

GENERAL NOTES

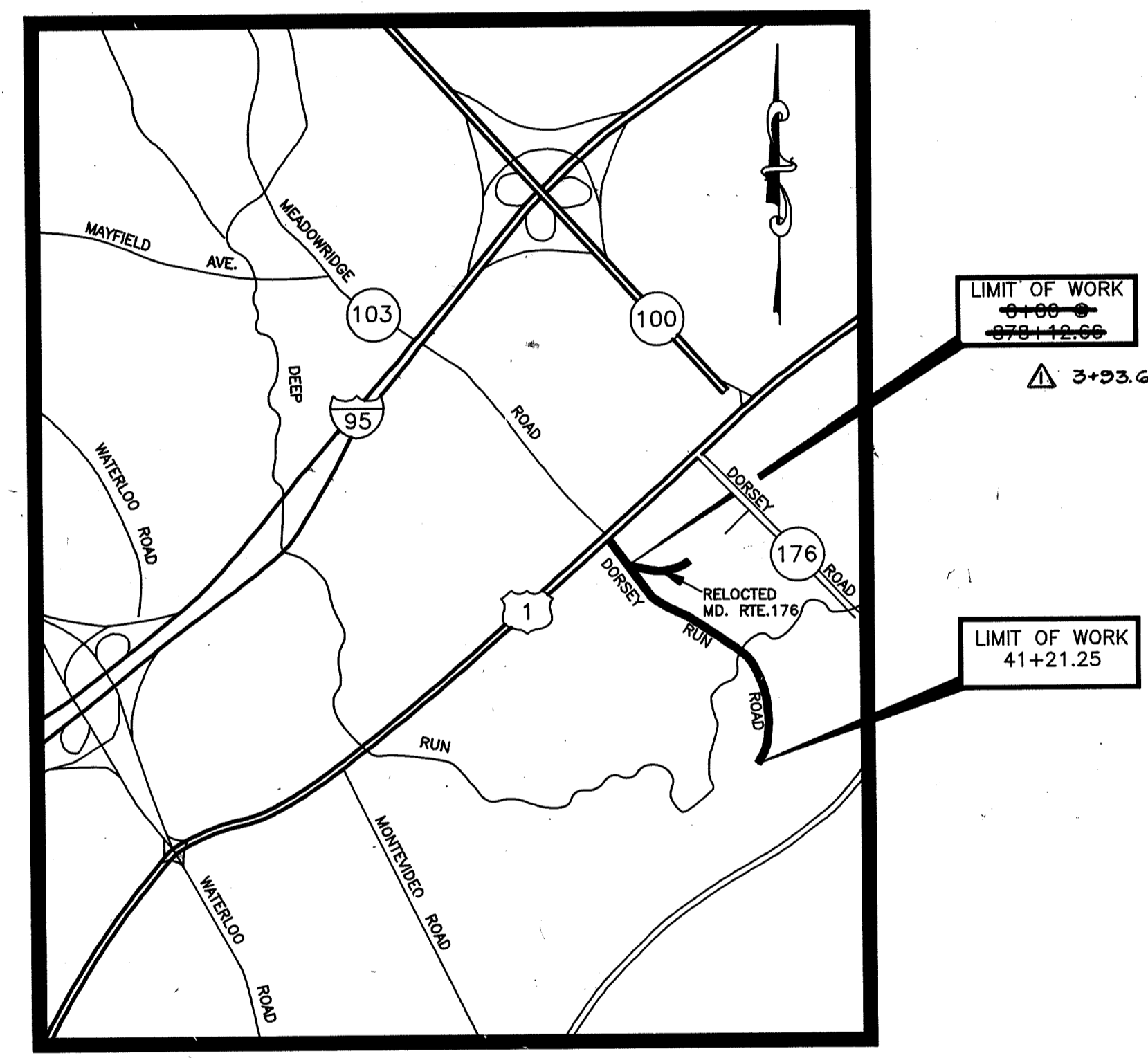
- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Department of Public Works/Construction Inspection Division at (410-313-1880) at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at Least 48 hours prior to any excavation work.
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- A field run survey was conducted by Boender Associates, Inc. on or about Feb. of 1992.
- Light poles and fixtures for street lights shall be in accordance with the latest Howard County Design Manual, Volume III Roads and Bridges.
- Stormwater Management for water quality will be provided.
- Wetlands delineation was performed by Brightwater, Inc. on June 1994.
- Existing utilities were located by a field run survey and approved county As-Builts.

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS
3	ROAD PLAN & PROFILE
4	ROAD PLAN & PROFILE
5	ROAD PLAN & PROFILE
6	SIGNAGE AND TRAFFIC MARKINGS PLAN
7	SIGNAGE AND TRAFFIC MARKINGS PLAN
8	SIGNAGE AND TRAFFIC MARKINGS PLAN
9	DRAINAGE AREA MAP
10	DRAINAGE AREA MAP
11	STORM DRAIN PROFILES
12	STORM DRAIN PROFILES
13	SUPER SPAN PLAN AND PROFILE
14	SUPER SPAN DETAIL
15	SEDIMENT CONTROL PLAN
16	SEDIMENT CONTROL PLAN
17	SEDIMENT CONTROL PLAN
18	SEDIMENT CONTROL DETAILS
19	X-SECTIONS 5+00 to 7+50
20	X-SECTIONS 8+00 to 9+00
21	X-SECTIONS 9+50 to 10+50
22	X-SECTIONS 11+00 to 12+50
23	X-SECTIONS 13+00 to 14+50
24	X-SECTIONS 15+00 to 16+00
25	X-SECTIONS 16+50 to 17+50
26	X-SECTIONS 18+00 to 19+00
27	X-SECTIONS 19+50 to 21+00
28	X-SECTIONS 21+50 to 22+50
29	X-SECTIONS 23+00 to 24+50
30	X-SECTIONS 25+00 to 26+00
31	X-SECTIONS 26+50 to 28+00
32	X-SECTIONS 28+50 to 30+00
33	X-SECTIONS 30+50 to 31+50
34	X-SECTIONS 32+00 to 33+00
35	X-SECTIONS 33+50 to 34+50
36	X-SECTIONS 35+00 to 36+00
37	X-SECTIONS 36+50 to 37+50
38	X-SECTIONS 38+00 to 39+00
39	X-SECTIONS 39+50 to 40+50
40	X-SECTIONS 41+00
2A	WATER RELOCATION
1	8" WATER MAIN

PART OF PHASE I NOT IN THIS CONTRACT

CROSS SECTIONS NOT PART OF CONTRACT. SUPPLIED TO CONTRACTOR AS A SEPERATE DOCUMENT.

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS



SCALE : 1" = 2000'

DORSEY RUN ROAD ROADWAY IMPROVEMENTS CAPITAL PROJECT J-4114

CUT AND FILL SUMMARY

STATION	AREAS		VOLUMES		CUMULATIVE VOLUMES	
	CUT	FILL	CUT 0.85	FILL	CUT 0.85	FILL
5+28.23	81.88	73.05	57.47	65.15	57.47	65.15
6+50	73.70	76.79	114.63	150.74	172.10	215.89
6+50	69.95	84.00	88.96	132.34	261.06	348.22
6+41.45	66.41	88.42	17.65	27.90	278.77	376.12
6+50	65.80	89.35	95.68	173.28	374.45	548.40
7+00	52.16	99.10	67.85	200.65	442.24	750.05
7+50	30.06	119.35	24.35	282.73	466.59	1032.79
8+00	0.00	188.43	0.00	536.58	466.59	1569.38
8+50	0.00	391.07	0.00	917.79	466.59	2487.15
8+50	0.00	595.31	0.00	415.37	466.59	2902.50
9+17.76	0.00	644.56	0.00	904.74	466.59	3807.24
9+50	0.00	859.59	0.00	1916.66	466.59	5723.90
10+00	0.00	1219.11	0.00	2406.05	466.59	8129.95
10+50	0.00	1379.13	0.00	2505.82	466.59	10635.78
11+00	0.00	1327.16	0.00	2189.42	466.59	12825.20
11+50	0.00	1037.42	0.00	1612.49	466.59	14437.69
12+00	0.00	704.06	0.00	984.91	466.59	15422.60
12+50	0.00	359.64	0.00	442.37	500.21	15864.97
13+00	42.71	118.13	130.08	186.67	630.28	16031.85
13+50	122.56	61.88	201.86	105.81	832.15	16137.25
14+00	133.92	52.18	281.20	65.86	1093.34	16203.21
14+50	197.96	19.00	258.70	96.12	1352.04	16399.33
15+00	130.74	192.74	38.20	14.77	1390.24	16549.11
15+13.63	47.25	450.44	27.57	780.00	1417.81	17329.10
15+50	0.14	778.67	4.00	1368.18	1421.81	18697.28
16+00	4.78	716.84	30.20	1056.92	1452.01	19754.20
16+50	32.32	438.83	159.35	485.07	1611.35	20239.27
17+00	164.75	86.69	811.24	86.34	2022.60	20325.61
17+50	85.63	0.00	1392.44	0.00	3813.04	20325.61
18+00	11.48	0.00	1058.17	0.00	4873.20	20325.61
18+34.61	1030.58	0.00	504.19	0.00	5377.39	20325.61
18+50	1050.75	0.00	1731.02	0.00	7108.41	20325.61
19+00	1148.66	0.00	1762.58	0.00	8870.99	20325.61
19+50	1080.85	0.00	1767.69	0.00	10638.68	20325.61
20+00	1155.15	0.00	1559.54	0.00	12198.22	20325.61
20+50	826.39	0.00	743.86	61.32	12942.08	20386.93
21+00	118.75	66.22	0.00	0.00	12942.08	20386.93

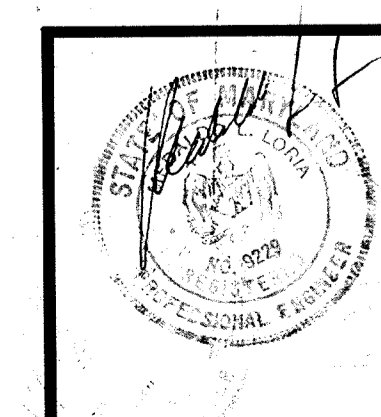
STATION	AREAS		VOLUMES		CUMULATIVE VOLUMES	
	CUT	FILL	CUT 0.85	FILL	CUT 0.85	FILL
23+50	270.61	15.98	1029.33	14.79	1029.33	14.79
24+00	1037.24	0.00	1414.18	0.00	2443.51	14.79
24+50	758.61	0.00	939.56	20.75	3383.07	35.57
25+00	434.19	22.44	25.21	1.67	3408.28	37.25
25+01.86	26.33	26.07	433.24	234.20	3841.52	271.44
25+50	156.29	231.60	117.60	775.99	3959.12	1047.44
26+00	0.00	596.96	0.00	940.81	3959.12	1988.25
26+50	0.00	415.20	38.23	488.50	3997.35	2476.74
27+00	48.79	118.15	207.05	132.36	4204.40	2809.11
27+50	212.85	28.04	448.20	25.19	4649.61	2834.29
28+00	350.78	0.00	645.91	0.00	5295.52	2834.29
28+50	467.02	0.00	773.21	0.00	6068.73	2834.29
29+00	514.62	0.00	798.59	0.00	6867.32	2834.29
29+50	501.56	0.00	823.87	0.00	7691.19	2834.29
30+00	545.23	0.00	873.12	0.00	8564.31	2834.29
30+50	562.71	0.00	911.23	0.00	9475.52	2834.29
31+00	594.91	0.00	1009.03	0.00	10554.55	2834.29
31+50	776.65	0.00	1319.09	0.00	11861.64	2834.29
32+00	883.54	0.00	1552.67	0.00	13214.31	2834.29
32+50	833.59	0.00	1281.08	0.00	14495.37	2834.29
33+00	789.06	0.00	1390.69	0.00	15886.06	2834.29
33+50	969.06	0.00	1645.82	0.00	17531.57	2834.29
34+00	1115.90	0.00	1735.75	0.00	19267.32	2834.29
34+50	1089.46	0.00	1602.02	0.00	20869.34	2834.29
35+00	949.89	0.00	1436.51	0.00	22305.85	2834.29
35+50	884.73	0.00	1295.10	0.00	23600.94	2834.29
36+00	769.64	0.00	1084.81	0.00	24687.76	2834.29
36+50	614.11	0.00	745.63	1.57	25433.39	2835.86
37+00	329.76	1.72	387.76	38.75	25821.15	2875.61
37+50	167.07	40.01	219.56	123.54	26040.71	2799.15
38+00	15.64	89.97	182.11	153.17	26222.82	2952.32
38+50	115.50	71.16	220.70	125.22	26443.52	3077.54
39+00	168.02	60.57	265.02	161.50	26708.55	3239.05
39+50	172.83	109.50	181.11	274.52	26889.66	3513.56
40+00	61.09	179.98	74.41	294.72	26964.07	3808.29
40+50	35.36	131.05	125.09	186.89	27089.16	3993.18
41+00	125.56	65.79	71.61	34.25	27160.77	4029.43
41+15	176.29	54.25	0.00	0.00	27160.77	4029.42

SUMMARY:
TOTAL CUT = 40,002 C.Y.
TOTAL FILL = 24,587 C.Y.
WASTE = 15,415 C.Y.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/16/95 DATE *[Signature]* 5/15/95 DATE
DIRECTOR OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS

[Signature] 5/16/95 DATE *[Signature]* 5/16/95 DATE
CHIEF, BUREAU OF ENGINEERING CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE



10/24/95	REVISION NO. 1
DATE	REVISION

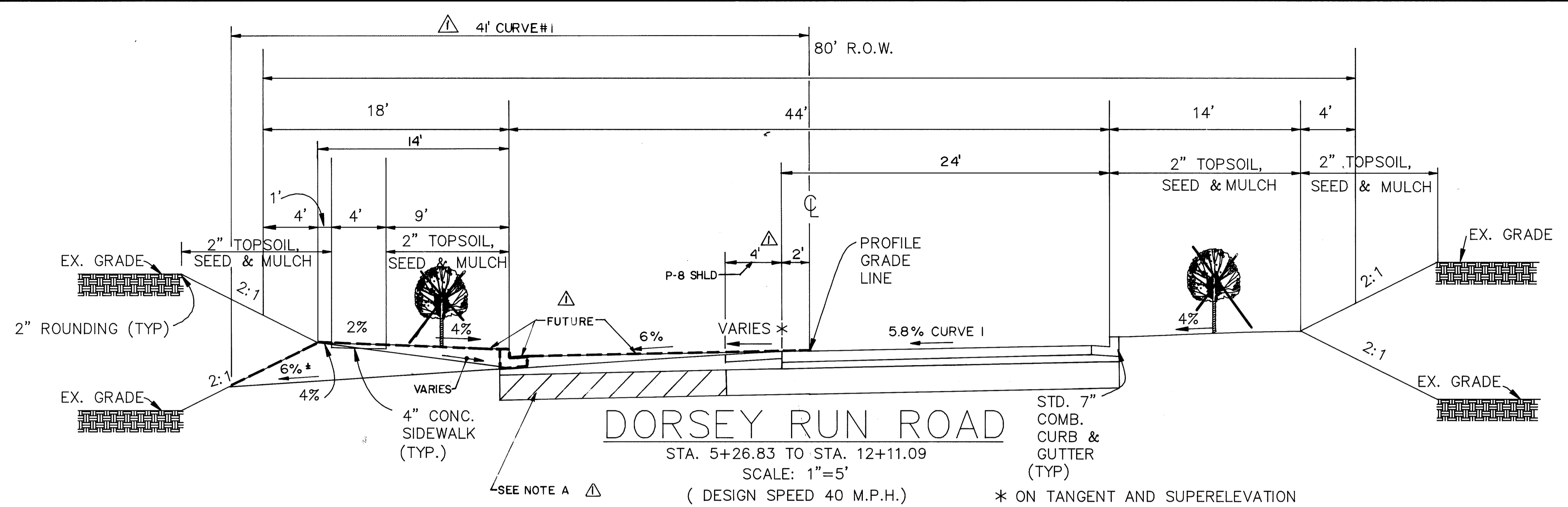
TITLE SHEET
PROJECT: DORSEY RUN ROAD, PHASE II
LOCATION: 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
TAX MAP: 43 PARCEL: BLOCK:
DESIGN REFERENCE: COUNTY FILE NO. J-4114
SCALE: AS SHOWN DESIGNED BY: BAWN BY: CHECKED BY: DATE: 5/16/95
FIELD BOOK: MAKE: 1895
DATE: REVISION: BY:

Boender Associates
ENGINEERS - PLANNERS - SURVEYORS

3230 BETHANY LANE
ELLCOTT CITY, MD. 21102
(410) 465-7777 FAX: (410) 465-7966

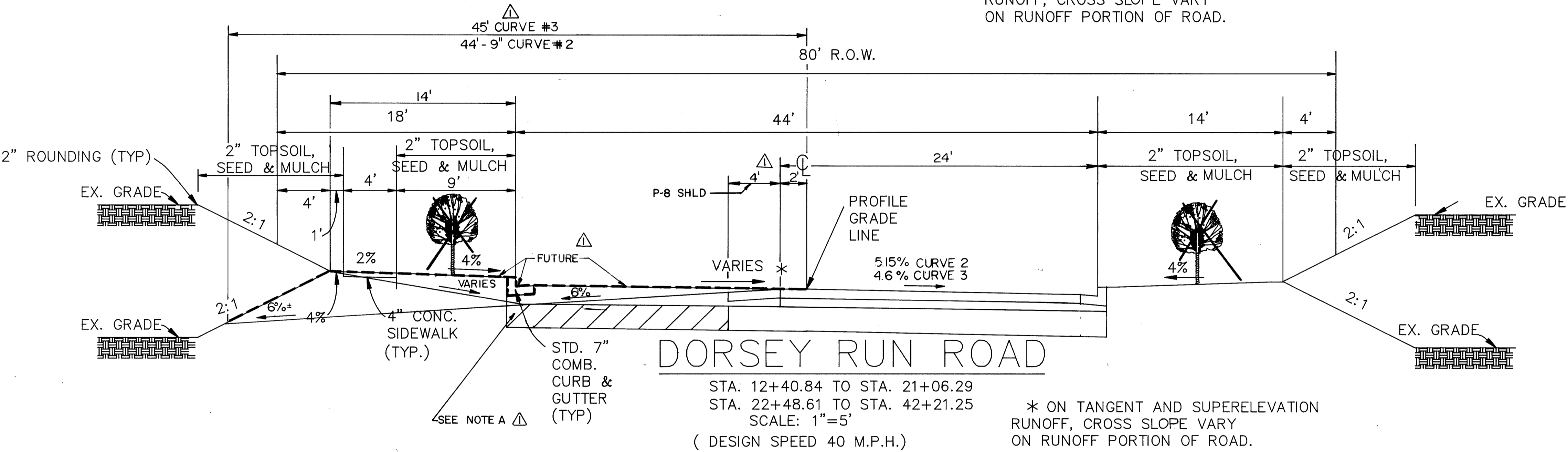
107

SUPER ELEVATION DATA			
ITEM	CURVE 1	CURVE 2	CURVE 3
BEGIN TANGENT RUNOFF NORMAL SECTION	SE+0.050'/FT. 3+48.12	SE+0.050'/FT. 12+40.84	SE+0.046'/FT. 22+48.61
END TANGENT RUNOFF BEGIN S/E RUNOFF HALF LEVEL	4+48.12	13+40.84	23+48.61
INCLINE PLAIN	5+48.12	14+40.84	24+48.61
PC STATION	PC 6+41.45	PC 15+12.51	PC 25+01.94
BEGIN FULL S/E	7+38.12	15+98.34	25+78.61
END FULL S/E	8+21.09	17+48.79	40+44.58
PT STATION	PT 9+17.76	PT 18+34.62	PT 41+21.25
INCLINE PLAIN	10+11.09	19+06.29	41+74.58
END S/E RUNOFF BEGIN TANGENT RUNOFF HALF LEVEL	11+11.09	20+06.29	42+74.58
END TANGENT RUNOFF NORMAL SECTION	12+11.09	21+06.29	43+74.58



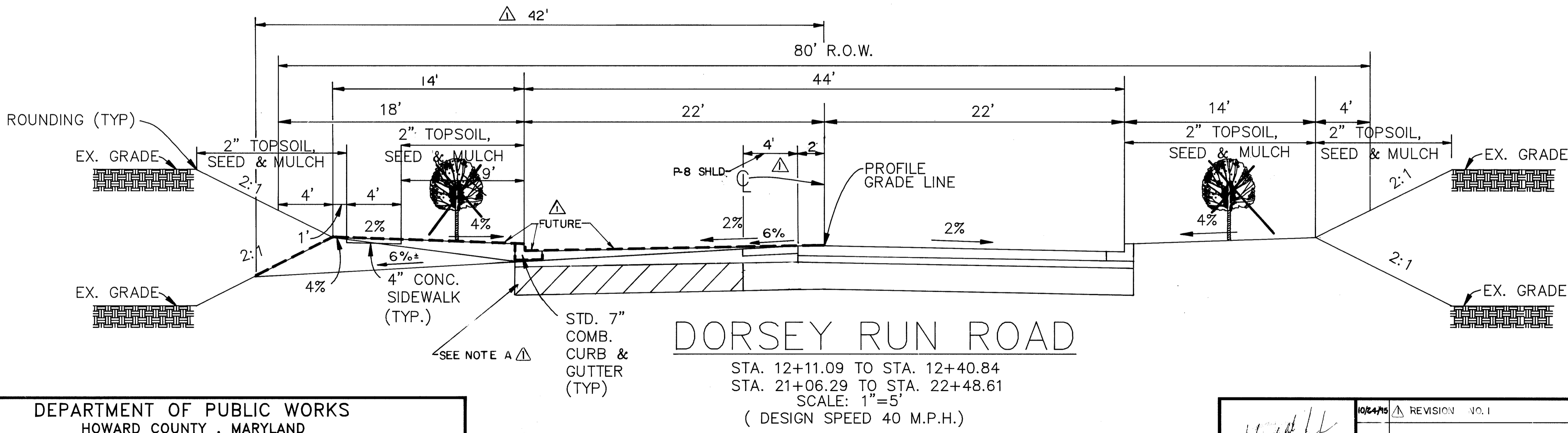
DORSEY RUN ROAD
 STA. 5+26.83 TO STA. 12+11.09
 SCALE: 1"=5'
 (DESIGN SPEED 40 M.P.H.)

* ON TANGENT AND SUPERELEVATION RUNOFF, CROSS SLOPE VARY ON RUNOFF PORTION OF ROAD.



DORSEY RUN ROAD
 STA. 12+40.84 TO STA. 21+06.29
 STA. 22+48.61 TO STA. 42+21.25
 SCALE: 1"=5'
 (DESIGN SPEED 40 M.P.H.)

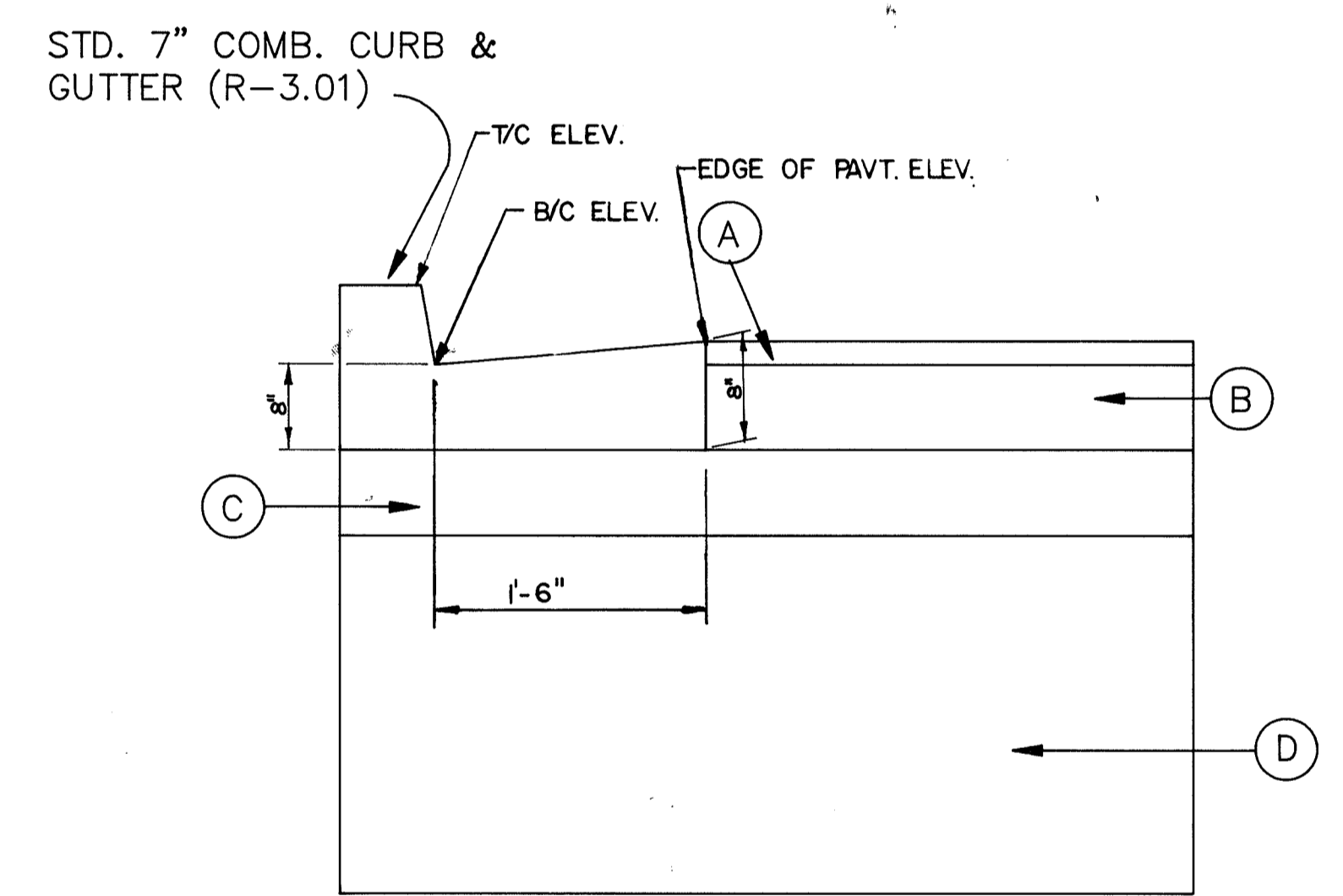
* ON TANGENT AND SUPERELEVATION RUNOFF, CROSS SLOPE VARY ON RUNOFF PORTION OF ROAD.



DORSEY RUN ROAD
 STA. 12+11.09 TO STA. 12+40.84
 STA. 21+06.29 TO STA. 22+48.61
 SCALE: 1"=5'
 (DESIGN SPEED 40 M.P.H.)

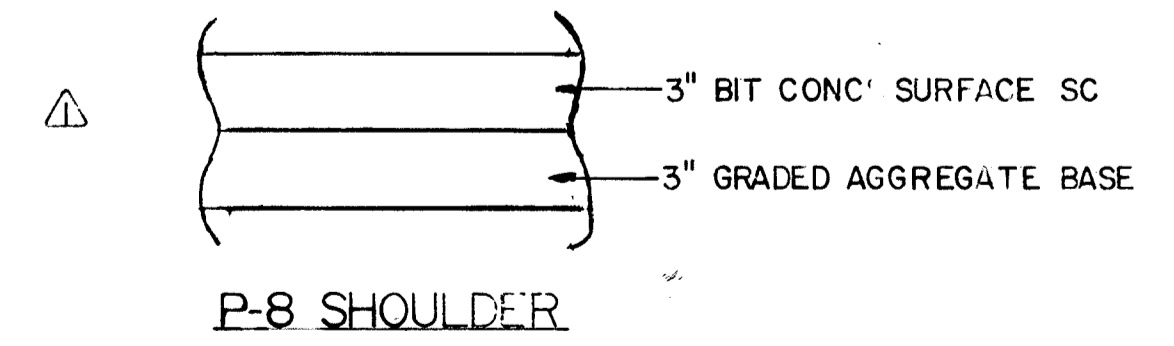
NOTES:
 A. TYPE II BORROW EXCAVATION IS TO BE PLACED IN FILL AREA ONLY

DORSEY RUN ROAD
HOWARD COUNTY
PAVING DETAIL
 NOT TO SCALE



- A 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, SC
- B 6 1/2" BITUMINOUS CONCRETE BASE COURSE, BC
- C 6" STABILIZED AGGREGATE BASE COURSE WITH PORTLAND CEMENT
- D 24" TYPE II BORROW SOIL CLASS I EXCAVATION

SEE SHEET 3 OF 40 FOR TYPICAL SECTION STA. 3+93.61 TO 5+26.83 AND WIDENING MD RTE 176 STA. 880+565 TO 881+610



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 5/15/95
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 5/15/95
 CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 5/12/95
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 5/12/95
 CHIEF DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

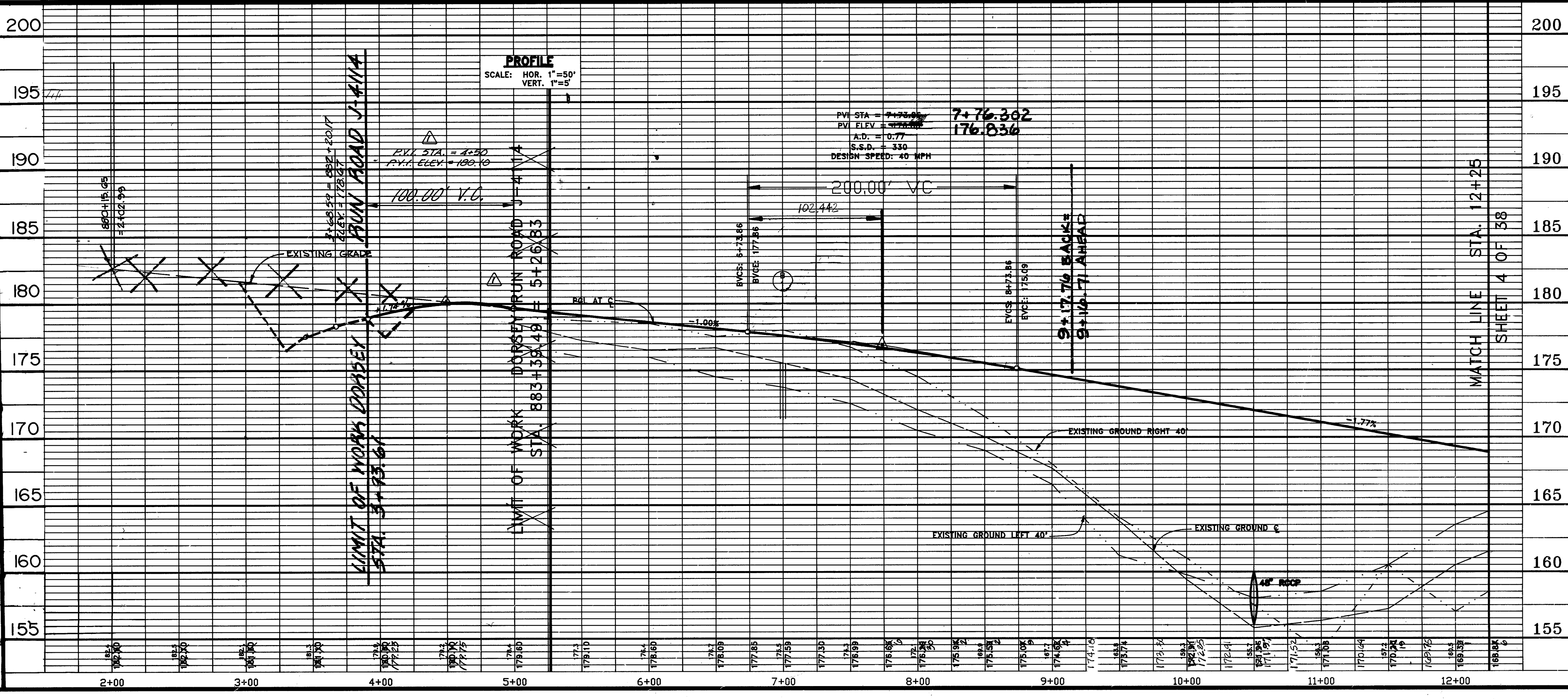
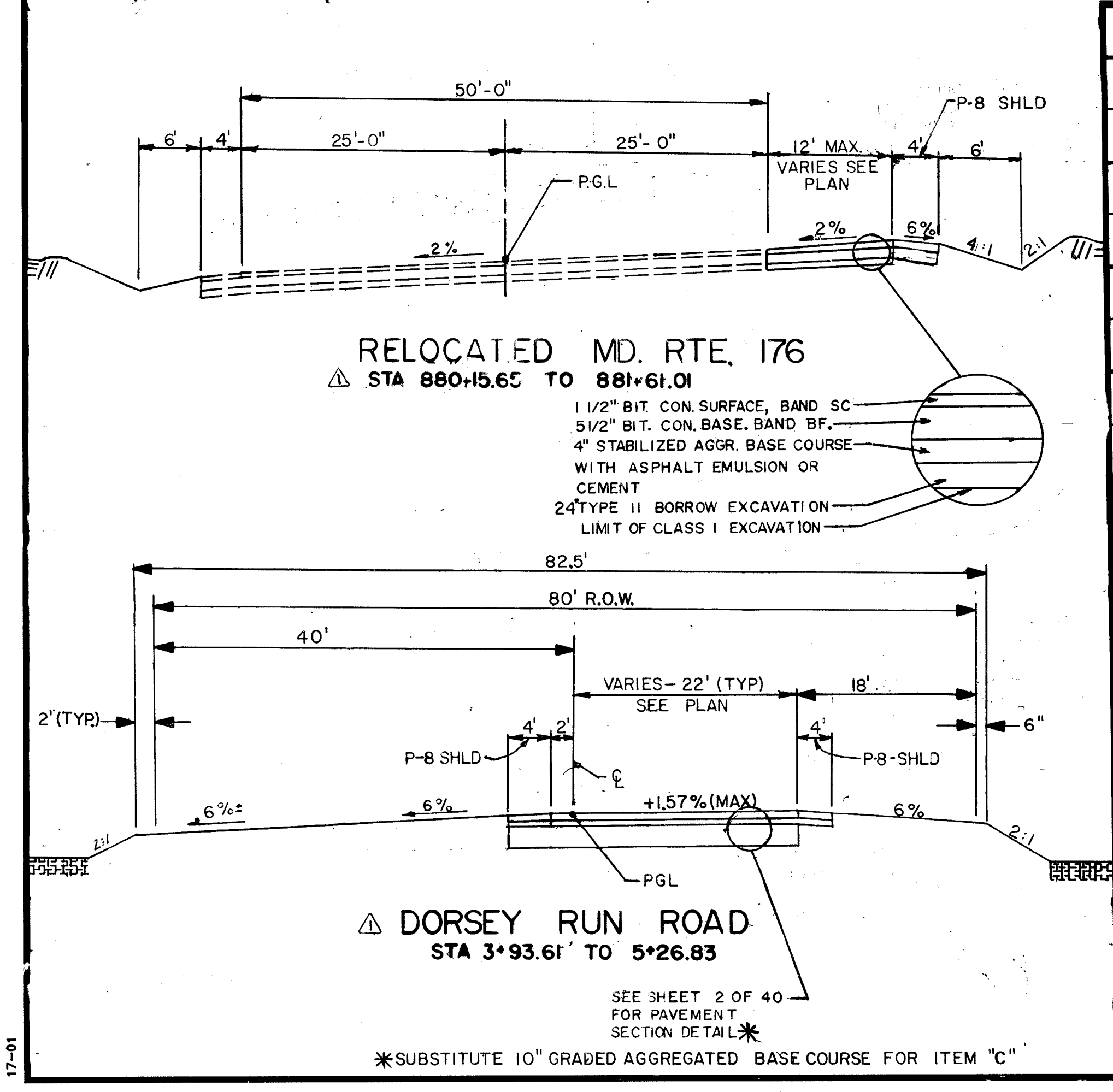
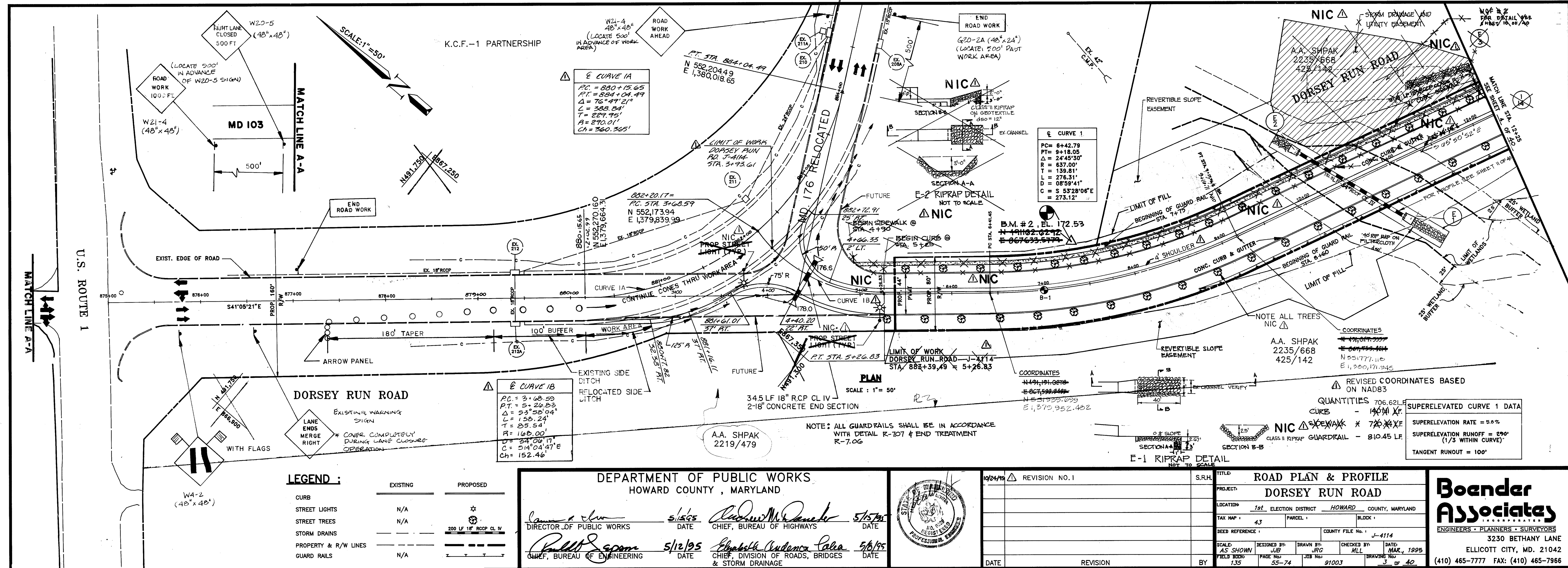
Boender Associates
 ENGINEERS - PLANNERS - SURVEYORS
 3230 BETHANY LANE
 ELLICOTT CITY, MD. 21042
 (410) 465-7777 FAX: (410) 465-7966

TYPICAL SECTIONS
DORSEY RUN ROAD

LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TAX MAP: 43 PARCEL: BLOCK:
 COUNTY FILE No.: J-4114

DESIGNED BY: JUB DRAWN BY: JRG CHECKED BY: MILL DATE: MAR., 1995
 SCALE: AS SHOWN FIELD BOOK: PAGE No: JOB No: 91003 DRAWING No: 2 OF 42

107



107

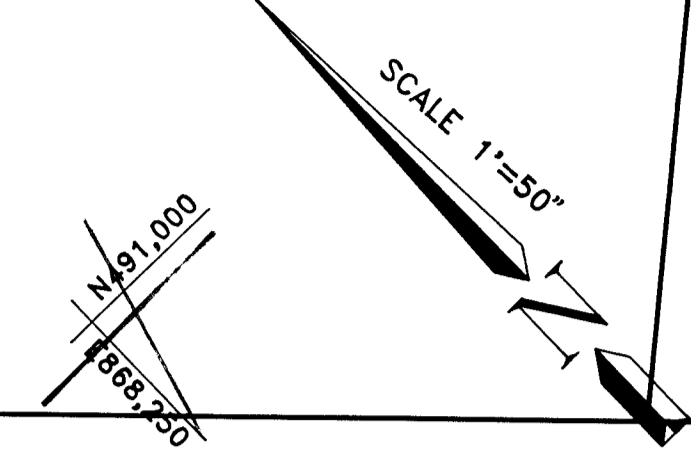
17-01

H.W. JOHNSON
138/139

FOR STORM DRAIN PROFILE FOR I-13 TO I-11,
SEE SHEET 12 OF 40. I-16 TO S-2, E-6 TO E-5
SHEET 11 OF 40.

J.H. KANE
477/333

R.WAYNE NEWSOME
1821/732



☐ CURVE 2

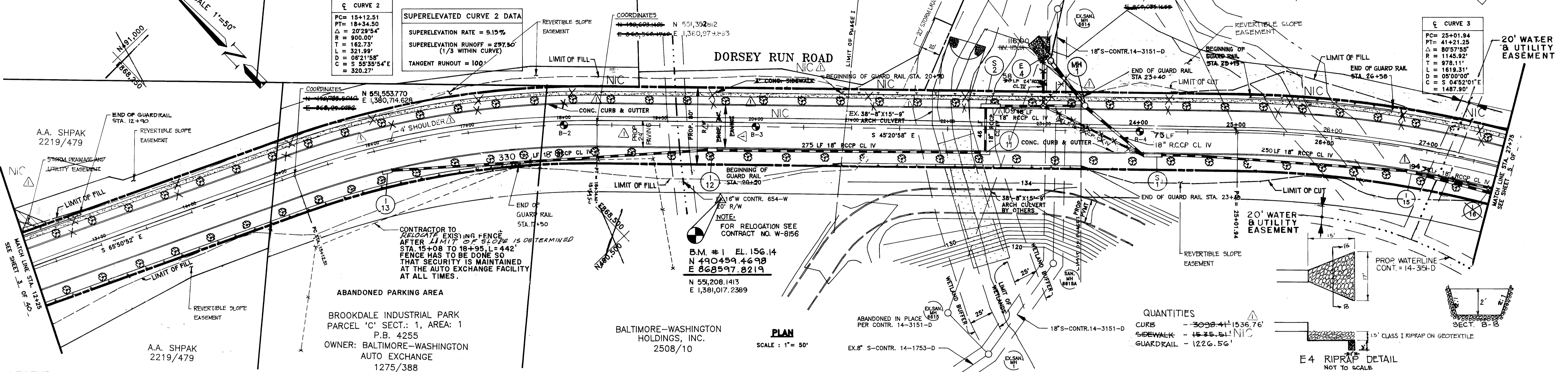
PC= 15+12.51
PT= 18+34.50
Δ = 20°29'54"
R = 900.00'
T = 162.73'
L = 321.99'
D = 062°1'58"
C = S 55°35'54" E
= 320.27'

SUPERELEVATED CURVE 2 DATA

SUPERELEVATION RATE = 5.15%
SUPERELEVATION RUNOFF = 237.50'
(1/3 WITHIN CURVE)
TANGENT RUNOUT = 100'

☐ CURVE 3

PC= 25+01.94
PT= 41+21.25
Δ = 80°57'55"
R = 1145.92'
T = 978.11'
L = 1619.31'
D = 05°00'00"
C = S 04°52'01" E
= 1487.90'



LEGEND :

	EXISTING	PROPOSED
CURB	---	---
STREET LIGHTS	N/A	☉
STREET TREES	N/A	☼
STORM DRAINS	---	200 LF 18" RCCP CL IV
PROPERTY & R/W LINES	---	---
GUARD RAILS	N/A	---
FENCE LINE	---	---

PLAN
SCALE : 1" = 50'

QUANTITIES

CURBS - 3098.41' @ 1536.76'
SIDEWALK - 4525.51'
GUARDRAIL - 122.656'

E 4 RIPRAV⁵ DETAIL
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 5/12/95 *Andrew M. ...* 5/12/95
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF HIGHWAYS DATE

Paul J. ... 5/12/95 *Marvick Anderson-Calin* 5/12/95
CHIEF, BUREAU OF ENGINEERING DATE CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

NO.	REVISION	BY
10/24/95	REVISION NO. 1	

TITLE: ROAD PLAN AND PROFILE
DORSEY RUN ROAD

PROJECT: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

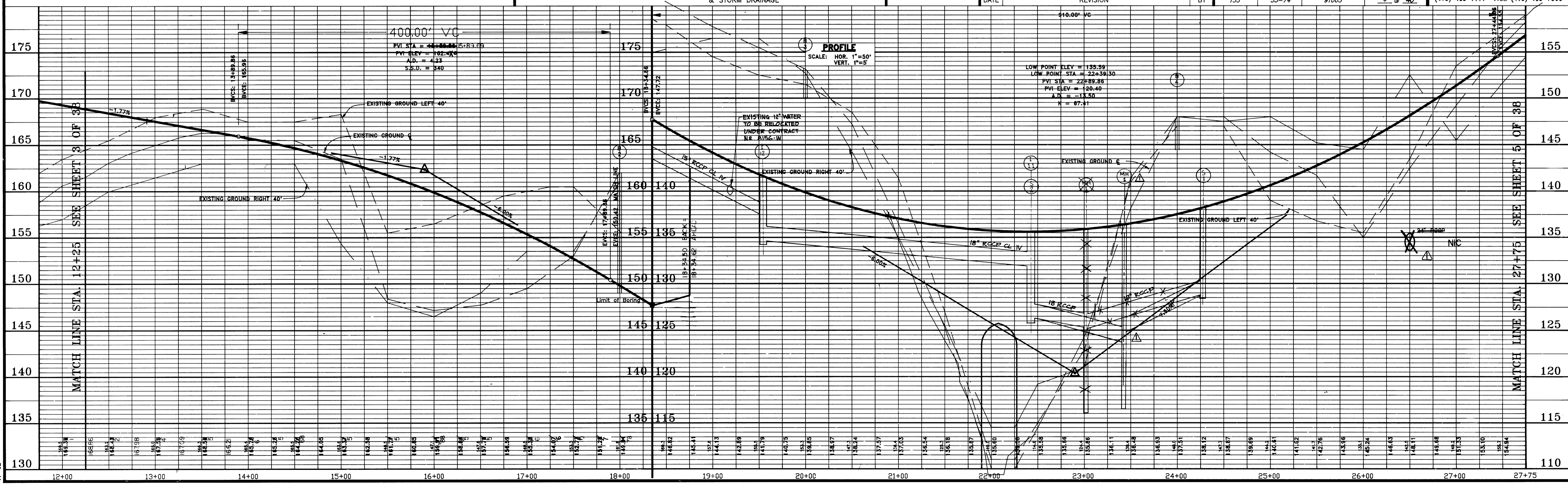
LOCATION: 4.3 PARCEL: BLOCK:

DEED REFERENCE: COUNTY FILE No. J-4114

SCALE: AS SHOWN DESIGNED BY: JAB DRAWN BY: JRG CHECKED BY: MLL DATE: MAR, 1995

FIELD NO.: 135 PAGE NO.: 55-74 JOB NO.: 91003 DRAWING NO.: 4 OF 40

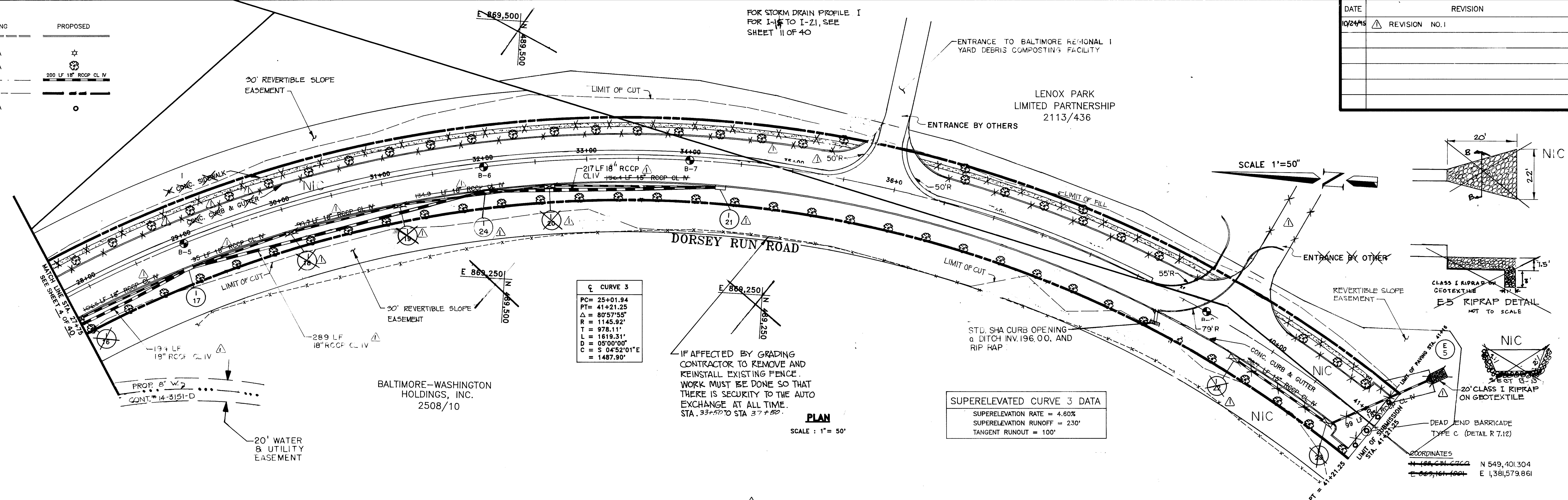
Boender Associates
INCORPORATED
ENGINEERS • PLANNERS • SURVEYORS
3230 BETHANY LANE
ELLCOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966



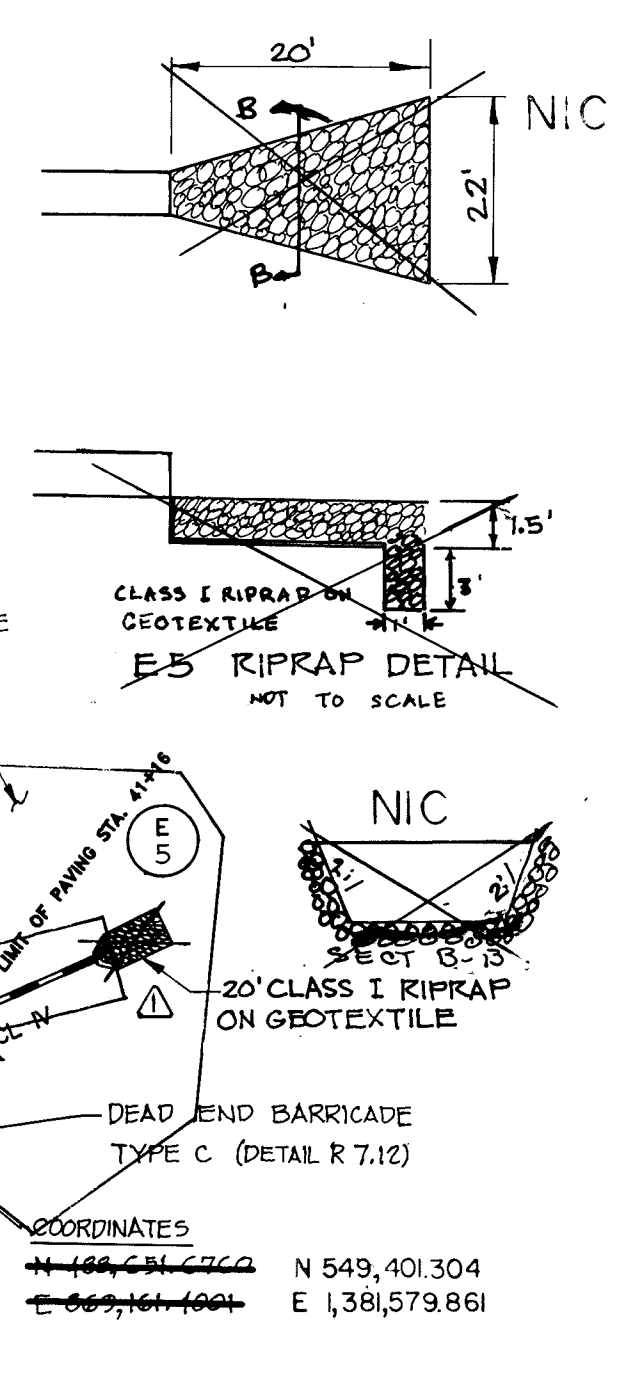
107

LEGEND :

	EXISTING	PROPOSED
CURB		
STREET LIGHTS	N/A	☆
STREET TREES	N/A	⊗
STORM DRAINS		200 LF 18" RCCP CL IV
PROPERTY & R/W LINES		---
DEAD END BARRICADE	N/A	○

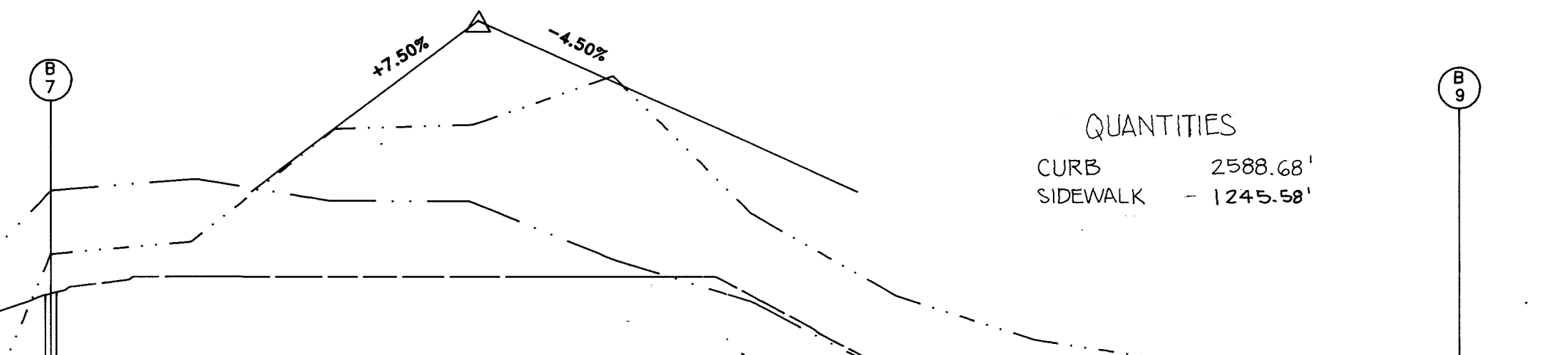


DATE	REVISION	BY
10/24/95	REVISION NO. 1	S.R.H.



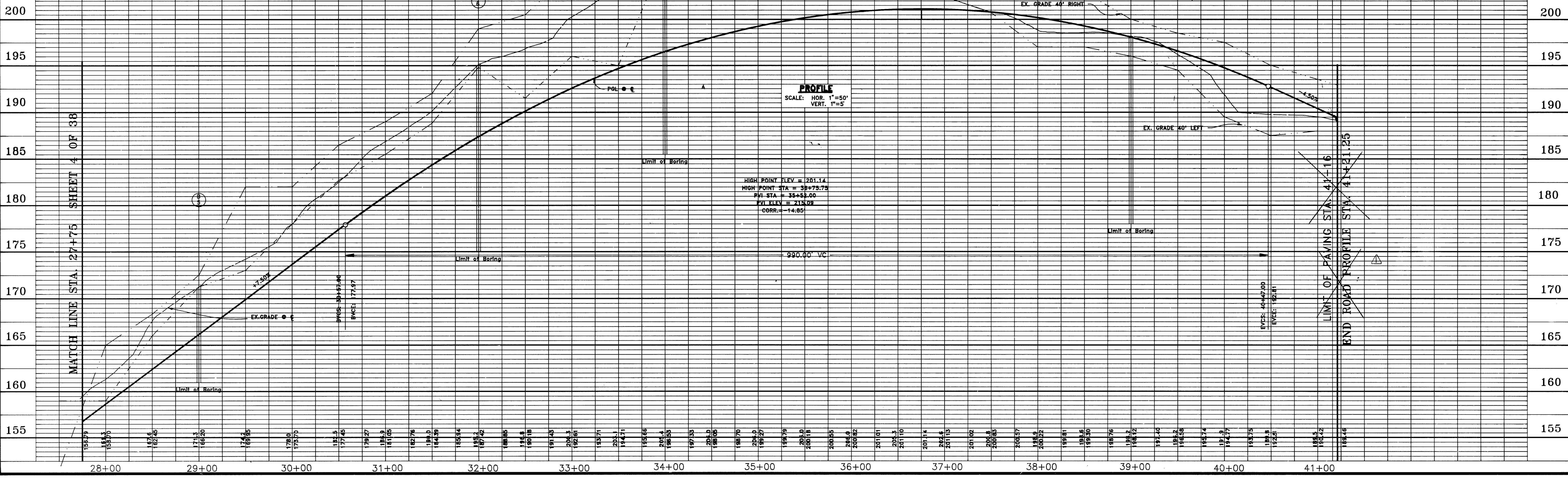
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Laura A. Lee 5/12/95 DIRECTOR OF PUBLIC WORKS
Andrew M. Doncker 5/15/95 CHIEF, BUREAU OF HIGHWAYS
Richard S. Sporn 5/12/95 CHIEF, BUREAU OF ENGINEERING
Elizabeth Anderson-Calin 5/6/95 CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE

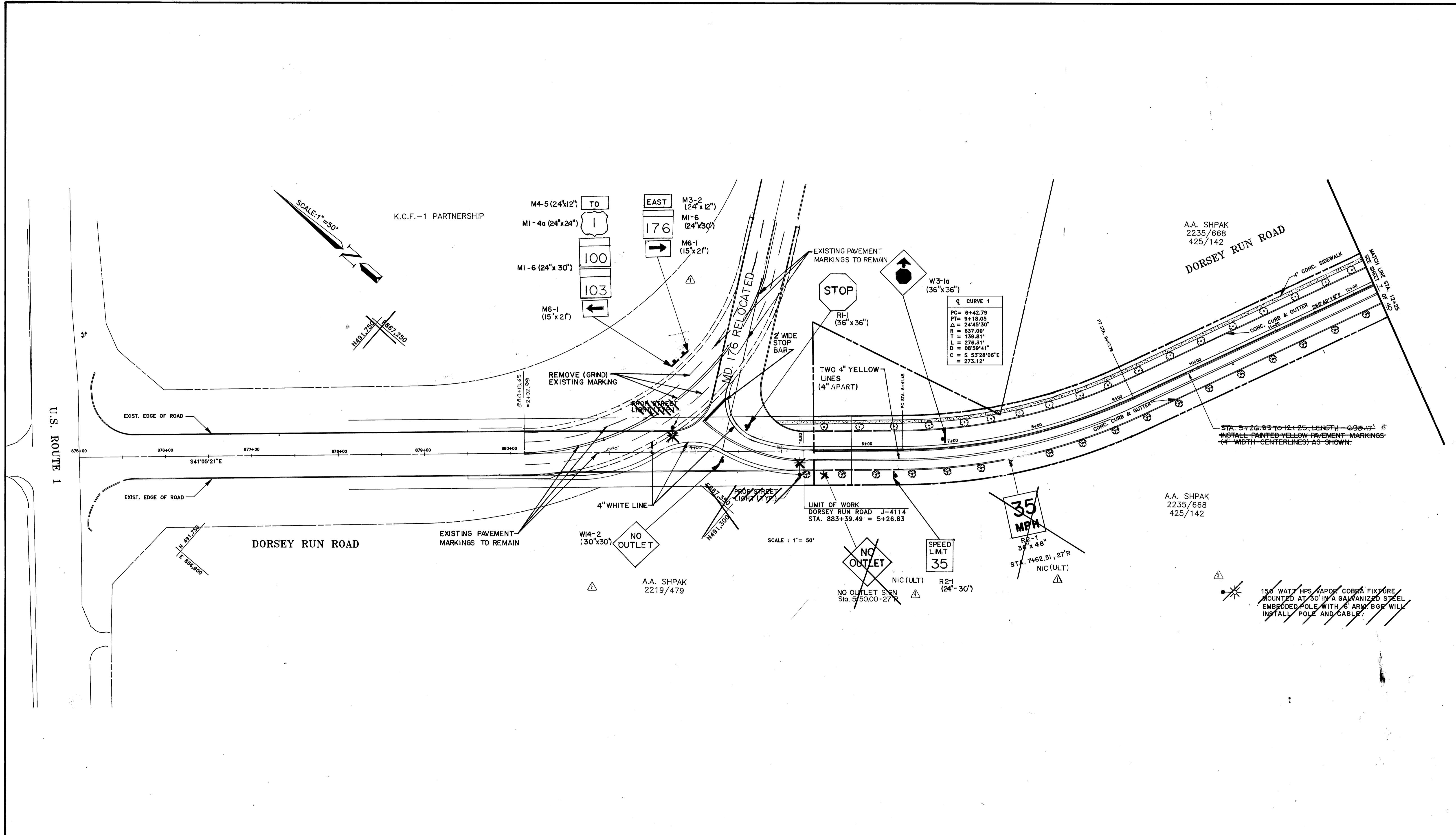


TITLE: ROAD PLAN AND PROFILE
PROJECT: DORSEY RUN ROAD
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 43 PARCEL: BLOCK:
DEED REFERENCE: COUNTY FILE No. J-4114
SCALE: AS SHOWN DESIGNED BY: JUE DRAWN BY: JRG CHECKED BY: MLL DATE: MAR., 1995
FIELD BOOK: 135 PAGE NO.: 55-74 JOB NO.: 91003 DRAWING NO.: 5 OF 40

Boander Associates
ENGINEERS - PLANNERS - SURVEYORS
3230 BETHANY LANE
ELLICOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966



107



K.C.F.-1 PARTNERSHIP

A.A. SHPAK
2235/668
425/142

A.A. SHPAK
2235/668
425/142

A.A. SHPAK
2219/479

150 WATT HPS VAPOR COBRA FIXTURE
MOUNTED AT 50' IN A GALVANIZED STEEL
EMBEDDED POLE WITH 6' ARM. BGR WILL
INSTALL POLE AND CABLE.

ε CURVE 1

PC=	6+42.79
PT=	9+18.05
Δ=	24°45'30"
R=	637.00'
T=	139.81'
L=	276.31'
D=	08°59'41"
C=	S 53°28'06"E
	= 273.12'

LIMIT OF WORK
DORSEY RUN ROAD J-4114
STA. 883+39.49 = 5+26.83

SCALE: 1" = 50'

INITIAL SIGNAGE & PAVEMENT MARKING PLAN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

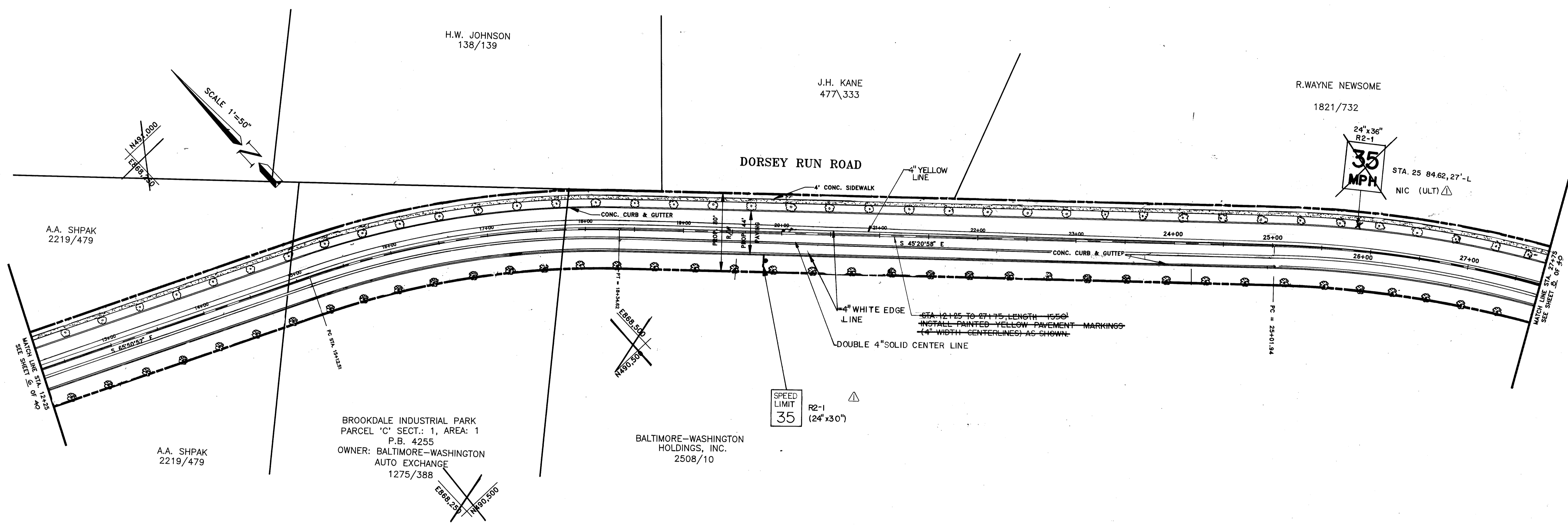
<i>[Signature]</i> DIRECTOR OF PUBLIC WORKS	5/15/95 DATE	<i>[Signature]</i> CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
<i>[Signature]</i> CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	<i>[Signature]</i> CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/16/95 DATE

	10/24/95	REVISION NO. 1	SIGNAGE & PAVEMENT MARKING PLAN PROJECT: DORSEY RUN ROAD	
	LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND TAX MAP: 43 PARCEL: BLOCK: COUNTY FILE No.: J-4114		DESIGNED BY: SJD DRAWN BY: SJD CHECKED BY: MILL DATE: MAR. 1995	
DATE	REVISION	BY	FIELD BOOK	SCALE: 1"=50' PAGE No.: 2 OF 30 JOB No.: 91003 DRAWING No.: 2 OF 30

Boender Associates
ENGINEERS - PLANNERS - SURVEYORS
3230 BETHANY LANE
ELLCOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966

107

107



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

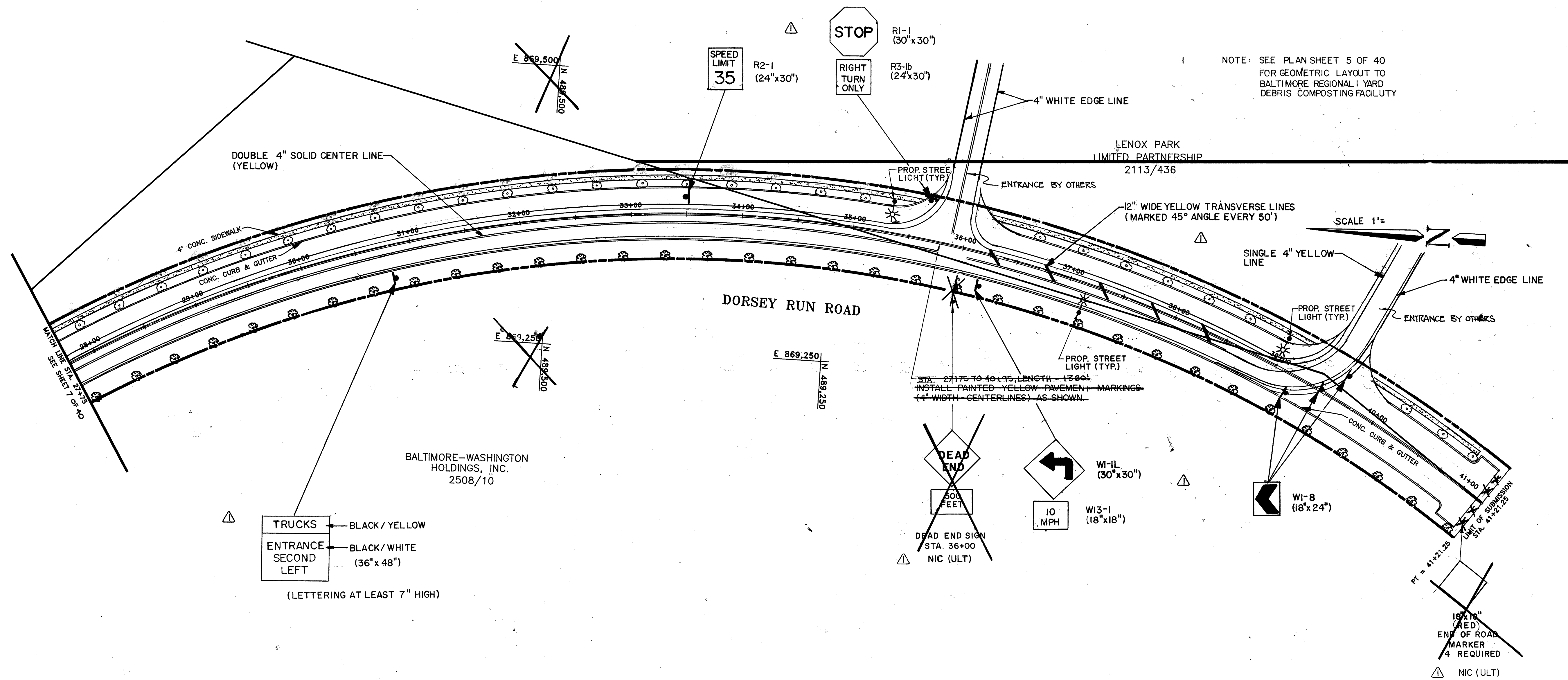
James M. Shuman 5/15/95
DIRECTOR OF PUBLIC WORKS DATE

Richard M. Dando 5/15/95
CHIEF, BUREAU OF HIGHWAYS DATE

Richard M. Dando 5/12/95
CHIEF, BUREAU OF ENGINEERING DATE

David M. Anderson 5/15/95
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

		TITLE: INITIAL SIGNAGE & PAVEMENT MARKING PLAN PROJECT: SIGNAGE & PAVEMENT MARKING PLAN LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND TAX MAP: 43 PARCEL: BLOCK: COUNTY FILE No.: J-4114 DEED REFERENCE: COUNTY FILE No.: J-4114 SCALE: 1"=50' DESTROYED BY: SJD DRAWN BY: SJD CHECKED BY: VLL DATED: MAR, 1995 FIELD BOOK: PAGE No: JOB No: 91003 DRAWING No: 7 OF 40	
REVISION NO. 1 DATE: REVISION: BY:		Boender Associates ENGINEERS • PLANNERS • SURVEYORS 3230 BETHANY LANE ELLICOTT CITY, MD. 21042 (410) 465-7777 FAX: (410) 465-7966	



NOTE: SEE PLAN SHEET 5 OF 40 FOR GEOMETRIC LAYOUT TO BALTIMORE REGIONAL YARD DEBRIS COMPOSTING FACILITY

SCALE 1" = 40'

TRUCKS — BLACK / YELLOW
 ENTRANCE SECOND LEFT — BLACK / WHITE (36" x 48")
 (LETTERING AT LEAST 7" HIGH)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

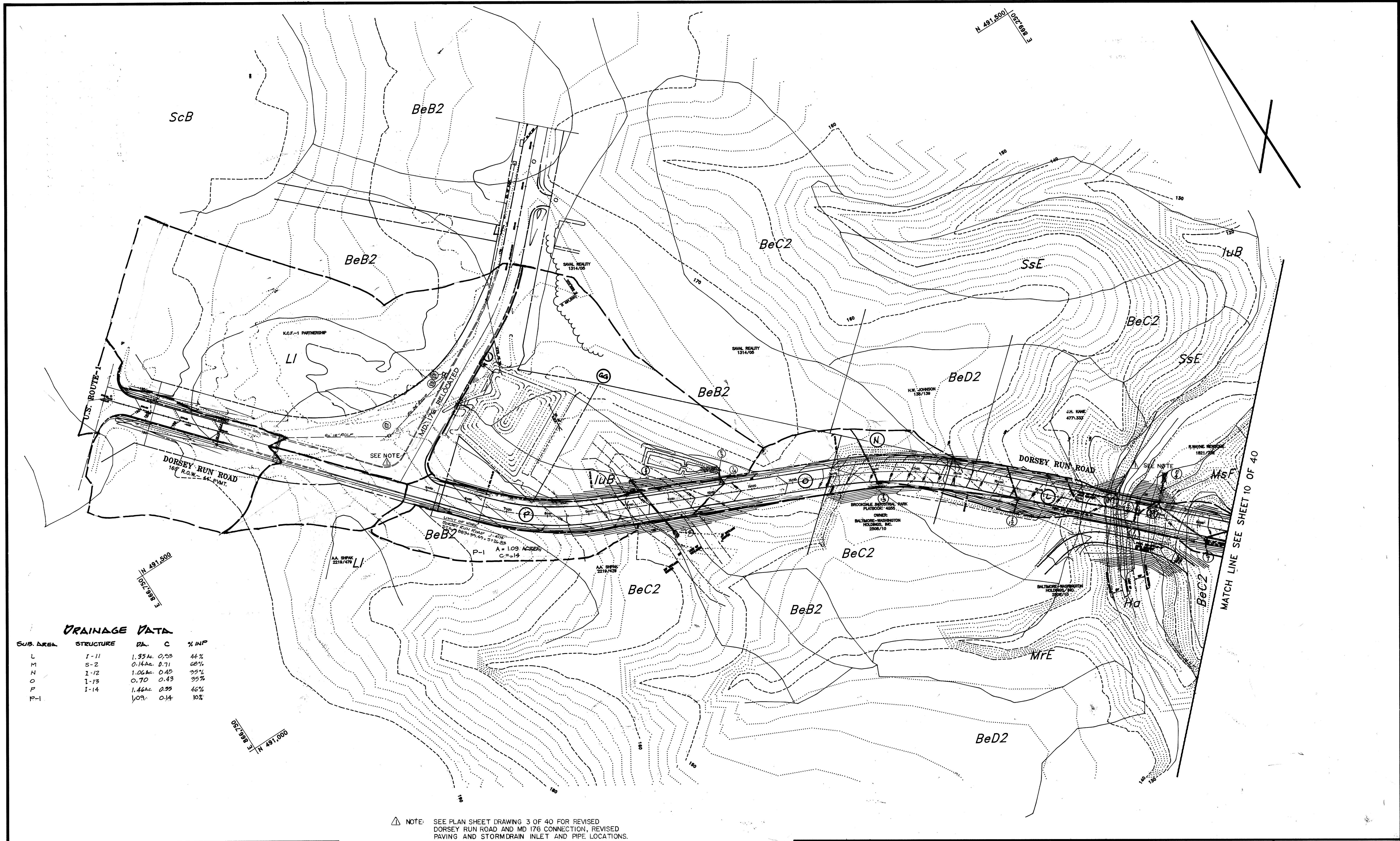
[Signature] 5/15/95 *[Signature]* 5/15/95
 DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF HIGHWAYS DATE
[Signature] 5/15/95 *[Signature]* 5/15/95
 CHIEF, BUREAU OF ENGINEERING DATE CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

INITIAL SIGNAGE & PAVEMENT MARKING PLAN

	10/24/95	REVISION NO. 1	TITLE: SIGNAGE & PAVEMENT MARKING PLAN PROJECT: DORSEY RUN ROAD			
	LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND		COUNTY FILE No. J-4114			
	TAX MAP: 43	PARCEL:	BLOCK:	DESIGNED BY: SJD	DRAWN BY: SJD	CHECKED BY: ML
	SCALE: 1" = 50'	DATE: MAR, 1995	PAGE No: 8	JOB No: 91003	DATE: MAR, 1995	DATE: MAR, 1995
	DATE:	REVISION:	BY:	DATE:	DATE:	DATE:

Boender Associates
 ENGINEERS • PLANNERS • SURVEYORS
 3230 BETHANY LANE
 ELLICOTT CITY, MD. 21042
 (410) 465-7777 FAX: (410) 465-7966

107



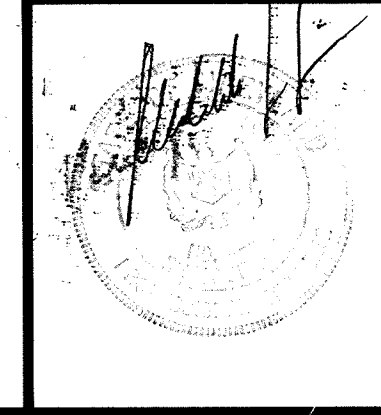
DRAINAGE DATA

SUB. AREA	STRUCTURE	DR.	C	% INF
L	I-11	1.35 ac	0.53	44%
M	S-2	0.14 ac	0.71	60%
N	I-12	1.06 ac	0.45	39%
O	I-13	0.70	0.43	35%
P	I-14	1.46 ac	0.33	46%
P-1		1.09 ac	0.14	10%

NOTE: SEE PLAN SHEET DRAWING 3 OF 40 FOR REVISED DORSEY RUN ROAD AND MD 176 CONNECTION, REVISED PAVING AND STORMDRAIN INLET AND PIPE LOCATIONS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. [Signature] 5/12/95 Director of Public Works
 Robert M. [Signature] 5/15/95 Chief, Bureau of Highways
 [Signature] 5/12/95 Chief, Bureau of Engineering
 [Signature] 5/8/95 Chief, Division of Roads, Bridges & Storm Drainage



10/24/95	REVISION NO. 1	S.R.H.	TITLE
			DRAINAGE AREA MAP
			PROJECT
			DORSEY RUN ROAD
			LOCATION
			1st ELECTION DISTRICT
			HOWARD COUNTY, MARYLAND
			SCALE
			1" = 100'
			DESIGNED BY
			JJB
			DRAWN BY
			JRG
			CHECKED BY
			MLL
			DATE
			MAR, 1995
			FIELD BOOK
			138
			PAGE No.
			53-69
			JOB No.
			91003
			DRAWING No.
			9 OF 40
DATE	REVISION	BY	

Boender Associates
 ENGINEERS - PLANNERS - SURVEYORS
 3230 BETHANY LANE
 ELLICOTT CITY, MD. 21042
 (410) 465-7777 FAX: (410) 465-7966

107

DRAINAGE AREA DATA

SUB AREA	STRUCTURE	DRAINAGE AREA	C	% IMP
A	I-29	0.34 ac.	0.36	22
B	I-22	0.87 ac.	0.41	30
C	I-21	0.89 ac.	0.42	30
D	I-20	0.50 ac.	0.34	20
E	I-19	0.58 ac.	0.29	19
F	I-16	0.46 ac.	0.37	22
G	I-17	0.50 ac.	0.36	22
H	I-16	0.62 ac.	0.34	20
I	I-15	0.76 ac.	0.31	16
J	S-1	1.06 ac.	0.66	22

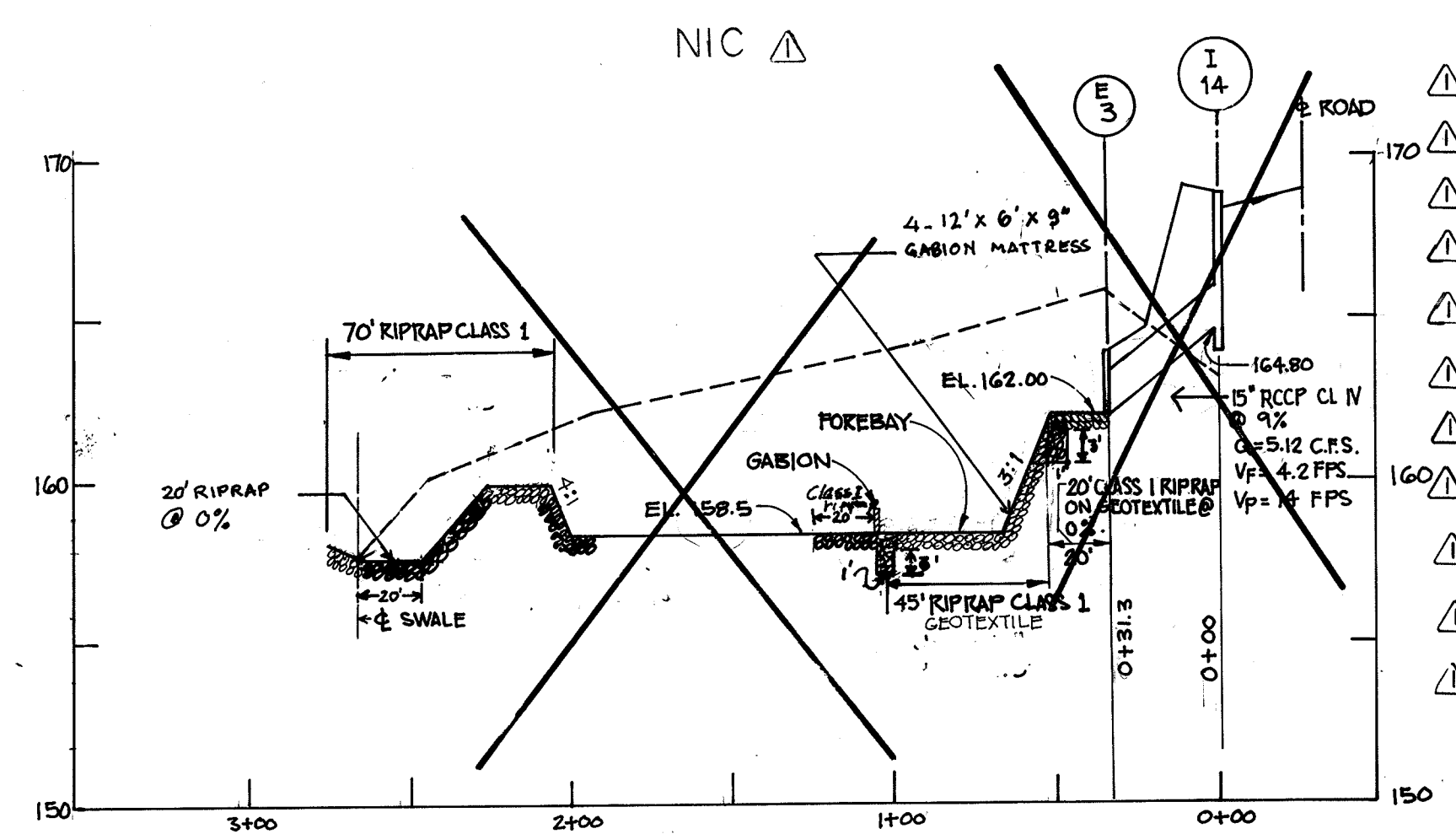
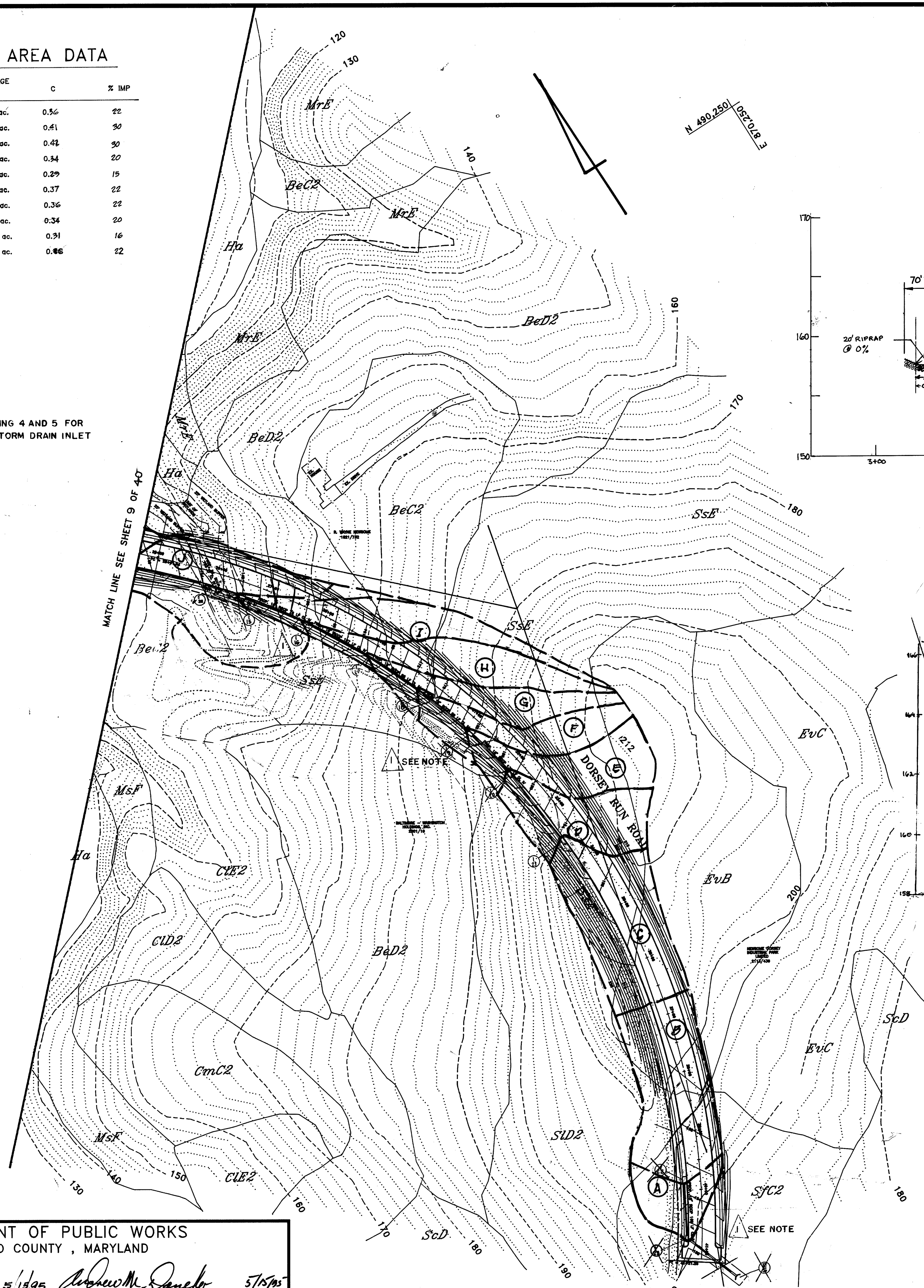
NOTE: SEE PLAN SHEET DRAWING 4 AND 5 FOR REVISED PAVING AND STORM DRAIN INLET AND PIPE LOCATIONS.

STRUCTURE SCHEDULE

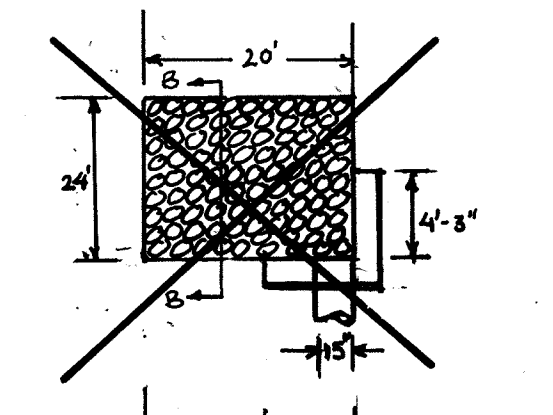
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP EL.	REMARKS
I-11	A-10	22+39.30 - 23.92' R	132.09	131.95	135.47	W = 2'-6" SD 4.02
I-12	A-10	19+55 - 23.92' R	137.10	134.40	141.65	W = 2'-6" SD 4.02
I-13	A-10	16+08 - 23.92' R	155.01 154.48	159.03 159.48	165.00 165.48	W = 2'-6" SD 4.02
I-14	A-10	12+22 - 23.92' L	164.88	164.02	169.02	W = 2'-6" SD 4.02
I-15	A-10	26+09 - 23.92' R	146.78 145.29	144.76 144.62	150.29 150.29	W = 2'-6" SD 4.02
I-16	A-10	27+75 - 23.92' R	153.28	153.02	166.36	W = 2'-6" SD 4.02
I-17	A-10	28+94 - 23.92' R	162.80 160.68	162.80 159.93	165.92 165.68	W = 2'-6" SD 4.02
I-18	A-10	30+00 - 23.92' R	170.25	170.00	179.27	W = 2'-6" SD 4.02
I-19	A-10	31+12 - 23.92' R	178.48	178.23	181.48	W = 2'-6" SD 4.02
I-20	A-10	32+88 - 23.92' R	187.20	187.00	190.41	W = 2'-6" SD 4.02
I-21	A-10	34+30 - 23.92' R	194.29 191.91	194.29 191.91	197.88 197.20	W = 2'-6" SD 4.02
I-22	A-10	39+74 - 23.92' R	191.60	191.35	195.35	W = 2'-6" SD 4.02
I-23	A-10	40+85 - 23.92' R	187.25	187.00	190.84	W = 2'-6" SD 4.02
S-2	WATER QUALITY INLET WITH A-5 OPENING	22+39.30 - 25.50' L	131.78	125.97	135.47	SEE DETAIL INLET SD 4.01
S-1	WATER QUALITY INLET WITH A-10 OPENING	24+14 - 25.50' L	134.37	128.62	137.93	SEE DETAIL INLET SD 4.02
MH-1	STD 4' DIA MH	25+08 - 24' L	124.04 125.50	115.00 123.14	126.45	D = 4' G 501
E-1	TYPE D HEADWALL	0+87.5 - 56' R	155.79		161.79	SD 5.41-A
E-2	TYPE D HEADWALL	10+17 - 55.04' L	157.70		163.70	SD 5.41-A
E-3	TYPE E HEADWALL	12+20 - 57' L	162.00		168.00	SD 5.51
E-4	TYPE A HEADWALL	23+00 - 76' L	115.24 116.00		118.74	SD 5.11
E-5	18" CONC END SECT	41+70 - 66' L	185.78		187.23	SD 5.51
MH-2	STD 4' DIA MH	20+10 - 75' L	118.00	116.00		
I-24	A-10	32+00 - 23.92' R	182.23	181.65	187.23	W = 2'-6" SD 4.02

NOTE: INLET LOCATION FROM C OF ROADWAY TO C OF STRUCTURE

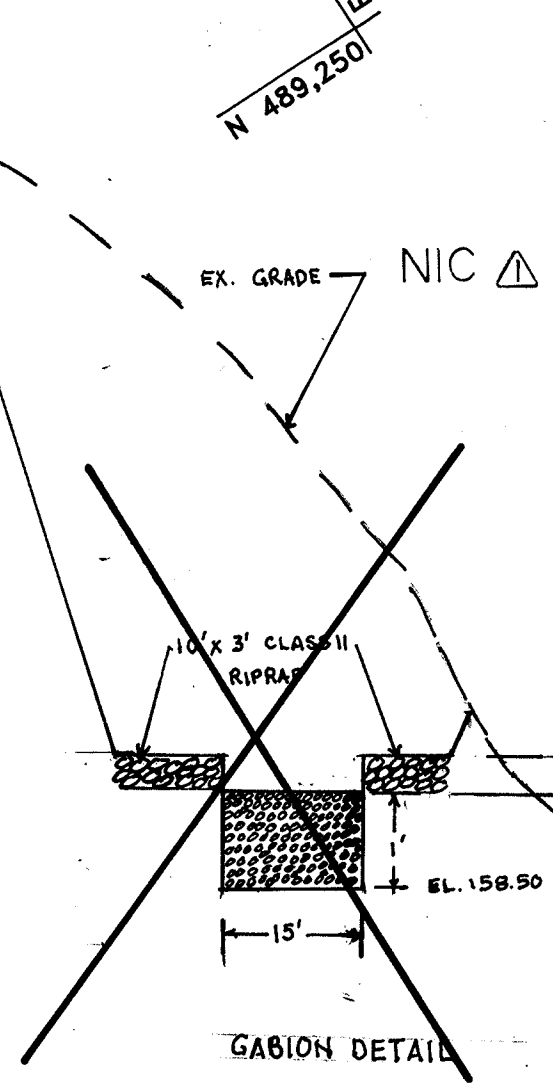
SEE STRUCTURE AND PIPE SCHEDULE IN SPECIAL PROVISIONS



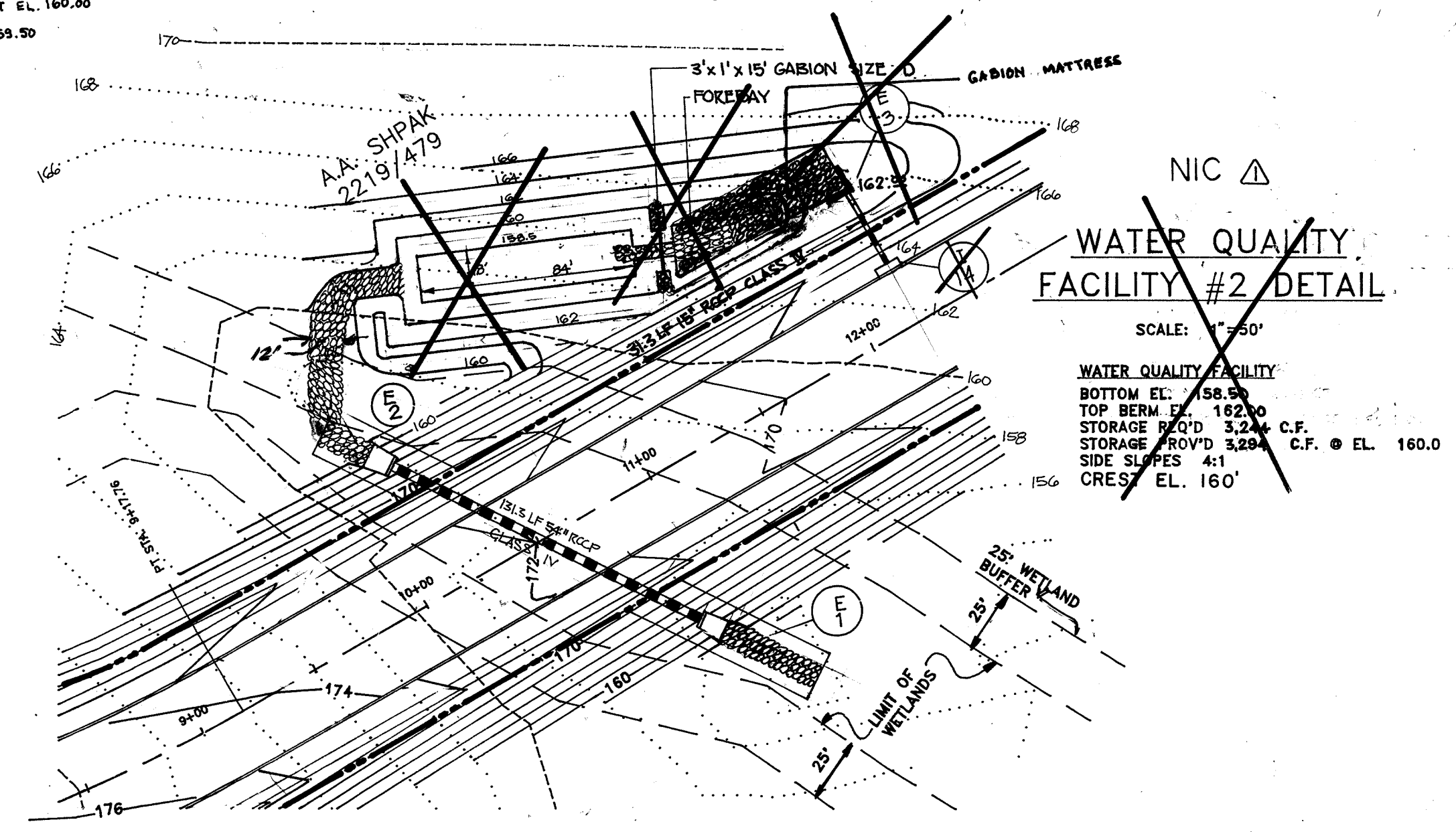
SECTION
SCALE: 1" = 50' HOR.
1" = 5' VER.



RIPRAP DETAIL E-3
NOT TO SCALE



GABION DETAIL
SCALE: 1" = 20' HOR.
1" = 2' VER.



WATER QUALITY FACILITY #2 DETAIL
SCALE: 1" = 50'

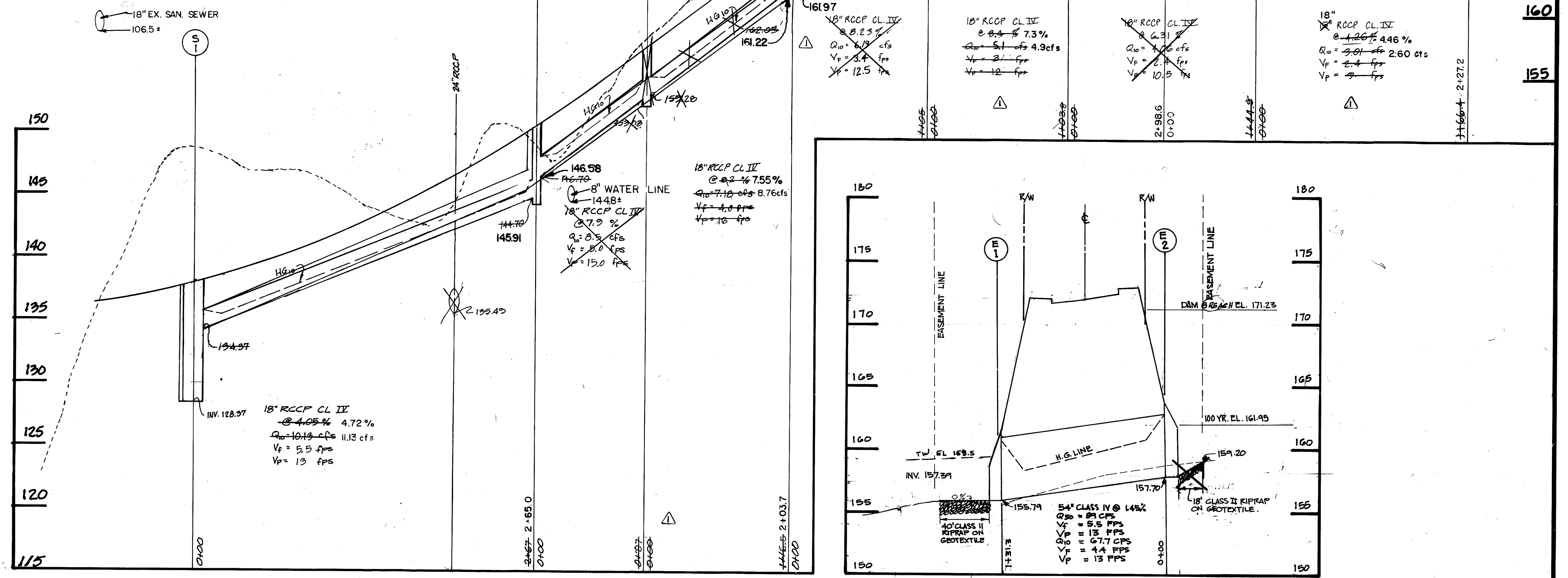
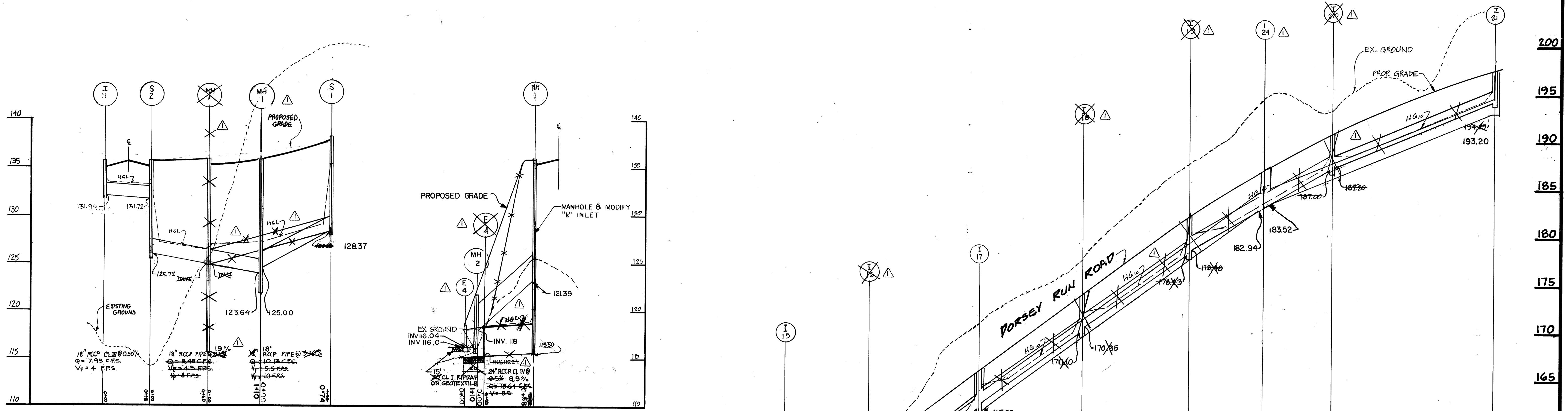
WATER QUALITY FACILITY
BOTTOM EL. 158.50
TOP BERM EL. 162.00
STORAGE PROVID' 3,281 C.F.
STORAGE PROVID' 3,281 C.F. @ EL. 160.0
SIDE SLOPES 4:1
CREST EL. 160'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

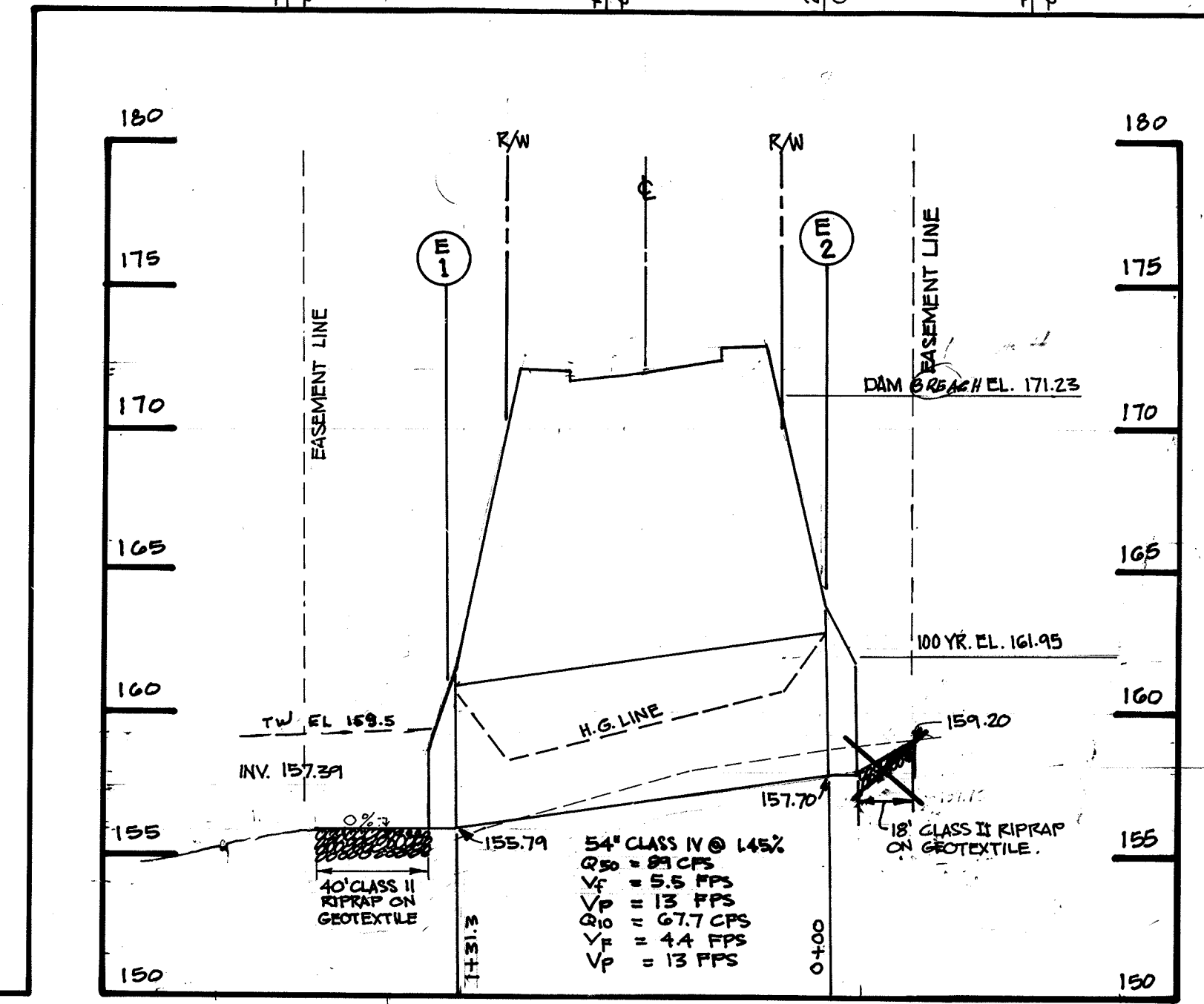
James P. Brown 5/18/95 Director of Public Works
Robert M. Daniels 5/18/95 Chief, Bureau of Highways
Robert P. Brown 5/18/95 Chief, Bureau of Engineering
Elizabeth B. Coia 5/18/95 Chief, Division of Roads, Bridges & Storm Drainage

DATE	REVISION	NO.	SPR	TITLE
		NO. 1		DRAINAGE AREA MAP
PROJECT: DORSEY RUN ROAD				
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND				
SCALE: 1" = 100'	DESIGNED BY: JJB	CHECKED BY: JRG	DATE: MAR., 1995	
FIELD BOOK: 138	PAGE No: 53-69	JOB No: 91003	DRAWING No: 10 OF 40	

Boender Associates
ENGINEERS - PLANNERS - SURVEYORS
3230 BETHANY LANE
ELLCOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966



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



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

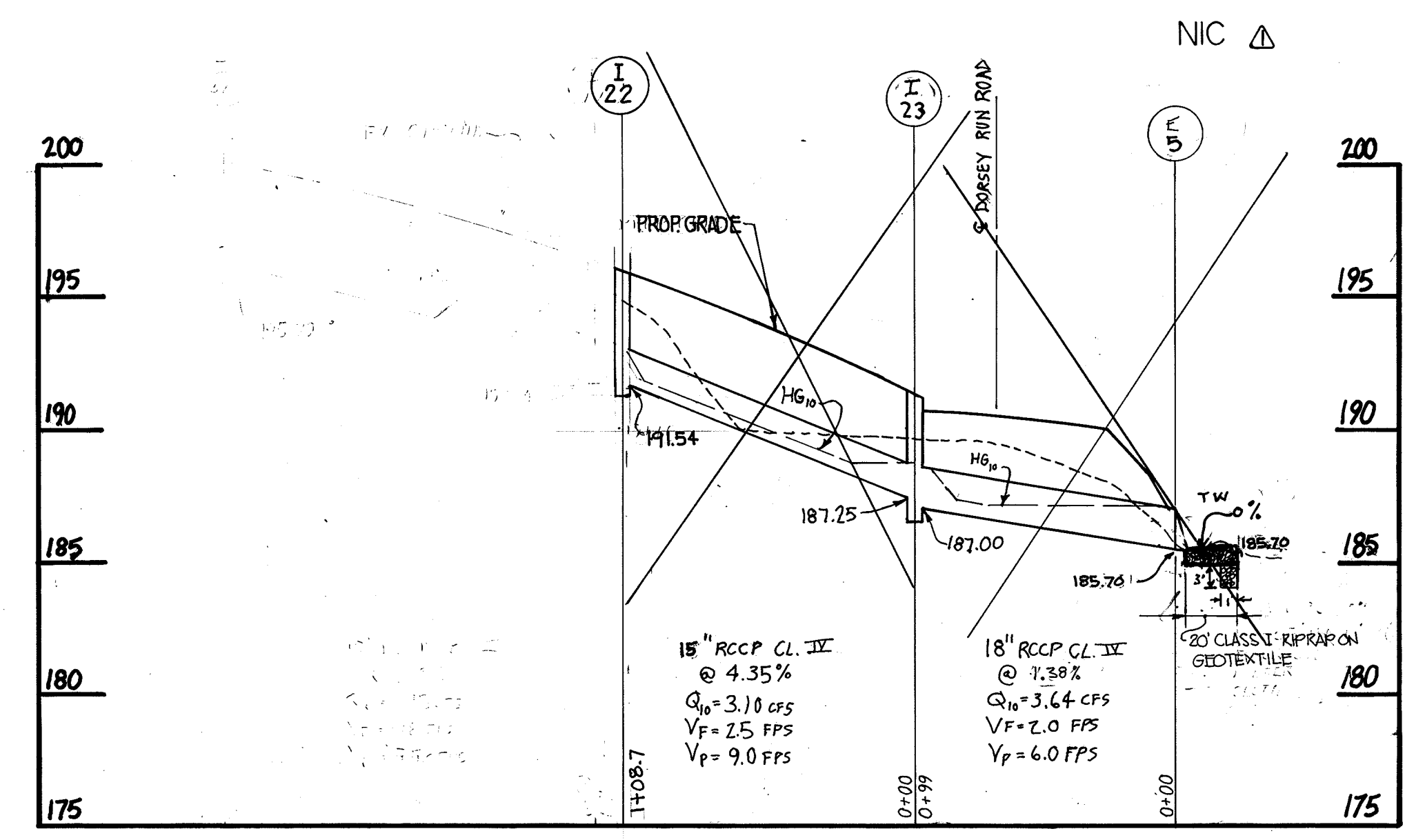
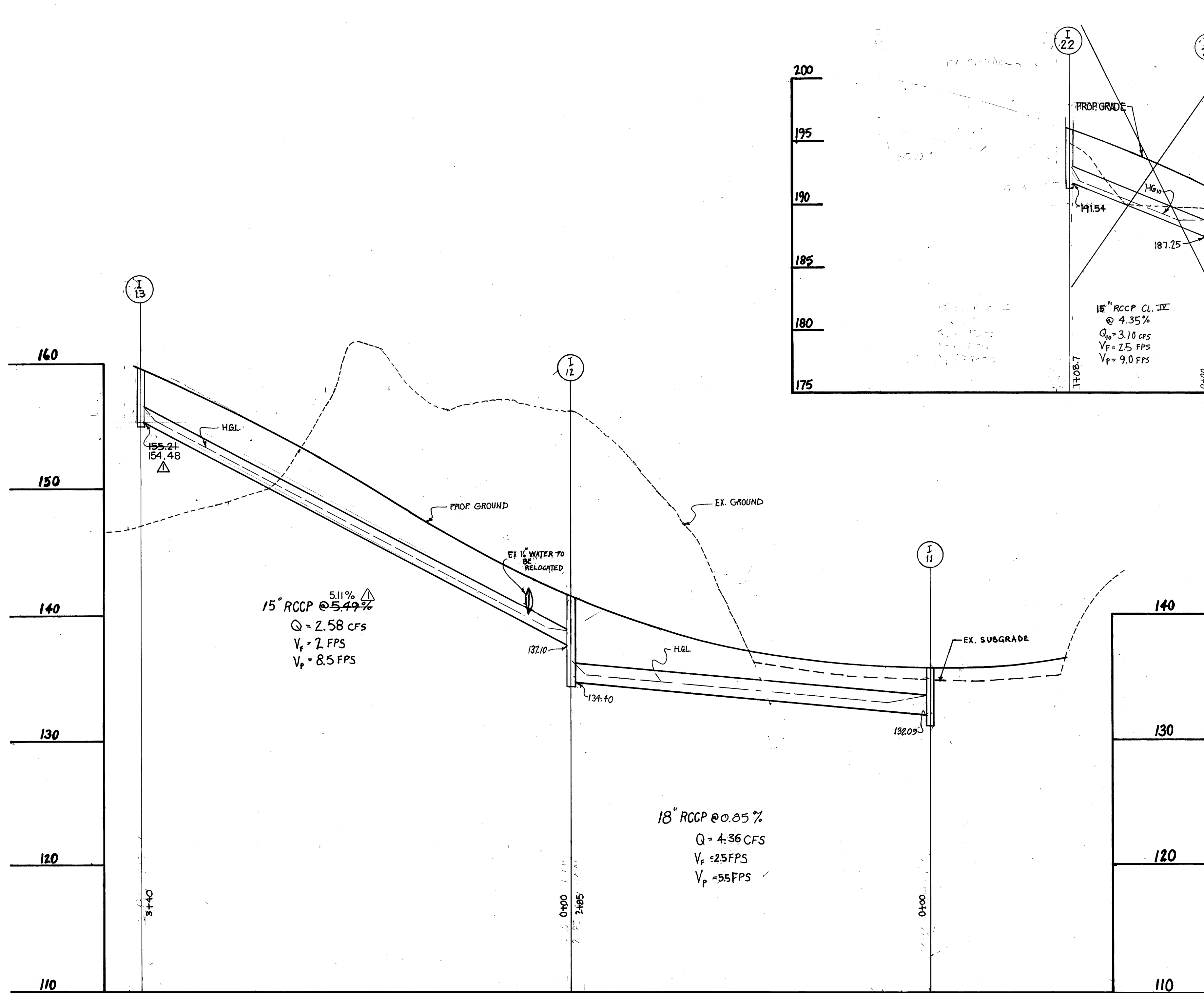
James P. Lewis 5/15/95 *Andrew M. Donato* 5/15/95
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF HIGHWAYS DATE

Paul S. Ryan 5/12/95 *Warshell Anderson-Cole* 5/12/95
CHIEF, BUREAU OF ENGINEERING DATE CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

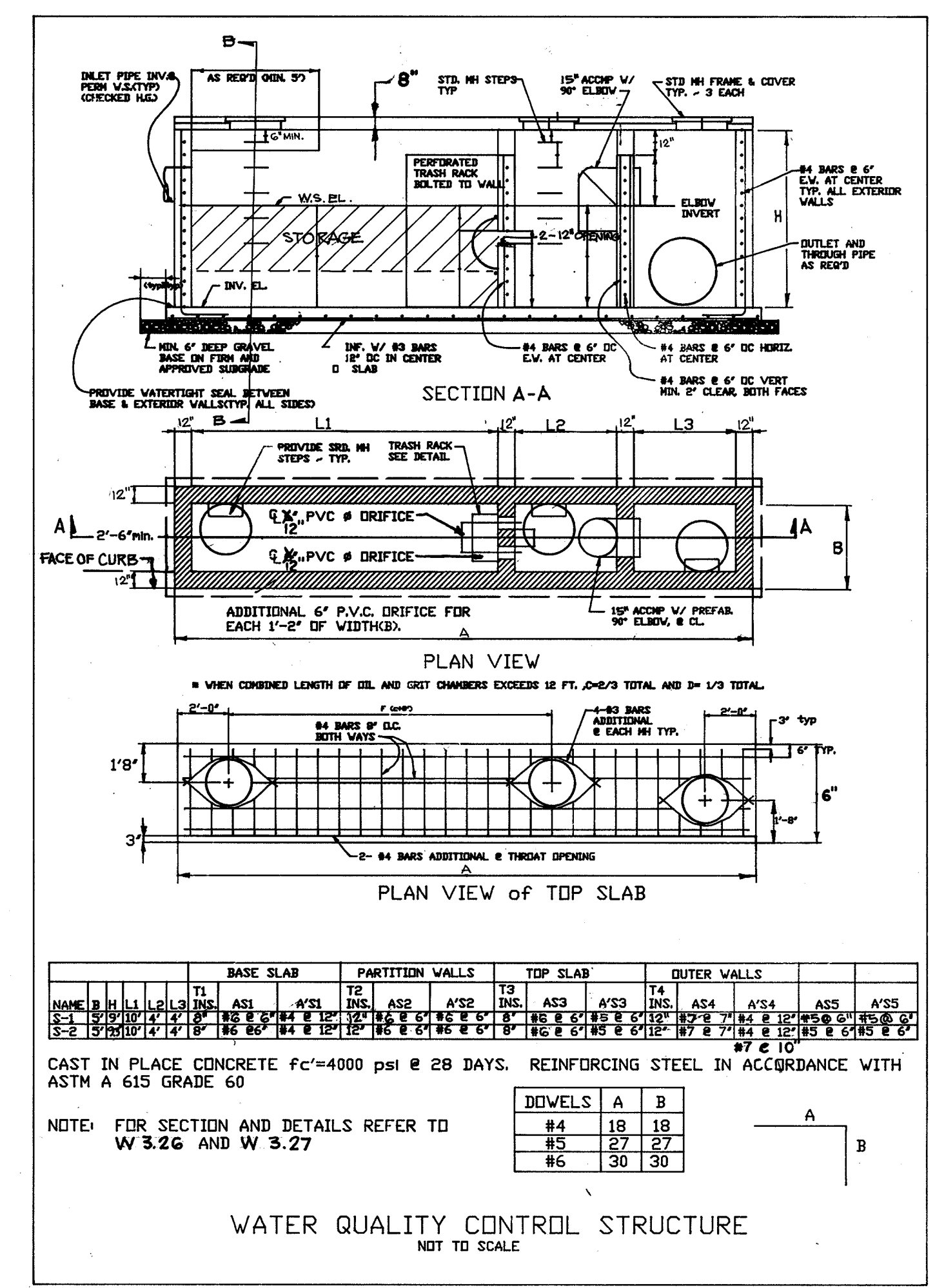
102495	REVISION NO. 1	SRH	TITLE	STORM DRAIN PROFILES
			PROJECT	DORSEY RUN ROAD
			LOCATION	1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
			SCALE: AS SHOWN	DESIGNED BY: JRG DRAWN BY: MLL CHECKED BY: MLL DATE: MAR, 1995
			FIELD BOOK: N/A	PAGE No.: N/A JOB No.: 91003 DRAWING No.: 11 OF 40
			DATE	REVISION

Boender Associates
ENGINEERS - PLANNERS - SURVEYORS
3230 BETHANY LANE
ELLCOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966

107



STRUCTURE	INVERT EL.	INVERT 12" OPENING	INV. IN 15" ACCMP	INV. OUT 15" ACCMP
S-1	128.37	130.62	131.62	133.87
S-2	125.72	128.97	128.97	131.22



BASE SLAB		PARTITION WALLS		TOP SLAB		OUTER WALLS	
INCH	NO.	INCH	NO.	INCH	NO.	INCH	NO.
12	1	12	1	12	1	12	1
12	1	12	1	12	1	12	1
12	1	12	1	12	1	12	1

CAST IN PLACE CONCRETE $f'c=4000$ psi @ 28 DAYS. REINFORCING STEEL IN ACCORDANCE WITH ASTM A 615 GRADE 60

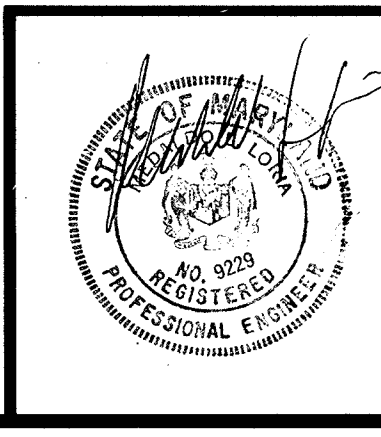
DOVELS	A	B
#4	18	18
#5	27	27
#6	30	30

NOTE: FOR SECTION AND DETAILS REFER TO W 3.26 AND W 3.27

WATER QUALITY CONTROL STRUCTURE
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lew 5/12/95
DIRECTOR OF PUBLIC WORKS DATE
Charles M. Daniels 5/15/95
CHIEF, BUREAU OF HIGHWAYS DATE
Robert J. Sporn 5/12/95
CHIEF, BUREAU OF ENGINEERING DATE
Joseph A. Sullivan 5/13/95
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

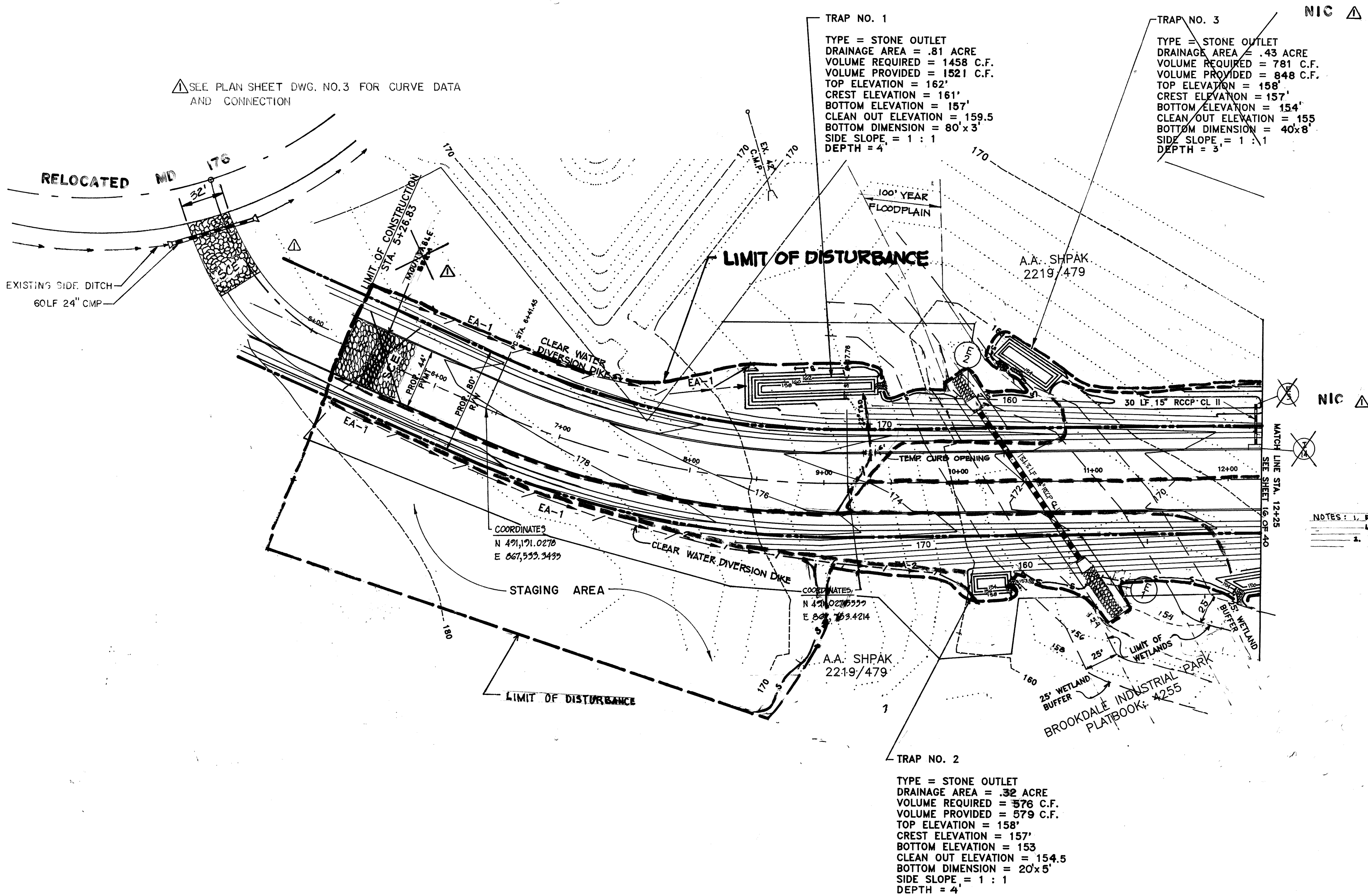


DATE	REVISION	BY
10/24/95	REVISION NO. 1	

TITLE	S.R.H.
STORM DRAIN PROFILES	
PROJECT	DORSEY RUN ROAD
LOCATION	1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP	4.3 PARCEL BLOCK
DEED REFERENCE	COUNTY FILE No. J-4114
SCALE	DESIGNED BY: DRAWN BY: CHECKED BY: DATED: 12/1/95
FIELD BOOK	PAGE No. JOB No. 91003 DRAWING No. 12 OF 42

Boender Associates
ENGINEERS - PLANNERS - SURVEYORS
3230 BETHANY LANE
ELLCOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966

107



TRAP NO. 1
 TYPE = STONE OUTLET
 DRAINAGE AREA = .81 ACRE
 VOLUME REQUIRED = 1458 C.F.
 VOLUME PROVIDED = 1521 C.F.
 TOP ELEVATION = 162'
 CREST ELEVATION = 161'
 BOTTOM ELEVATION = 157'
 CLEAN OUT ELEVATION = 159.5'
 BOTTOM DIMENSION = 80' x 3'
 SIDE SLOPE = 1 : 1
 DEPTH = 4'

TRAP NO. 3
 TYPE = STONE OUTLET
 DRAINAGE AREA = .43 ACRE
 VOLUME REQUIRED = 781 C.F.
 VOLUME PROVIDED = 848 C.F.
 TOP ELEVATION = 158'
 CREST ELEVATION = 157'
 BOTTOM ELEVATION = 154'
 CLEAN OUT ELEVATION = 155'
 BOTTOM DIMENSION = 40' x 8'
 SIDE SLOPE = 1 : 1
 DEPTH = 3'

TRAP NO. 2
 TYPE = STONE OUTLET
 DRAINAGE AREA = .32 ACRE
 VOLUME REQUIRED = 576 C.F.
 VOLUME PROVIDED = 579 C.F.
 TOP ELEVATION = 158'
 CREST ELEVATION = 157'
 BOTTOM ELEVATION = 153'
 CLEAN OUT ELEVATION = 154.5'
 BOTTOM DIMENSION = 20' x 5'
 SIDE SLOPE = 1 : 1
 DEPTH = 4'

NOTES: 1. FOR SEDIMENT CONTROL AT E-1 & E-2 USE WPD 2.2 (SEE SHEET 18 OF 40)
 2. TRAPS NO. 1, 2 & 3 SHALL BE REDDESIGNED DAILY AND DURING RAIN EVENTS.

NOTE: SEE PLAN SHEET DWG. NO. 3 FOR REVISED DORSEY RUN RD. AND MD. 176 CONNECTION, REVISED PAVING AND STORMDRAIN INLET AND PIPE LOCATIONS.

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit and NTWW Permit # 93-NT-0547.
2. Install all sediment control measures shown on plan.
3. Install 54" pipe from E-1 to E-2 and obtain permission from Sediment Control Inspector to proceed. Construction should proceed only if there is a 5-day clear weather forecast.
4. Grade the road and install all utilities. The following conditions should be followed during the grading operation.
 - a. Remove excess fill or construction material or debris to an upland disposal area outside of any waterway, floodplain, nontidal wetland, or buffer;
 - b. If backfill is obtained, use clean material free of waste metal products, unsightly debris, toxic material or any other deleterious substance;
 - c. Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of the nontidal wetland;
 - d. Maintain the hydrologic regime of nontidal wetlands outside the limits of disturbance.
 - e. Rectify any nontidal wetlands and buffers temporarily impacted by the permitted activity. All stabilization in the wetland and buffer shall be of the following recommended species: Annual Ryegrass (Lolium multiflorum), Millet (Setaria italica), Oats (Uniola sp.), and/or Rye (Secale cereale). Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands Division. Kentucky 31 fescue shall not be utilized in the wetland or buffer. All temporary fills shall be removed in their entirety on or before the completion of construction;
 - f. To protect important aquatic species, in-stream work is prohibited as determined by the classification of the stream as follows:
 Class I Waters: In-stream work may not be conducted during the period March 1 through June 15, inclusive, during any year.
 - g. Place heavy equipment on mats or suitably operate the equipment to prevent damage to the nontidal wetlands;
 - h. No removal of vegetation, grading, filling, draining or other alteration of the nontidal wetlands or buffer outside the limits of disturbance shall occur, either during construction or after completion, without written authorization from the Water Resources Administration.
5. Stabilized all disturbed areas.
6. Removes all sediment control measures after approved by Howard County Sediment Control Inspector.

Reviewed for Howard Soil Conservation District and meets technical requirements.
Peterson E. Coyle 4/22/95
 NATURAL RESOURCES CONSERVATION SERVICE Date

This development is approved soil erosion and sediment control by the Howard Soil Conservation District.
Jeffrey Selig 6/22/95
 SOIL CONSERVATION DISTRICT Date

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Liam J. Shaw 5/15/95 *Richard M. Daniels* 5/15/95
 DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF HIGHWAYS DATE

William J. Seaman 5/12/95 *Robert L. Anderson* 5/15/95
 CHIEF, BUREAU OF ENGINEERING DATE CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

DEVELOPERS CERTIFICATE

I certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certification of attendance at a Maryland Department of Environment approved training program for the periodic on-site inspections by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

William J. Seaman 5/12/95
 Developer Date

ENGINEER CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and verifiable plan based on personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Richard L. H. 8-23-95
 Engineer Date

10/24/95	REVISION NO. 1	S.R.H.	TITLE: SEDIMENT CONTROL PLAN
			PROJECT: DORSEY RUN ROAD
			LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
			TAX MAP: 43 PARCEL: BLOCK:
			NEED REFERENCE: COUNTY FILE NO.: J-4114
			SCALE: 1" = 50' DESIGNED BY: JUB DRAWN BY: JRG CHECKED BY: MLL DATE: MAR., 1995
			FIELD BOOK: PAGE NO.: JOB NO: 91003 DRAWING NO: 12 OF 40
DATE	REVISION	BY	

Boender Associates
 ENGINEERS - PLANNERS - SURVEYORS
 3230 BETHANY LANE
 ELLICOTT CITY, MD. 21042
 (410) 465-7777 FAX: (410) 465-7966

101

NOTE: TRAP NO. 7 SHALL BE REVISITED DAILY AND DURING FILL LISTS.

TRAP NO. 7
 TYPE = STONE OUTLET
 DRAINAGE AREA = 1.50 ACRES (DURING GRADING; 6.20 ACRES AFTER CURB IS CONSTRUCTED.)
 VOLUME REQUIRED = 13,160 C.F.
 VOLUME PROVIDED = 11,264 C.F.
 TOP ELEVATION = 114'
 CREST ELEVATION = 113'
 BOTTOM ELEVATION = 108'
 CLEAN OUT ELEVATION = 110'
 BOTTOM DIMENSION = 66' x 36'
 SIDE SLOPE = 1 : 1
 DEPTH = 4'

TRAP NO. 8
 TYPE = STONE OUTLET
 DRAINAGE AREA = 2.18 ACRES
 VOLUME REQUIRED = 3924 C.F.
 VOLUME PROVIDED = 3996 C.F.
 TOP ELEVATION = 138'
 CREST ELEVATION = 137'
 BOTTOM ELEVATION = 133'
 CLEAN OUT ELEVATION = 134.5
 BOTTOM DIMENSION = 18' x 60'
 SIDE SLOPE = 1 : 1
 DEPTH = 5'

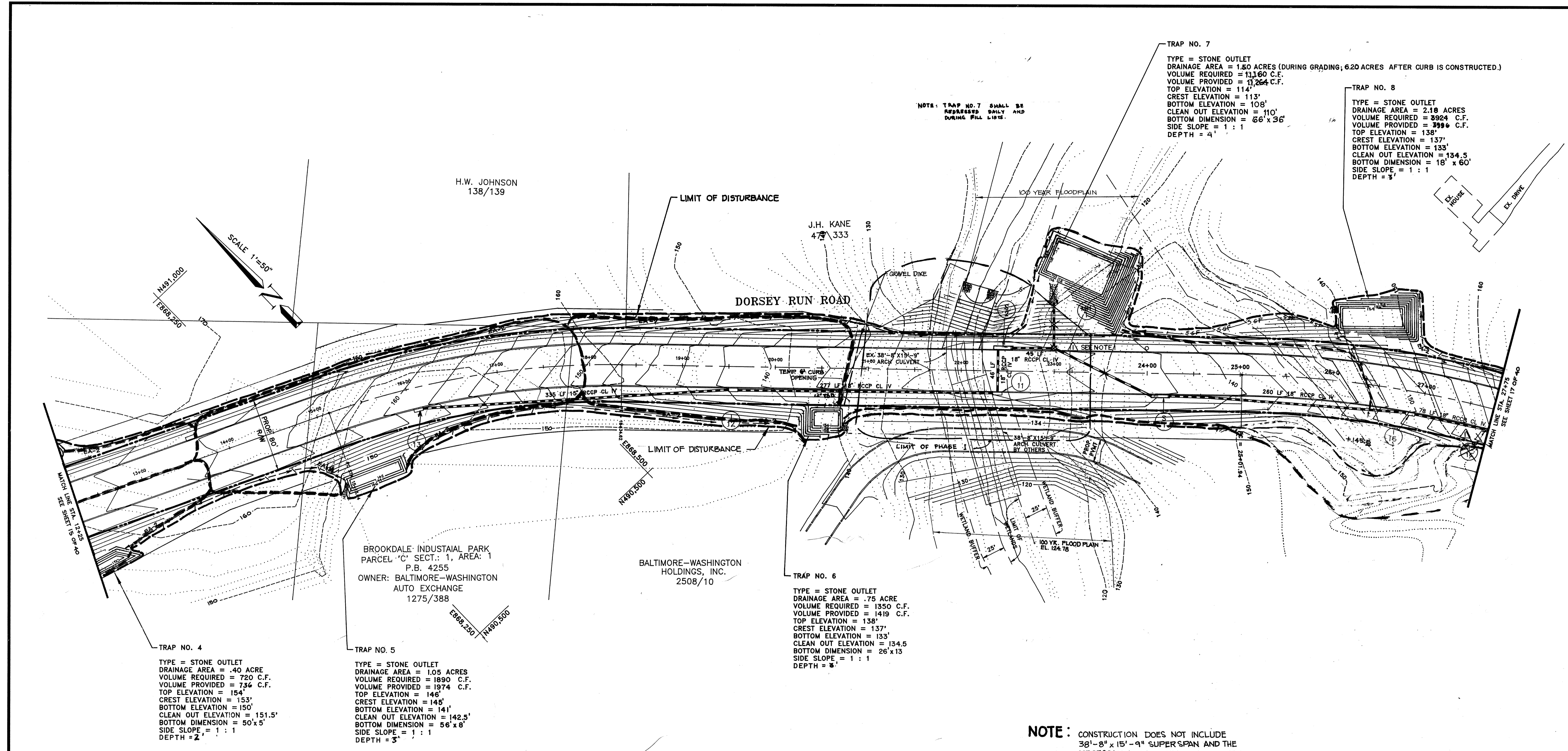
TRAP NO. 6
 TYPE = STONE OUTLET
 DRAINAGE AREA = .75 ACRE
 VOLUME REQUIRED = 1350 C.F.
 VOLUME PROVIDED = 1419 C.F.
 TOP ELEVATION = 138'
 CREST ELEVATION = 137'
 BOTTOM ELEVATION = 133'
 CLEAN OUT ELEVATION = 134.5
 BOTTOM DIMENSION = 26' x 13'
 SIDE SLOPE = 1 : 1
 DEPTH = 5'

TRAP NO. 4
 TYPE = STONE OUTLET
 DRAINAGE AREA = .40 ACRE
 VOLUME REQUIRED = 720 C.F.
 VOLUME PROVIDED = 736 C.F.
 TOP ELEVATION = 154'
 CREST ELEVATION = 153'
 BOTTOM ELEVATION = 150'
 CLEAN OUT ELEVATION = 151.5'
 BOTTOM DIMENSION = 50' x 5'
 SIDE SLOPE = 1 : 1
 DEPTH = 2'

TRAP NO. 5
 TYPE = STONE OUTLET
 DRAINAGE AREA = 1.05 ACRES
 VOLUME REQUIRED = 1890 C.F.
 VOLUME PROVIDED = 1974 C.F.
 TOP ELEVATION = 146'
 CREST ELEVATION = 145'
 BOTTOM ELEVATION = 141'
 CLEAN OUT ELEVATION = 142.5'
 BOTTOM DIMENSION = 56' x 8'
 SIDE SLOPE = 1 : 1
 DEPTH = 3'

NOTE: CONSTRUCTION DOES NOT INCLUDE 38'-8" x 15'-9" SUPER SPAN AND THE NECESSARY SLOPE GRADING. THIS WILL BE CONSTRUCTED UNDER PHASE I.

NOTE: SEE PLAN SHEET DRAWING NO. 4 FOR REVISED PAVING AND STORM DRAIN INLET AND LOCATIONS.



Reviewed for Howard Soil Conservation District and meets technical requirements.
[Signature] 6/22/95
 Natural Resources Conservation Service Date

This development is approved soil erosion and sediment control by the Howard Soil Conservation District.
[Signature] 6/22/95
 SOIL CONSERVATION DISTRICT Date

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 5/15/95 *[Signature]* 5/15/95
 DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 5/12/95 *[Signature]* 5/12/95
 CHIEF, BUREAU OF ENGINEERING DATE CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE DATE

DEVELOPERS CERTIFICATE

I certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certification of attendance at a Maryland Department of Environment approved training program for the periodic on-site inspections by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

[Signature] 5/12/95
 Developer Date

ENGINEER CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

[Signature] 5/24/95
 Engineer Date

10/24/95	REVISION NO. 1	TITLE	SEDIMENT CONTROL PLAN
		PROJECT	DORSEY RUN ROAD
		LOCATION	1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		TAX MAP	43 PARCEL
		DEED REFERENCE	COUNTY FILE No. J-4114
		SCALE	1" = 50'
		DESIGNED BY	MLL
		DRAWN BY	MLL
		CHECKED BY	MLL
		DATE	MAR., 1995
		FIELD BOOK	91003
		PAGE No.	16 OF 22
		JOB No.	91003
		DRAWING No.	16 OF 22

Boender Associates
 ENGINEERS - PLANNERS - SURVEYORS
 3230 BETHANY LANE
 ELLICOTT CITY, MD. 21042
 (410) 465-7777 FAX: (410) 465-7966

107

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (0.7 lbs/1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 80 lbs per acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 80 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

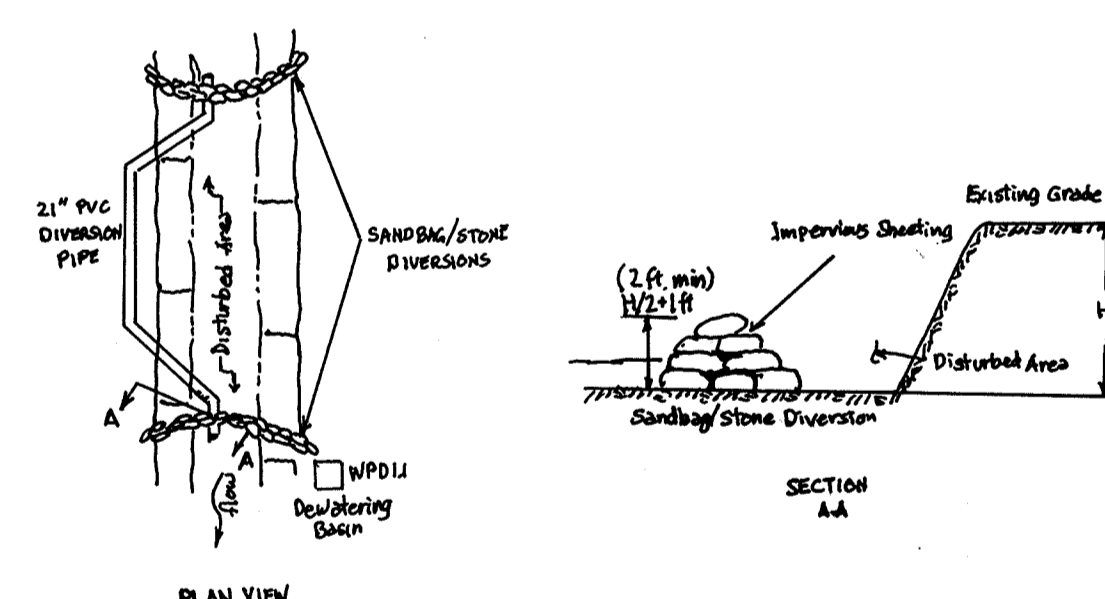
Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction (915-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:

Total area of site	15.0± Acres
Area disturbed	15.0± Acres
Area to be roofed or paved	5.0± Acres
Area to be vegetatively stabilized	10.0± Acres
Total Cut	100,000 Cu. Yds.
Total fill	24,416 Cu. Yds.

 Offsite waste/borrow area location County Compost Plant S-OP - 9160'
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.



1. DESCRIPTION: THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL, SUCH AS CULVERT CONSTRUCTION OR CULVERT REPLACEMENT.
2. MATERIAL SPECIFICATIONS:
 1. SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE AND WHICH TRAP WATER ENOUGH TO PREVENT LEAKAGE OF FIL MATERIAL (E.G., SAND, FINE GRAVEL, ETC.).
 2. STONE: STONE SHALL BE WASHED AND HAVE A MINIMUM DIAMETER OF 6 INCHES.
 3. SHEETING: SHEETING SHALL CONSIST OF AN INTELLENT LINE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.
3. CONSTRUCTION REQUIREMENTS:
 1. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 2. THE DIVERSION PIPE SHALL BE INSTALLED WITH THE SANDBAGS/STONE STRUCTURE BEING ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BANK PLUS ONE FOOT, AS SHOWN IN SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH, PREPARED SURFACE.
 3. ALL EXPOSED MATERIALS SHALL BE COVERED OR IN A SOFT APPROVED DISPOSAL AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED BY LOCAL AGENCIES.
 4. ALL DISTURBED AREAS OF THE CONSTRUCTION AREA SHALL BE PLACED TO A CONTAINMENT BASIN (PLATE 1001.1) OR OTHERWISE APPROVED ON THE PLANS BY THE WEA.
 5. SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 6. THE DIVERSION PIPE SHALL HAVE A MINIMUM DIAMETER OF SUFFICIENT SIZE TO CONVEY THE NORMAL STREAM FLOW.
 7. IF NECESSARY, SILT FENCE OR STRAWMULCH SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 8. SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

Reviewed for Howard Soil Conservation District and meets technical requirements.

Patricia E. H. 4/16/95
NATURE RESOURCES CONSULTANT DATE

Shirley A. 4/16/95
SOIL CONSERVATION DISTRICT DATE

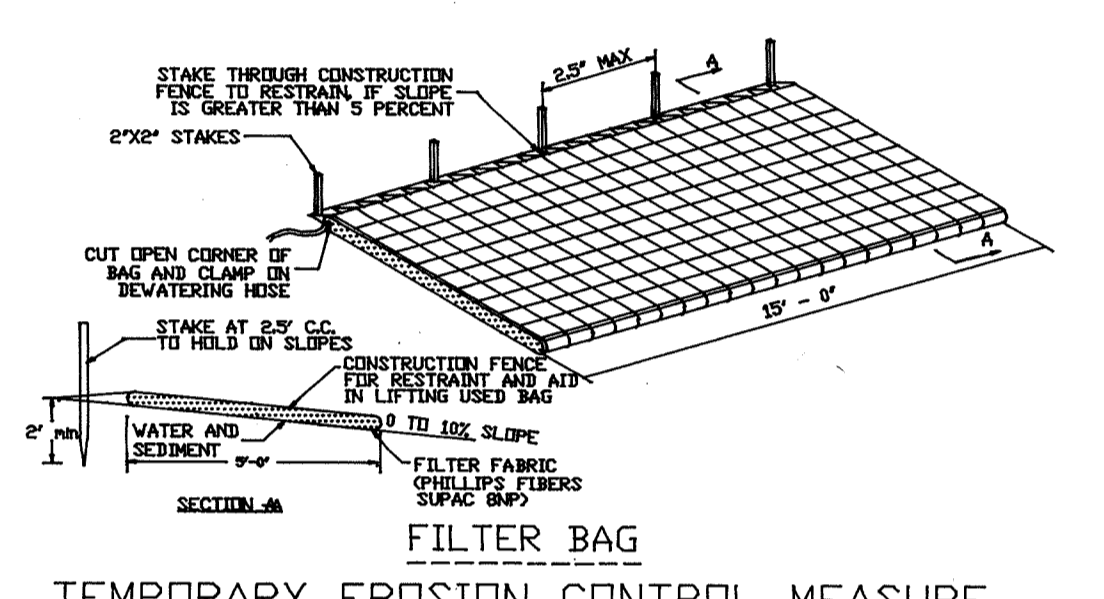
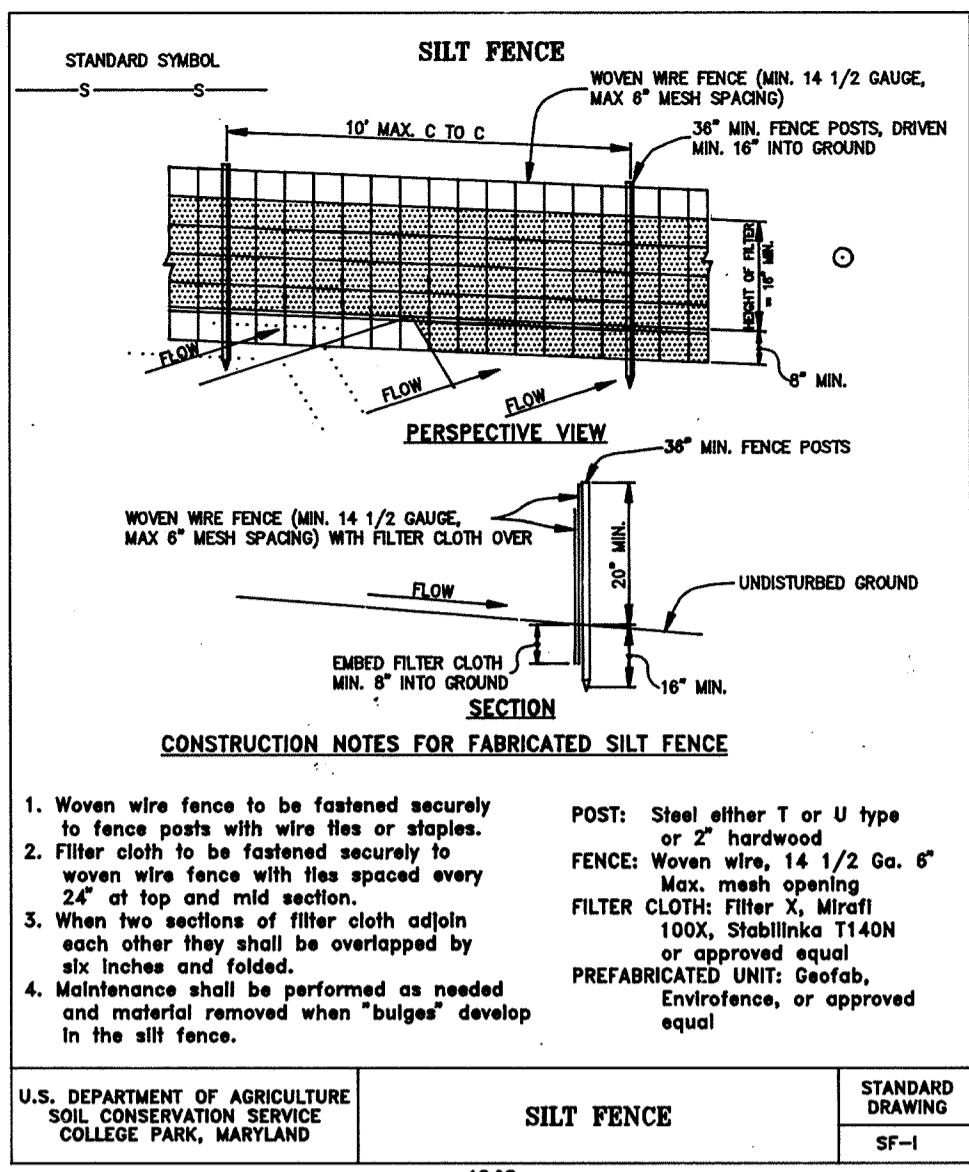
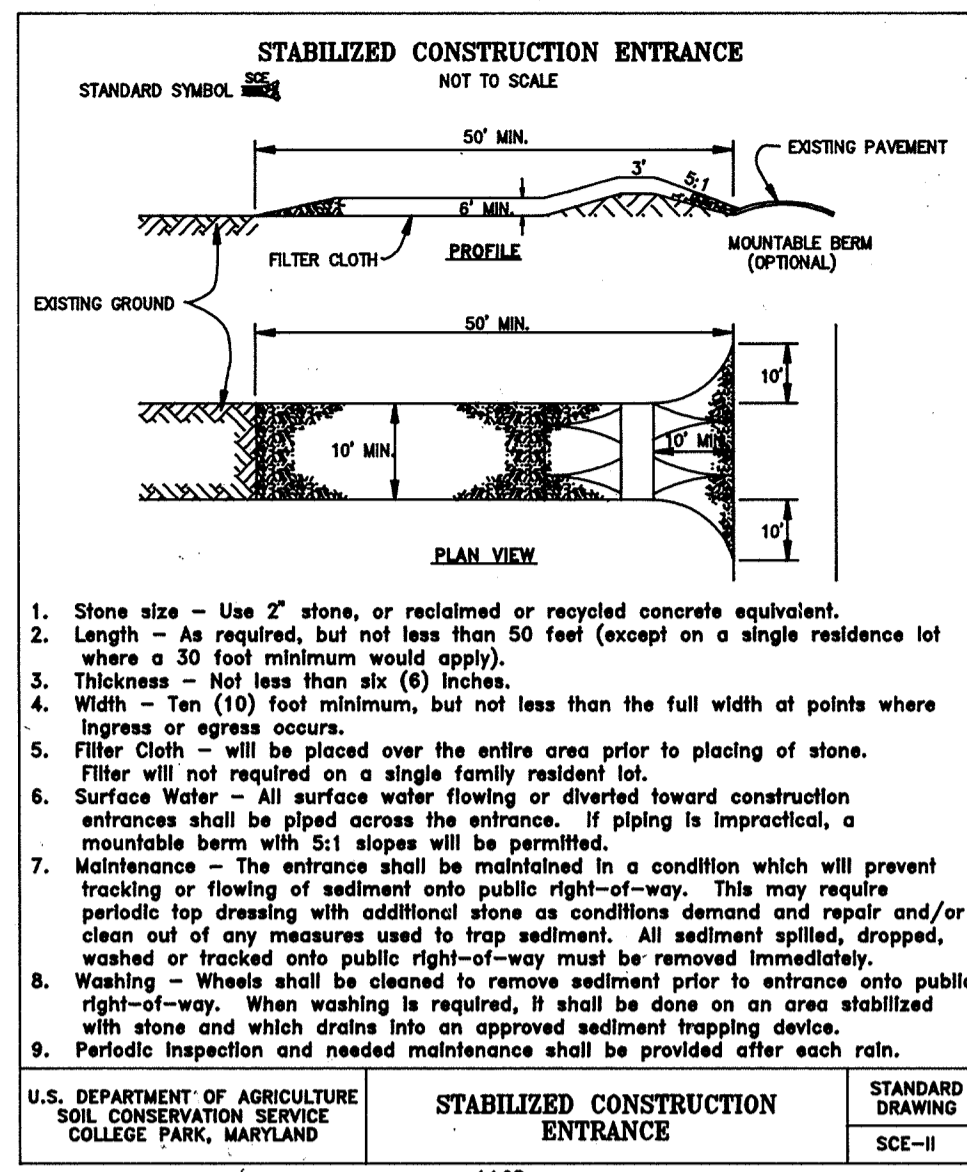
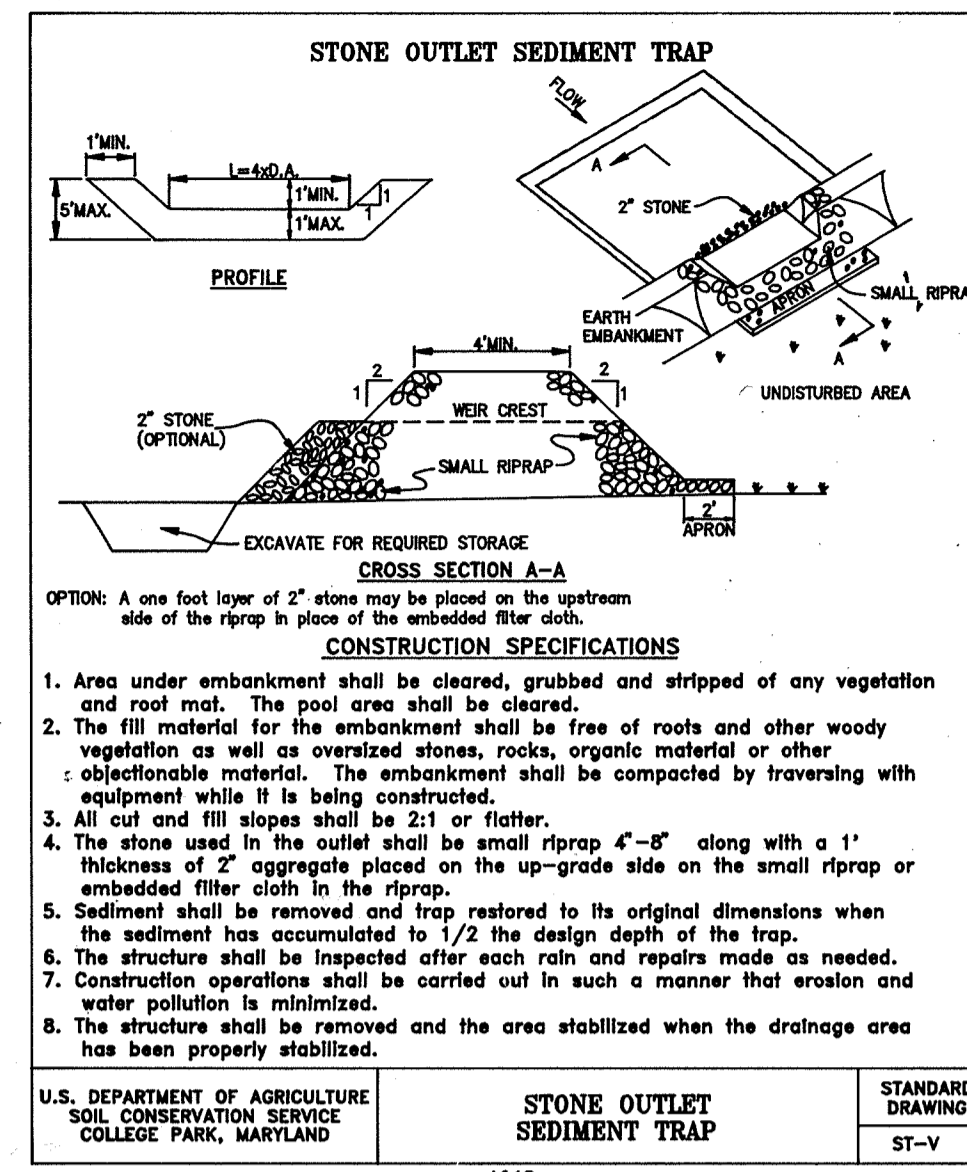
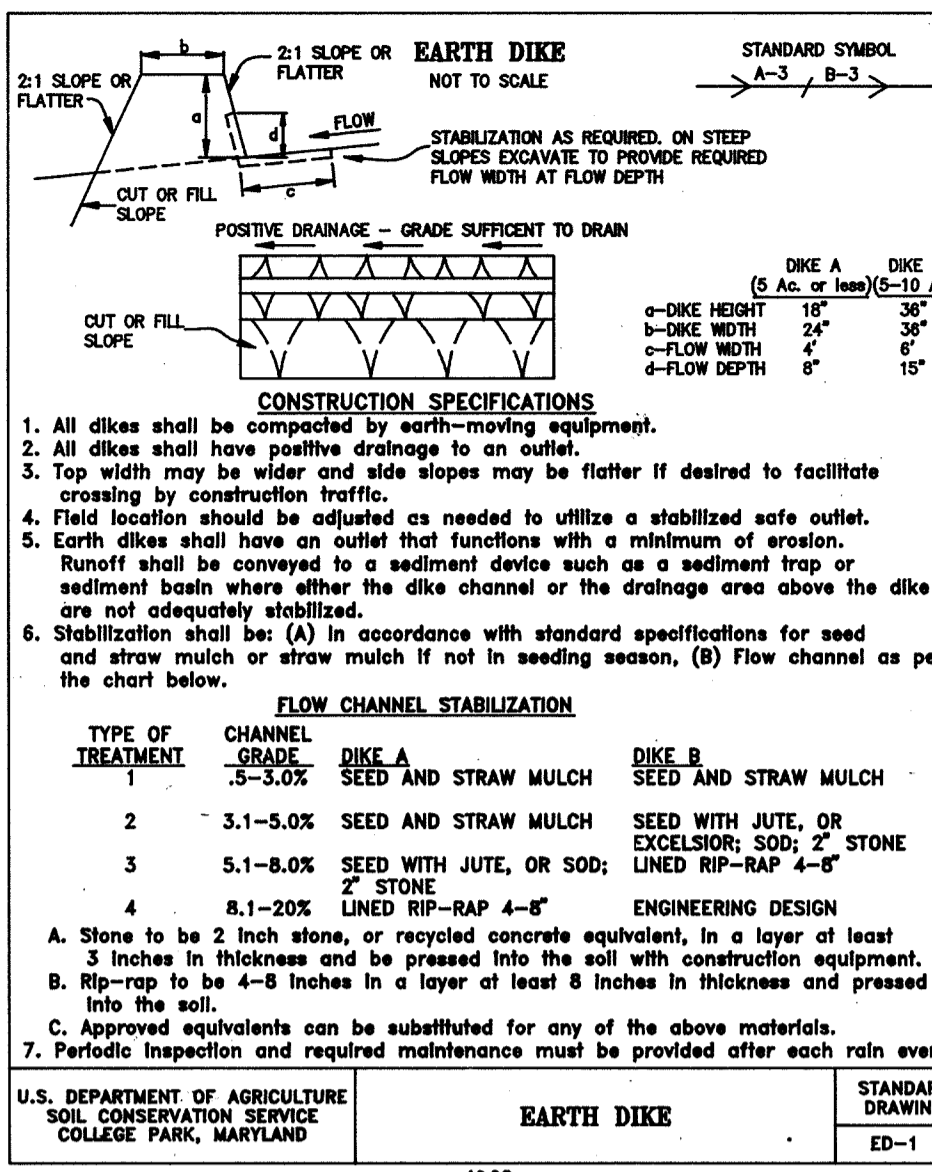
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. 5/12/95 DATE
DIRECTOR OF PUBLIC WORKS

Robert M. 5/12/95 DATE
CHIEF, BUREAU OF HIGHWAYS

Charles R. 5/12/95 DATE
CHIEF, BUREAU OF ENGINEERING

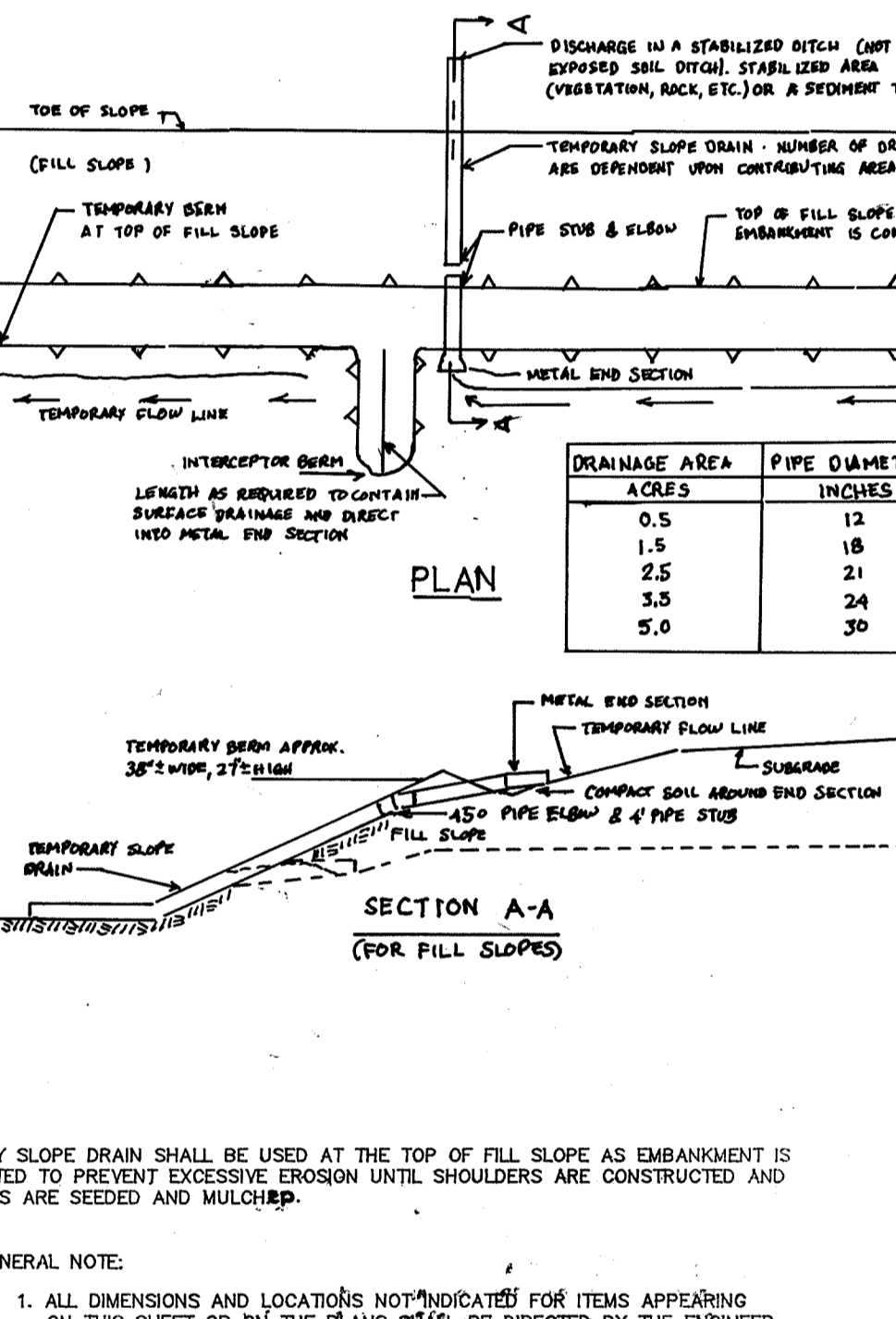
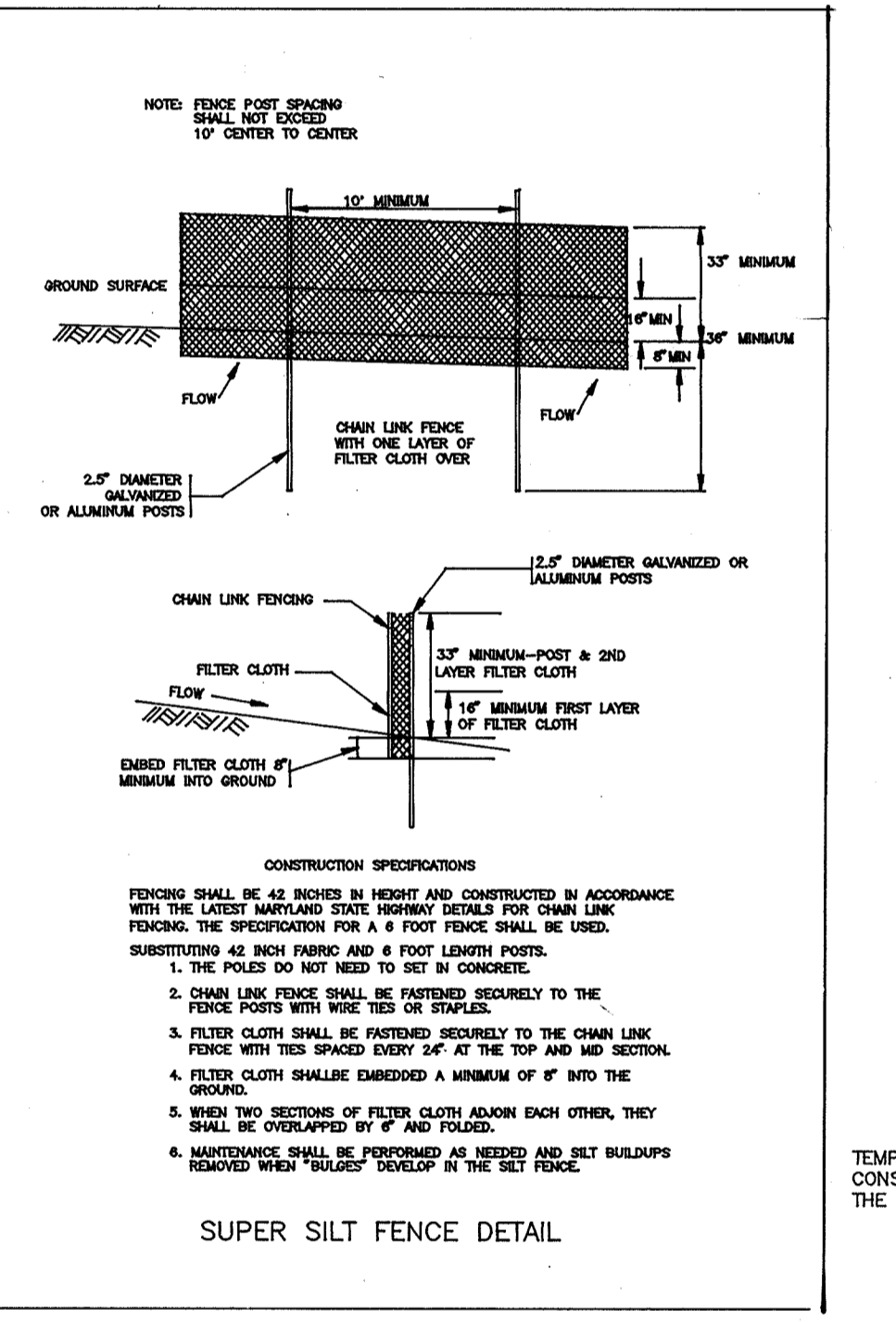
Quayle Anderson 5/12/95 DATE
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE



Maryland SCS/WRA April 1983

CONSTRUCTION SPECIFICATIONS FOR ST-VI

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
3. All fill slopes shall be 2:1 or flatter; Cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level water crest.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be four (4) to eight (8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repaired as needed.
10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
12. Drainage area for this practice is limited to 15 acres or less.



SEDIMENT CONTROL DETAILS

PROJECT: DORSEY RUN ROAD

LOCATION: 1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: DESIGNED BY/DRAWN BY: JJB
AS SHOWN JJB

CHECKED BY: JRG
DATE: MAR, 1995

FIELD BOOK: PAGE No. 91003

JOB No. 18 OF 42

Boender Associates
ENGINEERS - PLANNERS - SURVEYORS

3230 BETHANY LANE
ELLCOTT CITY, MD 21042
(410) 465-7777 FAX: (410) 465-7966

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site and conditions and it was prepared in accordance with the requirements of Howard Soil Conservation District.

Shirley A. 8/12/95 DATE
SIGNATURE OF ENGINEER

DEVELOPER'S/BUILDER'S CERTIFICATE

I certify that all development and construction will be done in accordance with this plan, and that any responsible personnel involved in the construction will have a Certificate of Attendance at the Department of the Environment Approved Training Program for the Control of Sediment before beginning the project. I also authorize participation by the Howard Soil Conservation Service.

Shirley A. 5/12/95 DATE
BUILDERS/DEVELOPER

