

SHEET INDEX	
SHEET No.	SHEET
1	TITLE SHEET
2	MARRIOTTVILLE ROAD - PLAN & PROFILE AND WARWICK WAY - PLAN
3	MARRIOTTVILLE ROAD - PLAN & PROFILE
4	WARWICK WAY - PLAN & PROFILE
5	WARWICK WAY - PLAN & PROFILE
6	WARWICK WAY - PLAN AND BIRMINGHAM WAY - PLAN & PROFILE
7	GOLF CART AND PEDESTRIAN UNDERPASS • WARWICK WAY
8	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
9	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
10	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
11	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
12	DRAINAGE AREA MAP
13	DRAINAGE AREA MAP
14	DRAINAGE AREA MAP
15	DRAINAGE AREA MAP
16	STORM DRAIN PROFILES
17	STORM DRAIN PROFILES
18	STORM DRAIN PROFILES
19	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. 0+00 TO STA. 2+50
20	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. 3+00 TO STA. 5+50
21	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. 6+00 TO STA. 8+50
22	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. 9+00 TO STA. 10+00
23	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. 0+00 TO STA. -2+50
24	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. -3+00 TO STA. -5+50
25	CROSS - SECTIONS (MARRIOTTVILLE ROAD) STA. -6+00 TO STA. -7+00
26	DETAIL SHEET
27	SEDIMENT CONTROL NOTES AND DETAILS
28	TRAFFIC CONTROL AND STRIPING PLAN
29	FOREST CONSERVATION PLAN (FOREST CLEARING)
30	FOREST CONSERVATION PLAN (FOREST CLEARING)
31	FOREST CONSERVATION PLAN (FOREST CLEARING)
32	FINAL FOREST CONSERVATION PLAN
33	FOREST CONSERVATION DETAILS

FINAL ROAD CONSTRUCTION, GRADING AND STORM WATER MANAGEMENT PLANS FOR G.T.W.'S WAVERLY WOODS SECTION 7 LOTS 1 THRU 4 AND PARCELS A THRU E WARWICK WAY

ZONING: B-1, PEC & R-SA-8 TAX MAP NO. 16 PART OF PARCEL NO. 406 & 20 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED: DEPARTMENT OF PUBLIC WORKS
Charles J. Crovo, Sr. 9-16-98
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 7/17/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

TRAFFIC CONTROL SIGNS				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
WARWICK WAY	0+59	31'L	STOP	RI-1
WARWICK WAY	2+00	31'L	STOP SIGN AHEAD	W3-1a
WARWICK WAY	2+00	31'R	SPEED LIMIT 35	R2-1
WARWICK WAY	3+00	31'R	LANE REDUCTION	W4-2
WARWICK WAY	24+95	21'R	SPEED LIMIT 35	R2-1
WARWICK WAY	24+95	21'L	STOP SIGN AHEAD	W3-1a
WARWICK WAY	26+46	21'R	STOP	RI-1

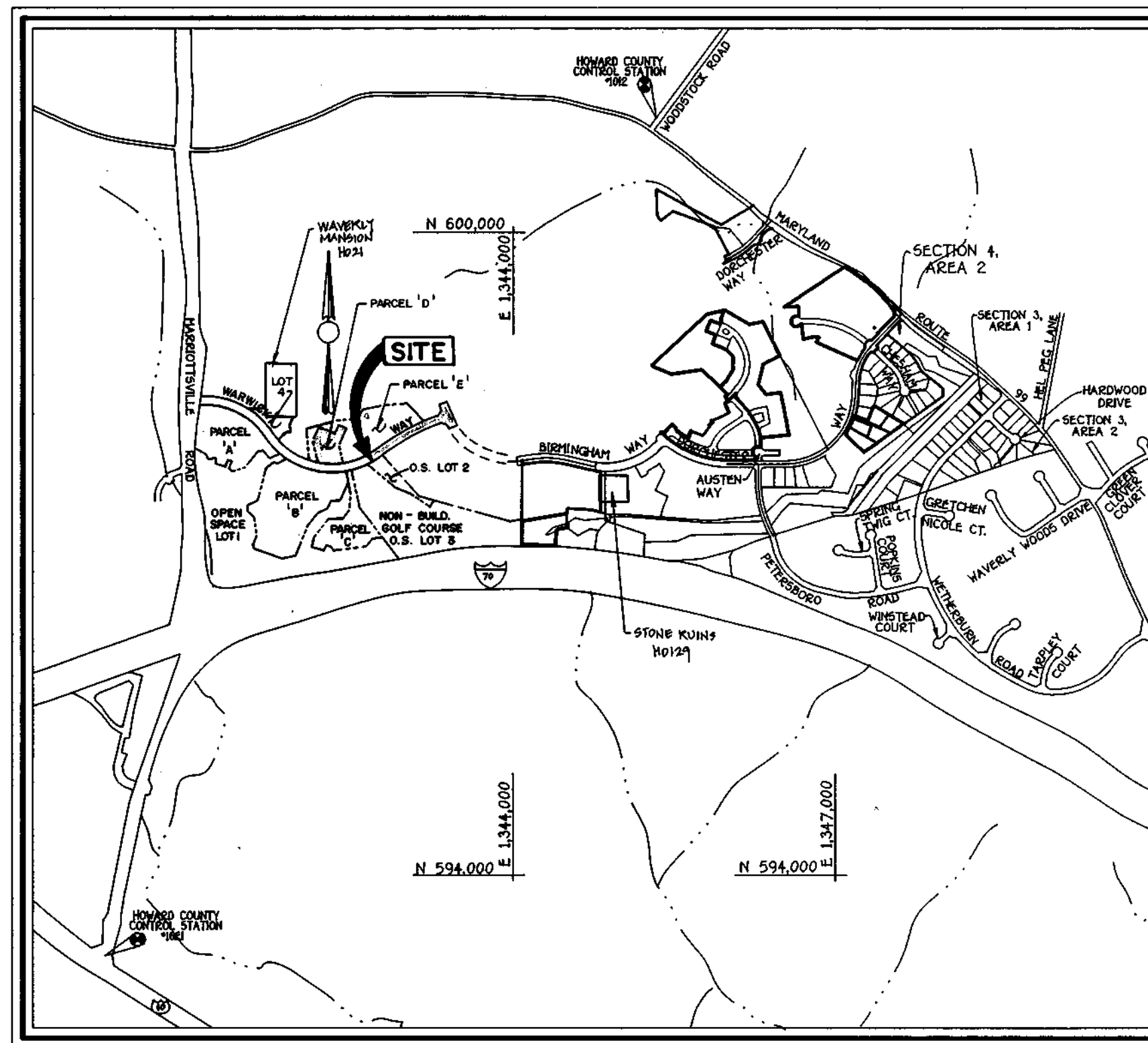
GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION VOLUME IV.
 - MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AS AMENDED.
 - SOIL CONSERVATION SERVICE 1983 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARDS AND SPECIFICATION FOR POND CONSTRUCTION (CODE 378).
 - EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF DEPARTMENT OF PUBLIC WORKS, DIVISION OF CONSTRUCTION INSPECTION AT 410-313-1000 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY "HIS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY PREPARED BY PHOTO-SCIENCE, INC. FLOWN ON FEBRUARY 2, 1989. TOPOGRAPHY ALSO REFLECTS SDP 96-35 APPROVED ON 6/14/96.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT WAS PROVIDED UNDER SDP 96-35 AND APPROVED ON 6/14/96.
- HORIZONTAL AND VERTICAL DATUMS BASED ON HOWARD COUNTY CONTROL COORDINATES BASED ON NAD 83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY CONTROL STATIONS NO. 1012 AND NO. 16E1
 HOWARD COUNTY MONUMENT 1012
 N 61060.177 ELEV. = 445.577
 E 1345336.7580
 N 595250.9322 ELEV. = 509.924
 E 1340192.710
 HOWARD COUNTY MONUMENT 16E1
- NOISE STUDY WAS PROVIDED BY Widman Environmental Services, Inc. AND APPROVED ON NOV. 1, 1994.
- FOREST DELINEATION WAS PROVIDED BY ENVIRONMENTAL SYSTEMS ANALYSIS, INC. AND APPROVED ON 11-30-93.
- THE 100 Yr. FLOODPLAIN AS SHOWN ON THESE PLANS ARE BASED ON THE ENCLOSED FLOODPLAIN STUDY THAT WAS PROVIDED BY Mildenburg Associates, Inc. STUDY WAS APPROVED AT PRELIMINARY STAGE ON 3-3-95.
- THE WETLANDS STUDY WAS PREPARED BY Exploration Research, Inc. AND WAS COMPILED ON 9/5/91.
- THE TRAFFIC STUDY WAS PROVIDED BY The Traffic Group AND APPROVED ON 7-14-94.
- THE SOILS INVESTIGATION REPORT WAS PREPARED BY LITE, INC. ON JUNE 28, 1994.
- THIS PLAN IS SUBJECT TO WAIVER PETITION # WP-95-23 FROM SECTION 16.116.1 & SECTION 16.116.2 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH RESTRICTS GRADING AND REMOVAL OF VEGETATIVE COVER FROM WETLANDS AND STREAM BUFFER AND FROM SECTION 16.116.1 WHICH RESTRICTS GRADING OF STEEP SLOPES OF 25% OR GREATER AND SECTION 16.116.2 WHICH RESTRICTS DEVELOPMENT WITHIN THE 100 YEAR FLOODPLAIN. (SEE GENERAL NOTE NO. 23)
- THE SKETCH PLAN 5 94-07 WAS APPROVED ON 11/30/93. THE PRELIMINARY PLAN P 97-04 WAS APPROVED ON 3/13/97. SDP 96-35 WAS APPROVED ON 6/14/96. BA-96-21V WAS APPROVED ON 6/14/96.
- THE WAIVER PETITION WAS APPROVED ON 1/23/95 FOR WP-95-23.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE, 1993)".
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- PUBLIC WATER AND PUBLIC SEWER WILL BE USED WITHIN THIS DEVELOPMENT. WATER MAIN EXTENSION FOR THIS SUBDIVISION IS UNDER CONTRACT NO. 44-3600-D. DRAINAGE AREA IS THE LITTLE PATUXENT.
- EXISTING UTILITIES ARE BASED ON CONTRACT NO. 44-3480 AND HOWARD COUNTY AS-BUILTS FOR THE REFERENCED CONTRACT.
- PERMITS APPLICABLE FOR THIS SUBDIVISION ARE AS FOLLOWS:
 WETLAND PERMIT AUTHORIZATION NO. - CENAD-OP-RP(G.T.W. PROPERTY) 91-0921-5
 MDE WATER QUALITY CERTIFICATION NO. - 91-WQ-048B AND MDE WATER MANAGEMENT ADMINISTRATION LETTER OF RECEIPT TRACKING NO'S - 199100921 AND 199191509 (91-WC-0012).
- TOTAL AREA OF SUBMISSION = 68.170 AC.
 A. TOTAL AREA ZONED B-1 = 0.725 AC.
 B. TOTAL AREA ZONED PEC = 67.267 AC.
 C. TOTAL AREA ZONED R-SA-B = 0.178 AC.
- TABULATION (TOTAL AREA OF SUBDIVISION):
 A. TOTAL NUMBER OF GOLF COURSE NON-BUILDABLE LOTS = 1
 B. TOTAL AREA OF HOMEOWNERS ASSOCIATION LOTS = 0
 C. TOTAL AREA OF GOLF COURSE NON-BUILDABLE LOTS = 14.286 AC.
 D. TOTAL AREA OF ROADWAY = 5.145 AC.
- THE INTRUSION INTO THE WETLANDS BUFFER AUTHORIZED BY WAIVER PETITION WP 95-23 IN THIS AREA OF WAVERLY WOODS WAS FOR THE WARWICK WAY ROAD CROSSING ONLY. ANY FUTURE ADDITIONAL WAIVER REQUESTS ASSOCIATED WITH THIS PLAN AREA MUST BE SUBMITTED UNDER A NEW WAIVER APPLICATION.
- THIS PLAN IS SUBJECT TO MASS GRADING PLAN SDP 96-35 AND BOARD OF APPEALS CASE NO. 96-21V.
- THE FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THIS PLAN IS SUBJECT TO WAIVER PETITION WP 98-144 FROM SECTION 16.140 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH RESTRICTS THE SUBDIVISION'S LAND DEVELOPMENT REGULATIONS WHICH RESTRICTS THE SUBDIVISION OF A PRELIMINARY PLAN FOR NON-RESIDENTIALLY ZONED LAND (P.E.C. # B-1). THIS WAIVER WAS APPROVED ON AUGUST 4, 1998 SUBJECT TO SUBMISSION OF REVISED FINAL PLANS.
- THE AMOUNT OF \$19,000.00 WAS CONTRIBUTED TO HISTORIC WAVERLY, INC. FOR LANDSCAPING HISTORIC WAVERLY GROUNDS.
- OTHER LANDSCAPING REQUIRED IN SECTION 7 WILL BE PROVIDED WITH RELATED SITE DEVELOPMENT PLANS FOR THE GOLF COURSE AND PARCELS 'A' THRU 'E'.

STREET LIGHT CHART		
STREET NAME	STATION	FIXTURE/POLE TYPE
WARWICK WAY	0+34	49'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	0+60	33'R 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	3+38	33'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	5+90	33'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	9+40	23'R 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	12+80	23'R 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	16+27	35'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	19+77	23'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	23+26	34'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
WARWICK WAY	26+47	23'L 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
BIRMINGHAM WAY	23+09	26'R 150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM

SIGNIFICANT & SPECIMEN TREE LIST

NO.	COMMON NAME	DBH *
ST54	*PIN OAK	30.2
ST63	*SILVER MAPLE	42.7
ST69	*PIN OAK	32.3
ST70	*RED MAPLE	35.4
ST72	*RED MAPLE	34.5
ST73	*TULIP POPLAR (TWIN)	38.2
ST74	*TULIP POPLAR (TWIN)	34.7
ST75	*TULIP POPLAR (TWIN)	42.7
ST76	*TULIP POPLAR (TWIN)	32.6
ST83	*WHITE OAK (TWIN)	42.4
ST84	*RED MAPLE	34.4
ST85	*RED MAPLE	32.5
ST86	*GREEN ASH	31.3



VICINITY MAP
SCALE: 1" = 1200'

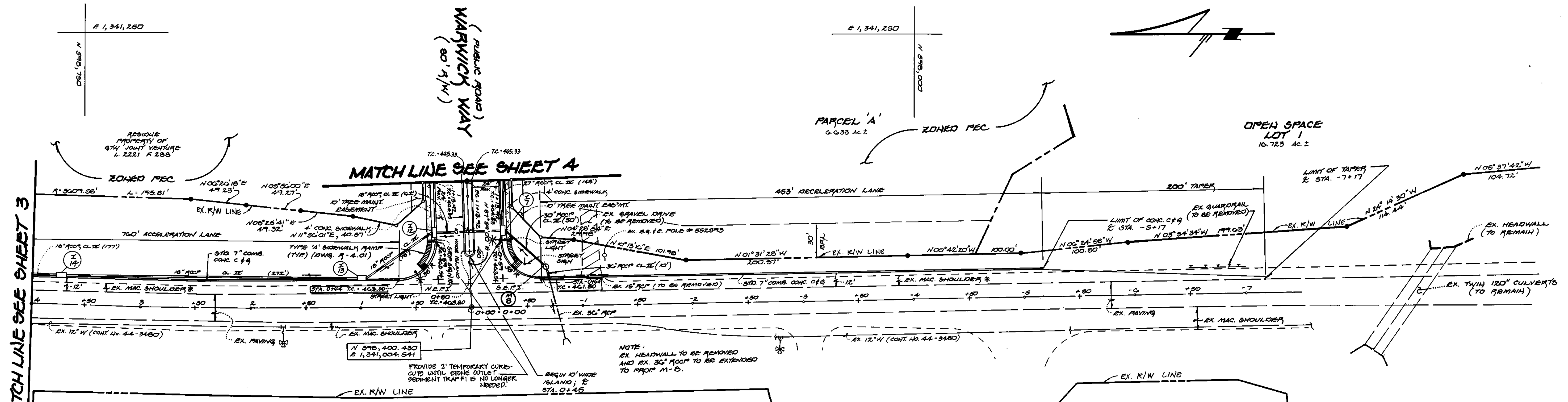
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 481 - 2855

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT
 10805 HICORY RIDGE ROAD
 COLUMBIA, MARYLAND 21044

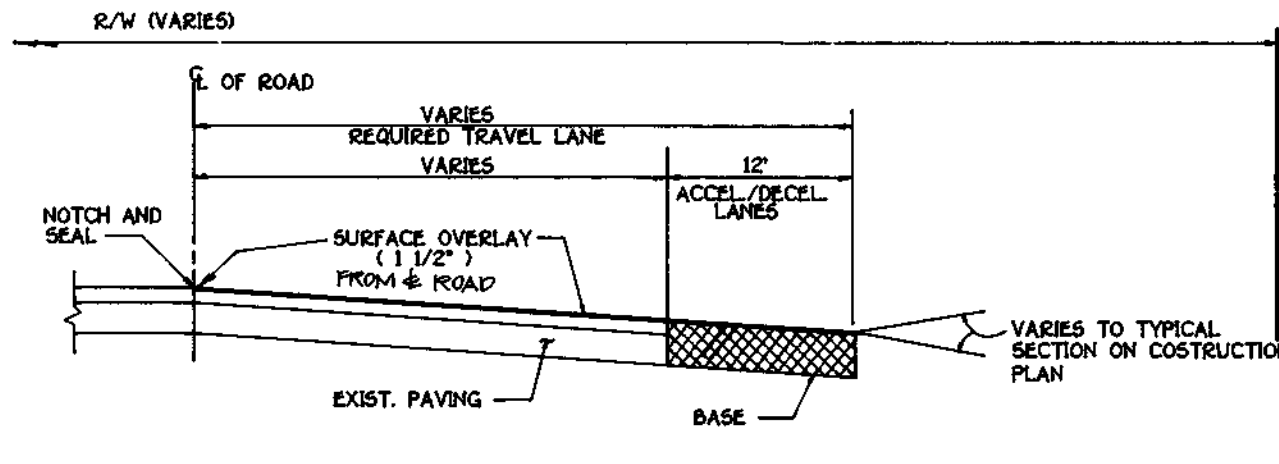
DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT
 10805 HICORY RIDGE ROAD
 COLUMBIA, MARYLAND 21044

STATE OF MARYLAND
 CHARLES J. CROVO, SR.
 PROFESSIONAL ENGINEER
 No. 13204
 EXPIRES 12/31/99

**G.T.W.'S WAVERLY WOODS
 SECTION 7
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
 WARWICK WAY**
 ZONING: B-1, PEC AND R-SA-B
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 15, 1997
 SHEET 7 OF 35



MARRIOTTVILLE ROAD
(INTERMEDIATE ARTERIAL)
R/W WIDTH VARIES



* CONTRACTOR SHALL CORE EX. MAC. SHOULDER TO VERIFY IT MEETS PG FRACTION SECTION. MACADAM SHOULDER SHALL BE REMOVED IF CORE SAMPLE DOES NOT MEET THE REQUIRED PG SECTION FOR THE ACQU. AND DECEL. LANE WIDENING.



GTW'S WAVERLY WOODS
SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MARRIOTTVILLE ROAD
PLAN & PROFILE
WARWICK WAY
PLAN

OWNER: 5TH JOINT VENTURE
C/O LAND DESIGN AND DEVELOPMENT, INC.
10005 HICKORY RIDGE ROAD, SUITE #225
COLUMBIA, MARYLAND 21044

DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION
570 LAND DESIGN AND DEVELOPMENT, INC.
10005 HICKORY RIDGE ROAD, SUITE #225
COLUMBIA, MARYLAND 21044

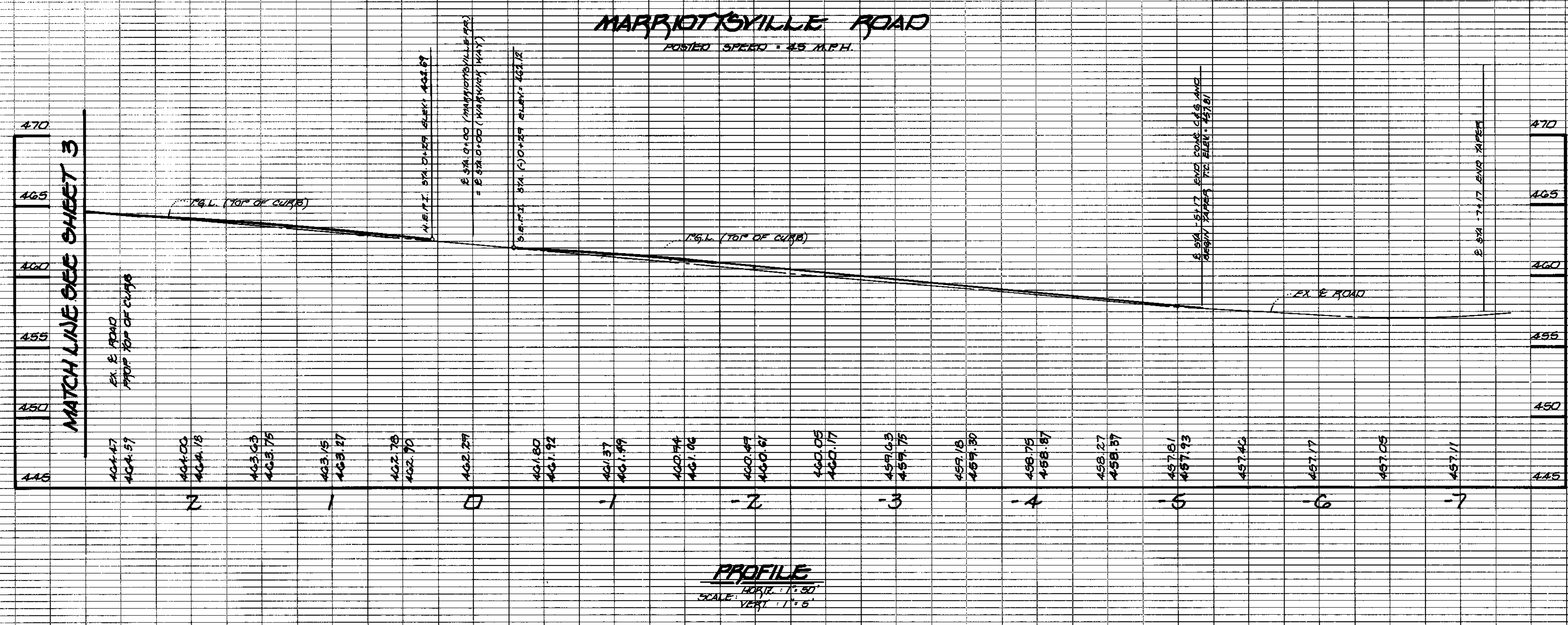
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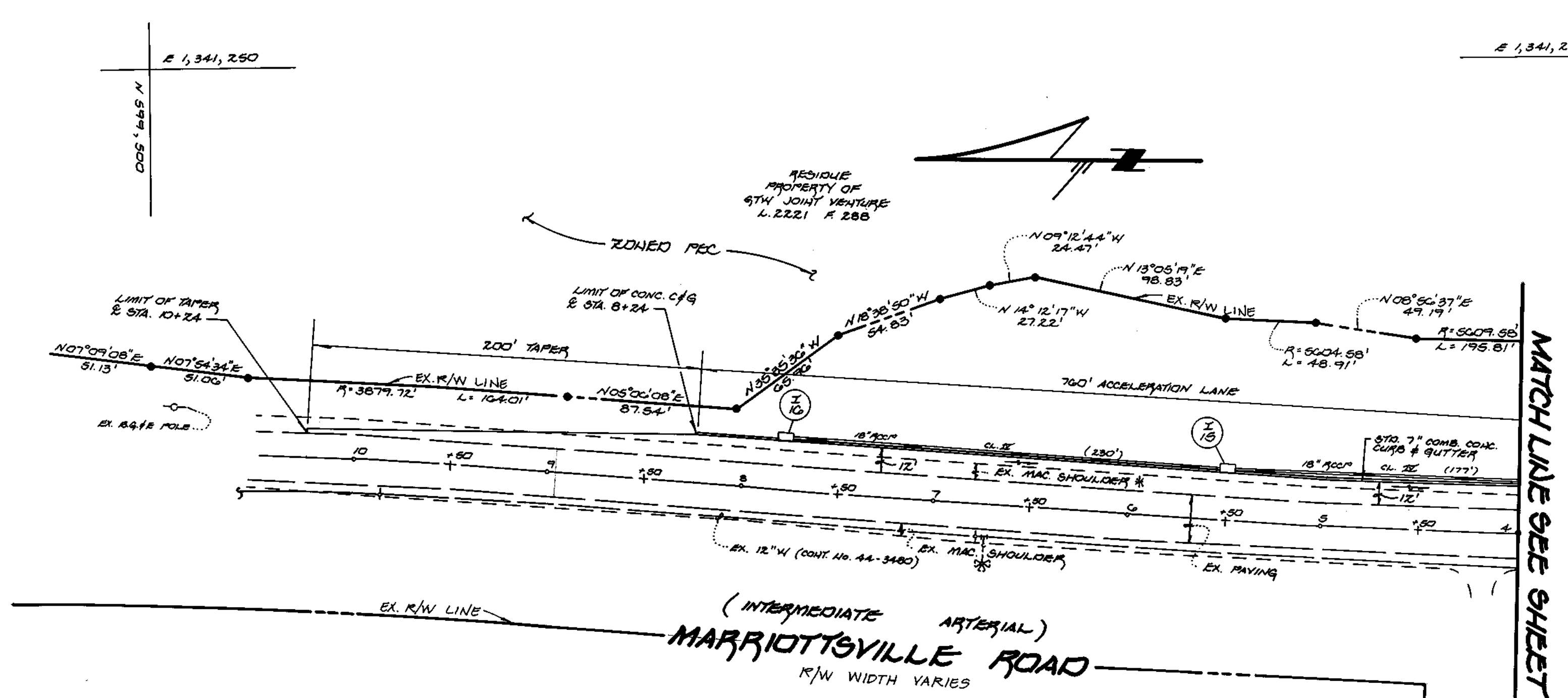
FISHER, COLLINS & GARDNER, INC.
CIVIL ENGINEERING CONSULTANTS & ARCHITECTS
CENTENNIAL SQUARE OFFICE PARK 10277 BAY PLAZA, SUITE 100
ELKROTT CITY, MARYLAND 20904
4109 961 - 2855

APPROVED DEPARTMENT OF PLANNING AND ZONING
Cinda Hamilton JK 9/29/98
CHIEF, DIVISION OF PLANNING AND ZONING

APPROVED DEPARTMENT OF PLANNING AND ZONING
[Signature] 9/16/98
CHIEF, DEVELOPMENT AND ENGINEERING DIVISION

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Jankovics JK 9-16-98
CHIEF, BUREAU OF HIGHWAYS





* CONTRACTOR SHALL CORE EX. MAC SHOULDER TO VERIFY IT MEETS P-5 PAVING SECTION. MACADAM SHOULDER SHALL BE REMOVED IF CORE SAMPLE DOES NOT MEET THE REQUIRED P-5 SECTION FOR THE ACCEL AND REGEL LANE WIDENING.

PLAN
SCALE: 1" = 50'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 7/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 9/1/98
 CHIEF, DIVISION OF PLANNING AND ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donofrio 9-16-98
 CHIEF, BUREAU OF HIGHWAYS



GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

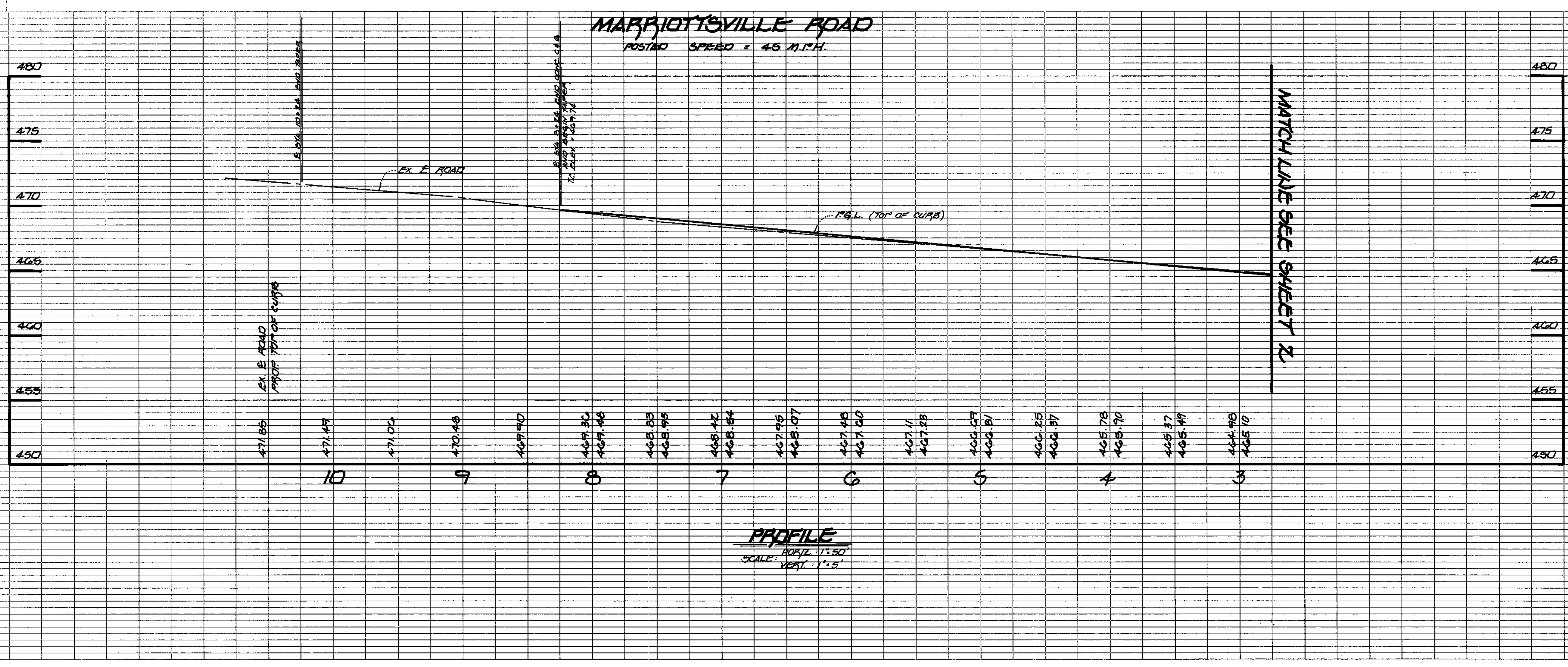
MARRIOTTVILLE ROAD
 PLAN & PROFILE

OWNER: GTW JOINT VENTURE
 12005 HICKORY RIDGE ROAD SUITE 225
 COLUMBIA, MARYLAND 21044

DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION
 12005 HICKORY RIDGE ROAD SUITE 225
 COLUMBIA, MARYLAND 21044

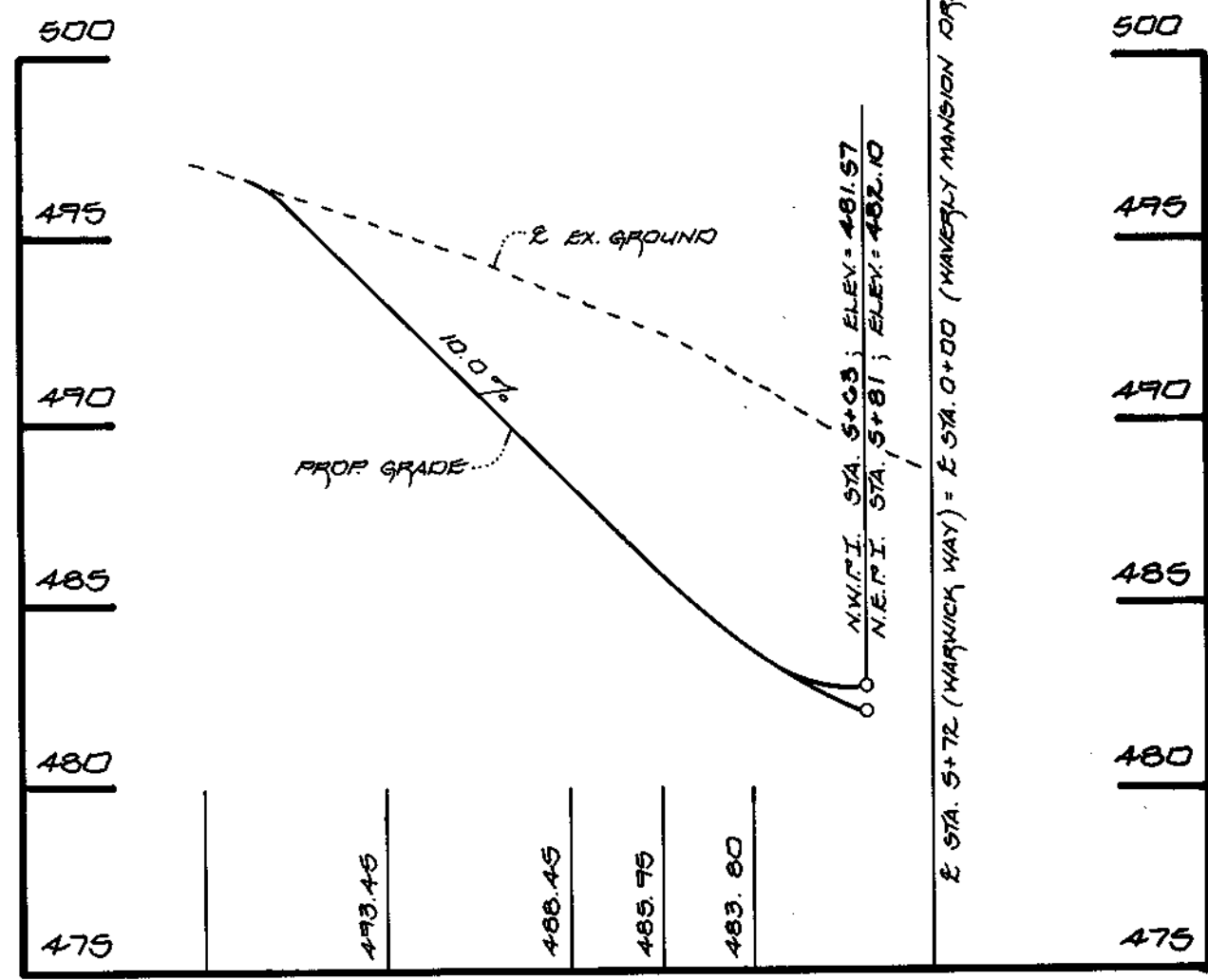
SCALE: AS SHOWN DATE: APRIL 10, 1997 SHEET: 3 OF 33
 DES. J.J.C. DIR. J.C.C. C.E. C.J.C.

FISHER, COLLINS & COMPANY, INC.
 CIVIL ENGINEERING CONSULTANTS 1-1-1985 REGISTERED PROFESSIONAL ENGINEERS
 CENTENNIAL SQUARE OFFICE PARK - 10212 BA, 11192 GLENN RD
 BELLEVILLE CITY, MARYLAND 21038
 (410) 461-2800

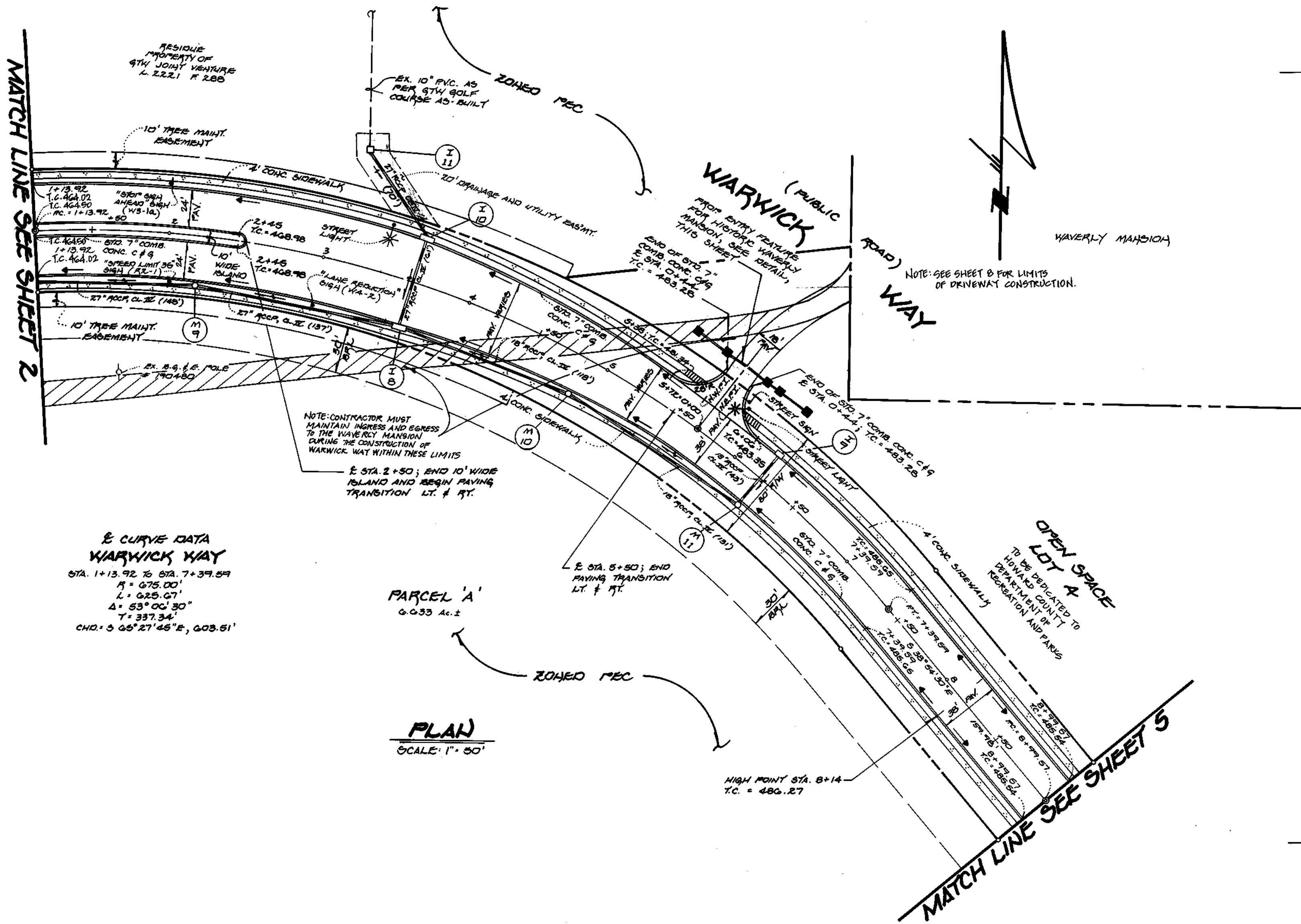


PROFILE
 HORIZ. 1" = 50'
 VERT. 1" = 5'

WAVERLY MANSION DRIVEWAY (PRIVATE DRIVE)



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



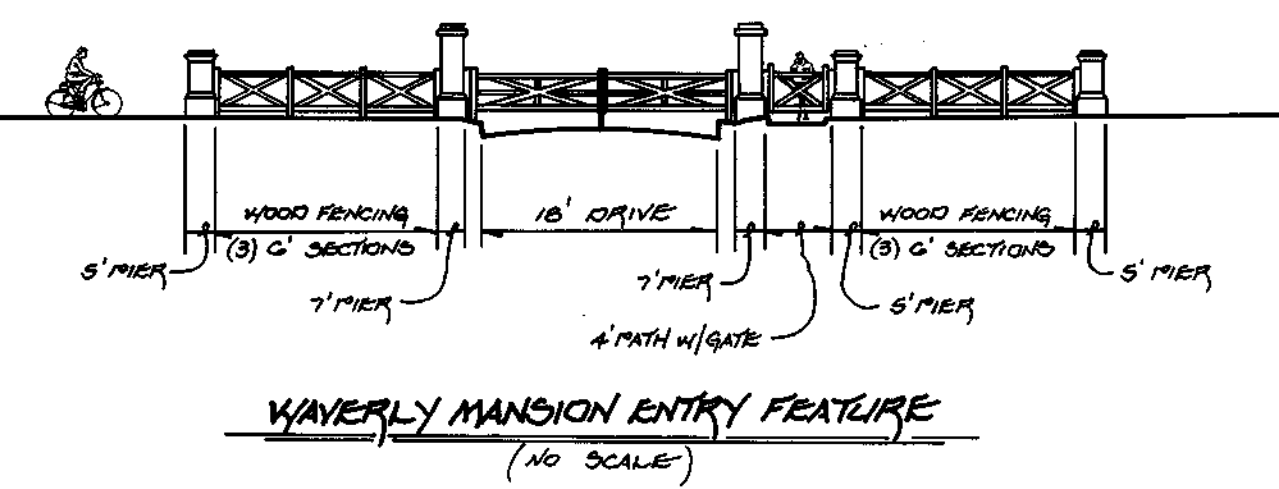
PLAN
SCALE: 1" = 50'

E CURVE DATA WARWICK WAY
STA. 1+13.92 TO STA. 7+39.59
R = 675.00'
L = 620.07'
Δ = 83°00'30"
T = 337.34'
CHD = 5 00'27"48"E, 603.51'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 7/21/98
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 8/10/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 9-16-98
CHIEF, BUREAU OF HIGHWAYS
DATE



WAVERLY MANSION ENTRY FEATURE
(NO SCALE)



GTW'S WAVERLY WOODS SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

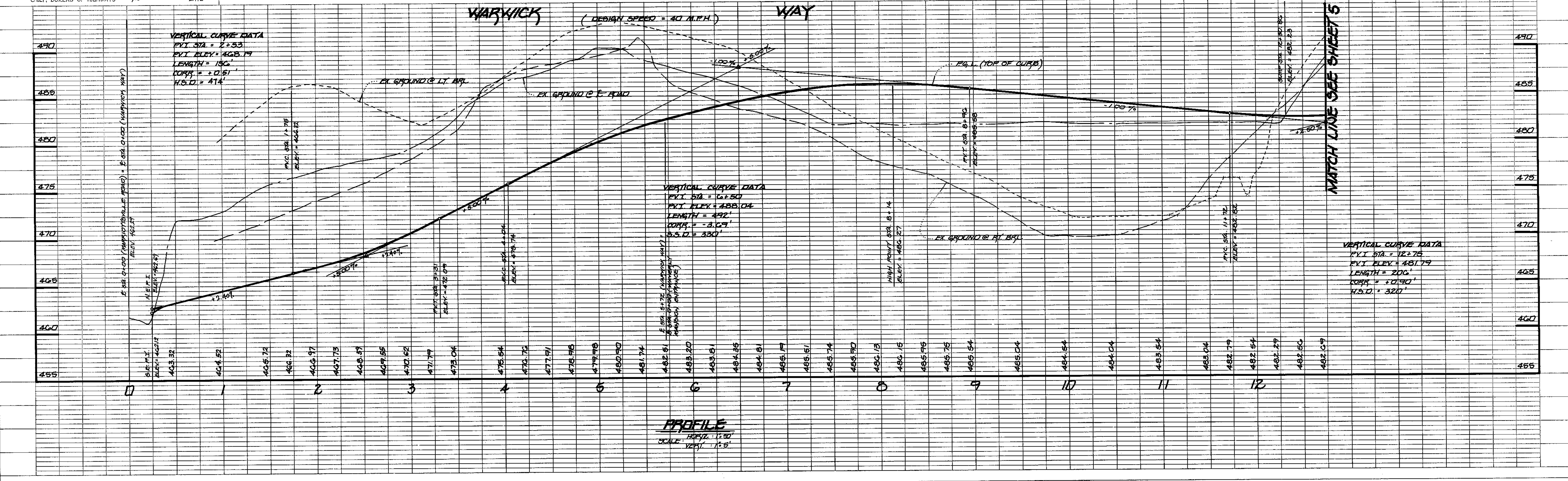
WARWICK WAY
PLAN & PROFILE

OWNER: GTW JOINT VENTURE
C/O LAND DESIGN AND DEVELOPMENT, INC.
10000 HECROY RIDGE ROAD, SUITE 107
COLUMBIA, MARYLAND 21044

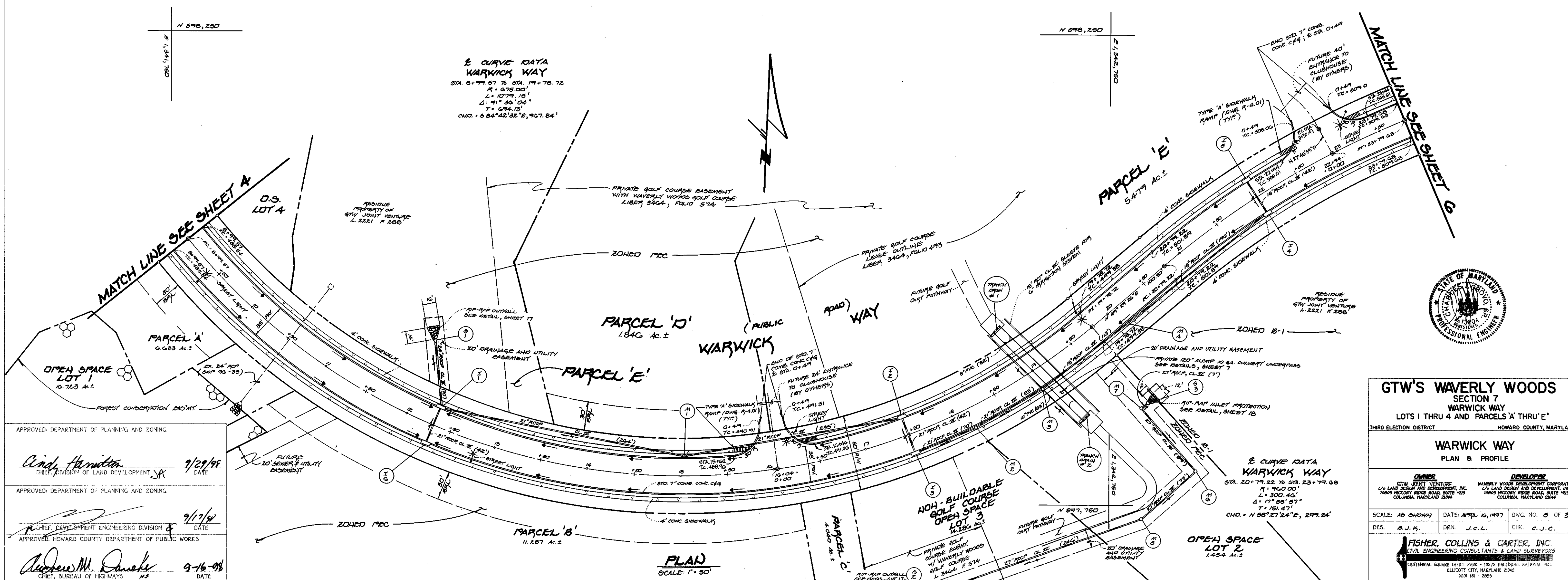
DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION
C/O LAND DESIGN AND DEVELOPMENT, INC.
10000 HECROY RIDGE ROAD, SUITE 107
COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN DATE: APRIL 15, 1997 DWG. NO. 4 OF 33
DES. S.J.M. DRN. J.C.L. CHK. C.J.C.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 3825 SALTPOPE NATIONAL TRAIL
ELICOTT CITY, MARYLAND 21042
(410) 661-2055



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



GTW'S WAVERLY WOODS
SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

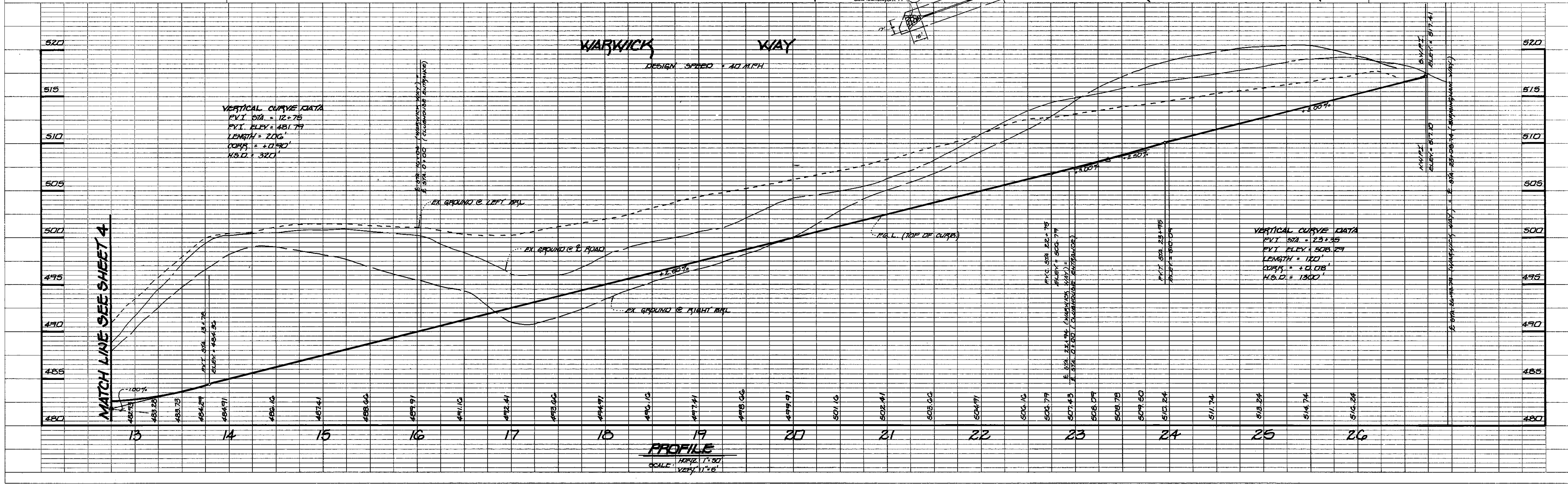
WARWICK WAY
PLAN & PROFILE

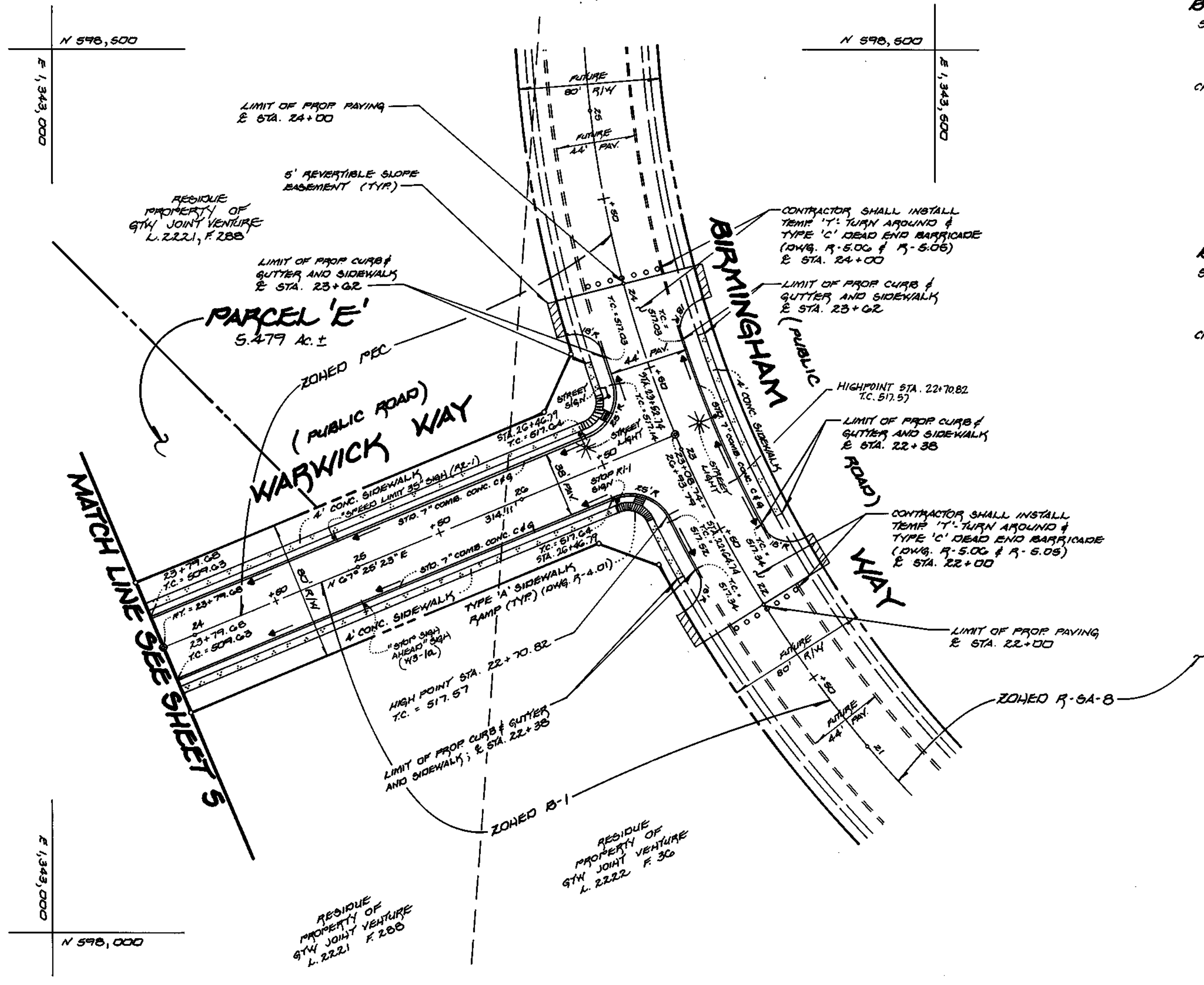
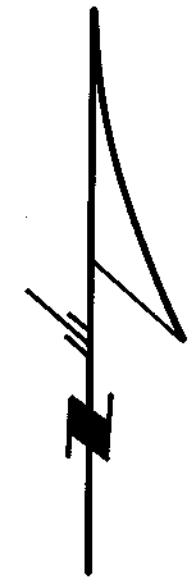
OWNER: GTW JOINT VENTURE
510 LAND DESIGN AND DEVELOPMENT, INC.
1809 HICKORY RIDGE ROAD, SUITE 205
COLUMBIA, MARYLAND 21044

DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION
1200 LAND DESIGN AND DEVELOPMENT, INC.
1809 HICKORY RIDGE ROAD, SUITE 205
COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN DATE: APRIL 16, 1997 DWG. NO. 5 OF 33
DES. G. J. H. DRN. J. C. L. CHK. C. J. C.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2955





E CURVE DATA
BIRMINGHAM WAY
 STA 22+00 TO STA 24+00
 $R = 675.00'$
 $L = 200.00'$
 $\Delta = 10^\circ 08' 30''$
 $T = 100.74'$
 $CHD = N 23^\circ 19' 06'' W, 177.27'$

E CURVE DATA
BIRMINGHAM WAY
 STA 22+00 TO STA 23+08.74
 $R = 675.00'$
 $L = 108.74'$
 $\Delta = 09^\circ 13' 49''$
 $T = 54.49'$
 $CHD = N 27^\circ 11' 32'' W, 108.02'$

PLAN
 SCALE: 1" = 50'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/29/97
 CHIEF, DIVISION OF LAND DEVELOPMENT
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 9/17/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew W. Duncle 9-16-98
 CHIEF, BUREAU OF HIGHWAYS



GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
 THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

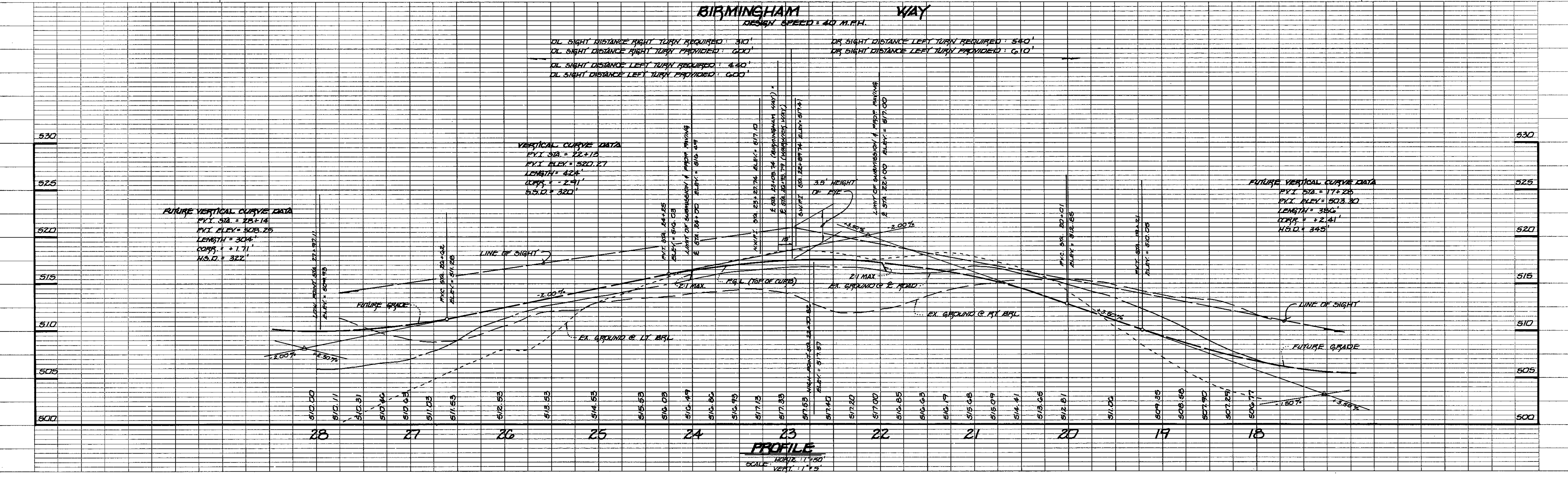
WARWICK WAY
 PLAN
 BIRMINGHAM WAY
 PLAN & PROFILE

OWNER
 GTW JOINT VENTURE
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10000 HICKORY RIDGE ROAD, SUITE #215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10000 HICKORY RIDGE ROAD, SUITE #215
 COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN DATE: APRIL 10, 1997 DWG. NO. G OF 33
 DES. B.J.H. DRN. J.C.L. CHR. C.J.C.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 31272 BALTORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 (410) 461-2855



STREET TREE SCHEDULE

SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
(+)	PLATANUS X ACERIFOLIA 'COLUMBIA' COLUMBIA LONDON PLANE	2 1/2" - 3" CALIPER 40' APART ON PUBLIC R/W	

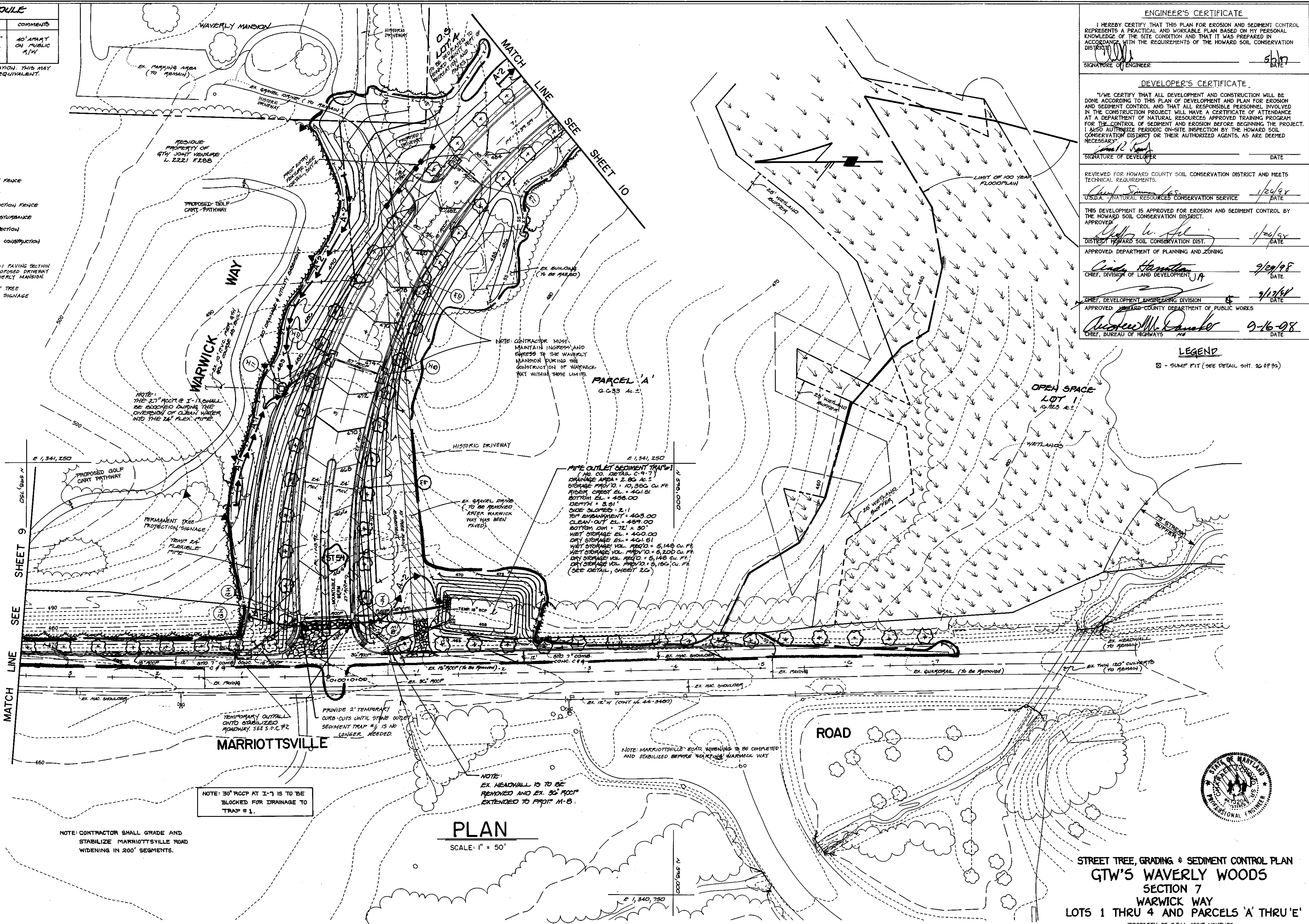
NOTE: STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.

TOTAL NUMBER OF STREET TREES: 173

(+) - 58 STREET TREES (THIS SHEET)

LEGEND

- S — S — SILT FENCE
- SS — SS — SUPER SILT FENCE
- A-I — A-I — EARTH OIL
- X — X — TREE PROTECTION FENCE
- — — LIMIT OF DISTURBANCE
- [] — [] — INLET PROTECTION
- [] — [] — STABILIZED CONSTRUCTION ENTRANCE
- [] — [] — DENOTES PAVING SECTION FOR THE PROPOSED DRIVEWAY TO THE WAVERLY MANSION.
- ▲ — ▲ — PERMANENT TREE PROTECTION SIGNAGE



PLAN
SCALE: 1" = 50'

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 1/26/98
SIGNATURE OF ENGINEER: [Signature]

DEVELOPER'S CERTIFICATE
I/WE 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 CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DATE: 1/26/98
SIGNATURE OF DEVELOPER: [Signature]

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
DATE: 1/26/98
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
DATE: 1/26/98
DISTRICT HOWARD SOIL CONSERVATION DIST.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 9/29/98
Cindy Hamilton, CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 9/17/98
Andrew M. Daniels, CHIEF, BUREAU OF HIGHWAYS

LEGEND

[] - SUMP PIT (SEE DETAIL SHT. 26 OF 32)

STREET TREE, GRADING & SEDIMENT CONTROL PLAN
GTW'S WAVERLY WOODS
SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

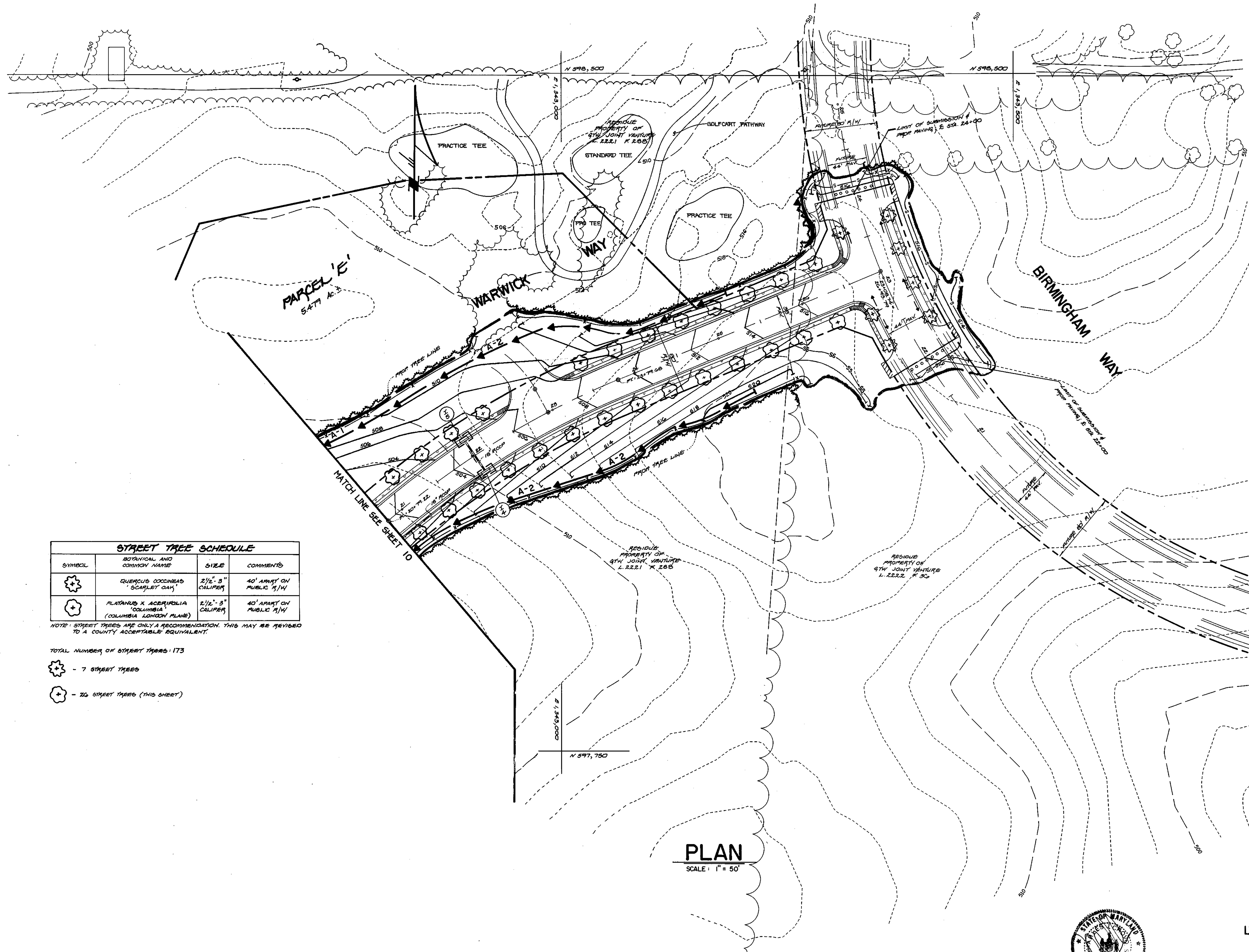
OWNER: GTW JOINT VENTURE
916 LAND DESIGN AND DEVELOPMENT, INC.
10805 NICHOLS RIDGE ROAD
COLUMBIA, MARYLAND 21044

DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION
916 LAND DESIGN AND DEVELOPMENT, INC.
10805 NICHOLS RIDGE ROAD
COLUMBIA, MARYLAND 21044

PROPERTY OF GTW JOINT VENTURE
LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 200
ZONING: PEC-R-SA-8 AND B-1
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: APRIL 16, 1997
SHEET 8 OF 33

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PLACE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855





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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 5/20/98

DEVELOPER'S CERTIFICATE
 I/WE 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 CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 5/20/98

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
[Signature] DATE: 1/26/98
 U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: *[Signature]* DATE: 1/26/98
 DISTRICT HOWARD SOIL CONSERVATION DIST.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] DATE: 9/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] DATE: 9/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] DATE: 9-16-98
 CHIEF, BUREAU OF HIGHWAYS

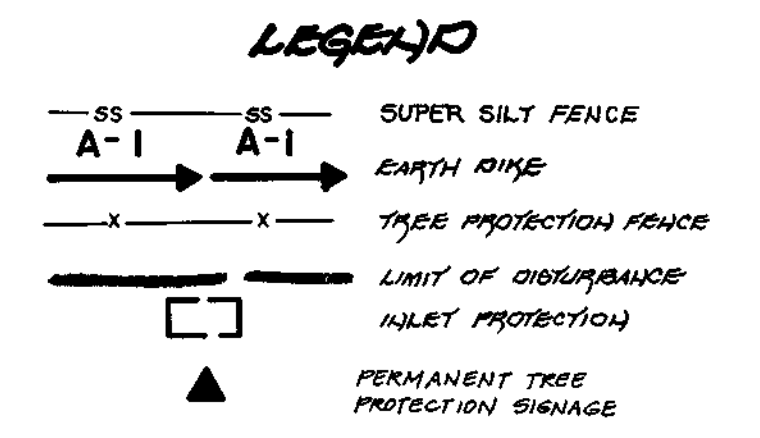
STREET TREE SCHEDULE

SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
⊛	QUERCUS COCCINEA 'SCARLET OAK'	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W
⊕	PLATANUS X ACERIFOLIA 'COLUMBIA' (COLUMBIA LONDON PLANE)	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W

NOTE: STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.

TOTAL NUMBER OF STREET TREES: 173

- ⊛ - 7 STREET TREES
- ⊕ - 26 STREET TREES (THIS SHEET)



PLAN
 SCALE: 1" = 50'

STREET TREE, GRADING & SEDIMENT CONTROL PLAN
GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

(PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 288)
 ZONING REC. R-5A-B AND D-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 11 OF 33



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELKROTT CITY, MARYLAND 21042
 (410) 441-2955

OWNER
 GTW JOINT VENTURE
 50% LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE RD.
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 50% LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE RD.
 COLUMBIA, MARYLAND 21044

Cindy Hamolter 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

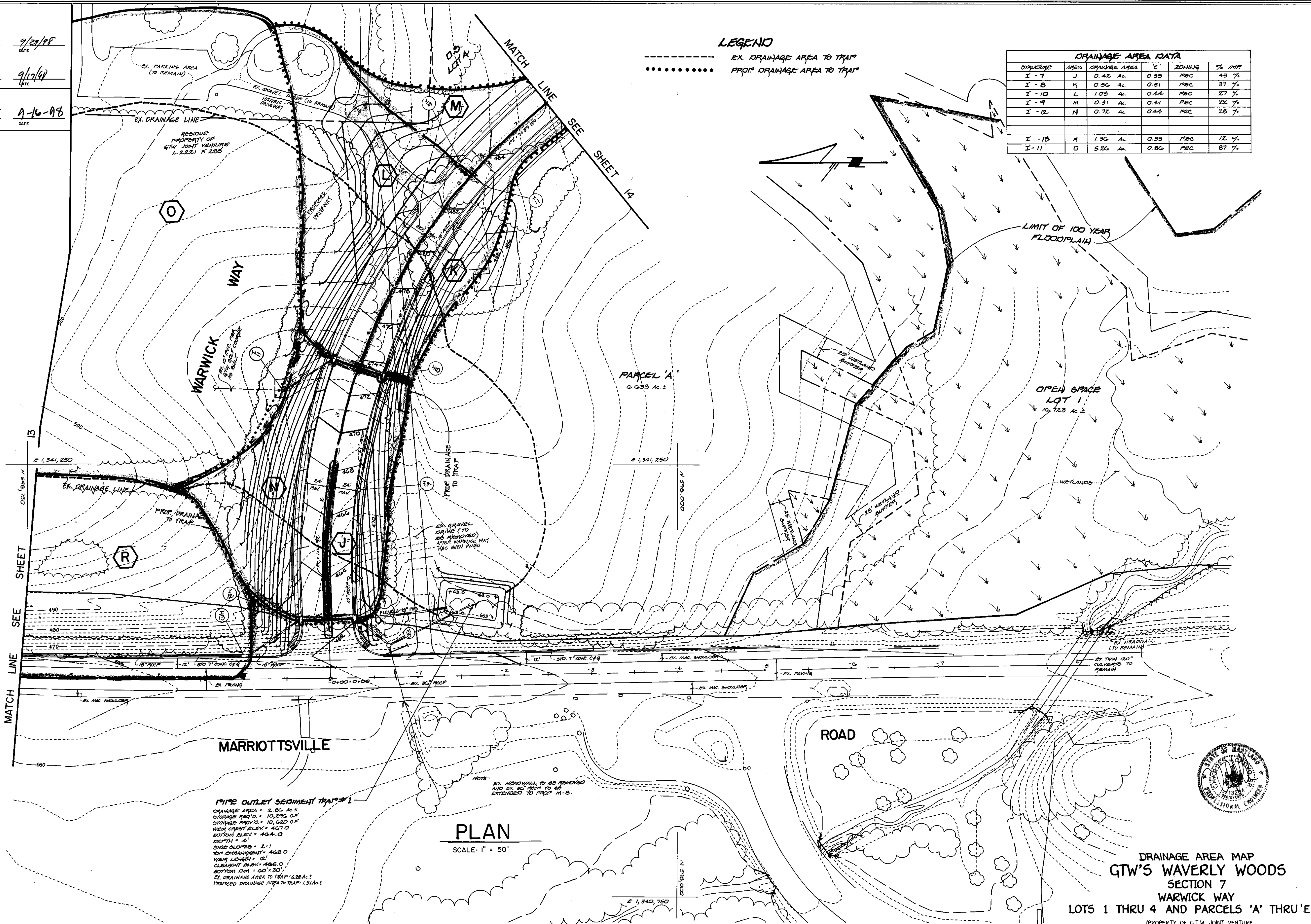
[Signature] 9/17/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daveler 9-16-98
 CHIEF, BUREAU OF HIGHWAYS
 DATE

LEGEND

- EX. DRAINAGE AREA TO TRAP
- PROP. DRAINAGE AREA TO TRAP

DRAINAGE AREA DATA						
STRUCTURE	AREA	DRAINAGE AREA	C'	ZONING	% IMP	
I-7	J	0.42 Ac.	0.55	PEC	43 %	
I-8	K	0.56 Ac.	0.51	PEC	37 %	
I-10	L	1.03 Ac.	0.44	PEC	27 %	
I-9	M	0.31 Ac.	0.41	PEC	22 %	
I-12	N	0.72 Ac.	0.44	PEC	25 %	
I-13	A	1.36 Ac.	0.35	PEC	12 %	
I-11	O	5.26 Ac.	0.86	PEC	87 %	



PIPE OUTLET SEDIMENT TRAP # 1
 DRAINAGE AREA = 2.80 Ac.
 STORAGE PROVIDED = 10,000 C.F.
 WEIR CREST ELEV. = 467.0
 BOTTOM ELEV. = 464.0
 WIDTH = 4'
 SLOPE DOWNSTREAM = 2:1
 WEIR LENGTH = 12'
 CLEARANCE ELEV. = 468.0
 BOTTOM CH. = 60' x 30"
 EX. DRAINAGE AREA TO TRAP = 688 Ac.
 PROPOSED DRAINAGE AREA TO TRAP = 1.51 Ac.

PLAN
 SCALE: 1" = 50'



DRAINAGE AREA MAP
GTW'S WAVERLY WOODS
SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

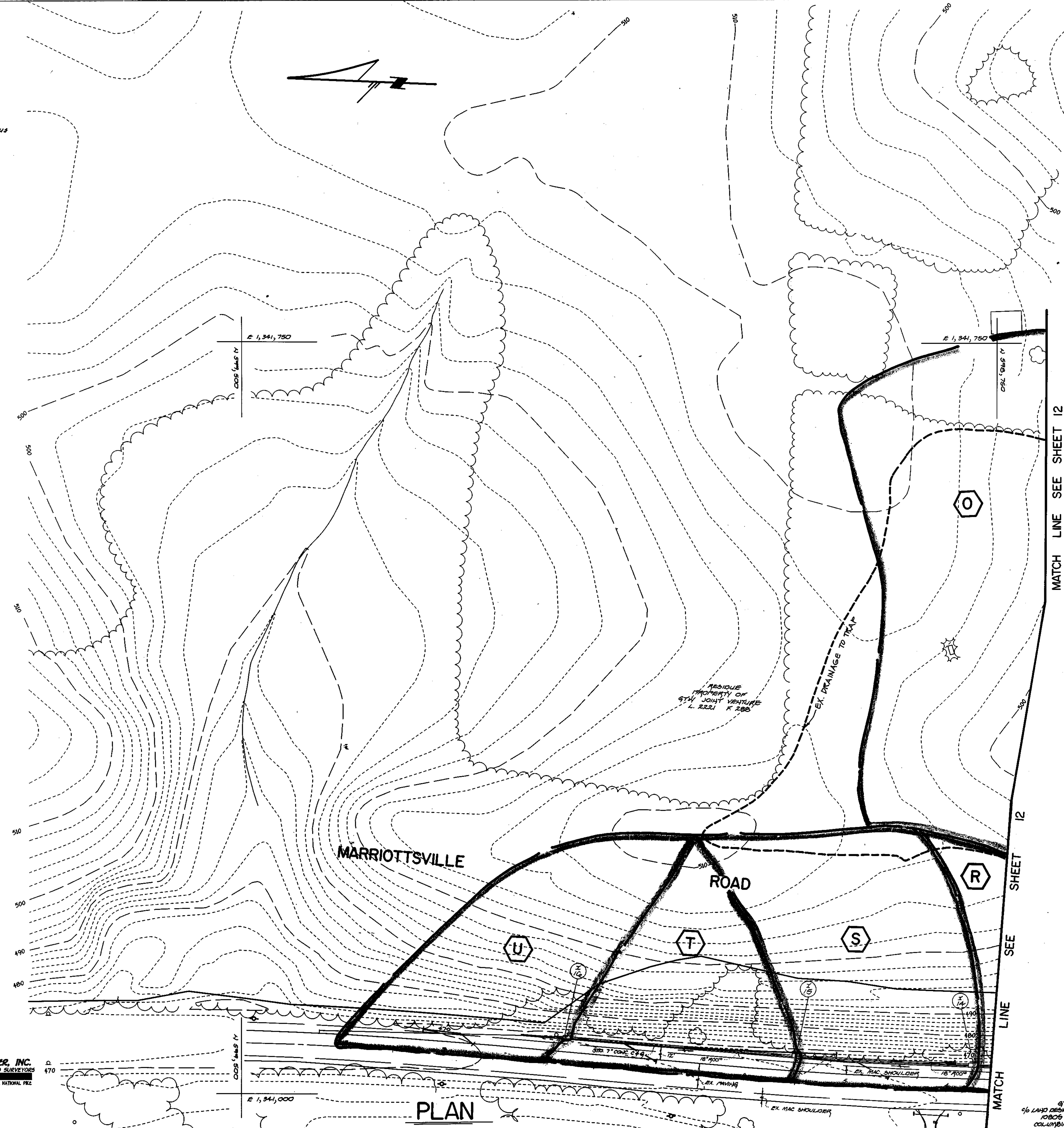
PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 2800
 ZONING PEC, R-SA-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 12 OF 33

OWNER
 GTW JOINT VENTURE
 96 LAUD CHESHAM AND DEVELOPMENT, INC.
 10805 HIGHWAY ROBE ROAD
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 96 LAUD CHESHAM AND DEVELOPMENT, INC.
 10805 HIGHWAY ROBE ROAD
 COLUMBIA, MARYLAND 21044

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Linda Harvatta 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT SA DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Robert M. Parker 9-16-98
 CHIEF, BUREAU OF HIGHWAYS DATE



177.76

DRAINAGE AREA DATA					
STRUCTURE	AREA	DRAINAGE AREA	'C'	ZONING	% IMP.
I-13	9	1.36 Ac.	0.33	PEC	12%
I-14	6	1.12 Ac.	0.31	PEC	9%
I-16	7	0.76 Ac.	0.36	PEC	16%
I-16	4	0.91 Ac.	0.33	PEC	11%
I-11	0	5.32 Ac.	0.86	PEC	87%

LEGEND

- EX. DRAINAGE AREA TO TRAP
- PROP. DRAINAGE AREA TO TRAP



**DRAINAGE AREA MAP
 GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'**

(PROPERTY OF G.T.W. JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 288)
 ZONING PEC, R-5A-0 AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 15 OF 33

OWNER
 G.T.W. JOINT VENTURE
 7% LAND DESIGN AND DEVELOPMENT, INC.
 10806 HENRY RIDGE ROAD
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WYNELLY WOODS DEVELOPMENT CORPORATION
 7% LAND DESIGN AND DEVELOPMENT, INC.
 10806 HENRY RIDGE ROAD
 COLUMBIA, MARYLAND 21044

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21041
 (410) 481-2895

PLAN
 SCALE: 1" = 80'

Arinda Hamilton
 CHIEF, DIVISION OF LAND DEVELOPMENT
 9/23/98
 DATE

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 9/11/98
 DATE

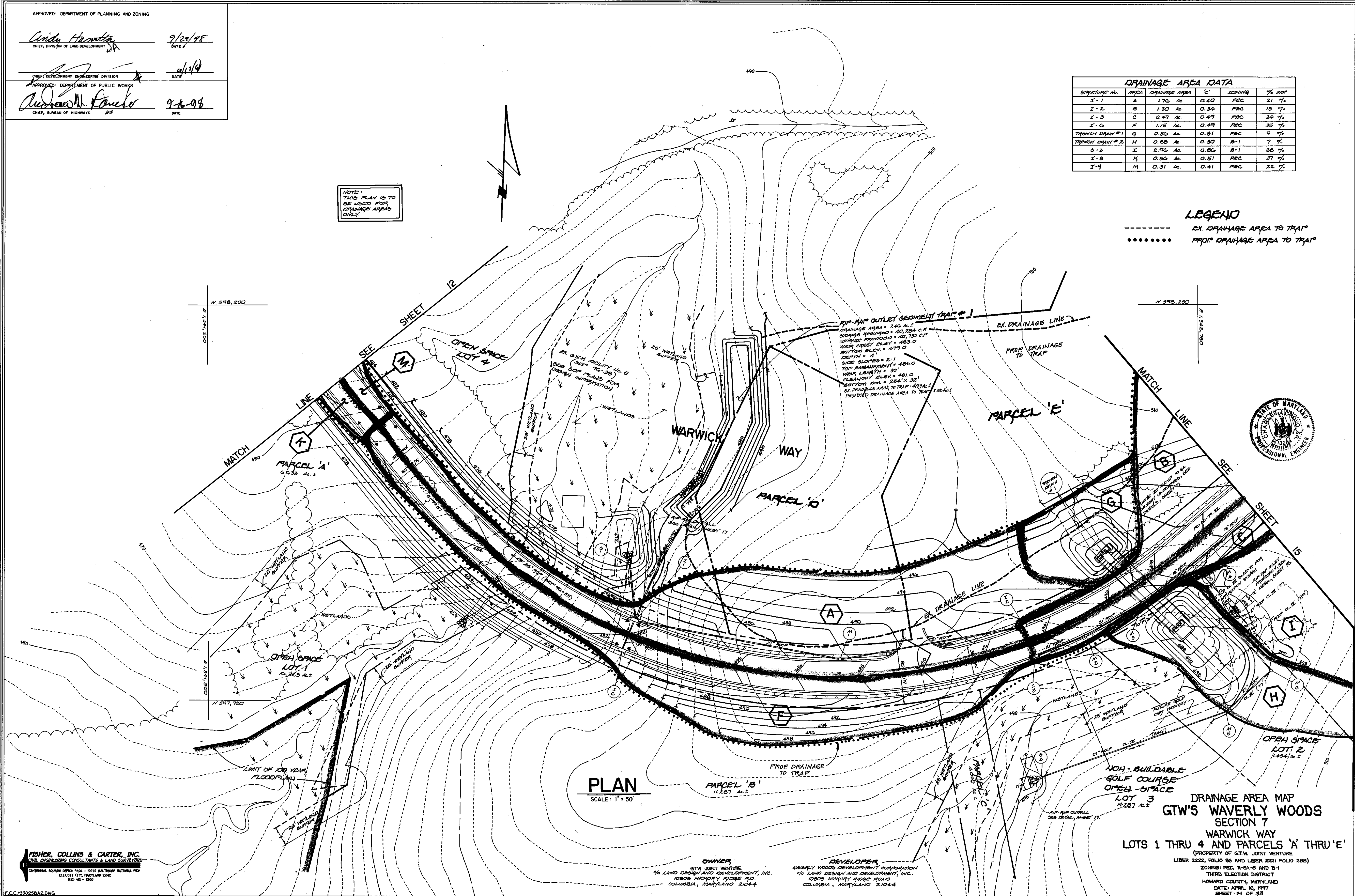
Andrew M. Connelo
 CHIEF, BUREAU OF HIGHWAYS
 9-16-98
 DATE

NOTE:
 THIS PLAN IS TO
 BE USED FOR
 DRAINAGE AREAS
 ONLY.

DRAINAGE AREA DATA						
STRUCTURE NO.	AREA	DRAINAGE AREA	C'	ZONING	% IMP	
I-1	A	1.70 Ac.	0.40	PEC	21 %	
I-2	B	1.30 Ac.	0.34	PEC	13 %	
I-3	C	0.47 Ac.	0.49	PEC	34 %	
I-4	F	1.15 Ac.	0.49	PEC	35 %	
TRENCH DRAIN #1	G	0.36 Ac.	0.31	PEC	9 %	
TRENCH DRAIN #2	H	0.85 Ac.	0.20	B-1	7 %	
O-3	I	2.90 Ac.	0.80	B-1	88 %	
I-8	K	0.50 Ac.	0.51	PEC	37 %	
I-9	M	0.31 Ac.	0.41	PEC	22 %	

LEGEND

- EX. DRAINAGE AREA TO TRAP
- PROP. DRAINAGE AREA TO TRAP



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDORNE NATIONAL PIKE
 ELKLOTT CITY, MARYLAND 21046
 410.461.2200

OWNER
 GTW JOINT VENTURE
 5/6 LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 5/6 LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 COLUMBIA, MARYLAND 21044

DRAINAGE AREA MAP
GTW'S WAVERLY WOODS
SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
 (PROPERTY OF GTW JOINT VENTURE)
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 288)
 ZONING: PEC, R-SA-8 AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 14 OF 33

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 7/27/88
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Duque 9-16-98
 CHIEF, BUREAU OF HIGHWAYS JAF DATE



DRAINAGE AREA DATA

STRUCTURE NO.	AREA	DRAINAGE AREA	'C'	ZONING	% IMP
I-2	B	1.30 Ac.	0.34	PEC	13%
I-3	C	0.47 Ac.	0.49	PEC	34%
I-4	D	0.99 Ac.	0.42	B-1	24%
I-5	E	0.78 Ac.	0.45	PEC	28%
TRUNK DRAIN	H	0.85 Ac.	0.30	B-1	7%
B-3	I	2.90 Ac.	0.80	B-1	88%

LEGEND

----- EX. DRAINAGE AREA TO TRAP

..... PROP. DRAINAGE AREA TO TRAP

PLAN
 SCALE: 1" = 50'

**DRAINAGE AREA MAP
 GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'**

PROPERTY OF G.T.W. JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221, FOLIO 288)
 ZONING: PEC, R-5A-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 15 OF 35



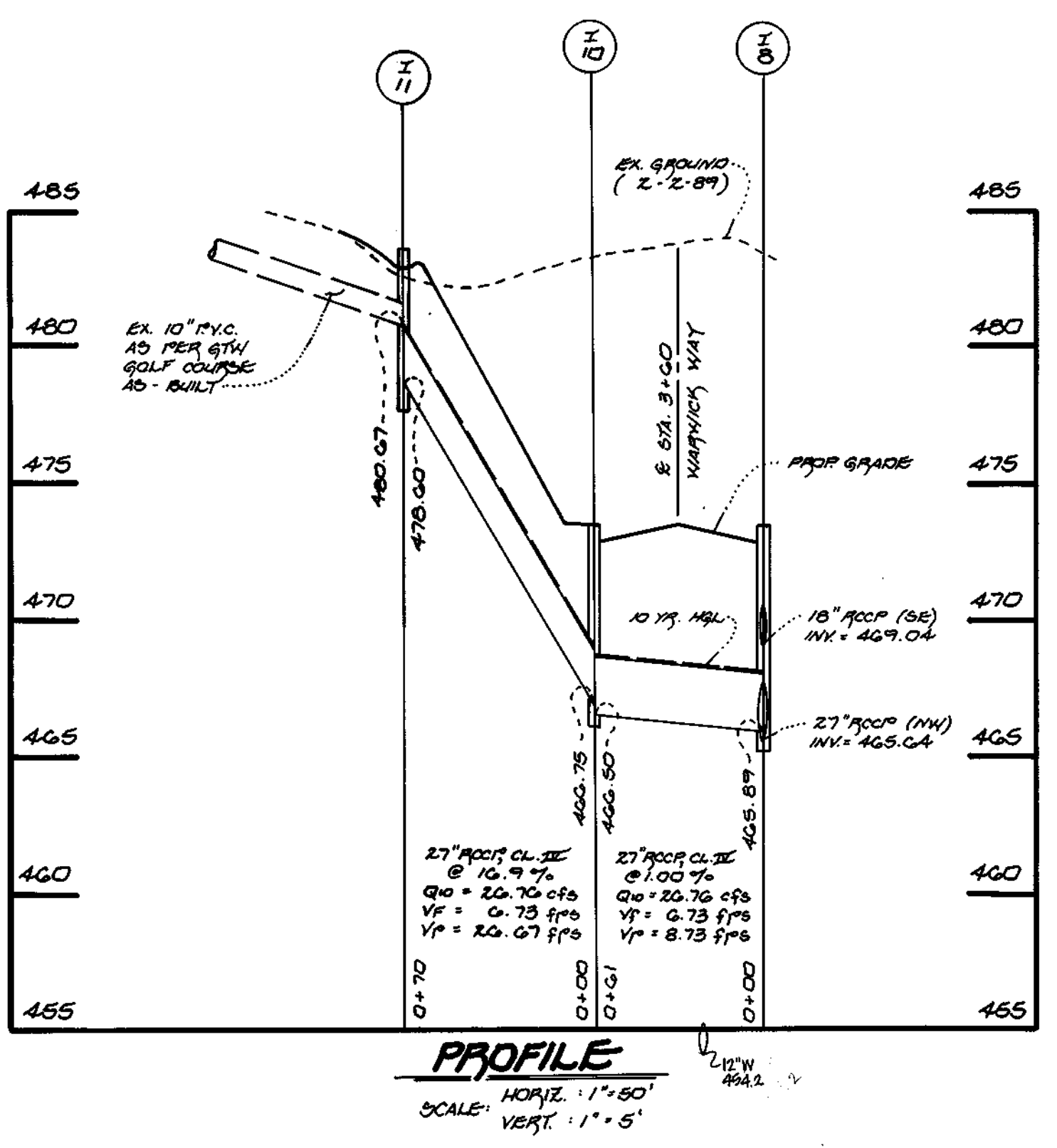
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELKOTT CITY, MARYLAND 21042
 MD 94 - 2095

OWNER
 GTW JOINT VENTURE
 10805 NICHOLS RIDGE RD.
 COLUMBIA, MARYLAND 21044

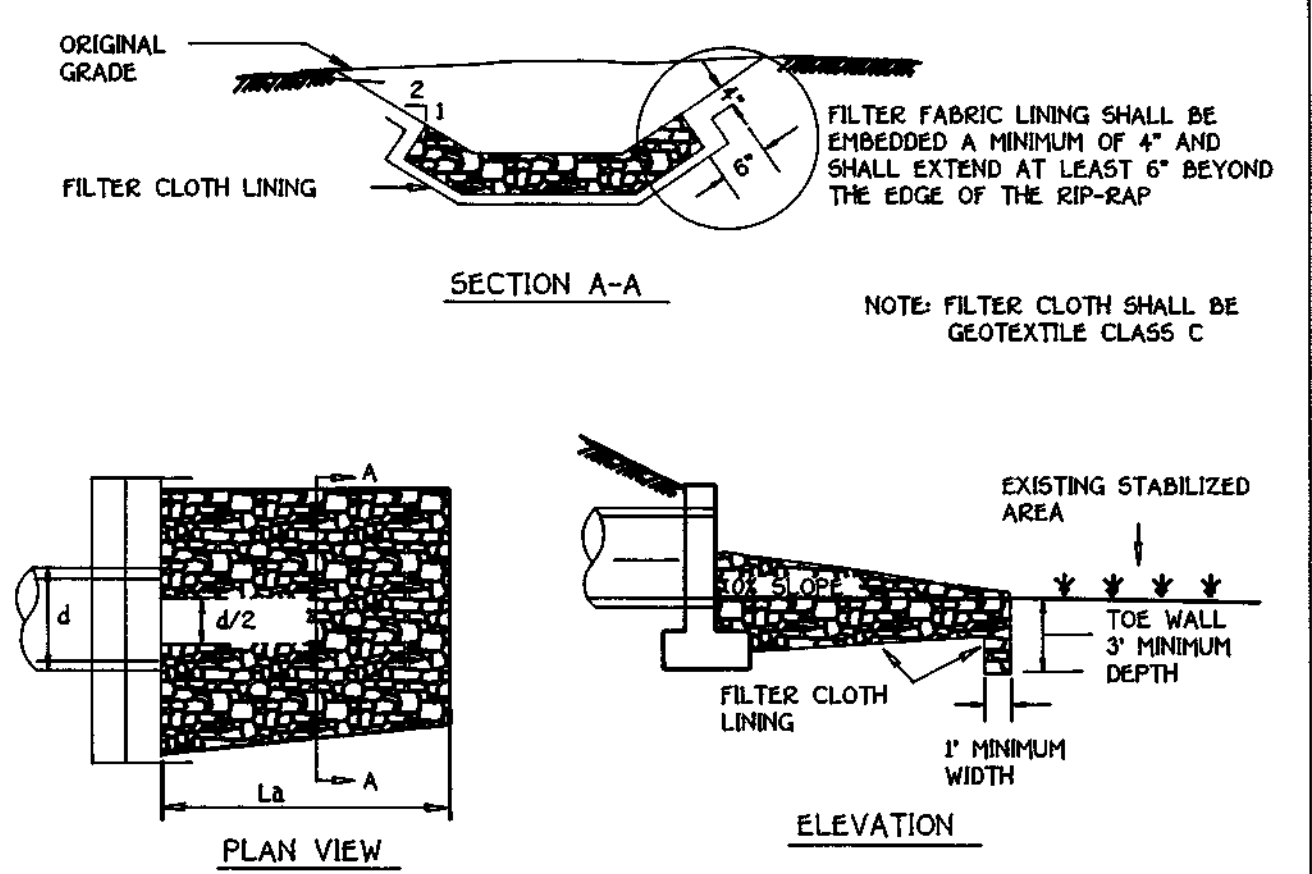
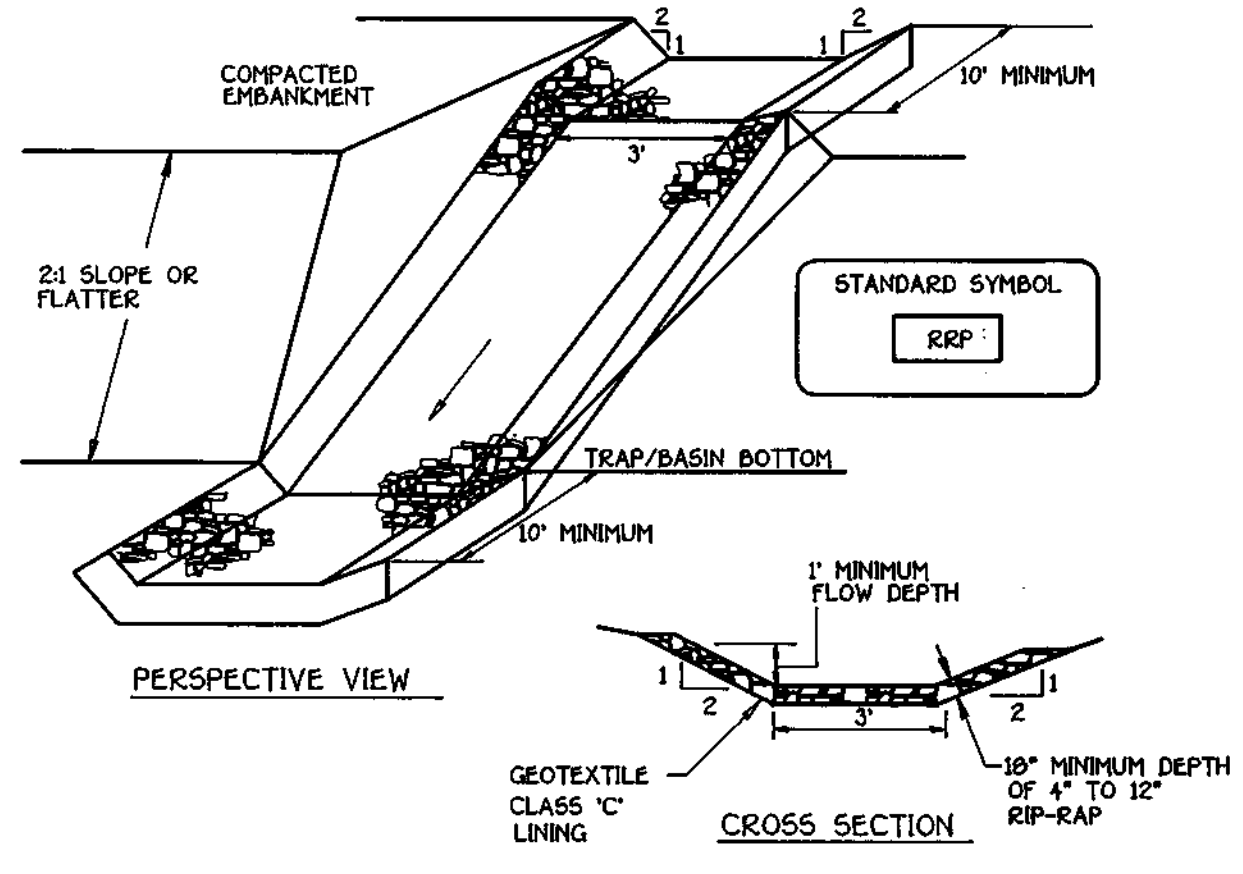
DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 10805 NICHOLS RIDGE RD.
 COLUMBIA, MARYLAND 21044

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamlett 9/28/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert M. Davelle 9-16-98
 CHIEF, BUREAU OF HIGHWAYS
 DATE



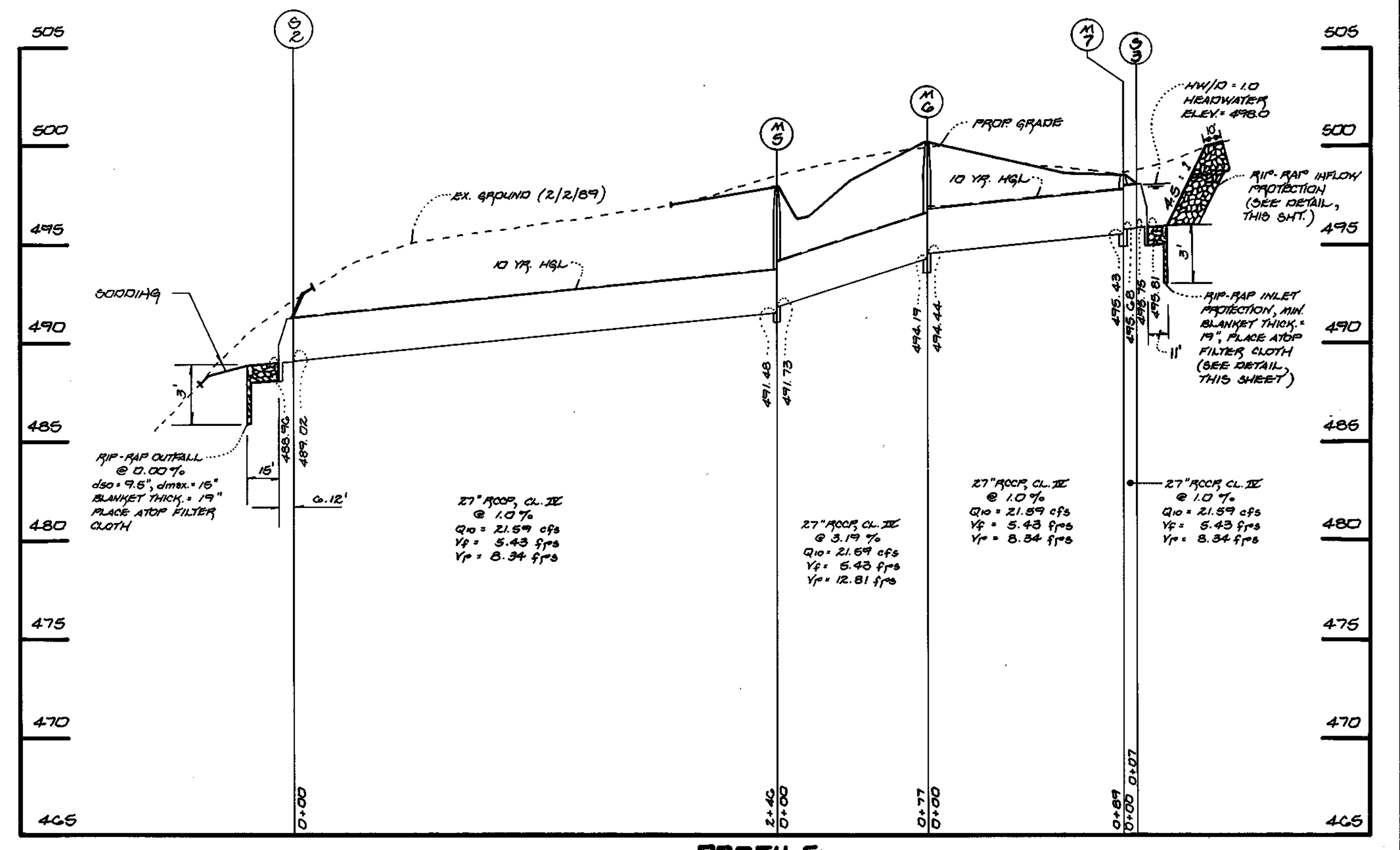
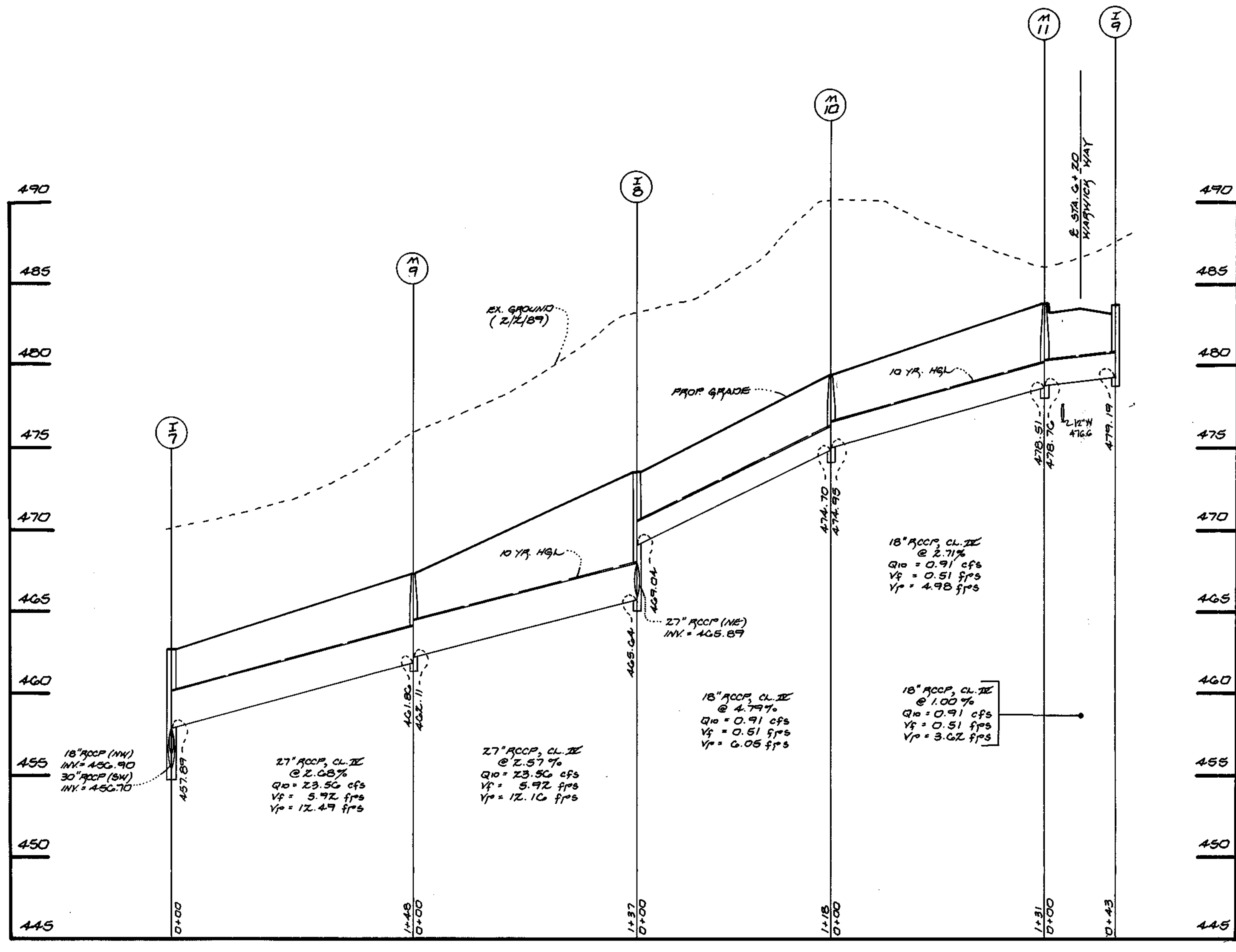
- Construction Specifications
- Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 10".
 - Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
 - Entrance and exit sections shall be installed as shown on the detail section.
 - Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
 - Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
 - Rip-rap should blend into existing ground.
 - Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.



RIP-RAP INFLOW PROTECTION
 NOT TO SCALE

RIP-RAP INLET PROTECTION DETAIL
 NO SCALE

- Construction Specifications
- THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SURGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
 - THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
 - GEOTEXTILE CLASS C²⁰ OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE FABRIC. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
 - STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER-BLANKET OR GEOTEXTILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
 - THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 410-481-5895

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE #215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE #215
 COLUMBIA, MARYLAND 21044

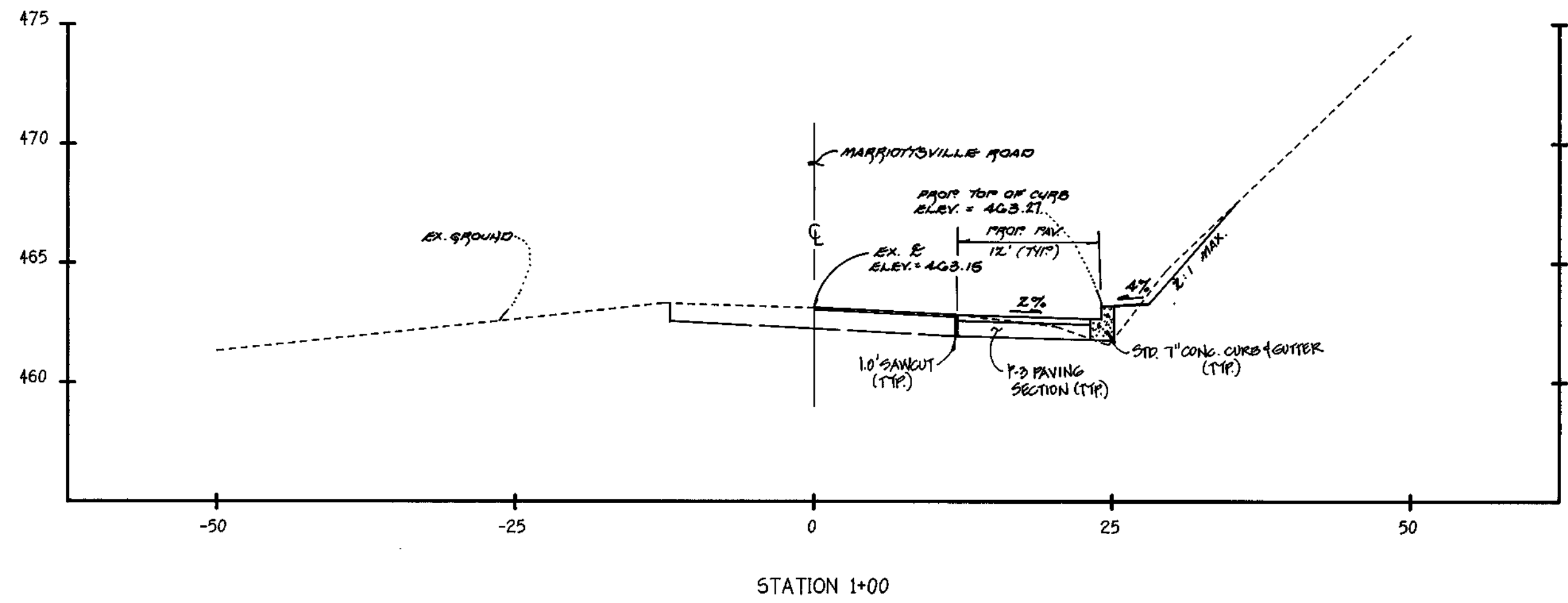


STORM DRAIN PROFILES
 GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
 (PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 200)
 ZONING: PEC, R-SA-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 18 OF 33

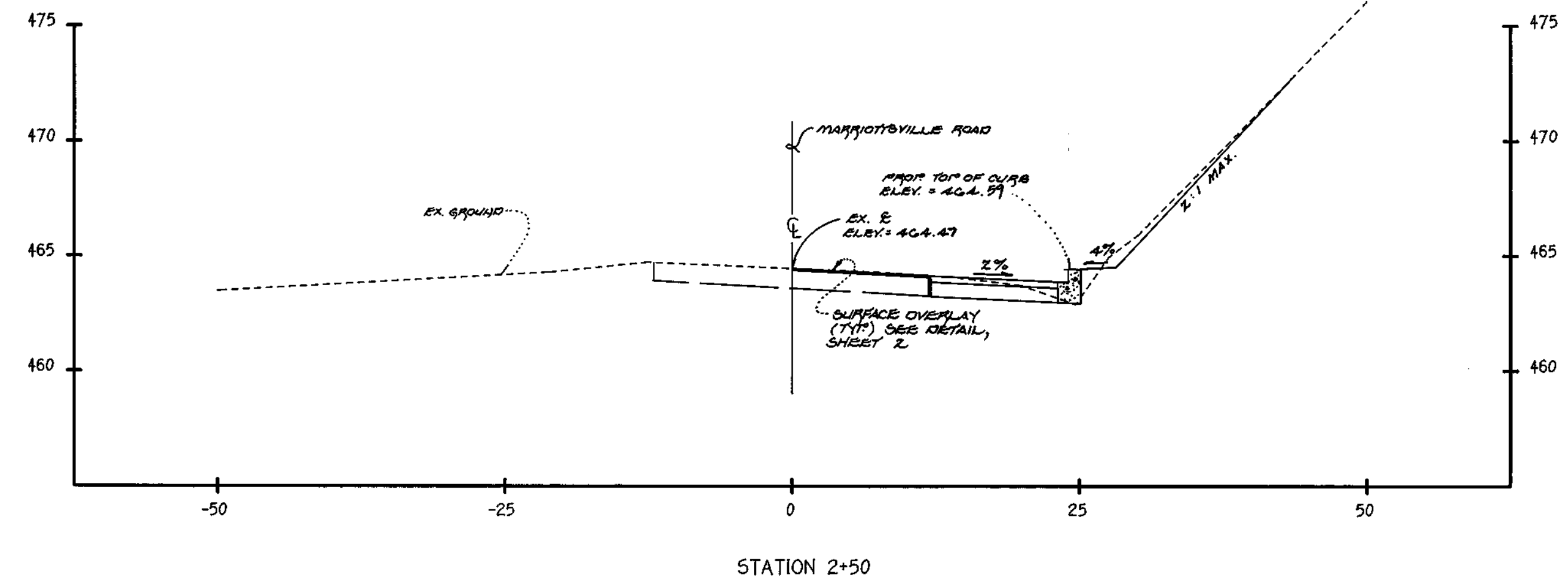
Cindy Hammit 9/20/97
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

7/12/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

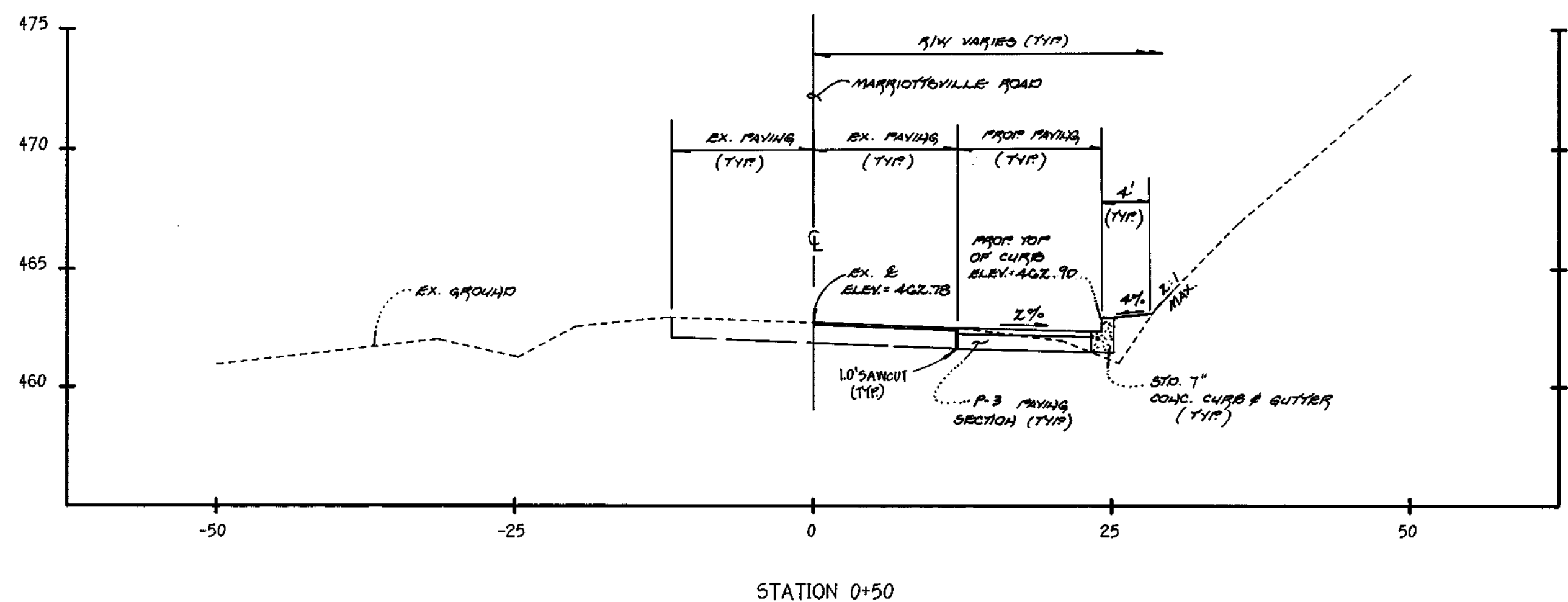
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Robert M. Daniels 9-16-97
 CHIEF, BUREAU OF HIGHWAYS DATE



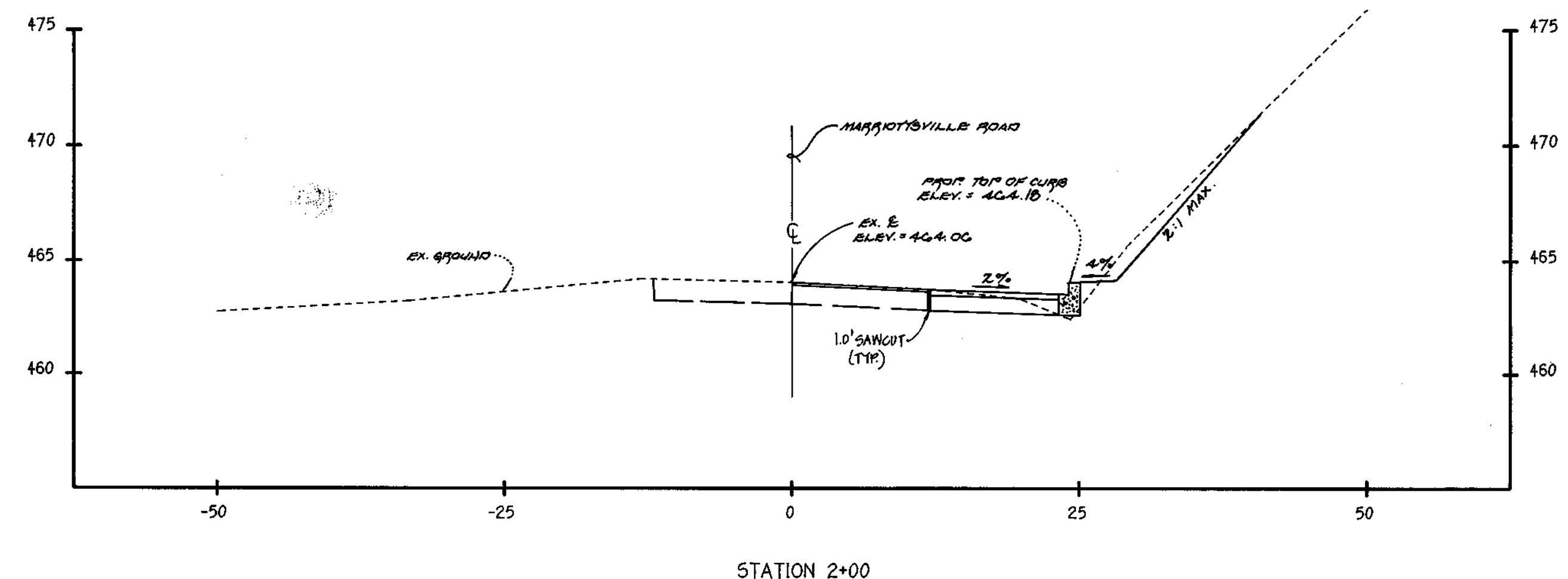
STATION 1+00



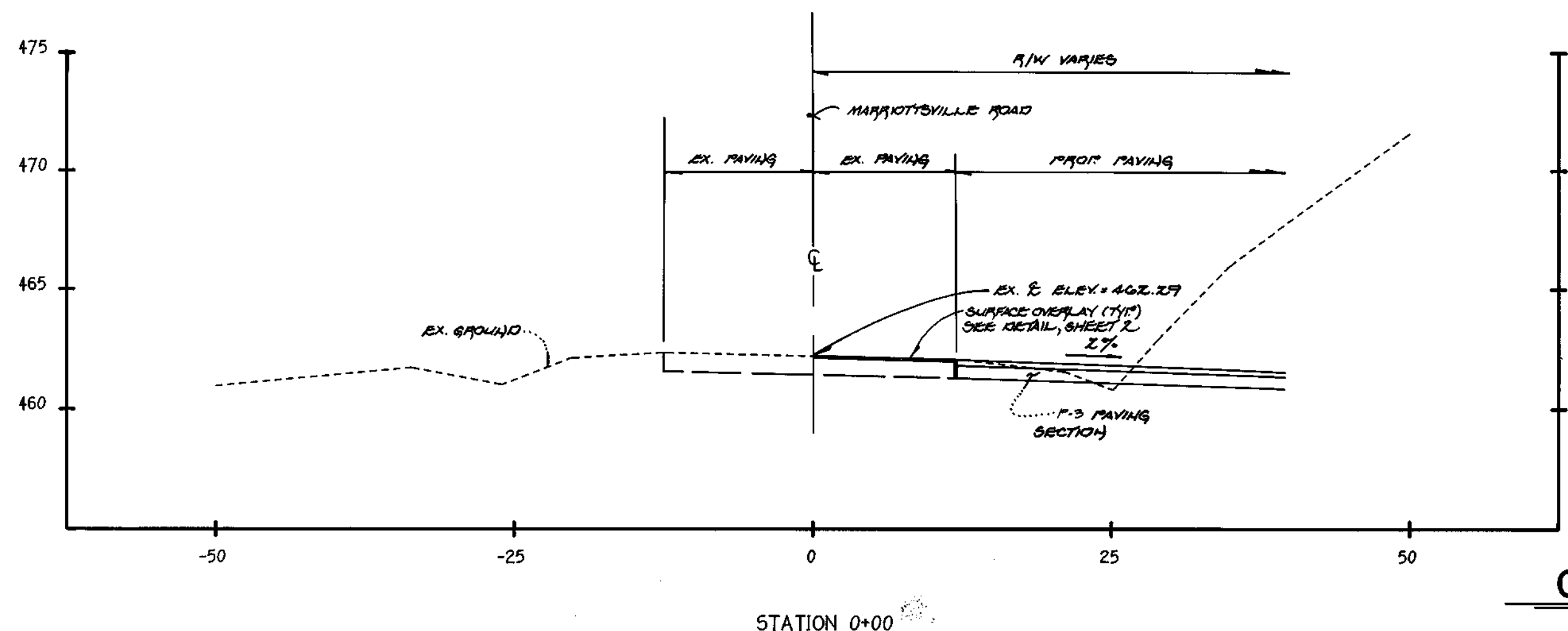
STATION 2+50



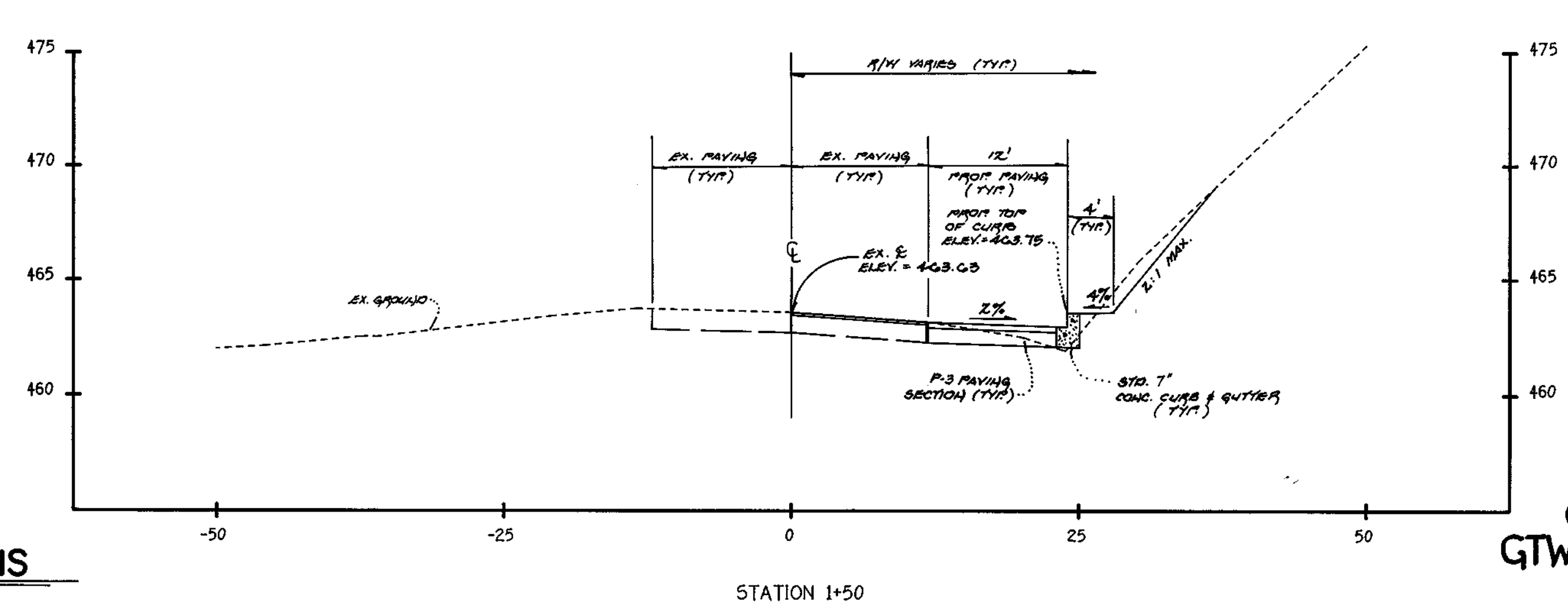
STATION 0+50



STATION 2+00



STATION 0+00



STATION 1+50

CROSS - SECTIONS

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

CROSS - SECTIONS
 (MARRIOTTVILLE ROAD WIDENING)
 GTW'S WAVERLY WOODS
 SECTION 7

WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



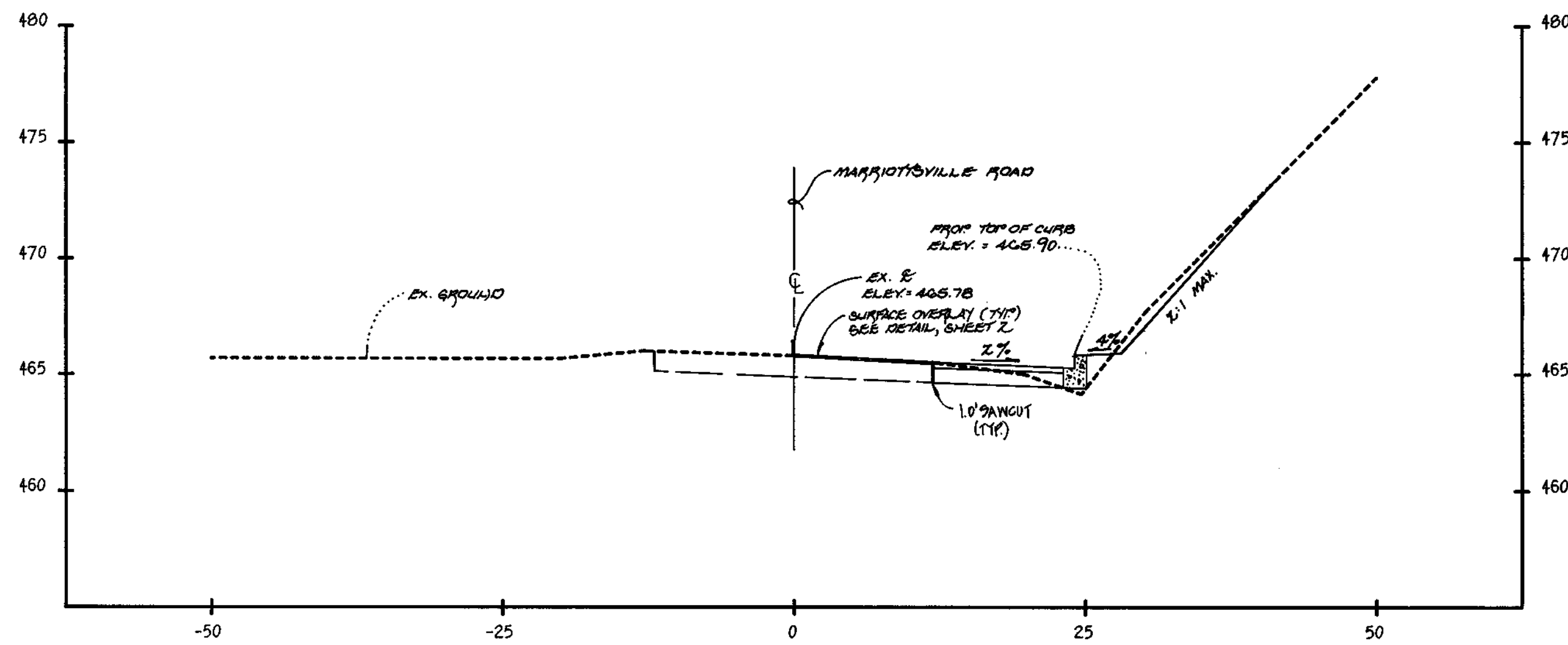
(PROPERTY OF G.T.W. JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 200)
 ZONING: PEC, R-SA-8 AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 19 OF 33

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21038
 (410) 461-2255

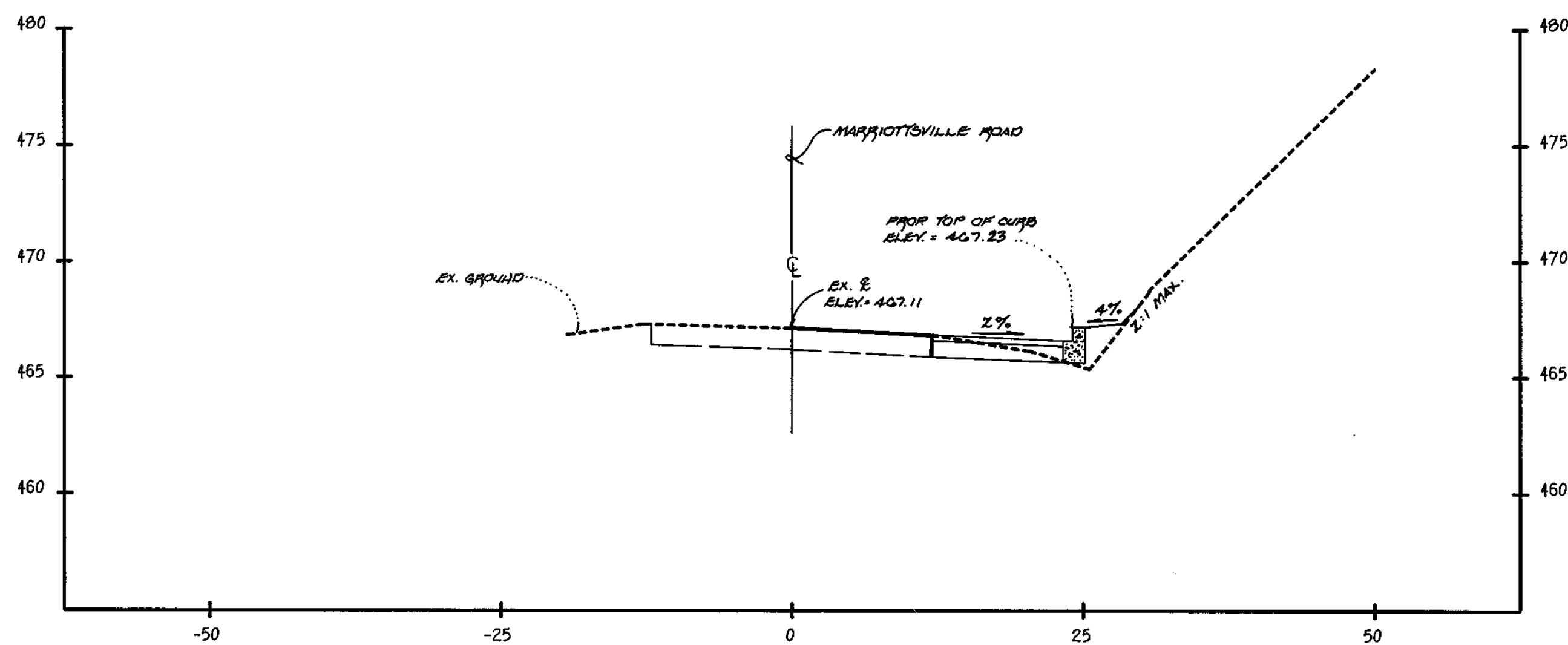
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APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cinda Hamilton 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

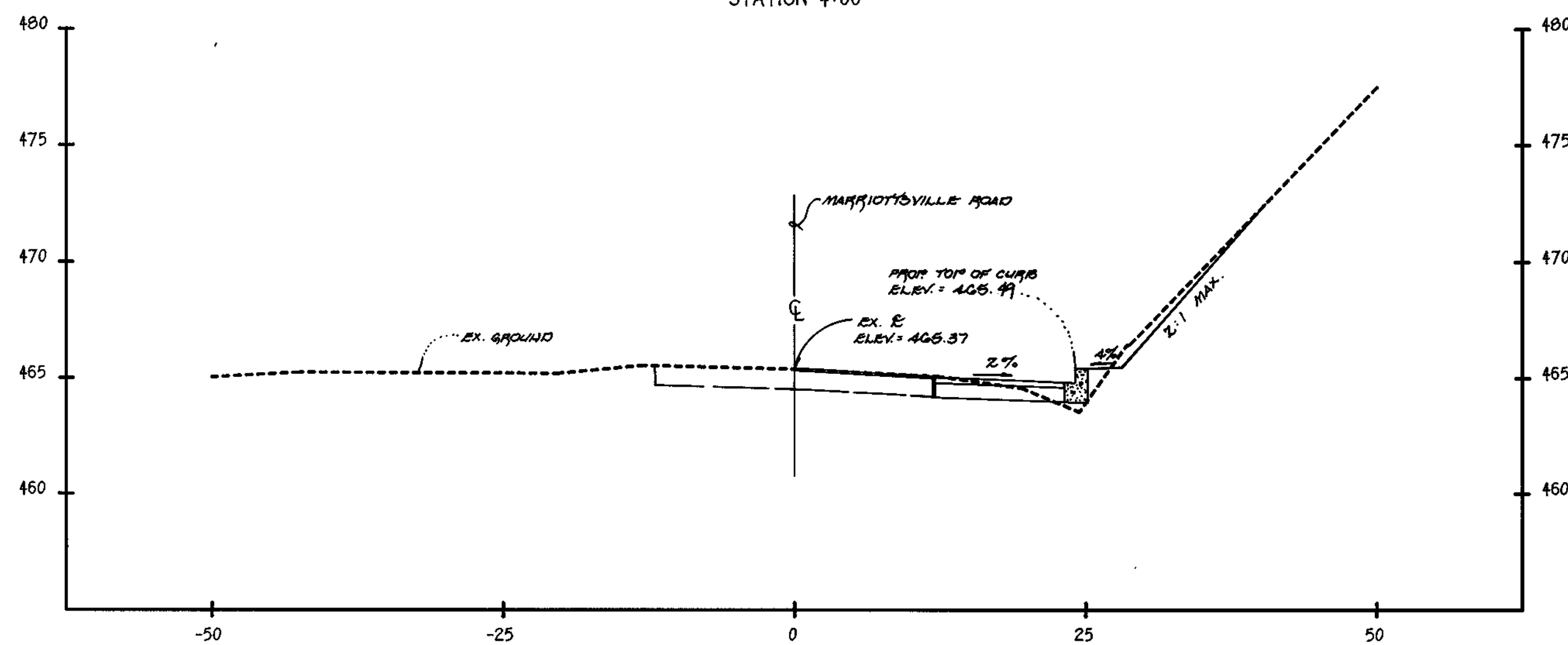
APPROVED: DEPARTMENT OF PUBLIC WORKS
Robert M. Daniels 9-16-98
 CHIEF, BUREAU OF HIGHWAYS DATE



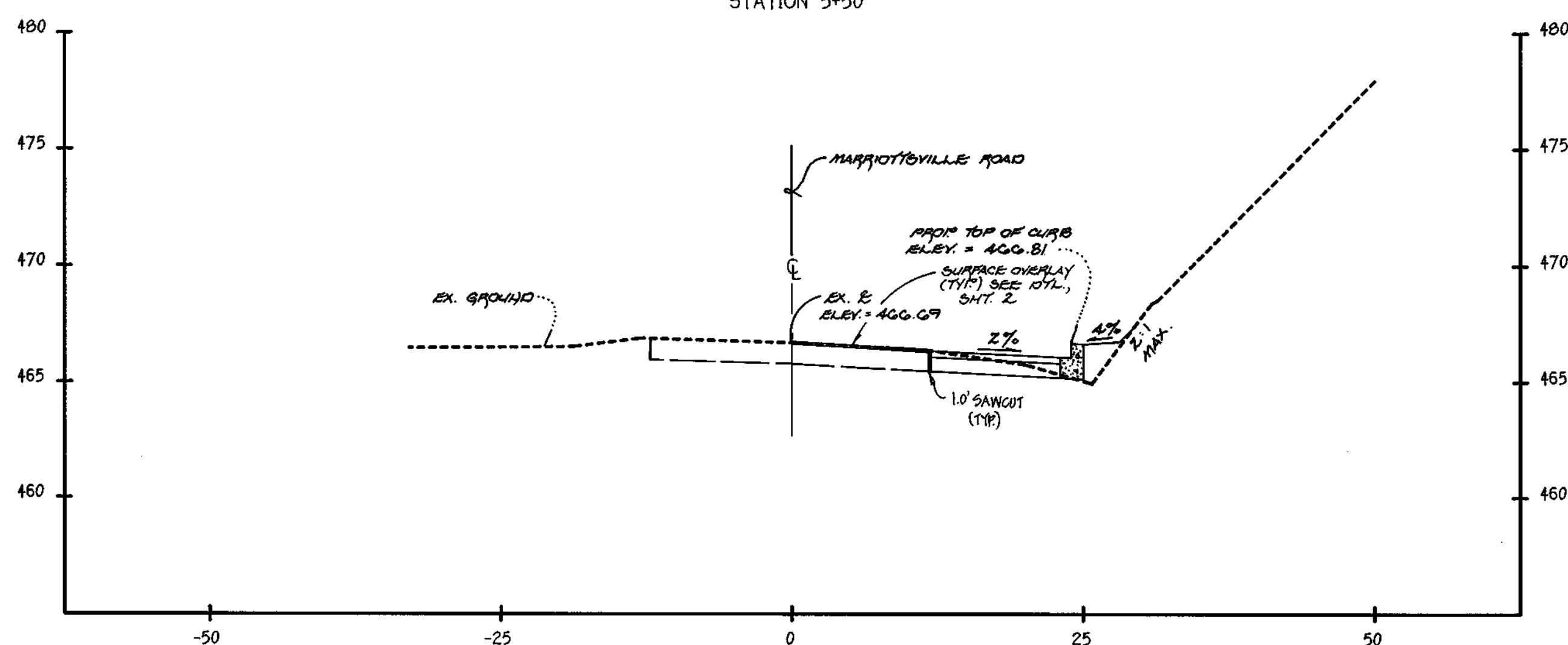
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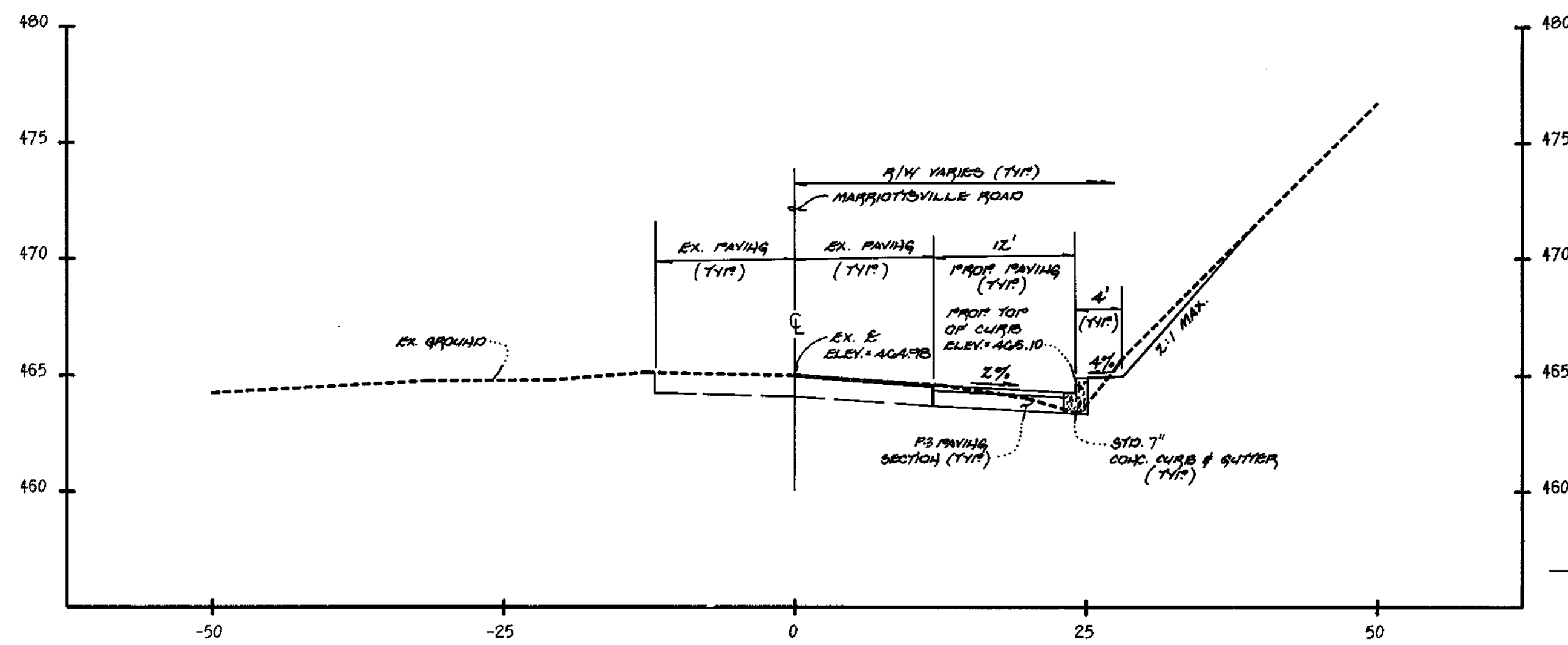
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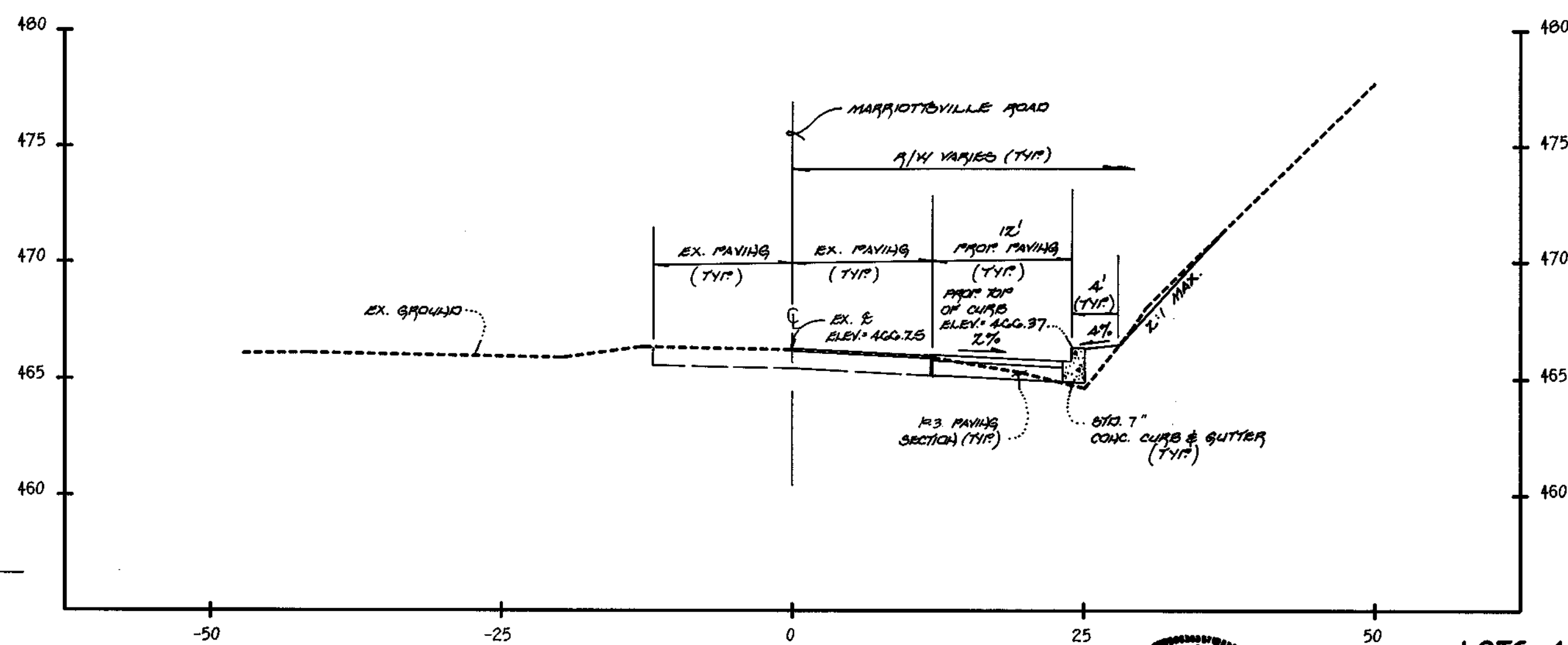
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STATION 5+00



STATION 3+00



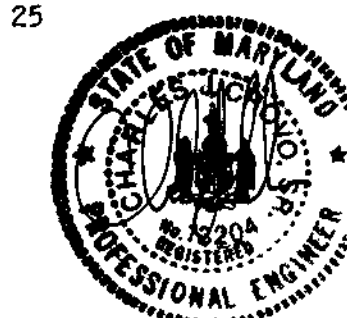
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CROSS-SECTIONS

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



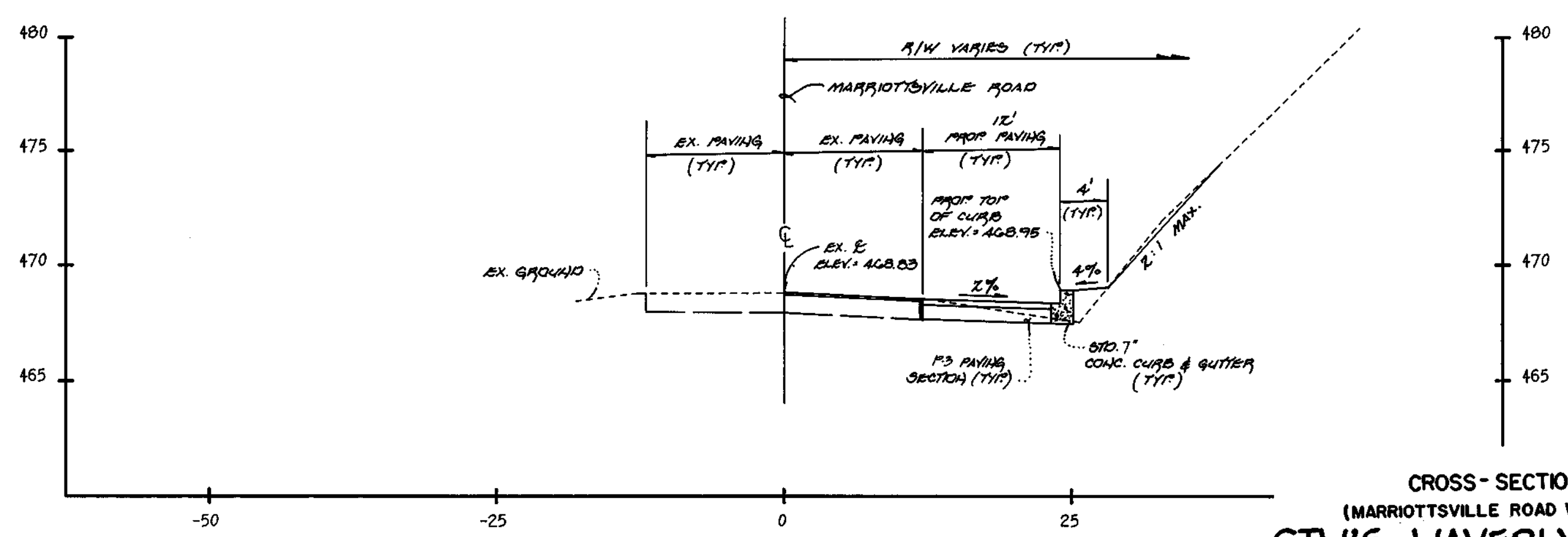
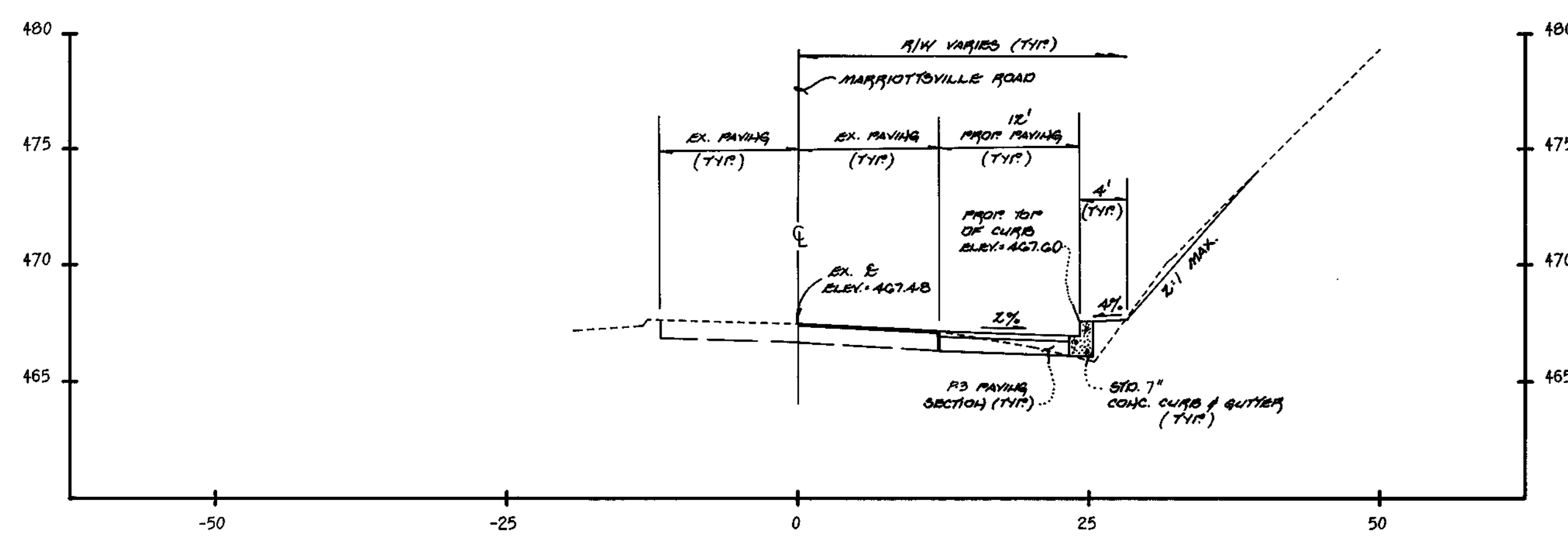
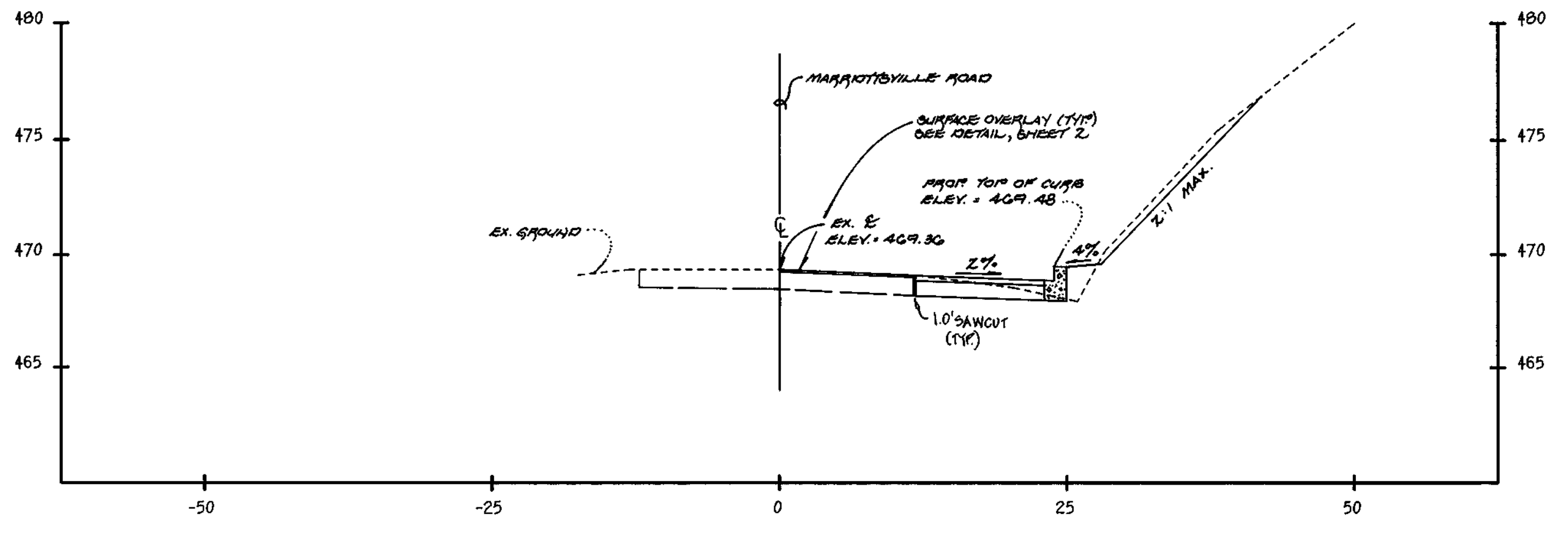
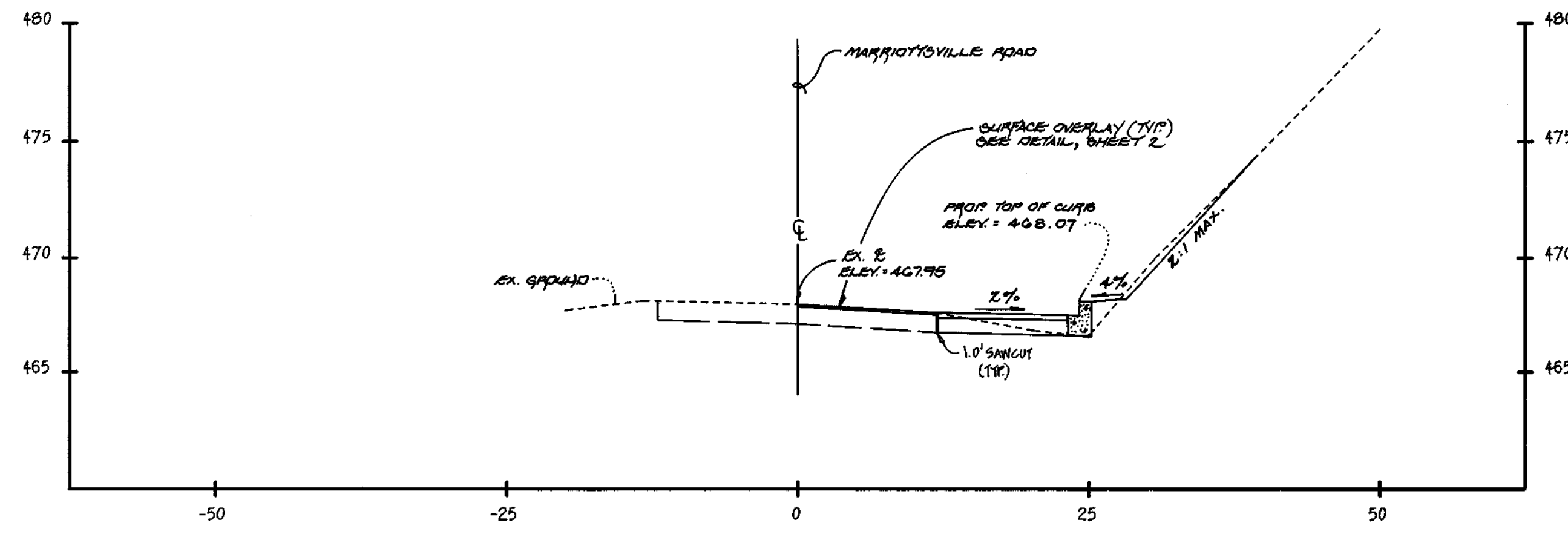
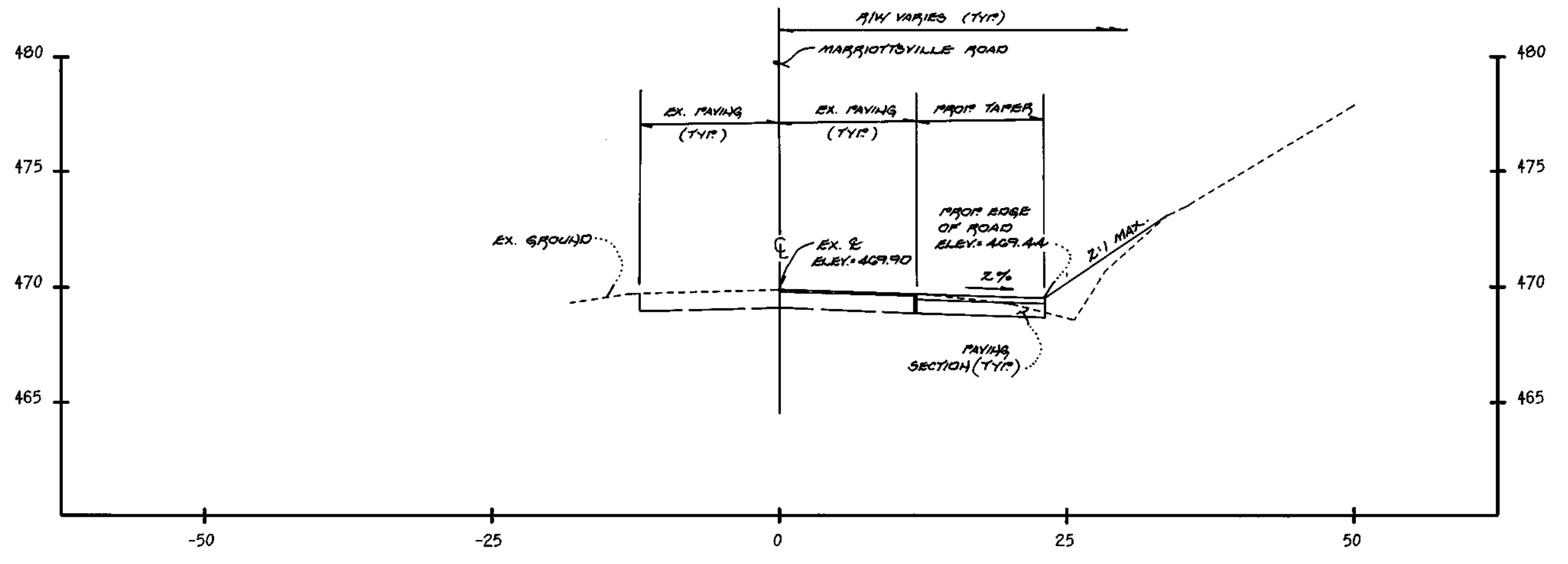
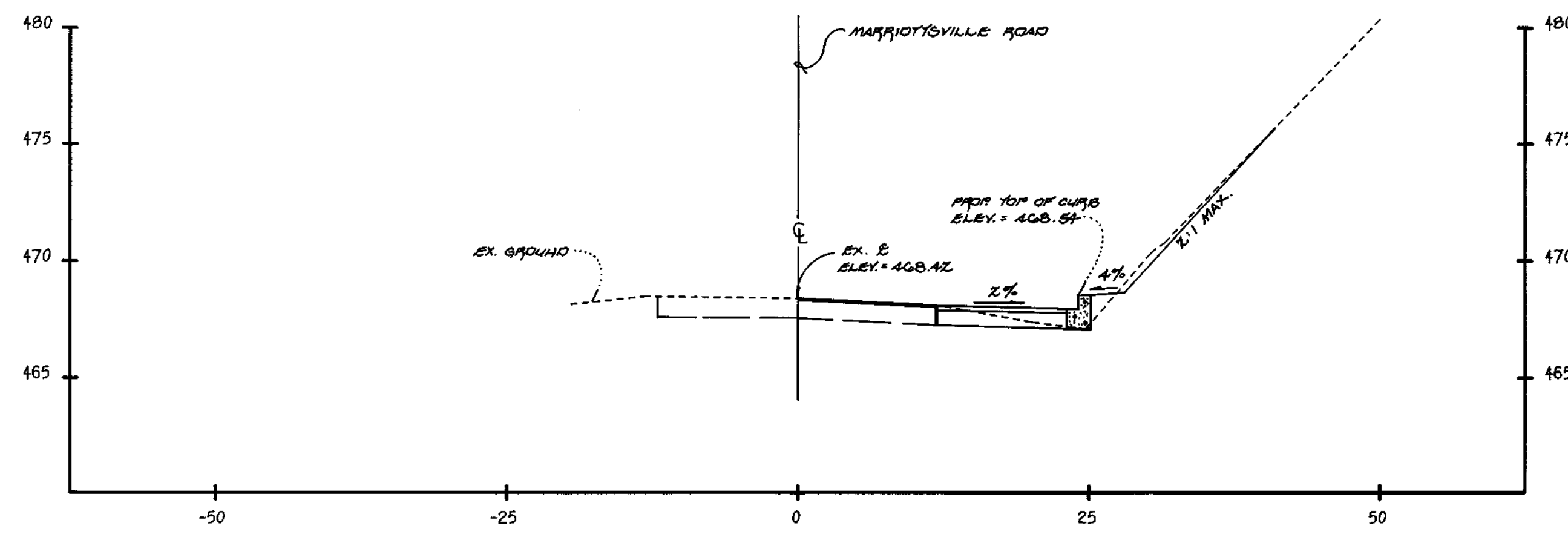
CROSS-SECTIONS
 (MARRIOTTVILLE ROAD WIDENING)
GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

(PROPERTY OF GTW JOINT VENTURE)
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 208)
 ZONING: PEC, R-5A-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 20 OF 33

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 18275 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 481-2895

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Decker 9-16-98
 CHIEF, BUREAU OF HIGHWAYS MS DATE



CROSS-SECTIONS

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

CROSS-SECTIONS
 (MARRIOTTVILLE ROAD WIDENING)
GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21226
 4100 461 - 2895

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

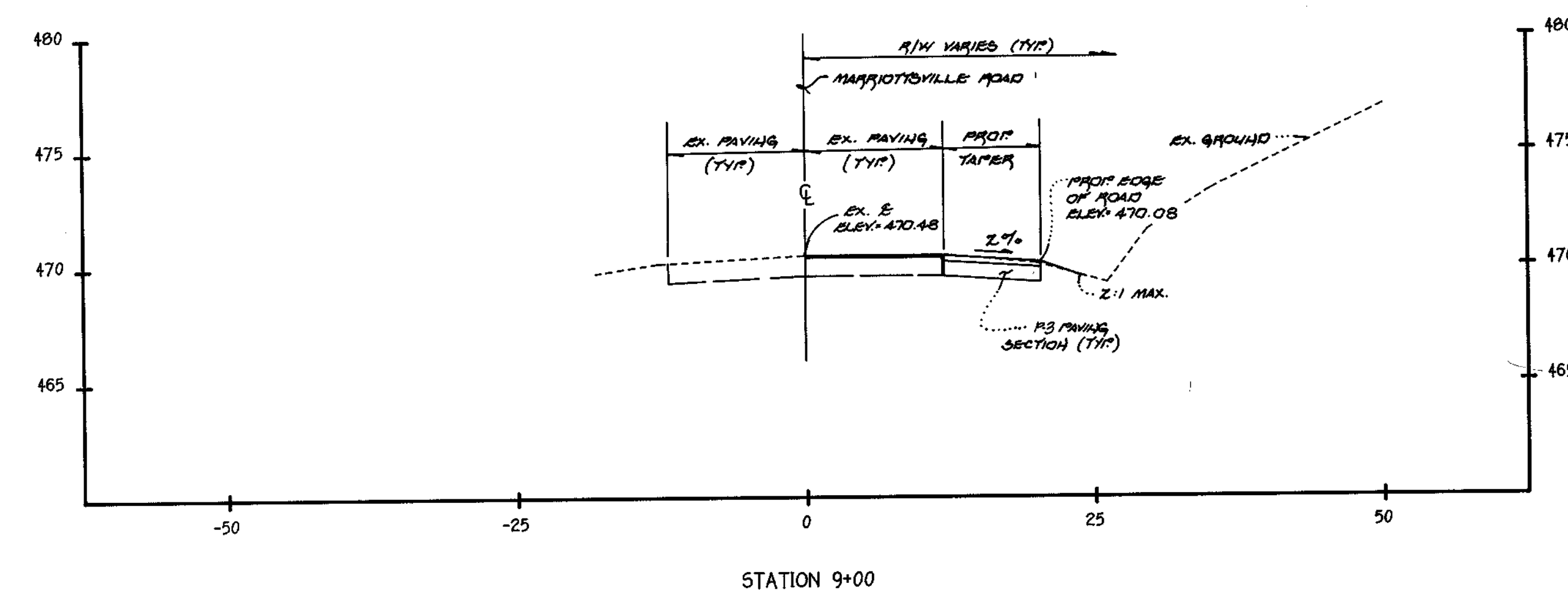
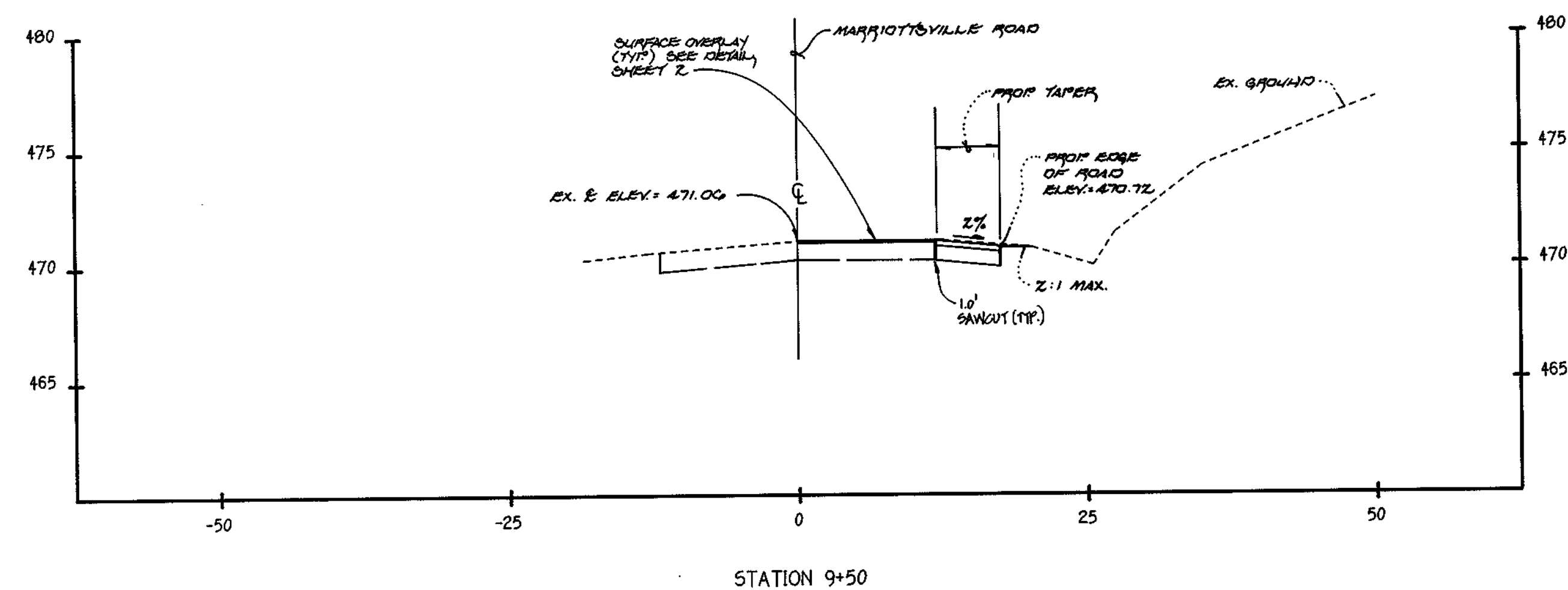
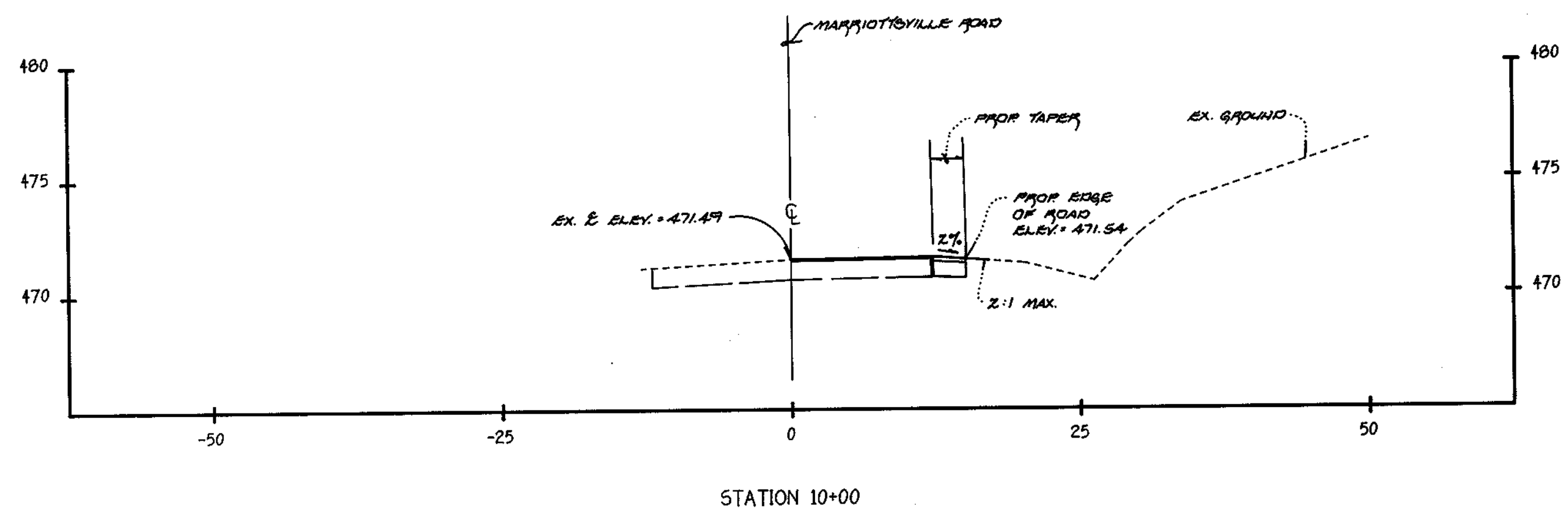


(PROPERTY OF G.T.W. JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 280)
 ZONING PEC. R-5A-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 21 OF 33

Cindy Hamilton
 CHIEF, DIVISION OF LAND DEVELOPMENT JA 9/29/98
 DATE

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 9/17/98
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels
 CHIEF, BUREAU OF HIGHWAYS MS 9-16-98
 DATE



CROSS-SECTIONS

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

OWNER

GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER

WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



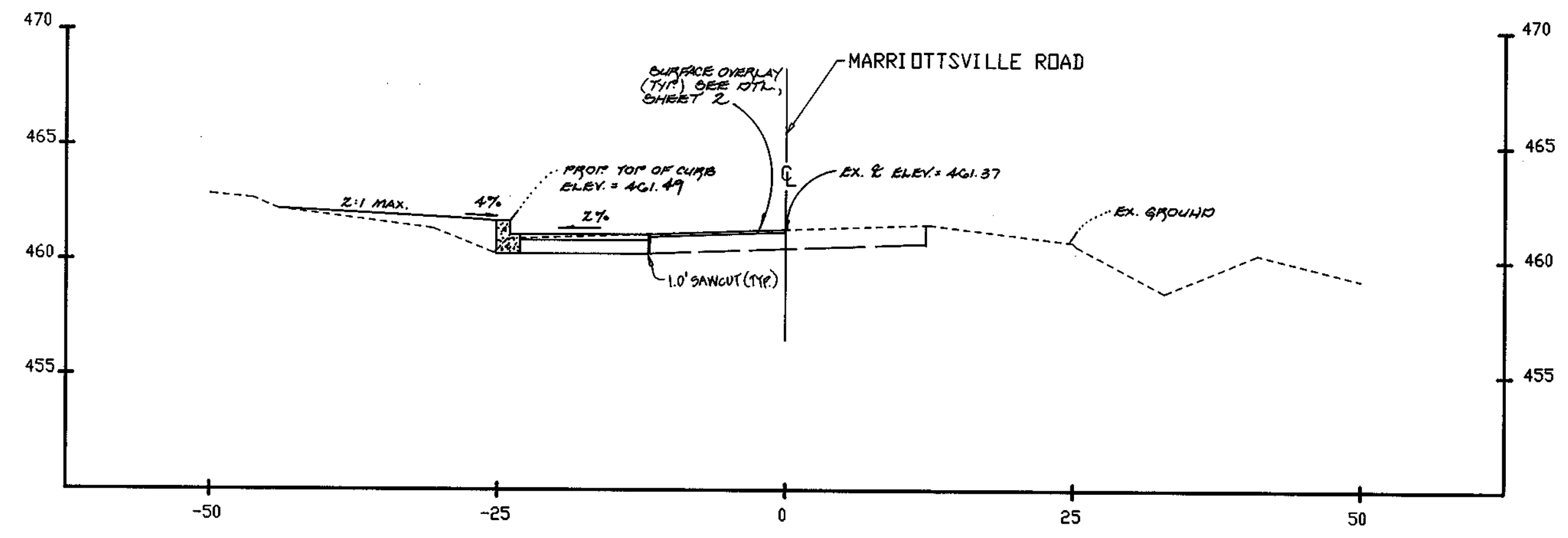
CROSS-SECTIONS
 (MARRIOTTVILLE ROAD WIDENING)
GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221, FOLIO 288)
 ZONING: REC. R-5A-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 22 OF 33

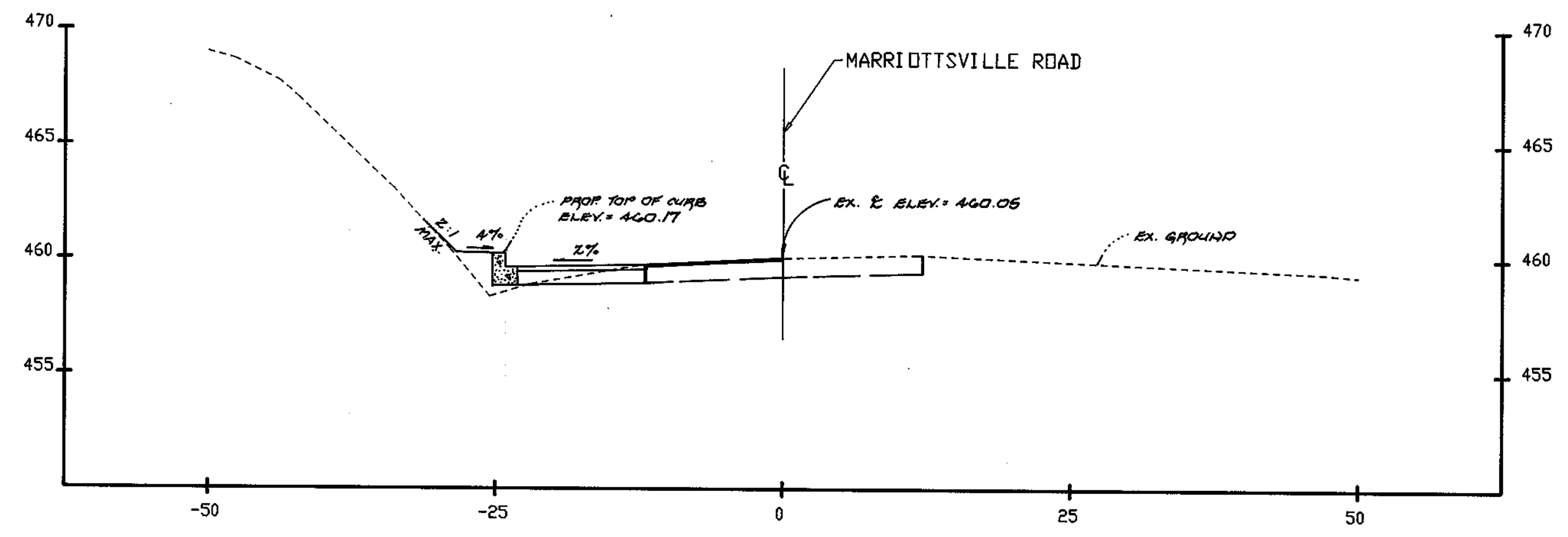
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 9/12/98
 DATE

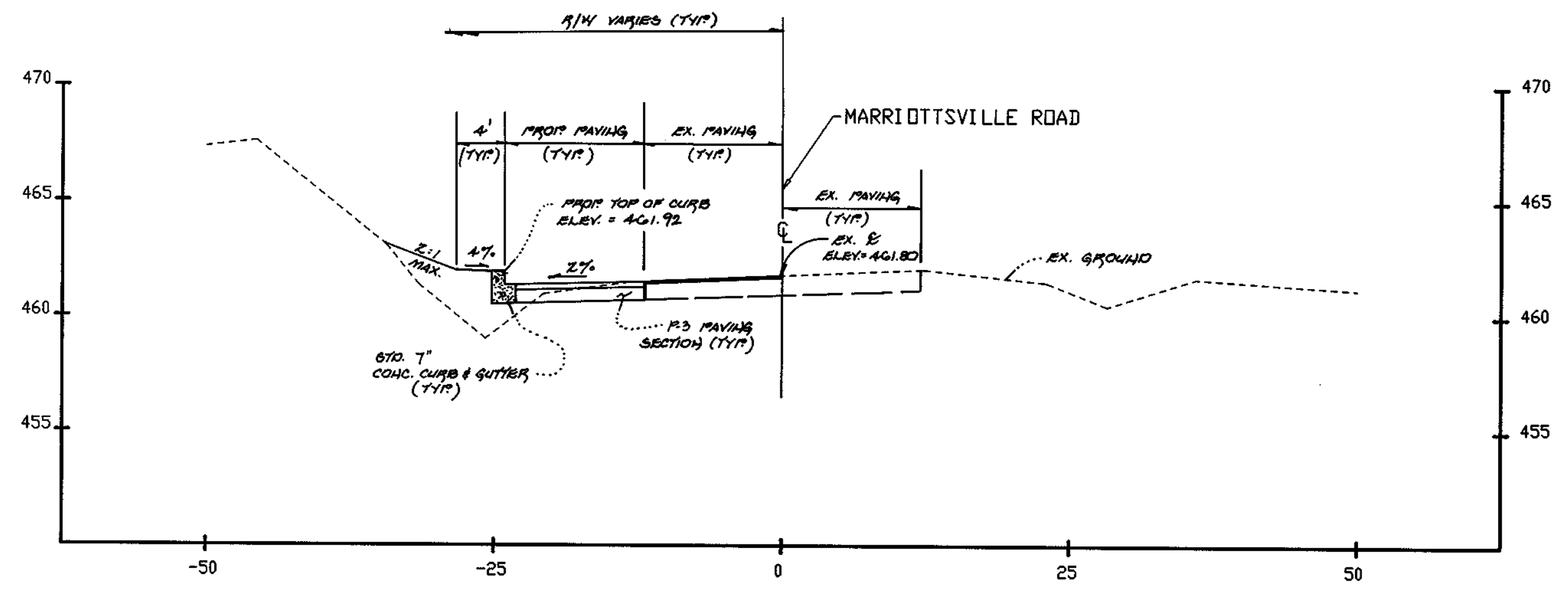
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard W. Duncle 9-16-98
 CHIEF, BUREAU OF HIGHWAYS DATE



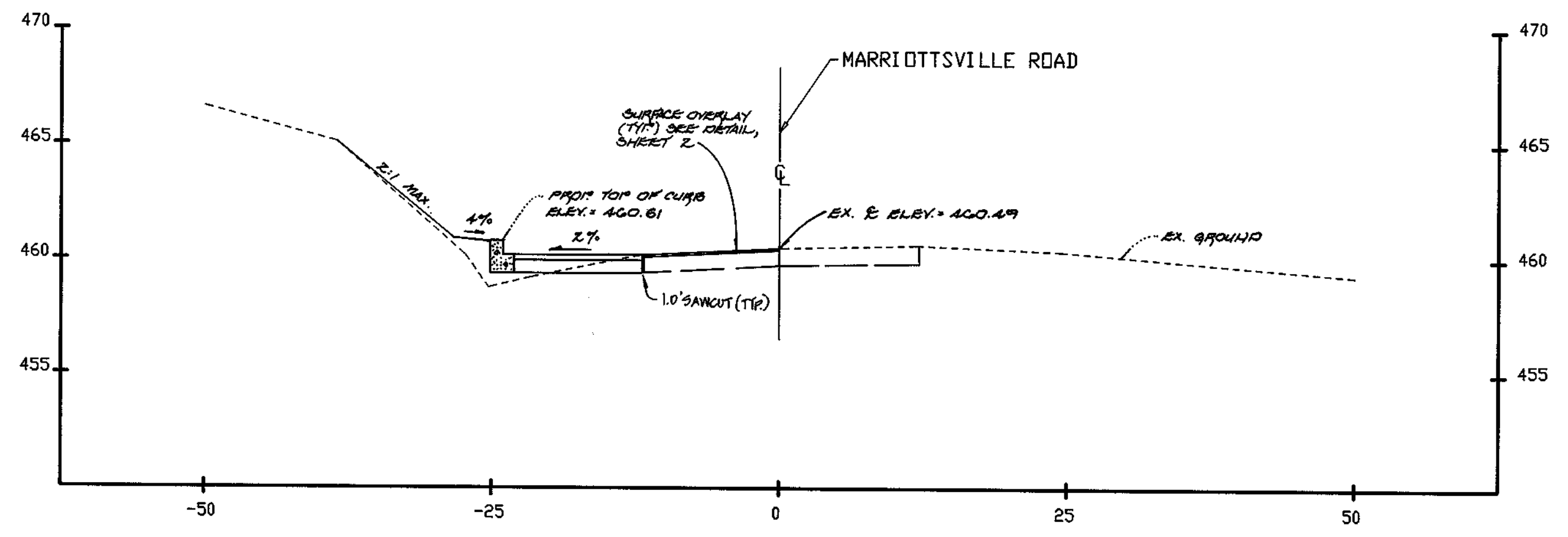
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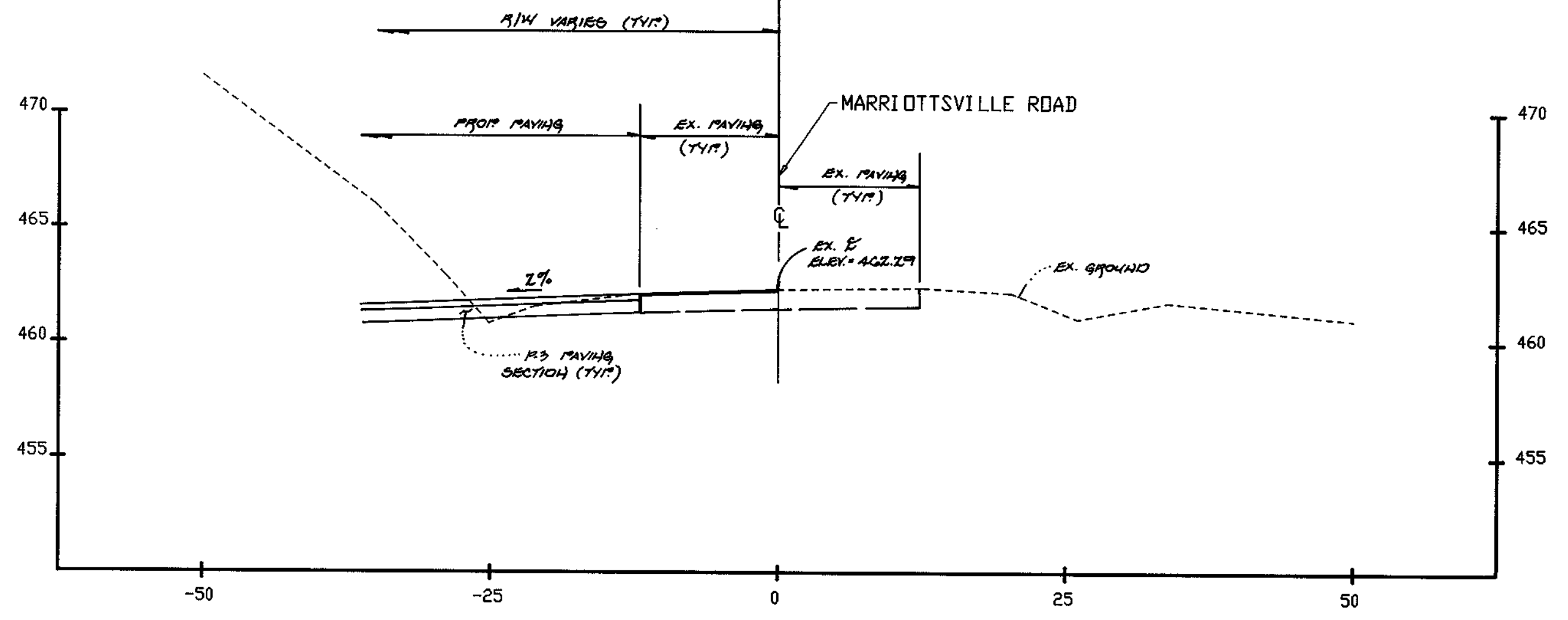
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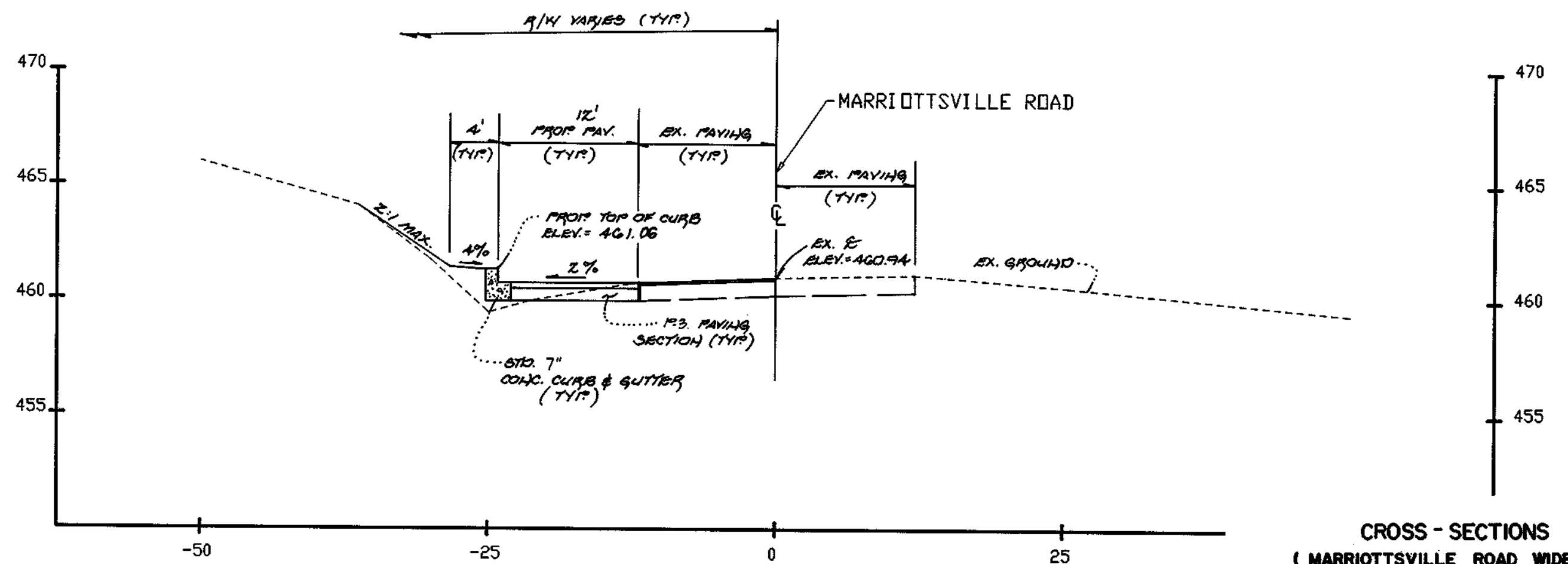
STATION -0+50



STATION -2+00



STATION 0+00



STATION -1+50

CROSS - SECTIONS

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

**CROSS - SECTIONS
 (MARIOTTSVILLE ROAD WIDENING)
 GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'**

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



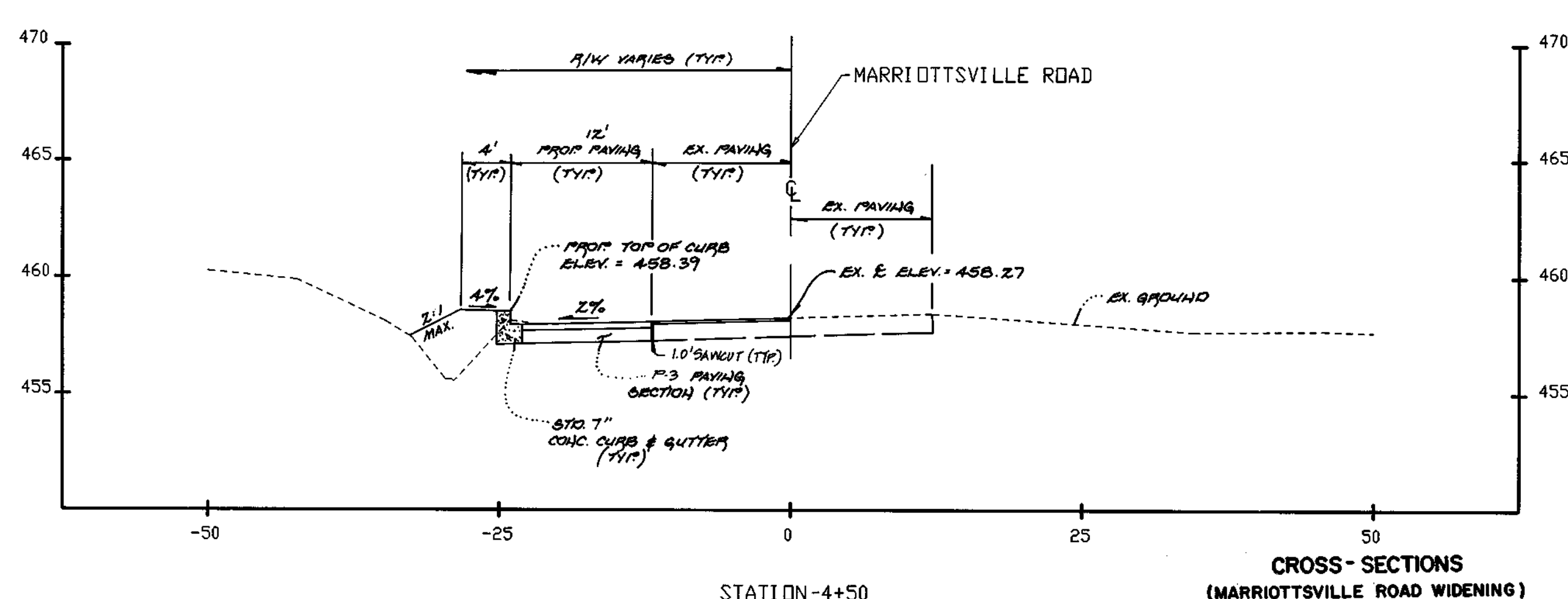
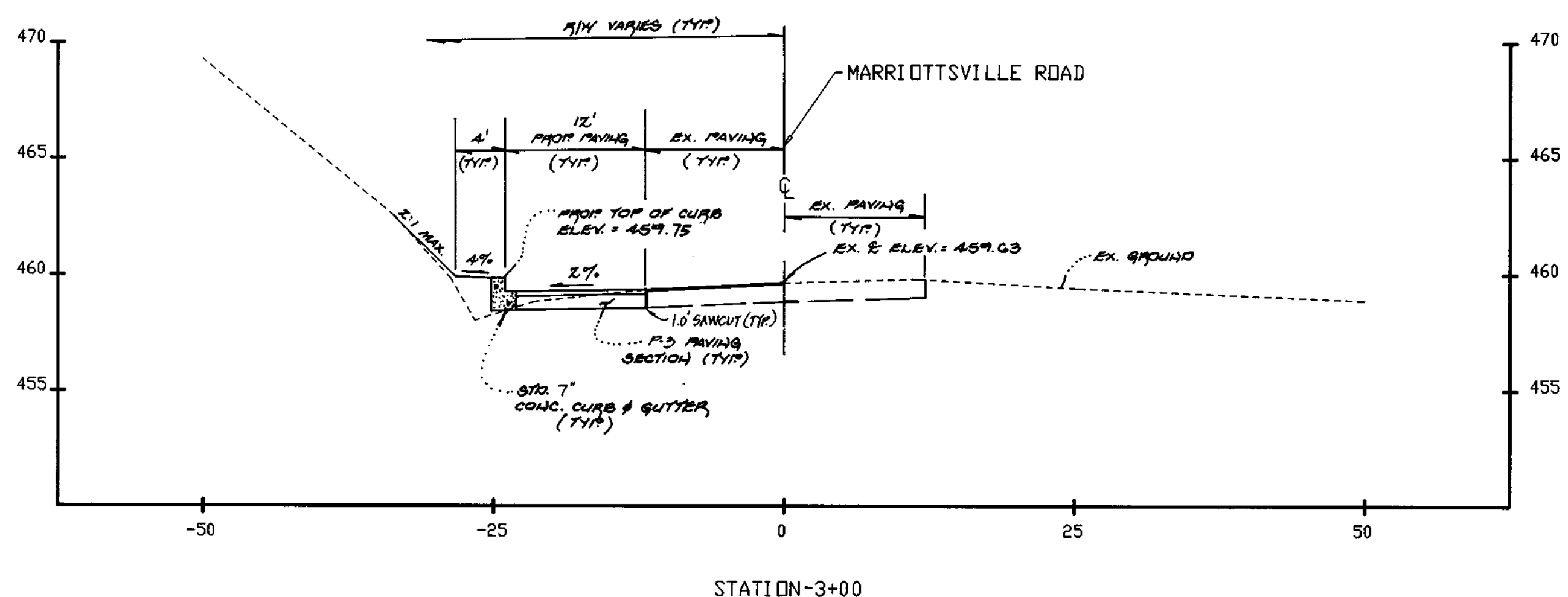
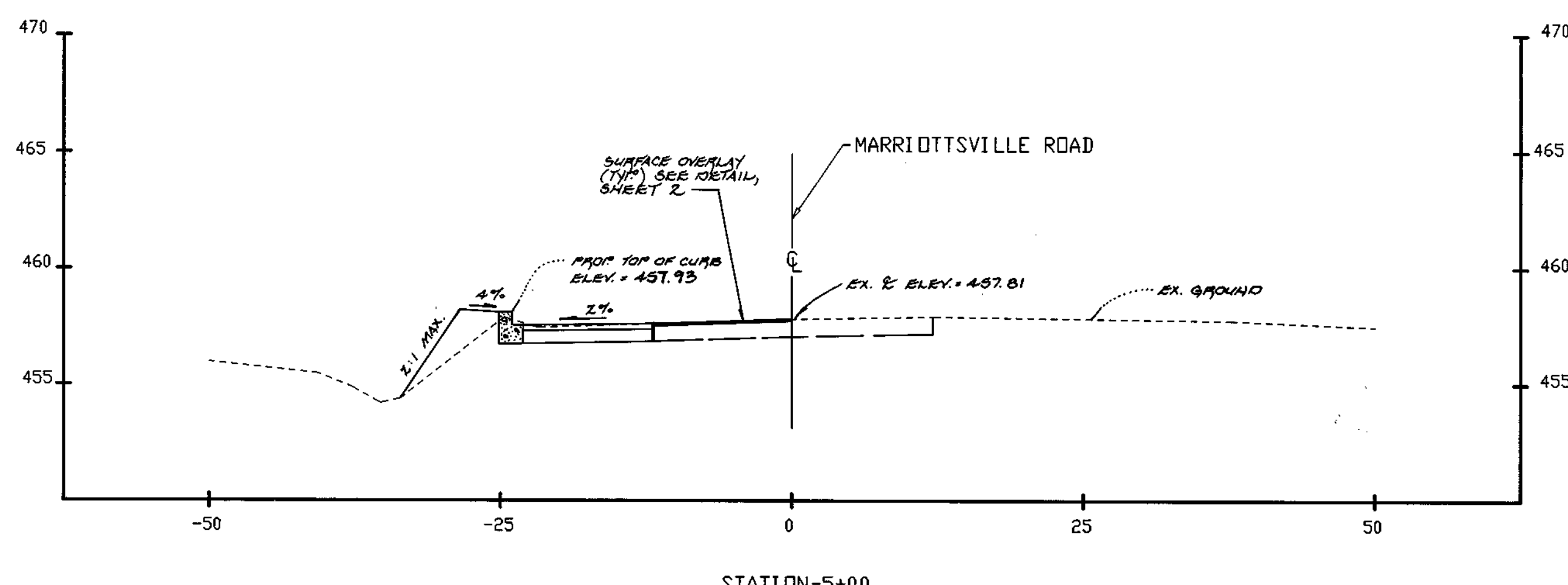
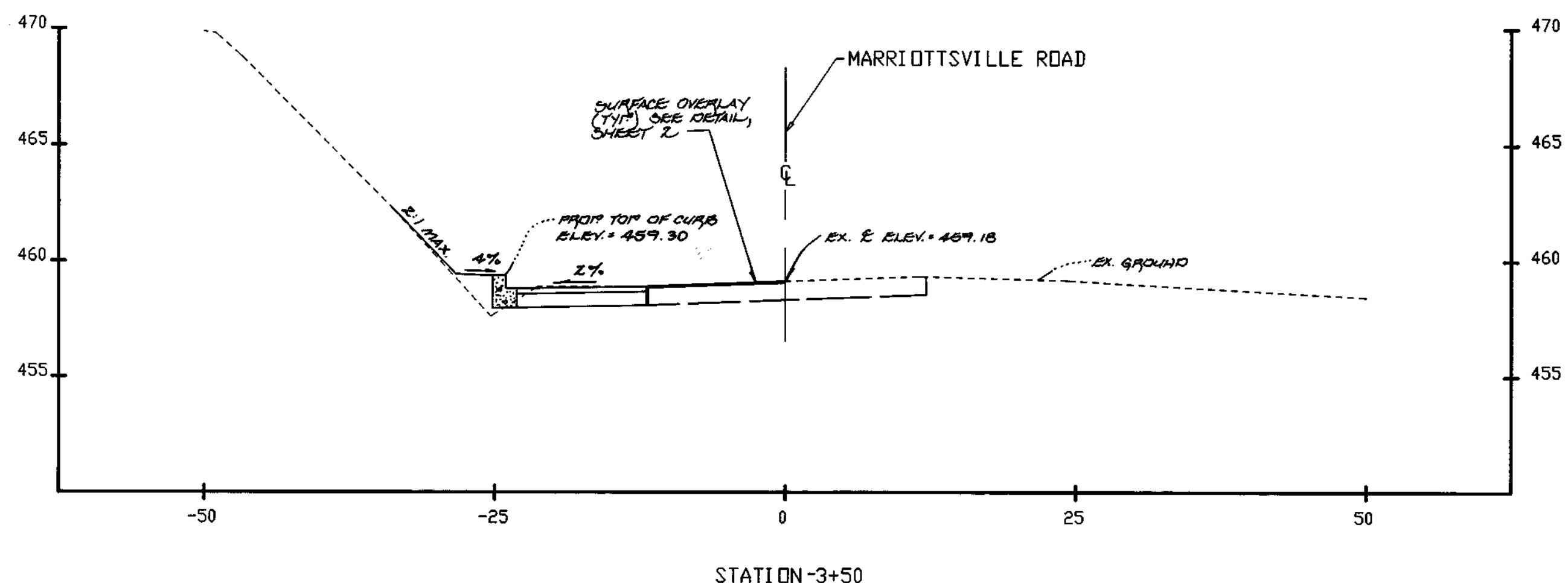
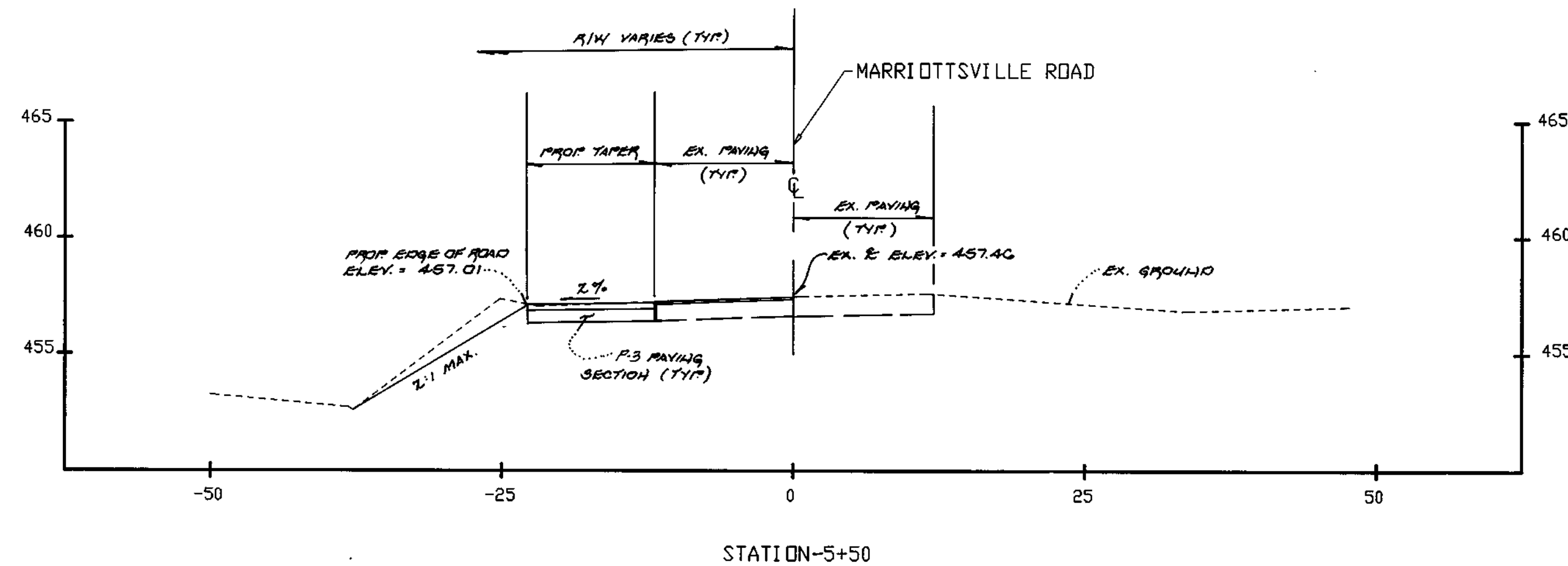
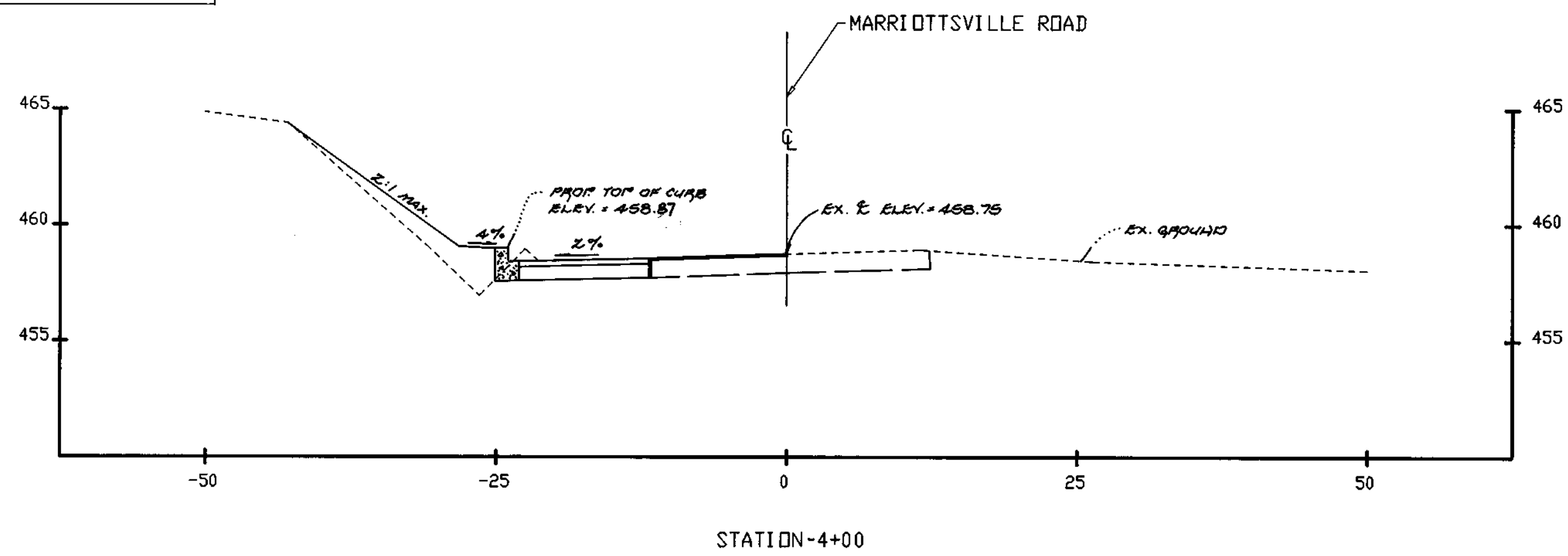
(PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 208)
 ZONING PEC, R-5A-8 AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 23 OF 33

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLESOFT CITY, MARYLAND 21114
 410.461.2895

Cindy Hamilton 7/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

[Signature] 5/12/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 9-16-98
 CHIEF, BUREAU OF HIGHWAYS DATE



CROSS - SECTIONS

SCALE: HORIZ. : 1" = 10'
 VERT. : 1" = 5'

OWNER

GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER

WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



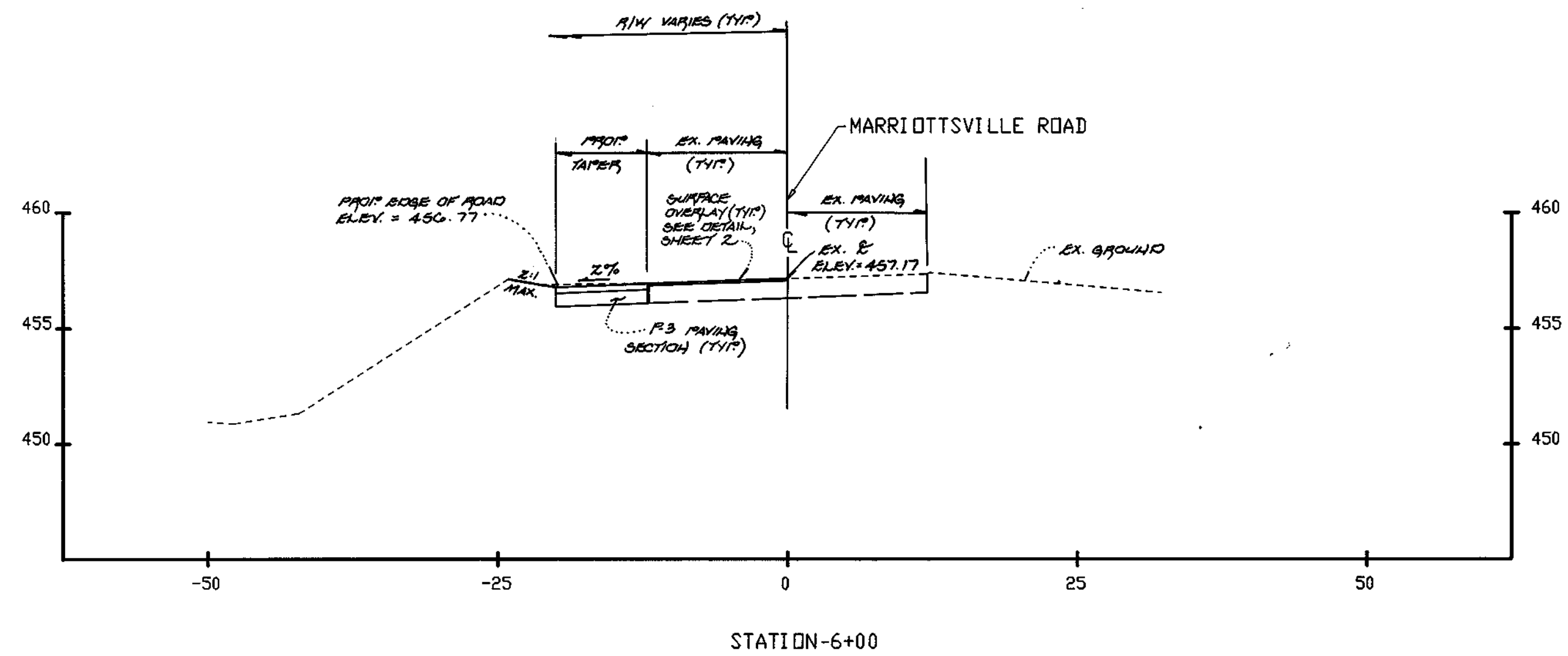
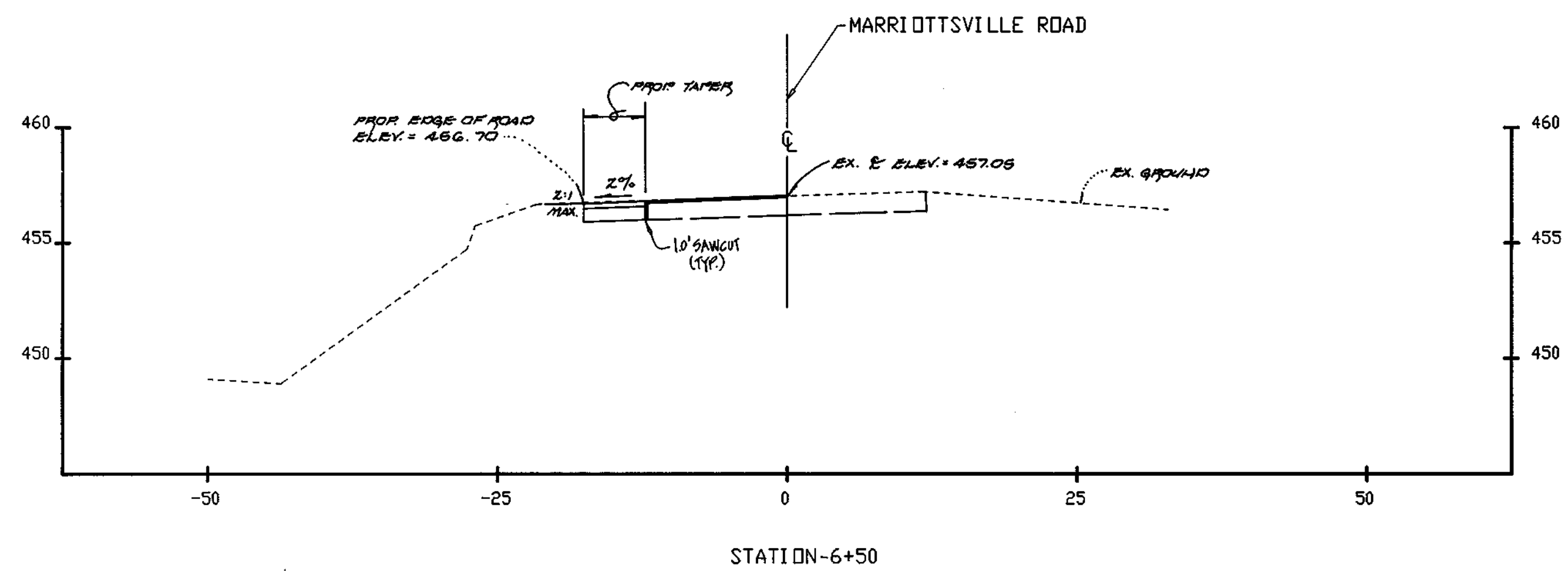
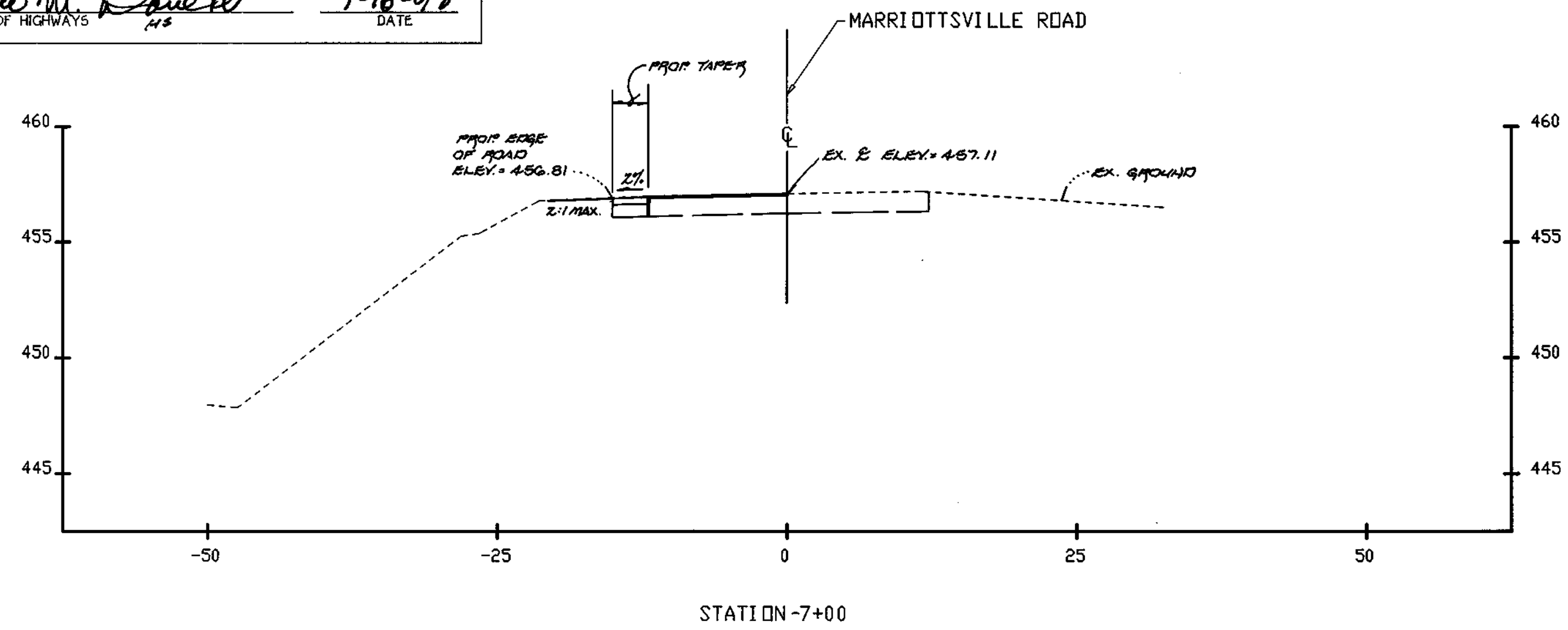
**CROSS - SECTIONS
 (MARRIOTTVILLE ROAD WIDENING)
 GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'**

(PROPERTY OF G.T.W. JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221, FOLIO 208)
 ZONING: PEC, R-SA-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 24 OF 33

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL FIRE
 ELLIOTT CITY, MARYLAND 21114
 (410) 461-2895

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cinda Hamilton 9/20/97
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Danek 9-16-97
 CHIEF, BUREAU OF HIGHWAYS DATE



CROSS - SECTIONS

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

OWNER

GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER

WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



CROSS - SECTIONS
 (MARRIOTTSVILLE ROAD WIDENING)
GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

(PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 200)
 ZONING PEC. R-5A-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 25 OF 33

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 410-481-2855

F.C.C. - 300255X7.DWG

APPROVED: DEPARTMENT OF PLANNING AND ZONING

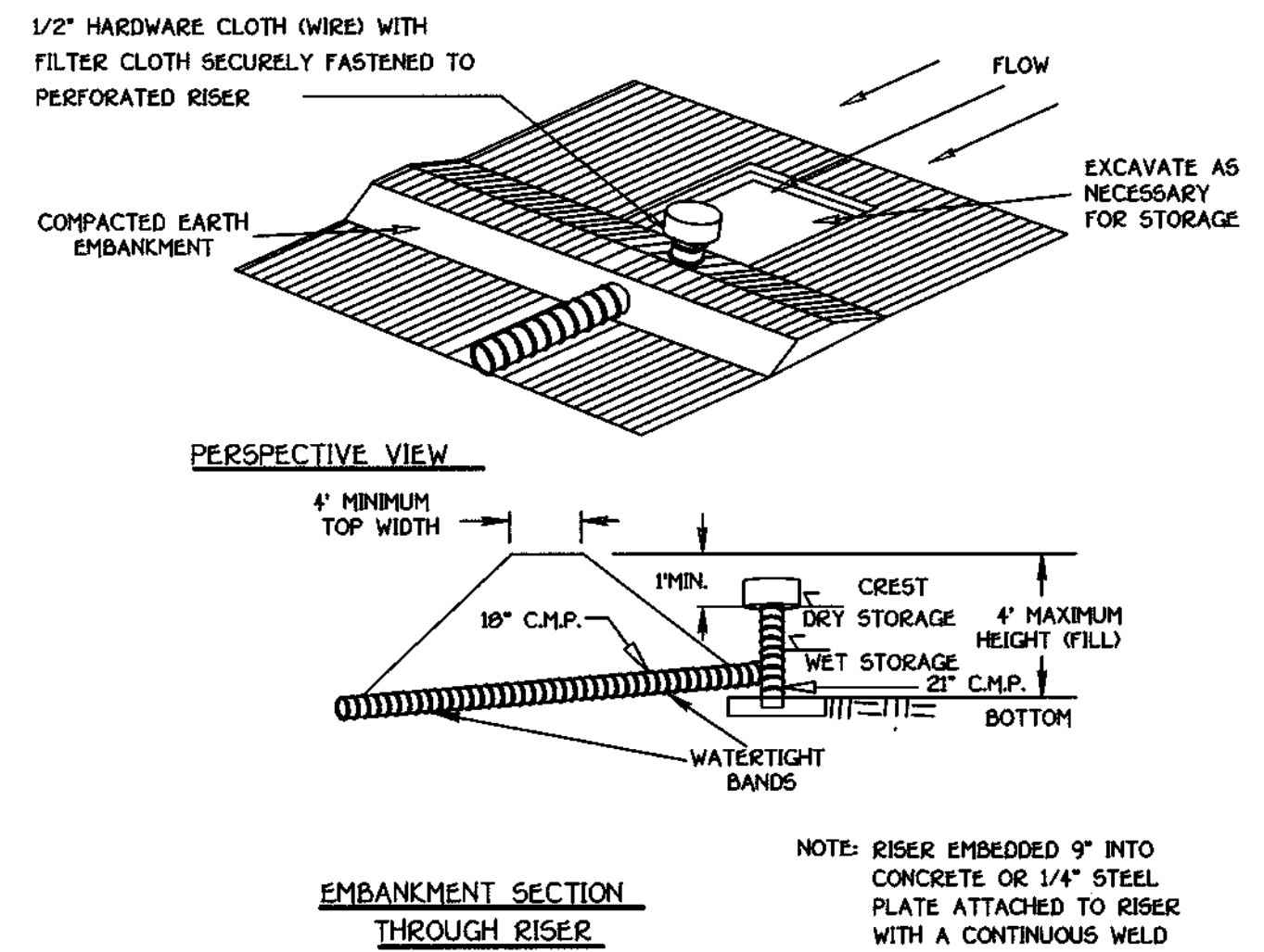
Grady Hamilton 7/2/98 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

John M. Dawick 7/17/98 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John M. Dawick 7-16-98 DATE
 CHIEF, BUREAU OF HIGHWAYS

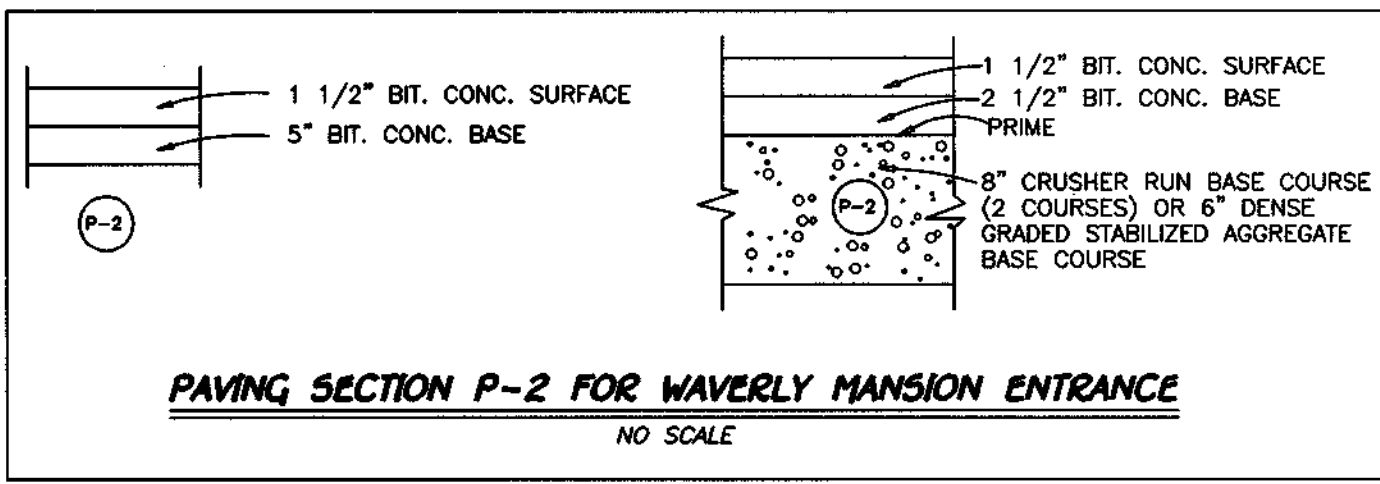
DETAIL 8 - PIPE OUTLET SEDIMENT TRAP - ST 1



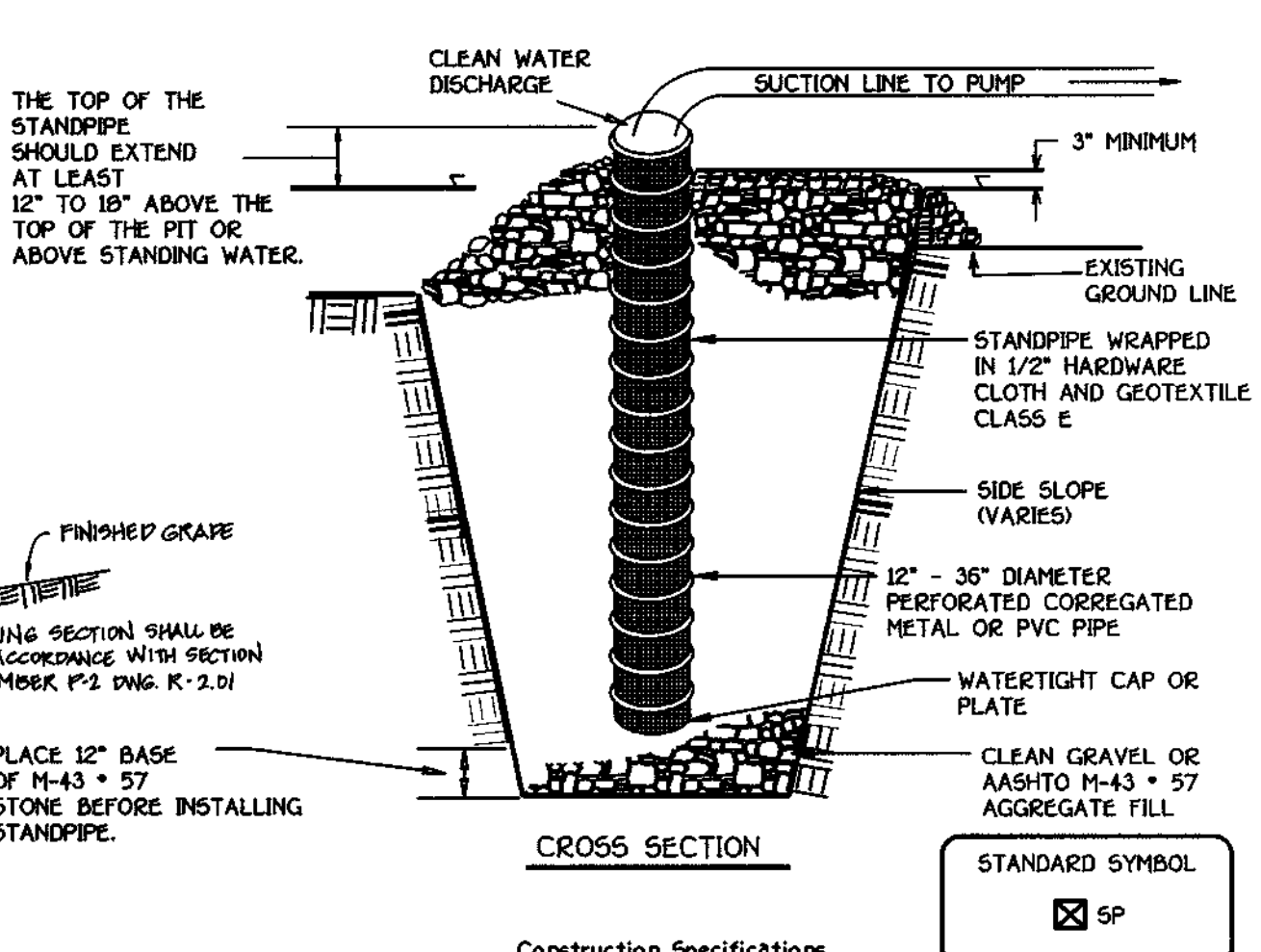
- Construction Specifications
- The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - The total trap volume as measured from the bottom to riser crest elevation shall be 3600 cubic feet per acre of drainage area (see Table 9). The top of embankment must be $\geq 1'$ above the riser crest elevation.
 - Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap (900cf/acre). The sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected periodically and after each rain and repairs made as necessary.

PIPE OUTLET SEDIMENT TRAP - ST 1

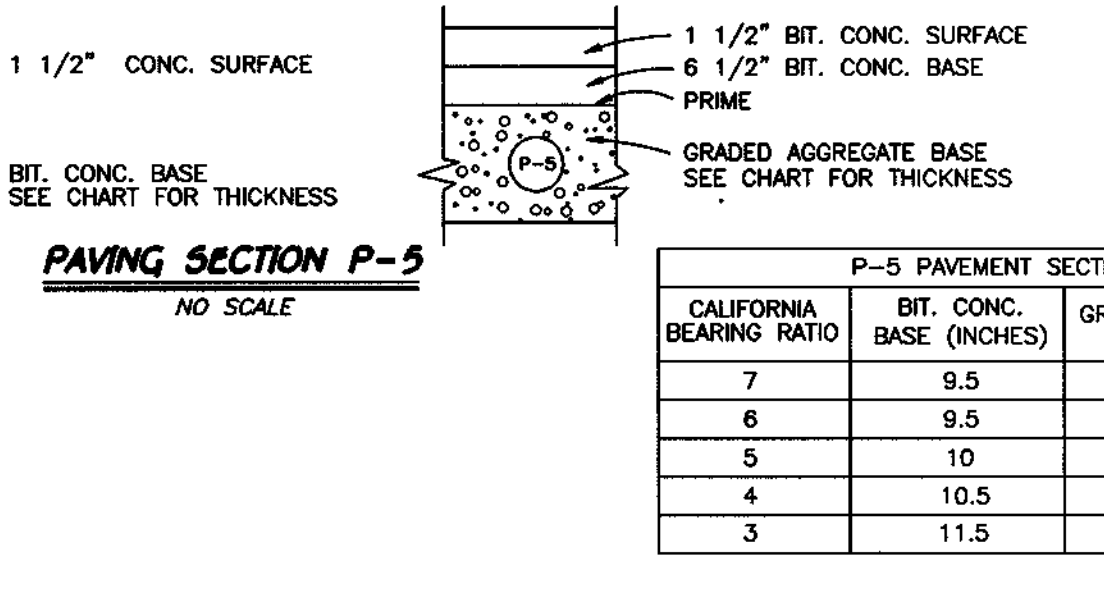
- Construction operations shall be carried out in such a manner that erosion and water pollution are abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
- The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
- All cut and fill slopes shall be 2:1 or flatter.
- All pipe connections shall be watertight.
- Above the wet storage elevation, the riser shall be perforated with 1/2" wide by 6" long slits or 1" diameter holes spaced 6" vertically and horizontally. No perforations will be allowed within 6" of the horizontal barrel.
- The riser shall be wrapped with 1/2" hardware cloth (wire) then wrapped with Geotextile Class E. The filter cloth shall extend 6" above the highest slit and 6" below the lowest slit. Where ends of filter cloth come together, they shall be overlapped, folded and fastened to prevent bypass. Filter cloth shall be replaced as necessary to prevent clogging.
- Straps or connecting bands shall be used to hold the filter cloth and wire fabric in place. They shall be placed at the top and bottom of the cloth.
- Fill material around the pipe spillway shall be hand compacted in 4" layers. A minimum of 2" of hand-compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.
- The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be at least twice the riser diameter and 12" deep with the riser embedded 9". Steel plate bases shall be at least twice the riser diameter, 1/4" minimum thickness and attached to the bottom of the riser by a continuous weld to form a watertight connection. Then place 2" of stone, gravel or tamped earth on the plate.
- Concentric trash rack and anti-vortex device design details are on Detail 16.
- Refer to Section D for dewatering requirements of sediment traps.



DETAIL 20B - SUMP PIT

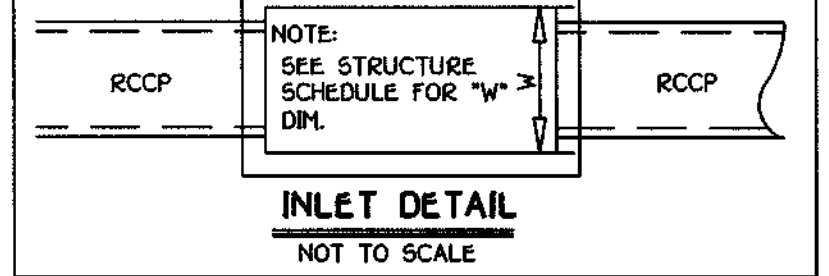


- Construction Specifications
- Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
 - The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class E. The perforations shall be 1/2" x 6" slits or 1" diameter holes.
 - A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
 - The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (bain dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

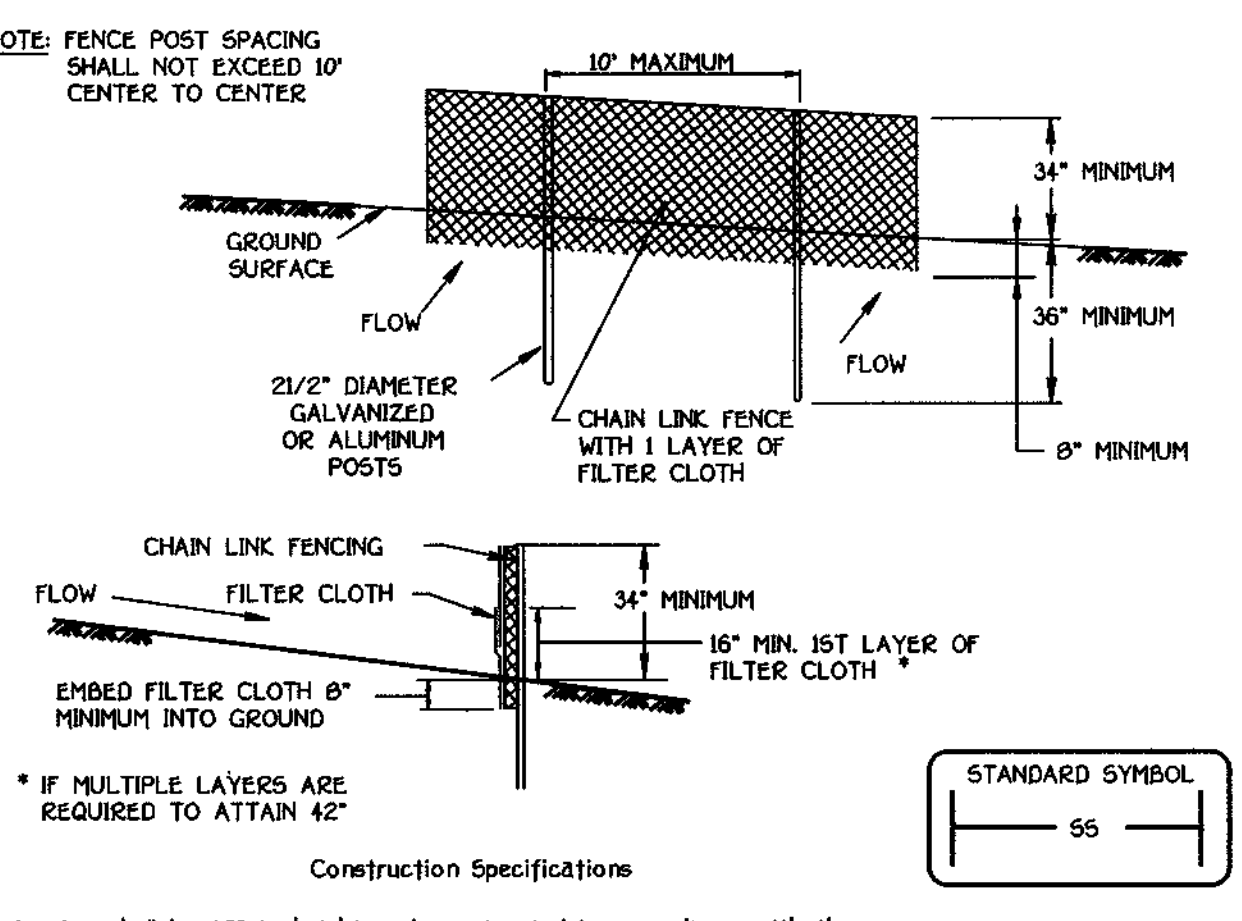


STRUCTURE SCHEDULE											
STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS	"w"	"w"	"w"
I-1	492.23	476.43	474.49	WARWICK WAY	CL. STA. 12+30.86	21' LT.	A-10	S.D. 4.41	3.50'		
I-2	493.61	479.98	479.73	WARWICK WAY	CL. STA. 17+48	21' LT.	A-10	S.D. 4.41	3.50'		
I-3	493.61	480.85	480.40	WARWICK WAY	CL. STA. 17+48	21' RT.	A-10	S.D. 4.41	3.50'		
I-4	504.91	499.36	499.11	WARWICK WAY	CL. STA. 22+00	21' RT.	A-10	S.D. 4.41	3.50'		
I-5	504.91	-----	500.41	WARWICK WAY	CL. STA. 22+00	21' LT.	A-10	S.D. 4.41			
I-6	482.23	-----	477.48	WARWICK WAY	CL. STA. 12+30.86	21' RT.	A-10	S.D. 4.41			
I-7	463.75	457.89	456.90	WARWICK WAY	CL. STA. 0+68	31' LT.	A-10	S.D. 4.41	3.50'		
I-8	473.54	469.04	465.89	WARWICK WAY	CL. STA. 3+60	30.5' RT.	A-10	S.D. 4.41	3.50'		
I-9	483.69	-----	479.19	WARWICK WAY	CL. STA. 6+20	21' LT.	A-5	S.D. 4.40			
I-10	473.54	466.75	466.50	WARWICK WAY	CL. STA. 3+60	30.5' LT.	A-10	S.D. 4.41			
I-11	482.67	480.67	478.60	WARWICK WAY	N 997,920,847 E 1,342,201,565	-----	'D' INLET	S.D. 4.39			
I-12	463.75	457.41	457.21	WARWICK WAY	CL. STA. 0+68	31' LT.	A-10	S.D. 4.41			
I-13	463.27	458.04	457.79	MARRIOTTVILLE ROAD	CL. STA. 1+00	28' RT.	A-10	S.D. 4.41	3'		
I-14	465.67	461.01	460.76	MARRIOTTVILLE ROAD	CL. STA. 3+72	28' RT.	A-10	S.D. 4.41	3'		
I-15	467.24	463.03	462.78	MARRIOTTVILLE ROAD	CL. STA. 5+52	28' RT.	A-10	S.D. 4.41	3'		
I-16	469.27	-----	465.33	MARRIOTTVILLE ROAD	CL. STA. 7+20	28' RT.	A-10	S.D. 4.41			
M-1	487.63	477.38	477.13	WARWICK WAY	CL. STA. 15+05	21.5' LT.	STD. MANHOLE	G - 5.11			
M-2	493.43	481.60	481.35	WARWICK WAY	CL. STA. 18+17	21.5' RT.	STD. MANHOLE	G - 5.11			
M-3	497.46	484.20	482.83	WARWICK WAY	CL. STA. 18+98	21.5' RT.	DROP MANHOLE	G - 5.01			
M-4	500.21	496.21	495.96	WARWICK WAY	CL. STA. 20+08	21.5' RT.	STD. MANHOLE	G - 5.11			
M-5	497.80	491.73	491.48	-----	-----	-----	STD. MANHOLE	G - 5.11			
M-6	500.10	494.44	494.19	-----	-----	-----	STD. MANHOLE	G - 5.11			
M-7	498.50	495.68	495.43	-----	-----	-----	STD. MANHOLE	G - 5.11			
M-8	463.00	456.45	456.25	MARRIOTTVILLE ROAD	CL. STA. (-) 0+69	35' RT.	STD. MANHOLE	G - 5.11			
M-9	467.36	462.11	461.86	WARWICK WAY	CL. STA. 2+18	21.5' RT.	STD. MANHOLE	G - 5.11			
M-10	479.45	474.95	474.70	WARWICK WAY	CL. STA. 4+05	21.5' RT.	STD. MANHOLE	G - 5.11			
M-11	483.79	478.76	478.51	WARWICK WAY	CL. STA. 6+20	21.5' RT.	STD. MANHOLE	G - 5.11			
S-1	475.54	473.54	473.48	WARWICK WAY	N 997,920,847 E 1,342,201,565	---	CONC. END SECTION	S.D. 5.51			
S-2	491.27	489.02	488.96	-----	-----	---	CONC. END SECTION	S.D. 5.51			
S-3	498.00	495.81	495.75	-----	-----	---	CONC. END SECTION	S.D. 5.51			

* SEE INLET DETAIL THIS SHEET



DETAIL 33 - SUPER SILT FENCE



- Construction Specifications
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

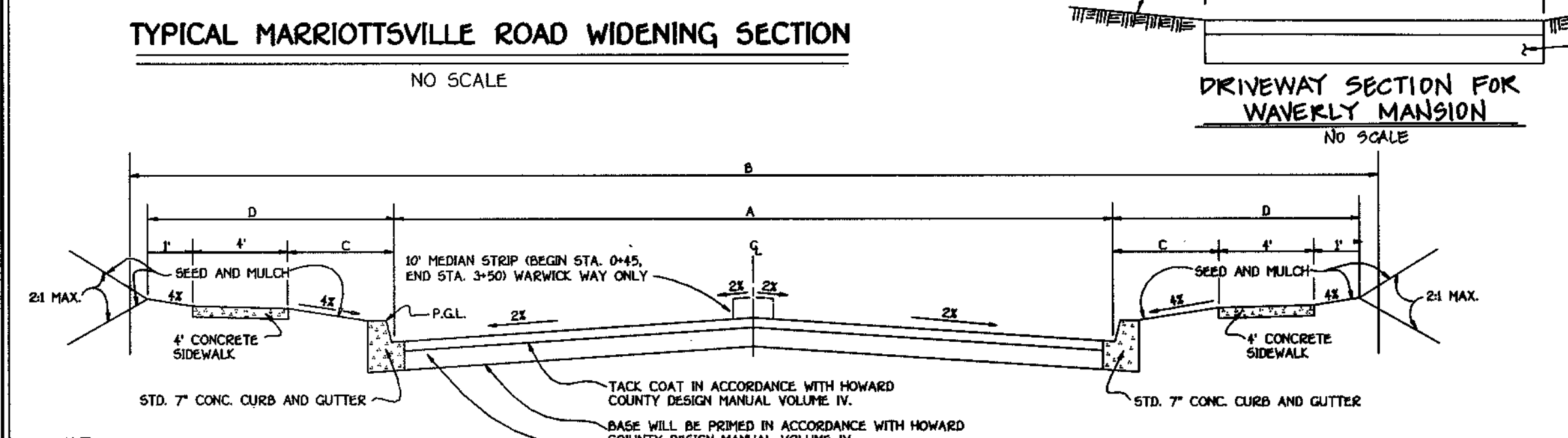
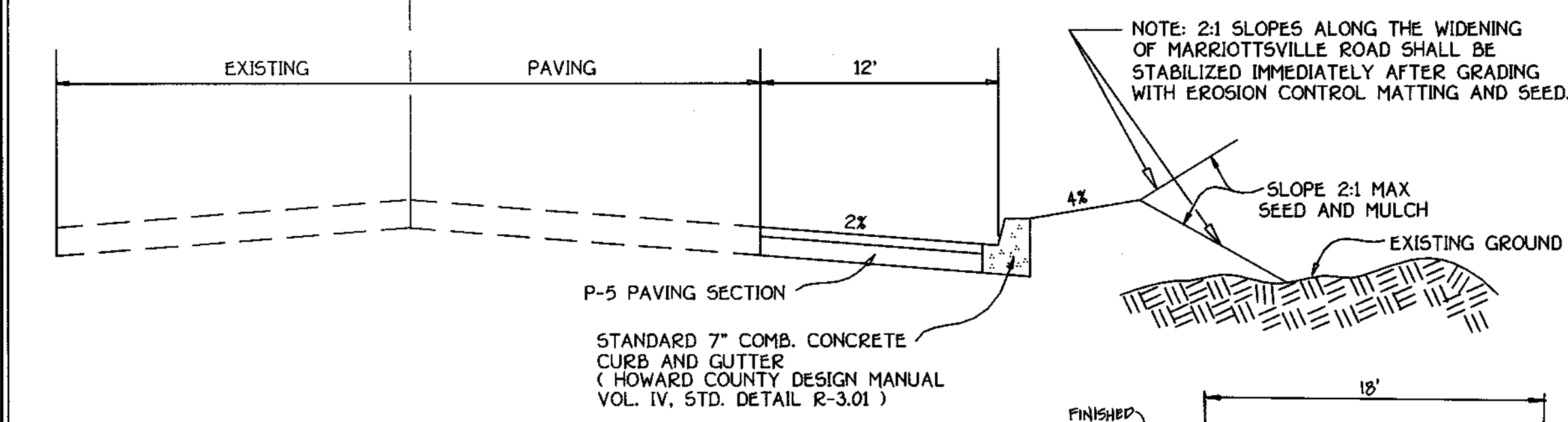
Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft / minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

DETAIL SHEET
 GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND
 PARCELS 'A' THRU 'E'
 (PROPERTY OF G.T.W. JOINT VENTURE)
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 298
 ZONING: PEC, R-5A-B & B-1
 THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 26 OF 33

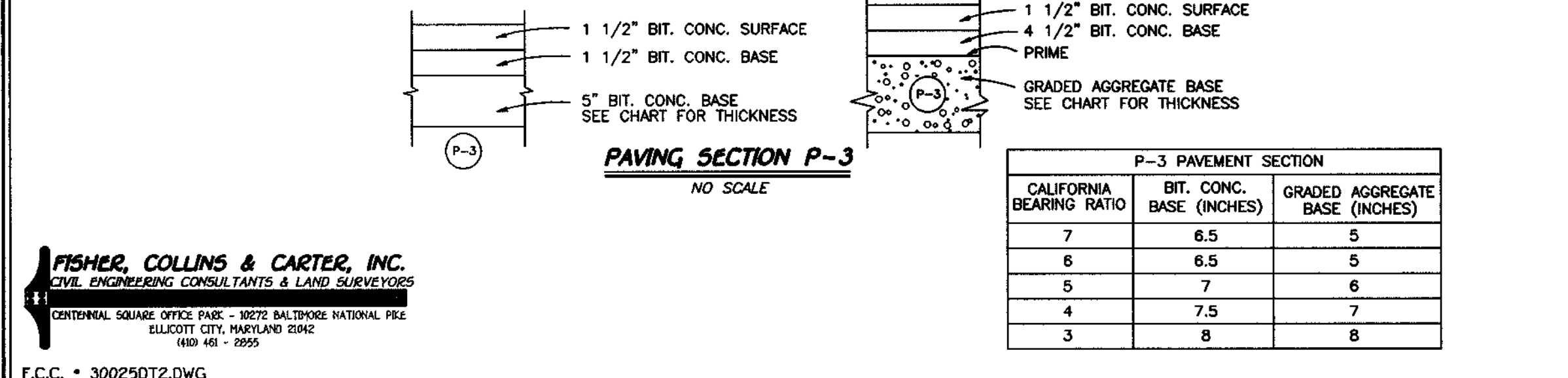
OWNER: GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

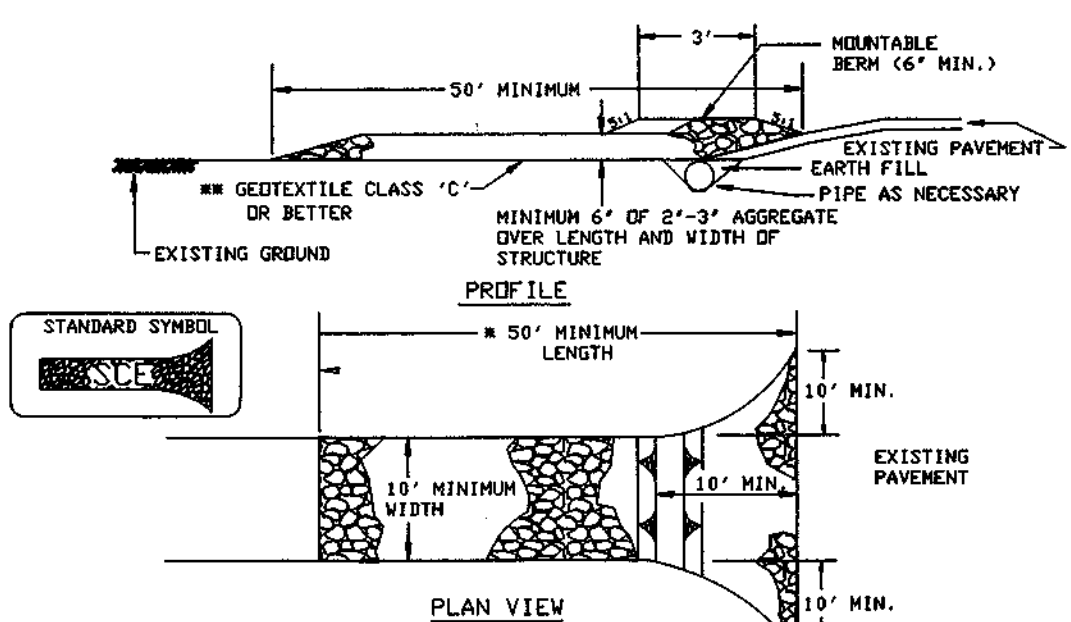
- SEQUENCE OF CONSTRUCTION
- OBTAIN THE REQUIRED GRADING PERMIT. (1 DAY)
 - NOTIFY MISS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK. AT 0-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION (410) 313-1070 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)
 - CONSTRUCT 5-3 TO 5-2 BEFORE GRUBBING AND MASS GRADING THE SITE (2 DAYS). INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES, STONE CONSTRUCTION ENTRANCES, TREE PROTECTION DEVICES, AND EARTH DIKES. THERE WILL BE 2 STONE CONSTRUCTION ENTRANCES LOCATED OFF MARRIOTTVILLE ROAD. AN EXISTING GRAVEL DRIVE WILL BE UTILIZED FOR INCOMING VEHICLES WHILE THE STONE CONSTRUCTION ENTRANCE AT THE PROPOSED WARWICK WAY WILL BE USED FOR EXITING THE SITE. (1 WEEK) NOTIFY INSPECTOR FOR PERMISSION TO PROCEED. MARRIOTTVILLE ROAD WILL BE COMPLETED BEFORE ANY CONSTRUCTION WILL BEGIN ON WARWICK WAY. (2 WEEKS) THE 2:1 SLOPES ALONG THE WIDENING OF MARRIOTTVILLE ROAD SHALL BE STABILIZED IMMEDIATELY AFTER GRADING WITH EROSION CONTROL MATTING AND SEED. MARRIOTTVILLE ROAD WILL BE GRADED AND STABILIZED IN 200' SEGMENTS. PERMISSION IS REQUIRED FROM THE SEDIMENT CONTROL INSPECTOR BEFORE STARTING EACH SEGMENT.
 - CLEAR AND GRUB TO SUBGRADE ONLY TO CENTERLINE STA. 4+00 FOR INSTALLATION OF STORM DRAIN SYSTEM FROM I-II TO M-8 FOR STABILIZATION AND SEDIMENT CONTROL TO RIP-RAP OUTLET TRAP NO.1. INSTALL 24" TEMP. FLEXIBLE PIPE BESIDE I-II. DIVERT DIKES TO END OF PIPE. PLUS THE 10" PVC GOLF COURSE PIPE INTO THE END OF TEMP. 24" FLEXIBLE PIPE FOR WATER DIVERSION. BLOCK 1-7 AT 30' RCCP AND INSTALL 18" FLEXIBLE PIPE FOR DRAINAGE TO TRAP NO. 1. NOTIFY INSPECTOR UPON COMPLETION BEFORE CONTINUING. ALL EROSION AND SEDIMENT CONTROL WILL REMAIN UNTIL COMPLETION OF WARWICK WAY. INCLUDE FULL STABILIZATION TO STA. 4+00. ALL DIVERSIONS MUST BE IN PLACE BEFORE GRUBBING AND MASS GRADING.
 - COMPLETE STORM DRAIN INSTALLATION AND CONTINUE CLEARING AND GRUBBING FOR ROADS AND STORM DRAINS PRIOR TO CLEARING AND GRUBBING. SEDIMENT CONTROL INSPECTOR MUST BE NOTIFIED FOR PERMISSION TO PROCEED. (2 WEEKS)
 - STABILIZE THE GRADED AREA (2 DAYS). INSTALL INLET PROTECTION. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS (1 DAY)
 - INSTALL PAVING (2 DAYS). INSTALL CURB AND GUTTER PLUS ROAD BASE COURSE. (7 DAYS)
 - UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES NOT NEEDED AND FLUSH STORM DRAIN TO REMOVE TRAPPED SEDIMENT. (2 DAYS)
 - BEFORE REMOVING ALL SEDIMENT CONTROL DEVICES AND DIVERSIONS, SEDIMENT CONTROL INSPECTOR MUST BE NOTIFIED FOR PERMISSION TO PROCEED.
 - ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING. (2 DAYS)
 - DURING CONSTRUCTION OF WARWICK WAY THE EXISTING DRIVEWAY GOING TO THE WAVERLY MANSION WILL BE REMOVED WITHIN THE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL PROVIDE A TEMPORARY ACCESS ROAD FOR INGRESS AND EGRESS TO THE WAVERLY MANSION WHICH SHALL BE MAINTAINED ON A DAILY BASIS UNTIL WARWICK WAY HAS BEEN PAVED.



ROAD NAME	CLASSIFICATION	C.L. STA. TO C.L. STA.	A	B	C	D	PAVING SECTION	DESIGN SPEED
WARWICK WAY	MAJOR COLLECTOR	0+00 TO 28+93.79	30'	80'	5'	10'	P-3	40 MPH
BIRMINGHAM WAY	MAJOR COLLECTOR	22+00 TO 24+00	44'	80'	9'	14'	P-3	40 MPH



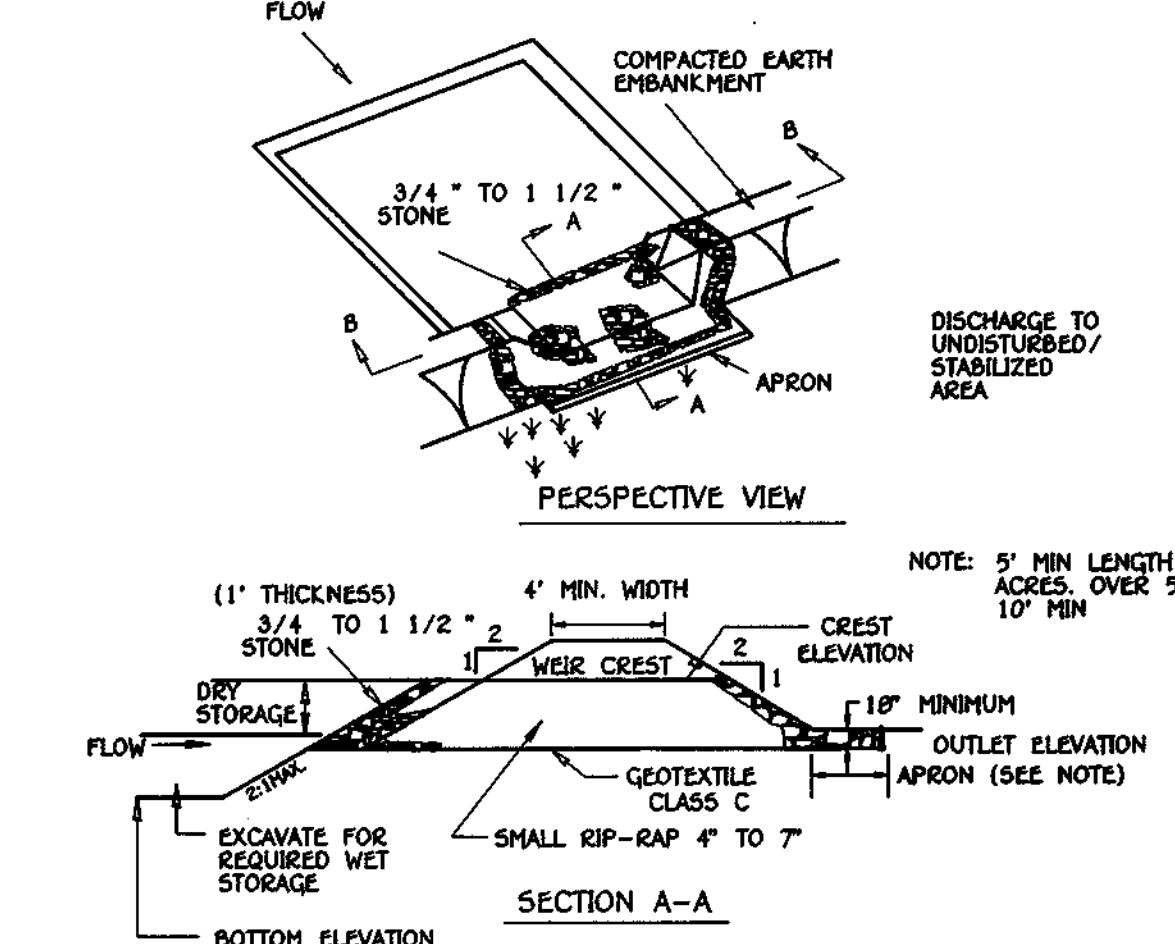
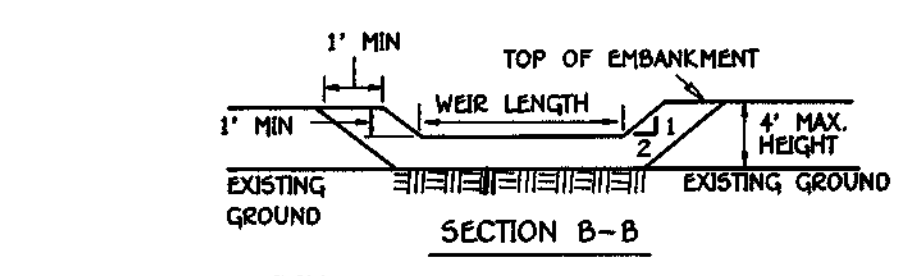
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10722 MILITARY NATIONAL Pk.
 ELICOTT CITY, MARYLAND 21042
 (410) 461 - 1995



Construction Specifications

- Length - minimum of 30' (30' for single residence lots).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. Write plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2\"/>

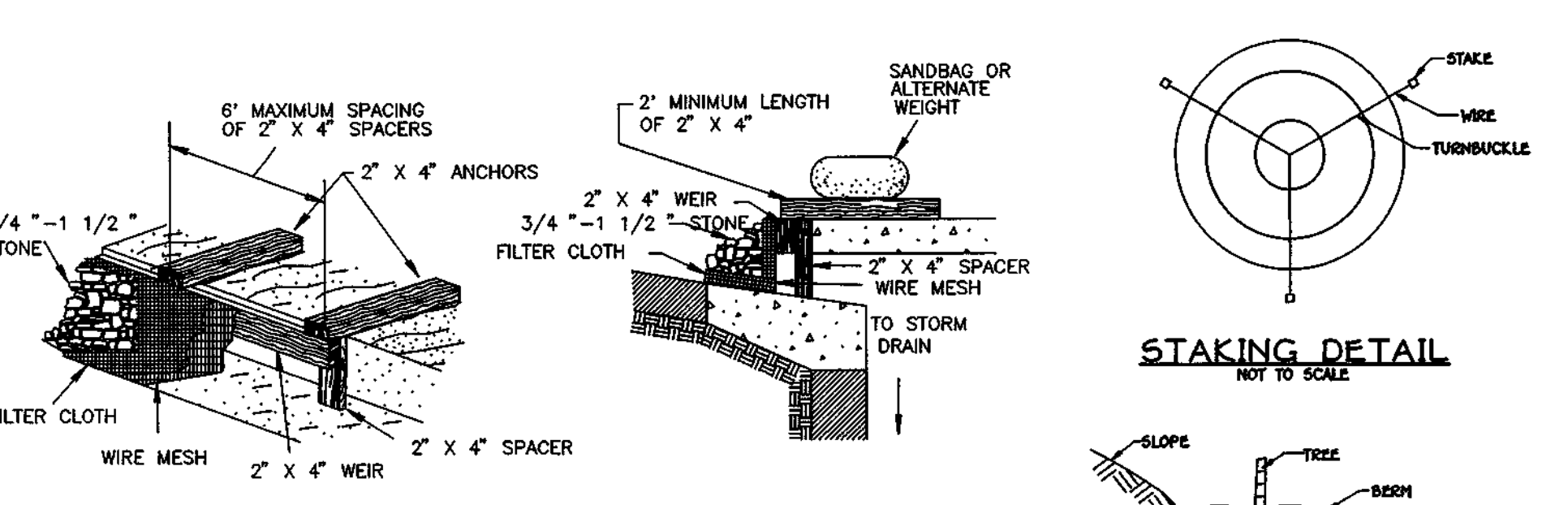
STABILIZED CONSTRUCTION ENTRANCE - 2
NOT TO SCALE



STONE / RIP-RAP OUTLET SEDIMENT TRAP - 5T IV
NOT TO SCALE

Construction Specifications

- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized 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 4', measured at centerline of embankment.
- All cut and fill slopes shall be 2:1 or flatter.
- Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.
- Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 9).
- Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6\"/>



Construction Specifications

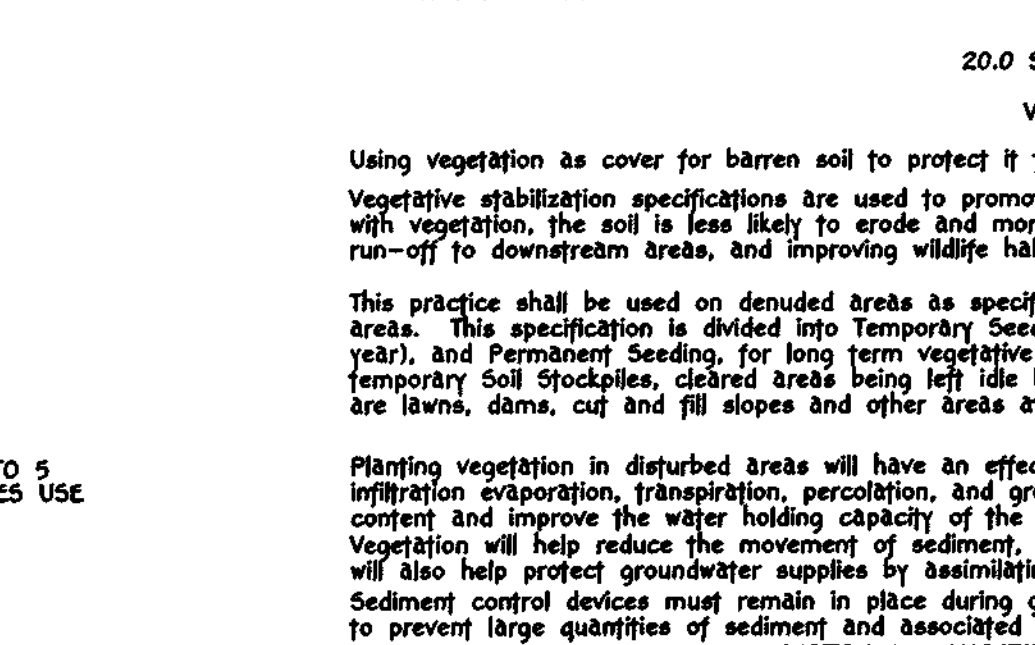
- Attach a continuous piece of wire mesh (30' minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
- Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
- Securely nail the 2" x 4" weir to a 9\"/>

STANDARD CURB INLET PROTECTION
NOT TO SCALE

Construction Specifications

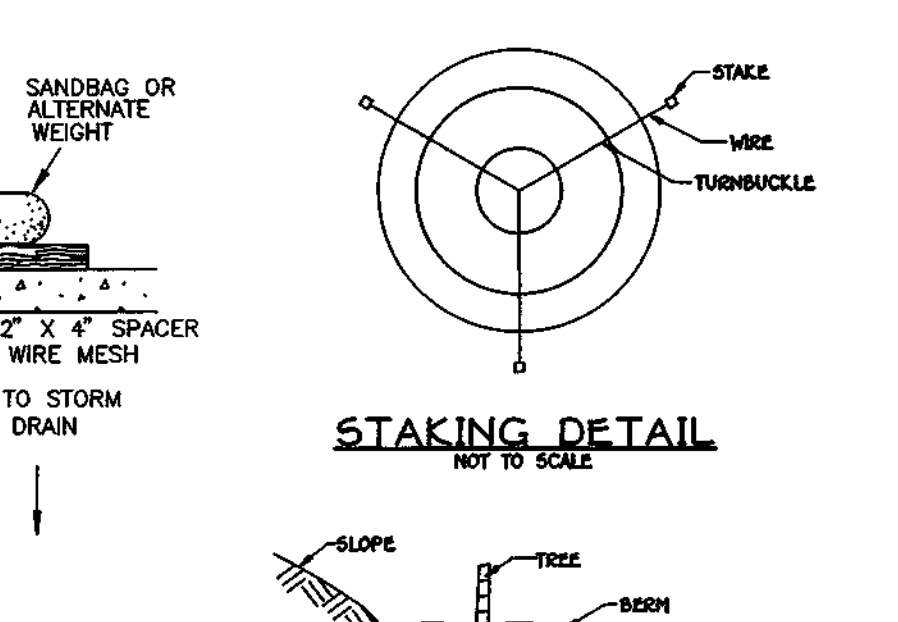
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STANDARD CURB INLET PROTECTION
NOT TO SCALE



Construction Specifications

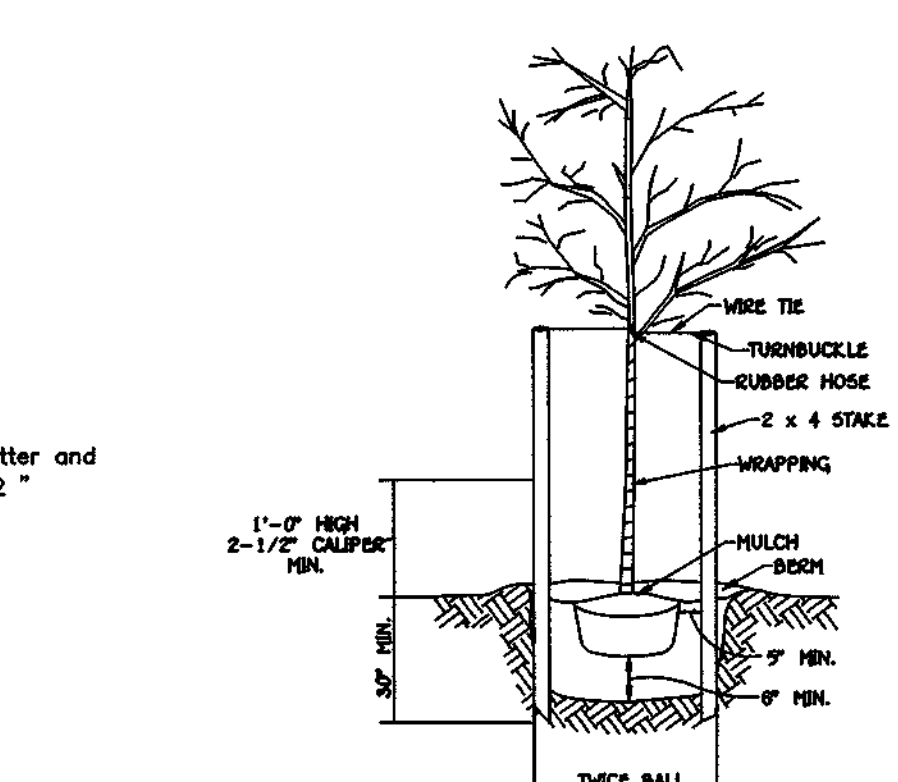
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Construction Specifications

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- Securely nail the 2" x 4" weir to a 9\"/>

GRADING FOR PLANTING ON SLOPES
NOT TO SCALE



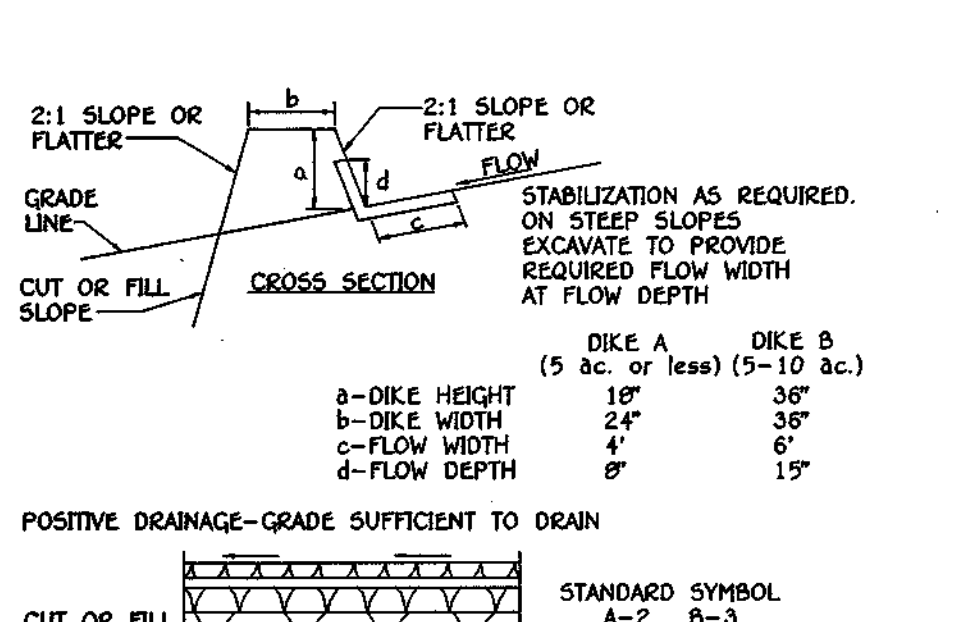
GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

Construction Specifications

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Construction Specifications

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAND CHANNEL.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- 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.

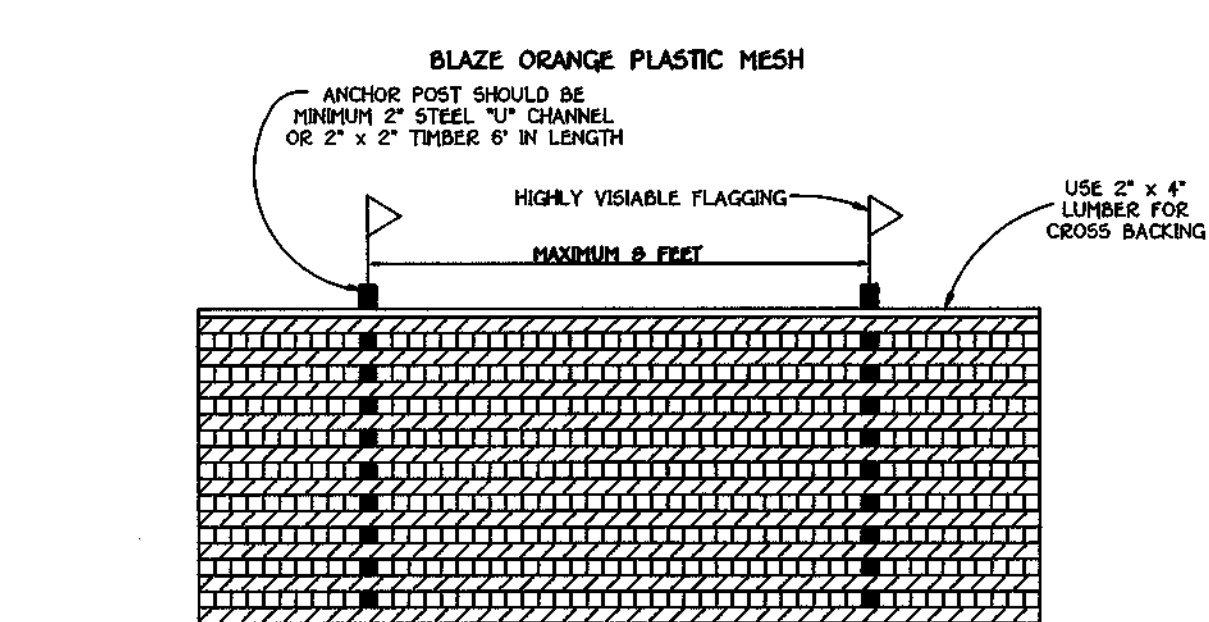
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A
1	5-3.0%	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH
3	5.1-8.0%	SEED WITH JUTE OR SOD; 2\"/>

EARTH DIKE
NOT TO SCALE

Construction Specifications

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Construction Specifications

- FOREST PROTECTION DEVICE ONLY.
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- ROOT DAMAGE SHOULD BE AVOIDED.
- PROTECTIVE SIGNAGE MAY ALSO BE USED.
- DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION DETAIL
NOT TO SCALE

Construction Specifications

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DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

DATE: 1/21/97
SIGNATURE OF DEVELOPER

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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

DATE: 1/21/97
SIGNATURE OF ENGINEER

APPROVED: DEPARTMENT OF NATURAL RESOURCES CONSERVATION SERVICE
DATE: 1/21/97

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 1/21/97

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 1/21/97

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 1/21/97

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 1/21/97

Incremental Stabilization - Cut Slopes

- All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
- Construction sequence (Refer to Figure 3 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 - Perform Phase 1 excavation, dress and stabilize.
 - Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as areas as necessary.
 - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

Incremental Stabilization - Fill Slopes

- Embankments shall be constructed in lifts and stabilized on the plans.
- Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15', or when the grading operation ceases as prescribed in the plans.
- At the end of each day, temporary berms and pipe slope drains shall be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
- Construction sequence (Refer to Figure 4 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill.
 - Place Phase 1 embankment, dress and stabilize.
 - Place Phase 2 embankment, dress and stabilize.
 - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

SEEDING SPECIFICATIONS

- All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the seeding operation.
- Seed bags shall be made available to the inspector to verify type and rate of seed used.
- Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of rhizobium bacteria specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible. Inoculant should be kept in a cool shaded area and used within 60 days of receipt. Inoculant should be kept in a cool shaded area and used within 60 days of receipt.
- Methods of Seeding
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast by drop seeded, or a cultipacker seeder.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following nitrogen maximum of 100 lbs./acre, phosphorus total of soluble nitrogen: P205 (phosphorous); 200 lbs./acre, K2O (potassium); 200 lbs./acre.
 - Lime - use only ground agricultural limestone. (Up to 3 tons per acre may be applied by hydroseeding.) Normally, not more than 2 tons per acre should be applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 269 or 276. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
 - Where practical, seed should be applied in two directions perpendicular to each other.
 - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of covering.
 - Where practical, seed should be applied in two directions perpendicular to each other.
 - Apply half the seeding rate in each direction.
- Mulch Specifications (in order of preference)
 - Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, rotted, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the seed law.
 - Wood Cellulose Fiber Mulch (WCFF)
 - WCFF shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFF shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFF, including dye, shall contain no germination or growth inhibiting factors.
 - WCFF materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry.
 - The mulch material shall form a blower-like ground cover, on application, having moisture absorption and retention properties, and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFF material shall contain no elements or compounds of concentration levels that will be phytotoxic.
 - WCFF must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.5% maximum, and breaking strength of 300 minimum.

SEEDING SPECIFICATIONS

- Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.
 - If grading is completed outside of the seeding season, mulch shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 - When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the seed is not exposed. If it is anchored to soil it is to be used at the rate specified or increased to 2.5 tons/acre.
 - Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch (Mulch Anchoring) - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference):
 - Application of granules of area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes. When used on sloping land, this practice should be used on the contour if possible.
 - Wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crests of banks. The remainder of area should be applied after binder application. Binders - such as Acrylic, Ureac (Acrac-Tack), DCA-70 (Fetrol), Terra Tex II, Terra Tack AG or other approved equal may be used at rates recommended by the manufacturer for anchor mulch.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

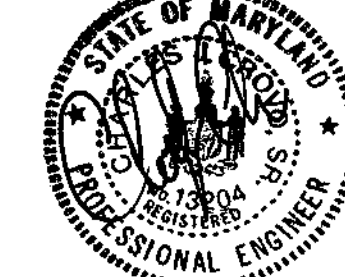
SEEDMENT CONTROL NOTES AND DETAILS

GTW'S WAVERLY WOODS

SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

(PROPERTY OF GTW JOINT VENTURE
LIBER 2222, FOLIO 36 AND LIBER 2221, FOLIO 280)
CONV. ZONING: R-15, R-5A, P-15
TAX MAP NO. 16 PARCEL NO. 406
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 16, 1997

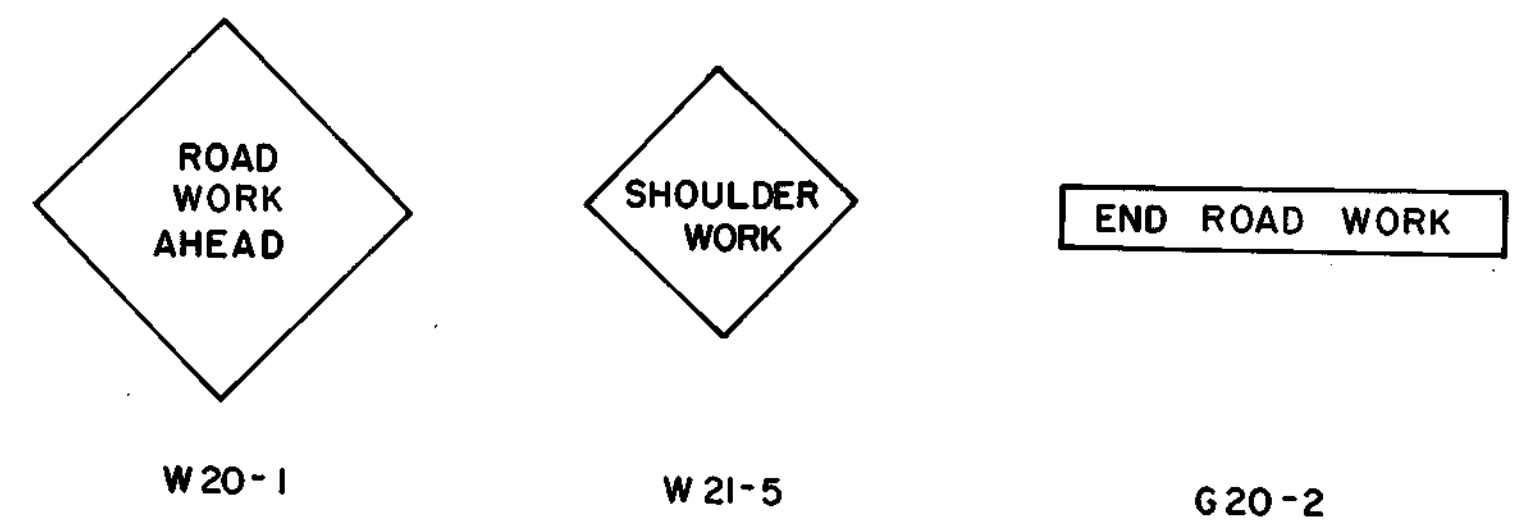
SHEET 27 OF 33



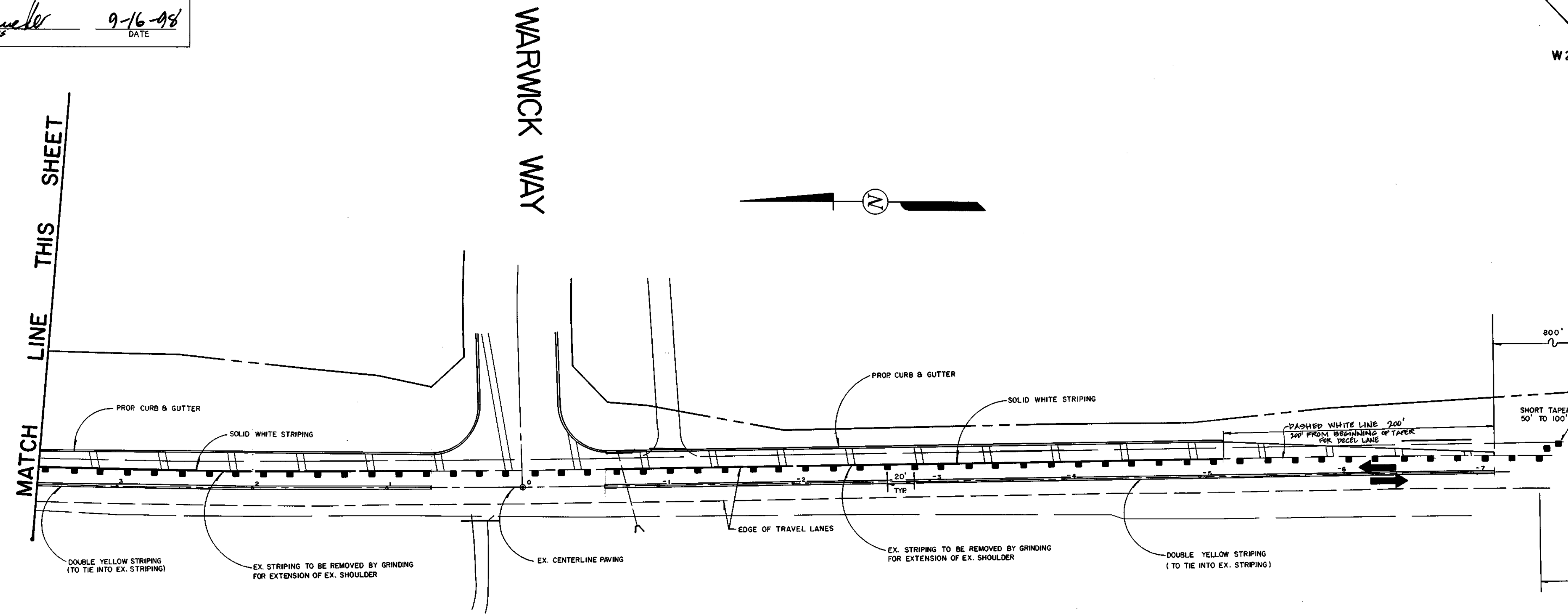
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/29/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/17/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

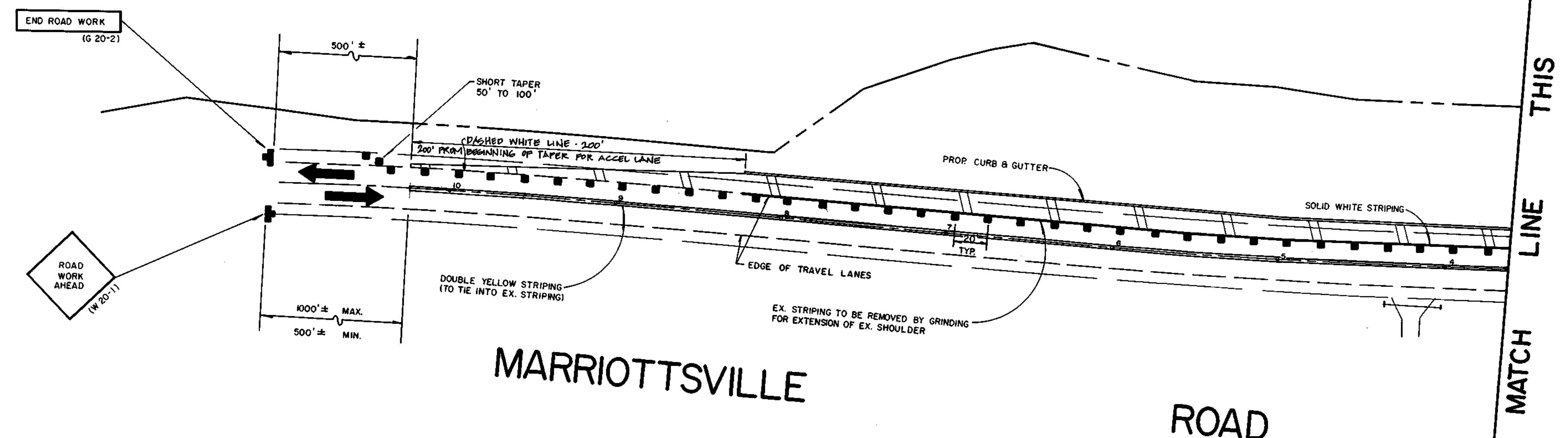
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 9-16-98
 CHIEF, BUREAU OF HIGHWAYS DATE



TRAFFIC CONTROL SIGNAGE
 N.T.S.



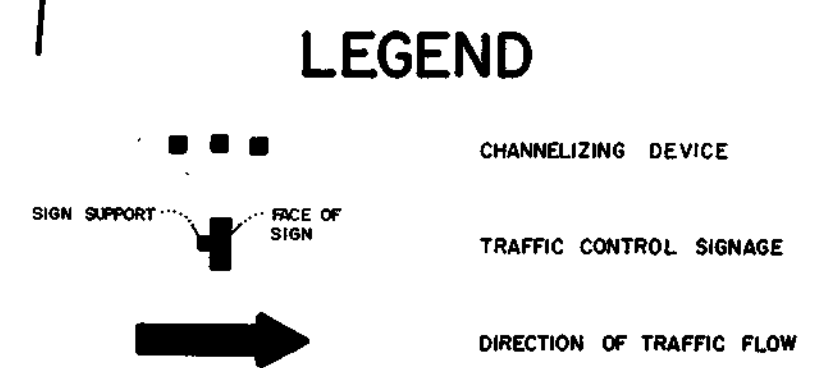
MARRIOTTSVILLE ROAD



MARRIOTTSVILLE ROAD

PLAN
 SCALE: 1" = 50'

- MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS**
- GENERAL**
- THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE OF TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
 - PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR ENSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
 - THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE ANY COMBINATION OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
 - THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1989 EDITION, ESPECIALLY PART VI, AND TO SECTION 814 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY, 1992), INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
 - THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FORTH IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THREE WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
 - NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
 - GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
 - THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION, AND MOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
 - ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TCP SHALL BE KEPT IN GOOD CONDITION, FULLY OPERATING AS SET FORTH IN THE TCP, THE MUTCD, AND/OR SECTION 814 OF THE SPECIFICATIONS. FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSUMED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTANCE CAPABILITY OF AT LEAST 80% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 90% OF THE VISIBLE REFLECTIVE SURFACE.
 - ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR OUT REASON FOR THE DEVICE.
 - THROUGHOUT THE PERIODS OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TCP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCP'S MAY BE IMPLEMENTED WITH A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TCP'S JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
 - THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
 - TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



TRAFFIC CONTROL AND STRIPING PLAN
GTW'S WAVERLY WOODS
SECTION 7
WARWICK WAY
LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'

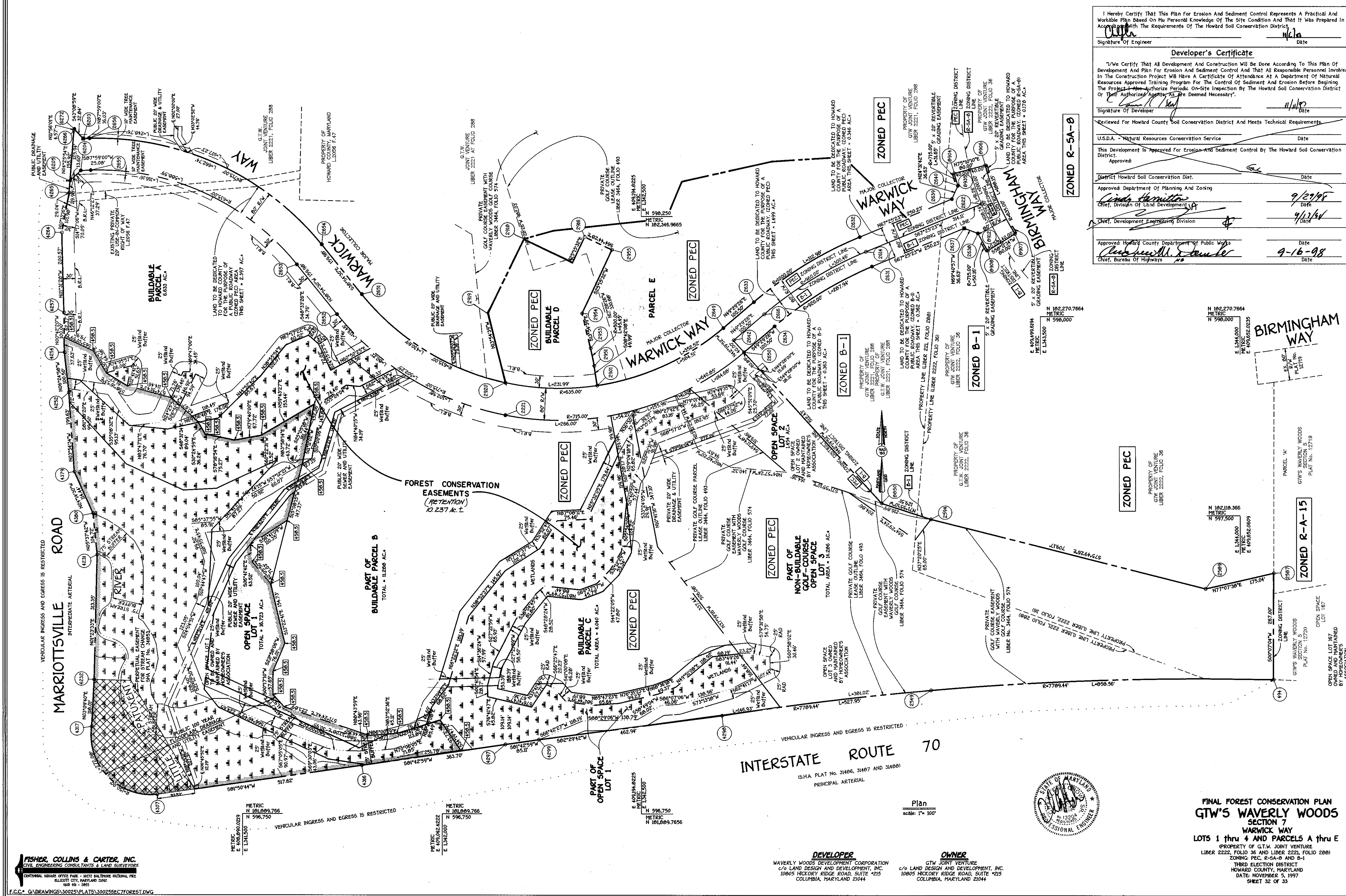
OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

(PROPERTY OF G.T.W. JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 28B)
 ZONING: PEC, R-SA-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 28 OF 35

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CONTINENTAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21117
 410.461.2955





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 Condition and That It was Prepared in Accordance with the Requirements of The Howard Soil Conservation District.

Signature of Engineer: *[Signature]* Date: *11/16/98*

Developer's Certificate

"I/We 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 Certificate of Attendance At a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion Before Beginning the Project. I/We Authorize Periodic On-Site Inspection by the Howard Soil Conservation District or Their Authorized Agents, as Deemed Necessary."

Signature of Developer: *[Signature]* Date: *11/16/98*

Reviewed For Howard County Soil Conservation District and Meets Technical Requirements

U.S.D.A. - Natural Resources Conservation Service Date: _____

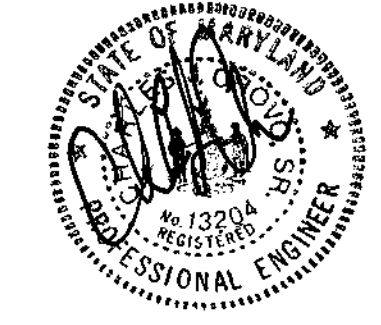
This Development is Approved For Erosion and Sediment Control by The Howard Soil Conservation District. Approved: _____ Date: _____

District Howard Soil Conservation Dist. Date: _____

Approved Department of Planning and Zoning
[Signature] Date: *9/29/98*
 Chief, Division of Land Development

[Signature] Date: *9/23/98*
 Chief, Development Engineering Division

Approved Howard County Department of Public Works
[Signature] Date: *9-16-98*
 Chief, Bureau of Highways



FINAL FOREST CONSERVATION PLAN
GTW'S WAVERLY WOODS
 SECTION 7
WARWICK WAY
 LOTS 1 thru 4 AND PARCELS A thru E
 (PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221, FOLIO 288)
 ZONING: PEC, R-5A-B AND B-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: NOVEMBER 5, 1997
 SHEET 32 OF 33

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1872 BALDORNE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21034
 410-461-2855

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE #215
 COLUMBIA, MARYLAND 21044

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE #215
 COLUMBIA, MARYLAND 21044

NARRATIVE

The Waverly Woods Property is a 682 acre tract containing a combination of commercially and residentially zoned property. The site is to be slowly developed in a series of phases. A Preliminary Forest Conservation Plan was prepared for the property in August of 1993 and revised in January 1996. The latter was accepted by the Howard County Department of Planning and Zoning in February of 1996.

This Final Forest Conservation Plan has been prepared for Warwick Way which is located within Section 7 of the commercially zoned portion of Waverly Woods. The Forest Conservation Worksheet contains the original figures from the Preliminary Forest Conservation Plan for commercially zoned property and revised figures from the proposed development of Lots 1 and 2 and Parcels A, B, and C. The revised figures were obtained by laying the proposed limits of disturbance for these Lots and Parcels over the Preliminary Forest Conservation Plan and recording all changes to forest clearing and forest conservation. There continues to be no reforestation requirement for commercial development at Waverly Woods.

Please note that the Forest Conservation Worksheet does not include the forest conservation or clearing on Lot 3 and Parcel D associated with Warwick Way. This is due to the fact that they lie within the golf course easement. Their clearing and forest conservation associated with Warwick Way will be calculated on the final forest conservation plan for Waverly Woods Golf Course which shall be submitted separately.

GENERAL NOTES

- This forest conservation plan has been prepared in accordance with the requirements set forth by the Forest Conservation Act of Howard County. The preparation of this plan, the notes and details were prepared using the guidelines of the Howard County Forest Conservation Manual.
- Base sheet information was provided by Fisher, Collins and Carter, Inc.
- Since work on this project will be initiated in several phases all tree protection devices required for a given phase shall be installed prior to any disturbance within that phase of work.

FOREST PROTECTION MEASURES

- After the limits of disturbance (LOD) and the location of all Tree Protection Devices (TPD's) have been staked and/or flagged in the field, an on-site pre-construction meeting shall be held. During this meeting, the limits of clearing specified on the approved plan shall be field-verified and authorization shall be given for the installation of TPD's with any necessary adjustments. This meeting shall include the owner or their representative, the on-site foreman in charge of land disturbance, ESA, Inc., and the appropriate county inspectors. Upon approval of the flagged or staked locations by Howard County, installation may begin. TPD installation shall be completed prior to installation of initial Sediment Controls. No cutting or clearing of trees may begin before final approval of TPD installation.
- The Specimen Tree Protection Measures shall be installed where applicable as specified below.
- Filter cloth on wire mesh shall be the short-term forest protection device and will be located along the limit of clearing as identified on these plans. Refer to this plan set for the appropriate details and installation notes.
- Permanent signs shall be installed along the limits of clearing in the locations shown on these plans immediately after the short-term forest protection device has been installed. These signs shall delineate proposed forest preservation areas on commercial and golf course development sites adjacent to Warwick Way. These devices shall not, in any way, be anchored or attached to the trees to be saved.
- Short-term forest protection devices and permanent signs shall be installed prior to any land clearing or grading and shall be maintained during the entire construction phase including fine grading and final seeding.
- Equipment, machinery, vehicles, materials, or debris shall not be allowed within the forest protection areas.
- After construction activities have been completed, an on-site inspection by Howard County will be conducted to evaluate the remaining trees for damage or impacts which may have occurred during the construction process. If trees along the forest perimeter are found to be damaged or dead as a direct result of the construction process, corrective action must be taken. The measures may include the following and must be carried out by a qualified tree professional:
 - Removal of dead or dying trees located within 20 feet of the limits of disturbance which are potentially hazardous. Dead or dying trees which are not potentially hazardous shall be left to provide wildlife habitat. Removal should be authorized by Howard County.
 - Pruning of dead or declining limbs
 - Soil aeration
 - Fertilizing
 - Watering
 - Wound repair
 - Clean-up retention areas
- Prior to removing the temporary forest protection devices, authorization from Howard County shall first be given.
- When removing the temporary tree protection devices, care shall be taken to not disturb or clear additional area within the limit of disturbance. Hand removal of vines, excessive dead material and trash is permitted. The burial of discarded materials is not permitted on the site. Clearing for the purpose of sodding or planting grass is not permitted within the forest conservation area.
- It is the responsibility of the present Owner to educate the occupants/owners of the new development about the proper use of the forest preservation areas, about the need for the Owner/Developer to carry out the post-construction management program, and the eventual transfer of long-term responsibilities to the new owners or occupants.
- A signed agreement detailing these post-construction activities shall be submitted for approval as part of the developers agreements for the project. The agreement shall also include bonding covering all costs of the necessary protection and management activities required by the post-construction program.

SPECIMEN TREE STRESS REDUCTION MEASURES

Specimen trees 54, 70 and 72 have been identified on these plans due to their large size, appealing features and close proximity to the LOD of Section 5 Development. The Critical Root Zone (CRZ) and required preservation techniques for these specimen trees are as follows:

Specimen Tree 54: CRZ = 30.2' To Be Removed
 Specimen Tree 70: CRZ = 35.4' Refer to the Sequence of Stress Reduction Measures outlined below.
 Specimen Tree 72: CRZ = 34.5' Refer to the Sequence of Stress Reduction Measures outlined below.

These critical root zones have been calculated using a formula for trees in a forested environment. (one inch of trunk diameter at breast height equals a one foot radius of the critical root zone).

Sequence of Stress Reduction Measures

- This protection measure applies to specimen trees 70 and 72 as identified above.
- Root pruning
 - Trench the area 1' beyond the limit of disturbance and excavate with a 4-6" trencher, approximately 24" deep. Refer to this sheet for the Root Pruning Detail and Note.
 - Immediately after trenching and cutting through all roots in the trench area, prune the root so as to provide good clean cuts. Backfill the trench with the excavated material or other high organic soil.
 - Water the backfilled trench immediately, until trench overflows. Settled areas should be filled with backfill until level with the existing ground.
- Apply 3" of mulch to the trees critical root zone within the limit of forest clearing.
- Continue with the forest protection measures in the FOREST PROTECTION MEASURES section identified above.

LONG TERM MANAGEMENT PROGRAM

- Refer to the Howard County Forest Conservation Manual, Appendix J, for activities permitted within the forest conservation easement and long-term management practices.
- The periodic removal of vines and/or other invasive and non-native vegetation along the perimeter of the forest conservation area may be necessary to control the intrusion and development of such vegetation and maintain forest productivity.
- Woody vegetation located within 20' from the forest perimeter susceptible to wind-throw and dead or diseased trees along the forest perimeter shall be selectively thinned if potentially hazardous.

Waverly Woods (Commercial w/o Golf Course)

Forest Conservation Worksheet

Input Parameter:	Preliminary FCP	Revised Per Section 7
Tract Area	258.33	258.33
100-Year Floodplain Area	39.3	39.3
Other ROW/Easements to be Excluded from Net Tract Area	11.95	11.95
Disturbance within Floodplain to be added to Net Tract Area	0	0.67
Existing Forest Area within Net Tract Area	97	97
Afforestation Threshold Percentage	0.15	0.15
Conservation Threshold Percentage	0.15	0.15
Total Area of Forest to be Cleared	50.8	52.57
Calculated Parameters:		
Net Tract Area	207.08	207.75
Afforestation Threshold	31.062	31.1625
Conservation Threshold	31.062	31.1625
Area of Forest Above Afforestation Threshold	65.938	65.8375
Area of Forest Above Conservation Threshold	44.2496	44.33
Break Even Point	52.7504	52.67
Clearing Permitted with no Mitigation	46.2	44.43
Total Area of Forest to be Retained		
Reforestation for Clearing Above Conservation Threshold	12.7	13.1425
Reforestation for Clearing Below the Conservation Threshold	0	0
Credit for Retention Above the Conservation Threshold	15.138	13.2675
Total Reforestation Required	0	0
Total Afforestation Required	0	0
TOTAL Afforestation/Reforestation Required	0	0

* FOR THE PURPOSE OF FOREST CONSERVATION, SECTION 7 OF THE WAVERLY WOODS COMMERCIAL DEVELOPMENT INCLUDES LOTS 1, 2 & 4 AND PARCELS A, B & C. PARCELS D & E ARE LOCATED WITHIN SECTION 7, BUT ARE BEING DEVELOPED BY SHIVA GOLF, INC. FOR THE GOLF COURSE CLUBHOUSE AND POOL FACILITY. A SEPARATE FOREST CONSERVATION PLAN FOR PARCELS D & E WILL BE SUBMITTED BY SHIVA GOLF, INC. OR THEIR REPRESENTATIVE. LOT 3 IS LOCATED WITHIN THE GOLF COURSE EASEMENT AREA AT WAVERLY WOODS AND WILL BE INCLUDED IN THE FOREST CONSERVATION PLAN FOR THE GOLF COURSE WHICH SHIVA GOLF, INC. WILL ALSO PREPARE.

SPECIMEN TREE LIST

No.	Common Name	Scientific Name	DBH	Vigor
54	Pin Oak	Quercus palustris	30.2	Good
70	Red Maple	Acer rubrum	34.5	Fair
72	Red Maple	Acer rubrum	34.5	Poor

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Signature: *[Signature]* DATE: 11/1/97

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 11/1/97

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE: _____

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

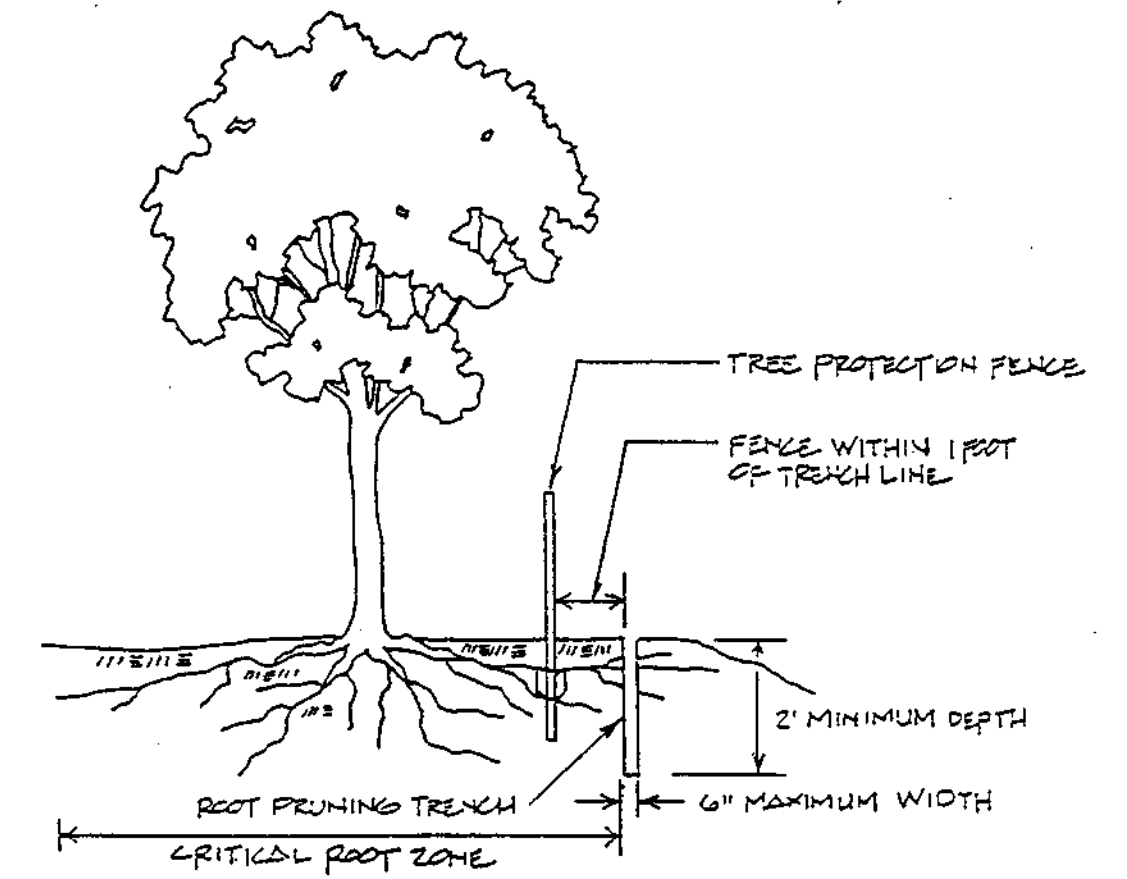
HOWARD SOIL CONSERVATION DISTRICT DATE: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 9/23/96
 CHIEF DIVISION OF LAND DEVELOPMENT AND RECREATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 9/12/96
 CHIEF DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Signature: *[Signature]* DATE: 9-16-99
 CHIEF, BUREAU OF HIGHWAYS

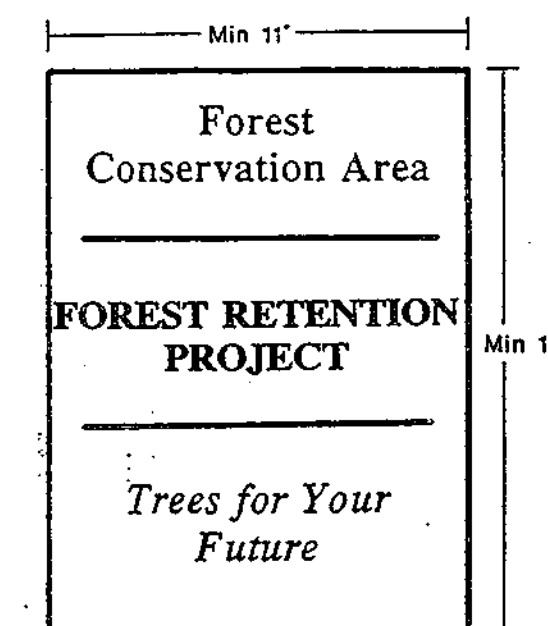
ROOT PRUNING DETAIL



- Notes:
- Retention Areas will be set as part of the review process.
 - Boundaries of Retention Areas should be staked/flagged prior to trenching.
 - Exact location of trench should be identified.
 - Trench should be immediately backfilled with soil removed or other high organic soil.
 - Roots should be cleanly cut using vibratory knife or other acceptable equipment.

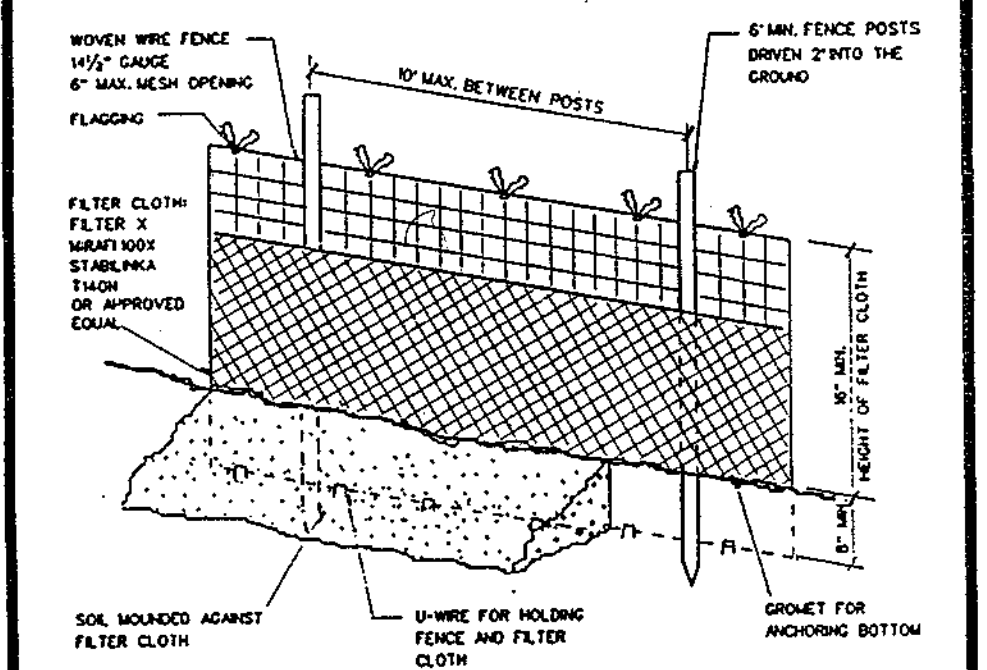
Source: City of Gaithersburg, Maryland: City Tree Manual

PERMANENT SIGNAGE DETAIL



TREE PROTECTION AND SEDIMENT CONTROL

FILTER CLOTH ON WIRE MESH DETAIL



- NOTE:
- Combine sediment control and protective device.
 - Retention area will be set as part of the review process.
 - Boundaries of Retention Area should be staked prior to installing protective device.
 - Root damage should be avoided.
 - Guard safety within the limits of disturbance.
 - Protective signage is required.
 - All standard maintenance for sediment control devices apply to these details.

Source: Prince Georges County, Maryland WOODLAND CONSERVATION MANUAL
 Adapted from Maryland State FOREST CONSERVATION MANUAL

PLAN PREPARED BY:

 Environmental Systems, Inc.
 48 Maryland Avenue, Annapolis, Maryland 21401
 (410) 267-0495 Fax: (410) 267-0496

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL OFFICE: 1070 BALDWIN NATIONAL PIKE
 SUITE 201, WASHINGTON, DC 20004
 (301) 424-1395

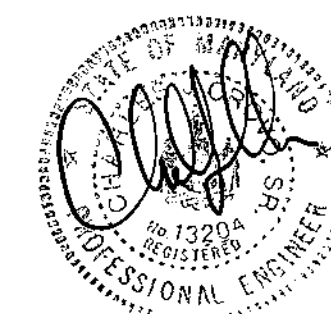
Kevin Kelly
 DNR APPROVED QUALIFIED PROFESSIONAL
 FOR FSD'S AND FCP'S
 DATE: 5/97

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISED NOTES AND FOREST CONSERVATION WORKSHEET	11/97

OWNER
 GTW JOINT VENTURE
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044

DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD
 SUITE 215
 COLUMBIA, MARYLAND 21044



FOREST CONSERVATION DETAILS
GTW'S WAVERLY WOODS
 SECTION 7
 WARWICK WAY
 LOTS 1 THRU 4 AND PARCELS 'A' THRU 'E'
 (PROPERTY OF GTW JOINT VENTURE
 LIBER 2222, FOLIO 36 AND LIBER 2221 FOLIO 208)
 ZONING: PEC, R-5A-B AND D-1
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: APRIL 16, 1997
 SHEET 33 OF 33