

ENGINEER'S CERTIFICATE
 I, CHARLES J. CROVO SR., a duly Licensed Professional Engineer in the State of Maryland, hereby certify that the above described plan for EROSION AND SEDIMENT CONTROL WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 CHARLES J. CROVO SR. 7/6/84 DATE

DEVELOPER'S CERTIFICATE
 I, JAMES HELM, certify that all development and construction will be done according to this plan of development and construction 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 onsite inspection by the Howard County Soil Conservation District or their authorized agents as are deemed necessary.
 JAMES HELM 10-4-84 DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 JAMES HELM 10-4-84 DATE

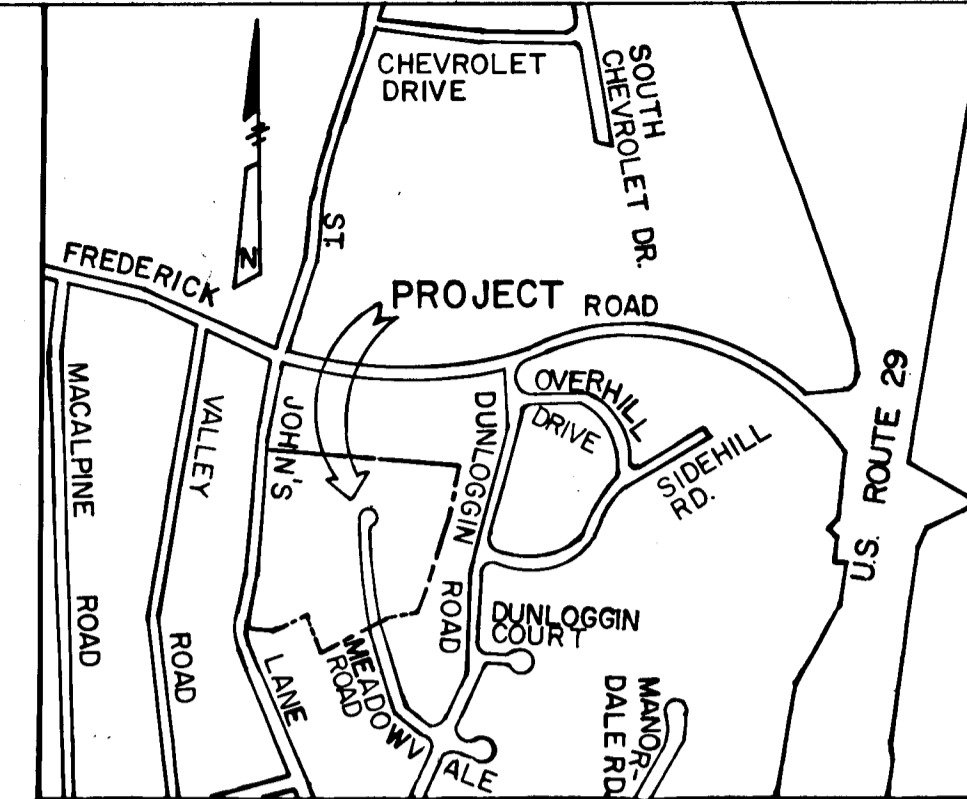
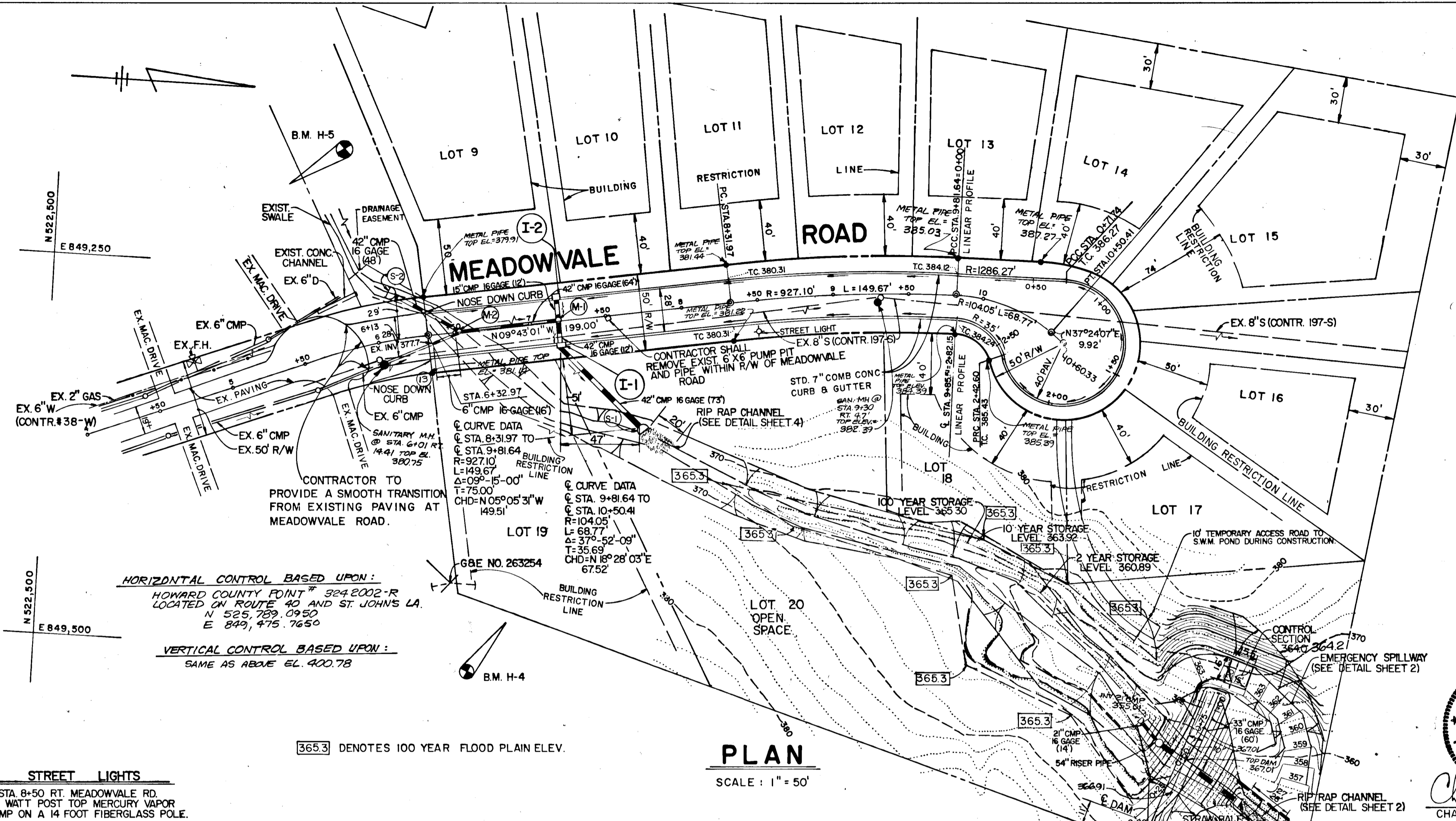
THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 ROBERT W. ZELM 10-4-84 DATE

GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HRS. IN ADVANCE OF ANY CONSTRUCTION.
- STORM DRAINAGE TRENCHES WITHIN ROAD RIGHTS-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS - TELEPHONE: 792-7272
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.

APPROVED DEPARTMENT OF PUBLIC WORKS
 M. J. ... 10-8-84 DATE
 CHIEF, BUREAU OF ENGINEERING

APPROVED OFFICE OF PLANNING AND ZONING
 J. ... 10-8-84 DATE
 ZONING ADMINISTRATION



BENCH MARKS

B.M. H-4	HUB WITH TACK SET 45° NORTHEAST FROM GBE POLE NO. 263254	ELEV. 385.44
B.M. H-5	HUB WITH TACK SET 115° WEST FROM C. STA. 5+73 MEADOWVALE ROAD	ELEV. 381.54

BEDFORD SQUARE
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

**MEADOWVALE ROAD
 PLAN, PROFILE, AND
 STORM WATER MANAGEMENT POND**

OWNER AND DEVELOPER
 P & N PARTNERSHIP
 9025 CHEVROLET DRIVE
 SUITE L
 ELLICOTT CITY, MD. 21043

SCALE AS SHOWN DATE JULY 6, 1984 DWG. NO. 1 OF 5
 DES. C. CROVO SR. DRN. A. STEINBERG CHK. R. CARTER

FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

BY DATE

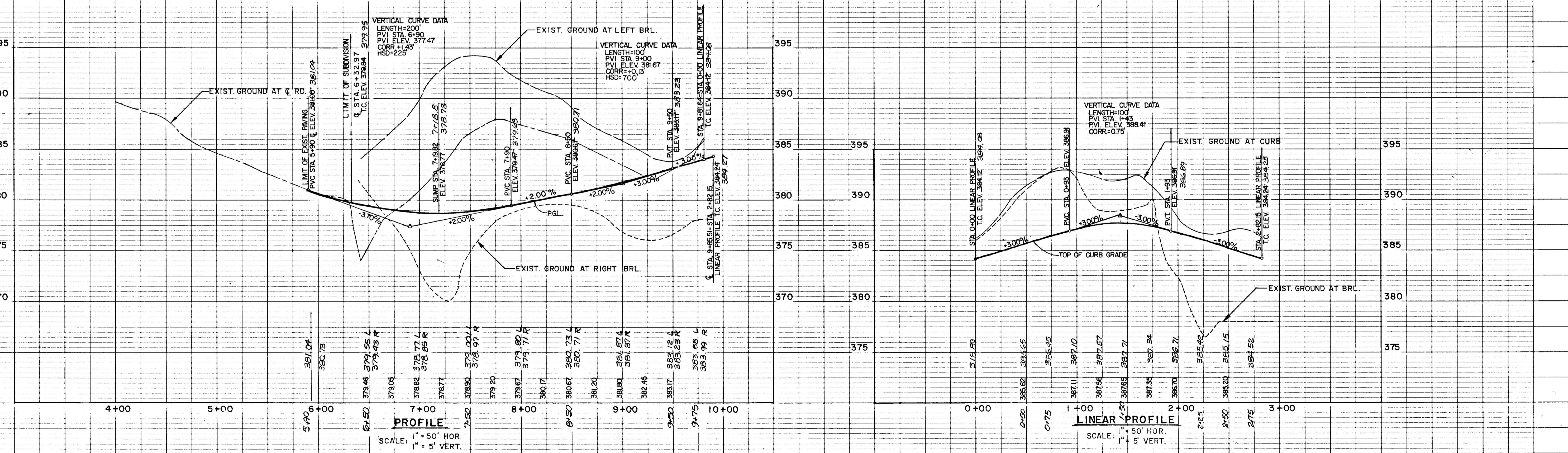
PLAN SURVEYED PLOTTED CHECKED RT. OF WAY CHECKED
 NOTE BOOK NO.

BY DATE

PROFILE SURVEYED PLOTTED CHECKED STRUCTURE NOTATIONS CHECKED
 NOTE BOOK NO.

1099

MEADOWVALE ROAD



AS-BUILT SURVEY CERTIFIED BY
 BY DHARAM V. KATHURIA, MD. REG.
 P.E. No. 8515 ON

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.

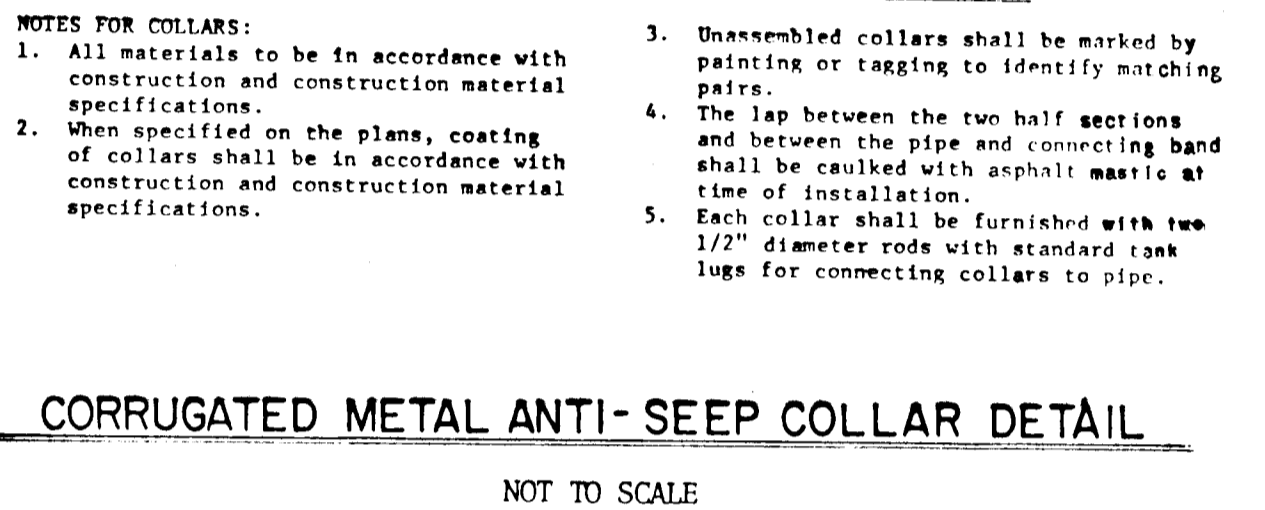
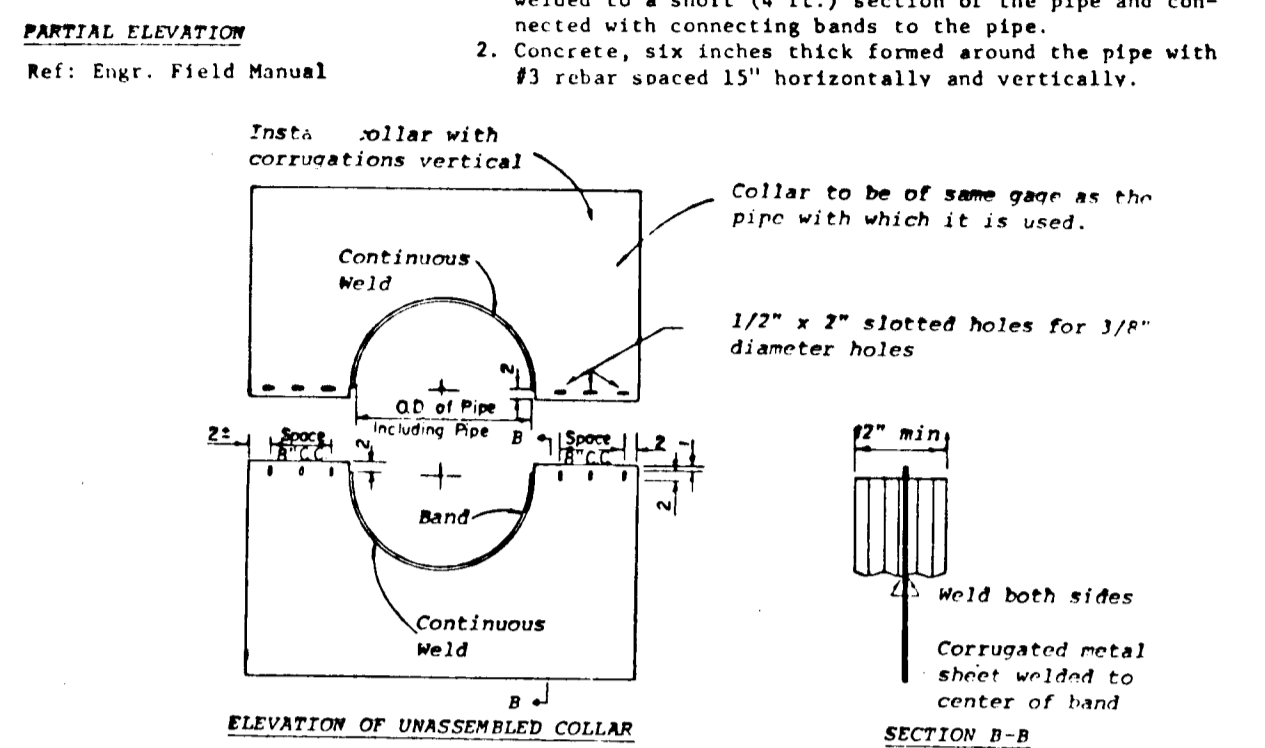
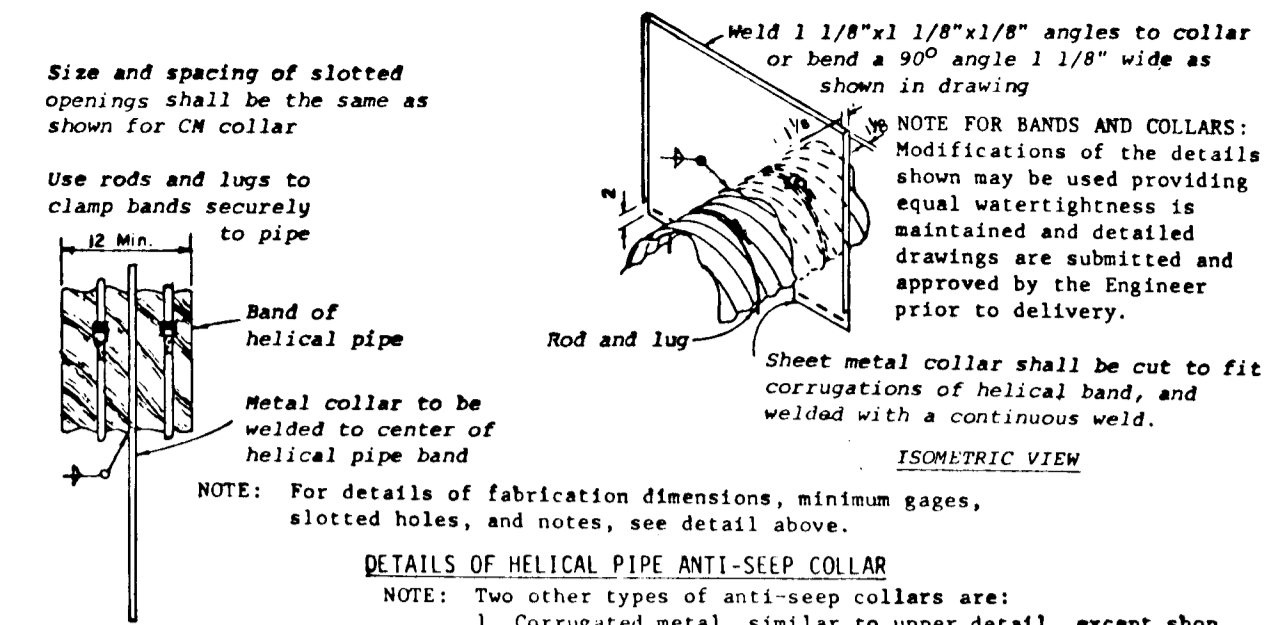
Core Trench: Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans.

III. STRUCTURAL BACKFILL: Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material.

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.

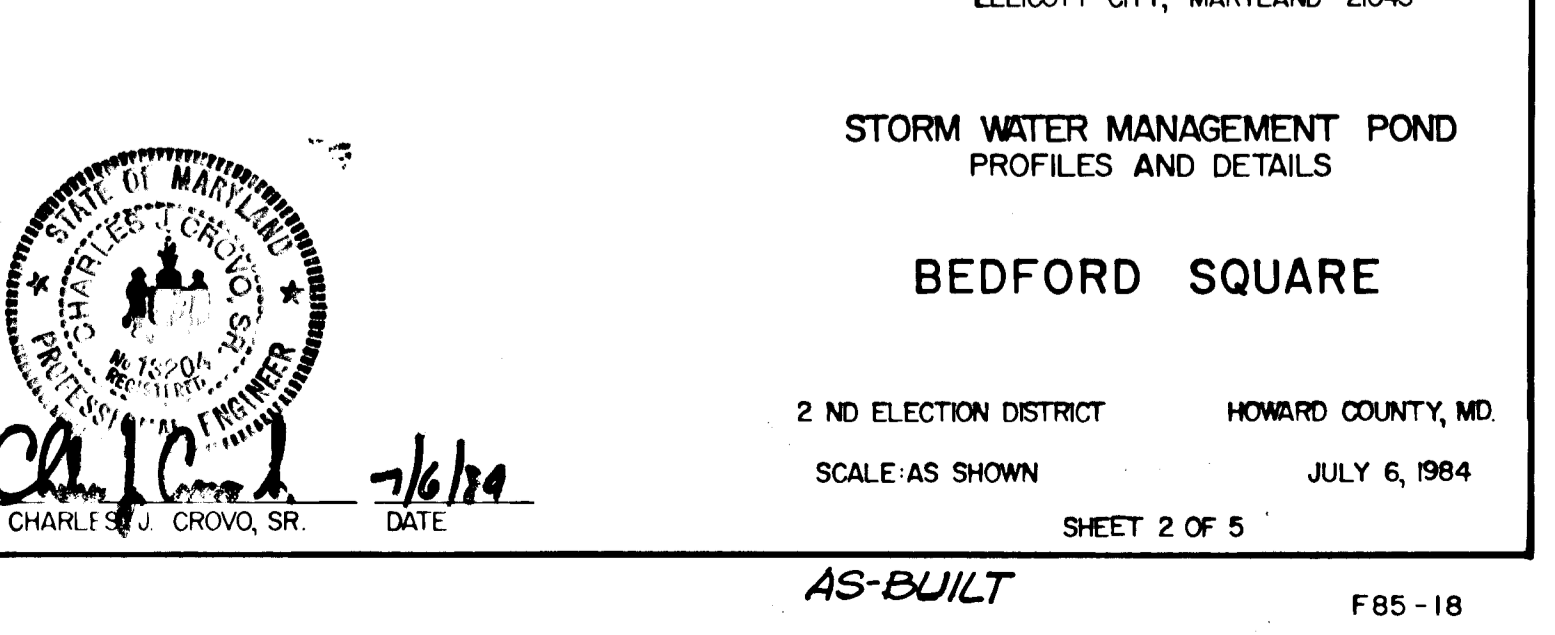
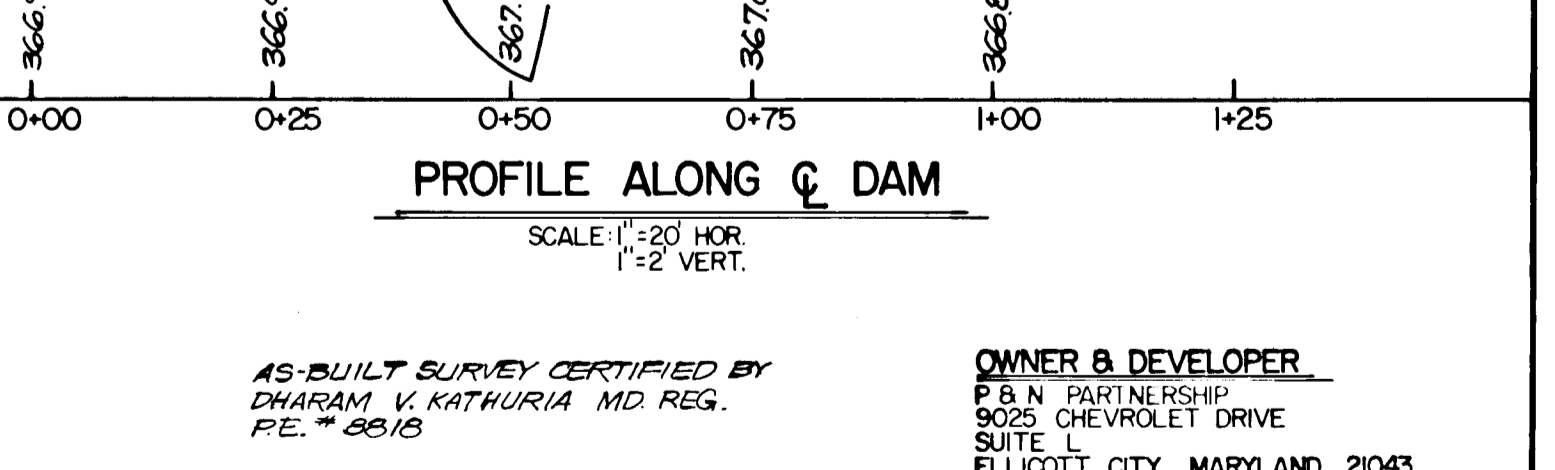
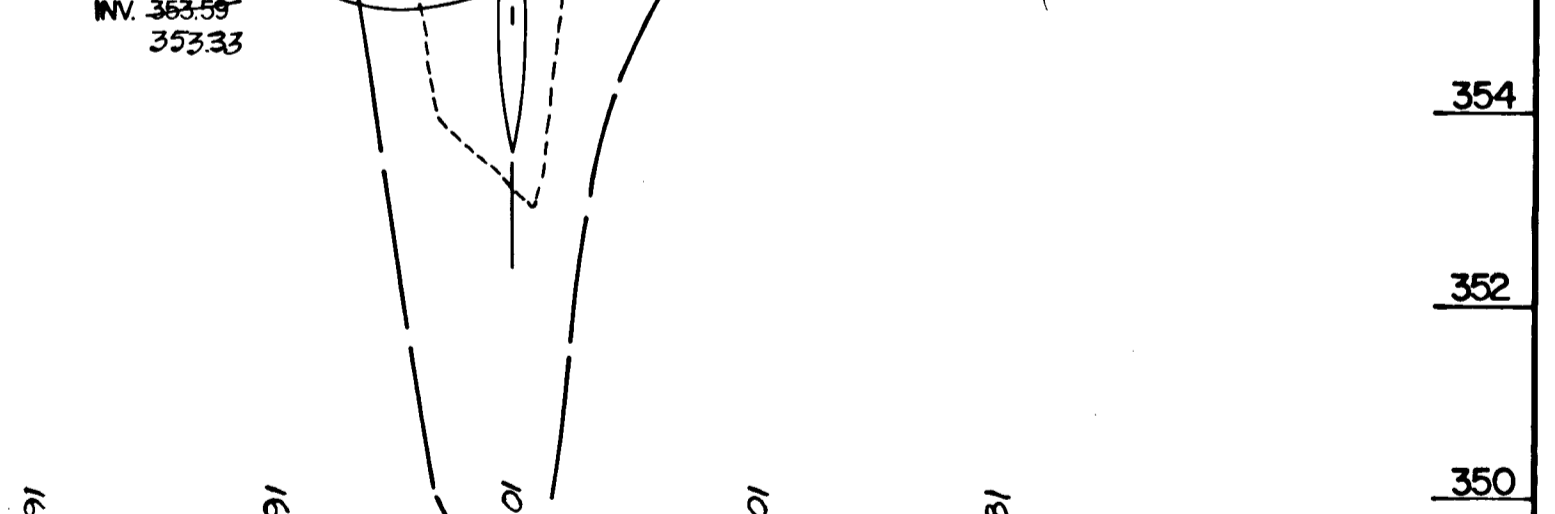
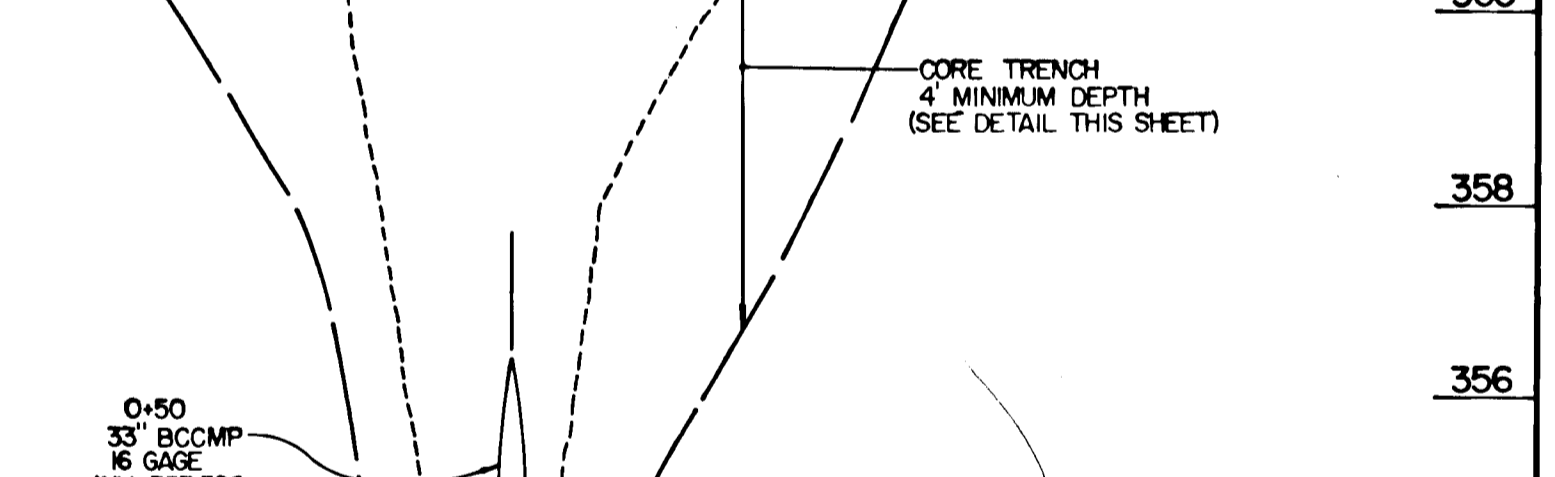
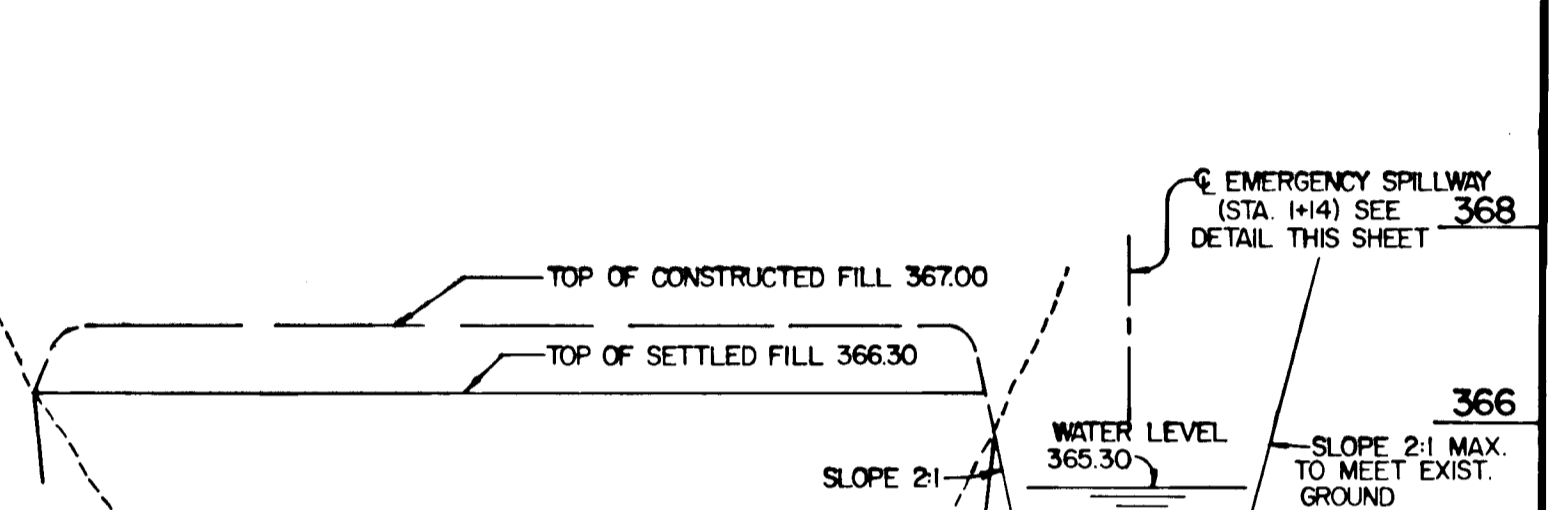
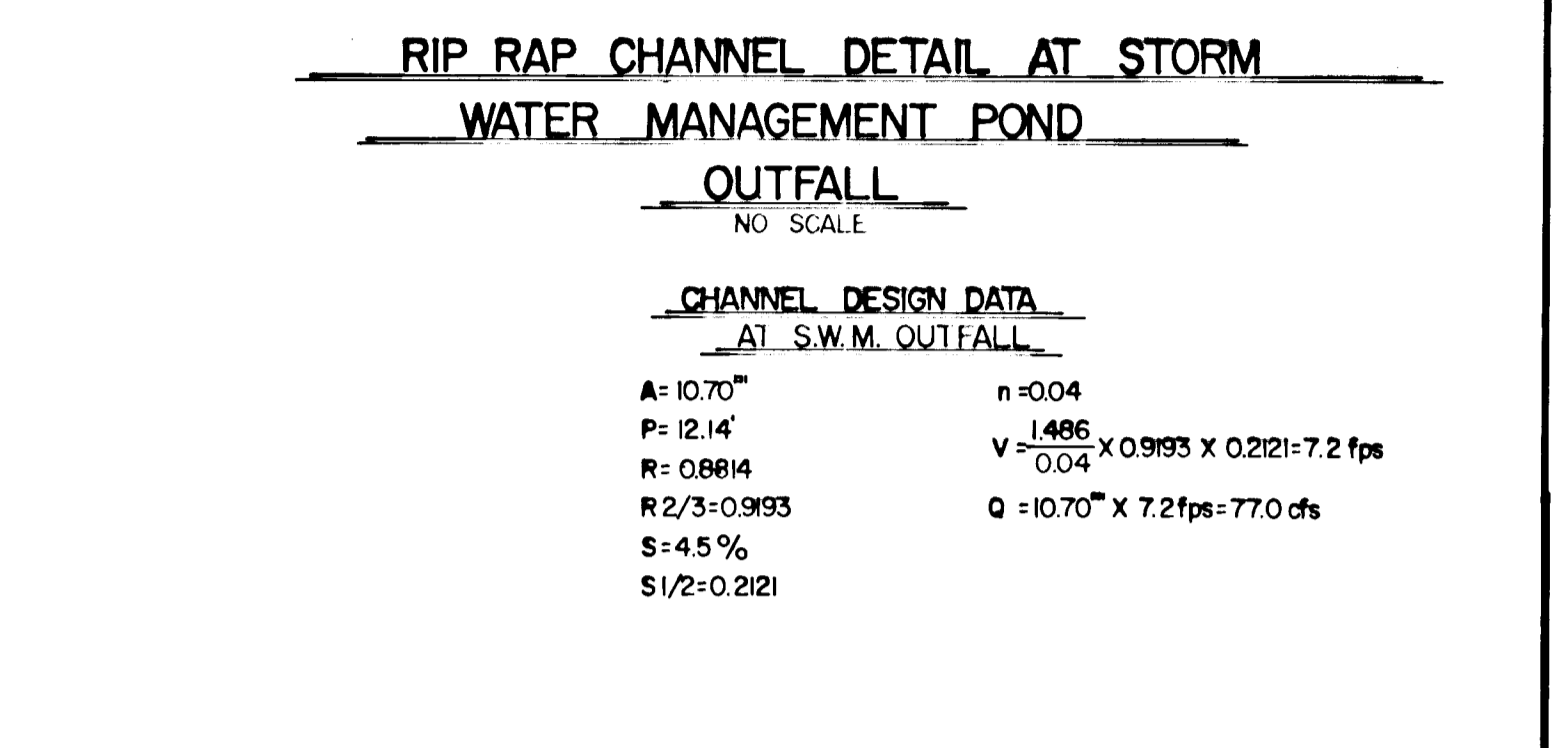
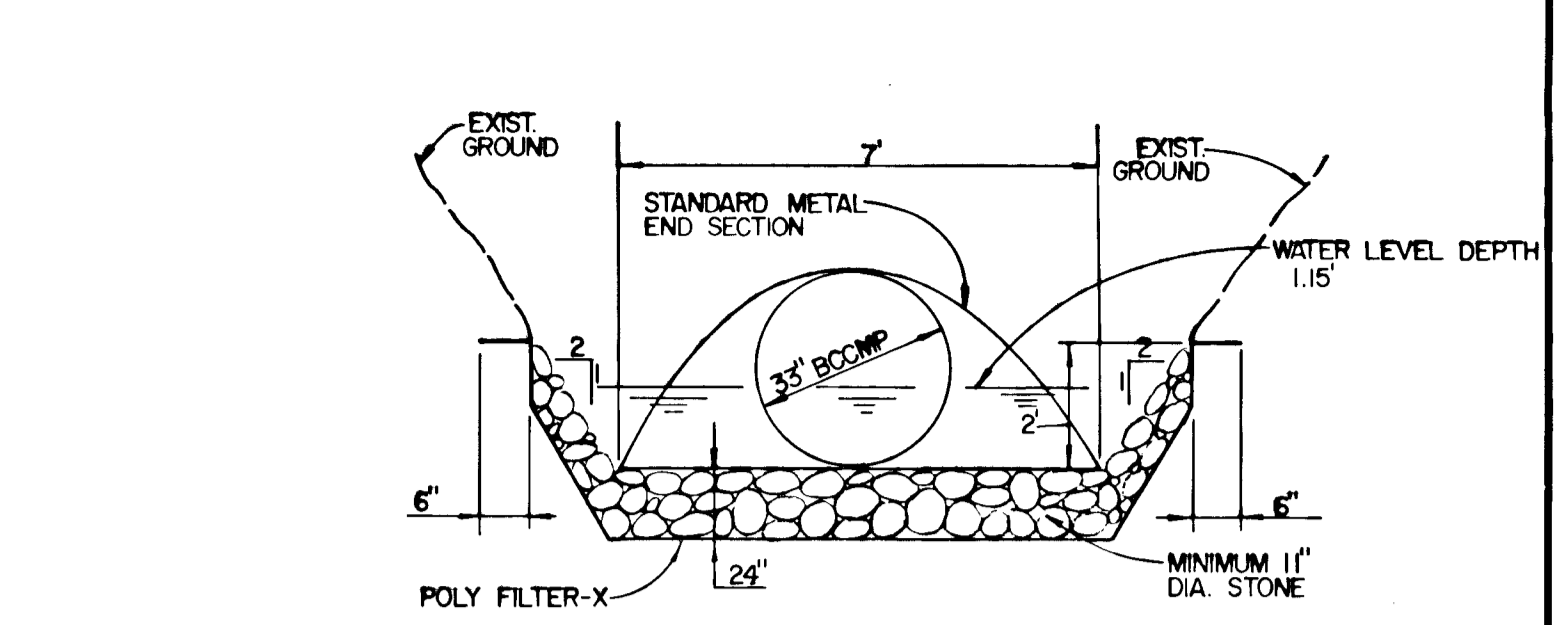
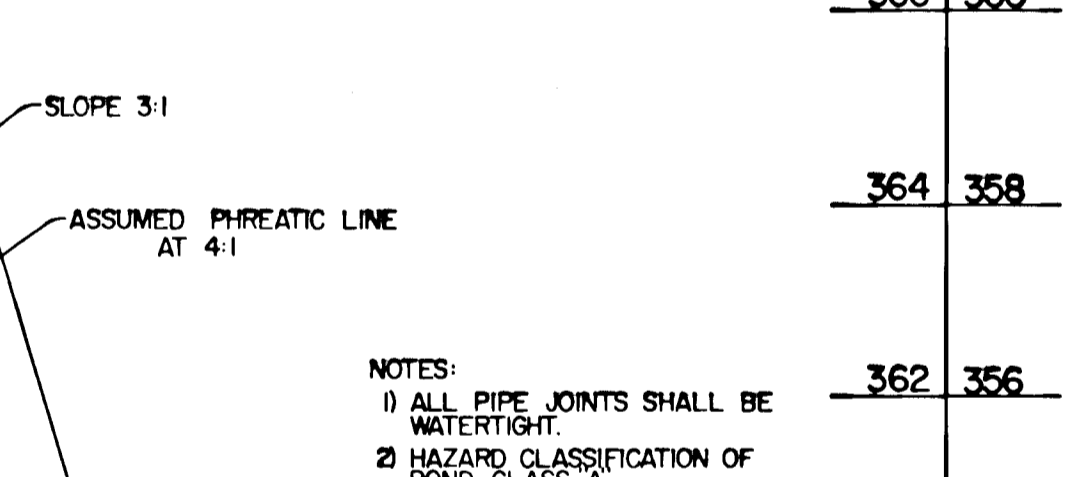
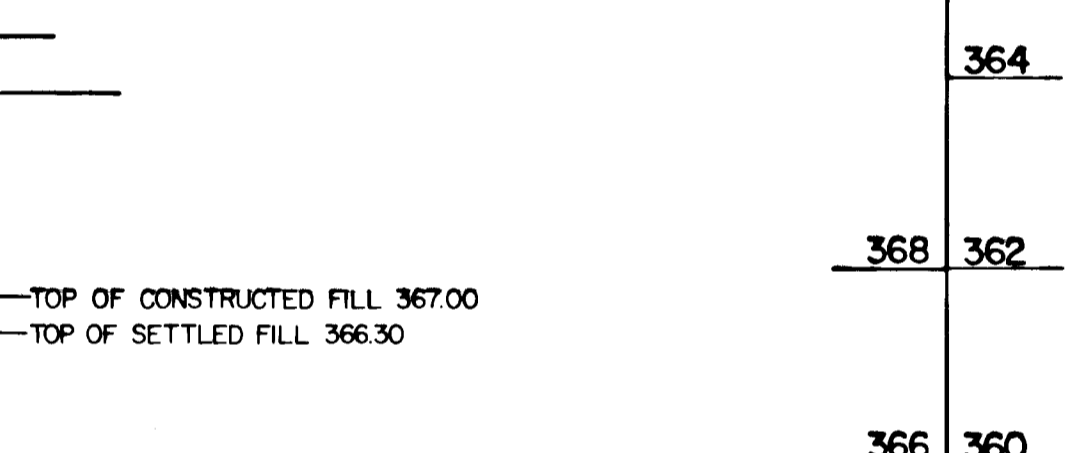
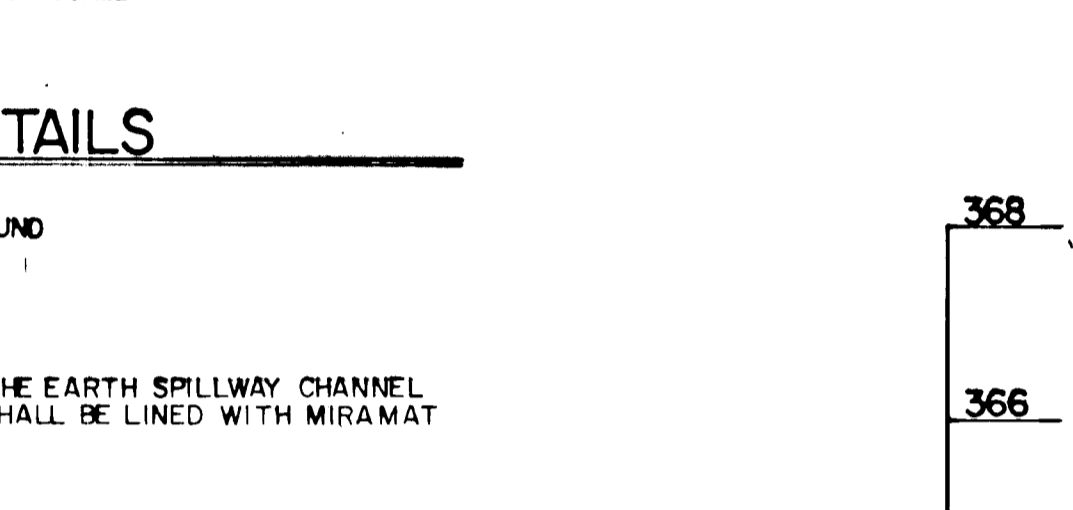
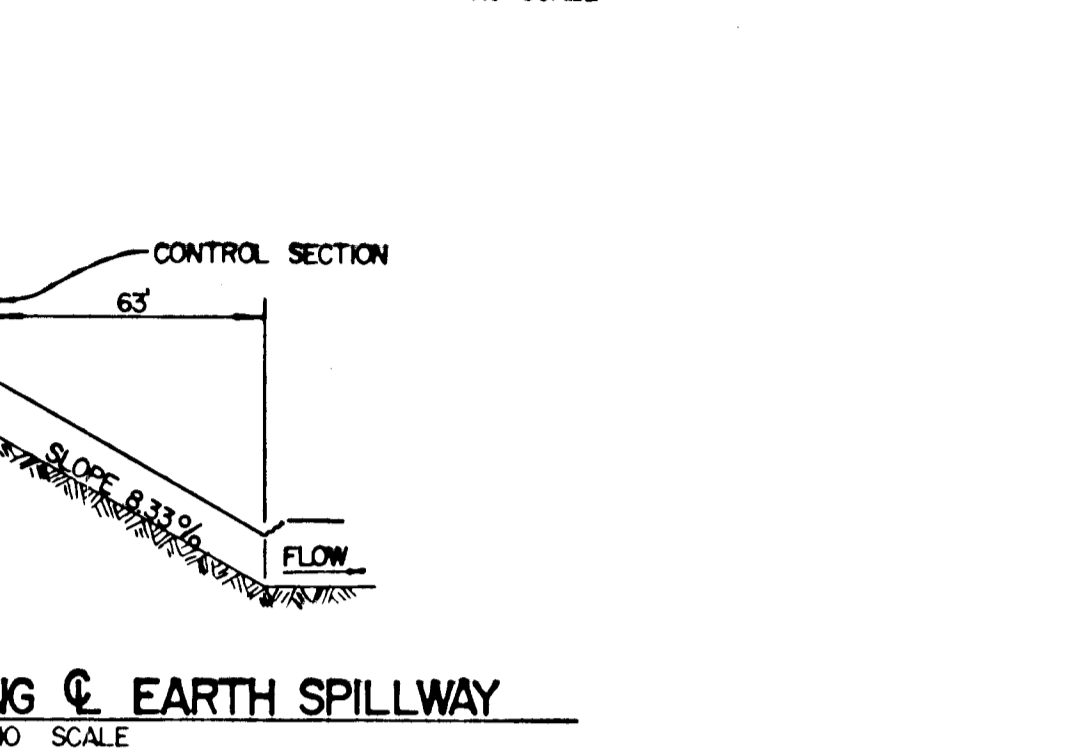
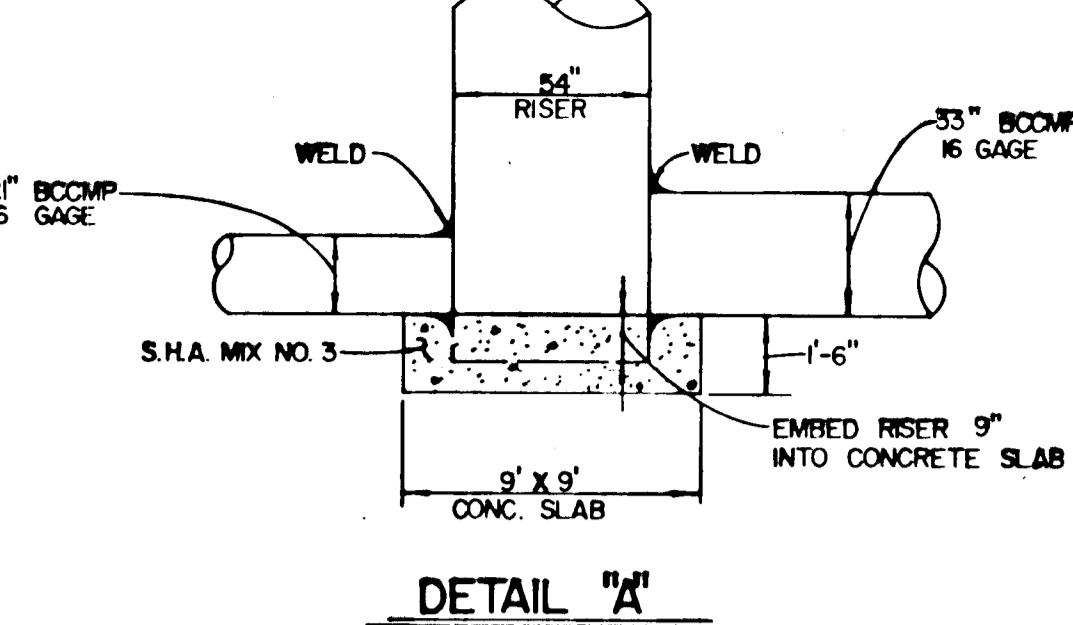
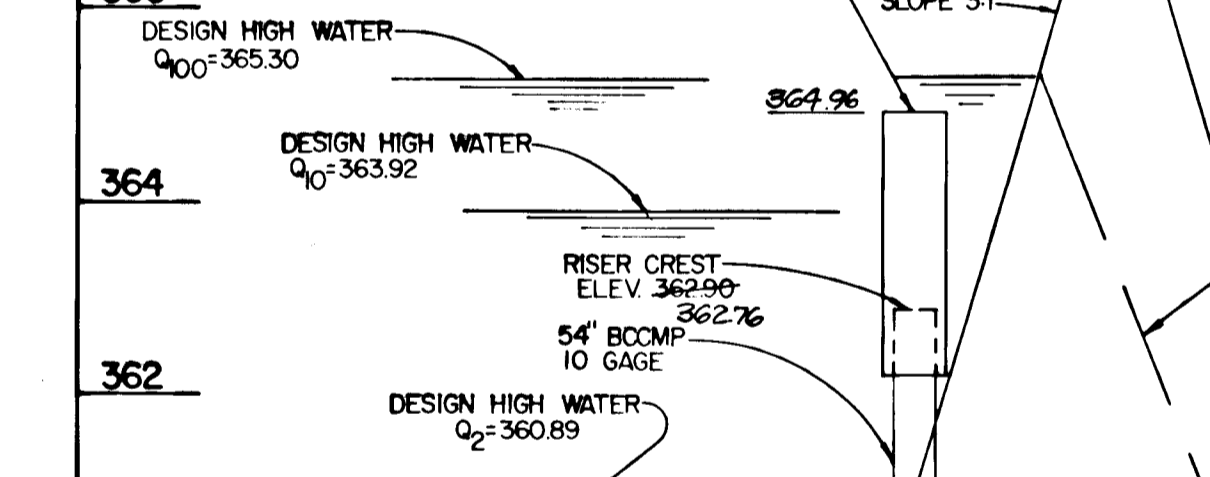
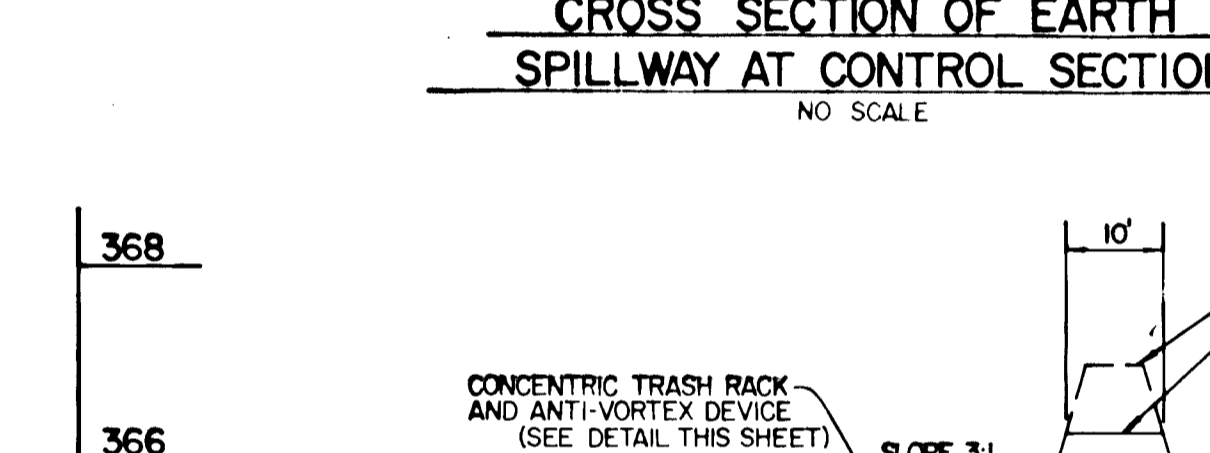
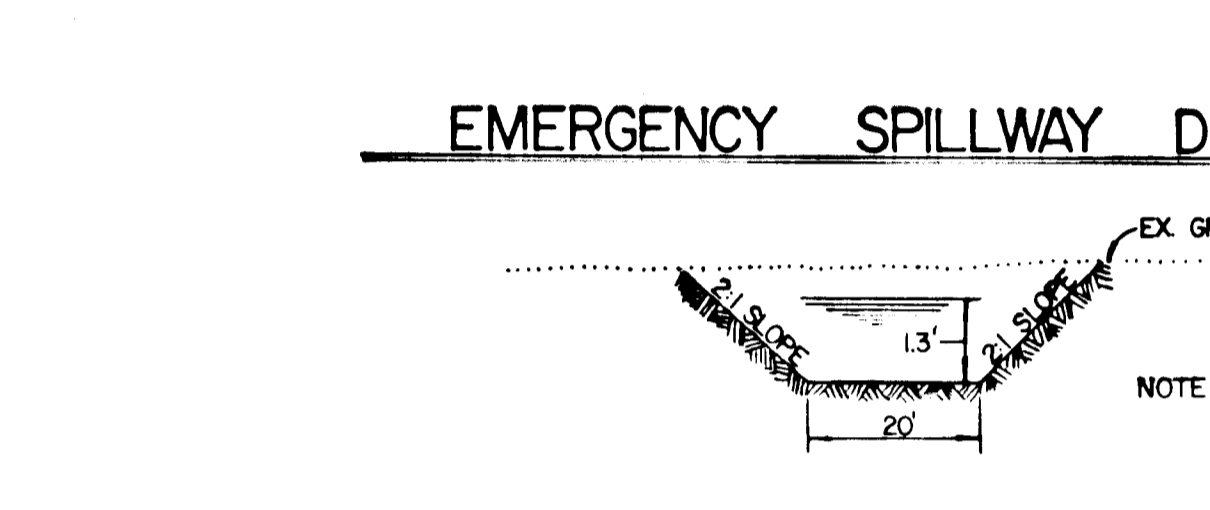
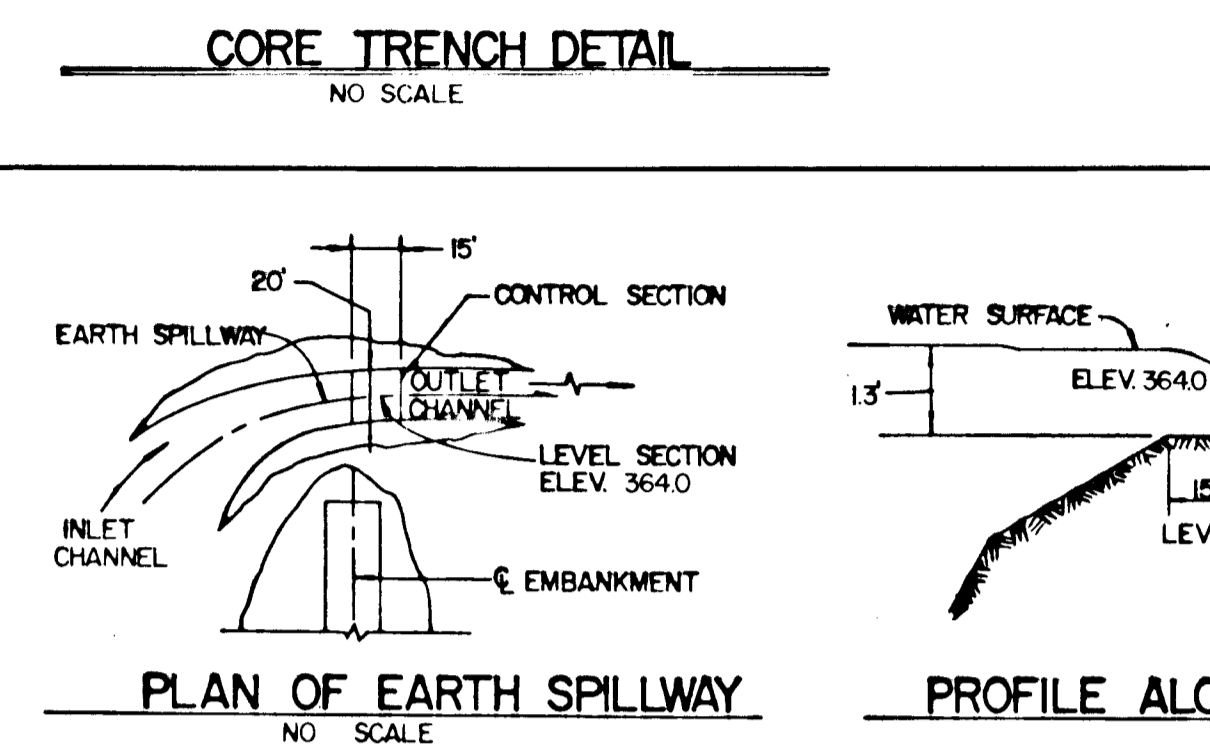
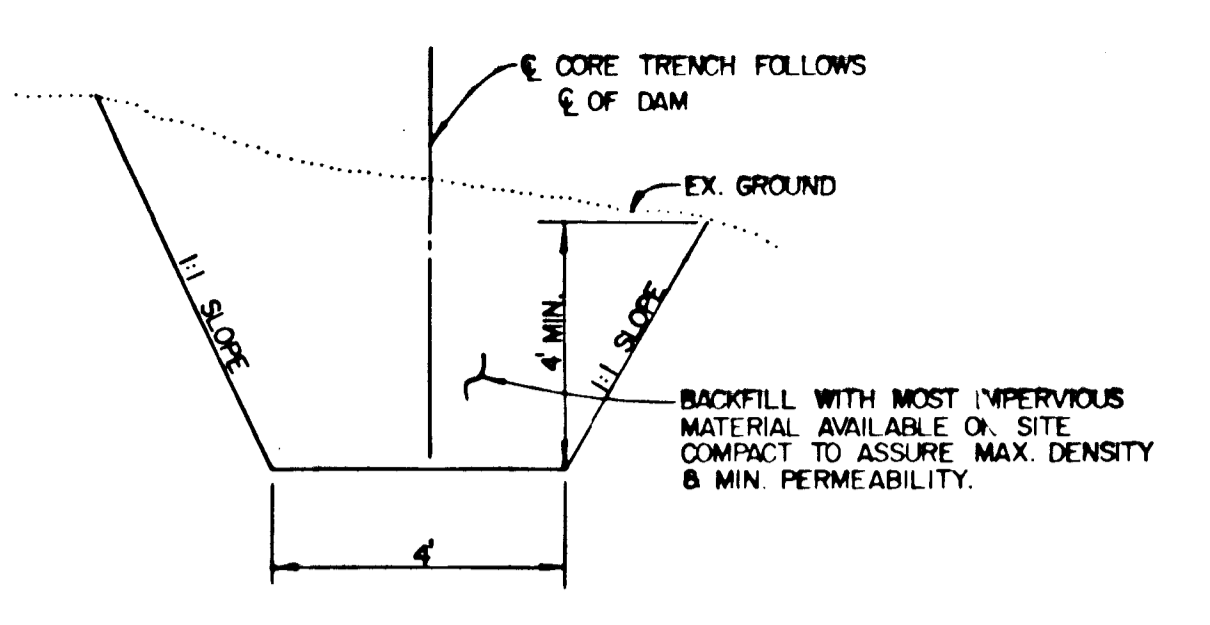
V. CONCRETE: Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

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 seeding and applying straw mulch in accordance with Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.



DEVELOPER'S CERTIFICATE: I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS.

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.

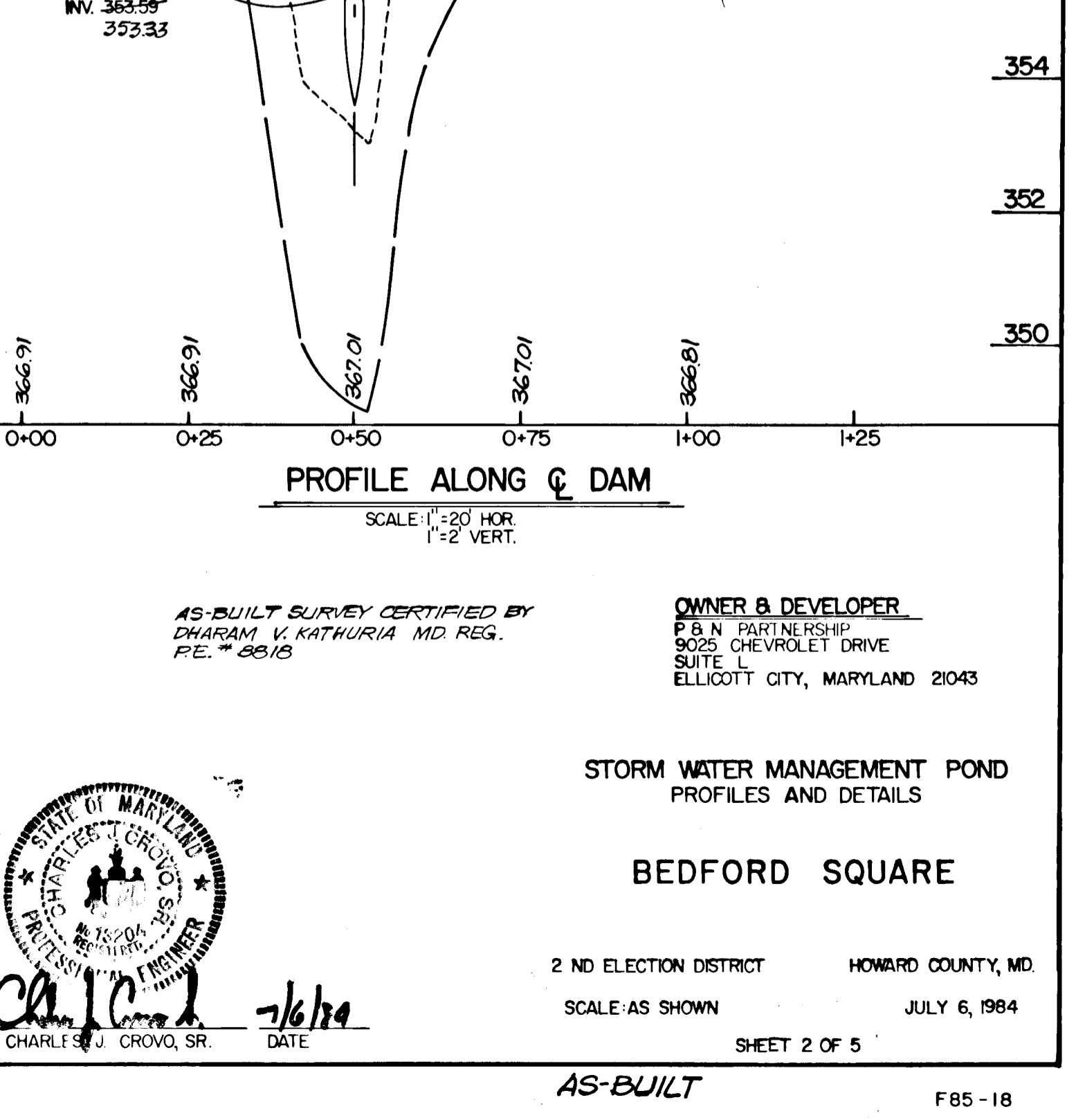
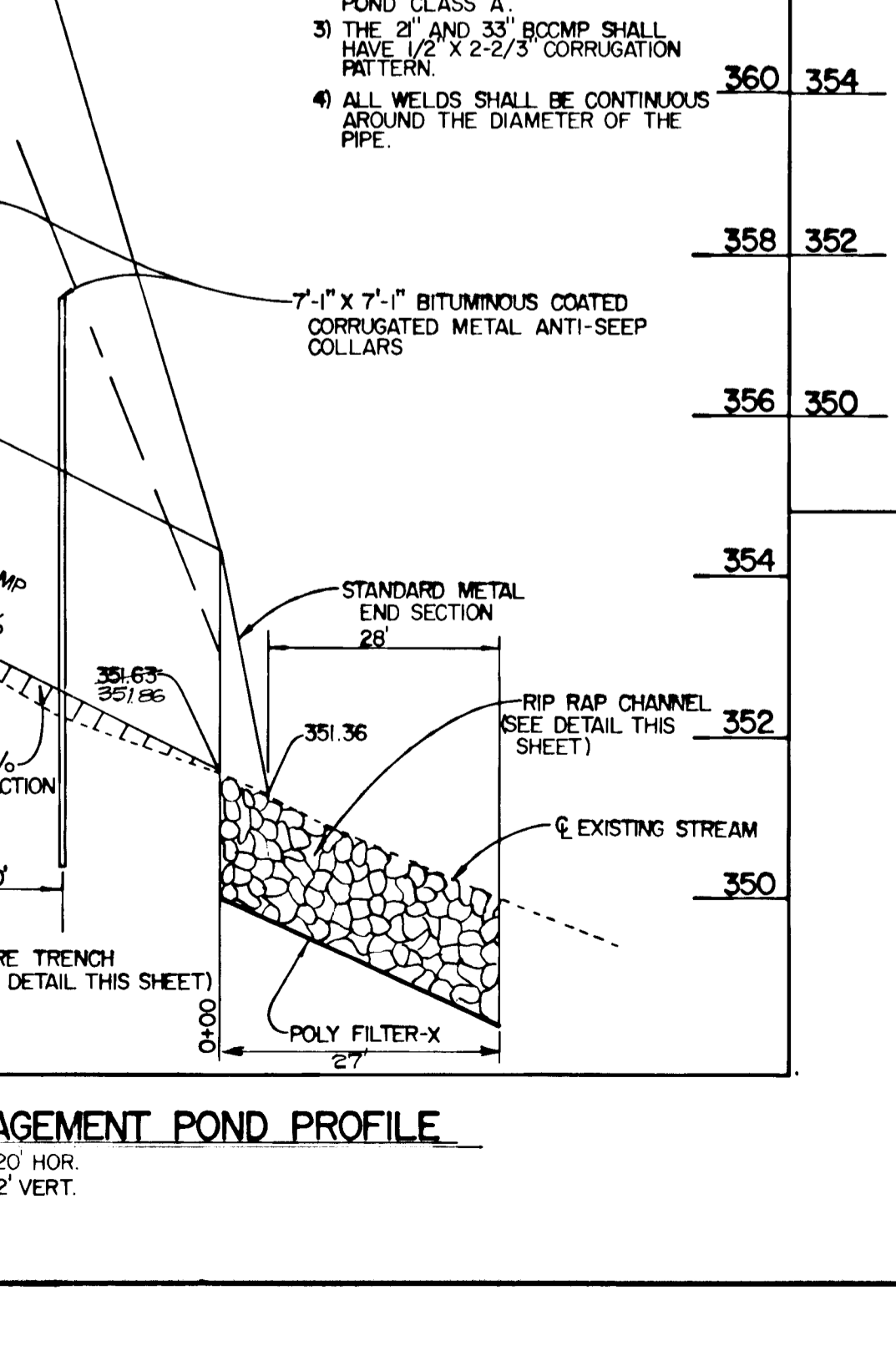
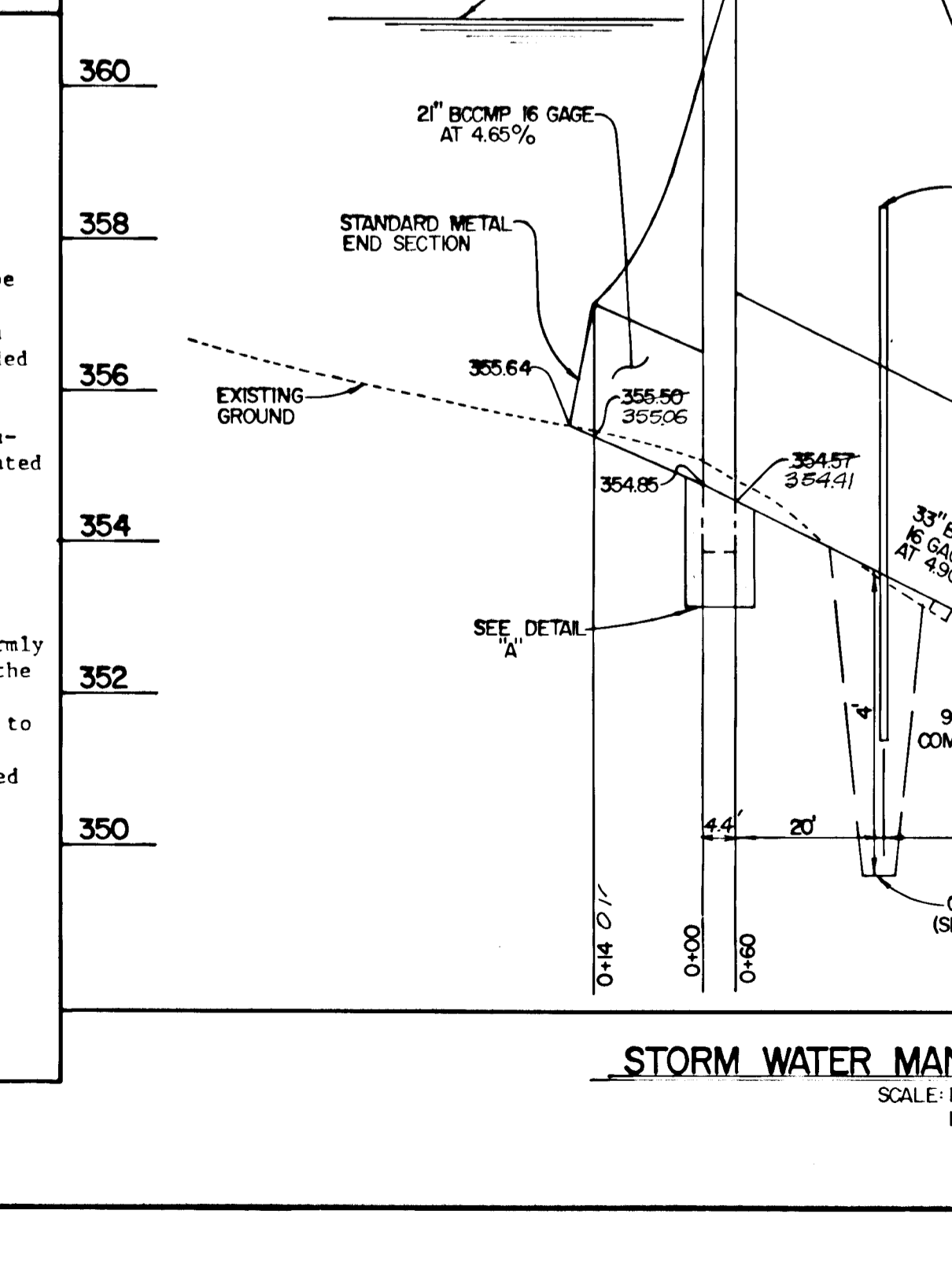
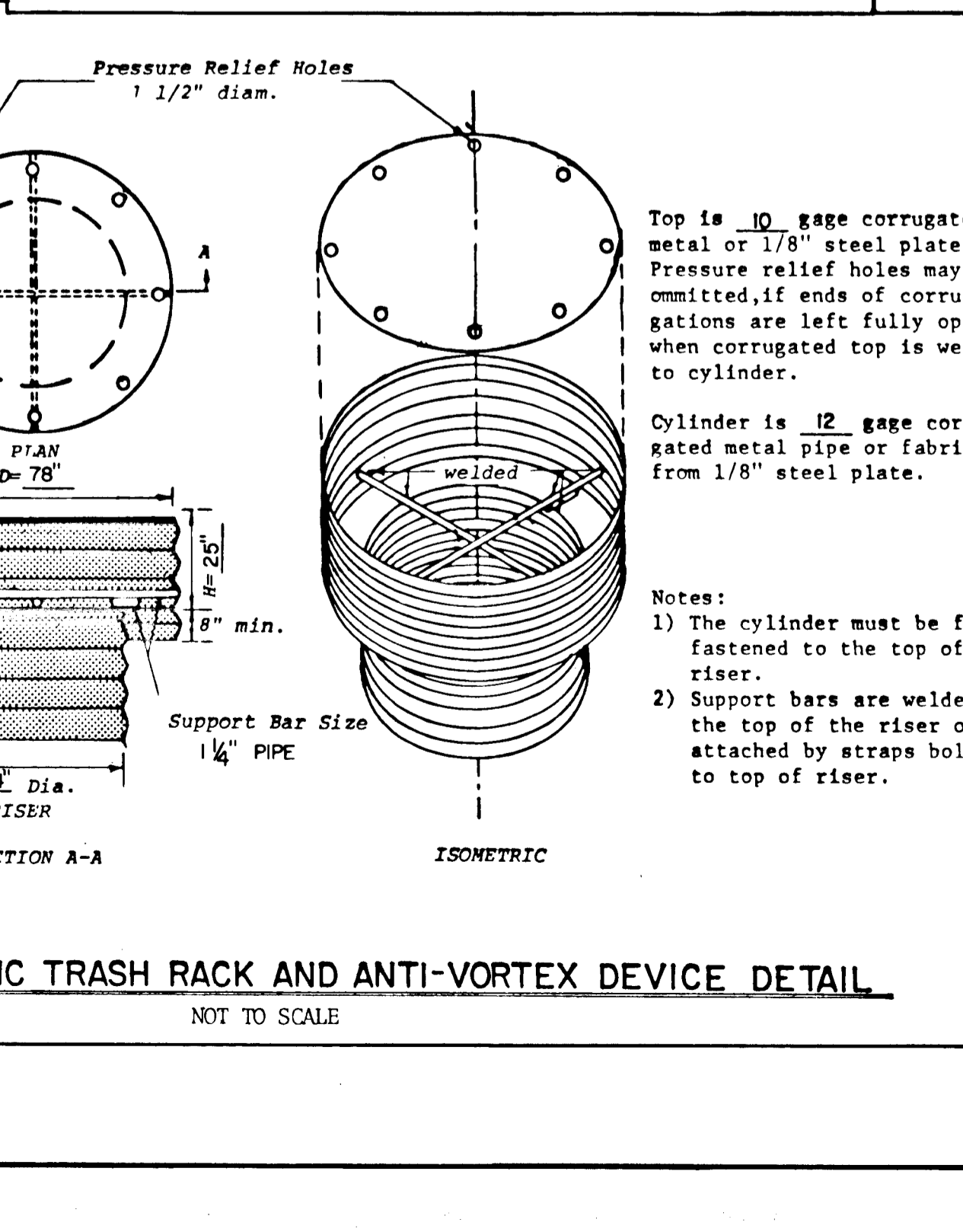


These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

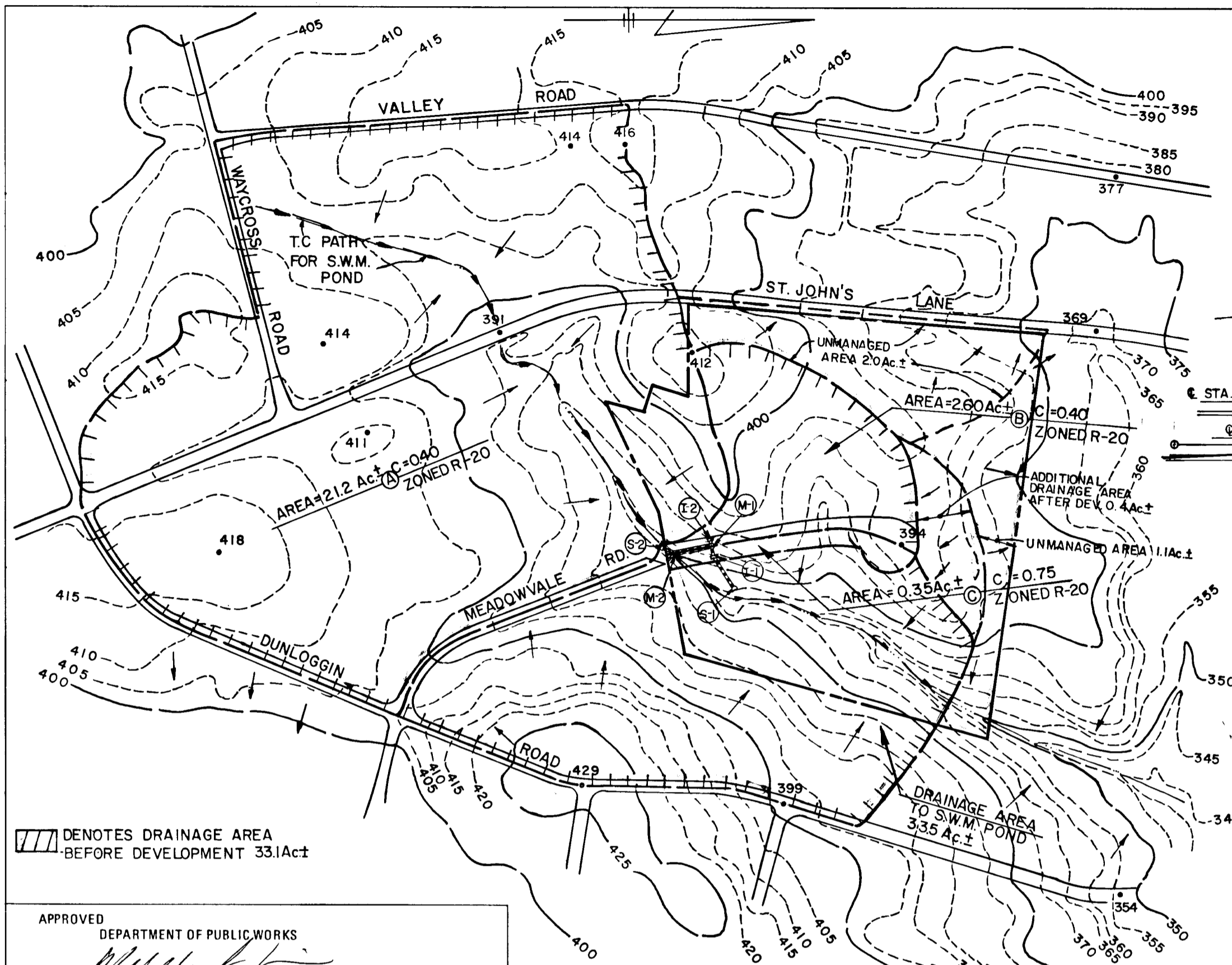
APPROVED: DEPARTMENT OF PUBLIC WORKS, CHIEF, BUREAU OF ENGINEERING

APPROVED: OFFICE OF PLANNING AND ZONING, CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERS & LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043



DATE	
BY	
PLAN	
NO.	
DATE	
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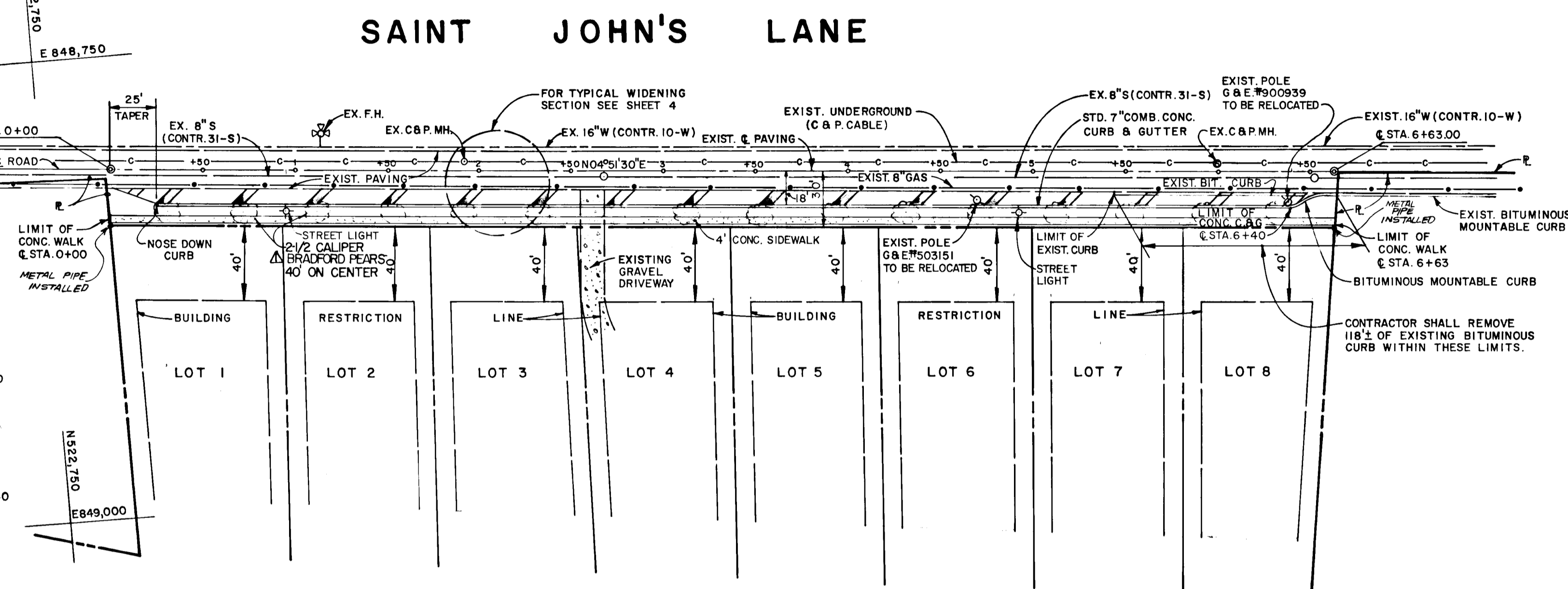
DRAINAGE AREA MAP

SCALE: 1" = 200'

APPROVED
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
DATE

APPROVED
OFFICE OF PLANNING AND ZONING
DATE

DATE	
BY	
PROFILE	
NO.	
DATE	
BY	
PROFILE	
NO.	



SAINT JOHN'S LANE

PLAN

SCALE: 1" = 50'

STREET LIGHTS
250-WATT MERCURY VAPOR LAMP PENDANT MOUNTED
FIXTURES ON A 25'-FOOT GALVANIZED STEEL POLE
@ STA. 0+95 @ STA. 4+95 ±

NO.	BY	REVISION	DATE
1	D.A.N.	REVISE TREE TYPE FROM MAPLES TO BRADFORD PEARS.	2/10/87



CHARLES J. CROVO SR. DATE 7/6/89

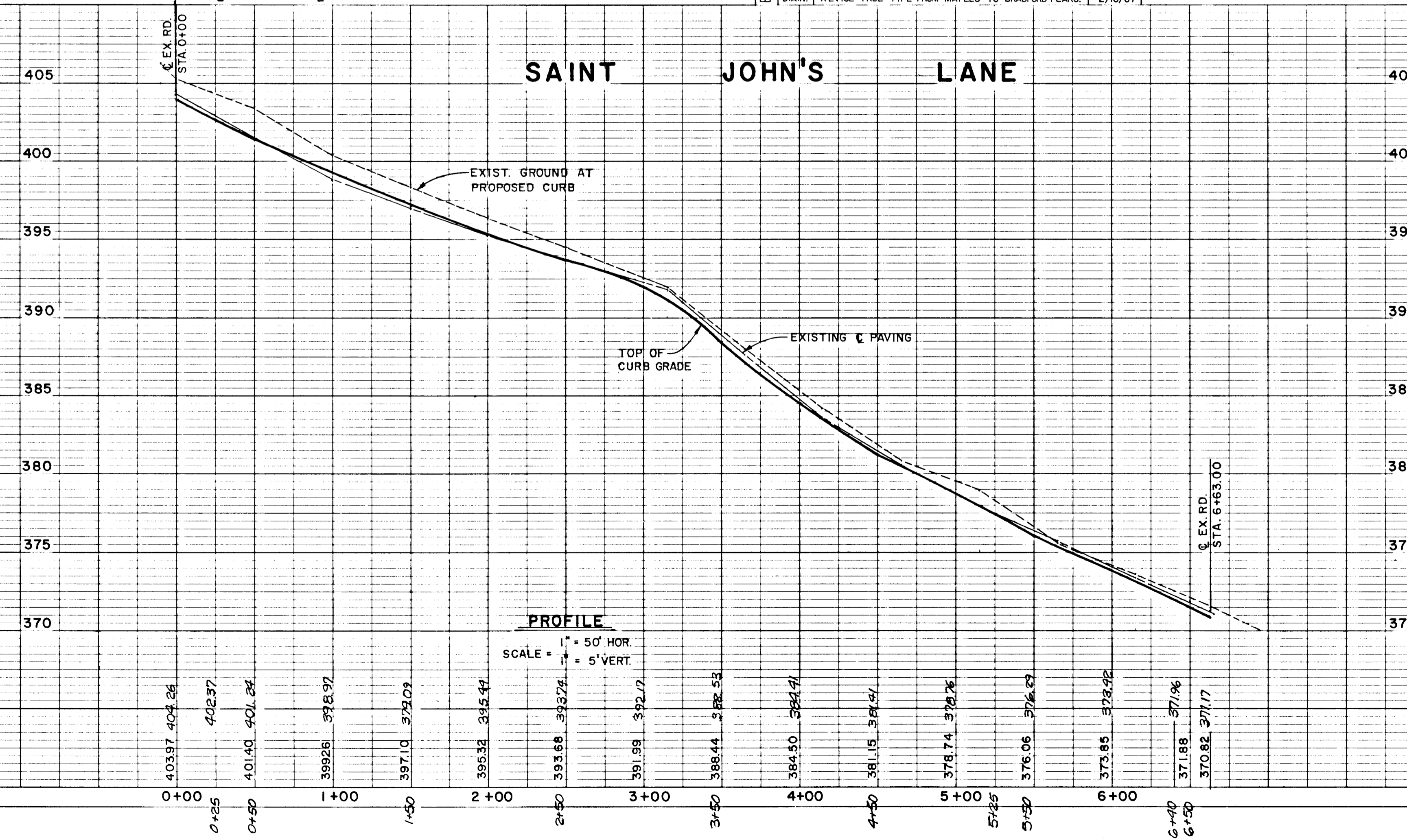
BEDFORD SQUARE
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SAINT JOHN'S LANE
PLAN AND PROFILE

OWNER AND DEVELOPER
P & N PARTNERSHIP
9025 CHEVROLET DRIVE
SUITE 1
ELLCOTT CITY, MD. 21043

SCALE AS SHOWN DATE JULY 6, 1984 DWG. NO. 3 OF 5
DES. C. CROVO SR. DRN. A. STEINBERG CHK. R. B. CARTER

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLCOTT CITY, MARYLAND 21043

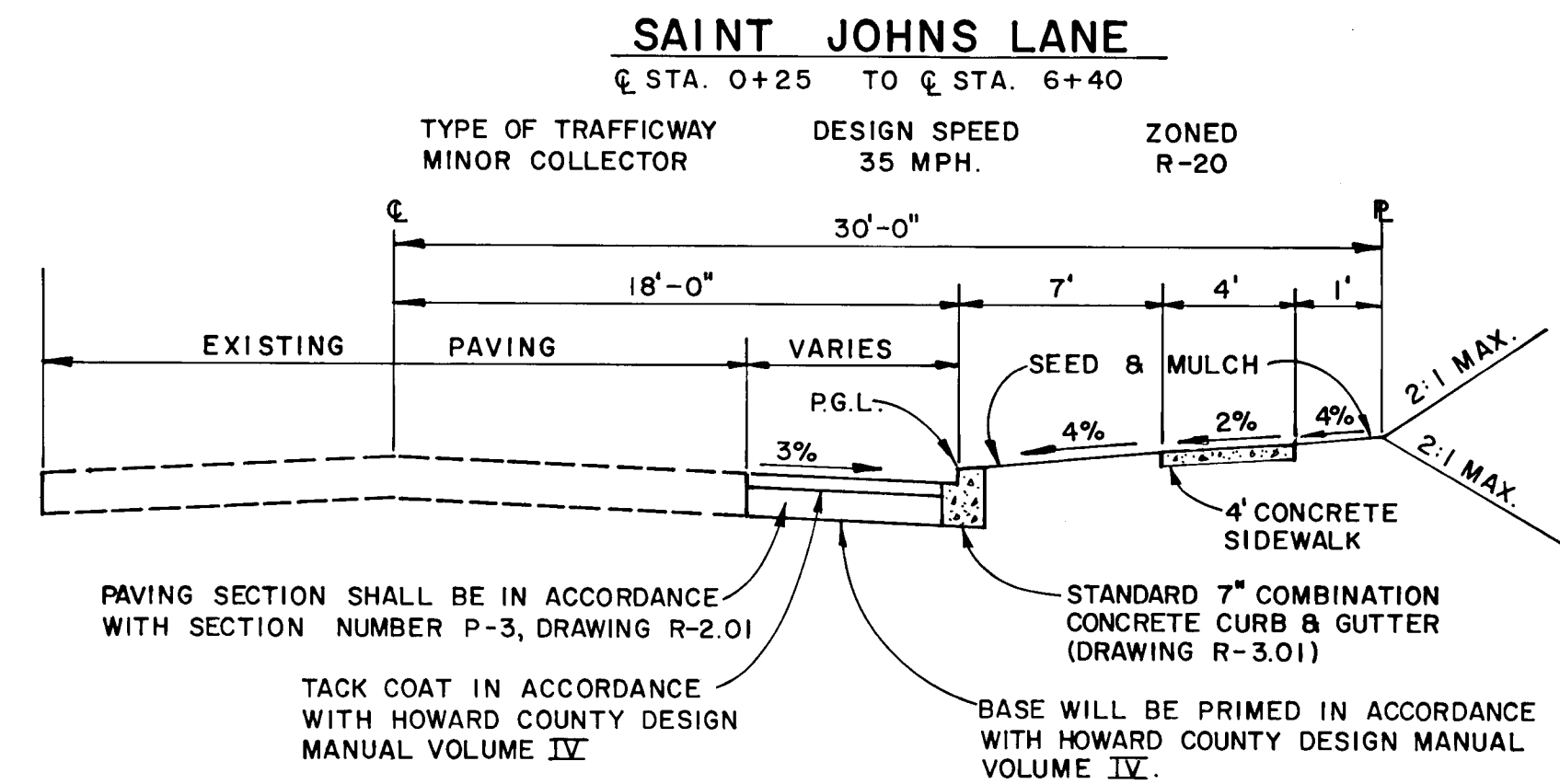


PROFILE

SCALE = 1" = 50' HOR.
1" = 5' VERT.

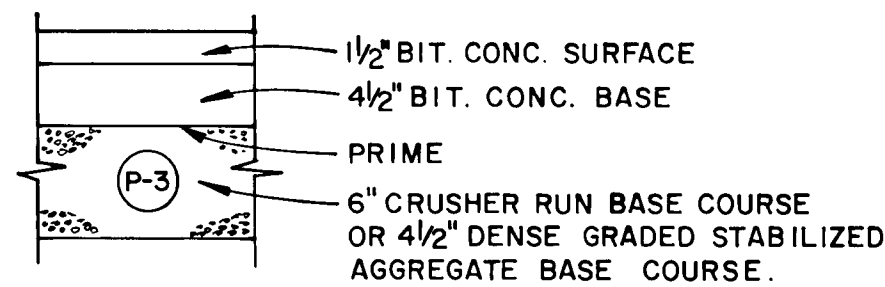
AS-BUILT SURVEY CERTIFIED
BY DHARAM V. KATHURIA, MD.
REG. P.E. 8818

#1099



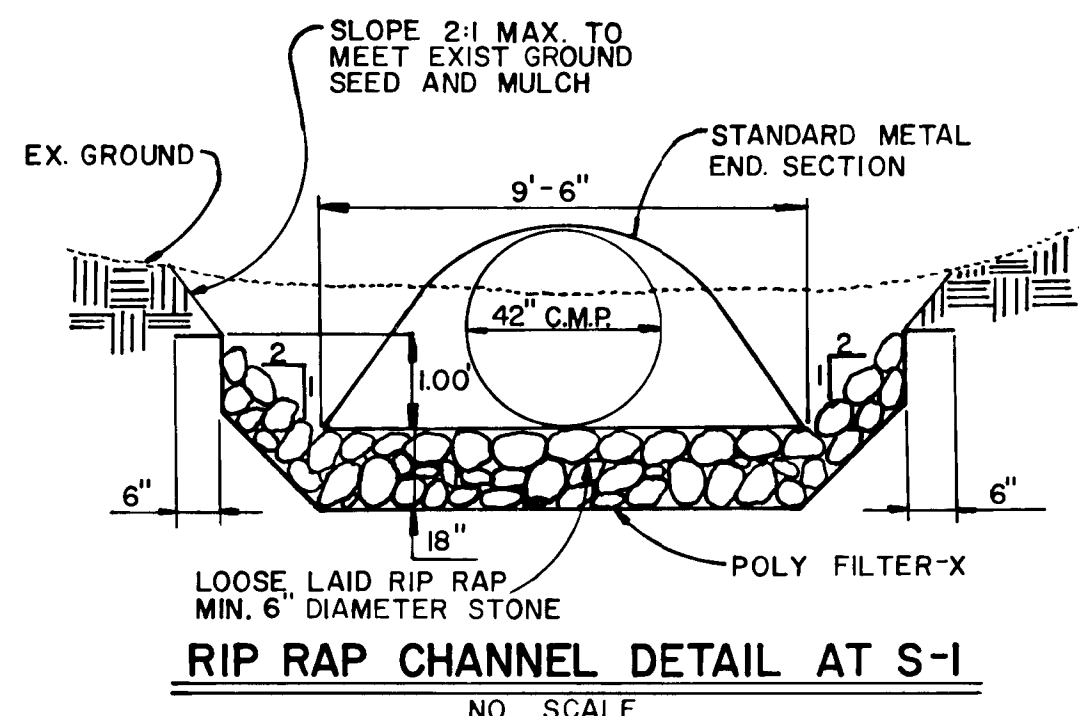
TYPICAL WIDENING SECTION

NO SCALE



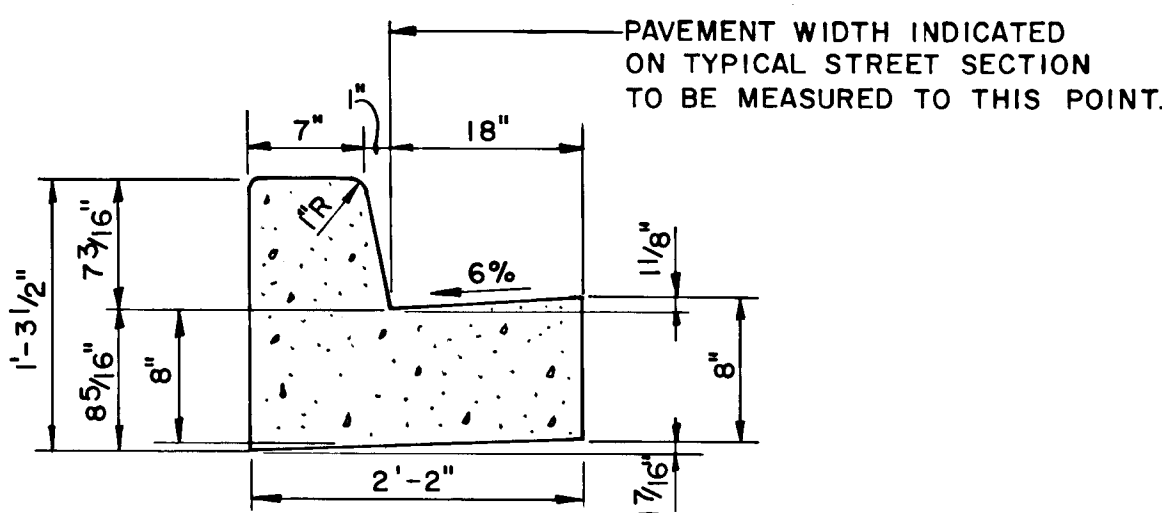
PAVING SECTION P-2 & P-3

NO SCALE



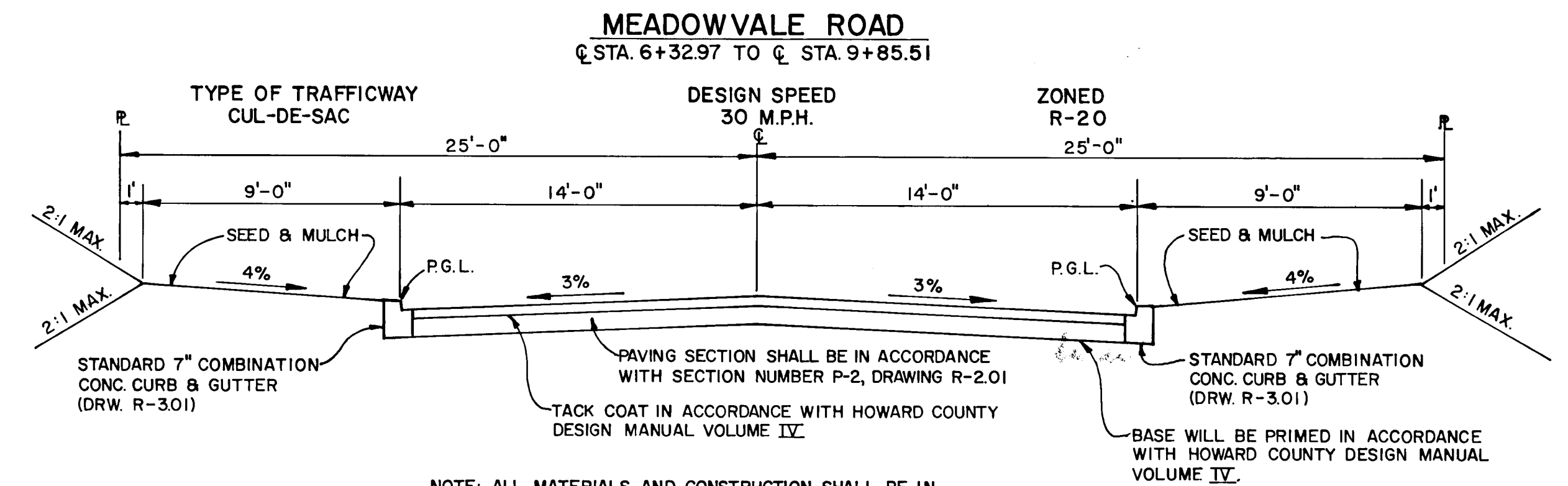
CHANNEL DESIGN DATA

A = 7.14 sq. ft. S = 4.85%
P = 12.46 ft. SI/2 = 0.2202
R = 0.5730 n = 0.04
R2/3 = 0.6899 WATER LEVEL = 0.66'
V = 1.486 x 0.6899 x 0.2202 = 5.64 fps
0.04
Q = 7.14 sq. ft. x 5.64 fps = 40.3 cfs



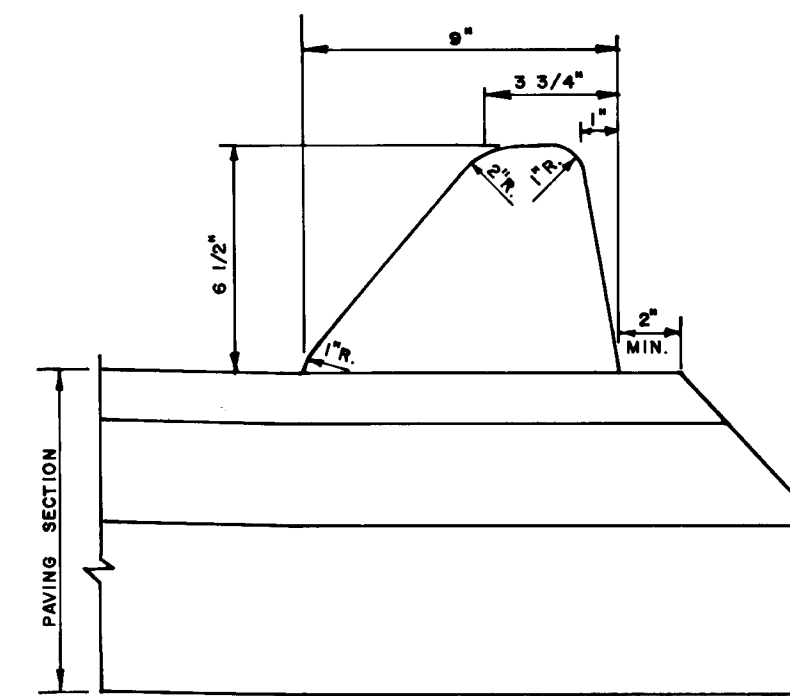
STANDARD SLOPE 7" COMB. CONC. CURB & GUTTER

NO SCALE



TYPICAL ROADWAY SECTION

NO SCALE



STANDARD BITUMINOUS CURB

NO SCALE



Charles J. Grovo Sr. 7/16/84
DATE

BEDFORD SQUARE
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

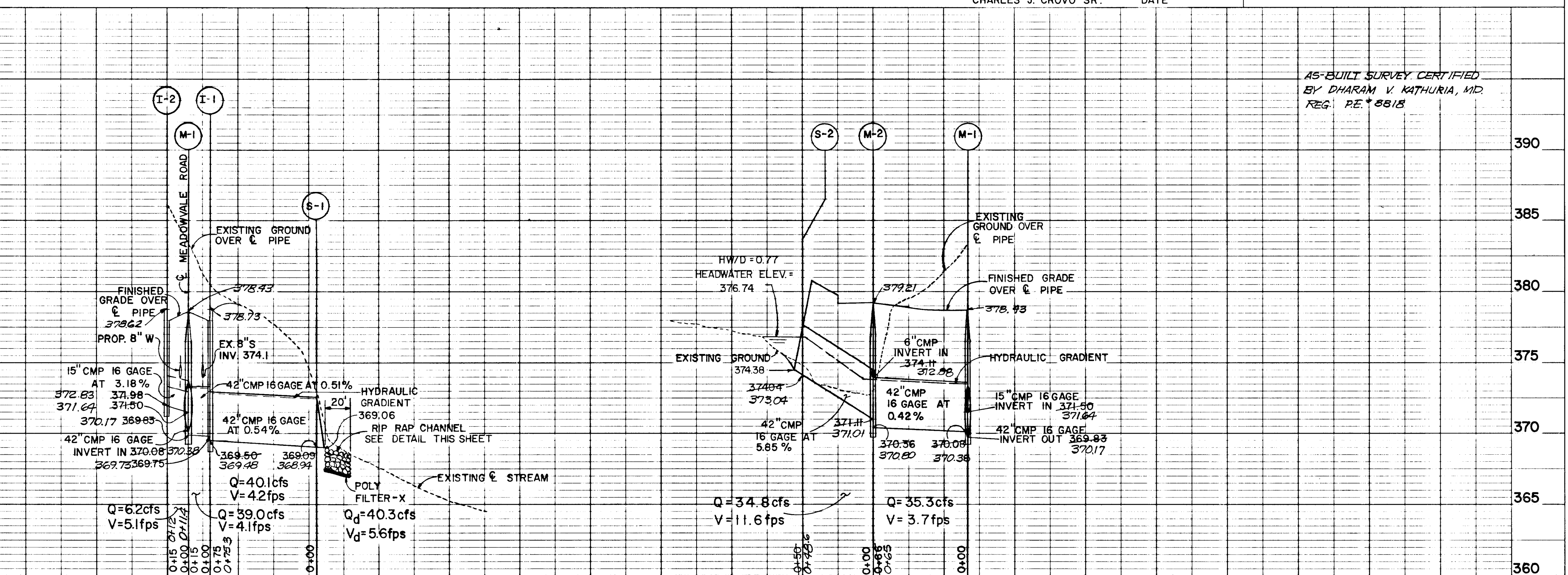
**ROAD SECTIONS, DETAILS,
AND STORM DRAIN PROFILES**

OWNER AND DEVELOPER
P & N PARTNERSHIP
9025 CHEVROLET DRIVE
SUITE L
ELLCOTT CITY, MD. 21043

SCALE AS SHOWN	DATE JULY 6, 1984	DWG. NO. 4 OF 5
DES. C. GROVO SR.	DRN. A. STEINBERG	CHK. R.B. CARTER

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLCOTT CITY, MARYLAND 21043

STRUCTURE		SCHEDULE				REMARKS
NO.	TYPE	INVERT IN	INVERT OUT	TOP ELEV.	STATION	
I-1	A-5	369.75	369.50	378.75	7+19.82	DRAWING SD 4.01
I-2	A-5	---	371.98	378.75	7+19.82	DRAWING SD 4.01
M-1	STANDARD MANHOLE	371.50	369.85	378.88	7+19.82	DRAWING 6 5.03
M-2	STANDARD MANHOLE	371.11	370.36	378.88	6+53.82	DRAWING 6 5.03
S-1	STANDARD METAL END SECTION	---	369.09	372.59	---	DRAWING SD 5.61
S-2	STANDARD METAL END SECTION	374.04	---	372.54	---	DRAWING SD 5.61



STORM DRAIN PROFILES

SCALE: 1" = 50' HOR.
1" = 5' VERT.

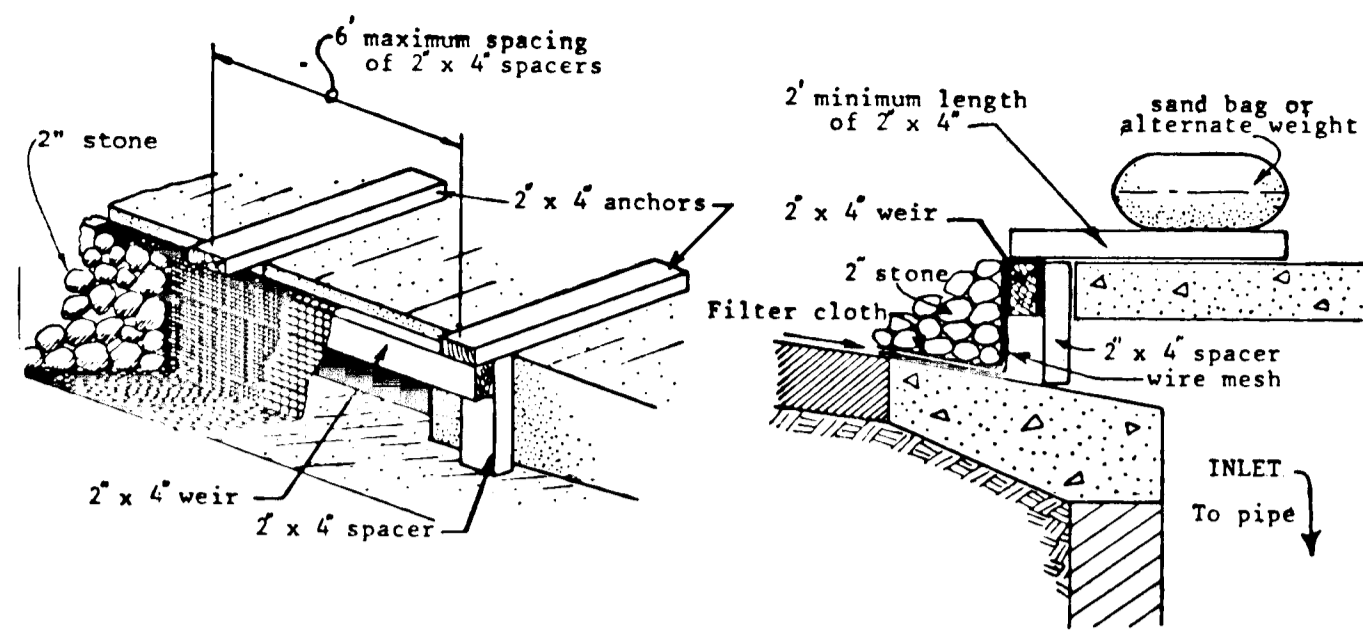
AS-BUILT SURVEY CERTIFIED BY DHARAM V. KATHURIA, MD REG. P.E. # 8818

DATE
BY
SURVEYED
PLOTTED
CHECKED
NOTE BOOK
NO.

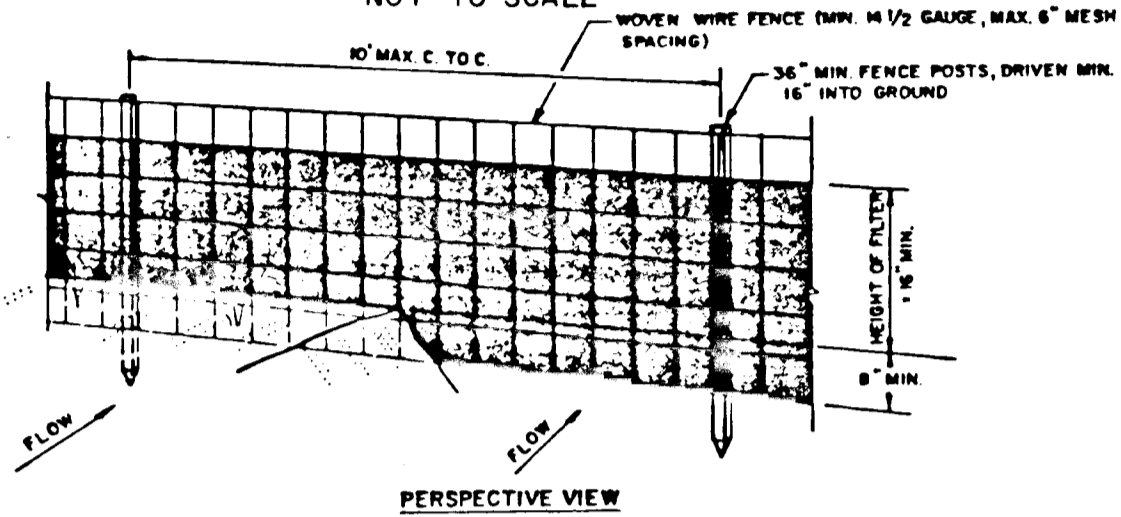
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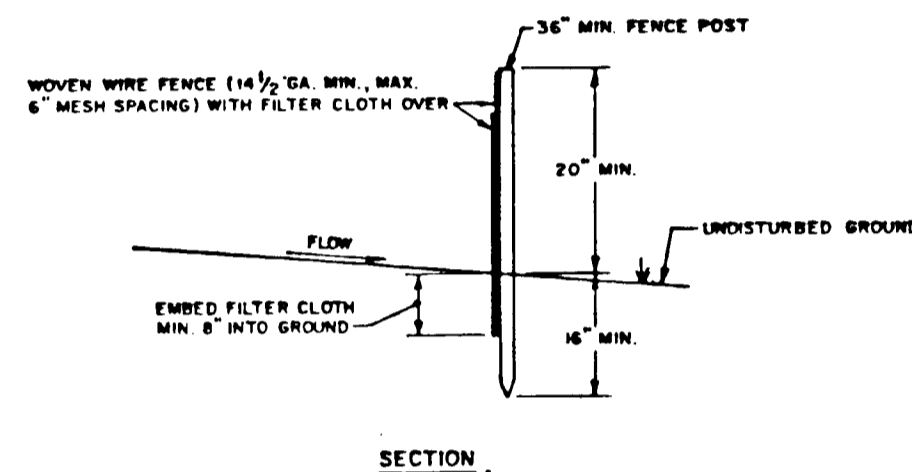
CURB INLET PROTECTION DETAIL
NOT TO SCALE



SILT FENCE
NOT TO SCALE

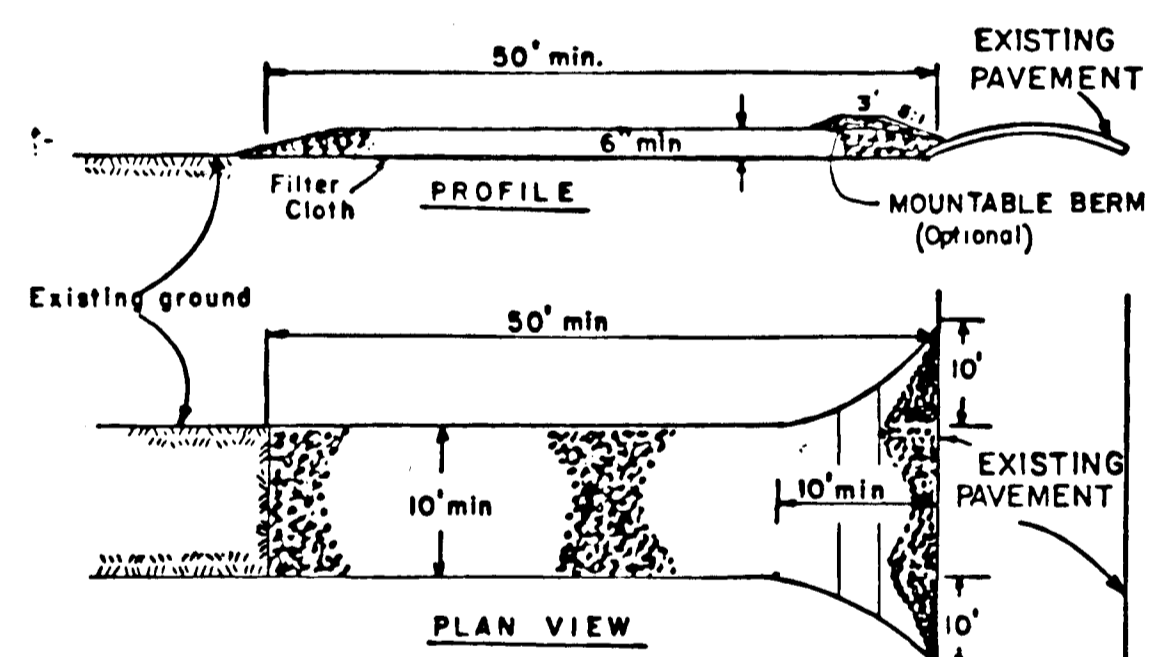


PERSPECTIVE VIEW



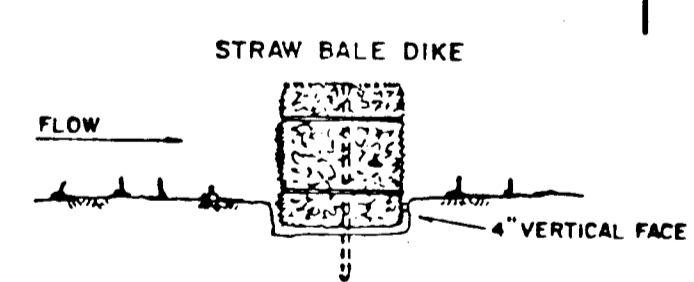
SECTION

STABILIZED CONSTRUCTION ENTRANCE
not to scale

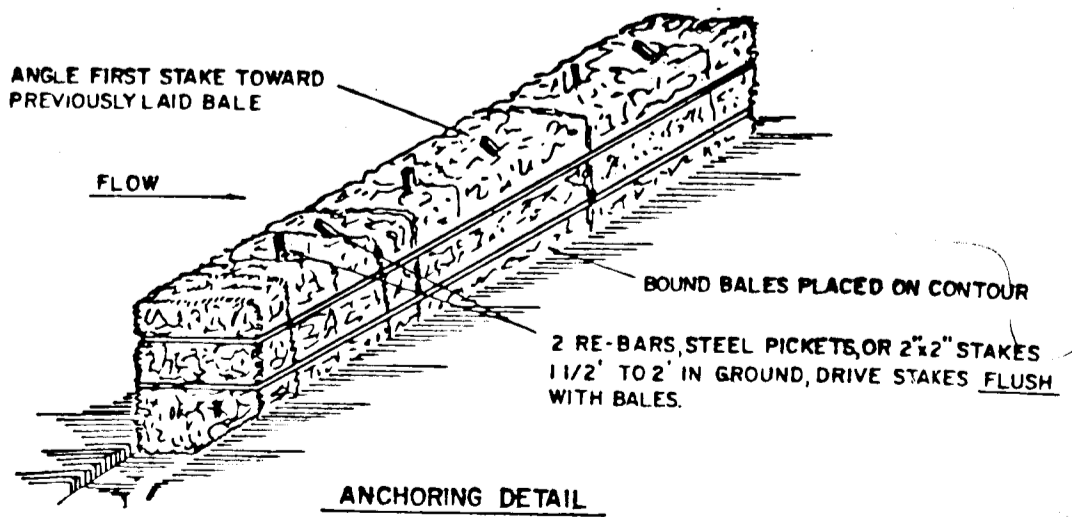


PROFILE

PLAN VIEW



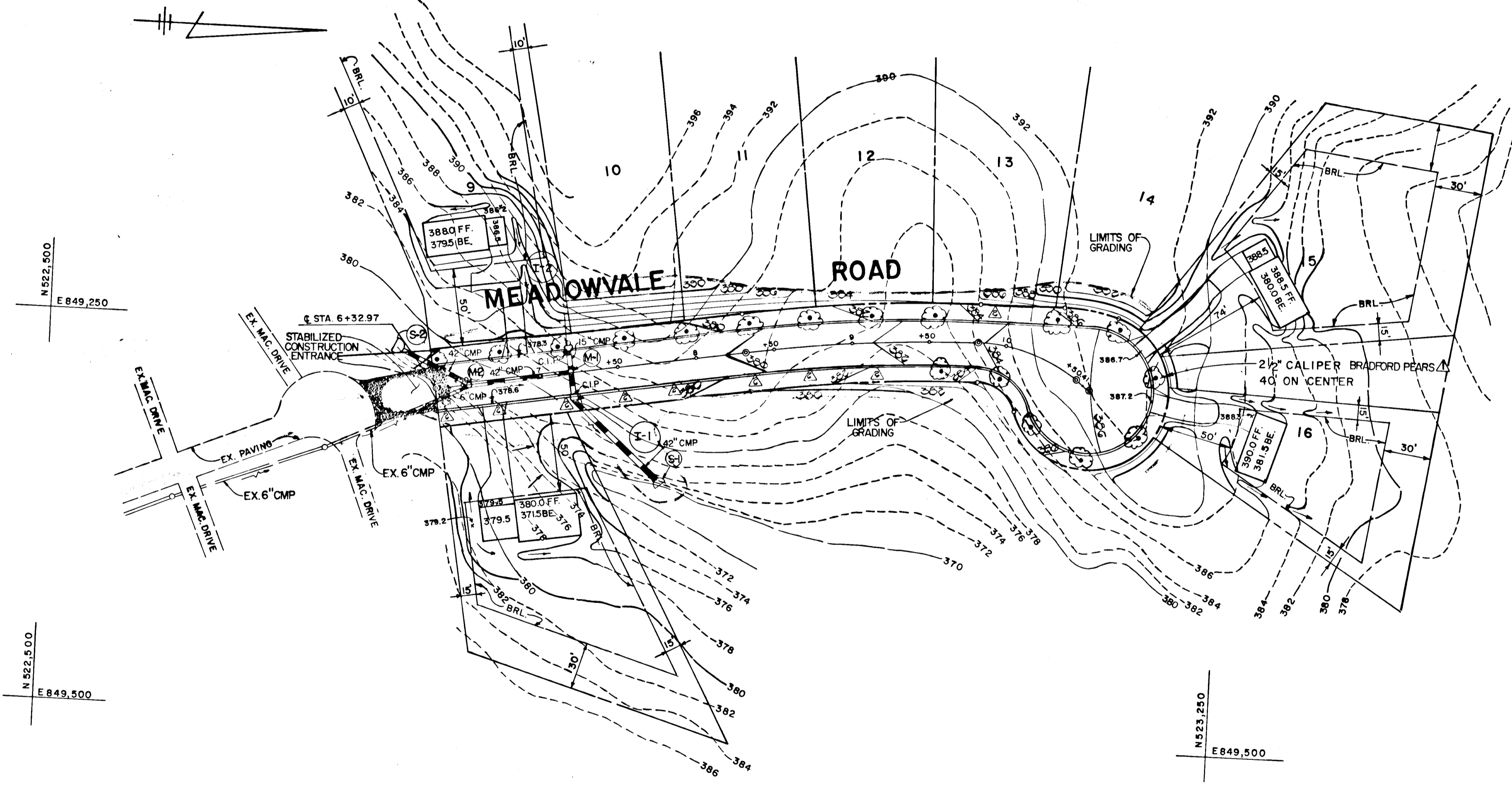
BEDDING DETAIL



ANCHORING DETAIL

CONSTRUCTION SEQUENCE

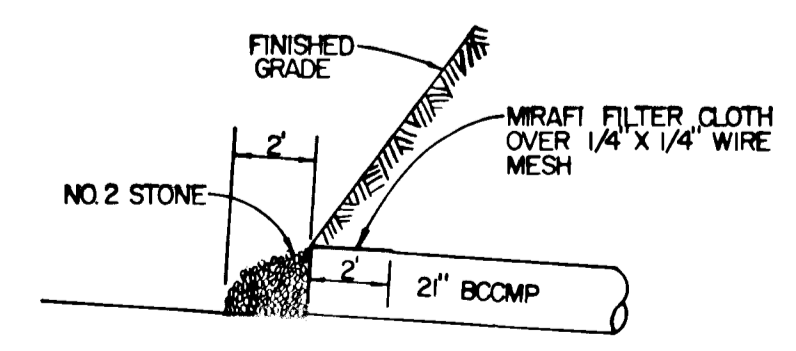
1. OBTAIN GRADING PERMIT.
2. CONSTRUCT STONE CONSTRUCTION ENTRANCE AS SHOWN ON PLAN.
3. CONSTRUCT STORM WATER MANAGEMENT POND AND STABILIZE USING TEMPORARY SEEDING.
4. THE 21" BCMP SHALL BE BLOCKED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET. THE 21" BCMP SHALL REMAIN BLOCKED UNTIL SUCH TIME WHEN THE SEDIMENT BASIN TRANSITIONS TO FUNCTION AS A STORM WATER MANAGEMENT POND.
5. CONSTRUCT 42" CMP FROM S-2 TO S-1 FOR STREAM CROSSING AT MEADOWVALE ROAD.
6. GRADE ROADS TO SUBGRADE STABILIZING SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB USING PERMANENT SEEDING.
7. CONSTRUCT REMAINDER OF STORM DRAIN SYSTEM.
8. INSTALL STONE FILTER INLET PROTECTION DEVICES AT ALL INLETS.
9. CONSTRUCT CONCRETE CURB AND LAY BASE COURSE.
10. UPON STABILIZATION OF GRADED AREAS, INLETS SHALL BE OPENED AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM.
11. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE STORM WATER MANAGEMENT POND WHEN THE CLEANOUT ELEVATION 359.20 HAS BEEN REACHED.
12. DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
13. REMOVE STONE CONSTRUCTION ENTRANCE.
14. CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING.
15. THE SEDIMENT BASIN SHALL BE DEWATERED BY PUMPING.
16. THE SEDIMENT FROM THE STORM WATER MANAGEMENT POND SHALL BE PLACED ON LOT 17 AND STABILIZED WITH PERMANENT SEEDING.
17. THE STORM WATER MANAGEMENT POND SHALL BE GRADED IN ACCORDANCE WITH SHEET ONE AND STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS IN THE SEDIMENT CONTROL NOTES. INSTALL RIP RAP APRON.
18. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
19. DURING THE CONSTRUCTION ALONG SAINT JOHNS LANE, THE CONTRACTOR SHALL PLACE STRAW BALE DIKES OR SILT FENCE DOWNGRADE OF ANY DISTURBED AREAS AT THE END OF EACH WORKING DAY.
20. 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, SHALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



PLAN

SCALE: 1" = 50'

BLOCKING DETAIL FOR 21" BCMP
AT STORM WATER MANAGEMENT POND
NO SCALE



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 I WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: _____ DATE: 7/6/84
SIGNATURE OF ENGINEER: Charles J. Crovo, Sr.
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."
APPROVED: _____ DATE: July 12, 1984
SIGNATURE OF DEVELOPER: Columbus J. Sylvest Jr.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
APPROVED: _____ DATE: 10-4-84
SIGNATURE: James Helms
U.S. SOIL CONSERVATION SERVICE
APPROVED: _____ DATE: 10-4-84
SIGNATURE: Robert W. Zielman
DISTRICT HOWARD SOIL CONSERVATION DISTRICT
APPROVED: DEPARTMENT OF PUBLIC WORKS.
APPROVED: _____ DATE: 6-8-84
SIGNATURE: [Signature]
BUREAU OF ENGINEERING
APPROVED: OFFICE OF PLANNING AND ZONING
APPROVED: _____ DATE: 10-4-84
SIGNATURE: John M. Muschman
DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

SEDIMENT CONTROL NOTES

1. SPECIFICATIONS FOR THE SEDIMENT CONTROL DETAILS INCLUDED IN THE U.S.D.A. SOIL CONSERVATION SERVICE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS."
2. THE DEVELOPER SHALL NOTIFY THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS AT LEAST 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION SHOWN HEREON (992-2433).
3. SEDIMENT CONTROL STRUCTURES TO BE CONSTRUCTED PRIOR TO ANY ON-SITE GRADING OR DISTURBANCE TO ANY EXISTING SURFACE MATERIAL, AND ARE TO BE STABILIZED AS SOON AS CONSTRUCTED.
4. ALL SEDIMENT CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS (992-2433).
5. ALL GRADED AREAS NOT TO BE SODDED SHALL BE STABILIZED BY SEEDING AND MULCHING IN ACCORDANCE WITH THE FOLLOWING:
 1. SITE PREPARATION
 - A. HARROW OR DISC IN AREAS PROPOSED TO BE SEEDING THE FOLLOWING MATERIALS:
 - 1) PULVERIZED LIMESTONE AT 2 TONS/ACRE.
 - 2) COMMERCIAL FERTILIZER 10-10-10 AT 3/4 TONS/ACRE.
 - 3) SUPER PHOSPHATE AT 600 LBS./ACRE.
 2. SEEDING
 - A. SOW THE FOLLOWING SEED MIXTURE AT THE RATE OF 200 LBS./ACRE WITH A MECHANICAL SPREADER:
 - 1) TEMPORARY: ITALIAN OR PERENNIAL RYE GRASS.
 - 2) PERMANENT: 40% MARION BLUE GRASS, 40% DAKOTA BLUE GRASS AND 20% PENN LAWN CREEPING FESCUE.
 - B. THE SEEDING AREA SHALL THEN BE RAKED WITH A YORK RATE (A MINIMUM OF 2 PASSES) COVERED AND COMPACTED WITH CULTIPACKER OR OTHER APPROVED METHOD.
 3. MULCHING
 - A. SEEDING AREAS SHALL BE UNIFORMLY MULCHED IMMEDIATELY AFTER SEEDING WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2-2 TONS/ACRE.
 - B. TIE MULCH DOWN WITH LIQUID ASPHALT AT 0.1 GAL./S.Y. OR EMULSIFIED ASPHALT AT 0.04 GAL./S.Y. OR MULCH NETTING.
 6. A GRADING PLAN MUST BE DEVELOPED BY THE BUILDER AND APPROVED BEFORE BEGINNING CONSTRUCTION OF DWELLINGS.

SITE ANALYSIS

TOTAL AREA OF SUBDIVISION	10.5 Ac ±
AREA TO BE VEGETATED	1.2 Ac ±
IMPERVIOUS AREA	0.4 Ac ±
AREA UNDISTURBED	8.9 Ac ±

#1099
FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043
TELEPHONE: (301) 461-2855

NO.	BY	REVISION	DATE
1	DAN	REMOVE TREES.	2/15/84
2	DAN	REVISE TREE TYPES FROM MAPLES TO BRAD FORD PEARS.	2/10/84
3	BY		

STATE OF MARYLAND
PROFESSIONAL ENGINEER
CHARLES J. CROVO, SR.
7/6/84
DATE

OWNER AND DEVELOPER
P & N PARTNERSHIP
9025 CHEVROLET DRIVE
SUITE L
ELLCOTT CITY, MD. 21043

STREET TREE, GRADING,
SEDIMENT CONTROL PLAN,
AND DETAILS
BEDFORD SQUARE
2ND ELECTION DISTRICT HOWARD COUNTY, MD.
SCALE AS SHOWN JULY 6, 1984
SHEET 5 OF 5