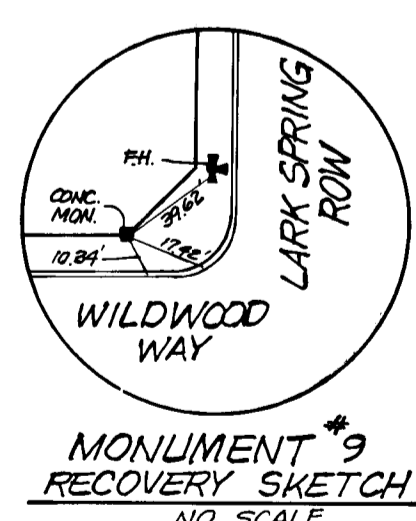
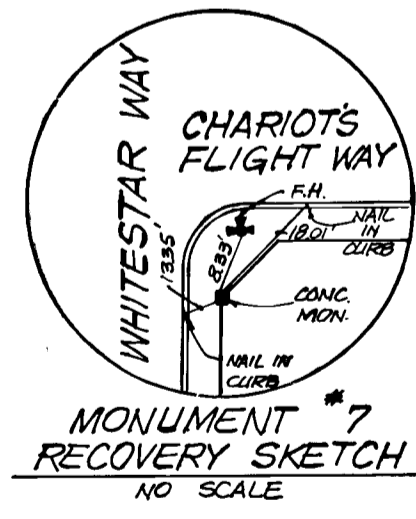
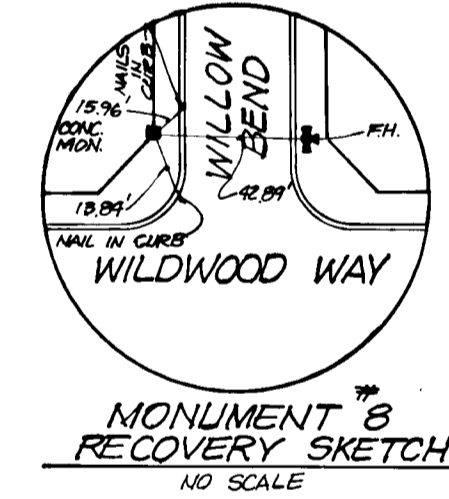
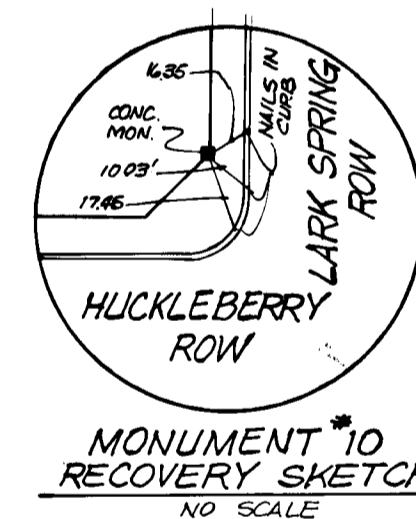
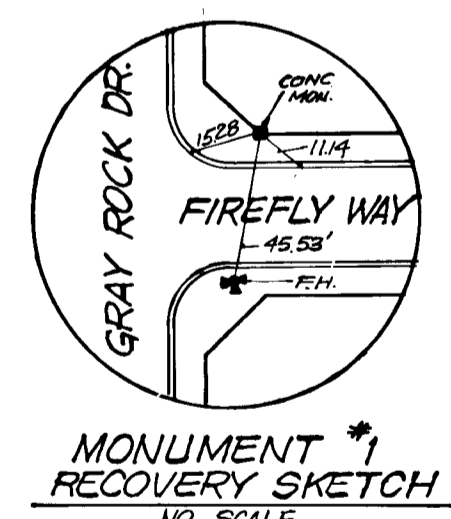
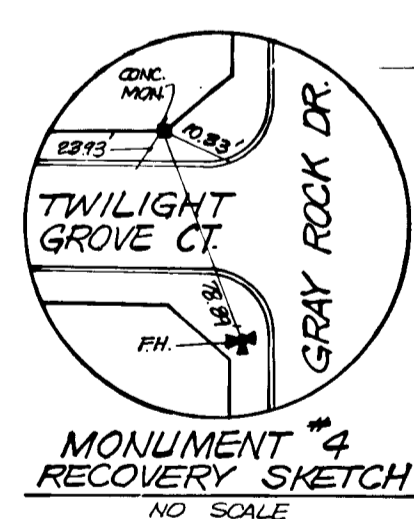
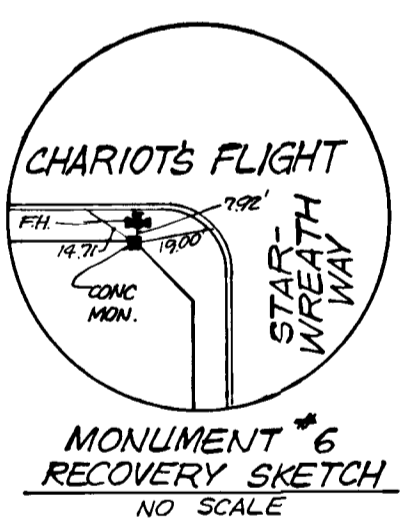
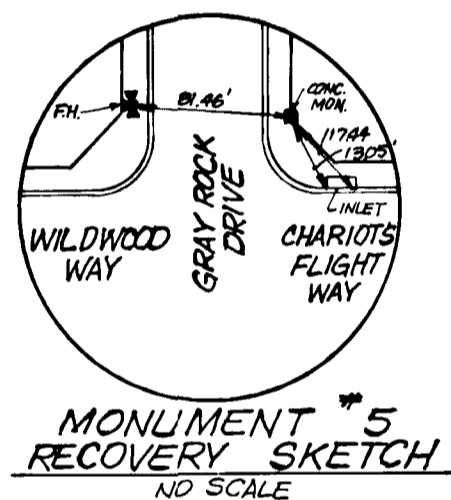
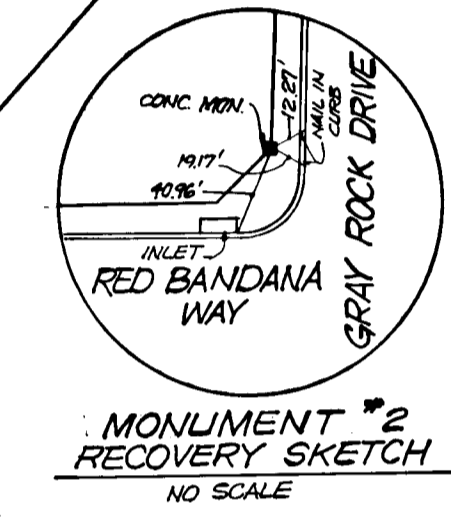
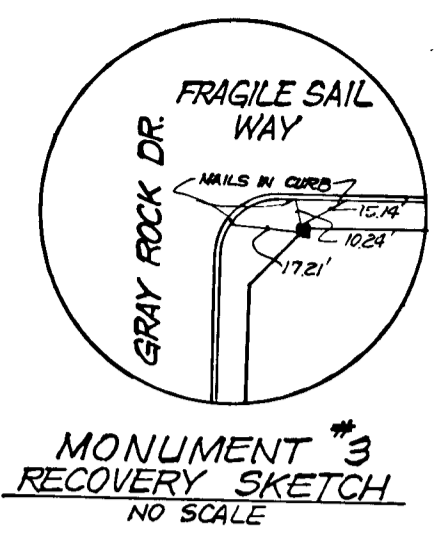
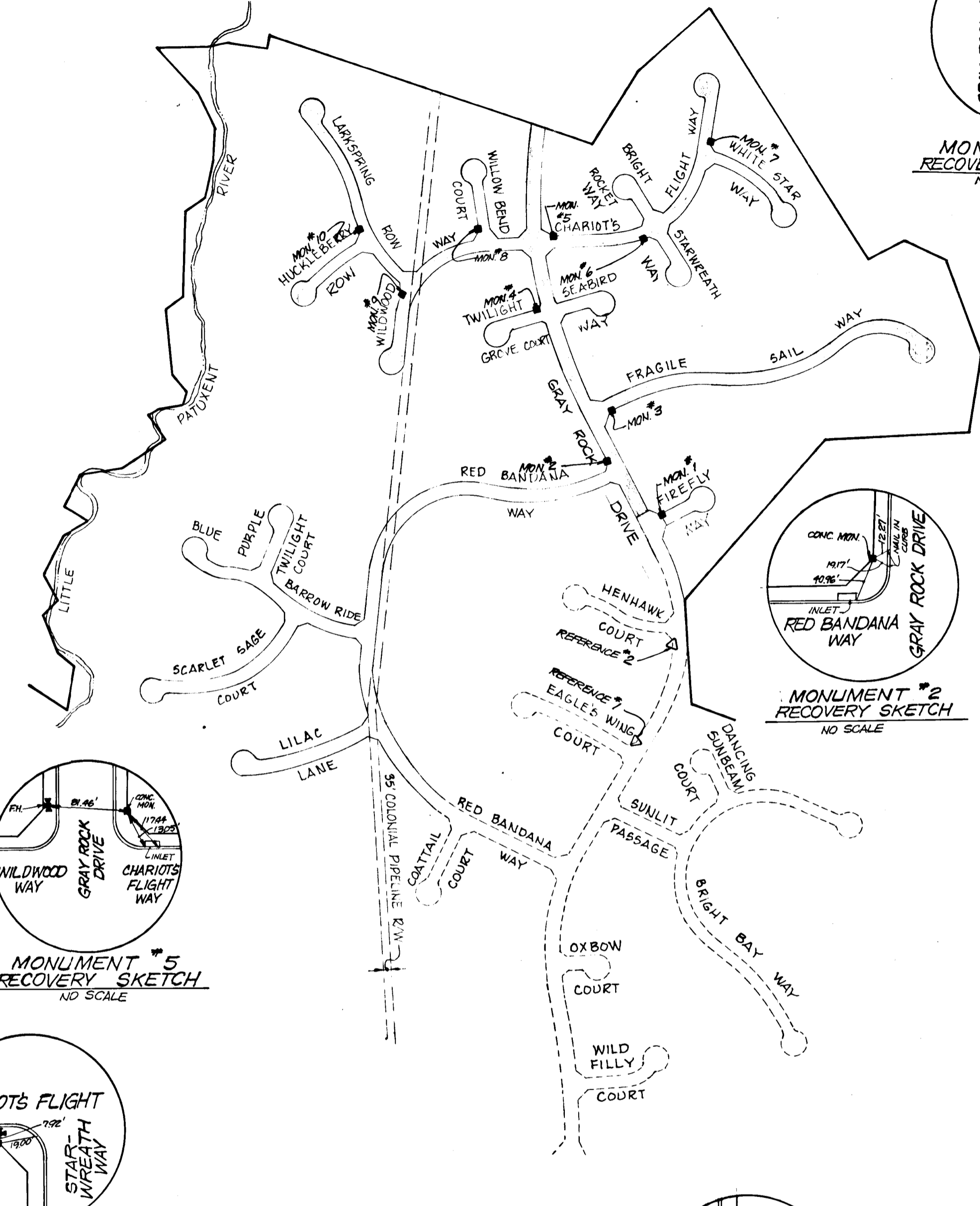


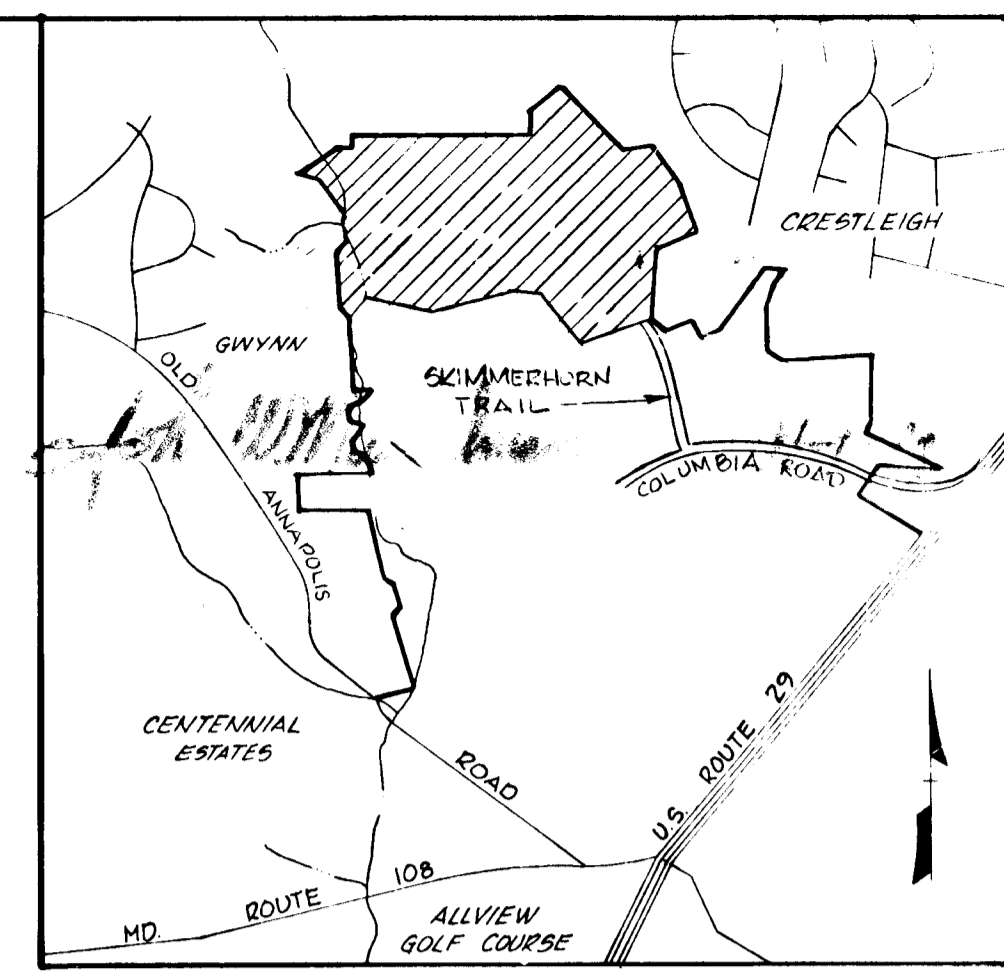
ESTIMATE OF QUANTITIES		SHEET INDEX	
ITEM	DESCRIPTION	UNIT	QUANTITIES
1	TOPSOIL STRIPPING UNDER FILLS	CY	
2	UNCLASSIFIED EXCAVATION (ROADWAY)	CY	
3	BORROW EXCAVATION	CY	
4	BIT. CONC. SURFACE COURSE (1 1/2" TH.)	SY	30,410
5	BIT. CONC. BASE COURSE (5" TH.)	SY	30,770
6	5 1/2" 7" COMB. CURB AND GUTTER	LF	17,172
7	2" CONCRETE END SECTION (5-15)	EA	1
8	BARRIER CURB	LF	1,140
9	CONCRETE SIDEWALK (4" TH.)	LF	10,160
10	P/W AND SLOPE STABILIZATION	SY	30,150
11	TRANSITION CURB AT "A" INLETS	LF	157
12	5 1/2" A-B INLET	EA	12
13	5 1/2" A-D INLET	EA	5
14	5 1/2" MANHOLE	EA	13
15	5 1/2" TYPE "C" END WALL (5-17)	EA	2
16	15" 5 1/2" 5 1/2" CONC. END SECTION (5-13, 5-4, 5-11, 5-7, 5-10, 5-24)	EA	6
17	15" 5 1/2" 5 1/2" CONC. END SECTION (5-15, 5-22)	EA	2
18	21" 5 1/2" 5 1/2" CONC. END SECTION (5-20)	EA	1
19	30" 5 1/2" 5 1/2" CONC. END SECTION (5-12)	EA	1
20	15" RCP CL III	LF	780
21	18" RCP CL III	LF	254
22	21" RCP CL III	LF	58
23	24" RCP CL III	LF	106
24	15" RCP CL III	LF	1854
25	18" RCP CL III	LF	545
26	21" RCP CL III	LF	474
27	24" RCP CL III	LF	144
28	30" RCP CL III	LF	155
29	DITCH EXCAVATION	CY	200
30	RIP RAP DITCH (MD SHA CL I MEDIUM RIP RAP) 9" TH.	SY	620
31	POLY-FILTER-X CLOTH	SY	631
32	DITCH STABILIZATION (SEEDING)	SY	175
33	TYPE "B" MANHOLE	EA	5
SEDIMENT CONTROL			
34	SEDIMENT TRAP EXCAVATION	CY	2025
35	EARTH DAM EMBANKMENTS	CY	1450
36	ANTI-VORTEX AND TRASH RACK	EA	2
37	TEMPORARY 30" CMP 14 GAGE	LF	10
38	TEMPORARY 18" CMP 12 GAGE	LF	10
39	SEDIMENT TRAPS (INCL EXCAV, STONE & INLET TREATMENT)	EA	7
40	DIVERSION DIKE (EARTH)	LF	4260
41	TEMPORARY 24" CMP 16 GAGE & FITTINGS (BASIN NO. 1)	LF	37
42	TEMPORARY 30" CMP 18 GAGE & FITTINGS (BASIN NO. 2)	LF	41
43	SEDIMENT BASIN (INCL EXCAV, STONE & INLET TREATMENT)	EA	2

NO	DESCRIPTION
1	TITLE SHEET
2	GRAY ROCK DRIVE STA. 28+00 TO STA. 38+00
3	STAR WOOD COURT STA. 28+00 TO STA. 45+23
4	FRAGILE SAIL WAY STA. 0+00 TO STA. 11+876
5	FIREFLY WAY AND FRAGILE SAIL WAY STA. 11+876 TO END
6	TWILIGHT GROVE COURT
7	CHARIOTS FLIGHT WAY STA. 0+00 TO STA. 8+00
8	WHITE STAR WAY AND CHARIOTS FLIGHT WAY STA. 8+00 TO END
9	BRIGHT ROCKET WAY AND STARWREATH WAY
10	WILLOW WAY
11	WILLOW BEND COURT
12	LARKSPRING ROW
13	HUCKLEBERRY ROW AND SEABIRD WAY
14	ROADWAY DETAILS
15	SEDIMENT CONTROL PLAN
16	SEDIMENT CONTROL PLAN
17	SEDIMENT CONTROL PLAN
18	SEDIMENT CONTROL PLAN
19	SEDIMENT CONTROL PLAN
20	SEDIMENT CONTROL DETAILS
21	DRAINAGE AREA MAP
22	DRAINAGE AREA MAP
23	STORM DRAIN PROFILES
24	STORM DRAIN PROFILES
25	STORM DRAIN PROFILES
26	STORM DRAIN DETAILS

REFERENCES
 *1 CONCRETE MONUMENT 30' LEFT & STA. 17+90 ± GRAY ROCK DRIVE
 ELEV. 381.16 - N 51° 01' 02" E 845' 49.79
 *2 CONCRETE MONUMENT 30' LEFT & STA. 22+40 ± GRAY ROCK DRIVE
 ELEV. 377.86 - N 51° 43' 06" E 845' 41.22



PLAN
 Scale: 1" = 400'



GENERAL NOTES

- All work shall be performed in accordance with the SPECIFICATIONS and also the Howard Co Road Construction Code and Standard Specifications.
- All utility companies shall be notified 24 hours in advance of construction.
- Gray Rock Drive is designed for 35 MPH speed limit, all other roads are designed for 30 MPH speed limit in accordance with AASHTO standards, except in short cul-de-sacs where length dictates a lower design speed.
- All inlets shall be Howard County standards unless otherwise shown.
- All street curb returns shall have a 350' radius unless otherwise noted.
- Storm drain trenches within road rights of way shall be backfilled and compacted in accordance with Howard County Road Code.
- Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to Contractor's operations shall be repaired immediately at the Contractor's expense.
- The Contractor shall test pit existing utilities where directed by the Engineer, a minimum of two weeks in advance of any construction.
- Temporary compacted 18" high Earth Fill Diversion Dikes shall be constructed above the lips of fill slopes on the ROW concurrently with the initial grading and directed to undisturbed sod areas at the end of each day.
- Contractor to notify the Howard County Dept. of Inspections and Permits at least 3 days before starting work shown on these drawings.
- All disturbed slope areas to be stabilized as soon as grading is completed.
- On all fills in sump areas, Reliance Plastic & Chemical Company Flexible Tube Down Drains and Pans or approved equal shall be used.
- All reinforced concrete for storm drain structures shall have minimum 28 days strength of 3500 psi.
- All swales and slopes shall be permanently seeded. See the seed specifications on this sheet.
- Traffic control devices and their installation shall be in accordance with the Manual on Uniform Traffic Control Devices, 1971 Revised Edition.
- Poly Filter-X (filter cloth blanket) or equal shall be placed under all stone rip-rap (full width and length of stone).
- Stone shall be Maryland SHA Class I medium Rip Rap Stone from on site rock excavation may be substituted for the Maryland SHA Class I medium rip rap. Rip Rap shall be unpaved unless otherwise noted.

* Telephone No. 992-2436

AS BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974

SEQUENCE OF CONSTRUCTION

- Obtain a Grading Permit.
- Clear and grub wooded areas.
- Construct the Sediment Basin, Traps and Diversion Dikes.
- Strip the roads and seed topsoil stockpile.
- Install storm drain systems Block inlets where required.
- Construct all utilities.
- Fine grade roads, construct curb and gutter and seed all disturbed areas as per specifications this sheet.
- Clean storm drain systems.
- After all construction is complete and grass is established in the drainage areas, remove the Sediment Basin, Traps and Diversion Dikes. Complete storm drain outlets as required.

PERMANENT SEEDING (SEE GENERAL NOTES)

LIME - 2 tons/acre agricultural ground limestone
 FERTILIZER - 1000 lbs/acre (10-10-10)
 SEEDING - 100 lbs/acre of the following:
 20% Kentucky Blue Grass, 20% Merion Blue Grass
 55% Creeping Red Fescue, 5% Redtop
 Mulch Required- Mulch area with straw at 75 lbs/1000 sq. ft. or 1.5 tons/acre
 Anchor with asphalt at the rate of 480 gallons/acre
 Stabilization of slopes steeper than 3:1 shall be planted with crownvetch
 including 15 lbs/acre (0.34 lbs./1000 sq. ft.)
 Kentucky 31 Tall Fescue 40 lbs/acre (1 lb./1000 sq. ft.)

CERTIFICATION BY THE DEVELOPER
 I certify that all development and construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary.
 Walter E. Woodford Date 3-25-79

CERTIFICATION BY THE ENGINEER
 I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
 Kenneth A. McCord P.E. 1974 Date 3-24-79

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202
 Kenneth A. McCord
 Registered Engineer
 NO. 1574

DEPARTMENT OF PUBLIC WORKS
 Allen S. Brown 11/6/79
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 1/4-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP
 COLUMBIA, MARYLAND

Reviewed for HOWARD SCD
 Name and meets Technical Requirements
 James Helms Date 11-1-79
 Signature
 US Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Approved: Wm. Rouse Date 11-1-79
 Howard SCD

DORSEY HALL
 SECTION 1 AREA 4
ROAD CONSTRUCTION PLANS
 2ND ELECTION DISTRICT OF HOWARD COUNTY MD
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP
 COLUMBIA MARYLAND
 Date Scale: As Shown

STORM DRAIN STRUCTURE SCHEDULE

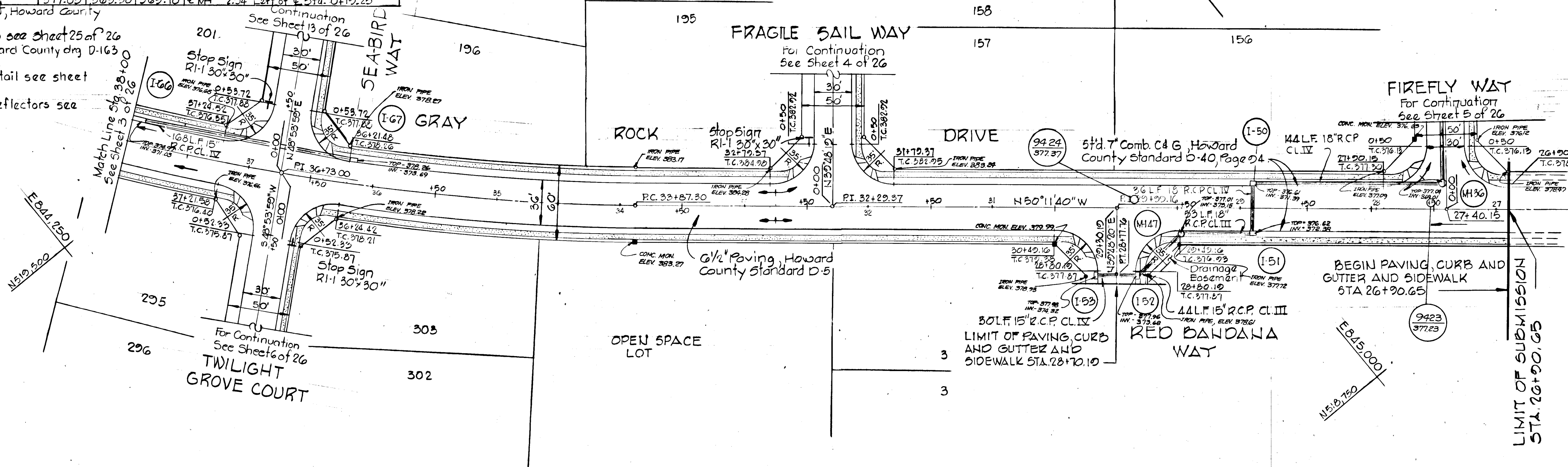
NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	LOCATION
I-66	Standard A-10 Inlet, Width 25"	375.04	371.12	370.73	Inlet 10.25 Right of Sta. 37+05
I-67	Standard A-5 Inlet, Width 25"	375.82	---	373.57	Inlet 10.25 Right of Sta. 36+12.31
I-30	Standard A-5 Inlet, Width 25"	376.49	374.42	371.22	Inlet 10.25 Right of Sta. 28+90.53
I-51	Standard A-5 Inlet, Width 25"	376.49	374.35	374.15	Inlet 10.25 Left of Sta. 28+90.53
I-54	Standard A-3 Inlet, Width 25"	377.00	373.33	373.15	Inlet 16.25 Right of Sta. 28+77.02
I-55	Standard A-3 Inlet, Width 25"	377.00	373.33	373.51	Inlet 16.25 Left of Sta. 28+77.02
MH-47	Type "B" Manhole	377.06	374.91	374.64	MH 47.5 Left of Sta. 29+43.16
MH-30	Standard Manhole	377.09	369.30	369.10	MH 25.4 Left of Sta. 0+19.25

- Standard A-5 & A-10 Inlet, Howard County Dwg. 64A, Page 11 of 26
- For Storm Drain Profiles see sheet 25 of 26
- Standard Manhole, Howard County Dwg. D-163, Page 158
- Type "B" Manhole, for detail see sheet 26 of 26
- * Denotes Inlets with deflectors see detail sheet 26 of 26

CURVE DATA

P.C. 33+87.30 to P.I. 36+73.00 P.I. 36+73.00 to P.T. 39+56.10
 $\Delta = 09^{\circ}05'39''$ $\tan = 143.15$ $\Delta = 09^{\circ}00'41''$ $\tan = 141.84$
 $R = 1800.00$ $Ch = 285.40$ $R = 1800.00$ $Ch = 282.81$
 $Arc = 285.70$ $Brg = N45^{\circ}35'50''W$ $Arc = 283.10$ $Brg = N36^{\circ}35'40''W$

DEPARTMENT OF PUBLIC WORKS
Allen S. Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
Kenneth A. McCord 11-7-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



PLAN
 Scale: 1" = 50'

NOTE: PAVING WIDTH = 36'
 LENGTH OF ROAD = 1109'
 2 SEWER MHS IN R/W
 AS-BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY KENNETH A. MCCORD P.E. 1974

Rev. Date	Rev. No.	Revision Description

DORSEY HALL
 2nd ELECTION DISTRICT
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP

PROJECT AREA
 SECTION I AREA 4

PROJECT TITLE
 GRAY ROCK DRIVE
 Sta. 28+00 to Sta. 38+00

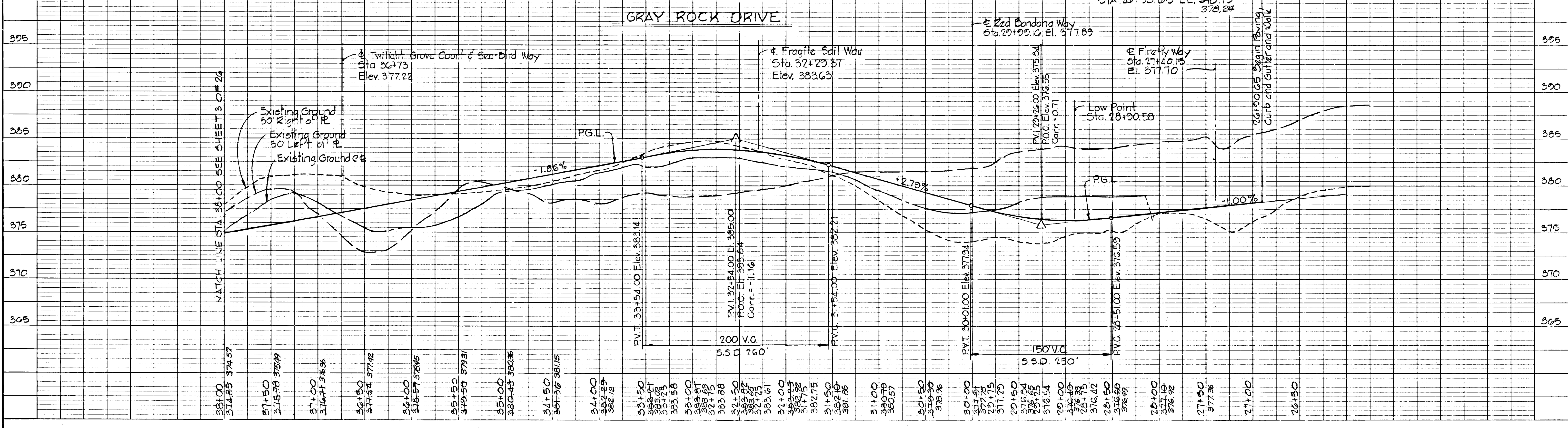
SCALE: AS SHOWN DATE

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974

PROFILE

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



PROPOSED
 GRAY ROCK FARMS SUBDIVISION
 (BY OTHERS)

DATE	
BY	
REVISION	
NO.	
DATE	
BY	
REVISION	
NO.	

- NOTES:
- Standard A-5&A-10 Inlet, Howard County Dwg. 61A, Page 119A.
 - Standard Manhole, Howard County Dwg. 0703, Page 138.
 - 18" x 24" Concrete End Sections, see detail sheet 25 of 26.
 - Standard Type "C" Endwall, Howard County Dwg. P-52, Page 107.
 - * Denotes Inlet with detectors, see detail sheet 26 of 26.
 - For Storm Drain Profiles see sheet 23 of 26.

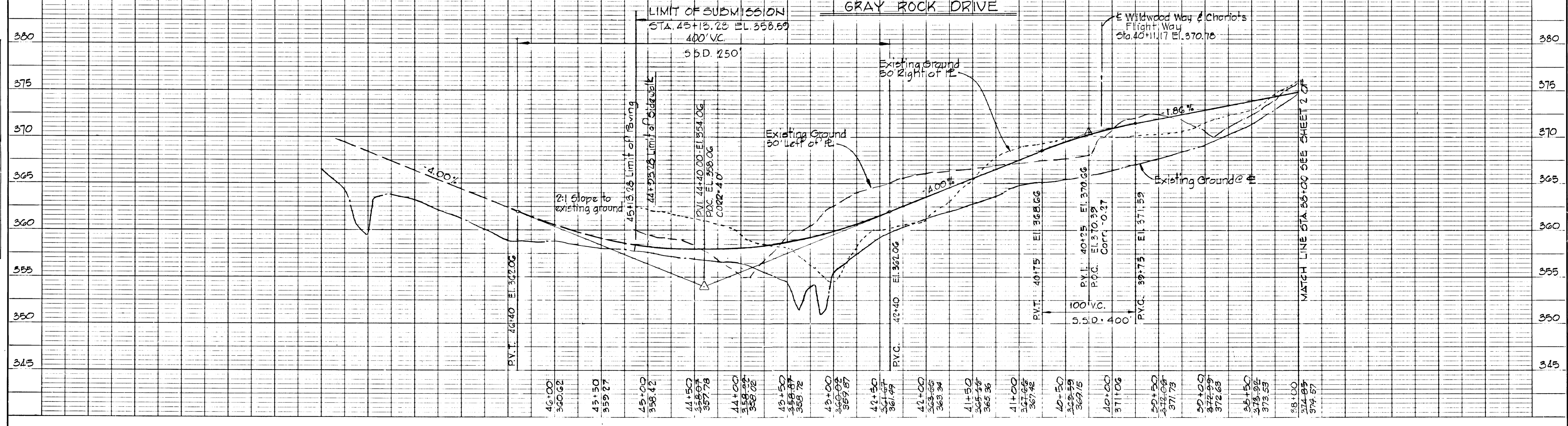
Standard Temporary Dead End Barricade, Howard County Standard B-109, Page 161.
 Standard Tee Turn Around Howard County Standard D-33, Page 88.

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
I-64	Standard A-5 Inlet, Width 2.5	358.16	352.21	352.14	Inlet 10.25 Right of Sta. 44+38
I-65	Standard A-10 Inlet, Width 2.5	358.16	349.52	348.75	Inlet 10.25 Left of Sta. 44+43
MH-40	Standard Manhole	360.63	355.27	354.54	Manhole 21.50 Right of Sta. 42+85
I-68	Standard A-10 Inlet, Width 2.5	371.89	367.17	366.61	Inlet 16.25 Right of Sta. 0+63.53
I-69	Standard A-10 Inlet, Width 2.5	371.89	—	367.30	Inlet 16.25 Left of Sta. 0+63.53
I-70	Standard A-5 Inlet, Width 2.5	372.10	—	367.57	Inlet 10.25 Left of Sta. 30+52.88
I-65	Standard A-5 Inlet, Width 2.5	372.10	368.12	367.41	Inlet 10.25 Right of Sta. 30+52.88
I-71	Standard A-5 Inlet, Width 2.5	371.79	367.20	367.00	Inlet 16.25 Left of Sta. 0+61.03
I-72	Standard A-5 Inlet, Width 2.5	371.79	—	367.33	Inlet 16.25 Right of Sta. 0+61.03

MH-41	Standard Manhole	369.60	365.23	364.52	Manhole 20' Right of Sta. 40+31
S-17	Standard Type "C" Endwall	—	364.64	—	See Plan and Profile
S-18	27" Concrete End Section	—	—	348.20	See Plan and Profile

DATE	
BY	
REVISION	
NO.	
DATE	
BY	
REVISION	
NO.	



NOTE: PAVING WIDTH - 36'
 LENGTH OF ROAD - 713'
 3 SEWER MHS IN R/W

CURVE DATA	
P.C. 42+06.10 to 45+13.28	P.I. 36+73.00 to P.T. 30+56.10
$\Delta = 26^{\circ}16'09''$ Tan: 156.34	$\Delta = 09^{\circ}00'41''$ Tan: 141.84
$R = 610.00'$ Chd: 304.50'	$R = 1800.00'$ Chd: 282.81
Arc: 307.18' Drg: N18°57'15"W	Arc: 283.10' Drg: N36°35'40"W

PLAN
 Scale: 1" = 50'

PROFILE
 Scale: Hor 1" = 50'
 Vert 1" = 5'

NO.	DATE	REVISION DESCRIPTION
DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION I AREA 4		
PROJECT TITLE GRAY ROCK DRIVE Sta. 38+00 to Sta. 45+13.28		
SCALE: AS SHOWN DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 NO. 1974

DEPARTMENT OF PUBLIC WORKS
Allen S. Brown 11/16/79
 CHIEF BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
Robert W. McCord 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

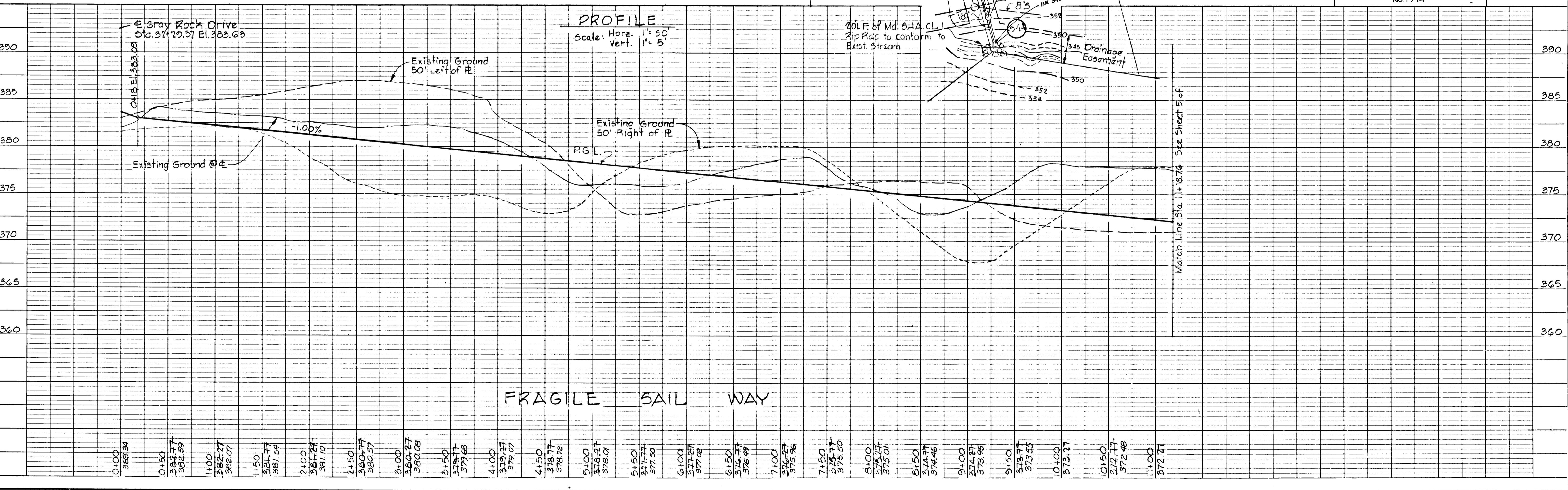
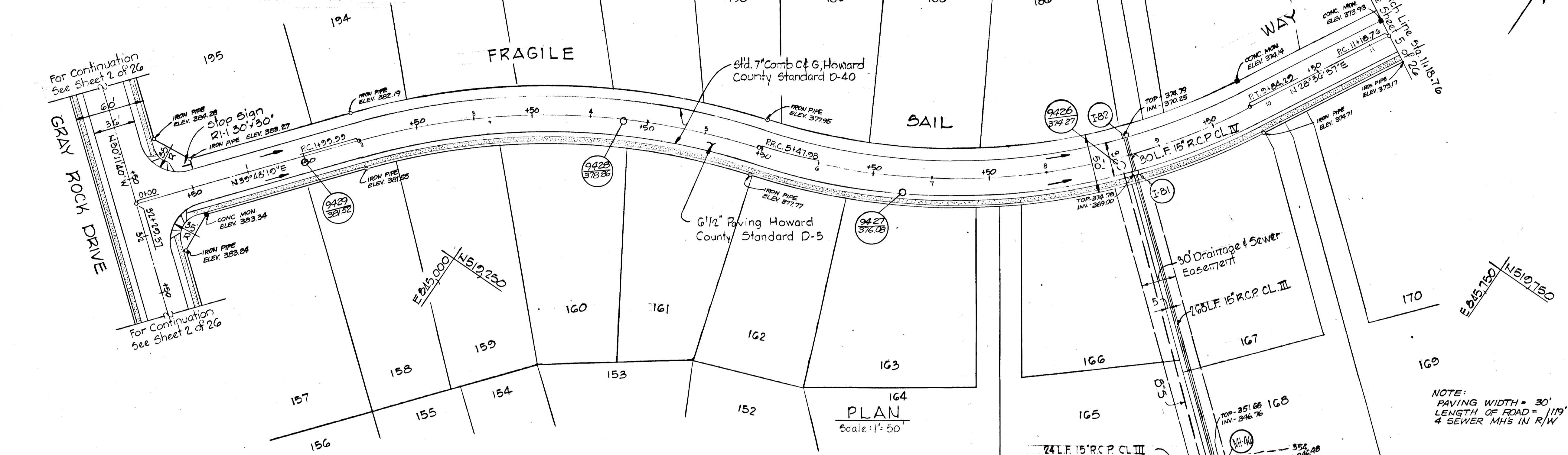
AS-BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974

Rev. Date	Rev. No.	Revision Description
		DORSEY HALL 2nd ELECTION DISTRICT HOWARD COUNTY MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA SECTION 1 AREA 4
		PROJECT TITLE FRAGILE SAIL WAY Sta. 0+00 to Sta. 11+18.76
		SCALE: AS SHOWN DATE
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974

NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	LOCATION
I-81	Standard A-5 Inlet Width-25'	374.75	369.23	369.23	Inlet 16.25' Right of Sta. 8+66.77
I-82	Standard A-5 Inlet Width-25'	374.75	370.25	370.25	Inlet 16.25' Left of Sta. 8+66.77
MH-46	Standard Manhole	353.50	348.00	345.70	See Plan and Profile
S-24	15' Conc. End Section			345.07	See Plan and Profile

PC: 1+22.29 to PRC 5+47.95	PRC 5+47.95 to PT: 5+84.29
$\Delta = 93^\circ 36' 56"$	$\Delta = 44^\circ 48' 40"$
Turn = 174.16	Turn = 230.00
R = 503.15	R = 557.87
Ch. = 343.02	Ch. = 425.28
Arc = 941.99	Arc = 436.31
Brg. = N56°36'48"E	Brg. = N 51° 0' 57"E

NOTES:
 1. Standard A-5 Inlet, Howard County Dwg. G4A, Page 119A.
 2. Standard Manhole, Howard County Dwg. D-103, Page 158
 3. 15' Concrete End Section, see detail Sheet 25 of 26
 4. For Storm Drain Profiles, see Sheet 25 of 26



DATE	
BY	
NO.	

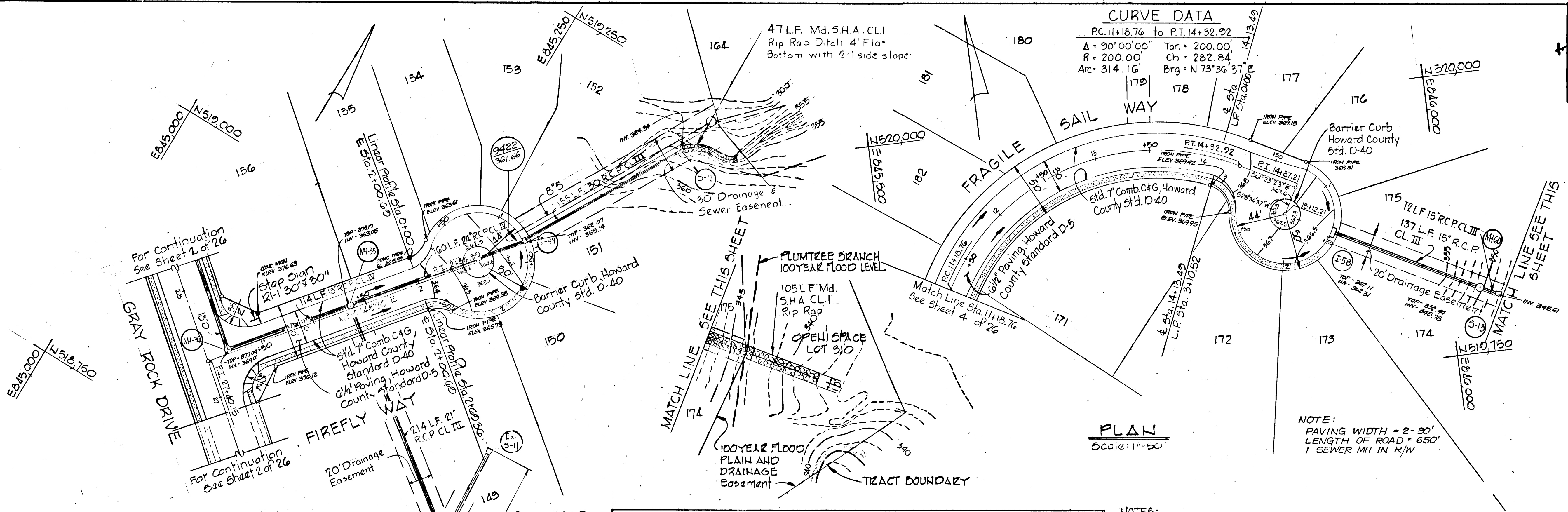
DATE	
BY	
NO.	

Note
 For Cul-de-sac details
 See Sheet 14 of 26

AS-BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974

Rev. Date	Rev. No.	Revision Description
		DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA SECTION I AREA 4
		PROJECT TITLE FIREFLY WAY AND FRAGILE SAIL WAY Sta. 11+18.76 to Sta. 15+12.21
		SCALE: AS SHOWN DATE
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974

CURVE DATA
 PC: 11+18.76 to PT: 14+32.92
 $\Delta = 90^{\circ}00'00"$ Tan = 200.00
 $R = 200.00'$ Ch = 282.84'
 Arc = 314.16' Brg = N 73°36'37"



PLAN
 Scale: 1" = 50'

NOTE:
 PAVING WIDTH = 2'-30"
 LENGTH OF ROAD = 650'
 1 SEWER MH IN R/W

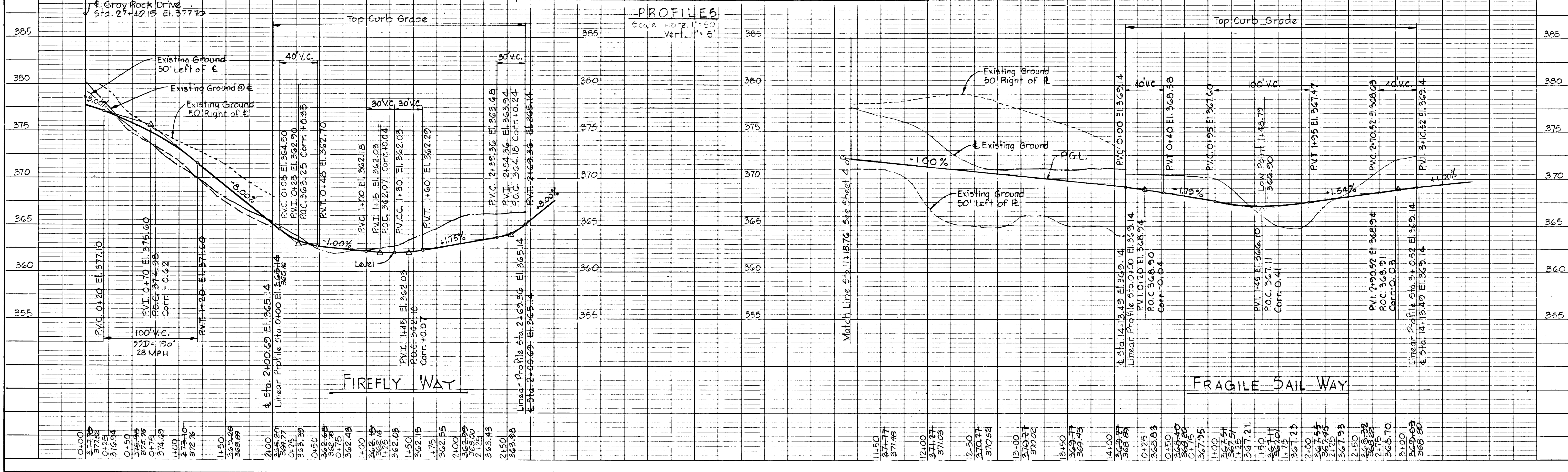
STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV. INV. IN	INV. OUT	LOCATION
I-58	Standard A-5 Inlet Width = 25"	366.20	364.25	1/2 Inlet 1.25' Back of L.P. Sta. 1+45.20
5-13	Std. 15" Conc. End Section		345.26	See Plan and Profile
I-41	Standard A-5 Inlet Width = 25"	362.03	354.93	25' Back of L.P. Sta. 1+31.54
M-21	Type "B" Manhole	370.17	363.70	25' Left of L.P. Sta. 1+36.90
5-12	Std. 30" Conc. End Section		354.15	See Plan & Profile
M-60	Standard Manhole	352.50	345.92	See Plan & Profile

- NOTES:**
- Standard A-5 Inlet, Howard County Dwg. G4A Page 119A.
 - Standard Manhole, Howard County Dwg. D-103, Page 152.
 - 30" Concrete End Section, see detail Sheet 25 of 26.
 - For Storm Drain Profiles, see Sheet 24 and 25 of 26.
 - 15" Concrete End Section, see detail Sheet 25 of 26.

PLAN
 NOTE BOOK
 NO. _____

PROFILE
 NOTE BOOK
 NO. _____



PROFILES
 Scale: Horiz. 1" = 50'
 Vert. 1" = 5'

NOTES:

1. Standard A-10 Inlet, Howard County Dwg. C-4A, Page 119A.
2. Standard Manhole, Howard County Dwg. D-103, Page 158
3. 15" Concrete End Section, see detail Sheet 23 of 26
4. For Storm Drain Profile, see Sheet 24 of 26

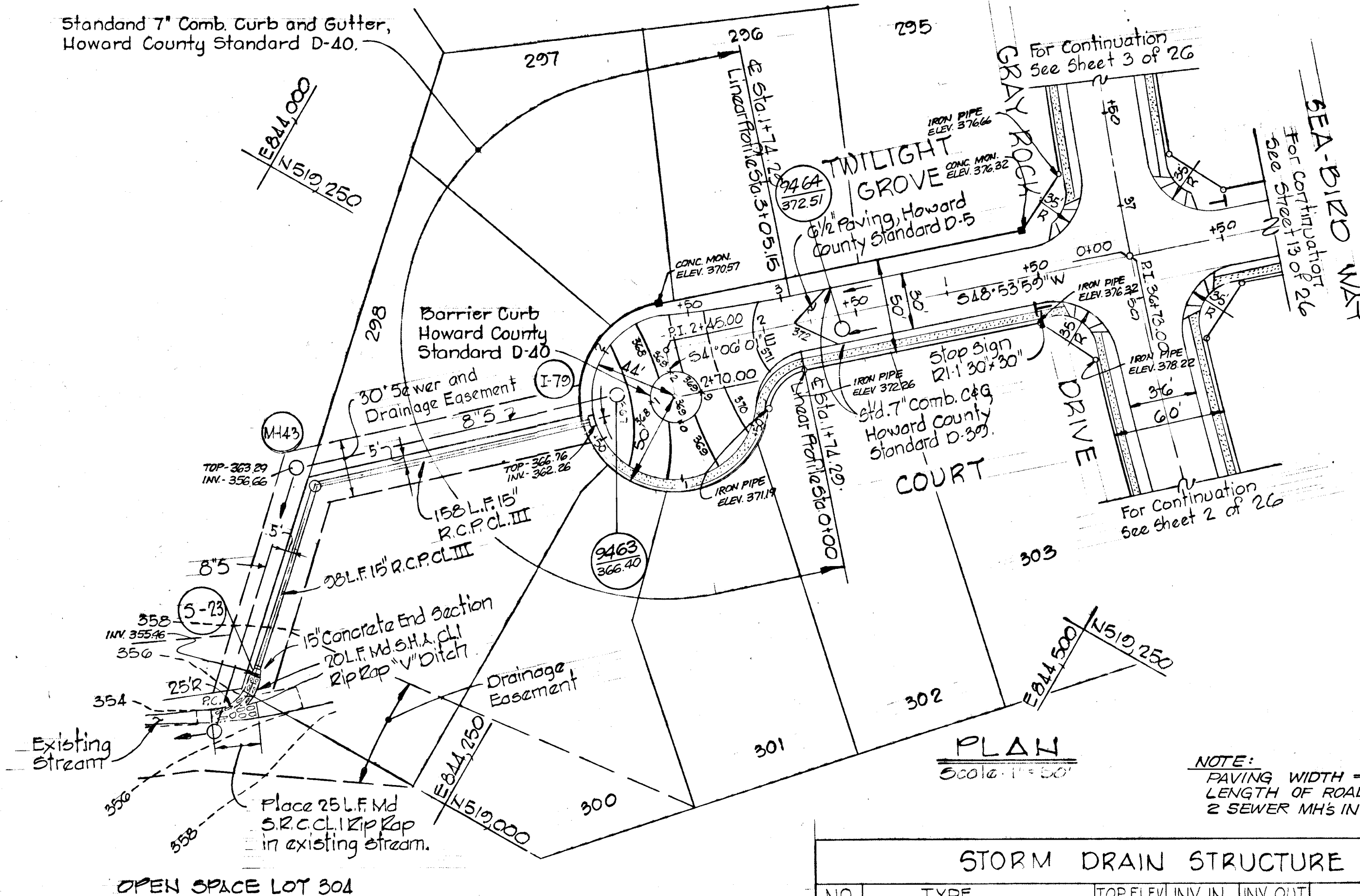
Standard 7" Comb. Curb and Gutter,
Howard County Standard D-40.

DEPARTMENT OF PUBLIC WORKS

Allen & Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
 John W. Muddeman 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

AS-BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED
 BY KENNETH A. McCORD P.E. 1974

Note
 For Cul-de-sac details
 see sheet 14 of 26



PLAN
 Scale: 1" = 30'

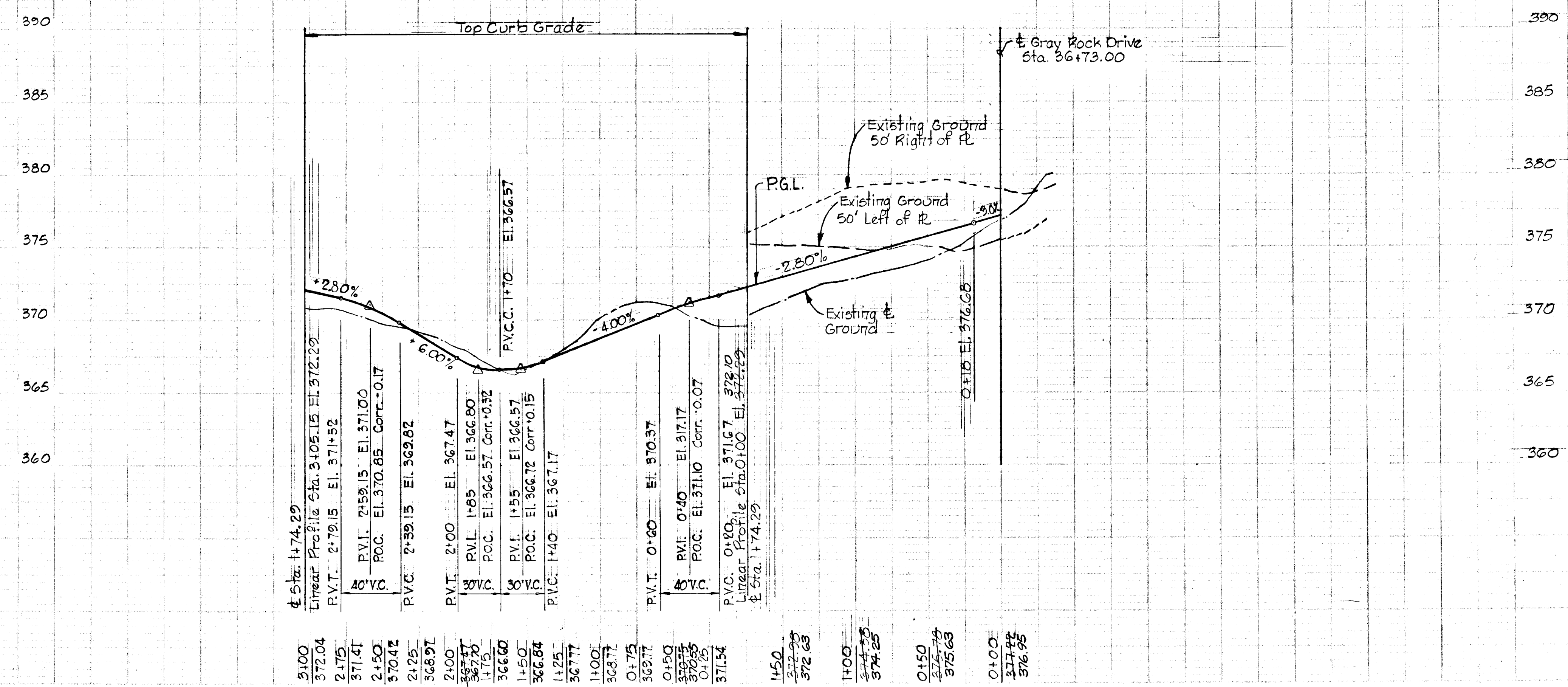
NOTE:
 PAVING WIDTH = 30'
 LENGTH OF ROAD = 270'
 2 SEWER MHS IN R/W

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV	INV IN	INV OUT	LOCATION
I-79	Standard A-10 Inlet Width: 25'	366.57		362.45	Inlet 125' back of L.P. Sta. 1+64.24
M-49	Standard Manhole	363.25	358.00	356.60	See Plan and Profile
E-23	Std. 15" Conc. End Section			355.41	See Plan and Profile

Rev. Date	Rev. No.	Revision Description
DORSEY HALL 6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION I AREA 4		
PROJECT TITLE TWILIGHT GROVE COURT		
SCALE: AS SHOWN DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McCord KENNETH A. McCORD Registered Engineer No. 1974		

TWILIGHT GROVE COURT



F 80-26

10/10/79

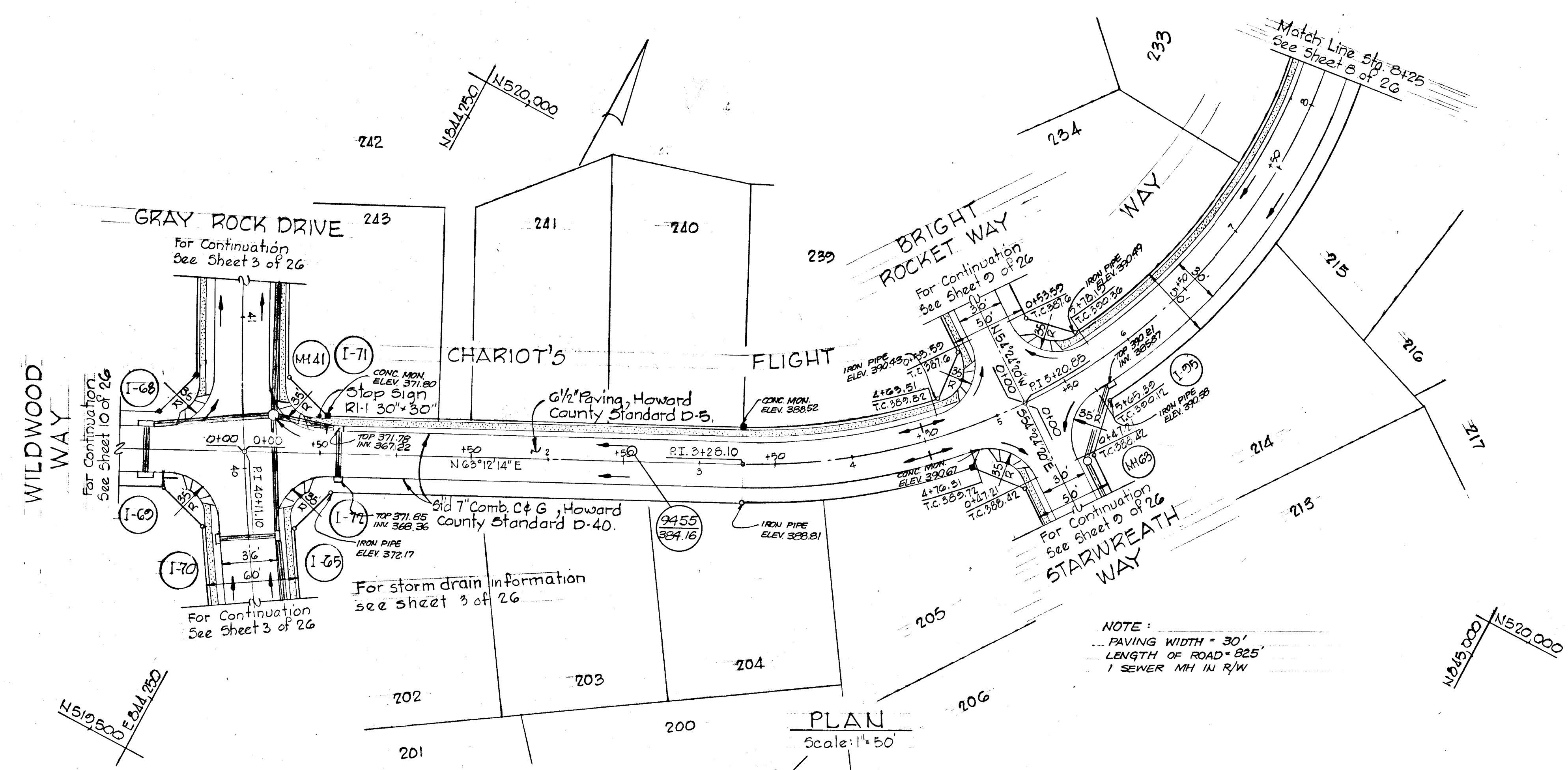
SHEET 6 OF 26

"Q" & "O"

CURVE DATA

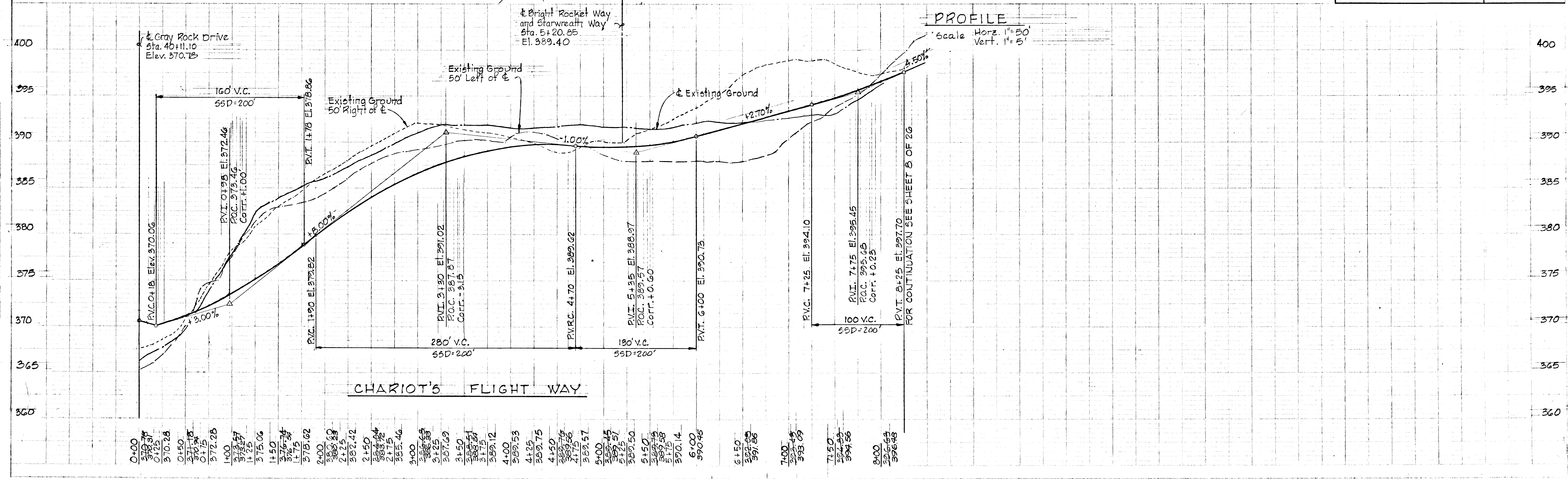
PC: 3+28.10 to P.I. 5+20.85	PI: 5+20.85 to P.T. 8+63.56
$\Delta = 27^\circ 36' 34''$ Tan = 98.28'	$\Delta = 49^\circ 05' 25''$ Tan = 182.67'
R = 400.00' Ch = 190.89'	R = 400.00' Ch = 332.33'
Arc = 192.75' Brg = N45°23'57"E	Arc = 342.71' Brg = N11°02'59"E

DEPARTMENT OF PUBLIC WORKS
 Allen S. Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
 William M. Mendenhall 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



AS BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974

Rev. Date	Rev. No.	Revision Description
DORSEY HALL 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION 1 AREA 4		
PROJECT TITLE CHARIOT'S FLIGHT WAY Sta. 0+00 to Sta. 8+00		
SCALE: As shown DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McCord KENNETH A. McCORD Registered Engineer No. 1974		

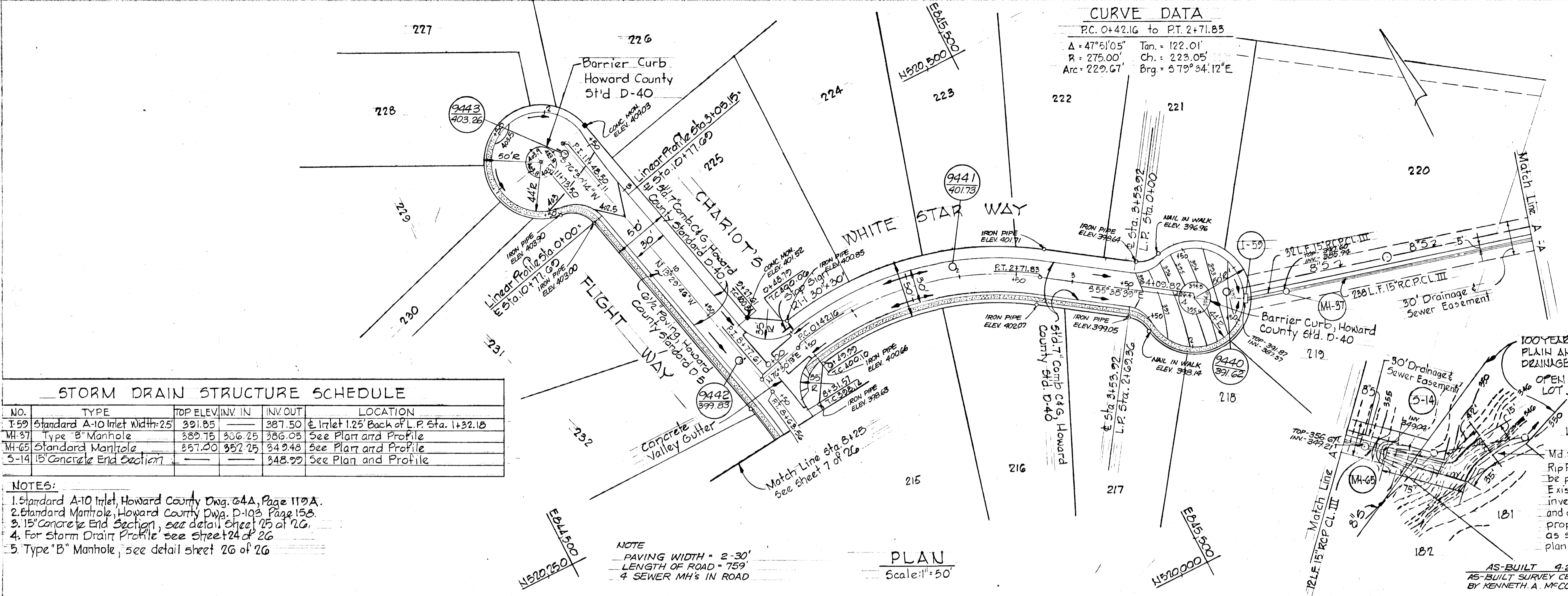


Note:
 For Cul-de-sac details
 See Sheet 14 of 26

Rev. Date	Rev. No.	Revision Description
		DORSEY HALL 6th ELECTION DISTRICT HOWARD COUNTY MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP
		PROJECT AREA SECTION I AREA 4
		PROJECT TITLE CHARIOT'S FLIGHT WAY Sta. 8+00 to Sta. 11+73.40 AND WHITE STAR WAY
		SCALE: As Shown DATE
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974

CURVE DATA

P.C. 0+42.16	to P.T. 2+71.83
A = 47°51'05"	Tan. = 122.01'
R = 275.00'	Ch. = 223.05'
Arc = 229.67'	Brg = S 79° 34' 12" E



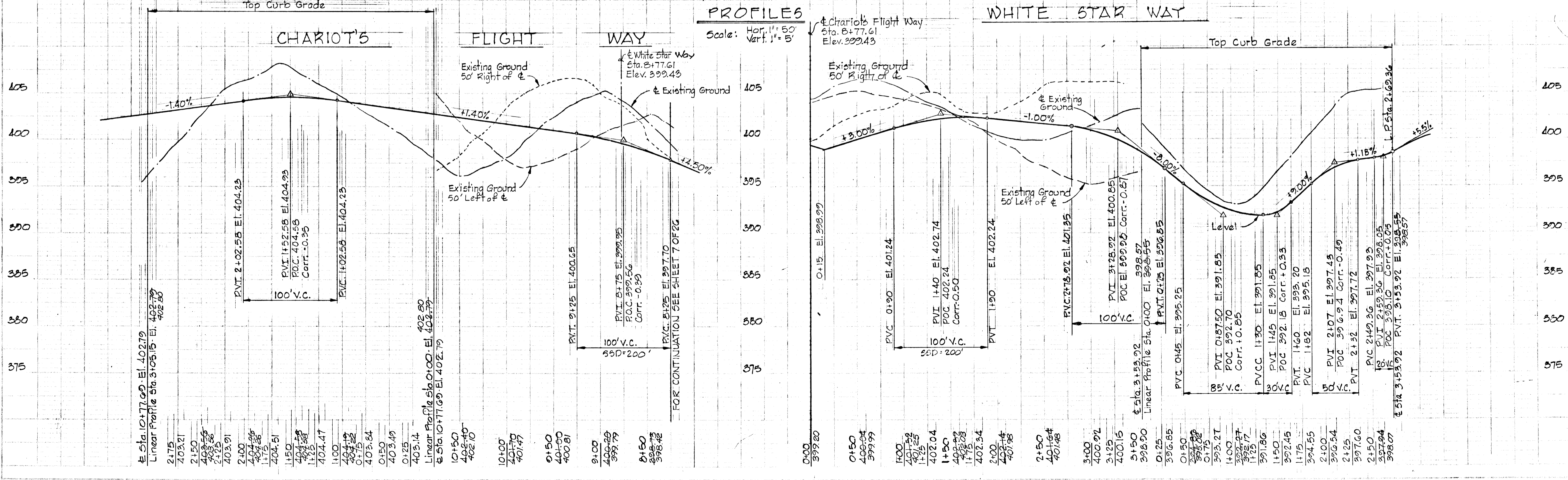
STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	LOCATION
T-59	Standard A-10 Inlet Width: 25"	391.85	387.50	387.50	at Inlet 125' Back of L.P. Sta. 1+32.18
MH-37	Type "B" Manhole	383.75	386.25	386.05	See Plan and Profile
MH-38	Standard Manhole	357.20	352.25	349.48	See Plan and Profile
S-14	15 Concrete End Section			348.22	See Plan and Profile

- NOTES:**
- Standard A-10 Inlet, Howard County Dwg. 64A, Page 110A.
 - Standard Manhole, Howard County Dwg. P-103 Page 153.
 - 15' Concrete End Section, see detail sheet 25 of 26.
 - For Storm Drain Profile see sheet 24 of 26.
 - Type "B" Manhole, see detail sheet 26 of 26.

NOTE
 PAVING WIDTH = 2-30'
 LENGTH OF ROAD = 759'
 4 SEWER MH'S IN ROAD

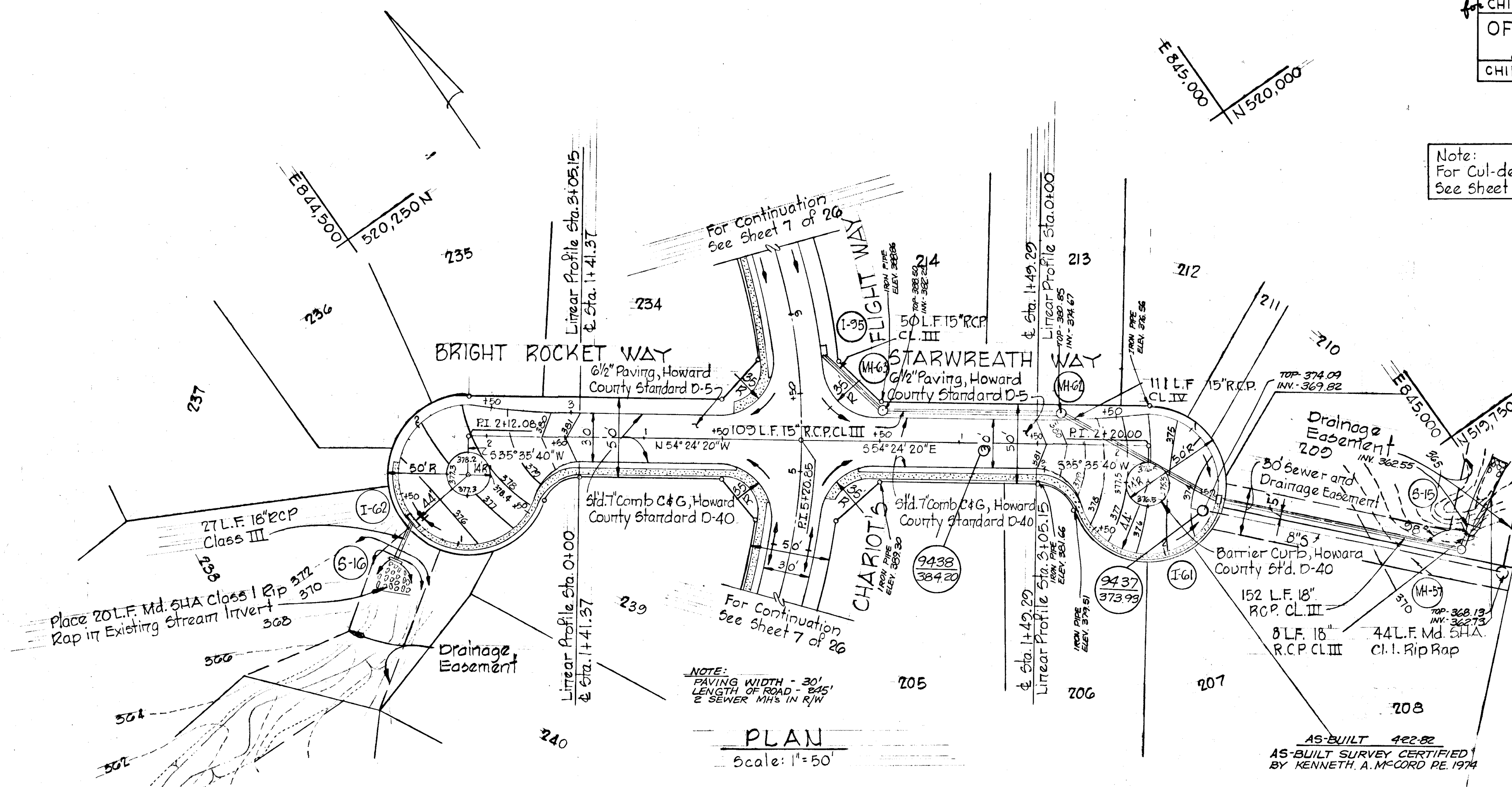
PLAN
 Scale: 1" = 50'



STORM DRAIN STRUCTURE SCHEDULE					
NO.	TYPE	TOP ELEV.	INN. IN.	INN. OUT.	LOCATION
I-61	Standard A-10 Inlet, Width 25"	375.87		368.16	At Inlet 1.25 Back L.P. Sta. 1+33
I-61	Standard A-5 Inlet, Width 25"	374.03	370.00	369.73	At Inlet 1.25 Back L.P. Sta. 1+47.42
MH-57	Standard Manhole	368.60	367.93	367.66	See Plan and Profile
S-15	Standard 18" Conc. End Sec.			367.33	See Plan and Profile
S-16	Standard Type 'C' End Wall			367.64	See Plan and Profile
*I-95	Std A-5 Inlet width 15"	370.27		366.15	At Inlet 16.25 Right of Sta. 5+74
MH-61	Standard Manhole	380.55	374.85	374.65	At MH 20' Left of Sta. 1+65
MH-63	Standard Manhole	388.32	388.05	382.85	At MH 20' Left of Sta. 0+51

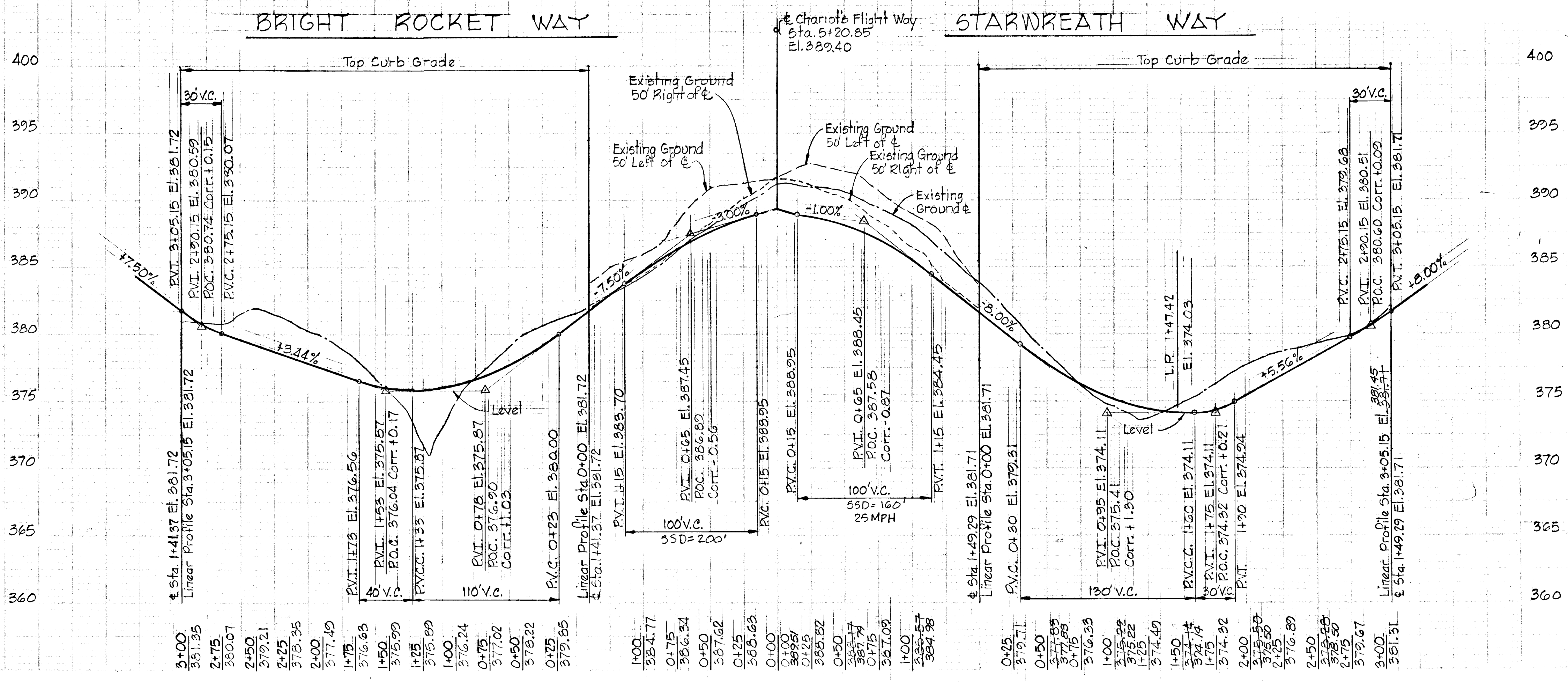
DEPARTMENT OF PUBLIC WORKS
Alan S. Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
John W. MacCallum 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

- Standard A-10 & A-5 Inlets, Howard County, Dwg. 64A, Page 119 A
- 21" Concrete End Section see detail, sheet 25 of 26
- For Storm Drain Profile see sheet 24 of 26
- Standard Manhole Howard County Dwg. D-103 Page 158
- * Inlets with deflectors



Note:
 For Cul-de-sac details
 See sheet 14 of 26

Rev. Date	Rev. No.	Revision Description
DORSEY HALL		
6 th ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION 1 AREA 4		
PROJECT TITLE BRIGHT ROCKET WAY STARWREATH WAY		
SCALE: AS SHOWN DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i>		
KENNETH A. McCORD Registered Engineer No. 1974		



F-80-26

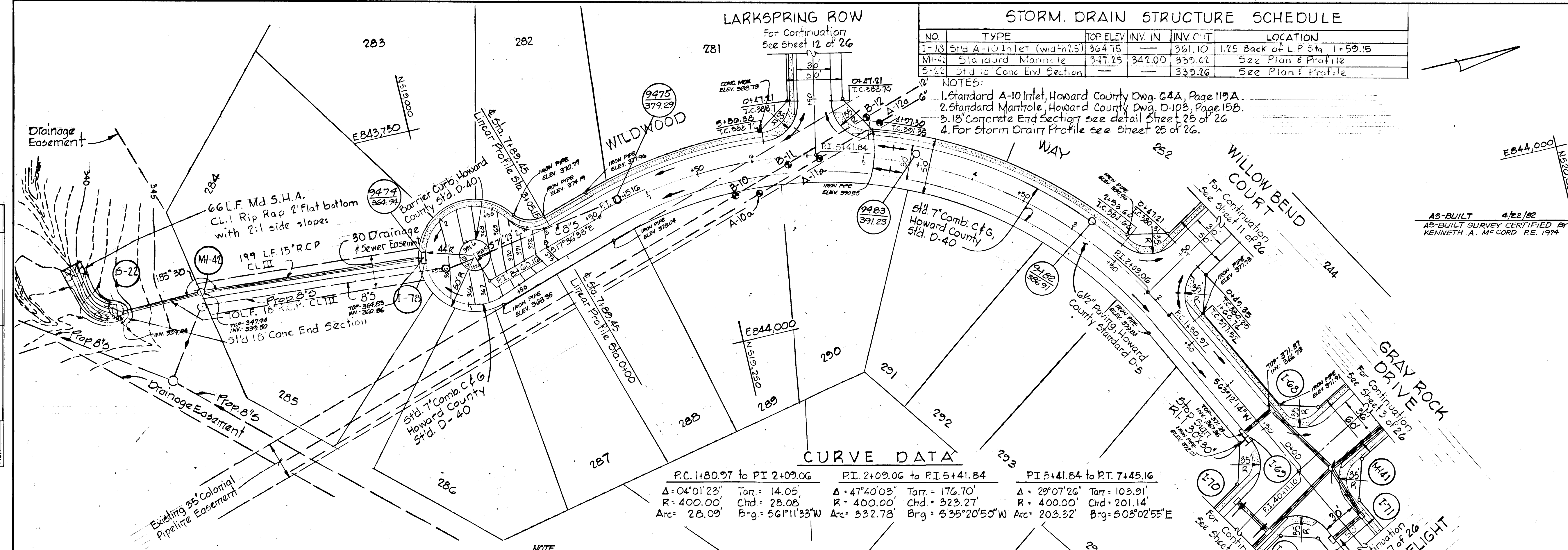
NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	LOCATION
1-78	Std A-10 Inlet (width 25)	364.75	361.10	1.25 Back of L.P. Sta. 1+59.15	
11-44	Standard Manhole	347.25	339.62	See Plan & Profile	
5-24	Std 3 Conc End Section	---	---	339.26	See Plan & Profile

NOTES:
 1. Standard A-10 Inlet, Howard County Dwg. 64A, Page 119A.
 2. Standard Manhole, Howard County Dwg. D-103, Page 15B.
 3. 18" Concrete End Section see detail Sheet 25 of 26.
 4. For Storm Drain Profile see Sheet 25 of 26.

AS-BUILT 4/22/82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974

Note:
 For Cul-de-sac details
 See Sheet 14 of 26

Rev. Date	Rev. No.	Revision Description
DORSEY HALL		
2nd ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION 1 AREA 4		
PROJECT TITLE WILDWOOD WAY		
SCALE: AS SHOWN DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		

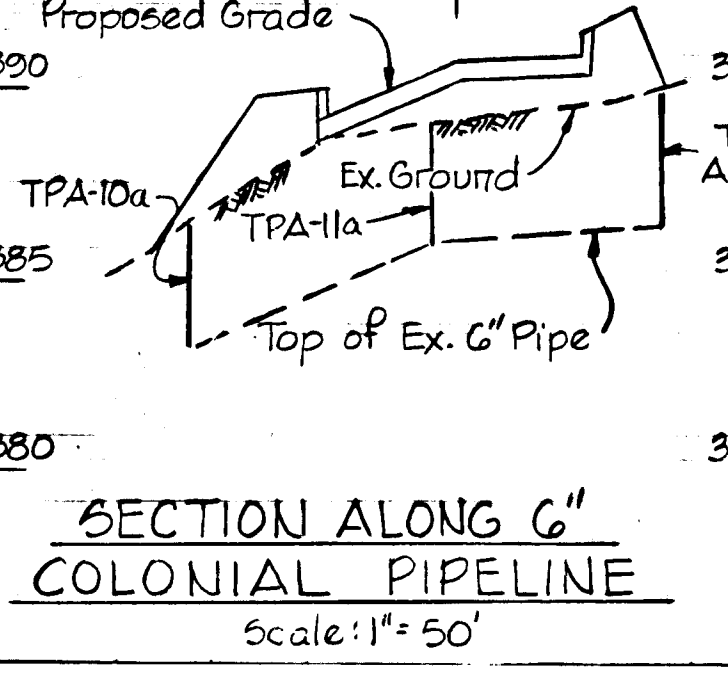
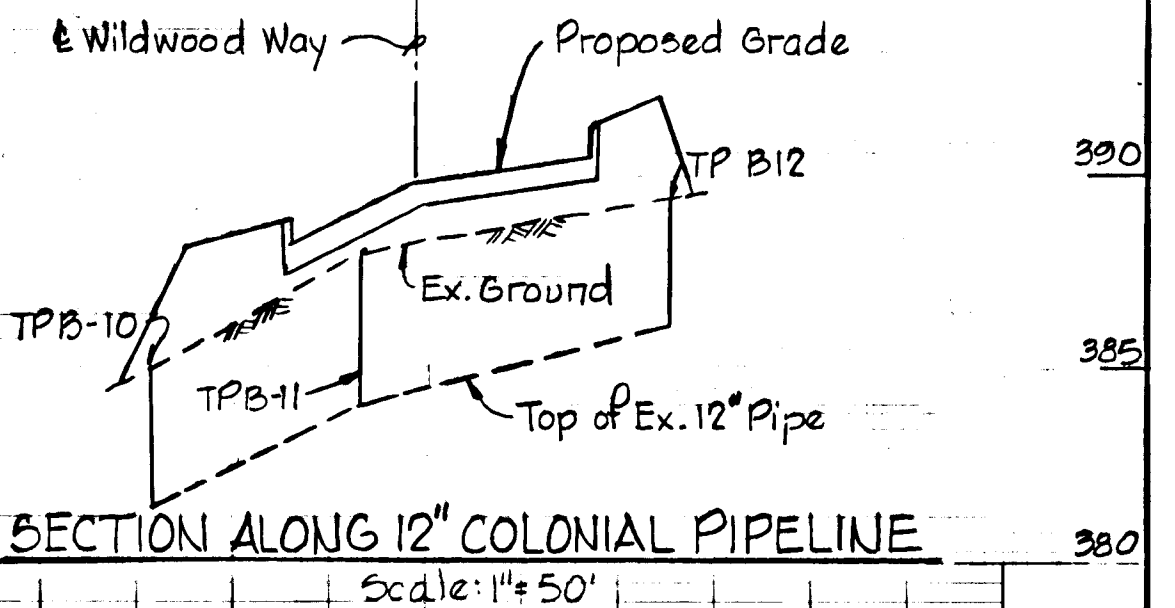
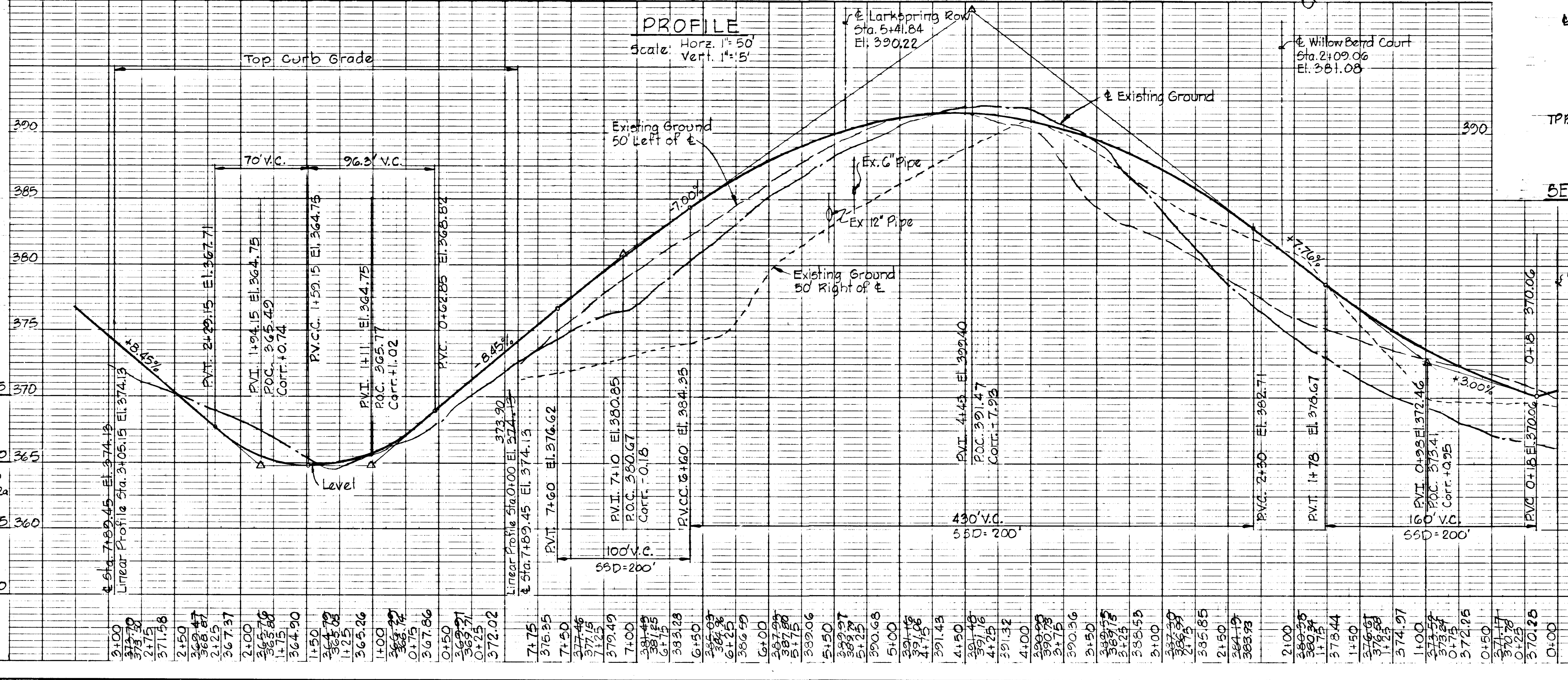


Stationing	Delta	Tan	Chd	Brng
P.C. 1+80.97 to P.T. 2+09.06	Δ: 04°01'23"	Tan: 14.05	Chd: 28.08	Brng: S 61°11'33"W
P.I. 2+09.06 to P.T. 5+41.84	Δ: 47°40'03"	Tan: 176.70'	Chd: 323.27'	Brng: S 33°2'78"
P.I. 5+41.84 to P.T. 7+45.16	Δ: 29°07'26"	Tan: 103.91'	Chd: 201.14'	Brng: S 50°3'02"55"E

PLAN Scale: 1" = 50'

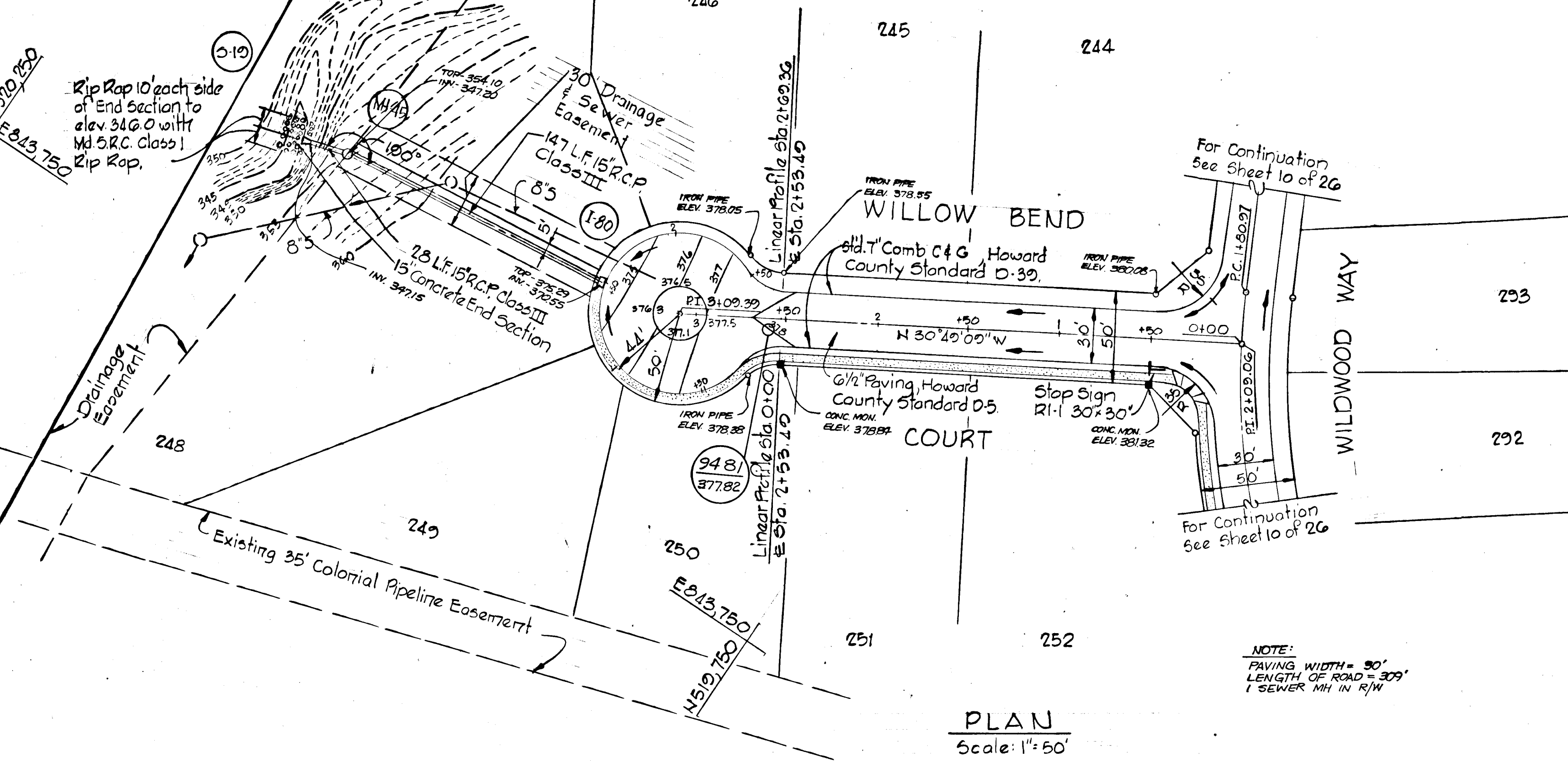
COLONIAL PIPELINE TEST PIT DATA

6" PIPE	
A-10a	Exist. Ground = 386.9 Top of Pipe = 383.2 Depth = 3.7'
A-11a	Exist. Ground = 389.2 Top of Pipe = 385.9 Depth = 3.3'
A-12a	Exist. Ground = 390.1 Top of Pipe = 386.3 Depth = 3.8'
12" PIPE	
B-10	Exist. Ground = 385.0 Top of Pipe = 381.4 Depth = 3.6'
B-11	Exist. Ground = 387.7 Top of Pipe = 384.0 Depth = 3.7'
B-12	Exist. Ground = 389.2 Top of Pipe = 386.0 Depth = 3.2'



PROPOSED GRAY ROCK FARMS SUBDIVISION (BY OTHERS)

Rip Rap 10' each side of End Section to elev. 346.0 with Md 5 R.C. Class 1 Rip Rap.



PLAN Scale: 1"=50'

NOTE: PAVING WIDTH = 30' LENGTH OF ROAD = 309' 1 SEWER MH IN R/W

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV	INV IN	INV OUT	LOCATION
1-20	Standard A-5 Inlet, Width 25"	375.60	---	370.54	Inlet 1/25' Back L.F. Sta. 1+53.00
MH 48	Standard Manhole	355.50	347.75	345.18	See Plan and Profile
5-10	15' Concrete End Section	---	---	345.03	See Plan and Profile

- NOTES:
 1. Standard A-5 Inlet, Howard County Dwg 644, Page 112A.
 2. Standard Manhole, Howard County Dwg 0103, Page 158.
 3. 15' Concrete End Section, see detail sheet 25 of 26.
 4. For Storm Drain Profiles see sheet 23 of 26.

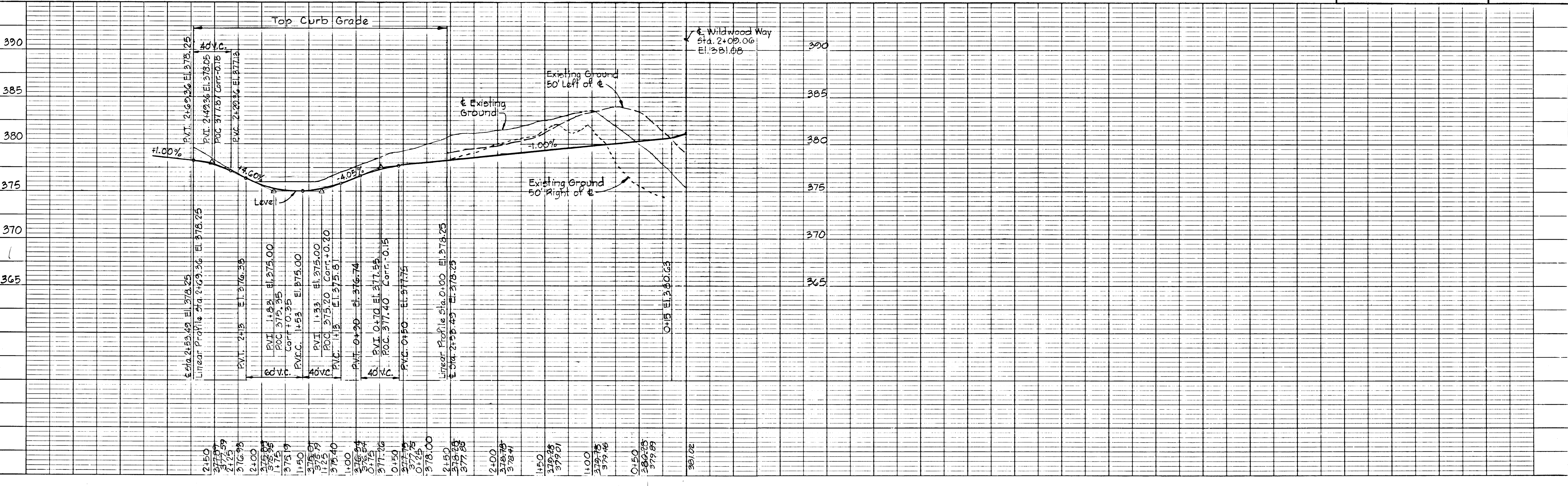
DEPARTMENT OF PUBLIC WORKS

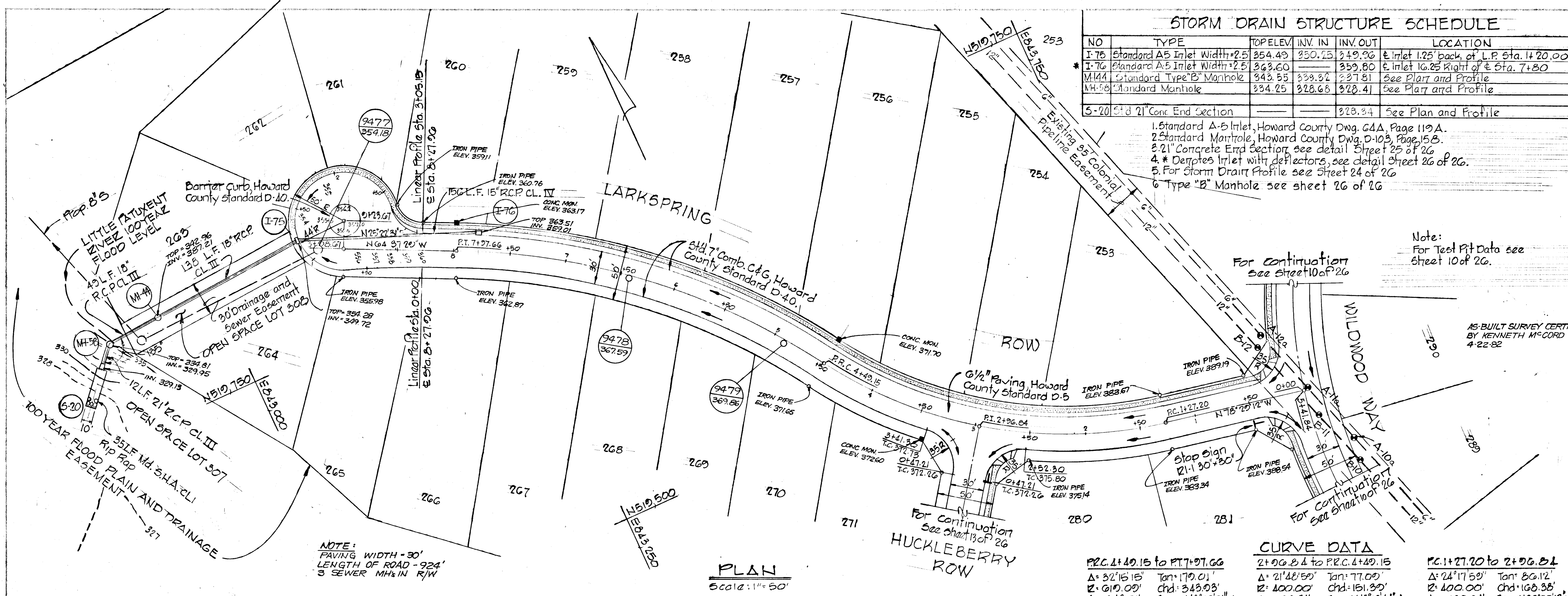
11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
 11-179
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Note For Cul-de-Sac details See sheet 14 of 26

Rev. Date	Rev. No.	Revision Description
DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION 1 AREA 4		
PROJECT TITLE WILLOW BEND COURT		
SCALE: AS SHOWN DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		

AS-BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD, P.E. 1974





STORM DRAIN STRUCTURE SCHEDULE					
NO	TYPE	TOP ELEV.	INV. IN	INV. OUT	LOCATION
I-76	Standard A-5 Inlet Width=2.5	354.49	350.25	349.36	± Inlet 1.25' back of L.P. Sta. 1+20.00
I-76	Standard A-5 Inlet Width=2.5	343.60	339.32	338.80	± Inlet 16.25' Right of ± Sta. 7+80
MH-44	Standard Type 'B' Manhole	343.65	339.32	337.81	See Plan and Profile
MH-58	Standard Manhole	334.25	328.65	328.41	See Plan and Profile
5-20	Std 21" Conc End Section			328.34	See Plan and Profile

DEPARTMENT OF PUBLIC WORKS
Allen & Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING AND ZONING
Shull-Madden 11-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

1. Standard A-5 Inlet, Howard County Dwg. 64A, Page 119A.
2. Standard Manhole, Howard County Dwg. D-103, Page 15B.
3. 21" Concrete End Section, see detail Sheet 25 of 26.
4. * Depictes Inlet with deflectors, see detail Sheet 26 of 26.
5. For Storm Drain Profile see Sheet 24 of 26.
6. Type "B" Manhole see sheet 26 of 26.

Note:
 For Cut-de-5ac details
 See Sheet 14 of 26

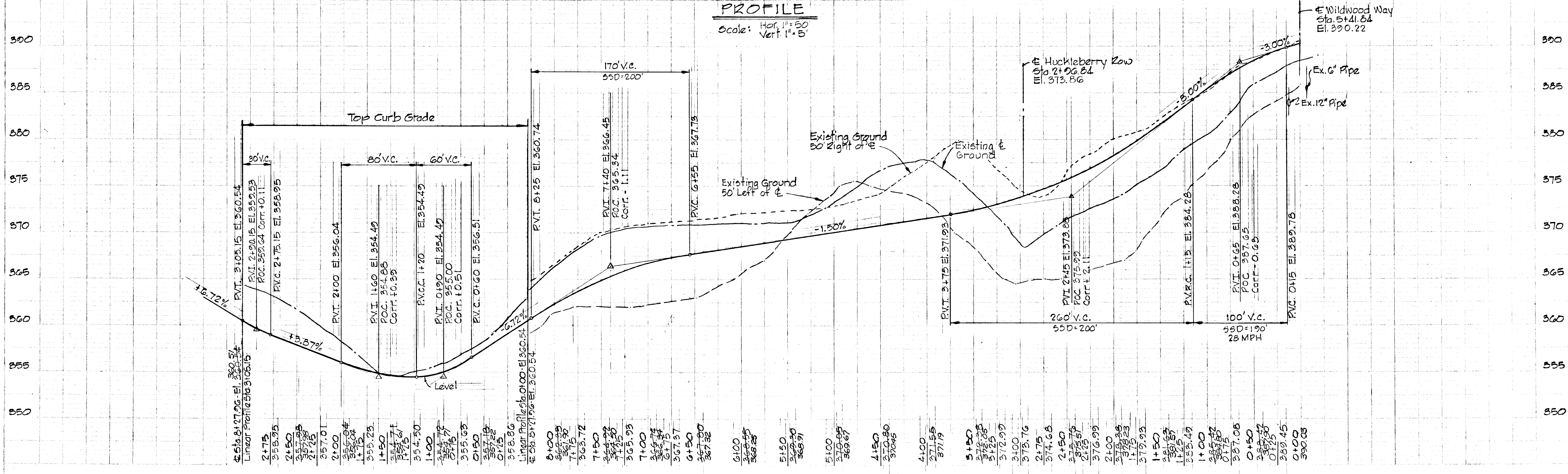
Note:
 For Test Pit Data see
 Sheet 10 of 26.

Rev. Date	Rev. No.	Revision Description
		DORSEY HALL 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA SECTION 1 AREA 4
		PROJECT TITLE LARKSPRING ROW
		SCALE: As Shown DATE
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202

Kenneth A. McCord
 KENNETH A. McCORD
 Registered Engineer
 No. 1974

CURVE DATA		
P.C. 1+49.15 to P.T. 7+97.66	P.C. 2+06.84 to P.R.C. 4+49.15	P.C. 1+27.20 to 2+06.84
Δ: 32°15'15" Tan: 179.01'	Δ: 21°48'50" Tan: 77.00'	Δ: 24°17'59" Tan: 86.12'
R: 610.00' Chd: 343.93'	R: 400.00' Chd: 151.39'	R: 400.00' Chd: 168.35'
Arc: 348.51' Brg: N46°20'51"W	Arc: 152.31' Brg: N43°16'44"W	Arc: 169.64' Brg: N66°20'13"W

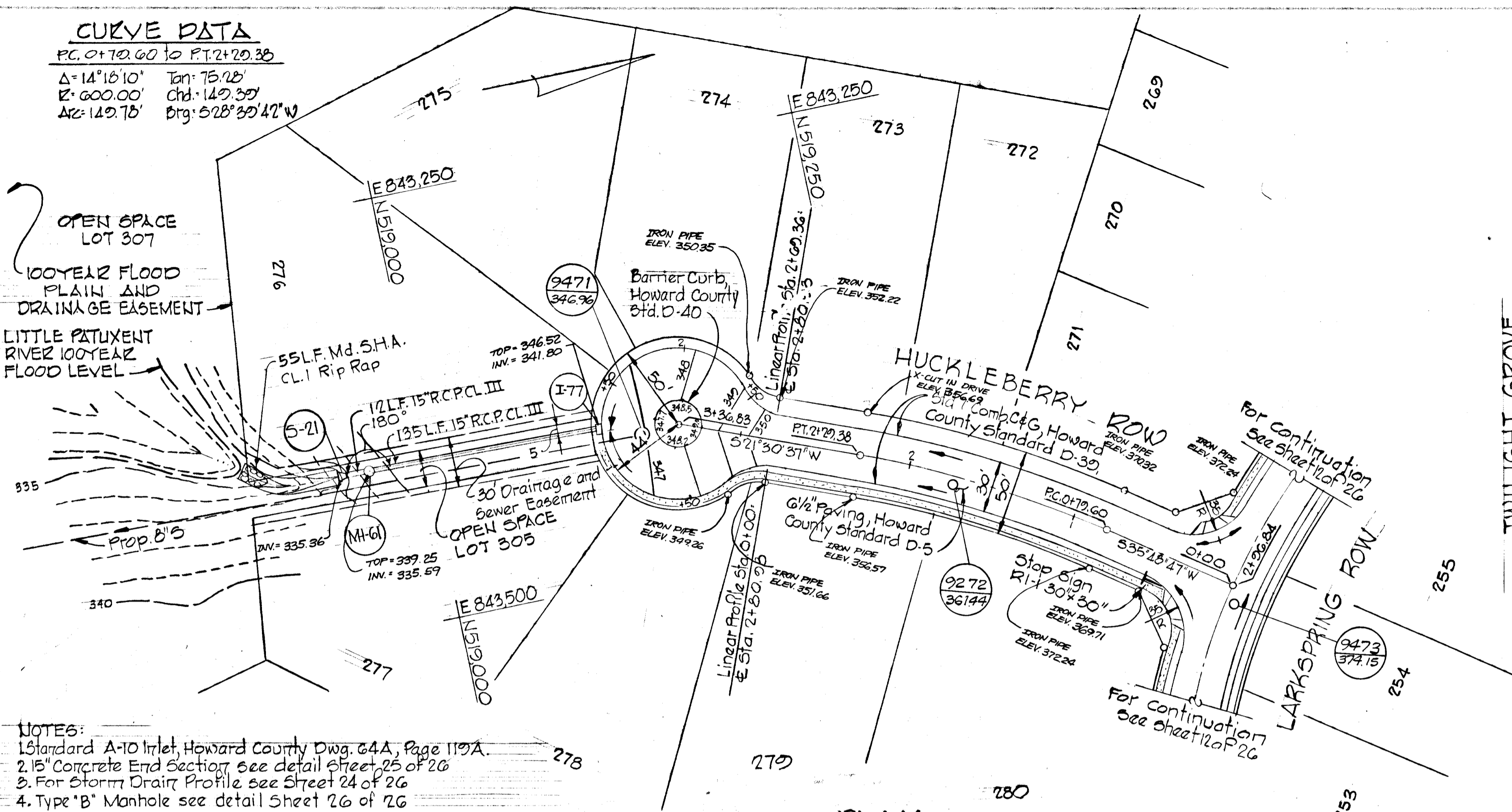
PROFILE
 Scale: Hor. 1"=50'
 Vert. 1"=5'



CURVE DATA

PC: 0+72.60 to PT: 2+29.38
 $\Delta = 14^\circ 16' 10''$ Tan: 75.10'
 $E = 600.00'$ Chd: 149.35'
 $Arc: 149.78'$ Brg: $52^\circ 35' 47'' W$

OPEN SPACE LOT 307
 100 YEAR FLOOD PLAIN AND DRAINAGE EASEMENT
 LITTLE PATUXENT RIVER 100 YEAR FLOOD LEVEL



- NOTES:
 1. Standard A-10 Inlet, Howard County Dwg. 64A, Page 119A.
 2. 15" Concrete End Section, see detail sheet 25 of 26.
 3. For Storm Drain Profile see Sheet 24 of 26.
 4. Type "B" Manhole see detail sheet 26 of 26.

STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	TOP ELEV.	INV. IN	INV. OUT	LOCATION
I-77	Standard A-10 Inlet Width: 2.5	346.50		342.15	4" Inlet 1.25' back of L.P. Sta. 1+15.00
I-21	Std. 15" Conc. End Section		335.17		See Plan and Profile
MH-61	Std. Type "B" Manhole	335.25	335.44	335.24	See Plan and Profile

PLAN
Scale: 1" = 50'

NOTE
 PAVING WIDTH = 2'-30"
 LENGTH OF ROAD = 377'
 4 SEWER MH'S IN ROW

DEPARTMENT OF PUBLIC WORKS
 Allen S. Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
 Kenneth A. McCord 11-1-79
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

Note:
 For Cul-de-sac details
 See Sheet 14 of 26

AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974
 422 B2

Rev. Date Rev. No. Revision Description

DORSEY HALL
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

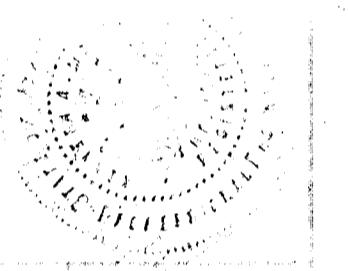
PROJECT AREA
 SECTION 1 AREA 4

PROJECT TITLE
 HUCKLEBERRY ROW
 SEA-BIRD WAY

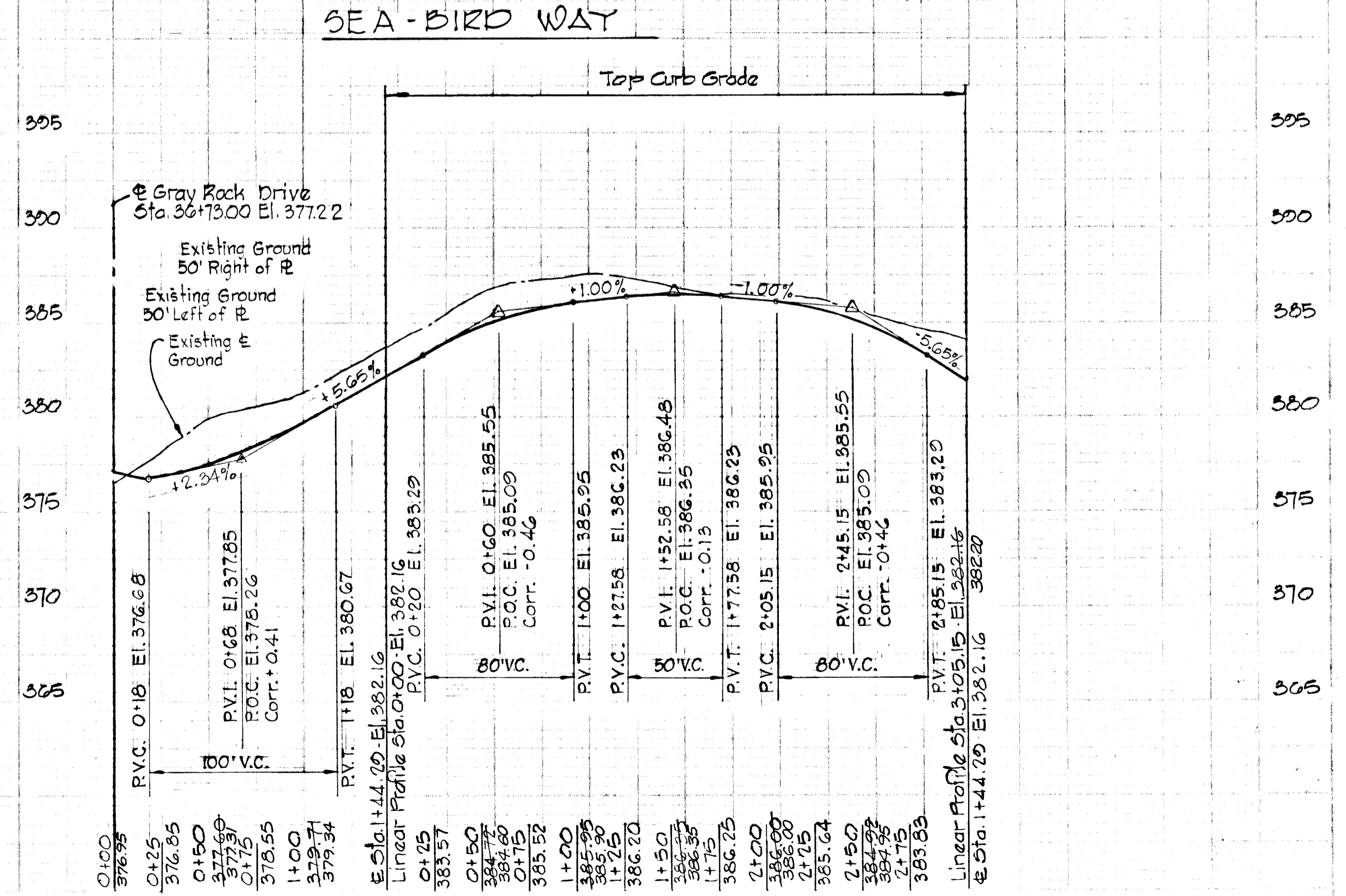
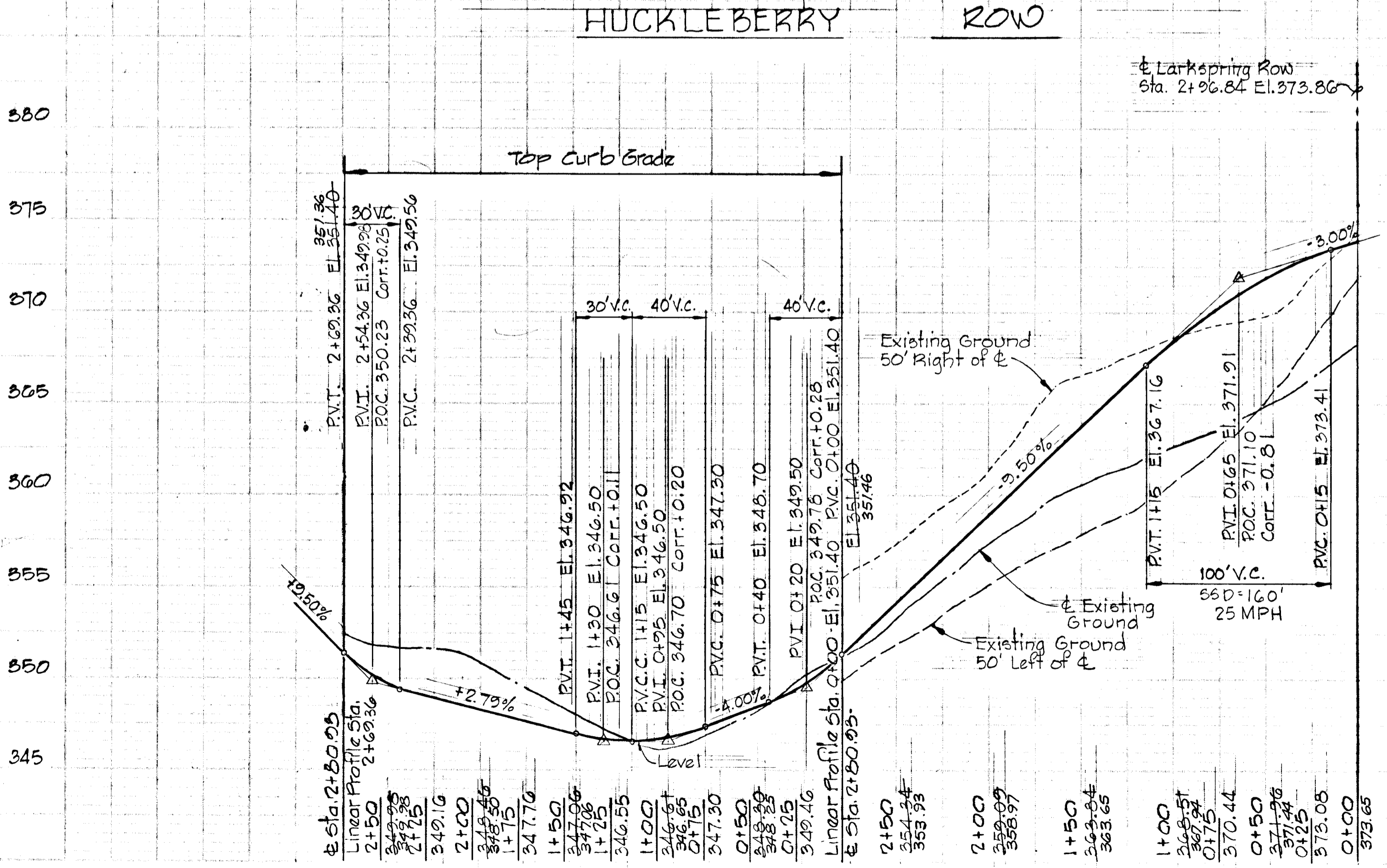
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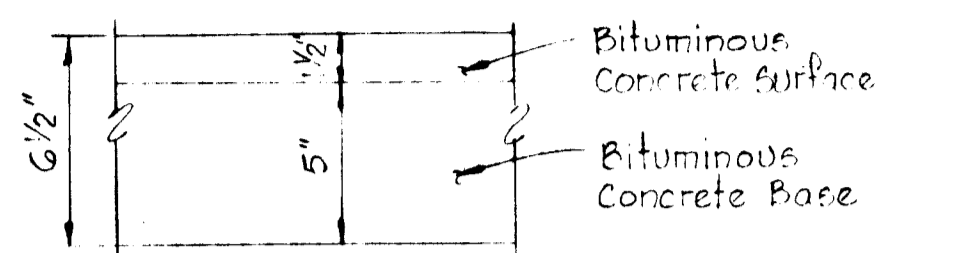
WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

Kenneth A. McCord
 KENNETH A. McCORD
 Registered Engineer
 No. 1974



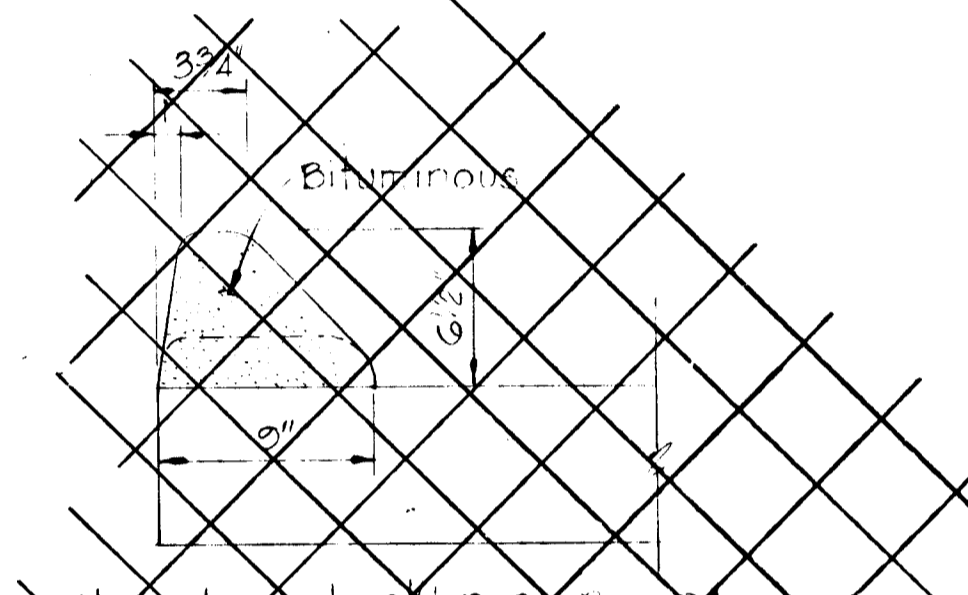
PROFILES
Scale: Hor. 1" = 50' Vert. 1" = 5'



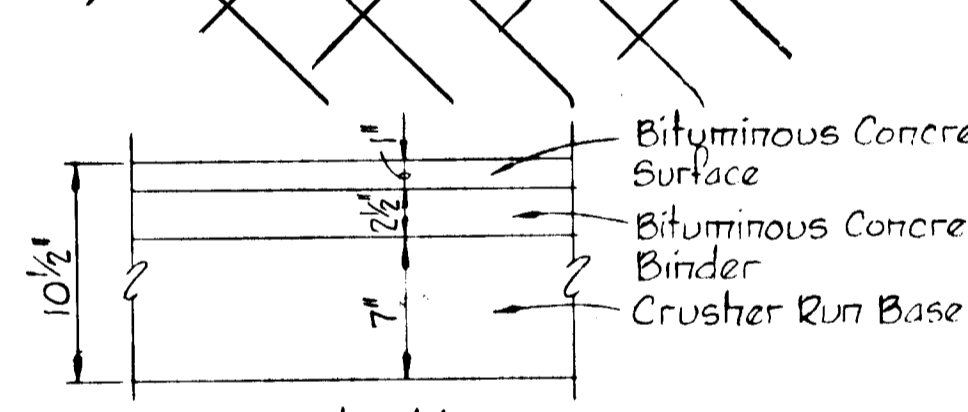


Howard County Std. D-5 Page 60
 Notes:
 1. Base will be primed in accordance with C-30-C as provided in the Howard County Road Construction Code and Standard Specifications.
 2. Top Coat is required in accordance with section C-31.4 of the Howard County Road Construction Code and Standard Specifications.

TYPICAL PAVING SECTION
 No Scale

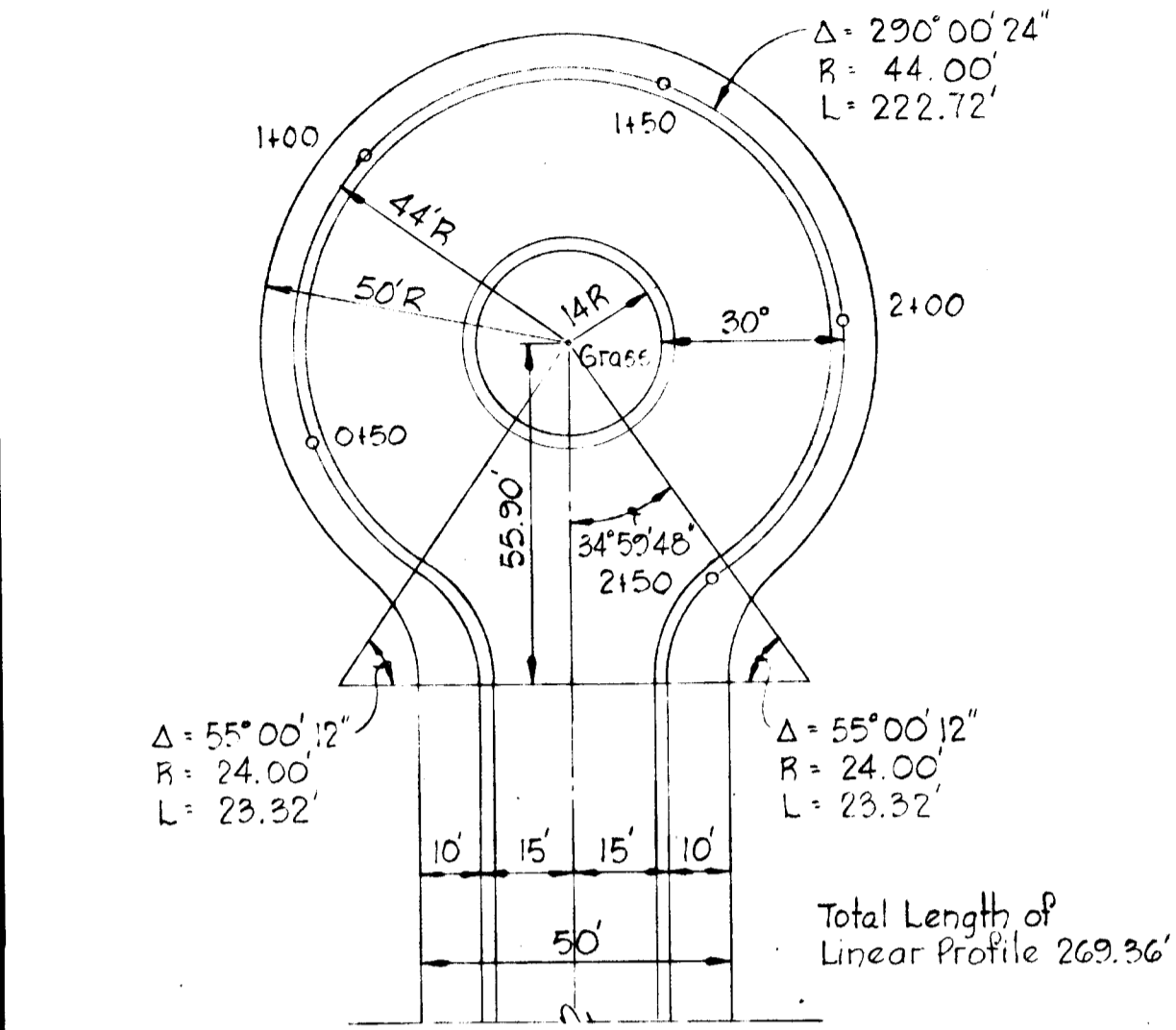


Howard County Std. D-24 Page 34
 MOUNTABLE CURB SECTION
 No Scale

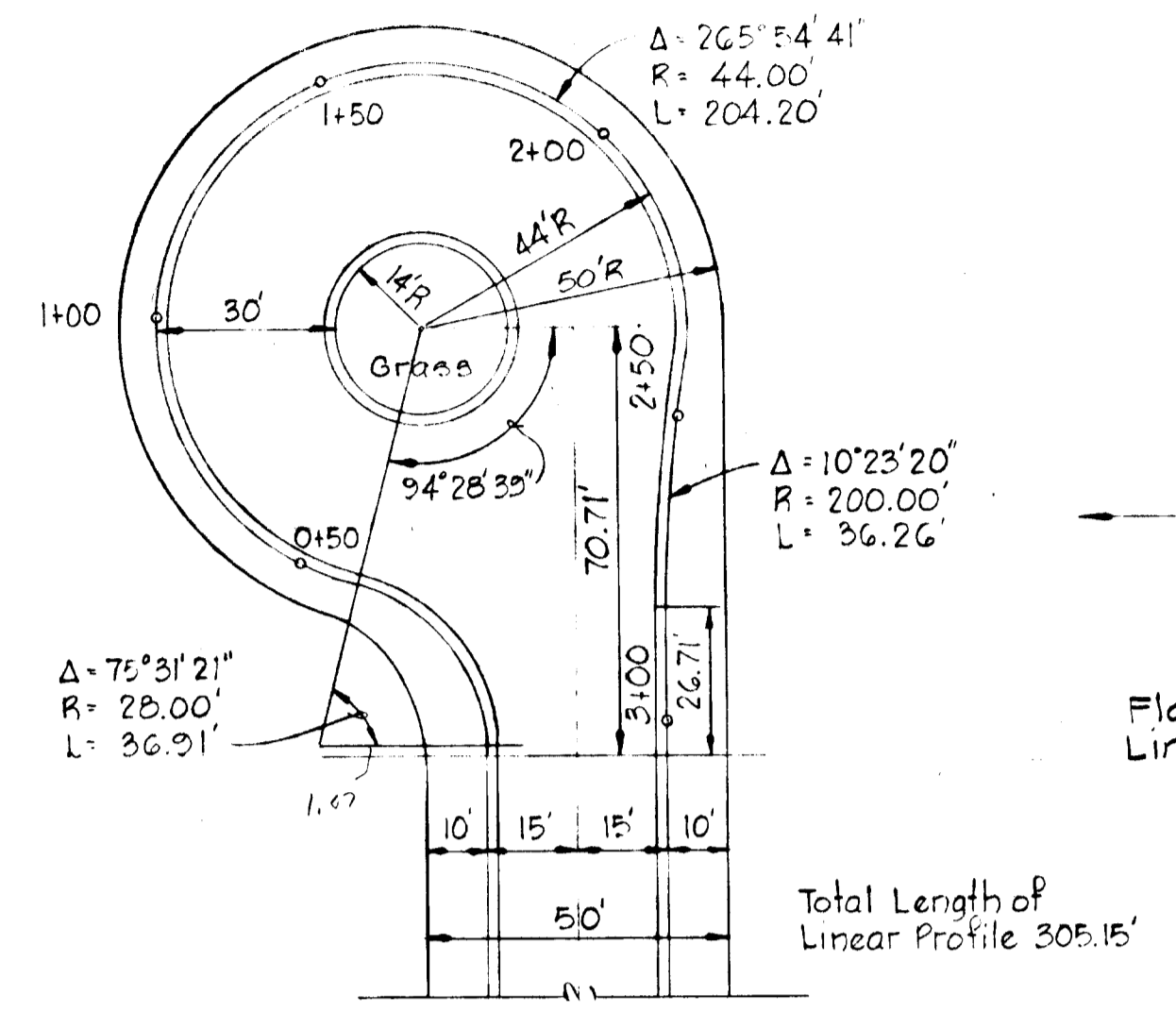


Howard County Std. D-4 page 59
 ALTERNATE SECTION

Rev. Date	Rev. No.	Revision Description
DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION I AREA 4		
PROJECT TITLE ROADWAY DETAILS		
SCALE: As Shown		DATE
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		



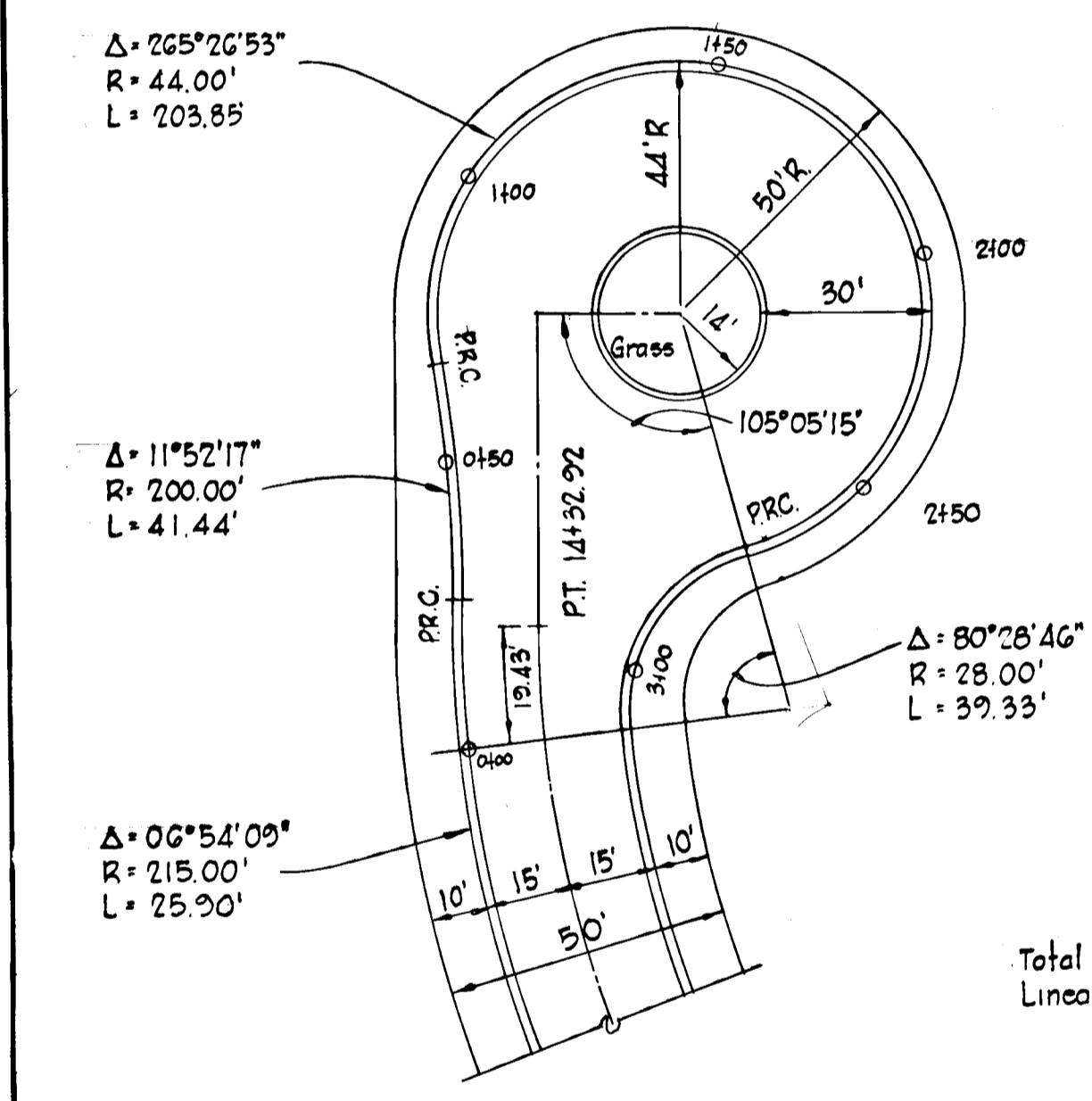
FIREFLY WAY, WHITE STAR WAY, WILLOW BEND COURT, HUCKLEBERRY ROW



CHARIOT'S FLIGHT WAY, BRIGHT ROCKET WAY, TWILIGHT GROVE COURT, STARWREATH WAY

WILDWOOD WAY, LARKSPRING ROW, SEA-BIRD WAY

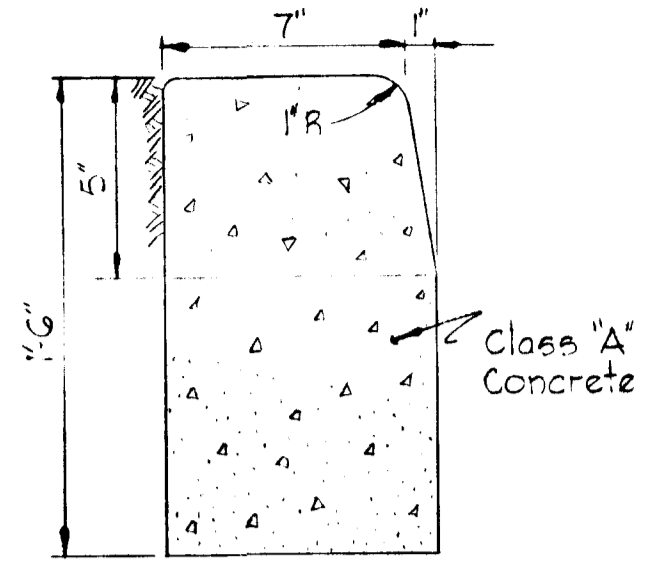
* Opposite Hand



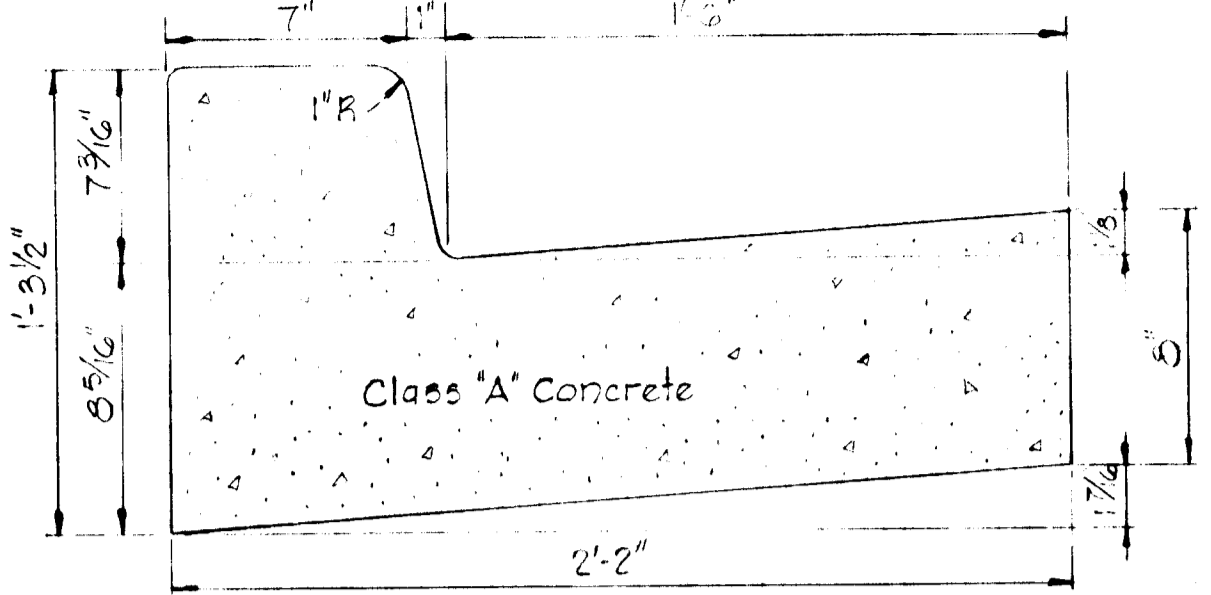
FRAGILE SAIL WAY

CUL-DE-SAC DETAILS
 Scale 1" = 30'

- NOTES:
 1. All dimensions are to back of curb.
 2. See plan for sidewalk locations.
 3. Paving is 6 1/2" Bituminous Concrete or Alternate As Shown.
 4. Standard 7" Combination Curb and Gutter shall be used on all cul-de-sacs.

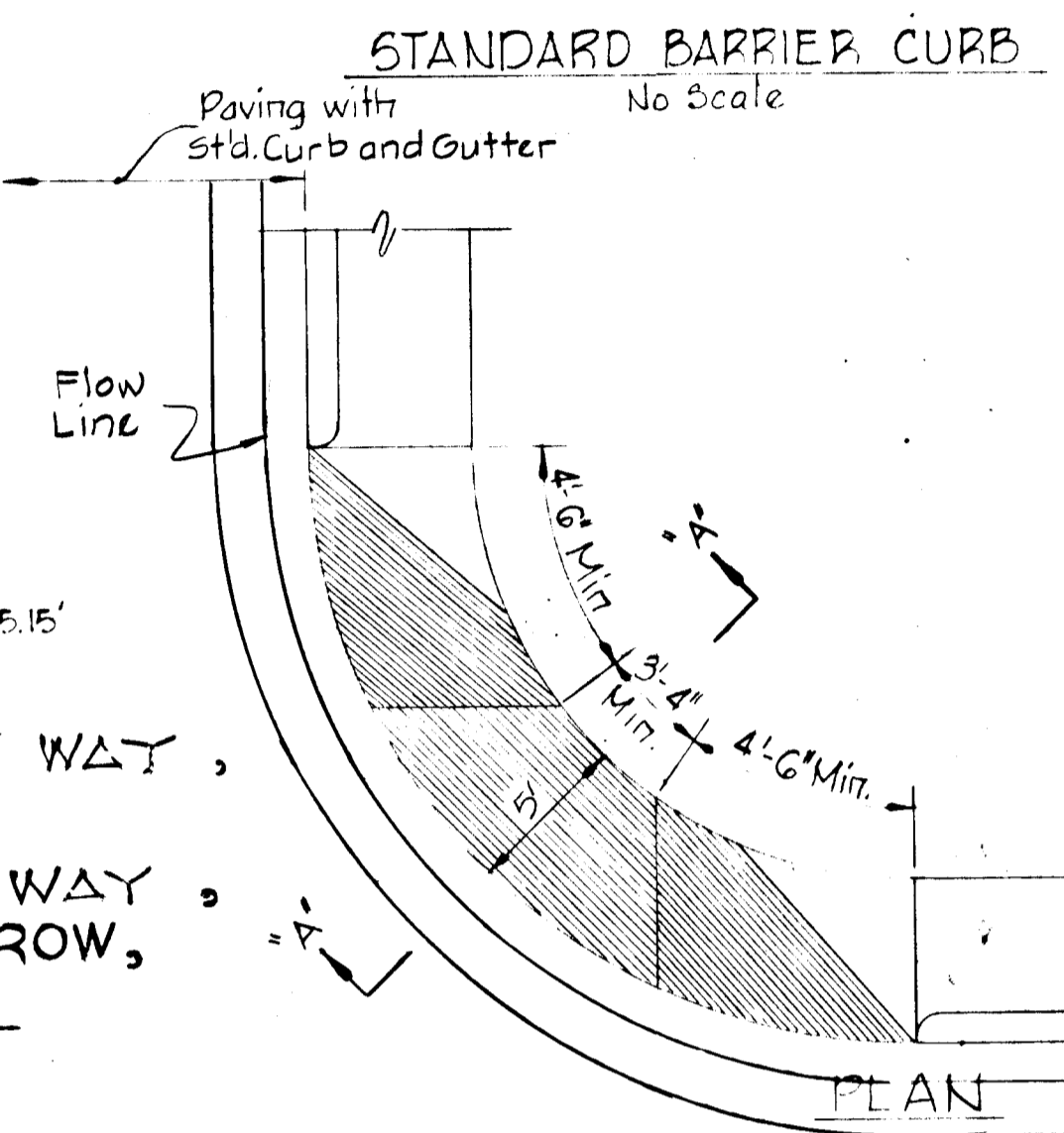


STANDARD BARRIER CURB
 No Scale

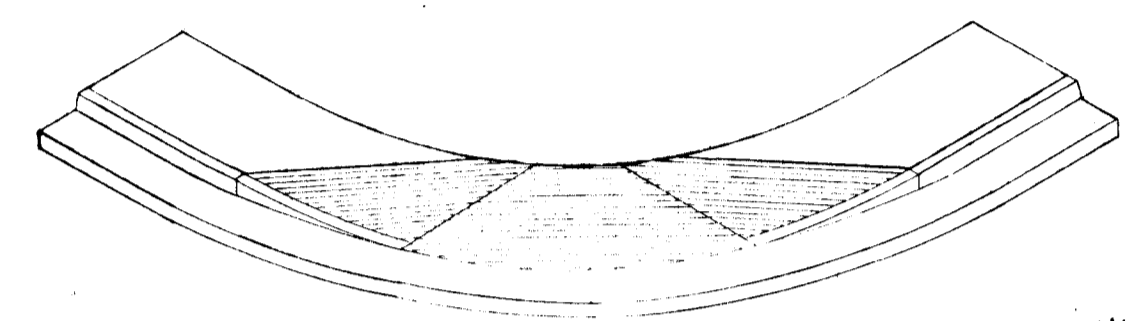


STANDARD 7" COMBINATION CURB & GUTTER
 No Scale

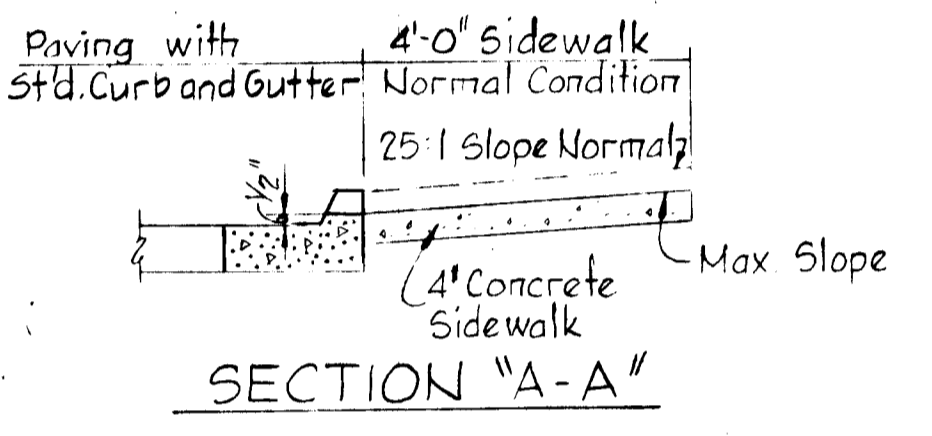
NOTE:
 ONLY ONE OF THE PAVING SECTIONS SHOWN SHALL BE USED FOR THE ROAD CONSTRUCTION PROPOSED UNDER THIS SUBMISSION.



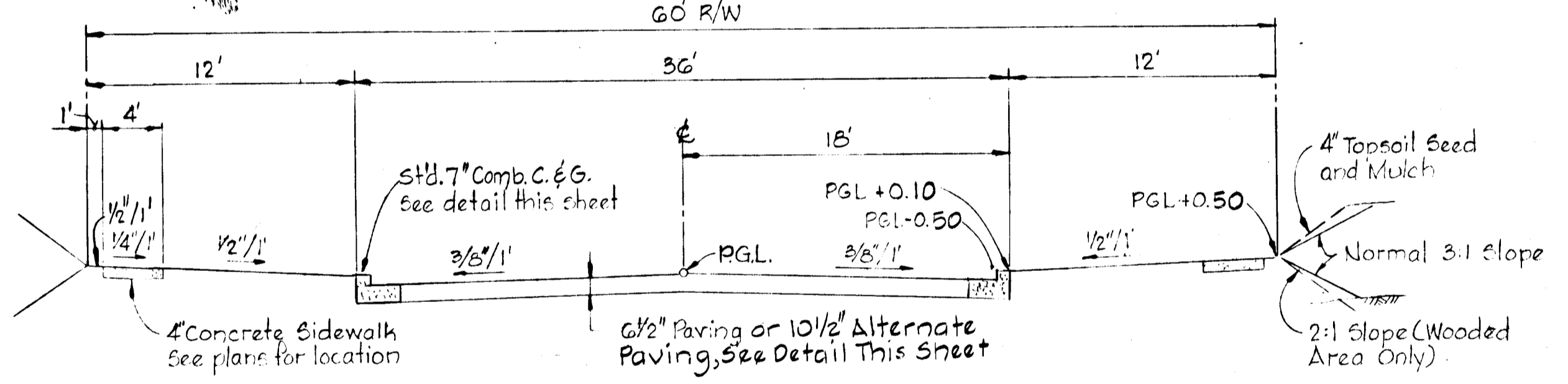
DETAIL SIDEWALK RAMP
 No Scale



ISOMETRIC

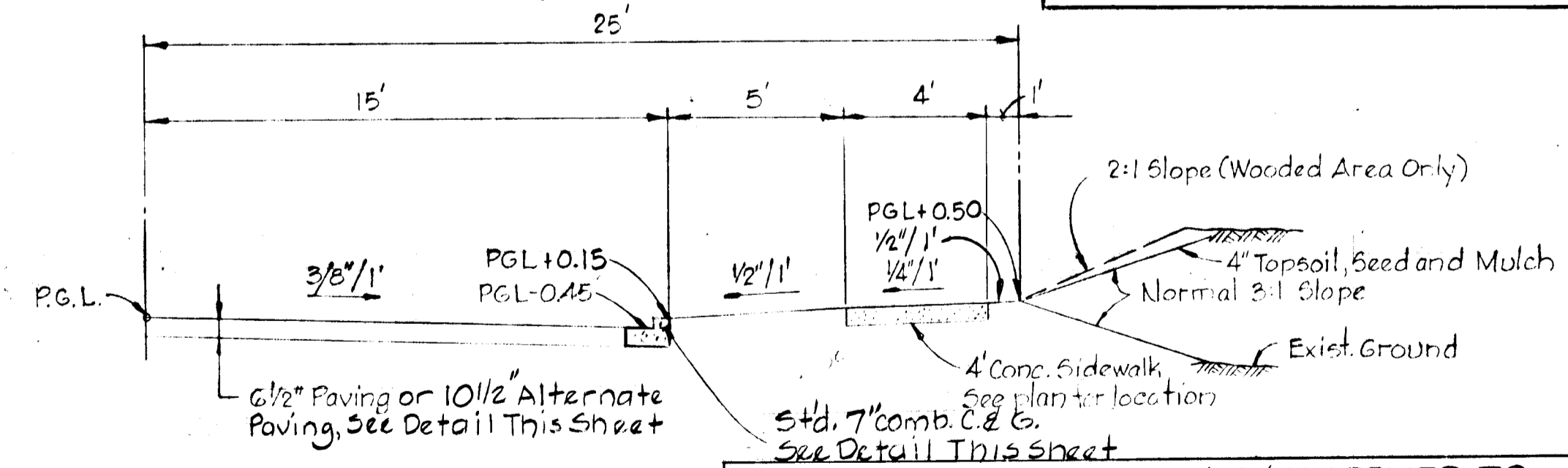


SECTION "A-A"



GRAY ROCK DRIVE
 STA. 28+00 TO STA. 45+13.28
 No Scale

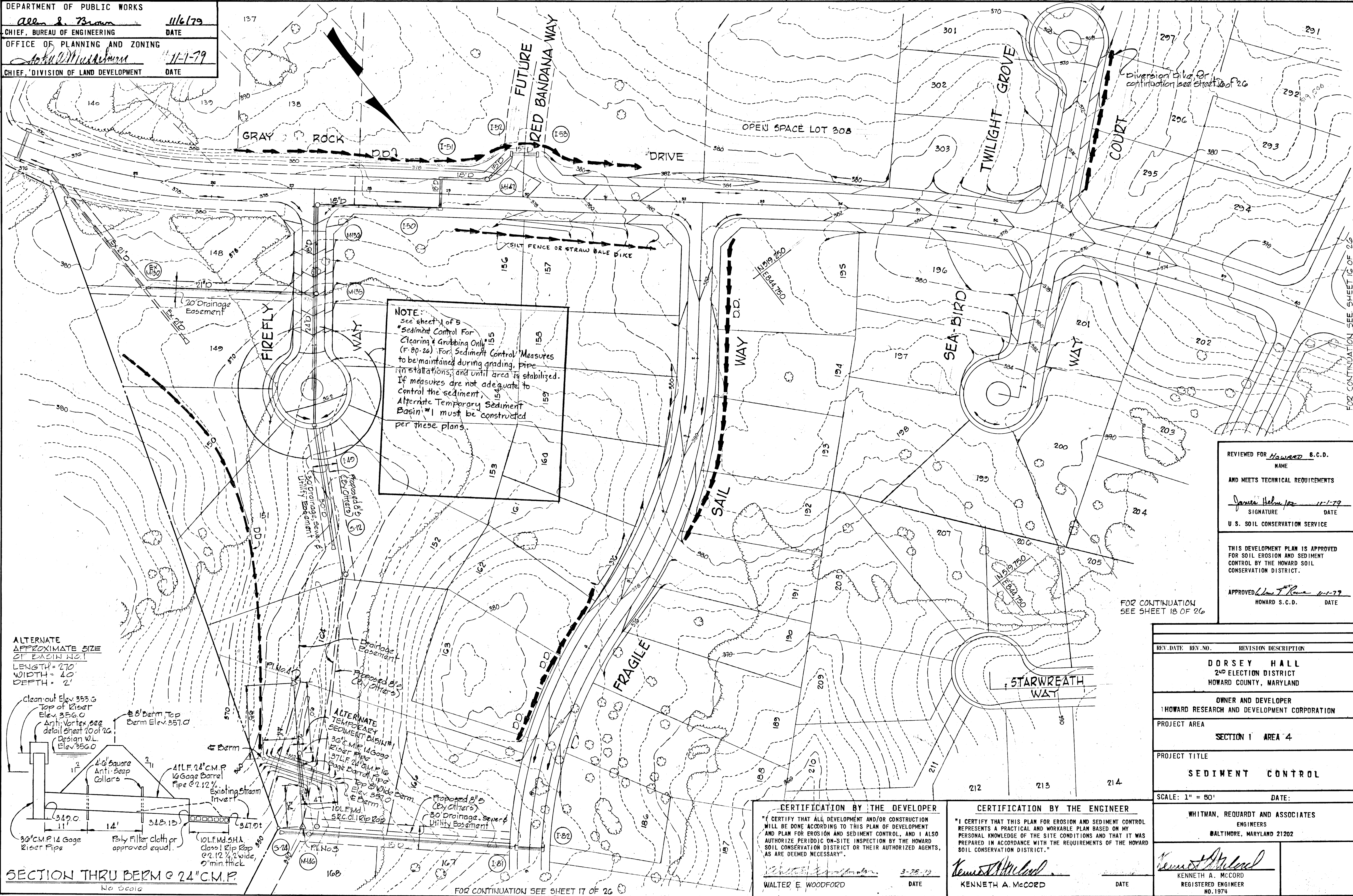
TYPICAL SECTION 60' R/W APPLIES TO:
 GRAY ROCK DRIVE 28+00 TO 45+13.28
 DESIGN SPEED 35 MPH
 ZONING IS R-20
 TRAFFIC WAY - MINOR COLLECTOR



TYPICAL HALF SECTION
 50' R/W - 30' ROADWAY
 No Scale

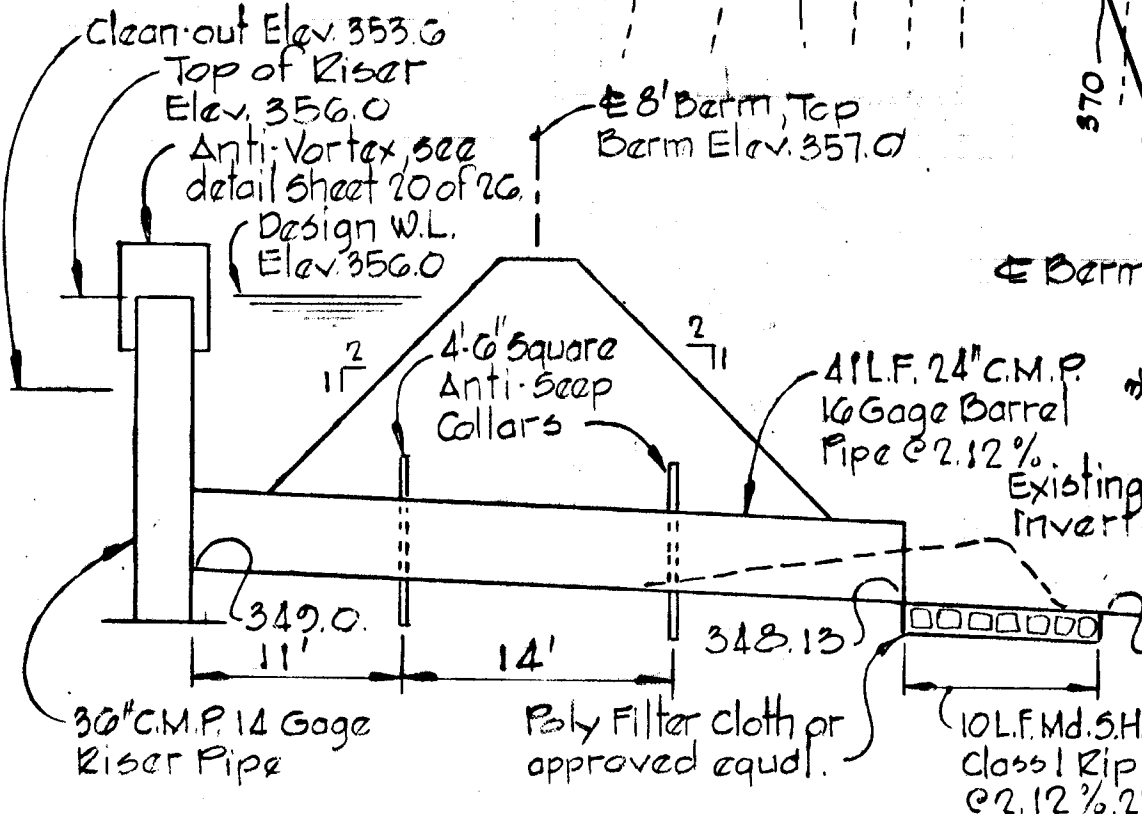
TYPICAL HALF SECTION 50' R/W APPLIES TO:
 FRAGILE SAIL WAY 0+00 to 15+12
 FIREFLY WAY 0+00 to 2+57
 TWILIGHT GROVE COURT 0+00 to 2+70
 CHARIOT'S FLIGHT WAY 0+00 to 11+73
 WHITE STAR WAY 0+00 to 4+70
 BRIGHT ROCKET WAY 0+00 to 2+37
 STARWREATH WAY 0+00 to 2+45
 WILDWOOD WAY 0+00 to 8+85
 WILLOW BEND COURT 0+00 to 3+09
 LARKSPRING ROW 0+00 to 9+24
 HUCKLEBERRY ROW 0+00 to 3+37
 SEA-BIRD WAY 0+00 to 2+40
 TRAFFIC WAY - LOCAL
 DESIGN SPEED 30 MPH
 ZONING IS R-20

DEPARTMENT OF PUBLIC WORKS
Allen S. Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
Robert W. Harkness 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



NOTE:
 See sheet 1 of 5
 "Sediment Control For
 Clearing & Grubbing Only"
 (F-80-26) For Sediment Control Measures
 to be maintained during grading, pipe
 installations, and until area is stabilized.
 If measures are not adequate to
 control the sediment, an
 Alternate Temporary Sediment
 Basin #1 must be constructed
 per these plans.

ALTERNATE
 APPROXIMATE SIZE
 OF BASIN NO. 1
 LENGTH = 270'
 WIDTH = 10'
 DEPTH = 2'



SECTION THRU BERM @ 24" C.M.P.
 No. Scale

REVIEWED FOR *Howard S.C.D.*
 NAME
 AND MEETS TECHNICAL REQUIREMENTS
James Helms 11-1-79
 SIGNATURE DATE
 U. S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED
 FOR SOIL EROSION AND SEDIMENT
 CONTROL BY THE HOWARD SOIL
 CONSERVATION DISTRICT.
 APPROVED *Howard S.C.D.* 11-1-79
 HOWARD S.C.D. DATE

FOR CONTINUATION
 SEE SHEET 18 OF 26

REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA SECTION 1 AREA 4		
PROJECT TITLE SEDIMENT CONTROL		
SCALE: 1" = 80'		DATE:
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974		DATE

CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION
 WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT
 AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO
 AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD
 SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS,
 AS ARE DEEMED NECESSARY."
Walter E. Woodford 3-28-79
 WALTER E. WOODFORD DATE

CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL
 REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY
 PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS
 PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD
 SOIL CONSERVATION DISTRICT."
Kenneth A. McCord
 KENNETH A. MCCORD DATE

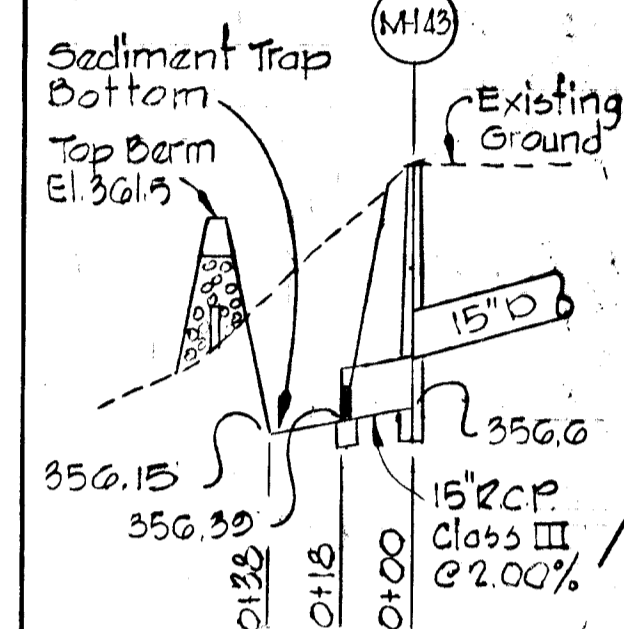
FOR CONTINUATION SEE SHEET 17 OF 26

DEPARTMENT OF PUBLIC WORKS
Allen J. Brown 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
Richard M. ... 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

FOR CONTINUATION SEE SHEET 19 OF 26

SEDIMENT TRAP
DESIGN DATA

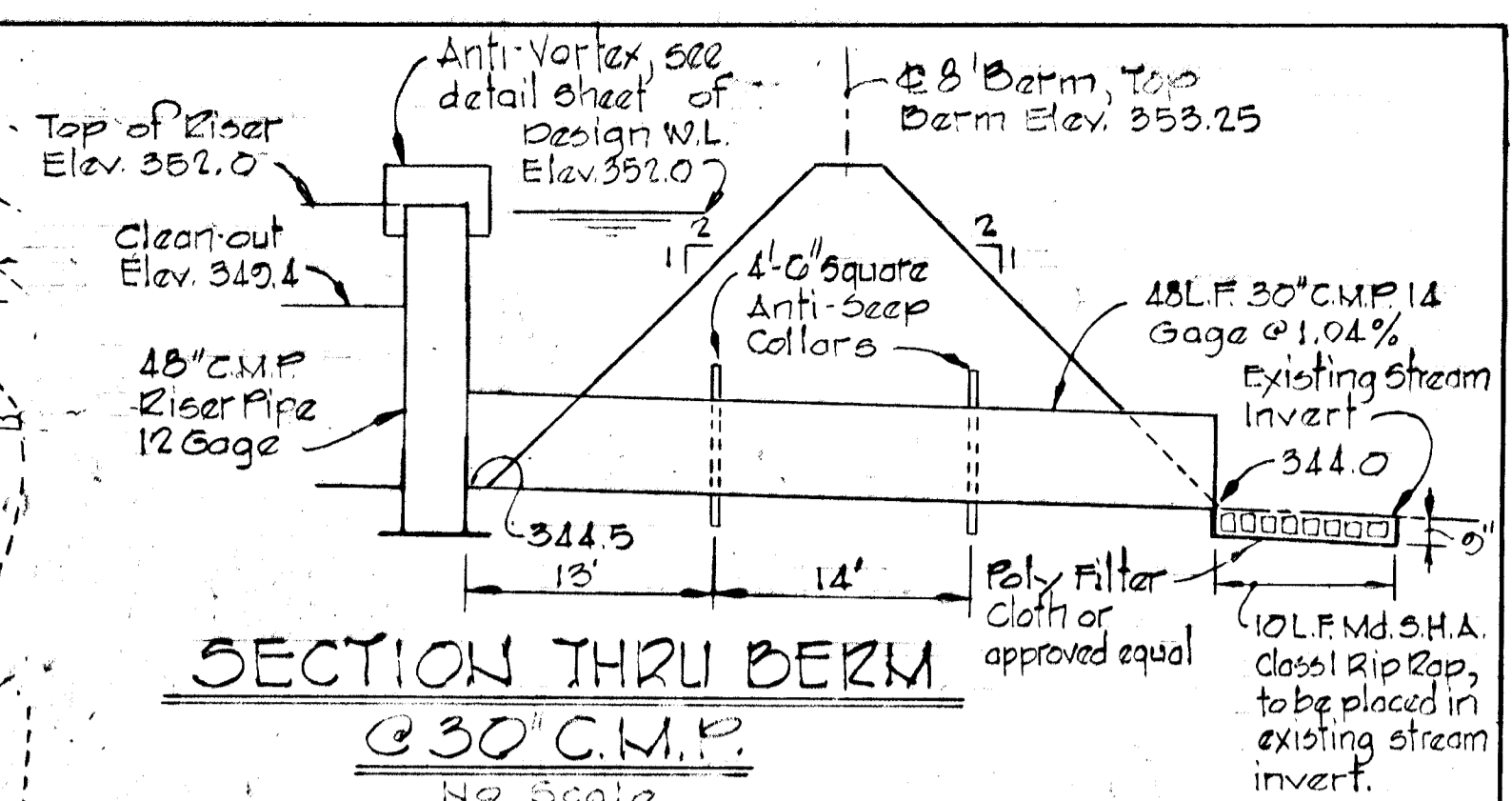
TRAP #4
 Drainage Area: 1.7 Acres
 Disturbed Area: 1.2 Acres
 Volume Required: 67,171.13 C.F.
 Volume Available: 120 C.F.
 Design Capacity Elev: 350.5
 Cleanout Elev: 353.0
 Stone Outlet Size 6x17
 Trap Size 10'x



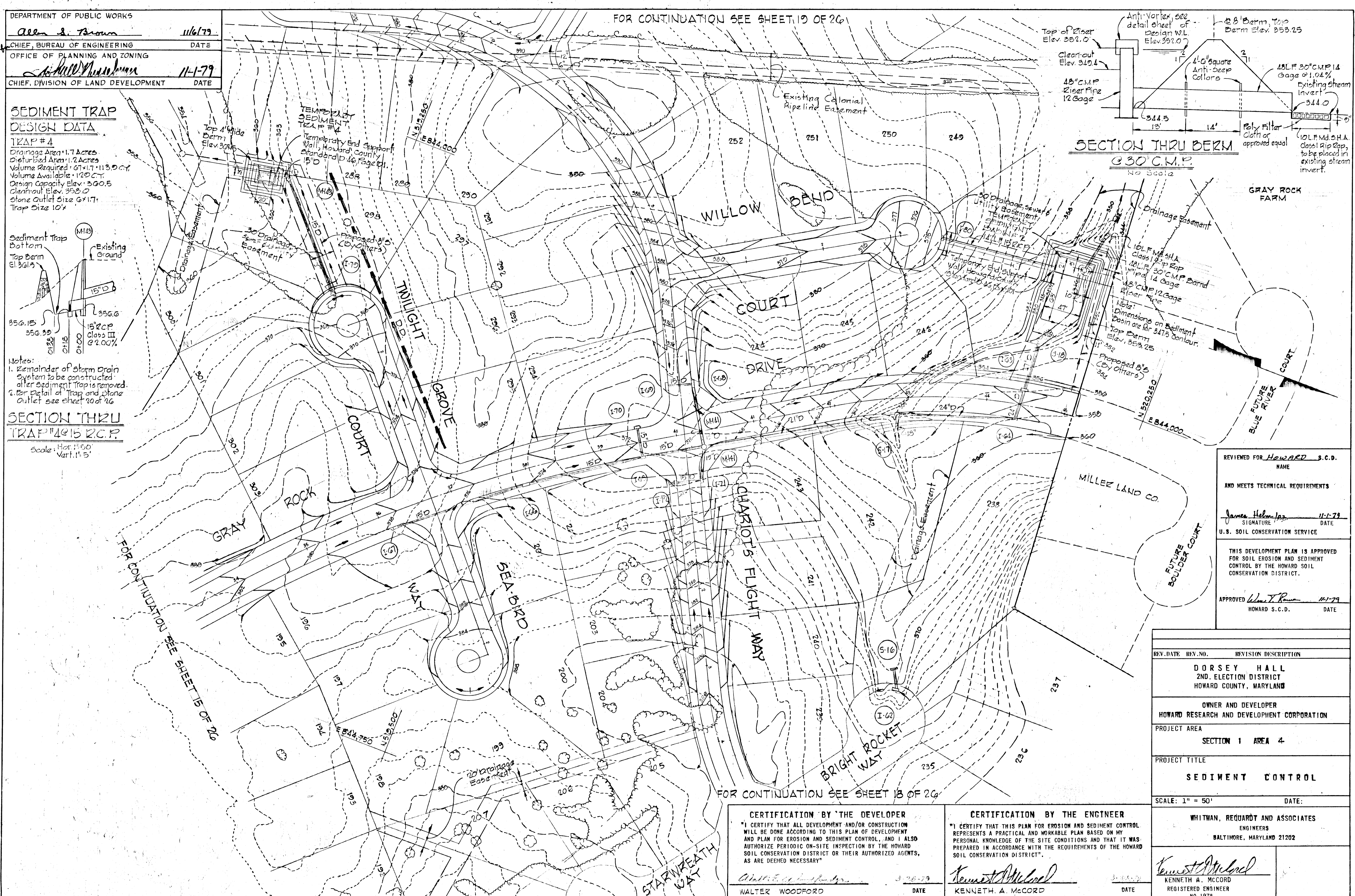
Notes:
 1. Remainder of storm drain system to be constructed after sediment trap is removed.
 2. For Detail of Trap and Stone Outlet see sheet 20 of 26

SECTION THRU TRAP #4 @ 15' R.C.P.

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



SECTION THRU BERM @ 30' C.M.P.
 No Scale



REVIEWED FOR *Howard S.C.D.* NAME

AND MEETS TECHNICAL REQUIREMENTS

James Helms 11-1-79
 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE

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

APPROVED *Walter Woodford* 11-1-79
 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND. ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION
		PROJECT AREA SECTION 1 AREA 4
		PROJECT TITLE SEDIMENT CONTROL
		SCALE: 1" = 50' DATE:

CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY"
Walter Woodford 11-28-79
 WALTER WOODFORD DATE

CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Kenneth A. McCord
 KENNETH A. MCCORD DATE

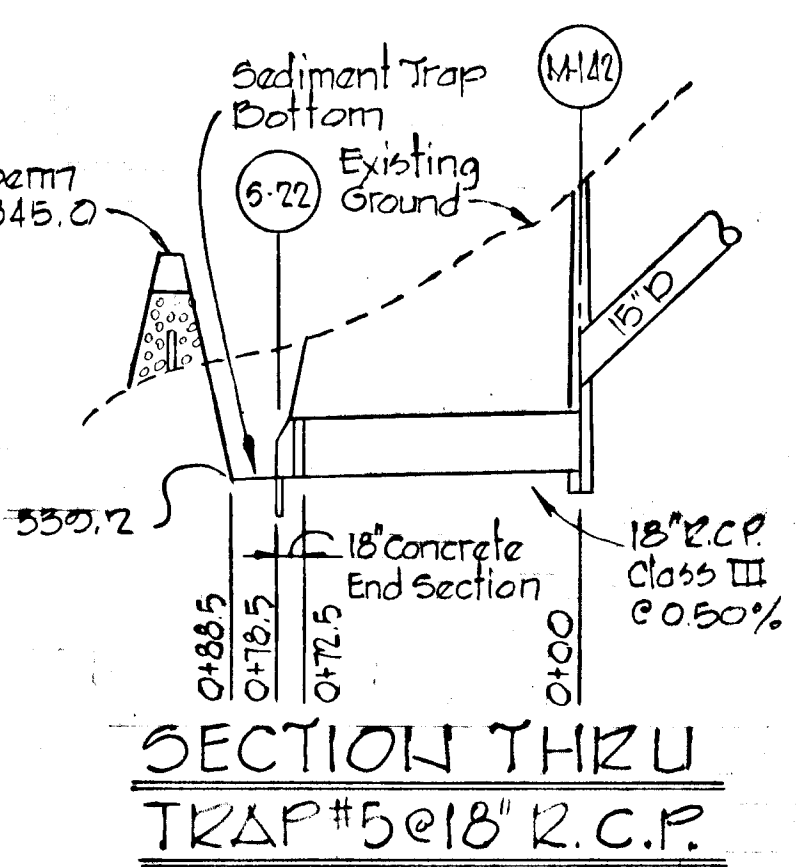
WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202
Kenneth A. McCord
 KENNETH A. MCCORD
 REGISTERED ENGINEER
 NO. 1974

FOR CONTINUATION SEE SHEET 15 OF 26

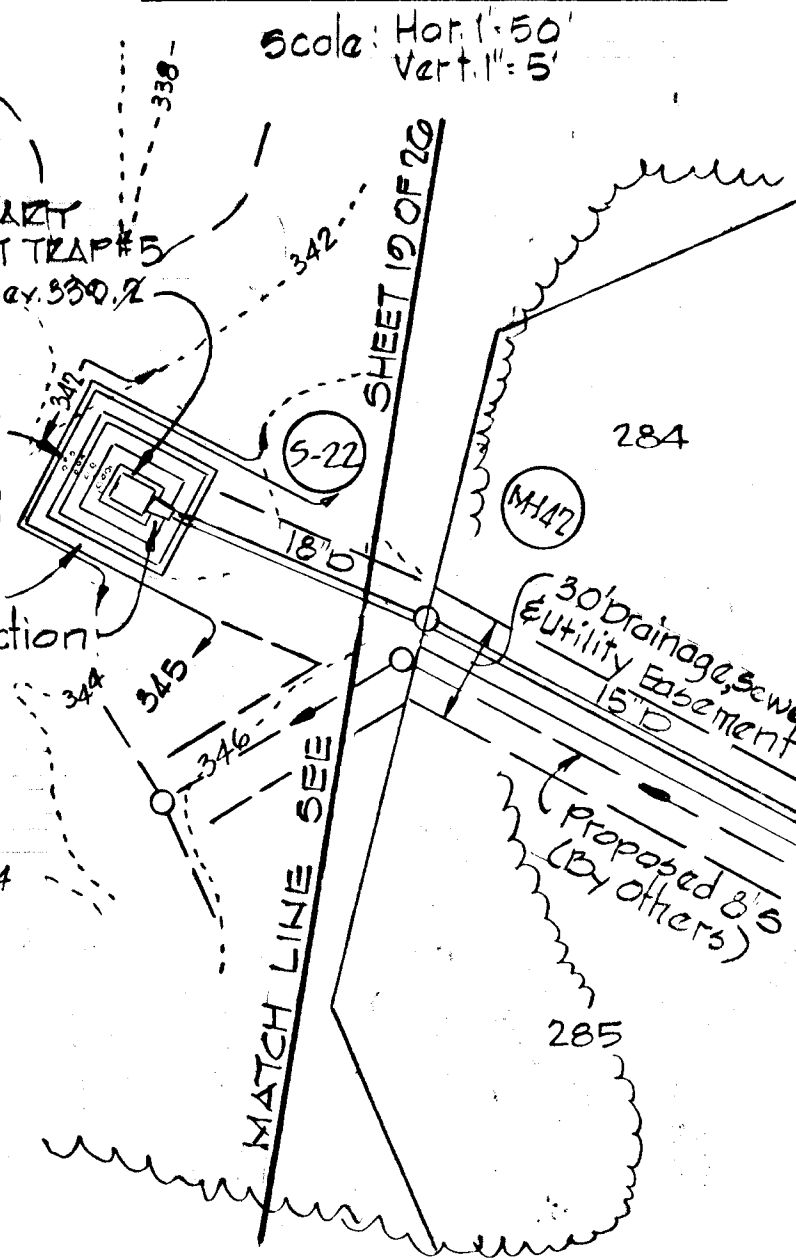
FOR CONTINUATION SEE SHEET 18 OF 26

**SEDIMENT TRAP
 DESIGN DATA**

TRAP #5
 Drainage Area: 0.0 Acres
 Disturbed Area: 0.0 Acres
 Volume Required: 0.0 CBY
 Volume Available: 0.0 CBY
 Design Capacity Elev: 344.0
 Clean-out Elev: 341.6
 Stone Outlet Width: 6' x 0.5' x 5.4'
 Trap Size: 10' x 7'

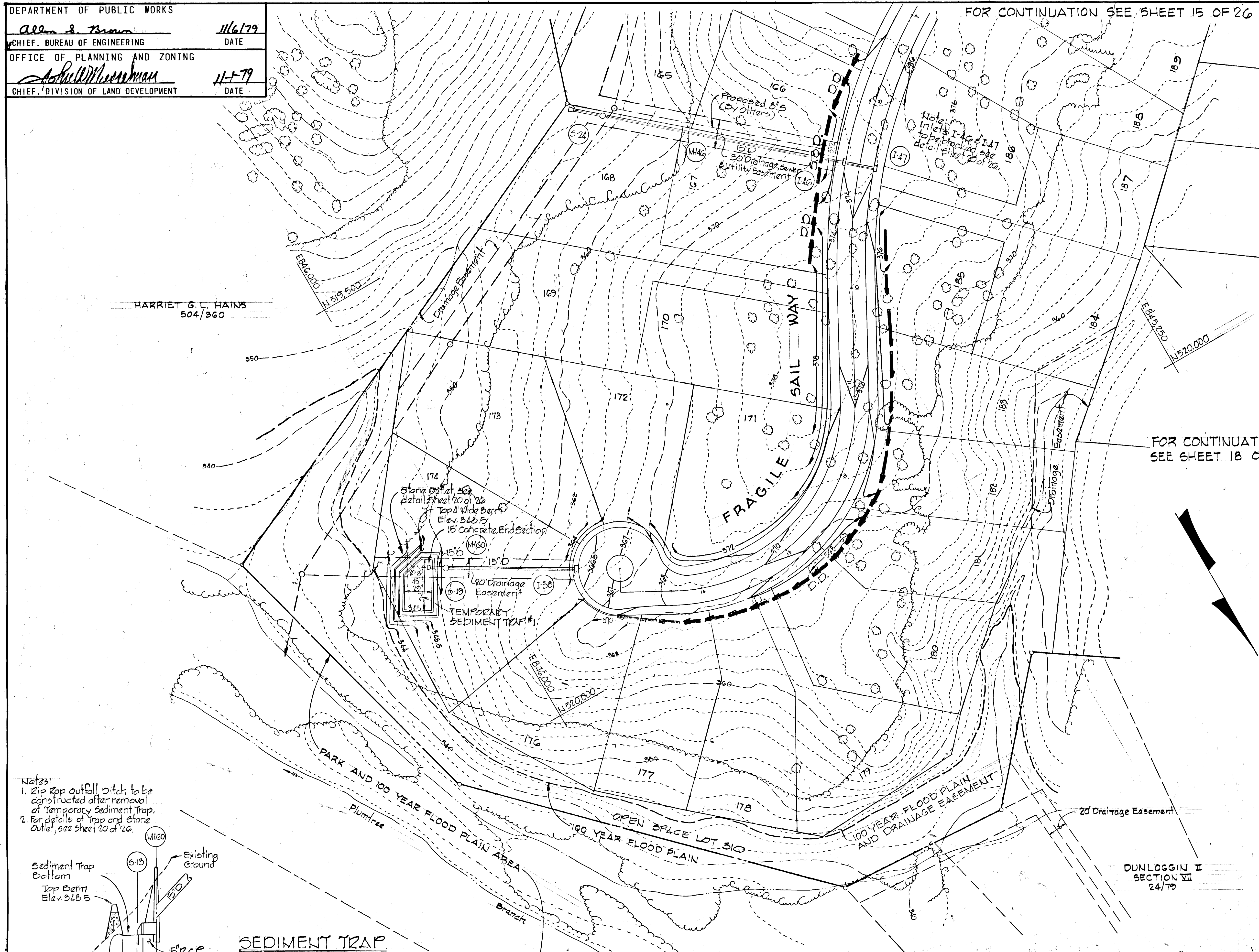


**SECTION THRU
 TRAP #5 @ 18\"/>**

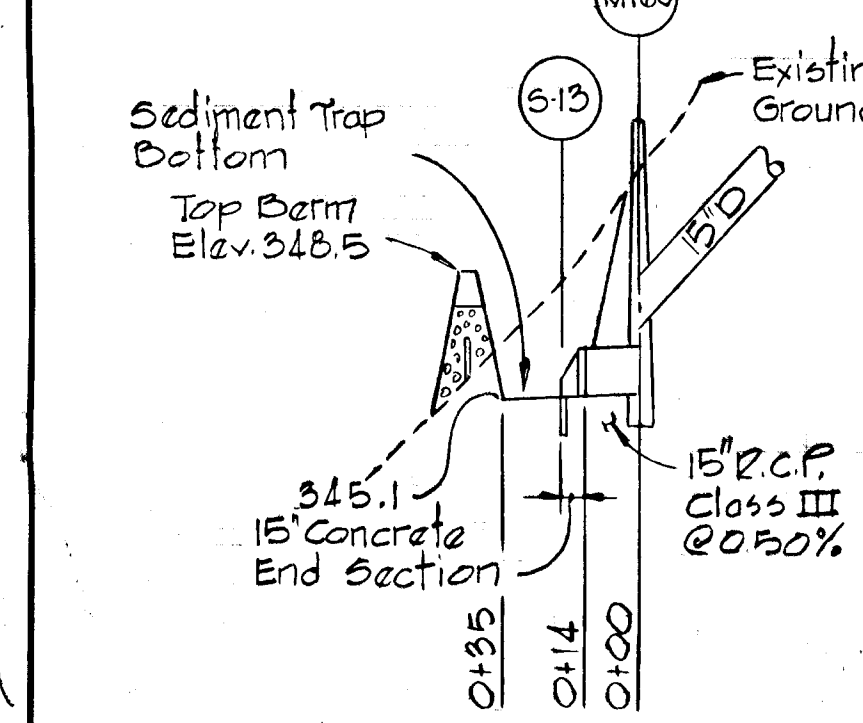


Notes:
 1. Rip Rap Outfall Ditch to be constructed after removal of Temporary Sediment Trap.
 2. For details of Trap and Stone Outlet, see Sheet 20 of 26.

FOR CONTINUATION
 SEE SHEET 18 OF 26



Notes:
 1. Rip Rap outfall Ditch to be constructed after removal of Temporary Sediment Trap.
 2. For details of Trap and Stone Outlet, see Sheet 20 of 26.



**SEDIMENT TRAP
 DESIGN DATA**

TRAP #1
 Drainage Area: 2.4 Acres
 Disturbed Area: 2.4 Acres
 Volume Required: 67 x 2.4 = 160.8 CBY
 Volume Available: 180 CBY
 Design Capacity Elev: 347.5
 Clean-out Elev: 346.5
 Stone Outlet Width: 6' x 2.4' x 14.4'

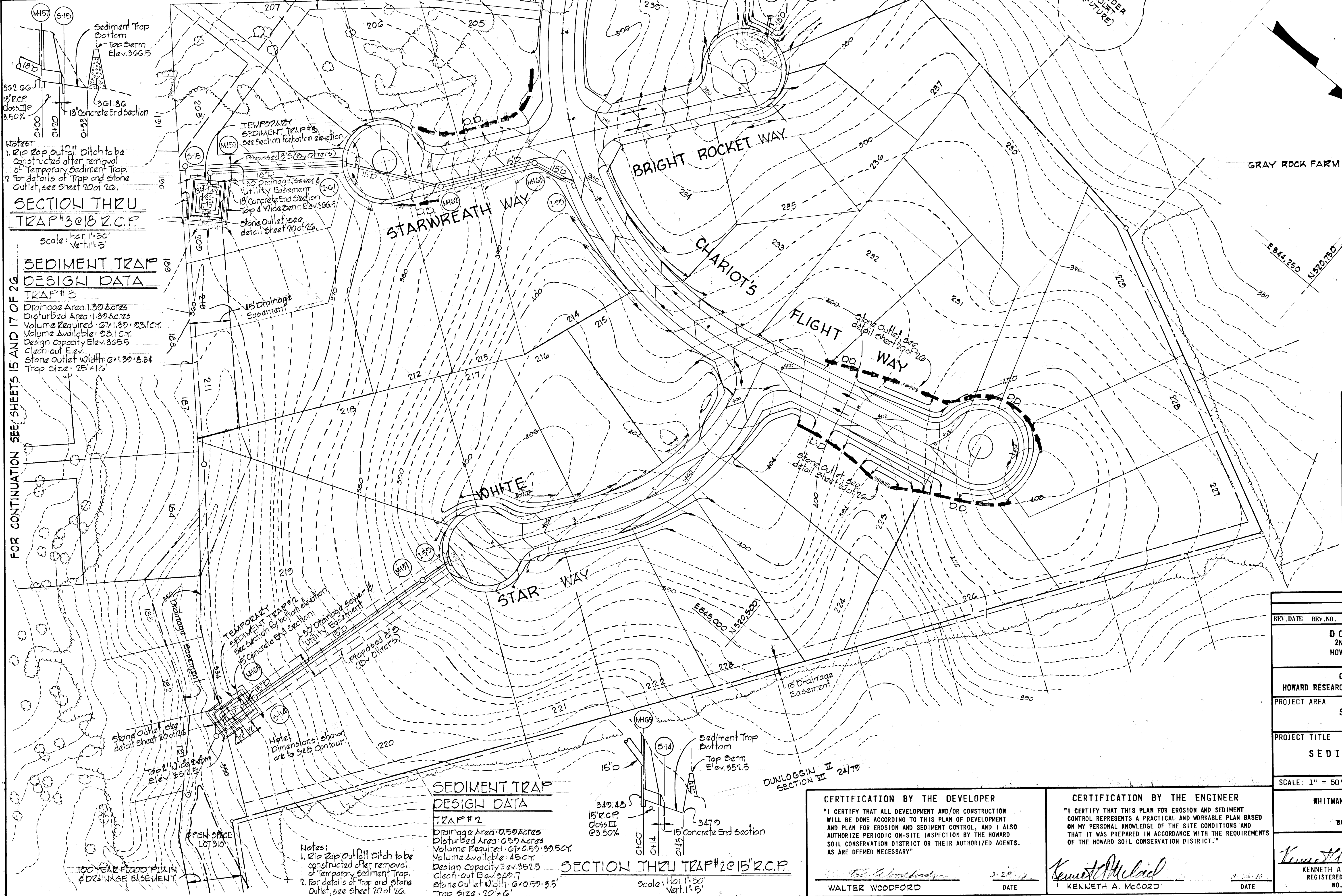
**SECTION THRU
 TRAP #1 @ 15\"/>**

REVIEWED FOR *Howard* S.C.D.
 NAME
 AND MEETS TECHNICAL REQUIREMENTS
James Helms 11-1-79
 SIGNATURE DATE
 U.S.
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVE: *Wm. T. Rouse* 11-1-79
 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND. ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION
		PROJECT AREA SECTION 1 AREA 4
		PROJECT TITLE SEDIMENT CONTROL
		SCALE: 1" = 50' DATE:
		WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974

CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
Walter Woodford
 WALTER WOODFORD
 3-28-79
 DATE

CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Kenneth A. McCord
 KENNETH A. MCCORD P.E. NO. 1974
 3-24-79
 DATE



Notes:
 1. Rip Trap outfall ditch to be constructed after removal of Temporary Sediment Trap.
 2. For details of Trap and Stone Outlet, see sheet 20 of 26.

SECTION THRU TRAP #3 @ 12' R.C.P.
 Scale: Hor. 1"=50'
 Vert. 1"=5'

SEDIMENT TRAP DESIGN DATA TRAP #3
 Drainage Area: 1.39 Acres
 Disturbed Area: 1.39 Acres
 Volume Required: 271,139 cu. ft.
 Volume Available: 231 cu. ft.
 Design Capacity: Elev. 365.5
 Clean-out Elev.
 Stone Outlet Width: 21.39' x 3.34'
 Trap Size: 25' x 16'

FOR CONTINUATION SEE SHEETS 15 AND 17 OF 26

TEMPORARY SEDIMENT TRAP #3
 See Section for bottom elevation
 Proposed 8' x 5' (by others)

TEMPORARY SEDIMENT TRAP #2
 See Section for bottom elevation
 Proposed 8' x 9' (by others)

TEMPORARY SEDIMENT TRAP #1
 See Section for bottom elevation
 Proposed 8' x 9' (by others)

SECTION THRU TRAP #2 @ 15' R.C.P.
 Scale: Hor. 1"=50'
 Vert. 1"=5'

SEDIMENT TRAP DESIGN DATA TRAP #2
 Drainage Area: 0.59 Acres
 Disturbed Area: 0.59 Acres
 Volume Required: 271,059 cu. ft.
 Volume Available: 45 cu. ft.
 Design Capacity: Elev. 349.7
 Clean-out Elev.
 Stone Outlet Width: 20.59' x 3.5'
 Trap Size: 20' x 6'

Notes:
 1. Rip Trap outfall ditch to be constructed after removal of Temporary Sediment Trap.
 2. For details of Trap and Stone Outlet, see sheet 20 of 26.

GRAY ROCK FARM

REVIEWED FOR *Howard* S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
James Helms 11-1-79 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED *Wm. T. Rowe* 11-1-79 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND. ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION
		PROJECT AREA SECTION 1 AREA
		PROJECT TITLE SEDIMENT CONTROL
		SCALE: 1" = 50' DATE:
		WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974

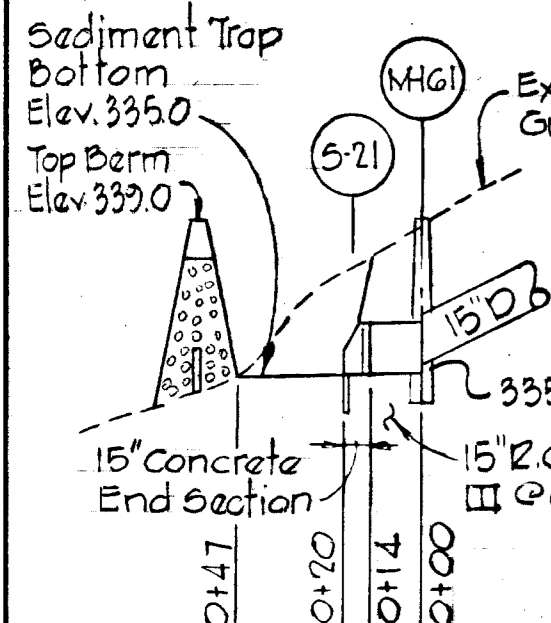
CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
Walter Woodford 3-25-79
 WALTER WOODFORD DATE

CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Kenneth A. McCord 3-25-79
 KENNETH A. MCCORD DATE

DEPARTMENT OF PUBLIC WORKS
 11/6/79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**SEDIMENT TRAP
 DESIGN DATA**

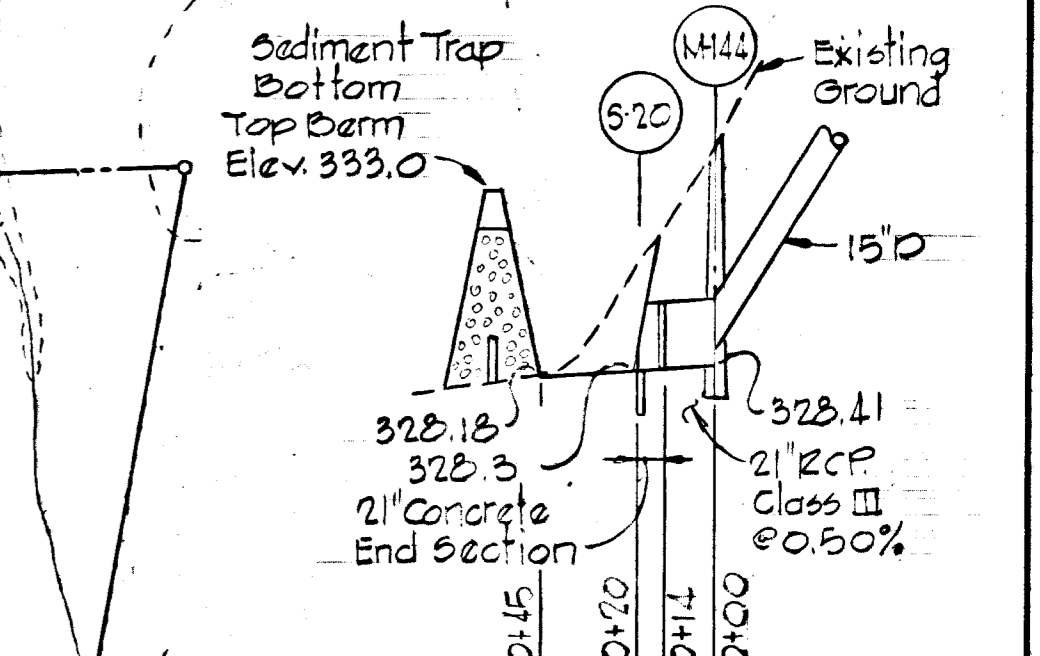
TRAP #6
 Drainage Area: 1.4 Acres
 Disturbed Area: 1.4 Acres
 Volume Required: 671.4 x 23.8 C.Y.
 Volume Available: 24 C.Y.
 Design Capacity Elev: 336.0
 Clean out Elev: 336.5
 Stone Outlet Width: 1.4 x 8.4
 Trap Size: 15' x 27'



**SECTION THRU
 TRAP #6 15' 2' C.P.**

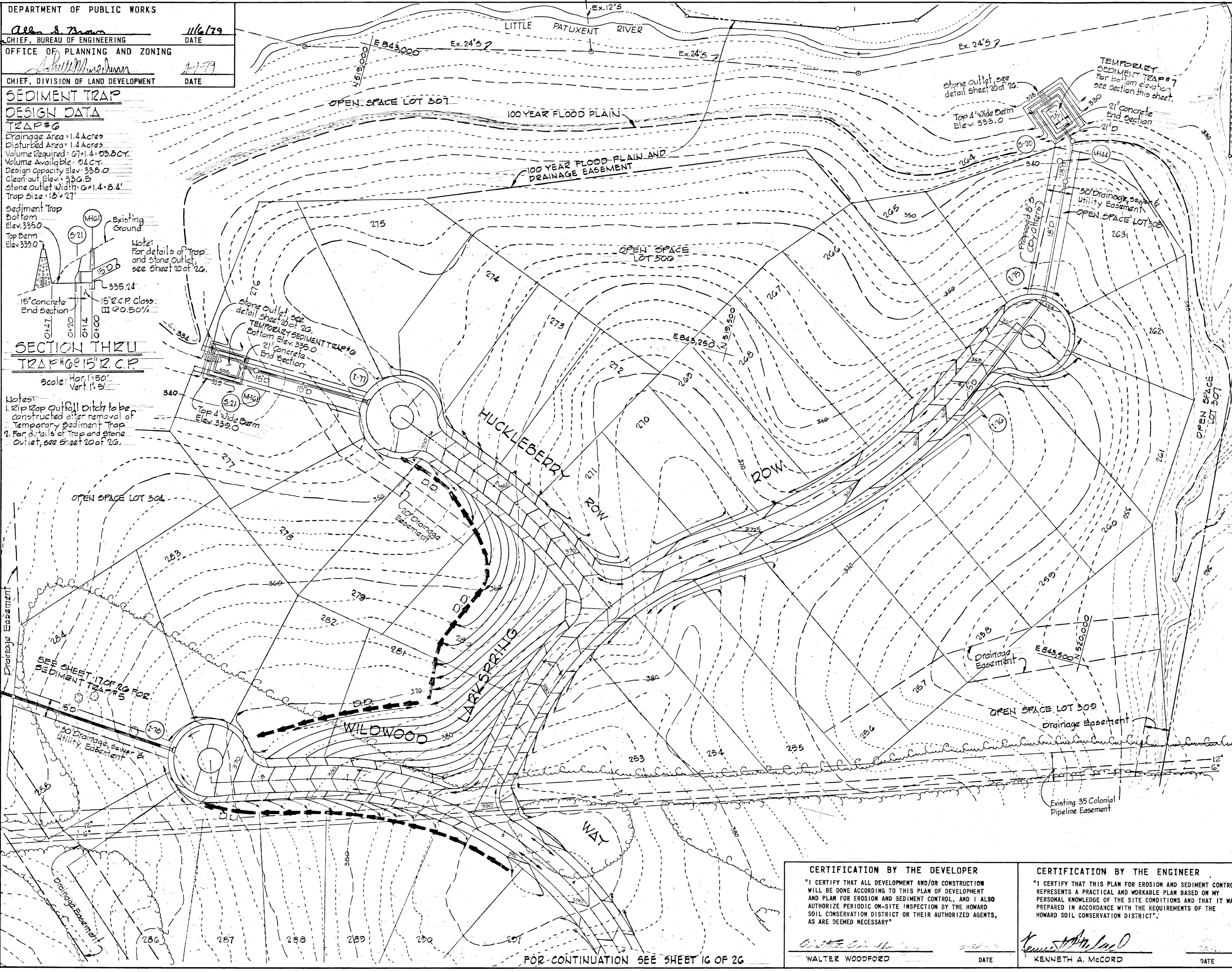
Scale: Hor: 1" = 50'
 Vert: 1" = 5'
 Notes:
 1. 21" trap outlet ditch to be constructed after removal of temporary sediment trap.
 2. For details of trap and stone outlet, see sheet 20 of 26.

**SEDIMENT TRAP
 DESIGN DATA**
TRAP #7
 Drainage Area: 1.05 Acres
 Disturbed Area: 1.05 Acres
 Volume Required: 671.4 x 11.1 C.Y.
 Volume Available: 17.2 C.Y.
 Design Capacity Elev: 332.0
 Clean out Elev: 332.0
 Stone Outlet Width: 1.05 x 9.0
 Trap Size: 15' x 25'



**SECTION THRU
 TRAP #7 15' 2' C.P.**

Scale: Hor: 1" = 50'
 Vert: 1" = 5'
 GRAY ROCK FARM



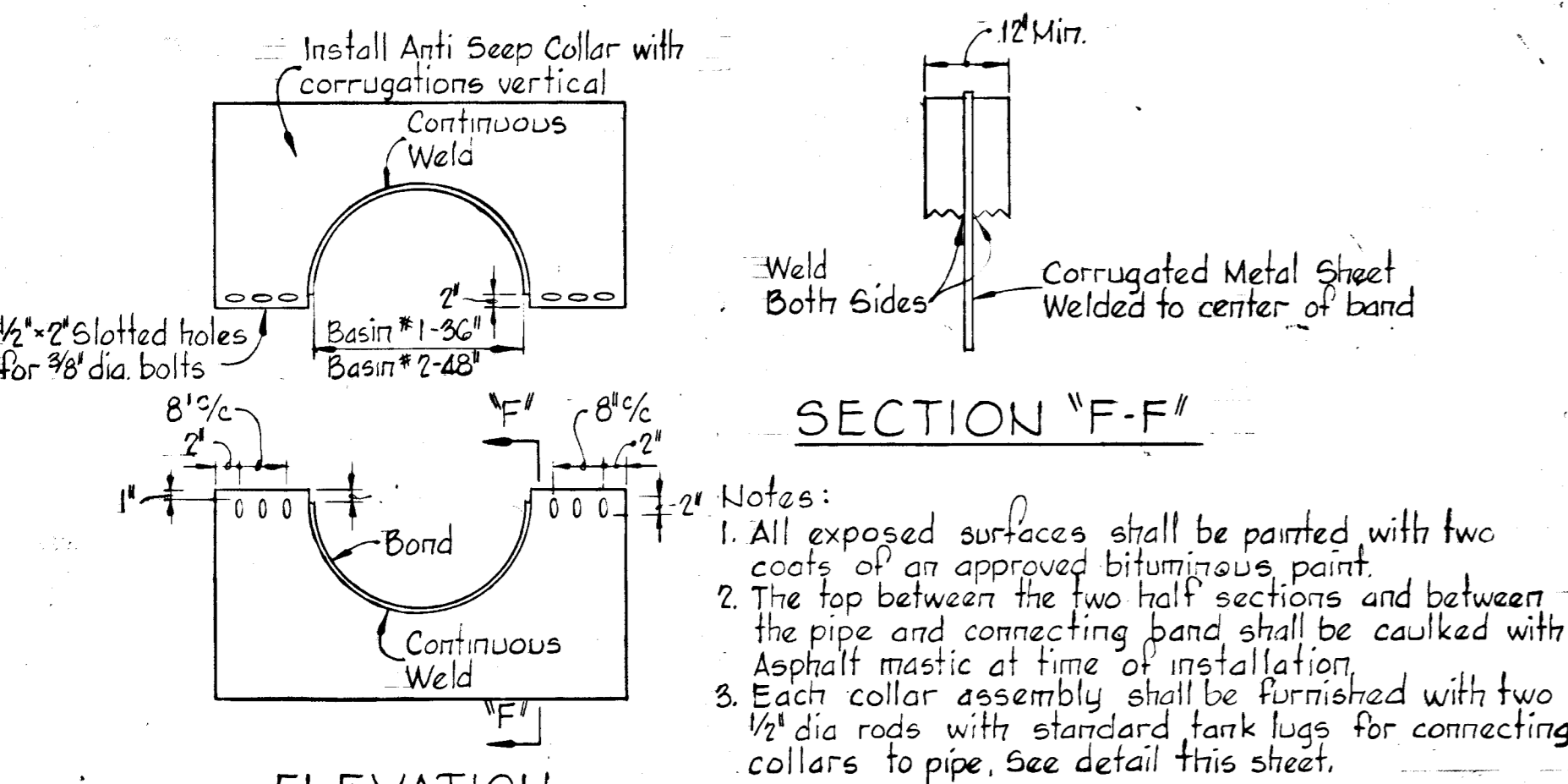
REVIEWED FOR: Howard S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
 Signature: James Helms DATE
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: Wm. V. Rowe 11/79 DATE
 HOWARD S.C.D.

REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION
		PROJECT AREA SECTION 1 AREA 4
		PROJECT TITLE SEDIMENT CONTROL
		SCALE: 1" = 50' DATE:
		WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		Signature: <u>Kenneth A. McCord</u> KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974

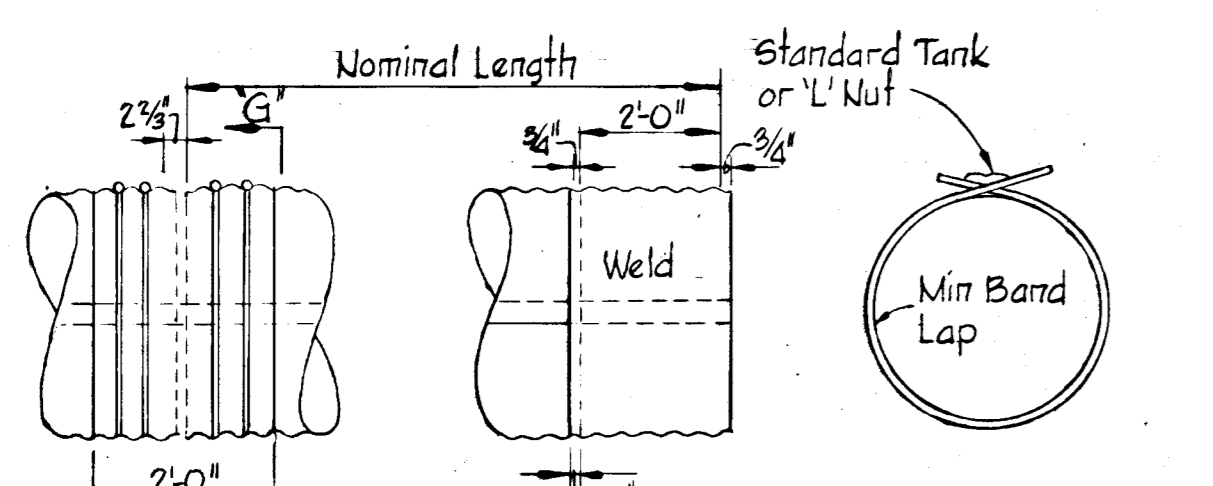
CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
 Signature: Walter Woodford
 WALTER WOODFORD DATE

CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature: Kenneth A. McCord
 KENNETH A. MCCORD DATE

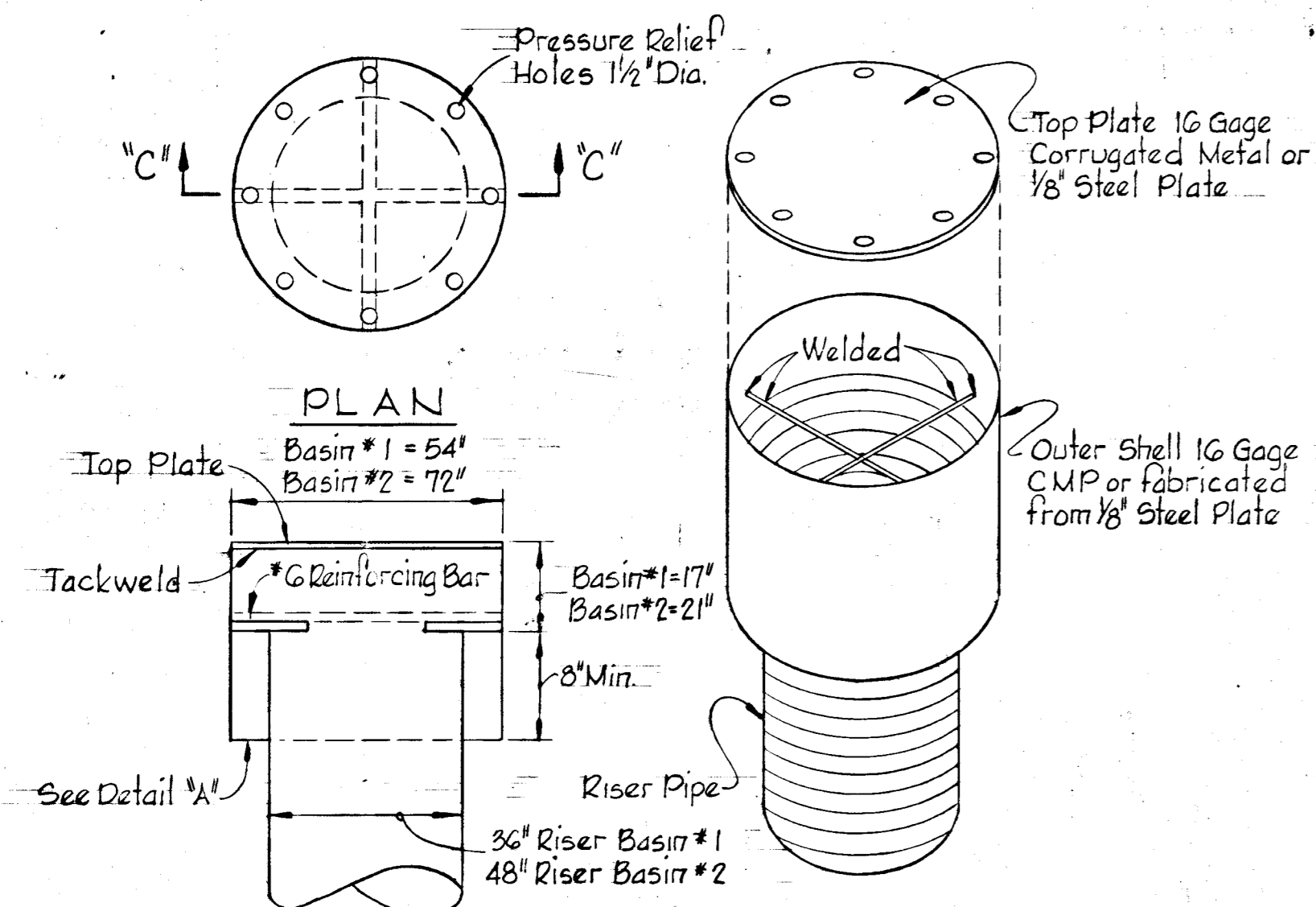
FOR CONTINUATION SEE SHEET 16 OF 26



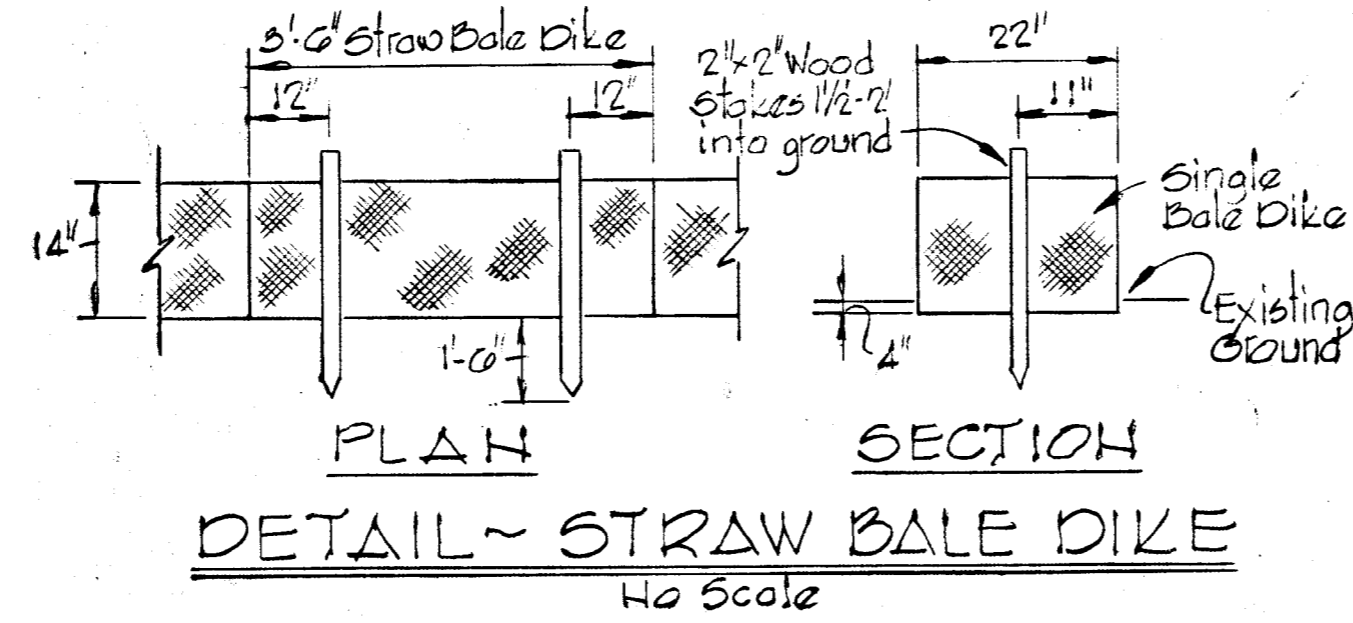
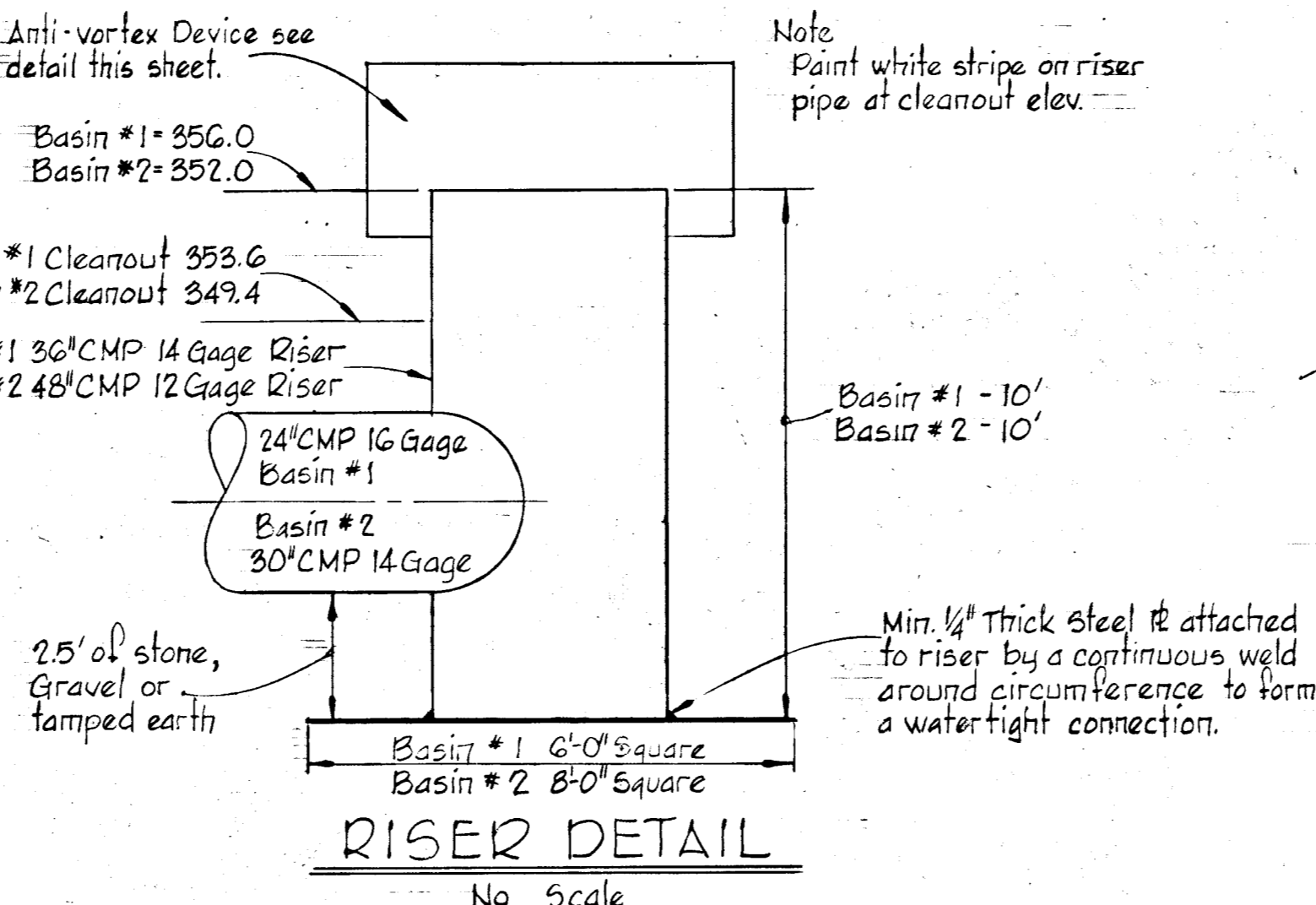
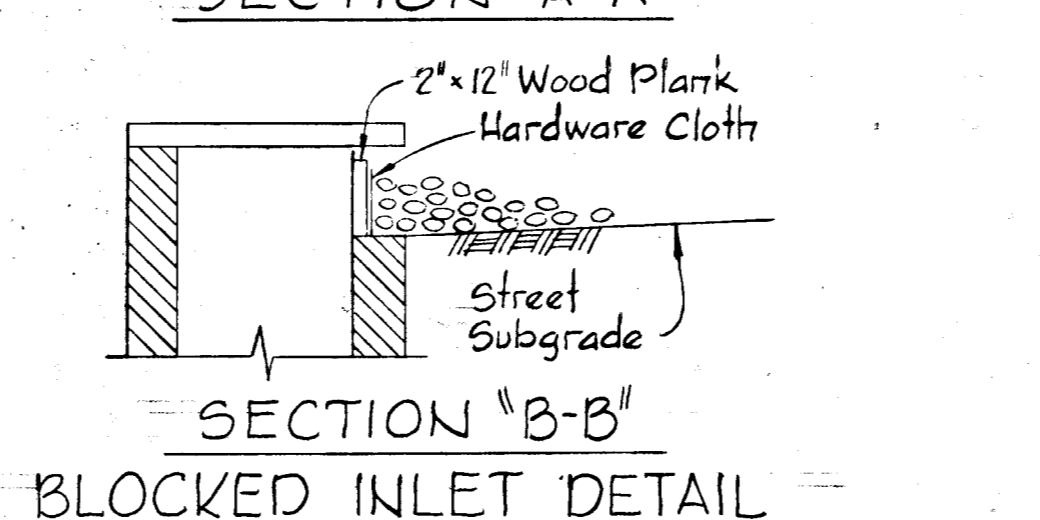
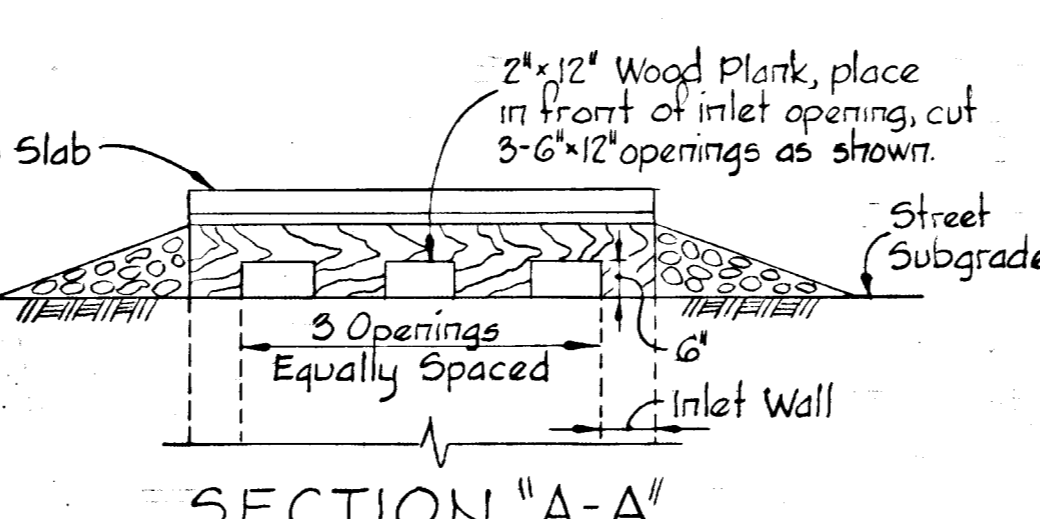
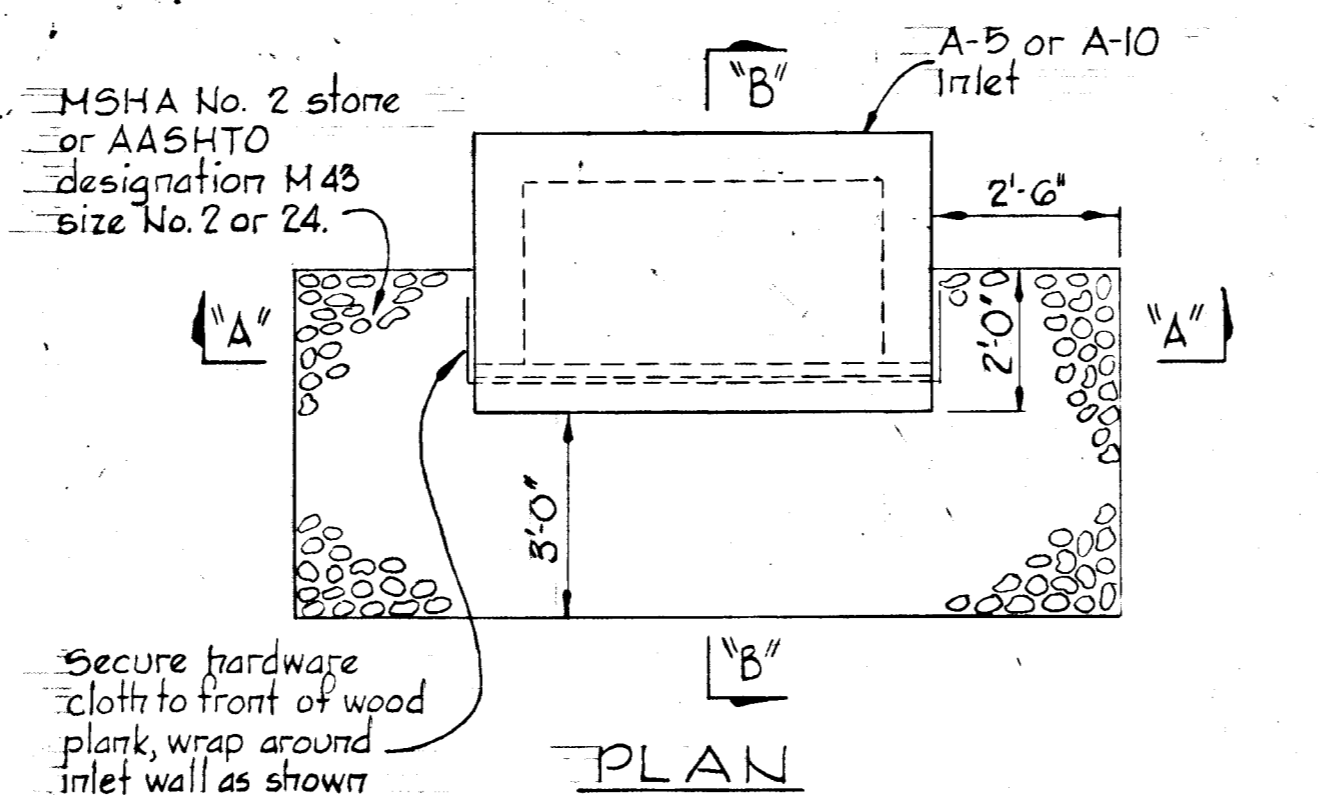
DETAIL-CORRUGATED METAL ANTI-SEEP COLLAR
 No Scale



DETAIL-WATERTIGHT COUPLING BAND
 No Scale



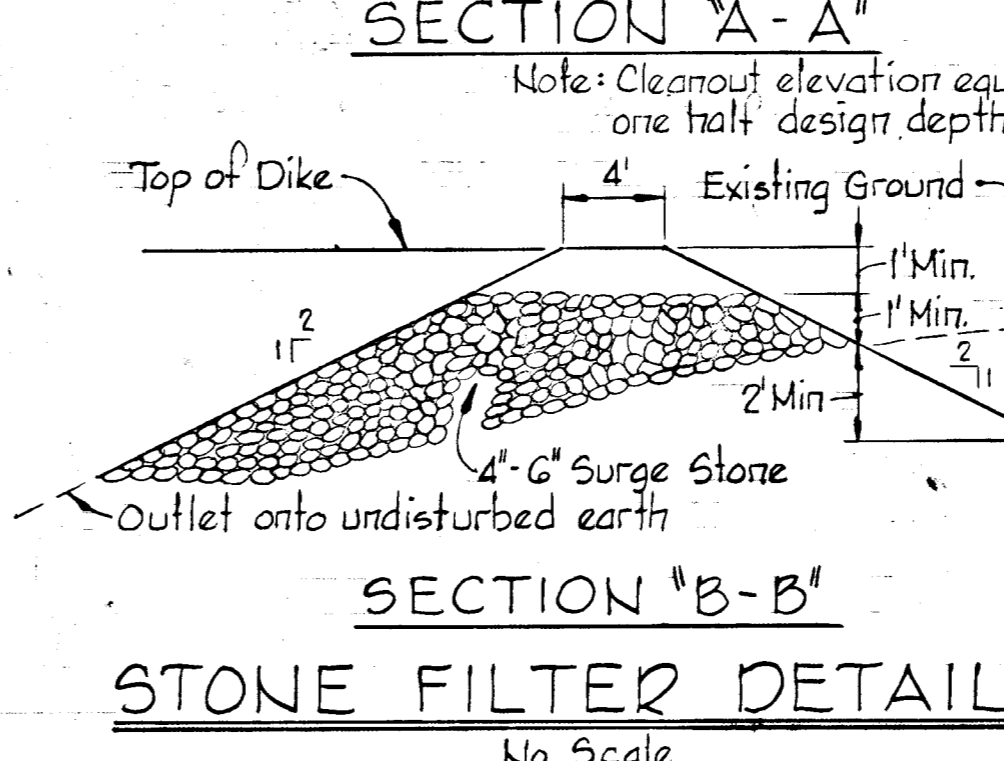
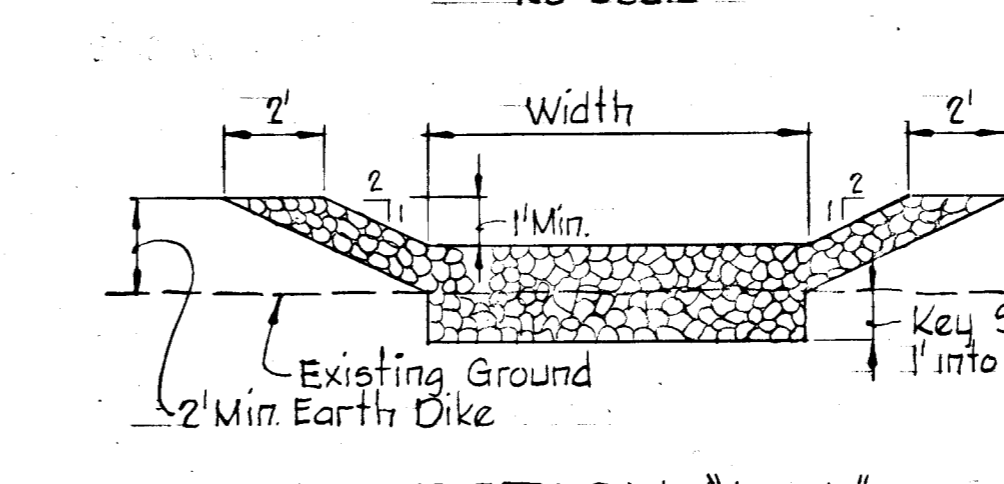
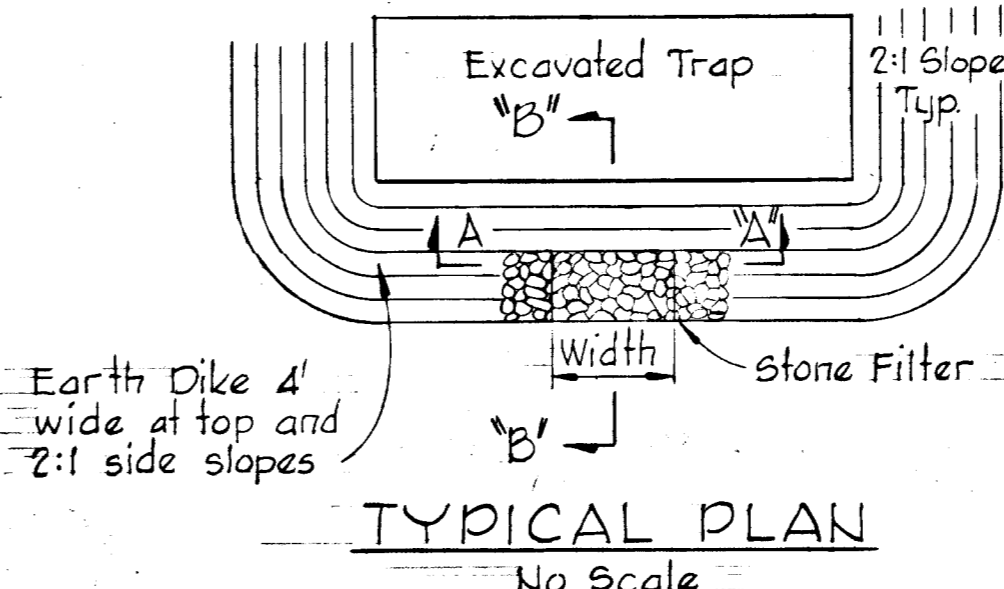
ANTI-VORTEX DEVICE AND TRASH RACK
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DETAIL- STRAW BALE DIKE
 No Scale

GENERAL NOTES

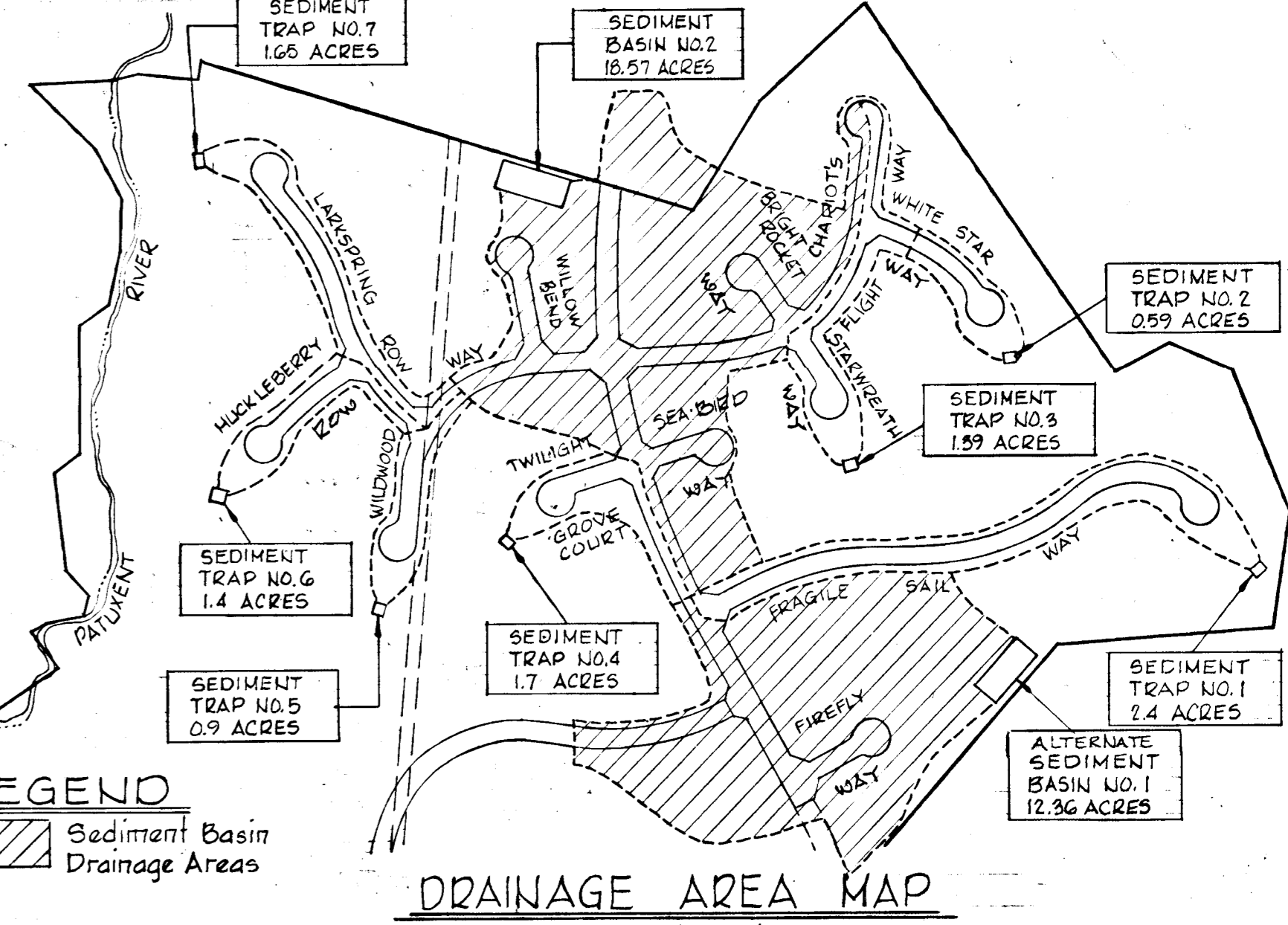
- See "Sequence of Construction" on Sheet 1.
- Prior to starting any work the contractor shall notify the Howard County Bureau of Inspections and Permits at least 24 hours in advance of notice to begin.
- The sediment control measures shall be constructed as shown on these drawings.
- All diversion dikes shall be seeded as specified in notes 5 and 6. All other surfaces to be permanently seeded. See Specifications on Sheet 1.
- The diversion dikes shall be hydroseeded as follows:
 a. Ground Limestone, (50#/1000#) one ton/acre
 b. Fertilizer, 10-10-10 (25#/1000#) 1/2 ton/acre
 c. Seed, Italian Rye Grass 40#/acre
- Mulch with straw at the rate of 50#/acre or one ton/acre. Anchor with asphalt at the rate of 480 gallons/acre.



STONE FILTER DETAILS
 No Scale

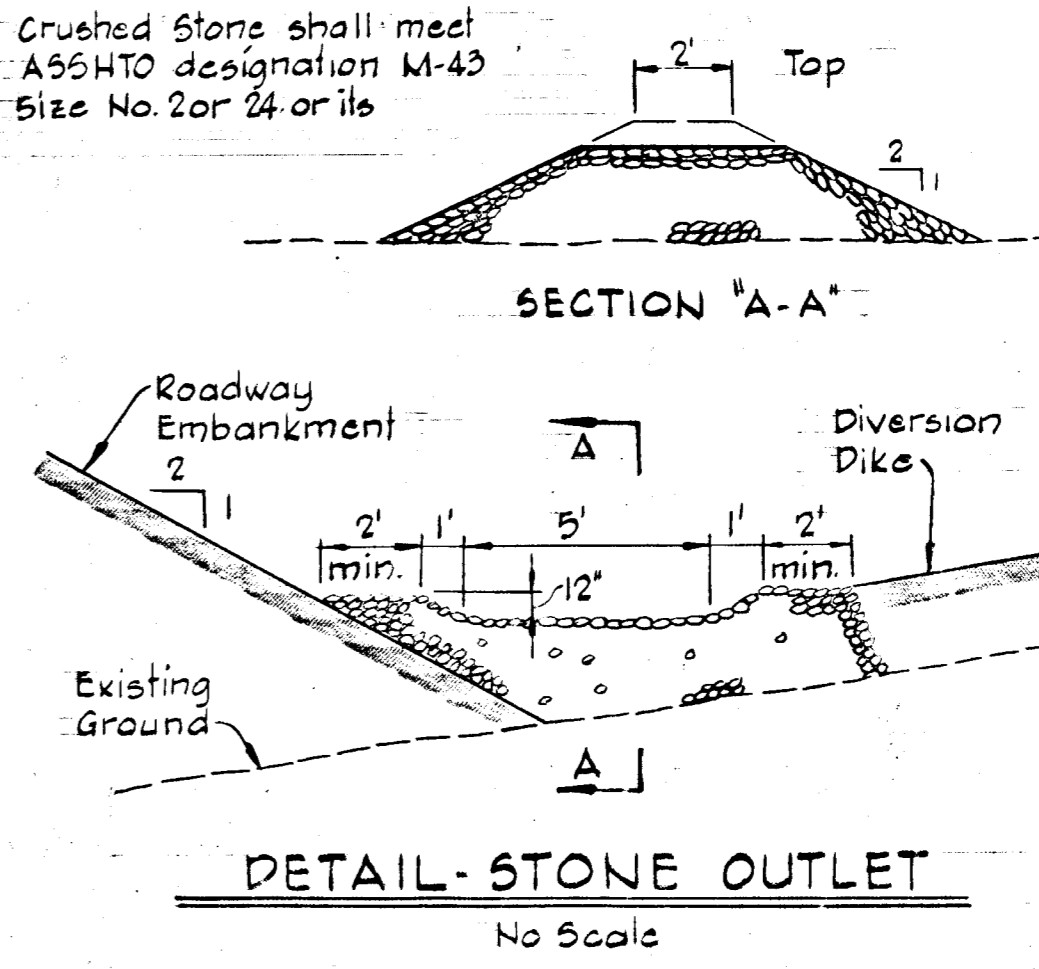


DIVERSION DIKE
 No Scale



LEGEND
 Sediment Basin
 Drainage Areas

- SEDIMENT BASIN NOTES
- Remove all sediment from Sediment Basin. All sediment must be removed from basin and upstream areas prior to removal of pipe spillway and earth dam embankment.
 - Remove a section of the earth dam embankment to pond invert to allow for gradual release of basin water.
 - Remove principal spillway and the remainder of the earth dam embankment, grade the basin area while restoring the stream to the original stream invert elevations.
 - Stabilize all graded areas. See permanent seeding specifications.
- SEDIMENT TRAP NOTES
- Remove sediment from all storm drain systems. Allow gradual release of water from sediment traps. Remove sediment from the traps.
 - Remove earth dam embankments and stone filters. Embankment material may be placed in adjacent areas away from the ditch invert. Grade for positive drainage. Stabilize all graded and disturbed areas.
 - Place rip-rap below storm drain outfall for total length and width of section as shown on the road construction drawings.



DETAIL-STONE OUTLET
 No Scale

CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

WALTER WOODFORD
 DATE

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

KENNETH A. MCCORD, P.E. NO. 1974
 DATE

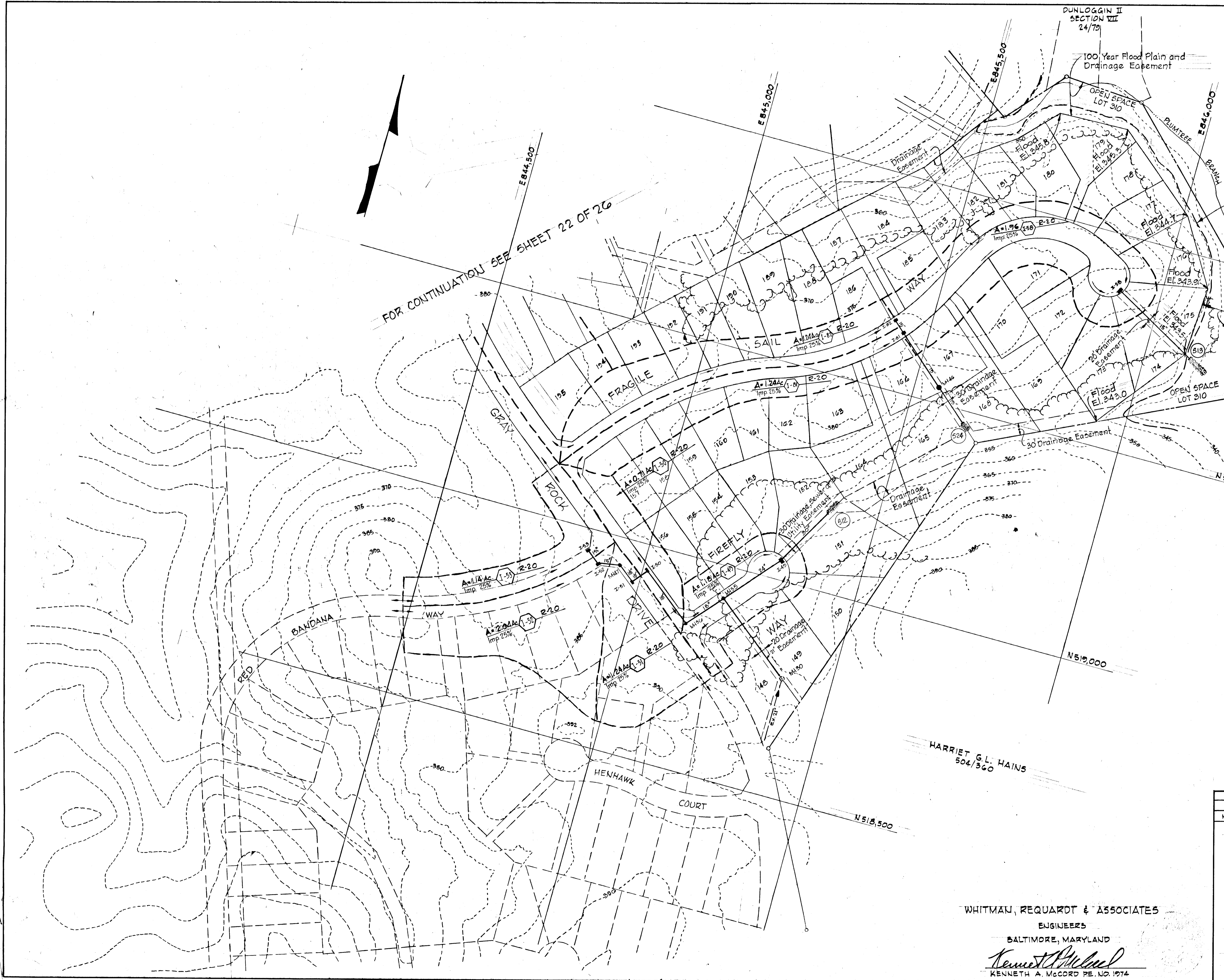
REVIEWED FOR HOWARD S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS

JAMES HELM/183
 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE

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

APPROVED: WALTER WOODFORD 11-79
 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
		DORSEY HALL 2ND. ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION
		PROJECT AREA SECTION 1 AREA 4
		PROJECT TITLE SEDIMENT CONTROL
		SCALE: 1" = 50' DATE:
		WHITMAN REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974



FOR CONTINUATION SEE SHEET 22 OF 26

100 YEAR FLOOD PLAIN
 N520,000
 100 Year Flood Plain and
 Drainage Easement

HARRIET G. L. HAINS
 504/360

NO.		REVISION DESCRIPTION	
NO.	DATE	REVISION DESCRIPTION	
DORSEY HALL SECTION 1 AREA 4 DRAINAGE AREA MAP 2 ND ELECTION DISTRICT OF HOWARD COUNTY, MD. OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND			
DATE	SHEET 21 OF 26		SCALE: 1"=100'

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND
Kenneth A. McCord
 KENNETH A. MCCORD P.E. NO. 1974

DEPARTMENT OF PUBLIC WORKS
 for *Allen S. Brown* 11/6/79
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING AND ZONING
John W. Kluehman 11-1-79
 CHIEF, DIVISION OF LAND DEVELOPMENT

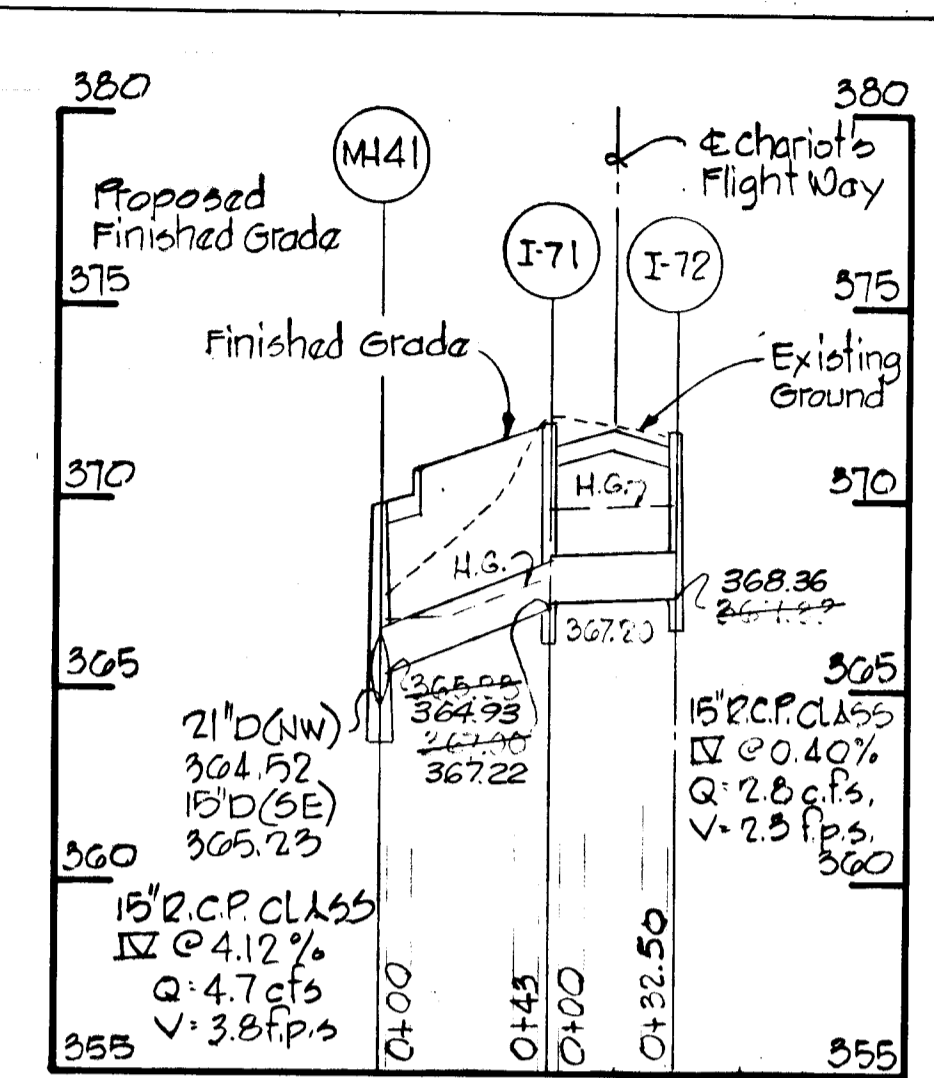
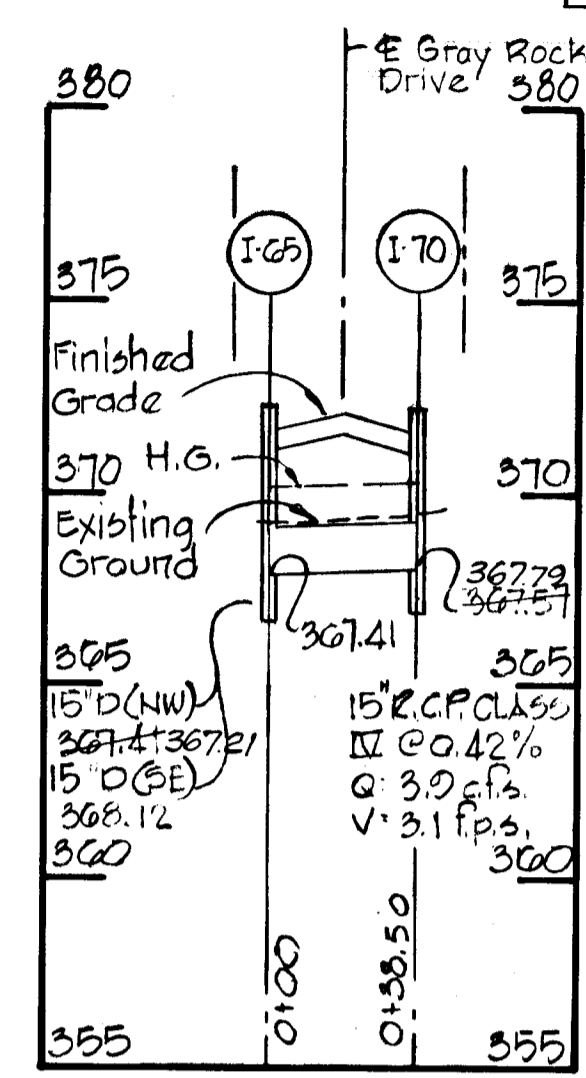
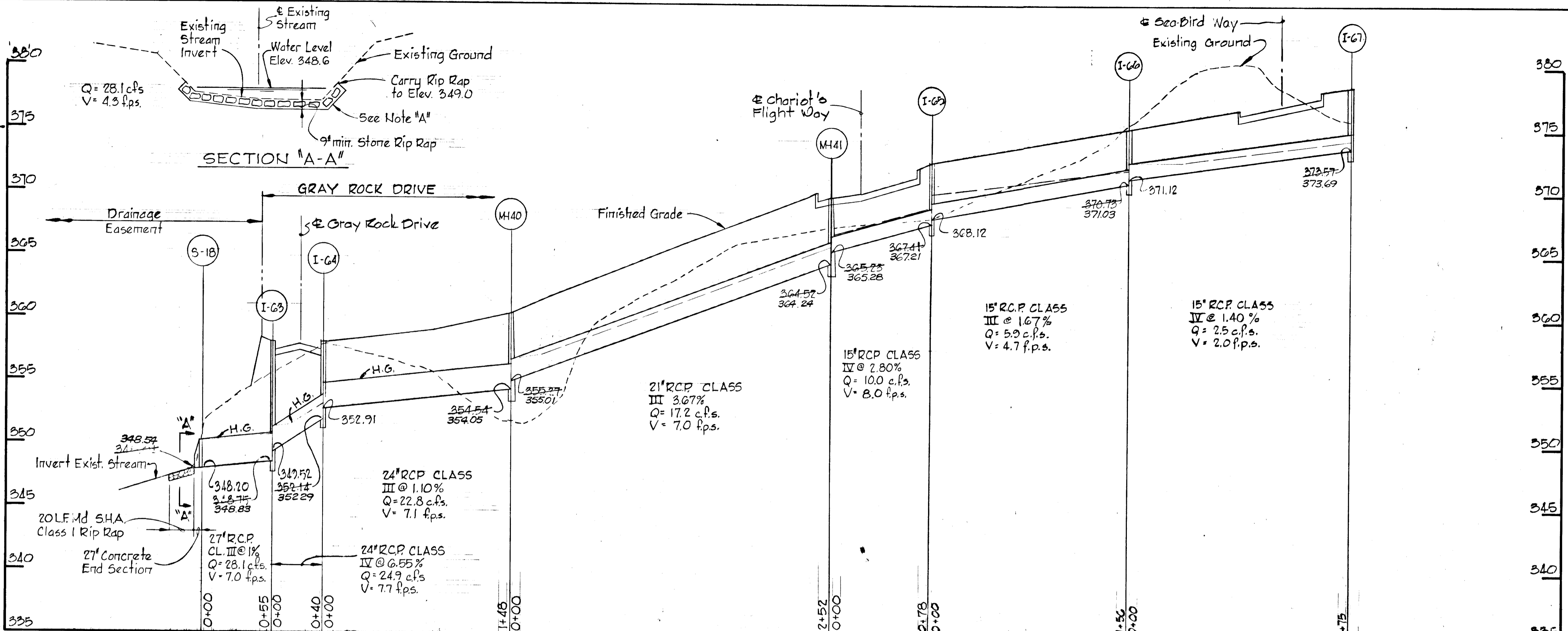


FOR CONTINUATION SEE SHEET 21 OF 26

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND
Kenneth A. McCord
 KENNETH A. MCCORD P.E. NO. 1074

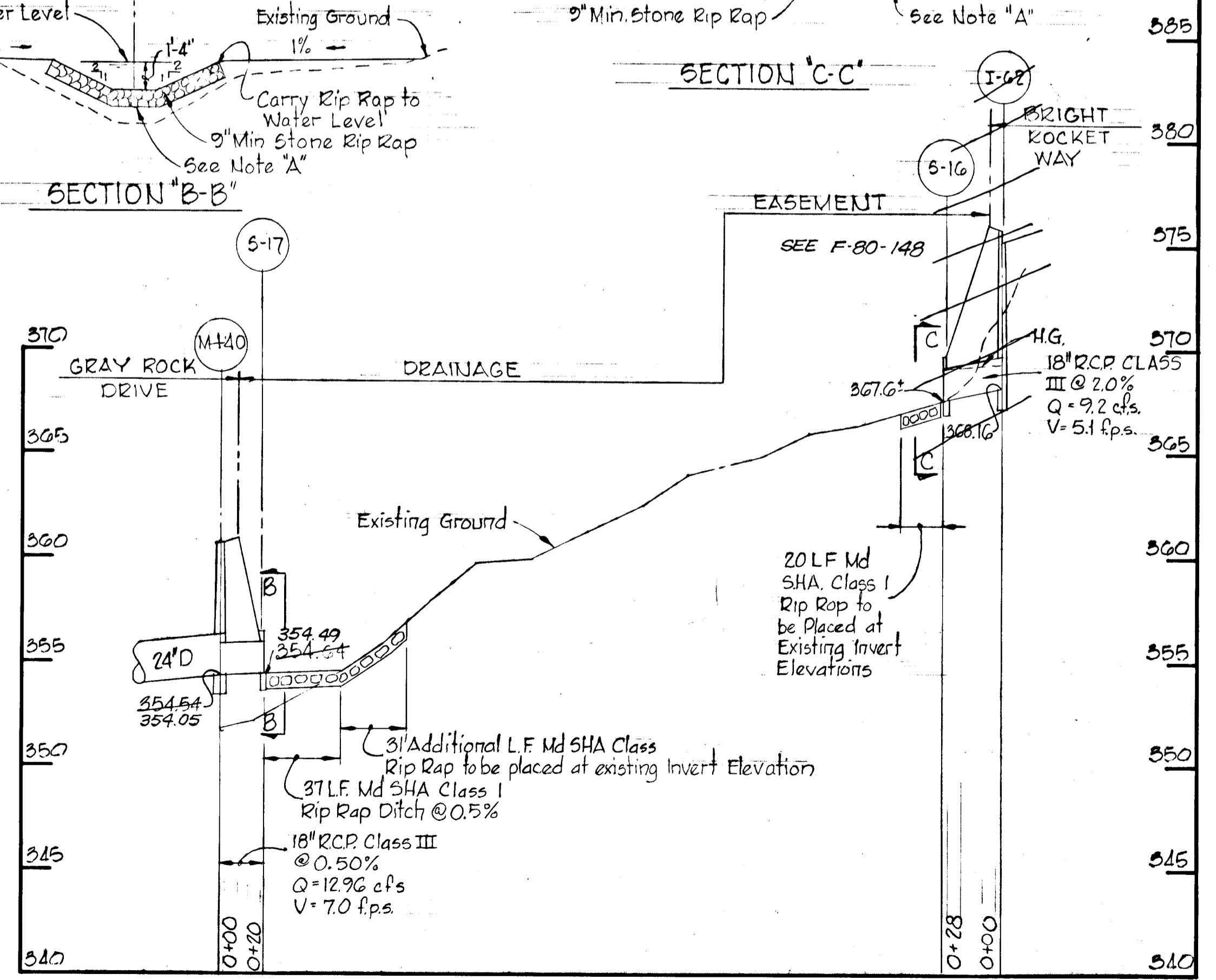
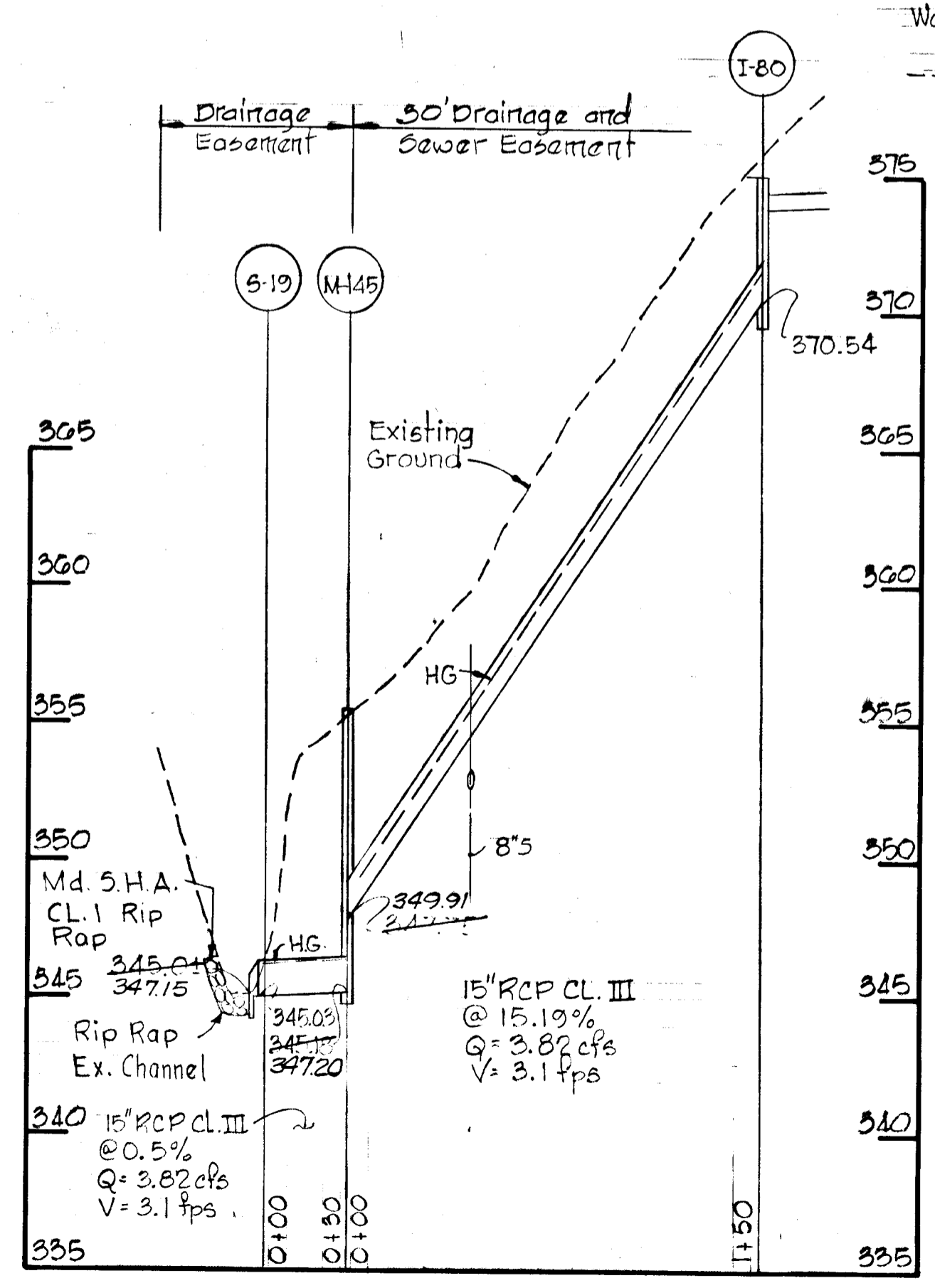
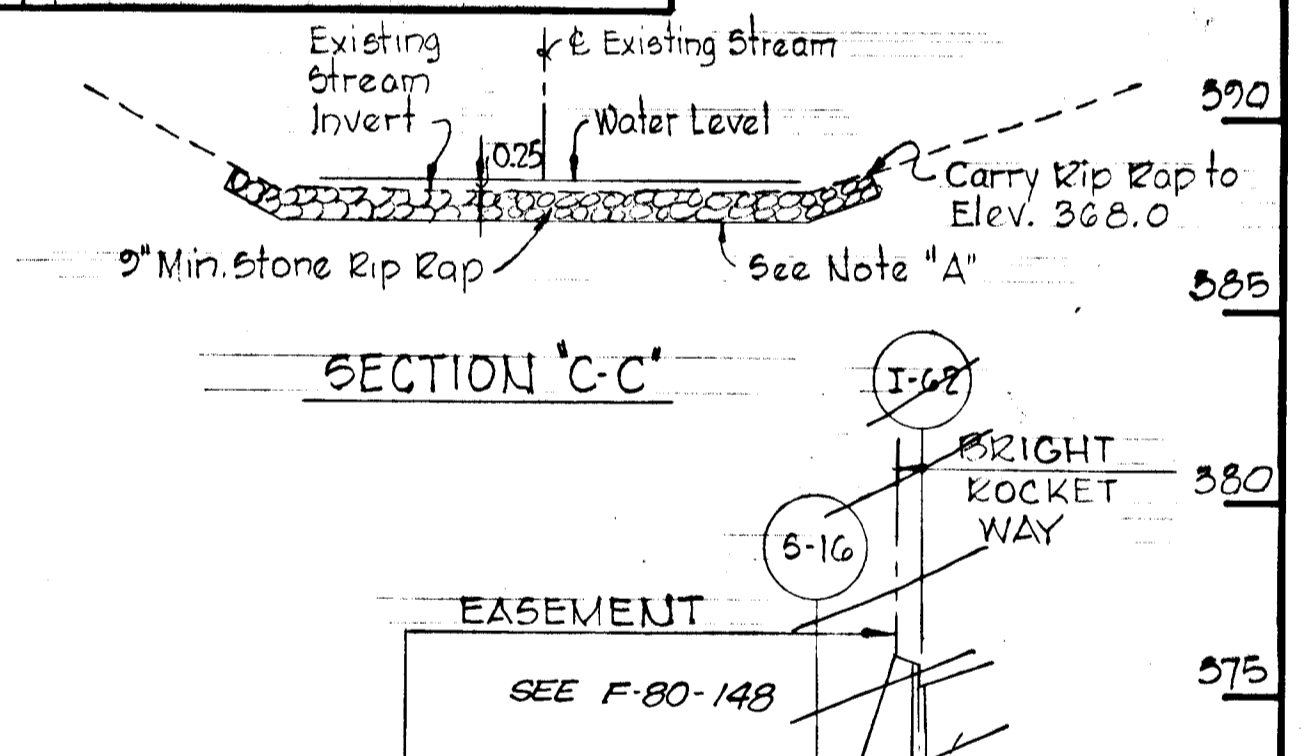
NO.	DATE	REVISION DESCRIPTION
DORSEY HALL SECTION 1 AREA 4 DRAINAGE AREA MAP 2 ND ELECTION DISTRICT OF HOWARD COUNTY, MD. OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND DATE _____ SCALE: 1"=100' SHEET 22 OF 26		

10/10/79 F-80-26



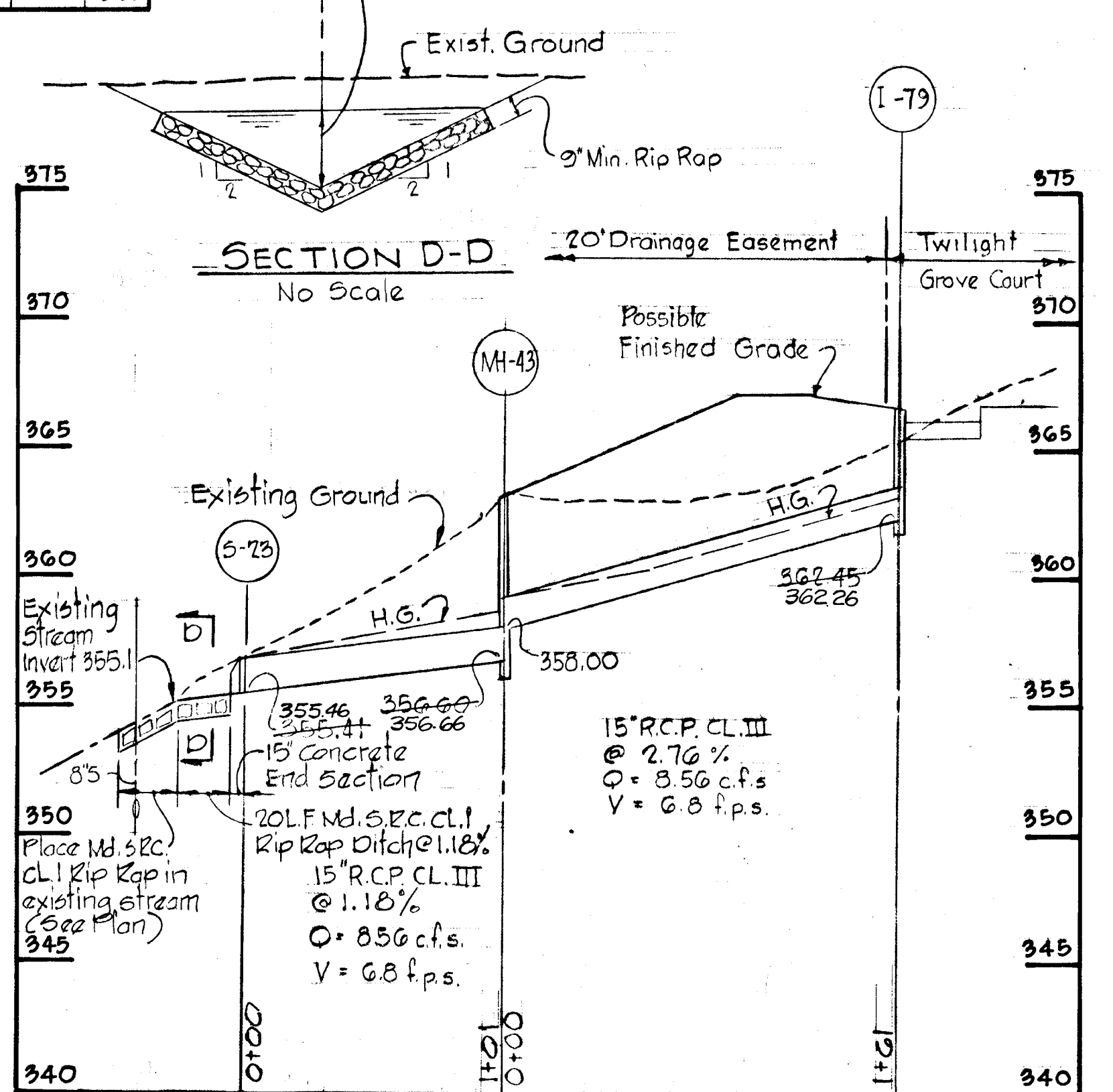
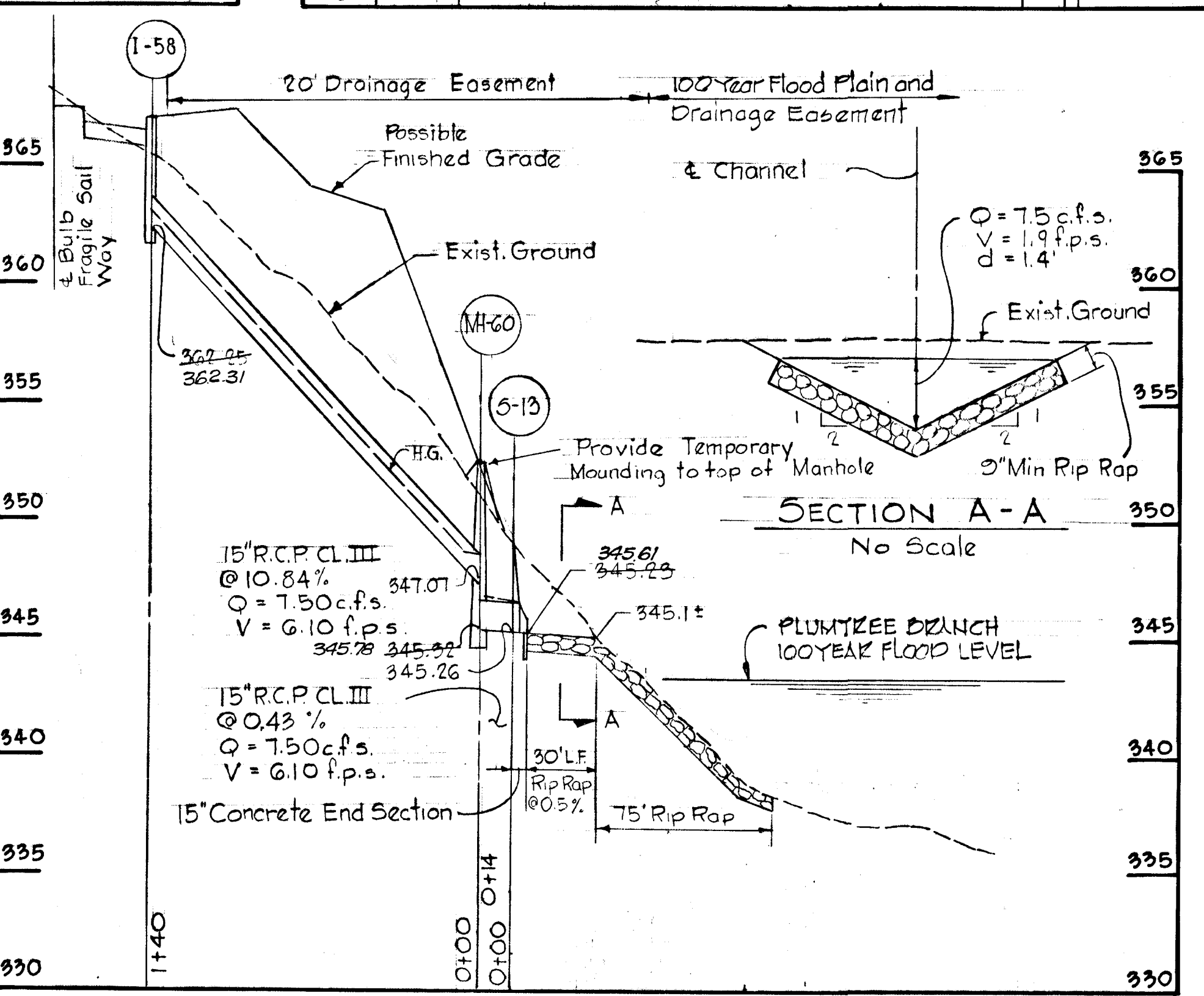
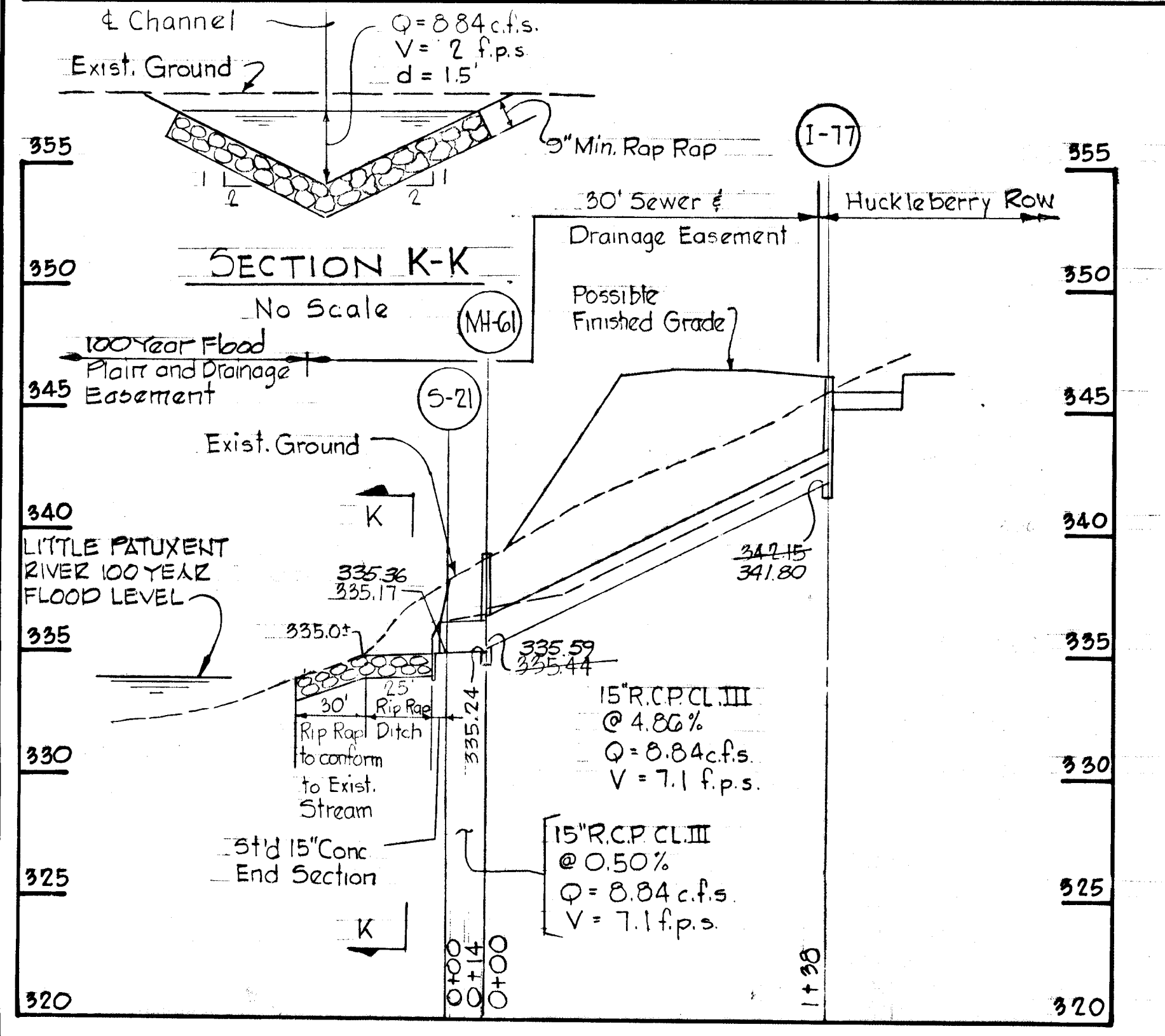
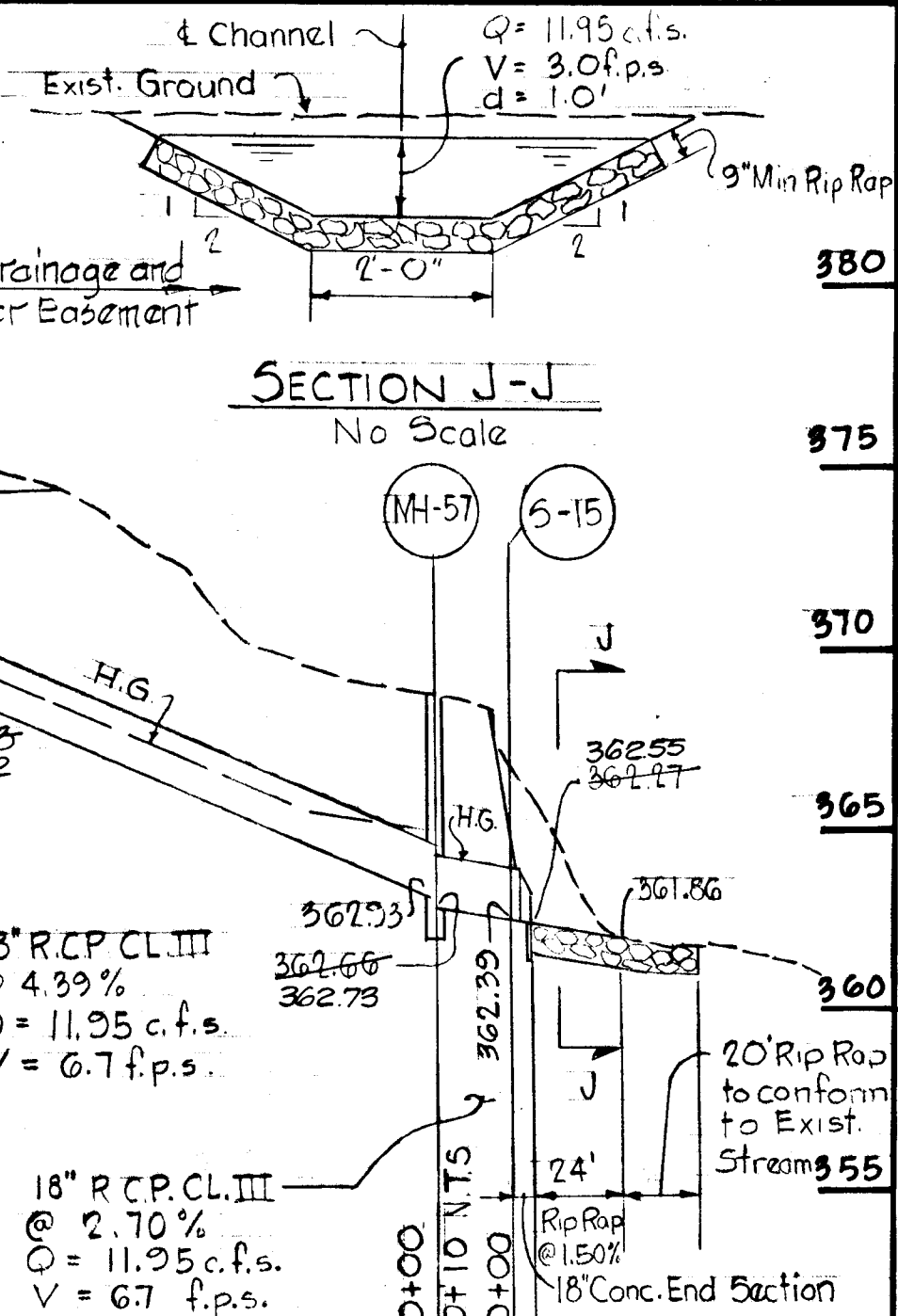
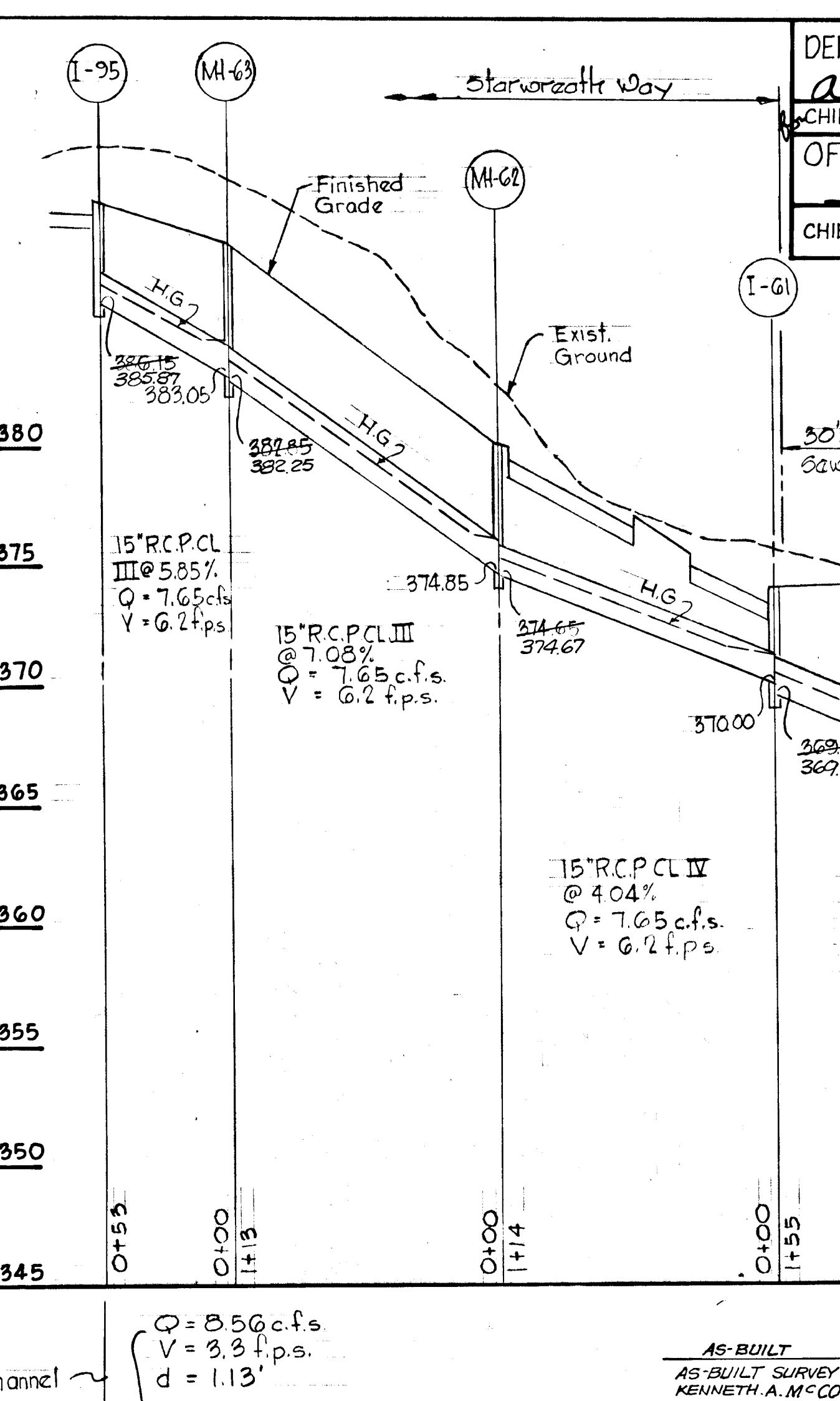
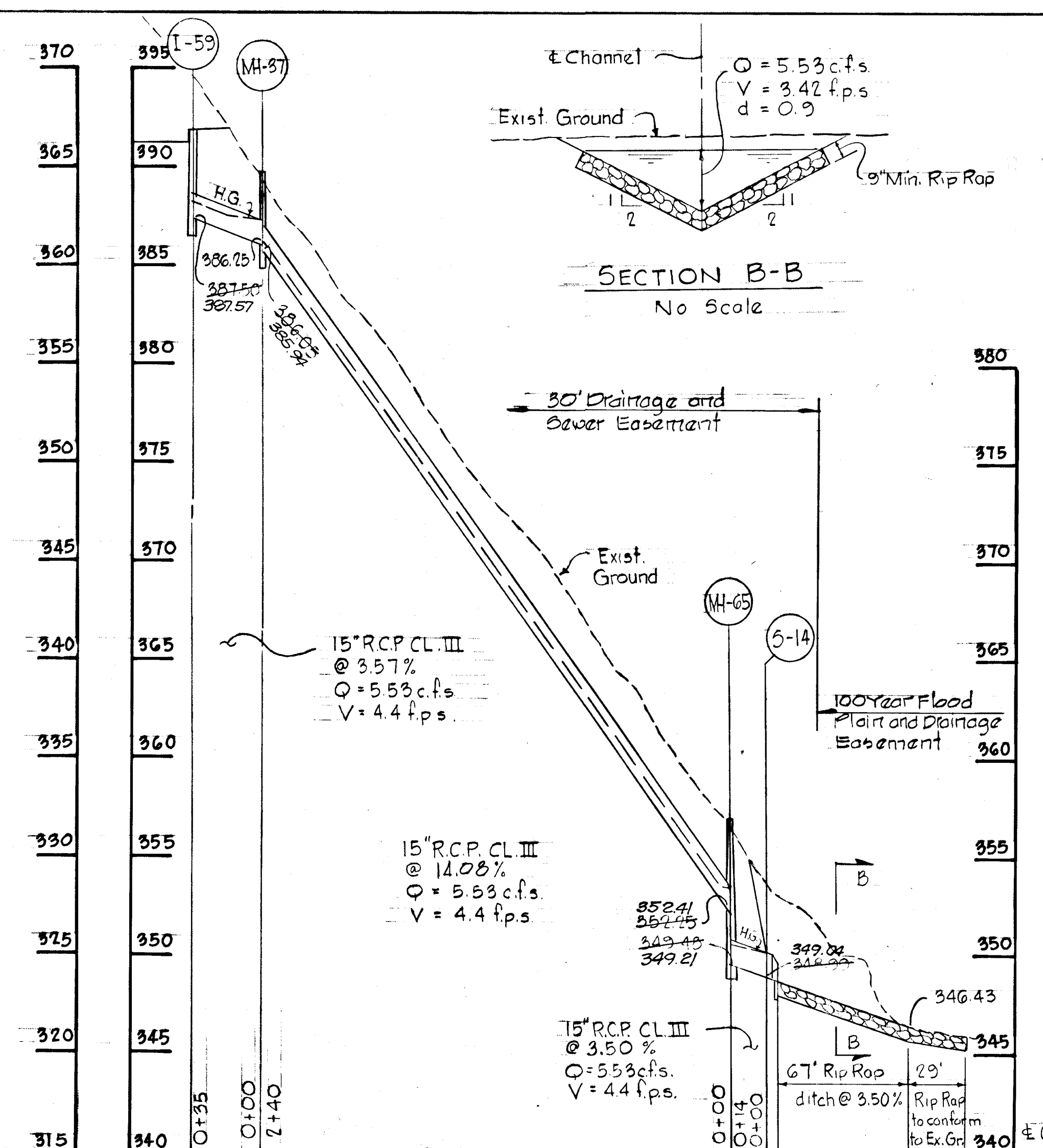
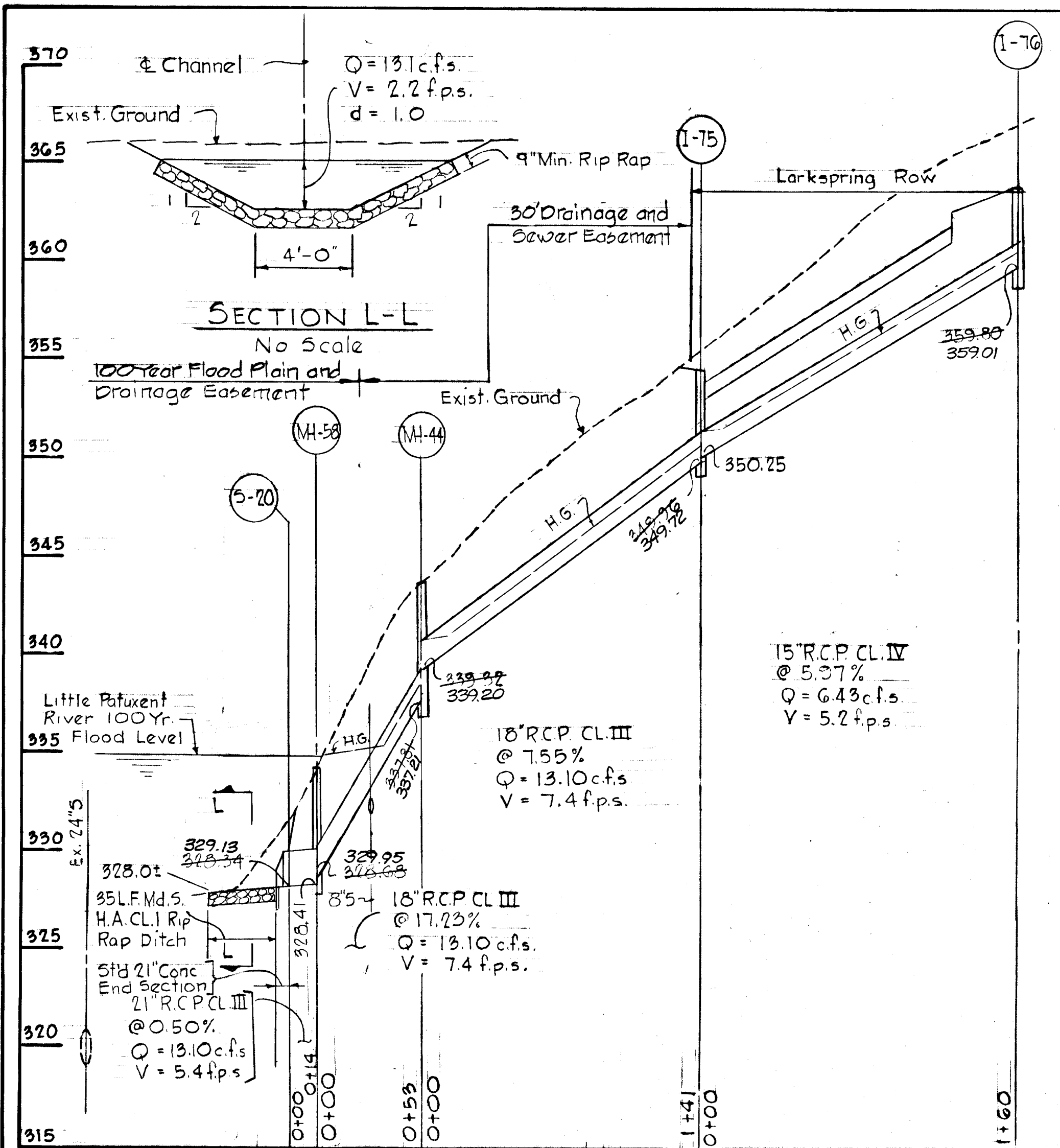
PROFILES
 Scale: Horiz. 1" = 50'
 Vert. 1" = 5'

NOTE A
 Plastic Filter Cloth shall be bedded and smooth surface and anchored with steel pins before placement of rip-rap.



REVIEWED FOR HOWARD S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
James Helms/RZ 11-1-79
 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 APPROVE *Allen S. Brown* 11-1-79
 HOWARD S.C.D. DATE

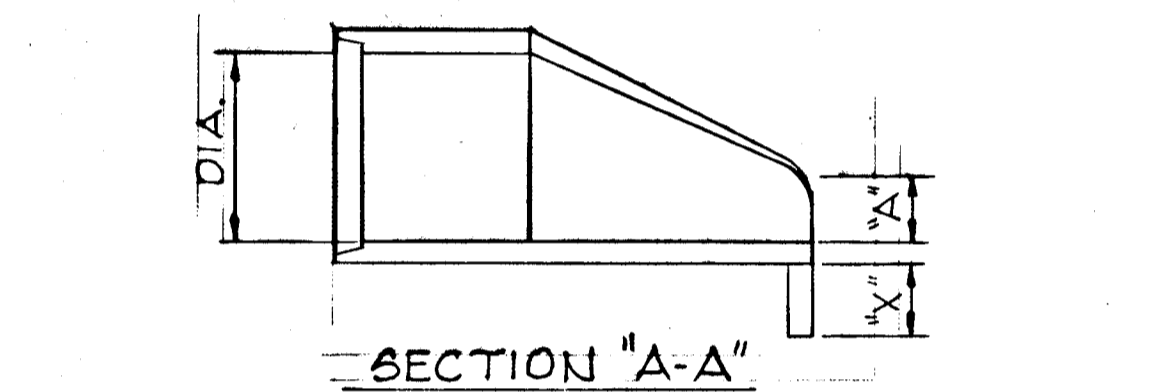
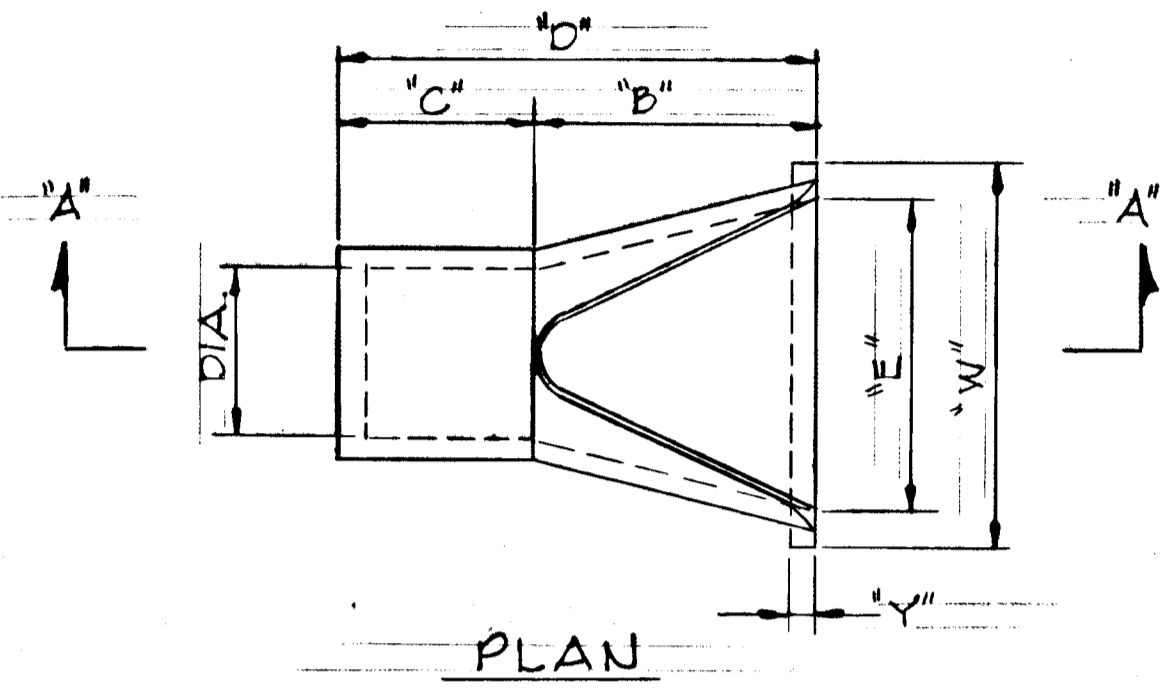
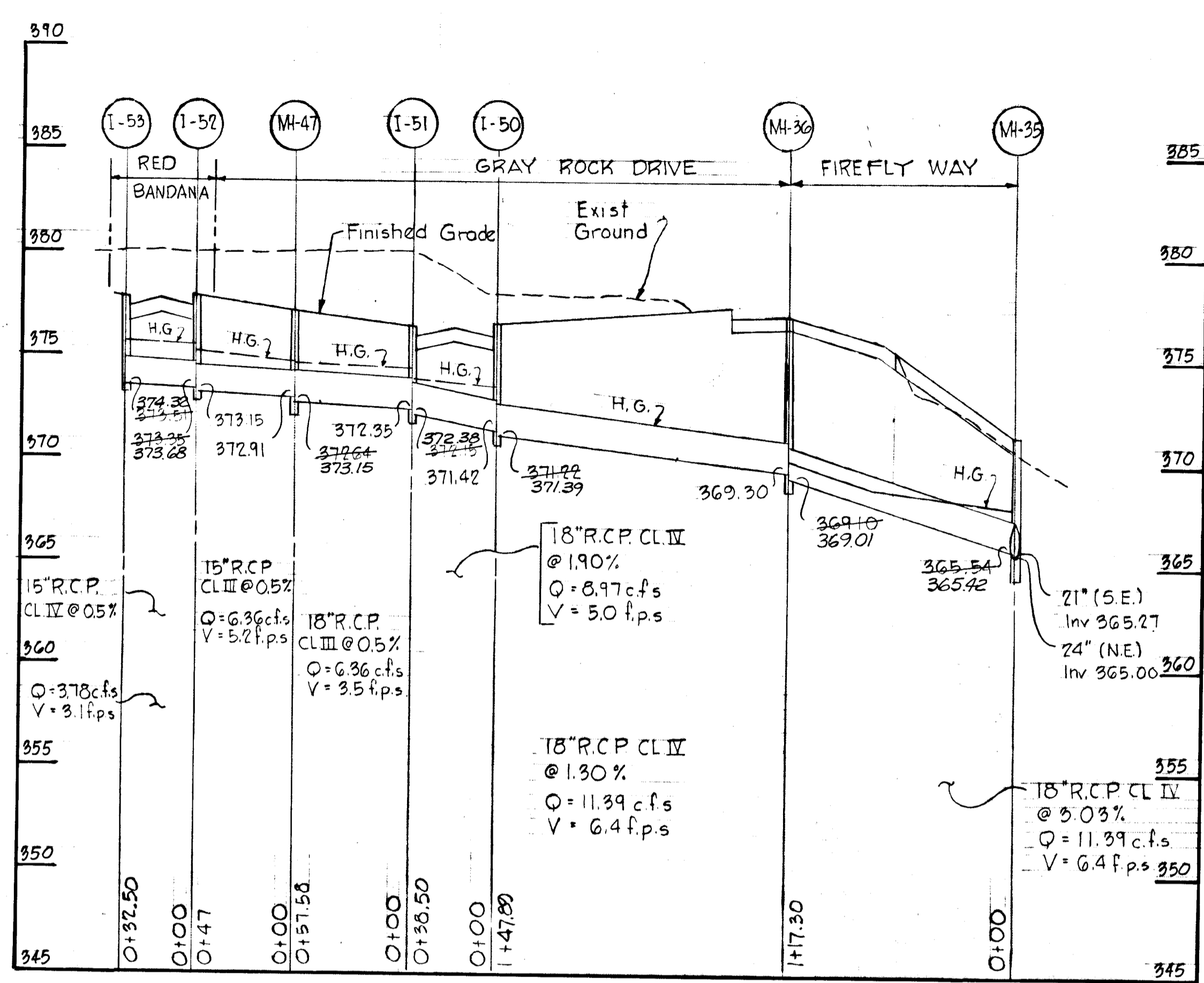
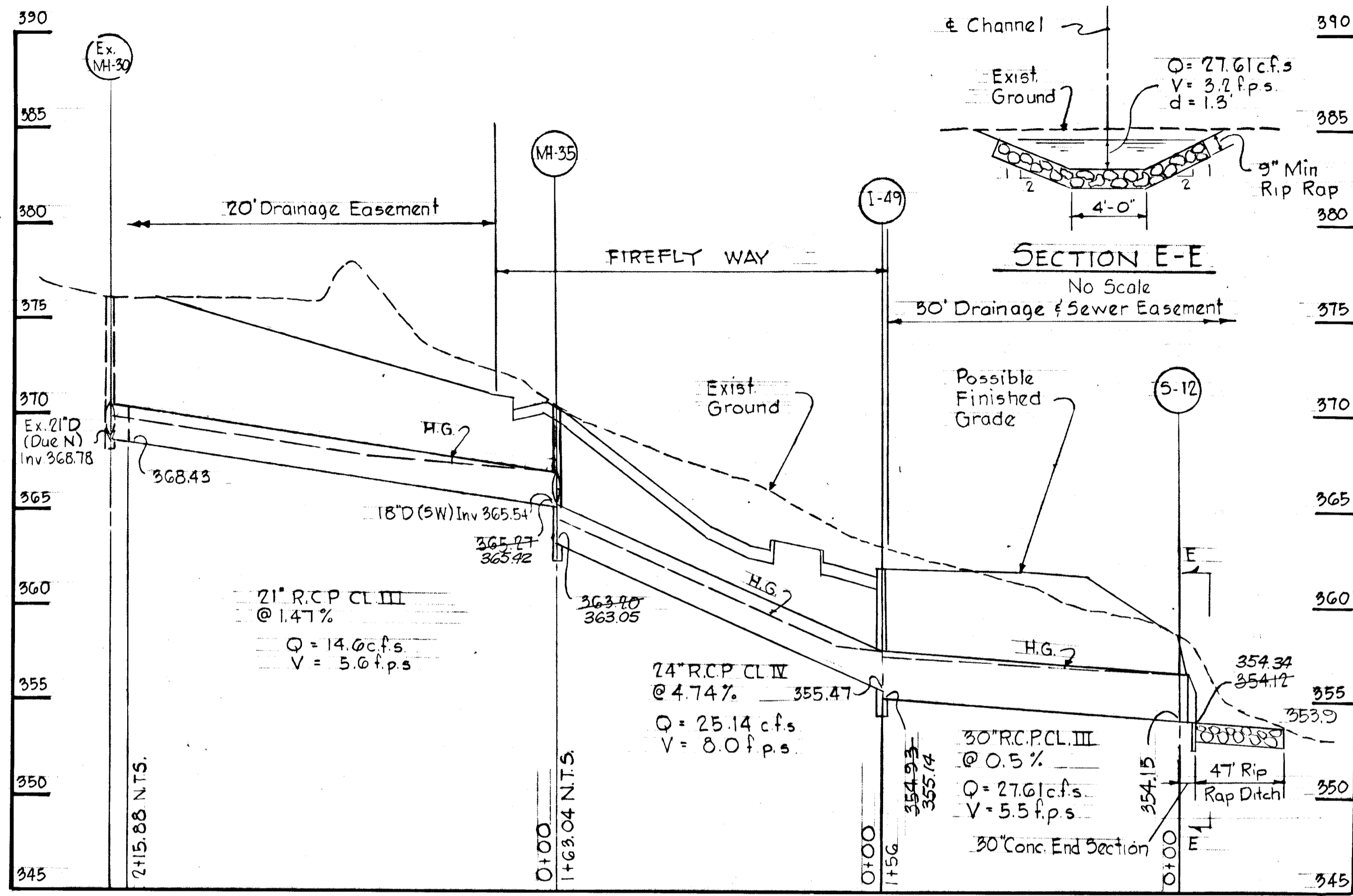
Rev. Date	Rev. No.	Revision Description
DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION I AREA 4		
PROJECT TITLE STORM DRAIN PROFILES		
SCALE: As Shown		DATE
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		



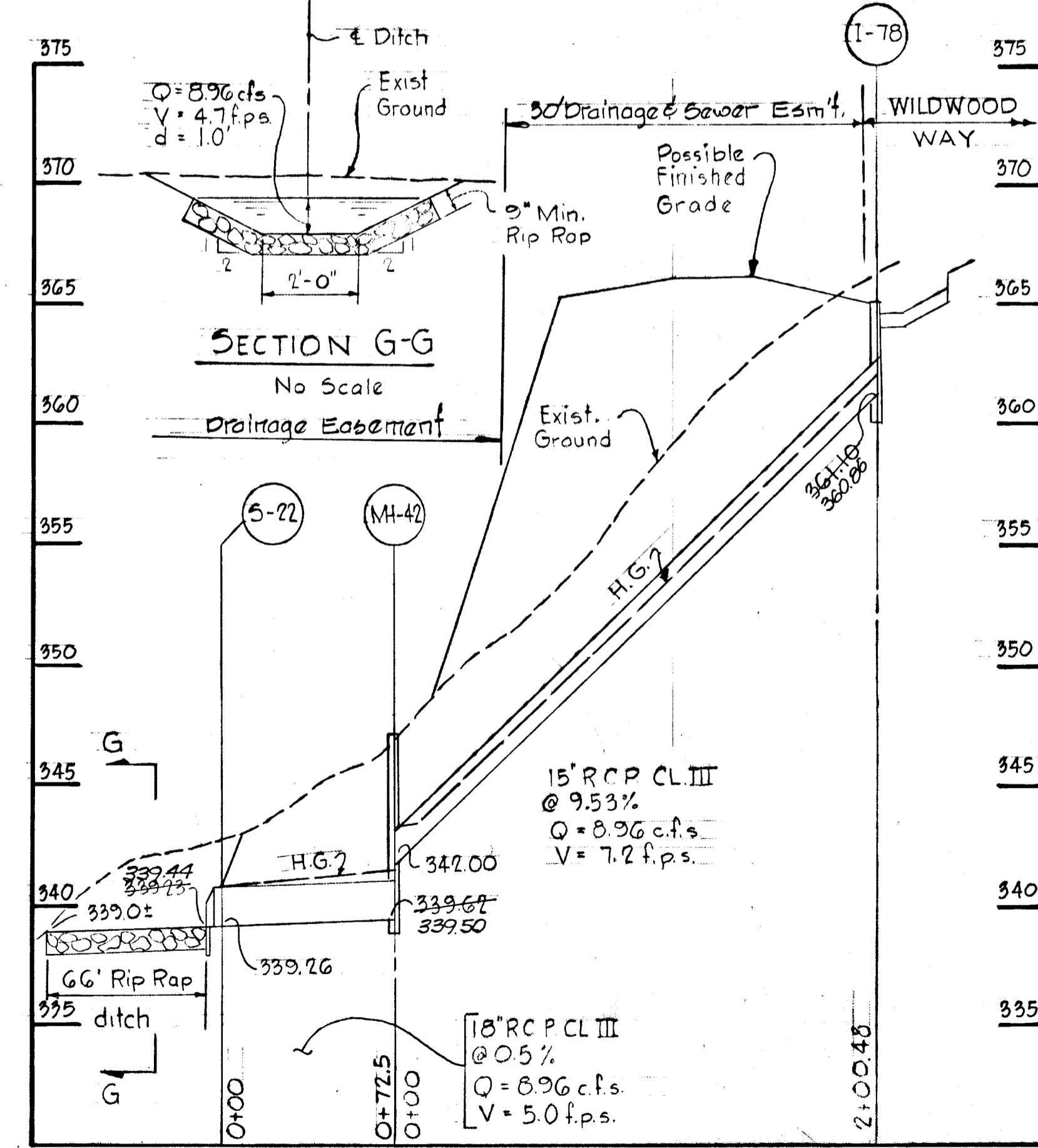
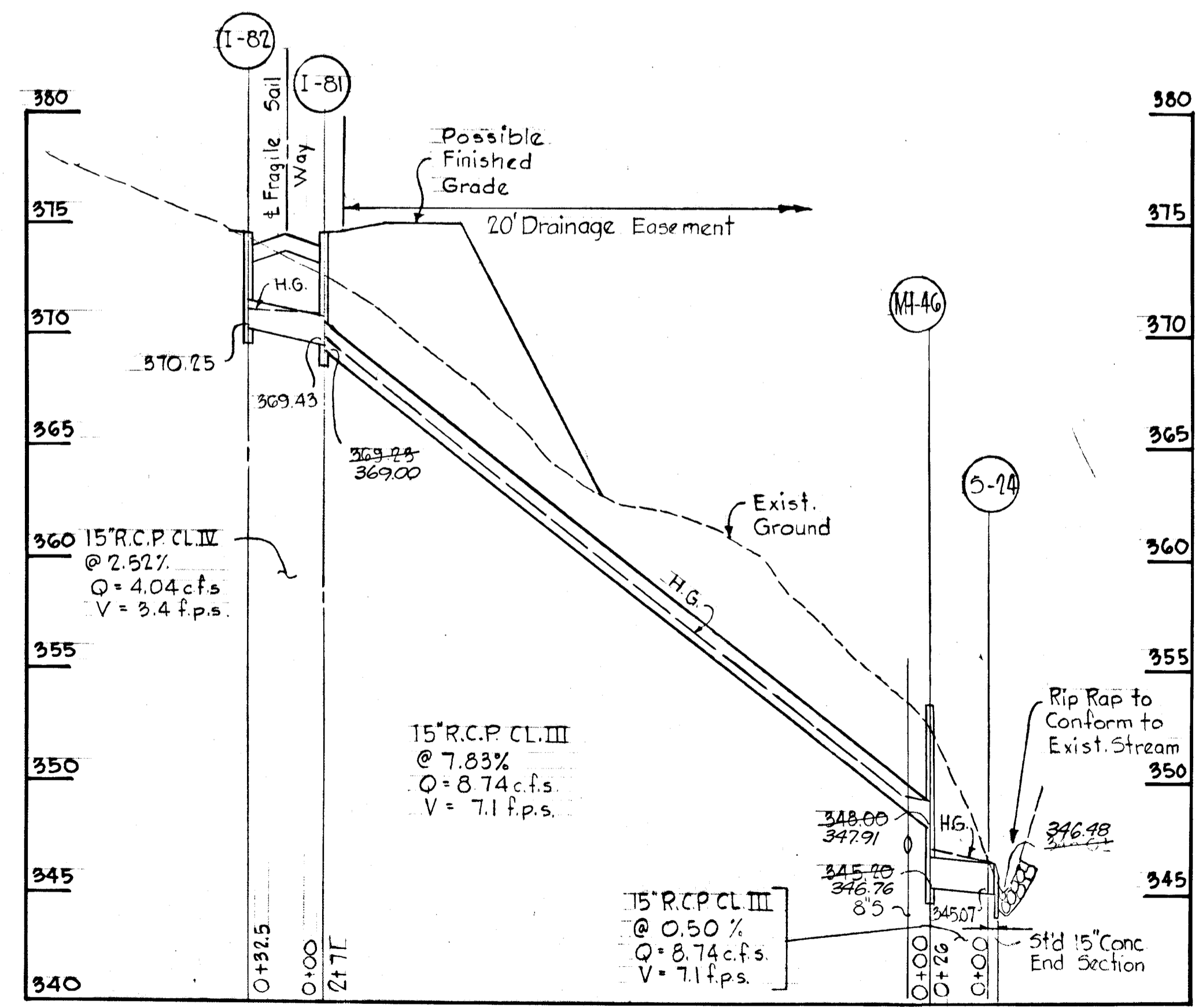
REVIEWED FOR *Howard* S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
Janice Helms 11-1-79 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 APPROVED *Wm. J. Rowe* 11-1-79 HOWARD S.C.D. DATE

Rev. Date	Rev. No.	Revision	Description
DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND			
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.			
PROJECT AREA SECTION 1 AREA 4			
PROJECT TITLE STORM DRAIN PROFILES			
SCALE: As Shown		DATE	
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202			
<i>Kenneth A. Mc Cord</i> KENNETH A. MC CORD Registered Engineer No. 1974			

PROFILES
 Scale: Horiz. 1"=50'
 Vert. 1"=5'



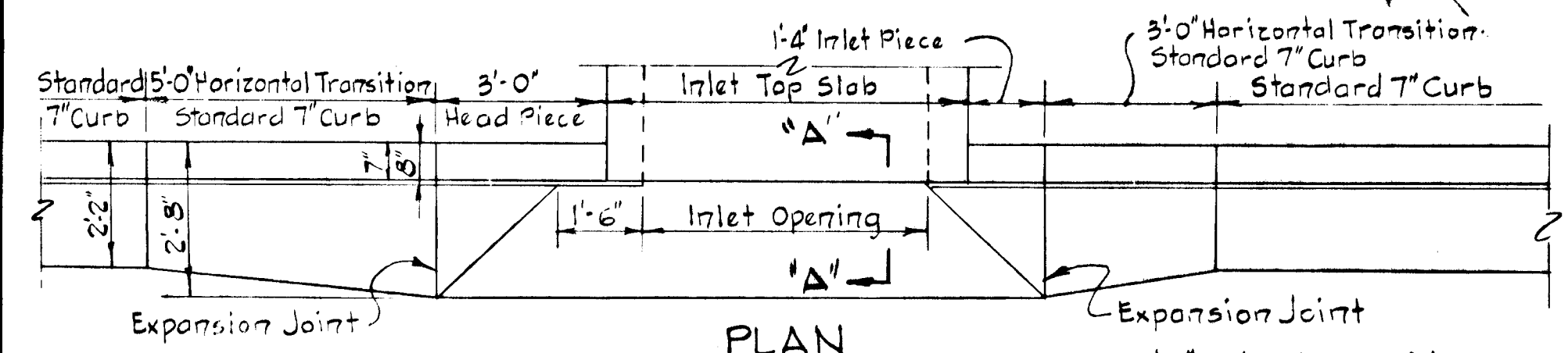
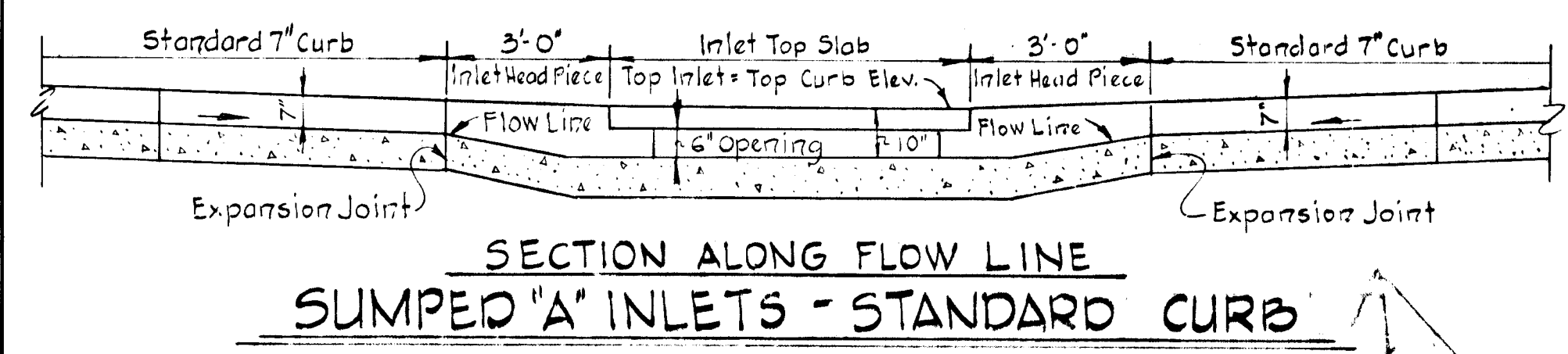
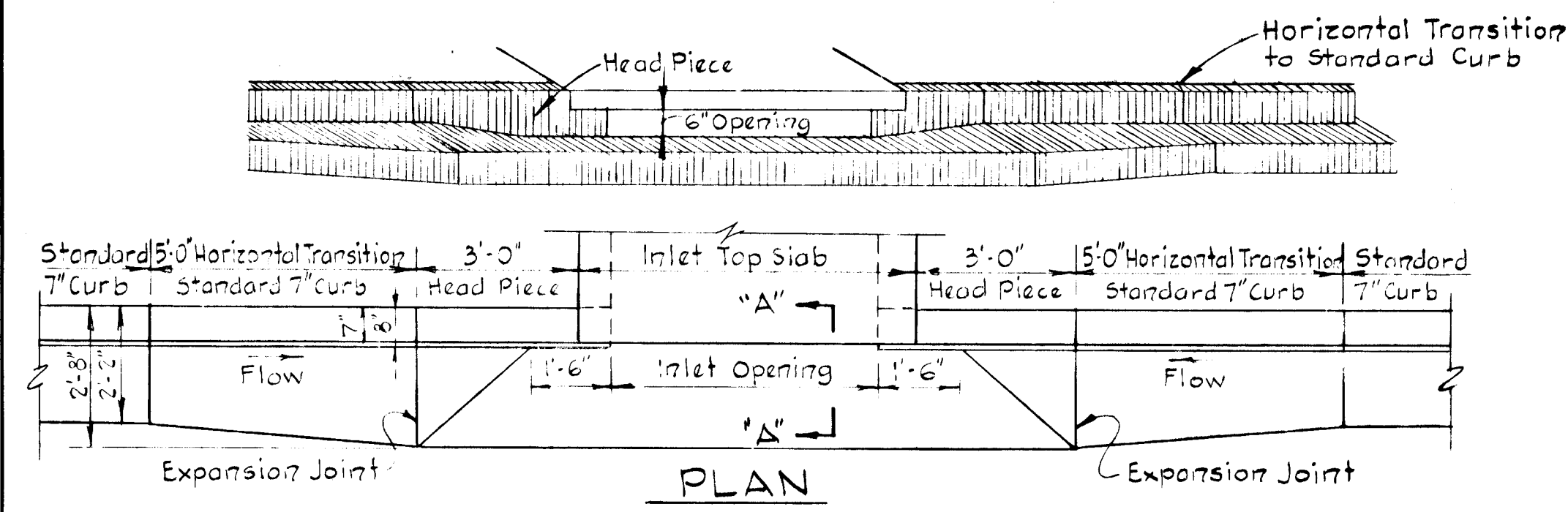
DETAIL-CONCRETE END SECTION
 No Scale



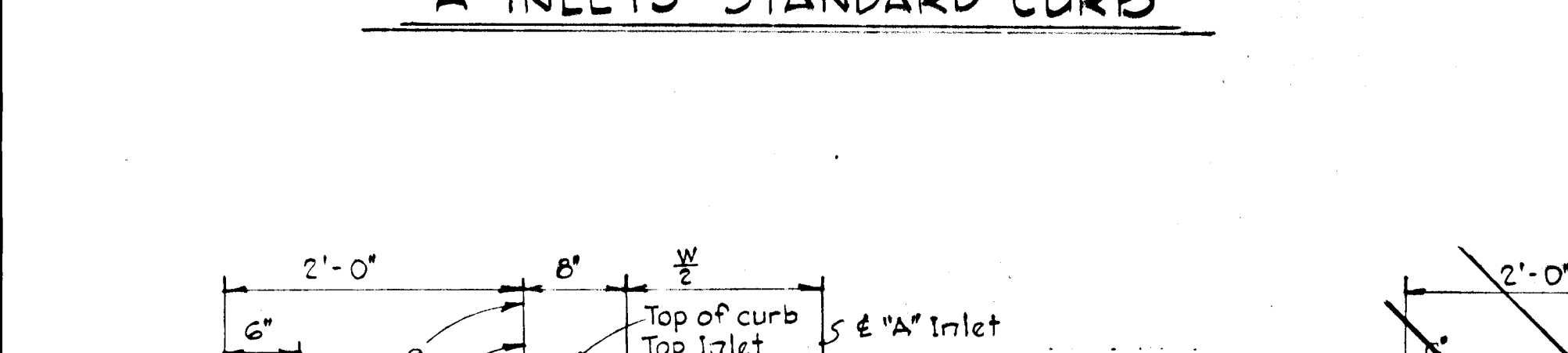
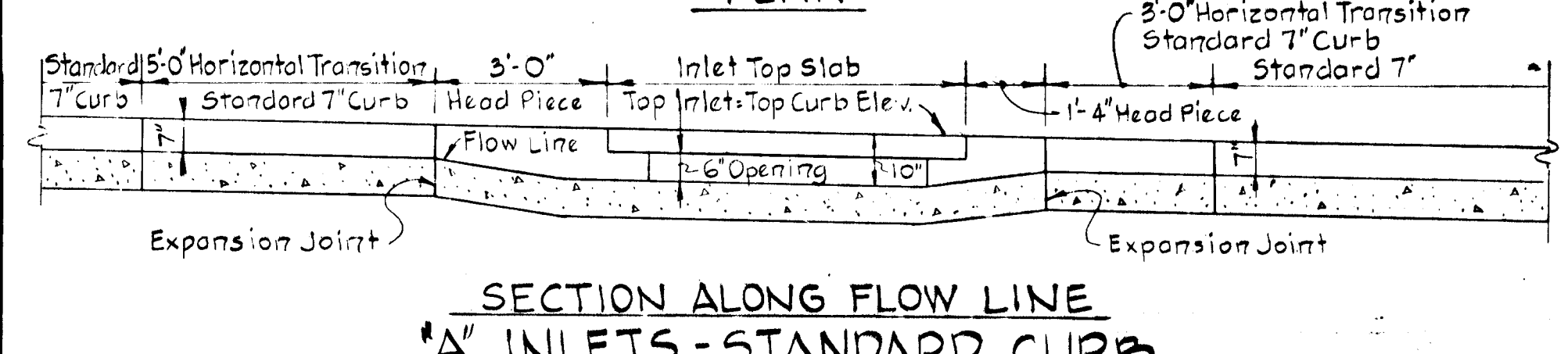
CONCRETE END SECTION		FOOTER													
DIA	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	'O'
15"	0'	2'-3"	3'-10"	6'-1"	2'-6"	3'-6"	12"	9"							
18"	0'	2'-3"	3'-10"	6'-1"	3'-0"	4'-0"	12"	9"							
21"	10 1/2"	1'-2"	2'-0"	6'-1/2"	4'-6"	5'-6"	15"	9"							
30"	1'-0"	4'-6"	1'-7 1/2"	6'-1 1/2"	5'-0"	6'-0"	15"	9"							

AS BUILT 4-22-82
 AS-BUILT SURVEY CERTIFIED BY
 KENNETH A. McCORD P.E. 1974

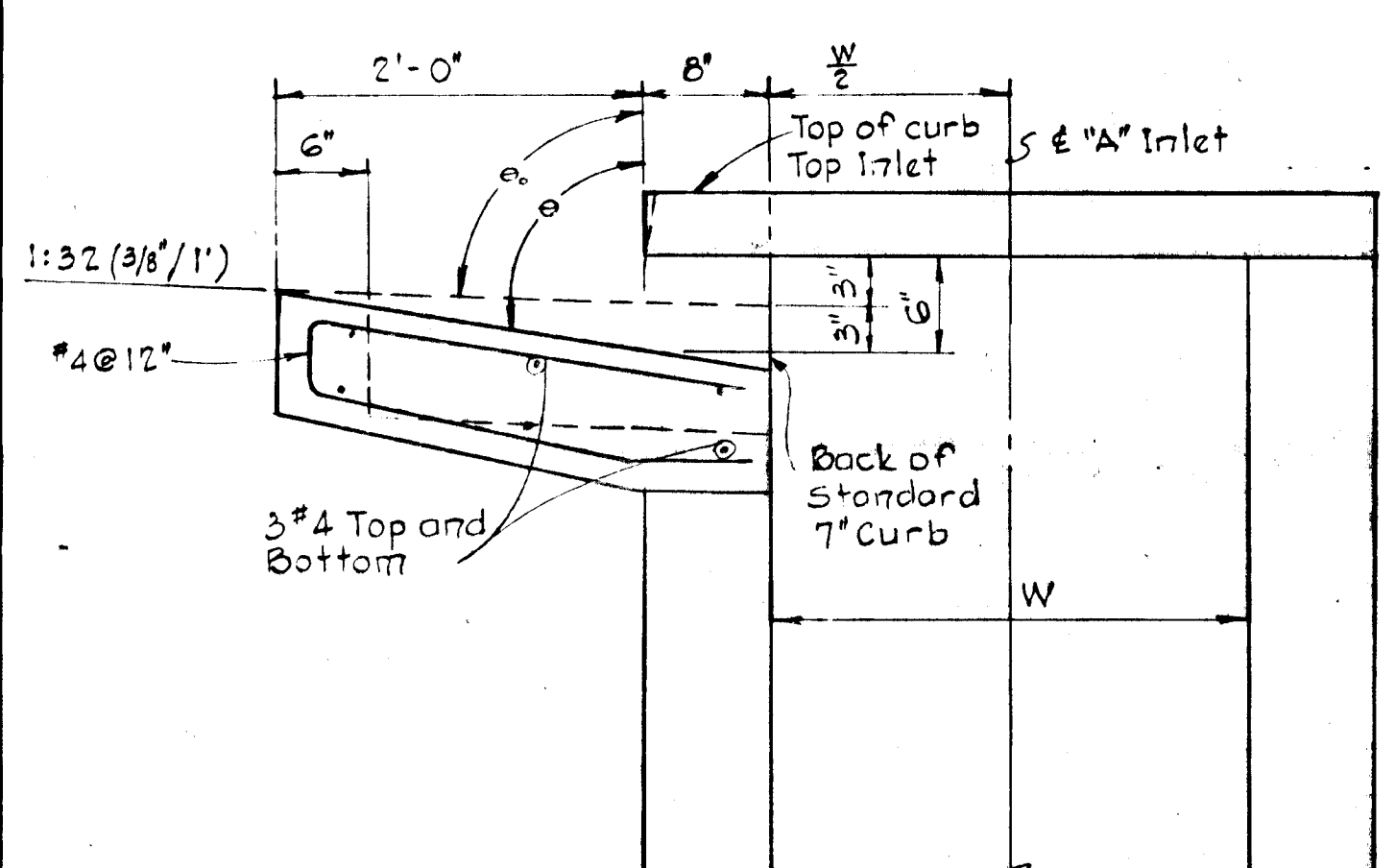
Rev. Date	Rev. No.	Revision Description
DORSEY HALL 6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA SECTION 1 AREA 4		
PROJECT TITLE STORM DRAIN PROFILES		
SCALE: Horiz. 1"=50' Vert. 1"=5' DATE		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		



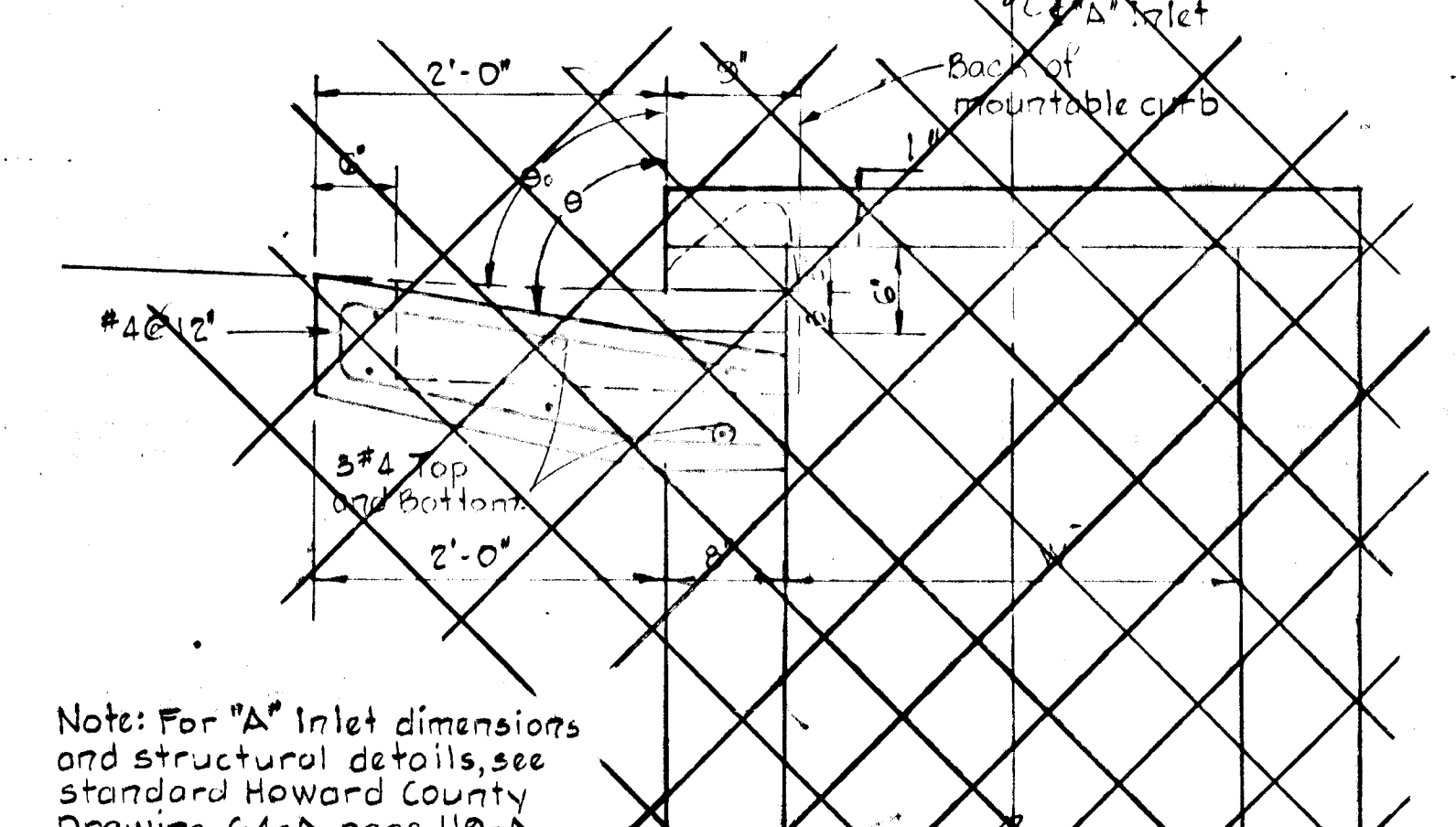
SECTION ALONG FLOW LINE
 SUMPED "A" INLETS - STANDARD CURB



SECTION ALONG FLOW LINE
 "A" INLETS - STANDARD CURB

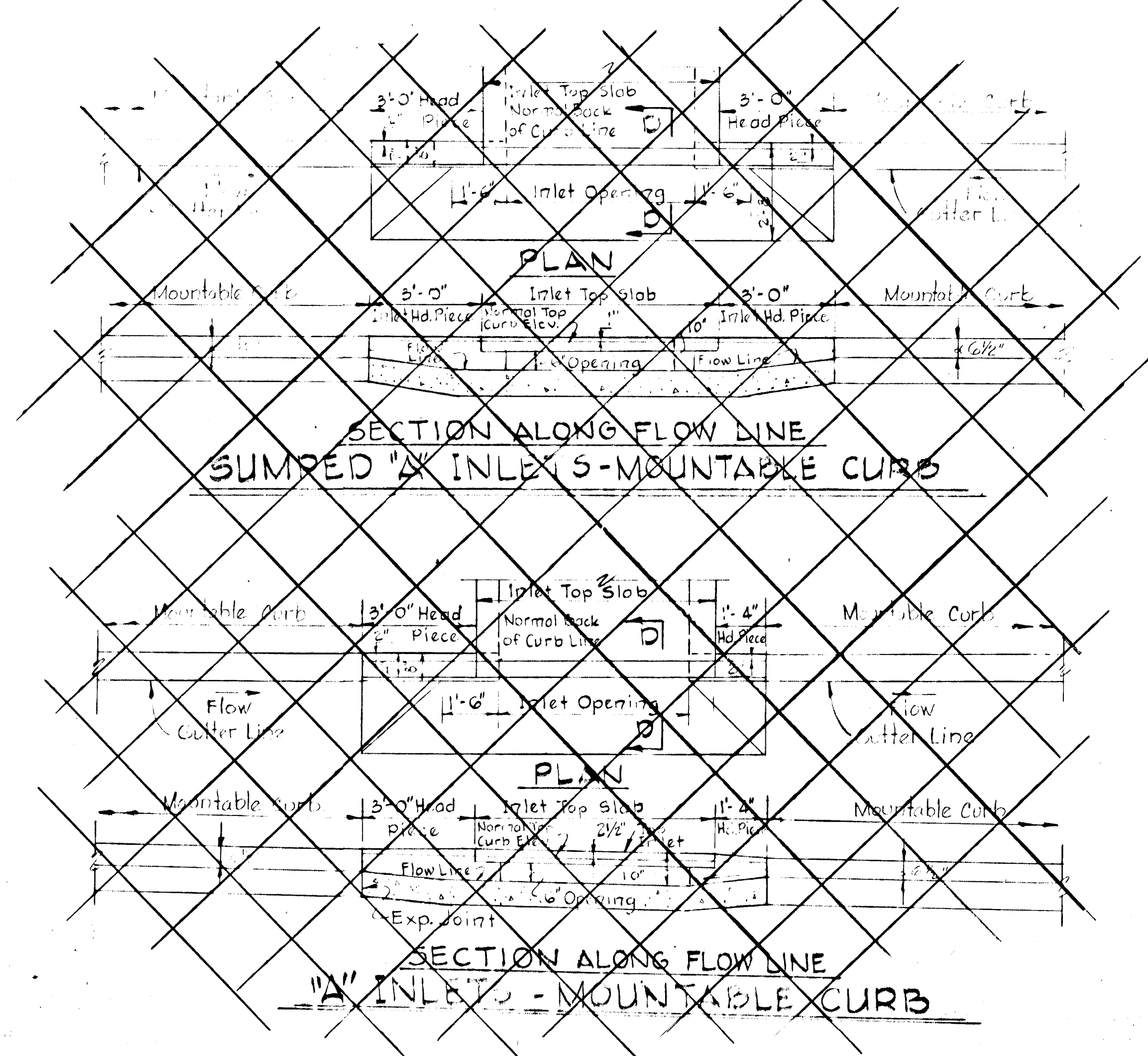


SECTION A-A
 "A" INLET - STANDARD CURB



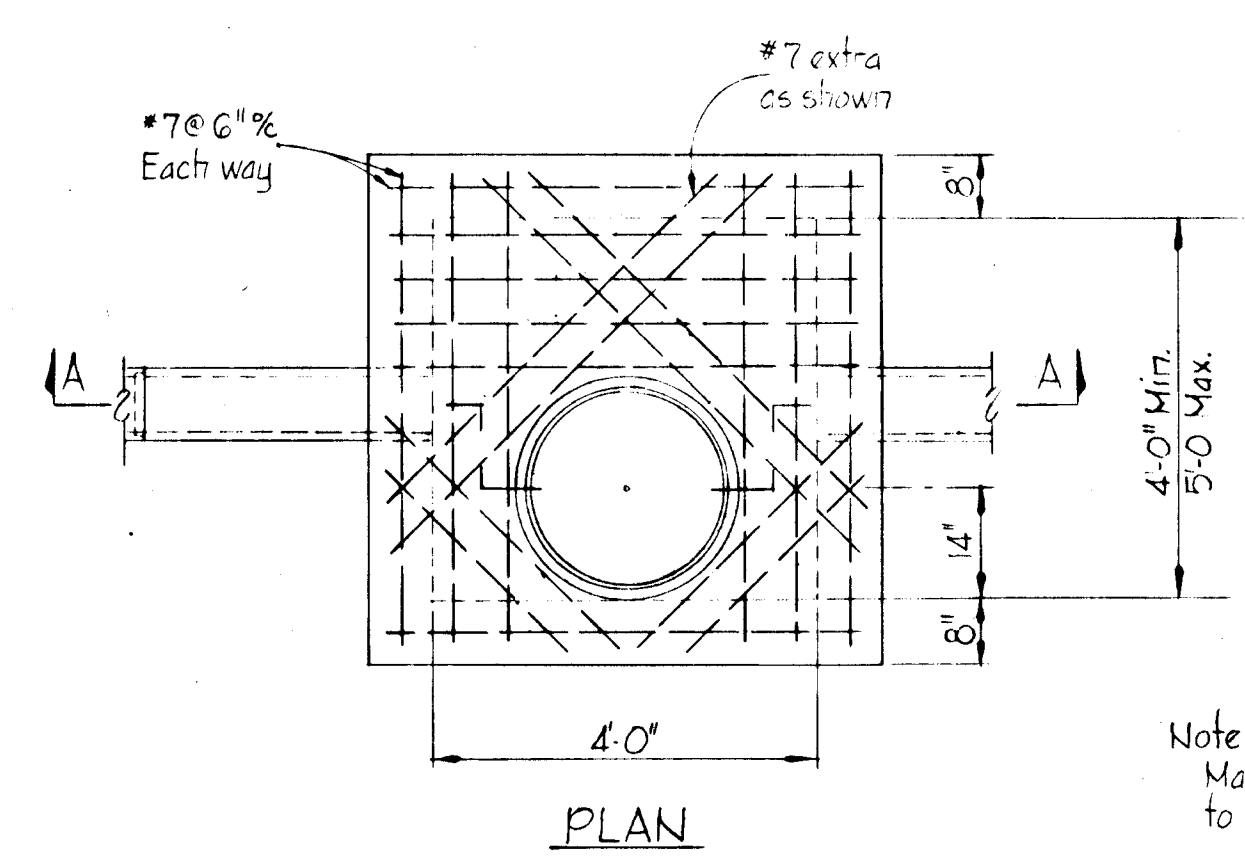
SECTION D-D
 "A" INLET - MOUNTABLE CURB

Note: For "A" Inlet dimensions and structural details, see standard Howard County Drawing G4-A page 110-A

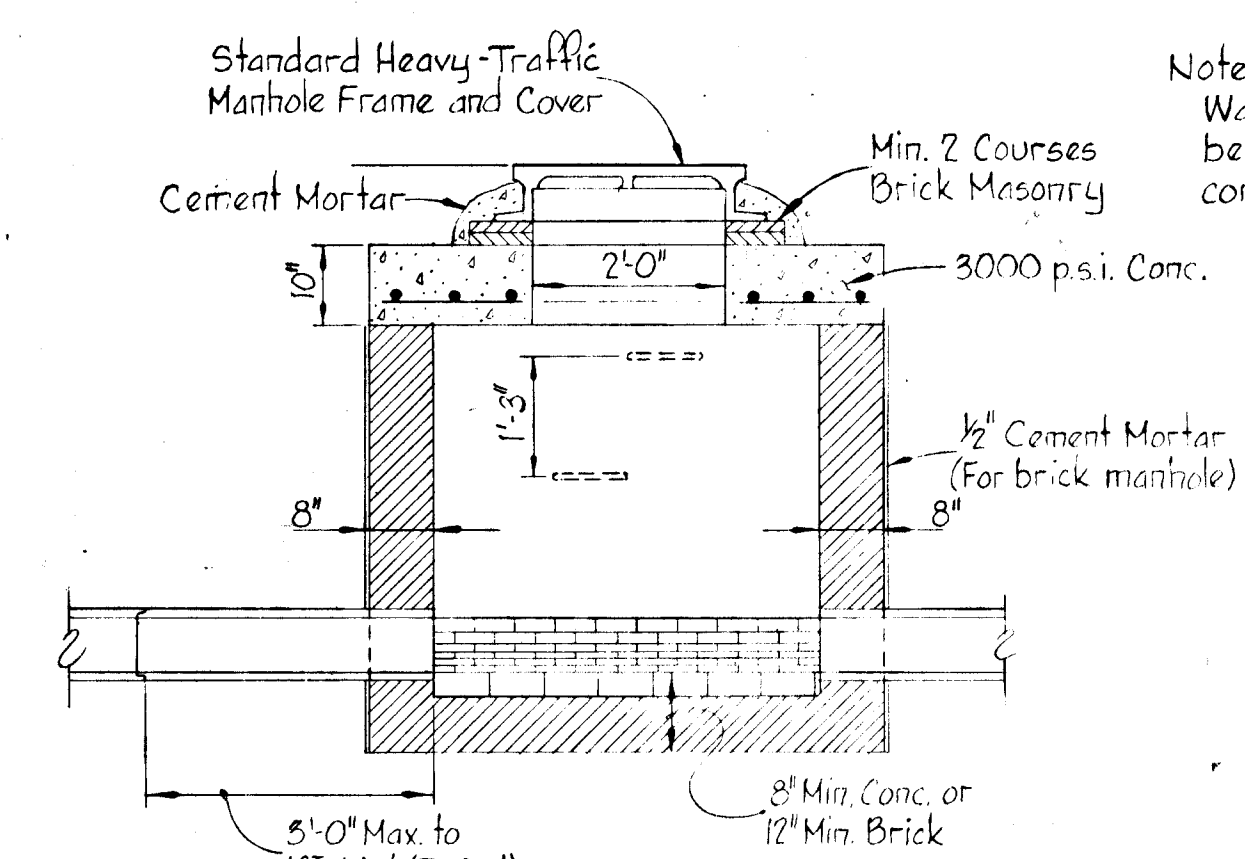


SECTION ALONG FLOW LINE
 SUMPED "A" INLETS - MOUNTABLE CURB

SECTION ALONG FLOW LINE
 "A" INLETS - MOUNTABLE CURB



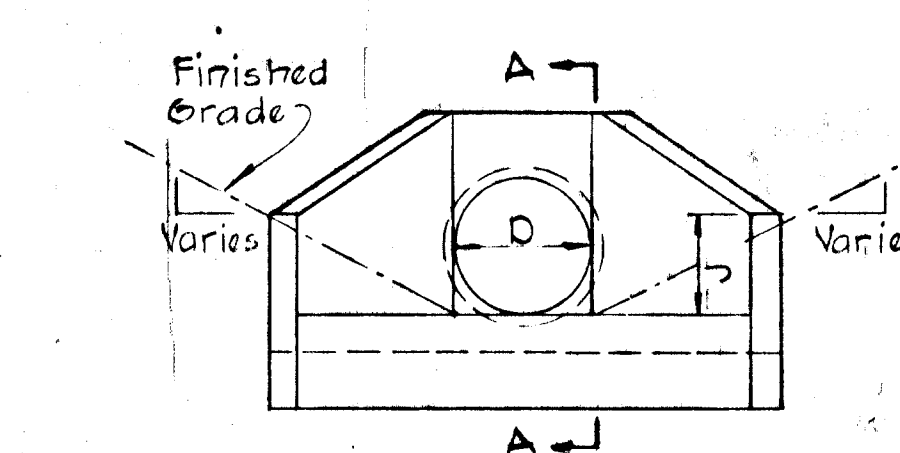
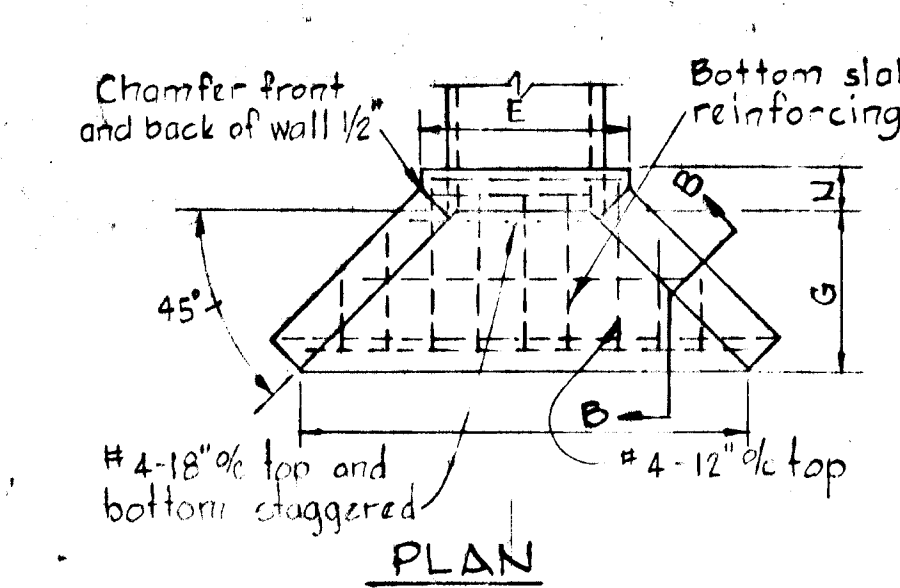
Note: Manhole Frame and Cover to be placed as shown



Note: Walls and bottom shall be Brick or 3000 psi. concrete poured in place

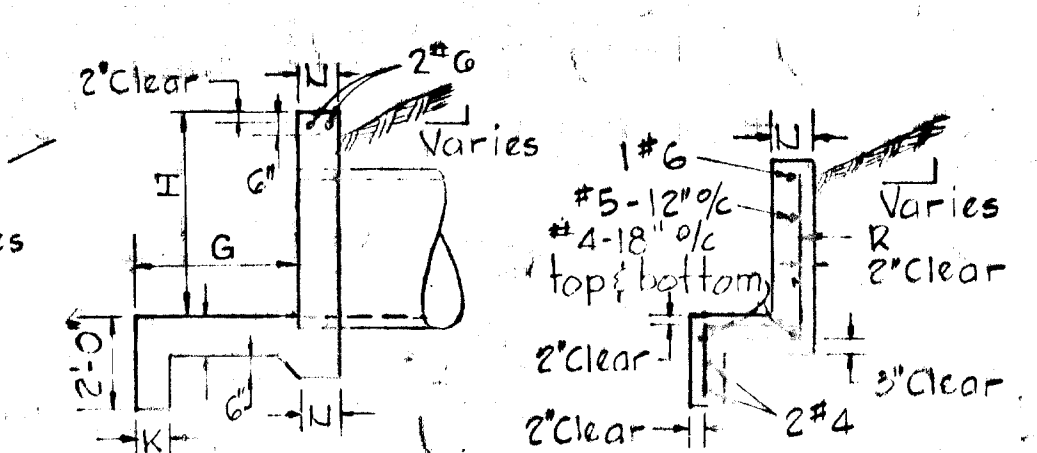
SECTION AA
 TYPE "B" MANHOLE
 No Scale

D	E	F	G	H	J	K	L	N	R
18'	3'-0"	7'-6"	3'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
24'	3'-6"	8'-0"	3'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
27'	3'-10"	8'-6"	3'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
30'	4'-2"	9'-0"	3'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
36'	4'-8"	10'-0"	3'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
42'	5'-3"	11'-6"	4'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
48'	5'-10"	13'-0"	4'-6"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
54'	6'-5"	14'-6"	5'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
60'	7'-0"	16'-0"	5'-6"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
66'	7'-7"	17'-6"	6'-0"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"
72'	8'-2"	19'-0"	6'-6"	3'-0"	2'-0"	8'	6'	8'	5'-12 1/2"



NOTES:
 1. Exposed edges shall be chamfered 1"x1".
 2. All concrete shall be 3000 psi.

DETAIL - TYPE "A" - HEADWALL
 No Scale



SECTION A-A SECTION B-B

Rev. Date	Rev. No.	Revision Description
DORSEY HALL 2 ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. PROJECT AREA SECTION I AREA 4 PROJECT TITLE STORM DRAIN DETAILS SCALE: AS SHOWN DATE: WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202 <i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		