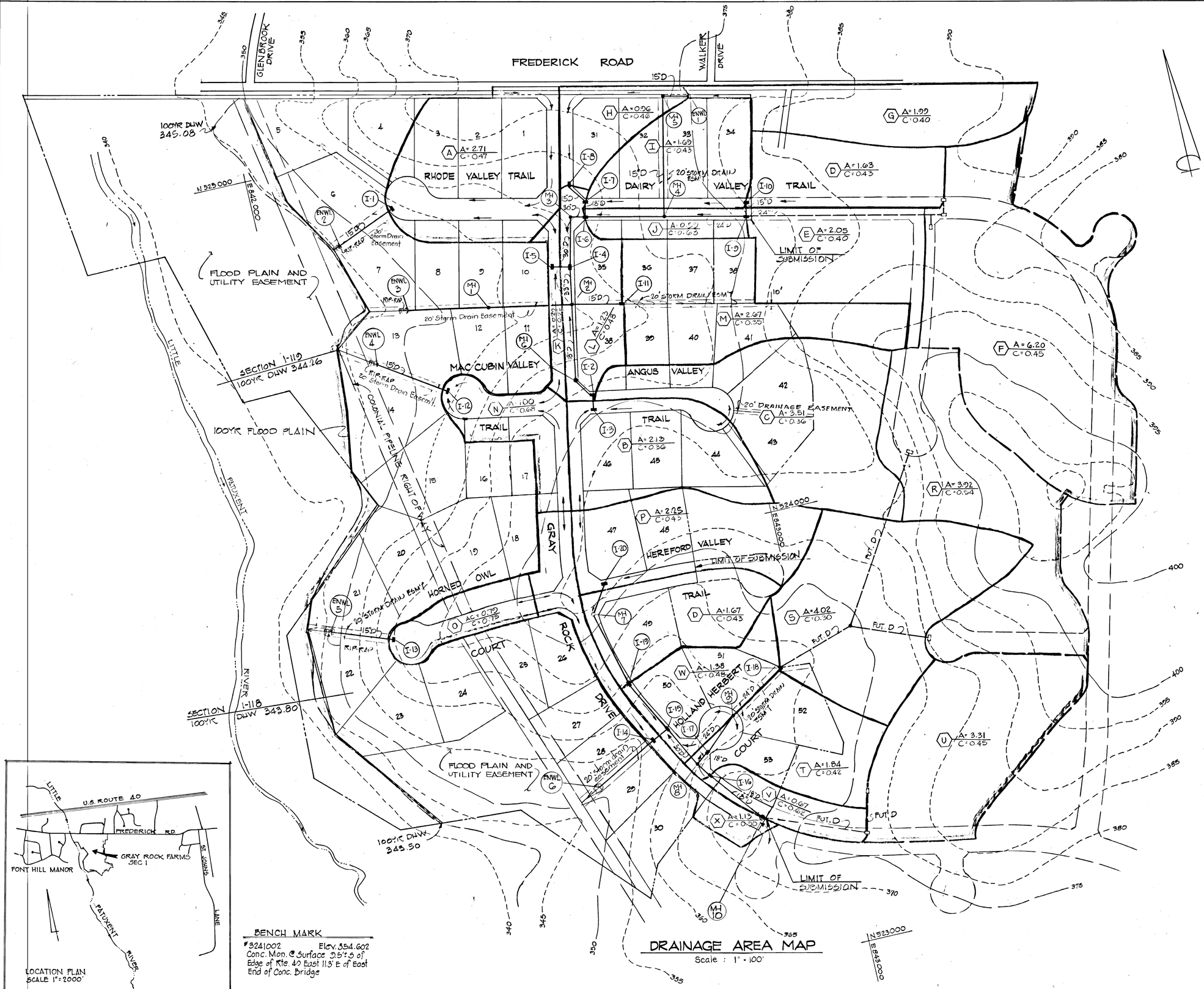
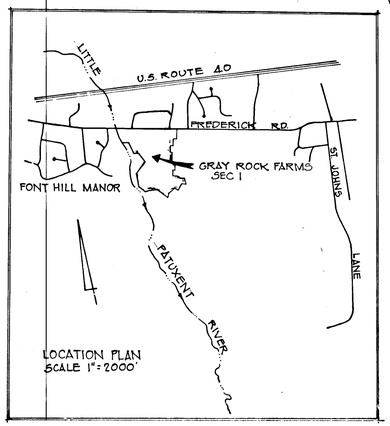


DRAINAGE AREA MAP
Scale : 1" = 100'



LOCATION PLAN
SCALE 1" = 2000'

BENCH MARK
#3241002 Elev. 354.602
Conc. Mon. @ Surface 3.5'± S of Edge of Rte. 40 East 11.3' E of East End of Conc. Bridge

DEPARTMENT OF PUBLIC WORKS

W O Talbert — 3-28-79
CHIEF, BUREAU OF ENGINEERING — DATE

John W. Mueldorfer — 3-16-79
CHIEF, DIVISION OF LAND DEVELOPEMENT — DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER & DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
DRAINAGE AREA MAP & LOCATION PLAN

SCALE : AS SHOWN — DATE

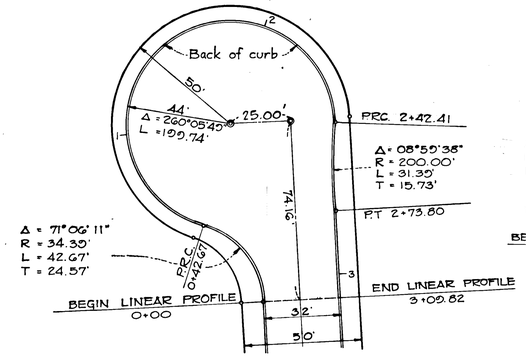
ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD 21204

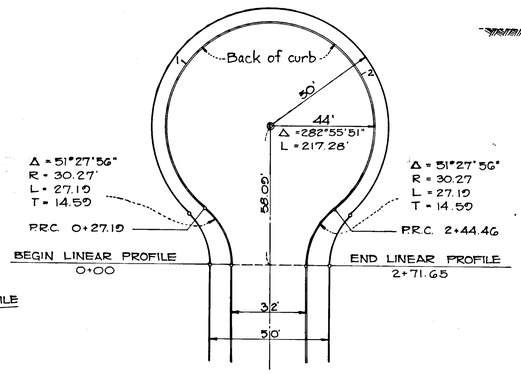
George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

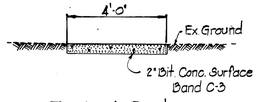
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	DRAINAGE AREA MAP & LOCATION PLAN
2.	TYPICAL CROSS SECTIONS & DETAILS
3.	PLAN & PROFILE : FREDERICK RD.
4.	PLAN & PROFILE : GRAY ROCK DRIVE 0+00 TO 10+00
5.	PLAN & PROFILE : GRAY ROCK DRIVE 10+00 TO 17+00 HOLLAND HERBERT CT.
6.	PLAN & PROFILE : RHODE VALLEY TRAIL DAIRY VALLEY TRAIL 0+00 TO 4+35
7.	PLAN & PROFILE : MAC CUBIN VALLEY TRAIL ANGUS VALLEY TRAIL
8.	PLAN & PROFILE : HORNED OWL COURT HEREFORD VALLEY TRAIL
9.	STORM DRAIN PROFILES
10.	STORM DRAIN PROFILES
11.	SEDIMENT CONTROL
12.	SEDIMENT CONTROL
13.	STORM WATER MANAGEMENT PLAN POND #1
14.	STORM WATER MANAGEMENT PROFILES POND #1
15.	STORM WATER MANAGEMENT PLAN POND #2
16.	STORM WATER MANAGEMENT PROFILES POND #2
17.	LANDSCAPE PLAN

NOTE : All dimensions are to back of curb.







Typical Section
PATH WAY
No Scale

OFFSET CUL DE SAC

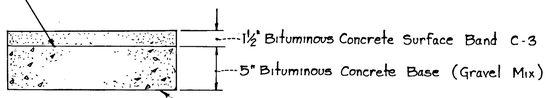
SYMMETRICAL CUL DE SAC

CUL DE SAC DETAILS

Scale : 1" = 30'

A Tack Coat is required in accordance with Section C-31-4 of Howard County Road Construction Code and Std. Spec's.

Clearing & Grading	Article	C-1
Subgrade	Article	C-2
Base Course	Article	C-33
Surface Course	Article	C-31



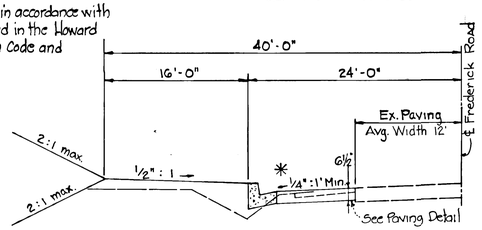
To be constructed in accordance with the Howard County Road Construction Code & Specifications.

The Base will be primed in accordance with Section C-30-3 as provided in the Howard County Road Construction Code and Std. Spec's.

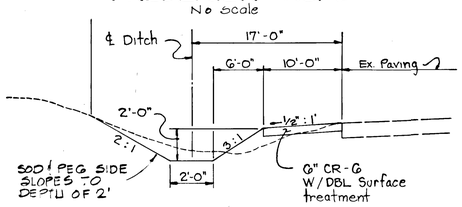
PAVING DETAIL

Not to Scale

* NOTE : See road profile for top of curb grades from sta. -1+00 to sta. 0+50



TYPICAL SECTION
STA -2+48 TO STA 2+48
FREDERICK ROAD
No Scale



TYPICAL SHOULDER SECTION
FREDERICK ROAD
No Scale

SHALLOW MANHOLE DETAIL

Not to scale

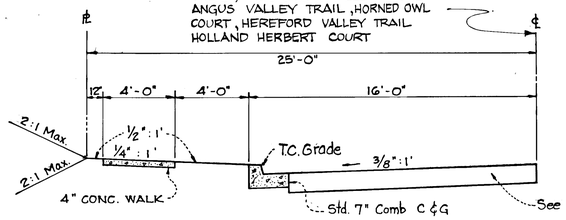
DITCH SECTION CAPACITY

D = 2.0'
A = 16.0
WP = 14.64'
R = 1.00
S = 2.60% AVG
n = 0.025
Q = 161.3 CFS

GENERAL NOTES

1. Traffic Control Devices and their installation shall be in accordance with the Manual on Uniform Traffic Control Devices. 1971 Revised Edition.
2. All reinforced concrete for storm drain structures shall have minimum 28 days strength of 3500 p.s.i.
3. A 7"- inch curb shall be used on all cul-de-sacs on a desending grade.
4. Existing utilities poles shall be relocated at developers expense. They shall be notified 24 hours in advance before starting work.

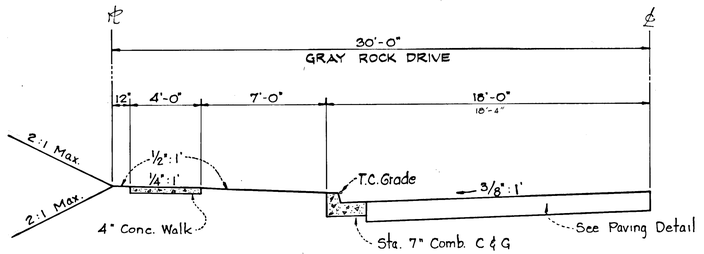
RHODE VALLEY TRAIL , DAIRY VALLEY TRAIL , MAC CUBIN VALLEY TRAIL ANGUS VALLEY TRAIL ,HORNED OWL COURT , HEREFORD VALLEY TRAIL HOLLAND HERBERT COURT



32' PAVING ON 50' R/W

Design Speed = 30 M.P.H.
Zoning = R-12

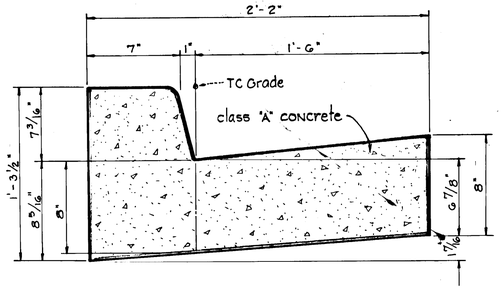
See Howard County Road Construction Code & Std. Specs. Dwg D-17



36' PAVING ON 60' R/W

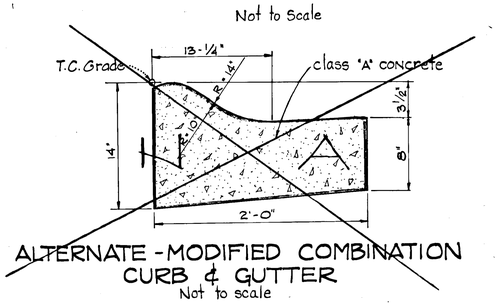
TYPICAL ROADWAY SECTIONS

Scale : ¼" = 1'-0"



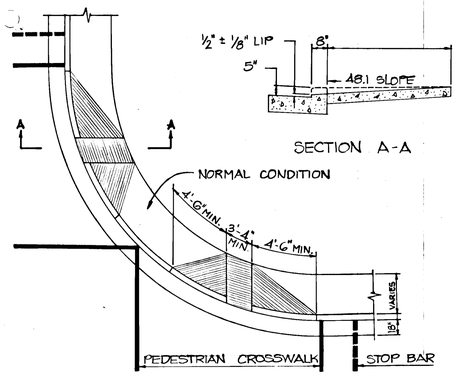
STANDARD 7" COMBINATION CURB & GUTTER

Not to Scale



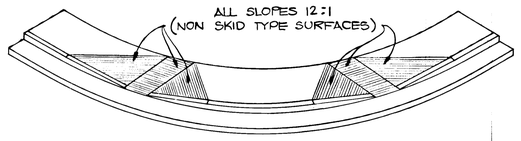
ALTERNATE - MODIFIED COMBINATION CURB & GUTTER

Not to scale



PLAN VIEW

SIDEWALK RAMP DETAILS



ISOMETRIC VIEW

DEPARTMENT OF PUBLIC WORKS
Robert W. Wilson 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING AND ZONING
Edward D. Macdonald 3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER:
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
TYPICAL SECTIONS & DETAILS

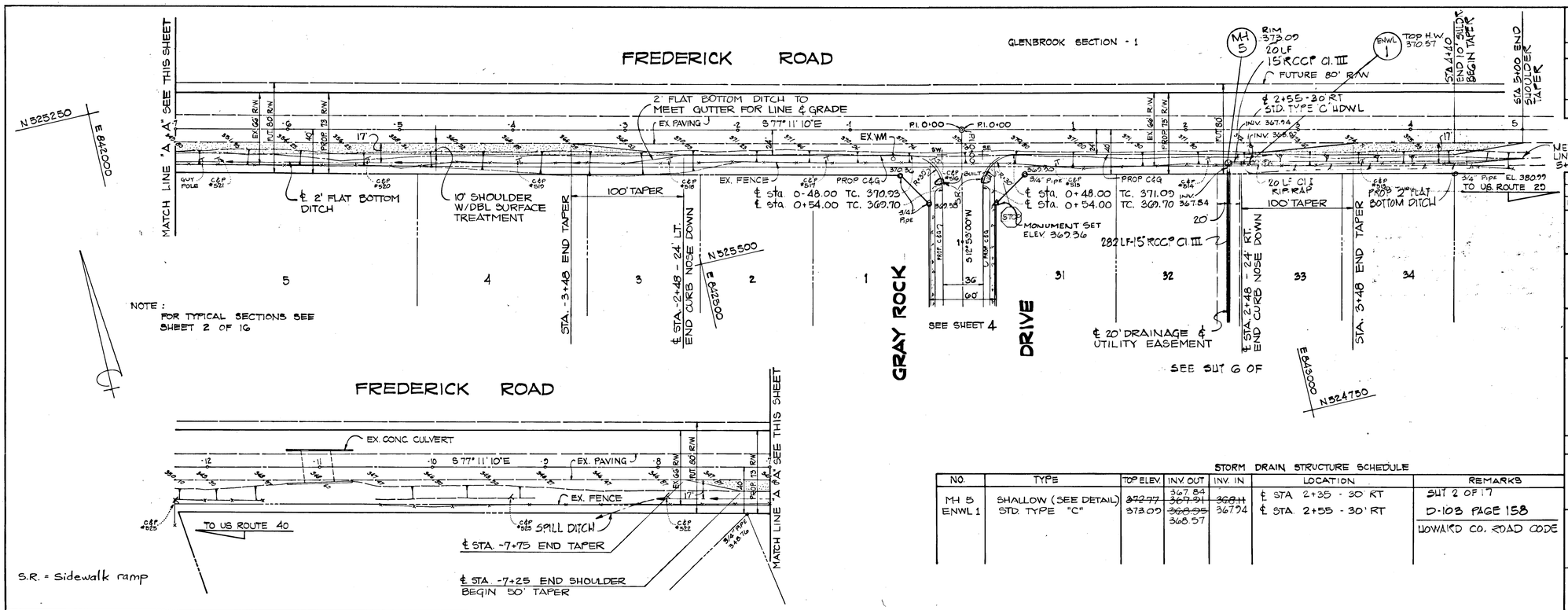
SCALE : AS SHOWN DATE

ENGINEER :
KIDDE CONSULTANTS, INC.
1020 CROMWELL BRIDGE ROAD
TOWSON, MD. 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
No 6510

#342

F-79-58



STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INV. OUT	INV. IN	LOCATION	REMARKS
MH 5	SHALLOW (SEE DETAIL)	~~372.77~~	~~367.84~~			
			~~367.91~~	~~368.11~~	℄ STA 2+35 - 30 RT	SHT 2 OF 17
ENWL 1	STD. TYPE "C"	373.09	~~368.95~~ 368.57	367.94	℄ STA. 2+55 - 30' RT	D-108 PAGE 158
						HOWARD CO. ROAD CODE

DEPARTMENT OF PUBLIC WORKS
W O Fulbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE
OFFICE OF PLANNING AND ZONING
John W. Macelwee 3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
9033 BALTIMORE NATIONAL PIKE
ELLICOTT CITY MD. 21043

PROJECT AREA
GRAY ROCK FARM
SECTION 1 AREA 1

PROJECT TITLE
PLAN & PROFILE
FREDERICK ROAD

SCALE : AS SHOWN DATE

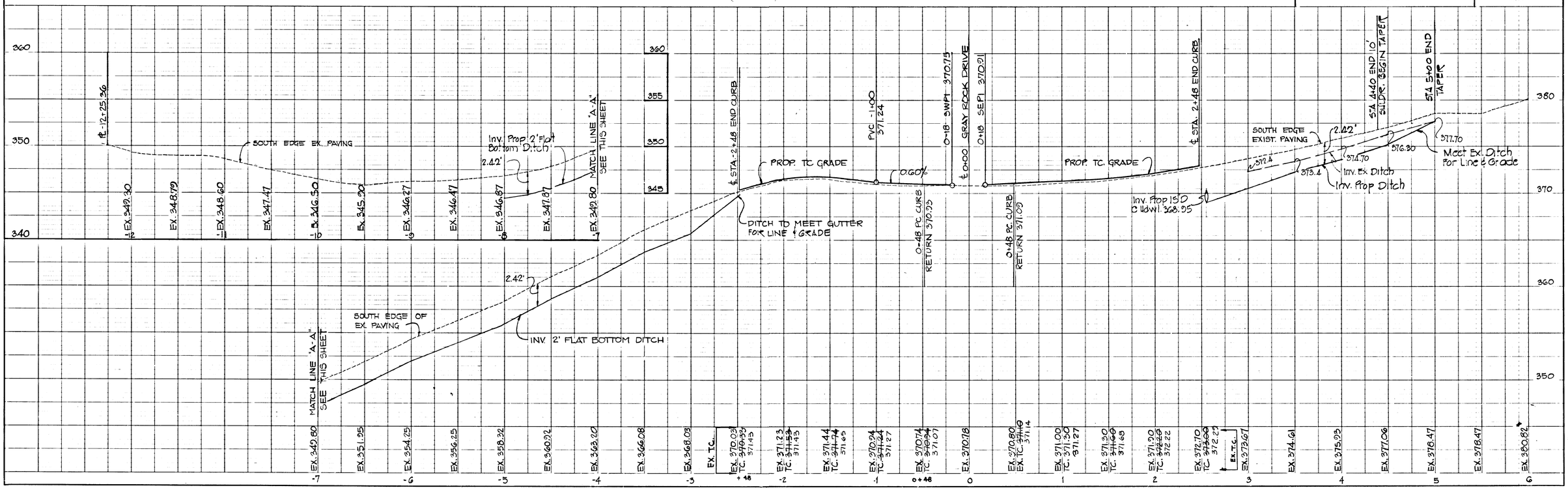
ENGINEER
KIDDE CONSULTANTS, INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

GEORGE LAMBROSE
REGISTERED PROFESSIONAL ENGINEER
NO. 6515

STATE OF MARYLAND — GEORGE LAMBROSE — REGISTERED PROFESSIONAL ENGINEER

PLAN — SURVEYED, DRAWN, NOTE BOOK, ALIGNMENT CHECKED, GRADES CHECKED, R. W. L. W.I.D., STRUCTURE LOCATIONS CHECKED, No., BY, DATE

PROFILE — SURVEYED, DRAWN, NOTE BOOK, GRADES CHECKED, R. W. L. W.I.D., STRUCTURE LOCATIONS CHECKED, No., BY, DATE



K&E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO. 48 7024 MADE IN U.S.A.

#242

F-79-58

SHEET 3 OF 17

STORM DRAIN STRUCTURE SCHEDULE						
NO.	TYPE	TOP ELEV.	INV. OUT	INV. IN	LOCATION	REMARK
I-5	A-5 (2.5' WIDE) TC	359.06	355.71	—	℄ 4+00 GRAY ROCK DR.	64A, PAGE 119-A
I-4	A-5 (3.5 WIDE) TC	359.10	353.35	354.85	℄ 4+00 GRAY ROCK DR.	64A, PAGE 119-A
MH2	STD. MANHOLE LID	360.21	352.56	352.71	℄ 5+11± " - 21' LEFT	D-103 PAGE 158
I-11	S GRATE	361.12	357.72	—	SEE PLAN	D-98 PAGE 153
MH6	STD. MANHOLE	366.34	360.83	361.03	℄ 6+87.00 " - 22' LEFT	D-103 PAGE 158
I-2	A-10 (2.5' WIDE) TC	368.46	363.86	364.01	℄ 0+58.00 ANGUS VALLEY TRAIL	64-A PAGE 119-A
I-3	A-5 (2.5' WIDE) TC	368.56	364.46	—	℄ 0+55.50 " " "	64-A PAGE 153

HOWARD CO. ROAD CODE

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

Approved Wes Earp Date 4-2-79
Howard S.C.D.

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements
C.W. Bradtt Date 4/2/79
Signature
U.S. Soil Conservation Service

DEPARTMENT OF PUBLIC WORKS
W O Filbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING
John W. Mussehian 3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO	REVISION	DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

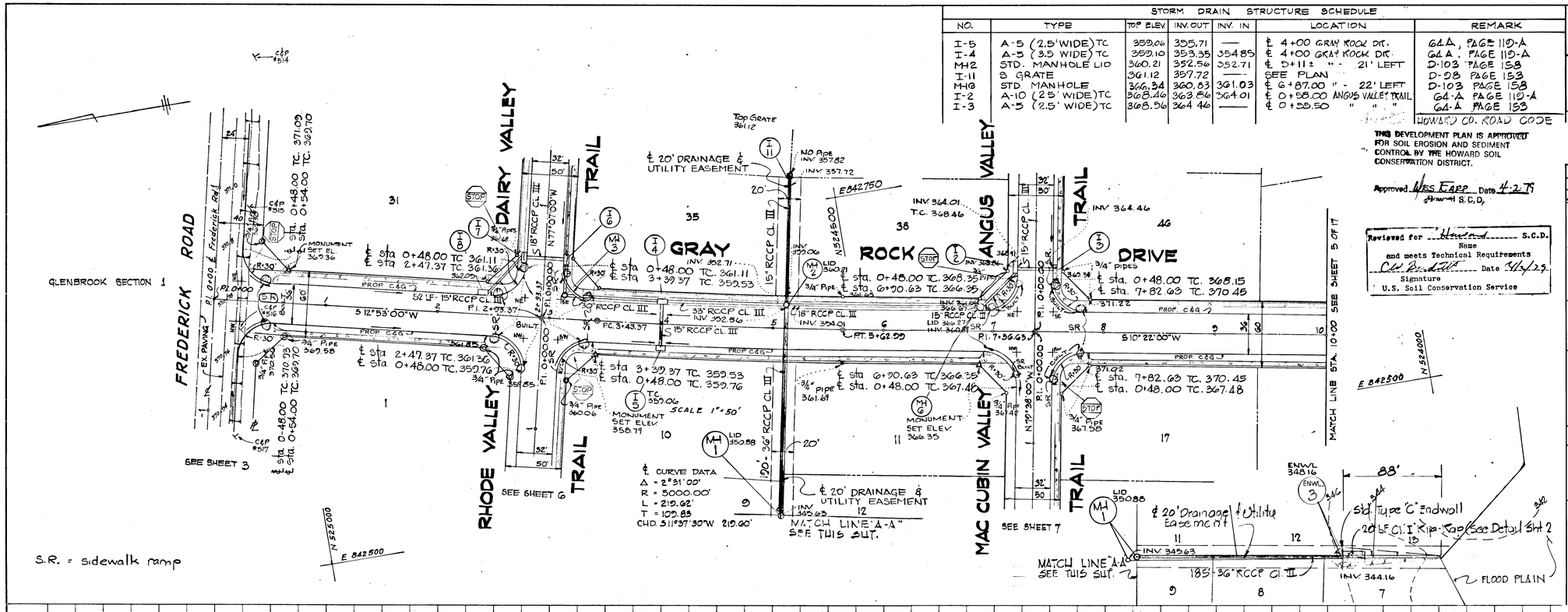
PROJECT AREA:
GRAY ROCK FARM
SECTION 1

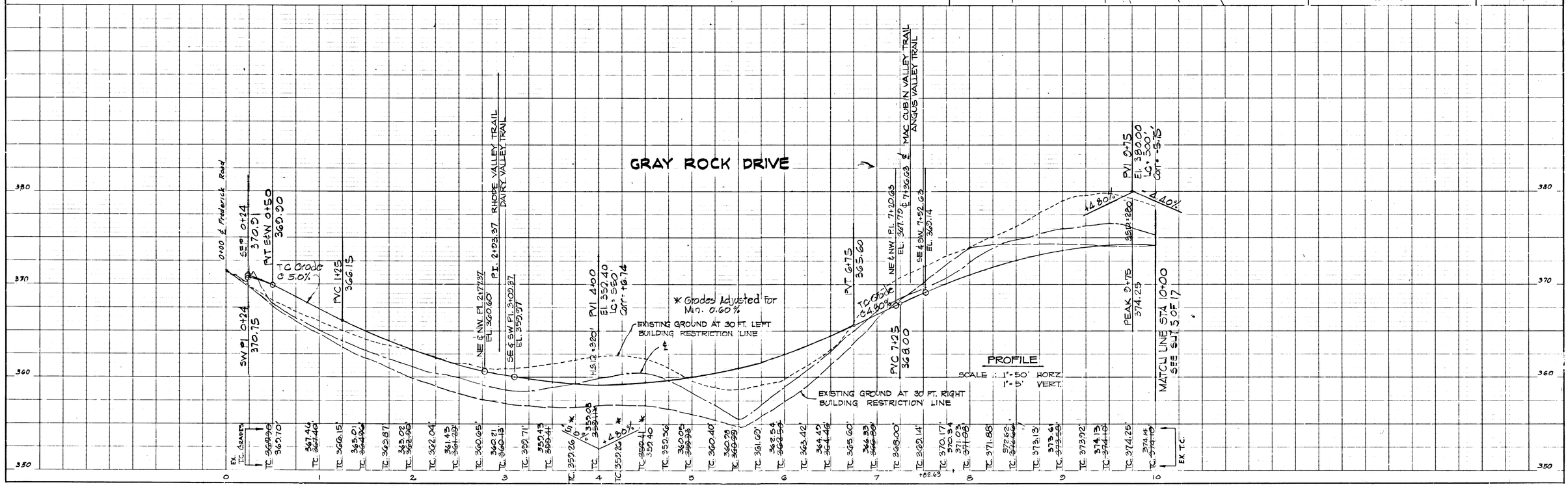
PROJECT TITLE
PLAN AND PROFILE
GRAY ROCK DRIVE
STA. 0+00 TO 10+00

SCALE AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
No. 6519





PLAN
NOTE BOOK
No.

PROFILE
NOTE BOOK
No.

#242

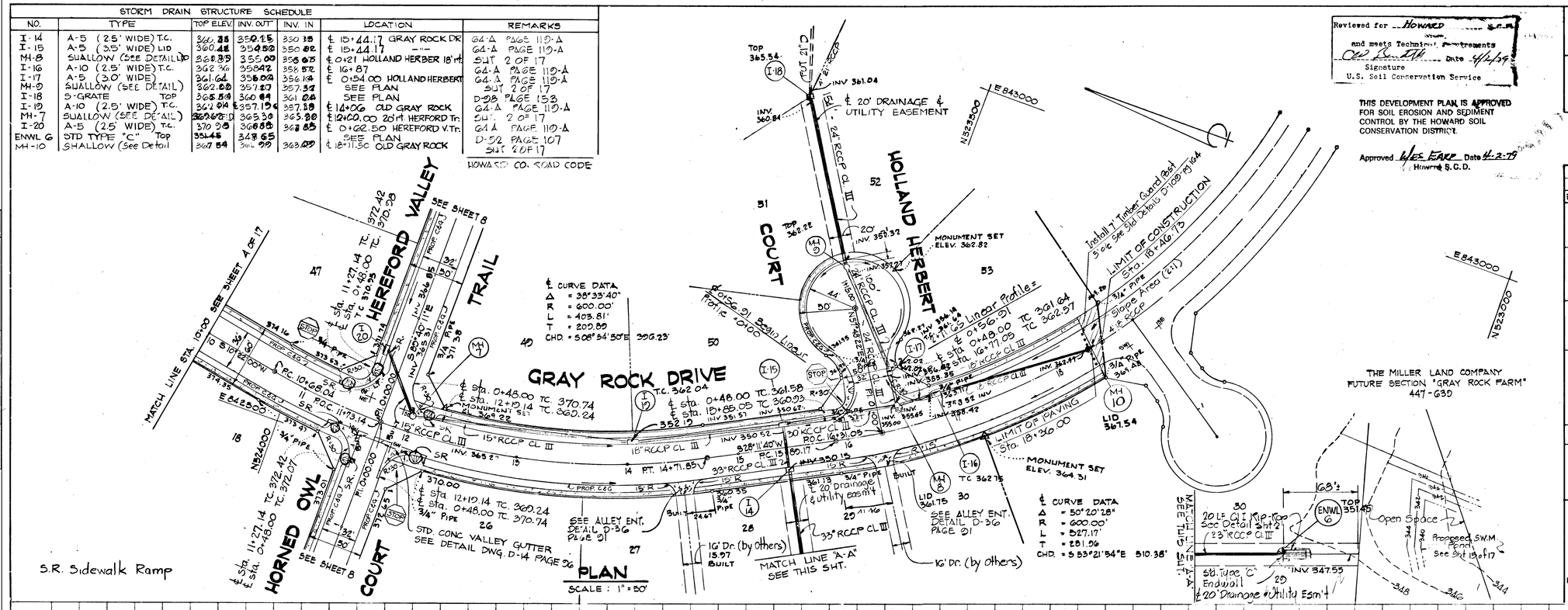
K+E PLATE 1, PLAN PROFILE KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

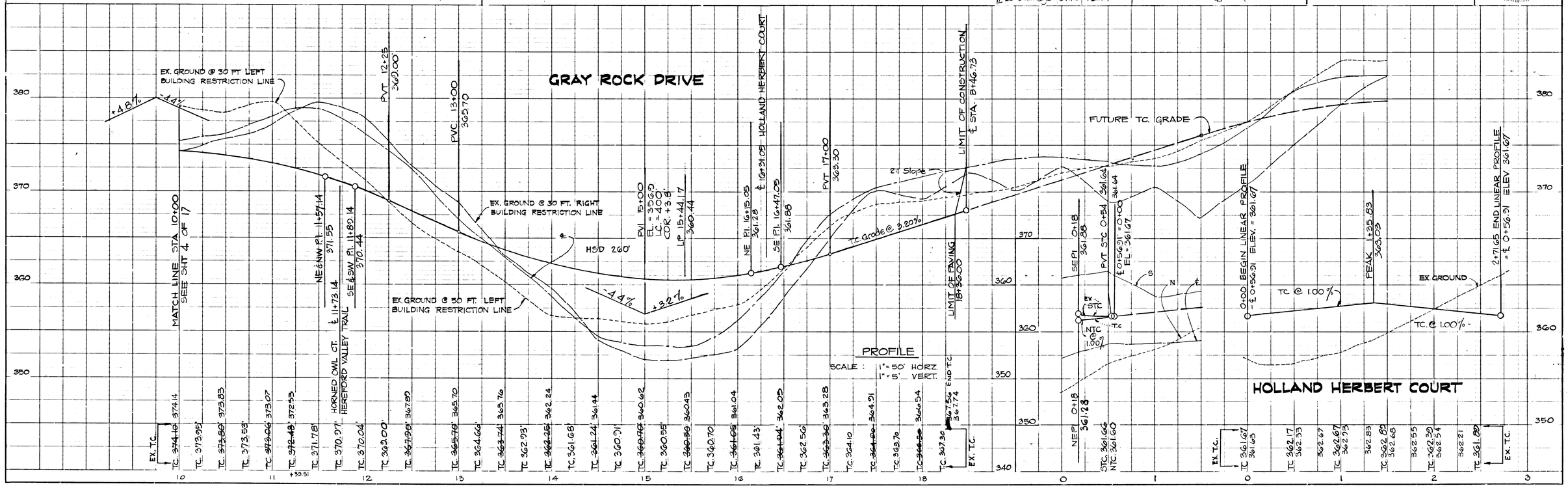
F-79-58

SHEET 4 OF 17

STORM DRAIN STRUCTURE SCHEDULE						
NO.	TYPE	TOP ELEV.	INV. OUT	INV. IN	LOCATION	REMARKS
I-14	A-5 (2.5' WIDE) T.C.	360.38	350.15	350.35	℄ 15+44.17 GRAY ROCK DR	G4-A PAGE 119-A
I-15	A-5 (3.5' WIDE) LID	360.41	350.50	350.82	℄ 15+44.17 -"-	G4-A PAGE 119-A
MH-8	SHALLOW (SEE DETAIL)	360.89	355.00	355.65	℄ 0+21 HOLLAND HERBER 18' rt.	SHT 2 OF 17
I-16	A-10 (2.5' WIDE) T.C.	362.36	358.42	358.52	℄ 16+87	G4-A PAGE 119-A
I-17	A-5 (3.0' WIDE)	361.64	356.04	356.14	℄ 0+54.00 HOLLAND HERBERT	G4-A PAGE 119-A
MH-9	SHALLOW (SEE DETAIL)	362.00	357.20	357.32	SEE PLAN	SHT 2 OF 17
I-18	S-GRATE TOP	365.54	360.84	361.04	SEE PLAN	D-98 PAGE 153
I-19	A-10 (2.5' WIDE) T.C.	362.04	℄ 357.19	357.38	℄ 14+06 OLD GRAY ROCK	G4-A PAGE 119-A
MH-7	SHALLOW (SEE DETAIL)	362.62	365.30	365.80	℄ 12+00.00 20' rt. HERFORD Tr.	SHT 2 OF 17
I-20	A-5 (2.5' WIDE) T.C.	370.98	368.88	368.85	℄ 0+62.50 HEREFORD V. Tr.	G4-A PAGE 119-A
ENWL 6	STD TYPE "C" Top	351.45	348.65		SEE PLAN	D-52 PAGE 107
MH-10	SHALLOW (See Detail	367.54	361.99	363.09	℄ 18+11.50 OLD GRAY ROCK	SHT 2 OF 17

HOWARD CO. ROAD CODE





Reviewed for HOWARD S.C.D. and meets Technical Requirements
Signature
U.S. Soil Conservation Service
Date 4/2/79

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

Approved Wes Earp Date 4-2-79
Howard S.C.D.

DEPARTMENT OF PUBLIC WORKS
W O Lilbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING
3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
PLAN & PROFILE
GRAY ROCK DRIVE
HOLLAND HERBERT COURT
STA. 10+00 to STA 18+27

SCALE AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

PLAN
NOTE BOOK
No.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED

PROFILE
NOTE BOOK
No.
DESIGNED
PLOTTED
GRADE CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHECKED

#242

K&E PLATE 1, PLAN PROFILE KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

F-79-58

SHEET 5 OF 17

DEPARTMENT OF PUBLIC WORKS
W O Falbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING AND ZONING
John W. Mascheron 3/16/79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER:
THE MILLER LAND COMPANY
5035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD, 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
PLAN AND PROFILE
RHODE VALLEY TR. & DAIRY VALLEY TR.
STA. 0+00 TO 4+35 STA. 0+00 TO 3+50

SCALE = AS SHOWN DATE

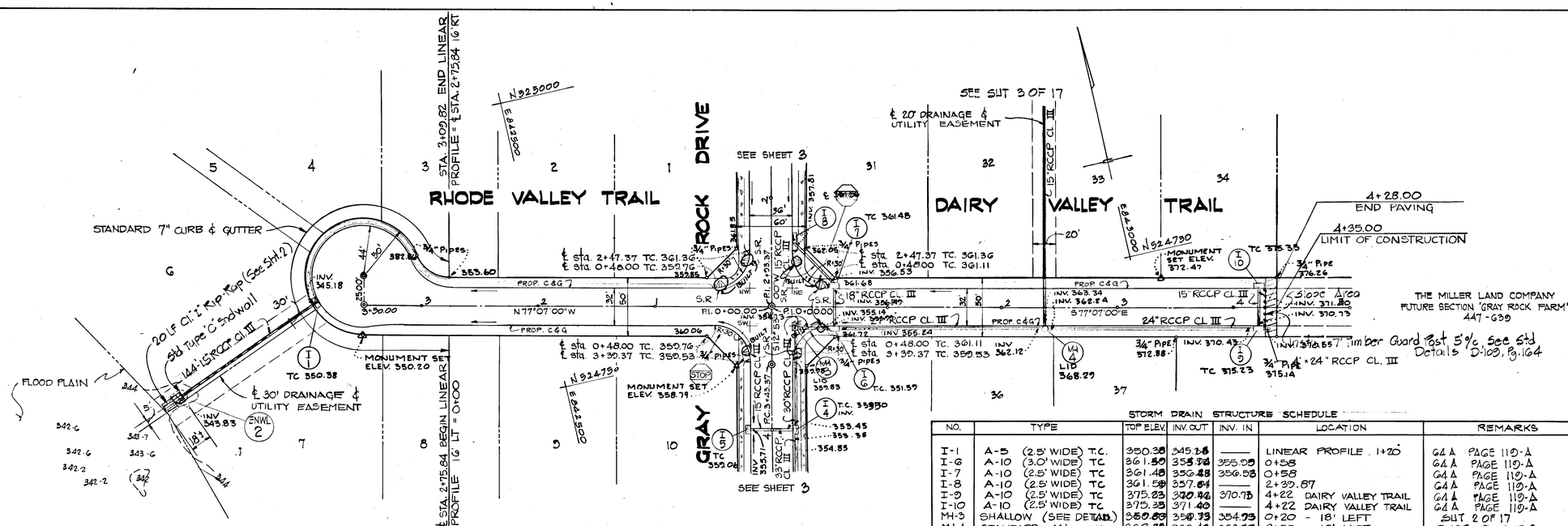
ENGINEER:
KIDDE CONSULTANTS, INC.
1020 CROMWELL BRIDGE ROAD
TOWSON, MD, 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
N°6819

STATE OF MARYLAND — GEORGE LAMBROS — No. 6819 — REGISTERED PROFESSIONAL ENGINEER

PLAN — SURVEYED — DRAWN — TRACED — NOTE BOOK — ALIGNMENT CHECKED — DATE — BY — No. — STRUCTURE LOCATIONS CHECKED — S. W. V. NOTED

PROFILE — SURVEYED — DRAWN — TRACED — NOTE BOOK — GRADES CHECKED — DATE — BY — No. — STRUCTURE LOCATIONS CHECKED — S. W. V. NOTED

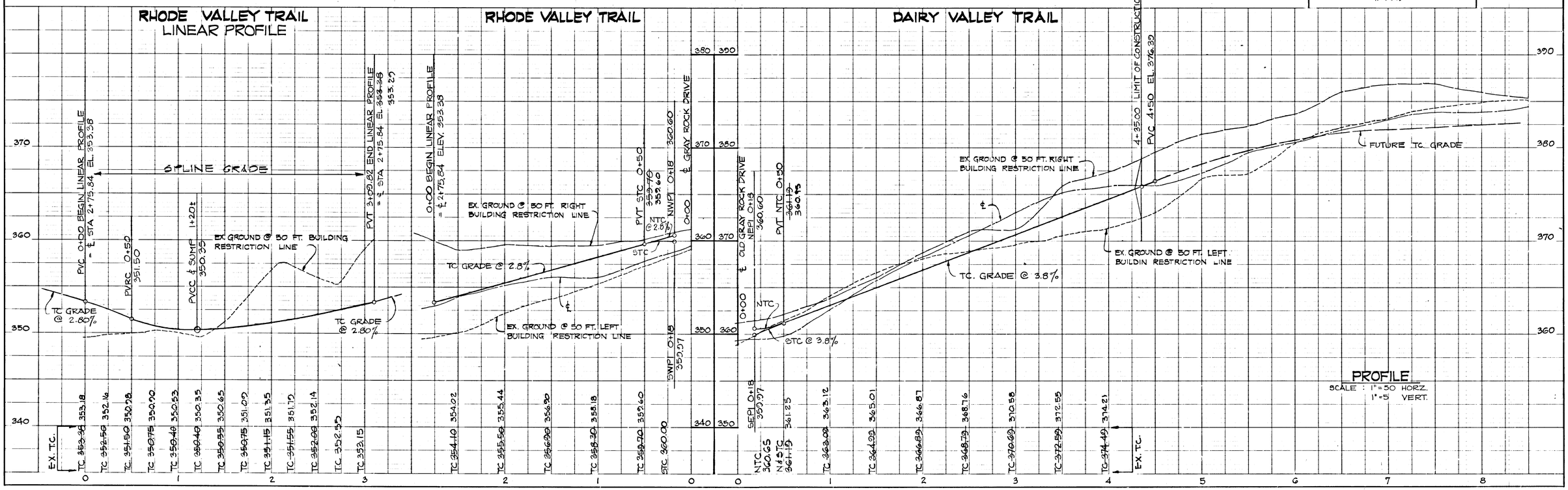


STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INV. OUT	INV. IN	LOCATION	REMARKS
I-1	A-5 (2.5' WIDE) T.C.	350.38	345.38	———	LINEAR PROFILE 1+20	G&A PAGE 110-A
I-6	A-10 (3.0' WIDE) TC	361.50	355.98	355.58	0+58	G&A PAGE 110-A
I-7	A-10 (2.5' WIDE) TC	361.48	356.48	356.08	0+58	G&A PAGE 110-A
I-8	A-10 (2.5' WIDE) TC	361.58	357.64	———	2+39.87	G&A PAGE 110-A
I-9	A-10 (2.5' WIDE) TC	375.23	370.86	370.73	4+22 DAIRY VALLEY TRAIL	G&A PAGE 110-A
I-10	A-10 (2.5' WIDE) TC	375.35	371.40	———	4+22 DAIRY VALLEY TRAIL	G&A PAGE 110-A
MH-3	SHALLOW (SEE DETAIL)	360.80	356.33	354.73	0+20 - 18' LEFT	SHT 2 OF 17
MH-4	STANDARD MH LID	368.29	362.40	362.30	2+35 - 18' LEFT	D-103 PAGE 158

HOWARD CO. ROAD CODE

RHODE VALLEY TRAIL
LINEAR PROFILE



PROFILE
SCALE: 1"=50 HORZ.
1"=5 VERT.

#242

K&E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO. 48 7024 MADE IN U.S.A.

F-79-58

SHEET 6 OF 17

STORM DRAIN STRUCTURE SCHEDULE						
NO.	TYPE	TOP ELEV	INV. OUT	INV. IN	LOCATION	REMARKS
I-12 ENWL	A-5 (2.5' WIDE)	356.26 / 345.00	350.76 / 343.00	——	1+50 SUMP MAC CUBIN VALLEY TR.	G4-A PAGE 110-A HOWARD CO. ROAD CODE

DEPARTMENT OF PUBLIC WORKS
W.O. Talbert 3.29.79
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING AND ZONING
John W. Muddiman 3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER:
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

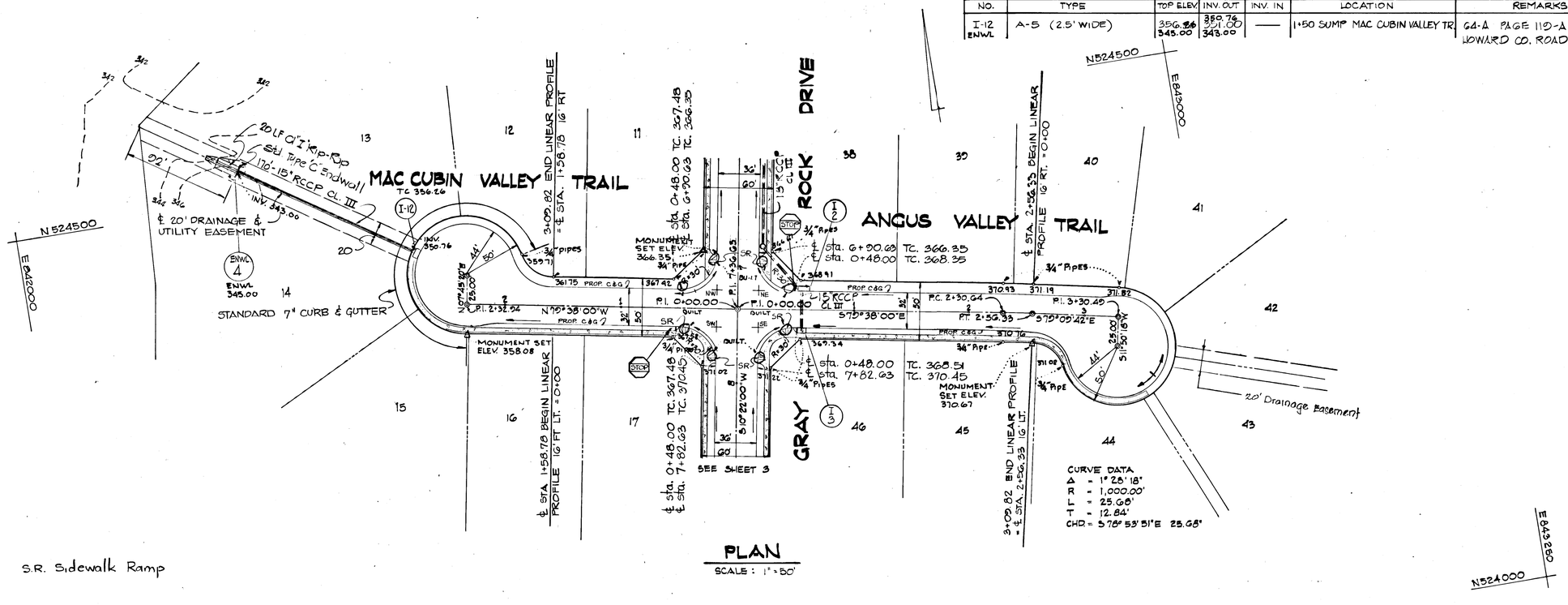
PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
PLAN & PROFILE
MAC CUBIN VALLEY TRAIL
ANGUS VALLEY TRAIL

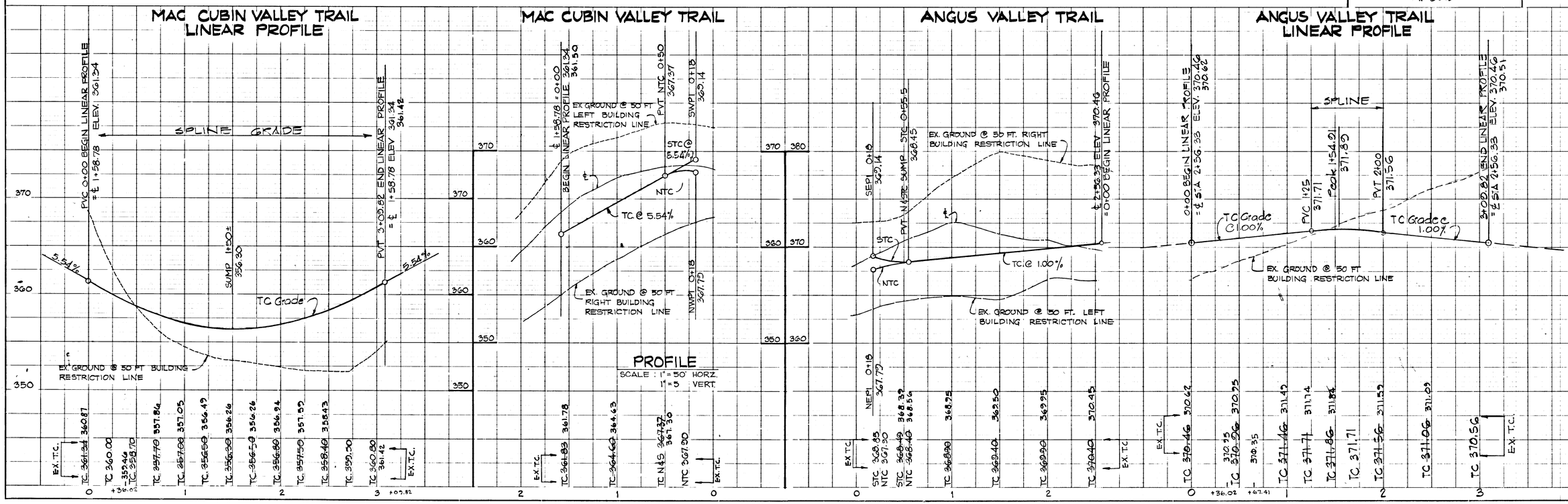
SCALE: AS SHOWN DATE

ENGINEER:
KIDDE CONSULTANTS, INC.
1020 CROMWELL BRIDGE ROAD
TOWSON, MD. 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
No. 6819



PLAN
SCALE: 1" = 50'



PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.

K+E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO. 48 7074 MADE IN U.S.A.

#242

F-79-58

SHEET 7 OF 17

DEPARTMENT OF PUBLIC WORKS

W O Gilbert 3-29-79

CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING

John W. Macgill Thum 3-26-79

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
5035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
PLAN AND PROFILE
HORNED OWL COURT
HEREFORD VALLEY TRAIL

SCALE AS SHOWN DATE

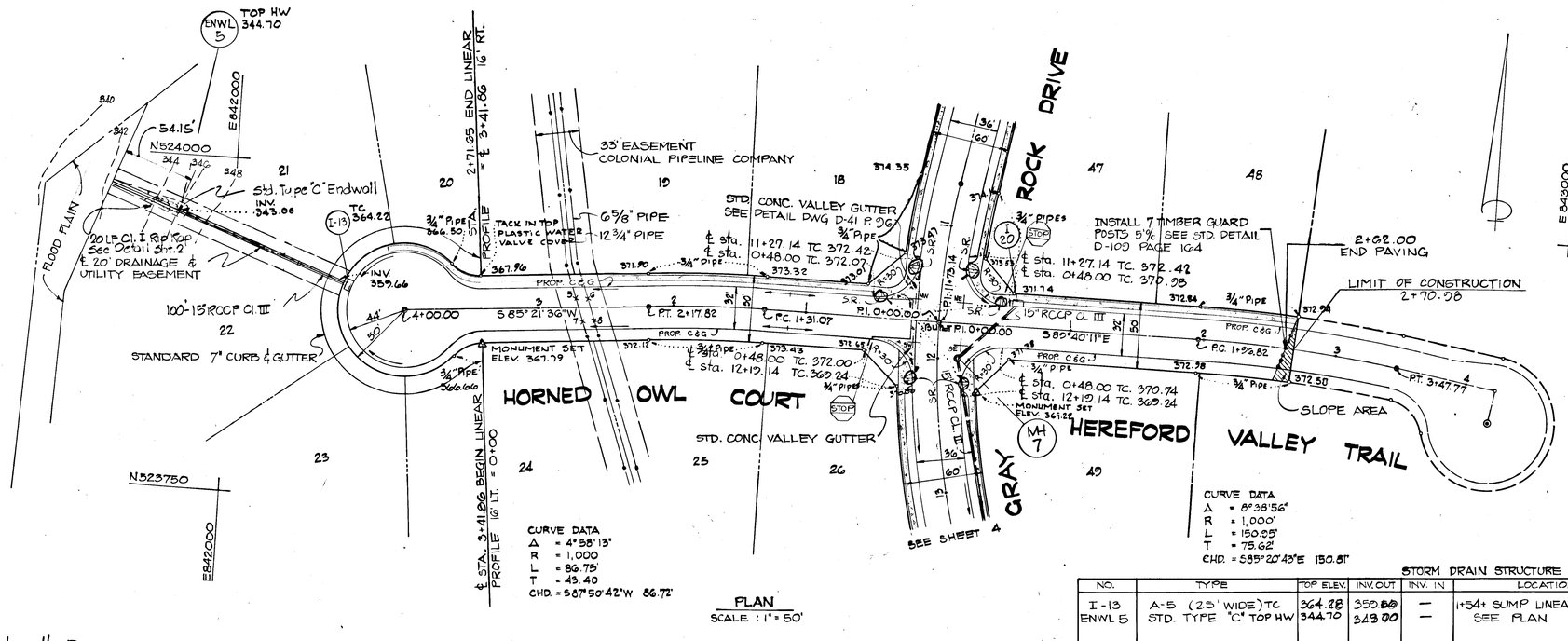
ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

George Lambros

GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. G519

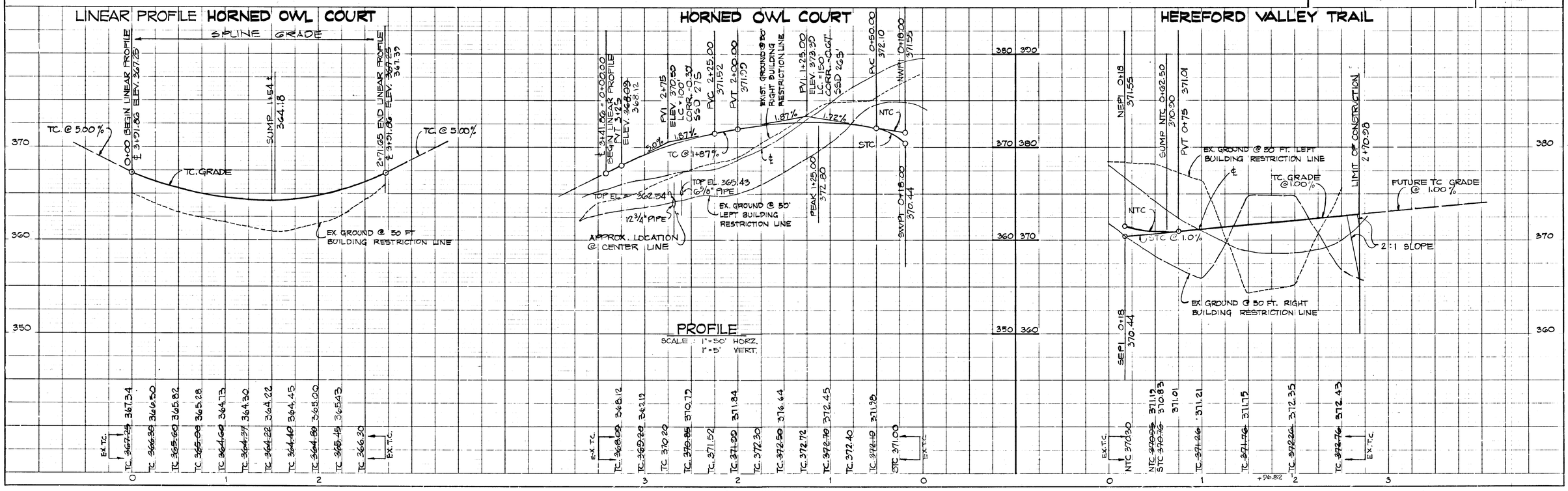
PLAN — SURVEYED, PLOTTED, NOTE BOOK, ALIGNMENT CHECKED, BY, DATE, NO.

PROFILE — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, BY, DATE, NO., ALL UTILITIES SHOWN CHECKED



STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INV. OUT	INV. IN	LOCATION	REMARK
I-13	A-5 (2.5' WIDE) TC	364.28	359.66	—	1+54± SUMP LINEAR PROFILE	G&A PAGE 110-A
ENWL 5	STD. TYPE "C" TOP HW	344.70	343.00	—	SEE PLAN	2UT 2 OF 17
						HOWAR CO. ROAD CODE

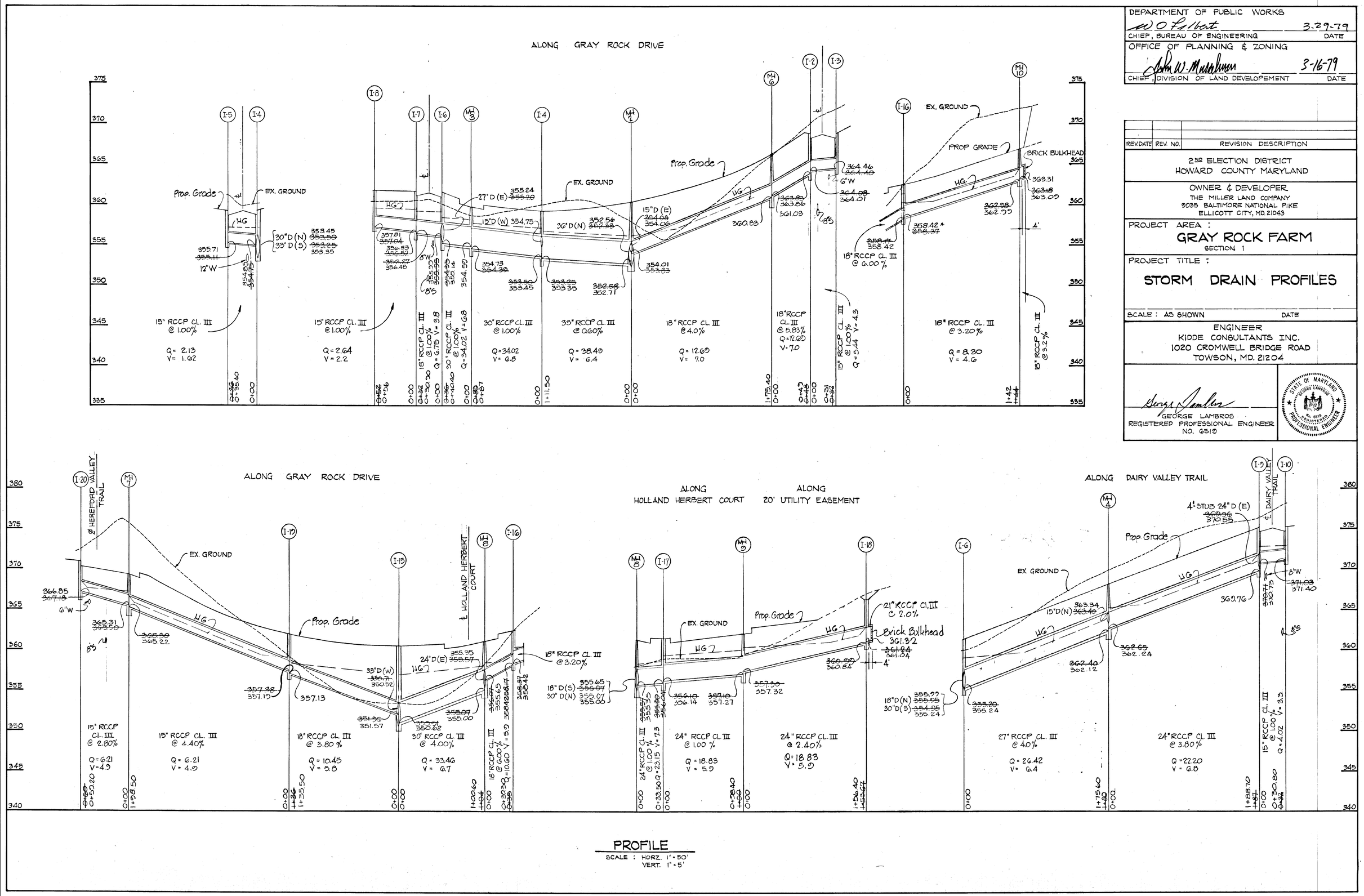


K&E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO. 48 7024 MADE IN U.S.A.

#242

F-79-58

SHEET 8 OF 17



DEPARTMENT OF PUBLIC WORKS

W O Filbert — 3-29-79

CHIEF, BUREAU OF ENGINEERING — DATE

OFFICE OF PLANNING & ZONING

John W. Musselman — 3-16-79

CHIEF, DIVISION OF LAND DEVELOPEMENT — DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY MARYLAND

OWNER & DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA :
GRAY ROCK FARM
SECTION 1

PROJECT TITLE :
STORM DRAIN PROFILES

SCALE : AS SHOWN — DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE ROAD
TOWSON, MD. 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

STATE OF MARYLAND — GEORGE LAMBROS — No. 6519 — REGISTERED PROFESSIONAL ENGINEER

#242

F-79-58

SHEET 9 OF 17

DEPARTMENT OF PUBLIC WORKS
W O Herbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE
OFFICE OF PLANNING & ZONING
5-16-79
CHIEF, DIVISION OF LAND DEVELOPEMENT DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY MARYLAND

OWNER & DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA :
GRAY ROCK FARM
SECTION 1

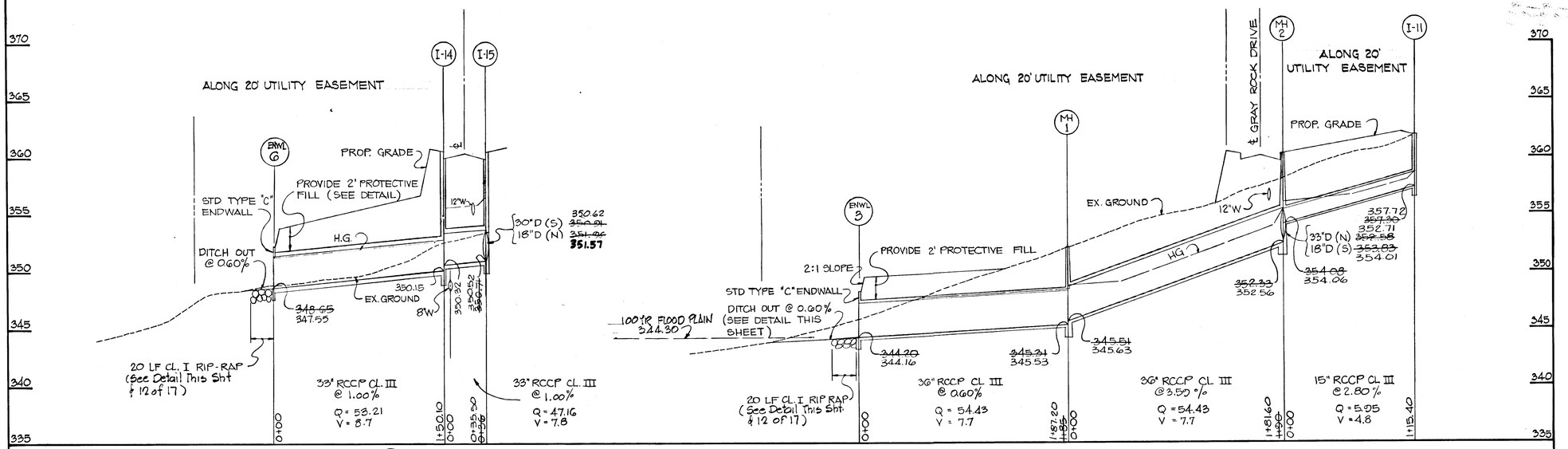
PROJECT TITLE :
STORM DRAIN PROFILES

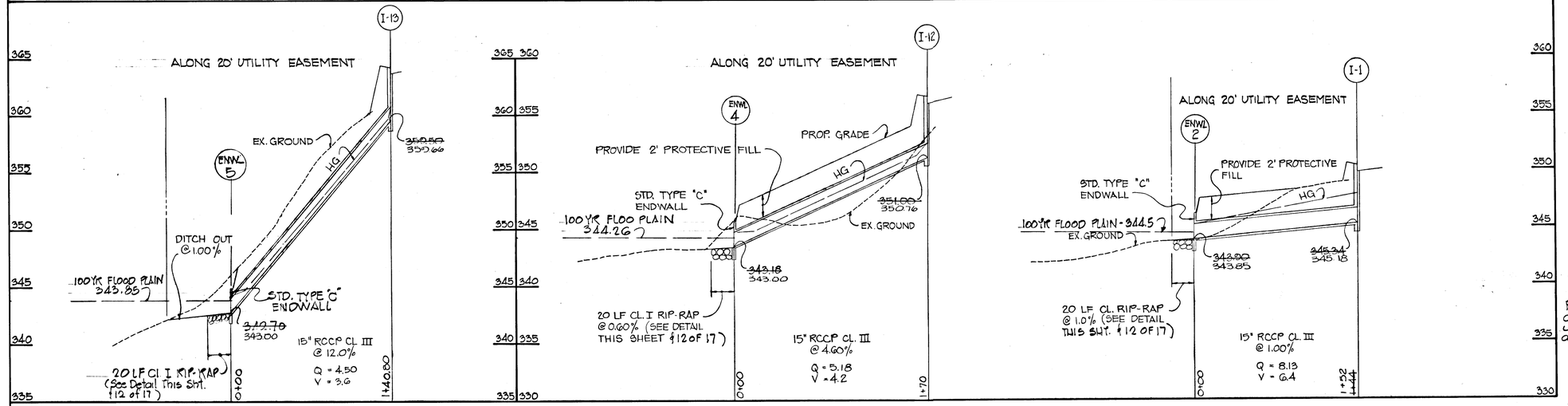
SCALE : AS SHOWN DATE

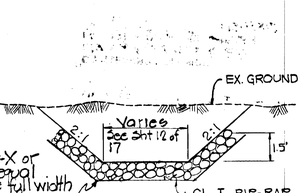
ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE ROAD
TOWSON, MD. 21204

George Lambrose
GEORGE LAMBROSE
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

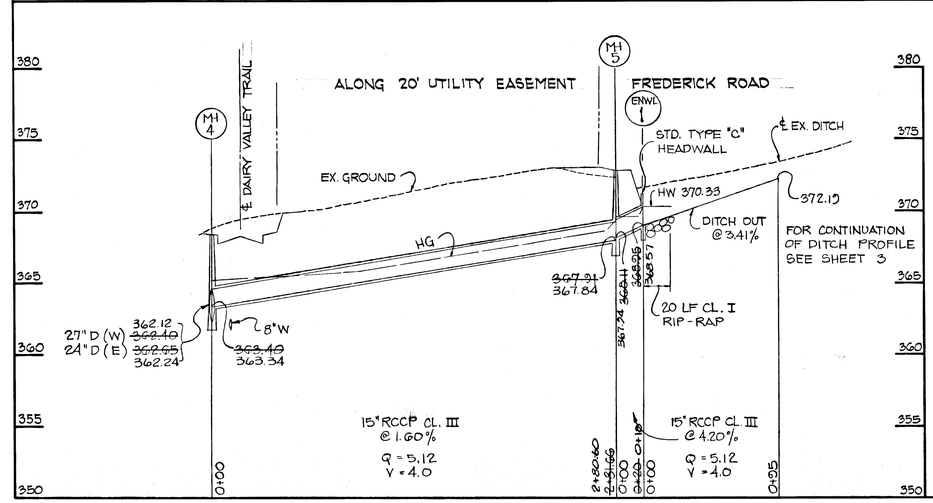
STATE OF MARYLAND · GEORGE LAMBROSE · NO. 6519 · REGISTERED PROFESSIONAL ENGINEER



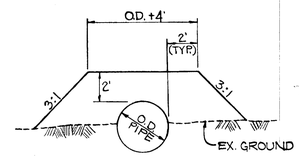




TYPICAL OUTLET DITCH
NO SCALE



PROFILE
SCALE HORZ 1"=50'
VERT 1"=5'



DETAIL OF PROTECTIVE FILL
NO SCALE

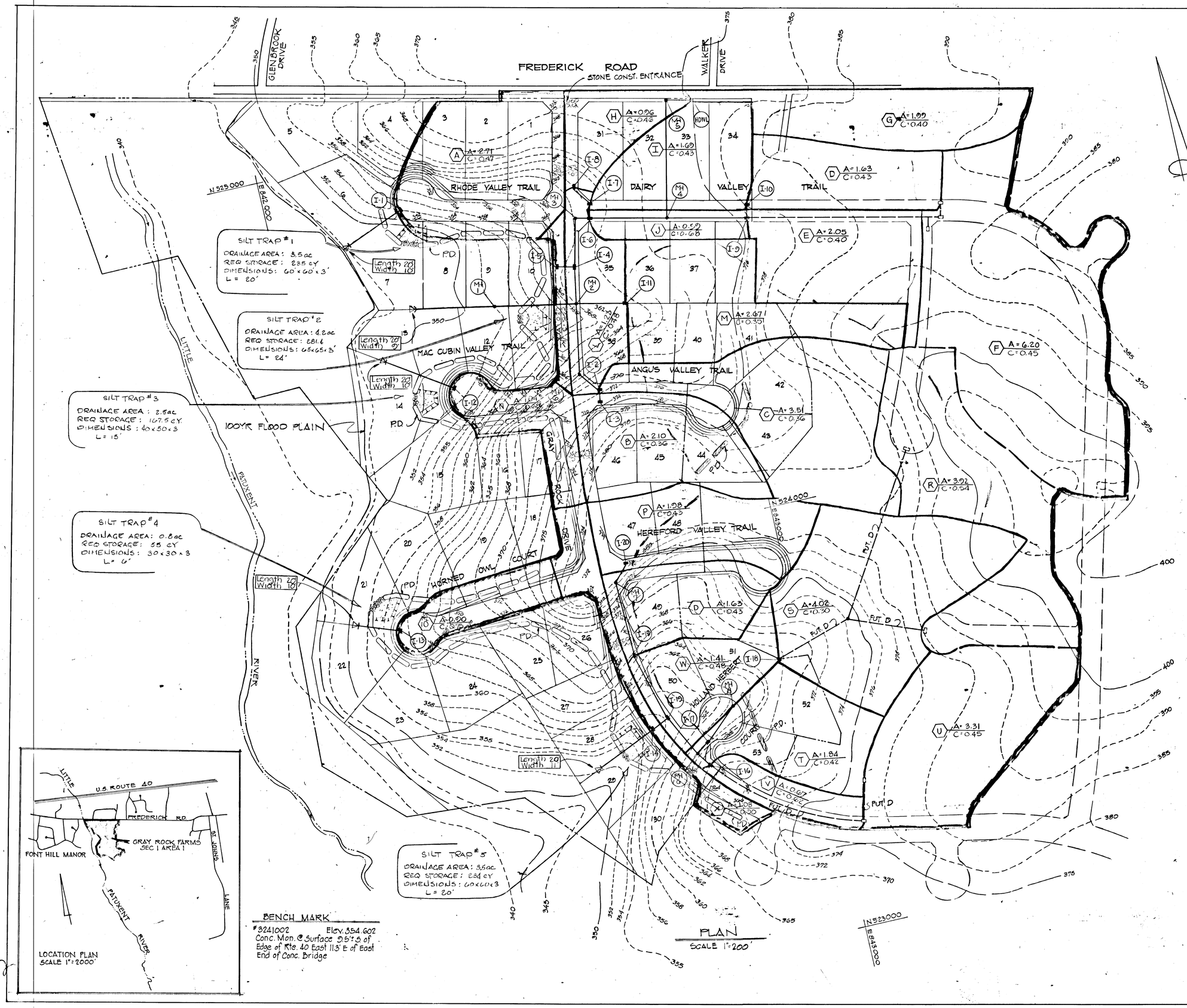
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved Wes Earp Date 4-2-79
Howard S.C.D.

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements
Carl Bendetti Date 4-2-79
Signature
U.S. Soil Conservation Service

#342

F-79-58



DEPARTMENT OF PUBLIC WORKS

W O Lilbat 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

John W. Musselman 3-29-79
CHIEF, DIVISION OF LAND DEVELOPEMENT DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER & DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA
GRAY ROCK FARM
SEC 1

PROJECT TITLE
SEDIMENT CONTROL

SCALE : AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

STATE OF MARYLAND
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
C.W. Bendtsen Date 4/2/79
Signature
U.S. Soil Conservation Service

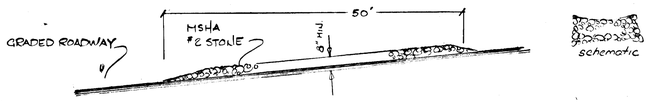
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved Wes Karp Date 4-2-79
Howard S.C.D.

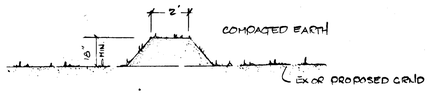
NOTE:
STORM DRAIN INLETS # 10, 11, 15 TO REMAIN OPEN TO CARRY RUNOFF FROM UNDISTURBED AREAS.
ALL OTHER INLETS TO BE SEALED (SHEET 12)

Sheet 11 of 17

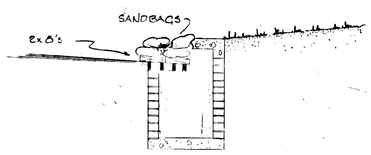
F-79-58



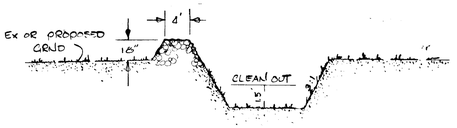
STABILIZED CONSTRUCTION ENTRANCE (S.C.E.)

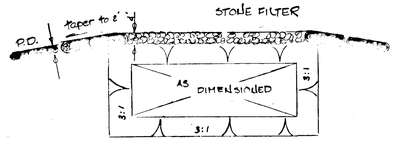


PERIMETER DIKE (P.D.)

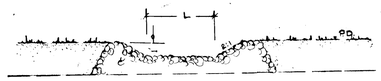


SANDBAG & BOARD CLOSED INLETS UNTIL SITE STABILIZATION

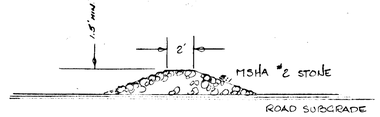




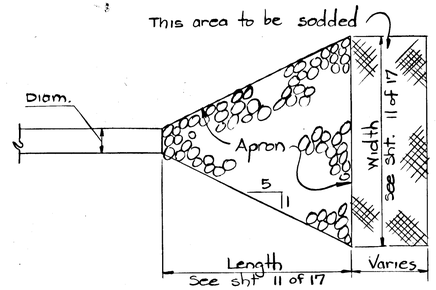
SILT TRAP
NO SCALE



STONE FILTER



STONE FILTER BERM ACROSS ROADWAY



OUTLET PROTECTION
No scale

SEDIMENT CONTROL NOTES:

1. CONTRACTOR TO NOTIFY HOWARD COUNTY SOIL CONSERVATION DISTRICT & HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS & PERMITS 24 HRS. PRIOR TO STARTING GRADING OPERATIONS.
2. AFTER CLEARING CONTRACTOR TO STRIP TOPSOIL WITHIN THE R/W & ADDITIONAL AREA BEYOND R/W FOR SLOPES & STOCKPILE TOPSOIL IN THE AREA DESIGNATED ON THE PLAN OR OTHER LOCATIONS AS DIRECTED BY FIELD ENGINEER. ALL TOPSOIL STOCKPILED SHALL BE SURROUNDED WITH PERIMETER DIKE WITH STONE FILTERS PLACED EVERY 100' (10' LNGTH) ALL STOCKPILES TO BE UNDISTURBED FOR 3 MONTHS OR LONGER SHALL IMMEDIATELY BE FERTILIZED, LIMED & SEEDED WITH ANNUAL RYE GRASS @ 11-16/1000 SQ FT
3. BEFORE GRADING OPERATIONS START CONTRACTOR TO CONSTRUCT STONE FILTER BERMS & STABILIZED CONSTRUCTION ENTRANCE ACROSS ROADWAY IN LOCATIONS SHOWN, AS EACH SECTION IS BROUGHT TO SUBGRADE. THESE STONE FILTER BERMS ARE TO BE LEFT IN PLACE & MAINTAINED UNTIL STORM DRAIN SYSTEM HAS BEEN CONSTRUCTED IN EACH SECTION AFFECTED. STABILIZED CONSTRUCTION ENTRANCE TO REMAIN IN PLACE UNTIL SUBBASE HAS BEEN LAID ON ROADWAYS.
4. BEFORE GRADING OPERATION STARTS CONTRACTOR TO CONSTRUCT PERIMETER DIKES & STONE FILTER TRAPS.
5. AS STORM DRAINS ARE CONSTRUCTED EACH INLET SHALL BE SANDBAGGED & BOARDED CLOSED & POSITIVE DRAINAGE TO NEARBY STONE FILTERS MAINTAINED UNTIL FINAL STABILIZATION, EXCEPT I 10, I 11, I 15 WHICH ARE TO BE ESTABLISHED AS SOON AS POSSIBLE TO CARRY RUNOFF.
6. SHOULDERS & SLOPES SHALL IMMEDIATELY BE SEEDED & MULCHED AS EACH SECTION OR AREA HAS BEEN BROUGHT TO SUBGRADE.

SEEDBED PREPARATION (PER ACRE)
2 TONS LIMESTONE (IF REQUIRED)
600#/ACRE 10-10-10 WORKED 3" DEPTH

SEED
2:1 SLOPES - KENTUCKY 31 TALL FESCUE @ 40#/ACRE AND 15#/AC CROWNVETCH
SHOULDERS - KENTUCKY 31 TALL FESCUE @ 60#/ACRE

MULCH - MULCH WITH UNWEATHERED SMALL GRAIN STRAW @ 1.5 TONS/AC
ASPHALT - ASPHALT TIE DOWN (RC 70, RC 250, RC 800) @ 0.1 GAL/SY.

7. OTHER SEDIMENT CONTROL MEASURES MAY BE NECESSARY IN ADDITION TO THOSE OUTLINED IF INSPECTION SO DEEMS.
8. ALL SEDIMENT CONTROL MEASURES TO BE BUILT ACCORDING TO "STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS." ALL SEDIMENT CONTROL STRUCTURES ARE TO BE IMEDIATLY STABILIZED WITH RYE @ 3.2#/1000 SF, 600#/ACRE 10-10-10 WORKED 3" DEPTH PER ACRE. SEE NOTE 6 FOR MULCH AND ASPHALT TIE DOWN
9. A GRADING PERMIT WILL BE REQUIRED PRIOR TO ANY EARTH MOVING
10. ALL DISTURBED AREAS OTHER THAN SLOPES OR SHOULDERS SHALL BE SEEDED WITH KENTUCKY 31 TALL FESCUE AT 60#/AC. FOR MULCH AN ASPHALT TIE DOWN SEE NOTE #6

CONSTRUCTION SCHEDULE

1. NOTIFY HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS & PERMITS 24 hrs IN ADVANCE OF ANY CONSTRUCTION START.
2. CLEAR & STRIP TOPSOIL
3. CONSTRUCTION OF PERIMETER DIKE & SILT TRAPS
4. ROUGH GRADING OF ROADWAYS & CONSTRUCTION OF STONE ROADWAY FILTERS ACROSS ROADWAYS AS ROADS ARE BROUGHT TO SUBGRADE.
5. CONSTRUCTION OF UTILITIES
6. PLACEMENT OF SUBBASE STONE ON ROADWAYS AS UTILITIES ARE CONSTRUCTED.
7. STABILIZE DISTURBED AREAS AS SAID AREAS ARE BROUGHT TO GRADE
8. REMOVAL OF SILT TRAPS AFTER ALL CONTRIBUTING AREAS ARE STABILIZED & INLETS ARE OPERABLE, & WITH PERMISSION OF HOWARD COUNTY.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Winfield Burdette 4-2-79
U.S. SOIL CONSERVATION SERVICE date

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

Hester Ford 4-2-79
APPROVED HOWARD S.C.D. date

ENGINEER'S CERTIFICATION

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

George Lambros 9-22-78
DATE

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD CO SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD CO SOIL CONSERVATION DISTRICT.

Charles E. Miller Pres. Sept 25, 1978
DATE

MILLER LAND CO.
9085 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND
21043

WO Follert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

Joshua W. Miller 3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV.	REV NO	DESCRIPTION OF REVISION

2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER & DEVELOPER
THE MILLER LAND COMPANY
9085 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043

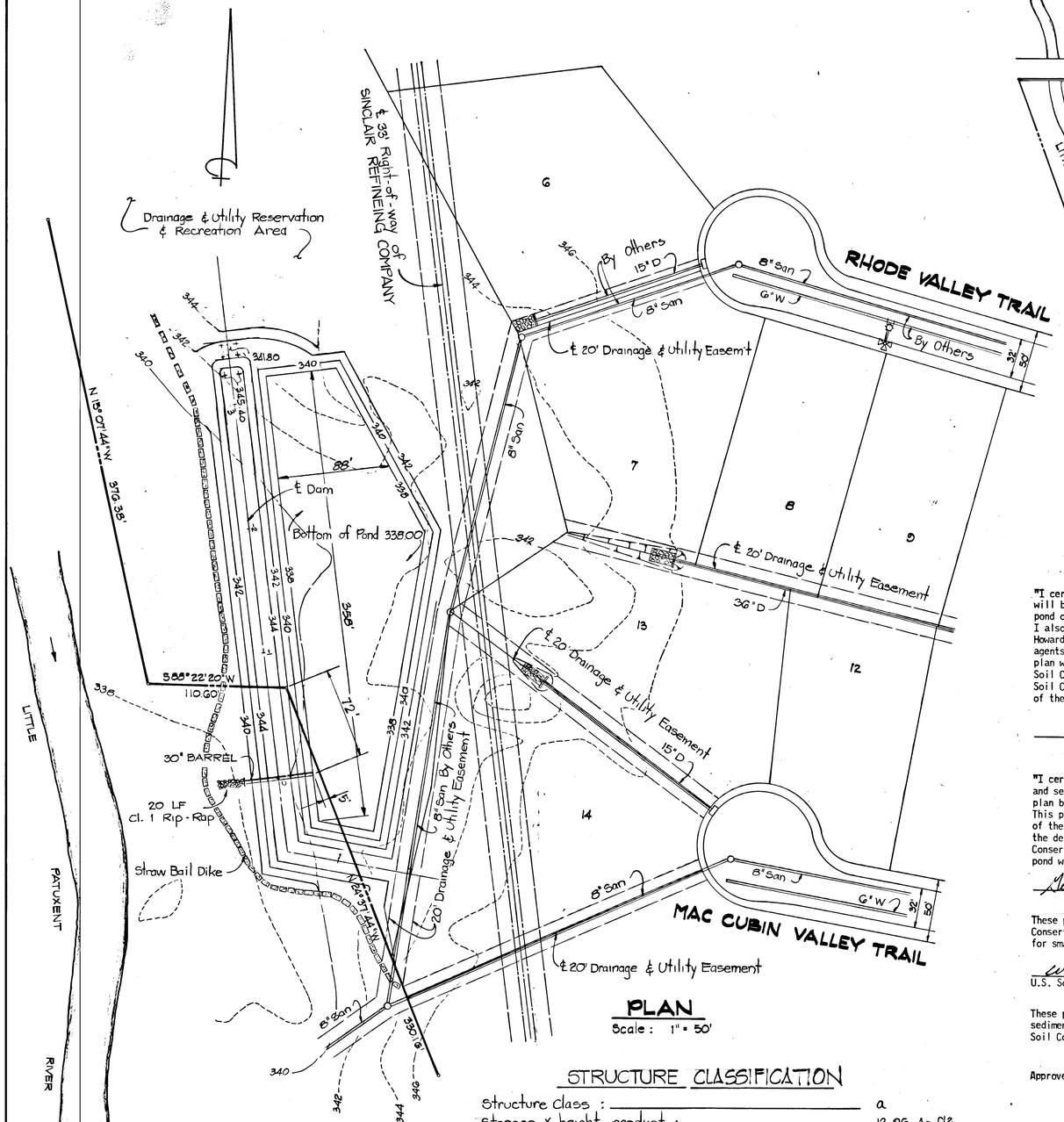
GRAY ROCK FARM
SEC. 1

SEDIMENT CONTROL

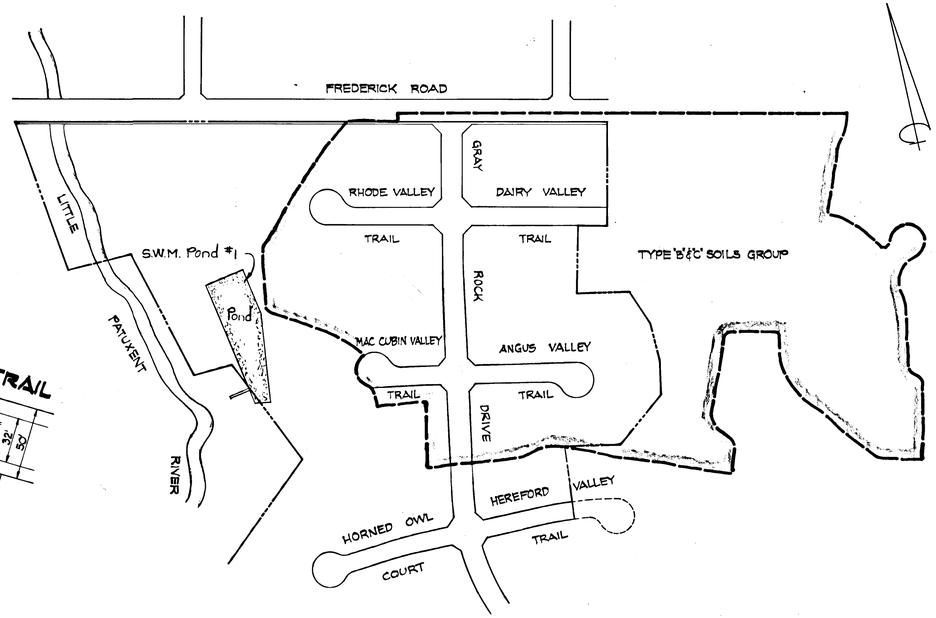
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENG.
6519

STATE OF MARYLAND
GEORGE LAMBROS
No. 6519
REGISTERED PROFESSIONAL ENGINEER

P-79-58 1-77110



PLAN
Scale : 1" = 50'



DRAINAGE AREA MAP
Scale : 1" = 200'

OWNERS CERTIFICATION

"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by The Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

Charles E. Miller, Pres. 2/8/79
Date

PLAN CERTIFICATION

"I certify that this plan for pond construction, erosion, and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

George Lambros PE 6519 1/4/79 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Winfred Bendetti 3/30/79
U.S. Soil Conservation Service Date

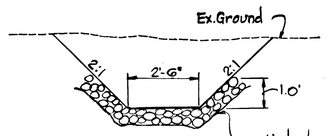
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Approved Robert W. Zeihm 4-5-79
Howard S.C.D. Date

Plan Number _____

STRUCTURE CLASSIFICATION

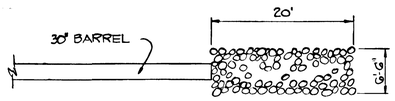
Structure Class :	a
Storage X height product :	12.96 Ac.ft²
Watershed Area :	32.41
Normal Surface Area :	None
Structure Location :	Urban
Enbankment height :	6'



OUTLET DITCH
No Scale

HYDROLOGIC CRITERIA
Eng. Memo Md. - 2 table 1

Principal Spillway Routing	2 year
Spillway Routing	50 year
Freeboard	2.0'



RIP-RAP OUTLET DETAIL
No Scale

CONSTRUCTION SPECIFICATION

1. The backfill material for the cutoff trench and upstream side of the dam shall be the most impervious material available. The movement of the hauling and spreading equipment over the fill shall be controlled so that entire surface of each 8" maximum thickness layer shall be compacted is not less than 95% of the maximum density. See A.S.T.M. spec's - G98.
2. The pipe shall be firmly and uniformly beded throughout its entire length. Were rock or other unstable soil is encountered under the pipe, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
3. Concrete shall have a minimum of 6 bags of cement per cubic yard and, water content not to exceed 6 gal. per bag of cement. Slump shall range 3"-4". All concrete shall be transit mix and internally vibrated during placement.
4. Conection bands to be one of the following.
   a. Standard band utilizing 3/8"x7" rubber gasket.
   b. Hugger band, w/2 "O" rings.
   c. Flanges continiously welded and bolted together.
   d. Flange band w/gasket.
5. All exposed surfaces of the embankment, 3:1 or flatter (shall be stabilized) by:
   a. Spreading 4" of topsoil.
   b. Working in 1 ton of ground lime and 1000 lbs. of 10-10-10 fertilizer per acre.
   c. Seeding with mixture of 60 lbs. "Kentucky" 31" tall Fescue and 20 lbs. Korean Lespedeza per acre.
   d. Mulching with 1½ tons straw per acre, asphalt tiedown with liquid RC 70, RC 250 or RC 800 @ 0.1 gal per sq. yard.
6. Riser assembly to be shop fabricated. Continiously weld base plate, drain stub, and barrel stub and coat with asphalt after welding.
7. The pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Spec. M-190 type "A" with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating coinpound.
   All connections with pipes must be completly watertight. The drain pipe or barrel connections to the riser shall be welded all around. Watertight coupling bands shall be used at all joints.
8. The movement of hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment, or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller fill material shall contain sufficient moisture such that the reqired degree of compaction can be obtained with the equipment used.
9. The contractor shall be responsible for ditches in the lake borrow are to provide drainage for fill material.
10. Area under the embankment shall be cleared and grubbed to remove all trees, vegetation, roots or other objectionoble material and top soil stripped and stockpiled.

DEPARTMENT OF PUBLIC WORKS
W O Frilbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE
OFFICE OF PLANNING & ZONING
Joshua W. Muddiman 3/26/79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
STORM WATER MANAGEMENT
PLAN - POND #1

SCALE AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

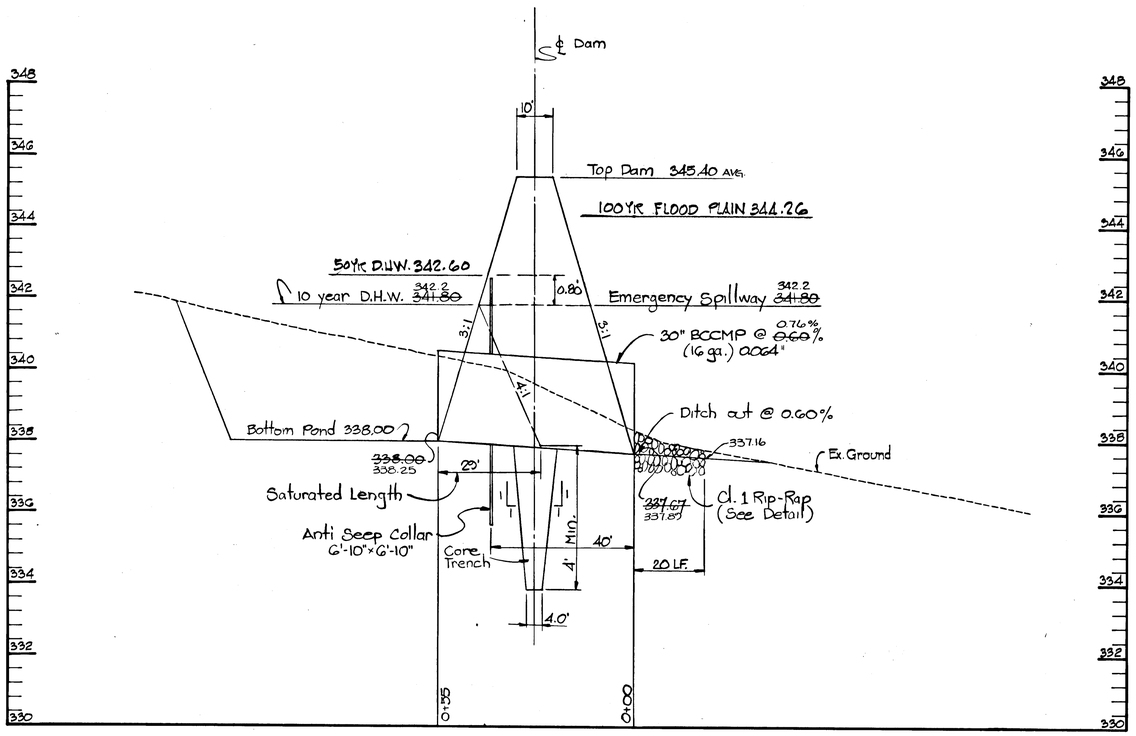
George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

STATE OF MARYLAND · GEORGE LAMBROS · No. 6519 · REGISTERED PROFESSIONAL ENGINEER

#342

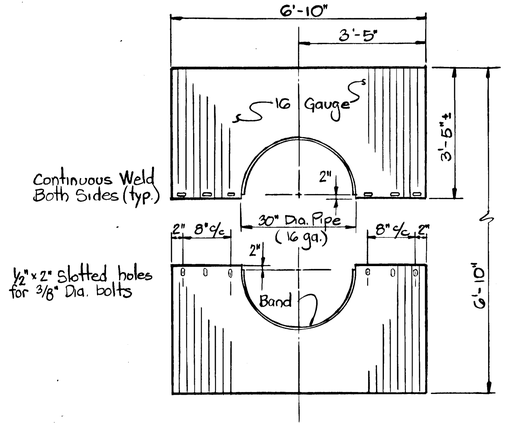
F-79-58

Sht 13 of 17



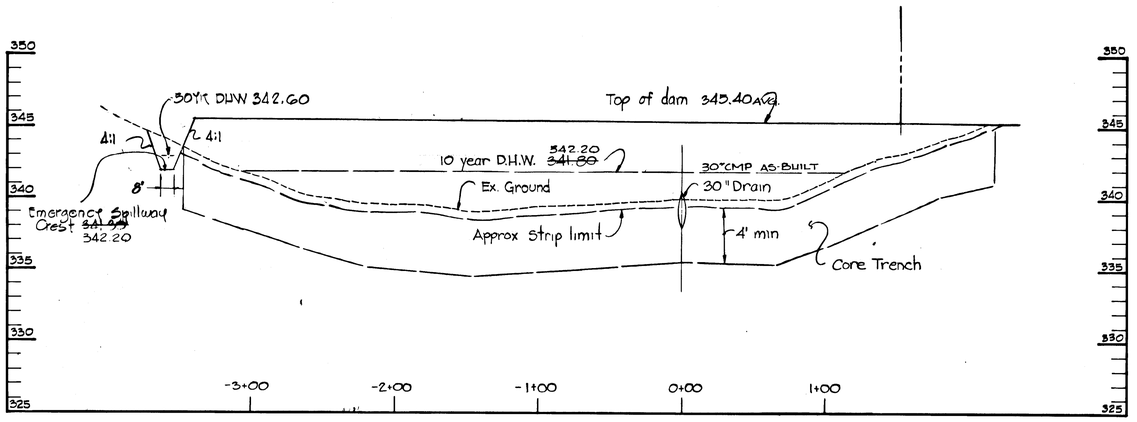
PIPE PROFILE

Scale : Horz. 1" = 20'
Vert. 1" = 2'



DETAIL OF ANTI-SEEP COLLAR

(Unassembled No Scale)



CROSS SECTION - EMBANKMENT

Scale : Horz. 1" = 50'
Vert. 1" = 5'

DEPARTMENT OF PUBLIC WORKS

W O Albert 3-29-79

CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING

[signature] 3-16-79

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
STORM WATER MANAGEMENT
PROFILES - POND # 1

SCALE AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

STATE OF MARYLAND GEORGE LAMBROS No. 6519 REGISTERED PROFESSIONAL ENGINEER

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

Approved R. Zieber Date 4-5-79
Howard S.C.D.

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements
C. W. Smith Date 4/2/79
Signature
U.S. Soil Conservation Service

STORM WATER MANAGEMENT CRITERIA

Peak flows resulting from a two year frequency storm prior to developement will not be exceeded during reocuring two-year frequency storms after development.

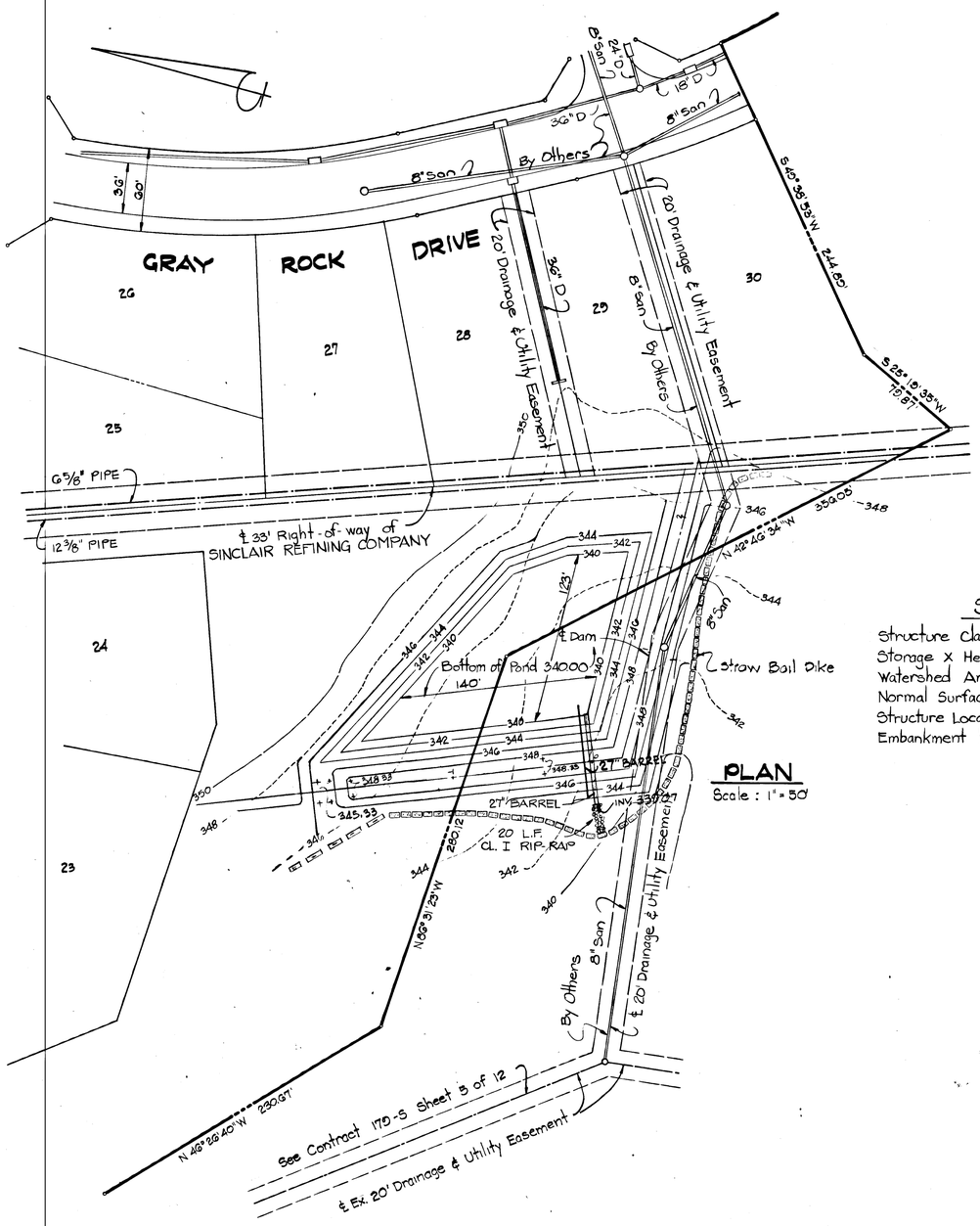
SMALL POND CRITERIA

Principal spillway will be designed to contain 10yr. storm below the crest of the emergency spillway.
The emergency spillway is designed to pass a 50 yr. storm.

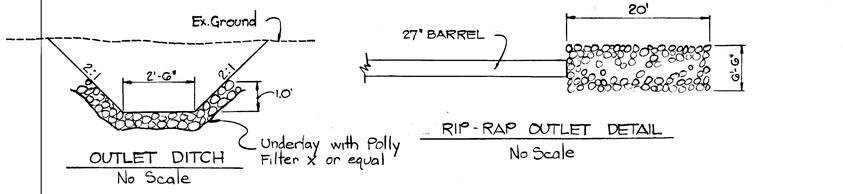
#242

F-79-58

Sht 14 of 17

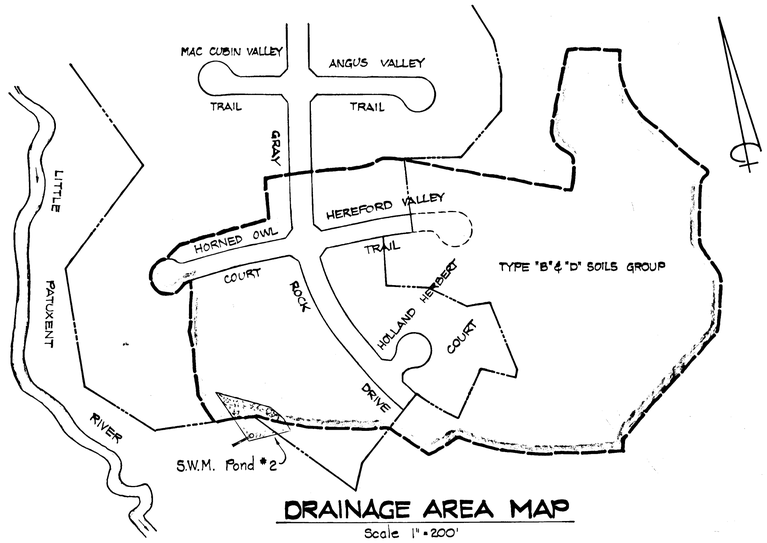


PLAN
Scale : 1" = 50'



OUTLET DITCH
No Scale

RIP-RAP OUTLET DETAIL
No Scale



DRAINAGE AREA MAP
Scale 1" = 200'

STRUCTURE CLASSIFICATION

Structure class :	a
Storage x Height Product :	3.29 Ac. Ft.²
Watershed Area :	25.33 Acres
Normal Surface Area :	None
Structure Location :	Urban
Embankment height :	7'

HYDROLOGIC CRITERIA
Eng. Memo Md. - 2 Table 1

Principle Spillway Routing	2 year
Spillway Routing	50 year
Freeboard	2.0 ft.

OWNERS CERTIFICATION

"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by The Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

Charles E. Miller, Trea. 2/8/79
Date

PLAN CERTIFICATION

"I certify that this plan for pond construction, erosion, and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

George Lambros PE 6519 — 1/4/79
Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Winston Bandstra — 4/2/79
U.S. Soil Conservation Service — Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Approved Robert D. Zechman 4-5-79
Howard S.C.D. — Date

Plan Number _____

DEPARTMENT OF PUBLIC WORKS
[illegible] 3-29-79
CHIEF, BUREAU OF ENGINEERING — DATE

OFFICE OF PLANNING & ZONING
John W. Hessman 3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
9035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE
STORM WATER MANAGEMENT
PLAN - POND #2

SCALE AS SHOWN — DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

George Lambros
GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6519

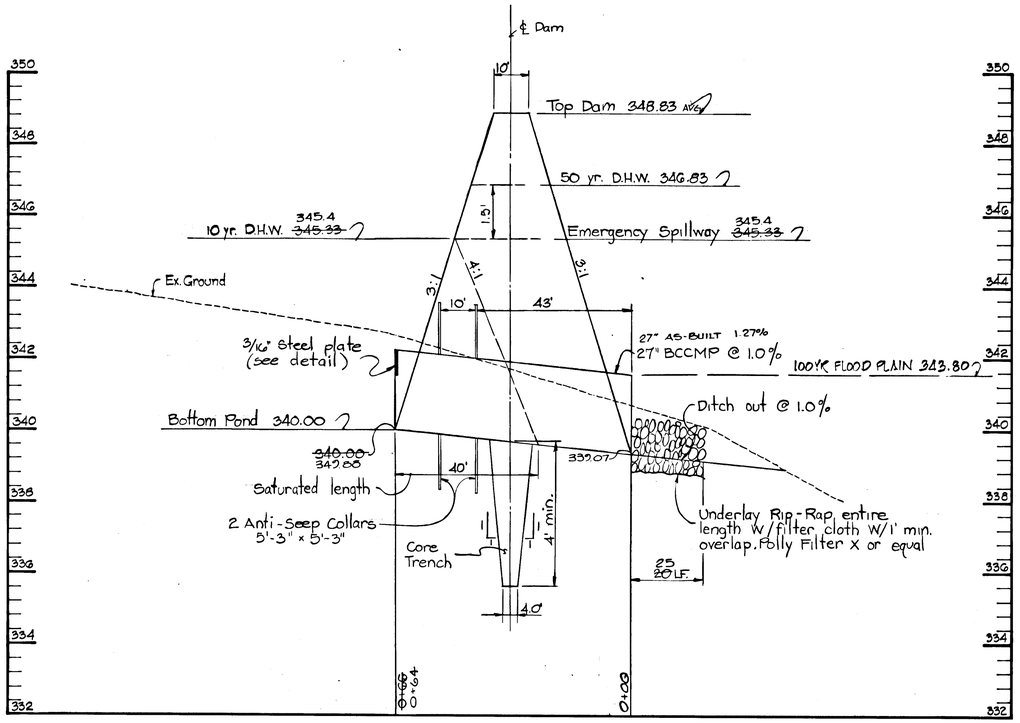
STATE OF MARYLAND — GEORGE LAMBROS — No. 6519 — REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION SPECIFICATIONS

1. The pipe shall be firmly and uniformly beded throughout its entire length. Where rock or or other unstable soil is encountered under the pipe, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
2. Concrete shall have a minimum of 6 bags of cement per cubic yard and water content not to exceed 6 gal. per bag of cement. Slump shall be 3"-4". All concrete shall be transit mix and internally vibrated during placement.
3. Conection bands to be one of the following.
   a. Standard band utilizing 3/8" x 7" rubber gasket.
   b. Hugger band w/2 "O" rings
   c. Flanges continously welded and bolted together.
   d. Flange band w/gasket
4. All exposed surfaces of the embankment, 3:1 or flatter (shall be stabilized) by :
   a. Spreading 4" of topsoil
   b. Working in 1 ton of ground lime and 1,000 lbs. of 10-10-10 fertilizer per acre.
   c. Seeding with mixture of 60 lbs. "Kentucky" 31" tall Fescue and 20 lbs. Korean lespedeza per acre.
   d. Mulching with 1½ tons straw per acre, asphalt tiedown w/liquid RC 70, RC 250 or RC 800 @ 0.1 gal. per sq. yard.
5. Riser assembly to be shop fabricated. Continously weld base plate, drain stub, and barrel stub and coat with asphalt after welding. (Not Applicable) N/A
6. The pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO spec. M-190 type A with watertight coupling bands. Any bituminous coating damaged or outherwise removed shall be replaced cold applied bituminous coating compound.
   All conections with pipes must be completly watertight. The drain pipe or barrel connection to the riser shall be welded all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
7. The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment, or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.
8. The contractor shall be responsible for ditches in the lake borrow area to provide drainage for fill material.
9. Area under the embankment shall be cleared and grubbed to remove all trees, vegetation, roots or other objectionable material and top soil stripped and stockpiled.
10. The backfill material for the cutoff thench and upstream side of the dam shall be the most impervious material available. The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each 8" maximum thickness layer shall be compacted is not less than 95% of the maximum density. See A.S.T.M. Spec's - D698.

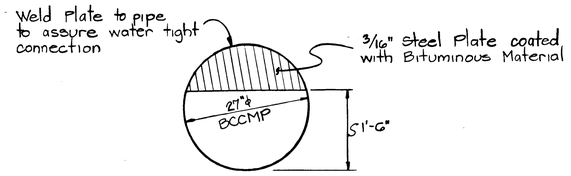
#242

F-79-58 Sht 15 of 17



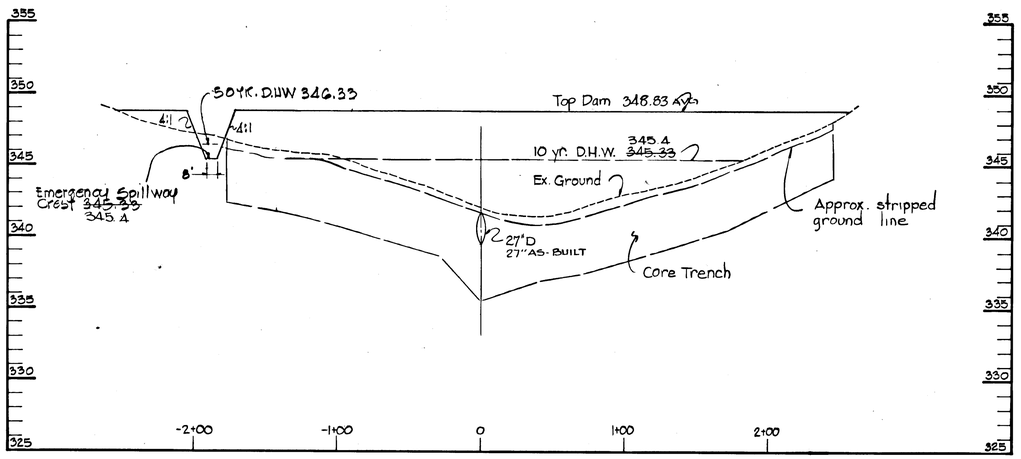
PIPE PROFILE

Scale : Horz. 1" = 20'
Vert. 1" = 2'



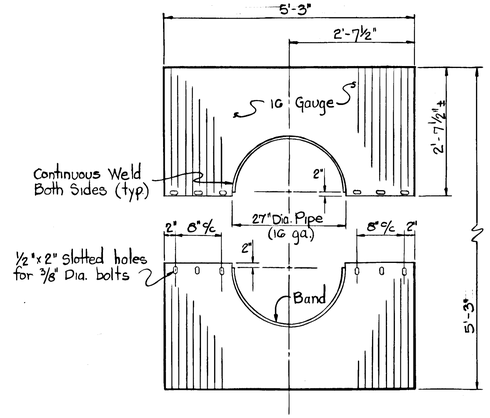
ORIFICE DETAIL

No Scale



CROSS SECTION - EMBANKMENT

Scale : Horz. 1" = 50
Vert. 1" = 5



DETAIL OF ANTI-SEEP COLLAR

(Unassembled - No Scale)

DEPARTMENT OF PUBLIC WORKS
W O Filbert 3-29-79
CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING
3-16-79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
5035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA:
GRAY ROCK FARM
SECTION 1

PROJECT TITLE

STORM WATER MANAGEMENT

PROFILES - POND #2

SCALE AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6510

STATE OF MARYLAND GEORGE LAMBROS No. 6510 REGISTERED PROFESSIONAL ENGINEER

Reviewed for ~~Howard~~ S.C.D.
Name
and meets Technical Requirements
Date 4/4/79
Signature
U.S. Soil Conservation Service

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

Approved Robert W. Filbert Date 4-5-79
Howard S.C.D.

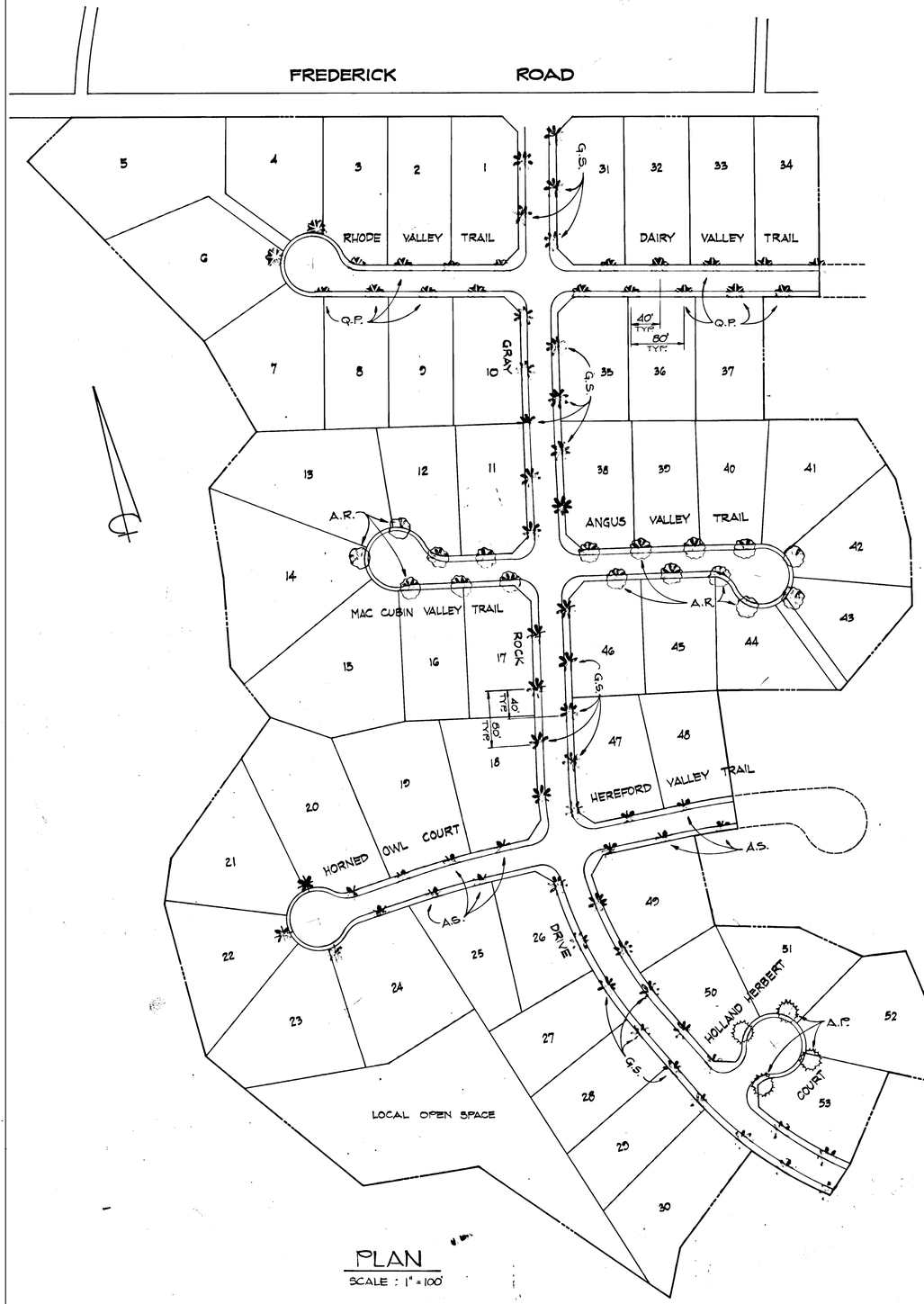
STORM WATER MANAGEMENT CRITERIA

Peak flows resulting from a two year frequency storm prior to developement, will not be exceeded during reoccuring two-year frequency storms after development.

SMALL POND CRITERIA

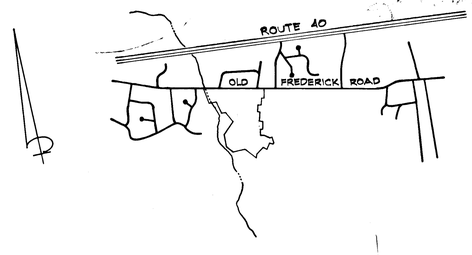
Principal spillway will be designed to contain 10 yr. storm below the crest of the emergency spillway.
The emergency spillway is designed to pass a 50 yr. storm.

#1248



PLAN

SCALE : 1" = 100'

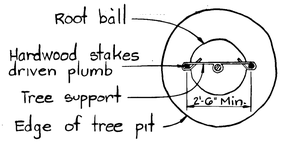


VICINITY MAP

Scale : 1" = 2000'

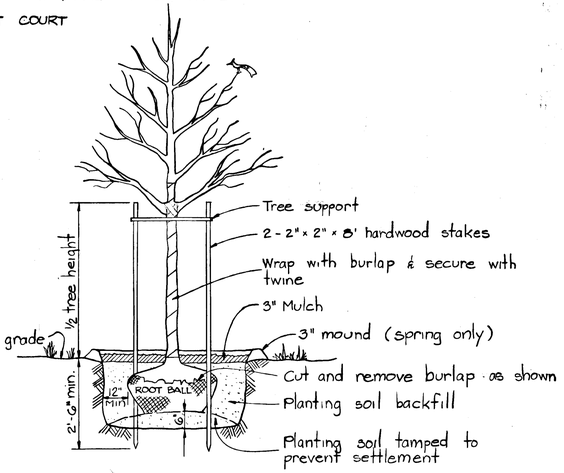
KEY

SHADEMASTER HONEYLOCUST	30	GRAY ROCK DRIVE
SUGAR MAPLE	15	HORNED OWL COURT & HEREFORD VALLEY TRAIL
WILLOW OAK	20	RHODE VALLEY TRAIL & DAIRY VALLEY TRAIL
RED MAPLE	17	MAC CUBIN VALLEY TRAIL & ANGUS VALLEY TRAIL
NORWAY MAPLE	4	HOLLAND HERBERT COURT



PLAN

NO SCALE



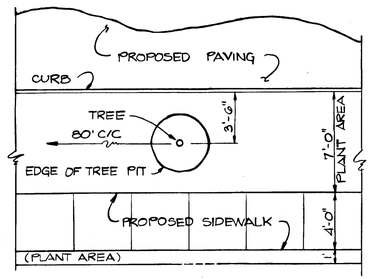
DECIDUOUS TREE STAKING

NO SCALE

QUAN	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
DECIDUOUS TREES						
17	A.R.	ACER RUBRUM	RED MAPLE	1½" CAL MIN	B & B	MIN 8' HEIGHT ABOVE GROUND
32	G.S.	GLEDITSIA TRIA. SHADEMASTER	SHADEMASTER HONEYLOCUST	1½" CAL MIN	B & B	"
15	A.S.	ACER SACCHARUM	SUGAR MAPLE	1½" CAL MIN	B & B	"
20	Q.P.	QUERCUS PHELLOUS	WILLOW OAK	1½" CAL MIN	B & B	"
4	A.P.	ACER PLATANOIDES	NORWAY MAPLE	1½" CAL MIN	B & B	"

NOTE :

1. The county may require the developer to provide for trees to be planted in the right-of-way or on private property.
2. The developer shall replace any tree that dies within one (1) year after initial planting



PLANTING WITHIN R/W

NO SCALE

DEPARTMENT OF PUBLIC WORKS

W O Talbert 3-29-79

CHIEF, BUREAU OF ENGINEERING DATE

OFFICE OF PLANNING & ZONING

John O. Hubbeman 3-16-79

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REV. DATE	REV. NO	REVISION DESCRIPTION

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE MILLER LAND COMPANY
5035 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD. 21043

PROJECT AREA :
GRAY ROCK FARM
SECTION 1

PROJECT TITLE

LANDSCAPE PLAN

SCALE AS SHOWN DATE

ENGINEER
KIDDE CONSULTANTS INC.
1020 CROMWELL BRIDGE RD.
TOWSON, MD. 21204

GEORGE LAMBROS
REGISTERED PROFESSIONAL ENGINEER
NO. 6319

STATE OF MARYLAND — GEORGE LAMBROS — No. 6319 — REGISTERED PROFESSIONAL ENGINEER

#242