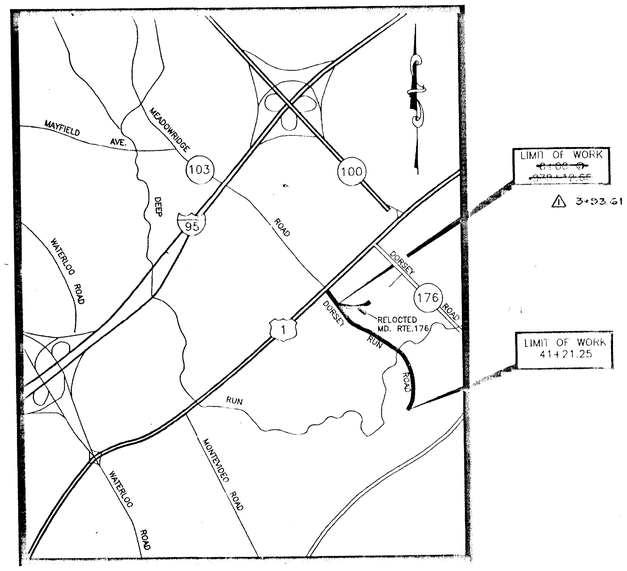
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

INDEX OF SHEETS

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



SCALE : 1"= 2000'

DORSEY RUN ROAD
ROADWAY IMPROVEMENTS
CAPITAL PROJECT J-4114

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
2. 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.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at Least 48 hours prior to any excavation work.
4. 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.
5. A field run survey was conducted by Boender Associates, Inc. on or about Feb. of 1992.
6. Light poles and fixtures for street lights shall be in accordance with the latest Howard County Design Manual, Volume III Roads and Bridges.
7. Stormwater Management for water quality will be provided.
8. Wetlands delineation was performed by Brightwater, Inc. on June 1994.
9. Existing utilities were located by a field run survey and approved county As-Builts.

CUT AND FILL SUMMARY

STATION	AREAS Square Feet CUT	AREAS Square Feet FILL	VOLUMES Cubic Yards CUT @.85	VOLUMES Cubic Yards FILL	CUMULATIVE VOLUMES Cubic Yards CUT @.85	CUMULATIVE VOLUMES Cubic Yards FILL
5+28.83	81.88	73.05				
5+50	75.70	78.79	57.47	65.15	57.47	65.15
6+00	69.95	84.00	114.63	150.74	172.10	215.89
6+41.45	66.41	88.42	88.96	132.34	261.06	348.22
6+50	65.80	89.35	17.65	27.90	278.71	376.12
7+00	57.16	99.10	95.68	173.28	374.39	549.40
7+50	30.05	119.35	67.85	200.65	442.24	750.05
8+00	0.00	188.43	24.35	282.73	466.59	1032.79
8+50	0.00	391.07	0.00	536.58	466.59	1569.36
9+00	0.00	595.31	0.00	917.79	466.59	2487.15
9+17.76	0.00	654.56	0.00	415.31	466.59	2902.50
9+50	0.00	859.59	0.00	904.74	466.59	3807.24
10+00	0.00	1219.1	0.00	1916.66	466.59	5723.90
10+50	0.00	1379.13	0.00	2406.05	466.59	8129.95
11+00	0.00	1327.16	0.00	2505.82	466.59	10635.78
11+50	0.00	1037.42	0.00	2189.42	466.59	12825.20
12+00	0.00	704.06	0.00	1612.49	466.59	14437.69
12+50	0.00	358.64	0.00	984.91	466.59	15422.60
13+00	42.71	118.13	53.80	442.37	500.21	15864.97
13+50	122.56	61.88	130.08	166.67	630.28	16031.65
14+00	133.92	52.18	201.86	105.61	832.15	16137.25
14+50	197.98	19.00	261.20	65.96	1093.34	16203.21
15+00	130.74	193.74	258.70	286.12	1352.04	16389.33
15+13.63	47.25	230.44	38.20	141.77	1390.24	16549.11
15+50	0.14	776.67	27.57	780.60	1417.81	17329.10
16+00	4.76	716.84	4.00	1368.18	1421.81	18697.28
16+50	32.32	436.63	30.20	1058.92	1452.01	19754.20
17+00	184.73	96.69	159.35	485.07	1611.35	20239.27
17+50	84.63	0.00	811.24	86.34	2422.60	20325.61
18+00	114.49	0.00	1392.44	0.00	3815.04	20325.61
18+34.61	1030.58	0.00	1058.17	0.00	4873.20	20325.61
18+50	1050.75	0.00	504.19	0.00	5377.39	20325.61
19+00	1148.66	0.00	1731.02	0.00	7108.41	20325.61
19+50	1090.85	0.00	1762.58	0.00	8870.99	20325.61
20+00	1155.15	0.00	1767.69	0.00	10638.68	20325.61
20+50	826.38	0.00	1559.54	0.00	12198.22	20325.61
21+00	118.75	66.22	743.86	61.32	12942.08	20386.93
			0.00	0.00	12942.08	20386.93

STATION	AREAS Square Feet CUT	AREAS Square Feet FILL	VOLUMES Cubic Yards CUT @.85	VOLUMES Cubic Yards FILL	CUMULATIVE VOLUMES Cubic Yards CUT @.85	CUMULATIVE VOLUMES Cubic Yards FILL
23+00	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	759.61	0.00	939.56	20.78	3383.07	35.57
25+00	434.19	22.44	25.21	1.67	3408.28	37.25
25+01.86	426.33	26.07	433.24	234.20	3841.52	271.44
25+50	139.29	231.60	117.60	775.98	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	49.79	118.15	207.05	132.36	4204.40	2609.11
27+50	212.85	28.04	445.20	25.18	4649.61	2634.29
28+00	350.79	0.00	645.91	0.00	5295.52	2634.29
28+50	467.02	0.00	773.21	0.00	6068.73	2634.29
29+00	514.62	0.00	798.59	0.00	6867.32	2634.29
29+50	501.56	0.00	823.87	0.00	7691.19	2634.29
30+00	545.23	0.00	873.12	0.00	8564.31	2634.29
30+50	562.71	0.00	911.21	0.00	9475.52	2634.29
31+00	594.91	0.00	1079.03	0.00	10554.55	2634.29
31+50	776.65	0.00	1306.09	0.00	11861.64	2634.29
32+00	883.54	0.00	1052.51	0.00	13214.31	2634.29
32+50	833.59	0.00	1281.06	0.00	14495.37	2634.29
33+00	789.06	0.00	1390.69	0.00	15886.06	2634.29
33+50	969.06	0.00	1645.52	0.00	17531.57	2634.29
34+00	1115.90	0.00	1735.75	0.00	19267.32	2634.29
34+50	1089.48	0.00	1602.02	0.00	20869.34	2634.29
35+00	949.89	0.00	1438.51	0.00	22307.85	2634.29
35+50	884.73	0.00	1295.10	0.00	23602.94	2634.29
36+00	769.64	0.00	1084.81	0.00	24687.76	2634.29
36+50	614.11	0.00	745.63	1.57	25433.39	2635.86
37+00	329.76	1.72	387.78	39.75	25821.15	2675.61
37+50	164.07	40.01	219.56	123.54	26040.71	2799.15
38+00	116.64	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	3995.18
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	4029.43

SUMMARY:

TOTAL CUT = ~~40,902~~ C.Y.
TOTAL FILL = 24,4~~1~~ C.Y. ⚠
WASTE = ~~16,686~~ C.Y.

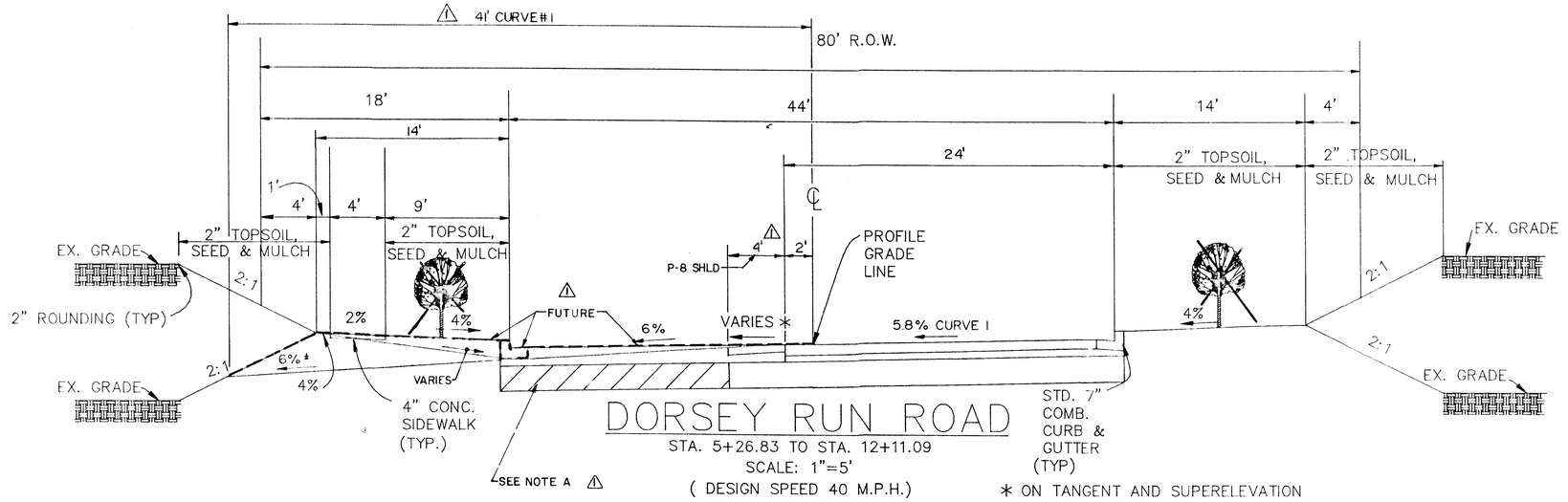
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 5/5/95
CHIEF, BUREAU OF HIGHWAYS — DATE 5/5/95
CHIEF, BUREAU OF ENGINEERING — DATE 5/12/95
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE — DATE 5/5/95

DATE	REVISION	BY
6/9/95 ⚠	REVISION NO. 1	

TITLE: TITLE SHEET
PROJECT: DORSEY RUN ROAD, PHASE II
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 43 PARCEL: BLOCK:
DEED REFERENCE: COUNTY FILE No.: J-4114
SCALE: AS SHOWN DESIGNED BY: JJB DRAWN BY: JKG CHECKED BY: MLL DATE: MAR. 1995
FIELD BOOK: PAGE No.: LDR No.: 91003 DRAWING No.: 1 OF 50

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



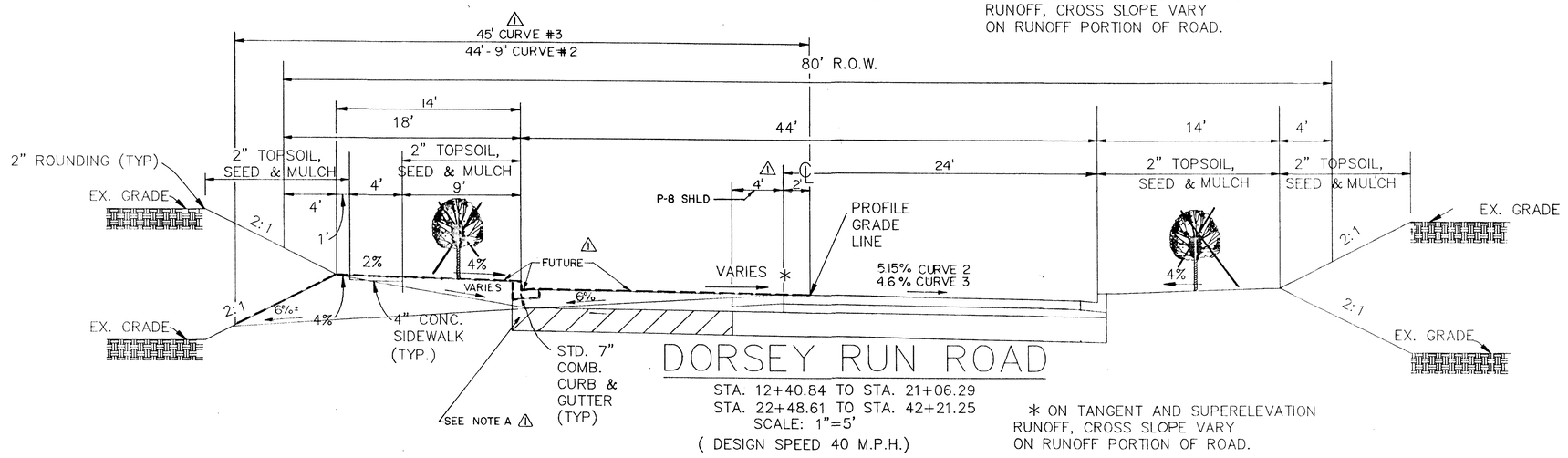
DORSEY RUN ROAD

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.

SUPER ELEVATION DATA

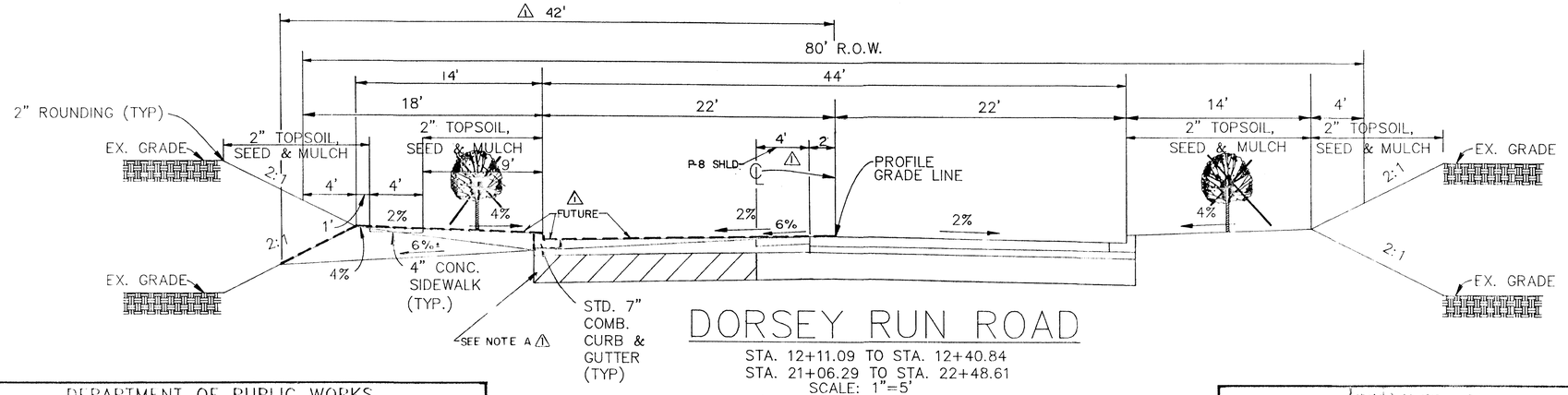
ITEM	CURVE 1	CURVE 2	CURVE 3
BEGIN TANGENT RUNOFF NORMAL SECTION	SE=0.056'/FT. 3+48.12	SE=0.0515'/FT. 12+40.84	SE=0.046'/FT. 22+48.61
END TANGENT RUNOFF BEGIN S/E RUNOFF HALF LEVEL	4+48.12	13+40.84	23+48.61
INCLINE PLAIN	5+48.12	14+40.84	24+48.61
PC STATION	PC 6+41.45	PC 15+12.51	PC 25+01.94
BEGIN FULL 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. 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.



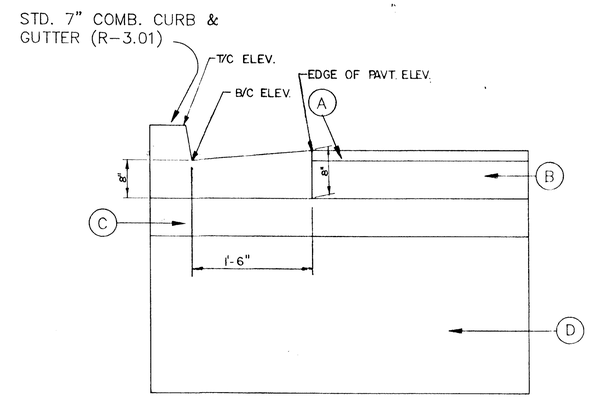
DORSEY RUN ROAD

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

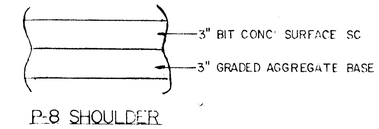
DORSEY RUN ROAD
HOWARD COUNTY
PAVING DETAIL

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+15.65 TO 881+61.01



P-8 SHOULDER

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 5/15/95
CHIEF, BUREAU OF HIGHWAYS — DATE 5/15/95
CHIEF, BUREAU OF ENGINEERING — DATE 5/12/95
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE — DATE 5/8/95

DATE	REVISION	BY
10/24/95	REVISED PER DPW	

TITLE: TYPICAL SECTIONS
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: JJB DRAWN BY: JRC CHECKED BY: MLL DATED: MAR. 1995
FIELD BOOK: PAGE No.: JOB No.: 91003 DRAWING No.: 2 OF 40

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ELLICOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966

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	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 5/15/95	CHIEF, BUREAU OF HIGHWAYS	DATE 5/15/95
CHIEF, BUREAU OF ENGINEERING	DATE 5/12/95	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	DATE 5/8/95

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

TITLE: ROAD PLAN & 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: JJB | DRAWN BY: JRG | CHECKED BY: MLL | DATE: MAR., 1995
FIELD BOOK: 135 | PAGE No.: 55-74 | JOB No.: 91003 | DRAWING No.: 3 OF 40

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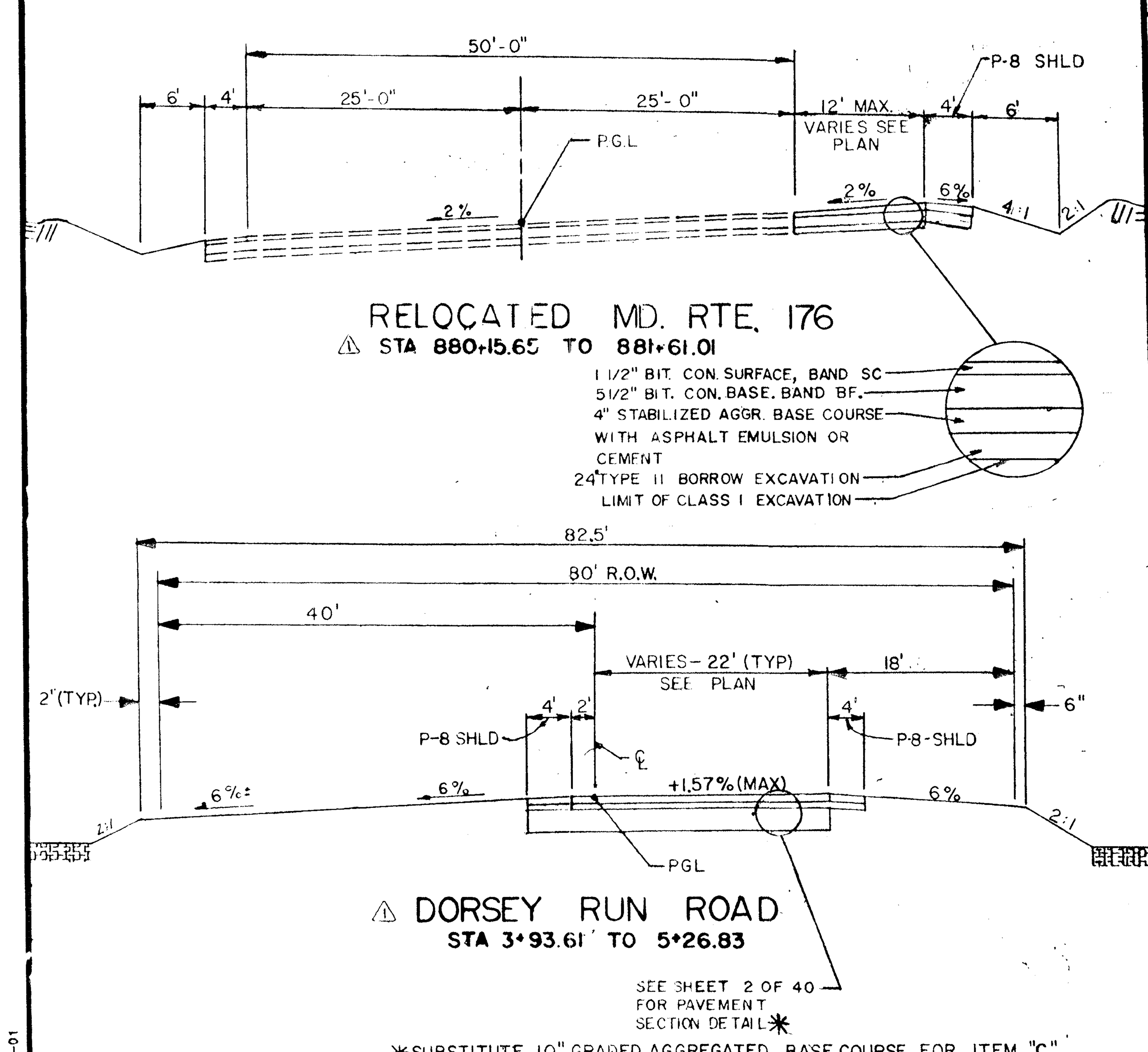
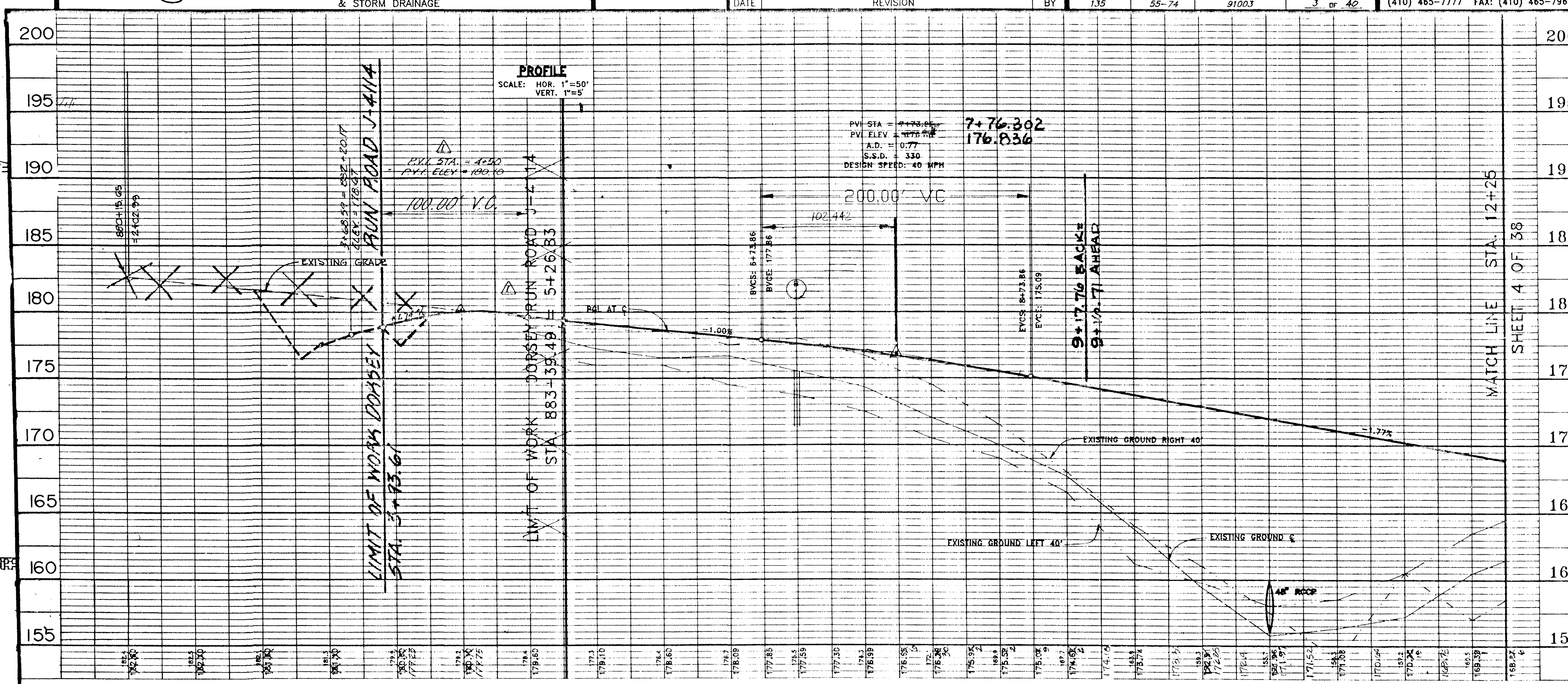
ELLICOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966





NOTE: ALL GUARDRAILS SHALL BE IN ACCORDANCE WITH DETAIL R-707 & END TREATMENT R-7.06
FOR STORM DRAIN PROFILE FOR I-13 TO I-11, SEE SHEET 12 OF 40. I-15 TO S-2, E-6 TO E-5 SHEET 11 OF 40.
H.W. JOHNSON 138/139
J.H. KANE 477\333
R.WAYNE NEWSOME 1821/732
SCALE 1"=50'
DORSEY RUN ROAD
SUPERELEVATED CURVE 2 DATA
SUPERELEVATION RATE = 5.15%
SUPERELEVATION RUNOFF = 257.50' (1/3 WITHIN CURVE)
TANGENT RUNOUT = 100'
CURVE 2
PC= 15+12.51
PT= 18+34.50
Δ = 20°29'54"
R = 900.00'
T = 162.73'
L = 321.99'
D = 06°21'58"
C = S 55°35'54"E 320.27'
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'
20' WATER & UTILITY EASEMENT
A.A. SHPAK 2219/479
BROOKDALE INDUSTRIAL PARK PARCEL 'C' SECT.: 1, AREA: 1 P.B. 4255
OWNER: BALTIMORE-WASHINGTON AUTO EXCHANGE 1275/388
ABANDONED PARKING AREA
BALTIMORE-WASHINGTON HOLDINGS, INC. 2508/10
CONTRACTOR TO RELOCATE EXISTING FENCE AFTER LIMIT OF SLOPE IS DETERMINED STA. 15+08 TO 18+95, L=442'. FENCE HAS TO BE DONE SO THAT SECURITY IS MAINTAINED AT THE AUTO EXCHANGE FACILITY AT ALL TIMES.
B.M. #1 EL. 156.14 N 490459.4698 E 868597.8219
NOTE: FOR RELOCATION SEE CONTRACT NO. W-8156
PLAN SCALE: 1" = 50'
QUANTITIES
CURB - 1536.76'
SIDEWALK - NIC
GUARDRAIL - 1226.56'
E4 RIPRAP DETAIL NOT TO SCALE
15' CLASS I RIPRAP ON GEOTEXTILE
SECT. B-B
LEGEND: CURB, STREET LIGHTS, STREET TREES, STORM DRAINS, PROPERTY & R/W LINES, GUARD RAILS, FENCE LINE
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS 5/15/95
CHIEF, BUREAU OF HIGHWAYS 5/15/95
CHIEF, BUREAU OF ENGINEERING 5/12/95
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE 5/8/95
ROAD PLAN AND PROFILE
DORSEY RUN ROAD
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP 43
COUNTY FILE No. J-4114
SCALE: AS SHOWN DESIGNED BY: JJB DRAWN BY: JRG CHECKED BY: MLL DATE: MAR. 1995
FIELD BOOK 135 PAGE No. 55-74 JOB No. 91003 DRAWING No. 4 OF 40
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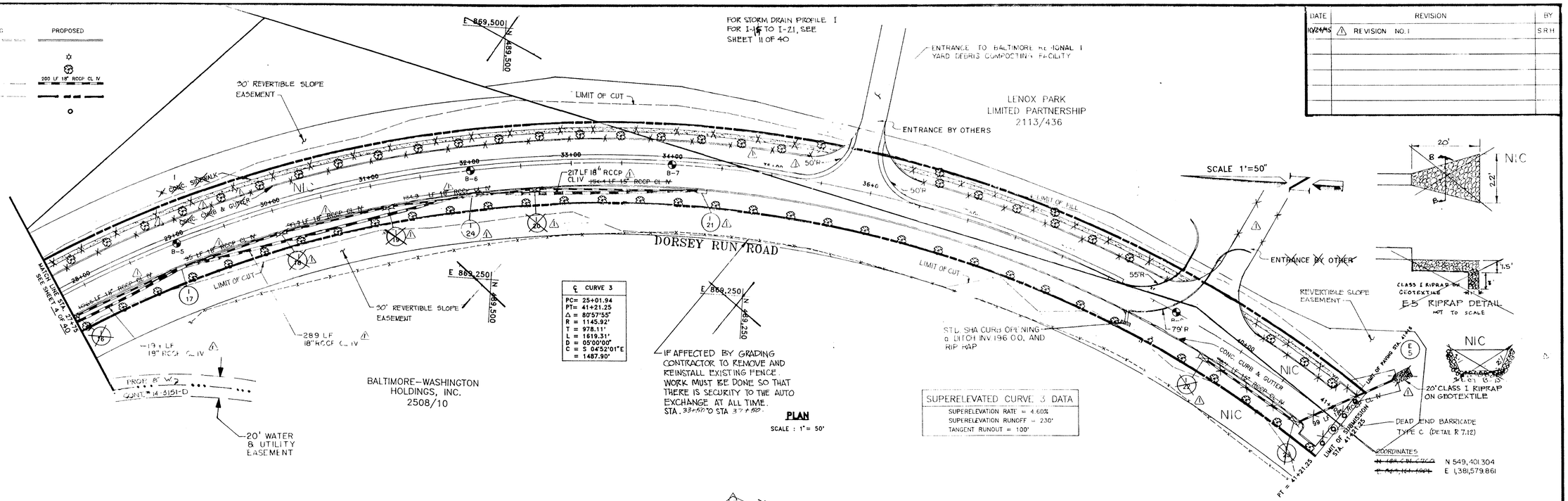
3230 BETHANY LANE ELLICOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966
PROFILE SCALE: HOR. 1"=50' VERT. 1"=5'
400.00' VC
910.00' VC
LOW POINT ELEV = 135.59
LOW POINT STA = 22+39.30
PVI STA = 22+89.86
PVI ELEV = 120.40
A.D. = -13.50
K = 67.41
EXISTING GROUND LEFT 40'
EXISTING GROUND ℄
EXISTING GROUND RIGHT 40'
EXISTING 12" WATER TO BE RELOCATED UNDER CONTRACT NO. 8156-W
MATCH LINE STA. 12+25 SEE SHEET 3 OF 38
MATCH LINE STA. 27+75 SEE SHEET 5 OF 38

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

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	o



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS	5/15/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/5/95 DATE

QUANTITIES

CURB	2588.68'
SIDEWALK	1245.58'

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: JJB DRAWN BY: JRG CHECKED BY: MLL DATE: MAR., 1995
FIELD BOOK: 135	PAGE No.: 55-74 JOB No.: 91003 DRAWING No.: 5 OF 40

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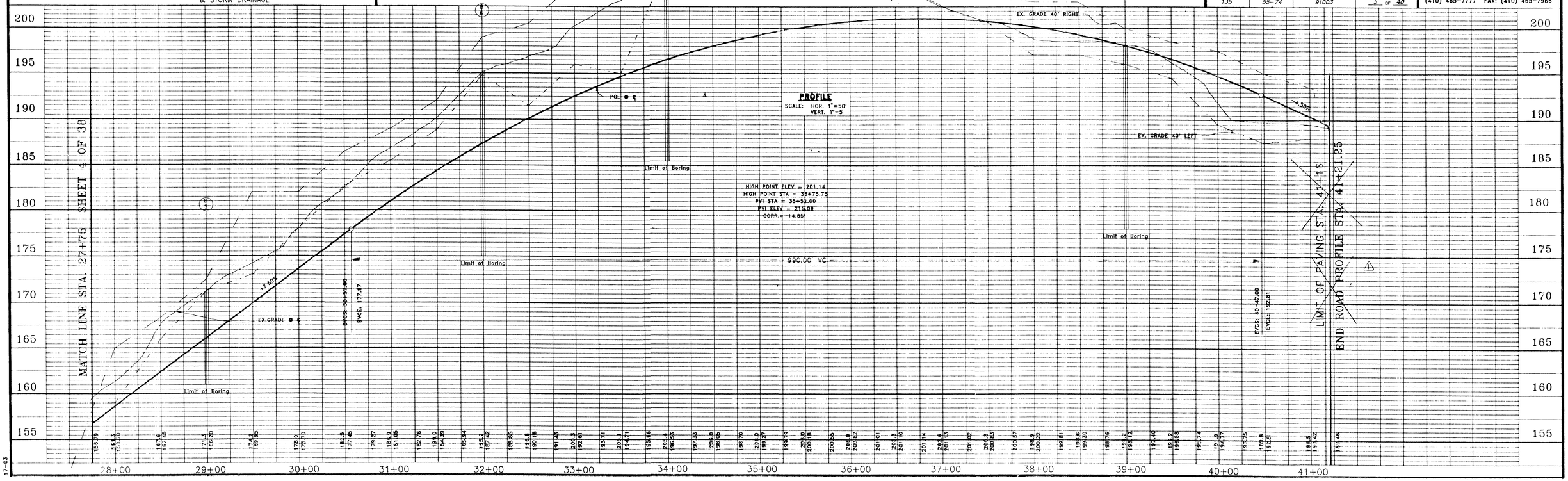

17-03

SCALE: 1" = 50'

K.C.F.–1 PARTNERSHIP

M4-5 (24"x12") TO
M1-4a (24"x24") 1
M1-6 (24"x30") 100
103
M6-1 (15"x21")

EAST
176
M3-2 (24"x12")
M1-6 (24"x30")
M6-1 (15"x21")

N491,750
E 867,250

EXISTING PAVEMENT MARKINGS TO REMAIN

STOP
R1-1 (36"x36")

W3-1a (36"x36")

℄ 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'

MD 176 RELOCATED

2' WIDE STOP BAR

REMOVE (GRIND) EXISTING MARKING

TWO 4" YELLOW LINES (4" APART)

880+15.65 = 2+02.99

PC STA. 6+42.79

PT STA. 9+18.05

FROM STREET LIGHT (TYP.)

EXIST. EDGE OF ROAD

875+00 876+00 877+00 878+00 879+00 880+00

S41°05'21"E

EXIST. EDGE OF ROAD

4" WHITE LINE

N491,300

E 867,330

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

SCALE : 1"= 50'

35 MPH

R2-1 36" x 48"

STA. 7+62.51, 27'R
NIC (ULT)

SPEED LIMIT 35
R2-1 (24"- 30")

NO OUTLET

NO OUTLET SIGN
Sta. 5+50.00-27'R

NIC (ULT)

U.S. ROUTE 1

DORSEY RUN ROAD

N491,750
E 866,900

EXISTING PAVEMENT MARKINGS TO REMAIN

W14-2 (30"x30") NO OUTLET

A.A. SHPAK
2219/479

A.A. SHPAK
2235/668
425/142

DORSEY RUN ROAD

4' CONC. SIDEWALK

CONC. CURB & GUTTER S65°49'19"E 12+00

CONC. CURB & GUTTER 11+50

CONC. CURB & GUTTER

8+00 10+00

MATCH LINE STA. 12+25
SEE SHEET 2 OF 40

~~STA. 5+26.83 TO 18+25, LENGTH 698.17' R~~
~~INSTALL PAINTED YELLOW PAVEMENT MARKINGS (4" WIDTH, CENTERLINE 5) AS SHOWN.~~

A.A. SHPAK
2235/668
425/142

~~150 WATT HPS VAPOR COBRA FIXTURE MOUNTED AT 30' IN A GALVANIZED STEEL EMBEDDED POLE WITH 6' ARM. BGE WILL INSTALL POLE AND CABLE.~~

INITIAL SIGNAGE & PAVEMENT MARKING PLAN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS	5/5/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/16/95 DATE

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

TITLE: ~~SIGNAGE & PAVEMENT MARKING PLAN~~
PROJECT: DORSEY RUN ROAD
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 43 PARCEL: BLOCK:
DEED REFERENCE: COUNTY FILE No.: J-4114
SCALE: 1"=50' DESIGNED BY: SJD DRAWN BY: SJD CHECKED BY: MLL DATE: MAR., 1995
FIELD BUOK: PAGE No.: JOB No.: 91003 DRAWING No.: 6 OF 40

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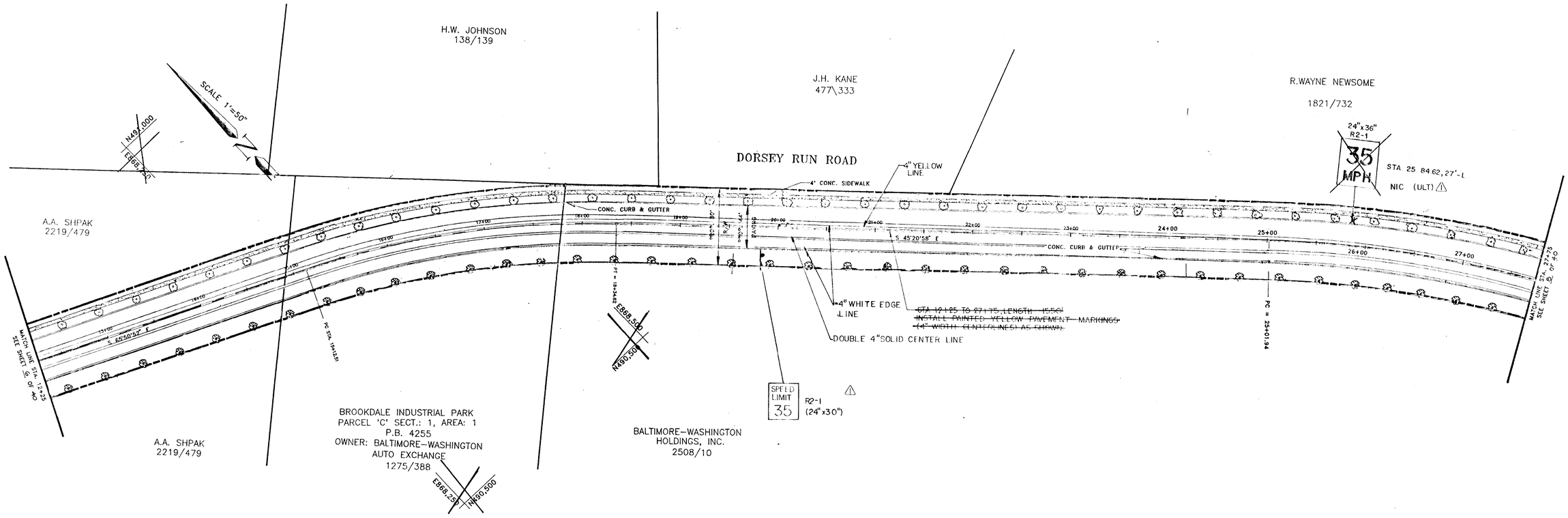
STAT. LOWS



⚠ INITIAL SIGNAGE & PAVEMENT MARKING PLAN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	5/15/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/15/95 DATE

DATE	REVISION	BY
10/24/96	⚠ REVISION NO 1	

TITLE: ~~SIGNAGE & PAVEMENT MARKING PLAN~~
PROJECT: DORSEY RUN ROAD
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 43 PARCEL: — BLOCK: —
DEED REFERENCE: — COUNTY FILE No.: J-4114
SCALE: 1"=50' DESIGNED BY: SJD DRAWN BY: SJD CHECKED BY: MLL DATE: MAR, 1995
FIELD BOOK: — PAGE No.: — JOB No.: 91003 DRAWING No.: 2 OF 40

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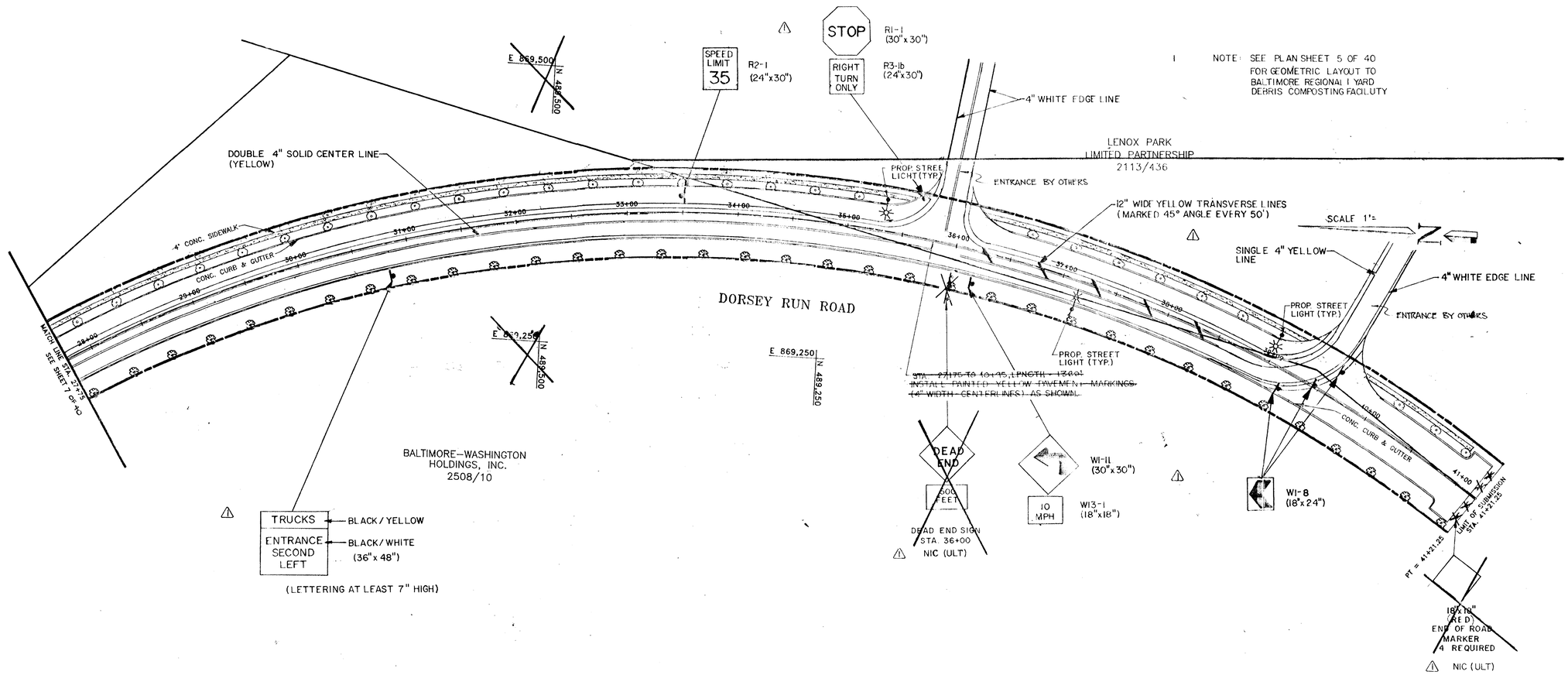

INITIAL SIGNAGE & PAVEMENT MARKING PLAN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	5/15/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/17/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/16/95 DATE

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

TITLE: ~~SIGNAGE & PAVEMENT MARKING PLAN~~
PROJECT: DORSEY RUN ROAD
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 43 PARCEL: BLOCK:
DEED REFERENCE: COUNTY FILE No.: S-4114
SCALE: 1"=50' DESIGNED BY: SJD DRAWN BY: SJD CHECKED BY: NLL DATE: MAR., 1995
FIELD BOOK: PAGE No.: JOB No.: 91003 DRAWING No.: 8 OF 40

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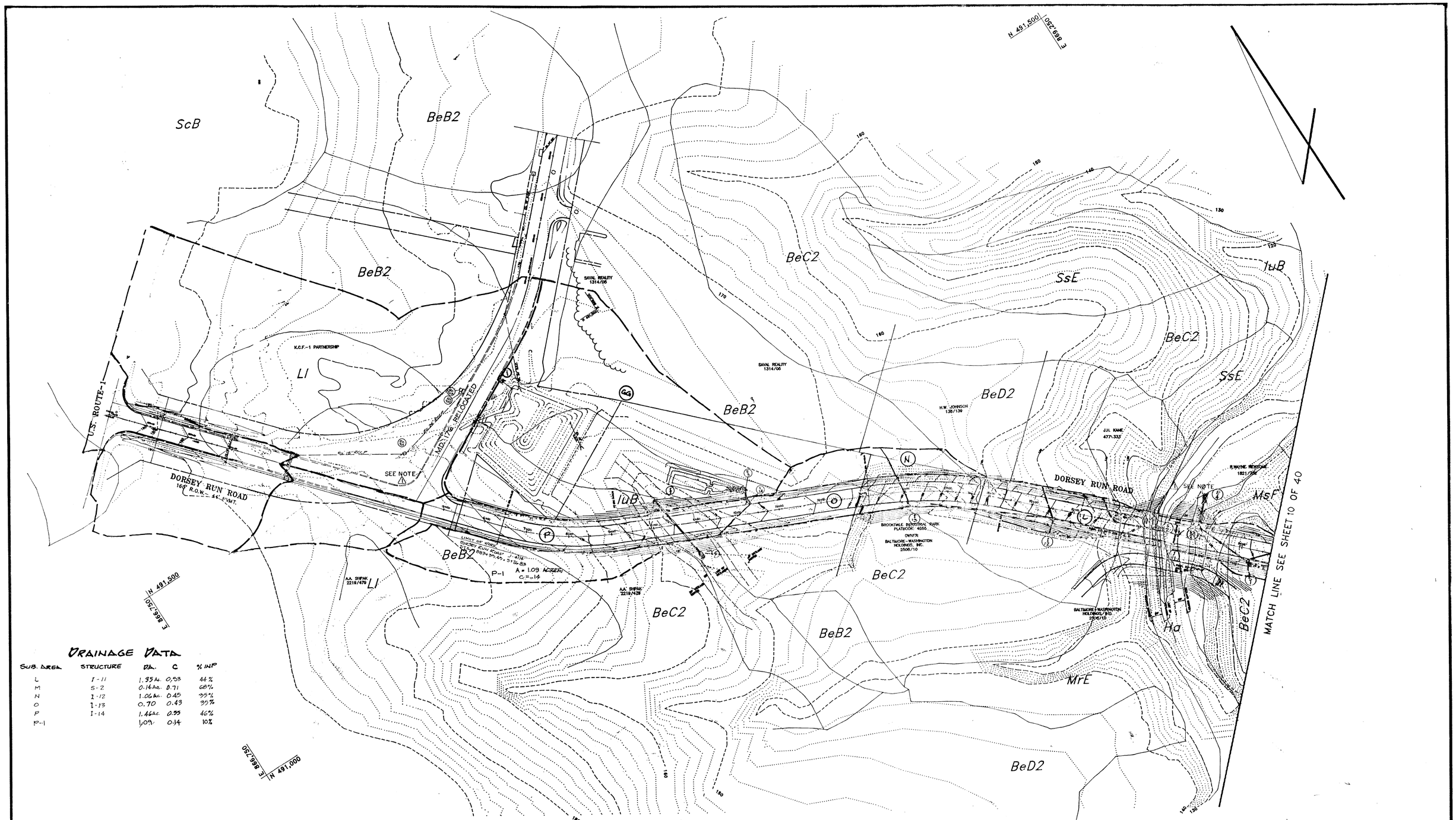
SIGNP-3.DWG



DRAINAGE DATA

SUB. AREA	STRUCTURE	DA.	C	% IMP
L	I-11	1.35 Ac.	0.58	44 %
M	S-2	0.14 Ac.	0.71	68%
N	I-12	1.06 Ac.	0.45	35%
O	I-13	0.70	0.43	35%
P	I-14	1.46 Ac.	0.55	46%
P-1		1.09	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. Irvin — DIRECTOR OF PUBLIC WORKS	5/10/95 DATE	Andrew M. Anoke — CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
Robert Lepson — CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	Elizabeth Anderson Cole — CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/8/95 DATE

DATE	REVISION	BY
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	DESIGNED BY	DRAWN BY	CHECKED BY	DATE
1" = 100'	JJB	JRG	MLL	MAR., 1995
FIELD BOOK	PAGE NO.	JOB NO.	DRAWING NO.	
138	53-69	91003	9 OF 40	

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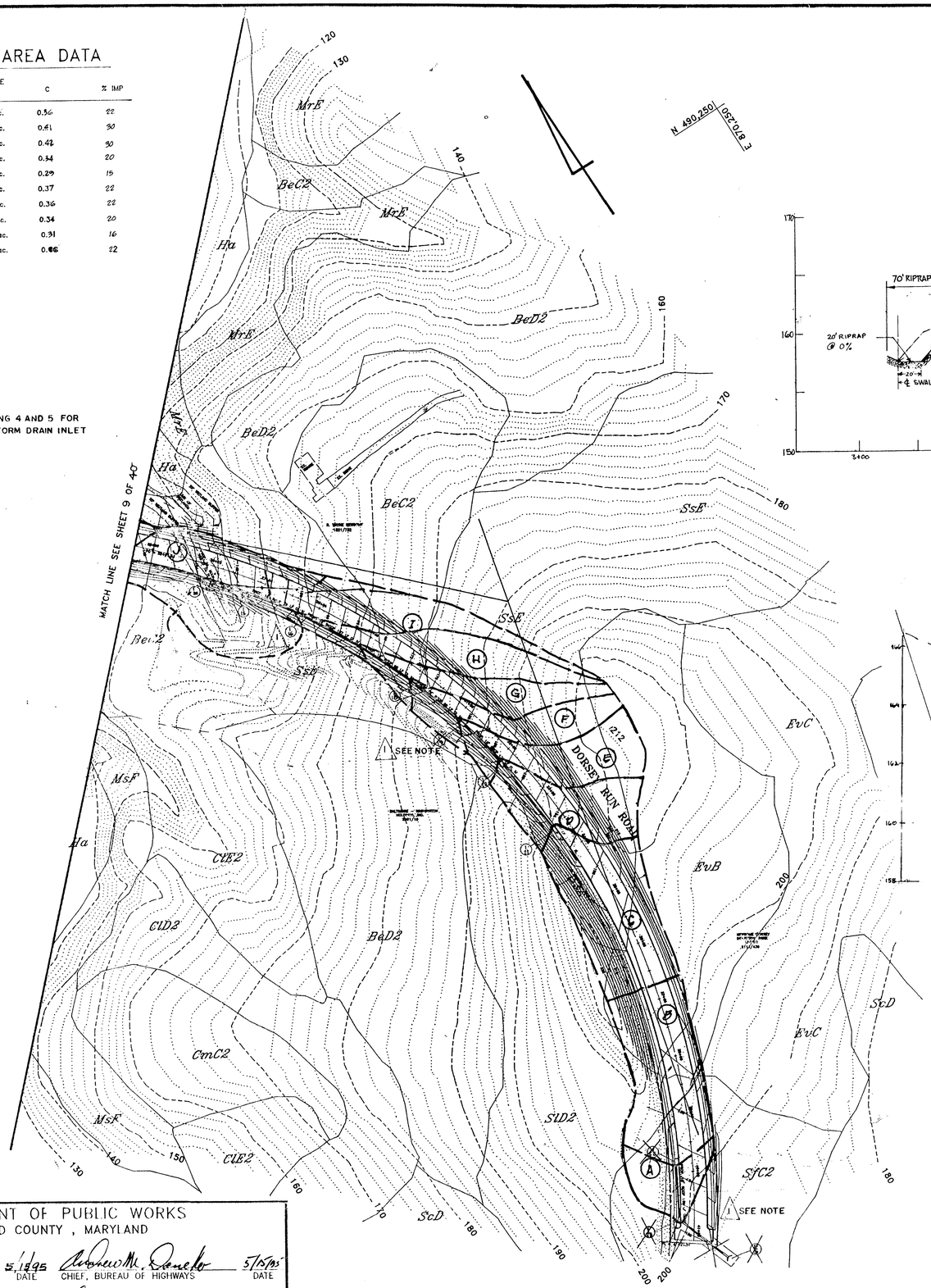
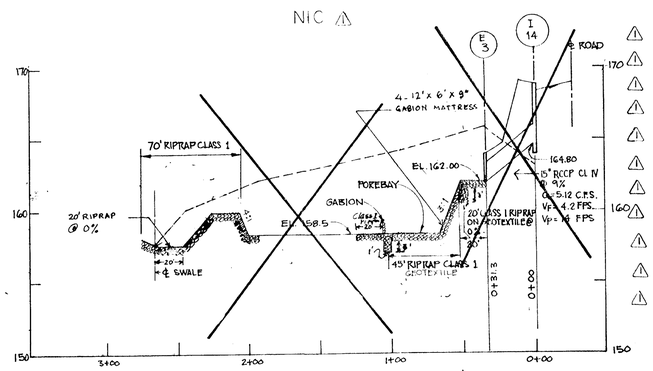
65-00

DRAINAGE AREA DATA

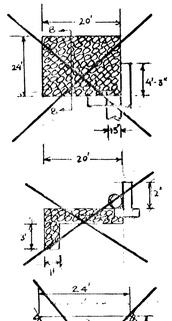
SUB AREA	STRUCTURE	DRAINAGE AREA	C	% IMP
A	I-23	0.34 ac.	0.36	22
B	I-22	0.87 ac.	0.41	30
C	I-21	0.83 ac.	0.42	30
D	I-20	0.50 ac.	0.34	20
E	I-19	0.58 ac.	0.29	15
F	I-18	0.46 ac.	0.37	22
G	I-17	0.50 ac.	0.36	22
H	I-16	0.62 ac.	0.34	20
I	I-15	0.76 ac.	0.31	16
J	S-1	1.06 ac.	0.36	22

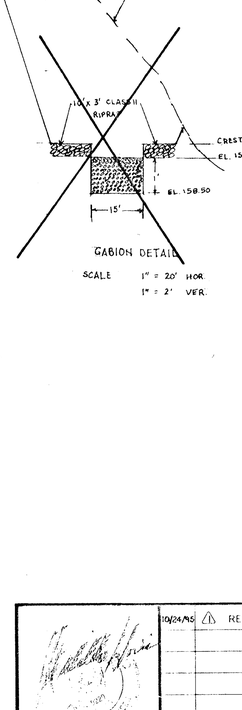
⚠1 NOTE: SEE PLAN SHEET DRAWING 4 AND 5 FOR REVISED PAVING AND STORM DRAIN INLET AND PIPE LOCATIONS.

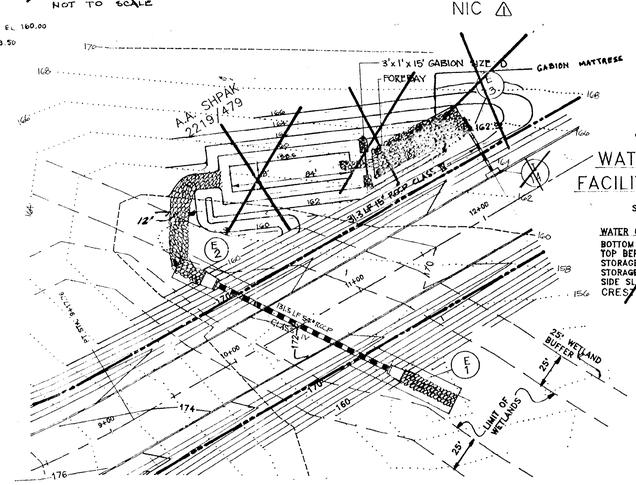




SECTION
SCALE: 1" = 50' HOR.
1" = 5' VER.







NIC ⚠

WATER QUALITY FACILITY #2 DETAIL

SCALE: 1" = 50'

WATER QUALITY FACILITY
BOTTOM EL. 158.50
TOP BERM EL. 162.00
STORAGE REQ'D 3,244 C.F.
STORAGE PROV'D 3,284 C.F. @ EL. 160.0
SIDE SLOPES 4:1
CREST EL. 160'

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		~~155.21~~ 154.48	~~159.03~~ 159.48	W = 2'6" SD 4.02
I-14	A-10	12+28 - 23.92' L		164.80	169.05	W = 2'6" SD 4.02 NIC
I-15	A-10	26+89 - 23.92' R	~~146.70~~ 145.29	144.70 144.62	~~154.20~~ 150.29	W = 2'6" SD 4.02
I-16	A-10	27+75 - 23.92' R	153.28	153.03	156.36	W = 2'6" SD 4.02 NIC
I-17	A-10	28+94 - 23.92' R	~~162.00~~ 160.68	~~162.80~~ 159.93	~~165.30~~ 165.68	W = 2'6" SD 4.02
I-18	A-10	30+00 - 23.92' R	170.35	170.10	173.27	W = 2'6" SD 4.02 NIC
I-19	A-10	31+15 - 23.92' R	178.48	178.23	181.48	W = 2'6" SD 4.02 NIC
I-20	A-10	32+69 - 23.92' R	187.30	187.00	190.61	W = 2'6" SD 4.02 NIC
I-21	A-10	34+30 - 23.92' R		~~194.29~~ 191.91	~~197.08~~ 197.20	W = 2'6" SD 4.02
I-22	A-10	39+74 - 23.92' R		191.60	195.35	W = 2'6" SD 4.02 NIC
I-23	A-10	40+85 - 23.92' R	187.25	187.00	190.84	W = 2'6" SD 4.02 NIC
S-2	WATER QUALITY INLET WITH A-5 OPENING	22+39.30 - 25.50'	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+00~~ - 24' L 25+50	~~134.94~~ 125.00	~~115.04~~ 123.14	~~136.15~~	D = 4' G 501
E-1	TYPE D HEADWALL	10+87.5 - 56' R		155.79	161.79	SD 5.41-A
E-2	TYPE D HEADWALL	10+17 - 56.04' L	157.70		163.70	SD 5.41-A
E-3	TYPE E HEADWALL	12+20 - 57' L	162.00		164.00	SD 5.31 NIC
E-4	TYPE A HEADWALL	23+00 - 76' L	~~115.04~~ 116.00		118.71	SD 5.11
I-5	18" CONC END SECT	41+40 - 66' L	185.70		187.23	SD 5.81 NIC
MH-2	STD 4' DIA MH	20.10 - 75' L	118.00	116.00		
I-24	A-10	32+00 - 2392'R	182.23	181.65	187.23	W=2'-6" SD 4.02

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

⚠ SEE STRUCTURE AND PIPE SCHEDULE IN SPECIAL PROVISIONS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	5/12/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/8/95 DATE

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

TITLE: DRAINAGE AREA MAP
PROJECT: DORSEY RUN ROAD
LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	DATE
1" = 100'	JJB	JRG	MLL	MAR., 1995
FIELD BOOK	PAGE NO.	JOB NO.	DRAWING NO.	
138	53-69	91003	10 OF 40	

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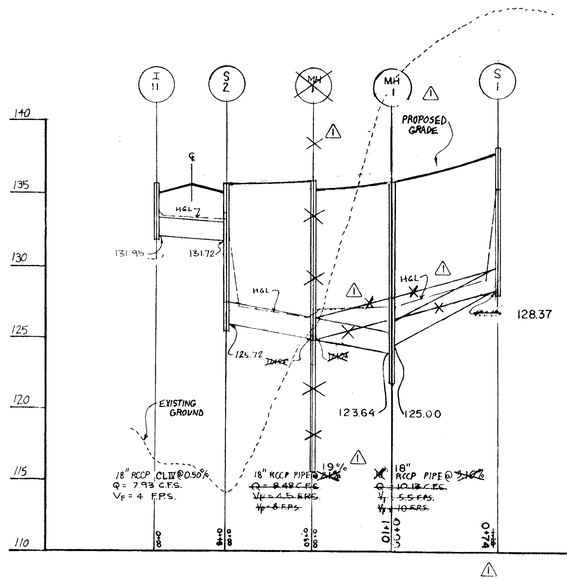
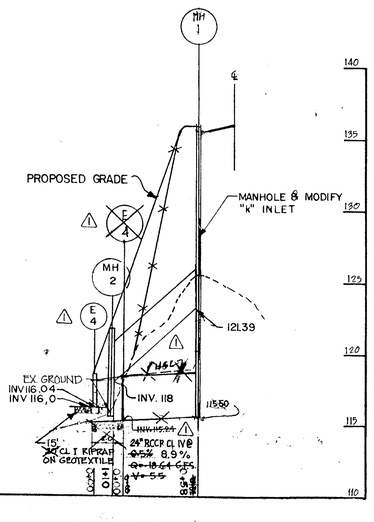
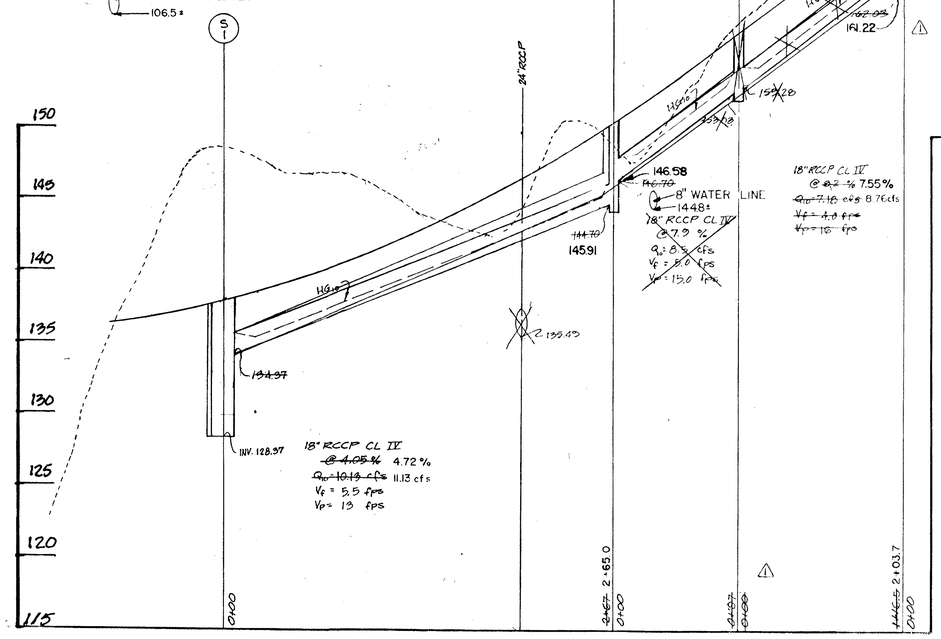
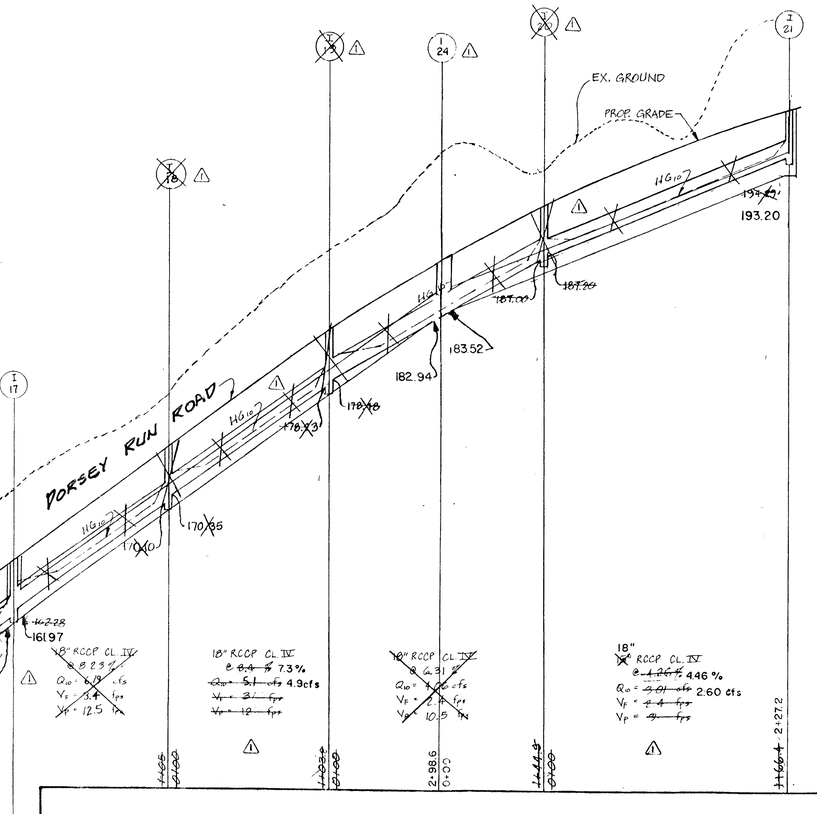
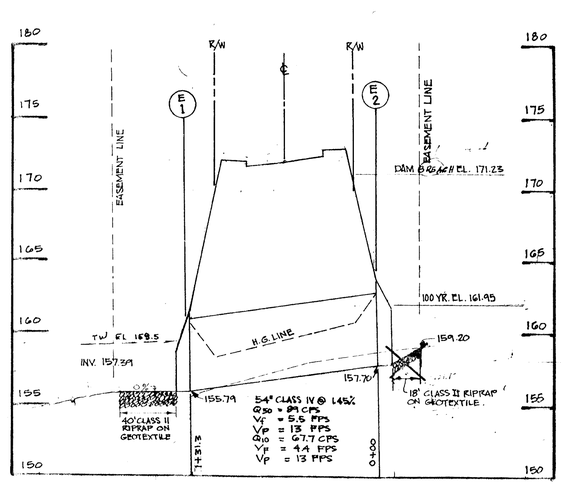
65-02











PROFILE

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS	5/12/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/8/95 DATE

DATE	REVISION	BY
5/29/95	⚠ REVISION NO. 1	SKH

TITLE: STORM DRAIN PROFILES
PROJECT: DORSEY RUN ROAD
LOCATION: 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:
AS SHOWN		JRG	MLL	MAR., 1995
FIELD BOOK:	PAGE NO.:	JOB NO.:	DRAWING NO.:	
N/A	N/A	91003	11 OF 40	

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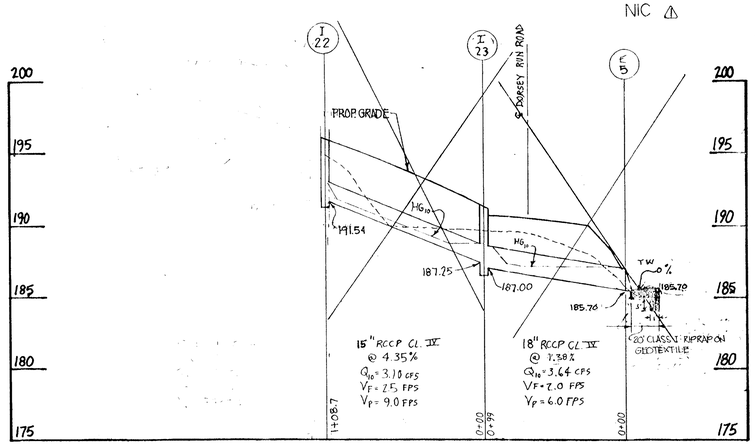
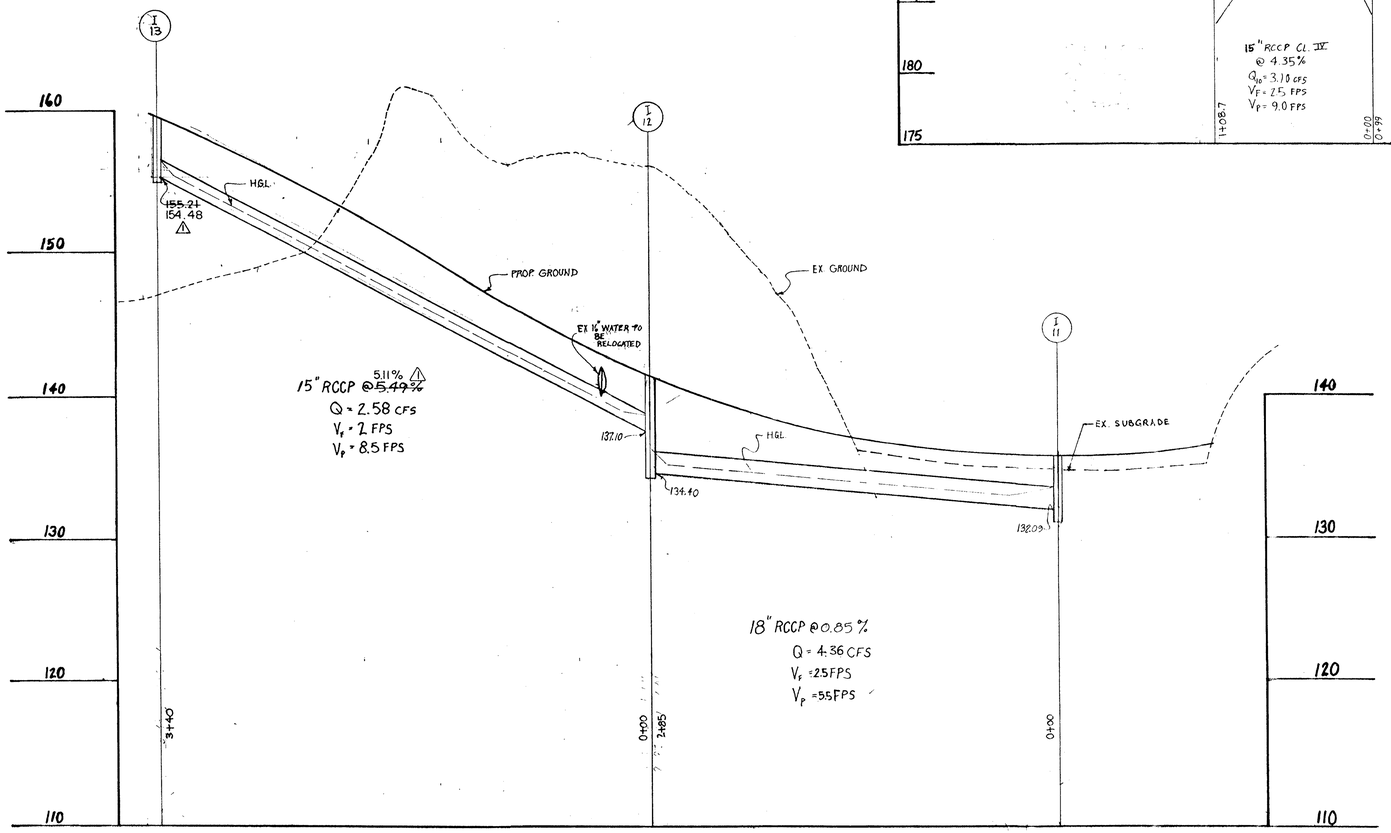
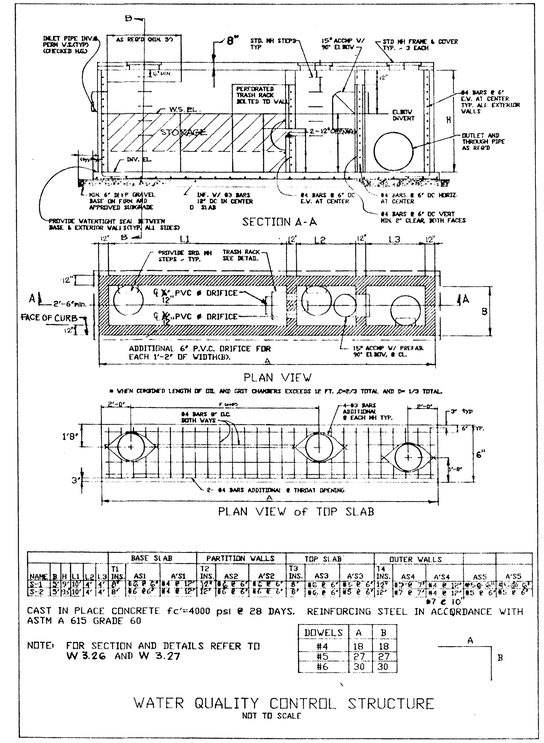
NIC ⚠





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



NAME	B	H	L1	L2	L3	BASE SLAB T1	BASE SLAB AS1	BASE SLAB A'S1	PARTITION WALLS T2	PARTITION WALLS AS2	PARTITION WALLS A'S2	TOP SLAB T3	TOP SLAB AS3	TOP SLAB A'S3	OUTER WALLS T4	OUTER WALLS AS4	OUTER WALLS A'S4	AS5	A'S5
S-1	3'0"	3'10"	4'	4'	8"	INS.	#5 @ 9"	#4 @ 12"	12"	#6 @ 6"	#6 @ 6"	8"	#6 @ 6"	#5 @ 6"	12"	#7 @ 7"	#4 @ 12"	#5 @ 6"	#5 @ 6"
S-2	3'0"	3'10"	4'	4'	8"	INS.	#6 @ 9"	#4 @ 12"	12"	#6 @ 6"	#6 @ 6"	8"	#6 @ 6"	#5 @ 6"	12"	#7 @ 7"	#4 @ 12"	#5 @ 6"	#5 @ 6"

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

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

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

WATER QUALITY CONTROL STRUCTURE
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS	5/12/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/5/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/8/95 DATE

NO. 9235 REGISTERED PROFESSIONAL ENGINEER

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

TITLE: STORM DRAIN PROFILES
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: DRAWN BY: JAB CHECKED BY: MLL DATE: MAR., 1995
FIELD BOOK: PAGE No.: JOB No.: 91003 DRAWING No.: 12 OF 40

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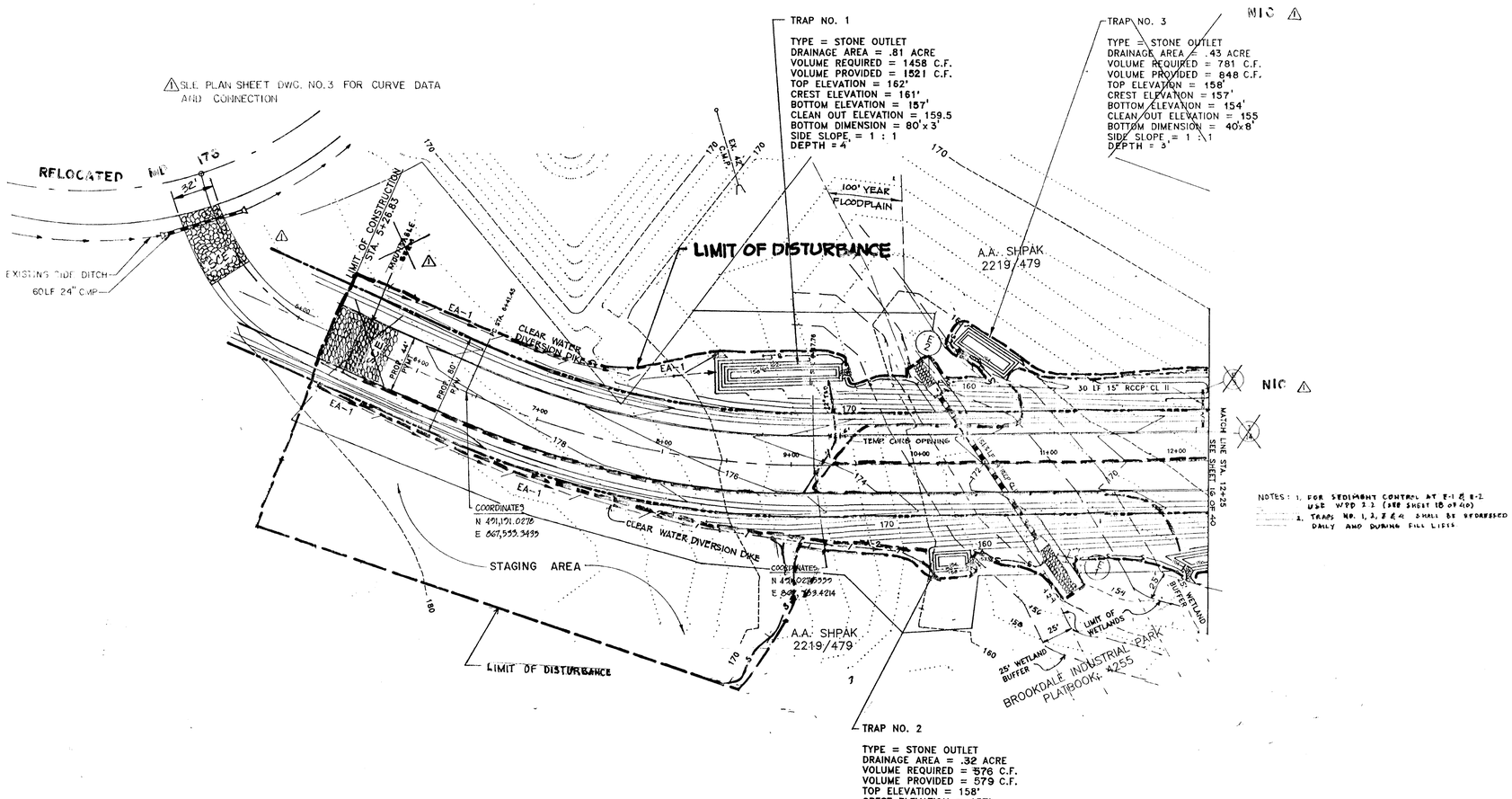

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit and NTWW Permit # 95-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.

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

Reviewed for Howard Soil Conservation District and meets technical requirements.

Patricia Earl — NATURAL RESOURCES CONSERVATION SERVICE — 6/22/95 Date

This development is approved soil erosion and sediment control by the Howard Soil Conservation District.

SOIL CONSERVATION DISTRICT — 6/22/95 Date

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS — 5/16/95 DATE
CHIEF, BUREAU OF HIGHWAYS — 5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING — 5/12/95 DATE
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE — 5/16/95 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.

Developer — 5/12/95 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.

Engineer — 5.24.95 Date

DATE	REVISION	BY
5/24/95	⚠ 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 #
DEED REFERENCE # COUNTY FILE No. # J-4114
SCALE: 1" = 50' DESIGNED BY: JGB DRAWN BY: JRG CHECKED BY: MLL DATE: MAR., 1995
FIELD BOOK# — PAGE No. — JOB No. 91003 DRAWING No. 15 OF 40

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

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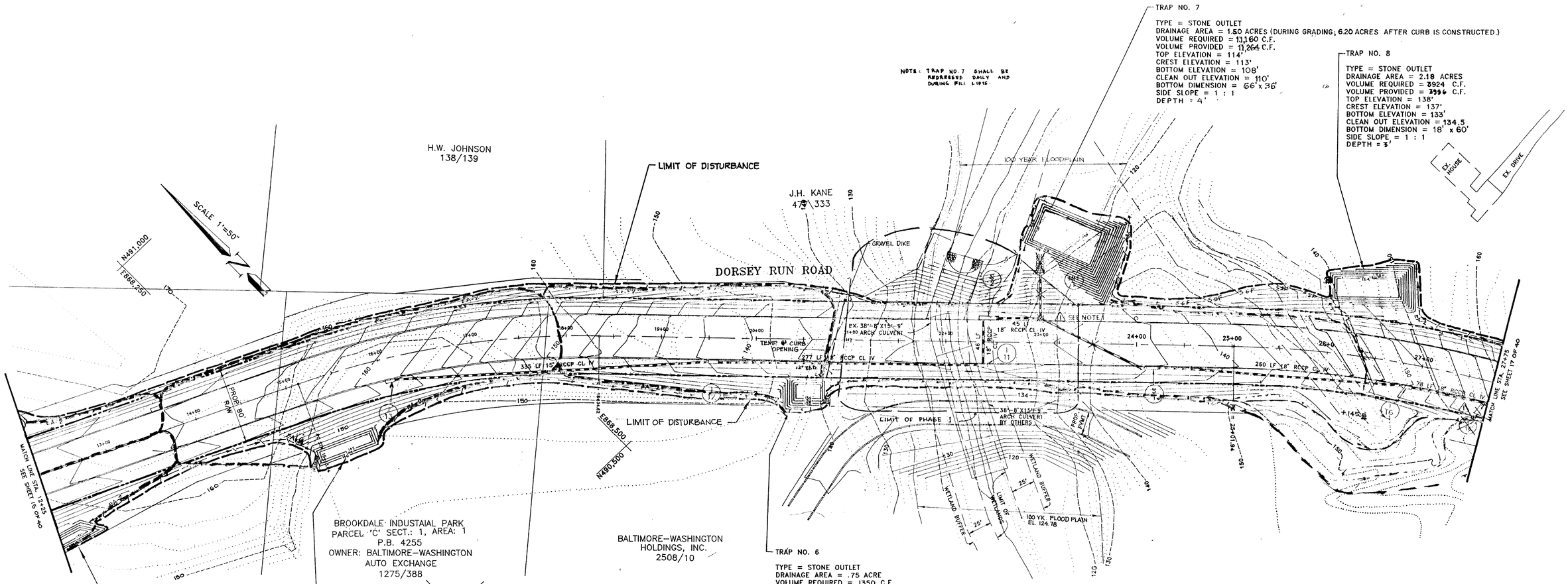

⚠ NOTE: SEE PLAN SHEET DRAWING NO. 4 FOR REVISED PAVING AND STORM DRAIN INLET AND LOCATIONS.

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

Reviewed for Howard Soil Conservation District and meets technical requirements.

Patricia Eby — Natural Resources Conservation Service — 6/22/95 Date

This development is approved soil erosion and sediment control by the Howard Soil Conservation District.

Soil Conservation District — 6/22/95 Date

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin — 5/15/95 — DIRECTOR OF PUBLIC WORKS — DATE
Andrew M. Anderson — 5/15/95 — CHIEF, BUREAU OF HIGHWAYS — DATE
Ronald W. Sepan — 5/12/95 — CHIEF, BUREAU OF ENGINEERING — DATE
Elizabeth A. Anderson Calea — 5/16/95 — 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.

Ronald W. Sepan — Developer — 5/12/95 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.

Engineer — 8-29-94 Date

DATE	REVISION	BY
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: BLOCK:
DEED REFERENCE: COUNTY FILE No.: F-4114
SCALE: 1" = 50' DESIGNED BY: MB DRAWN BY: JRC CHECKED BY: MLL DATE: MAR., 1995
FIELD BOOK: PAGE No.: JOB No.: 91003 DRAWING No.: 16 OF 40

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3230 BETHANY LANE
ELLICOTT CITY, MD. 21042
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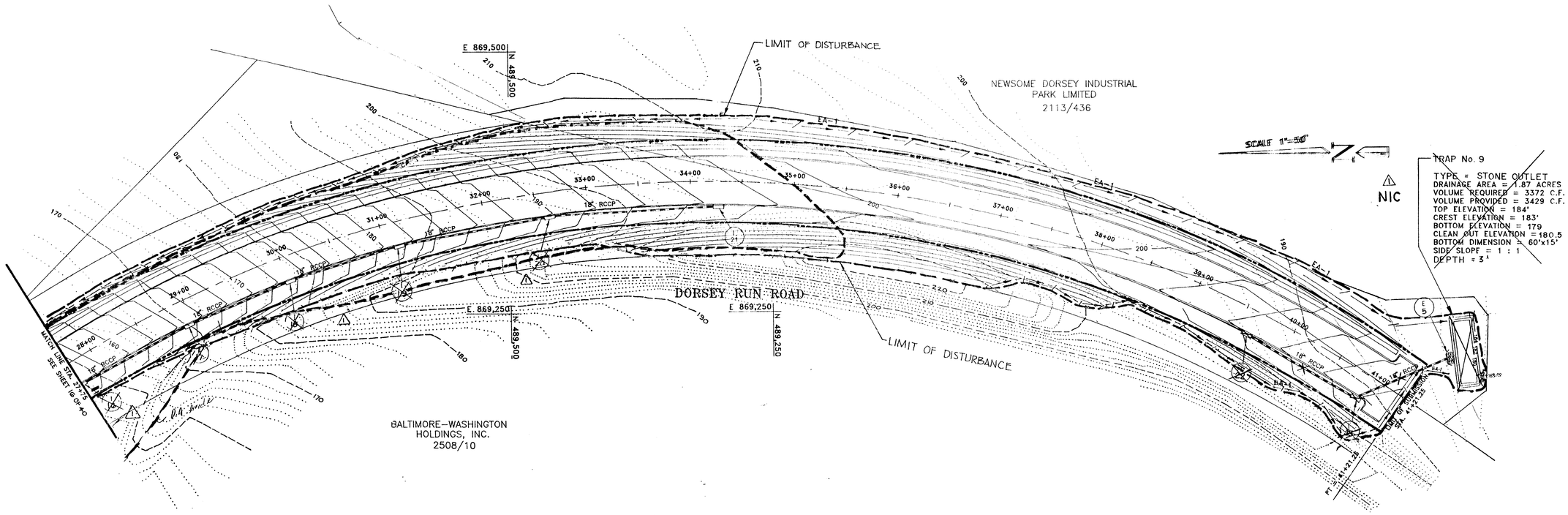

DRAINAGE AREAS TO TRAPS:

TRAP NO.	EXISTING	PROPOSED
1	1.57	.81
2	0.50	.32
3	0.43	.43
4	0.32	.40
5	0.61	1.05
6	0.30	.75
7	0.08	1.50 (During grading), 6.20 (after curb is constructed)
8	2.04	2.18
9	0.96	1.87

⚠ NOTE: SEE PLAN SHEET DRAWING NO.5 FOR REVISED DORSEY RUN ROAD ALIGNMENT, PAVING AND STORM DRAIN INLET AND PIPE LOCATIONS.

Reviewed for Howard Soil Conservation District and meets technical requirements.

Patricia Engh — Natural Resources Conservation Service — 6/22/95 Date

This development is approved soil erosion and sediment control by the Howard Soil Conservation District.

SCD CONSERVATION DISTRICT — 6/22/95 Date

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY , MARYLAND

DIRECTOR OF PUBLIC WORKS	5/15/95 DATE	CHIEF, BUREAU OF HIGHWAYS	5/15/95 DATE
CHIEF, BUREAU OF ENGINEERING	5/12/95 DATE	CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE	5/15/95 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.

Developer — 5/12/95 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.

Engineer — 5/2/95 Date

DATE	REVISION	BY
10/24/95	⚠ REVISION NO 1	SRH

TITLE: SEDIMENT CONTROL PLAN

PROJECT: DORSEY RUN ROAD

LOCATION: 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TAX MAP #	PARCEL #	BLOCK #
43		

DEED REFERENCE # — COUNTY FILE No. # 1-4114

SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	DATE
1" = 50'	JJB	JRG	MLL	MAR., 1995

FIELD BOOK	PAGE No.	JOB No.	DRAWING No.
—	—	91003	12 OF 40

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ELLICOTT CITY, MD. 21042
(410) 465-7777 FAX: (410) 465-7966

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 (313-1855).
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	10.0± Acres
Area disturbed	10.0± Acres
Area to be roofed or paved	0.0± Acres
Area to be vegetatively stabilized	10.0± Acres
Total Cut	40,102 Cu. Yds.
Total fill	24,416 Cu. Yds.
Offsite waste/borrow area location	~~County Compost Plant~~ S.09 - 96.00

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.

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, discing 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 rye (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, discing or other acceptable means before seeding, if not previously loosened.

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

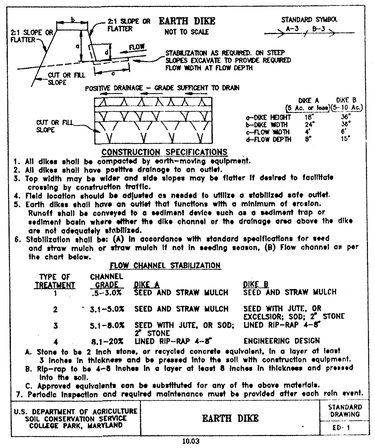
1) **Preferred** – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).

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 60 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 60 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.



CONSTRUCTION SPECIFICATIONS

1. All dikes shall be compacted by earth-moving equipment.
2. All dikes shall have positive drainage to an outlet.
3. Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized safe outlet.
5. Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
6. Stabilization shall be: (A) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) Flow channel as per the chart below.

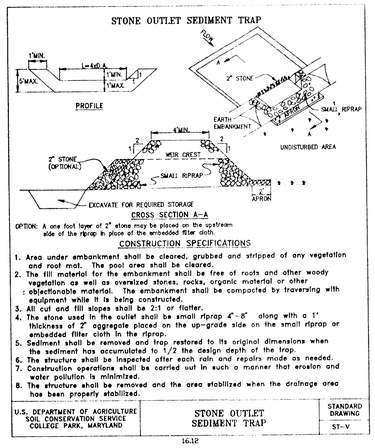
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED WITH JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.
B. Rip-rap to be 4-8 inches in a layer at least 8 inches in thickness and pressed into the soil.
C. Approved equivalents can be substituted for any of the above materials.

7. Periodic inspection and required maintenance must be provided after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	EARTH DIKE	STANDARD DRAWING ED-1
10.03		

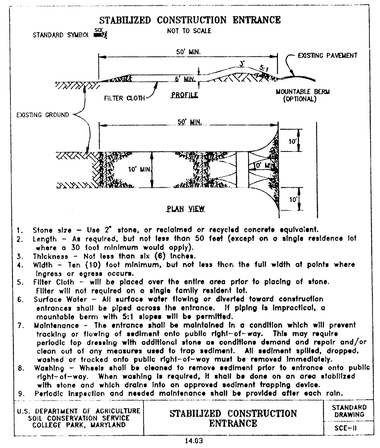


OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS

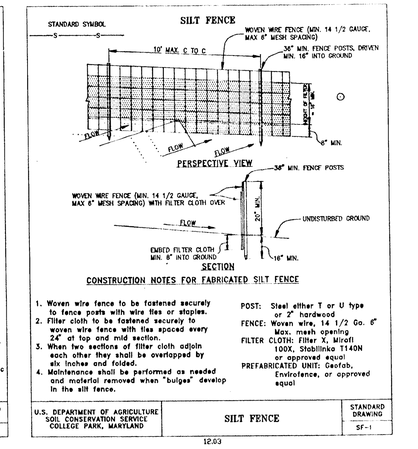
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap or embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STONE OUTLET SEDIMENT TRAP	STANDARD DRAWING ST-V
16.12		



1. Stone size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length – As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).
3. Thickness – Not less than six (6) inches.
4. Width – Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – will be placed over the entire area prior to placing of stone. Filter will not required on a single family resident lot.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or clean out of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STABILIZED CONSTRUCTION ENTRANCE	STANDARD DRAWING SCE-II
14.03		

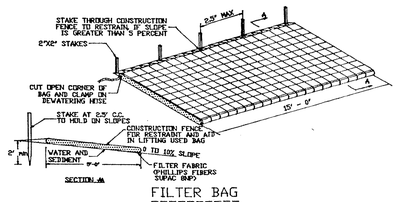


CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
4. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

POST: Steel either T or U type or 2" hardwood
FENCE: Woven wire, 14 1/2 Ga. 6" Max. mesh opening
FILTER CLOTH: Filter X, Mirafi 100X, Stabilinka T140N or approved equal
PREFABRICATED UNIT: Geofab, Enviofence, or approved equal

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	SILT FENCE	STANDARD DRAWING SF-I
12.03		



FILTER BAG

TEMPORARY EROSION CONTROL MEASURE

NOTES:

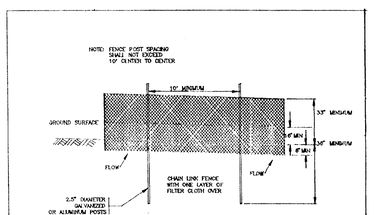
1. FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL-VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM STRUCTURES AND WORK AREAS.
2. THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
3. FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 500 GPM.
4. DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

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 or 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 weir 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.

16.14

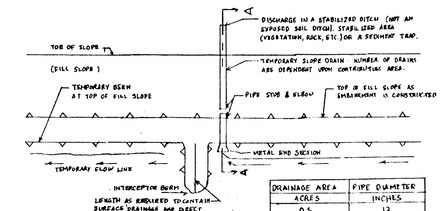


FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6 FOOT FENCE SHALL BE USED.

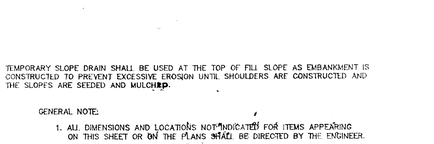
SUBSTITUTING 42 INCH FABRIC AND 6 FOOT LENGTH POSTS.

1. THE POLES DO NOT NEED TO SET IN CONCRETE.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SUPER SILT FENCE DETAIL



DRAINAGE AREA ACRES	PIPE DIAMETER INCHES
0.5	12
1.5	18
2.5	21
3.5	24
5.0	30

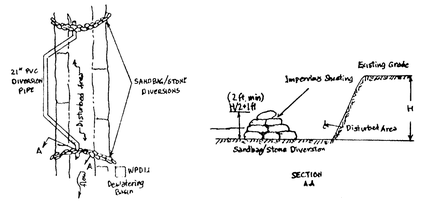


TEMPORARY SLOPE DRAIN SHALL BE USED AT THE TOP OF FILL SLOPE AS EMBANKMENT IS CONSTRUCTED TO PREVENT EXCESSIVE EROSION UNTIL SHOULDERS ARE CONSTRUCTED AND THE SLOPES ARE SEEDED AND MULCHED.

GENERAL NOTE:

1. ALL DIMENSIONS AND LOCATIONS NOT INDICATED FOR ITEMS APPEARING ON THIS SHEET OR ON THE PLANS SHALL BE DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL PLACE GEOTEXTILE AROUND THE METAL END SECTION TO PREVENT BLOW-OUTS IN THE EARTH BERM AS DIRECTED BY THE ENGINEER. PAYMENT OF GEOTEXTILE TO BE INCIDENTAL TO THE BID FOR TEMPORARY SLOPE DRAINS, THE ENDS OF THE GEOTEXTILE WILL BE BURIED IN A 4' DEEP BY 6' WIDE TRENCH AND BACKFILLED.
3. ALL TEMPORARY SLOPE DRAINS WILL DISCHARGE INTO THE BACK OF SEDIMENT TRAPS, INTO SEDIMENT BASINS OR DITCHES DISCHARGING INTO TRAPS OR BASINS.

TEMPORARY SLOPE DRAIN



I. DESCRIPTION

THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHICH CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS CULVERT CONSTRUCTION OR CULVERT REPLACEMENT.

II. MATERIAL SPECIFICATIONS

1. SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (I.E., SAND, FINE GRAVEL, ETC.).
2. STONE: STONE SHALL BE RIPRAP1 AND HAVE A MINIMUM DIAMETER OF 8 INCHES.
3. SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.

III. CONSTRUCTION REQUIREMENTS

1. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
2. THE HEIGHT OF THE SANDBAG/STONE DIVERSION STRUCTURE SHALL BE ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BANK PLUS ONE FOOT, AS INDICATED BY SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH, LEVEL SURFACE.
3. ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF IN A SCD APPROVED SPOIL AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON PLANS BY THE MNA.
4. ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A DEWATERING BASIN (PLATE M-50.11) OR OTHERWISE APPROVED ON THE PLANS BY THE MNA.
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 SANDBAGS 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.

SEQUENCE OF CONSTRUCTION:

1. OBTAIN GRADING PERMIT.
2. INSTALL ALL SEDIMENT CONTROL DEVICES SUCH AS DIVERSION PIPE, SANDBAGS, ETC.
3. INSTALL 24" PIPE.
4. STABILIZE ALL DISTURBED AREAS.
5. REMOVE SEDIMENT CONTROL STRUCTURES AFTER APPROVAL FROM RESIDENT CONTROL INSPECTOR.

DIVERSION PIPE AT E 1 & E 2

Reviewed for Howard Soil Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATIONIST III — DATE 6/26/95

This development is approved soil erosion and sediment control by Howard Soil Conservation District.

SOIL CONSERVATION DISTRICT — DATE 6/26/95

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 5/12/95
CHIEF, BUREAU OF HIGHWAYS — DATE 5/15/95
CHIEF, BUREAU OF ENGINEERING — DATE 5/12/95
CHIEF, DIVISION OF ROADS, BRIDGES & STORM DRAINAGE — DATE 5/15/95

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 periodic inspection by the Howard Soil Conservation Service.

BUILDER/DEVELOPER — DATE 5/12/95

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.

SIGNATURE OF ENGINEER — DATE 8/23/94

TITLE: SEDIMENT CONTROL DETAILS

PROJECT: DORSEY RUN ROAD

LOCATION: 1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:
AS SHOWN	JJB	JRG		MAR., 1995
FIELD BOOK:	PAGE No.:	JOB No.:		DRAWING No.:
		91003		18 OF 40

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