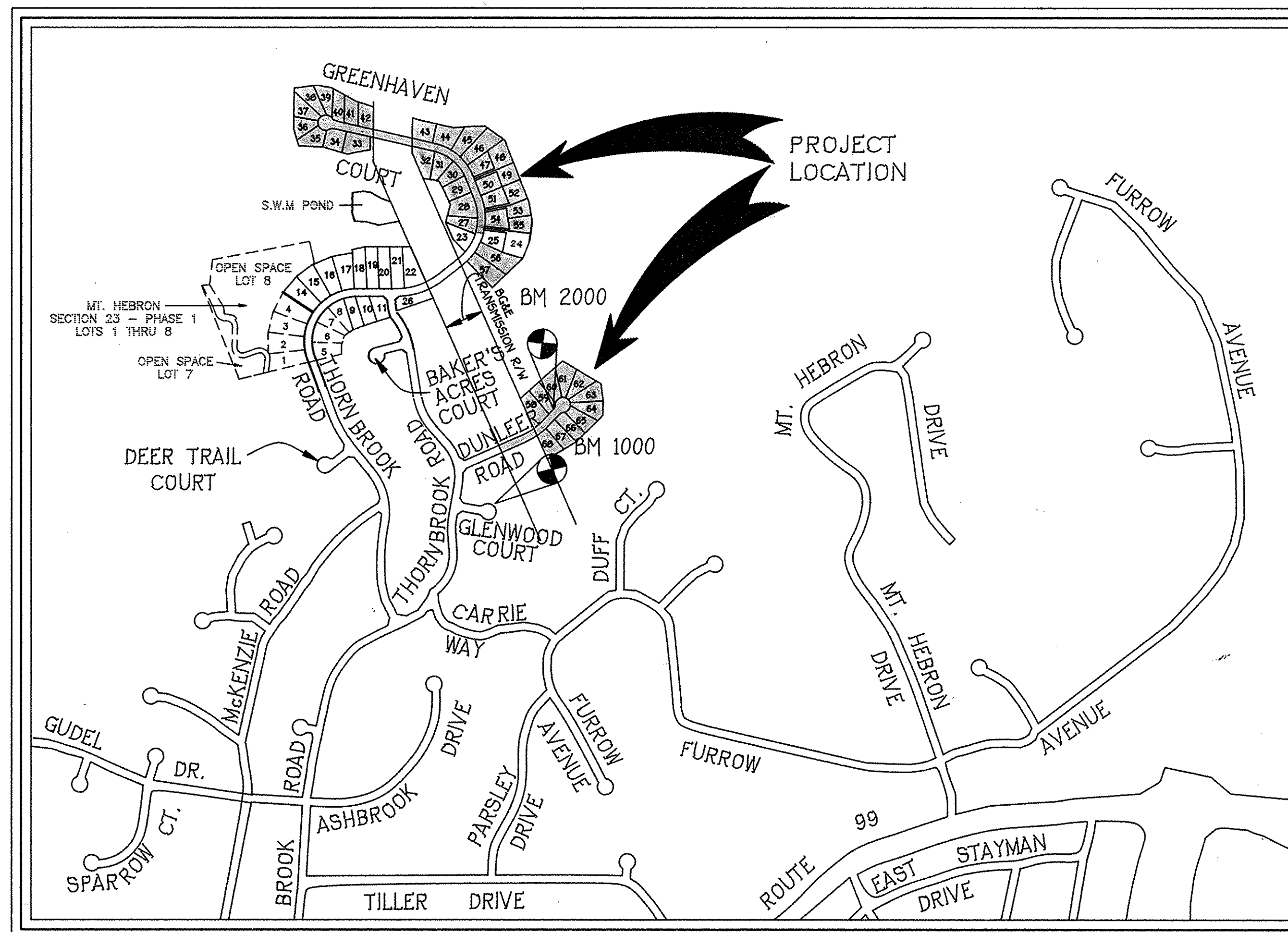


SHEET INDEX	
No.	DESCRIPTION
1	TITLE SHEET
2	GREENHAVEN COURT PLAN AND PROFILE
3	DUNLEER ROAD PLAN AND PROFILE
4	GREENHAVEN COURT PROFILE AND TYPICAL ROAD SECTIONS
5	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
6	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
7	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
8	STORM DRAIN PROFILES
9	STORM DRAIN PROFILES
10	DRAINAGE AREA MAP AND LANDSCAPE PLAN
11	DRAINAGE AREA MAP AND LANDSCAPE PLAN
12	DRAINAGE AREA MAP AND LANDSCAPE PLAN
13	SEDIMENT CONTROL NOTES AND DETAILS
14	SEDIMENT CONTROL NOTES AND DETAILS

# FINAL ROAD CONSTRUCTION AND GRADING PLANS FOR MT. HEBRON SECTION 23 - PHASES 2 AND 3 LOTS 27 - 71

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Dando* 5-22-97  
 CHIEF, BUREAU OF HIGHWAYS DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*W. Hamilton* 6/20/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*M. Crum* 6/12/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MINIMUM LOTS SIZE CHART						
LOT NO.	GROSS AREA	PIPESTEM AREA	REMAINING AREA	100 YEAR FLOODPLAIN	25% SLOPES	MINIMUM LOT SIZE
27	14305 SQ.FT.	-	14305 SQ.FT.	-	-	14305 SQ.FT.
28	22355 SQ.FT.	-	22355 SQ.FT.	-	7421 SQ.FT.	14934 SQ.FT.
29	16850 SQ.FT.	-	16850 SQ.FT.	-	2737 SQ.FT.	14113 SQ.FT.
30	15049 SQ.FT.	-	15049 SQ.FT.	-	1453 SQ.FT.	14396 SQ.FT.
31	15655 SQ.FT.	-	15655 SQ.FT.	-	-	15655 SQ.FT.
32	16505 SQ.FT.	-	16505 SQ.FT.	-	-	16505 SQ.FT.
33	17825 SQ.FT.	-	17825 SQ.FT.	-	3603 SQ.FT.	14223 SQ.FT.
34	16522 SQ.FT.	-	16522 SQ.FT.	-	2131 SQ.FT.	14491 SQ.FT.
35	16995 SQ.FT.	-	16995 SQ.FT.	-	1087 SQ.FT.	15008 SQ.FT.
36	14958 SQ.FT.	-	14958 SQ.FT.	-	-	14958 SQ.FT.
37	14800 SQ.FT.	-	14800 SQ.FT.	-	-	14800 SQ.FT.
38	10600 SQ.FT.	-	10600 SQ.FT.	-	-	10600 SQ.FT.
39	15810 SQ.FT.	-	15810 SQ.FT.	-	-	15810 SQ.FT.
40	17631 SQ.FT.	-	17631 SQ.FT.	-	671 SQ.FT.	16960 SQ.FT.
41	15190 SQ.FT.	-	15190 SQ.FT.	-	1149 SQ.FT.	14041 SQ.FT.
42	15771 SQ.FT.	-	15771 SQ.FT.	-	1175 SQ.FT.	14596 SQ.FT.
43	19491 SQ.FT.	-	19491 SQ.FT.	-	4920 SQ.FT.	14571 SQ.FT.
44	10910 SQ.FT.	-	10910 SQ.FT.	-	4534 SQ.FT.	14376 SQ.FT.
45	20975 SQ.FT.	-	20975 SQ.FT.	-	5209 SQ.FT.	15766 SQ.FT.
46	26148 SQ.FT.	-	26148 SQ.FT.	-	480 SQ.FT.	25668 SQ.FT.
47	15151 SQ.FT.	-	15151 SQ.FT.	-	-	15151 SQ.FT.
48	20927 SQ.FT.	1727 SQ.FT.	19200 SQ.FT.	-	-	19200 SQ.FT.
49	15915 SQ.FT.	1803 SQ.FT.	14112 SQ.FT.	-	-	14112 SQ.FT.
50	15200 SQ.FT.	-	15200 SQ.FT.	-	-	15200 SQ.FT.
51	15391 SQ.FT.	-	15391 SQ.FT.	-	-	15391 SQ.FT.
52	17813 SQ.FT.	1941 SQ.FT.	15872 SQ.FT.	-	-	15872 SQ.FT.
53	15656 SQ.FT.	1656 SQ.FT.	14000 SQ.FT.	-	-	14000 SQ.FT.
54	16376 SQ.FT.	-	16376 SQ.FT.	-	-	16376 SQ.FT.
55	16595 SQ.FT.	1938 SQ.FT.	14657 SQ.FT.	-	-	14657 SQ.FT.
56	27261 SQ.FT.	-	27261 SQ.FT.	-	4572 SQ.FT.	22689 SQ.FT.
57	23270 SQ.FT.	-	23270 SQ.FT.	-	-	23270 SQ.FT.
58	21312 SQ.FT.	-	21312 SQ.FT.	-	-	21312 SQ.FT.
59	15878 SQ.FT.	-	15878 SQ.FT.	-	-	15878 SQ.FT.
60	16136 SQ.FT.	-	16136 SQ.FT.	-	-	16136 SQ.FT.
61	18674 SQ.FT.	-	18674 SQ.FT.	-	-	18674 SQ.FT.
62	16321 SQ.FT.	-	16321 SQ.FT.	-	-	16321 SQ.FT.
63	10186 SQ.FT.	-	10186 SQ.FT.	-	-	10186 SQ.FT.
64	16360 SQ.FT.	-	16360 SQ.FT.	-	20 SQ.FT.	16340 SQ.FT.
65	15667 SQ.FT.	-	15667 SQ.FT.	-	-	15667 SQ.FT.
66	16167 SQ.FT.	-	16167 SQ.FT.	-	-	16167 SQ.FT.
67	16018 SQ.FT.	-	16018 SQ.FT.	-	1395 SQ.FT.	15423 SQ.FT.
68	16391 SQ.FT.	-	16391 SQ.FT.	-	1782 SQ.FT.	14609 SQ.FT.



VICINITY MAP  
SCALE: 1" = 600'

## SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

### GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING:
  - HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.
  - MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AS AMENDED.
  - SOIL CONSERVATION SERVICE 1983 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
  - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARDS AND SPECIFICATION FOR POND CONSTRUCTION (CODE 378).
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF CONSTRUCTION INSPECTION AT 410-313-1000 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- TOPOGRAPHY SHOWN HEREON IS FROM AERIAL MAPS FLOWN ON 1/27/90.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS APPROVED UNDER SECTION 23, PHASE 1, LOTS 1-8 (F95-167). ALL OF PHASES 2 AND 3 HAVE BEEN PROVIDED UNDER F 95-167 APPROVED 4/1/96.
- THIS HORIZONTAL AND VERTICAL DATUM SHOWN ARE BASED ON THE FOLLOWING NAD83 HOWARD COUNTY CONTROL STATIONS:
 

HOWARD COUNTY MONUMENT 17-EA	N 180994.8413 (METERS)	(NOT WITHIN VICINITY MAP LIMITS)
HOWARD COUNTY MONUMENT 17-EB	E 413227.8949 (METERS)	(NOT WITHIN VICINITY MAP LIMITS)
	N 181160.5677 (METERS)	(NOT WITHIN VICINITY MAP LIMITS)
	E 413772.7224 (METERS)	(NOT WITHIN VICINITY MAP LIMITS)
- NOISE STUDY IS NOT APPLICABLE FOR THIS SUBDIVISION.
- FOREST STAND DELINEATION STUDY AND WETLANDS STUDY WAS PREPARED BY M.A. DIRKS AND CO., INC. ON MARCH 1994 AND APPROVED MARCH 30, 1994 BY HOWARD COUNTY. (REFERENCES 594-24)
- THE TRAFFIC STUDY WAS PROVIDED BY STREET TRAFFIC STUDIES, INC. ON JANUARY 31, 1994 AND APPROVED MARCH 30, 1994. (594-24)
- THE SKETCH PLAN 594-24 WAS APPROVED ON 3/30/94. THE PRELIMINARY PLAN P96-12 WAS APPROVED ON 4/21/96.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE, 1993).
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- PUBLIC WATER AND PUBLIC SEWER WILL BE USED WITHIN THIS DEVELOPMENT. CONTRACT No. 24-3441-D AND 14-3181-D. DRAINAGE AREA IS THE PATAPSCO WATERSHED.
- EXISTING UTILITIES ARE BASED ON CONTRACT No. 24-1962-D AND HOWARD COUNTY A5-BUILTS FOR THE REFERENCED CONTRACT.
- VERTICAL DATUM IS BASED ON THE FOLLOWING BENCH MARKS:
 

BM 1000	ELEVATION 407.81
REBAR SET 27'	SOUTHEAST OF LINEAR PROFILE STATION 1+55 GLENWOOD COURT ON LOT 45
BM 2000	ELEVATION 423.62
REBAR SET 91'	NORTH OF CL STATION 2+00 DUNLEER ROAD ON LOT 36
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING OR UTILITIES WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
- THERE ARE NO BURIAL GROUNDS OR CEMETERY SITES LOCATED NEAR THE PROPERTY.

STREET LIGHT CHART			
STREET NAME	STATION	OFF-SET	FIXTURE/POLE TYPE
DUNLEER ROAD	5+73	17'L	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE
DUNLEER ROAD	L.P. STA. 1+28	3'	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE
GREENHAVEN COURT	35+36	18'L	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE
GREENHAVEN COURT	38+56	18'R	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE
GREENHAVEN COURT	43+00	18'L	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE
GREENHAVEN COURT	46+22	20'R	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE

TRAFFIC CONTROL SIGNS				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
DUNLEER ROAD	3+47	16'R	"SPEED LIMIT 30"	R2-1
GREENHAVEN COURT	43+56	17'L	"SPEED LIMIT 30"	R2-1
GREENHAVEN COURT	40+85	17'R	"SPEED LIMIT 30"	R2-1

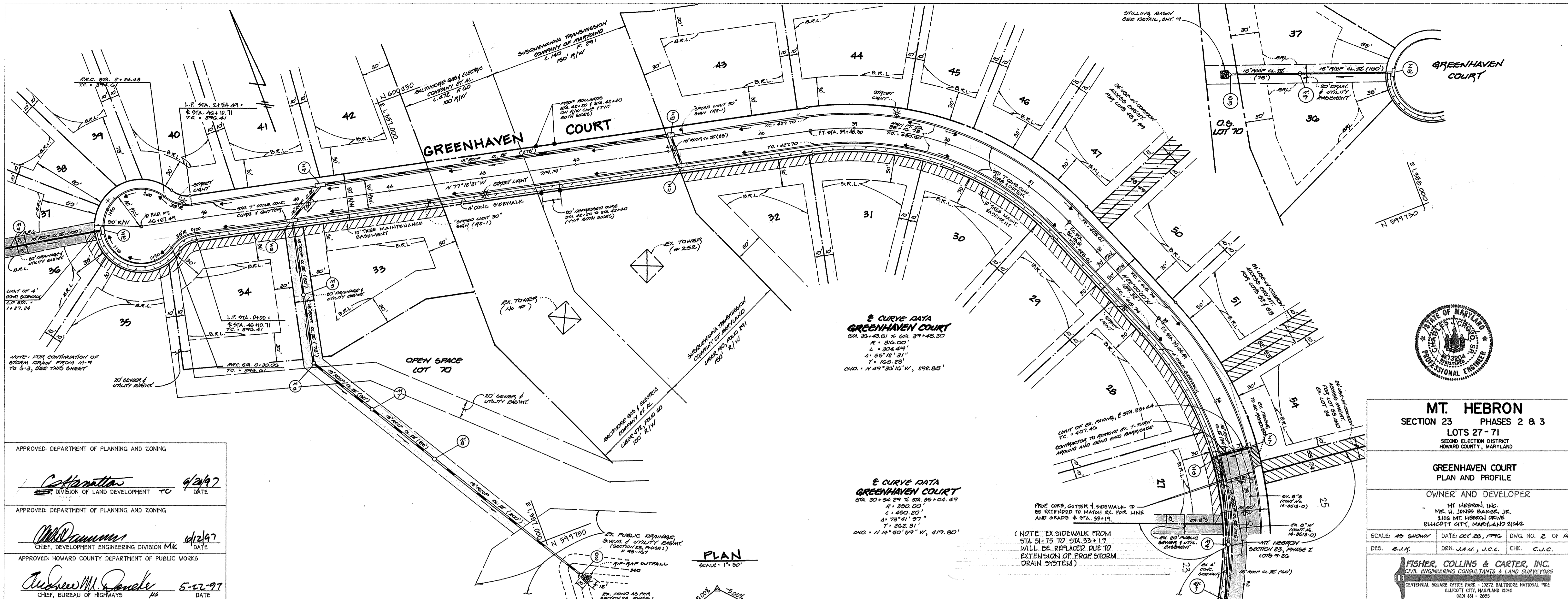
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL OFFICE: 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2855

**OWNER/DEVELOPER**  
 MT. HEBRON, INC.  
 MR. H. JONES BAKER, JR.  
 2105 MT. HEBRON DRIVE  
 ELLICOTT CITY, MARYLAND, 21042

*Charles J. Crovo, Sr.*  
 CHARLES J. CROVO, SR.  
 10/23/96  
 DATE

MT. HEBRON  
 SECTION 23 - PHASE 2 AND 3  
 LOTS 27 - 71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: OCTOBER 28, 1996





**E CURVE DATA GREENHAVEN COURT**  
 STA. 30+43.51 TO STA. 37+45.30  
 R = 314.00'  
 L = 304.47'  
 Δ = 89°12'31"  
 T = 105.23'  
 CHD. = N 49°30'12" W, 292.85'

**E CURVE DATA GREENHAVEN COURT**  
 STA. 30+56.29 TO STA. 33+04.49  
 R = 382.00'  
 L = 450.20'  
 Δ = 73°41'07"  
 T = 262.31'  
 CHD. = N 14°30'59" W, 419.80'

**PLAN**  
 SCALE: 1" = 50'

(NOTE: EX. SIDEWALK FROM STA. 31+75 TO STA. 33+19 WILL BE REPLACED DUE TO EXTENSION OF PROP. STORM DRAIN SYSTEM)



**MT. HEBRON**  
 SECTION 23 PHASES 2 & 3  
 LOTS 27-71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**GREENHAVEN COURT**  
 PLAN AND PROFILE

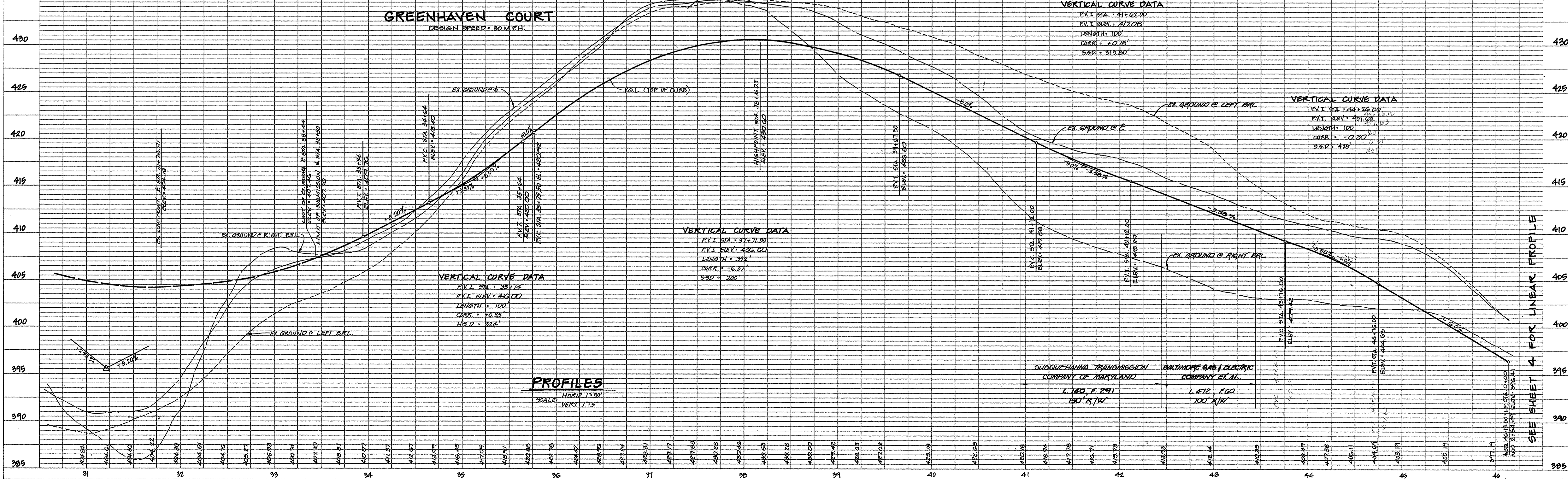
OWNER AND DEVELOPER

MT. HEBRON, INC.  
 MR. H. JONES BAKER, JR.  
 2106 MT. HEBRON DRIVE  
 BILLCOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: OCT 28, 1992 DWG. NO. 2 OF 14  
 DES. J.C.C. DRN. J.C.C., J.C.C. CHK. J.C.C.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2855

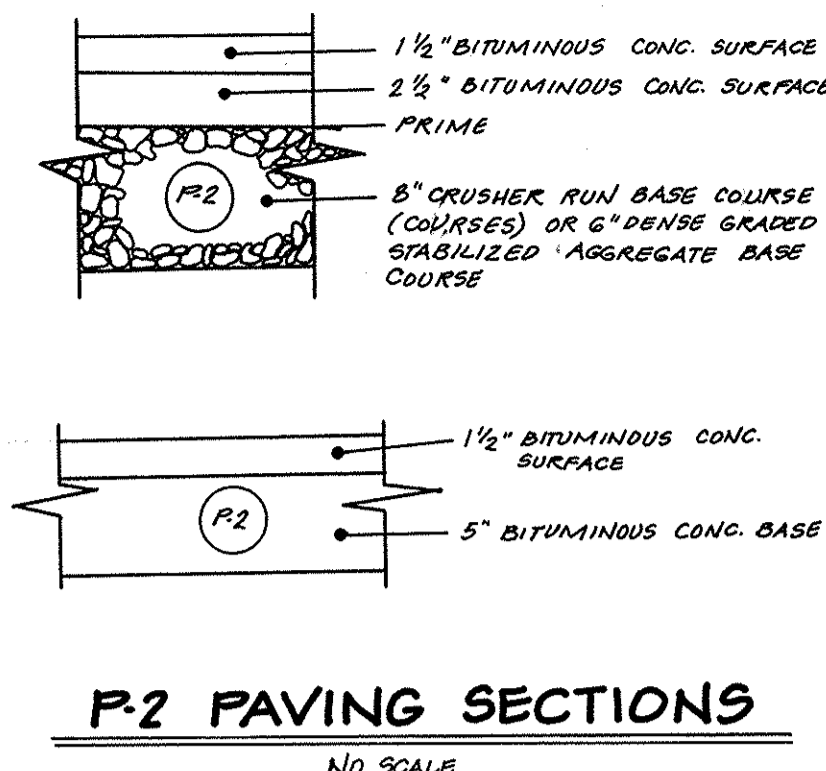
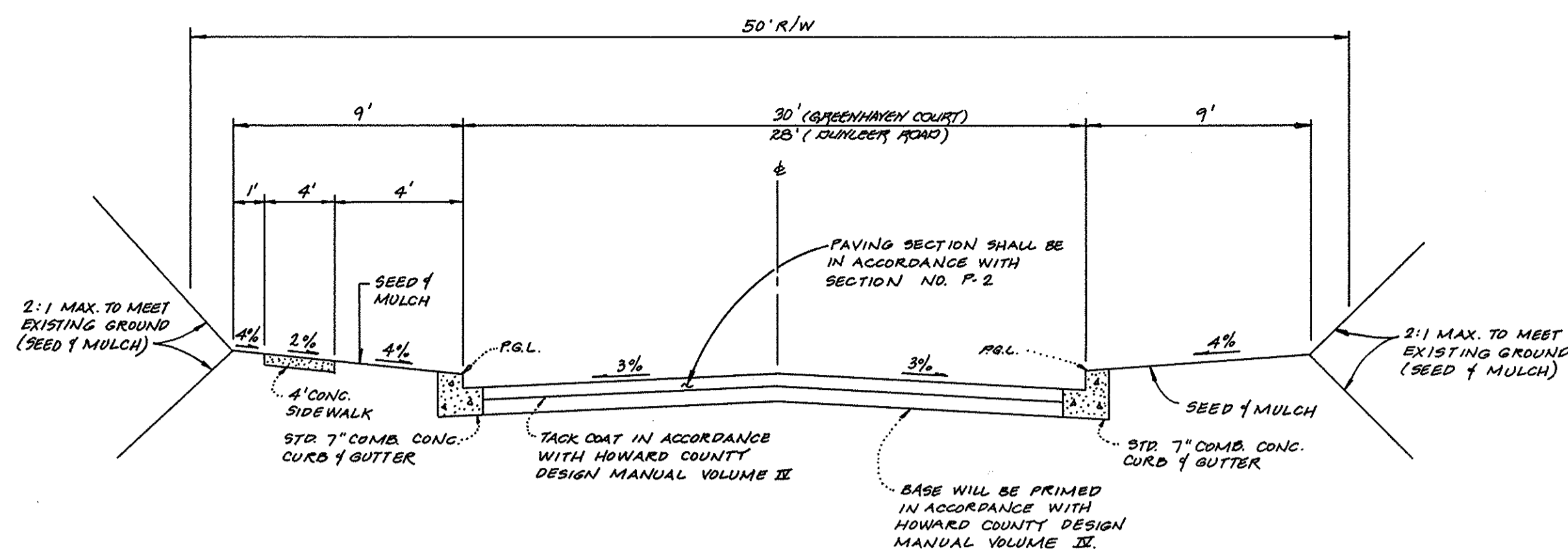
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Collins* 6/2/92 DATE  
 DIVISION OF LAND DEVELOPMENT TO  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Drummond* 6/12/92 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Pender* 5-22-97 DATE  
 CHIEF, BUREAU OF HIGHWAYS AS











NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION."

**TYPICAL ROADWAY SECTION**  
NO SCALE

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	E STA. LIMITS
DUNLEER ROAD	LOCAL ROAD	30 M.P.H.	R-20	3+08 to 8+00.54
GREENHAVEN COURT	LOCAL ROAD	30 M.P.H.	R-20	33+44 to 40+07.49

**SEQUENCE OF CONSTRUCTION**

- OBTAIN A GRADING PERMIT (1 DAY).
- NOTIFY "MISS UTILITY" 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT (410) 313-1880 (5) WORKING DAYS PRIOR TO START OF CONSTRUCTION (1 DAY).
- INSTALL SEDIMENT CONTROL MEASURES, STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION DEVICES, STONE OUTLET SEDIMENT TRAPS, EARTH DICES, SUPER SILT FENCE AND SILT FENCE. GRADE PROPOSED S.W.M. FACILITY. STABILIZE DISTURBED AREAS PER TEMPORARY SEEDING NOTES (3 WEEKS).
- CLEAR AND GRUB FOR CONSTRUCTION OF ROAD AND STORM DRAINS. PRIOR TO CLEARING AND GRUBBING SITE, SEDIMENT CONTROL INSPECTOR MUST BE NOTIFIED FOR PERMISSION TO PROCEED. GRADE SITE TO SUBGRADE, STABILIZE AND INSTALL STORM DRAINS (3 WEEKS).
- INSTALL INLET PROTECTION. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. SEDIMENT SHALL BE REMOVED FROM THE STORM WATER MANAGEMENT FACILITY AND BE PLACED UPHILL FROM THE POND AREA (2 DAYS).
- INSTALL PAVING CURB AND GUTTER PLUS ROAD BASE COURSE (7 DAYS).
- UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES NOT NEEDED AND FLUSH STORM DRAIN SYSTEM TO REMOVE TRAPPED SEDIMENT (2 DAYS).
- BEFORE REMOVING ALL SEDIMENT CONTROL DEVICES AND DIVERSIONS THE SEDIMENT CONTROL INSPECTOR MUST BE NOTIFIED FOR PERMISSION TO PROCEED.
- ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING (2 DAYS).

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*C. Hanrahan* 6/24/97  
 DIVISION OF LAND DEVELOPMENT TC DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*M. Dammann* 10/12/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Decker* 5-22-97  
 CHIEF, BUREAU OF HIGHWAYS MS DATE

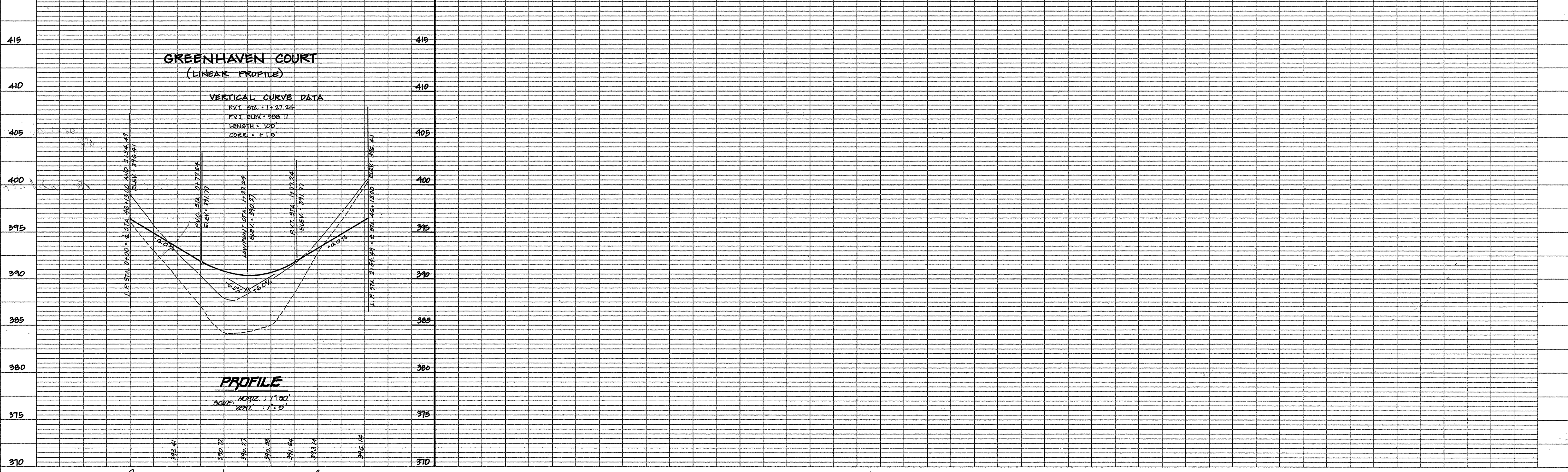


**MT. HEBRON**  
 SECTION 23 PHASES 2 & 3  
 LOTS 27-71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MD.

**GREENHAVEN COURT**  
 PROFILE  
 TYPICAL SECTIONS  
 OWNER AND DEVELOPER  
 MT. HEBRON, INC.  
 MR. N. JONES BASHER, JR.  
 2100 MT. HEBRON DR.  
 ELLICOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: OCT 28, 1996 DWG. NO. 4 OF 14  
 DES. A.J.H. DRN. J.A.U., J.C.C. CHK. C.J.C.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PkE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2855

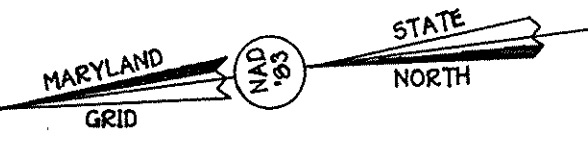




**STREET TREE CHART**

SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
	AUTUMN FLAME RED MAPLE	ACER RUBRUM AUTUMN FLAME	2 1/8" - 3" CAL.	37

NOTE: STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.



**LEGEND**

	INLET PROTECTION
	SILT FENCE
	BUFFER SILT FENCE
	TREE PROTECTION FENCE
	STABILIZED CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	25% OR GREATER SLOPES
	15% - 24.99% SLOPES
	EARTH DIKE

STATE OF MARYLAND DEPARTMENT OF FOREST AND PARKS  
LIBER 333 / FOLIO 302  
ZONED R-20

STONE OUTLET SEDIMENT TRAP No. 4  
(BOTTOM DIM. = 122' x 14')  
SEE TRAP DATA, SHEET 13

OPEN SPACE LOT 71

OPEN SPACE LOT 69

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

*Alana Bahr* 10/23/96  
SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10/23/96  
SIGNATURE OF ENGINEER DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*[Signature]* 5/5/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*[Signature]* 5/5/97  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 6/20/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 6/18/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*[Signature]* 5-22-97  
CHIEF, BUREAU OF HIGHWAYS DATE

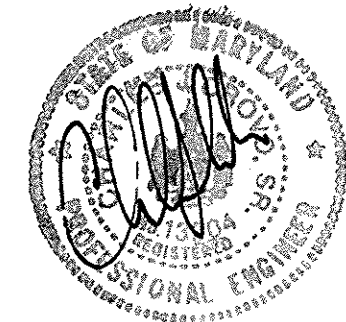
CENTERLINE ROAD DATA  
R=316.00'  
L=304.49'  
DELTA=59°12'31"  
T=165.23'

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
410-461-2925

OWNER AND DEVELOPER  
MT. HEBRON, INC.  
2106 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND 21042

**PLAN**  
SCALE: 1" = 50'

*[Signature]*  
CHARLES J. LAVO, SR.  
DATE 10/23/96



STREET TREE, GRADING AND SEDIMENT CONTROL PLAN  
**MT. HEBRON**  
SECTION 23, PHASES 2 & 3  
LOTS 27-71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCT. 28, 1996  
SHEET 5 OF 14



**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

*R. James Baker Jr.* 10/23/94  
SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Clare* 10/23/94  
SIGNATURE OF ENGINEER DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Clare* 5/3/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*John P. ...* 3/3/97  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*John ...* 6/20/97  
DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*John ...* 10/12/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Andrew M. ...* 5-22-97  
CHIEF, BUREAU OF HIGHWAYS DATE

STATE OF MARYLAND  
DEPARTMENT OF  
FOREST AND PARKS  
333 / 302  
ZONED R-20

STONE OUTLET SEDIMENT TRAP No. 2  
(bottom dim. = 60' x 33')

NOTE: FOR TRAP DATA, SEE CHART ON SHEET 13

STEEP SLOPE  
AREA = 136,555 Sq.Ft.

**PLAN**  
SCALE: 1" = 50'

OWNER AND DEVELOPER  
MT. HEBRON, INC.  
2105 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND 21042

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK, SUITE 200 BALTIMORE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21042  
4100 661 - 2855

STATE OF MARYLAND  
DEPARTMENT OF  
FOREST AND PARKS  
333 / 302  
ZONED R-20



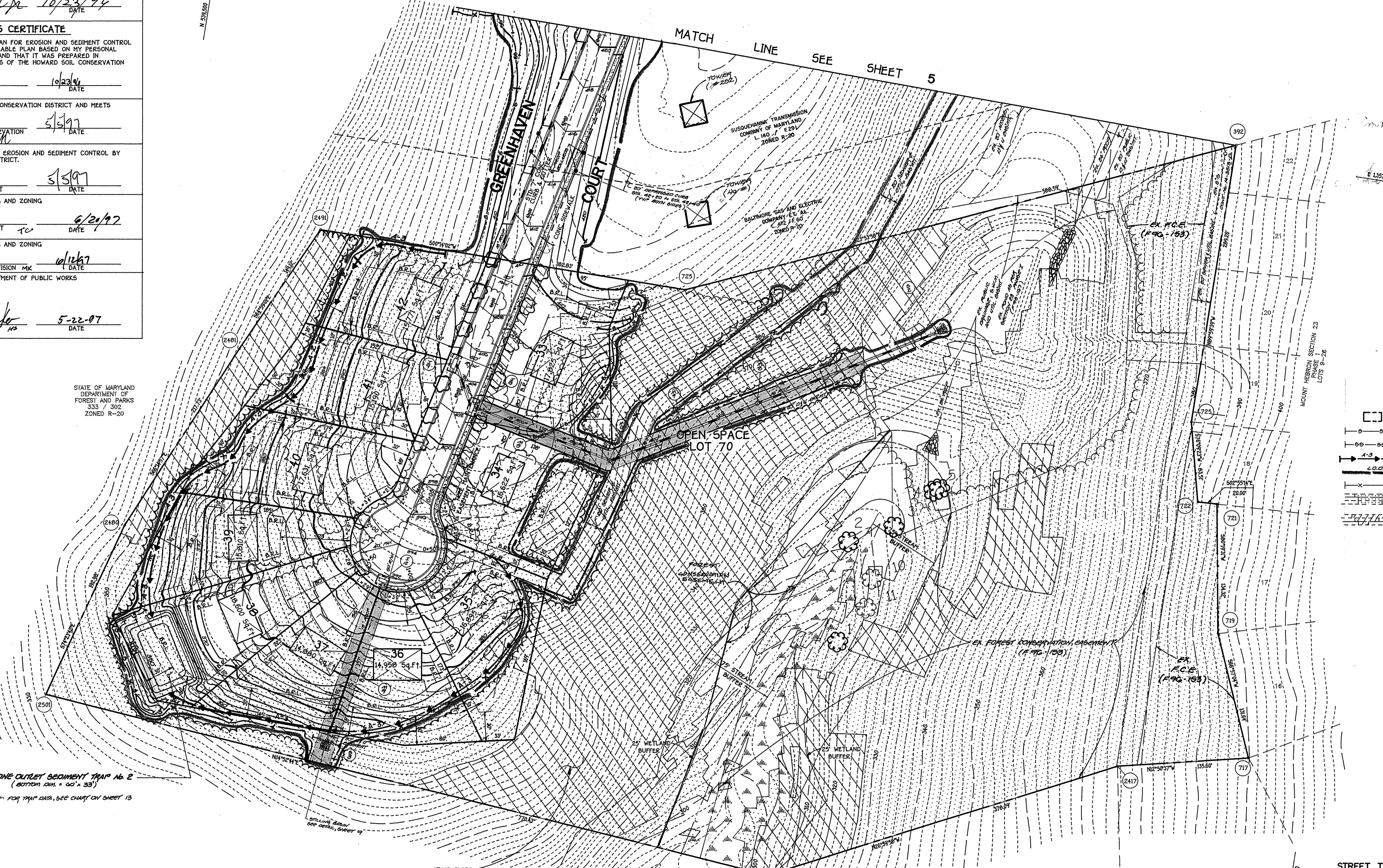
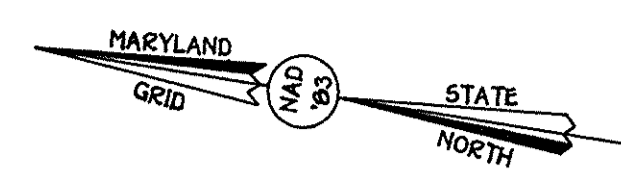
*Clare* 10/13/96  
CHARLES J. GROVO, SR. DATE

STREET TREE, GRADING AND  
SEDIMENT CONTROL PLAN  
**MT. HEBRON**  
SECTION 23, PHASES 2 & 3  
LOTS 27-71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCT. 28, 1996  
SHEET 6 OF 14

**STREET TREE CHART**

SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
	AUTUMN FLAME RED MAPLE	ACER RUBRUM AUTUMN FLAME	2 1/2" - 3" CAL.	19

NOTE: STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.



**LEGEND**

- INLET PROTECTION
- DITCH FENCE
- SUPER DITCH FENCE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- 15% - 24.99% SLOPES
- 25% OR GREATER SLOPES

STREET TREE, GRADING AND  
SEDIMENT CONTROL PLAN  
**MT. HEBRON**  
SECTION 23, PHASES 2 & 3  
LOTS 27-71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCT. 28, 1996  
SHEET 6 OF 14



**STREET TREE CHART**

SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
	AUTUMN FLAME RED MAPLE	ACER RUBRUM AUTUMN FLAME	2 1/2" - 3" CAL.	10

NOTE: STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE APPROVED TO A COUNTY ACCEPTABLE EQUIVALENT.

NOTE: FOR TRAP DATA, SEE CHART ON SHEET 13

STONE OUTLET SEDIMENT TRAP No. 3  
(BOTTOM DIM. = 30' x 20')

STONE OUTLET SEDIMENT TRAP No. 1  
(BOTTOM DIM. = 72' x 36')

STATE OF MARYLAND DEPARTMENT OF FOREST AND PARKS  
c/o PATAPSCO VALLEY STATE PARK  
LIBER 377 / FOLIO 582  
ZONED R-20

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

*John Baker* 10/23/96  
SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John Baker* 10/23/96  
SIGNATURE OF ENGINEER DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*John Baker* 5/5/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*John Baker* 5/5/97  
APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

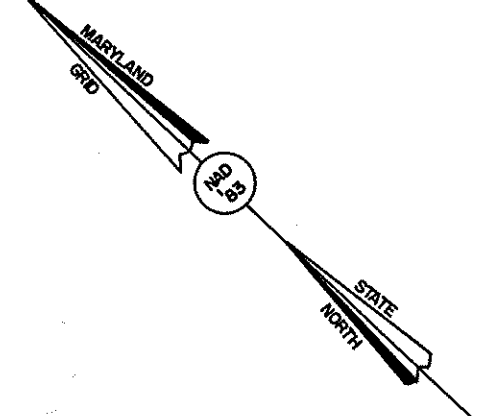
*John Baker* 6/20/97  
DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*John Baker* 6/12/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

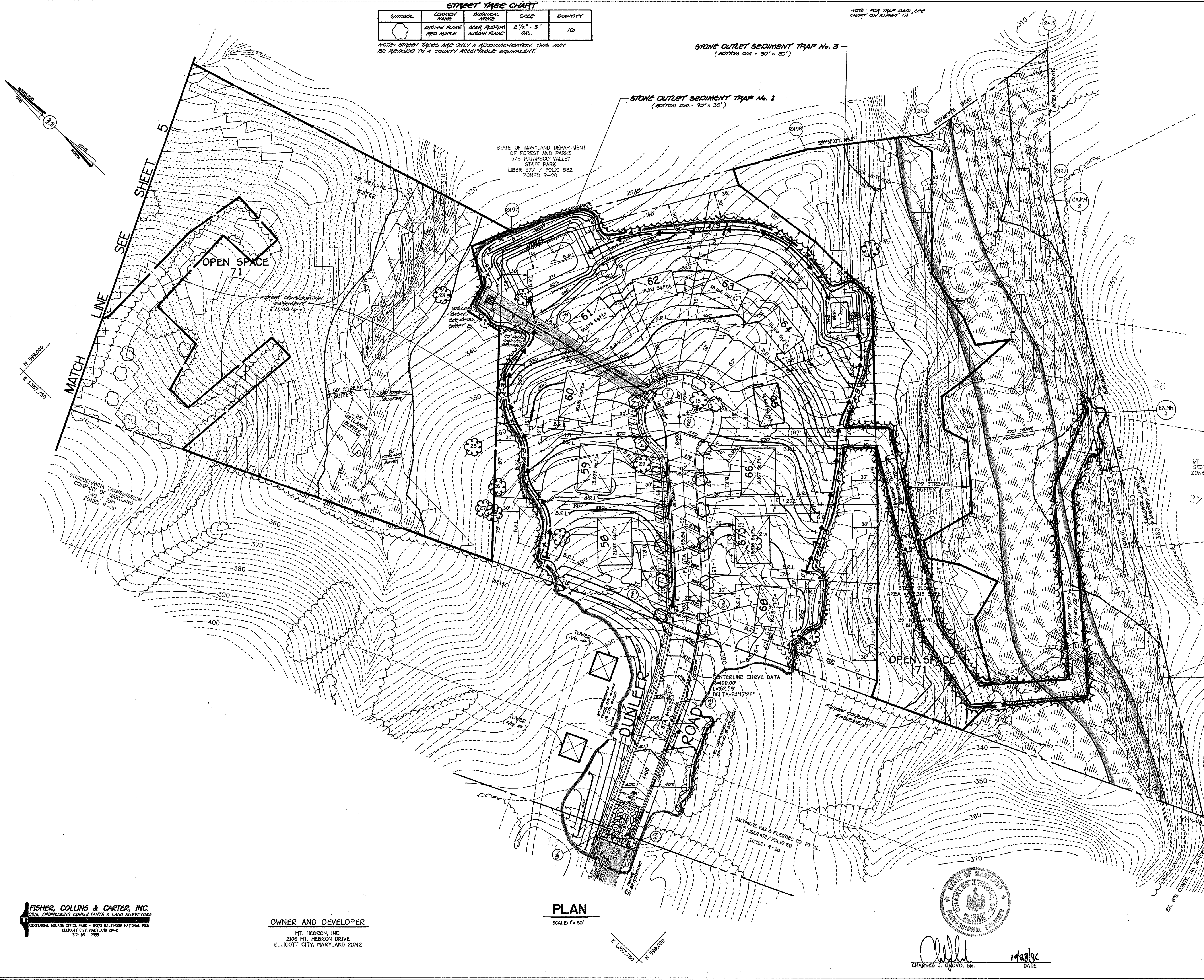
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Richard M. Danels* 5-22-97  
CHIEF, BUREAU OF HIGHWAYS DATE



N 999,000  
E 1,351,750

N 999,000  
E 1,351,750



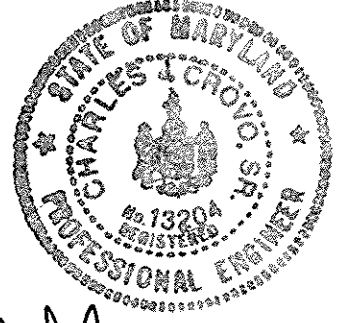
**LEGEND**

- INLET PROTECTION
- SILT FENCE
- EARTH DAM
- STABILIZED CONSTRUCTION ENTRANCE
- L.O.D. LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- 15% - 24.99% SLOPES
- 25% OR GREATER SLOPES

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
4100 461 - 2025

**OWNER AND DEVELOPER**  
MT. HEBRON, INC.  
2105 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND 21042

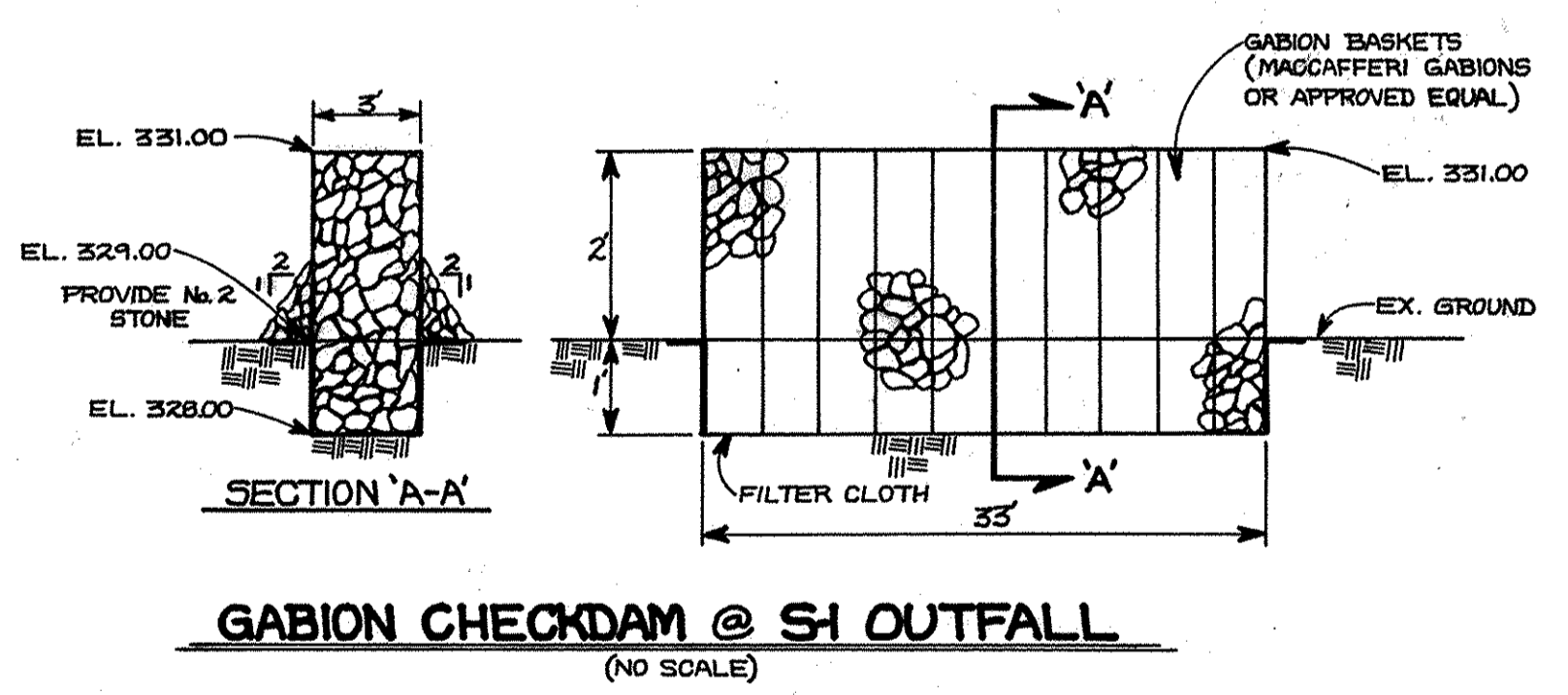
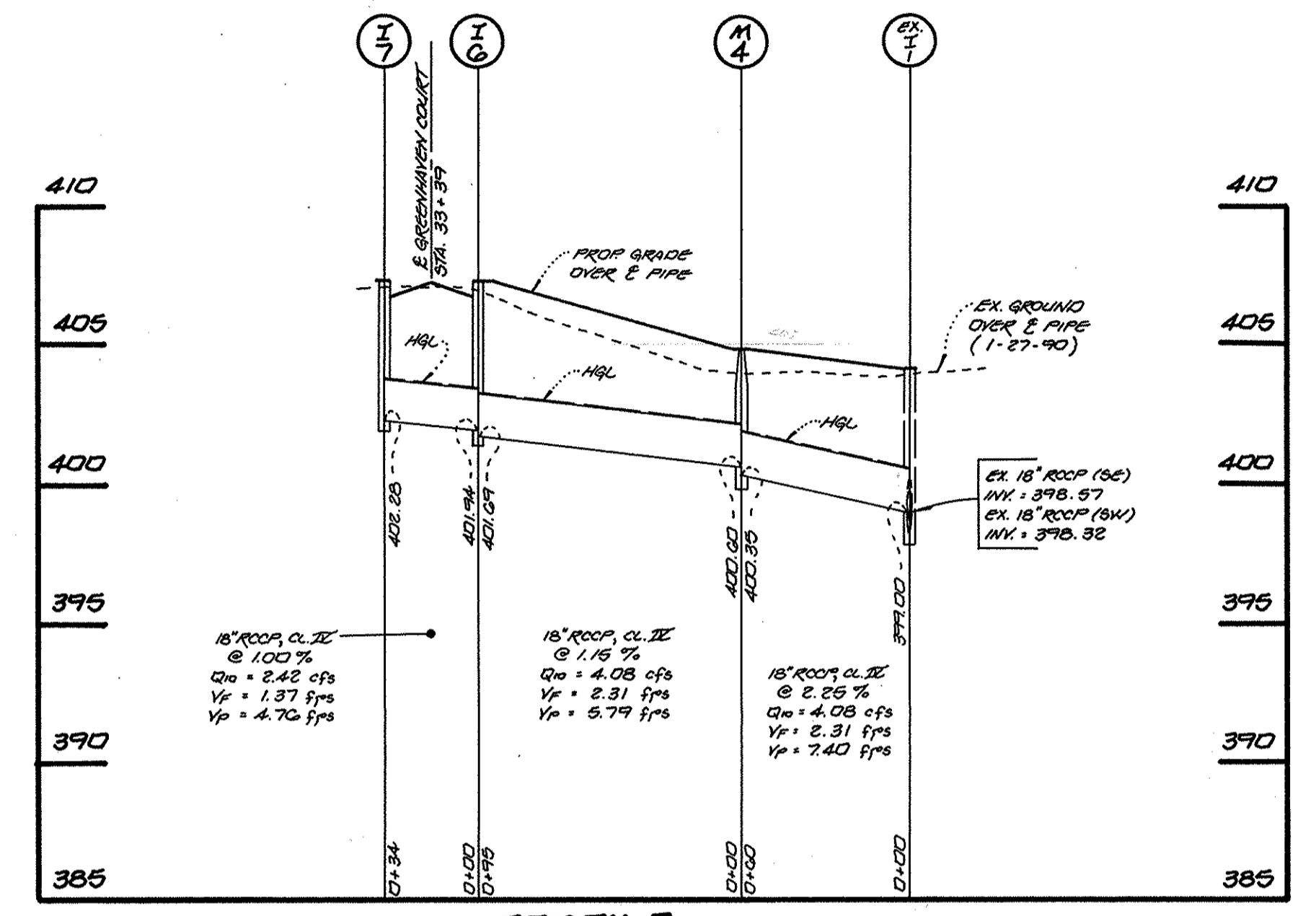
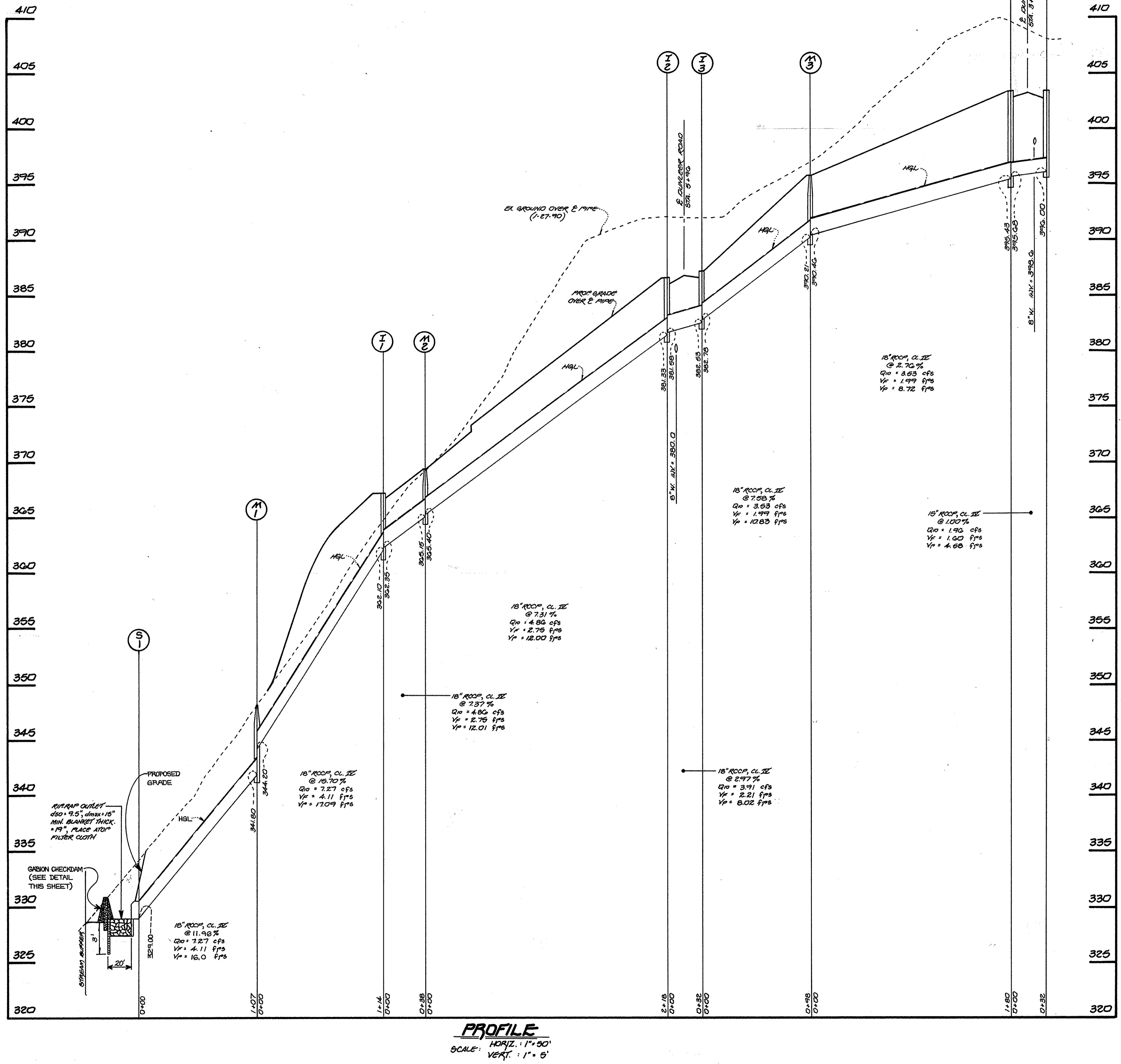
**PLAN**  
SCALE: 1" = 50'



*Charles J. Govo, Sr.* 10/23/96  
CHARLES J. GOVO, SR. DATE

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN  
**MT. HEBRON**  
SECTION 23, PHASES 2 & 3  
LOTS 27-71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCT. 28, 1996  
SHEET 7 OF 14

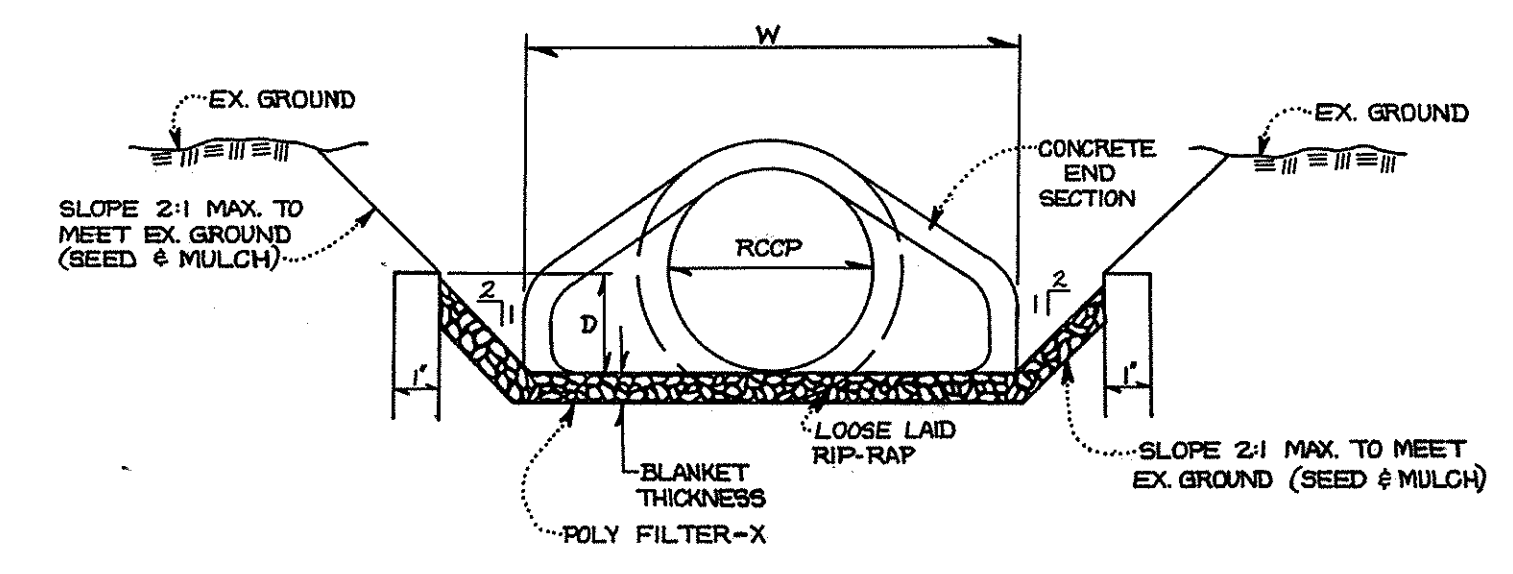






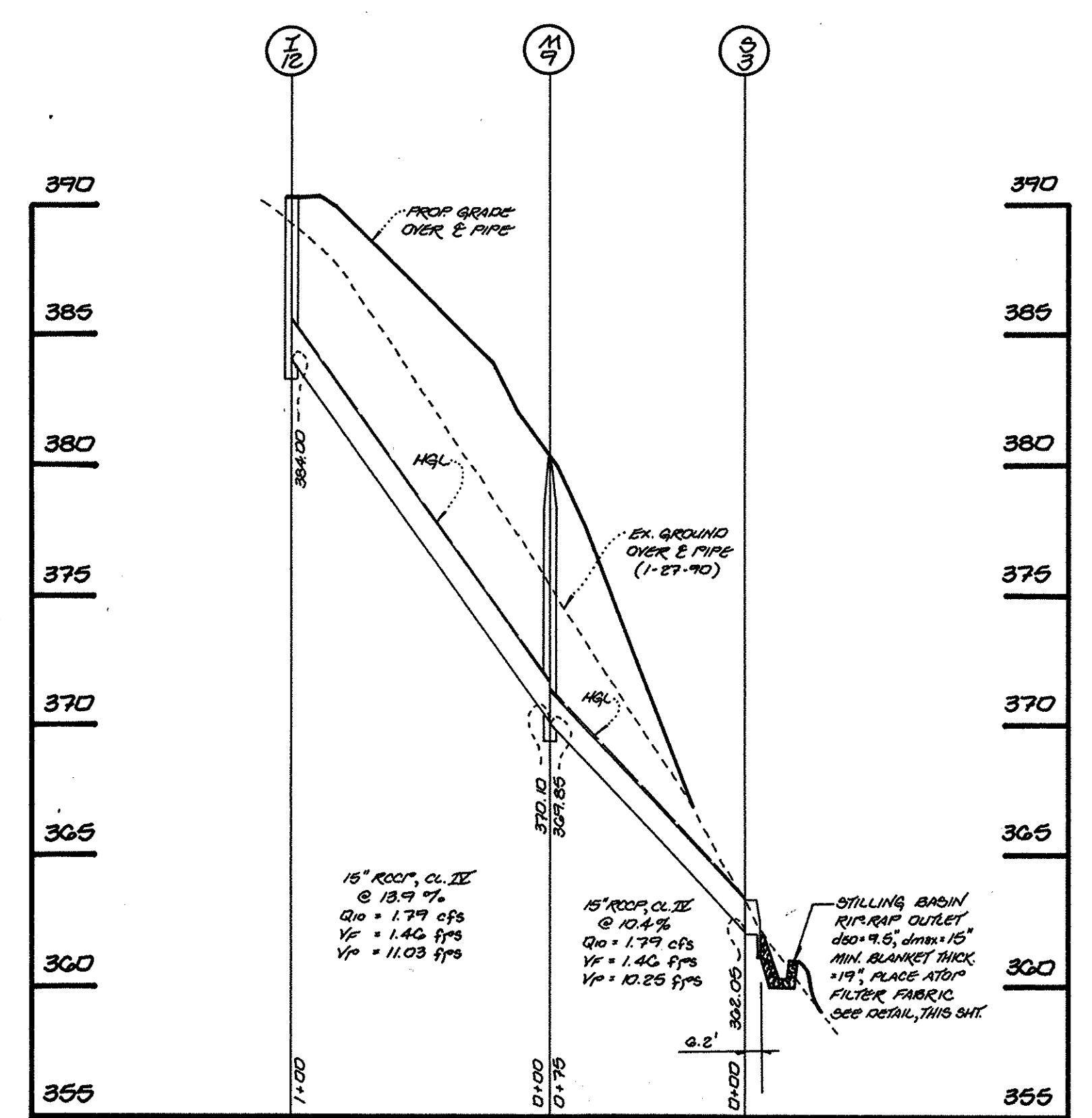
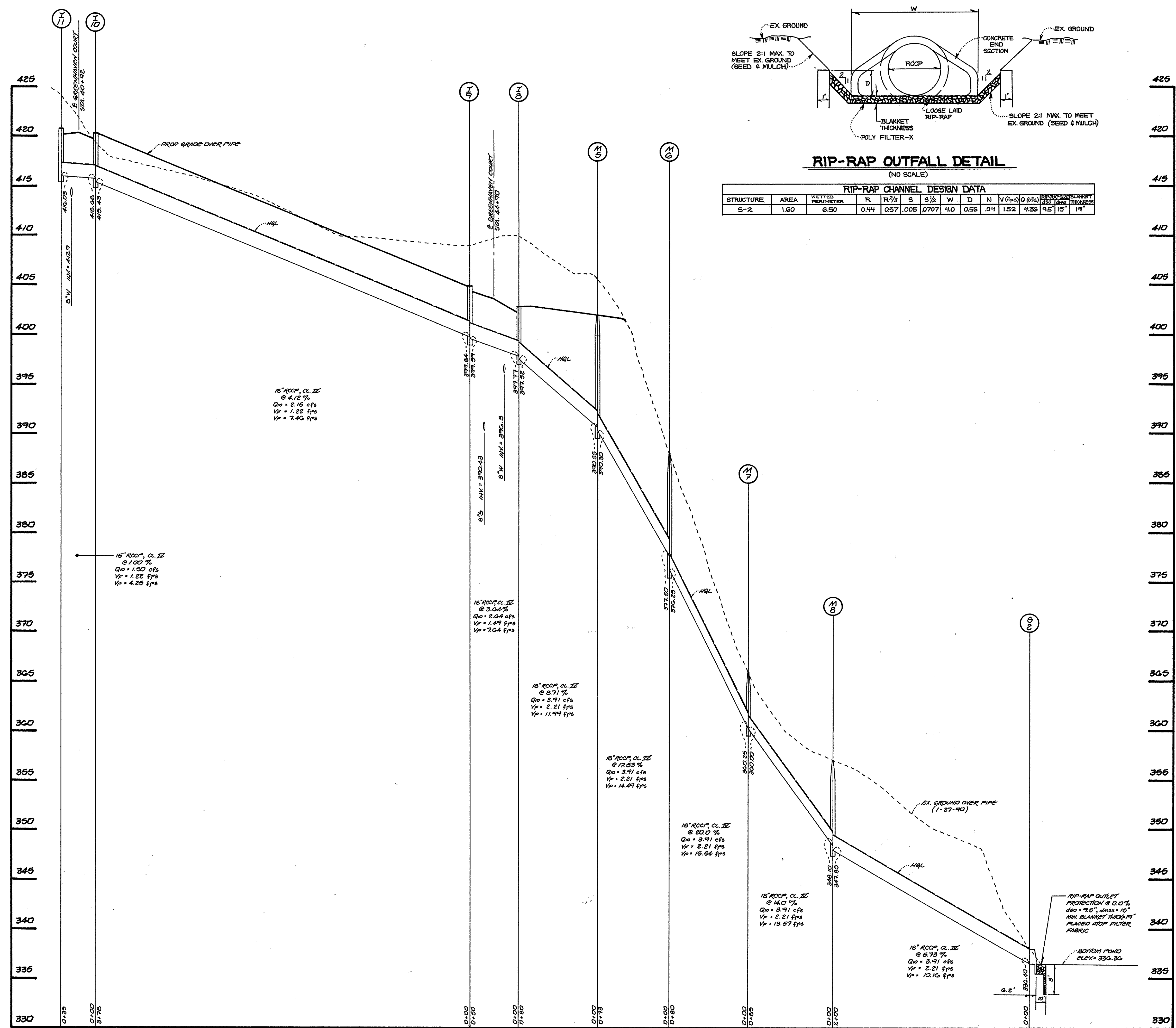
APPROVED: DEPARTMENT OF PUBLIC WORKS  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DIVISION OF LAND DEVELOPMENT  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

5-22-97  
 DATE  
 6/20/97  
 DATE  
 6/12/97  
 DATE

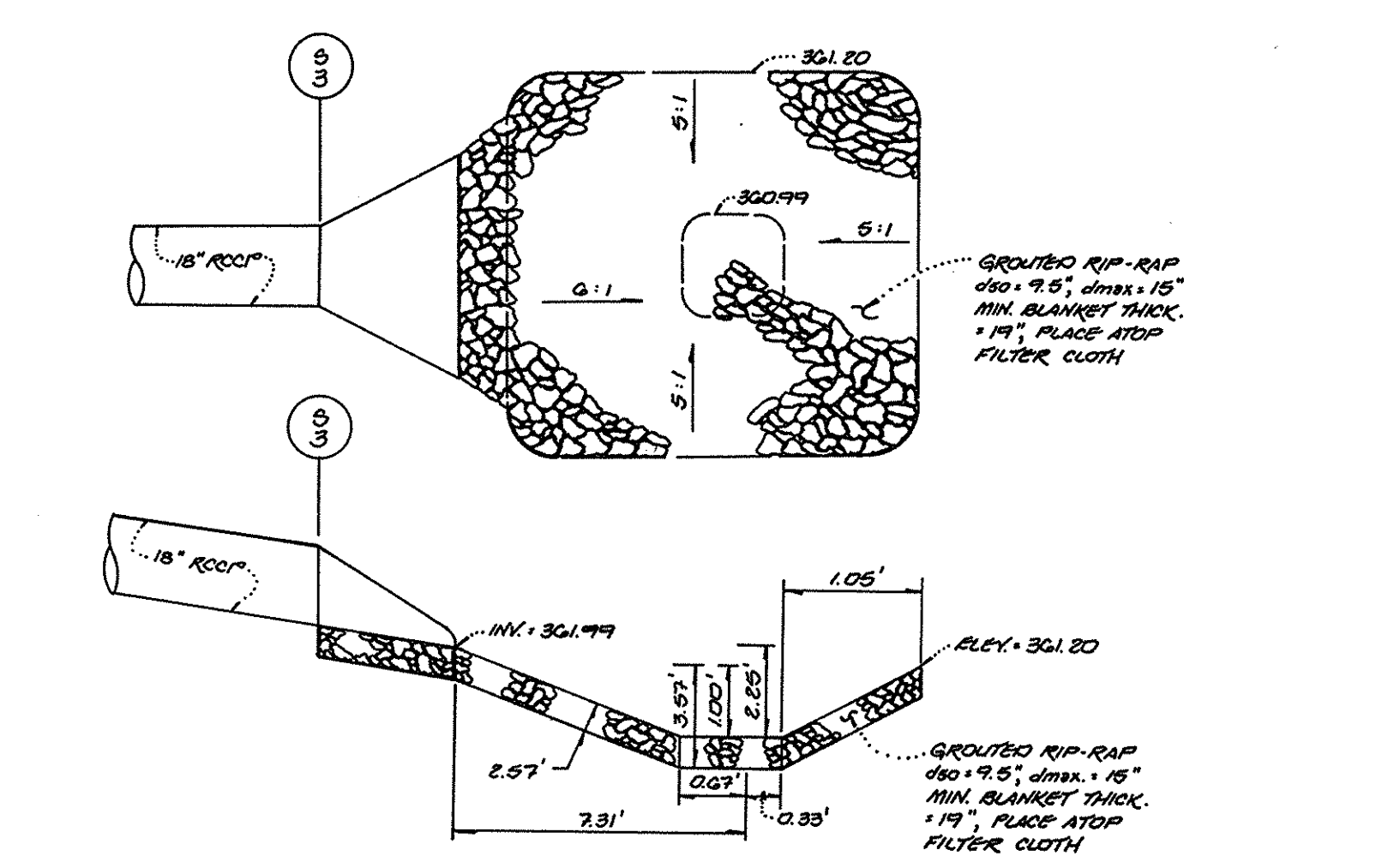


**RIP-RAP CHANNEL DESIGN DATA**

STRUCTURE	AREA	WETTED PERIMETER	R	R <sup>2/3</sup>	S	S <sup>1/2</sup>	W	D	N	V (FPA)	Q (CFS)	BLANKET THICKNESS
S-2	1.60	6.50	0.44	0.57	0.005	0.0707	4.0	0.56	0.4	1.52	4.36	15"



**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'

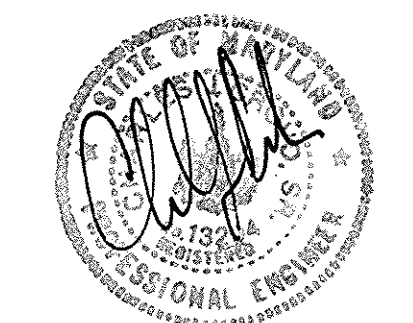


**OUTFALL @ S-3**  
 (NO SCALE)

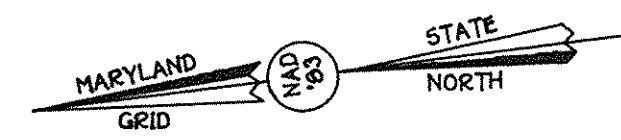
STORM DRAIN PROFILES  
**MT. HEBRON**  
 SECTION 23, PHASES 2 & 3  
 LOTS 27-71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: OCT. 28, 1996  
 SHEET 9 OF 14

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 BELLGATE CITY, MARYLAND 21114  
 410-481-2855

OWNER AND DEVELOPER  
 MT. HEBRON, INC.  
 MR. H. JAMES BANGS, JR.  
 2100 MT. HEBRON DRIVE  
 ELICOTT CITY, MARYLAND 21042







STATE OF MARYLAND DEPARTMENT OF FOREST AND PARKS LIBER 333 / FOLIO 302 ZONED R-20

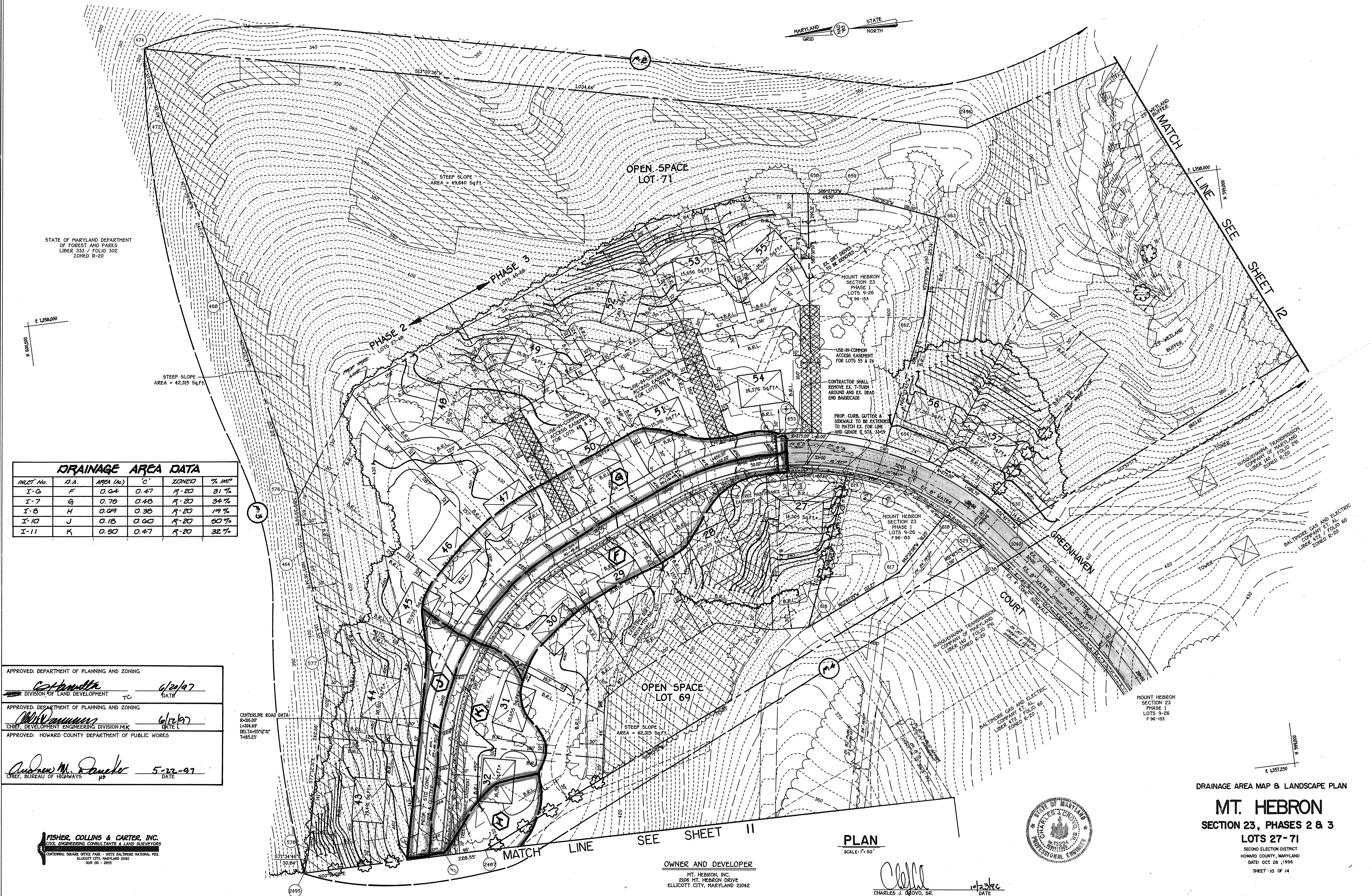
DRAINAGE AREA DATA					
INLET No.	D.A.	AREA (Ac.)	C'	ZONED	% IMP
I-6	F	0.04	0.47	R-20	31%
I-7	G	0.75	0.48	R-20	34%
I-8	H	0.09	0.38	R-20	19%
I-10	J	0.18	0.00	R-20	50%
I-11	K	0.50	0.47	R-20	32%

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 6/29/97  
 DIVISION OF LAND DEVELOPMENT TC DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 6/12/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 5-22-97  
 CHIEF, BUREAU OF HIGHWAYS js DATE

CENTERLINE ROAD DATA  
R-316.00'  
L-304.49'  
DELTA=55°12'31"  
T=452.23'



DRAINAGE AREA MAP & LANDSCAPE PLAN

# MT. HEBRON

SECTION 23, PHASES 2 & 3  
LOTS 27-71

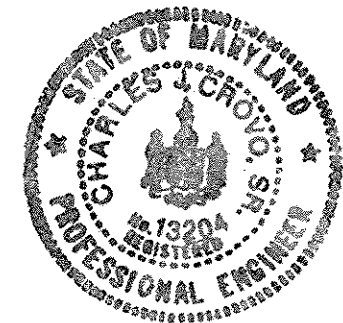
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCT 28, 1996  
SHEET 10 OF 14

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10725 BALTIMORE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21042  
1000 661 - 2955

OWNER AND DEVELOPER  
MT. HEBRON, INC.  
2106 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND 21042

PLAN  
SCALE: 1" = 50'

*[Signature]*  
CHARLES J. GIOVO, SR.  
DATE





**DRAINAGE AREA DATA**

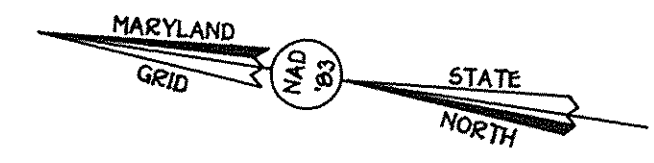
INLET No.	D.A.	AREA (Ac.)	'C'	ZONE'D	% IMI'
I-8	H	0.09	0.38	R-20	19%
I-9	I	0.23	0.68	R-20	61%
I-12	L	0.30	0.83	R-20	83%

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DATE: 6/20/97  
 DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DATE: 6/22/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DATE: 5-22-97  
 CHIEF, BUREAU OF HIGHWAYS

STATE OF MARYLAND  
 DEPARTMENT OF  
 FOREST AND PARKS  
 333 / 302  
 ZONED R-20



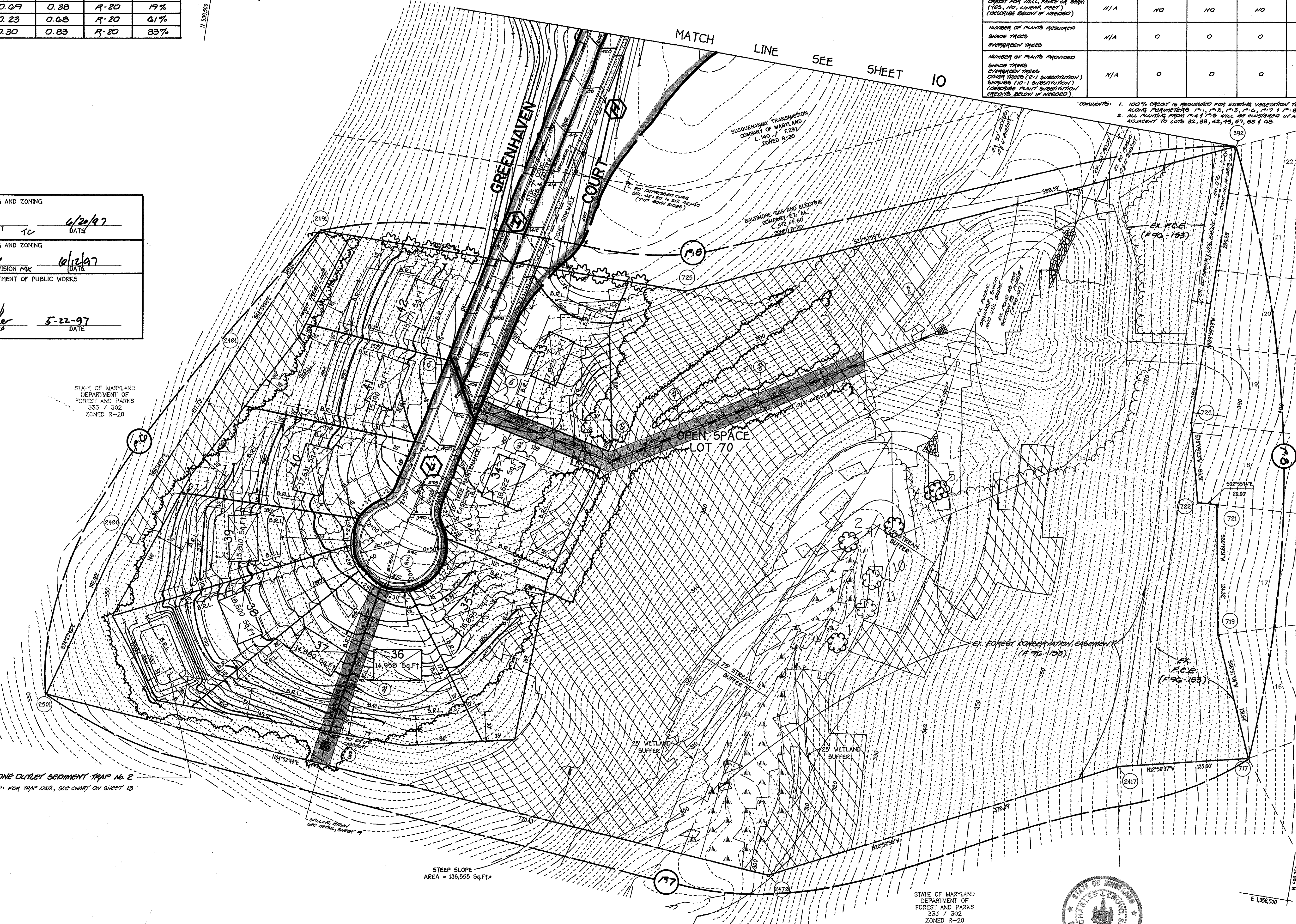
BOTANICAL NAME/ COMMON NAME	SIZE	QTY	ROOT
ACER RUBRUM RED MAPLE	2-2 1/2" CAL.	33	8 B B

**SCHEDULE A: PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES							
		#1	#2	#3	#4	#5	#6	#7	#8
LANDSCAPE TYPE	N/A	#1 120 L.F.	#2 2334 L.F.	#3 1003 L.F.	#4 2834 L.F.	#5 408 L.F.	#6 800 L.F.	#7 1283 L.F.	#8 056 L.F.
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	N/A	YES 120 L.F.	YES 2334 L.F.	YES 1003 L.F.	YES 2834 L.F.	YES 470 L.F.	YES 800 L.F.	YES 1283 L.F.	YES 056 L.F.
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	NO	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BARRIERS (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	0	0	0	0	0	0	0	0
NUMBER OF PLANTS REQUIRED	N/A	0	0	0	26	10	0	0	0
NUMBER OF PLANTS PROVIDED	N/A	0	0	0	26	10	0	0	0
OTHER TREE (1:1 SUBSTITUTION) REQUIRED (1:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	N/A	0	0	0	0	0	0	0	0

COMMENTS: 1. 100% CREDIT IS REQUIRED FOR EXISTING VEGETATION TO REMAIN ALONG PERIMETERS #1, #2, #3, #4, #7 & #8.  
 2. ALL PLANTING FROM #4 & #7 WILL BE CLUSTERED IN AREAS ADJACENT TO LOTS 32, 33, 42, 43, 47, 68 & 69.

NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 10-12A OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE (26) REQUIRED LANDSCAPE TREES HAS BEEN PROVIDED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF 33x100 = \$3,300.00.



Specimen	Species	DBH	Condition
ST-1	L. tulipifera Yellow Poplar / Tulip Poplar	34	Good
ST-2	L. tulipifera Yellow Poplar / Tulip Poplar	32	Good
ST-3	L. tulipifera Yellow Poplar / Tulip Poplar	33	Good
ST-5	L. tulipifera Yellow Poplar / Tulip Poplar	34	Good
ST-6	L. tulipifera Yellow Poplar / Tulip Poplar	33	Good
ST-7	L. tulipifera Yellow Poplar / Tulip Poplar	32	Good
ST-8	L. tulipifera Yellow Poplar / Tulip Poplar	33	Good
ST-9	L. tulipifera Yellow Poplar / Tulip Poplar	35	Good
ST-10	L. tulipifera Yellow Poplar / Tulip Poplar	40	Good
ST-11	L. tulipifera Yellow Poplar / Tulip Poplar	33	Good
ST-13	L. tulipifera Yellow Poplar / Tulip Poplar	39	Fair
ST-14	L. tulipifera Yellow Poplar / Tulip Poplar	33	Fair
ST-15	Quercus rubra Northern Red Oak	33	Good
ST-16	L. tulipifera Yellow Poplar / Tulip Poplar	41	Good
ST-17	L. tulipifera Yellow Poplar / Tulip Poplar	38	Poor, Trunk decay
ST-18	Quercus rubra Northern Red Oak	33	Fair
ST-19	L. tulipifera Yellow Poplar / Tulip Poplar	33	Good
ST-20	L. tulipifera Yellow Poplar / Tulip Poplar	31	Good
ST-21	L. tulipifera Yellow Poplar / Tulip Poplar	31	Good
ST-21A	L. tulipifera Yellow Poplar / Tulip Poplar	31	Good
ST-22	L. tulipifera Yellow Poplar / Tulip Poplar	32	Good
ST-23	L. tulipifera Yellow Poplar / Tulip Poplar	32	Good
ST-24	L. tulipifera Yellow Poplar / Tulip Poplar	30	Good
ST-25	L. tulipifera Yellow Poplar / Tulip Poplar	35	Good
ST-26	L. tulipifera Yellow Poplar / Tulip Poplar	30	Good
ST-27	L. tulipifera Yellow Poplar / Tulip Poplar	31	Good
ST-28	L. tulipifera Yellow Poplar / Tulip Poplar	32	Good
ST-29	L. tulipifera Yellow Poplar / Tulip Poplar	34	Good
ST-30	L. tulipifera Yellow Poplar / Tulip Poplar	30	Good

STONE OUTLET SEDIMENT TRAP No. 2  
 NOTE: FOR TRAP DATA, SEE CHART ON SHEET 13

STEEP SLOPE  
 AREA = 136,555 Sq.Ft.

**PLAN**  
 SCALE: 1" = 50'

OWNER AND DEVELOPER  
 MT. HEBRON, INC.  
 2106 MT. HEBRON DRIVE  
 ELLICOTT CITY, MARYLAND 21042

STATE OF MARYLAND  
 DEPARTMENT OF FOREST AND PARKS  
 333 / 302  
 ZONED R-20



CHARLES J. CROVO, SR.  
 DATE: 10/23/96

DRAINAGE AREA MAP & LANDSCAPE PLAN

**MT. HEBRON**  
 SECTION 23, PHASES 2 & 3  
 LOTS 27-71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: OCT. 28, 1996  
 SHEET 11 OF 14

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTONAL SQUARE OFFICE PARK - 16272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 410-681-2855



NOTE: FOR TRAP DATA, SEE CHART ON SHEET 13

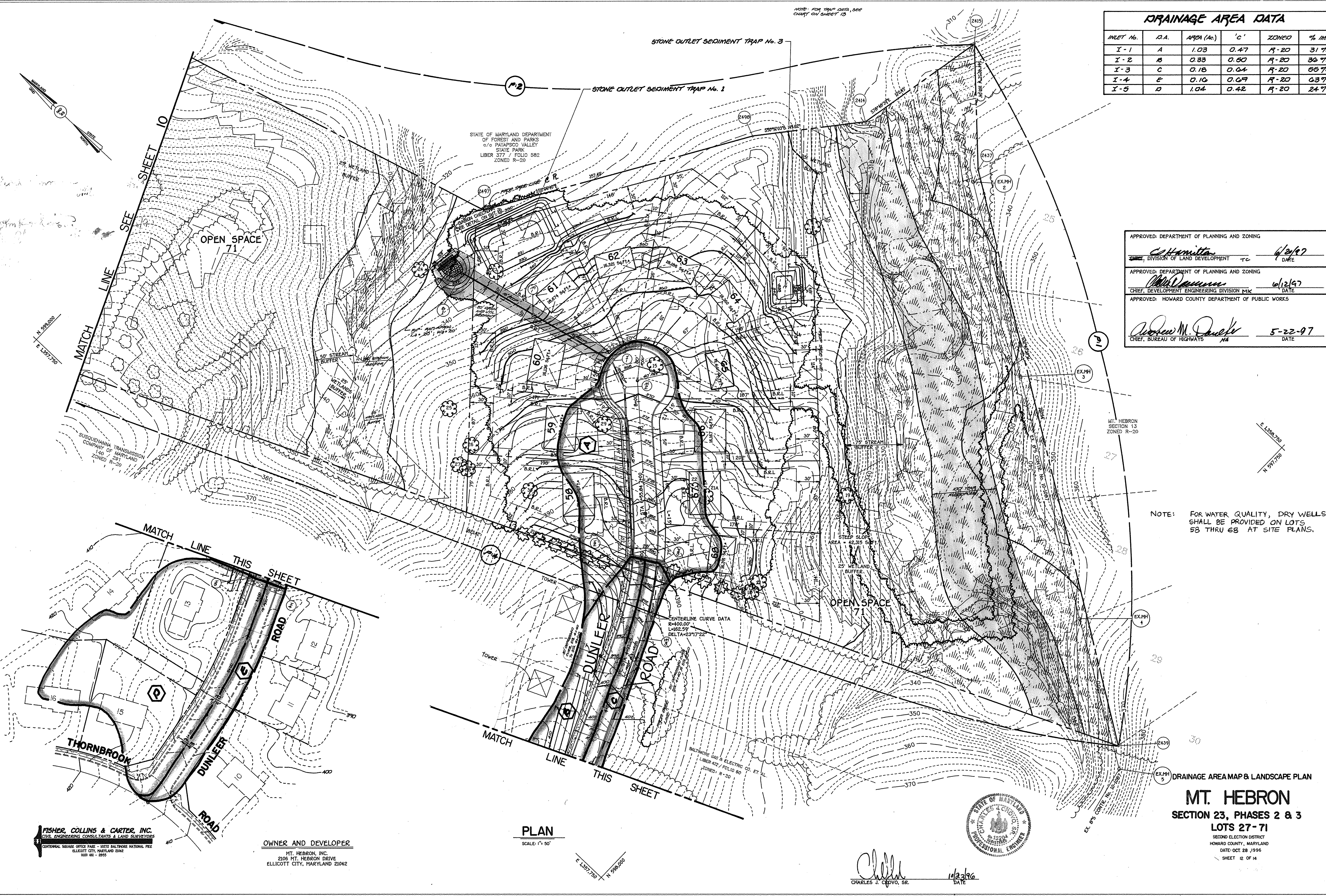
DRAINAGE AREA DATA					
INLET No.	D.A.	AREA (Ac.)	'c'	ZONED	% IMP
I-1	A	1.03	0.47	R-20	31%
I-2	B	0.33	0.50	R-20	36%
I-3	C	0.18	0.64	R-20	66%
I-4	E	0.16	0.69	R-20	63%
I-5	D	1.04	0.42	R-20	24%

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*C. Hammit* 6/2/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT TC DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John D. ...* 6/12/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. ...* 5-22-97  
 CHIEF, BUREAU OF HIGHWAYS HS DATE

NOTE: FOR WATER QUALITY, DRY WELLS SHALL BE PROVIDED ON LOTS 58 THRU 68 AT SITE PLANS.



STATE OF MARYLAND DEPARTMENT OF FOREST AND PARKS  
 c/o PATAPSCO VALLEY STATE PARK  
 LIBER 377 / FOLIO 882  
 ZONED R-20

SUSQUEHANNA TRANSMISSION COMPANY OF MARYLAND  
 140 281  
 ZONED R-20

MT. HEBRON SECTION 13  
 ZONED R-20

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2200

OWNER AND DEVELOPER  
 MT. HEBRON, INC.  
 2106 MT. HEBRON DRIVE  
 ELLICOTT CITY, MARYLAND 21042

PLAN  
 SCALE: 1" = 50'



*Charles J. Cevo*  
 CHARLES J. CEVO, SR.  
 DATE 10/23/96

DRAINAGE AREA MAP & LANDSCAPE PLAN  
**MT. HEBRON**  
 SECTION 23, PHASES 2 & 3  
 LOTS 27-71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: OCT 28, 1996  
 SHEET 12 OF 14



**ENGINEER'S CERTIFICATE**

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 10/23/96

**DEVELOPER'S CERTIFICATE**

"I/AWE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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."

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 10/23/96

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE: *[Signature]* DATE: 5/5/97

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

SIGNATURE: *[Signature]* DATE: 5/5/97

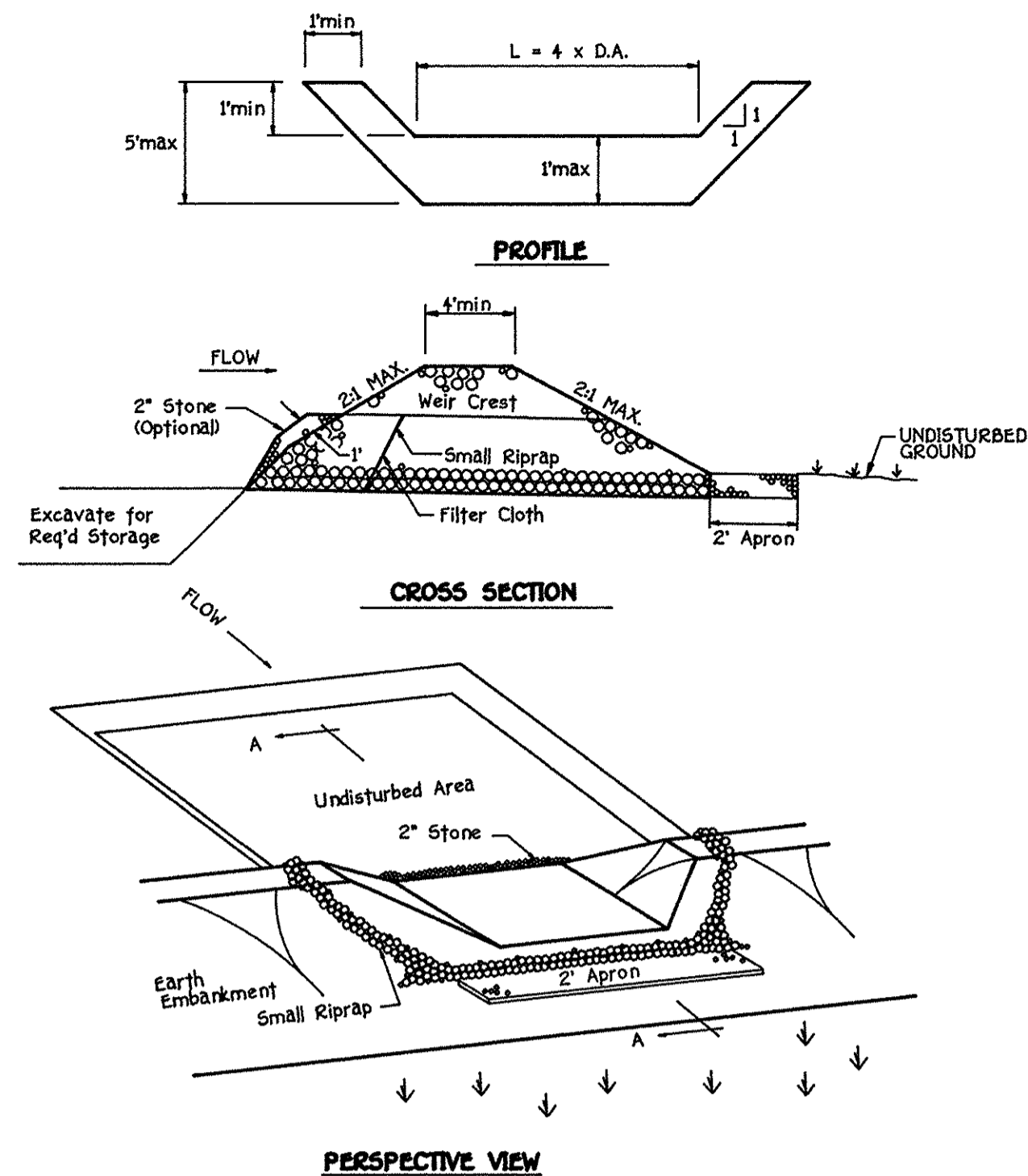
APPROVED: DEPARTMENT OF PLANNING AND ZONING

SIGNATURE: *[Signature]* DATE: 6/20/97

SIGNATURE: *[Signature]* DATE: 6/12/97

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

SIGNATURE: *[Signature]* DATE: 5-22-97

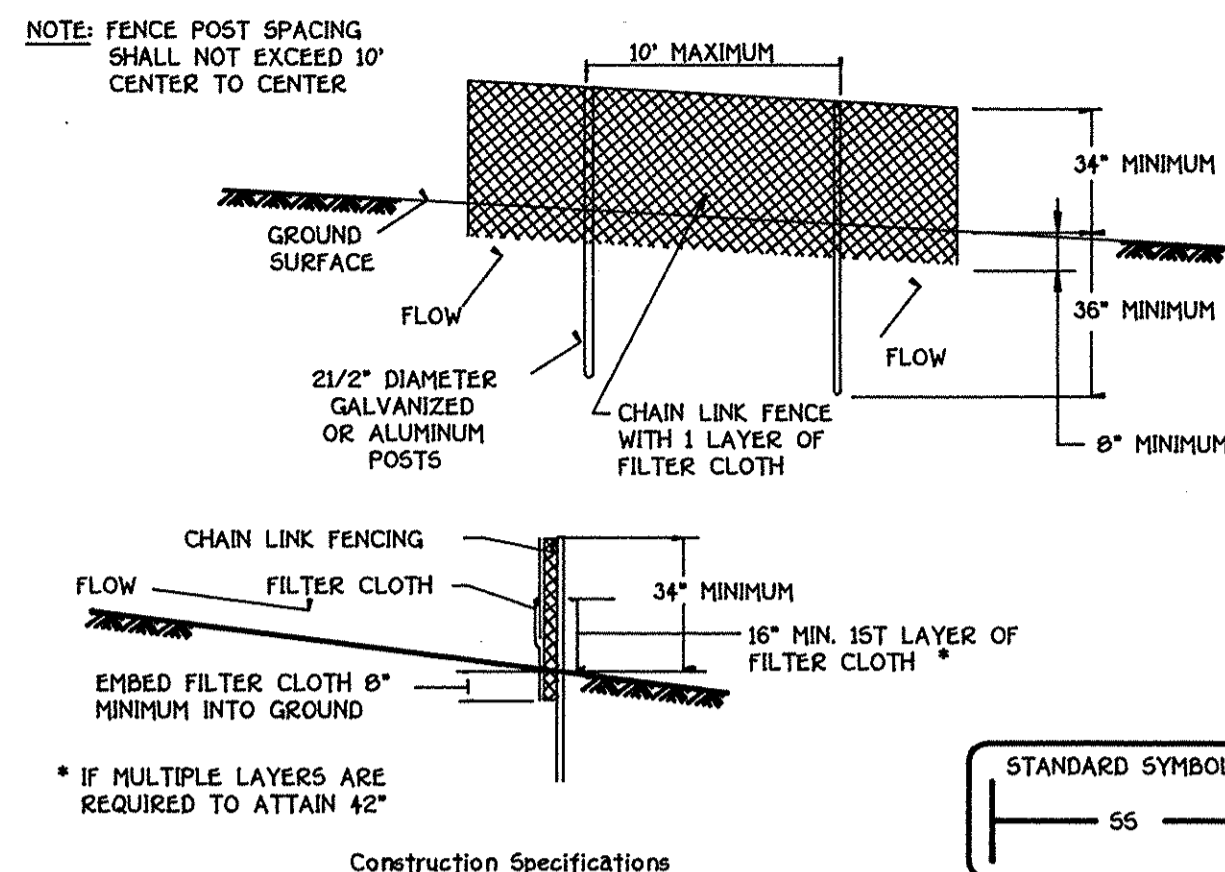


**STONE OUTLET SEDIMENT TRAP ST-VI**

OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

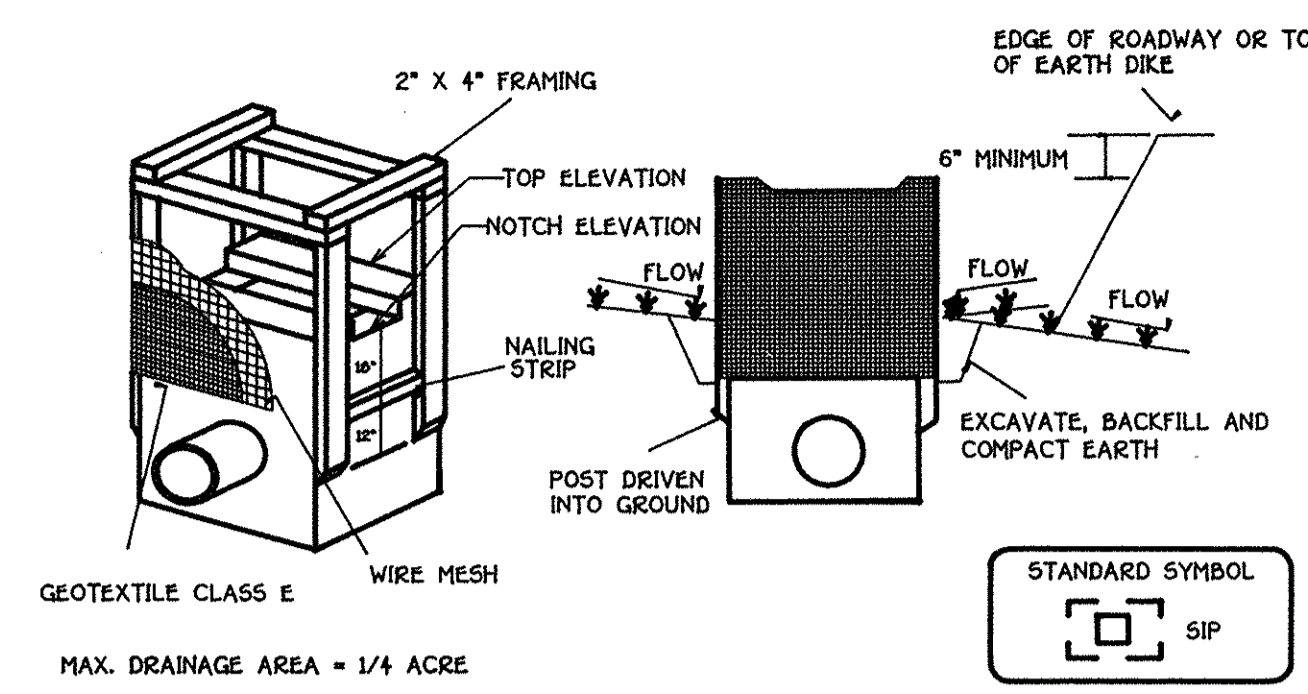
1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-6" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**DETAIL 33 - SUPER SILT FENCE**

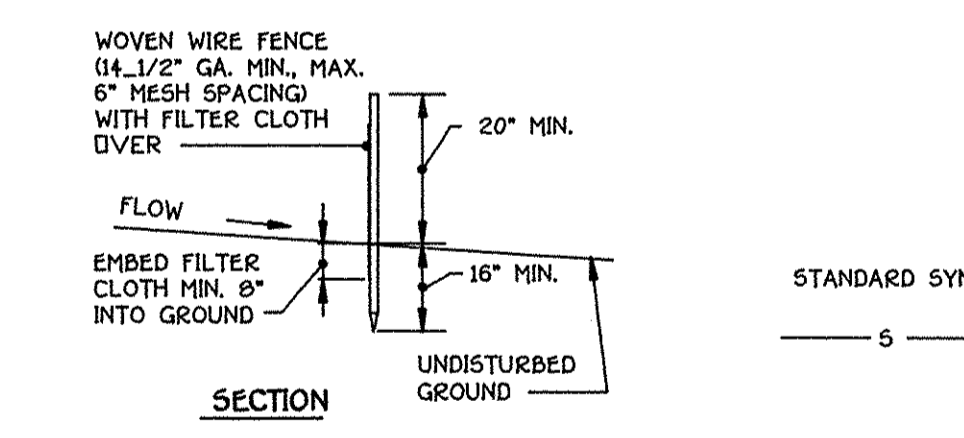
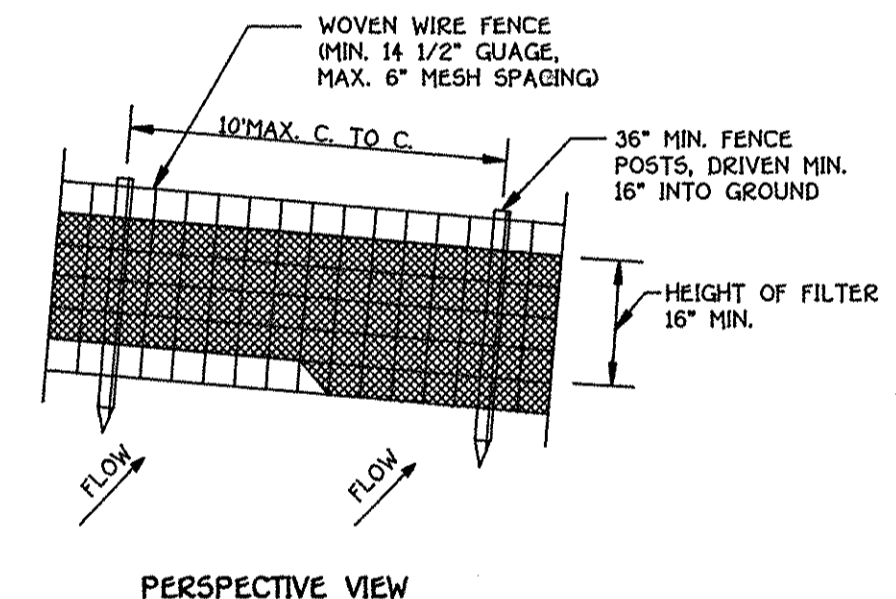


1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
  2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
  3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  4. Filter cloth shall be embedded a minimum of 8" into the ground.
  5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  6. Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
  7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- |                      |                          |                |
|----------------------|--------------------------|----------------|
| Tensile Strength     | 50 lbs/in (min)          | Test: MSMT 509 |
| Tensile Modulus      | 20 lbs/in (min)          | Test: MSMT 509 |
| Flow Rate            | 0.3 gal/ft /minute (max) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min)                | Test: MSMT 322 |

**DETAIL 23A - STANDARD INLET PROTECTION**



1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.



1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR U-TYPE OR 2" HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**STRUCTURE SCHEDULE**

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	367.34	362.35	362.10	DUNLEER ROAD	L.P. STA. 0+92.95	----	A-10	S.D. 4.41
I-2	386.98	381.58	381.33	DUNLEER ROAD	C.L. STA. 5+98	16' LT.	A-5	S.D. 4.40
I-3	386.98	382.78	382.53	DUNLEER ROAD	C.L. STA. 5+93	16' RT.	A-5	S.D. 4.40
I-4	403.40	395.68	395.43	DUNLEER ROAD	C.L. STA. 3+20	16' RT.	A-10	S.D. 4.41
I-5	403.40	----	396.00	DUNLEER ROAD	C.L. STA. 3+20	16' LT.	A-5	S.D. 4.40
I-6	407.26	401.94	401.69	GREENHAVEN COURT	C.L. STA. 33+39	17' LT.	A-10	S.D. 4.41
I-7	407.26	----	402.28	GREENHAVEN COURT	C.L. STA. 33+39	17' RT.	A-10	S.D. 4.41
I-8	402.77	397.77	397.52	GREENHAVEN COURT	C.L. STA. 45+07	17' LT.	A-10	S.D. 4.41
I-9	404.81	399.84	399.59	GREENHAVEN COURT	C.L. STA. 44+73	17' RT.	A-10	S.D. 4.41
I-10	420.43	415.68	415.43	GREENHAVEN COURT	C.L. STA. 40+95	17' RT.	A-5	S.D. 4.40
I-11	420.78	----	416.03	GREENHAVEN COURT	C.L. STA. 40+88	17' LT.	A-10	S.D. 4.41
I-12	390.27	----	384.00	GREENHAVEN COURT	L.P. STA. 1+27.00	----	A-10	S.D. 4.41
M-1	348.20	344.20	341.80	----	N 588,588,832 E 1,356,212,383	----	STD. M.H.	G-5.11
M-2	369.50	365.40	365.15	DUNLEER ROAD	N 988,411,882 E 1,356,212,383	----	STD. M.H.	G-5.11
M-3	395.75	390.46	390.21	DUNLEER ROAD	C.L. STA. 4+99	20' RT.	STD. M.H.	G-5.11
M-4	404.80	400.60	400.35	GREENHAVEN COURT	C.L. STA. 32+48	18' LT.	STD. M.H.	G-5.11
M-5	402.00	390.55	390.30	----	N 600,086,388 E 1,356,892,191	----	STD. M.H.	G-5.11
M-6	387.80	377.50	376.25	----	N 595,946,318 E 1,356,835,959	----	STD. M.H.	G-5.11
M-7	365.90	360.25	360.00	----	N 595,946,318 E 1,356,876,655	----	STD. M.H.	G-5.11
M-8	356.00	348.10	347.85	----	N 595,875,182 E 1,356,819,885	----	STD. M.H.	G-5.11
M-9	380.60	370.10	369.85	----	N 600,244,433 E 1,356,577,972	----	STD. M.H.	G-5.11
S-1	335.20	333.60	333.54	----	N 588,656,354 E 1,358,180,280	----	CONC. END SECTION	S.D. 5.51
S-2	338.00	336.40	336.34	----	N 595,700,929 E 1,357,021,601	----	CONC. END SECTION	S.D. 5.51
S-3	363.40	362.05	361.99	----	N 600,244,433 E 1,356,504,143	----	CONC. END SECTION	S.D. 5.51

**TRAP DATA**

TRAP NO.	STONE OUTLET ST 1	STONE OUTLET ST 2	STONE OUTLET ST 3	STONE OUTLET ST 4	STONE OUTLET ST 5
DRAINAGE AREA	3.40 AC.	2.97 AC.	0.90 AC.	2.65 AC.	1.08 AC.
STORAGE REQUIRED	12,240 C.F.	10,692 C.F.	3,240 C.F.	9,540 C.F.	3,888 C.F.
STORAGE PROVIDED	13,672 C.F.	10,780 C.F.	3,888 C.F.	10,696 C.F.	3,980 C.F.
WEIR CREST ELEV.	335.0	353.0	341.0	385.0	385.0
BOTTOM ELEV.	331.0	350.0	338.0	381.0	382.0
DEPTH	4'	3'	3'	4'	3'
SIDE SLOPES	2:1	2:1	2:1	2:1	2:1
TOP EMBANKMENT	336.0	354.0	342.0	386.0	386.0
WEIR LENGTH	14'	10'	4'	11'	5'
CLEANOUT ELEV.	333.0	351.50	339.50	383.0	383.50

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21042  
1001 46 - 2025

**OWNER/DEVELOPER**

MT. HEBRON, INC.  
MR. H. JONES BAKER, JR.  
2106 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND, 21042



*[Signature]*  
CHARLES J. CROVO, SR.

*[Signature]*  
DATE

**SEDIMENT CONTROL NOTES & DETAILS**  
**MT. HEBRON**  
SECTION 23 - PHASE 2 AND 3  
LOTS 27 - 71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCTOBER 28, 1996  
SHEET 13 OF 14



**ENGINEER'S CERTIFICATE**

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: *Charles J. Grovo* DATE: 10/23/96

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

SIGNATURE OF DEVELOPER: *James Baker* DATE: 10/23/96

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE: 5/5/97

APPROVED: DISTRICT HOWARD SOIL CONSERVATION DISTRICT DATE: 5/5/97

APPROVED: DEPARTMENT OF PLANNING AND ZONING DATE: 6/2/97

APPROVED: DIVISION OF LAND DEVELOPMENT DATE: 6/2/97

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 6/2/97

APPROVED: CHIEF, BUREAU OF HIGHWAYS DATE: 5-22-97

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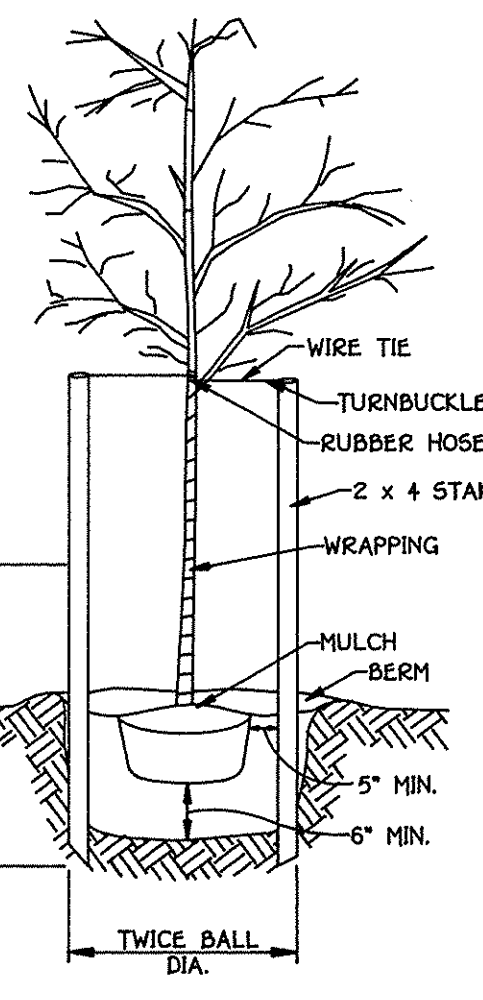
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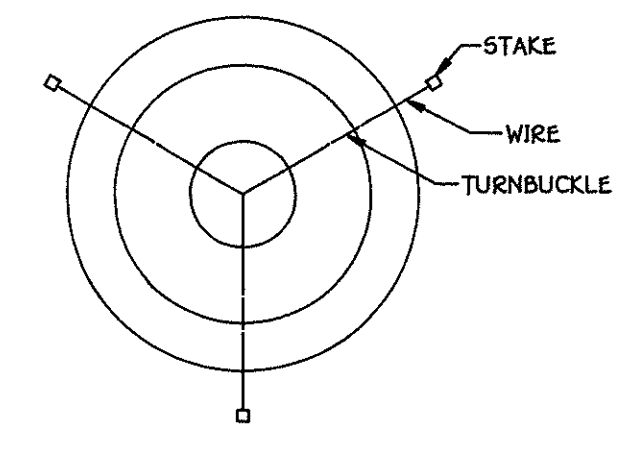
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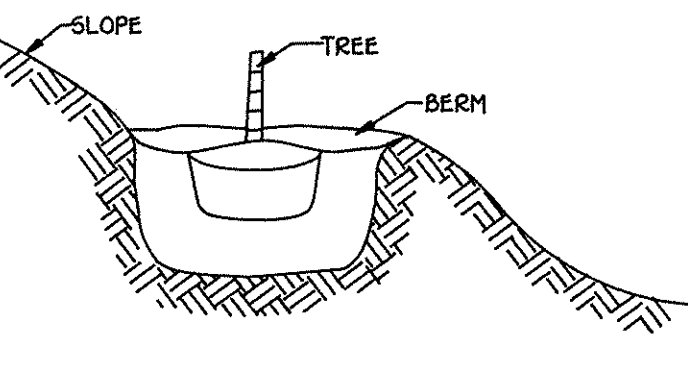
APPROVED: CHIEF, BUREAU OF HIGHWAYS DATE: 5-22-97



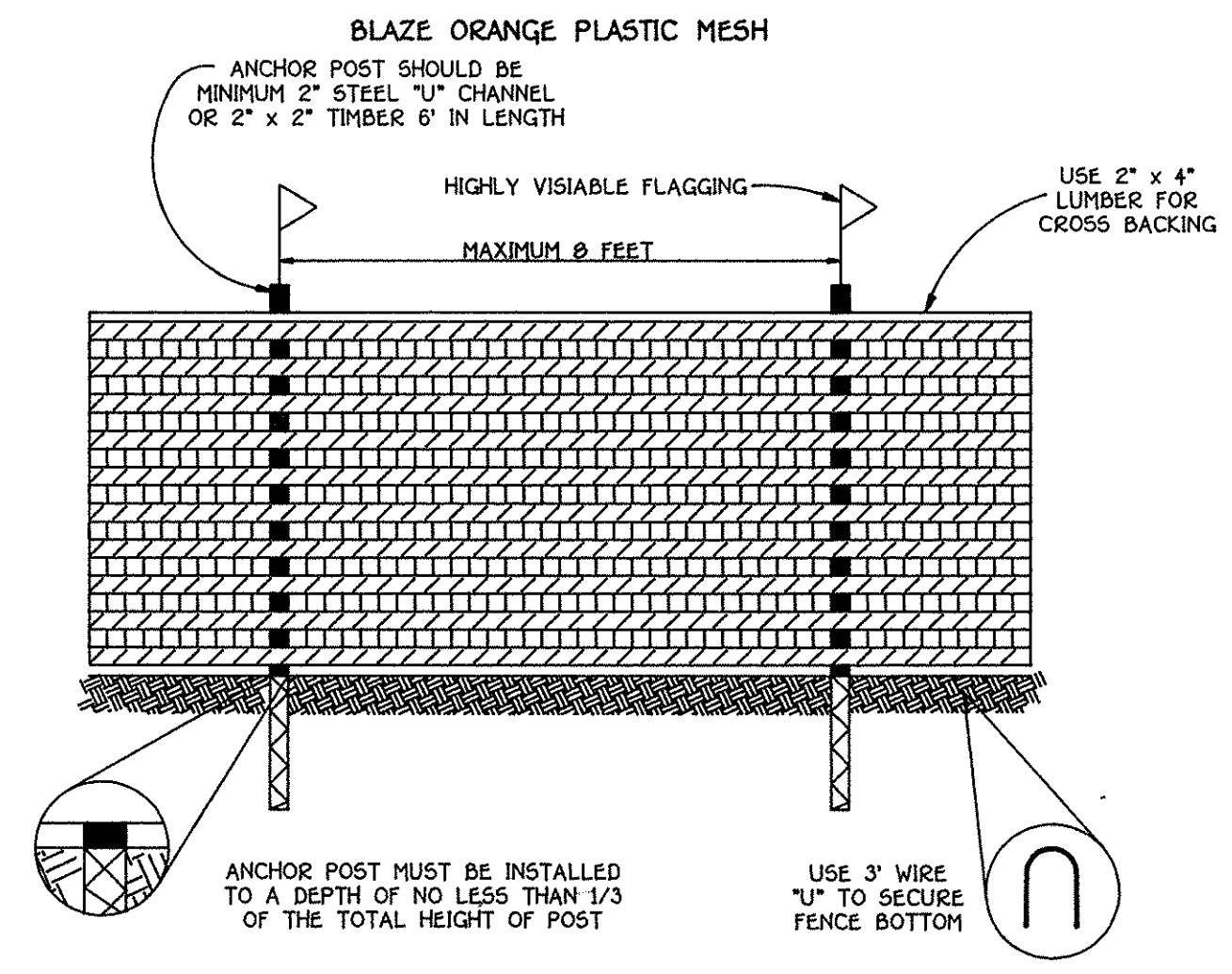
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NOT TO SCALE



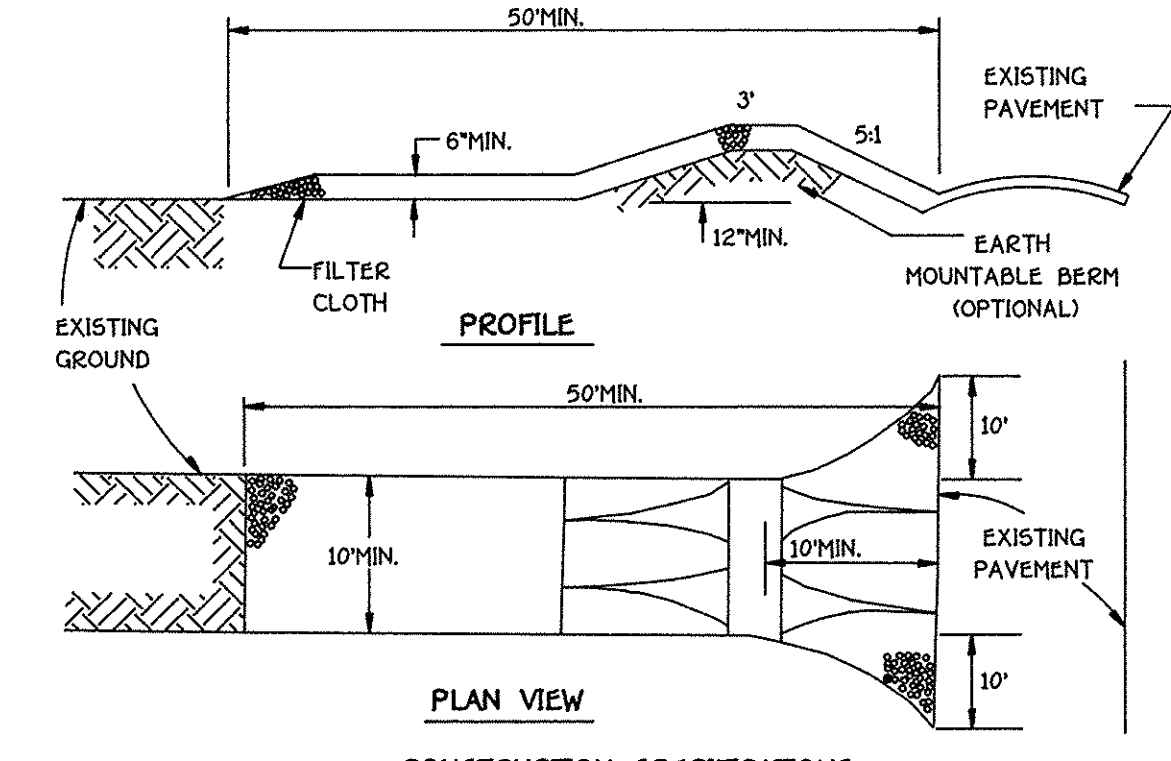
**STAKING DETAIL**  
NOT TO SCALE



**GRADING FOR PLANTING ON SLOPES**  
NOT TO SCALE



**TREE PROTECTION DETAIL**  
NOT TO SCALE



**STABILIZED CONSTRUCTION ENTRANCE - 2**  
NOT TO SCALE

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN 6 INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

**DEFINITION**  
Using vegetation as cover for barren soil to protect it from forces that cause erosion.

**PURPOSE**  
Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

**CONDITIONS WHERE PRACTICE APPLIES**  
This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are Temporary Soil Stabilization, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dunes, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

**EFFECTS ON WATER QUALITY AND QUANTITY**  
Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff. Infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

**SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS**

**A. Site Preparation**

- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

**B. Soil Amendments (Fertilizer and Lime Specifications)**

- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
- Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
- Lime materials shall be ground limestone (hydrated or burnt lime) but not substituted with which contains at least 50% total oxides calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.

**C. Seeded Preparation**

- Temporary Seeding
  - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it shall not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) shall be graded leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
  - Apply fertilizer and lime as prescribed on the plans.
- Permanent Seeding
  - Minimum soil conditions required for permanent vegetative establishment:
    - Soil pH shall be between 6.0 and 7.0.
    - Soluble salts shall be less than 500 parts per million (ppm).
    - The soil shall contain less than 40% clay, but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is for loesslike or silt loesslike soils to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
    - Soil shall contain 1.5% minimum organic matter by weight.
    - Soil must contain sufficient pore space to permit adequate root penetration.
    - If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standards and Specification for Topsoil.

**D. Seed Specifications**

- All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
- Seed tags shall be made available to the inspector to verify type and rate of seed used.
- Incubant - The incubant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Incubants shall not be used later than the date indicated on the container. Add fresh incubant as directed on package. Use four times the recommended rate when hydroseeding. Note 1: It is very important to keep incubant as cool as possible until used. Temperatures above 75-80° F. can weaken bacteria and make the incubant less effective.

**E. Methods of Seeding**

- Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cat/packer seeder.
  - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following nitrogen minimum of 100 lbs. per acre total of soluble nitrogen (P205 phosphorous; 200 lbs./ac; K2O potassium; 200 lbs./ac.
- Lime - Use only ground agricultural limestone. Up to 3 tons per acre may be applied by hydroseeding. Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

**F. Mulch Specifications (in order of preference)**

- Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- Wood Cellulose Fiber Mulch (WCFM)
  - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
  - WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
  - WCFM, including dye, shall contain no germination or growth inhibiting factors.
  - WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a better-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
  - WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per soil test or as included on the plans.

d. Mix soil amendments into the top 3-5" of topsoil by diking or other suitable means. Lawn areas should be rolled to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of the soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

**D. Seed Specifications**

- All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
- Seed tags shall be made available to the inspector to verify type and rate of seed used.
- Incubant - The incubant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Incubants shall not be used later than the date indicated on the container. Add fresh incubant as directed on package. Use four times the recommended rate when hydroseeding. Note 1: It is very important to keep incubant as cool as possible until used. Temperatures above 75-80° F. can weaken bacteria and make the incubant less effective.

**E. Methods of Seeding**

- Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cat/packer seeder.
  - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following nitrogen minimum of 100 lbs. per acre total of soluble nitrogen (P205 phosphorous; 200 lbs./ac; K2O potassium; 200 lbs./ac.
- Lime - Use only ground agricultural limestone. Up to 3 tons per acre may be applied by hydroseeding. Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

**F. Mulch Specifications (in order of preference)**

- Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- Wood Cellulose Fiber Mulch (WCFM)
  - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
  - WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
  - WCFM, including dye, shall contain no germination or growth inhibiting factors.
  - WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a better-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
  - WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 15% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

**G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.**

- If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
- When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
- Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

**H. Securing Straw Mulch (Mulch Anchoring):** Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods listed by preference, depending upon size of area and erosion hazard:

- A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
- Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be applied uniform after binder application. Synthetic binders - such as Acrylic DLR (Ago-Tack), DCA-70 Petrosel, Terra Tack II, Terra Tack 40 or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
- Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

**I. Incremental Stabilization - Cut Slopes**

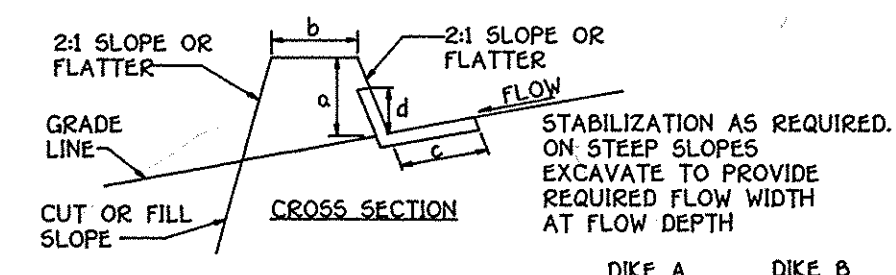
- All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
  - Construction sequence (Refer to Figure 3 below):
    - Excavate and stabilize all temporary erosion, side ditches, or berms that will be used to convey runoff from the excavation.
    - Perform Phase 1 excavation, dress, and stabilize.
    - Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
    - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

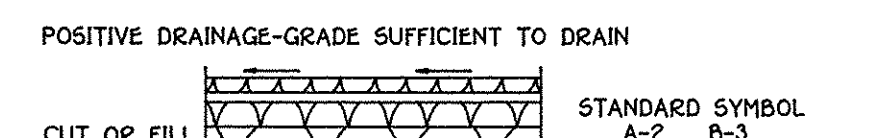
**J. Incremental Stabilization of Embankments - Fill Slopes**

- Embankments shall be constructed in lifts as prescribed on the plans.
  - Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15', or when the grading operation ceases as prescribed in the plans.
- At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
- Construction sequence (Refer to Figure 4 below):
  - Excavate and stabilize all temporary erosion, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
  - Place Phase 1 embankment, dress and stabilize.
  - Place Phase 2 embankment, dress and stabilize.
  - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.



**CROSS SECTION**  
STABILIZATION AS REQUIRED ON STEEP SLOPES EXISTING TO PROVIDE REQUIRED FLOW WIDTH AT FLOW DEPTH



**CONSTRUCTION SPECIFICATIONS**

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

**FLOW CHANNEL STABILIZATION**

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0X	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0X	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELISOR; SOD; 2" STONE
3	5.1-8.0X	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4"-8"
4	8.1-20X	LINED RIP-RAP 4"-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.

B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 3 INCHES THICKNESS AND PRESSED INTO THE SOIL.

C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

**EARTH DIKE**

NOT TO SCALE

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKWY  
ELLCOTT CITY, MARYLAND 21042  
410 661-2055

**OWNER/DEVELOPER**  
MT. HEBRON, INC.  
MR. H. JAMES BAKER, JR.  
2106 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND, 21042

*Charles J. Grovo*  
CHARLES J. GROVO, SR.  
DATE: 10/23/96



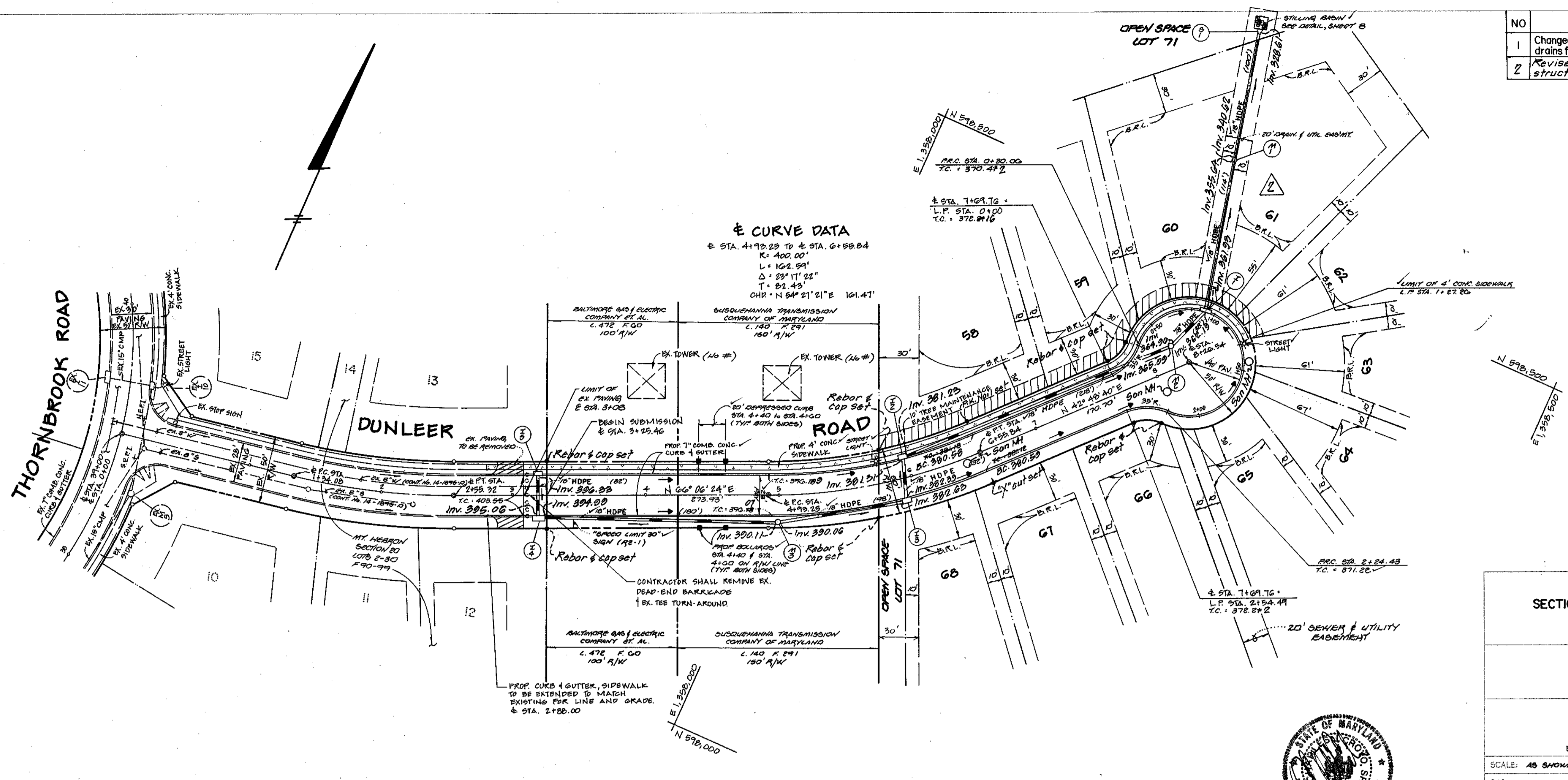
**SEDIMENT CONTROL NOTES & DETAILS**

**MT. HEBRON**

SECTION 23 - PHASE 2 AND 3  
LOTS 27 - 71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCTOBER 28, 1996



NO	REVISION	DATE
1	Changed the pipe material for all storm drains from RCP to HDPE	12-17-02
2	Revised inverts of 18" HDPE structures N-14 I-1	7-18-04



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Hamilton* 6/24/02  
 DIVISION OF LAND DEVELOPMENT TC DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chapman* 6/12/07  
 CHIEF DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Dauck* 5-22-07  
 CHIEF, BUREAU OF HIGHWAYS HS DATE

**MT. HEBRON**  
 SECTION 23 PHASES 2 & 3  
 LOTS 27 - 71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

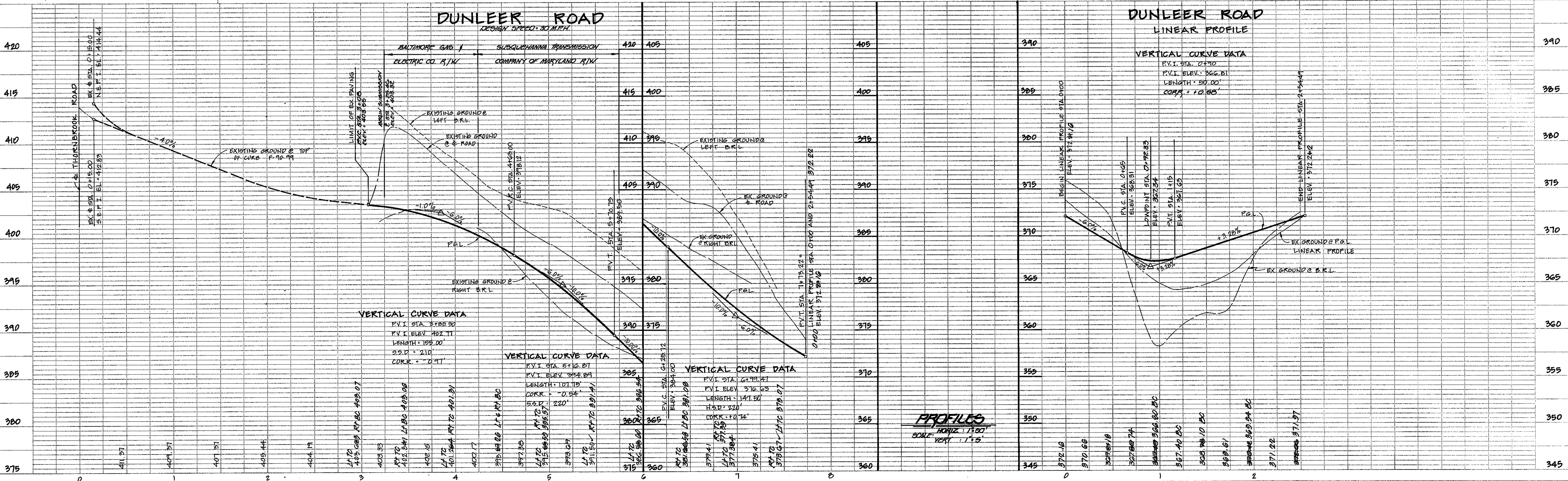
**DUNLEER ROAD**  
 PLAN AND PROFILE

OWNER AND DEVELOPER  
 MT. HEBRON, INC.  
 MR. H. JAMES BASKER, JR.  
 2106 MT. HEBRON DRIVE  
 BELLETT CITY, MARYLAND 21042

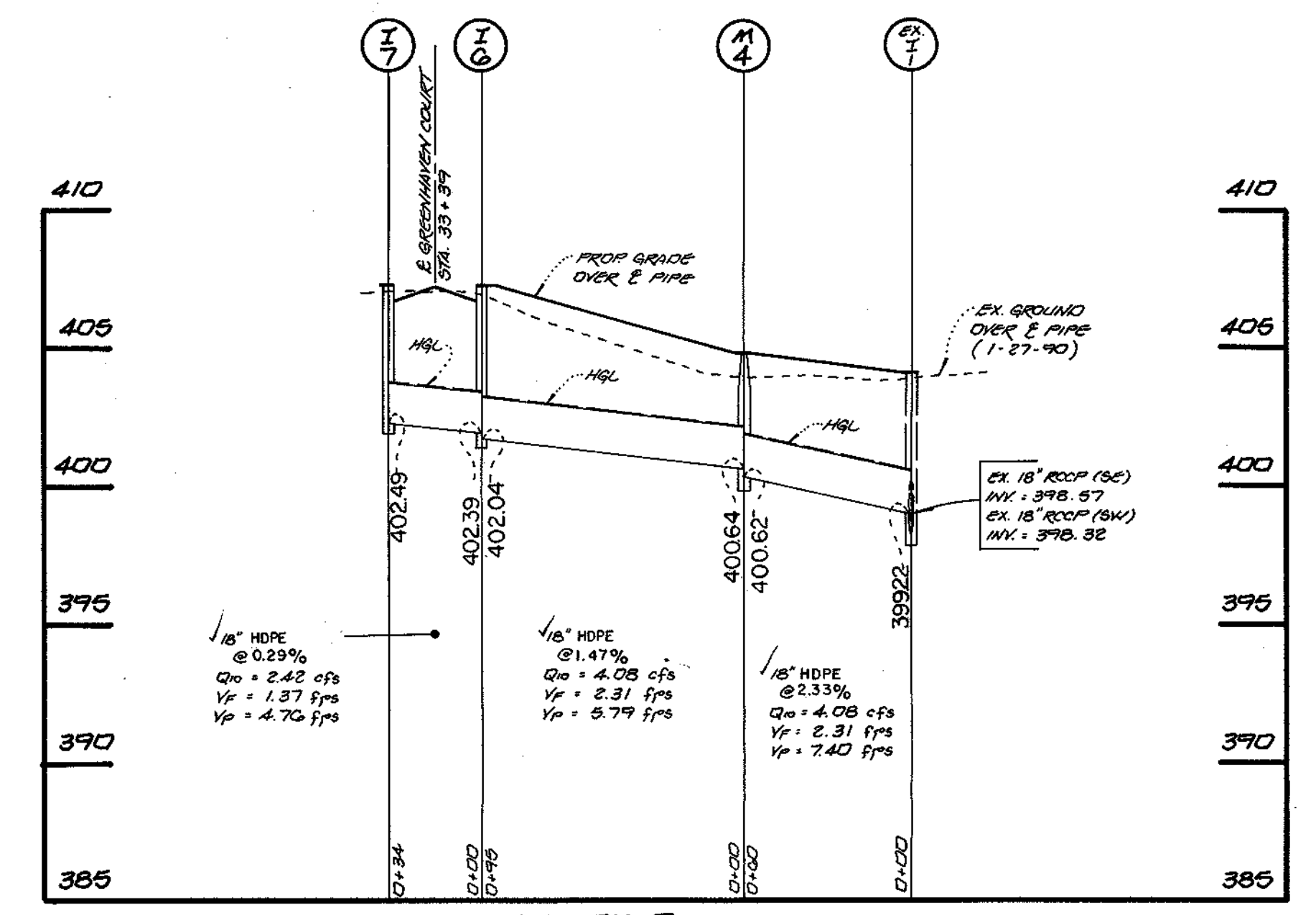
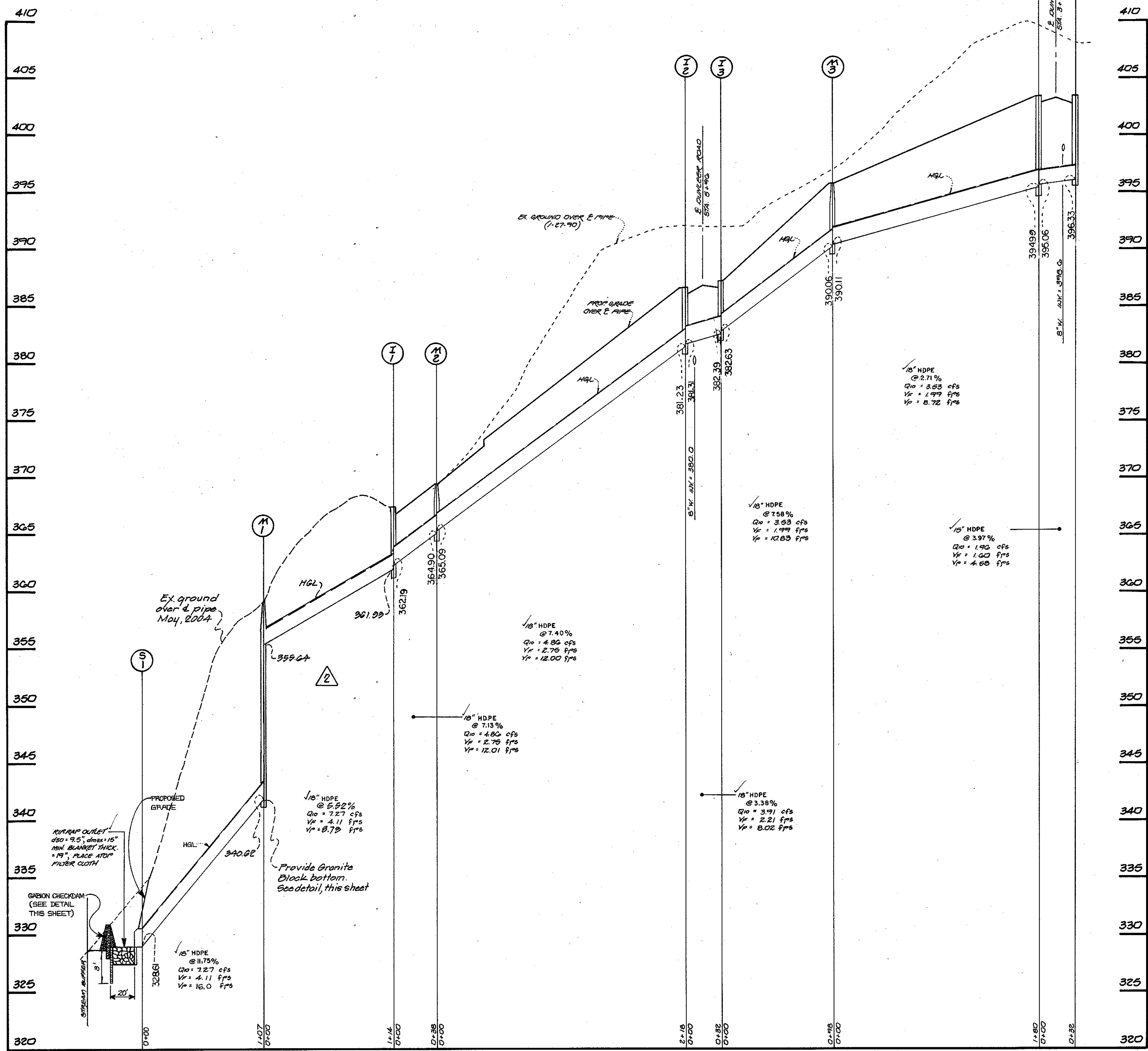
SCALE: AS SHOWN DATE: OCT. 28, 1990 DWS. NO. 3 OF 14  
 DES. B.J.K. DRN. J.A.C., J.C.C. C.J.C.

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK 10212 CALVERTHURST NATIONAL PIKE  
 BELLETT CITY, MARYLAND 21042  
 (410) 461-3835

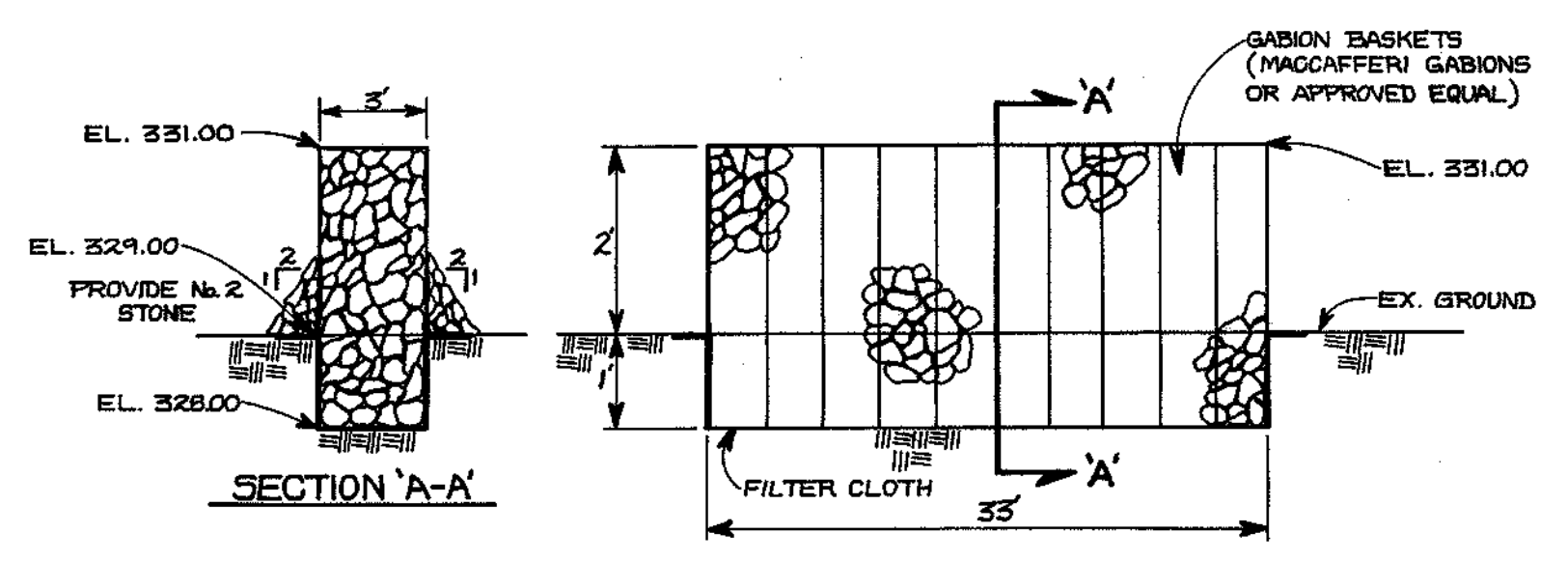
PLAN  
 SCALE: 1" = 50'



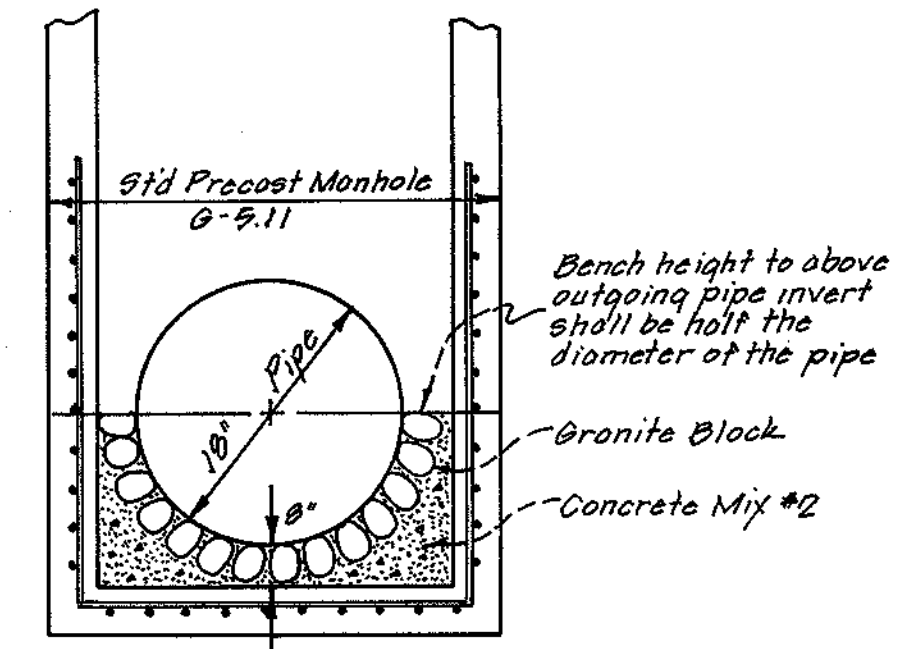




**PROFILE**  
 HORIZ. : 1" = 50'  
 VERT. : 1" = 5'



**GABION CHECKDAM @ S1 OUTFALL**  
 (NO SCALE)

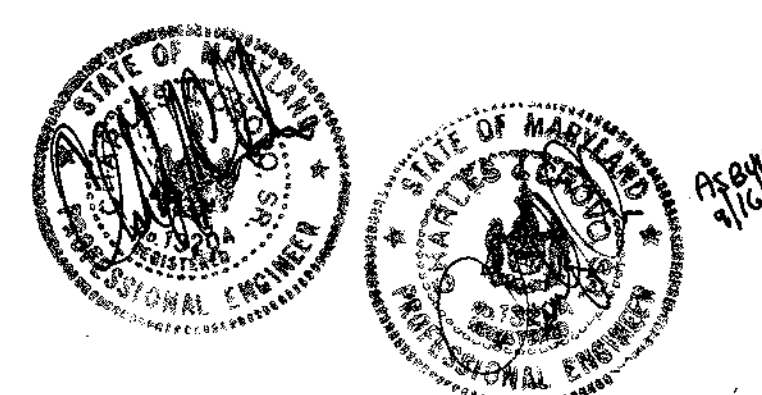


**Granite Block Detail**  
 Not to Scale

**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'

NO.	REVISIONS	DATE
1	Changed the pipe material for all storm drains from RCCP to HDPE; revised invert elevations and grades for all lines where the asbuilt elevations differed by more than 0.5' from the approved plan elevations.	12-17-02
2	Raised 18" HDPE between structures M-1 & I-1, added Granite Block Detail.	7-19-04

OWNER AND DEVELOPER  
 MT. HEBRON, INC.  
 MR. H. JAMES BANCOS, JR.  
 2100 MT. HEBRON DRIVE  
 ELICOTT CITY, MARYLAND 21042



STORM DRAIN PROFILES  
**MT. HEBRON**  
 SECTION 23, PHASES 2 & 3  
 LOTS 27-71  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: OCT. 28, 1996  
 SHEET 8 OF 14



**ENGINEER'S CERTIFICATE**

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature of Engineer: *Charles J. Crovo* Date: 10/23/96

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Signature of Developer: *John Baker* Date: 10/23/96

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: *Clark Simmons* Date: 5/5/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

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

Signature: *John R. Robertson* Date: 5/5/97  
DISTRICT HOWARD SOIL CONSERVATION DIST.

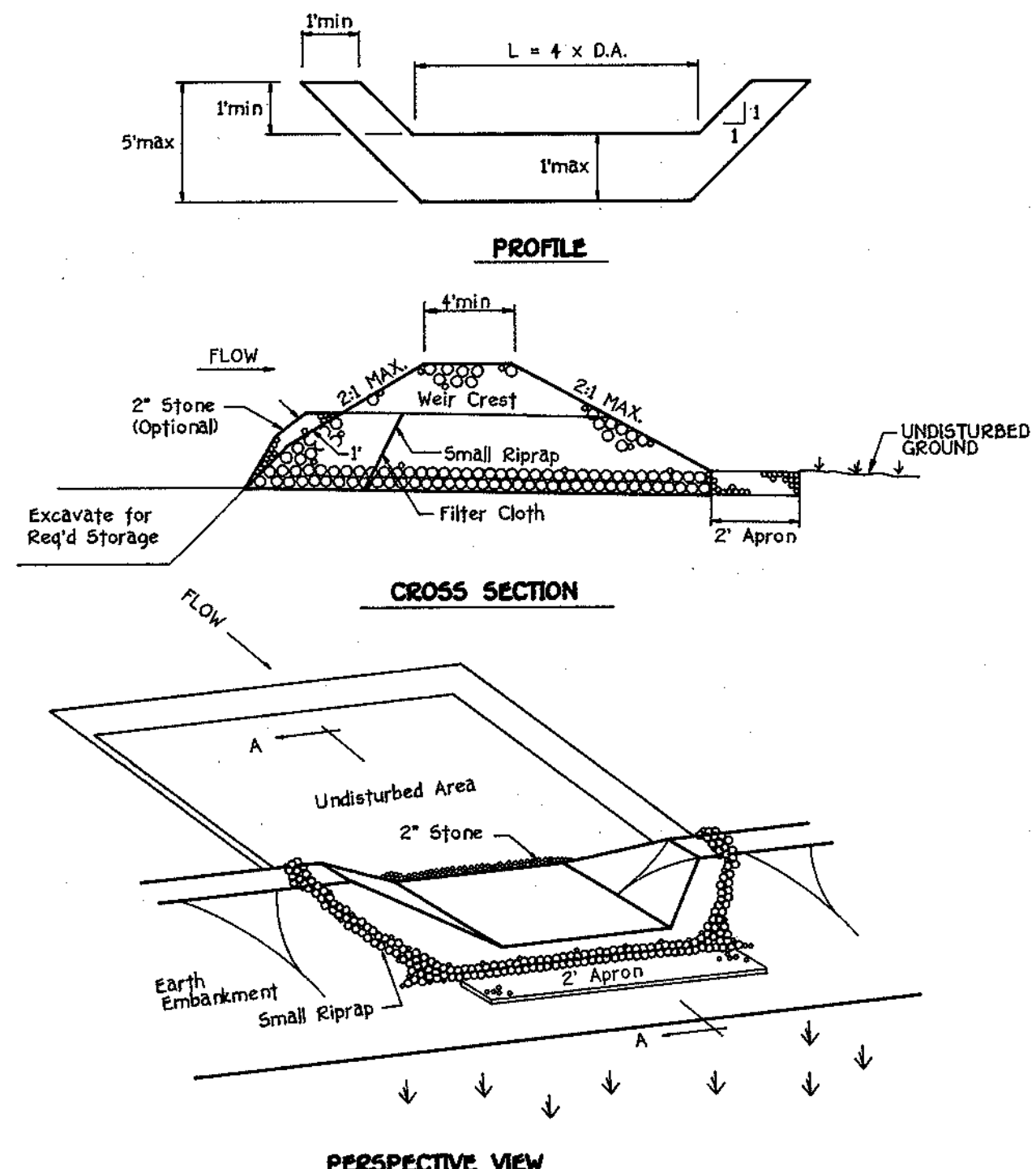
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *William D. Williams* Date: 6/20/97  
DIVISION OF LAND DEVELOPMENT

Signature: *William D. Williams* Date: 6/2/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature: *Andrew M. Decker* Date: 5-22-97  
CHIEF, BUREAU OF HIGHWAYS

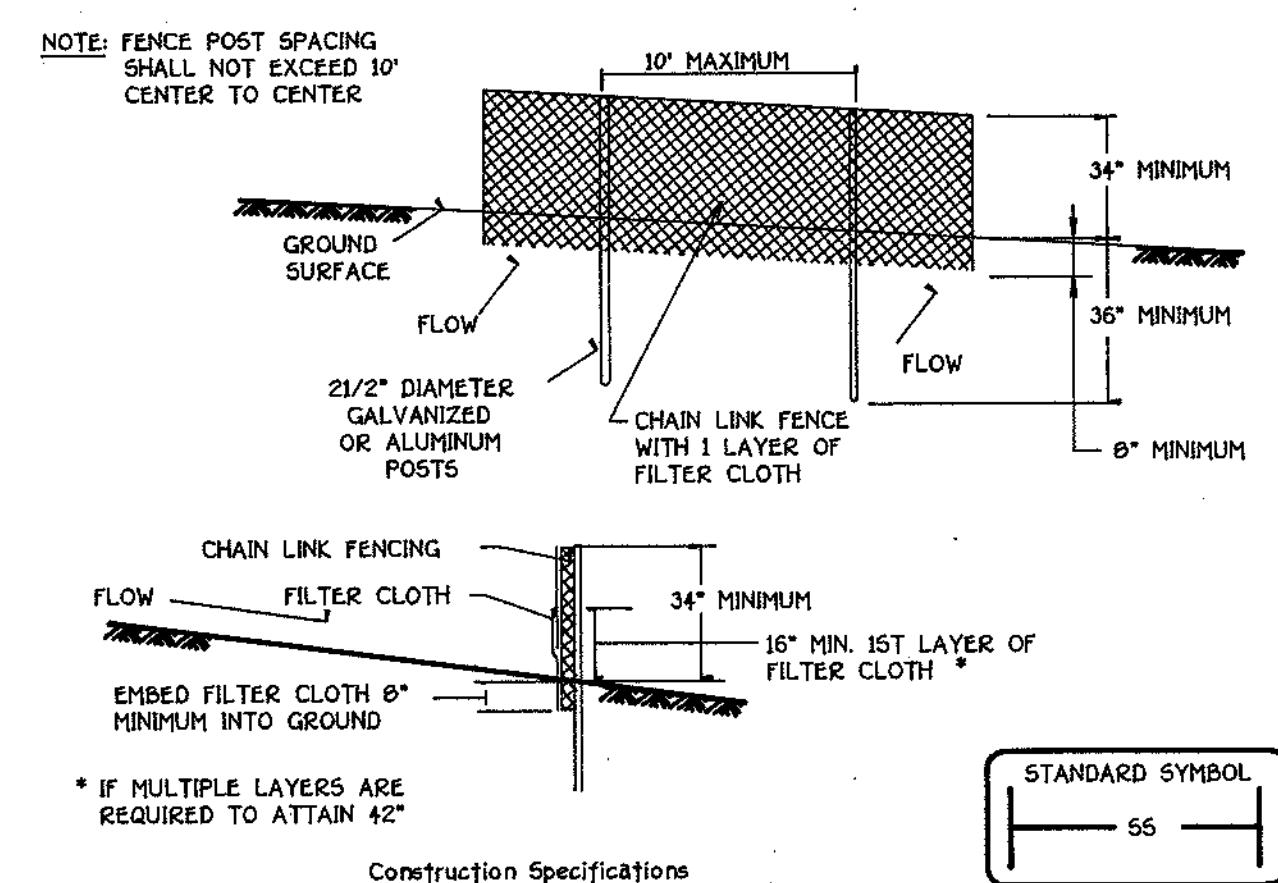


**STONE OUTLET SEDIMENT TRAP ST-VI**

OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

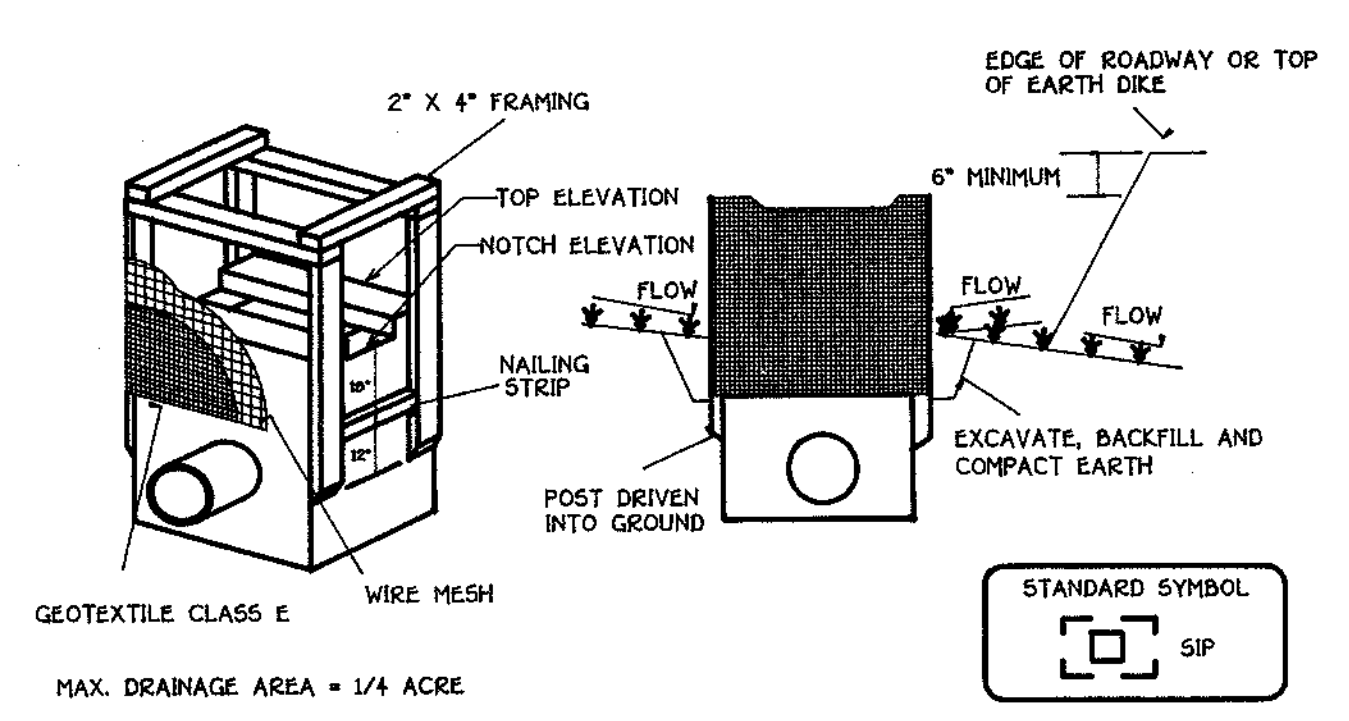
**DETAIL 33 - SUPER SILT FENCE**



1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class E:

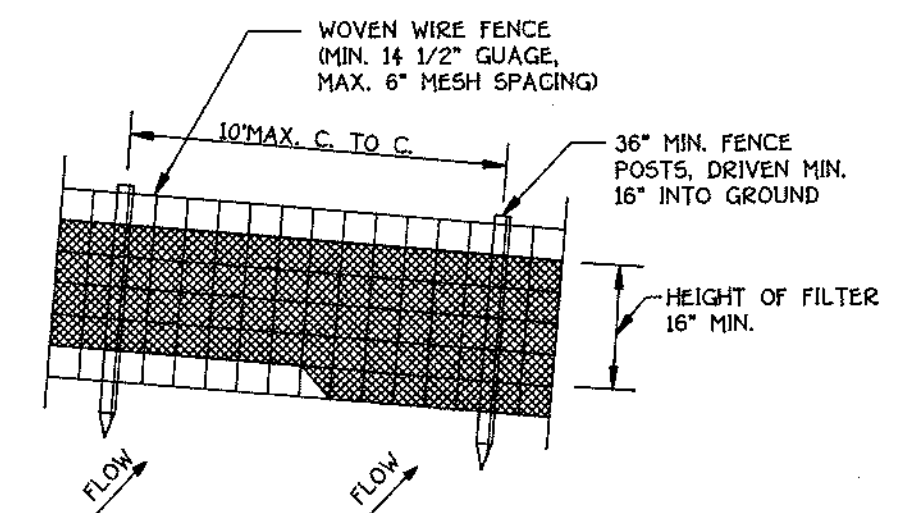
Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minutē (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

**DETAIL 23A - STANDARD INLET PROTECTION**

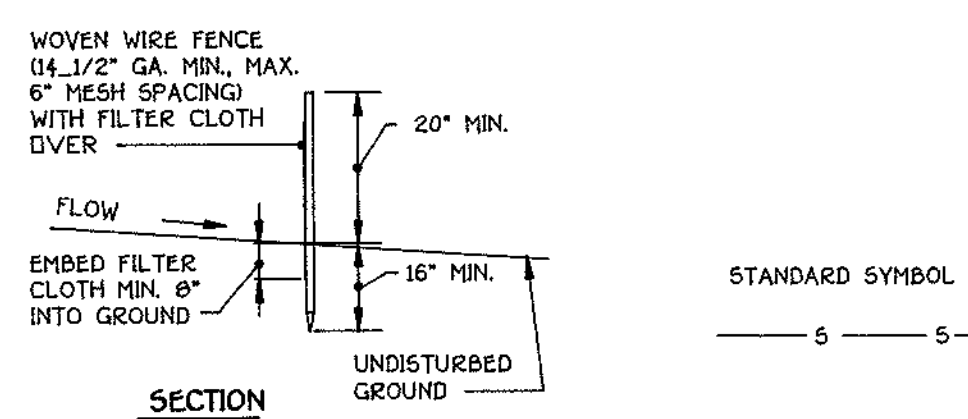


**Construction Specifications**

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.



**PERSPECTIVE VIEW**



**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OF STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**SILT FENCE**

NOT TO SCALE

**STRUCTURE SCHEDULE**

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	367.34 10	362.06 10	362.06 10	DUNLEER ROAD	L.P. STA. 0+92.55	---	A-10	S.D. 4.41
I-2	368.90 72	361.90 21	361.90 21	DUNLEER ROAD	C.L. STA. 5+98	16' LT.	A-5	S.D. 4.40
I-3	366.90 367.10	362.78 63	362.78 63	DUNLEER ROAD	C.L. STA. 6+98.4	16' RT.	A-5	S.D. 4.40
I-4	403.40 2	395.00 06	395.00 06	DUNLEER ROAD	C.L. STA. 3+20	16' RT.	A-10	S.D. 4.41
I-5	403.40	395.00 06	395.00 06	DUNLEER ROAD	C.L. STA. 3+20	16' LT.	A-5	S.D. 4.40
I-6	407.88 34	401.94 22 23	401.94 22 24	GREENHAVEN COURT	C.L. STA. 33+99.6	17' LT.	A-10	S.D. 4.41
I-7	407.28 2	---	402.28 43	GREENHAVEN COURT	C.L. STA. 33+99.6	17' RT.	A-10	S.D. 4.41
I-8	402.39 33	397.37 27	397.37 27	GREENHAVEN COURT	C.L. STA. 45+07	17' LT.	A-10	S.D. 4.41
I-9	404.84 30	399.84 37	399.84 37	GREENHAVEN COURT	C.L. STA. 44+78.4	17' RT.	A-10	S.D. 4.41
I-10	420.48 22	415.48 46	415.48 46	GREENHAVEN COURT	C.L. STA. 40+98.2	17' RT.	A-5	S.D. 4.40
I-11	420.38 04	---	415.08 41 2 34	GREENHAVEN COURT	C.L. STA. 40+98.2	17' LT.	A-10	S.D. 4.41
I-12	390.87 30	---	384.00 38 3 38	GREENHAVEN COURT	L.P. STA. 1+27.00	---	A-10	S.D. 4.41
M-1	348.00 352 22	344.00 352 64	341.00 340 02	---	N 598 558-032 2 36 E 1 358 218-032 0 22	---	STD. MH	G-5.11
M-2	369.80 07	365.40 03	365.40 03	DUNLEER ROAD	N 598 411 032 2 2 E 1 358 224-032 2 28	---	STD. MH	G-5.11
M-3	395.78 4	390.48 11	390.48 11	DUNLEER ROAD	C.L. STA. 4+99	20' RT.	STD. MH	G-5.11
M-4	404.80 31	400.68 4	400.68 4	GREENHAVEN COURT	C.L. STA. 32+40.6	18' LT.	STD. MH	G-5.11
M-5	400.00 401 28	399.00 388 19	399.00 388 19	---	N 600 386-388 3 33 E 1 356 852-388 0 21	---	STD. MH	G-5.11
M-6	387.80 03	379.00 373 63	379.00 373 63	---	N 600 018-379 0 23 E 1 356 836-379 0 23	---	STD. MH	G-5.11
M-7	365.80 75	366.80 359 45	366.80 359 45	---	N 599 946 346 0 29 E 1 356 876 346 0 29	---	STD. MH	G-5.11
M-8	356.80 14	368.00 347 75	347.00 72	---	N 599 874-356 2 49 E 1 356 904 356 2 49	---	STD. MH	G-5.11
M-9	388.00 362 64	388.00 362 36	369.00 18	---	N 600 244-388 3 26 E 1 356 572-388 2 26	---	STD. MH	G-5.11
S-1	338.00 330 11	338.00 328 61	338.00 328 55	---	N 598 856 334 2 24 E 1 358 180 330 2 24	---	CONC. END SECTION	S.D. 5.51
S-2	338.00 71	336.40 337 21	336.40 337 15	---	N 599 706-338 0 23 E 1 357 921 338 0 23	---	CONC. END SECTION	S.D. 5.51
S-3	388.00 365 36	388.00 364 61	369.00 364 61	---	N 600 257-388 2 24 E 1 356 504-388 2 24	---	CONC. END SECTION	S.D. 5.51

**TRAP DATA**

TRAP NO.	STONE OUTLET ST 1	STONE OUTLET ST 2	STONE OUTLET ST 3	STONE OUTLET ST 4	STONE OUTLET ST 5
DRAINAGE AREA	3.40 AC.	2.97 AC.	0.90 AC.	2.65 AC.	1.08 AC.
STORAGE REQUIRED	12,240 C.F.	10,692 C.F.	3,240 C.F.	9,540 C.F.	3,888 C.F.
STORAGE PROVIDED	13,672 C.F.	10,780 C.F.	3,888 C.F.	10,696 C.F.	3,980 C.F.
WEIR CREST ELEV.	335.0	353.0	341.0	365.0	365.0
BOTTOM ELEV.	331.0	350.0	338.0	361.0	362.0
DEPTH	4'	3'	3'	4'	3'
SIDE SLOPES	2:1	2:1	2:1	2:1	2:1
TOP EMBANKMENT	335.0	354.0	342.0	366.0	366.0
WEIR LENGTH	14'	10'	4'	11'	5'
CLEANOUT ELEV.	333.0	351.50	339.50	363.0	363.50

No.	Revision	Date
2	Revised top & invert elevations for structures M-1 & I-1.	7.19.04

OWNER/DEVELOPER  
MT. HEBRON, INC.  
MR. H. JONES BAKER, JR.  
2106 MT. HEBRON DRIVE  
ELLCOTT CITY, MARYLAND, 21042



Signature: *Charles J. Crovo*  
DATE: 9/16/02

SEDIMENT CONTROL NOTES & DETAILS  
**MT. HEBRON**  
SECTION 23 - PHASE 2 AND 3  
LOTS 27 - 71  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCTOBER 28, 1996  
SHEET 13 OF 14