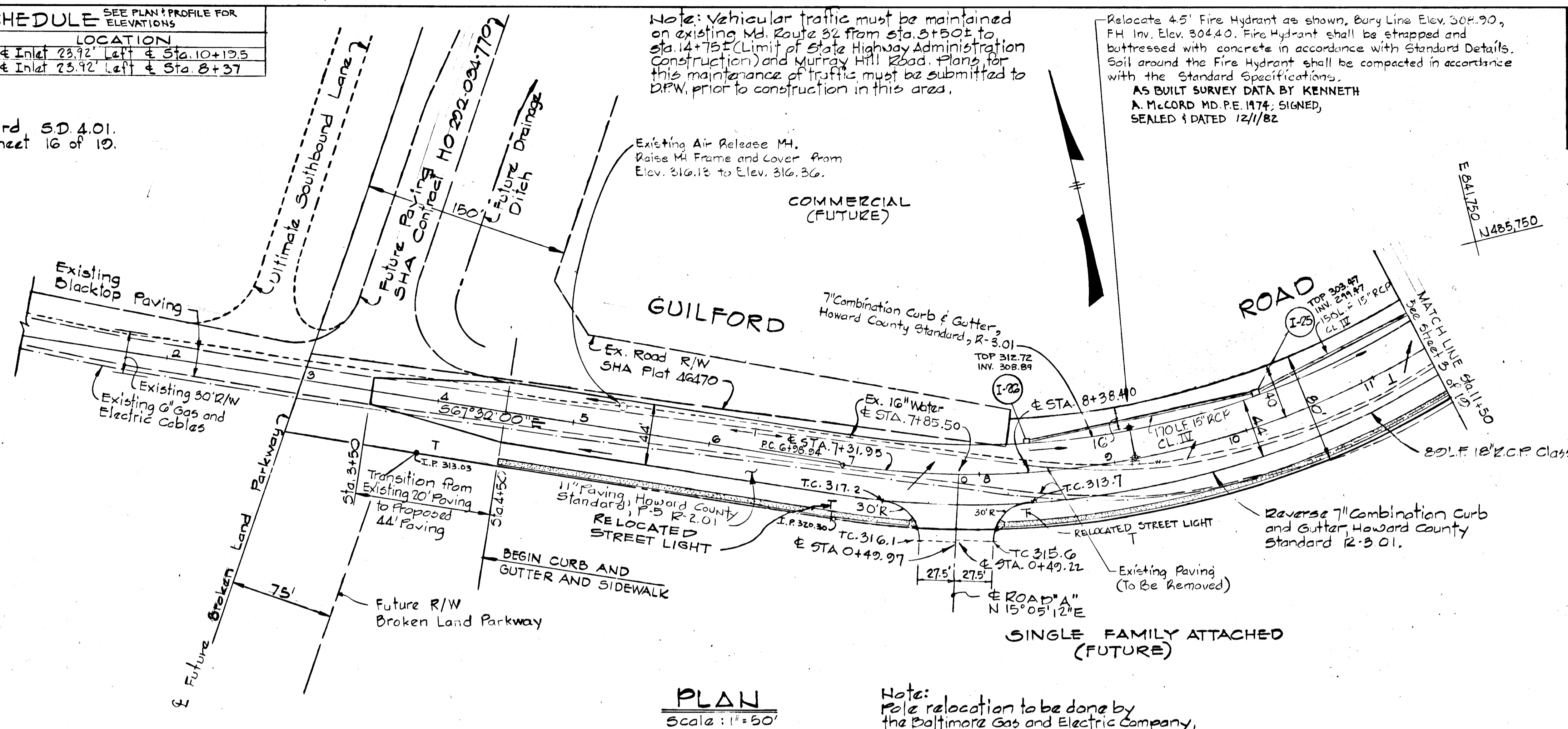


STRUCTURE SCHEDULE					SEE PLAN & PROFILE FOR ELEVATIONS
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
* I-25	Std. A-5 Inlet (width 25)	303.55	299.64	299.44	4' Inlet 23.92' Left of Sta. 10+19.5
* I-26	Std. A-5 Inlet (width 25)	314.62	—	308.30	4' Inlet 23.92' Left of Sta. 8+37

Notes:
 1. A-5 Inlet - Howard County Standard S.D. 4.01.
 2. For Storm Drain Profile, see sheet 16 of 19.

DATE	
BY	
NO.	
REVISIONS	
NO.	
DESCRIPTION	

DATE	
BY	
NO.	
REVISIONS	
NO.	
DESCRIPTION	



PLAN
Scale: 1" = 50'

Note: Pole relocation to be done by the Baltimore Gas and Electric Company.

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

DATE: 4/11/82
 DATE: 4/15/82

CURVE DATA
 PC: 6+28.94 to P.I. 14+10.99 (E Murray Hill Rd.)
 Δ = 63°50'33" Tan = 327.28'
 R = 637.00' Chd = 675.05'
 Arc = 711.45' Brg = N 80°28'10" E

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

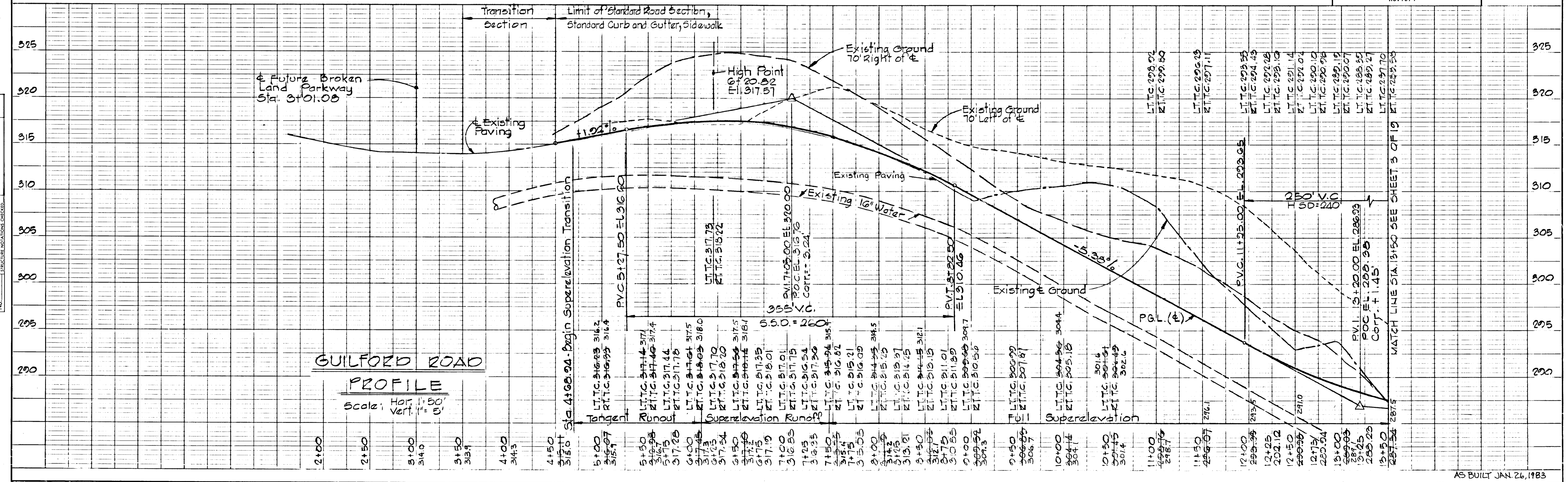
PROJECT AREA:
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1

PROJECT TITLE:
 PLAN AND PROFILE
 GUILFORD ROAD
 STA. 3+50 TO STA. 11+50

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

KENNETH A. MCCORD
 Registered Engineer
 No. 1974



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

AS BUILT JAN. 26, 1983

CURVE DATA

PC 6+98.94 to PI 14+30.39 (MURRAY HILL ROAD)
 A = 63°59'33" Tan = 307.98'
 R = 637.00' Chd = 675.05'
 Arc = 711.45' Brg = N80°28'13"E
 PT 14+10.39 to PT 15+30.78
 A = 10°49'43" Tan = 60.37'
 R = 637.00' Chd = 120.21'
 Arc = 120.30' Brg = N43°03'35"E

NOTE:
 THE DRAINAGE SYSTEMS AND BRIDGE APPROACH PAVEMENT SHOWN WITHIN THE LIMITS OF FILL BY SHA WILL BE CONSTRUCTED UNDER THIS CONTRACT.

CURVE NO. 2 (OUTFALL S-2)

Chd = 51.76' Chd Br. = N67°21'16"W
 Arc. = 52.36' Δ = 30° 0' 0"
 Rad. = 100.00' Tan = 26.79'

DEPARTMENT OF PUBLIC WORKS
Kenneth A. McCord 4/18/82
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
John W. Anderson 4/18/82
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 AND ZONING ADMINISTRATION

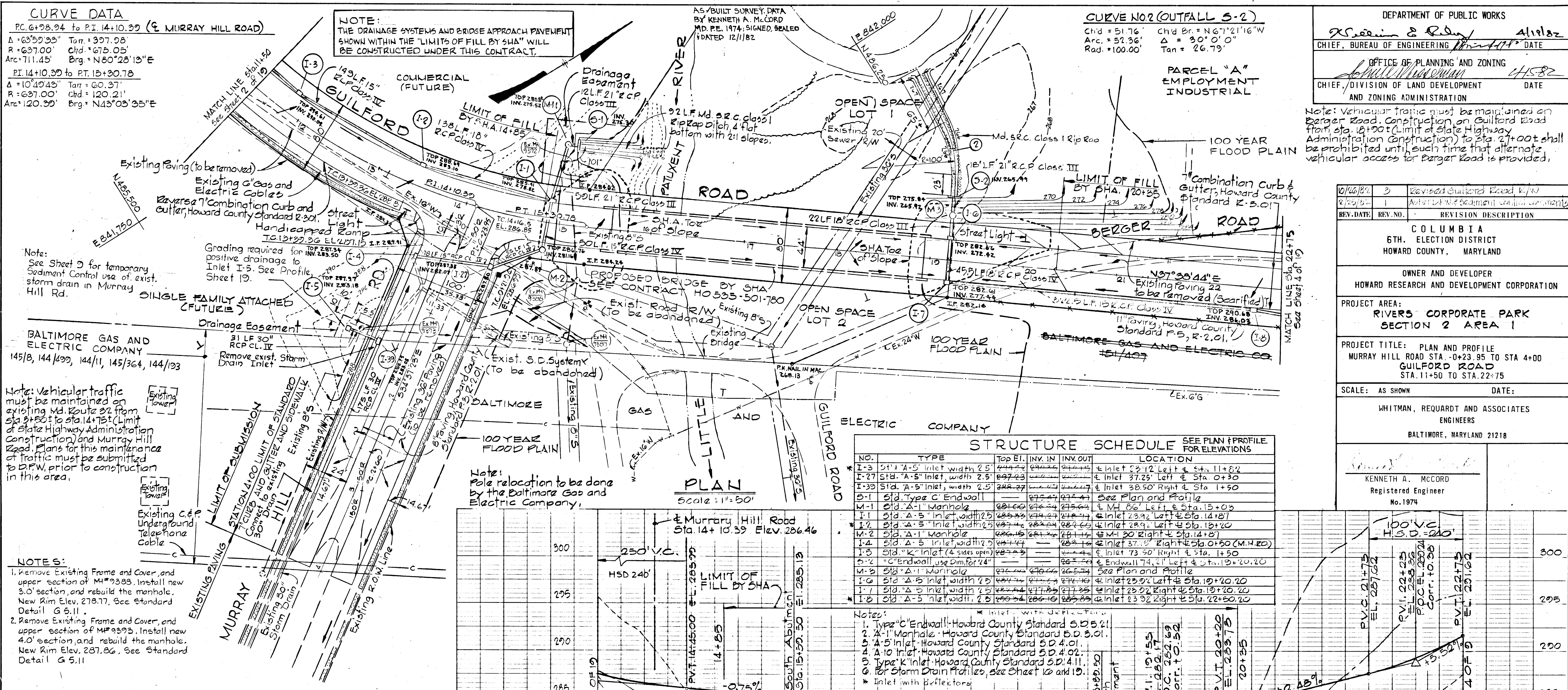
Note: Vehicular traffic must be maintained on Berger Road. Construction on Guilford Road from Sta. 18+00 to (Limit of State Highway Administration Construction) to Sta. 27+00 shall be prohibited until such time that alternate vehicular access for Berger Road is provided.

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/26/82	3	Revised Guilford Road R/W
12/29/82	1	Added 2" R.C.P. manhole and cover

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 PROJECT AREA:
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1
 PROJECT TITLE: PLAN AND PROFILE
 MURRAY HILL ROAD STA. 0+23.95 TO STA 4+00
 GUILFORD ROAD
 STA. 11+50 TO STA. 22+75
 SCALE: AS SHOWN DATE:
 WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

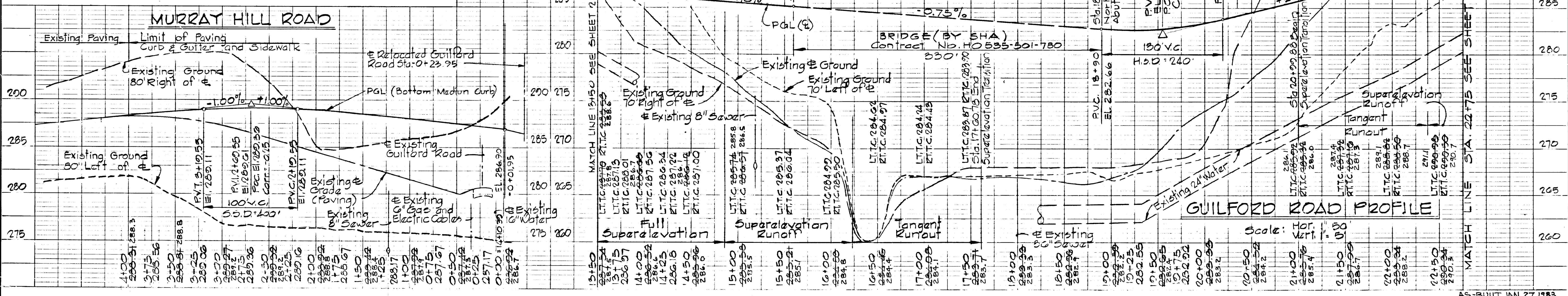
PLAN
 SURVEYED, PLOTTED, CHECKED, AS SHOWN, REVISIONS CHECKED, NOTE BOOK, NO.

PROFILE
 SURVEYED, PLOTTED, GRADE CHECKED, STRUCTURE NOTATIONS CHECKED, NOTE BOOK, NO.



STRUCTURE SCHEDULE SEE PLAN & PROFILE FOR ELEVATIONS

NO.	TYPE	Top El.	INV. IN	INV. OUT	LOCATION
I-3	Std. A-5 Inlet, width 2.5'	284.24	284.24	284.24	Inlet 37.12 Left & Sta. 11+82
I-27	Std. A-5 Inlet, width 2.5'	287.23	287.23	287.23	Inlet 37.25 Left & Sta. 0+30
I-39	Std. A-5 Inlet, width 2.5'	288.27	288.27	288.27	Inlet 38.50 Right & Sta. 1+50
S-1	Std. Type C Endwall	285.27	285.27	285.27	See Plan and Profile
M-1	Std. A-1 Manhole	286.60	286.60	286.60	M-1 80' Left & Sta. 15+00
I-1	Std. A-5 Inlet, width 2.5'	286.60	286.60	286.60	Inlet 23.92 Left & Sta. 14+87
I-2	Std. A-5 Inlet, width 2.5'	287.42	287.42	287.42	Inlet 28.92 Left & Sta. 13+20
M-2	Std. A-1 Manhole	288.14	288.14	288.14	M-2 30 Right & Sta. 14+87
I-4	Std. A-5 Inlet, width 2.5'	288.14	288.14	288.14	Inlet 37.33 Right & Sta. 0+50 (M.H. 20)
I-5	Std. K Inlet (4 sides open)	287.42	287.42	287.42	Inlet 73.50 Right & Sta. 1+50
S-2	Std. C Endwall, use Dim. for 24"	287.42	287.42	287.42	Endwall 74.11 Left & Sta. 19+20.20
M-3	Std. A-1 Manhole	287.42	287.42	287.42	See Plan and Profile
I-6	Std. A-5 Inlet, width 2.5'	287.42	287.42	287.42	Inlet 23.92 Left & Sta. 10+20.20
I-7	Std. A-5 Inlet, width 2.5'	287.42	287.42	287.42	Inlet 23.92 Right & Sta. 10+20.20
I-8	Std. A-5 Inlet, width 2.5'	287.42	287.42	287.42	Inlet 23.92 Right & Sta. 22+50.20



Note: Vehicular traffic must be maintained on Berger Road. Construction of Guilford Road from Sta. 18+30± (Limit of State Highway Administration Construction) to Sta. 27+00± shall be prohibited until such time that alternate vehicular access to Berger Road is provided.

AS-BUILT SURVEY DATA BY KENNETH A. MCCORD PE 1974 SIGNED, SEALED & DATED 12/1/82

No	TYPE	Top El.	INV. IN	INV. OUT	LOCATION
I-2	A-5 Inlet (width 2.5')	299.25	297.77	297.77	23.92' Right of E. Sta. 24+67.5 Guilford Rd
I-24	A-10 Inlet (width 3.5')	302.75	301.75	301.75	24.12' Right of E. Sta. 26+10 Guilford Rd
I-28	A-5 Inlet (width 2.5')	304.00	304.00	304.00	23.92' Right of E. Sta. 26+10 Guilford Rd
I-29	A-5 Inlet (width 2.5')	301.01	300.81	300.81	23.92' Right of E. Sta. 32+97.5 Guilford Rd
I-30	Type K Inlet (width 4.0')	301.15	301.15	301.15	55.58' Left of E. Sta. 32+97.5 Guilford Rd
I-31	A-5 Inlet (width 2.5')	302.73	302.49	302.49	23.92' Right of E. Sta. 35+23.65 Guilford Rd
I-22	A-5 Inlet (width 2.5')	300.69	300.69	300.69	23.92' Right of E. Sta. 35+23.65 Guilford Rd

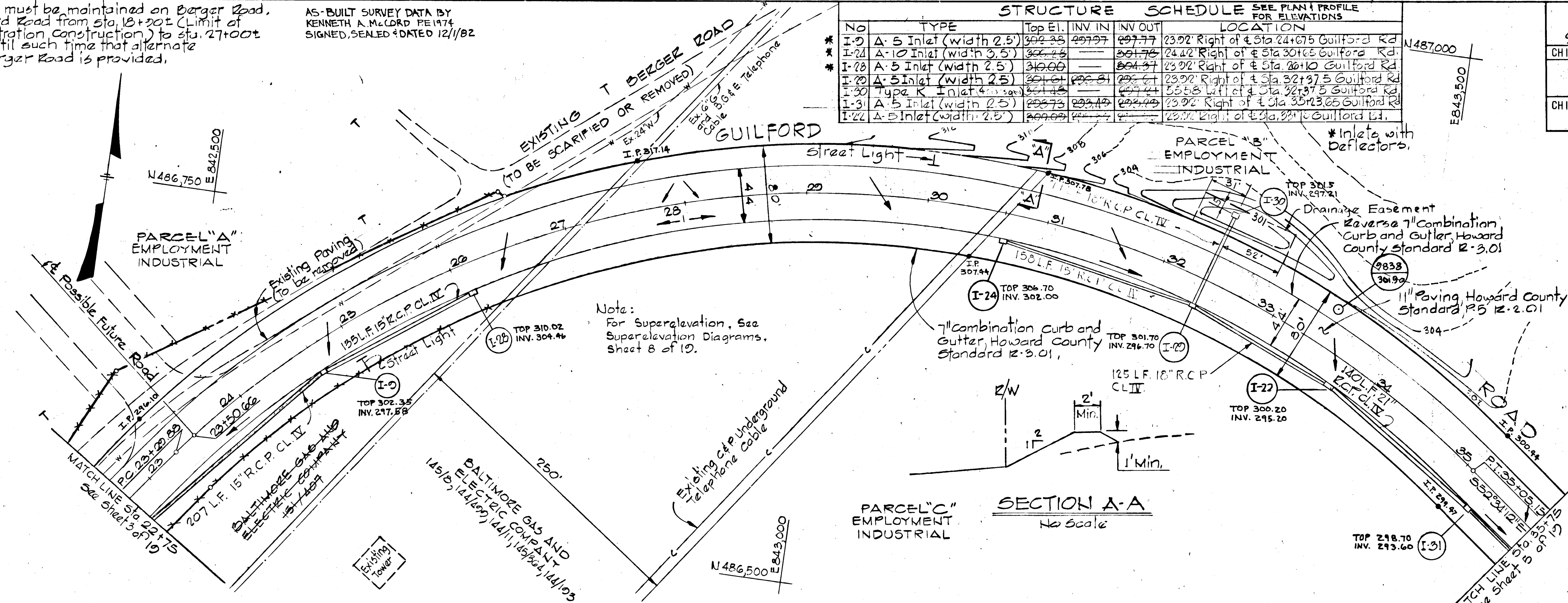
DEPARTMENT OF PUBLIC WORKS
Kenneth A. McCord 4/1/82
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
J. William H/582
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 AND ZONING ADMINISTRATION

CURVE DATA
 P.C. 23+29.83 to P.T. 35+05.15
 $\Delta = 89^\circ 47' 03''$ Tan. = 747.15
 $R = 750.00'$ Chd. = 1058.66'
 $Arc = 1175.27'$ Brg. = $N82^\circ 32' 16'' E$

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/20/82	3	Iron Bridge Road Deleted
07/23/82	2	After field changes by H.K.L.
12/25/82	1	After P.W. & Seaman's final comments

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 PROJECT AREA
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1
 PROJECT TITLE:
 PLAN AND PROFILE
 GUILFORD ROAD
 STA. 22+75 TO STA. 35+75
 SCALE: AS SHOWN DATE
 WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

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

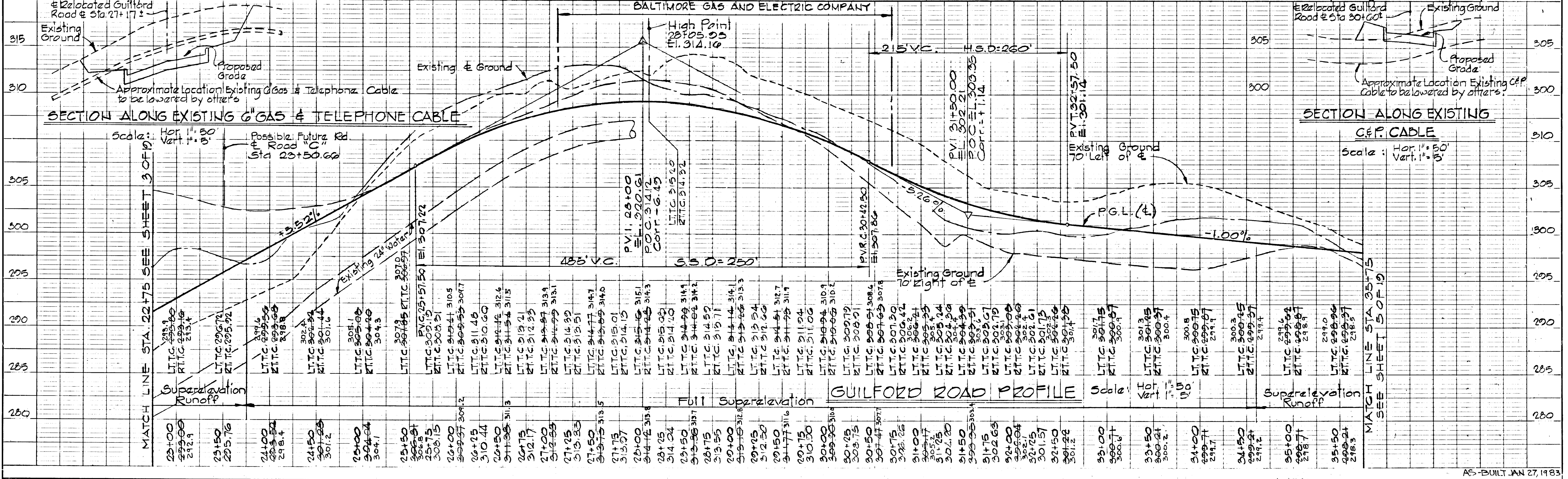


Note:
 For Super-elevation, See Super-elevation Diagrams, Sheet 8 of 10.

SECTION A-A
 No Scale

PLAN
 Scale: 1"=50'

- NOTES:**
1. A-10 Inlet Howard County Standard S.D. 4.02
 2. For Storm Drain Profiles, see sheets 16 & 18 of 19.
 3. A-5 Inlet Howard County Standard S.D. 4.01.
 4. Inlet deflectors Howard County Standard S.D. 4.03.



SECTION ALONG EXISTING 6" GAS & TELEPHONE CABLE
 Scale: Hor. 1"=50' Vert. 1"=5'

SECTION ALONG EXISTING C&P CABLE
 Scale: Hor. 1"=50' Vert. 1"=5'

MATCH LINE STA. 22+75 SEE SHEET 3 OF 19

Station	L.T.T.C.	R.T.T.C.
22+00	299.9	299.0
22+10	299.0	298.1
22+20	298.1	297.2
22+30	297.2	296.3
22+40	296.3	295.4
22+50	295.4	294.5
22+60	294.5	293.6
22+70	293.6	292.7
22+80	292.7	291.8
22+90	291.8	290.9
23+00	290.9	290.0
23+10	290.0	289.1
23+20	289.1	288.2
23+30	288.2	287.3
23+40	287.3	286.4
23+50	286.4	285.5
23+60	285.5	284.6
23+70	284.6	283.7
23+80	283.7	282.8
23+90	282.8	281.9
24+00	281.9	281.0
24+10	281.0	280.1
24+20	280.1	279.2
24+30	279.2	278.3
24+40	278.3	277.4
24+50	277.4	276.5
24+60	276.5	275.6
24+70	275.6	274.7
24+80	274.7	273.8
24+90	273.8	272.9
25+00	272.9	272.0
25+10	272.0	271.1
25+20	271.1	270.2
25+30	270.2	269.3
25+40	269.3	268.4
25+50	268.4	267.5
25+60	267.5	266.6
25+70	266.6	265.7
25+80	265.7	264.8
25+90	264.8	263.9
26+00	263.9	263.0
26+10	263.0	262.1
26+20	262.1	261.2
26+30	261.2	260.3
26+40	260.3	259.4
26+50	259.4	258.5
26+60	258.5	257.6
26+70	257.6	256.7
26+80	256.7	255.8
26+90	255.8	254.9
27+00	254.9	254.0
27+10	254.0	253.1
27+20	253.1	252.2
27+30	252.2	251.3
27+40	251.3	250.4
27+50	250.4	249.5
27+60	249.5	248.6
27+70	248.6	247.7
27+80	247.7	246.8
27+90	246.8	245.9
28+00	245.9	245.0
28+10	245.0	244.1
28+20	244.1	243.2
28+30	243.2	242.3
28+40	242.3	241.4
28+50	241.4	240.5
28+60	240.5	239.6
28+70	239.6	238.7
28+80	238.7	237.8
28+90	237.8	236.9
29+00	236.9	236.0
29+10	236.0	235.1
29+20	235.1	234.2
29+30	234.2	233.3
29+40	233.3	232.4
29+50	232.4	231.5
29+60	231.5	230.6
29+70	230.6	229.7
29+80	229.7	228.8
29+90	228.8	227.9
30+00	227.9	227.0
30+10	227.0	226.1
30+20	226.1	225.2
30+30	225.2	224.3
30+40	224.3	223.4
30+50	223.4	222.5
30+60	222.5	221.6
30+70	221.6	220.7
30+80	220.7	219.8
30+90	219.8	218.9
31+00	218.9	218.0
31+10	218.0	217.1
31+20	217.1	216.2
31+30	216.2	215.3
31+40	215.3	214.4
31+50	214.4	213.5
31+60	213.5	212.6
31+70	212.6	211.7
31+80	211.7	210.8
31+90	210.8	209.9
32+00	209.9	209.0
32+10	209.0	208.1
32+20	208.1	207.2
32+30	207.2	206.3
32+40	206.3	205.4
32+50	205.4	204.5
32+60	204.5	203.6
32+70	203.6	202.7
32+80	202.7	201.8
32+90	201.8	200.9
33+00	200.9	200.0
33+10	200.0	199.1
33+20	199.1	198.2
33+30	198.2	197.3
33+40	197.3	196.4
33+50	196.4	195.5
33+60	195.5	194.6
33+70	194.6	193.7
33+80	193.7	192.8
33+90	192.8	191.9
34+00	191.9	191.0
34+10	191.0	190.1
34+20	190.1	189.2
34+30	189.2	188.3
34+40	188.3	187.4
34+50	187.4	186.5
34+60	186.5	185.6
34+70	185.6	184.7
34+80	184.7	183.8
34+90	183.8	182.9
35+00	182.9	182.0
35+10	182.0	181.1
35+20	181.1	180.2
35+30	180.2	179.3
35+40	179.3	178.4
35+50	178.4	177.5
35+60	177.5	176.6
35+70	176.6	175.7
35+80	175.7	174.8
35+90	174.8	173.9
36+00	173.9	173.0

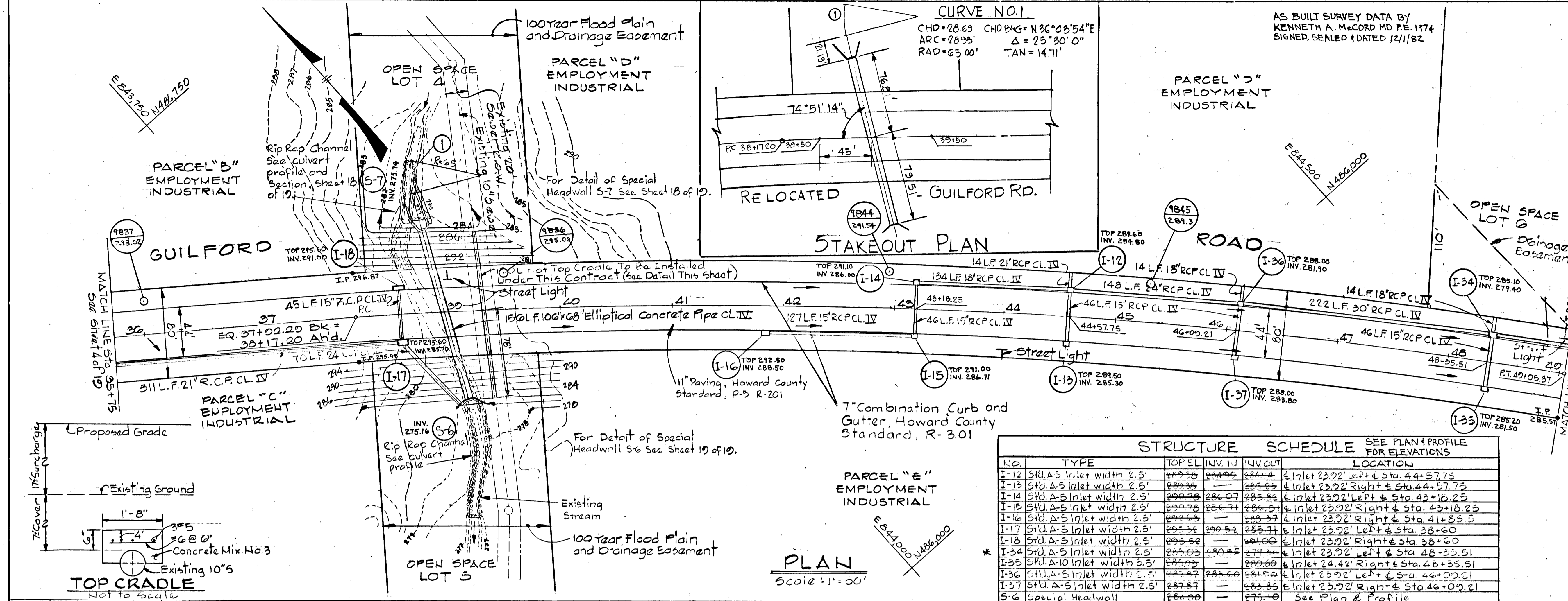
MATCH LINE STA. 35+75 SEE SHEET 5 OF 19

Station	L.T.T.C.	R.T.T.C.
35+00	301.5	300.6
35+10	300.6	299.7
35+20	299.7	298.8
35+30	298.8	297.9
35+40	297.9	297.0
35+50	297.0	296.1
35+60	296.1	295.2
35+70	295.2	294.3
35+80	294.3	293.4
35+90	293.4	292.5
36+00	292.5	291.6
36+10	291.6	290.7
36+20	290.7	289.8
36+30	289.8	288.9
36+40	288.9	288.0
36+50	288.0	287.1
36+60	287.1	286.2
36+70	286.2	285.3
36+80	285.3	284.4
36+90	284.4	283.5
37+00	283.5	282.6
37+10	282.6	281.7
37+20	281.7	280.8
37+30	280.8	279.9
37+40	279.9	279.0
37+50	279.0	278.1
37+60	278.1	277.2
37+70	277.2	276.3
37+80	276.3	275.4
37+90	275.4	274.5
38+00	274.5	273.6
38+10	273.6	272.7
38+20	272.7	271.8
38+30	271.8	270.9
38+40	270.9	270.0
38+50	270.0	269.1
38+60	269.1	268.2
38+70	268.2	267.3
38+80	267.3	266.4
38+90	266.4	265.5
39+00	265.5	264.6
39+10	264.6	263.7
39+20	263.7	262.8
39+30	262.8	261.9
39+40	261.9	261.0
39+50	261.0	260.1
39+60	260.1	259.2
39+70	259.2	258.3
39+80	258.3	257.4
39+90	257.4	256.5
40+00	256.5	255.6

CURVE DATA

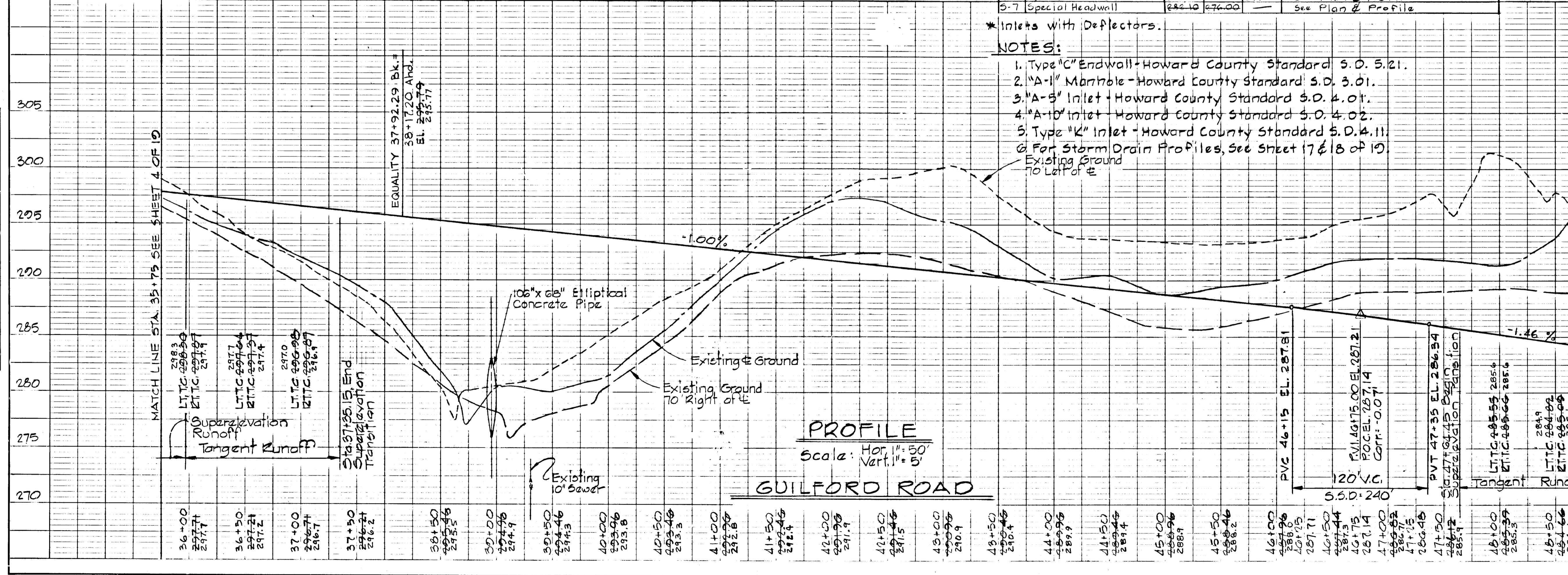
PC 38+17.20	to	PT. 49+05.37
$\Delta = 13^{\circ}33'14"$	Tan =	546.64'
R = 4600.00'	Chd. =	1085.65'
Arc = 1088.17'	Brg. =	545^{\circ}47'36"E

0/02/82	1	As Per field changes by H.K.P.
REV. DATE	REV. NO.	REVISION DESCRIPTION
COLUMBIA 6TH. ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: RIVERS CORPORATE PARK SECTION 2 AREA 1		
PROJECT TITLE: PLAN AND PROFILE GUILFORD ROAD STA. 35+75 TO STA. 49+05.37		
SCALE: AS SHOWN	DATE:	
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		



STRUCTURE SCHEDULE SEE PLAN & PROFILE FOR ELEVATIONS

NO.	TYPE	TOP EL	INV. IN	INV. OUT	LOCATION
I-12	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Left & Sta. 44+57.75
I-13	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Right & Sta. 44+57.75
I-14	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Left & Sta. 42+18.25
I-15	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Right & Sta. 42+18.25
I-16	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Left & Sta. 41+85.5
I-17	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Right & Sta. 38+60
I-18	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Right & Sta. 38+60
I-34	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Left & Sta. 48+35.51
I-35	Std. A-10 Inlet width 3.5'	288.20	288.20	288.20	Inlet 24.42' Right & Sta. 48+35.51
I-36	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Left & Sta. 46+09.21
I-37	Std. A-5 Inlet width 2.5'	288.20	288.20	288.20	Inlet 23.22' Right & Sta. 46+09.21
S-6	Special Headwall	288.20	288.20	288.20	See Plan & Profile
S-7	Special Headwall	288.20	288.20	288.20	See Plan & Profile



- * Inlets with Deflectors.
- NOTES:**
1. Type "C" Endwall - Howard County Standard S.D. 5.21.
 2. "A-1" Manhole - Howard County Standard S.D. 3.01.
 3. "A-5" Inlet - Howard County Standard S.D. 4.01.
 4. "A-10" Inlet - Howard County Standard S.D. 4.02.
 5. Type "K" Inlet - Howard County Standard S.D. 4.11.
 6. For Storm Drain Profiles, see sheet 17 & 18 of 19.

PLAN
 SURVEYED, PLANNED, ENGINEERED, CHECKED, & NOTED BY: [Blank]
 DATE: [Blank]

PROFILE
 SURVEYED, PLANNED, ENGINEERED, CHECKED, & NOTED BY: [Blank]
 DATE: [Blank]

DEPARTMENT OF PUBLIC WORKS
William R. Reilly 4/11/82
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
Kenneth A. McCord 4-15-82
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 AND ZONING ADMINISTRATION

10/20/82	3	Iron Bridge Road Deleted
2/25/82	1	As Per D.P.W. & Sediment Control Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

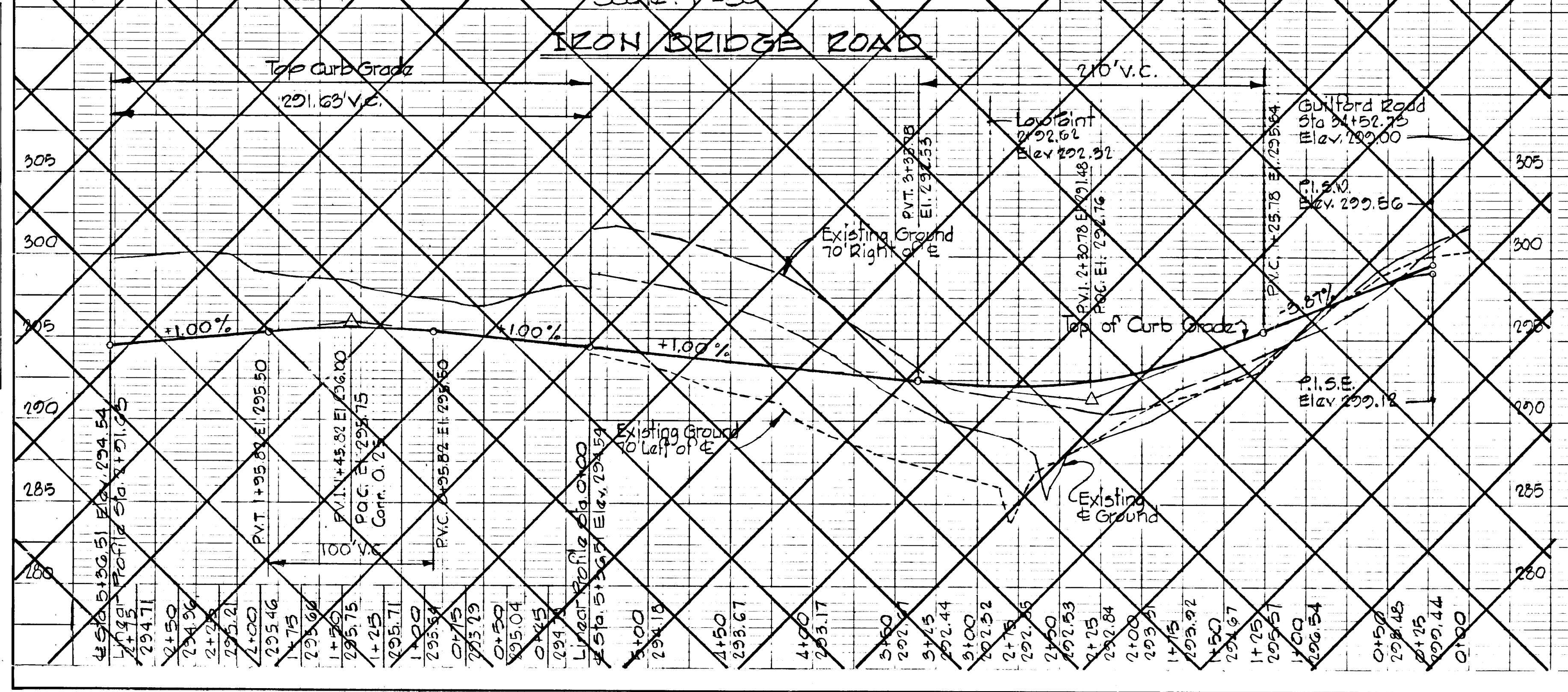
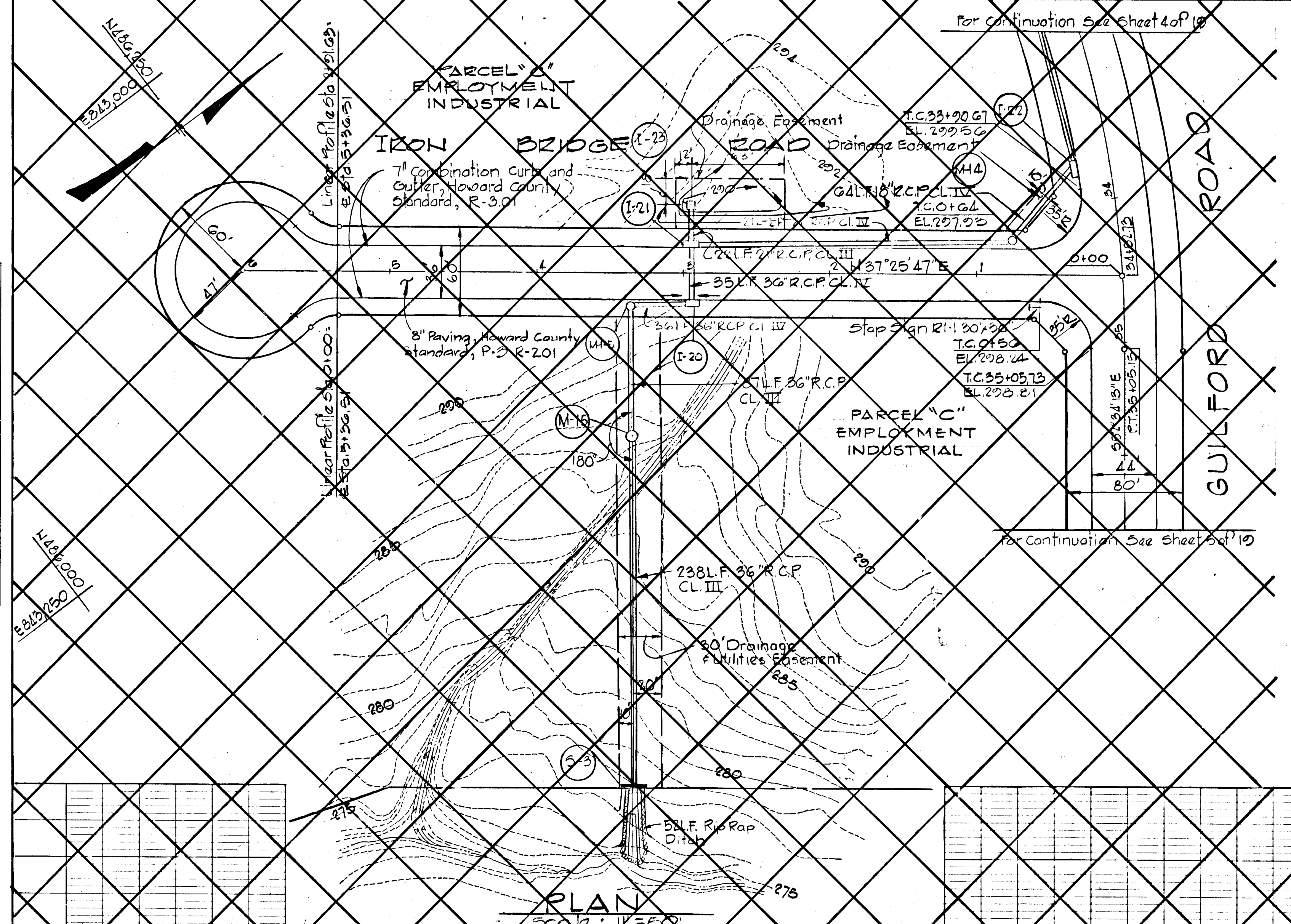
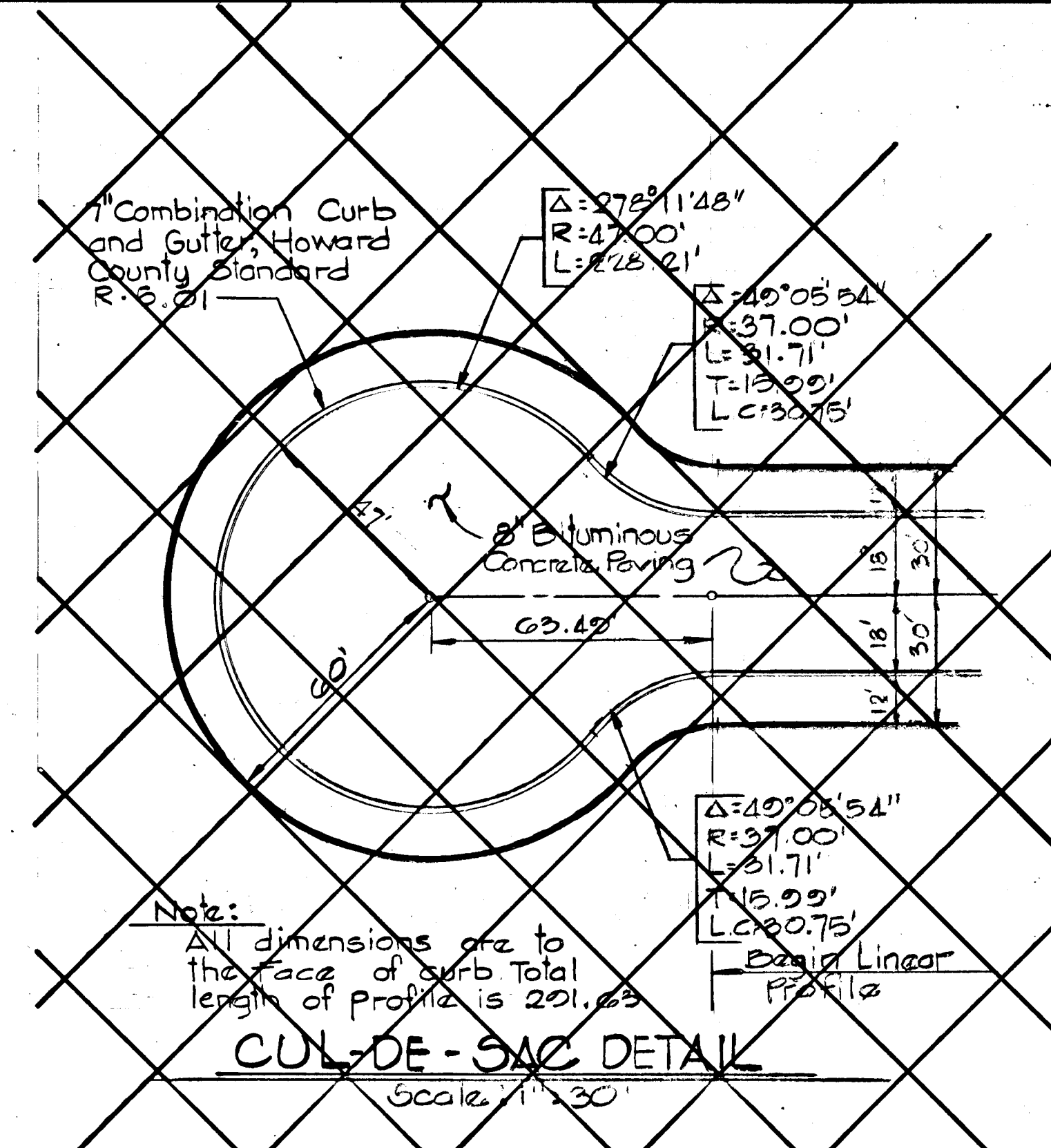
PROJECT AREA:
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1

PROJECT TITLE:
 PLAN AND PROFILE
 AND DETAILS
 IRON BRIDGE ROAD

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21213

Kenneth A. McCord
 KENNETH A. MCCORD
 REGISTERED ENGINEER
 NO. 1974

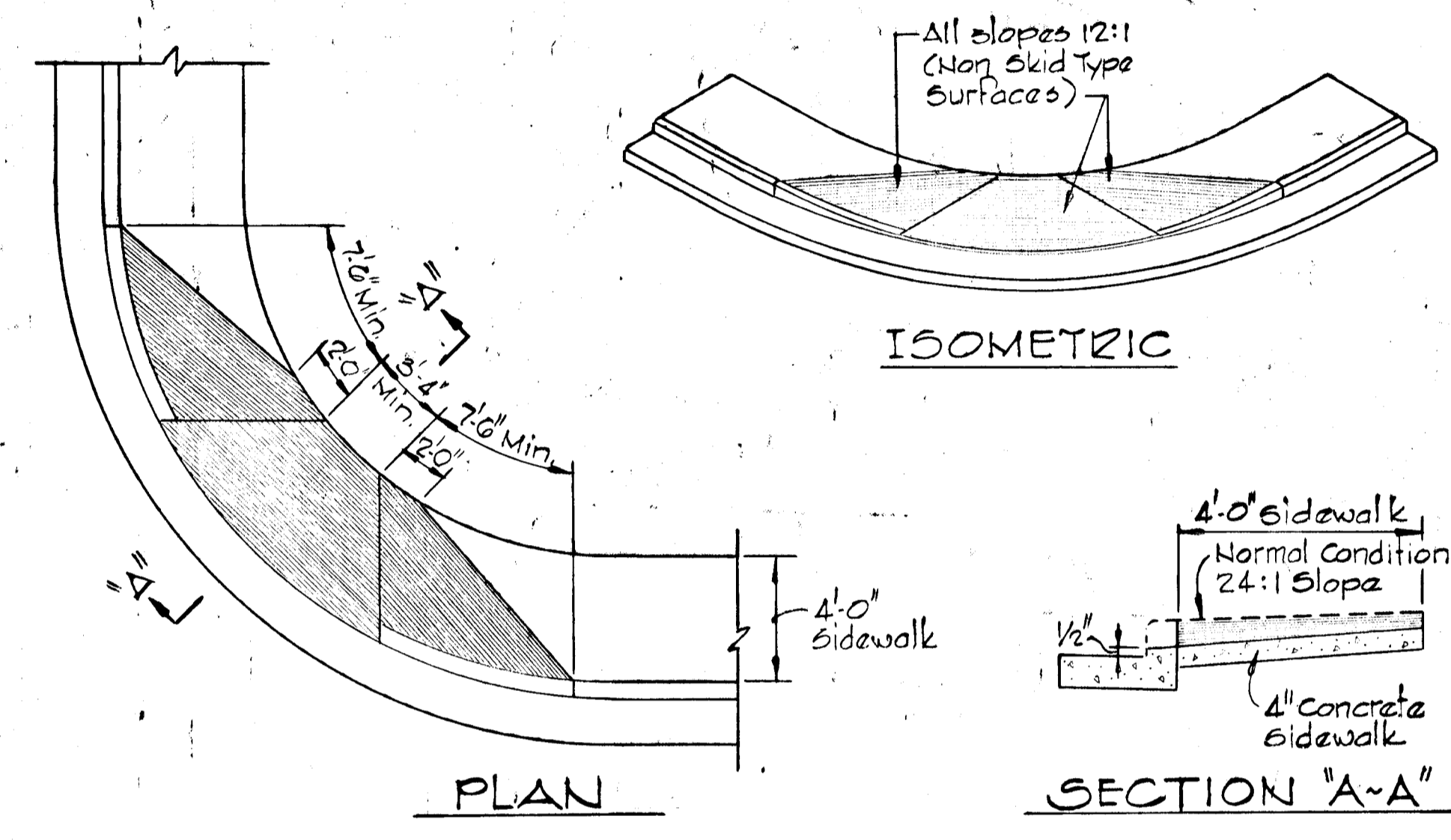
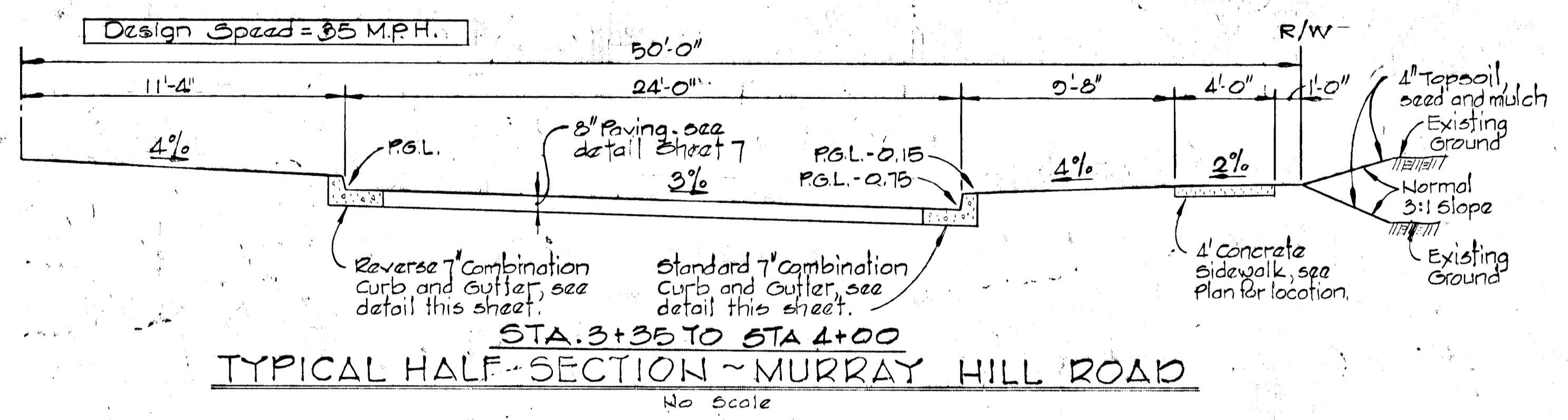
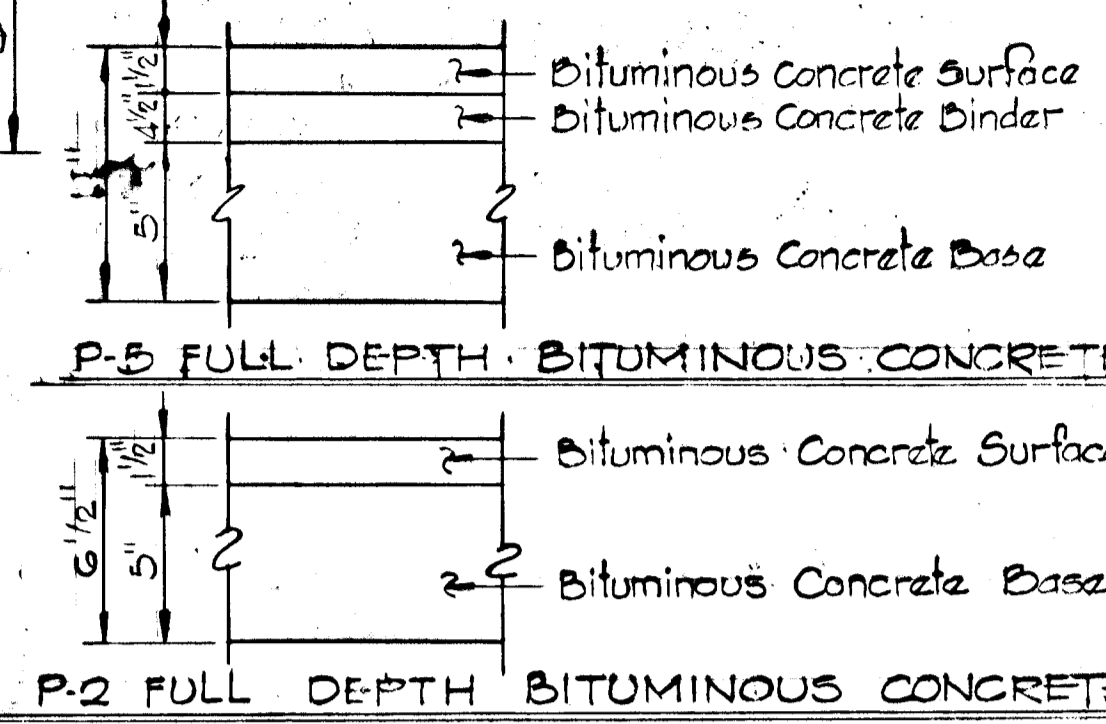
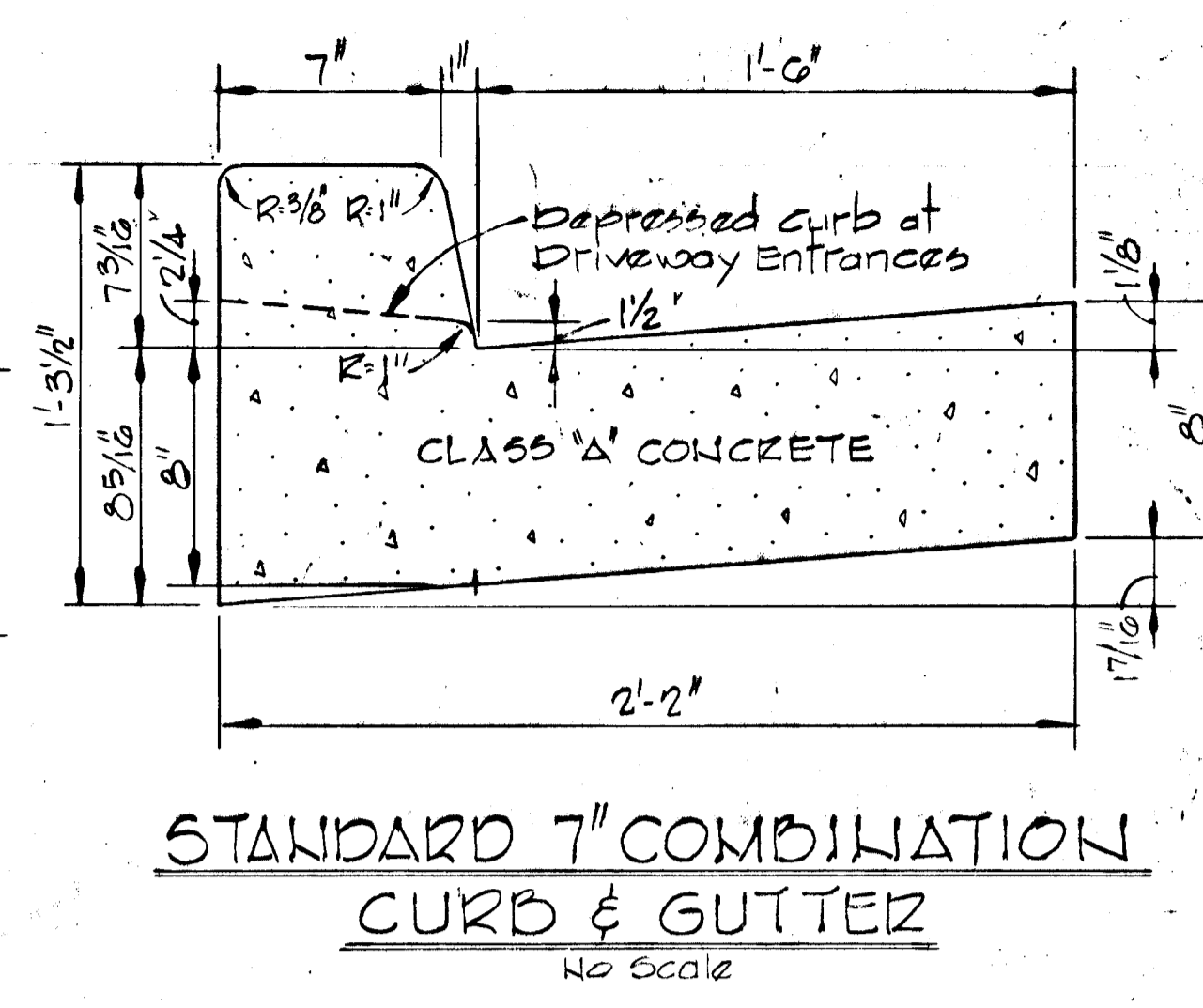
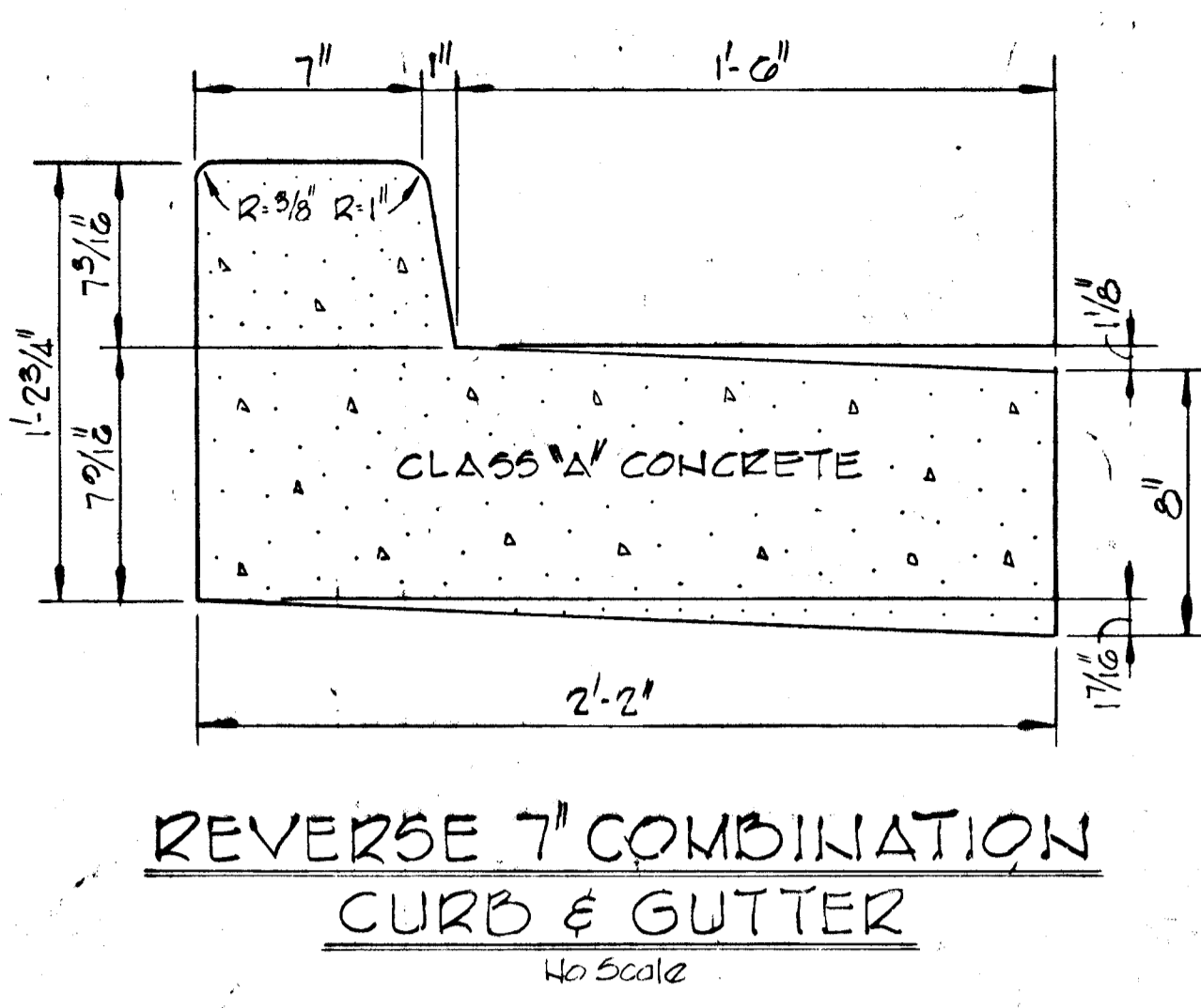
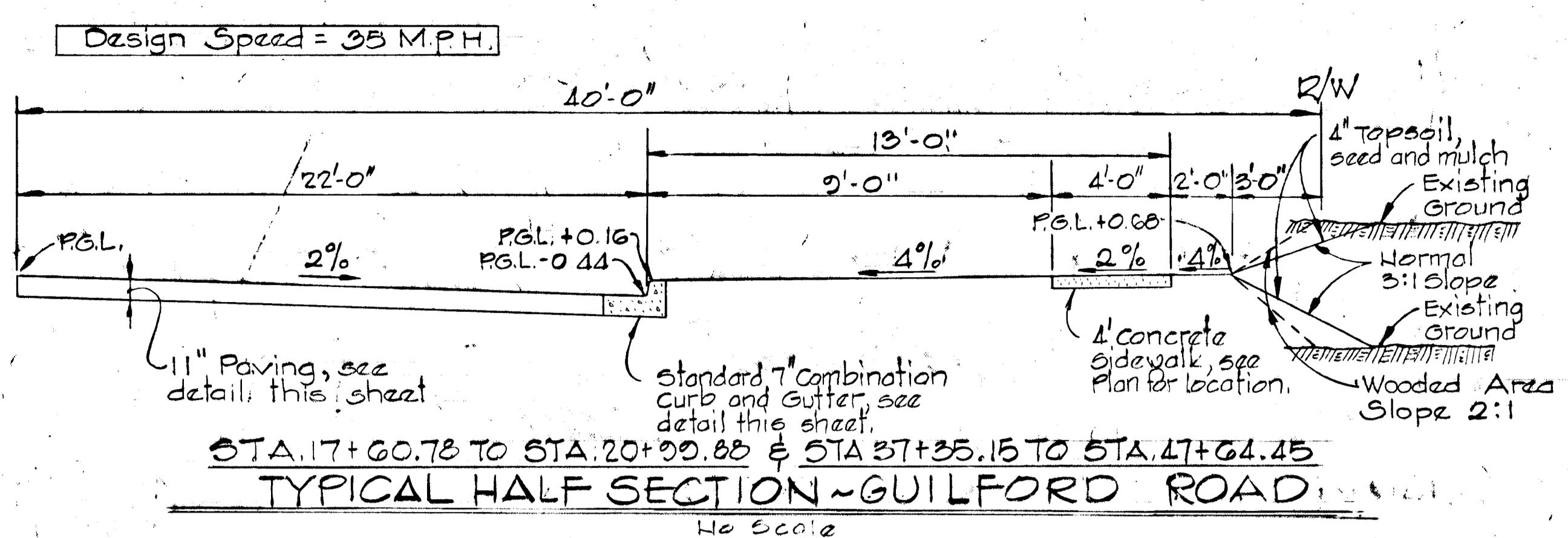


NO.	TYPE	Top El.	Inv. In	Inv. Out	LOCATION
I-20	A-10 Inlet (width 35)	292.32	284.33	283.68	20.22' Lt. of E. Sta. 2+02.66
I-21	A-10 Inlet (width 35)	292.32	286.41	284.51	20.42' Rt. of E. Sta. 2+02.66
I-22	A-5 Inlet (width 25)	300.03	285.30	285.10	23.92' Rt. of E. Sta. 33+78
A-23	Type 'K' Inlet (see spec)	290.23	-	288.62	See Plan and Profile
M-18	Standard Manhole	297.50	291.77	291.32	22.00' Rt. of E. Sta. 0+75
M-19	Standard Manhole	292.17	289.49	288.29	24.00' Lt. of E. Sta. 3+35
6-3	Std Type 'C' Headwall	277.80	-	274.21	See Plan and Profile

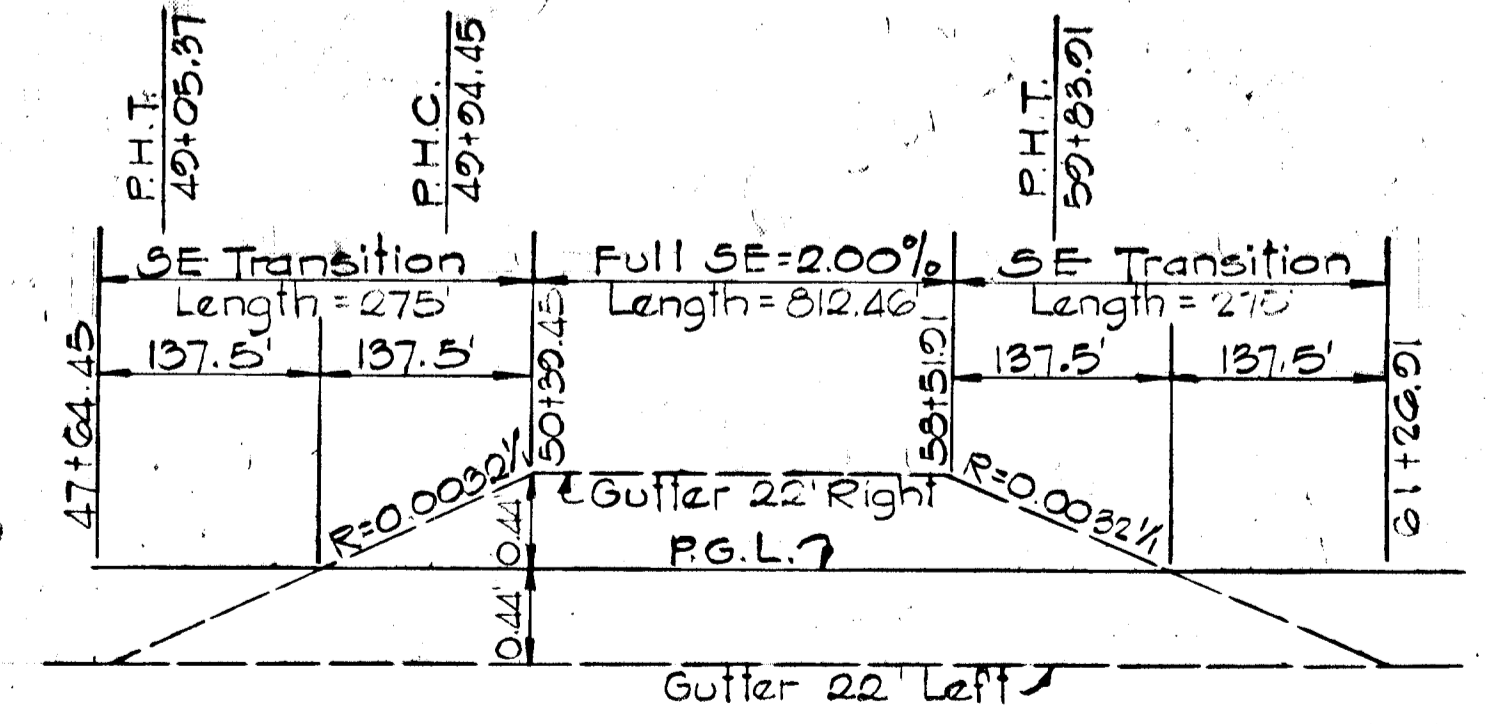
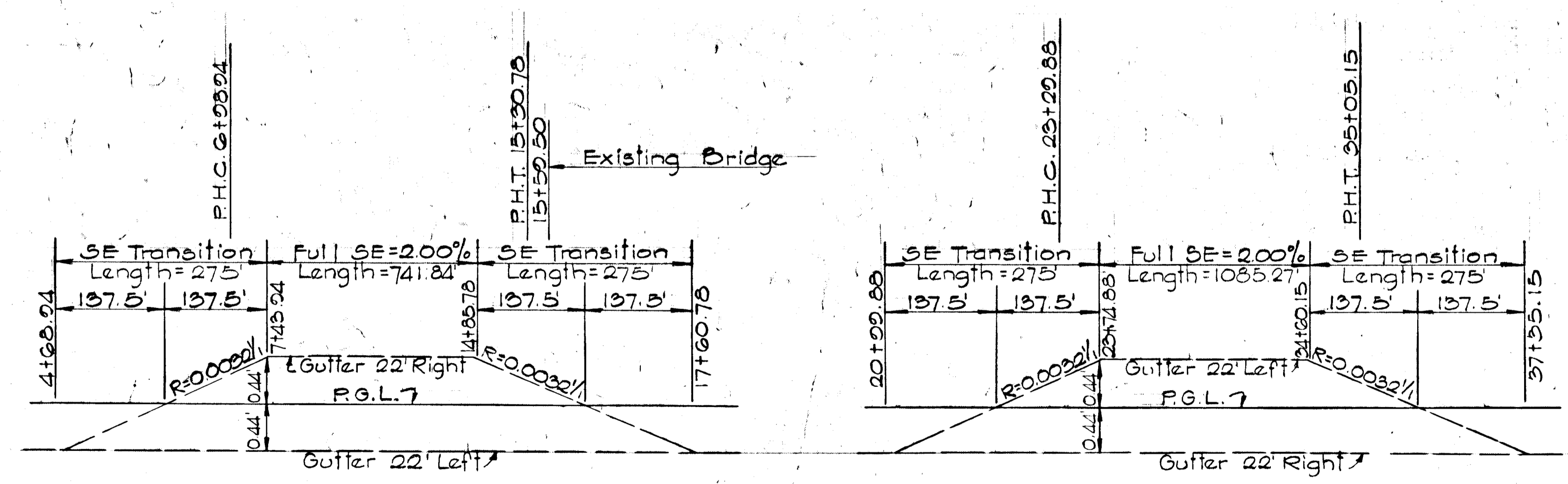
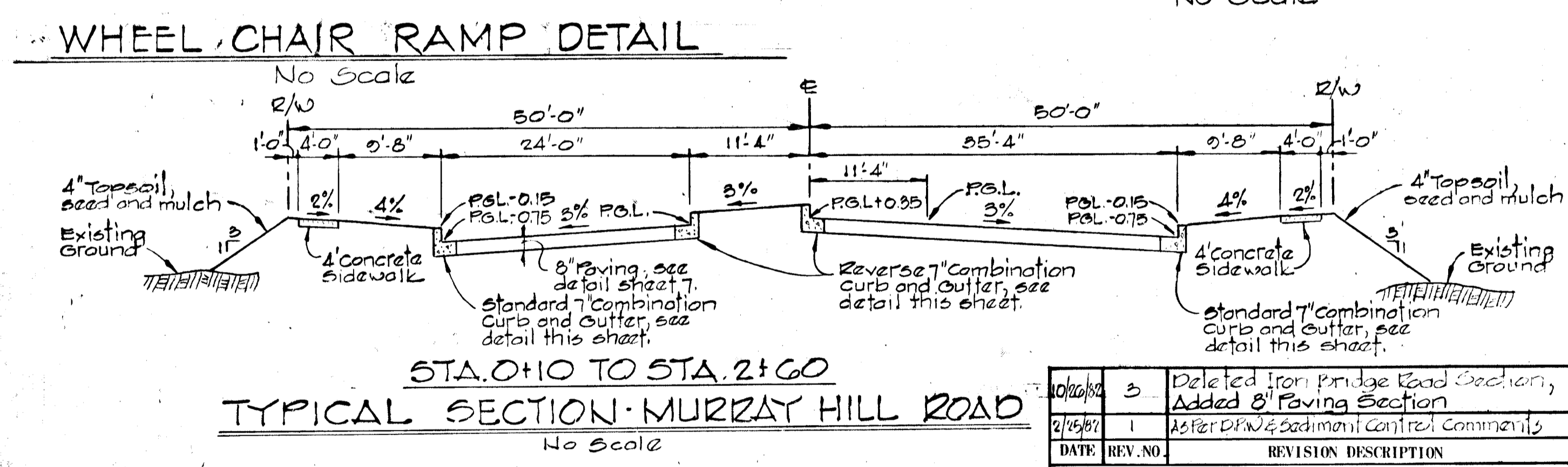
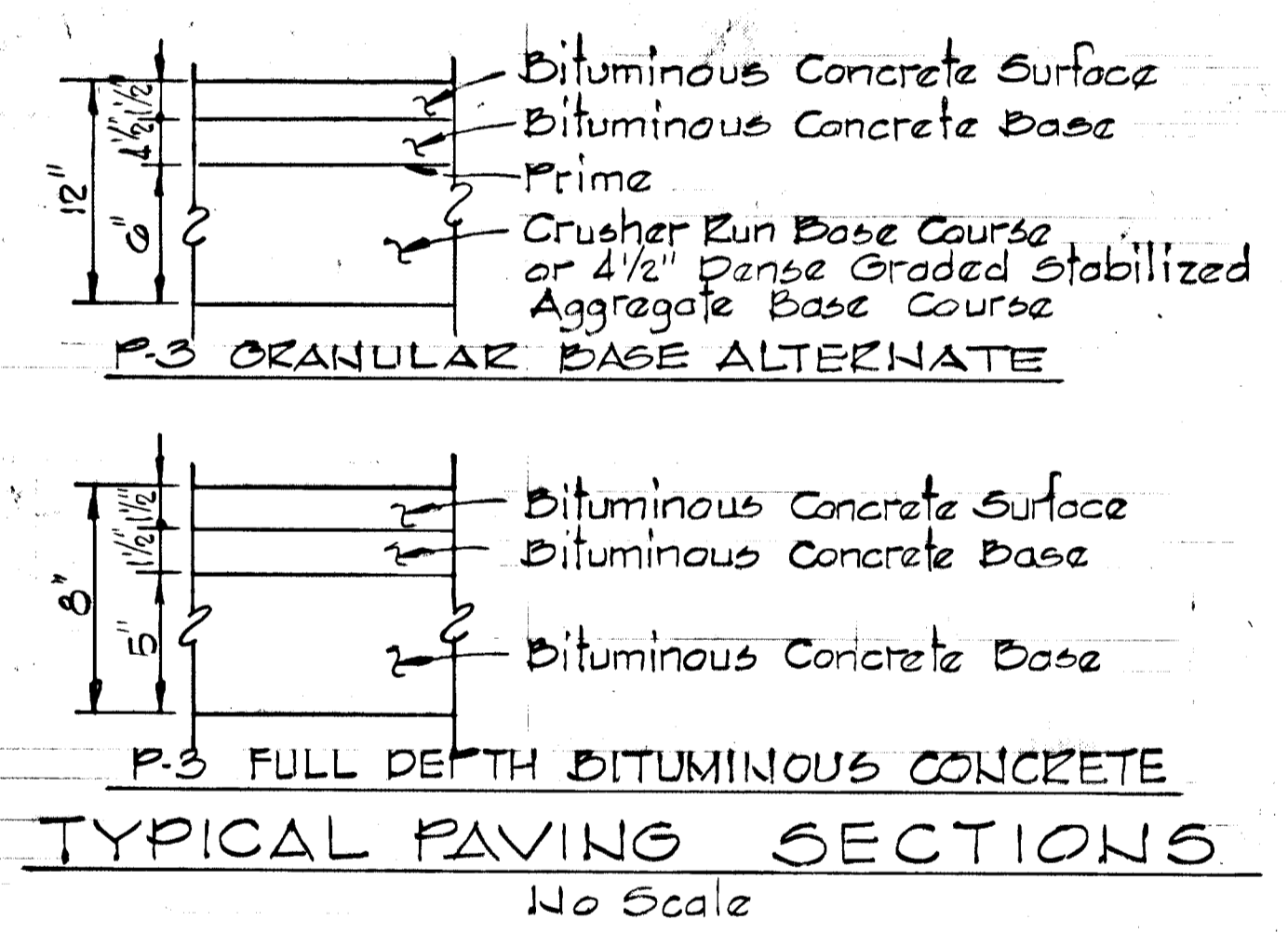
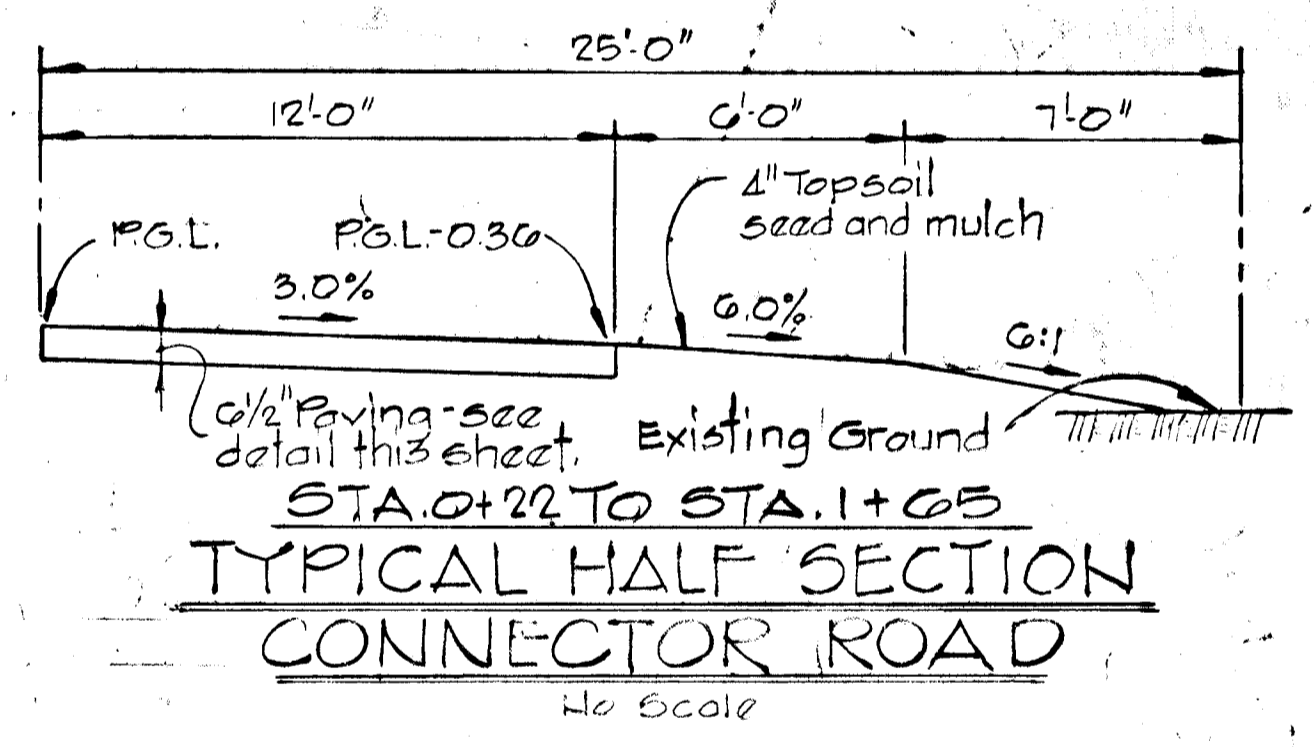
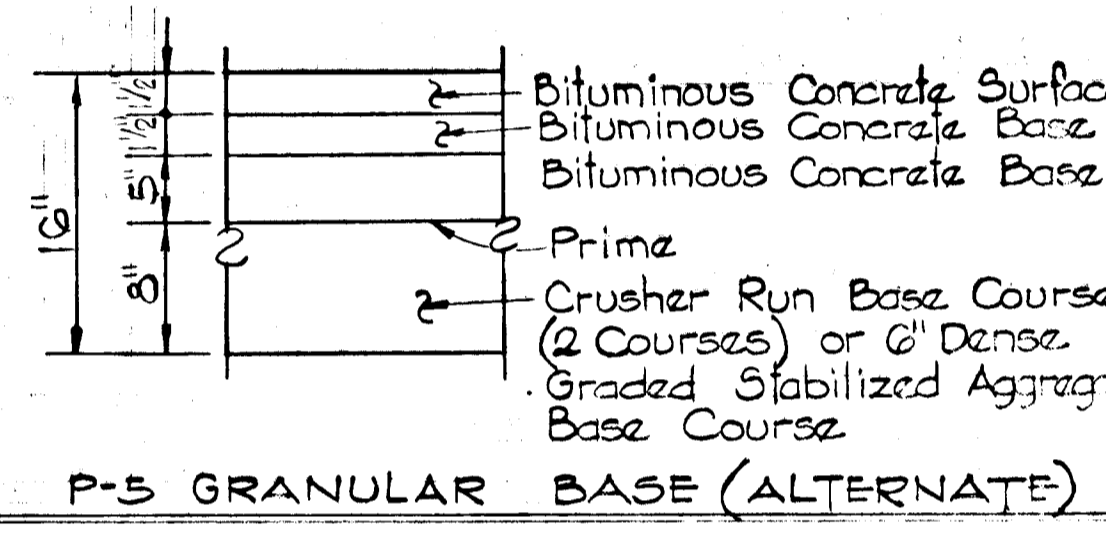
- NOTES:
- Type 'C' Endwall - Howard County Standard S.D. 3.21.
 - A-10 Manhole - Howard County S.D. 3.01.
 - A-5 Inlet - Howard County Standard S.D. 4.01.
 - A-10 Inlet - Howard County Standard S.D. 4.02.
 - Type 'K' Inlet - Howard County Standard S.D. 4.11.
 - For Storm Drain Profiles, see sheet 13 of 15.

PLAN
 SURVEYED, PLOTTED, CHECKED, & M.A. NOTED.
 BY: DATE: NO.:

PROFILE
 SURVEYED, PLOTTED, CHECKED, & M.A. NOTED.
 BY: DATE: NO.:



NOTES:
 1. Base will be primed in accordance with Article 33.03 as provided in The Md. S.R.C. specifications
 2. A tack coat will be applied in accordance with Section 33.07-3 as provided in The Md. S.R.C. specifications.



SUPERELEVATION DIAGRAMS - GUILFORD ROAD
 No Scale

DATE	REV. NO.	REVISION DESCRIPTION
10/25/80	3	Deleted Iron Bridge Road Section, Added 8' Paving Section
2/15/82	1	After D.W. & Sediment Control Comments

COLUMBIA 6TH. ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA:
 RIVERS CORPORATE PARK SECTION 2 AREA 1

PROJECT TITLE:
 ROAD DETAILS

SCALE: AS SHOWN DATE:

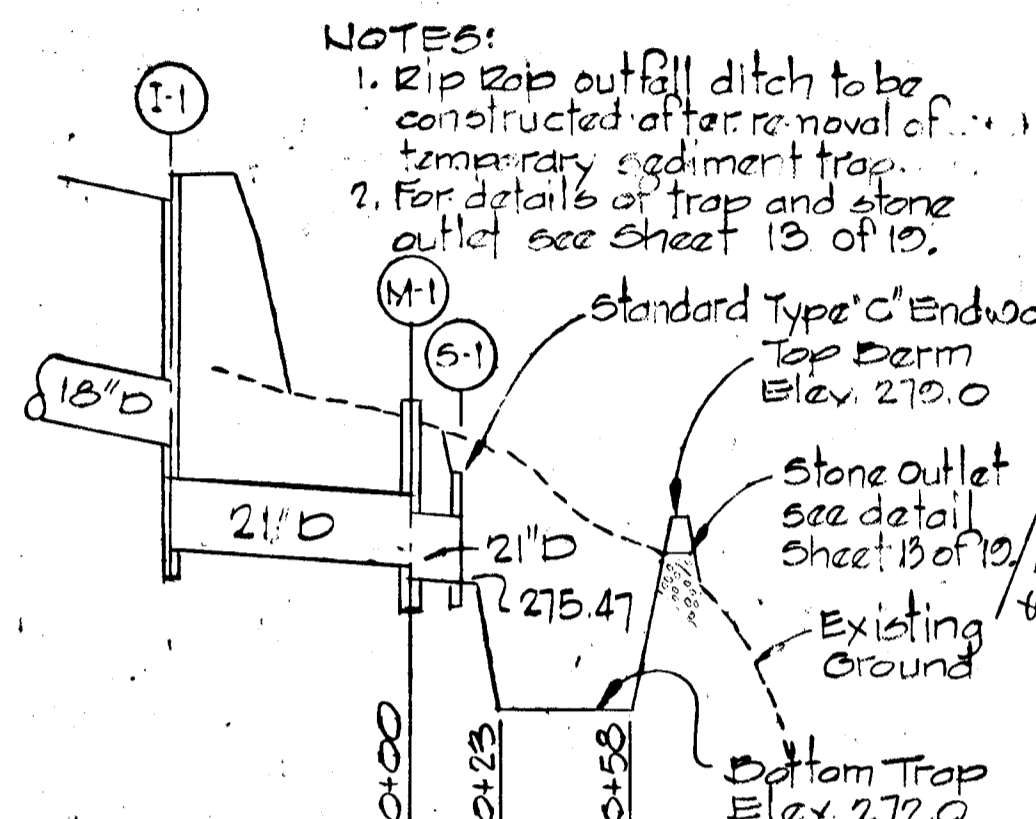
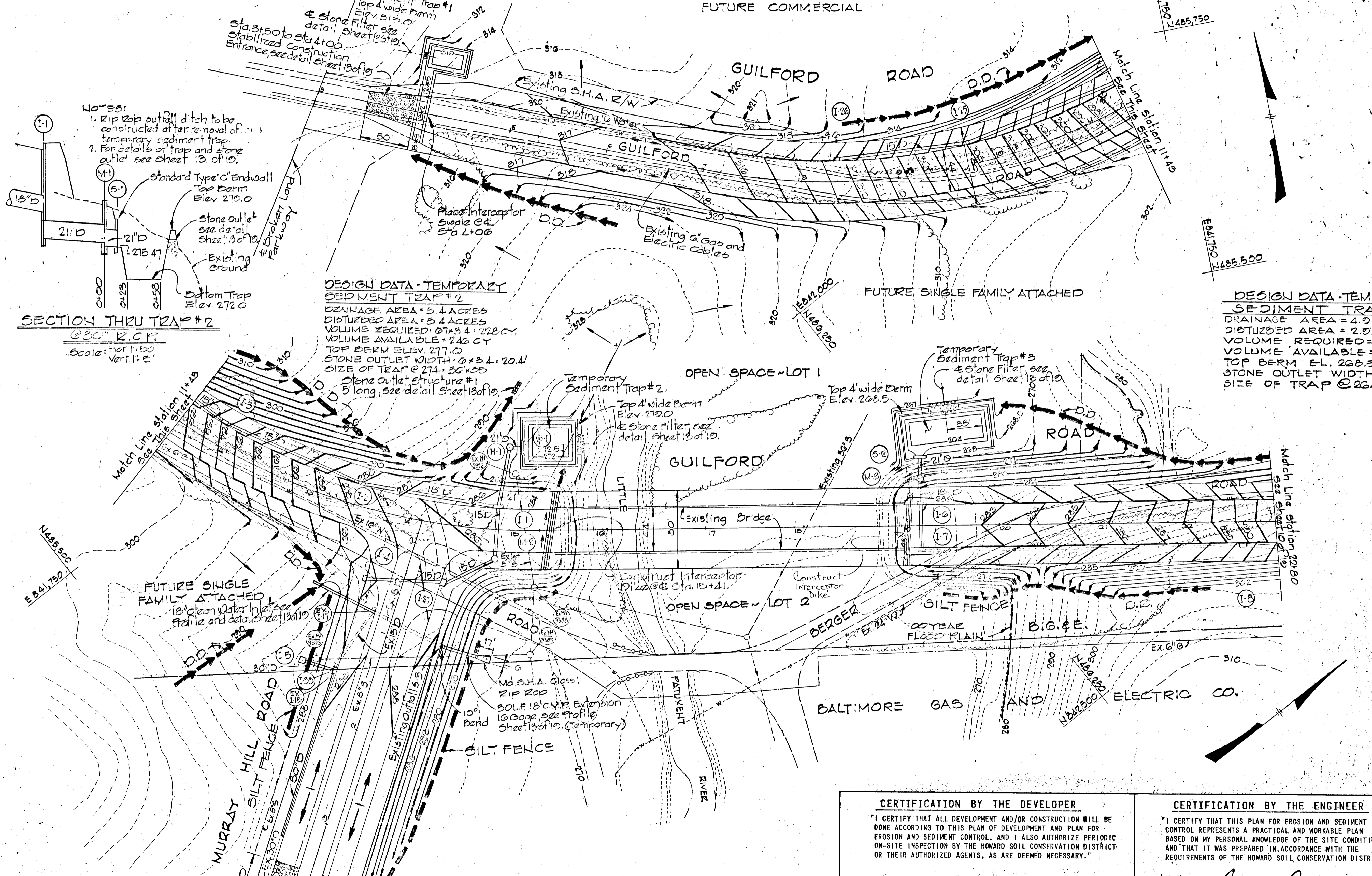
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS
 BALTIMORE, MARYLAND 212

Kenneth A. McCord
 KENNETH A. McCORD REGISTERED ENGINEER NO. 1974

DESIGN DATA - TEMPORARY SEDIMENT TRAP #1
 DRAINAGE AREA = 0.7 ACRES
 DISTURBED AREA = 0.6 ACRES
 VOLUME REQUIRED = 67 X 0.7 = 46.9 CY.
 VOLUME AVAILABLE = 50 CY
 TOP BERM EL. 313.0
 STONE OUTLET WIDTH = 5'
 SIZE OF TRAP @ 310 = 30' X 15'

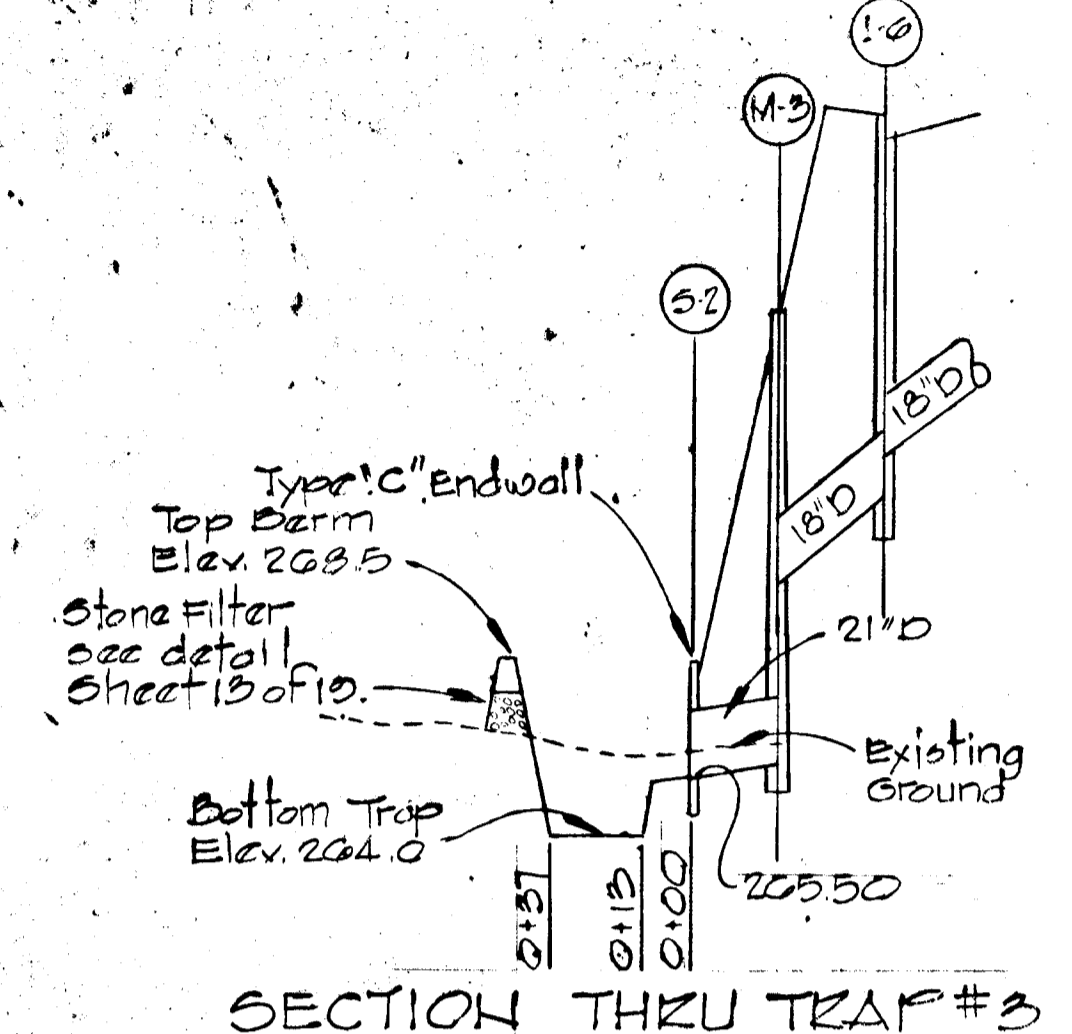
NOTE:
 DRAINAGE TO SEDIMENT TRAP NO 1 TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

DEPARTMENT OF PUBLIC WORKS
James M. Hill 4/14/82
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
James M. Hill 4/14/82
 CHIEF, DIVISION OF LAND PLANNING AND ZONING ADMINISTRATION DATE



DESIGN DATA - TEMPORARY SEDIMENT TRAP #2
 DRAINAGE AREA = 3.4 ACRES
 DISTURBED AREA = 3.4 ACRES
 VOLUME REQUIRED = 67 X 3.4 = 228 CY.
 VOLUME AVAILABLE = 240 CY.
 TOP BERM ELIV. 277.0
 STONE OUTLET WIDTH: 0' X 8' L. 20.4'
 SIZE OF TRAP @ 274 = 30' X 55'

DESIGN DATA - TEMPORARY SEDIMENT TRAP #3
 DRAINAGE AREA = 4.0 ACRES
 DISTURBED AREA = 2.0 ACRES
 VOLUME REQUIRED = 67 X 4.0 = 268 CY.
 VOLUME AVAILABLE = 307 CY.
 TOP BERM EL. 268.5
 STONE OUTLET WIDTH = 30'
 SIZE OF TRAP @ 264 = 24' X 70'



REVIEWED FOR Howard S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
James M. Hill 4/14/82 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. Rowe* 4/14/82 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
2/25/82	1	As Per D.P.W. & Sediment Control Comm'n

COLUMBIA 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA
 RIVERS CORPORATE PARK SECTION 2 AREA 1

PROJECT TITLE
 SEDIMENT CONTROL

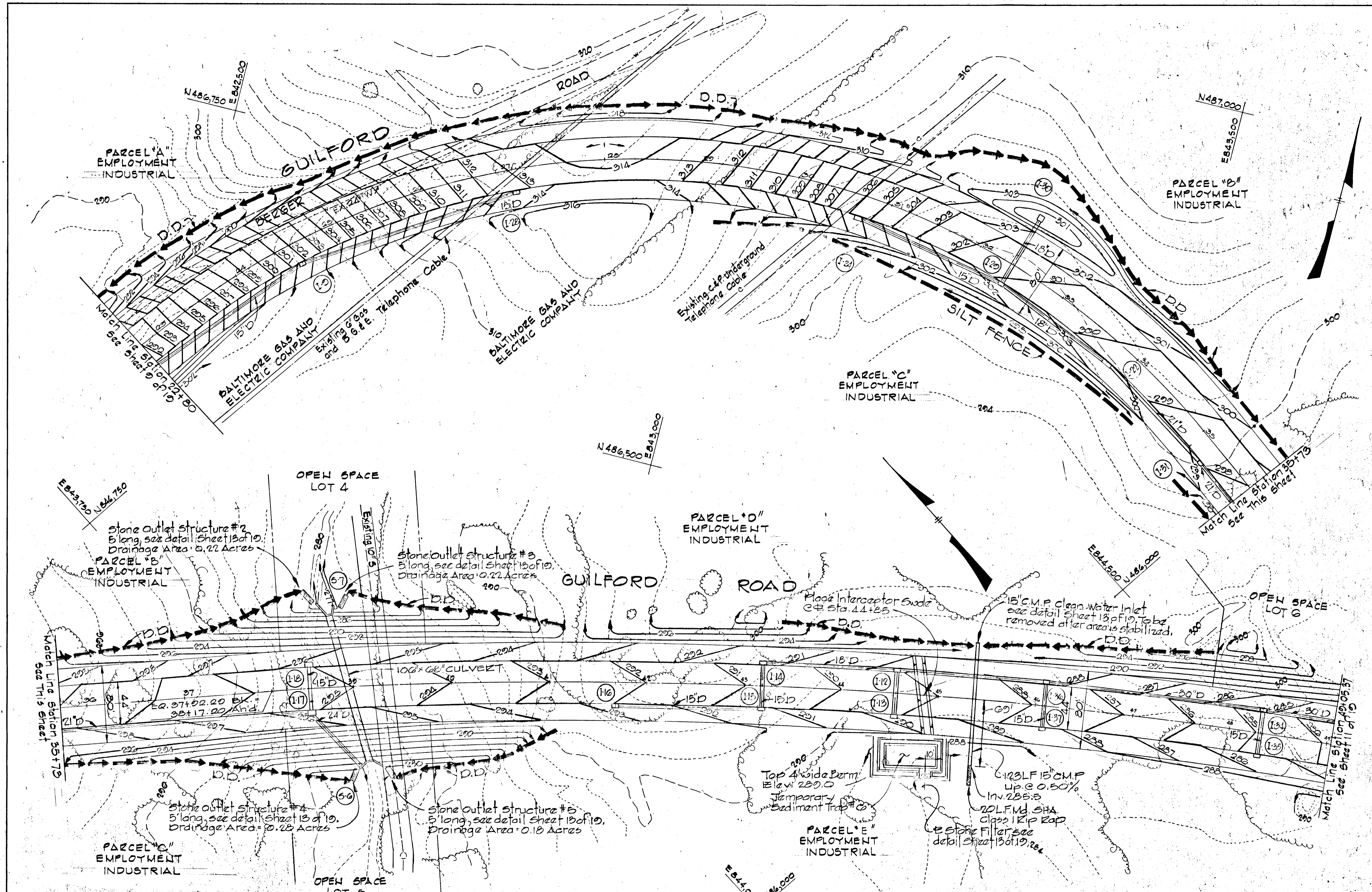
SCALE: 1" = 50' DATE:

Stabilized Construction Entrance, see detail Sheet 15 of 19.

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 4-8-82
 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

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS
 BALTIMORE, MARYLAND 21218
Kenneth A. McCord
 KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974



REVIEWED FOR *Howard* S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
John W. Williams 4-14-82 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: *William* 4-14-82
 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/26/82	3	Deleted Iron Bridge Road
12/05/82	1	As per D.P.W.E. Sediment Control Committee

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 PROJECT AREA
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1
 PROJECT TITLE
 SEDIMENT CONTROL
 SCALE: 1" = 50' DATE:

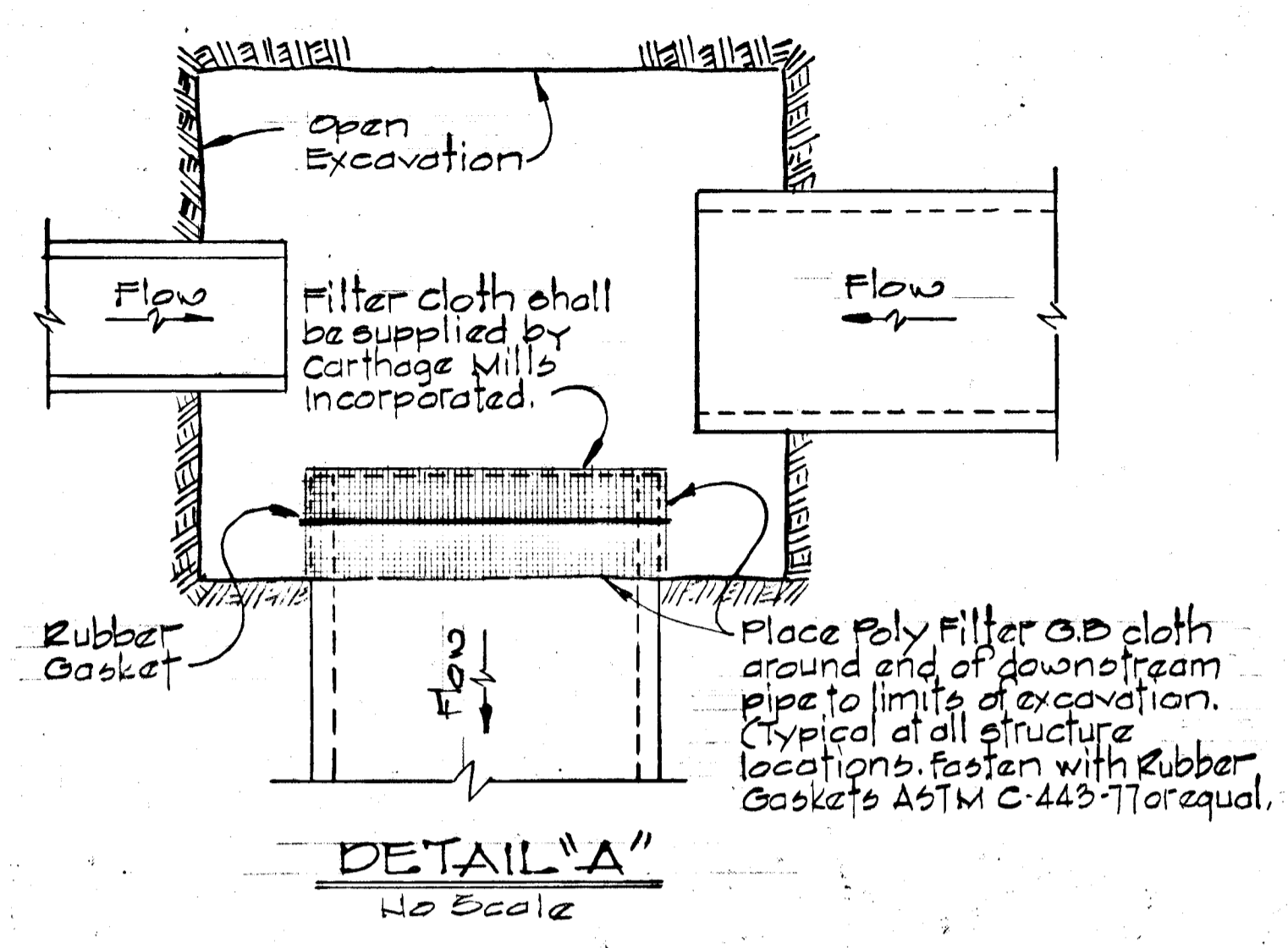
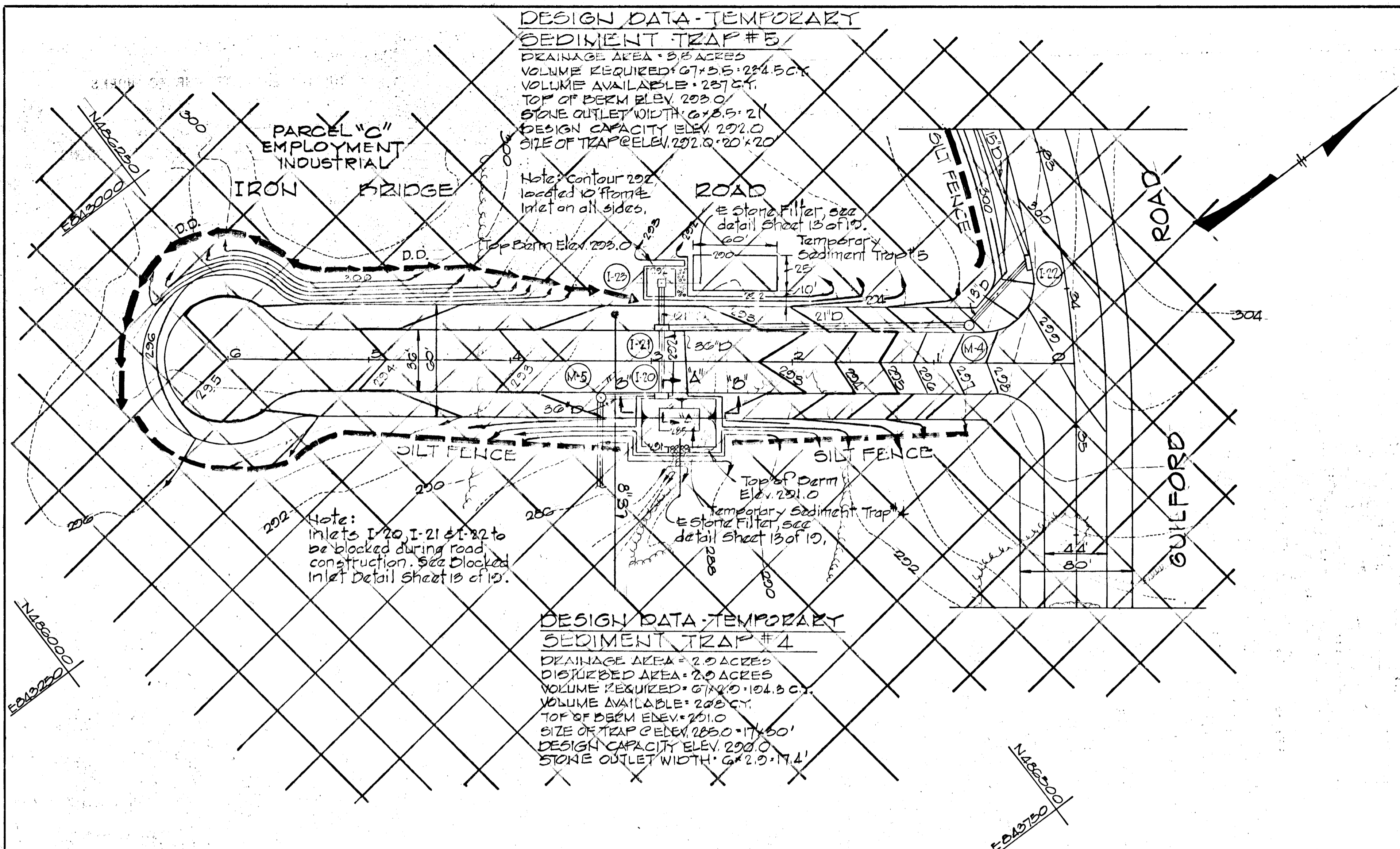
CERTIFICATION BY THE DEVELOPER
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
Walter E. Woodford 4-8-82
 WALTER E. WOODFORD DATE

Note:
 All inlets on this sheet to be blocked during road construction. See blocked inlet detail sheet 13 of 19.

DESIGN DATA-TEMPORARY SEDIMENT TRAP #0
 DRAINAGE AREA = 2.0 ACRES
 DISTURBED AREA = 2.0 ACRES
 VOLUME REQUIRED: 3114.0 CBY.
 VOLUME AVAILABLE = 148 CBY.
 SIZE OF TAILF (235.5' x 21' x 4')
 DESIGN CAPACITY ELEV. 288.0
 STONE FILTER WIDTH = 6' x 2.0' = 12'

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 212
Kenneth A. McCord
 KENNETH A. MCCORD
 REGISTERED ENGINEER
 NO. 1974



REVIEWED FOR Howard S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
James M. Mahan 11-14-82 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: James M. Mahan 11-14-82 HOWARD S.C.D. DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/2/82	3	Updated from Knight plan
2/10/82	1	As per D.W.E. examination of Control Comments

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1

PROJECT TITLE
 SEDIMENT CONTROL

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

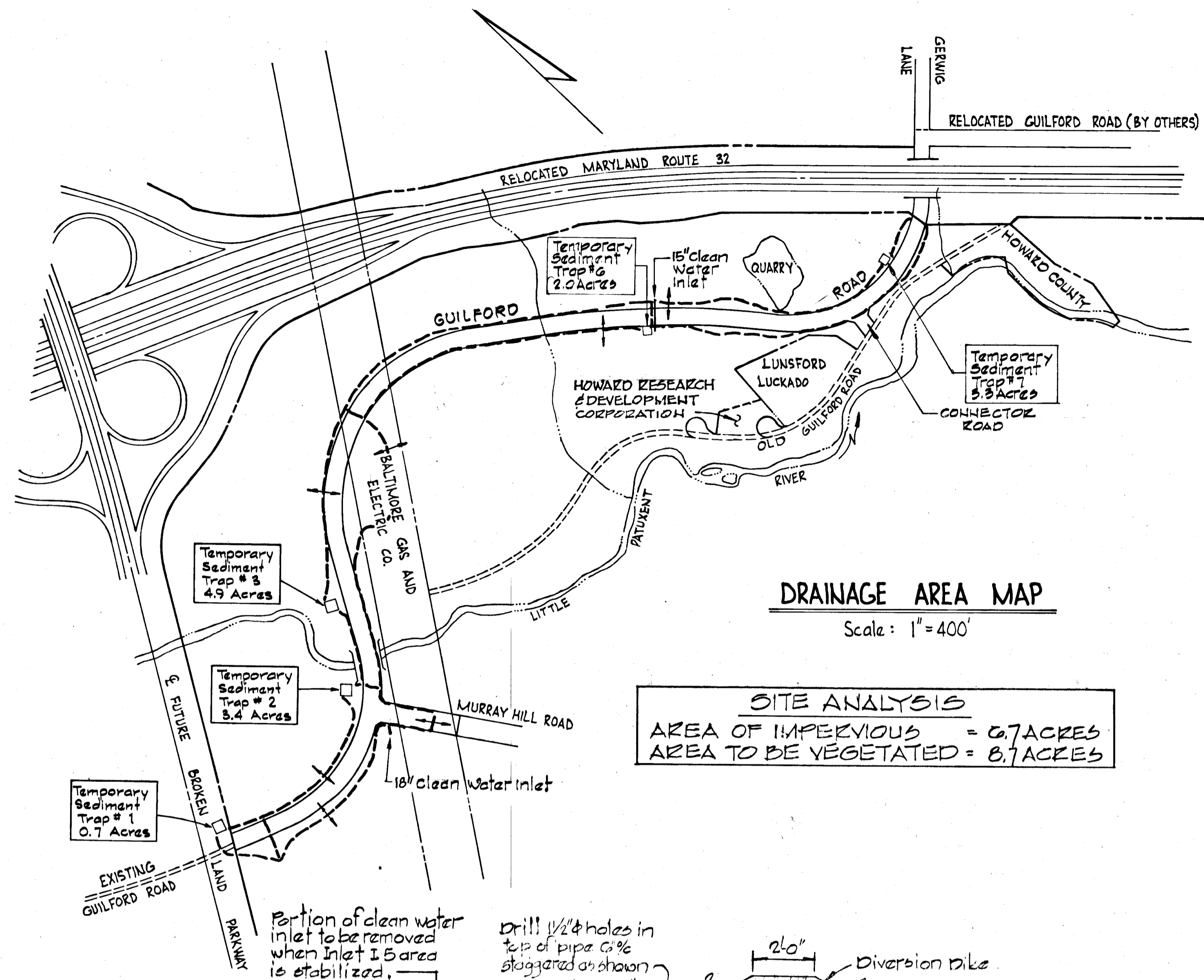
Kenneth A. McCord
 KENNETH A. McCORD
 REGISTERED ENGINEER
 NO. 1974

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 E. Woodford
 WALTER E. WOODFORD DATE

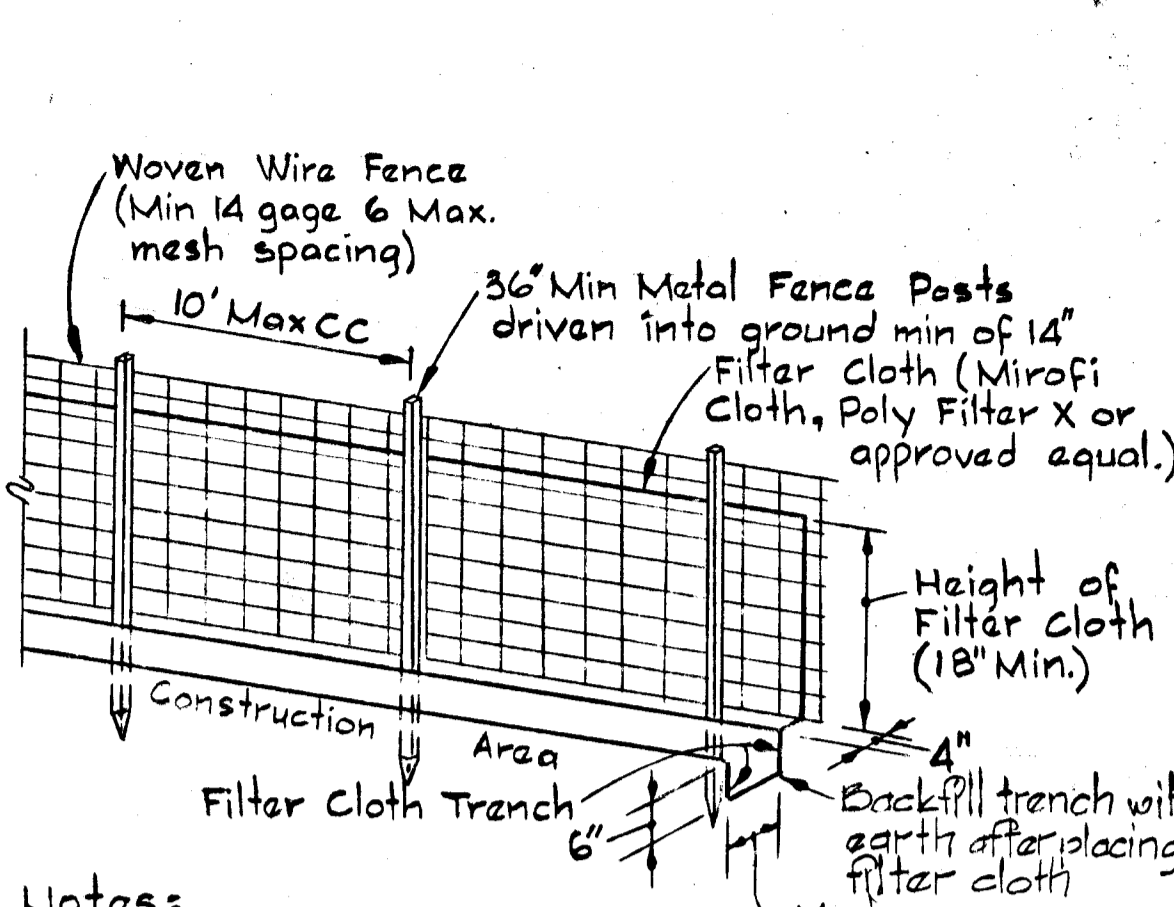
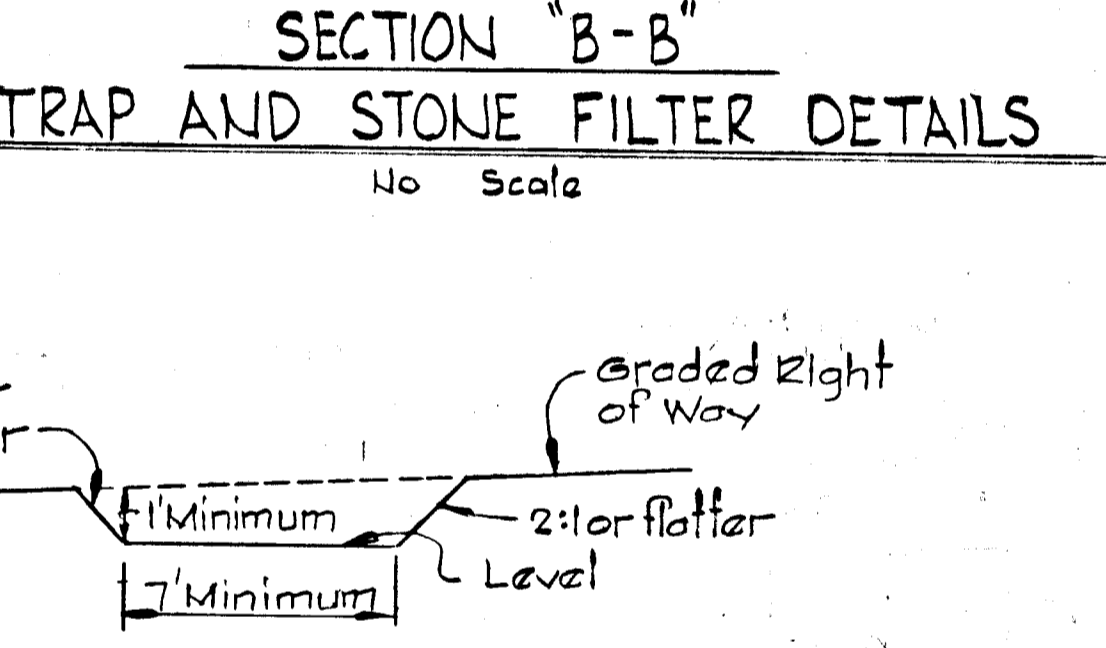
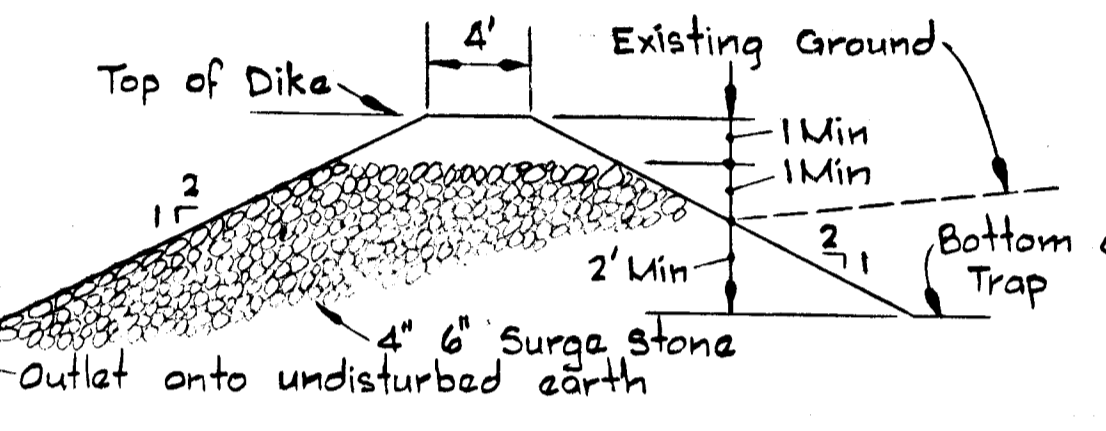
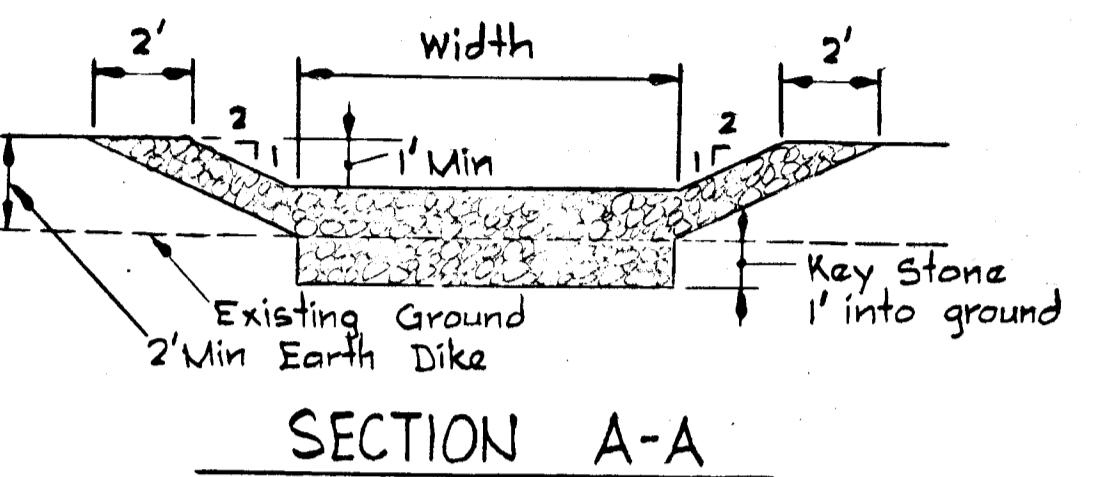
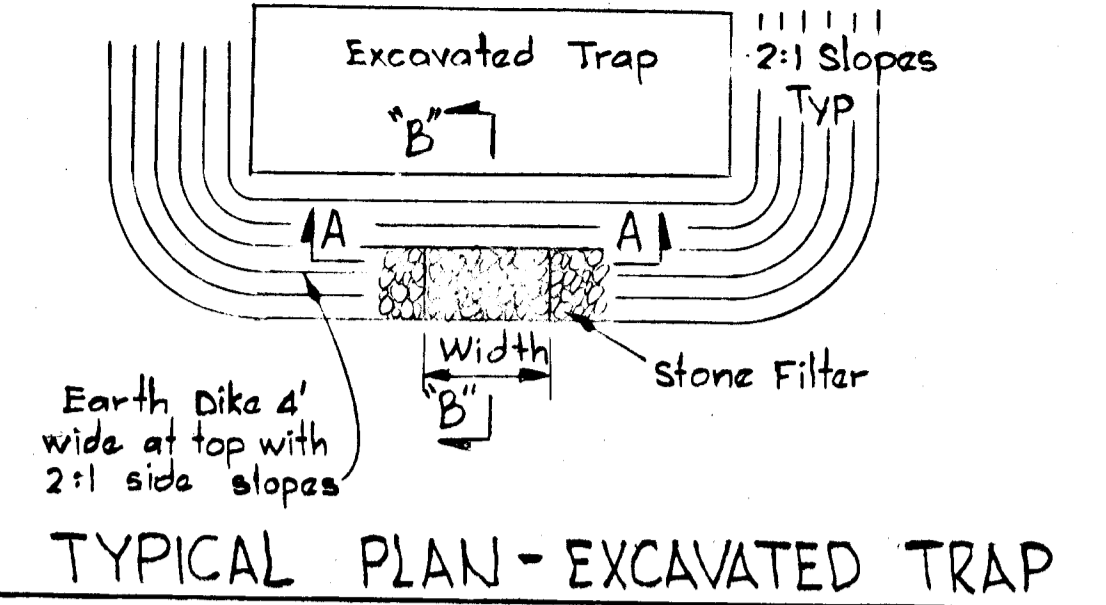
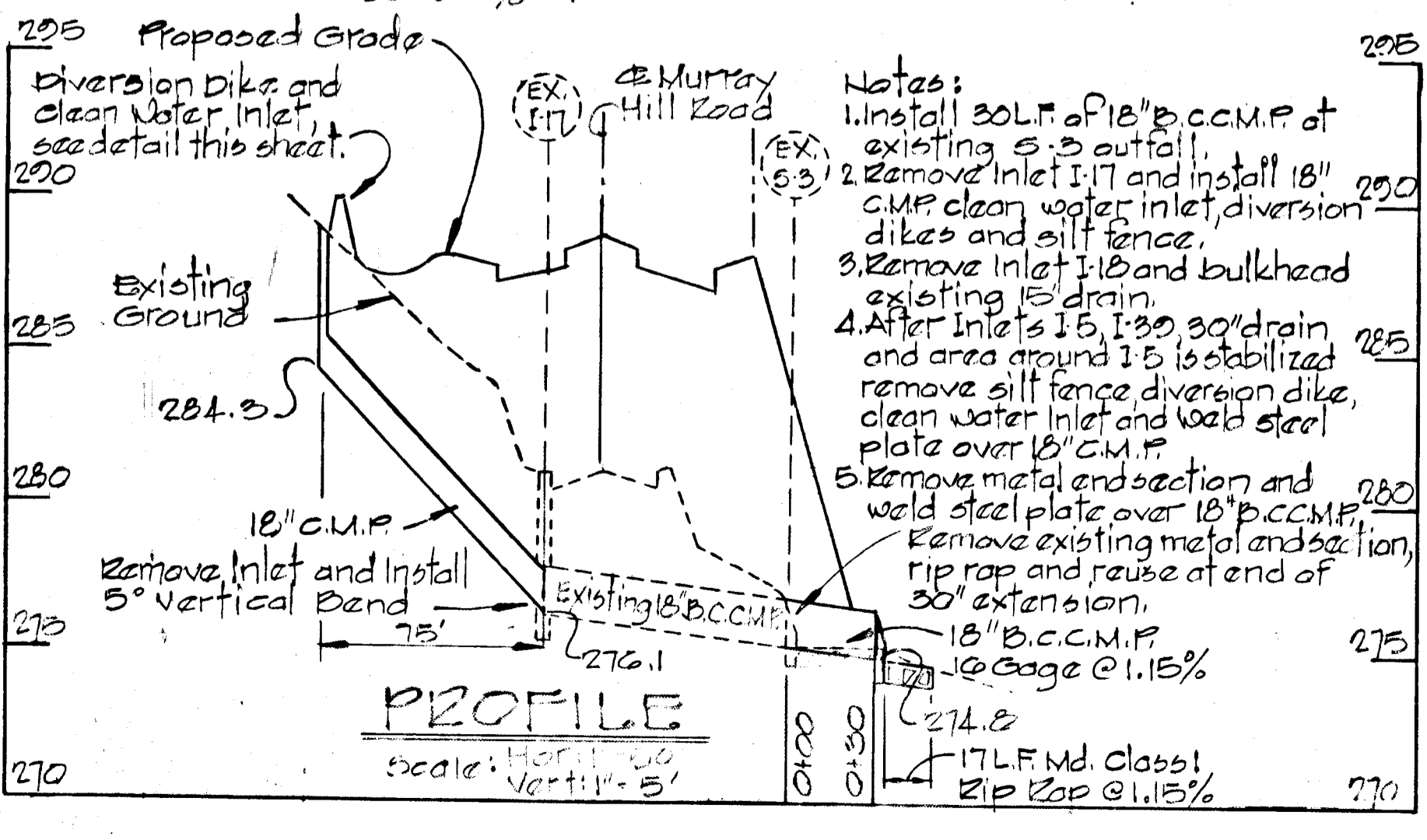
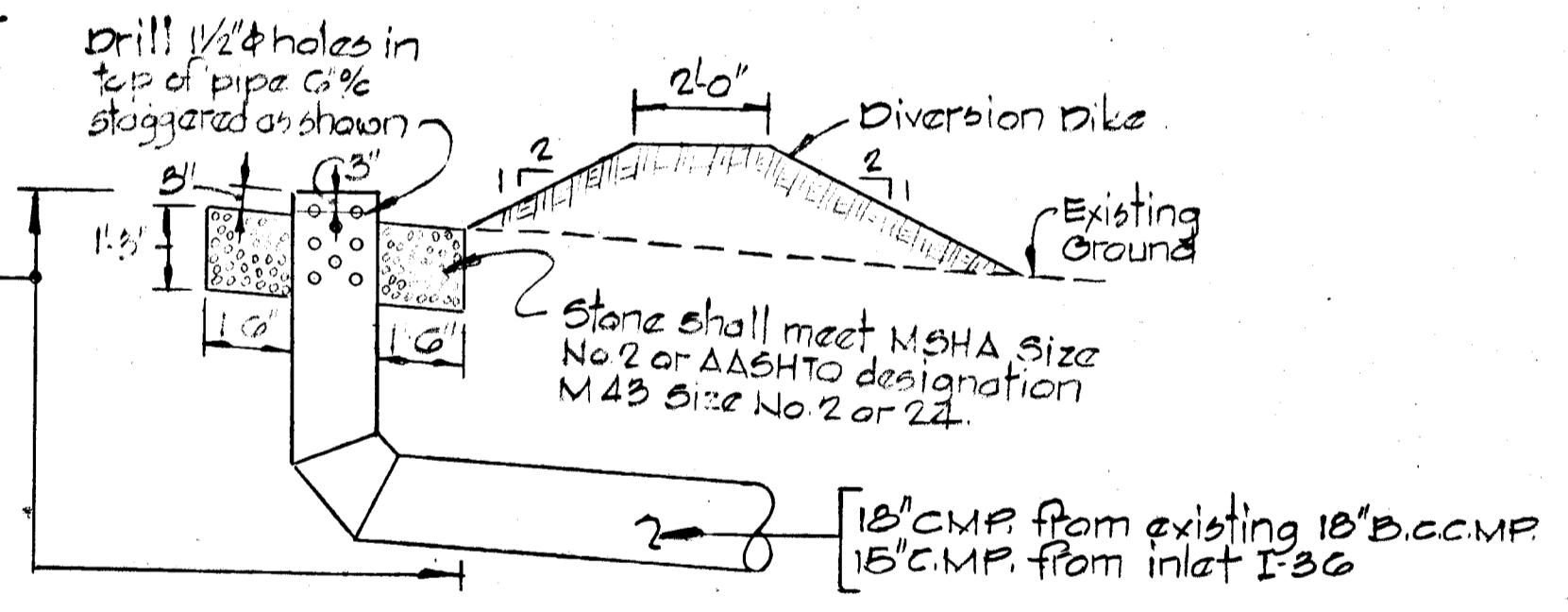
CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Kenneth A. McCord
 KENNETH A. McCORD DATE

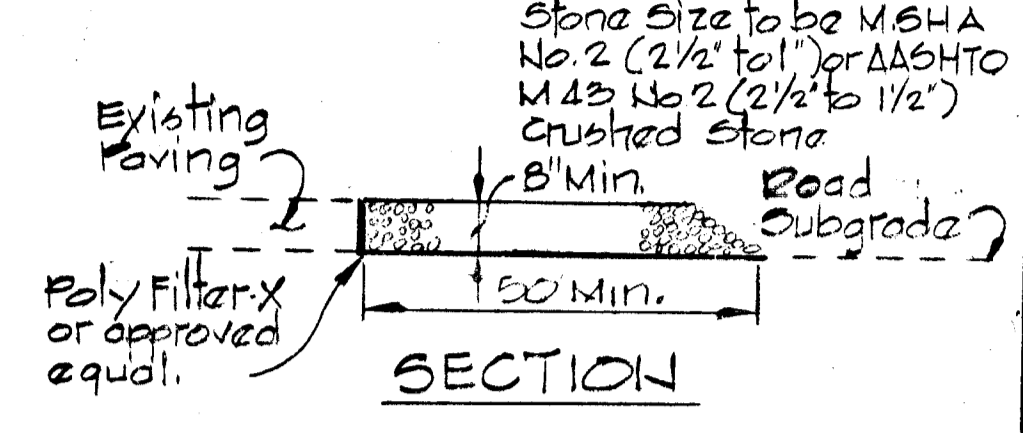
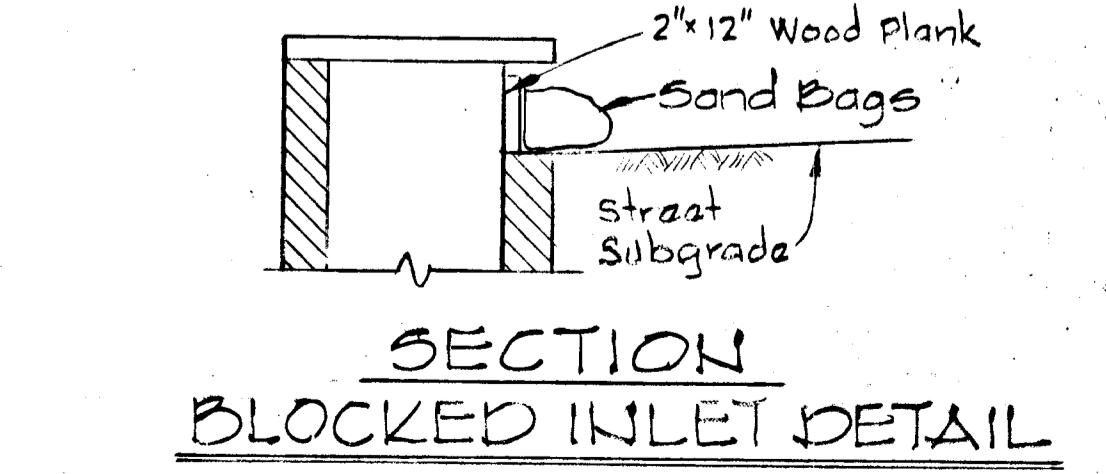
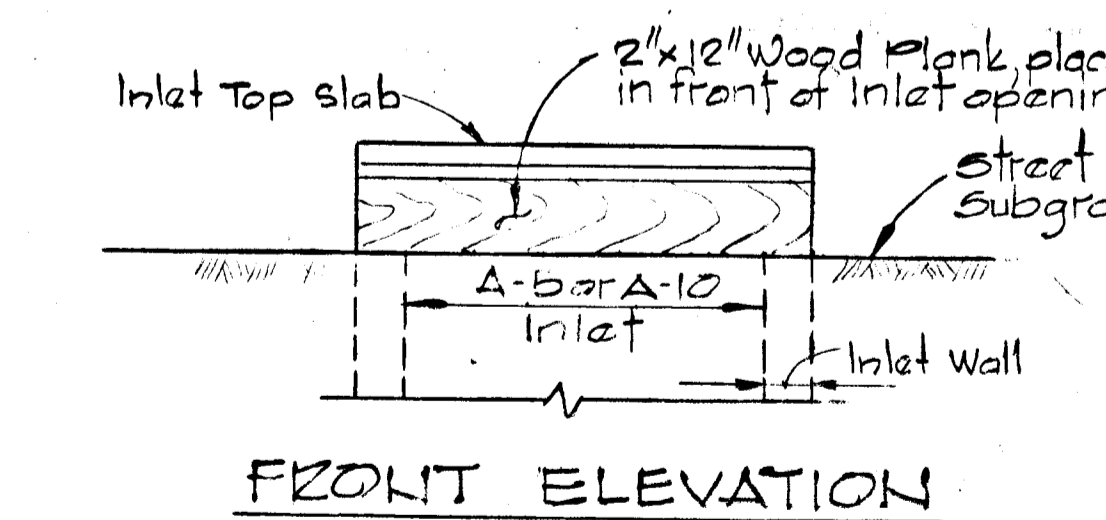
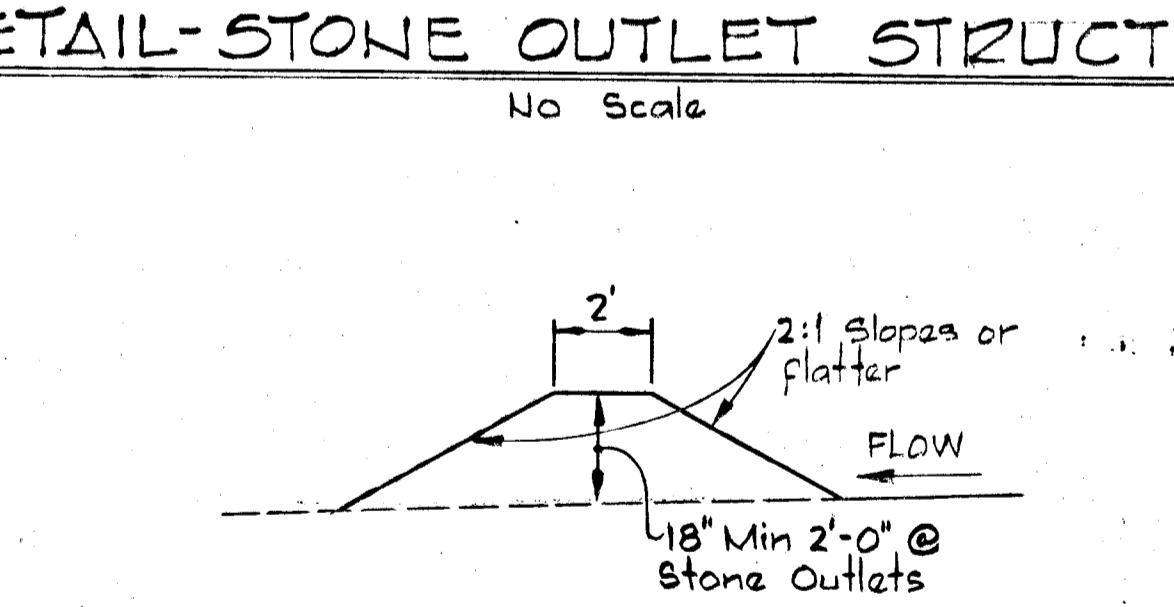
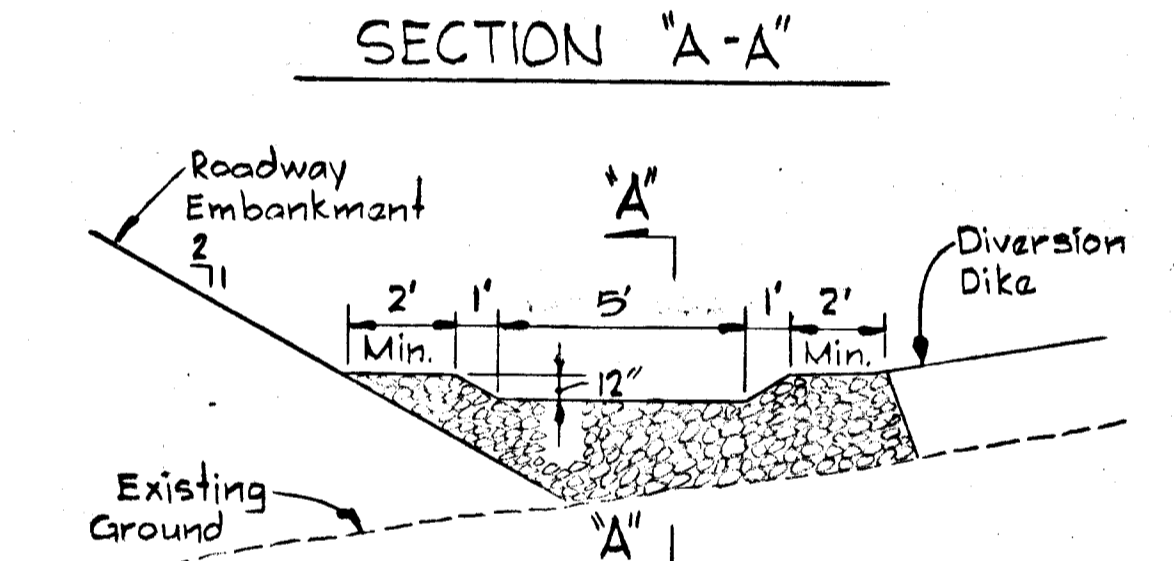
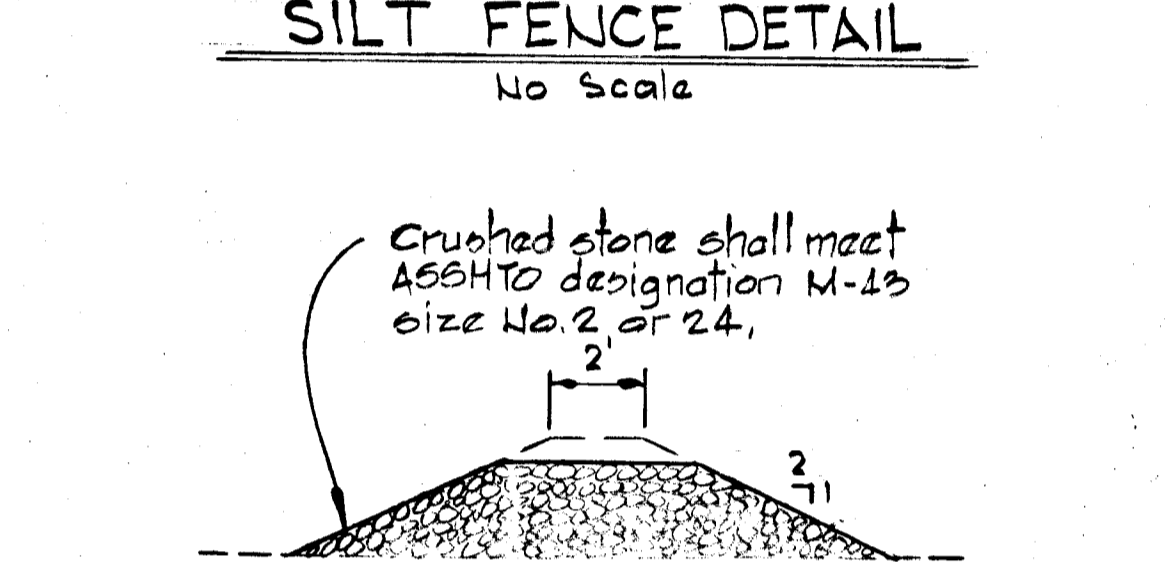


SITE ANALYSIS
 AREA OF IMPEVIOUS = 6.7 ACRES
 AREA TO BE VEGETATED = 8.1 ACRES

- GENERAL NOTES**
- See "Sequence of construction on sheet 1.
 - Prior to starting any work the contractor shall notify the Howard County Sediment Control Division 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:
 - Ground Limestone (50#/1000 sq)
 - Fertilizer 10-10-10 (25#/1000 sq)
 - Seed Italian Rye Grass (40#/Acre)
 - Mulch with straw at the rate of 70#/1000 sq or 1 1/2 tons/acre. Anchor with asphalt at the rate of 400 gallons/acre.



Notes:
 1. Woven wire fence to be fastened securely to fence posts by use of wire ties.
 2. Filter cloth to be fastened securely to woven wire fence by use of wire ties spaced every 24" x 24"



Stone size to be MSHA No. 2 (2 1/2" to 1") or AASHTO M 43 No. 2 (2 1/2" to 1 1/2") crushed stone
 8" Min. Road Subgrade

REVIEWED FOR: Howard S.C.D. NAME: [Signature]
 AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: [Signature] DATE: 4-14-82
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: [Signature] DATE: 4-14-82
 HOWARD S.C.D.

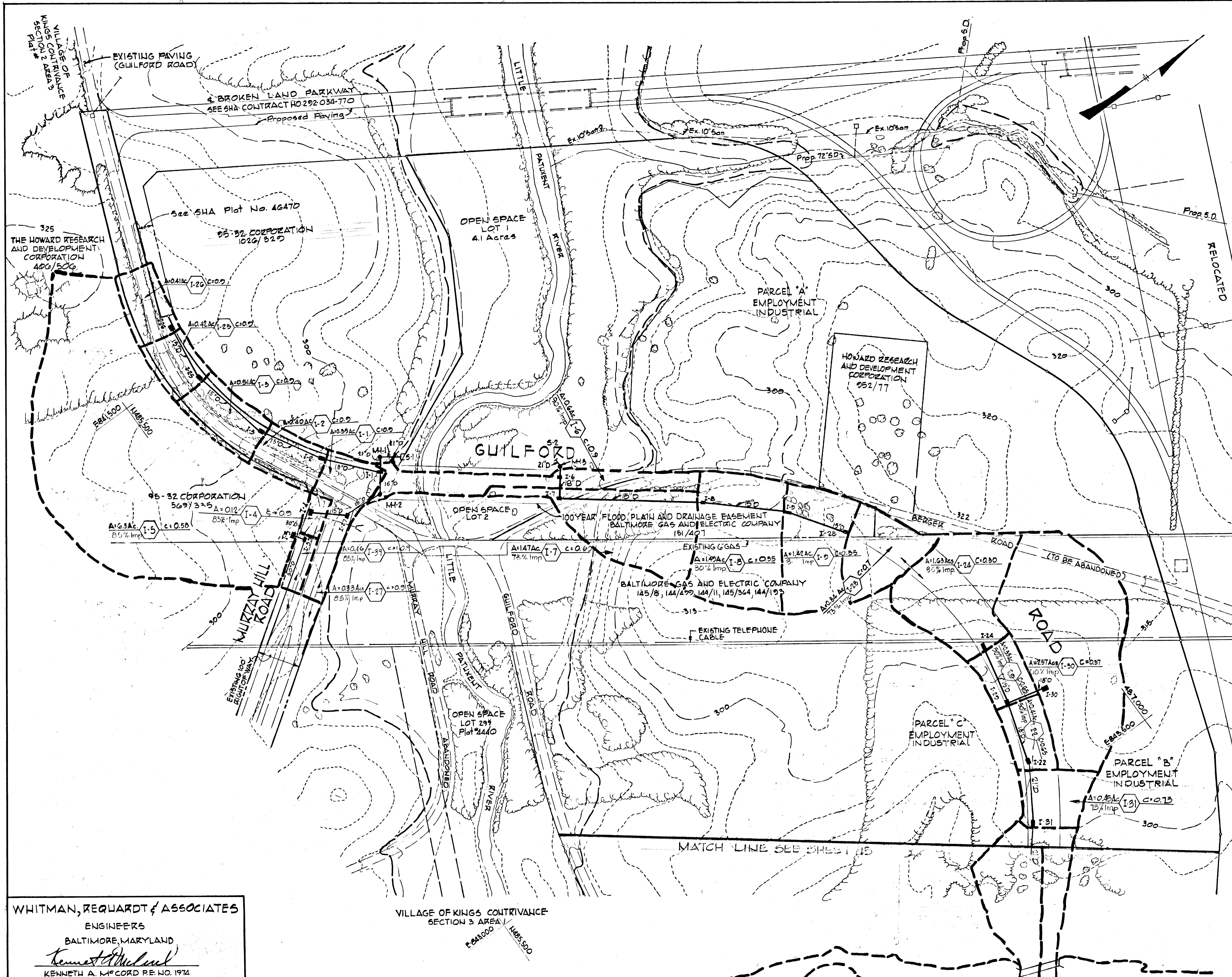
REV. DATE	REV. NO.	REVISION DESCRIPTION
4/15/82	1	Deleted Iron Bridge Road
4/15/82	1	Water Pollution Control Commission

COLUMBIA 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 PROJECT AREA: PROJECT RIVERS CORPORATE PARK SECTION 2 AREA 1
 PROJECT TITLE: SCALE SEDIMENT CONTROL
 SCALE: AS SHOWN DATE: [Blank]

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 DATE: 4-8-82

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 DATE: [Blank]

WHITMAN REQUARDT AND ASSOCIATES ENGINEERS
 BALTIMORE, MARYLAND 21218
 KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974



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

VILLAGE OF KINGS CONTRIVANCE
 SECTION 3 AREA
 P. 843,000 1485,500

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/24/82	3	Deleted Iron Bridge Road
6/28/82	2	As per field changes by H. H. ...
2/2/82	1	As per D. W. ...

COLUMBIA
 8TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA:
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1

PROJECT TITLE:
 DRAINAGE AREA MAP

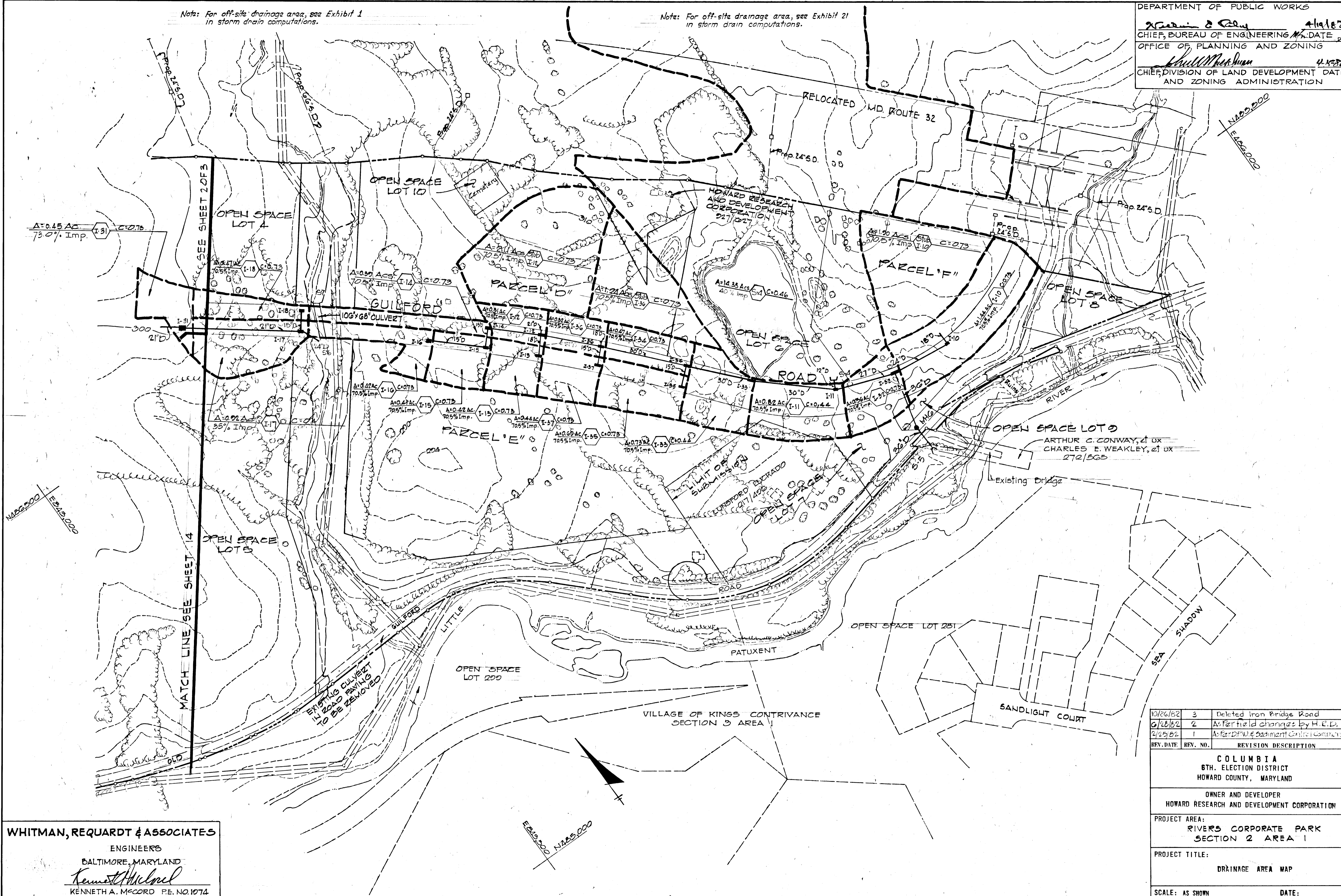
SCALE: AS SHOWN DATE:

Note: For off-site drainage area, see Exhibit 1 in storm drain computations.

Note: For off-site drainage area, see Exhibit 21 in storm drain computations.

DEPARTMENT OF PUBLIC WORKS

James S. Cole 4/19/82
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING AND ZONING
Shelley M. Hagan 4/19/82
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION



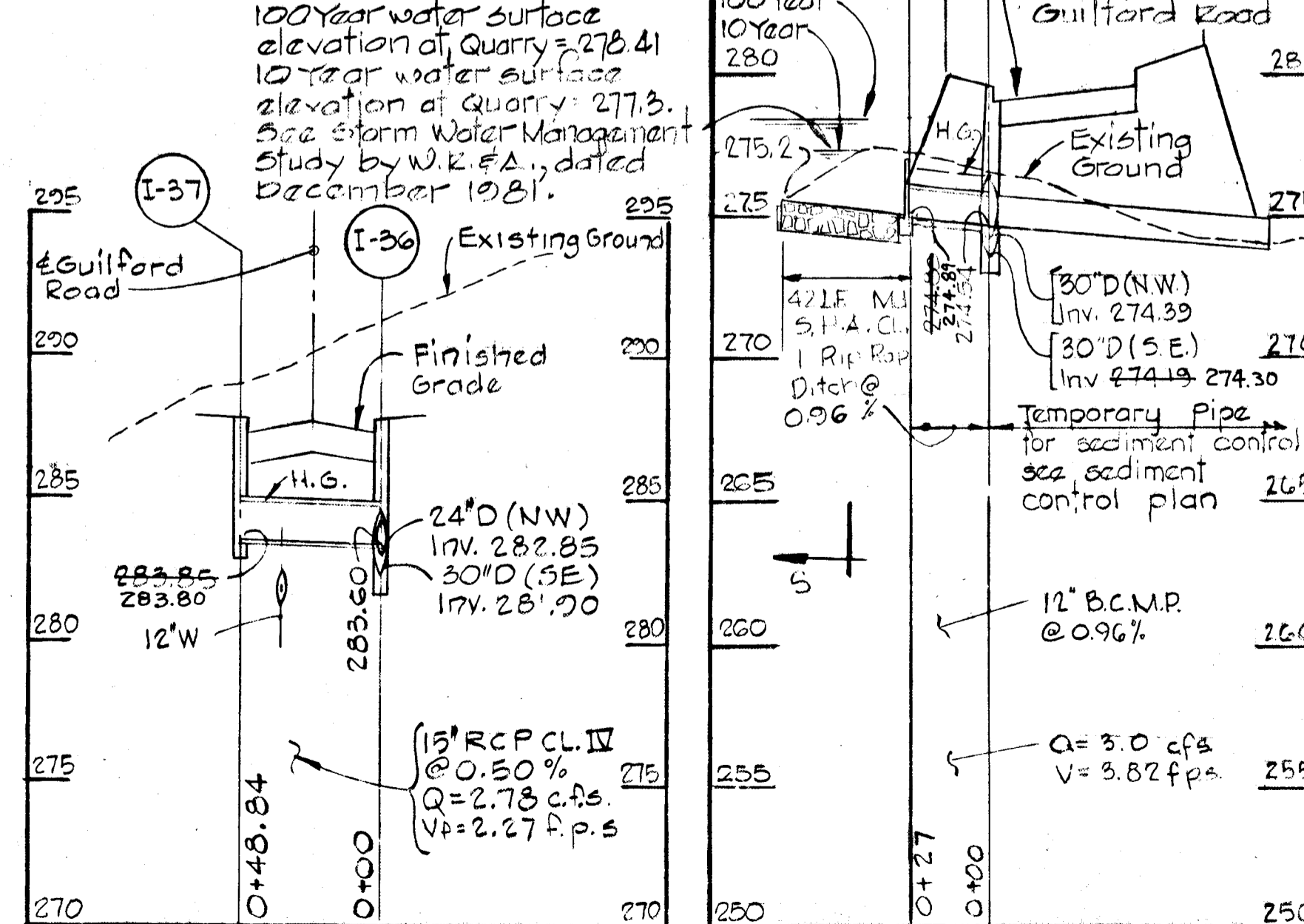
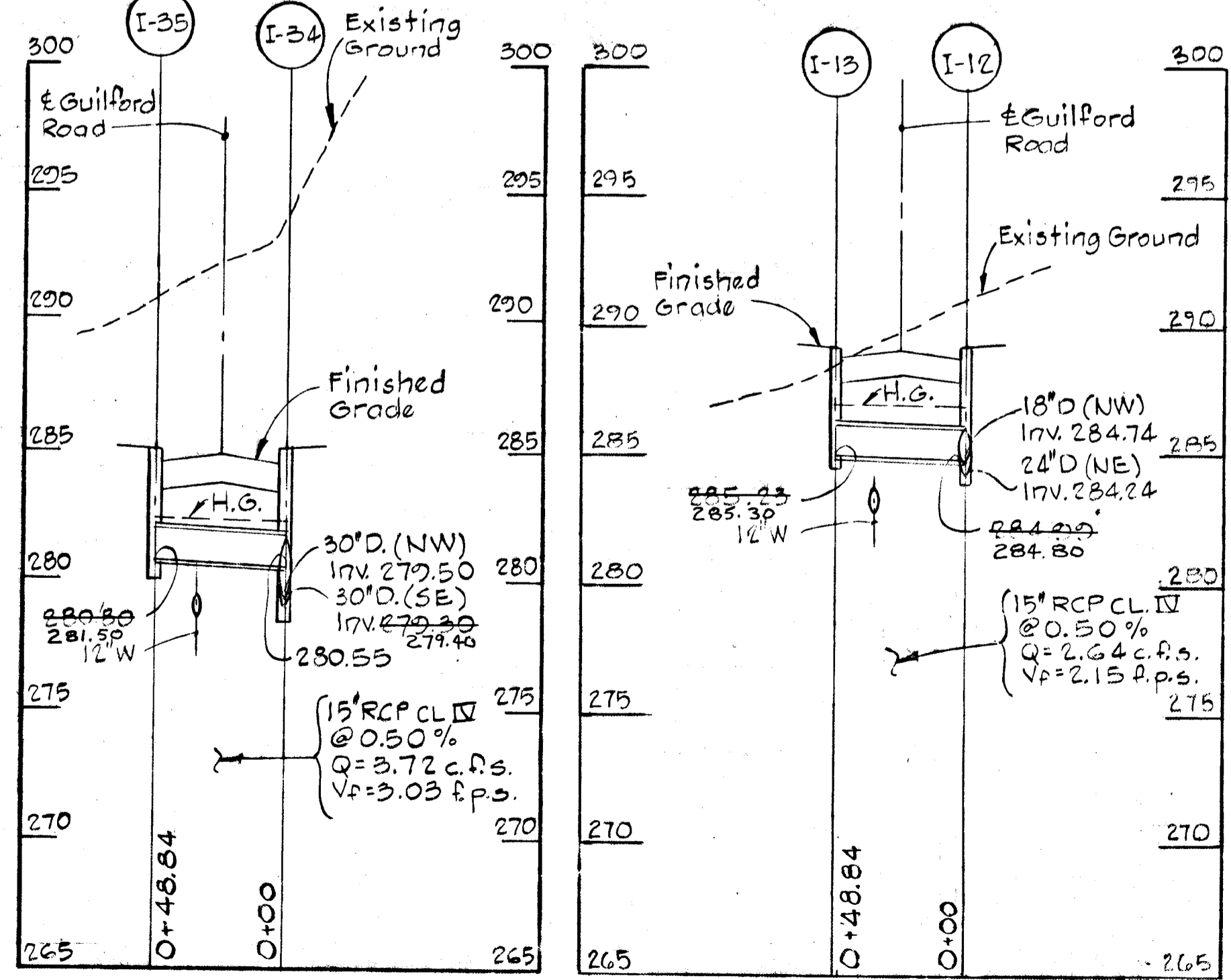
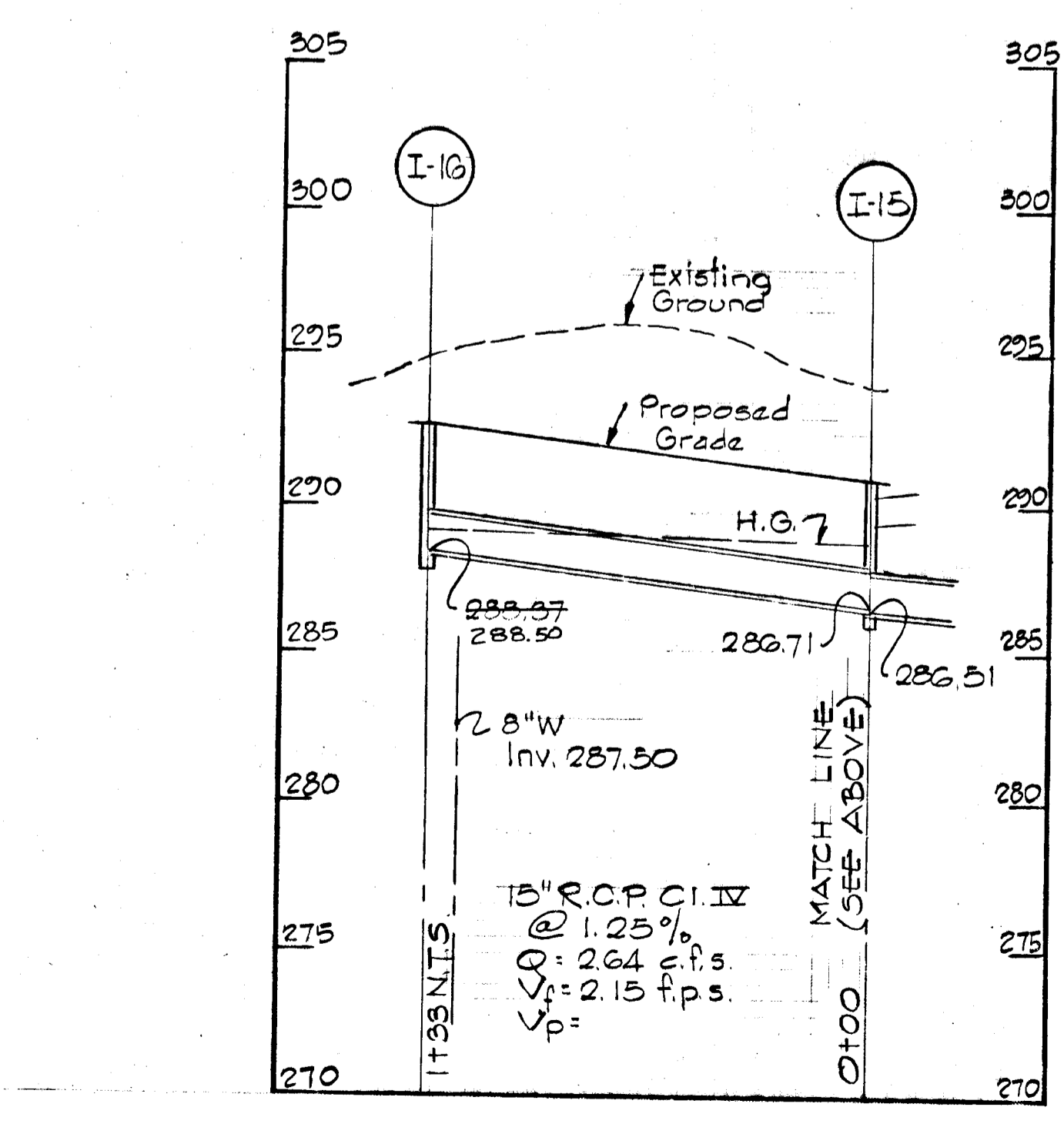
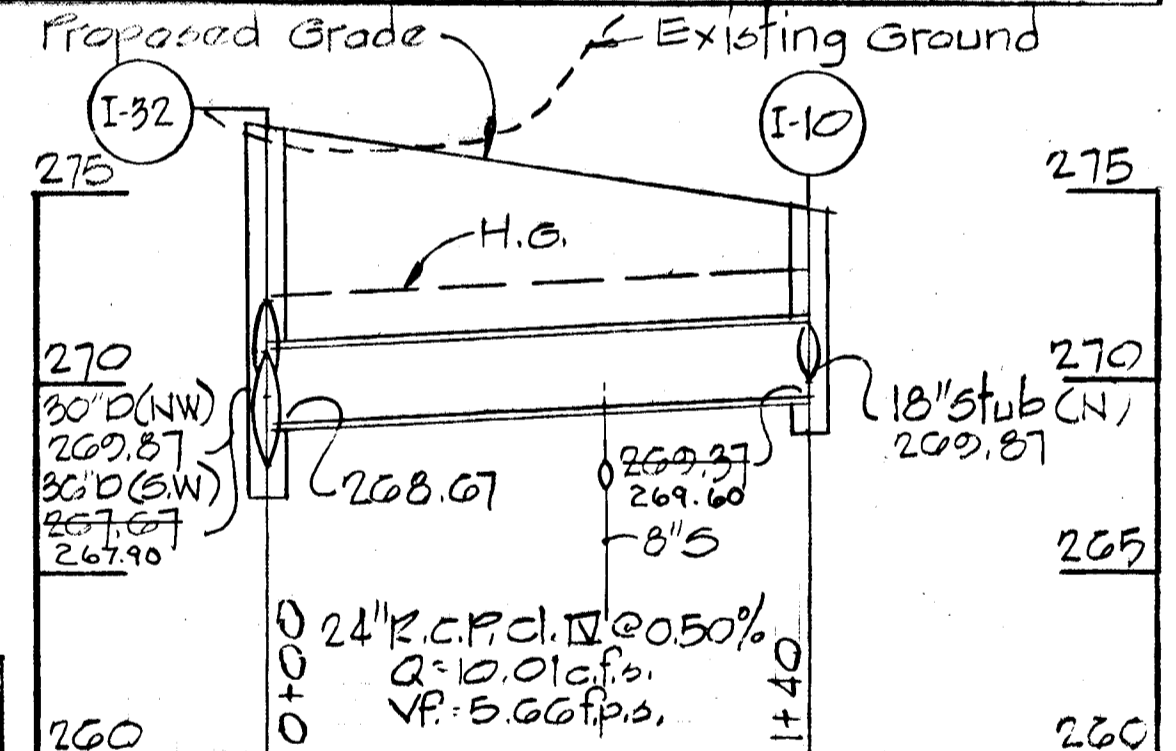
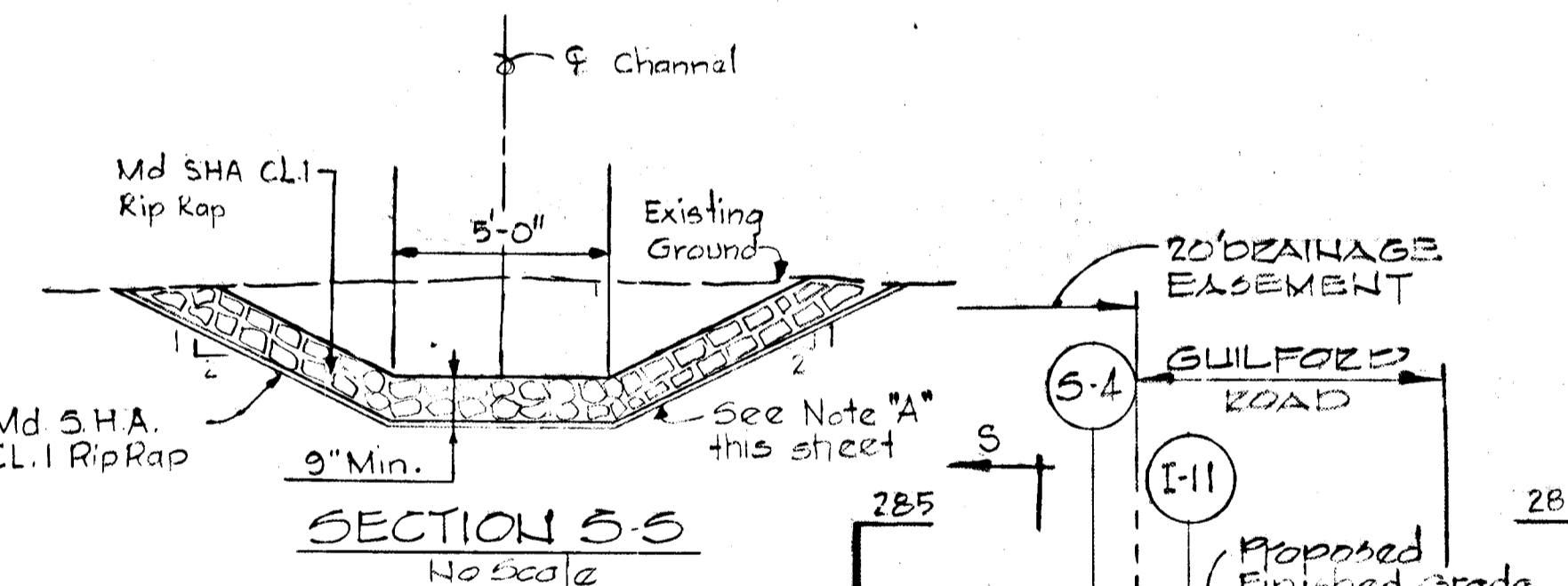
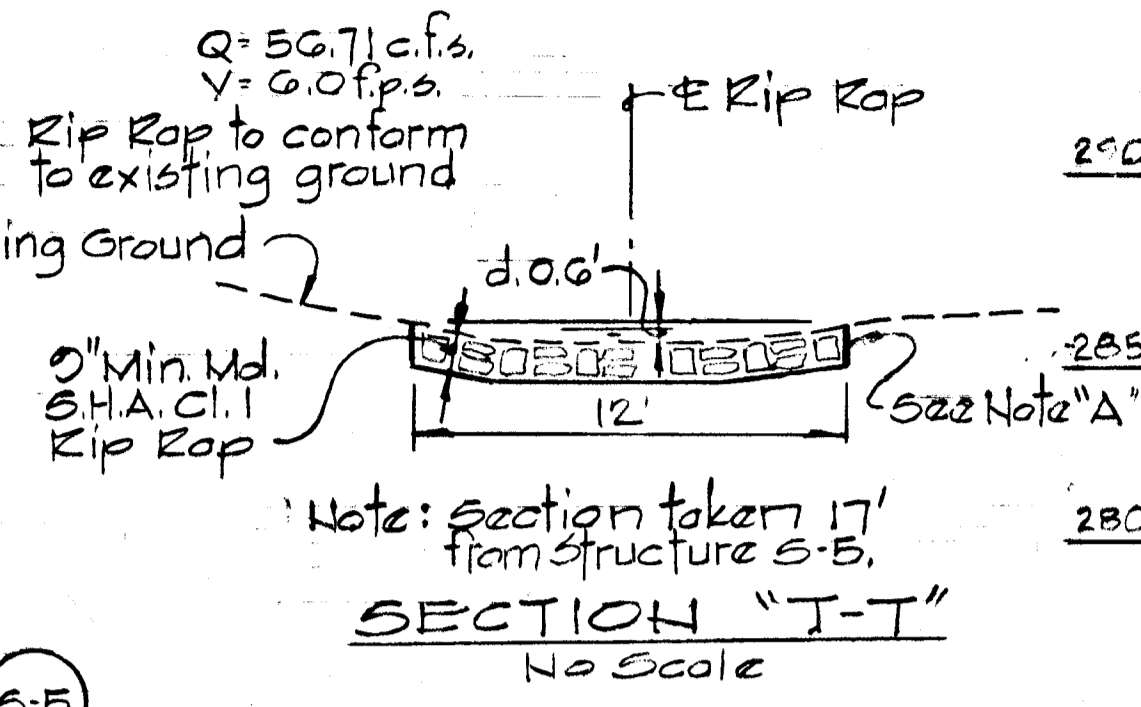
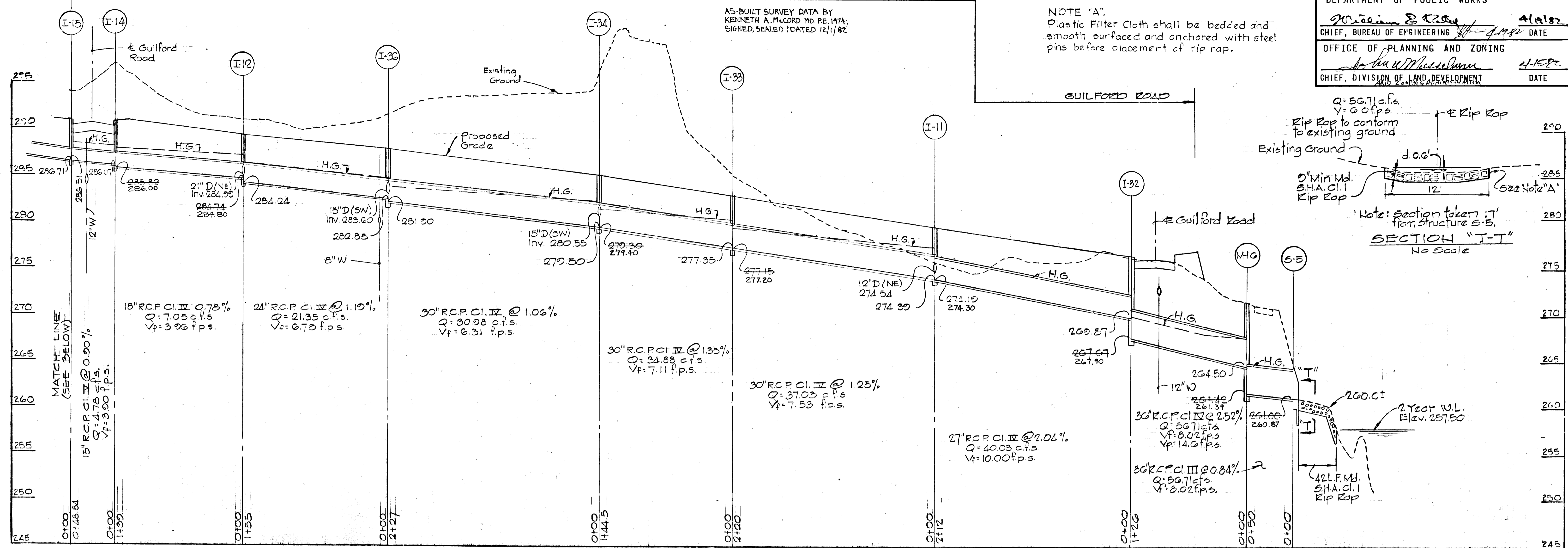
WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND
Kenneth A. McCord
 KENNETH A. MCCORD P.E. NO. 1074

REV. DATE	REV. NO.	REVISION DESCRIPTION
10/26/82	3	Deleted Iron Bridge Road
6/18/82	2	As per field changes by H.E.D.
2/15/82	1	As per D.P.W. & Sediment Control Committee

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 PROJECT AREA:
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1
 PROJECT TITLE:
 DRAINAGE AREA MAP
 SCALE: AS SHOWN DATE:

AS-BUILT SURVEY DATA BY
 KENNETH A. McCORD P.E. 197A;
 SIGNED, SEALED & DATED 12/1/82

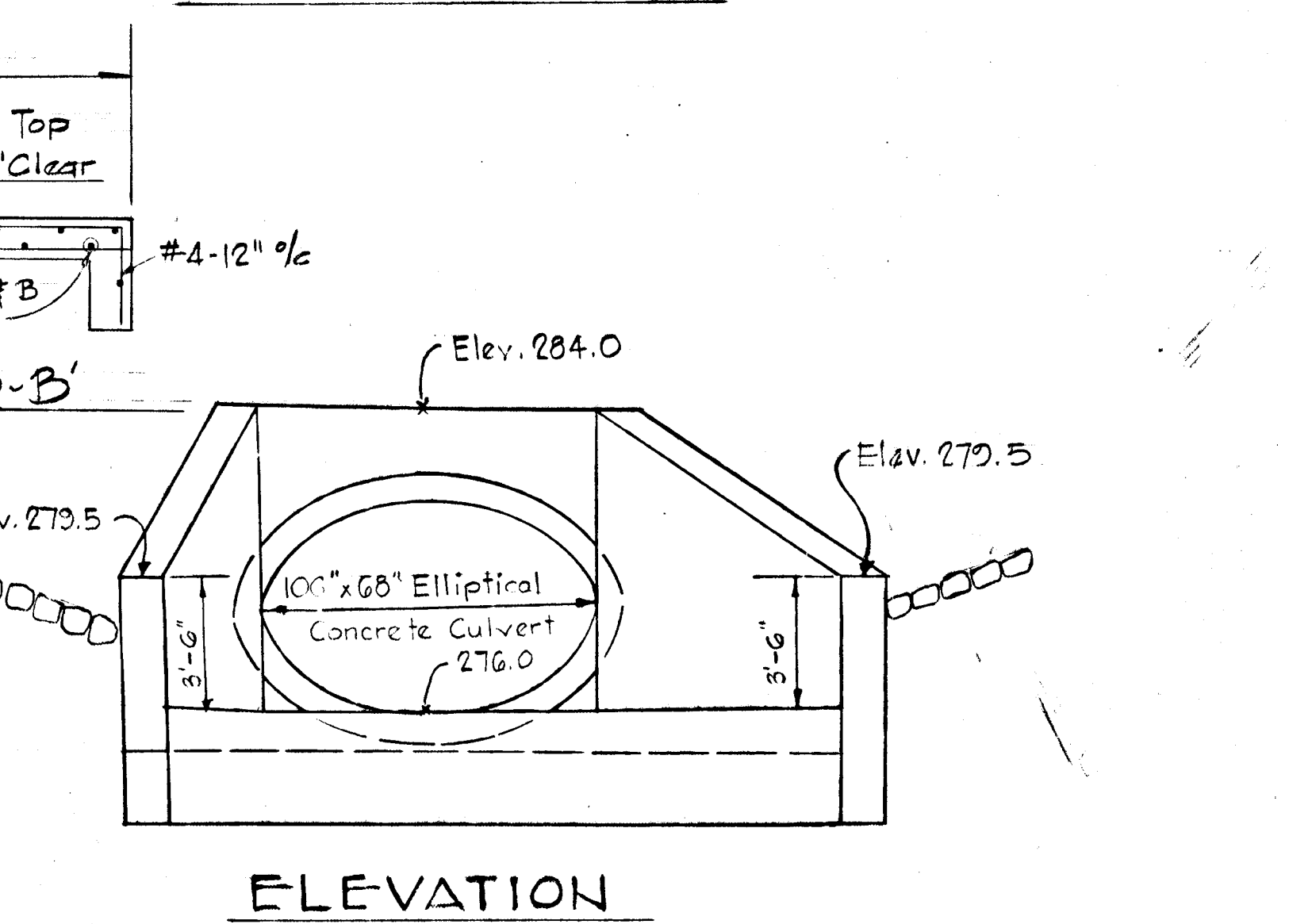
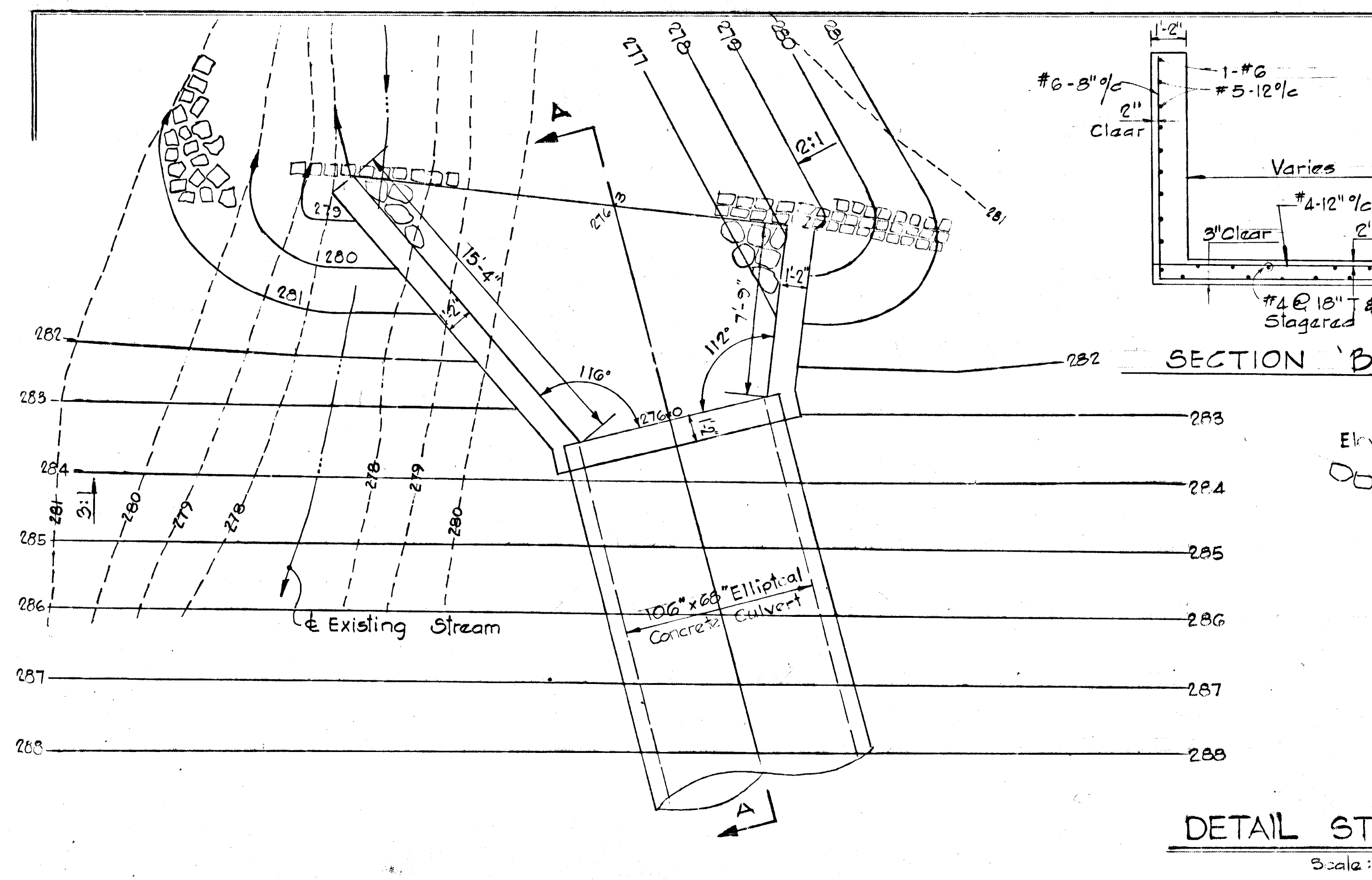
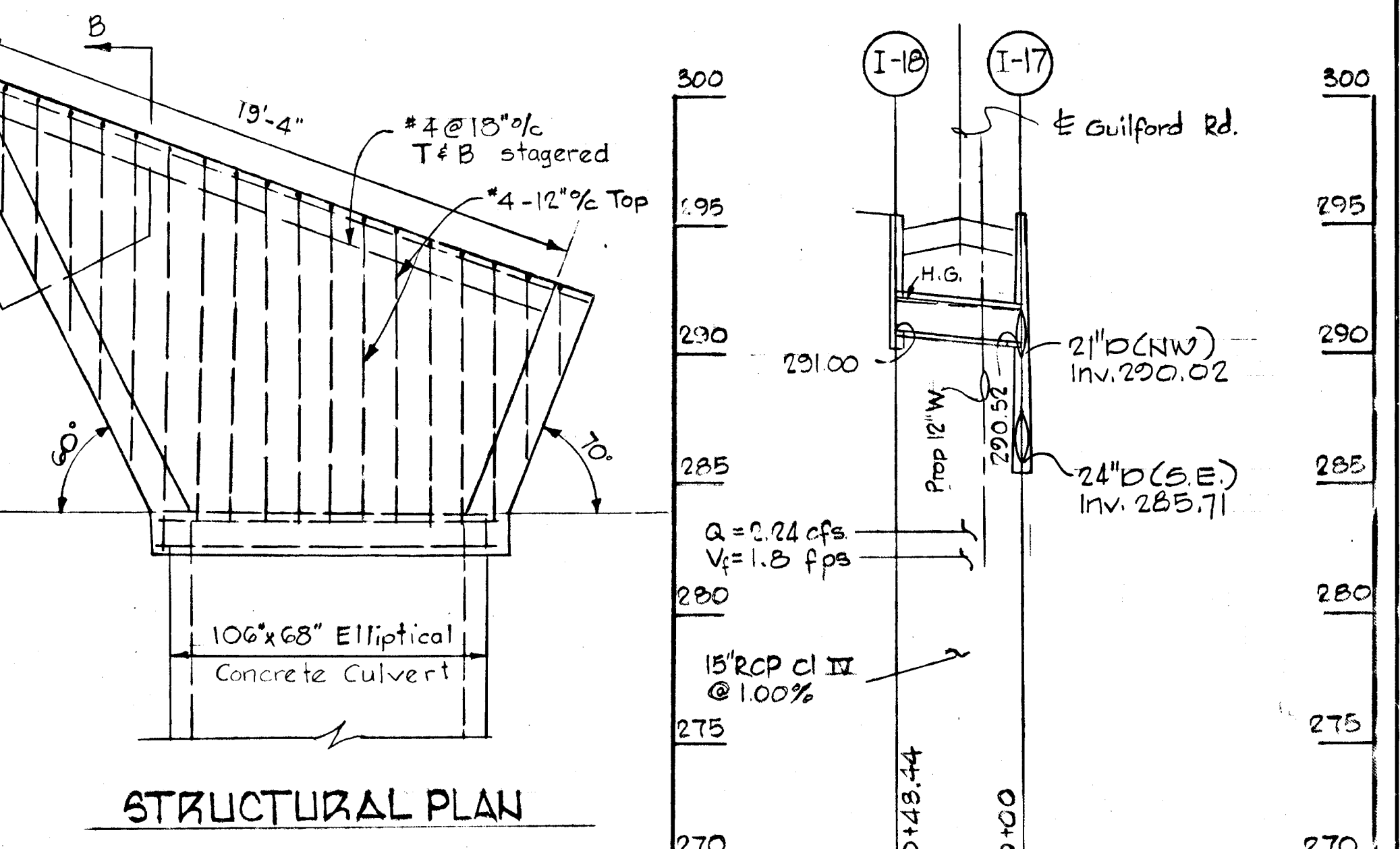
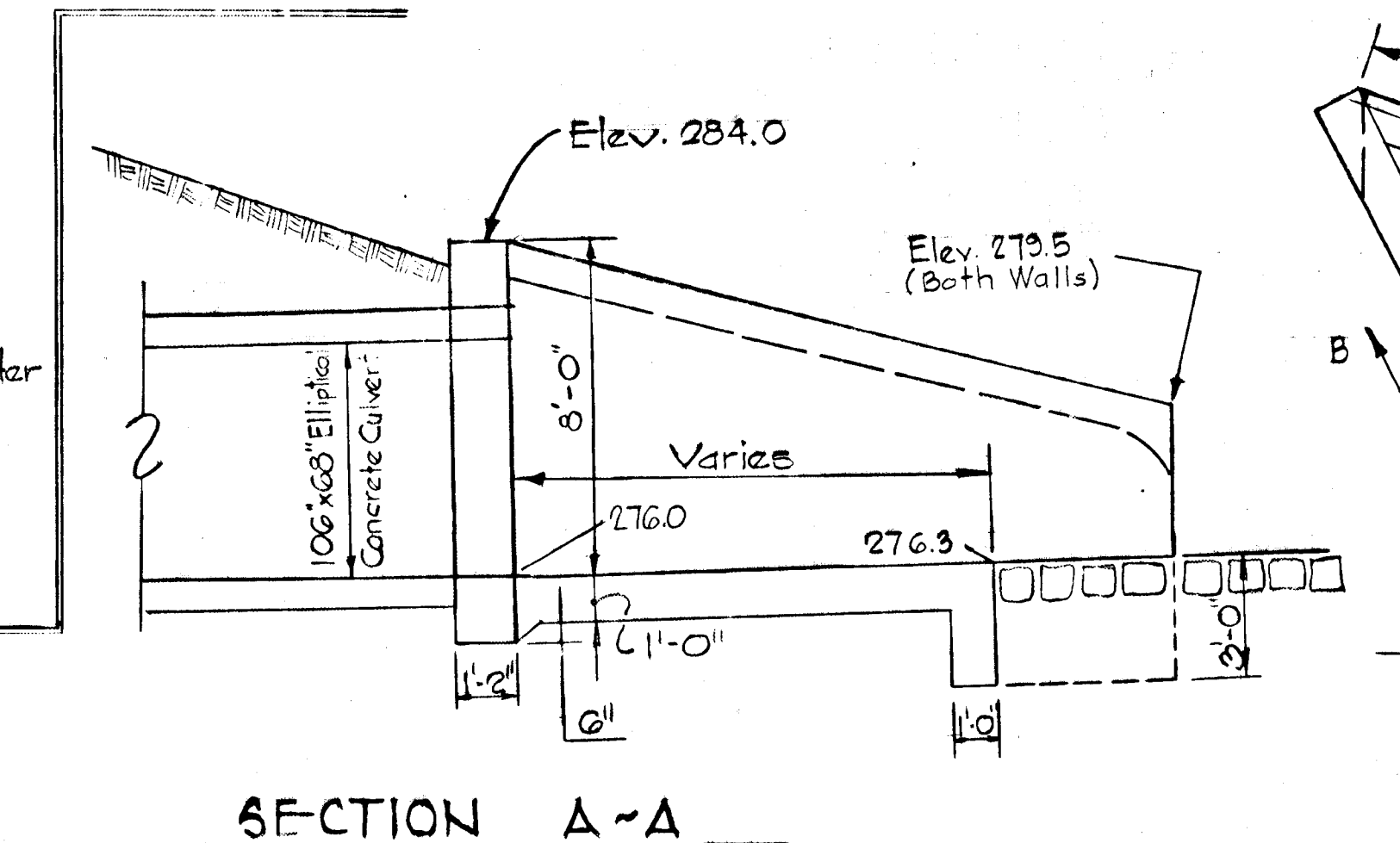
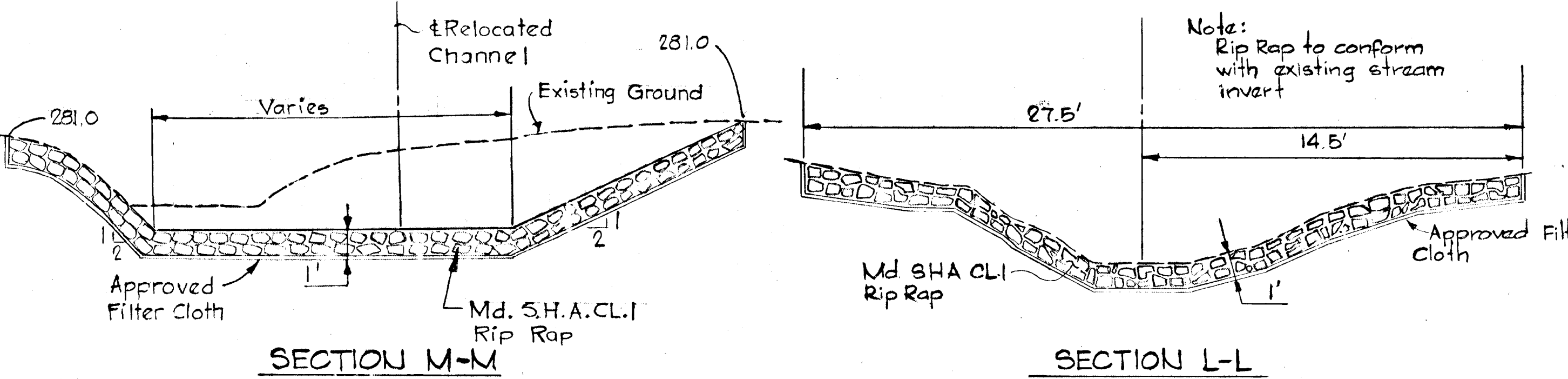
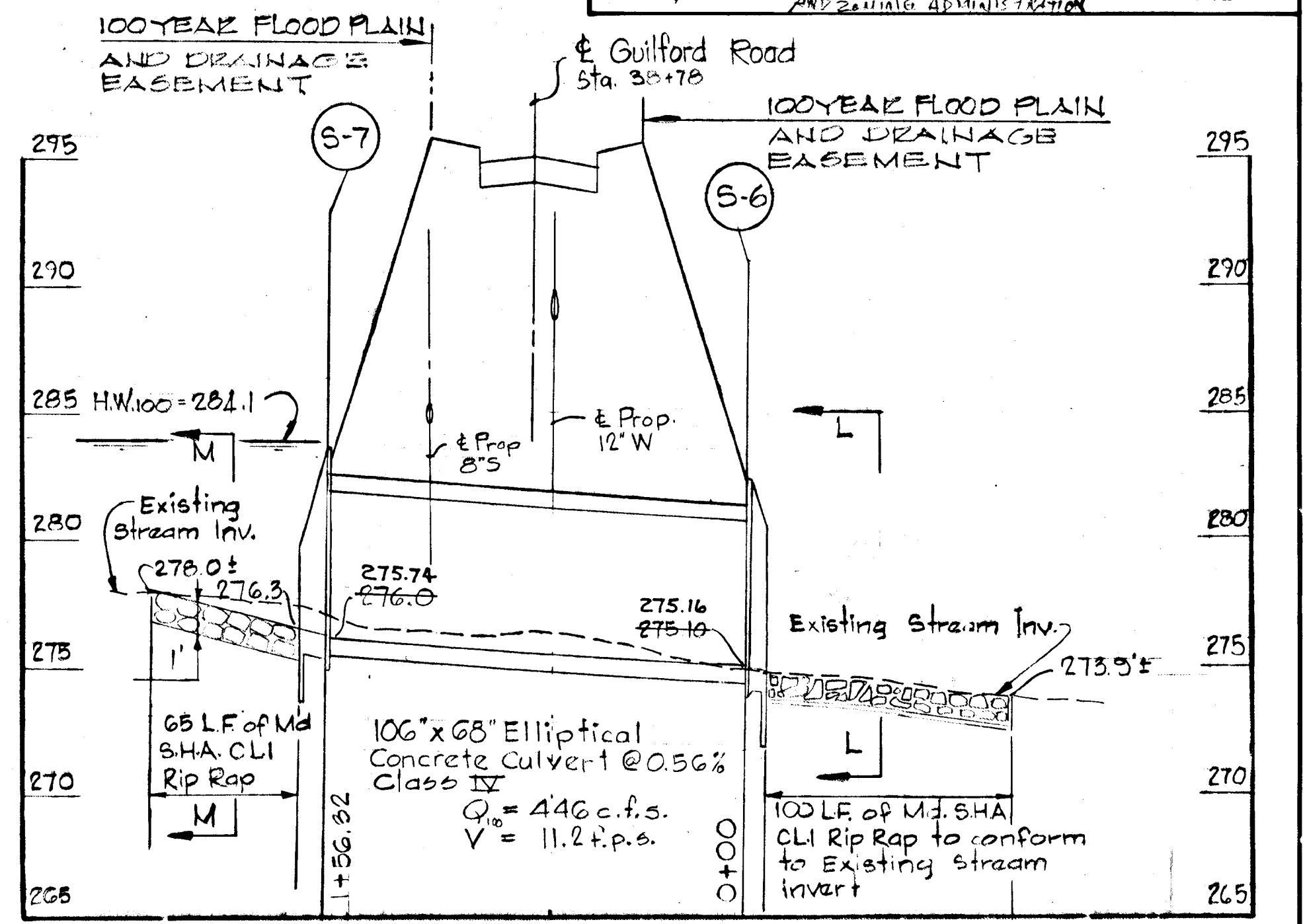
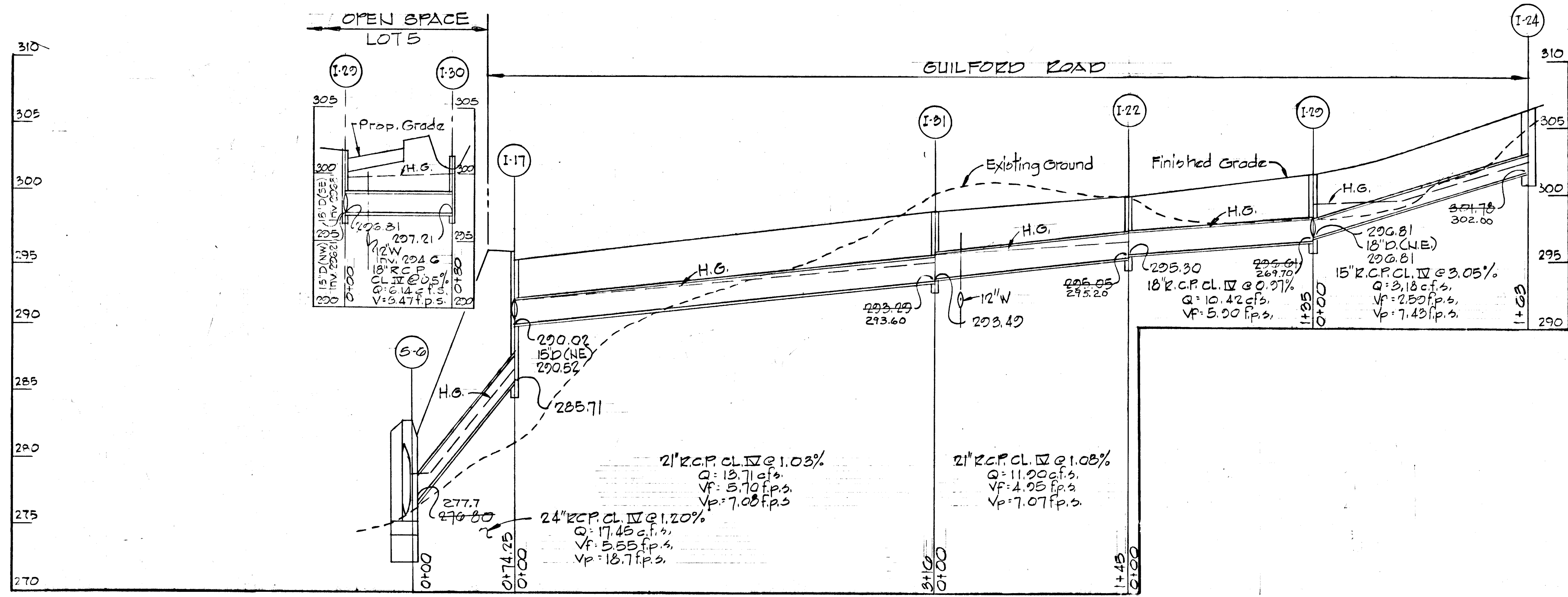
NOTE "A":
 Plastic Filter Cloth shall be bedded and
 smooth surfaced and anchored with steel
 pins before placement of rip rap.



Sheet	2	Author D.W. Latta	May 14, 1982
Revision	1	As per DRW & Sediment Control Comments	
DATE	REV. NO.	REVISION DESCRIPTION	
COLUMBIA 6TH. ELECTION DISTRICT HOWARD COUNTY, MARYLAND			
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION			
PROJECT AREA: RIVERS CORPORATE PARK SECTION 2 AREA 1			
PROJECT TITLE: STORM DRAIN PROFILES			
SCALE: AS SHOWN		DATE	
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202			
<i>Kenneth A. McCord</i> KENNETH A. McCORD REGISTERED ENGINEER			

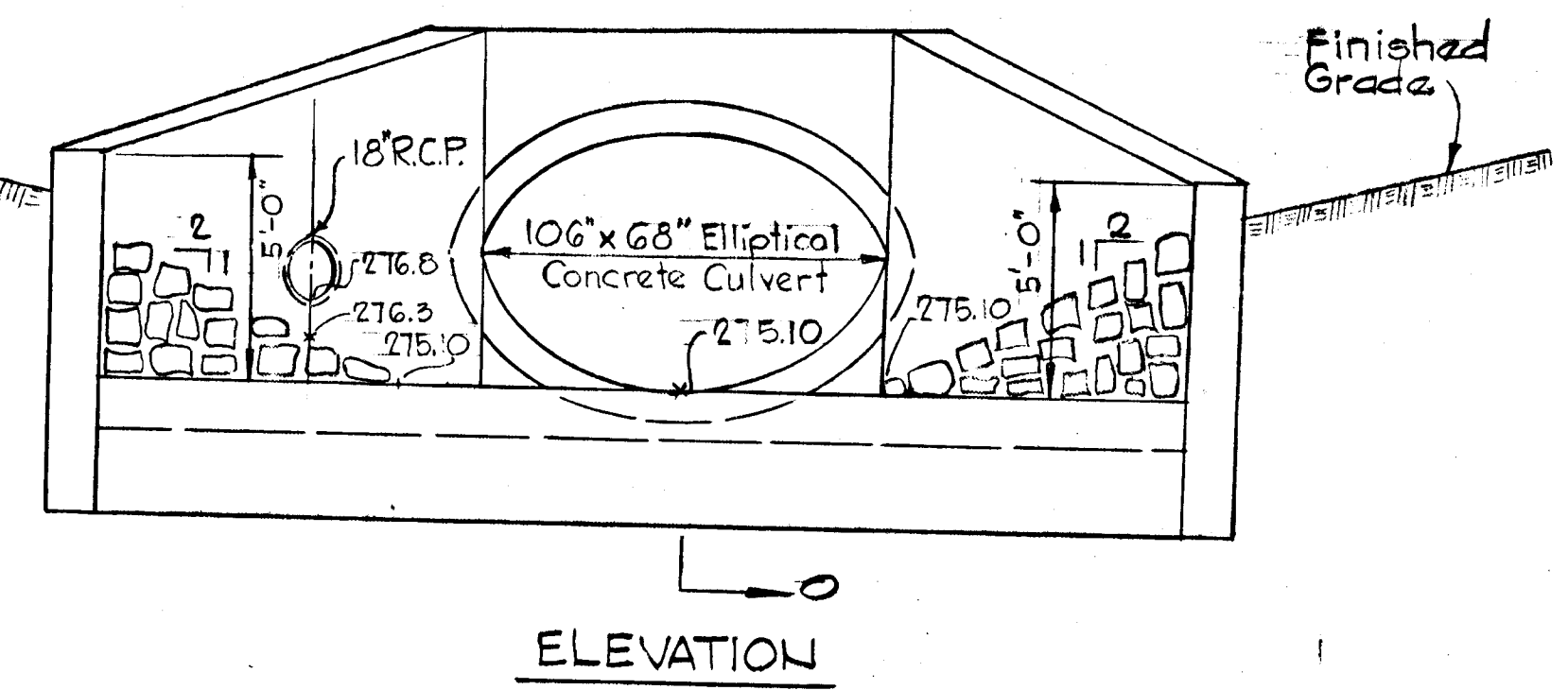
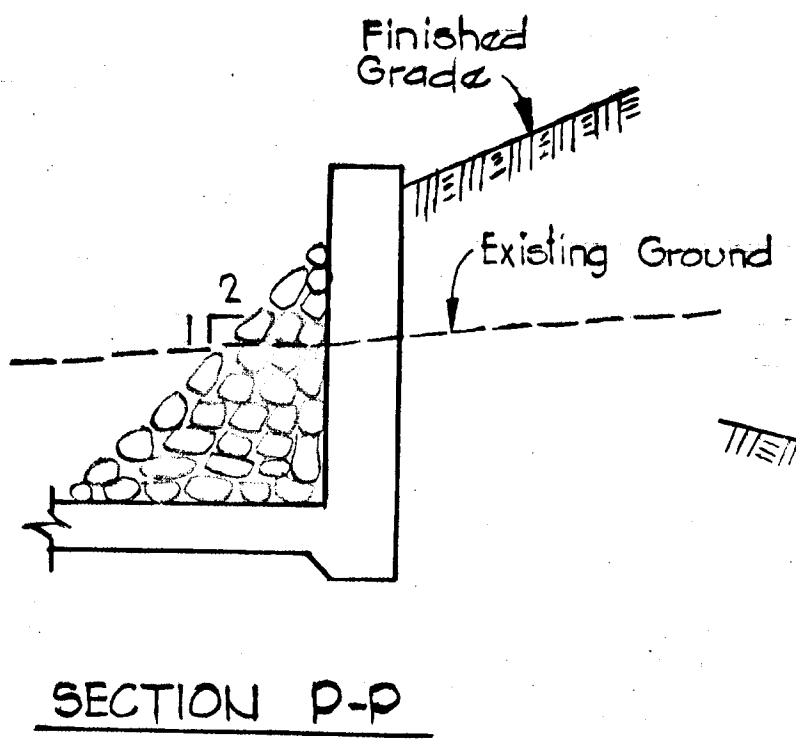
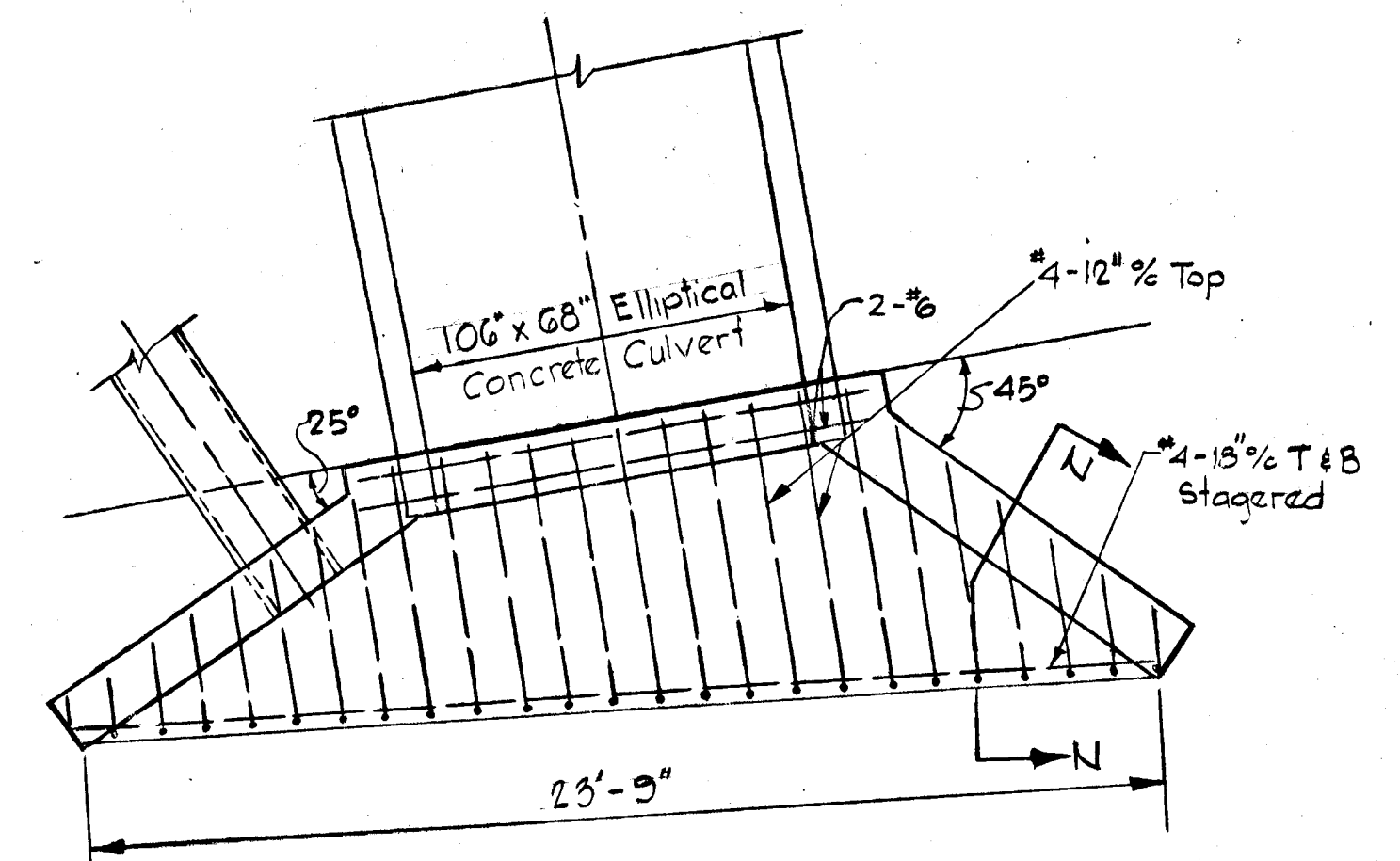
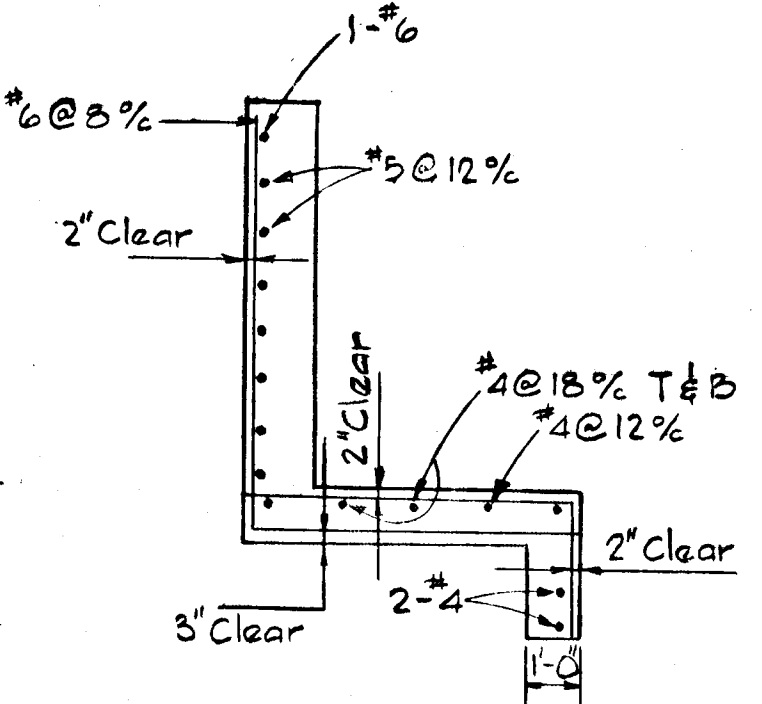
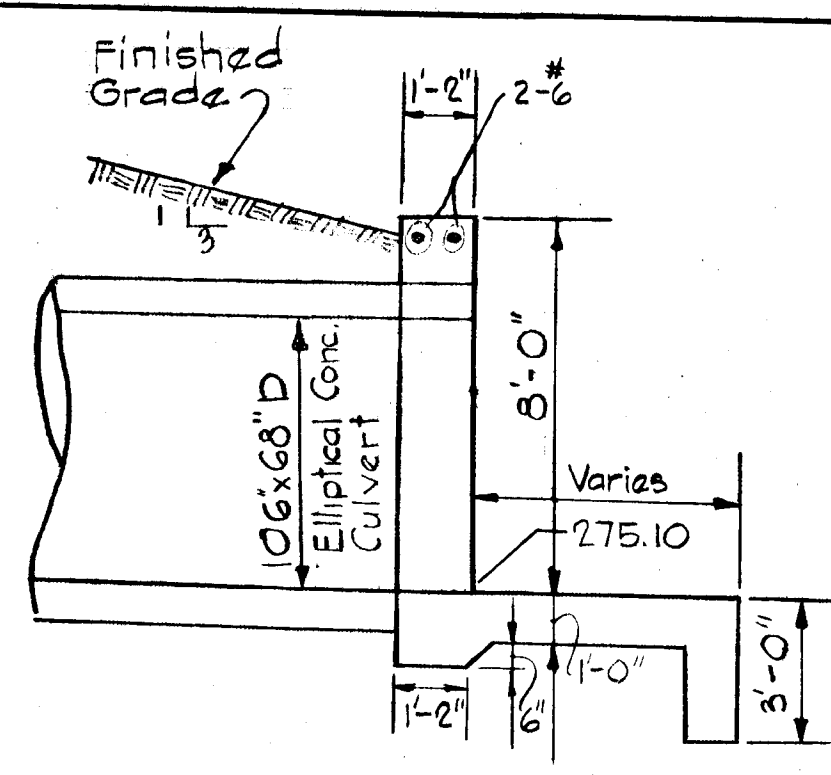
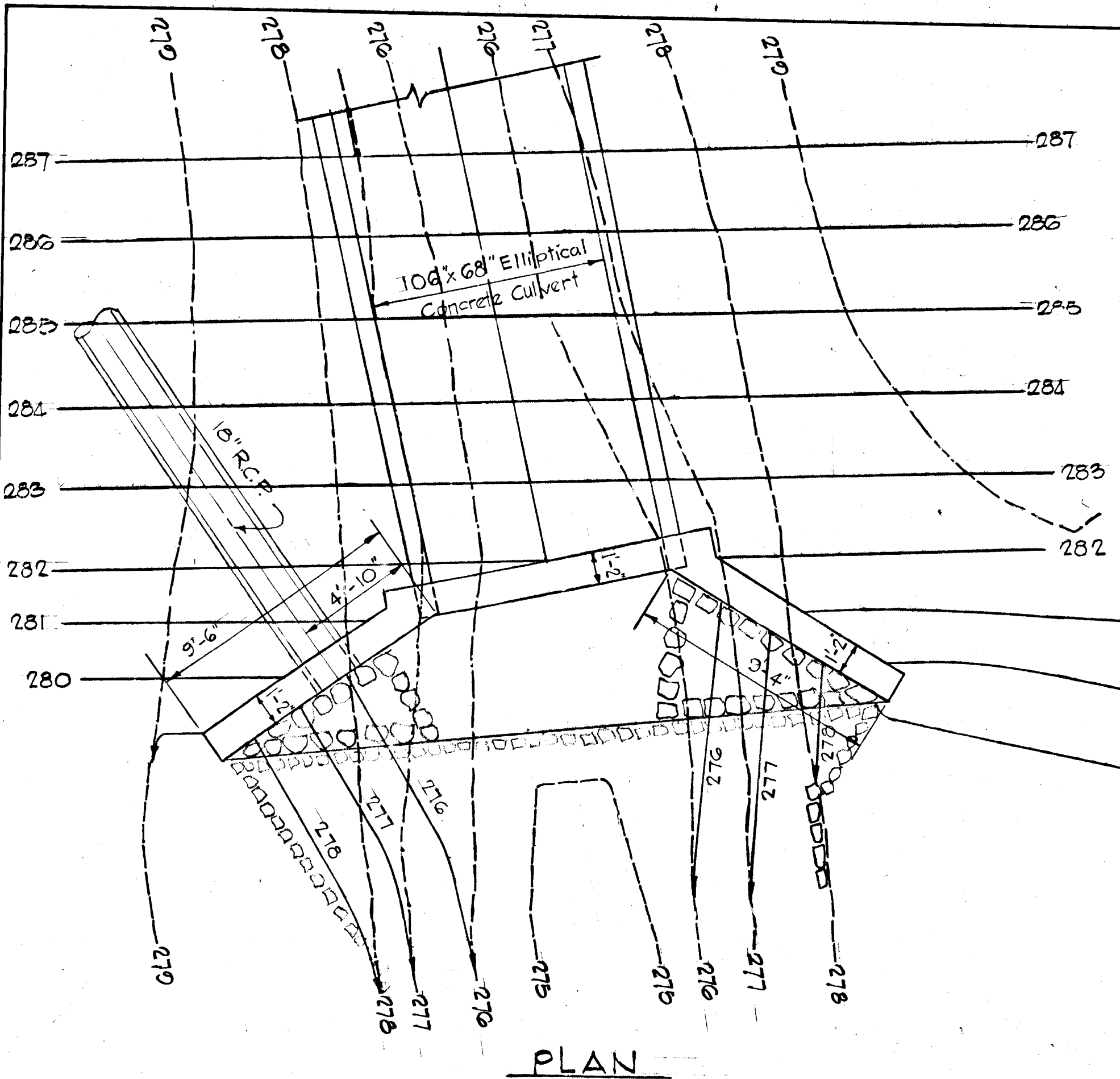
AS-BUILT SURVEY DATA BY
KENNETH A. MCCORD, MD. P.E. 1974
SIGNED, SEALED & DATED 12/1/82.

DEPARTMENT OF PUBLIC WORKS
William S. ... 4/15/82
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING AND ZONING
... 4/15/82
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



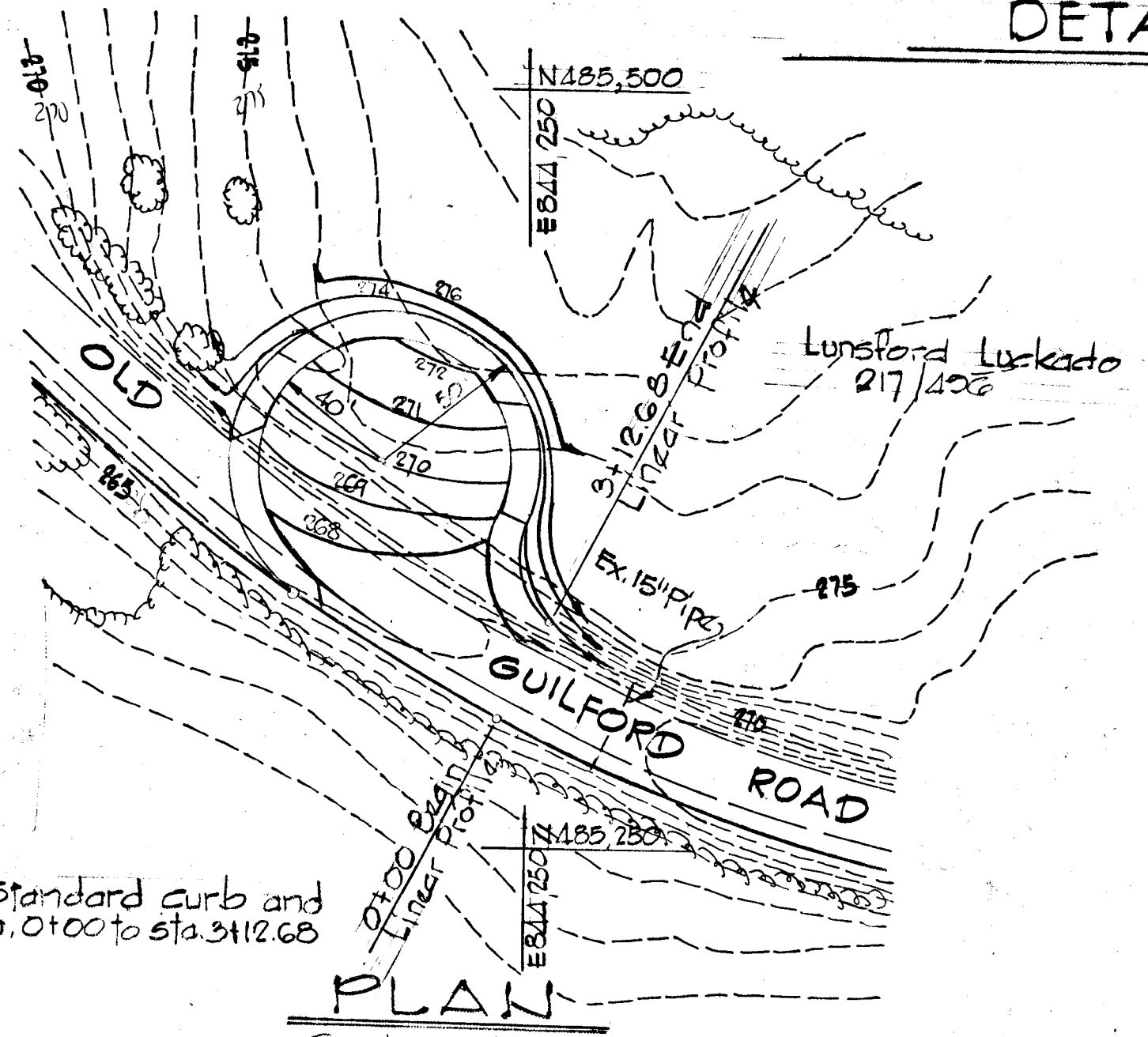
DETAIL STRUCTURE S-7
Scale: 1/8" = 1'-0"

DATE	REV. NO.	REVISION DESCRIPTION
12/1/82	1	As per field changes by H.R.P.
1/15/83	1	As per D.P. & S. 2nd man, control community
COLUMBIA 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: RIVERS CORPORATE PARK SECTION 2 AREA 1		
PROJECT TITLE: STORM DRAIN PROFILES AND DETAILS		
SCALE: AS SHOWN		DATE
WHITMAN, REQUARD AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD REGISTERED ENGINEER NO. 1974		



DETAIL - STRUCTURE S-6

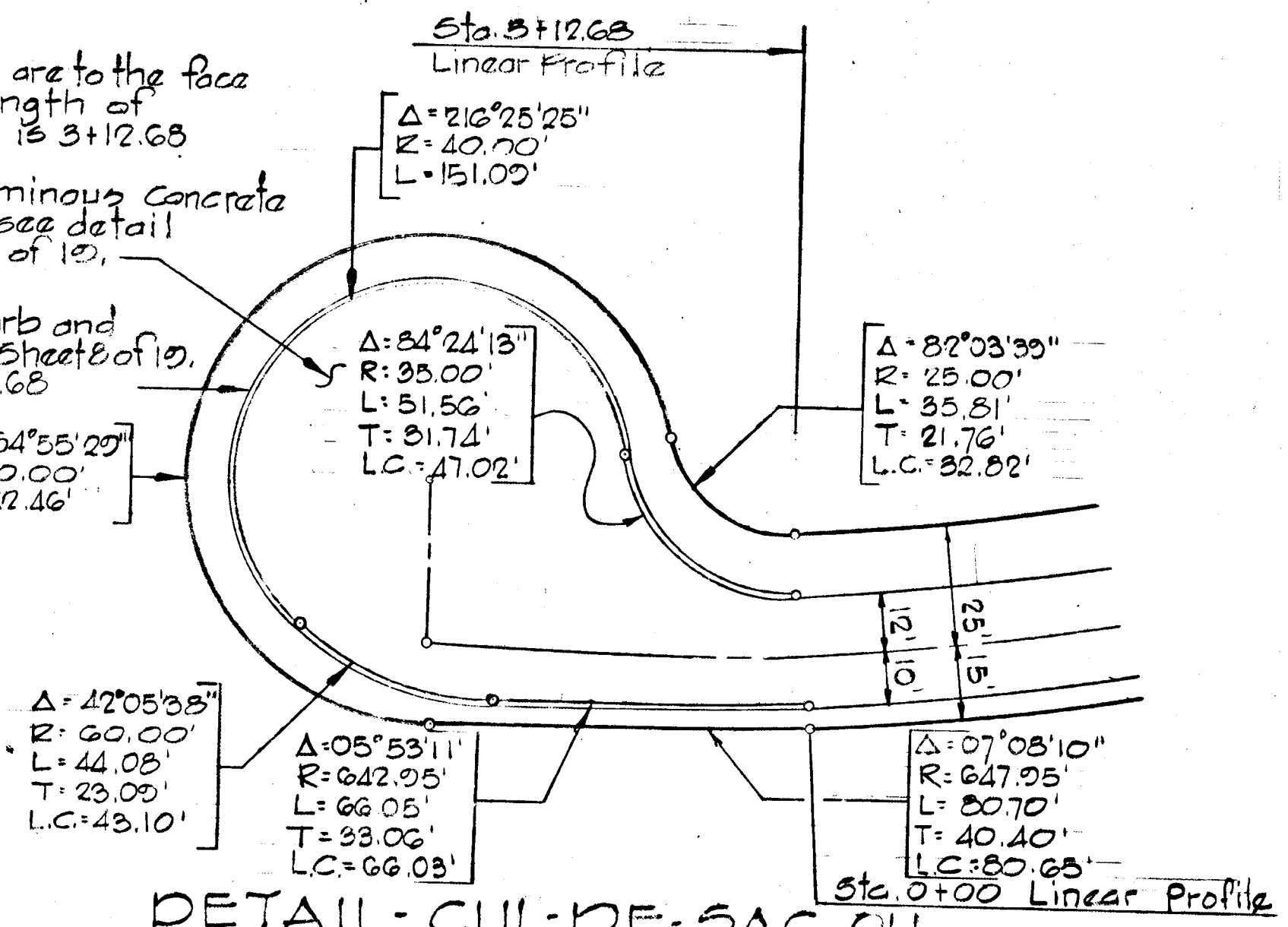
Scale: 1/4" = 1'-0"



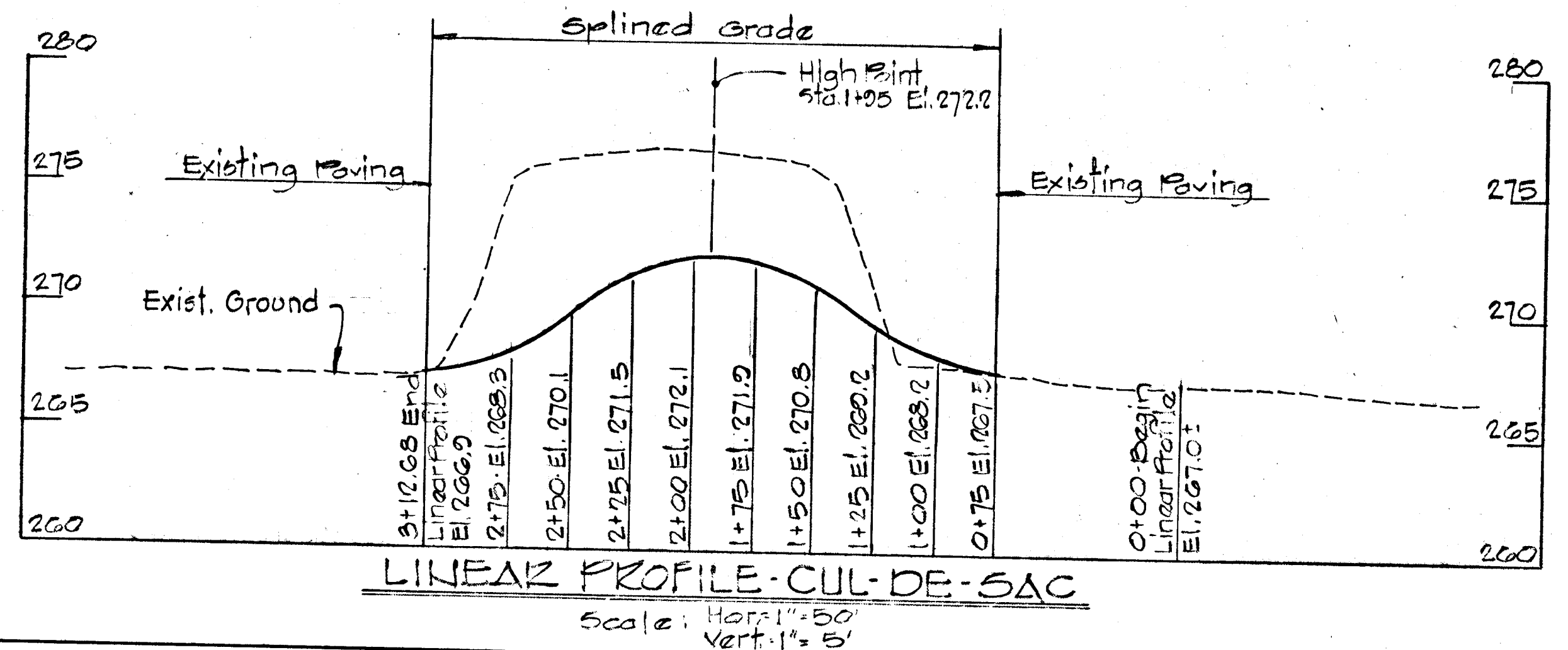
Note:
 All dimensions are to the face of curb. Total length of Linear Profile is 3+12.68

1/2" Bituminous Concrete Paving, see detail Sheet B of 10.

7" Combination Curb and Gutter, see detail Sheet B of 10. Sta. 0+00 to 3+12.68



Note: Construct standard curb and gutter from L.P. Sta. 0+00 to Sta. 3+12.68



DATE	REV. NO.	REVISION DESCRIPTION
2/18/82	1	Revised Guilford Road Cul-de-sac
2/18/82	2	Revised Curb and Gutter Detail

COLUMBIA
 6TH. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA:
 RIVERS CORPORATE PARK
 SECTION 2 AREA 1

PROJECT TITLE:
 STORM DRAIN PROFILES
 AND OLD GUILFORD RD. CUL-DE-SAC

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

Kenneth A. McCord
 REGISTERED ENGINEER
 NO. 1974