

WAVERLY WOODS

SECTION II

2ND/3RD ELECTION DISTRICT

HOWARD COUNTY MARYLAND

DEPARTMENT OF PUBLIC WORKS

Alan M. Longman 8/16/90
CHIEF, LAND DEVELOPMENT DIVISION DATE

Granville W. Holland 9/14/90
CHIEF, BUREAU OF HIGHWAYS DATE

William B. Lane 10-17-90
CHIEF BUREAU OF ENGINEERING DATE

APPROVED
DEPT. OF PLANNING AND ZONING

Mark J. Langley 11/2/90
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE
JB

STREET LAMP LOCATION

ALL POLES TO BE LOCATED NO LESS THAN 2'-10" FROM BACK OF CURB.

⊕ DENOTES 100 WATT SODIUM VAPOR LAMP PENDANT MOUNTED FIXTURE ON A 14 FOOT BLACK FIBERGLASS POLE WITH TRADITIONAIRE HEAD.

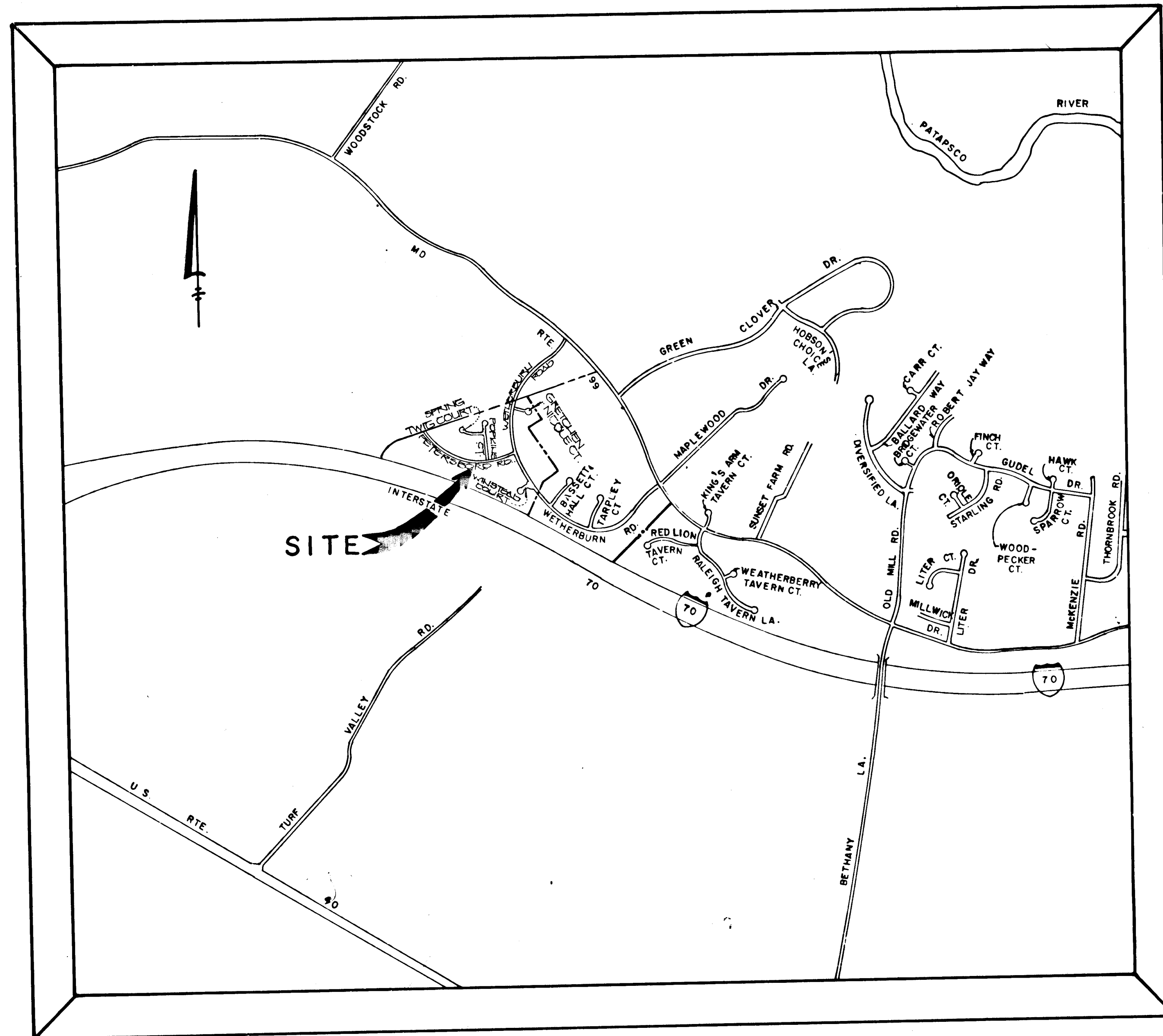
1. INTERSECTION POPKINS COURT AND PETERSBORO ROAD.
2. STA. 13+16 PETERSBORO ROAD OFFSET 18' LEFT.
3. INTERSECTION POPKINS COURT AND SPRING TWIG COURT.

⊕ DENOTES 150 WATT SODIUM LAMP PENDANT MOUNTED FIXTURE ON A 25 FOOT GALVANIZED STEEL POLE WITH TRADITIONAIRE HEAD.

1. INTERSECTION WINSTEAD COURT AND WETHERBURN ROAD.
2. INTERSECTION PETERSBORO ROAD AND WETHERBURN ROAD.
3. INTERSECTION NICOLE COURT AND WETHERBURN ROAD.
4. STA. 42+80 WETHERBURN ROAD OFFSET 22' RIGHT.
5. INTERSECTION WETHERBURN ROAD AND MD. RTE. 99.

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS, AND DETAILS FOR CONSTRUCTION.
2. ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HOURS IN ADVANCE OF ANY CONSTRUCTION.
3. ALL INLETS SHALL BE HOWARD COUNTY STANDARDS UNLESS OTHERWISE SHOWN. ALL 'A' INLETS SHALL BE DEPRESSED.
4. STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
5. ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY OR PAVING WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE: 792-7272.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT REVISED EDITION.
8. CONTRACTOR TO NOTIFY THE COLUMBIA GAS TRANSMISSION CORPORATION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. ATTN: MR. PAT DAVIS - TELEPHONE NO. 922-6969.
9. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1989 AMENDMENTS.
10. WETLAND MITIGATION TO BE PERFORMED OFF-SITE OF THIS SUBMISSION IN ACCORDANCE WITH THE MARYLAND DEPARTMENT OF NATURAL RESOURCES' APPROVED PLANS.



INDEX OF SHEETS

1. TITLE SHEET
2. WINSTEAD COURT - PLAN & PROFILE
3. WETHERBURN ROAD - PLAN & PROFILE
4. WETHERBURN ROAD - PLAN & PROFILE
5. WETHERBURN ROAD - PLAN & PROFILE
6. WETHERBURN ROAD - PLAN & PROFILE
7. WETHERBURN ROAD - PLAN & PROFILE
8. WETHERBURN ROAD - PLAN & PROFILE
9. WETHERBURN ROAD - PLAN & PROFILE
10. WETHERBURN ROAD - PLAN & PROFILE
11. WETHERBURN ROAD - PLAN & PROFILE
12. WETHERBURN ROAD - PLAN & PROFILE
13. WETHERBURN ROAD - PLAN & PROFILE
14. WETHERBURN ROAD - PLAN & PROFILE
15. WETHERBURN ROAD - PLAN & PROFILE
16. WETHERBURN ROAD - PLAN & PROFILE
17. WETHERBURN ROAD - PLAN & PROFILE
18. WETHERBURN ROAD - PLAN & PROFILE

VICINITY MAP

SCALE 1"=1200'

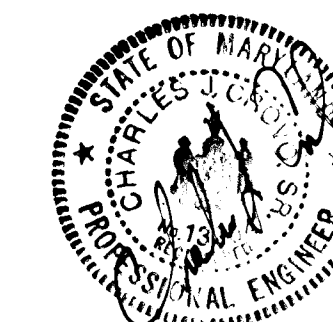
THE COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND STATE GRID SYSTEM AS PROJECTED BY THE FOLLOWING GEODETIC CONTROL STATIONS:

3540005 N 830430.823
E 830230.913
3029002 N 840311.256
E 832918.467

FISHER, COLLINS & CARTER, INC.

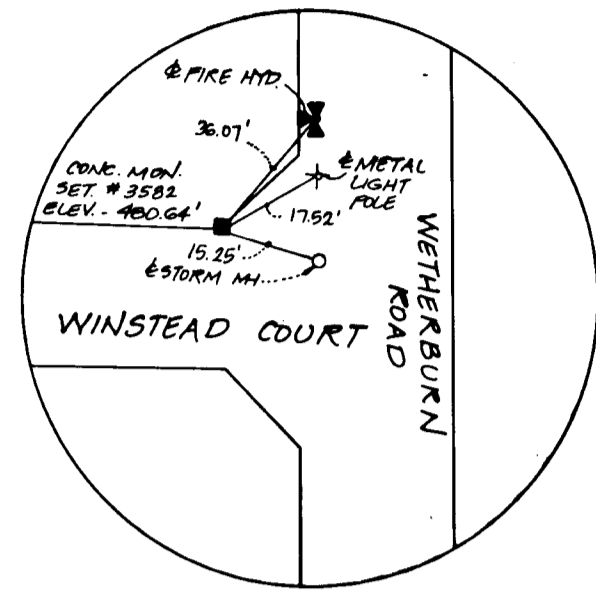
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

OWNER AND DEVELOPER
KENNARD WARFIELD, JR.
14003 TRIADAPLUA ROAD
GLENELG, MARYLAND 21737



1253

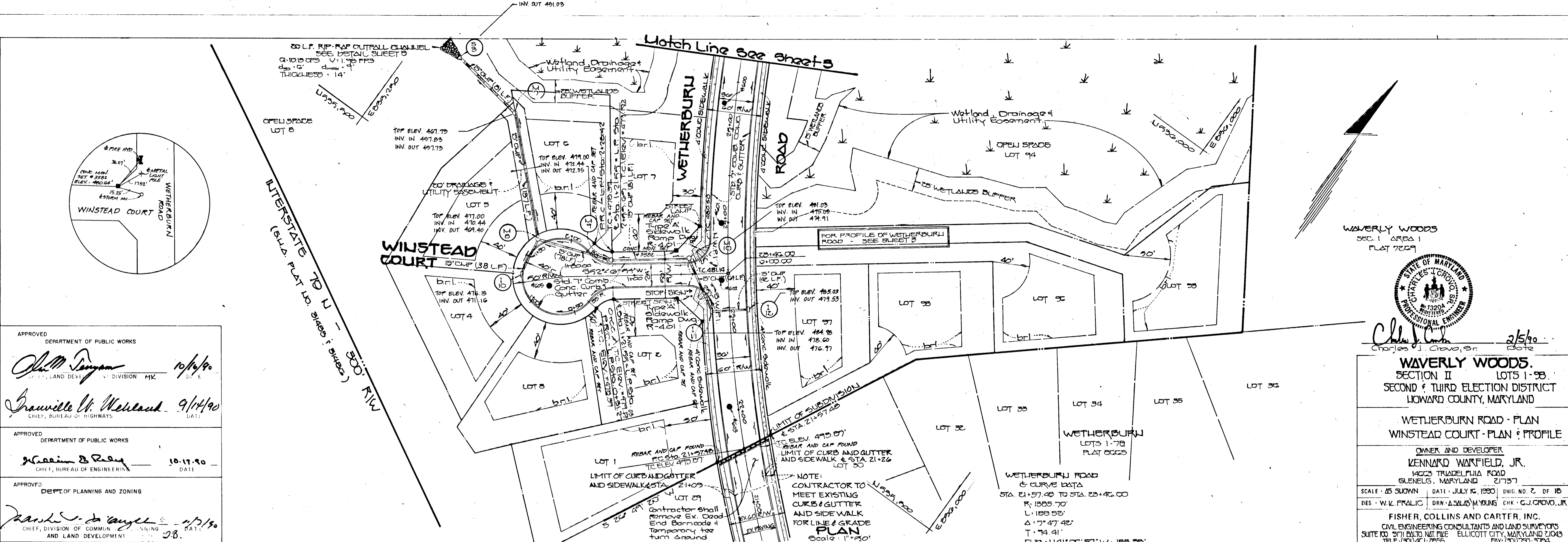
PLAN	DATE
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APPROVED
DEPARTMENT OF PUBLIC WORKS
John M. Torgano 10/16/90
CHIEF, LAND DEVELOPMENT DIVISION MK

APPROVED
DEPARTMENT OF PUBLIC WORKS
William B. Pugh 10-17-90
CHIEF, BUREAU OF ENGINEERING

APPROVED
DEPT. OF PLANNING AND ZONING
Franklin A. Taylor 10/17/90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



Waverly Woods
SEC. I AREA I
PLAT 7809



Charles J. Crovo, Jr. 2/5/90
Charles J. Crovo, Jr.
Date

WAVERY WOODS
SECTION II LOTS 1-35
SECOND & THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

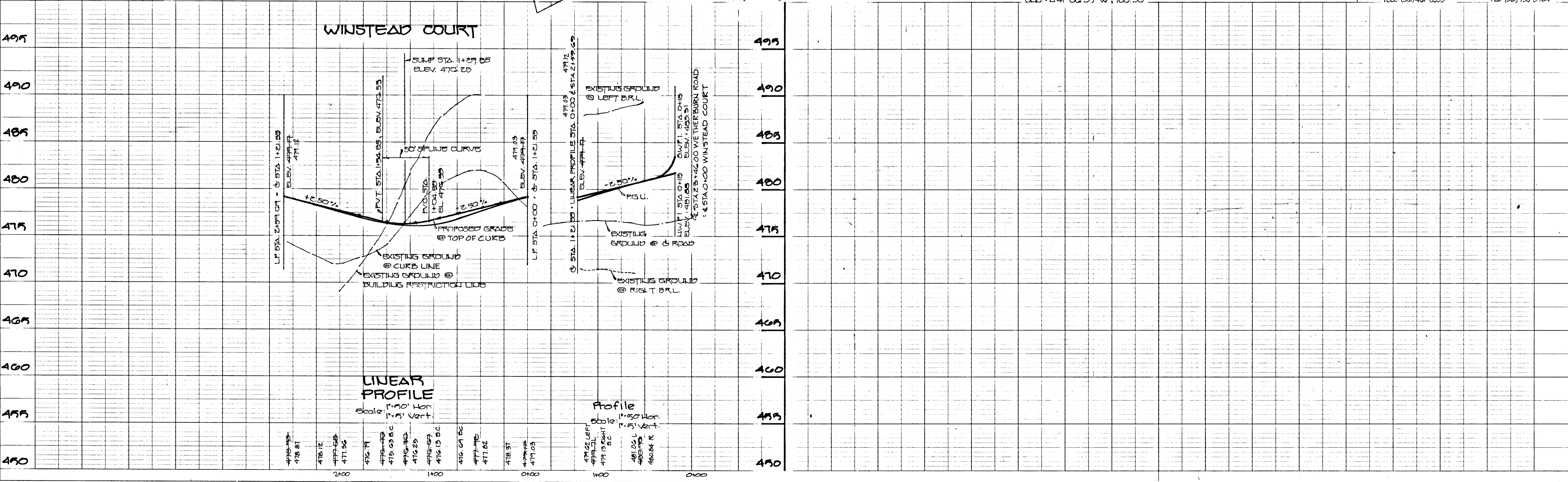
WETHERBURN ROAD - PLAN
WINSTEAD COURT - PROFILE

OWNER AND DEVELOPER
KENNARD WARFIELD, JR.
14223 TRIADELPHIA ROAD
GLENELG, MARYLAND 21757

SCALE: AS SHOWN DATE: JULY 16, 1990 DWG. NO. 2 OF 10
DES: W.K. FRALIC DRN: A.SALAS/M.YOUNG CHK: G.J. CROVO, JR.

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
SUITE 400 3971 BULLOCH PIKE ELLICOTT CITY, MARYLAND 21045
TEL: (301) 421-0555 FAX: (301) 750-3754

PROFILE	DATE
BY	
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NO.	



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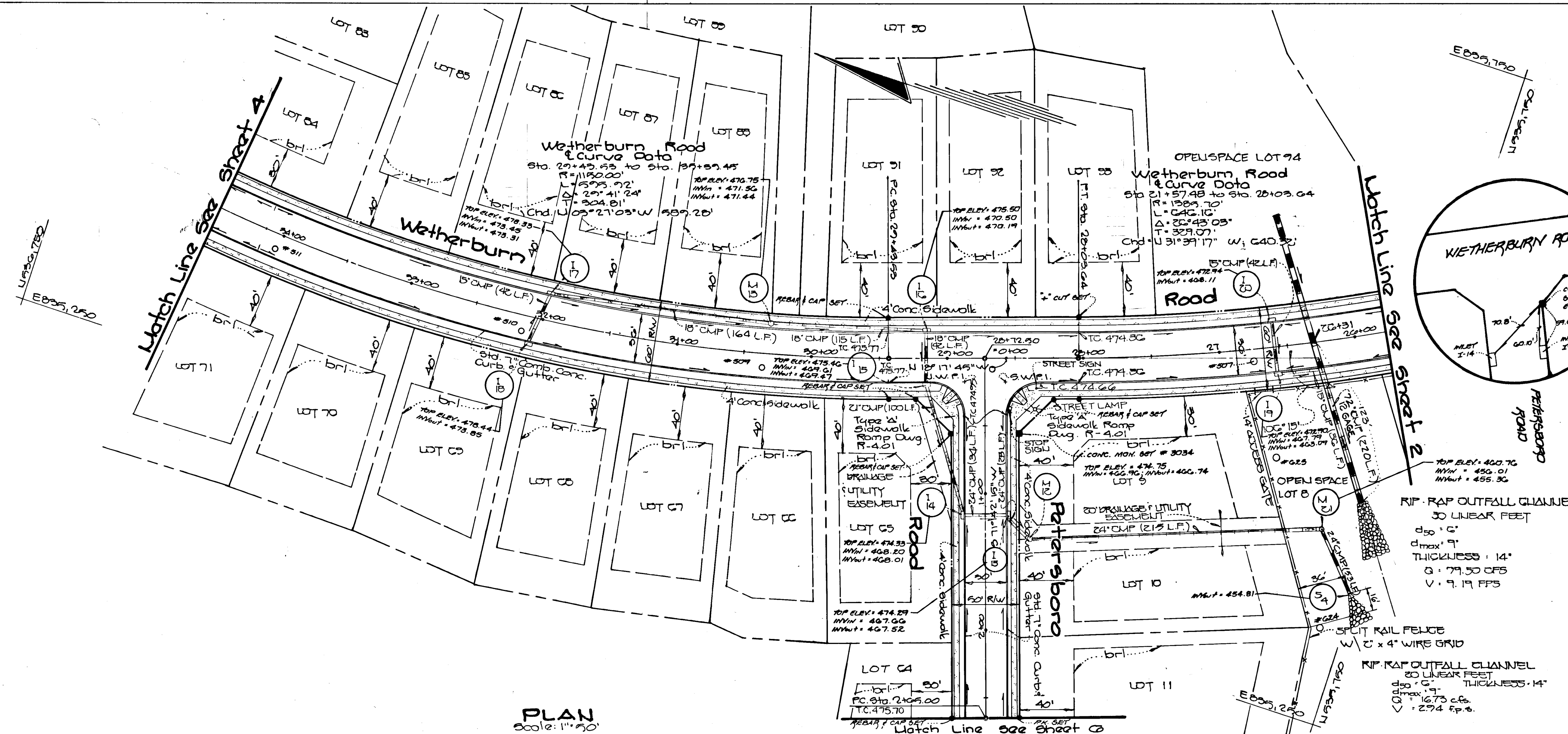
DATE	
BY	
SURVEYED	
ALIGNED	
CHECKED	
RT. OF WAY	
NO.	

APPROVED
DEPARTMENT OF PUBLIC WORKS
John M. Tamm 10/1/90
CHIEF, LAND DEVELOPMENT DIVISION MZ

APPROVED
DEPARTMENT OF PUBLIC WORKS
James W. Weiland 9/14/90
CHIEF, BUREAU OF HIGHWAYS

APPROVED
DEPARTMENT OF PUBLIC WORKS
William E. Rely 10-17-90
CHIEF, BUREAU OF ENGINEERING

APPROVED
DEPT. OF PLANNING AND ZONING
Ronald L. ... 11/2/90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
Charles J. Cravo, Jr. 2/5/90
Date

Waverly Woods
SECTION II
LOTS 1-98
SECOND & THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

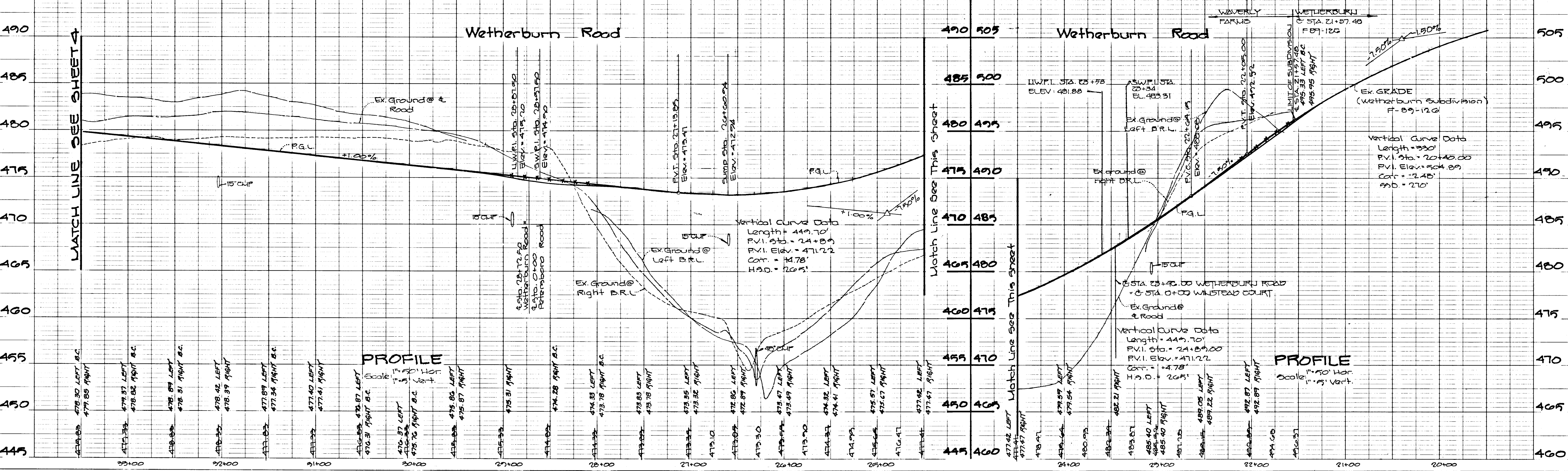
WETHERBURN ROAD - PLAN & PROFILE
PETERSBORO ROAD - PLAN

OWNER AND DEVELOPER
KENNARD WARFIELD, JR.
14633 TRIANGLE ROAD
GLENELG, MARYLAND 21737

SCALE: AS SHOWN DATE: JULY 16, 1990 DWG. NO. 3 OF 10
DES. W. L. FRALIC DRN. J. S. L. MYOUNG CHK. C. J. CROVO, SR.

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
SUITE 100 (717) BALTO NAT PIKE ELLICOTT CITY MD 21043
TELE (301) 461-2899 FAX (301) 790-3784

DATE	
BY	
SURVEYED	
GRADES CHECKED	
B.M. NOTED	
STRUCTURE NOTATIONS CHECKED	
NO.	



1253

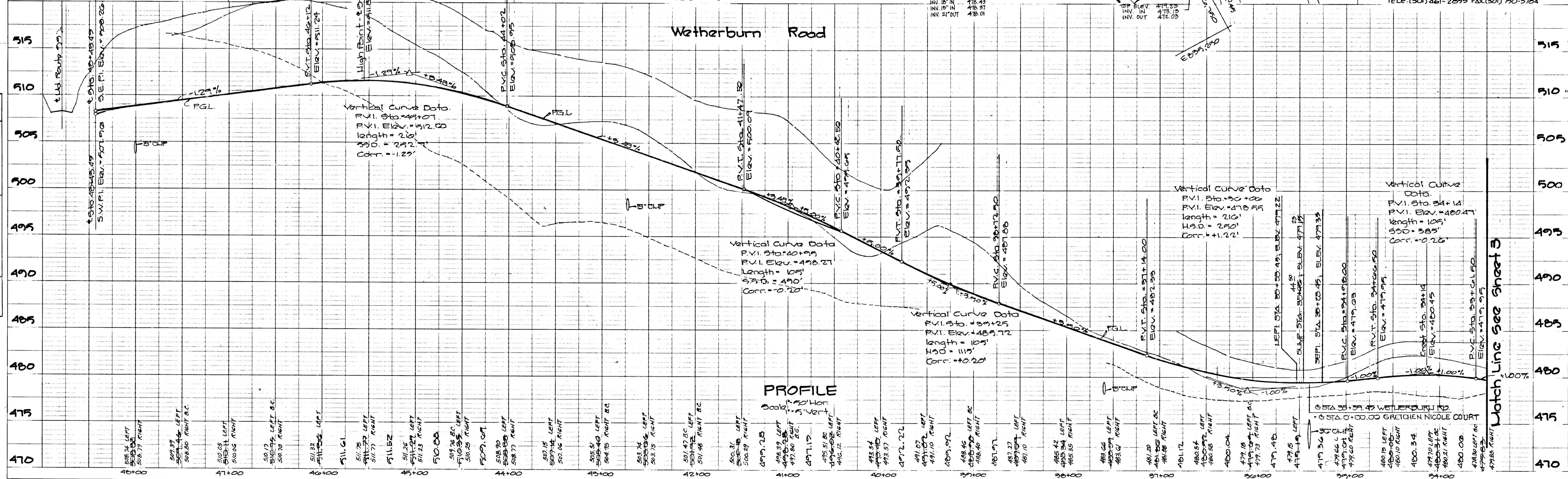
PLAN	DATE
APPROVED	
DEPARTMENT OF PUBLIC WORKS	
<i>John M. Taylor</i>	10/1/79
DATE	
BY	
DATE	
BY	
DATE	

APPROVED
DEPARTMENT OF PUBLIC WORKS
John M. Taylor 10/1/79
DATE
BY

APPROVED
DEPARTMENT OF PUBLIC WORKS
William B. Riley 10/17/80
DATE
BY

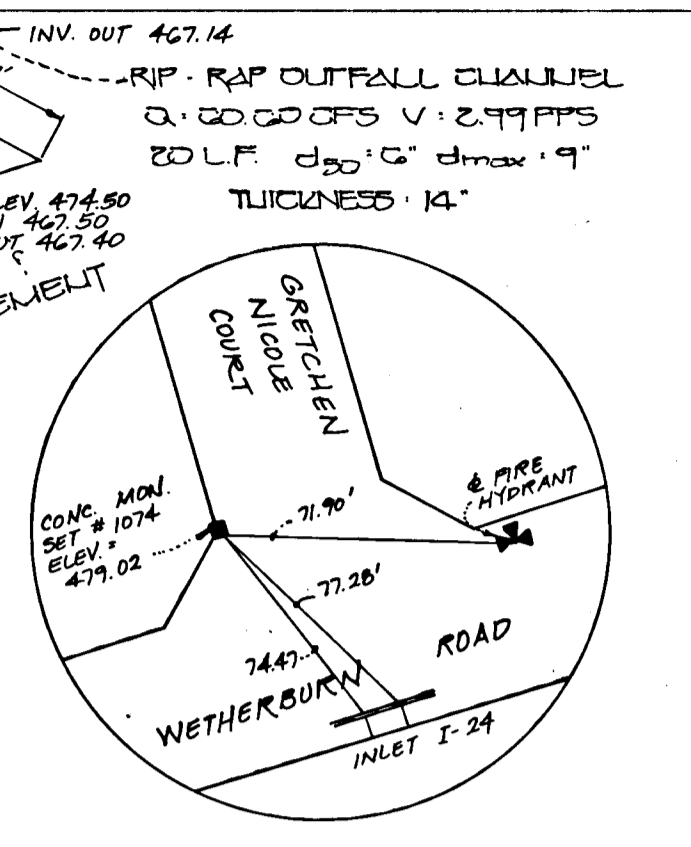
APPROVED
DEPT. OF PLANNING AND ZONING
Derek S. ... 11/2/80
DATE
BY

PROFILE	DATE
APPROVED	
DEPARTMENT OF PUBLIC WORKS	
<i>John M. Taylor</i>	10/1/79
DATE	
BY	
DATE	
BY	
DATE	



1253

Watch Line See Sheet 3



Charles J. Cravo, Sr. 2/5/80
DATE

WAVERLY WOODS
SECTION II LOTS 1-78
SECOND & THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

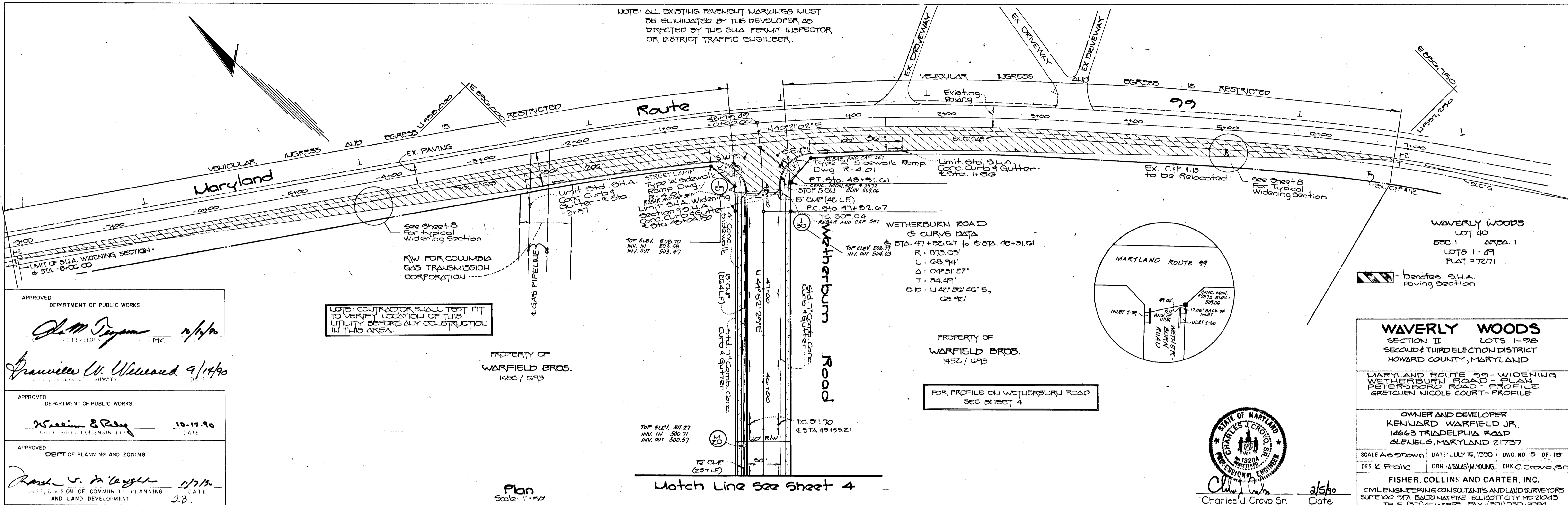
WETHERBURN ROAD - PLAN & PROFILE
GRETCHEN NICOLE COURT - PLAN

OWNER AND DEVELOPER
KENNARD WARFIELD JR.
14663 TRIADLEPHIA ROAD
GLENELG, MARYLAND 21737

SCALE As Shown DATE: JULY 16, 1980 DWG NO. 4 OF 13
DES. E. Fralic DRN. ASHUS M. YOUNG CHK. C. Cravo, Sr.

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
SUITE 100 971 BALDWIN PIKE ELLICOTT CITY MD 21043
TELE: (301) 461-2899 FAX: (301) 750-3764

NOTE: ALL EXISTING PAVEMENT MARKINGS MUST BE ELIMINATED BY THE DEVELOPER AS DIRECTED BY THE S.H.A. PERMIT INSPECTOR OR DISTRICT TRAFFIC ENGINEER.



DATE	
BY	
SURVEYED	
ALIGNED	
CHECKED	
NOTE BOOK	
NO.	

APPROVED
DEPARTMENT OF PUBLIC WORKS

John M. Ferguson 10/14/90
DATE

APPROVED
DEPARTMENT OF PUBLIC WORKS

William E. Wilson 9/14/90
DATE

APPROVED
DEPT. OF PLANNING AND ZONING

David C. Taylor 11/17/90
DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

NOTE: CONTRACTOR SHALL TEST FIT TO VERIFY LOCATION OF THIS UTILITY BEFORE ANY CONSTRUCTION IN THIS AREA.

PROPERTY OF
WARFIELD BROS.
1452 / 093

PROPERTY OF
WARFIELD BROS.
1452 / 093

FOR PROFILE ON WETHERBURN ROAD
SEE SHEET 4

WAVELY WOODS
SECTION II LOTS 1-98
SECOND & THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

MARYLAND ROUTE 99 - WIDENING
WETHERBURN ROAD - PLAN
PETERSBORD ROAD - PROFILE
GRETCHEN NICOLE COURT - PROFILE

OWNER AND DEVELOPER
KENNARD WARFIELD JR.
14663 TRADDELPHIA ROAD
GLENELG, MARYLAND 21737

SCALE AS SHOWN DATE: JULY 16, 1990 DWG. NO. 5 OF 18
DES. & F. COLLINS & CARTER, INC. DRN. ASHLAS/M. YOUNG CHK. C. CRAVO, SR.

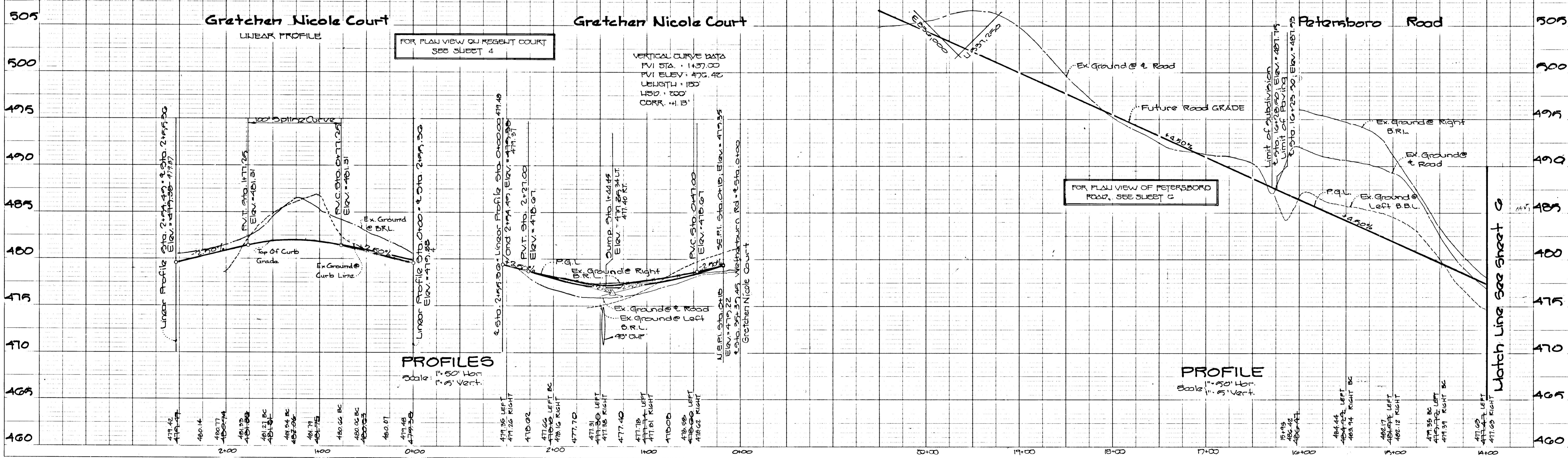
FISHER, COLLINS, AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
SUITE 100 371 BALTIMORE PIKE ELLICOTT CITY MD 21043
TELE (301) 421-2855 FAX (301) 750-3704



Plan
Scale: 1"=20'

Match Line See Sheet 4

1253



DATE	
BY	
SURVEYED	
GRADES CHECKED	
NOTE BOOK	
NO.	

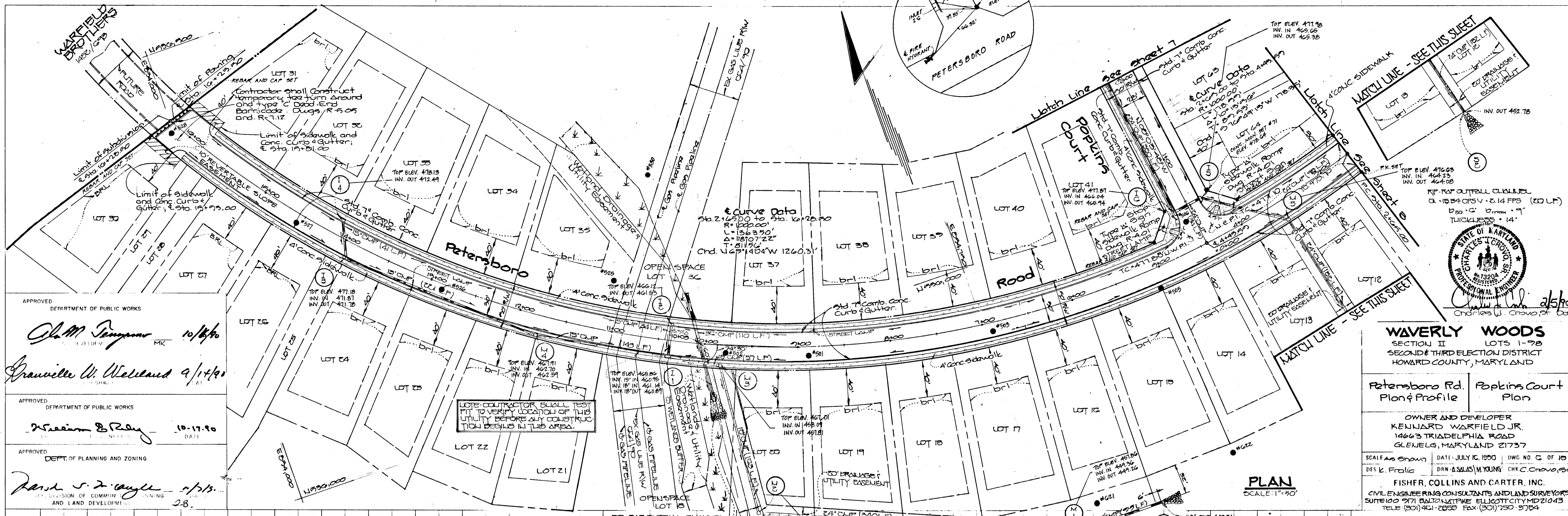
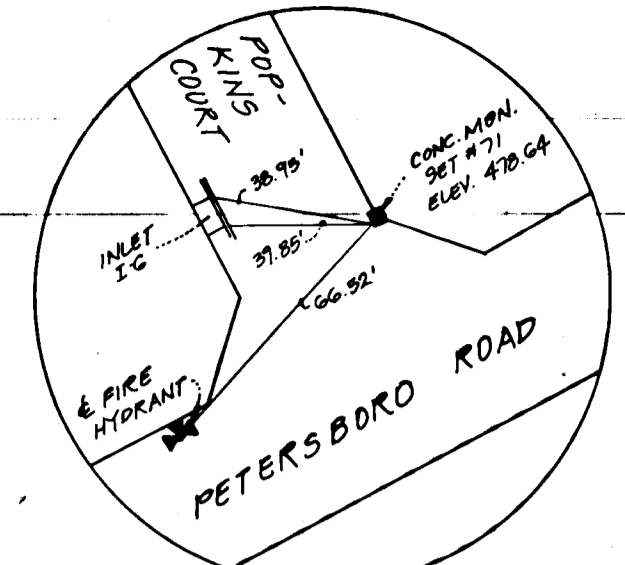
FOR PLAN VIEW ON GRETCHEN COURT
SEE SHEET 4

FOR PLAN VIEW OF PETERSBORD
ROAD, SEE SHEET C

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

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

Watch Line See Sheet C



DATE: _____ BY: _____

PLAN	REVISIONS	DATE
NO.	NO.	

NOTE: ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.

APPROVED DEPARTMENT OF PUBLIC WORKS
John M. Tamm 10/16/90
 GRANVILLE W. WELLS 9/14/90
 DEPT. OF PLANNING AND ZONING
Ronald S. Ziegler 10/15/90



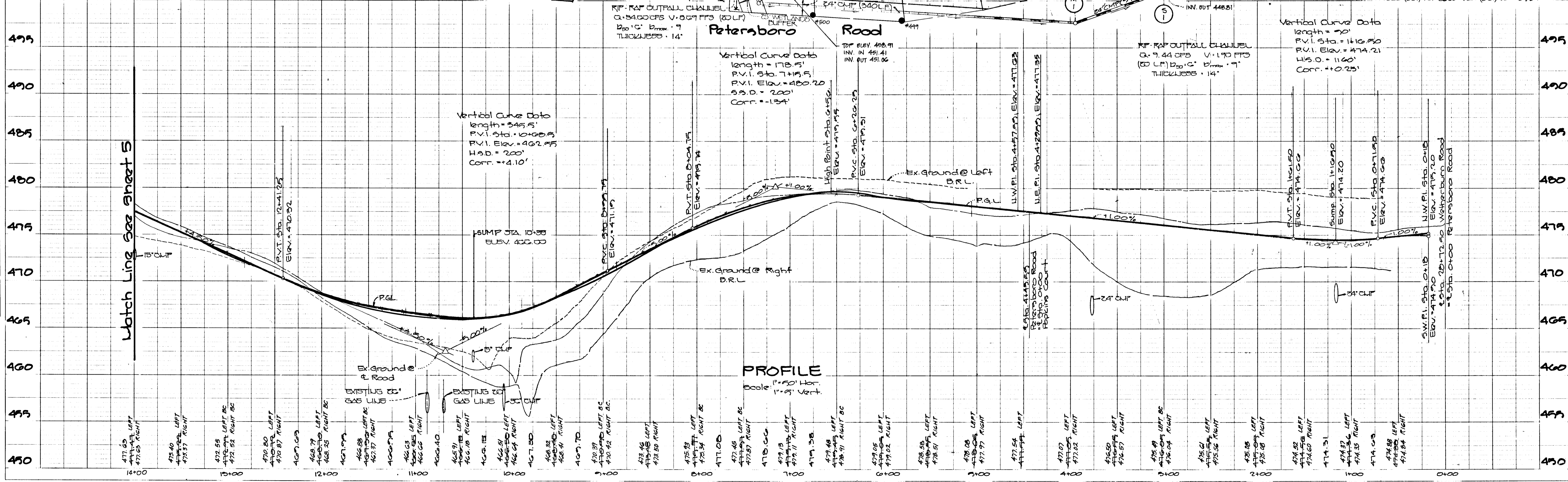
WAVERLY WOODS
 SECTION II LOTS 1-98
 SECOND & THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

Petersboro Rd. Plan & Profile Popkins Court Plan

OWNER AND DEVELOPER
 KENNARD WARFIELD JR.
 14643 TRIADELPHIA ROAD
 GLENELG, MARYLAND 21737

SCALE AS SHOWN DATE: JULY 16, 1990 DWG. NO. G. OF 10
 DES. L. FROIC DWN. A. SALAS M. YOUNG CHK. C. CHOWS

FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
 SUITE 100 971 BALDWIN PIKE ELLICOTT CITY, MD 21043
 TELE (301) 461-2055 FAX (301) 750-5784



1253

DATE	BY

APPROVED
DEPARTMENT OF PUBLIC WORKS

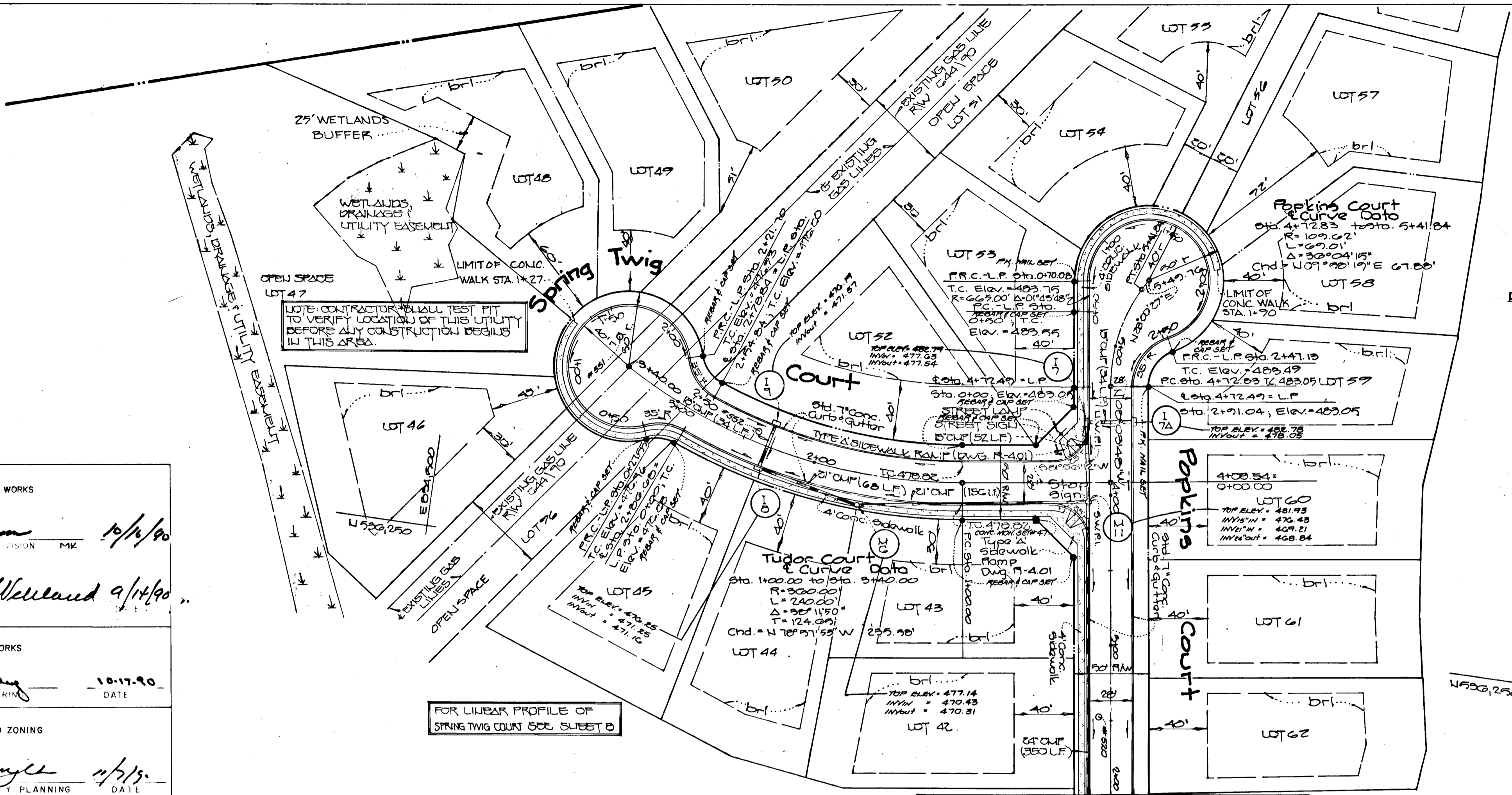
John M. Dugan 10/14/90
CHIEF, LAND DEVELOPMENT DIVISION MK

APPROVED
DEPARTMENT OF PUBLIC WORKS

James W. Welland 9/14/90
CHIEF, BUREAU OF HIGHWAYS

APPROVED
DEPT. OF PLANNING AND ZONING

Frank S. Taylor 11/11
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



DATE 2/5/90

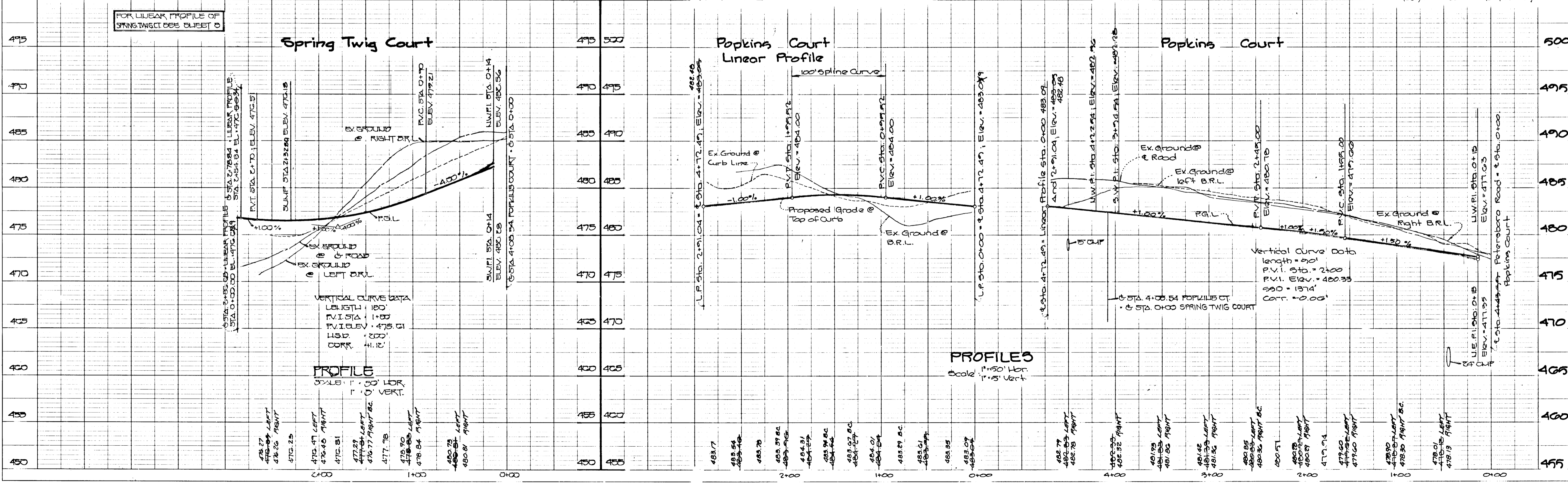
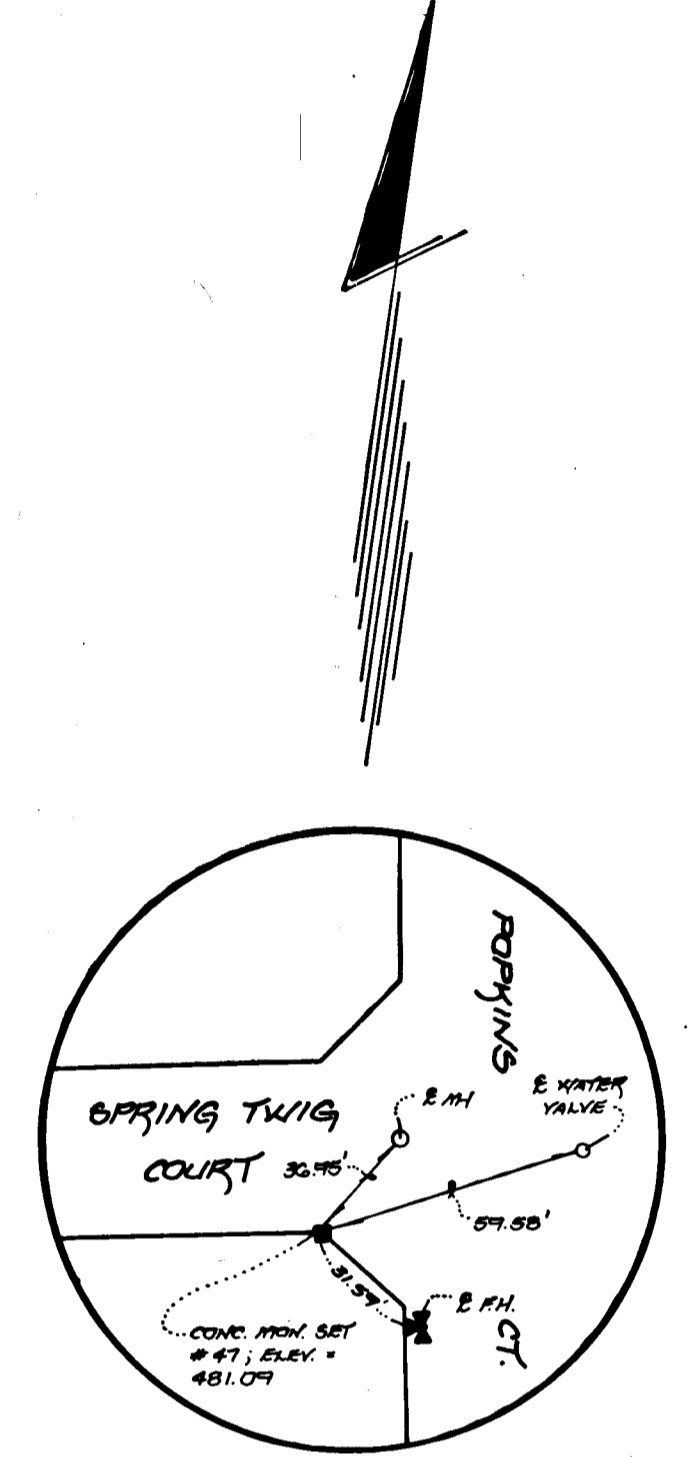
WAVERLY WOODS
SECTION II LOTS 1-78
SECOND & THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

Popkins Court Plans Profile Spring Twig Court Plan & Profile

OWNER AND DEVELOPER
KENNARD WARFIELD JR.
14663 TRIDELPHIA ROAD
GLENELG, MARYLAND 21737

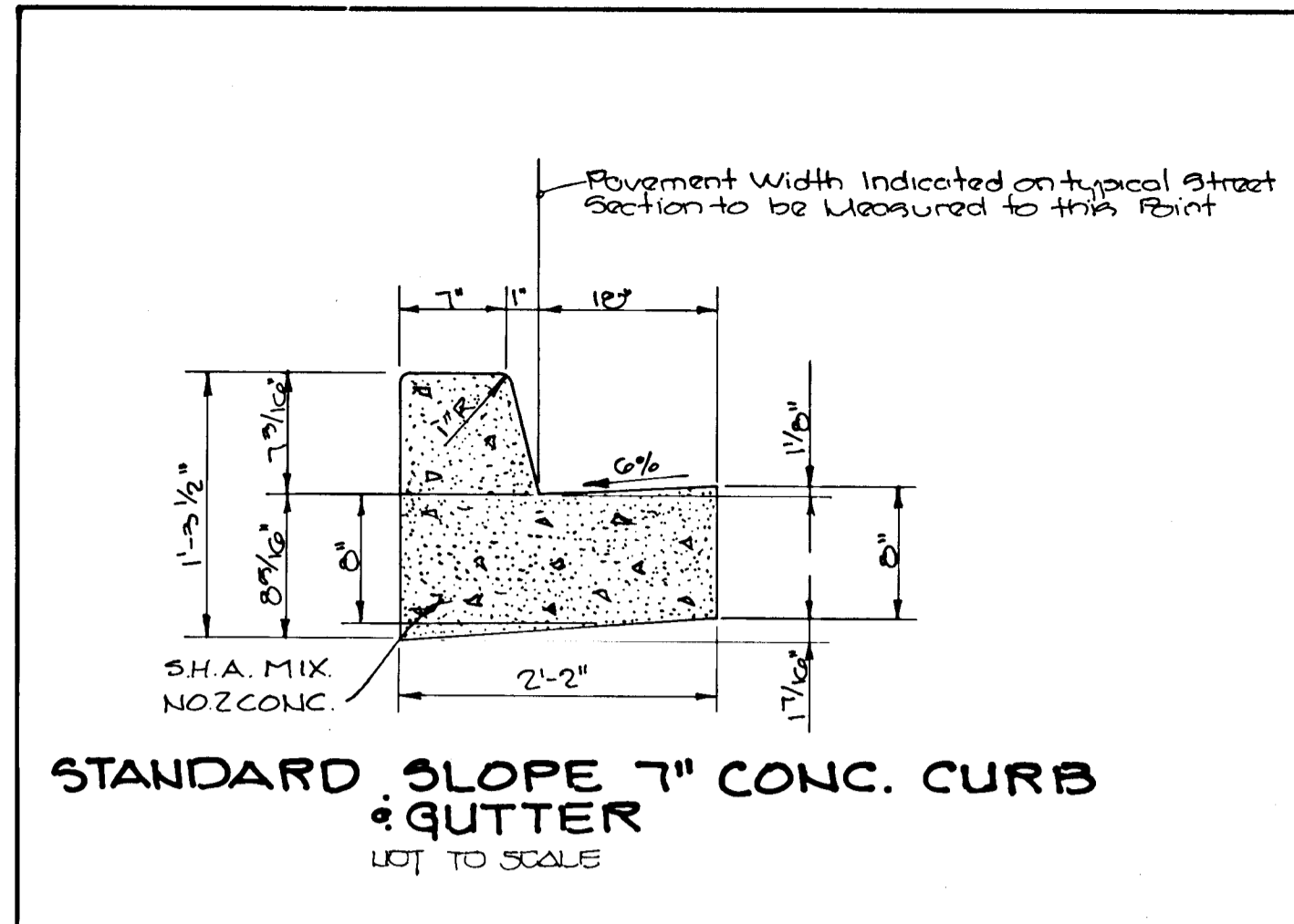
SCALE AS SHOWN DATE: JULY 16, 1990 DWG. NO. 7 OF 13
DES. & PLOT. DRN. & SALAS/M. YOUNG CHK. C. GROVES, JR.

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
SUITE 100 971 BALDWIN PIKE ELLICOTT CITY, MD 21043
TELE. (301) 461-2800 FAX: (301) 750-5704

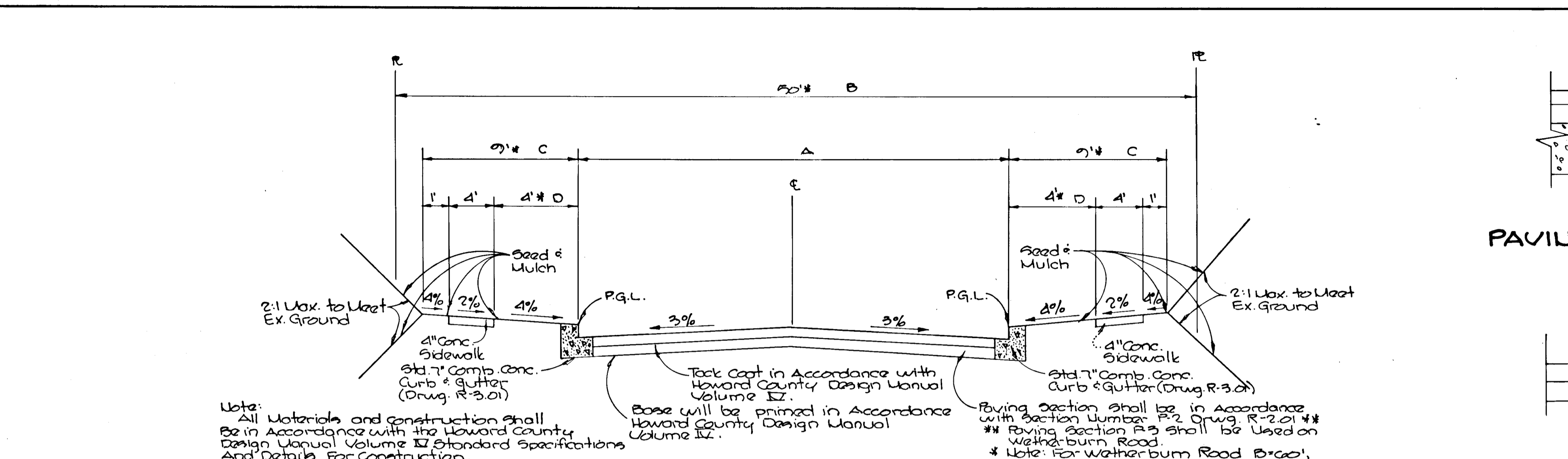


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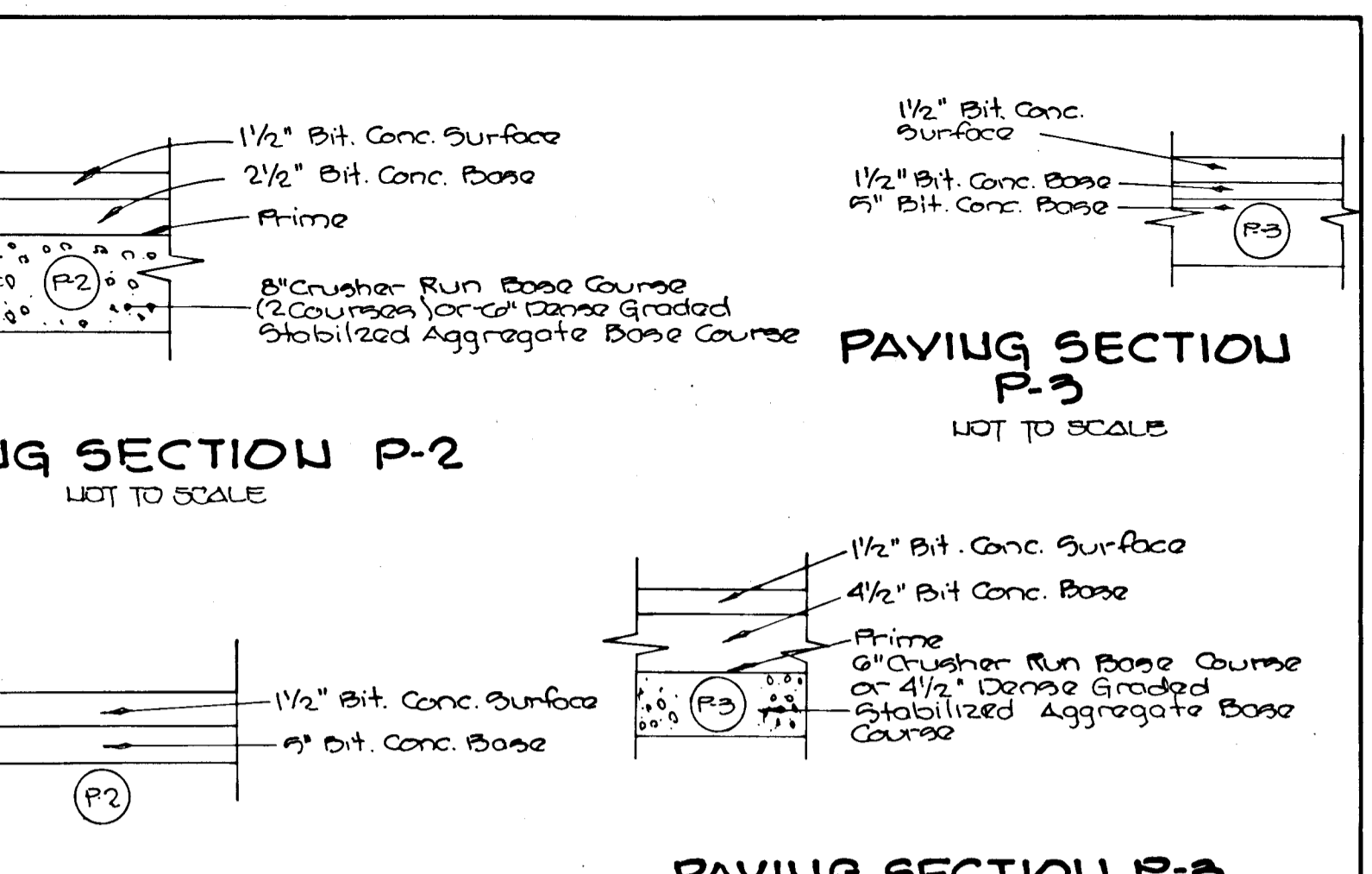
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APPROVED	
NOTED	
ALIGNMENT CHECKED	
RT. OF WAY CHECKED	
PLAN	
NOTE BOOK	
NO.	



STANDARD SLOPE 7" CONC. CURB & GUTTER
 LOT TO SCALE



TYPICAL ROADWAY SECTION
 LOT TO SCALE



PAVING SECTION P-2
 LOT TO SCALE

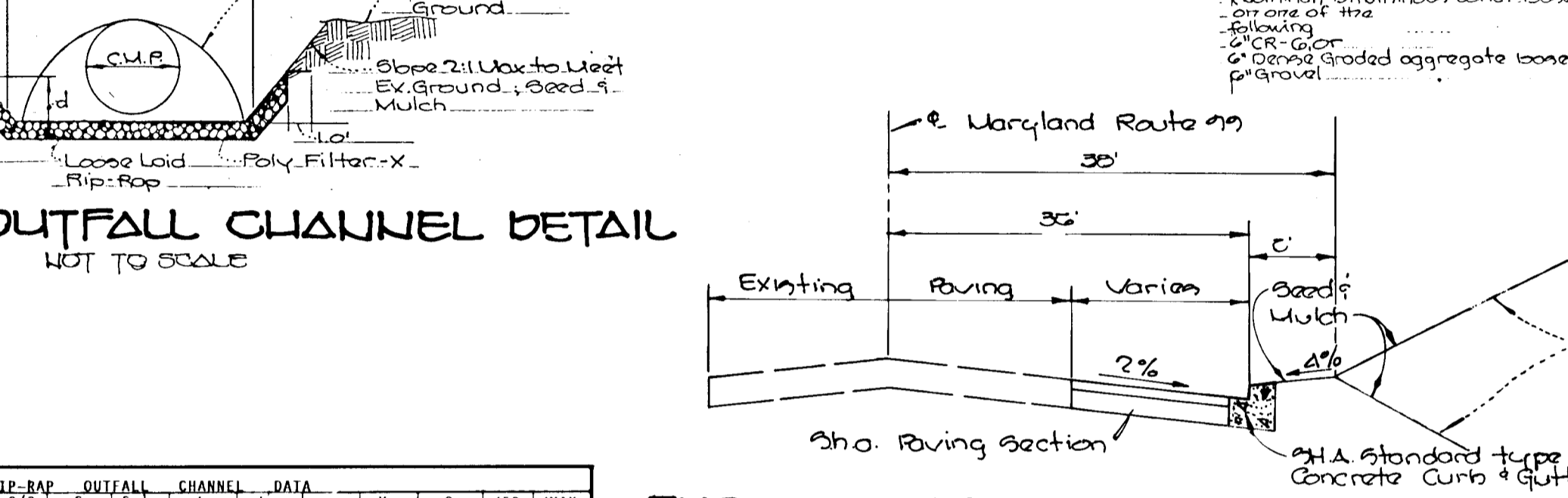
PAVING SECTION P-3
 LOT TO SCALE

APPROVED
 DEPARTMENT OF PUBLIC WORKS
John M. Tongue
 CHIEF, LAND DEVELOPMENT DIVISION
 DATE: 10/24/90

APPROVED
 DEPARTMENT OF PUBLIC WORKS
William W. Cleveland
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 9/14/90

APPROVED
 DEPARTMENT OF PUBLIC WORKS
William E. Raley
 CHIEF, BUREAU OF ENGINEERING
 DATE: 10-17-90

APPROVED
 DEPT. OF PLANNING AND ZONING
Ronald S. J. Lengler
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 DATE: 11/3/90



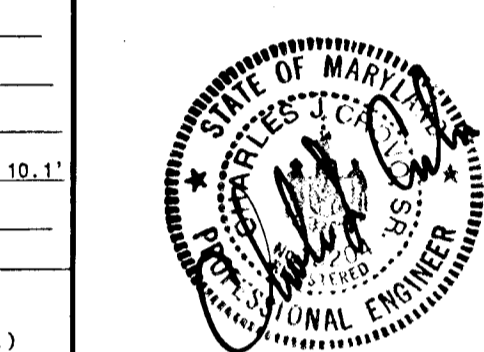
RIP-RAP OUTFALL CHANNEL DETAIL
 LOT TO SCALE

SOIL BORING DATA FOR THE S.W.M. POND

Soil Name	Classification	Design Speed	Zoning	Δ	Station Limits
Wetherburn Rd.	Minor Col.	25 U.P.U.	R-20	50'	2157.45 to 2160.04, 50
Winstead Court	cul-de-sac	25 U.P.U.	R-20	24'	0100 to 1121.55
Riverside Rd.	Local Road	30 U.P.U.	R-20	30'	0100 to 1513.00
Popkins Court	cul-de-sac	25 U.P.U.	R-20	28'	0100 to 1472.47
Spring Way Court	cul-de-sac	25 U.P.U.	R-20	28'	0100 to 2184.68
Kirchner-Nicole Court	cul-de-sac	25 U.P.U.	R-20	24'	0100 to 2199.36

Project Name: Waverly Farm
 Date Started: 10-10-89
 Boring Location: SWM Pond
 Elevation: (Topo) 452.5', Total Depth: 15.5', Ground Water @ 24 Hrs.: 4.7', caved 10.1'

Strata Depth	Sample Depth	SAMPLE		DESCRIPTION
		No.	Blows/6"	
1.5	0.0 - 1.5'	1	2	12" topsoil
		2	13"/18"	fine sand
5.5	4.0 - 5.5'	2	4	Brown, moist, loose, micaceous silty, fine sand
		3	11"/18"	Brown, moist, medium dense, micaceous silty, fine sand
10.5	9.0 - 10.5'	3	4	Brown, dry, loose, fine sand, some micaceous silt
		4	15"/18"	Brown, dry, medium dense, fine sand, some micaceous silt
15.5	14.0 - 15.5'	4	5	Brown, dry, medium dense, fine sand, some micaceous silt
		5	18"/18"	BOH 15.5'



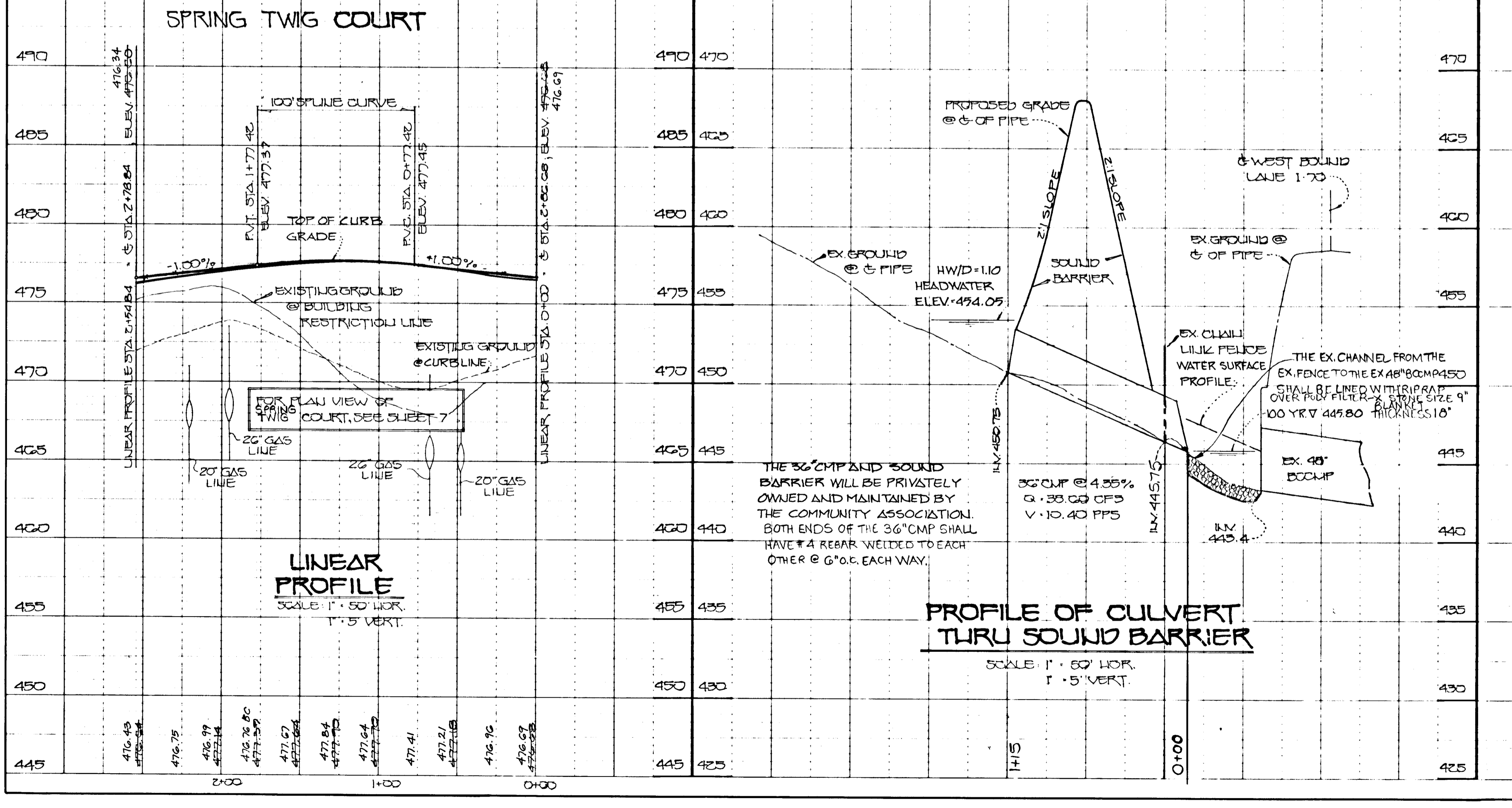
WAVERLY WOODS
 SECTION II
 SECOND & THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TYPICAL ROADWAY SECTION STORM DRAIN PROFILES NOTES AND DETAILS, SPRING TWIG COURT LINEAR PROFILE & CULVERT PROFILE & SOUND BARRIER

OWNER AND DEVELOPER
 KENNARD WARFIELD JR.
 14663 TRIPLE PHIA ROAD
 GLENELLS, MARYLAND 21737

SCALE AS SHOWN DATE: JULY 16, 1990 DWG. NO. 8 OF 10
 DES. K. Frolic DRN. ASADUL M. YOUNG CHK. C. Cravo, Sr.

FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
 SUITE 100 971 BALDWIN PIKE ELLICOTT CITY MD 21043
 TELE: (301) 461-2355 FAX: (301) 750-3704



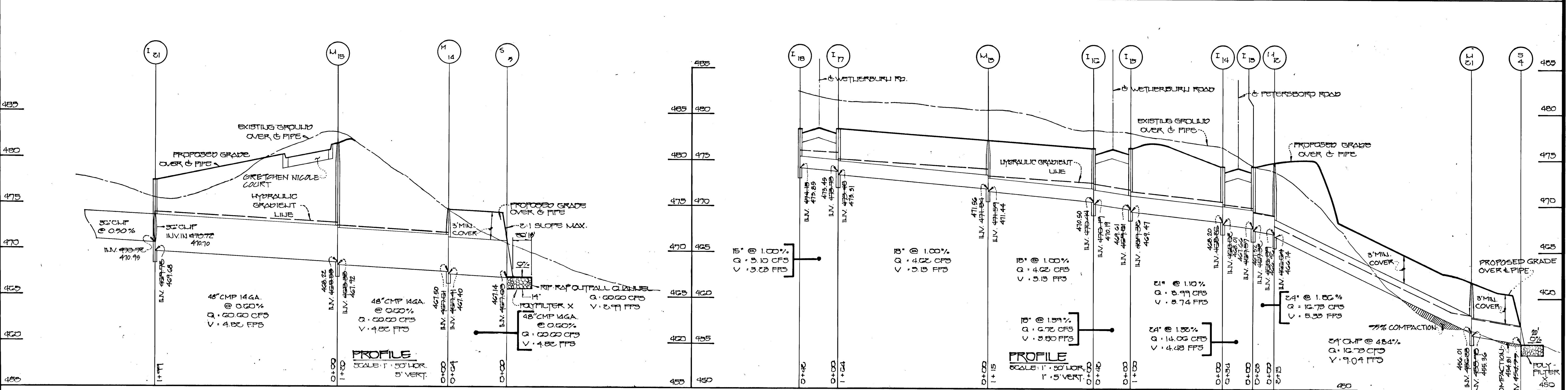
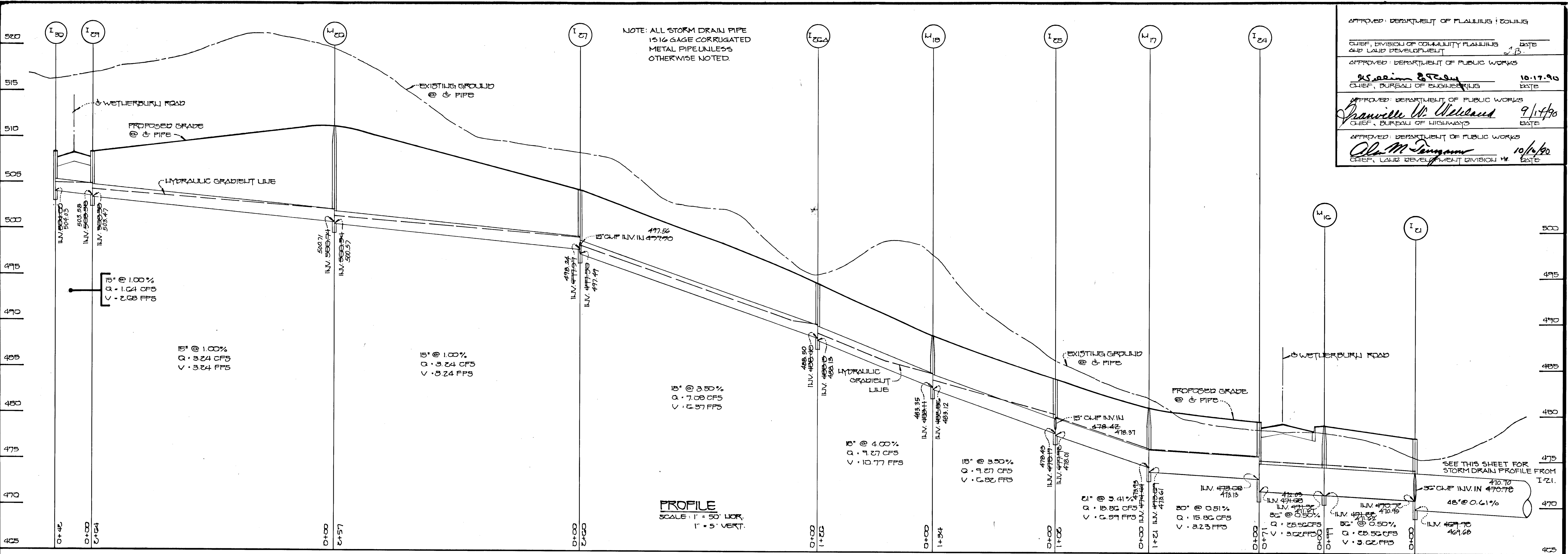
Project Name: Waverly Farm
 Date Started: 10-10-89
 Boring Location: SWM Pond
 Elevation: (Topo) 447.5', Total Depth: 15.5', Ground Water @ 24 Hrs.: 4.3', caved 10.7'

Strata Depth	Sample Depth	SAMPLE		DESCRIPTION
		No.	Blows/6"	
1.5	0.0 - 1.5'	1	2	12" topsoil
		2	18"/18"	Light brown with gray mottling, moist, loose, silt, some clay, trace fine sand and mica
5.5	4.0 - 5.5'	2	3	Light brown with gray mottling, moist, medium dense, clayey fine sand and silt
		3	18"/18"	Light brown with gray mottling, moist, dense, clayey fine sand and silt, some medium gravel
10.5	9.0 - 10.5'	3	4	Light brown with gray mottling, moist, dense, clayey fine sand and silt, some medium gravel
		4	12"/18"	Light brown with gray mottling, moist, dense, clayey fine sand and silt, some medium gravel
15.5	14.0 - 15.5'	4	7	Light brown with gray mottling, moist, dense, clayey fine sand and silt, some medium gravel
		5	14"/18"	BOH 15.5'

Project Name: Waverly Farm
 Date Started: 10-10-89
 Boring Location: SWM Pond
 Elevation: (Topo) 446', Total Depth: 15.5', Ground Water @ 24 Hrs.: 2.9', caved 9.5'

Strata Depth	Sample Depth	SAMPLE		DESCRIPTION
		No.	Blows/6"	
1.5	0.0 - 1.5'	1	1	12" topsoil
		2	18"/18"	Gray brown, moist, loose, micaceous silt with little clay and fine sand
5.5	4.0 - 5.5'	2	3	Grayish green, moist, loose, very fine sand and micaceous silt
		3	18"/18"	Greenish brown, moist, loose, fine sandy, micaceous silt
10.5	9.0 - 10.5'	3	6	Greenish brown, moist, medium dense, fine sandy, micaceous silt
		4	12"/18"	Greenish brown, moist, medium dense, fine sandy, micaceous silt
15.5	14.0 - 15.5'	4	5	Reddish brown, damp, loose, very fine sand, some silt and mica
		5	14"/18"	BOH 15.5'

1253



1253

FISHER, COLLINS & CARTER
 CIVIL ENGINEERS AND LAND SURVEYORS
 9171 BALTIMORE NATIONAL PIKE • SUITE 100
 ELLICOTT CITY, MD 21043
 TELE: (301) 401-2855 • FAX: (301) 750-3784

OWNER AND DEVELOPER
 Kennard Warfield Jr.
 14663 Triadelphia Rd.
 Glenzig, Maryland
 21737

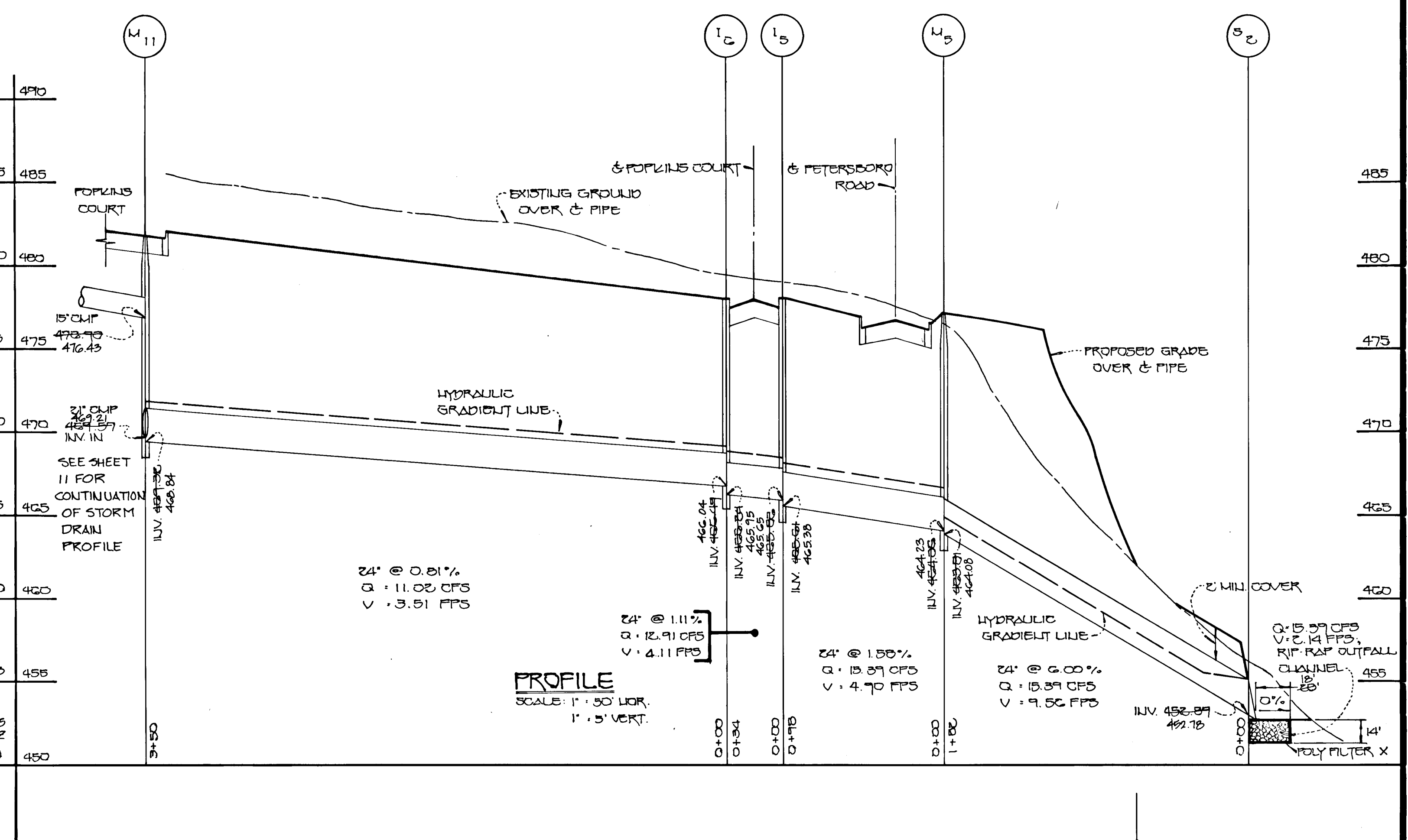
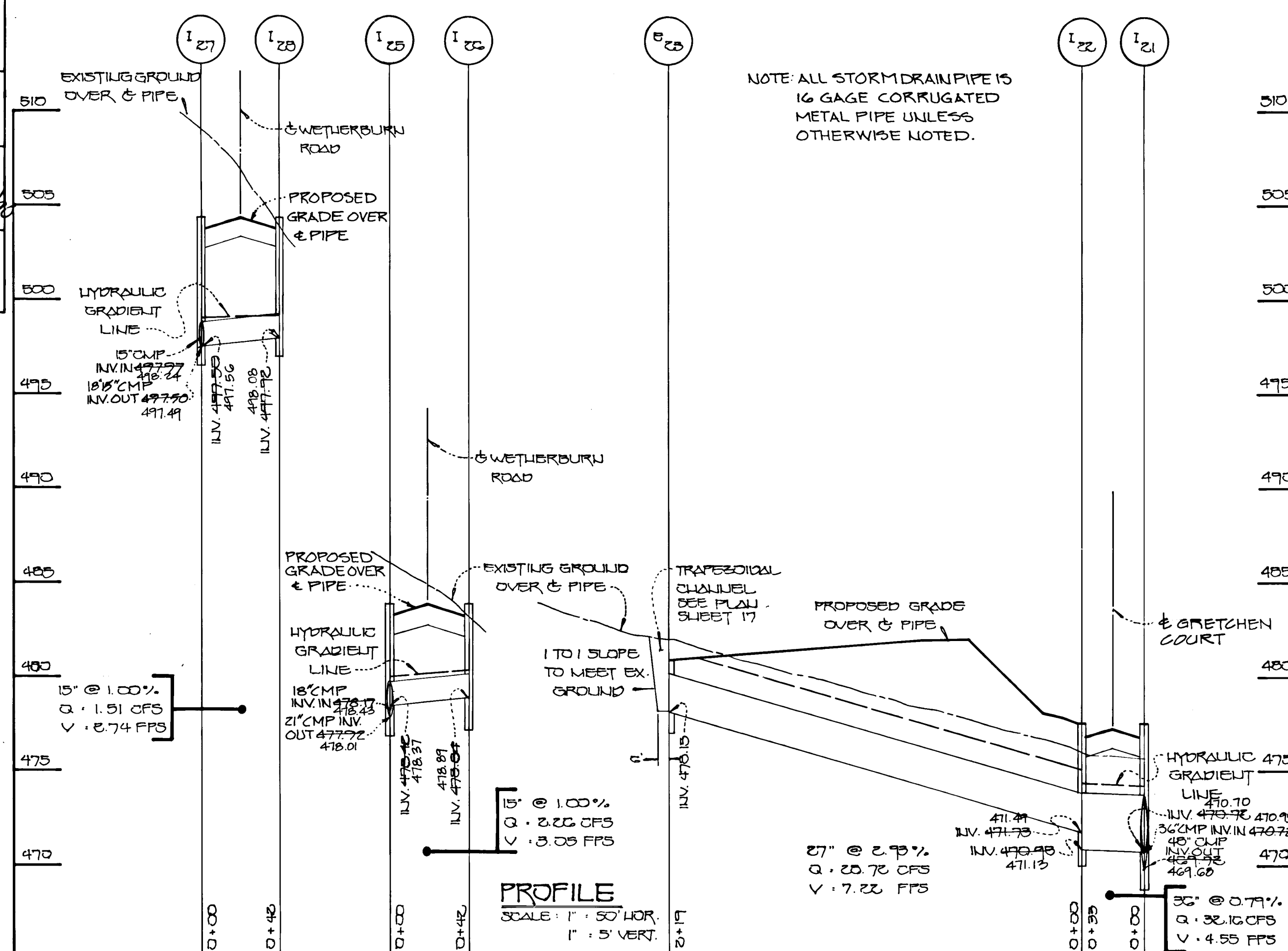
Notes: See Sheet 18 For Water Quality Pond Profiles At Storm Drain Outfalls.

2/5/90

STORM DRAIN PROFILES
WAVELY WOODS
 SECTION II LOTS 1-78
 2ND & 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 SHEET 9 OF 10
 DATE: JULY 10, 1990

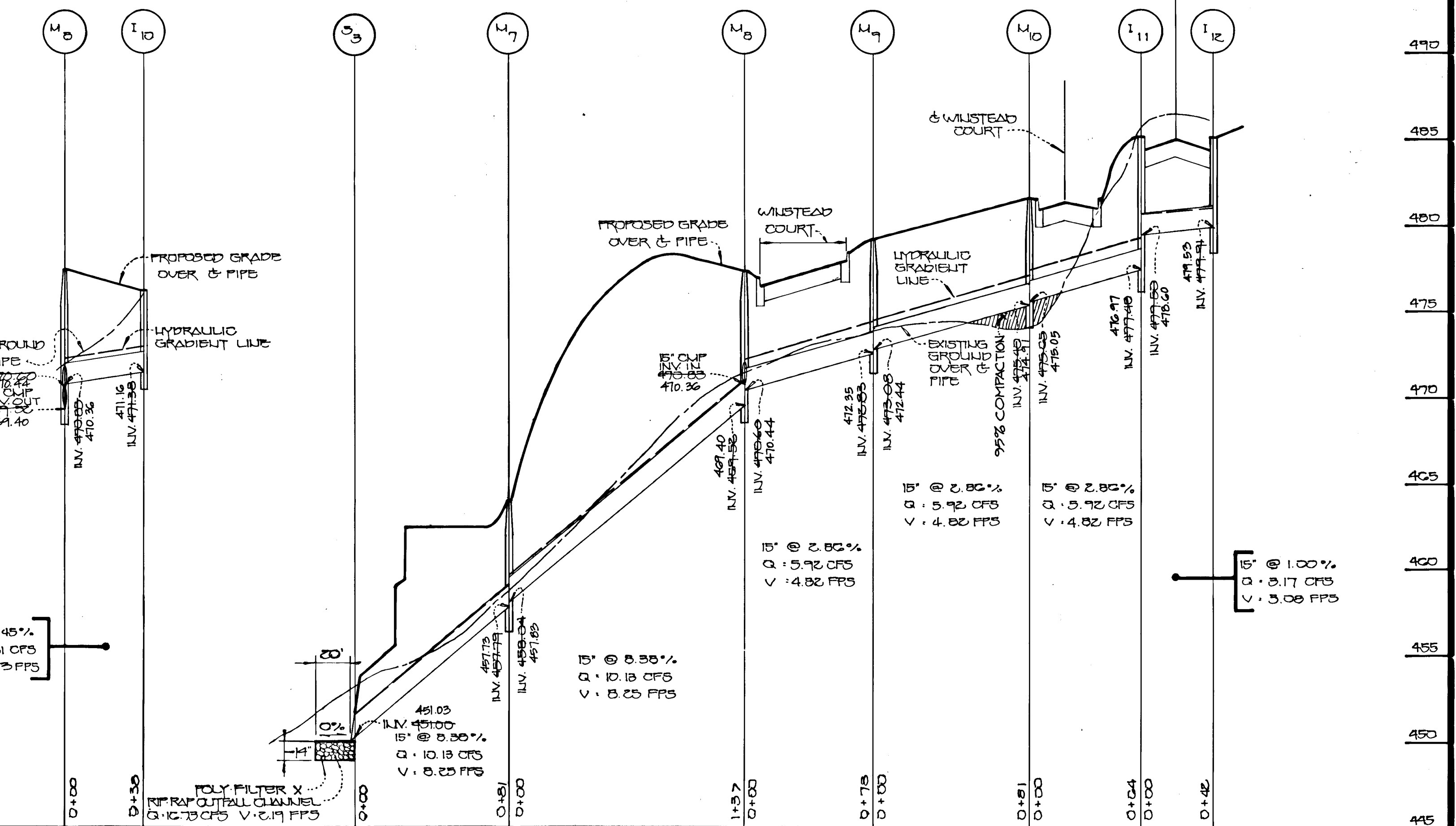
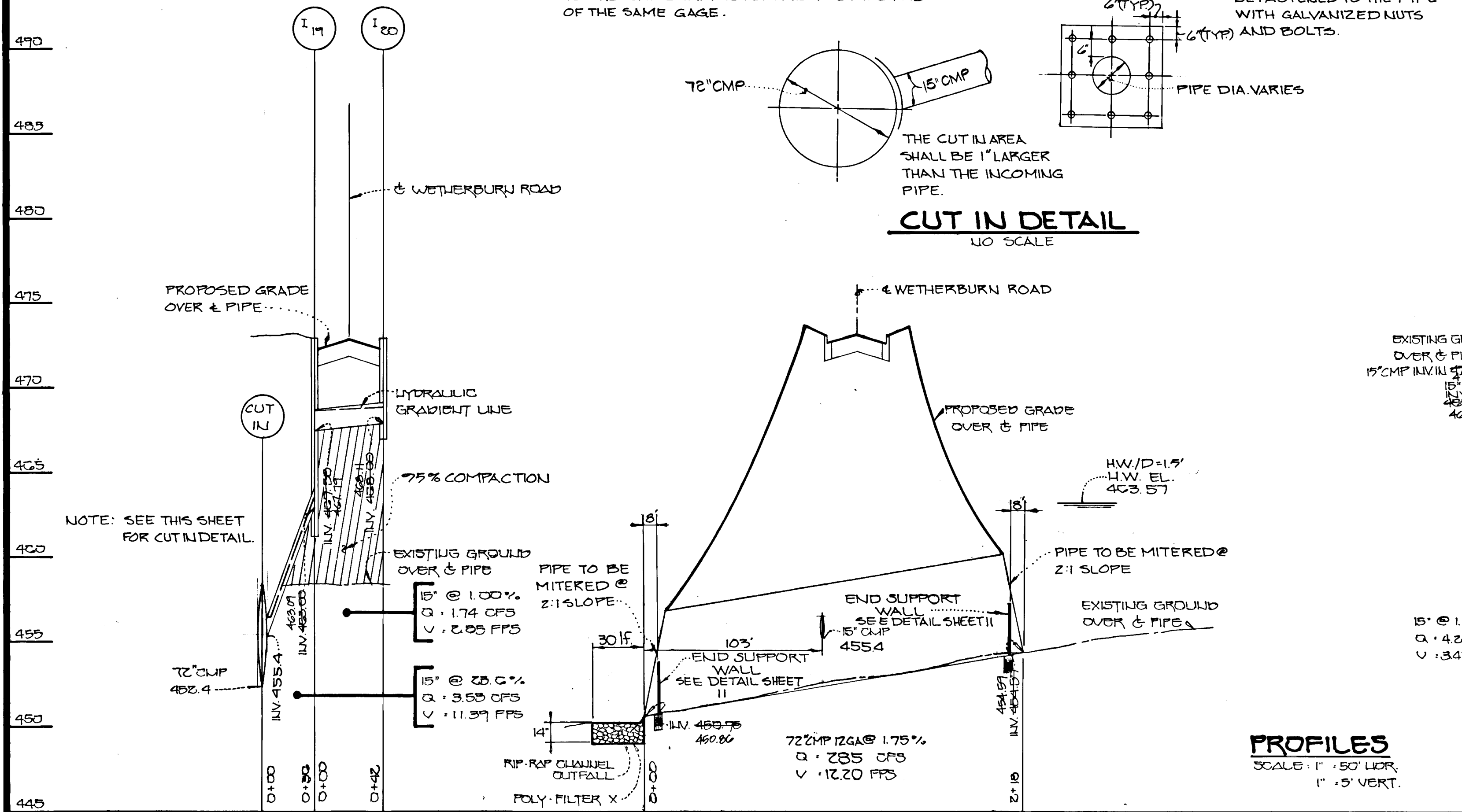
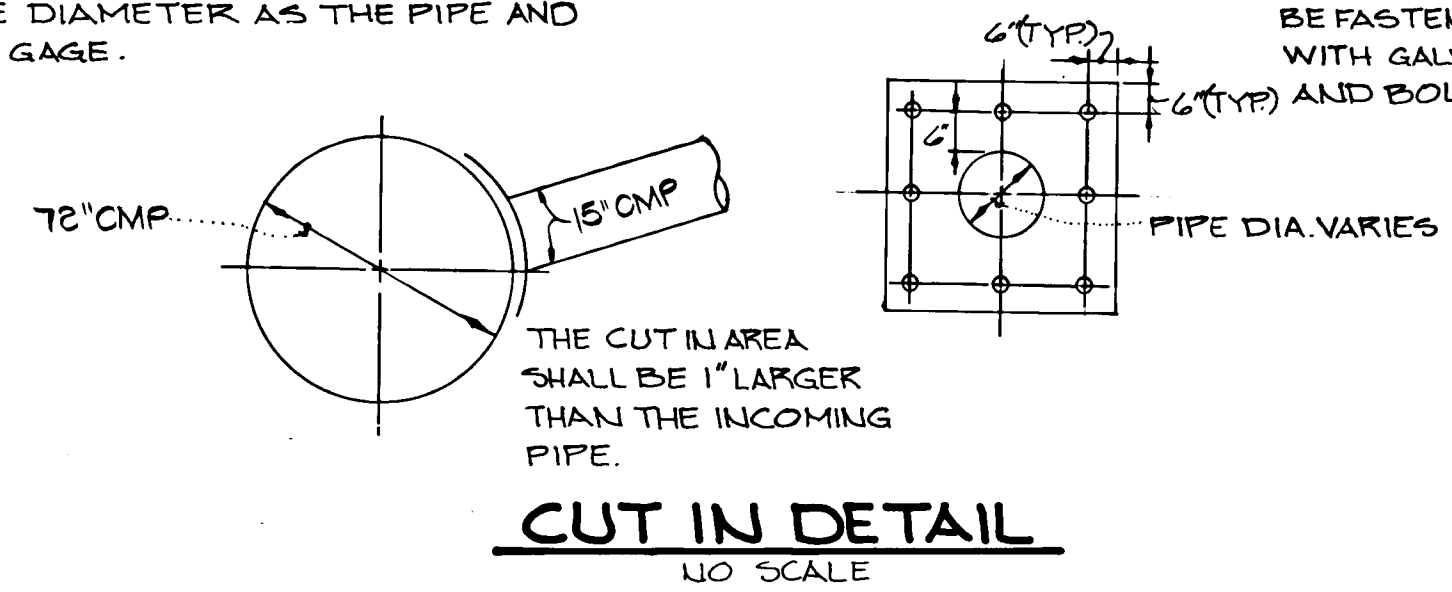
AS-BUILT 9-19-96 F 90-126

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE 12/8
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING DATE 10-11-96
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION DATE



THE SADDLE PLATE SHALL BE CURVED TO THE SAME DIAMETER AS THE PIPE AND OF THE SAME GAGE.

THE SADDLE PLATE SHALL BE FASTENED TO THE PIPE WITH GALVANIZED NUTS AND BOLTS.



Note: See Sheet 18 For Water Quality Pond Profiles At Storm Drain Outfalls.



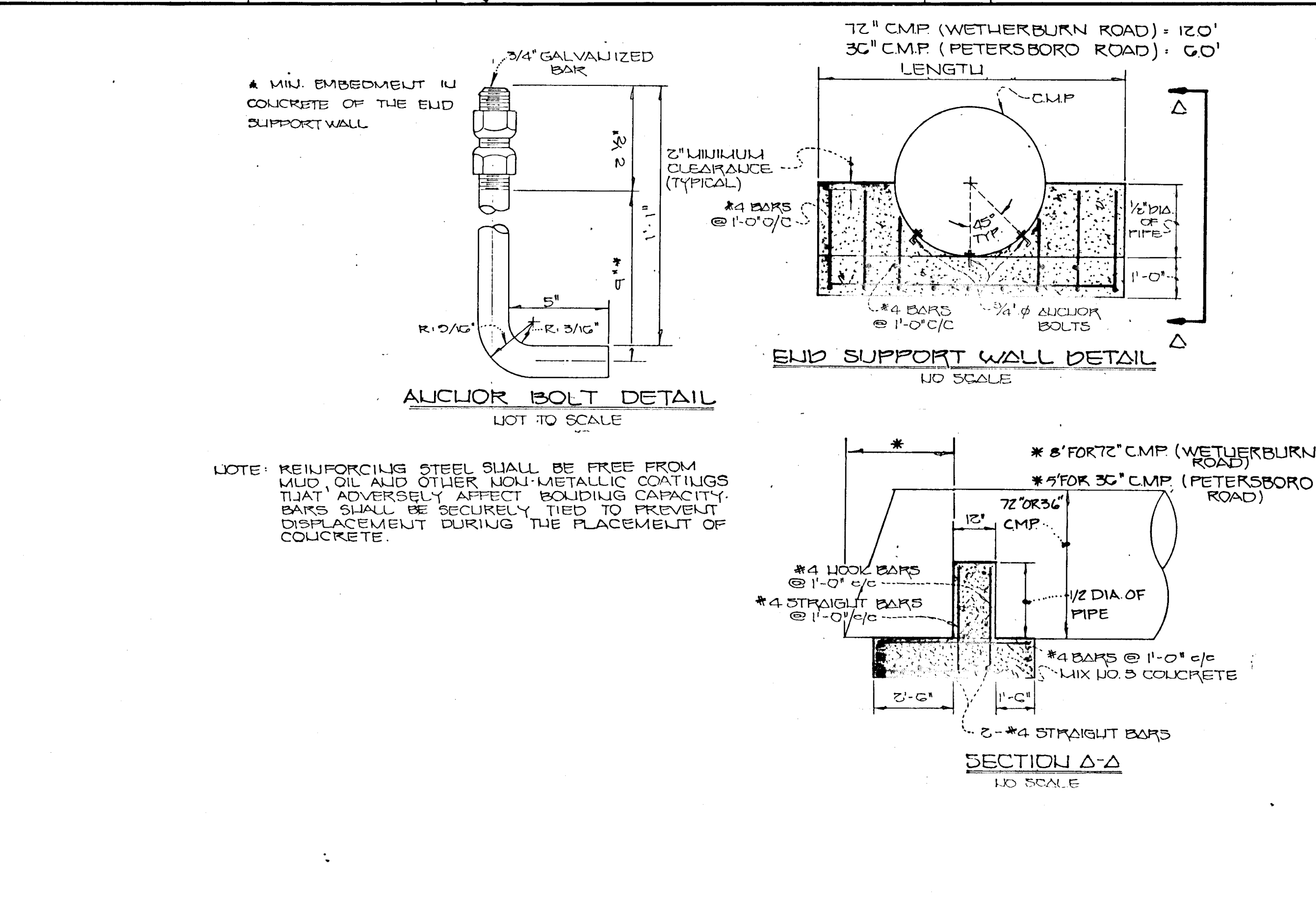
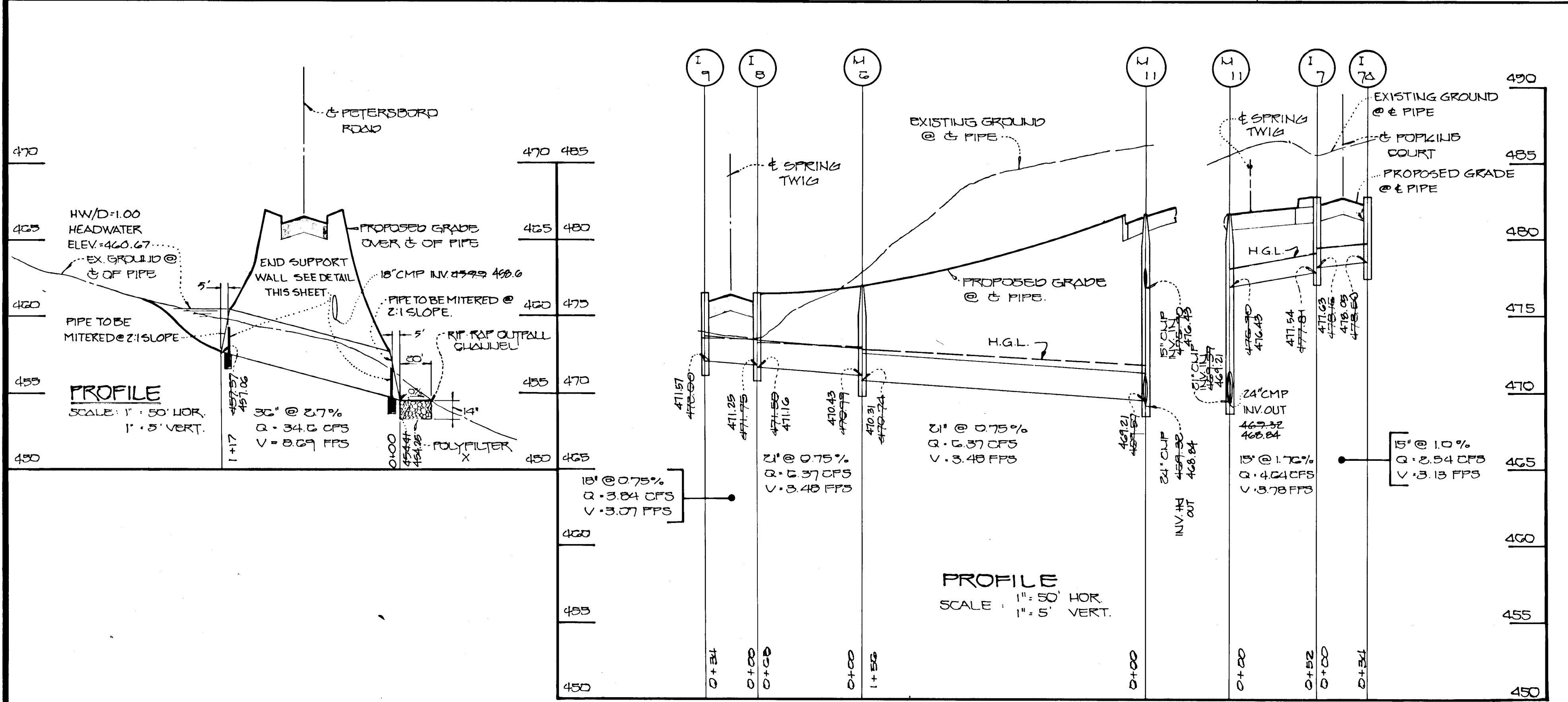
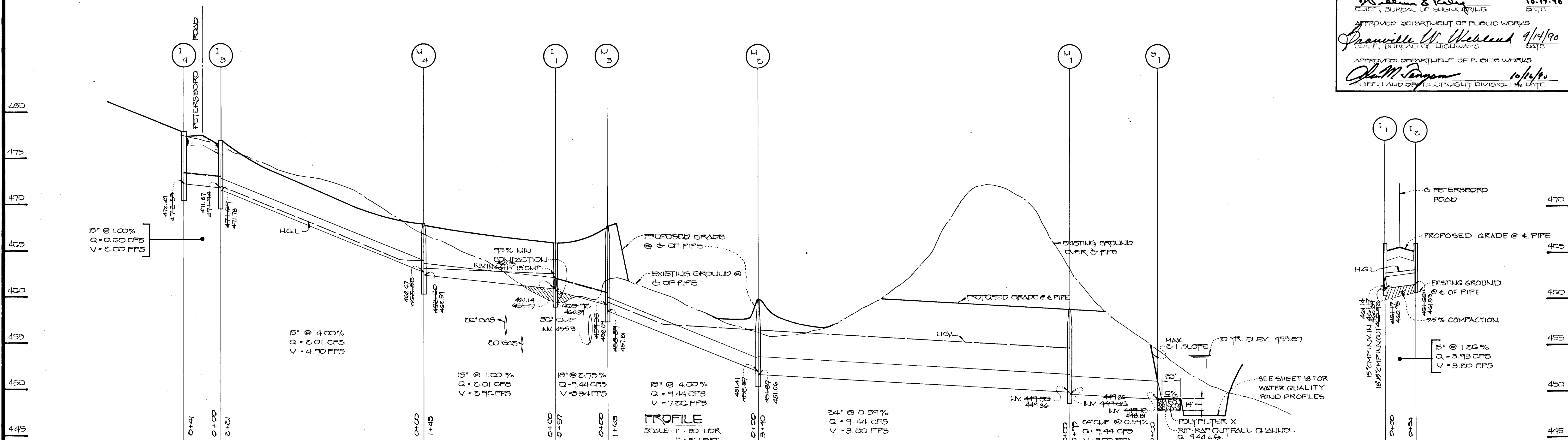
1253
 FISHER, COLLINS & CARTER
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 ELLICOTT CITY, MD 21043
 TELE: (301) 461-2855 • FAX: (301) 750-3784

Owner And Developer
 Harmond Warfield Jr.
 14663 Triadelphia Rd
 Glenelg, Maryland
 21737

STORM DRAIN PROFILES
 SECTION II LOTS 1-78
 2ND & 3RD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN SUBSET 10 OF 18
 DATE: JULY 10, 1996

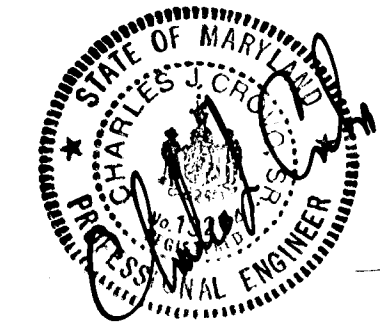
NOTE: ALL STORM DRAIN PIPE IS
1/2 GAGE CORRUGATED METAL
PIPE UNLESS OTHERWISE NOTED.

APPROVED: DEPARTMENT OF PLANNING & ZONING
CHIEF, DIVISION OF COMMUNITY PLANNING, DATE AND LAND DEVELOPMENT 1/13
APPROVED: DEPARTMENT OF PUBLIC WORKS
10-17-96
DATE
10/14/96
DATE
APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, LAND DEVELOPMENT DIVISION, DATE



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS &
LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043
(301) 461-2855

Owner And Developer
Kennard Warfield Jr.
14623 Triadelphia Rd.
Glenelg, Maryland
21737



STORM DRAIN PROFILES
WAVERLY WOODS
SECTION II LOTS 1-98
2ND & 3RD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN SHEET 11 OF 18
DATE: JULY 10, 1990

AS BUILT 9-19-96 F-10-126

1253

PERMANENT SEEDING NOTES:
 APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING.

2) HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE (.05 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 THRU FEBRUARY 28, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

3) APPLY 1 1/2 TONS PER ACRE (10 TO 90 LBS/1000 SQ.FT.) OF UNROOTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING. MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES:
 APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

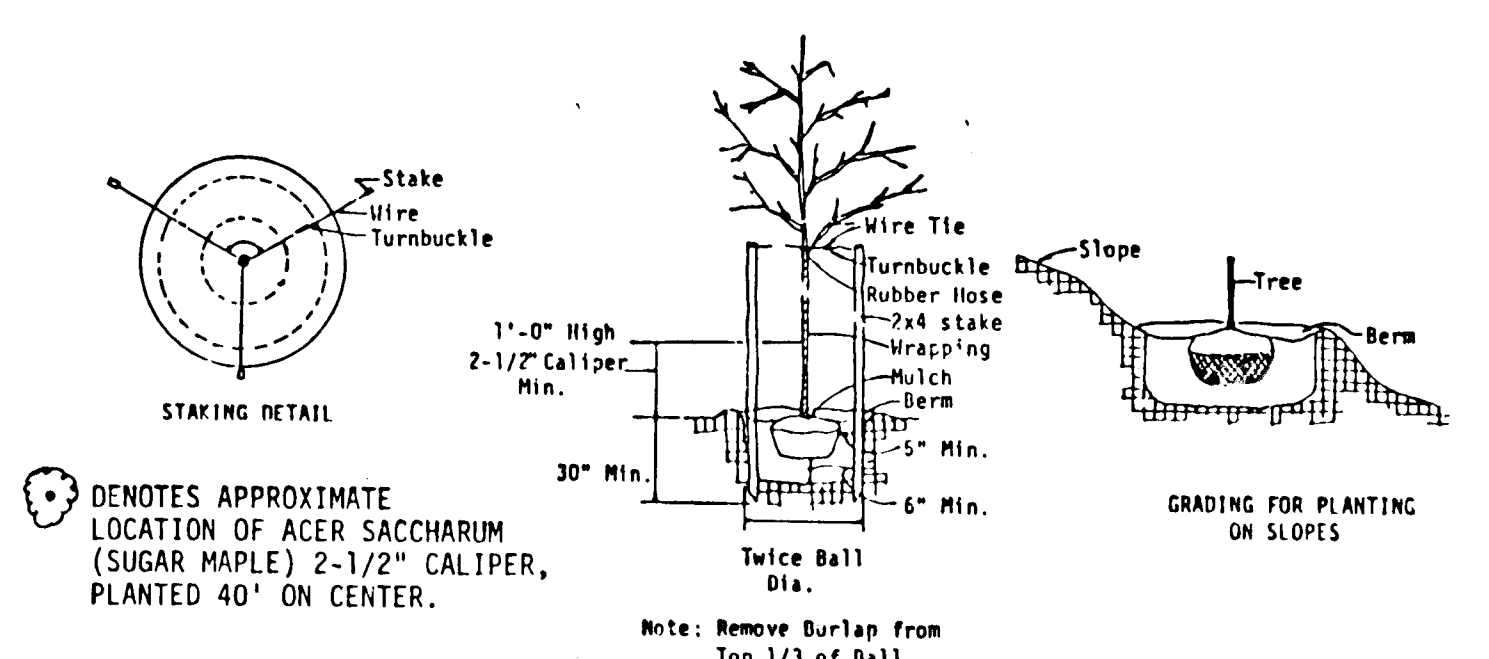
SEEDING PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)

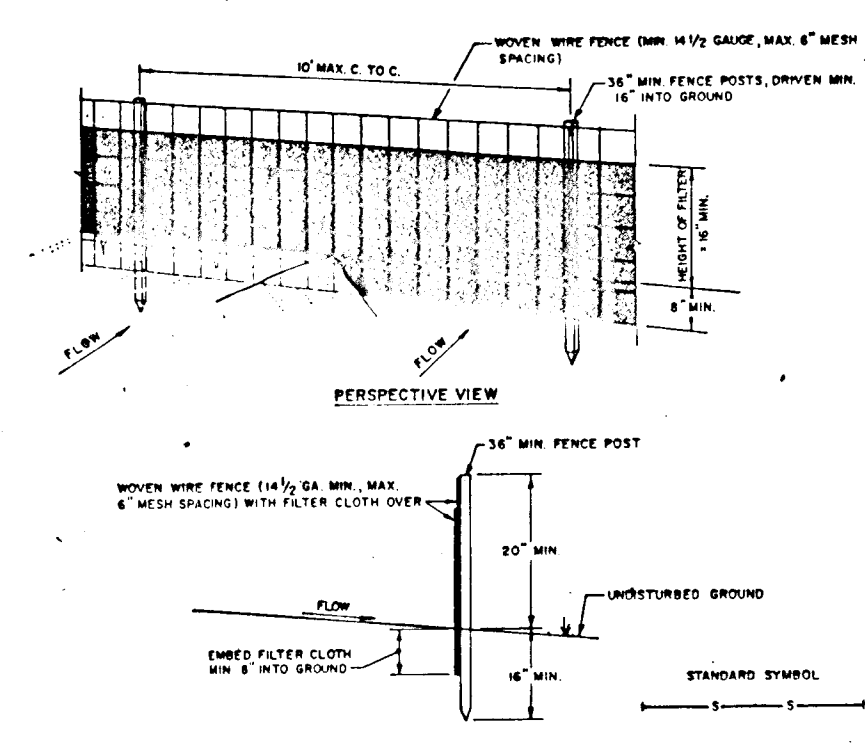
SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

3) APPLY 1 1/2 TONS PER ACRE (10 TO 90 LBS/1000 SQ.FT.) OF UNROOTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (8 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

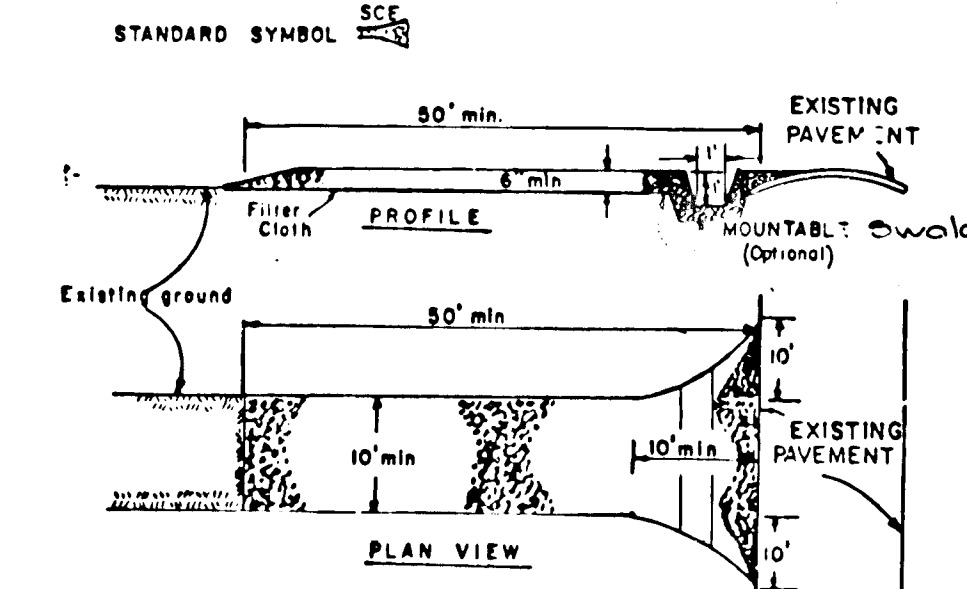
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



NOTE: STREET TREES WILL BE PLANTED OUTSIDE WALK AND STREET TREES WILL CLEAR STORM DRAIN STRUCTURES BY A MINIMUM DISTANCE OF 10'. CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATIONS OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL COMPLY WITH "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS". SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.



- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE:**
- When wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to wire fence with ties spaced every 6" at top and bottom.
 - When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
 - Maintenance shall be performed as needed and posted. Remove weeds "BULBS" develop in the silt fence.
- POSTS: STEEL EITHER T OR U TYPE OR 2" W/HEMLOCK
 FENCE: WOODEN WIRE, 1/4" GA. 6" MAX. FRESH OPENING
 FILTER CLOTH: FILTER X, HURON, LUMBER, STAINLESS, LUMBER, LUMBER OR APPROVED EQUAL
 PREPARED CEMENT: GEOPAL, CONCRETE, OR APPROVED EQUAL



- CONSTRUCTION SPECIFICATIONS:**
- Stone Size - Use 3" stone, or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 - Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable base with six (6) slippers will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 - Periodic inspection and needed maintenance shall be provided after each 24 hrs.

STABILIZED CONSTRUCTION ENTRANCE LOT TO SCALE

SEDIMENT CONTROL NOTES:
 1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).

2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4) ALL SEDIMENT TRAPS/BASINS SHOW MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), MULCHING (SEC. 52), TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7) SITE ANALYSIS:

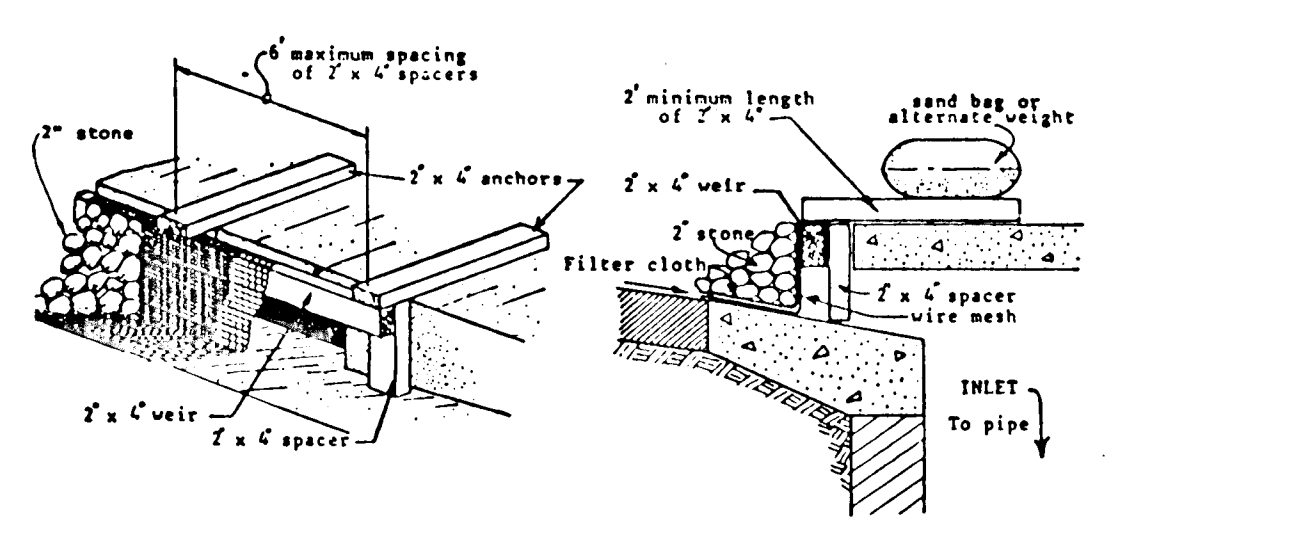
TOTAL AREA OF SITE	55.709 ACRES
AREA DISTURBED	20.100 ACRES
AREA TO BE ROOFED OR PAVED	30.200 ACRES
AREA TO BE VEGETATIVELY STABILIZED	10.222 ACRES
TOTAL CUT	16,000 CU. YDS.
TOTAL FILL	19,000 CU. YDS.

OFFSITE WASTE/BORROW AREA LOCATION

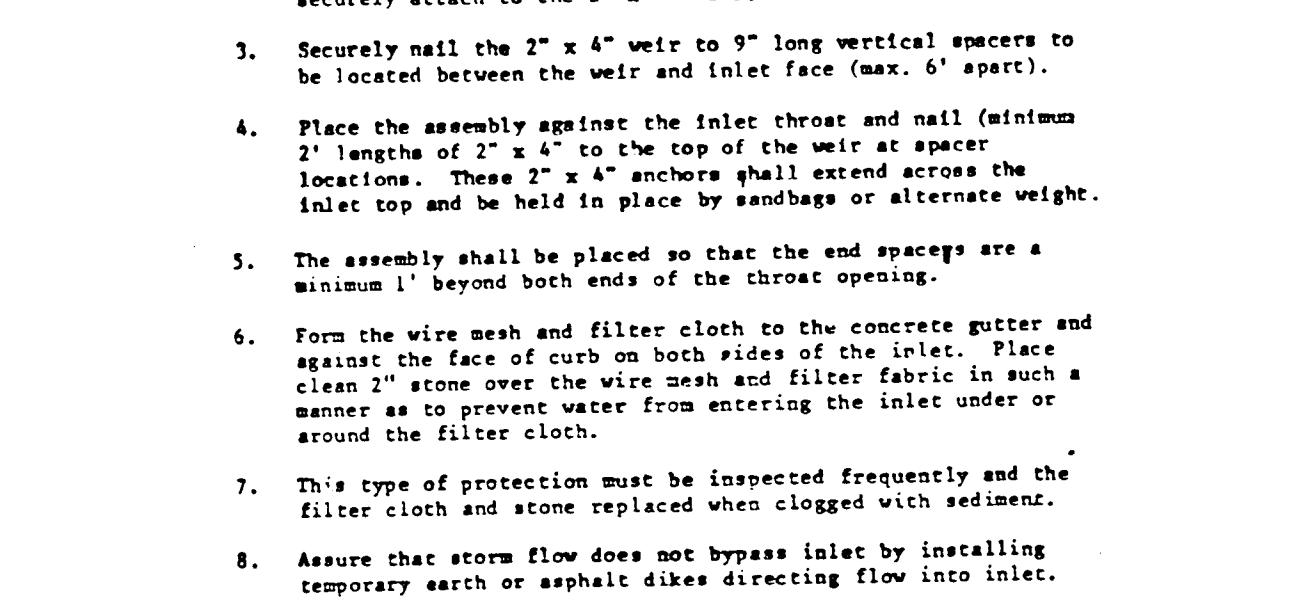
8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DEPT. OF SEDIMENT CONTROL INSPECTOR.

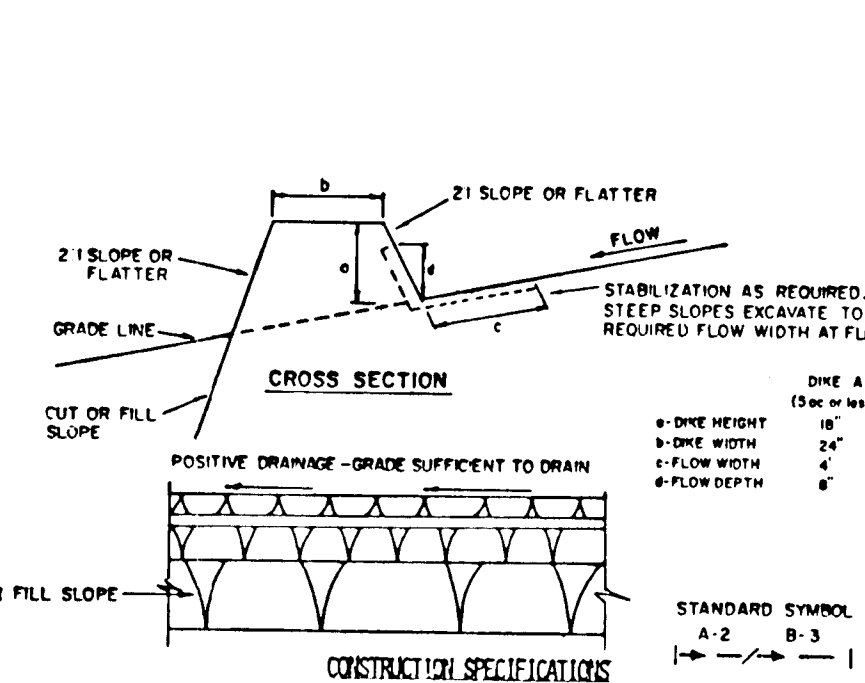
10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVAL MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.



- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weirs (measuring throat length plus 4") as shown on the standard drawing.
- Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weirs.
- Securely nail the 2" x 4" weirs to 9" long vertical concrete to be located behind the wire mesh and inlet face (max. 6' apart).
- Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at each location). These 2" x 4" anchors shall extend across the inlet cut and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.



SILT FENCE LOT TO SCALE

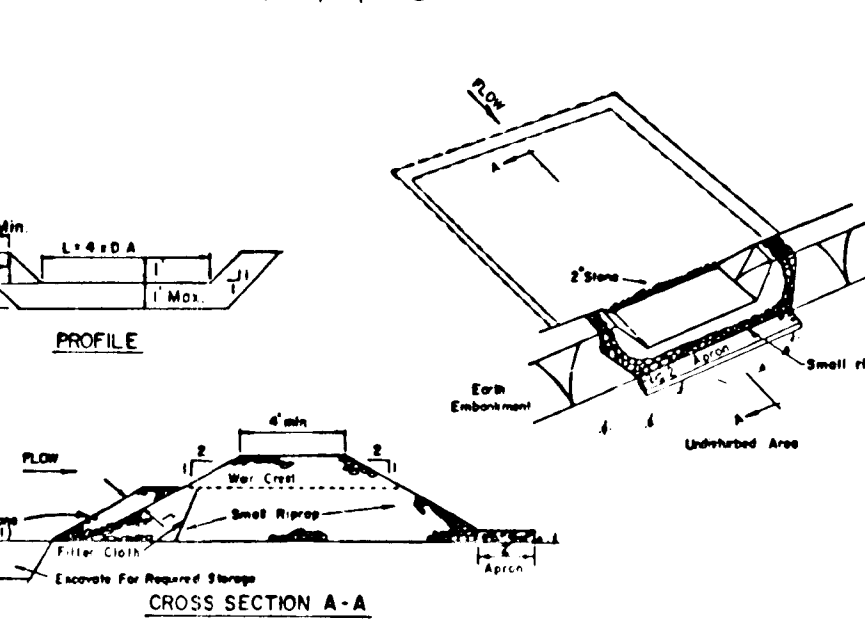


- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE PASSAGE BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF 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 INLET	CHANNEL	DIKE A	DIKE B
1	5-3:00	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3:1-5:00	SEED AND STRAW MULCH	SEED USING LITE, OR EXCELSTON, SOD, 2" STONE
3	5:1-8:00	SEED WITH LITE, OR SOD, 2" STONE	LINED RIP-RAP 4-8"
4	8:1-20:0	LINED RIP-RAP 4-8"	LINED RIP-RAP DESIGN

EARTH DIKE DETAIL LOT TO SCALE



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

TOP ELEV.	INV. IN.	INV. OUT.	STRUCTURE	TOP ELEV.	INV. DOT.	INV. DOT.	ROAD	ROAD STATION	OFFSET	TYPE	REMARKS
468.86	461.14	460.99	I-1	466.00	463.77	463.77	PETERSBURG	10+12.99	15' LT.	A-5	SD-4.40
466.02	461.14	461.14	I-2	463.77	463.77	463.77	PETERSBURG	10+12.99	15' RT.	A-5	SD-4.40
471.19	471.87	471.78	I-3	473.23	473.23	473.23	PETERSBURG	14+12.50	15' RT.	A-5	SD-4.40
471.19	471.87	471.78	I-4	473.23	473.23	473.23	PETERSBURG	14+12.50	15' RT.	A-5	SD-4.40
471.19	466.05	466.38	I-5	473.23	466.86	466.86	POPEKINS CT.	0+44	14' RT.	A-5	SD-4.40
471.19	466.05	466.38	I-6	473.23	466.86	466.86	POPEKINS CT.	0+44	14' RT.	A-5	SD-4.40
471.19	466.05	466.38	I-7	473.23	466.86	466.86	POPEKINS CT.	0+44	14' RT.	A-5	SD-4.40
471.19	466.05	466.38	I-8	473.23	466.86	466.86	POPEKINS CT.	0+44	14' RT.	A-5	SD-4.40
471.19	466.05	466.38	I-9	473.23	466.86	466.86	POPEKINS CT.	0+44	14' RT.	A-5	SD-4.40
471.19	466.05	466.38	I-10	473.23	466.86	466.86	POPEKINS CT.	0+44	14' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-11	486.33	478.60	478.60	WETHERBURN	23+06	18' LT.	A-5	SD-4.40
484.78	478.00	476.91	I-12	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-13	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-14	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-15	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-16	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-17	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-18	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-19	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-20	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-21	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
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484.78	478.00	476.91	I-23	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-24	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-25	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-26	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-27	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-28	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-29	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-30	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-31	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-32	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-33	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-34	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-35	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-36	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-37	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-38	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-39	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-40	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-41	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-42	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-43	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-44	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-45	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-46	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-47	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-48	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-49	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-50	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-51	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-52	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-53	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40
484.78	478.00	476.91	I-54	486.33	478.60	478.60	WETHERBURN	23+06	18' RT.	A-5	SD-4.40

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE 10-17-90
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION DATE

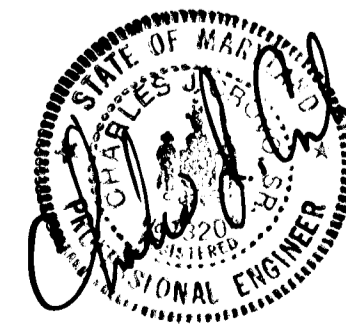


DRAINAGE AREA	AREA	ZONING	1/4"
0.00	0.00 AC.	R-20	0.40
0.01	0.01 AC.	R-20	0.50
0.15	0.15 AC.	R-20	0.62
0.17	0.17 AC.	R-20	0.57
0.20	0.20 AC.	R-20	0.56
0.28	0.28 AC.	R-20	0.60
0.40	0.40 AC.	R-20	0.49
0.50	0.50 AC.	R-20	0.47
0.64	0.64 AC.	R-20	0.47
0.78	0.78 AC.	R-20	0.40
0.78	0.78 AC.	R-20	0.59
1.23	1.23 AC.	R-20	0.45
1.29	1.29 AC.	R-20	0.60
0.61	0.61 AC.	R-20	0.46
0.44	0.44 AC.	R-20	0.67
1.15	1.15 AC.	R-20	0.60
1.02	1.02 AC.	R-20	0.51
0.80	0.80 AC.	R-20	0.56
0.59	0.59 AC.	R-20	0.59
0.45	0.45 AC.	R-20	0.57
4.45	4.45 AC.	R-20	0.40
0.96	0.96 AC.	R-20	0.55
1.19	1.19 AC.	R-20	0.53
1.20	1.20 AC.	R-20	0.40
2.07	2.07 AC.	R-20	0.40
0.80	0.80 AC.	R-20	0.47
0.92	0.92 AC.	R-20	0.46
0.60	0.60 AC.	R-20	0.42
0.47	0.47 AC.	R-20	0.37
0.44	0.44 AC.	R-20	0.37
4.16	4.16 AC.	R-20	0.40
0.93	0.93 AC.	R-20	0.50
0.96	0.96 AC.	R-20	0.50
1.25	1.25 AC.	R-20	0.48
1.94	1.94 AC.	R-20	0.45
2.37	2.37 AC.	R-20	0.40
1.97	1.97 AC.	R-20	0.40
0.61	0.61 AC.	R-20	0.58
0.72	0.72 AC.	R-20	0.65

OWNER AND DEVELOPER
 KENNARD WARFIELD JR.
 14663 TRIADELPHIA ROAD
 GLENELG, MARYLAND
 21737

NOTE: THE 3/4" CMP AND SOUND BARRIER WILL BE PRIVATELY OWNED AND MAINTAINED BY THE COMMUNITY ASSOCIATION.

FUTURE SYSTEM

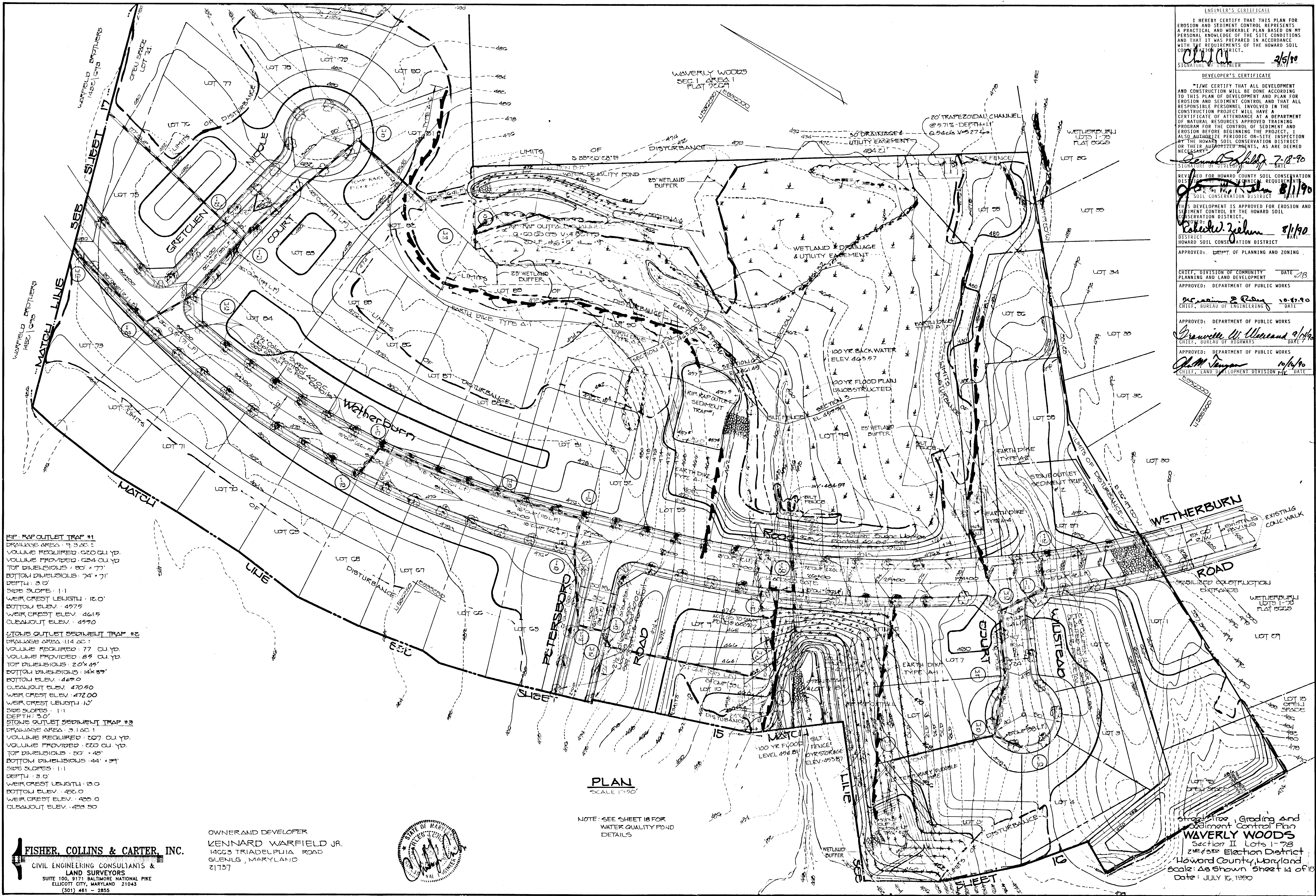


DRAINAGE AREA MAP
WAVERLY WOODS
 SECTION II LOTS 1-98
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN SHEET 13 OF 13
 DATE: JULY 16, 1980

PLAN
 SCALE 1" = 100'

1253

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS &
 LAND SURVEYORS
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043
 (301) 481-2855



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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature of Engineer: *[Signature]* DATE: 2/5/90

DEVELOPER'S CERTIFICATE
 I HEREBY 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: 7-18-90

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT: *[Signature]* DATE: 8/1/90

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 District: *[Signature]* DATE: 8/1/90

APPROVED: DEPT. OF PLANNING AND ZONING
 Chief, Division of Community Planning and Land Development: *[Signature]* DATE: 2/8

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Engineering: *[Signature]* DATE: 10-27-90

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways: *[Signature]* DATE: 9/1/90

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division: *[Signature]* DATE: 10/14/90

RIP-RAP OUTLET TRAP #1
 DRAINAGE AREA: 9.3 AC.
 VOLUME REQUIRED: 0.20 CU. YD.
 VOLUME PROVIDED: 0.34 CU. YD.
 TOP DIMENSIONS: 80' x 77'
 BOTTOM DIMENSIONS: 74' x 71'
 DEPTH: 3.0'
 SIDE SLOPES: 1:1
 WEIR CREST LENGTH: 12.0'
 BOTTOM ELEV.: 497.5
 WEIR CREST ELEV.: 461.5
 CLEANOUT ELEV.: 499.0

STONE OUTLET SEDIMENT TRAP #2
 DRAINAGE AREA: 11.4 AC.
 VOLUME REQUIRED: 77 CU. YD.
 VOLUME PROVIDED: 65 CU. YD.
 TOP DIMENSIONS: 20' x 49'
 BOTTOM DIMENSIONS: 14' x 35'
 BOTTOM ELEV.: 469.0
 CLEANOUT ELEV.: 470.50
 WEIR CREST ELEV.: 472.00
 WEIR CREST LENGTH: 10'
 SIDE SLOPES: 1:1
 DEPTH: 3.0'
 STONE OUTLET SEDIMENT TRAP #3
 DRAINAGE AREA: 3.1 AC.
 VOLUME REQUIRED: 207 CU. YD.
 VOLUME PROVIDED: 220 CU. YD.
 TOP DIMENSIONS: 80' x 45'
 BOTTOM DIMENSIONS: 44' x 39'
 SIDE SLOPES: 1:1
 DEPTH: 3.0'
 WEIR CREST LENGTH: 13.0
 BOTTOM ELEV.: 452.0
 WEIR CREST ELEV.: 455.0
 CLEANOUT ELEV.: 459.50

PLAN
 SCALE 1"=90'

NOTE: SEE SHEET 18 FOR WATER QUALITY POND DETAILS

OWNER AND DEVELOPER
 KENNARD WARFIELD JR.
 14023 TRIADAPLUIA ROAD
 GLENNS, MARYLAND
 21737



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043
 (301) 481-2855

Grading and Sediment Control Plan
WAVERLY WOODS
 Section II, Lots 1-78
 2ND DISTRICT Election District
 Howard County, Maryland
 Scale: As Shown Sheet 14 of 18
 Date: JULY 16, 1990

1853

PROPERTY OF
WARFIELD BROTHERS
1452 \ G 93

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 SOIL CONSERVATION DISTRICT.
Chas. A. ... 2/5/90
SIGNATURE OF ENGINEER DATE

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.
Edward S. ... 7-18-90
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT TECHNICAL REQUIREMENTS
John ... 8-1-90
DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Robert J. ... 8/1/90
DATE

APPROVED: DEPT. OF PLANNING AND ZONING
Mark ... 1/5/91
DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
APPROVED: DEPARTMENT OF PUBLIC WORKS
William ... 10-17-90
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Lawrence W. ... 9/4/90
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chas. ... 10/6/90
DATE

STONE OUTLET SEDIMENT TRAP NO. 1
DRAINAGE AREA= 2.1 AC.±
VOLUME REQUIRED= 140 CU.YDS.
VOLUME PROVIDED= 142 CU.YDS.
TOP DIMENSIONS= 30' X 50'
BOTTOM DIMENSIONS= 24' X 44'
WEIR CREST LENGTH= 90'
BOTTOM ELEVATION= 361.00
WEIR CREST ELEVATION= 364.00
CLEANOUT ELEVATION= 362.50

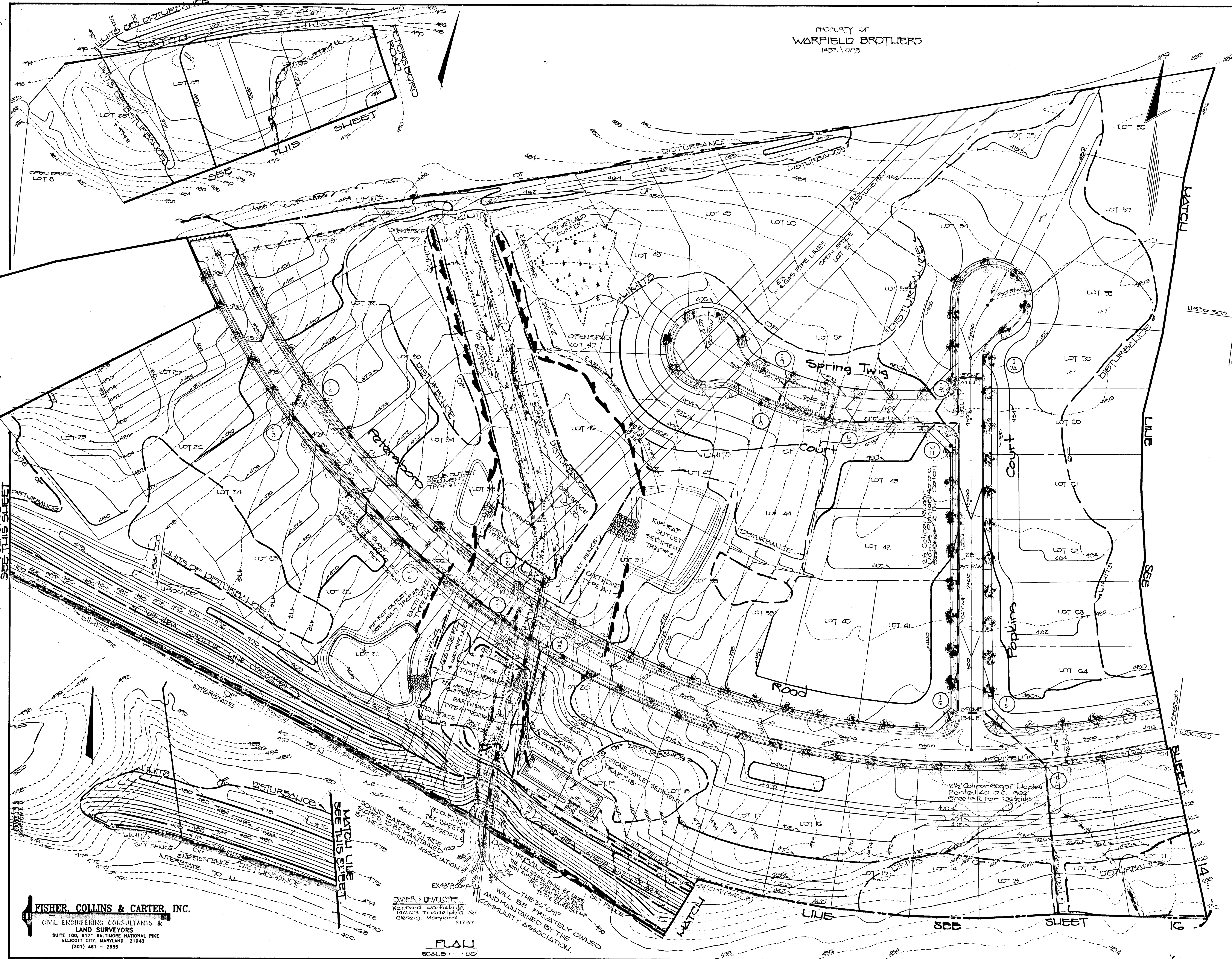
RIP-RAP OUTLET SEDIMENT TRAP NO. 2
DRAINAGE AREA= 11.5 AC.±
VOLUME REQUIRED= 793 CU.YDS.
VOLUME PROVIDED= 793 CU.YDS.
TOP DIMENSIONS= 90' X 85'
BOTTOM DIMENSIONS= 84' X 79'
WEIR CREST LENGTH= 14'
BOTTOM ELEVATION= 461.5
WEIR CREST ELEVATION= 465.5
CLEANOUT ELEVATION= 463.0
SIDE SLOPE= 1:1
DEPTH= 3.0'

RIP-RAP OUTLET SEDIMENT TRAP NO. 3
DRAINAGE AREA= 9.1 AC.±
VOLUME REQUIRED= 607 CU.YDS.
VOLUME PROVIDED= 612 CU.YDS.
TOP DIMENSIONS= 114' X 44'
BOTTOM DIMENSIONS= 101' X 34'
WEIR CREST LENGTH= 101'
BOTTOM ELEVATION= 457.5
WEIR CREST ELEVATION= 461.5
CLEANOUT ELEVATION= 459.0
SIDE SLOPE= 1:1
DEPTH= 3.0'

STONE OUTLET SEDIMENT TRAP NO. 1B DATA
DRAINAGE AREA= 3.44 AC.
VOLUME REQUIRED= 229.3 CU.YDS.
VOLUME PROVIDED= 248.8 CU.YDS.
TOP DIMENSIONS= 26' X 100'
BOTTOM DIMENSIONS= 20' X 94'
WEIR CREST LENGTH= 14'
BOTTOM ELEVATION= 456.00
WEIR CREST ELEVATION= 459.00
CLEANOUT ELEVATION= 457.50
SIDE SLOPE= 1:1
DEPTH= 3.0'



Street Tree, Grading and Sediment Control Plan
WAVERLY WOODS
SECTION II LOTS 1-58
2nd & 3rd ELECTION DISTRICT
Howard County, Maryland
Scale: As Shown Sheet 15 of 16
Date: JULY 16, 1990



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100, 2171 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043
(301) 461-2855

OWNER & DEVELOPER
Kennard Warfield Jr.
14663 Triadelphia Rd.
Glenelg, Maryland 21737

EX-48 B COMPANY
WILL BE PRIVATELY OWNED AND MAINTAINED BY THE COMMUNITY ASSOCIATION.

PLAN
SCALE: 1" = 50'

1253

POND SPECIFICATIONS

I. SITE PREPARATION

Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans. All fill material shall be CL or ML, as approved by Soils Engineer.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Core Trench

Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment, as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being 4-feet. The depth shall be at least 4-feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. Materials shall be CL or ML as approved by Soils Engineer.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed 4-inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than 4-feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a structure or pipe unless there is a compacted fill of 2-feet or greater over the structure or pipe.

IV. PIPE CONDUITS

A. CORRUGATED METAL PIPE

1. Materials - Metal Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with watertight coupling bands.
2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
5. Backfilling shall conform to structural backfill as shown above.
6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

V. CONCRETE

Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by permanent seeding and applying straw mulch in accordance with "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas" immediately after finish grading.

Fertilizer:	10-10-10	@ 11.5 lbs./1000 sq.ft.
Seed:	Crownvetch-inoculated	@ 0.5 lbs./1000 sq.ft.
	'KY-31' Tall Fescue	@ 1.5 lbs./1000 sq.ft.
Mulch:	Straw	@ 80 lbs./1000 sq.ft.
Asphalt Tie-down:	Slopes	@ 8 gal./1000 sq.ft.
	Flat areas	@ 5 gal./1000 sq.ft.

ALL EXPOSED AREAS OF THE EMBANKMENT AND POND SHALL BE STABILIZED BY:

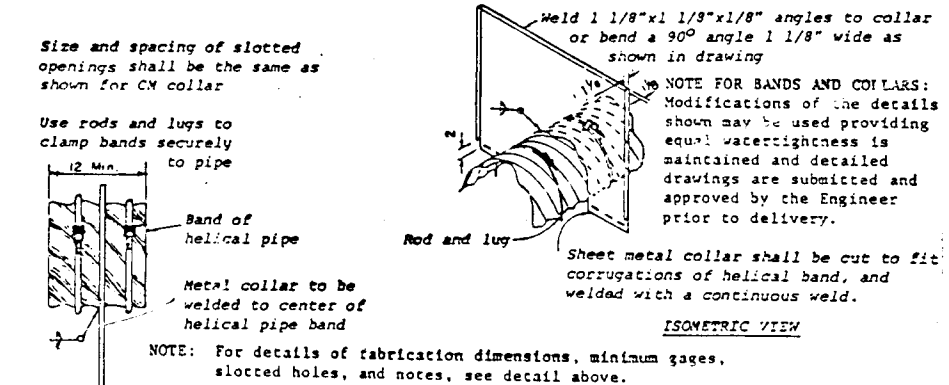
- A. SPREADING 4" TOPSOIL (INCLUDING BOTTOM OF POND).
- B. WORKING IN 1 TON OF GROUND LIMESTONE AND 1,000 POUNDS OF 10-10-10 FERTILIZER PER ACRE (INCLUDING BOTTOM OF POND).
- C. SEED WITH 40 LBS/ACRE OF "KENTUCKY 31" TALL FESCUE, AND 15 LBS./ACRE OF CROWNVETCH INOCULATED.
- D. MULCH WITH 1 1/2 TONS STRAW PER ACRE.
- E. TIE DOWN MULCH WITH EMULSIFIED ASPHALT @ 348 GALLONS/ACRE.

OPERATION AND MAINTENANCE SPECIFICATIONS

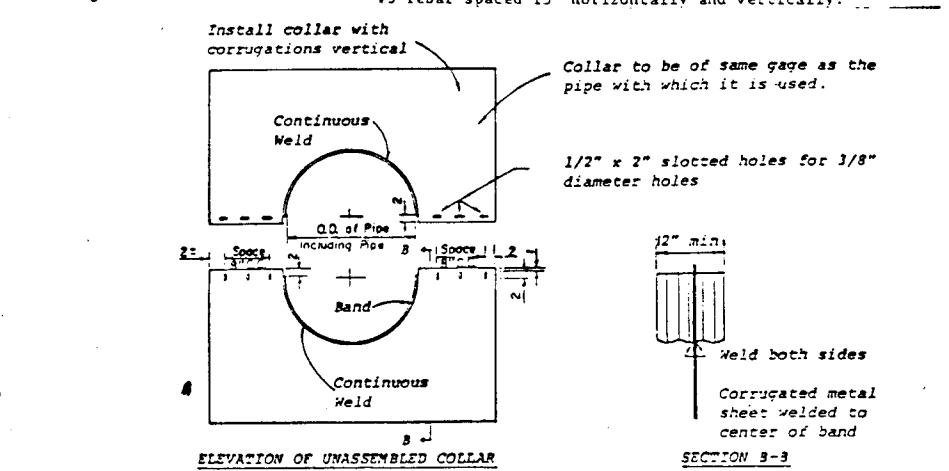
I HEREBY CERTIFY THAT I WILL OPERATE AND MAINTAIN THE COMPLETED POND IN ACCORDANCE WITH THE FOLLOWING:

1. PERIODIC INSPECTIONS OF THE FACILITY WILL BE MADE TO IDENTIFY POTENTIAL PROBLEMS THAT MAY AFFECT ITS SAFETY. THESE INSPECTIONS WILL BE MADE AFTER PERIODS OF HEAVY RAINFALL AND AT LEAST TWICE ANNUALLY. INSPECTION REPORTS SHALL BE KEPT UNTIL THE NEXT SUBSEQUENT INSPECTION. INSPECTIONS ITEMS TO BE LOOKED AT INCLUDE:
 - a) SPILLWAY AND OUTLET WORKS;
 - b) RIP-RAP;
 - c) VEGETATIVE COVER;
 - d) CRACKS IN THE FILL;
 - e) SLOPE FAILURES; AND
 - f) SEEPAGE AND OTHER SIGNS OF DISTRESS.
2. PROBLEMS IDENTIFIED DURING INSPECTIONS WILL BE PROMPTLY CORRECTED. MAJOR PROBLEMS WILL BE BROUGHT TO THE ATTENTION OF THE SOIL CONSERVATION DISTRICT AND THE DAM SAFETY DIVISION OF THE MARYLAND WATER RESOURCES ADMINISTRATION. AS A VERY MINIMUM, GRASSY VEGETATION WILL BE MAINTAINED IN A DENSE AND HEALTHY STATE, AND WOODY VEGETATION WILL NOT BE PERMITTED TO GROW ON THE EMBANKMENT.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS &
 LAND SURVEYORS
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043
 (301) 481 - 2855



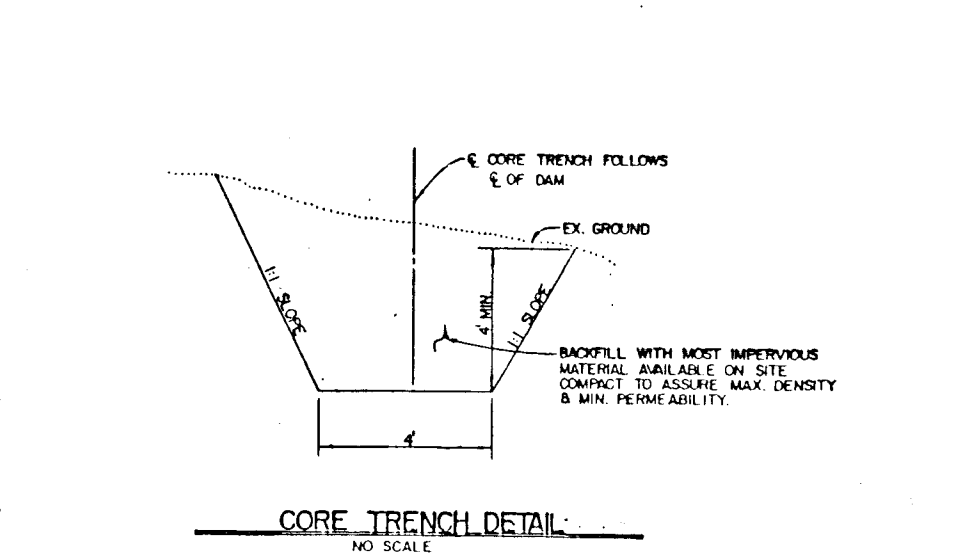
NOTE: For details of fabrication dimensions, minimum gaps, slotted holes, and notes, see detail above.



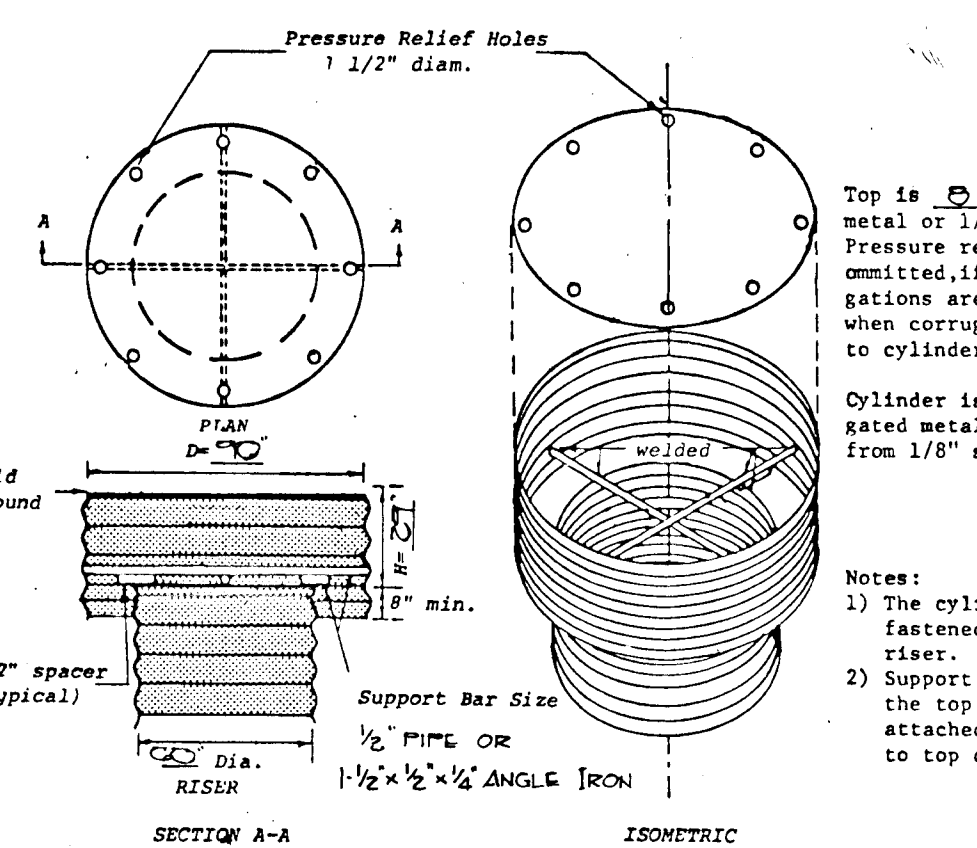
NOTES FOR COLLARS:
 1. All materials to be in accordance with construction and construction material specifications.
 2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
 3. Unseamed collars shall be marked by painting or tagging to identify matching parts.
 4. The lap between the two half sections and between the pipe and connecting band shall be caulked with approved mastic at time of installation.
 5. Each collar shall be furnished with two 1/2" diameter rods with standard caps for connecting collars to pipe.

CORRUGATED METAL ANTI-SEEP COLLAR DETAILS

NO SCALE

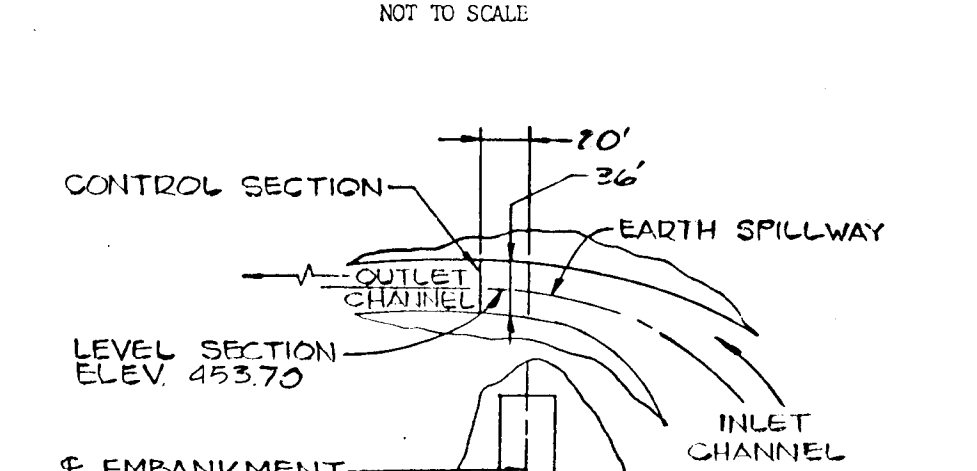


CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DETAIL



CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DETAIL

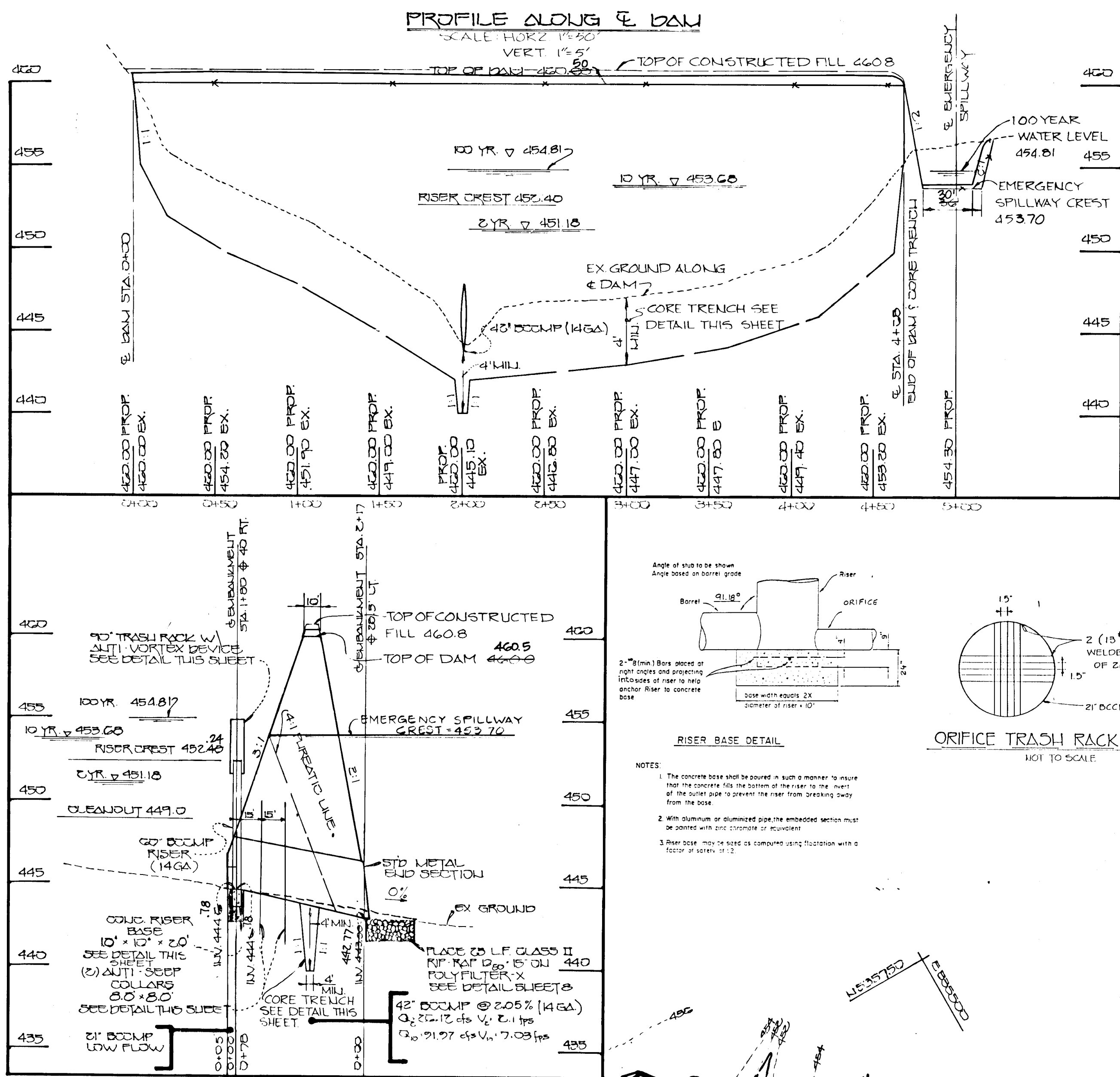
NOT TO SCALE



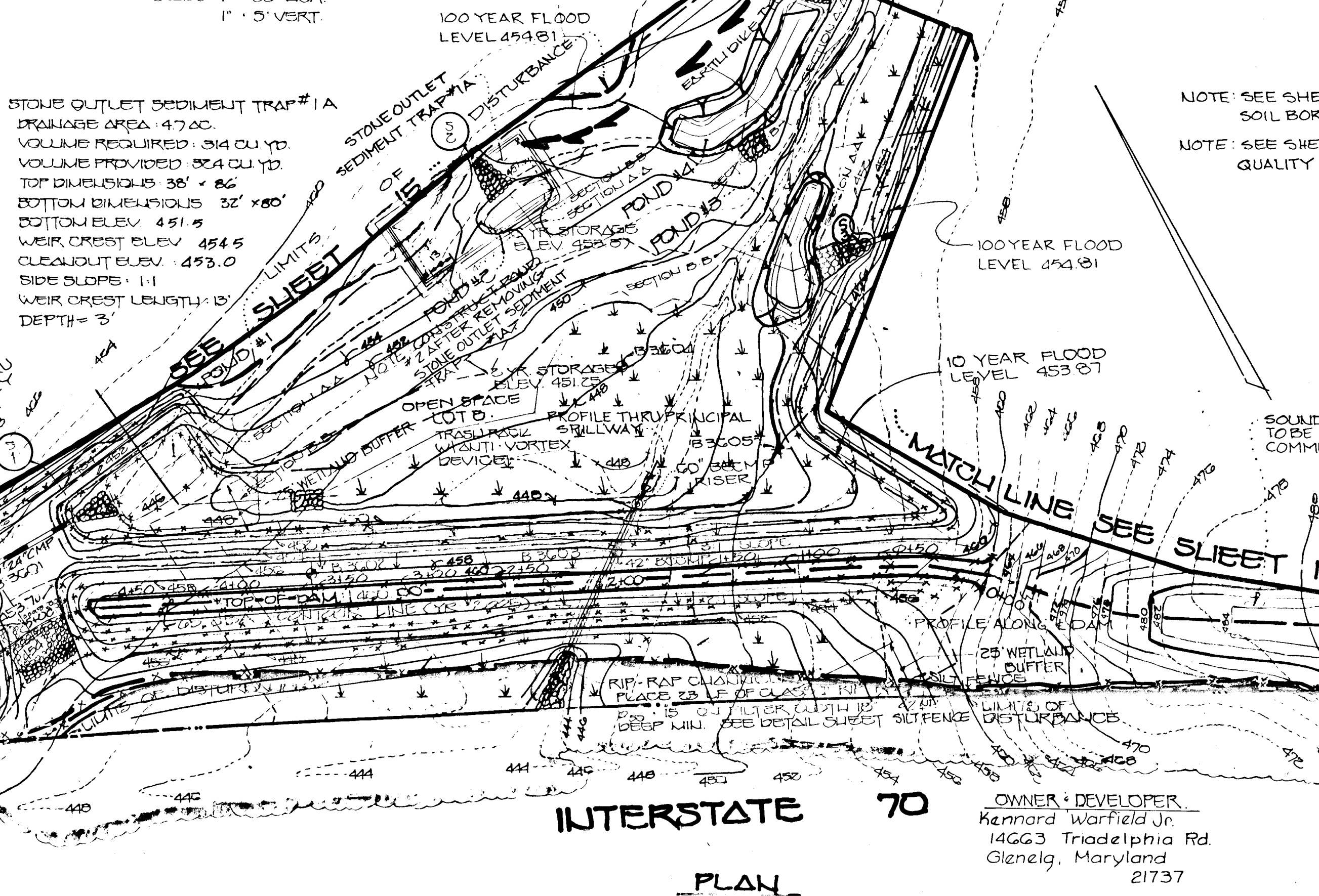
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DETAIL

NOT TO SCALE

NOTES: 1) ALL PIPE JOINTS SHALL BE WATERTIGHT.
 2) HAZARD CLASSIFICATION OF POND CLASS 'X'
 3) ALL WELDS SHALL BE CONTINUOUS AROUND THE DIAMETER OF THE PIPE.



PROFILE THRU & PRINCIPAL SPILLWAY



STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY 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 WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 Signature of Developer: *James S. Adair*
 Date: 7-18-90

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 Signature of Engineer: *Clifford Ch...*
 Date: 2/5/90

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 Signature of Soil Conservation Service: *James H. Adair*
 Date: 8-10-90

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature of Howard Soil Conservation District: *Robert J. Zieher*
 Date: 8/1/90

APPROVED: DEPT. OF PLANNING AND ZONING
 Signature: *Paul J. Taylor*
 Date: 4/7/90

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 Signature: *Clifford Ch...*
 Date: 10/6/90

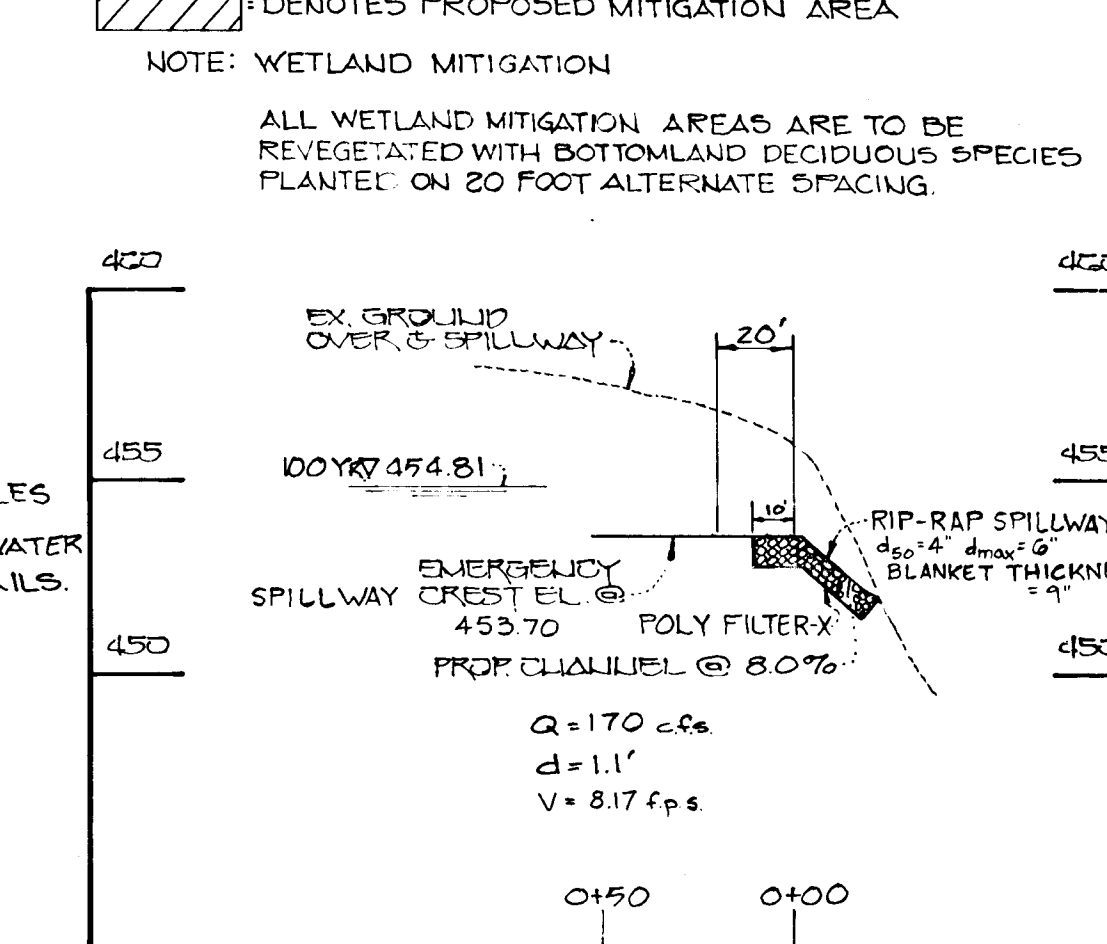
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Signature: *William W. Welland*
 Date: 9/14/90

CHIEF, BUREAU OF HIGHWAYS
 Signature: *William W. Welland*
 Date: 10-17-90

POND CONSTRUCTION CERTIFICATION

I CERTIFY THAT UPON COMPLETION OF CONSTRUCTION I WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE (O&M) OF THE SMALL POND. O&M WILL BE PERFORMED BY ME IN ACCORDANCE WITH THE SPECIFICATIONS ON THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS OF THE POND BY SITE AND LOCAL AGENCIES.
 Signature of Developer: *James S. Adair*
 Date: 7-18-90

PROFILE THRU & EMERGENCY SPILLWAY



PROFILE THRU & EMERGENCY SPILLWAY

SCALE: 1" = 5' VERT.

NOTE: SEE SHEET 8 FOR SOIL BORING PROFILES

NOTE: SEE SHEET 10 FOR WATER QUALITY POND DETAILS.

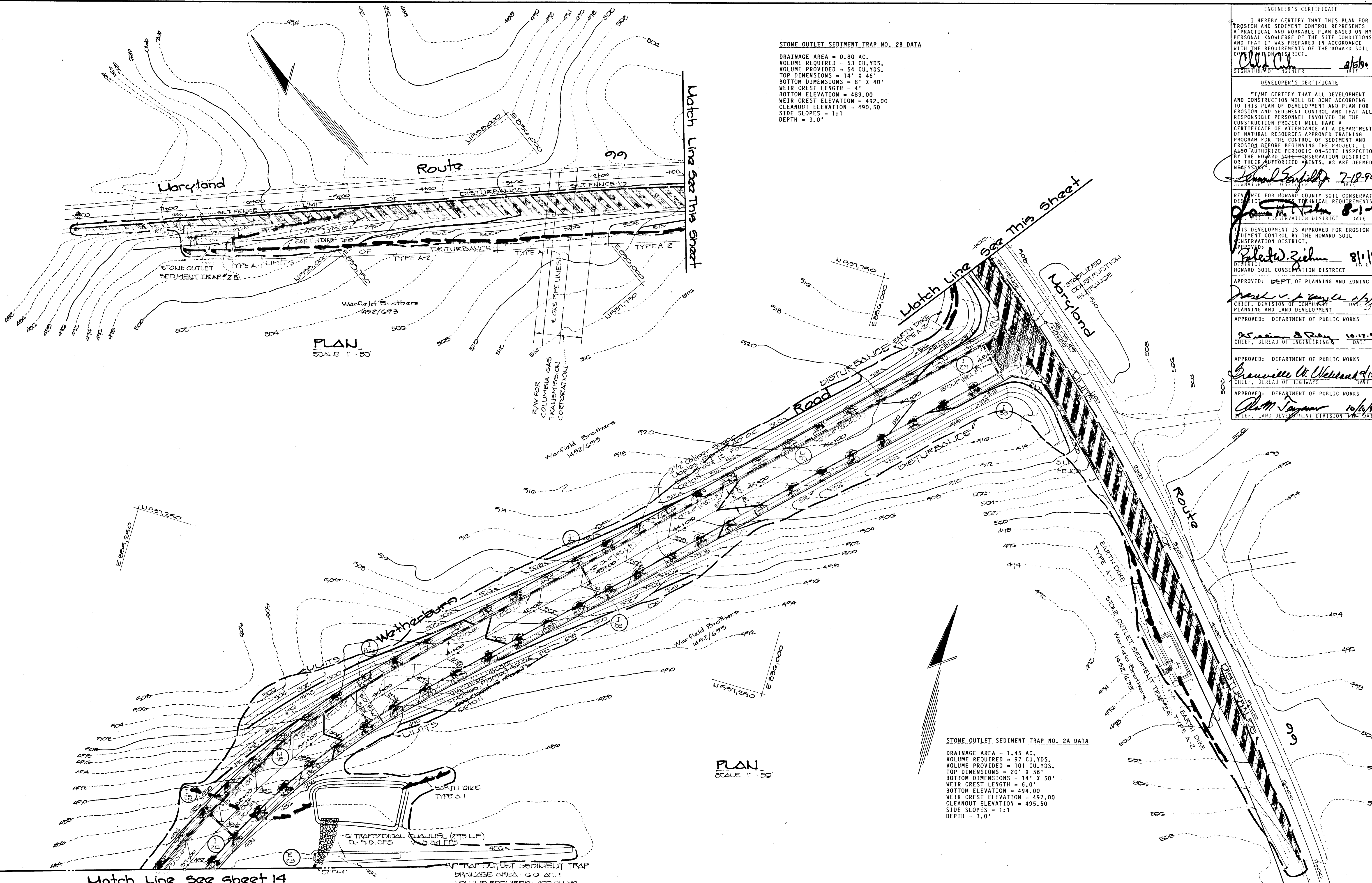
NOTE: SOUND BARRIER, 2:1 SIDE SLOPE, TO BE MAINTAINED BY THE COMMUNITY ASSOCIATION.

OWNER + DEVELOPER
 Kennard Warfield Jr.
 14663 Triadelphia Rd.
 Glenelg, Maryland
 21737

DATE: JULY 16, 1990.

Street Tree, Grading and Sediment Control Plan
WAVERLY WOODS
 SECTION II LOTS 1-30
 2nd & 3rd Election District
 Howard County, Maryland
 Scale: As Shown Sheet 16 of 10
 Date: JULY 16, 1990.

1253



STONE OUTLET SEDIMENT TRAP NO. 28 DATA
 DRAINAGE AREA = 0.80 AC.
 VOLUME REQUIRED = 53 CU. YDS.
 VOLUME PROVIDED = 54 CU. YDS.
 TOP DIMENSIONS = 14' X 46'
 BOTTOM DIMENSIONS = 8' X 40'
 WEIR CREST LENGTH = 4'
 BOTTOM ELEVATION = 489.00
 WEIR CREST ELEVATION = 492.00
 CLEANOUT ELEVATION = 490.50
 SIDE SLOPES = 1:1
 DEPTH = 3.0'

PLAN
 SCALE: 1" = 50'

PLAN
 SCALE: 1" = 50'

STONE OUTLET SEDIMENT TRAP NO. 2A DATA
 DRAINAGE AREA = 1.45 AC.
 VOLUME REQUIRED = 97 CU. YDS.
 VOLUME PROVIDED = 101 CU. YDS.
 TOP DIMENSIONS = 20' X 56'
 BOTTOM DIMENSIONS = 14' X 50'
 WEIR CREST LENGTH = 6.0'
 BOTTOM ELEVATION = 494.00
 WEIR CREST ELEVATION = 497.00
 CLEANOUT ELEVATION = 495.50
 SIDE SLOPES = 1:1
 DEPTH = 3.0'

TRAP OUTLET SEDIMENT TRAP
 DRAINAGE AREA = 0.0 AC.
 VOLUME REQUIRED = 400 CU. YD.
 VOLUME PROVIDED = 415 CU. YD.
 TOP DIMENSIONS = 100' X 40'
 BOTTOM DIMENSIONS = 90' X 40'
 DEPTH = 3.0'
 SIDE SLOPES = 1:1
 WEIR CREST LENGTH = 12.0'
 BOTTOM ELEV. = 485.0
 WEIR CREST ELEV. = 485.0
 CLEANOUT ELEV. = 481.5

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 SOIL CONSERVATION DISTRICT.
 Signature: *John C. [unclear]* 2/18/90
 SIGNATURE OF ENGINEER DATE

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: *John C. [unclear]* 2-18-90
 SIGNATURE OF DEVELOPER DATE

APPROVED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT
 Signature: *John C. [unclear]* 8-1-90
 DISTRICT ENGINEER DATE

APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *Robert D. Ziehm* 8/1/90
 DISTRICT ENGINEER HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPT. OF PLANNING AND ZONING
 Signature: *Frank V. [unclear]* 1/25/90
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *William B. [unclear]* 10-17-90
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *Granville W. [unclear]* 9/14/90
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *Alan M. [unclear]* 10/6/90
 CHIEF, LAND DEVELOPMENT DIVISION DATE

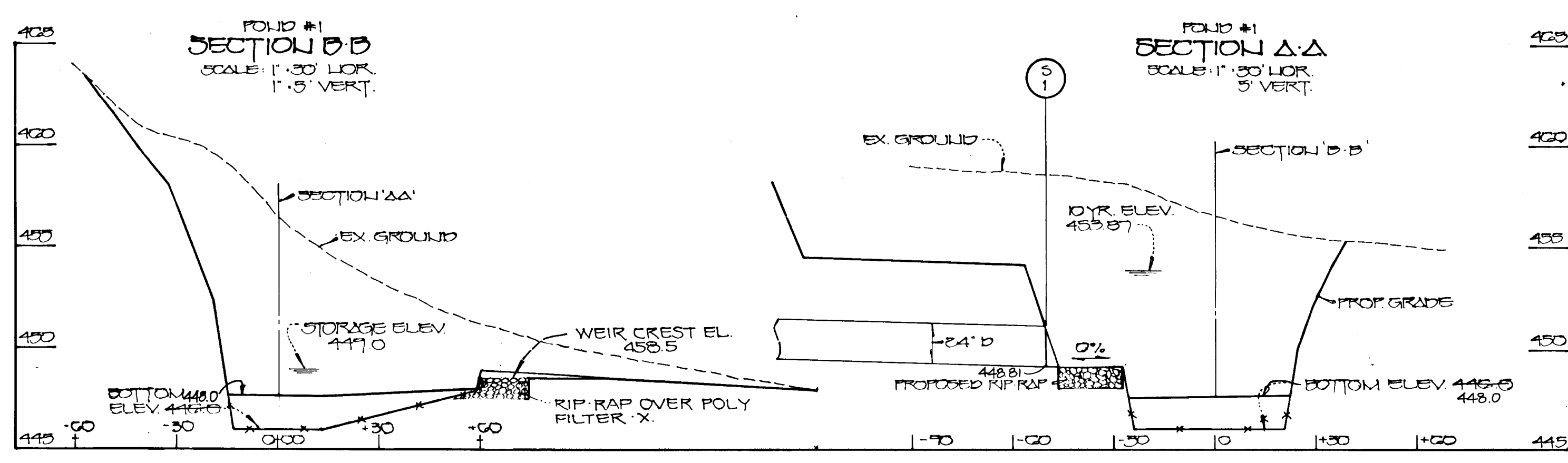
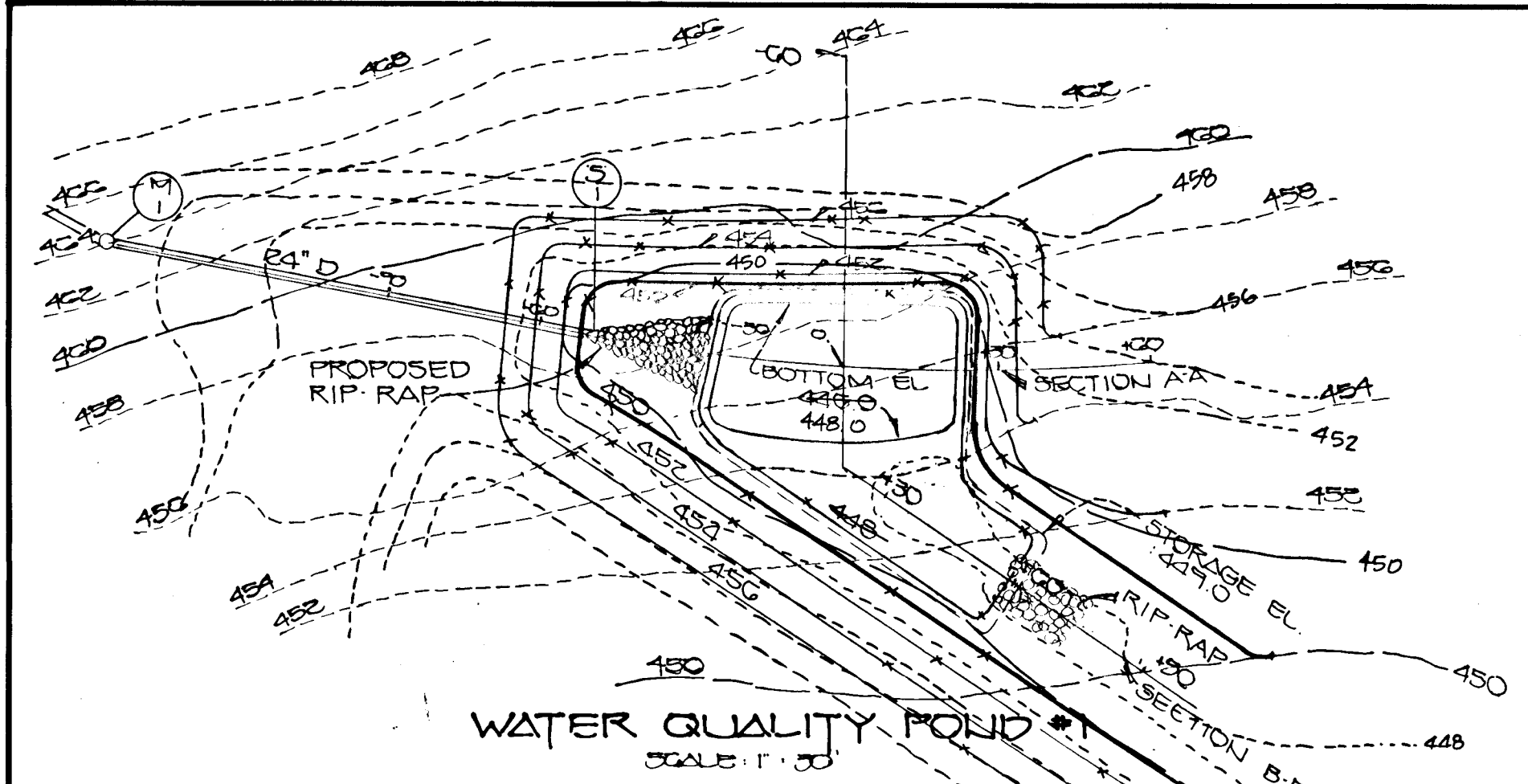
Street Tree, Grading and Sediment Control Plan
WAVERLY WOODS
 SECTION II LOTS 1-30
 2nd & 3rd Election District
 Howard County, Maryland
 Scale: As Shown Sheet 17 of 18
 Date: JULY 10, 1990



OWNER & DEVELOPER
 Kennard Warfield Jr.
 14663 Triadelphia Rd.
 Glenelg, Maryland
 21737

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 SUITE 100, 8171 BALTIMORE NATIONAL PIKE
 ELKROTT CITY, MARYLAND 21043
 (301) 481-2855

1253



APPROVED
DEPARTMENT OF PUBLIC WORKS

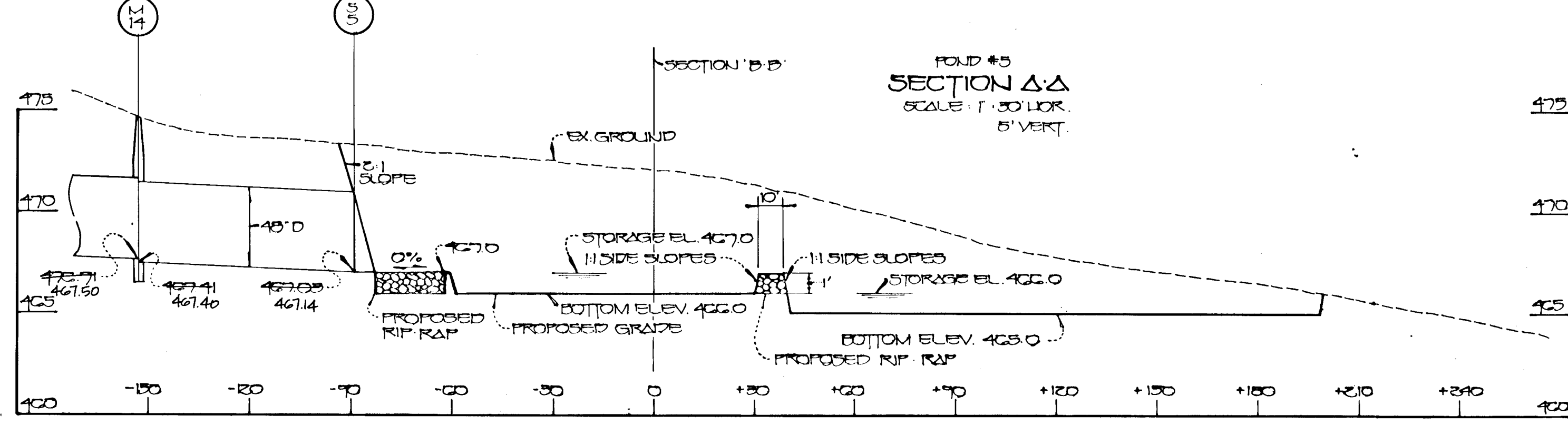
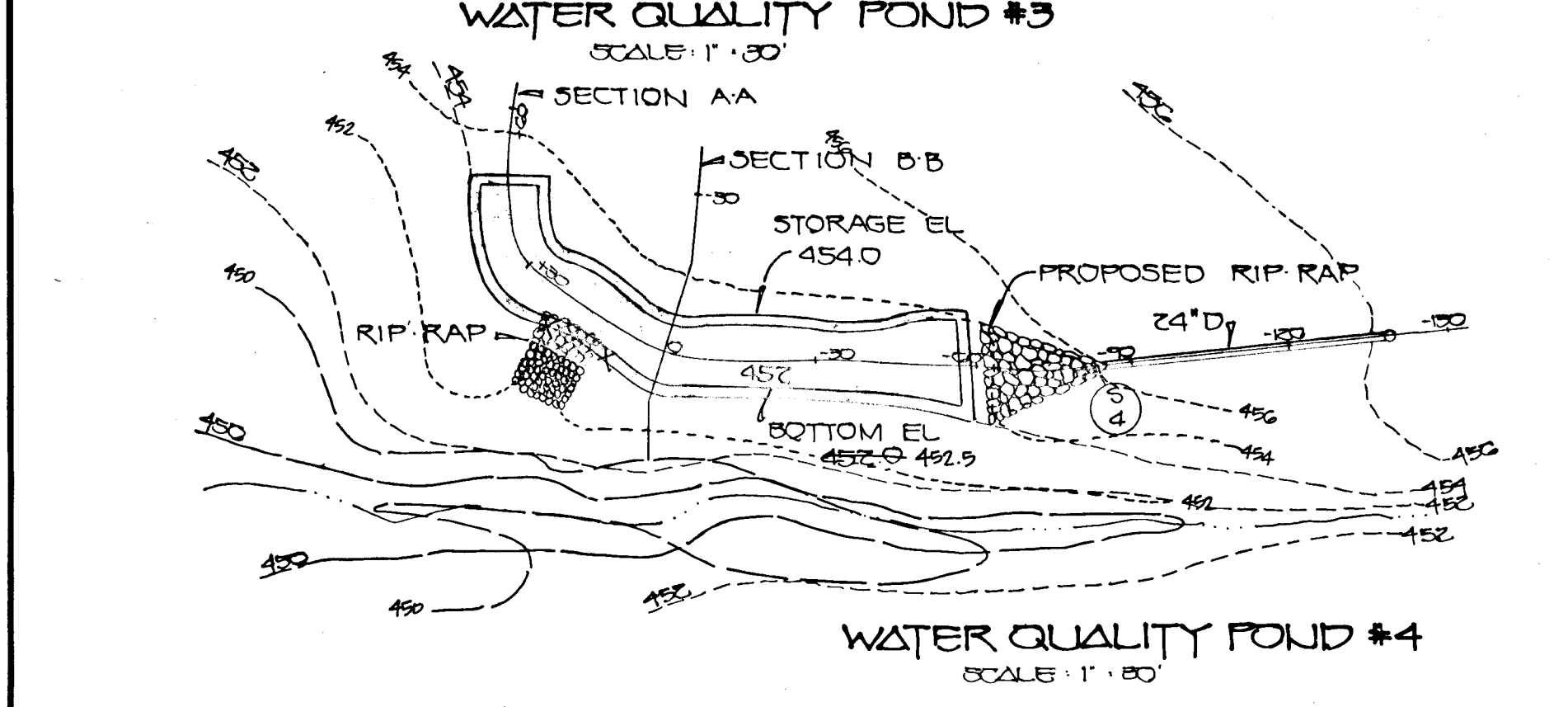
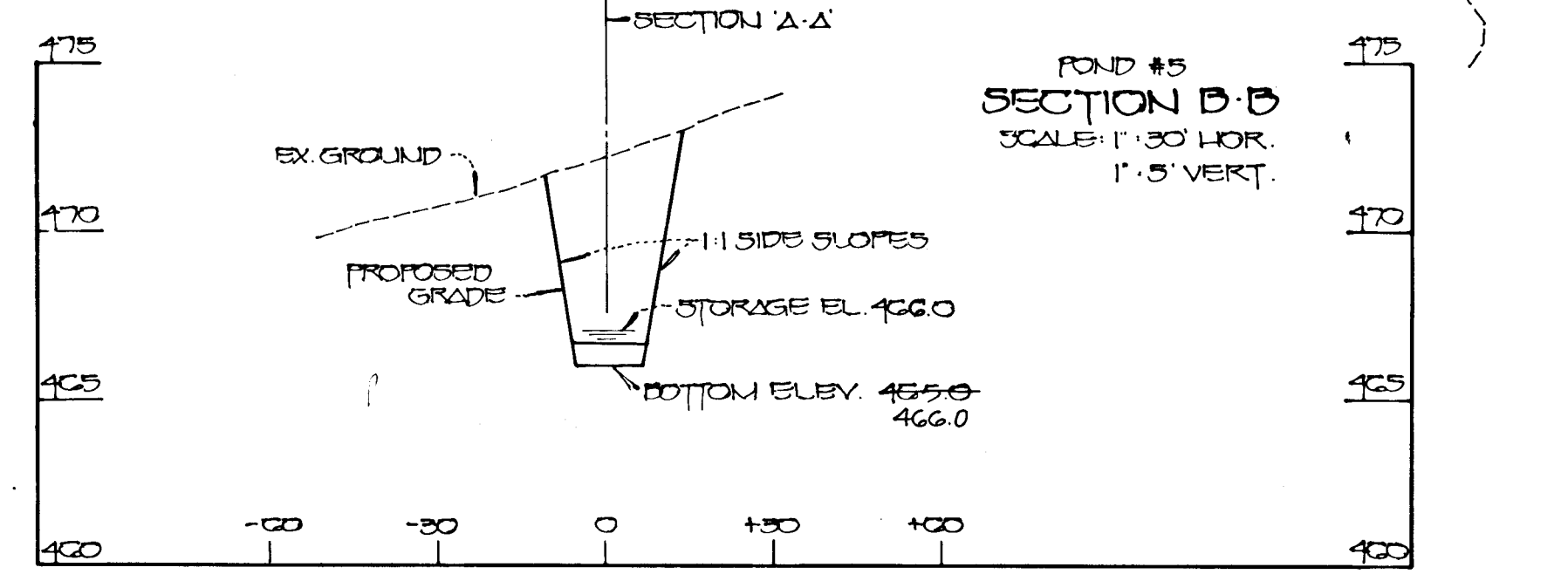
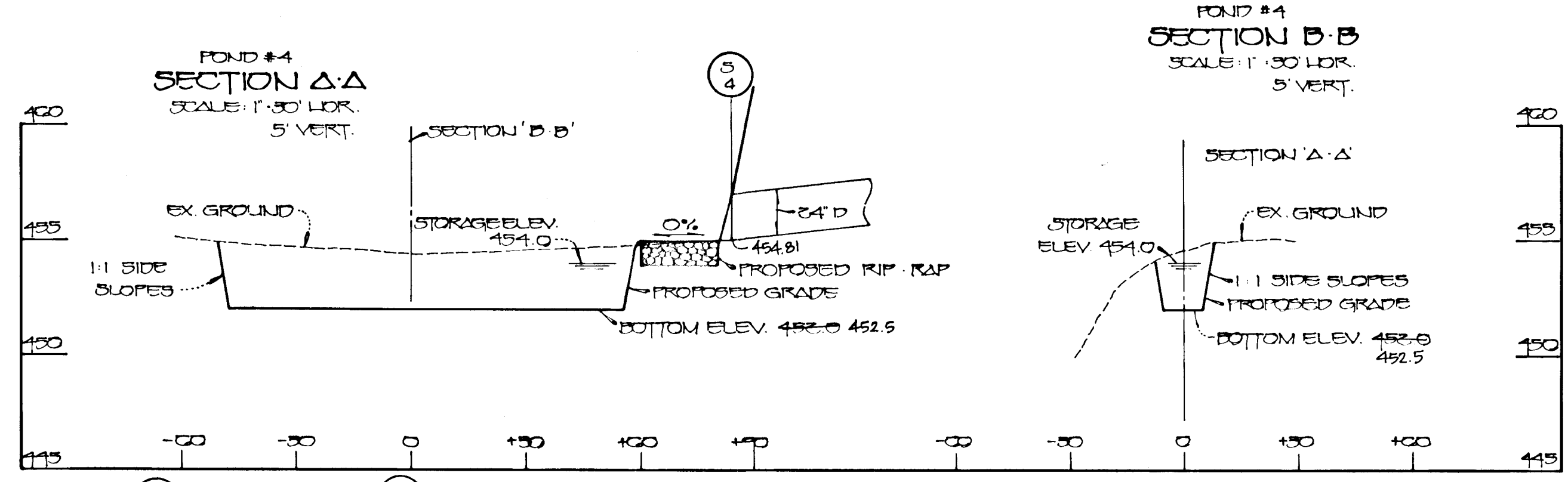
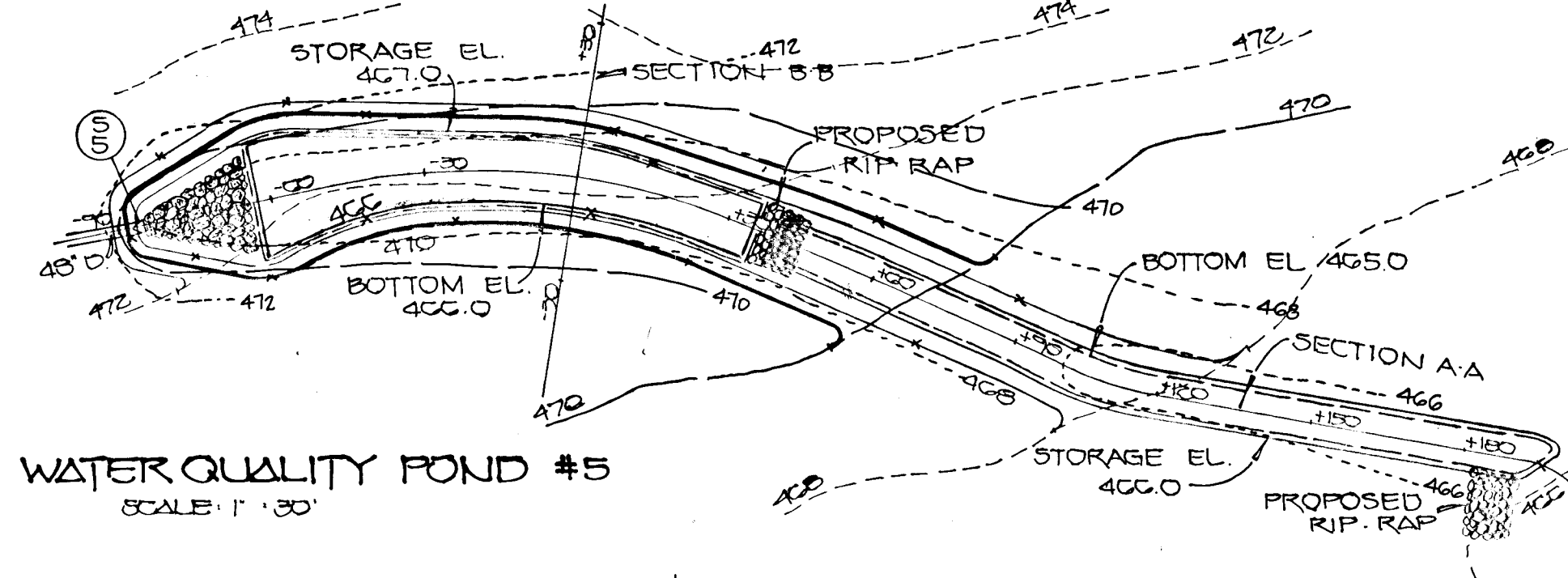
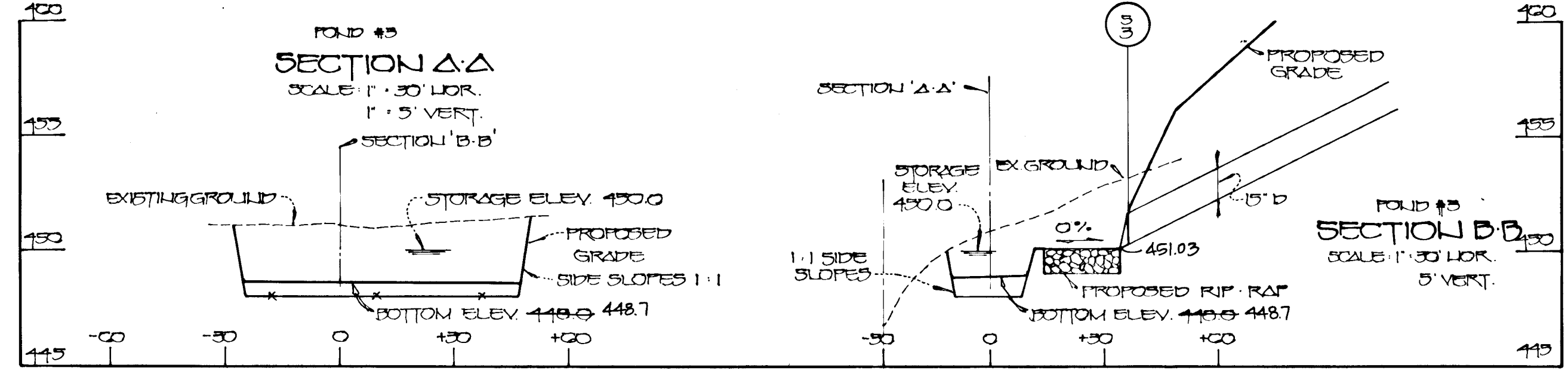
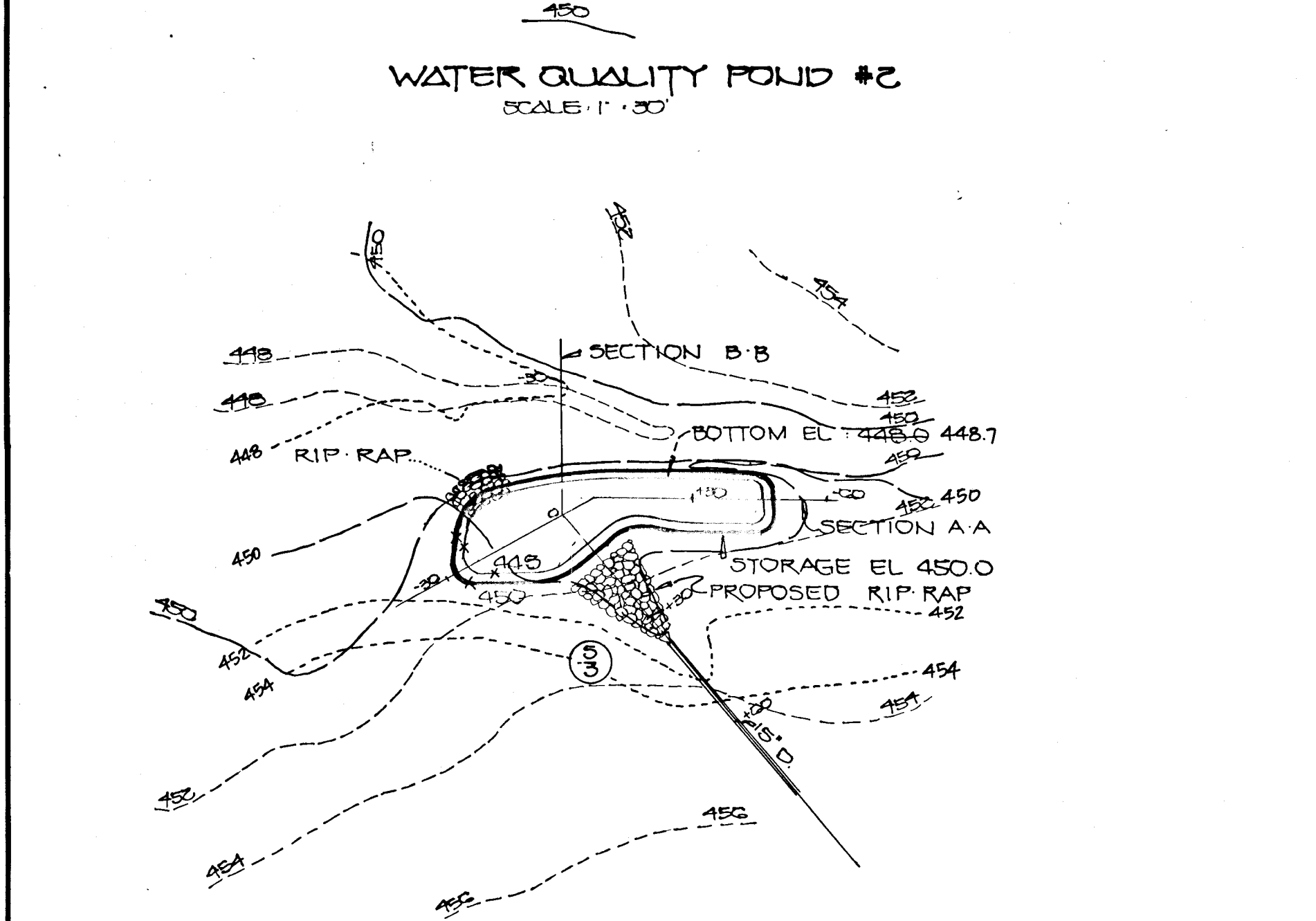
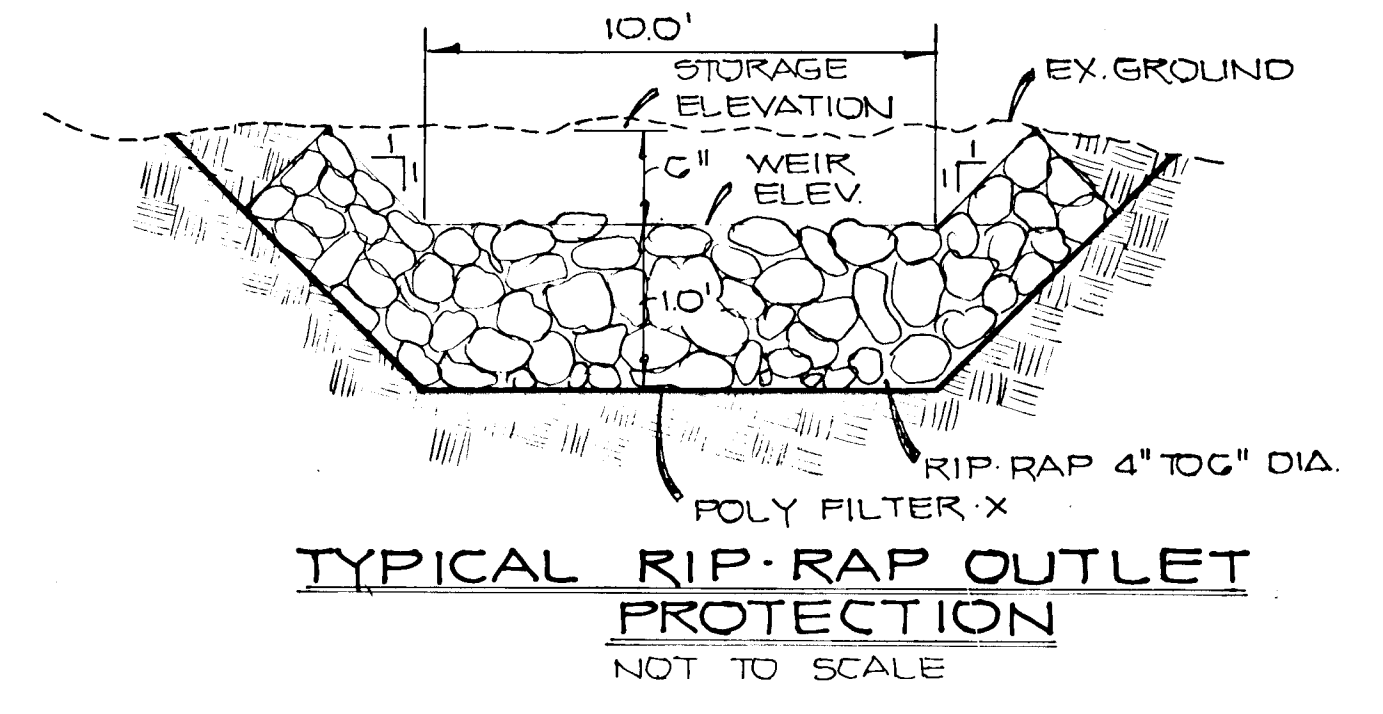
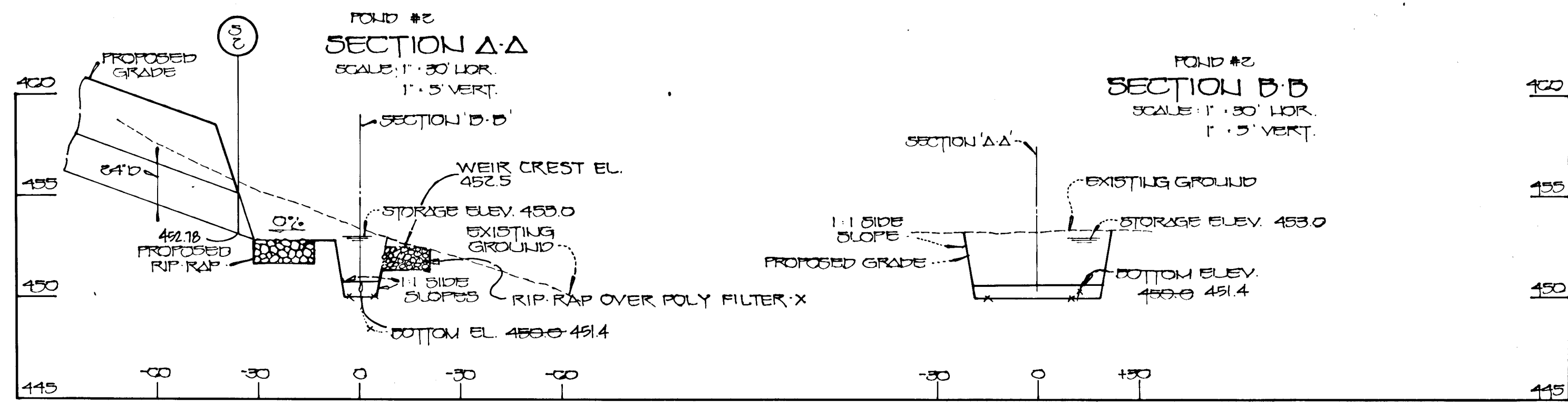
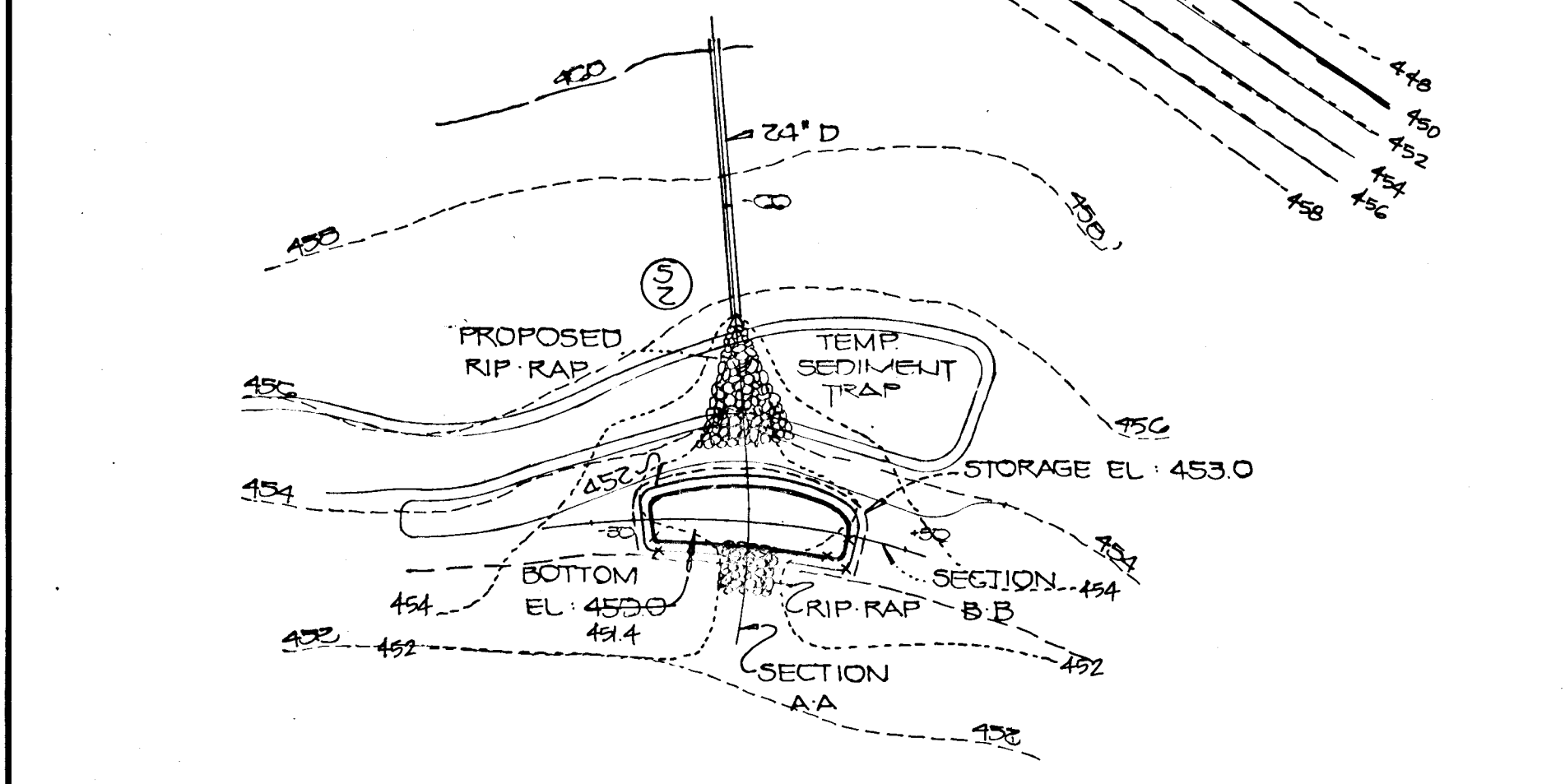
Ch. M. Jaynes 10/16/90
CHIEF, LAND DEVELOPMENT DIVISION #114 DATE

Granville W. Walsland 9/14/90
CHIEF, BUREAU OF HIGHWAYS DATE

William B. Ray 10-17-90
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED
DEPT. OF PLANNING AND ZONING

Danish V. Taylor 11/2/90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



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CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100 5171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
TELE: (301) 461-6855 FAX: (301) 730-3784

OWNER & DEVELOPER
KENNARD WARFIELD JR.
14663 TRIADELPHIA ROAD
GLENELG MARYLAND
21757



WATER QUALITY POND DETAILS
WAVERLY WOODS
SECTION II LOTS 1-20
2ND & 3RD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JULY 10, 1990 SCALE: AS SHOWN
SHEET 15 OF 18

1253