

**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

CHARLES J. CROVO, SR. 5/12/85  
 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 ONSITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY.

FLOYD E. LILLY 5/12/85  
 DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENTS.  
 James M. Hester 7-19-85  
 U.S. SOIL CONSERVATION SERVICE DATE

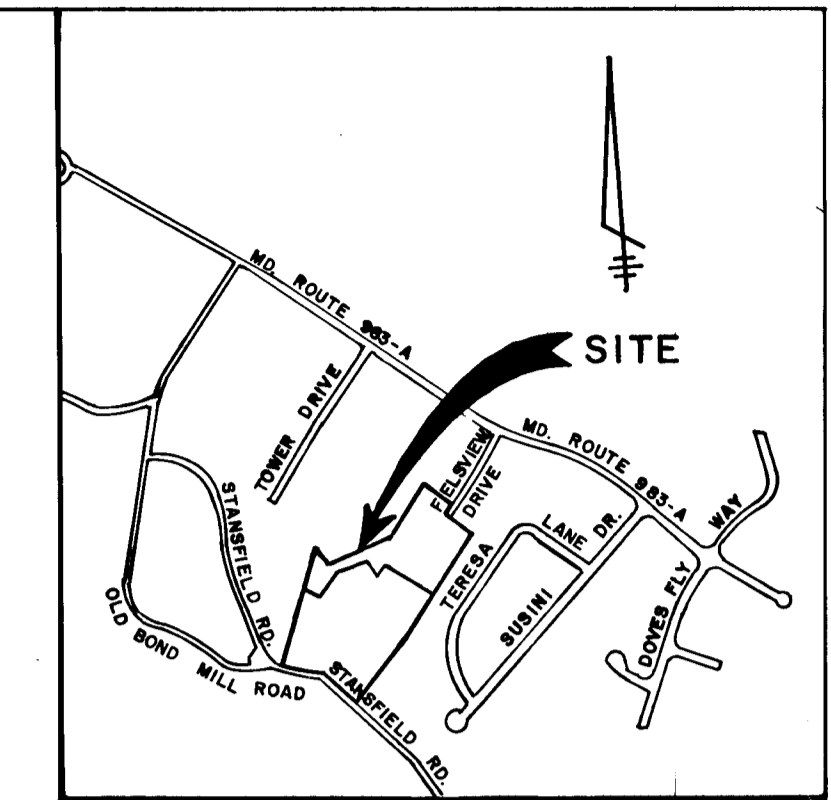
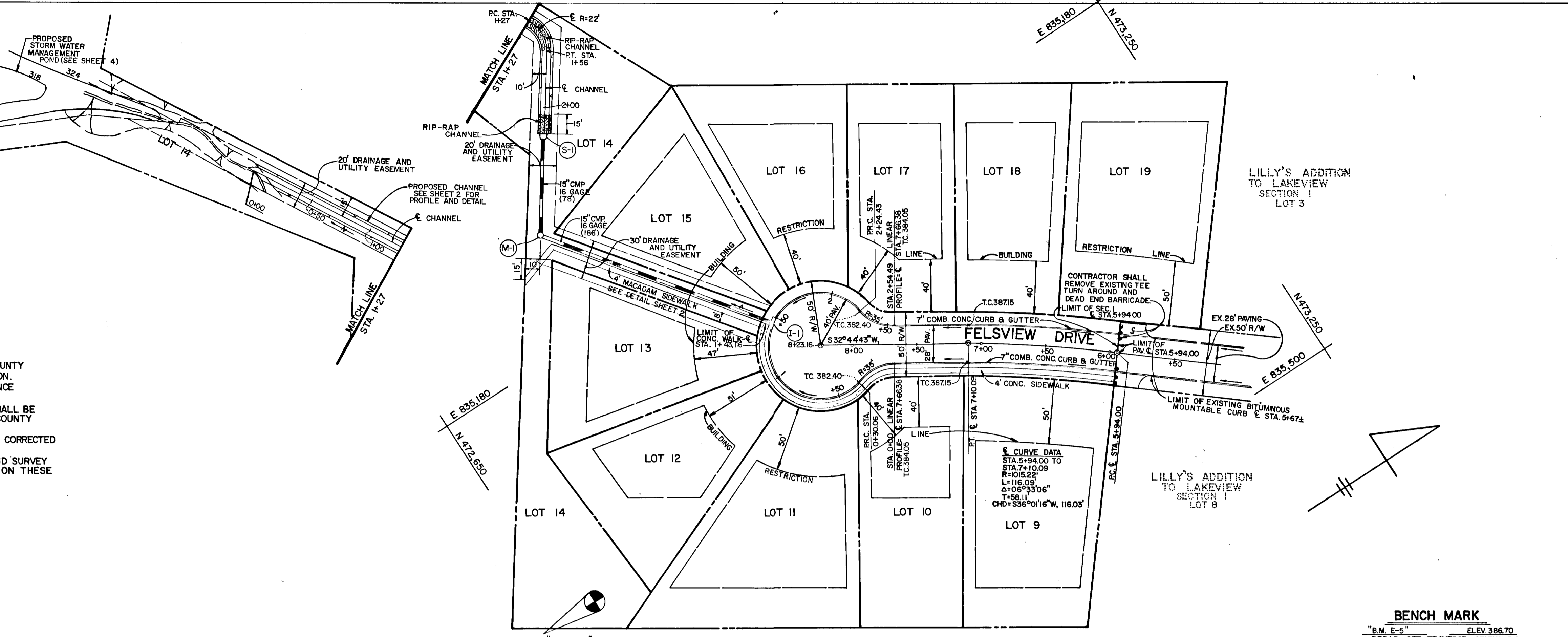
THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 Robert J. Zehner 7-19-85  
 HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

**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 HRS. IN ADVANCE OF ANY CONSTRUCTION.
- 3) STORM DRAINAGE TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
- 4) ANY DAMAGE TO PUBLIC RIGHTS-OF-WAYS OR PAVING WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
- 5) CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS - TELEPHONE = 792-7272

APPROVED DEPARTMENT OF PUBLIC WORKS  
 William B. Riley 7-22-85  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING  
 John M. ... 7-22-85  
 CHIEF, DIVISION OF PLANNING AND ZONING ADMINISTRATION DATE



**VICINITY MAP**  
 SCALE: 1" = 1200'

CHARLES J. CROVO, SR. 5/12/85  
 DATE

**LILLY'S ADDITION TO LAKEVIEW**  
 SECTION 2  
 LOTS 9-19  
 6TH. ELECTION DISTRICT HOWARD CO., MARYLAND

**FELSVIEW DRIVE**  
 PLAN AND PROFILE

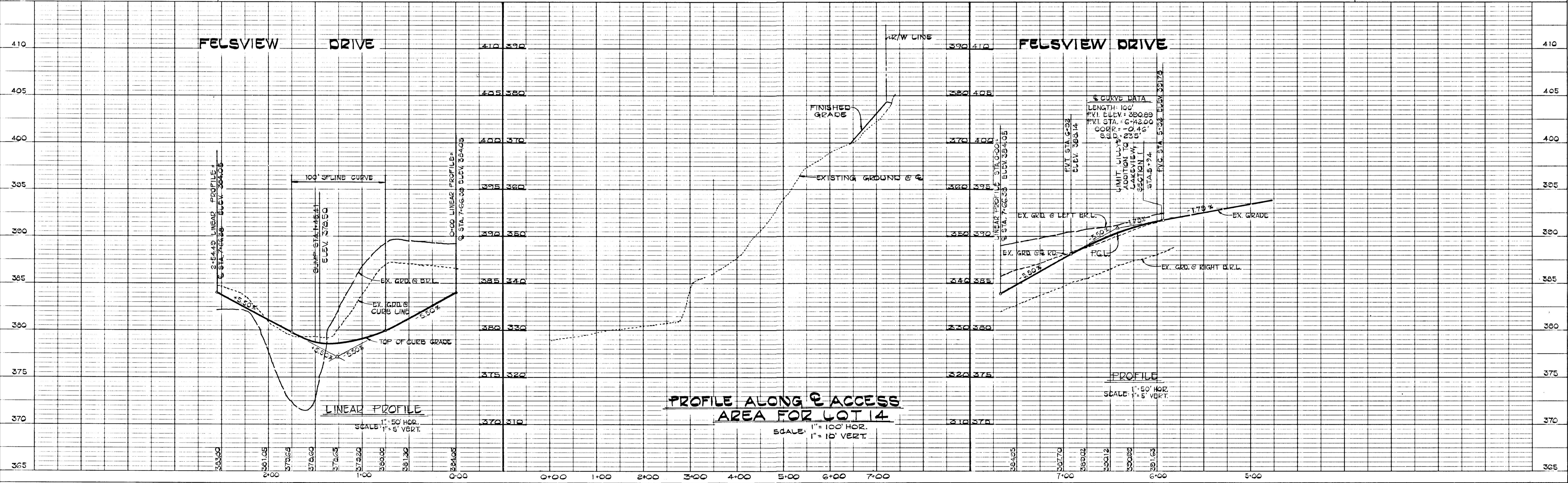
OWNER AND DEVELOPER  
 FLOYD E. LILLY  
 304 MONTGOMERY STREET  
 LAUREL, MARYLAND 20810

SCALE AS SHOWN DATE MAY 9, 1985 DWG. NO. 1 OF 4  
 DES. C. J. CROVO, SR. DRN. R. ISAACS CHK. R. CARTER

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

DATE	
BY	
PLAN	
SURVEYED	
ALIGNED	
NOTE BOOK	
NO.	

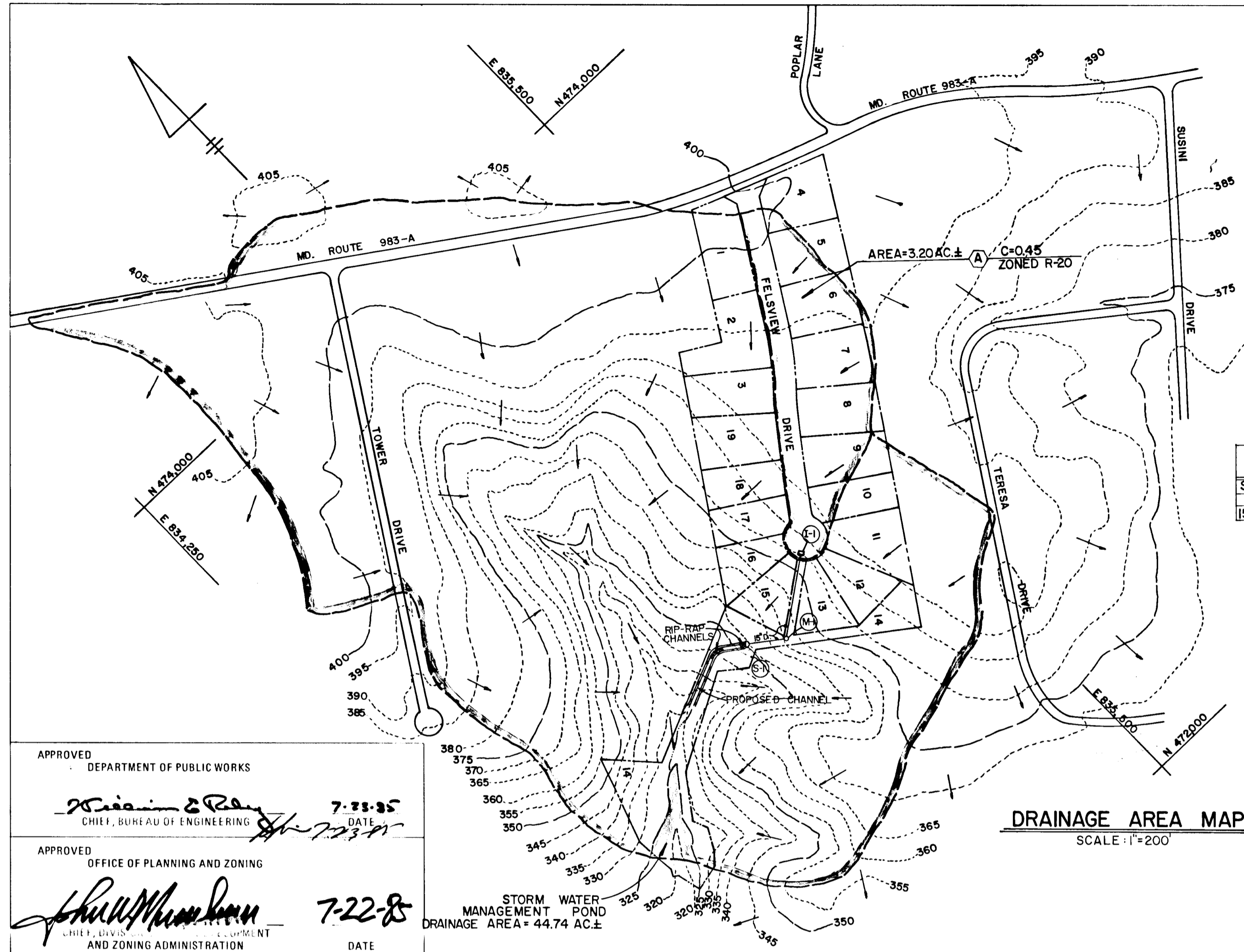
DATE	
BY	
PROFILE	
SURVEYED	
ALIGNED	
NOTE BOOK	
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#251

DATE  
BY  
SURVEYED  
PLOTTED  
CHECKED  
RT. OF WAY CHECKED  
NOTE BOOK NO.

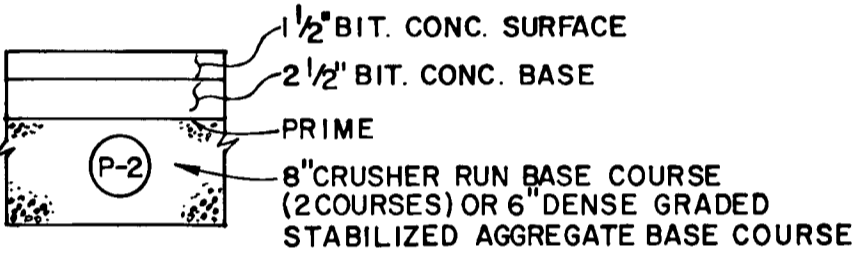
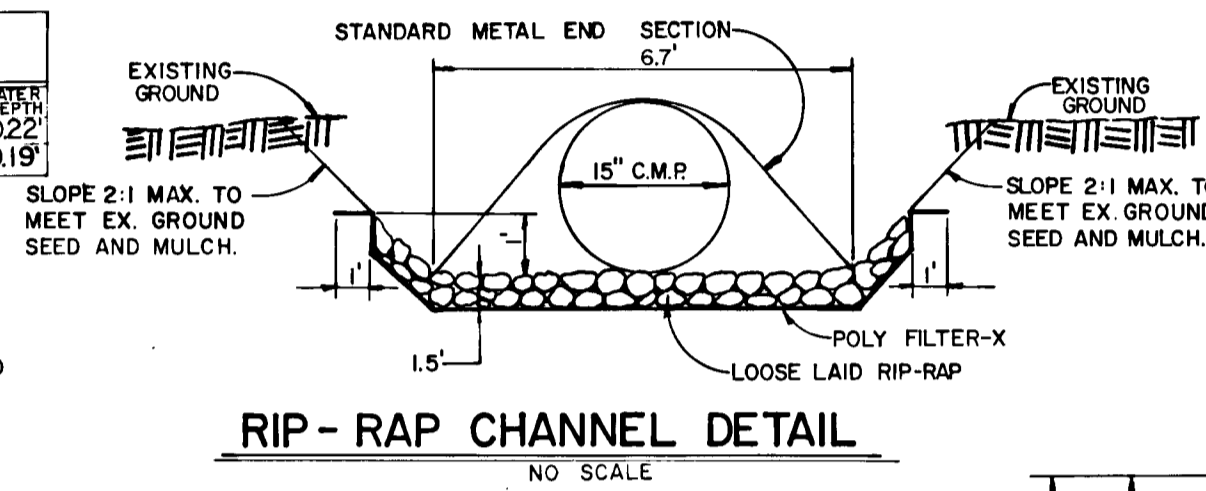
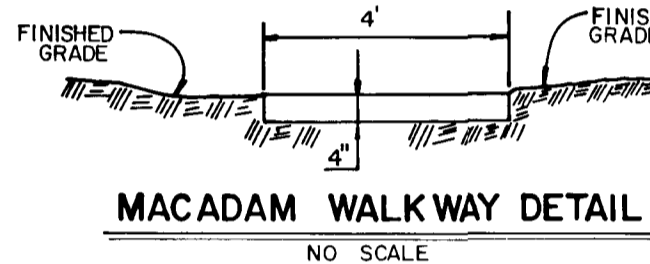
DATE  
BY  
SURVEYED  
PLOTTED  
CHECKED  
STRUCTURE NOTATIONS CHECKED  
NOTE BOOK NO.



**CHANNEL DESIGN DATA**

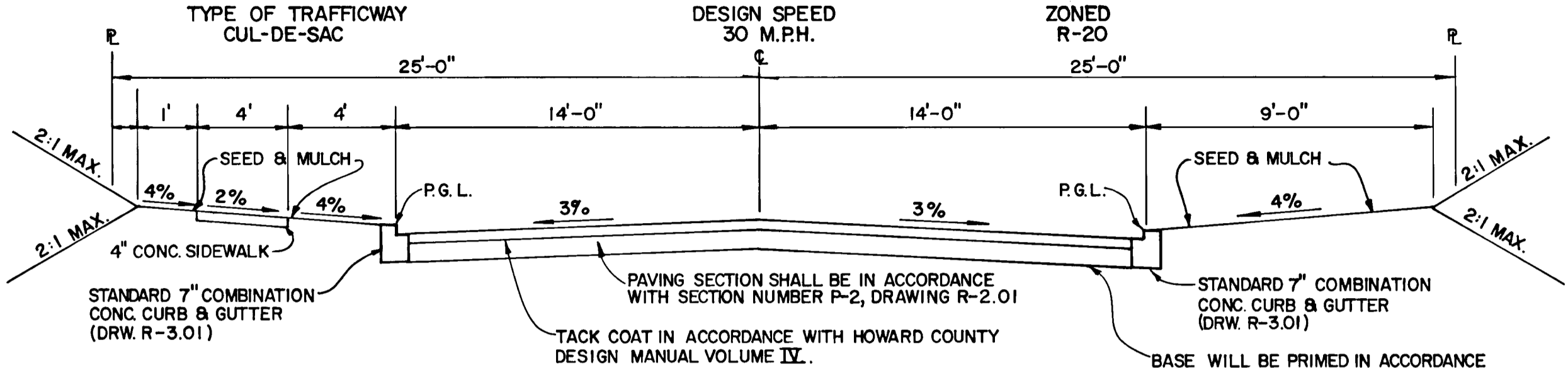
SLOPE	AREA	P	R	R2/3	S1/2	n	Q	V	WATER
8.70%	157.77	768	0.2044	0.3470	0.2950	0.03	795.0	0.22	
15.00%	1135.77	754	0.1790	0.3176	0.3873	0.0591	600.19		

**GRASS CHANNEL DETAIL**  
NO SCALE



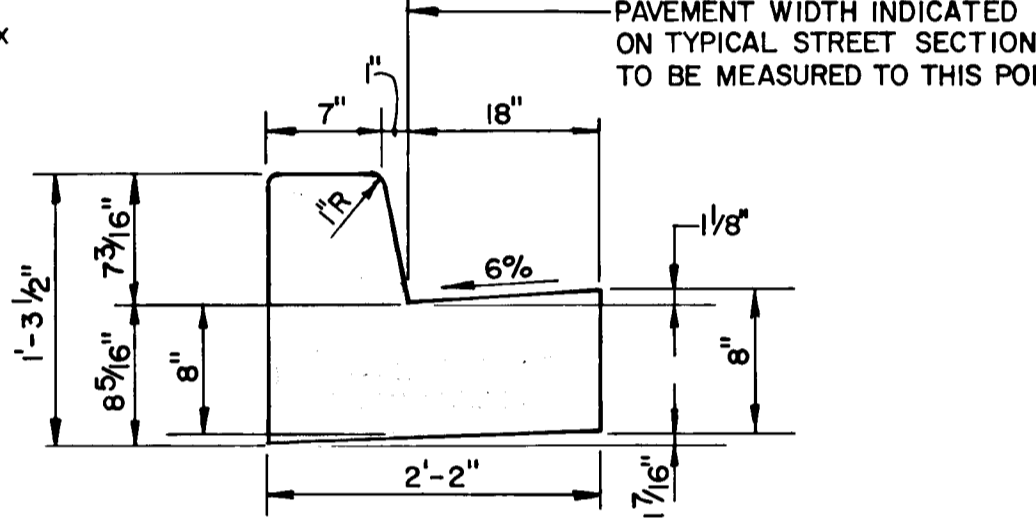
**PAVING SECTION P-2**  
NO SCALE

**FELSVIEW DRIVE**  
E STA. 5+94.00 TO E STA. 7+67.22

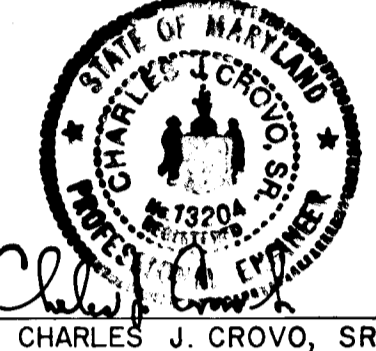


NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.

**TYPICAL ROADWAY SECTION**  
NO SCALE



**STANDARD SLOPE 7\"/>**



**LILLY'S ADDITION TO LAKEVIEW**  
SECTION 2  
LOTS 9-19  
6TH. ELECTION DISTRICT HOWARD CO., MARYLAND

**DRAINAGE AREA MAP, ROAD SECTION, DETAILS, AND STORM DRAIN PROFILES**

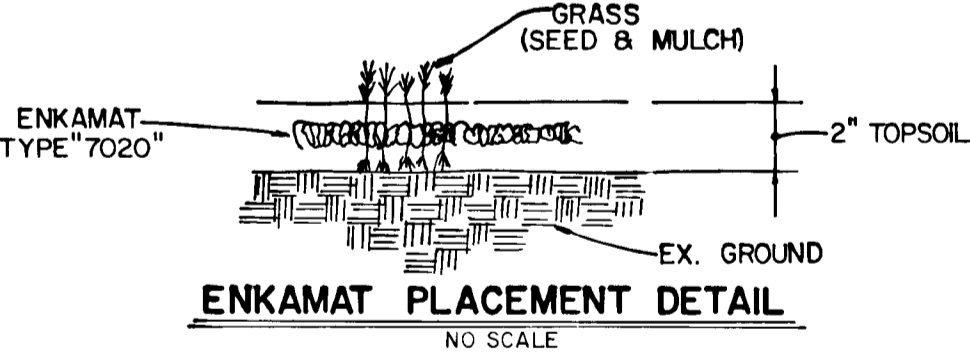
OWNER AND DEVELOPER  
FLOYD E. LILLY  
304 MONTGOMERY STREET  
LAUREL, MARYLAND 20810

SCALE AS SHOWN DATE MAY 9, 1985 DWG. NO. 2 OF 4  
DES. C. J. CROVO, SR. DRN. A. STEINBERG CHK. R. CARTER

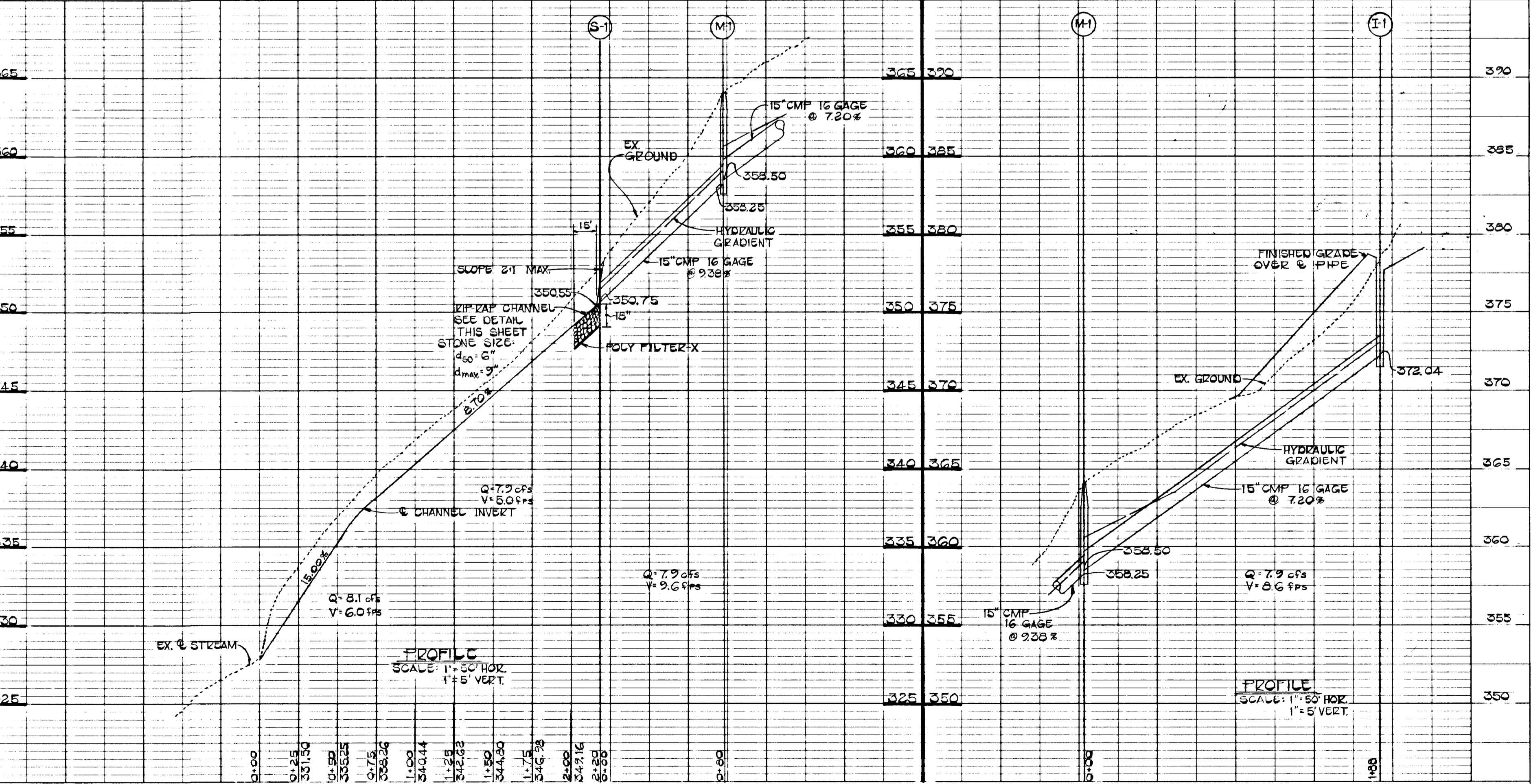
FISHER, COLLINS AND CARTER, INC.  
CIVIL ENGINEERS AND LAND SURVEYORS  
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

**STRUCTURE SCHEDULE**

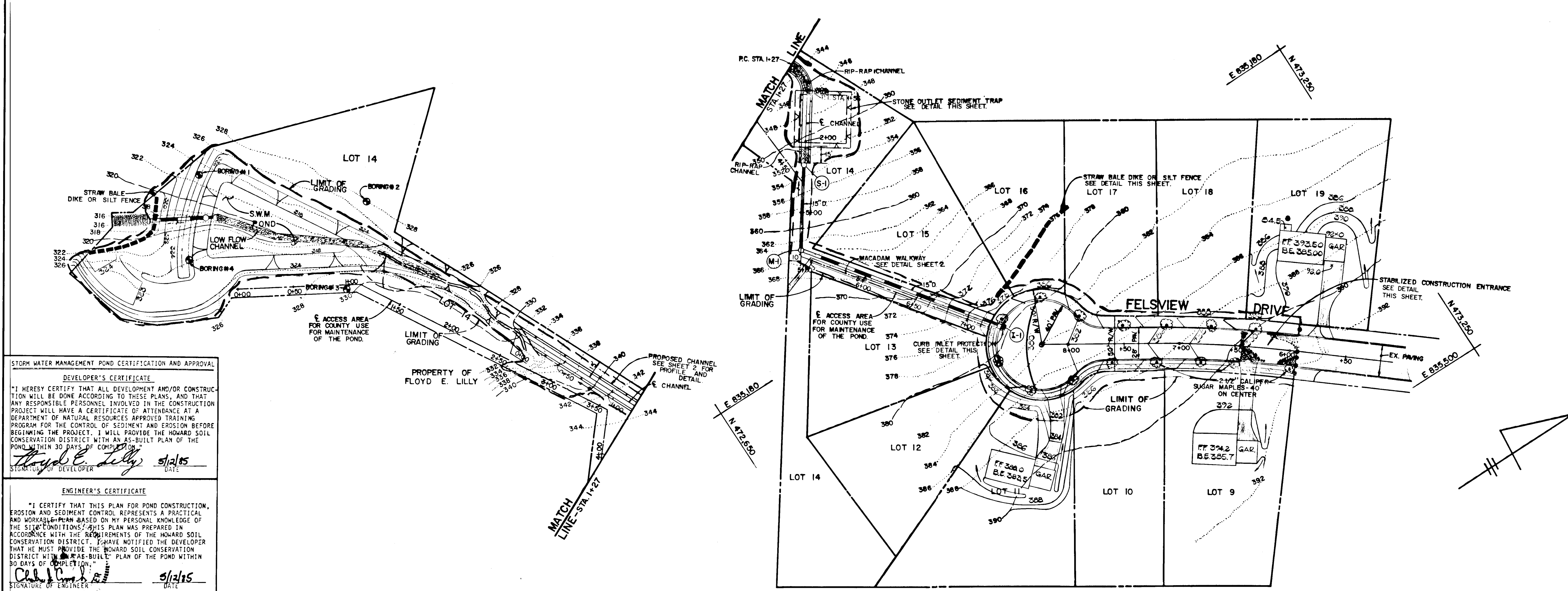
NO.	TYPE	INVERT IN	INVERT OUT	E TOP ELEV	STATION	REMARKS
I-1	A-10	---	372.04	378.50	1+45.41	DRWG. SD. 4.02
M-1	STANDARD MANHOLE	358.50	358.25	364.25	---	DRWG. G. 5.01
S-1	METAL END SECTION	---	350.75	352.00	---	DRWG. SD. 5.61



NOTE: LINE FULL SECTION OF CHANNEL FROM E STA. 0+00 TO E STA. 0+65 WITH ENKAMAT TYPE 7020. SEE DETAIL THIS SHEET.



#251



**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."

*Hayd E. Lilly* 5/12/85  
SIGNATURE OF DEVELOPER DATE

**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."

*Robert W. Ziehm* 5/12/85  
SIGNATURE OF ENGINEER DATE

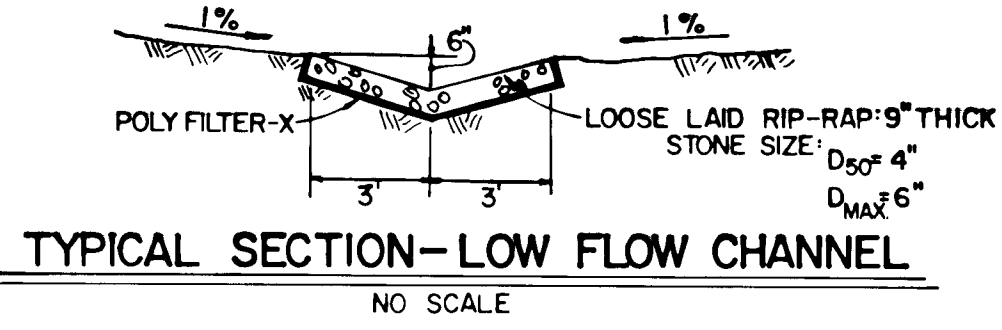
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Robert W. Ziehm* 7-19-85  
HOWARD SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

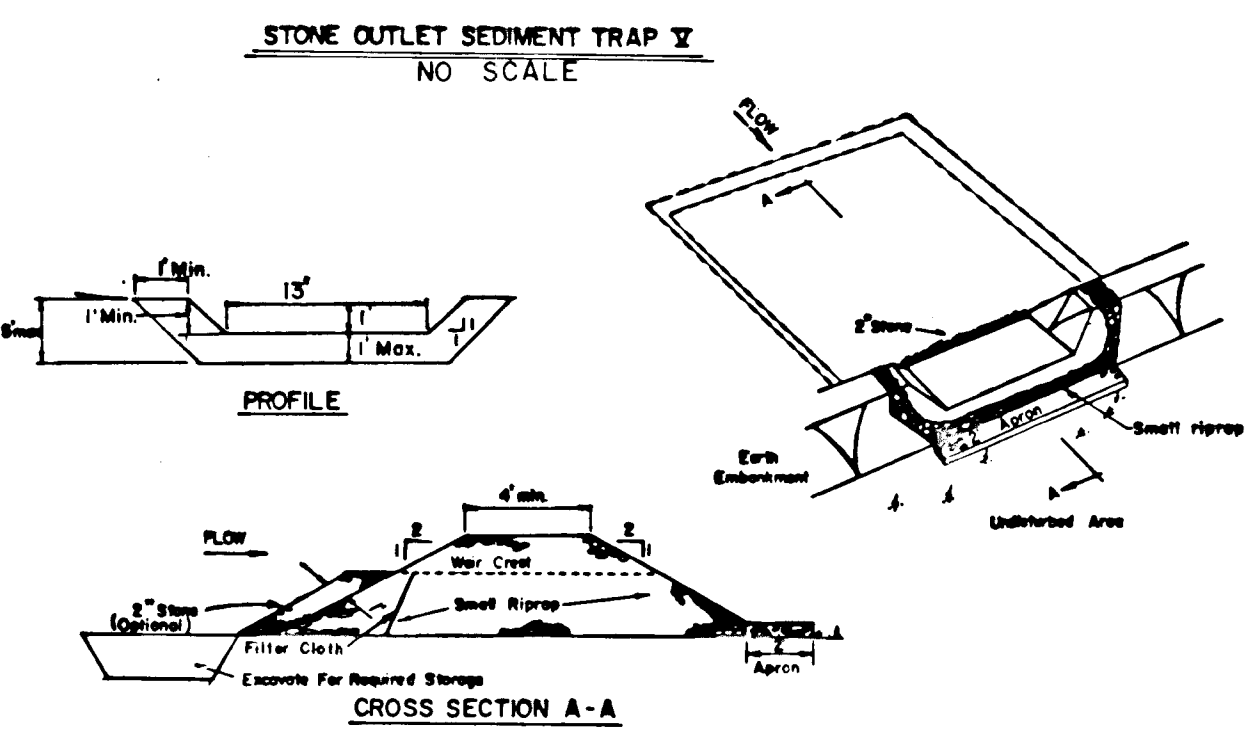
*Robert W. Ziehm* 7-19-85  
HOWARD SOIL CONSERVATION SERVICE DATE

- CONSTRUCTION SEQUENCE:**
- OBTAIN GRADING PERMIT.
  - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
  - CONSTRUCT STORM WATER MANAGEMENT POND AND STABILIZE USING PERMANENT SEEDING.
  - CONSTRUCT STONE OUTLET SEDIMENT TRAP AND INSTALL SILT FENCE OR STRAW BALE DIKE AS SHOWN ON PLANS.
  - CONSTRUCT THE TRAPEZOIDAL CHANNEL FROM S-1 TO THE EXISTING STREAM UTILIZING K-31 TALL FESCUE PERMANENT SEEDING. CONTRACTOR SHALL INSTALL STRAW BALE DIKES DOWNGRADE OF THE DISTURBED AREA AT THE END OF EACH WORKING DAY.
  - GRADE ROADS TO SUBGRADE STABILIZING SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB USING PERMANENT SEEDING.
  - CONSTRUCT STORM DRAIN SYSTEM.
  - INSTALL INLET PROTECTION DEVICE AT STORM DRAIN INLET.
  - CONSTRUCT CONCRETE CURB AND LAY BASE COURSE.
  - UPON STABILIZATION OF GRADED AREAS, THE INLET SHALL BE OPENED AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM.
  - DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE STONE OUTLET SEDIMENT TRAP WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.
  - DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
  - REMOVE STONE CONSTRUCTION ENTRANCE.
  - CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSES AND LAY SURFACE COURSE. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING.
  - ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
  - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE ACCEPTED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



**STONE OUTLET SEDIMENT TRAP DATA:**

DRAINAGE AREA: 3.2 AC.  
VOLUME REQUIRED: 213 CU. YDS.  
VOLUME PROVIDED: 214 CU. YDS.  
SIDE SLOPES: 1:1  
BOTTOM DIMENSION: 37'x37'  
TOP DIMENSION: 44'x44'  
DEPTH: 3.5'  
WEIR CREST ELEVATION: 347.0  
CLEANOUT ELEVATION: 344.3  
BOTTOM OF TRAP ELEVATION: 342.5



- CONSTRUCTION SPECIFICATIONS FOR ST-Y**
- 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.
  - All cut and fill slopes shall be 2:1 or flatter.
  - The stone used in the outlet shall be small riprap 4"-8" along with a 1" thickness of 2" aggregate placed on the up-grade side on the small riprap and embedded filter cloth in the trap.
  - Sediment shall be removed and trap returned to its original dimensions when the sediment has accumulated to 1/4 the design depth of the trap.
  - The structure shall be inspected after each rain and repairs made as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

**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.

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

- PREFERRED - APPLY 2 TONS PER ACRE DELTAIC LIME (92 LBS/1000 SQ. FT.) AND 400 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. NARROW OR DISC INTO UPPER THREE-INCHES OF SOIL AT TIME OF SEEDING. APPLY 800 LBS. PER ACRE 30-0-0 UREAPFORM FERTILIZER (9 LBS/1000 SQ. FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DELTAIC LIME (92 LBS/1000 SQ. FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. NARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.

**SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 50 LBS PER ACRE OF ANNUAL RYE (2.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 40 LBS PER ACRE OF TALL FESCUE PER ACRE AND 2 LBS PER ACRE OF 30-0-0 UREAPFORM FERTILIZER (9 LBS/1000 SQ. FT.). FOR THE PERIOD OCTOBER 16 THRU FEBRUARY 29, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WHEAT ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

**MULCHING:** APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNMILLED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/2 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF UNMILLED ASPHALT ON FLAT AREAS; ON SLOPES 8 FEET OR HIGHER, USE 3/4 GAL PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

**MAINTENANCE:** INSPECT ALL SEEDING AREAS AND MAKE NECESSARY 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.

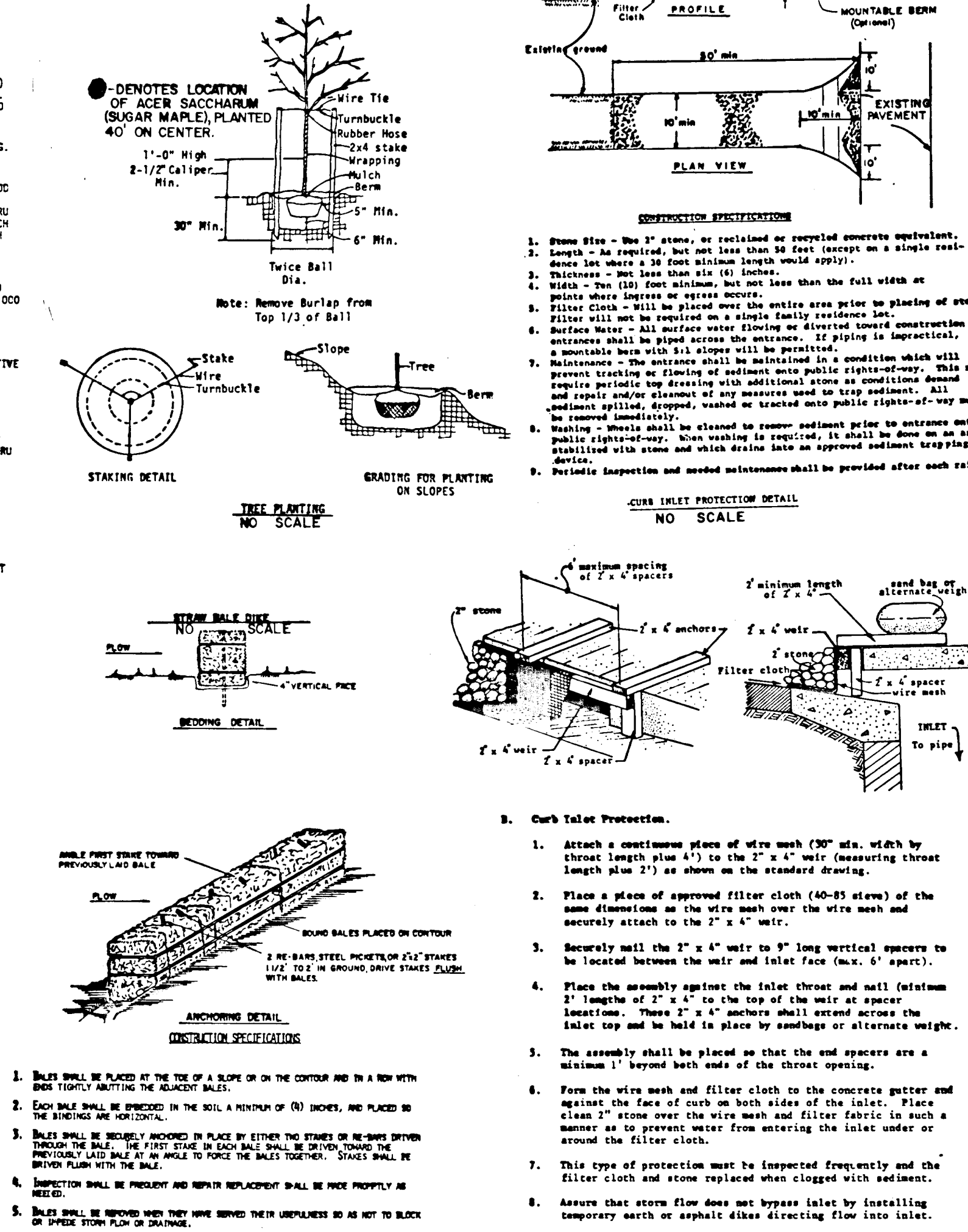
**SOIL AMENDMENTS:** APPLY 400 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

**SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 1 THRU NOVEMBER 15, SEED WITH 50 LBS PER ACRE OF ANNUAL RYE (2.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOWGROSS (1.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 29, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WHEAT ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

**MULCHING:** APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNMILLED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/2 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF UNMILLED ASPHALT ON FLAT AREAS; ON SLOPES 8 FT. OR HIGHER, USE 3/4 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:** 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.



**SEDIMENT CONTROL NOTES:**

- 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 (892-2437).
- 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.
- 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.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 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) 500 (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

**7) SITE ANALYSIS:**

TOTAL AREA OF SITE	5.880 ACRES
AREA TO BE ROOFED OR PAVED	1.726 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.860 ACRES
TOTAL CUT	0.886 CU. YDS.
TOTAL FILL	0.000 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	NONE

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

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

**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."

*Robert W. Ziehm* 5/12/85  
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."

*Hayd E. Lilly* 5/12/85  
SIGNATURE OF DEVELOPER DATE

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

*Robert W. Ziehm* 7-19-85  
HOWARD SOIL CONSERVATION SERVICE DATE

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

APPROVED: DEPARTMENT OF PUBLIC WORKS.

*Robert W. Ziehm* 7-22-85  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING

*Robert W. Ziehm* 7-22-85  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



**OWNER AND DEVELOPER**

FLOYD E. LILLY  
304 MONTGOMERY STREET  
LAUREL, MARYLAND 20810

**STREET TREE, GRADING AND SEDIMENT CONTROL PLAN**

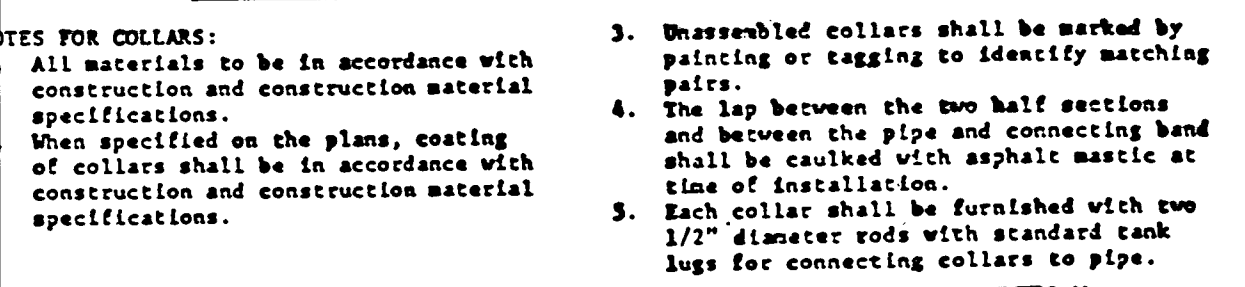
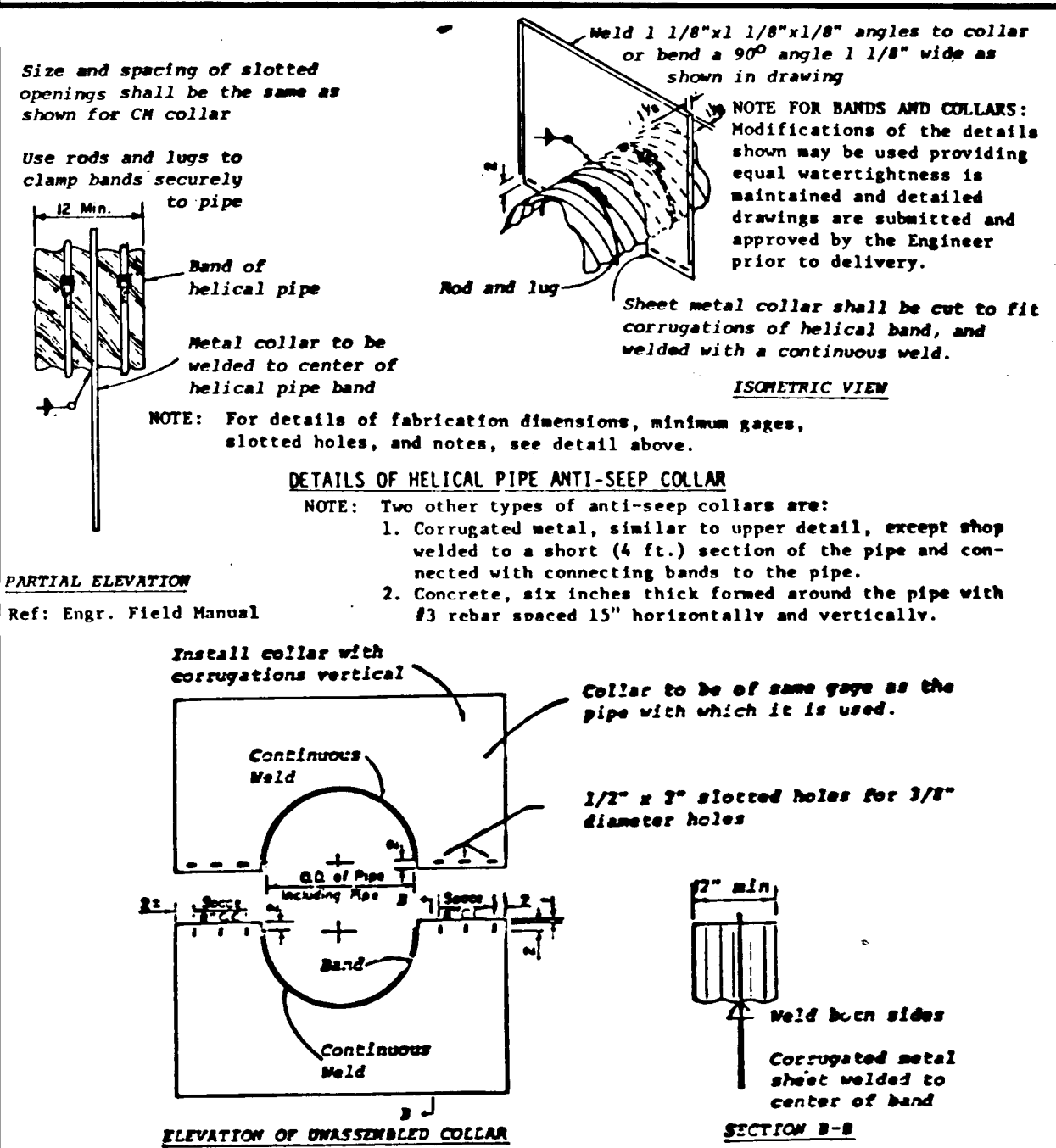
**LILLY'S ADDITION TO LAKEVIEW**

SECTION 2  
LOTS 9-19

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN SHEET 3 OF 4  
MAY 9, 1985

**FISHER, COLLINS AND CARTER, INC.**  
CONSULTING ENGINEERS AND LAND SURVEYORS  
8300 COURT AVENUE  
ELLICOTT CITY, MARYLAND 21043  
TELEPHONE: (301) 461-2855

#251



**CORRUGATED METAL ANTI-SEEP COLLAR DETAIL**

NO SCALE

NOTES FOR COLLARS:

- All materials to be in accordance with construction and construction material specifications.
- When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
- Unassembled collars shall be marked by painting or tagging to identify matching pairs.
- The lap between the two half sections and between the pipe and connecting band shall be caulked with asphaltic mastic at time of installation.
- Each collar shall be furnished with two 1/2" diameter rods with standard tank lugs for connecting collars to pipe.

**DEVELOPER'S CERTIFICATE**

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*Floyd E. Lilly* 5/12/85  
SIGNATURE OF DEVELOPER DATE

**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."

*Robert Ziehm* 5/12/85  
SIGNATURE OF ENGINEER DATE

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.

*John M. Hahn* 7-19-85  
U.S. Soil Conservation Service DATE

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

*Robert Ziehm* 7-19-85  
Howard Soil Conservation District DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

*[Signature]* 7-23-85  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING

*[Signature]* 7-22-85  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

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

**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 5 percent above the design elevation (including freeboard) unless otherwise shown on the plans.  
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 four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 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.

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 four 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 four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

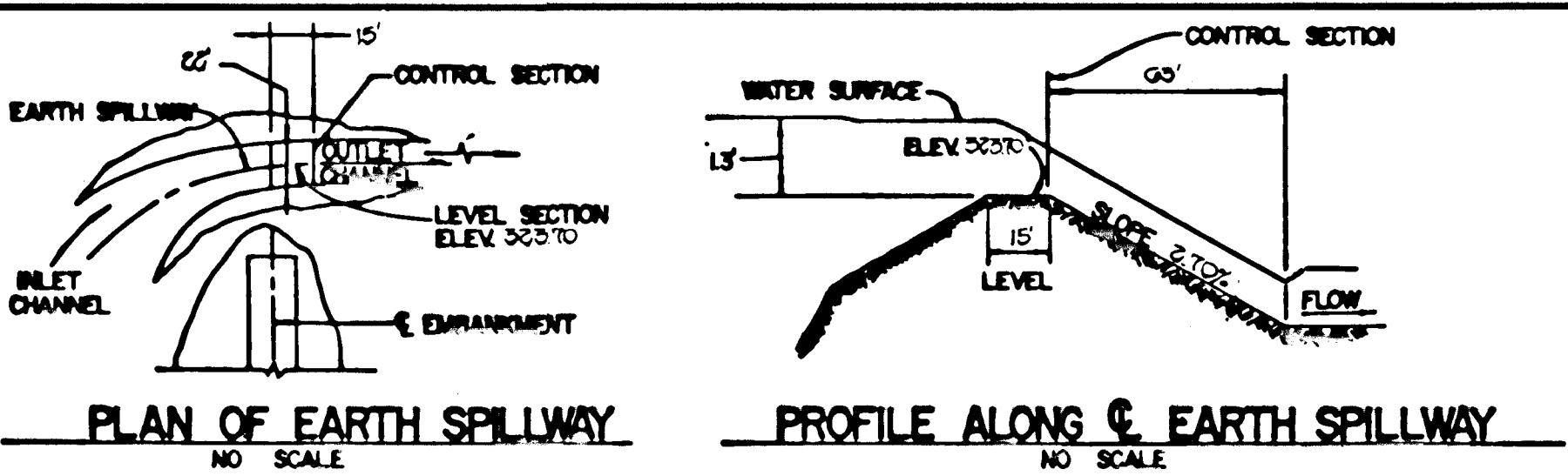
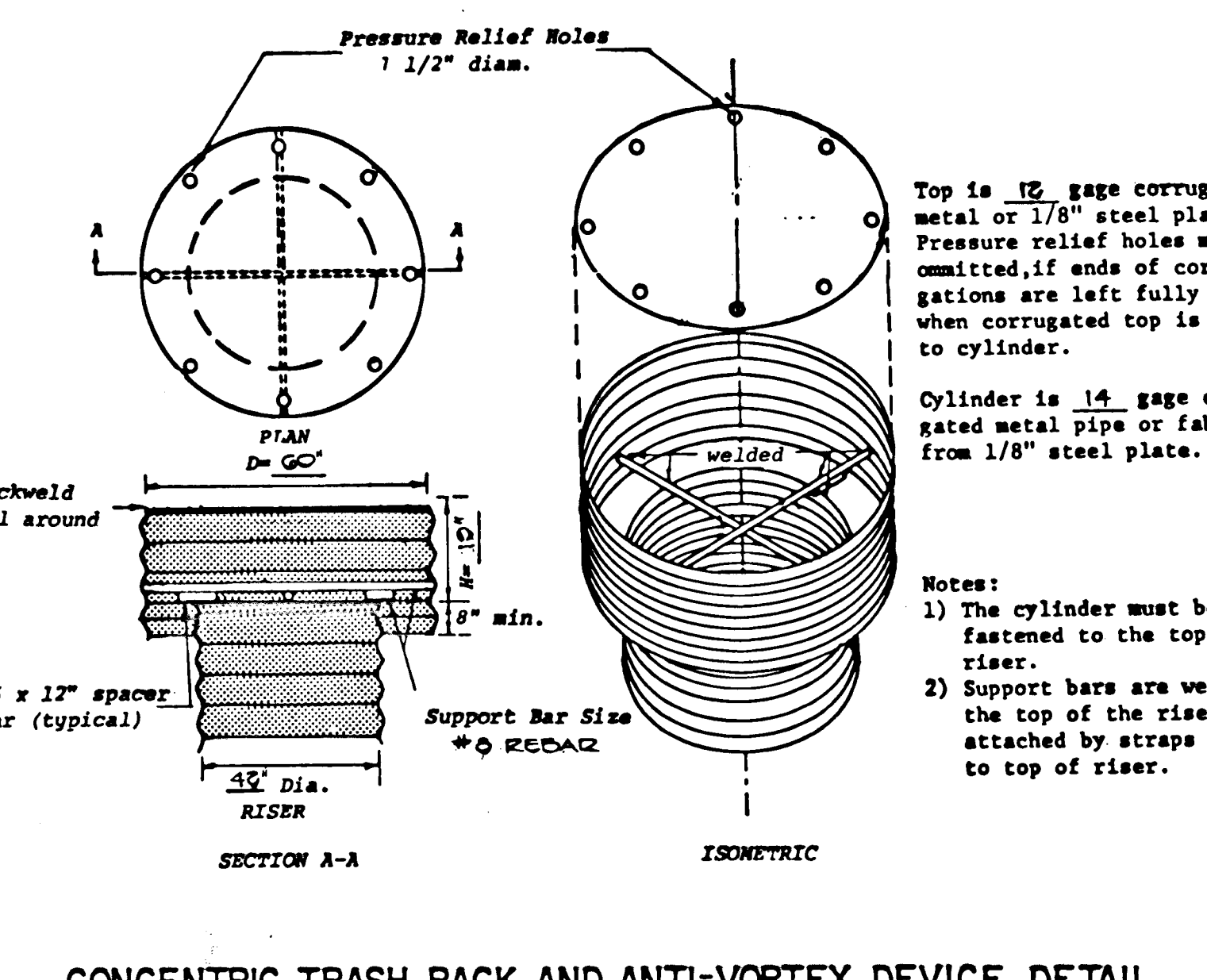
IV. **PIPE CONDUITS**  
A. **CORRUGATED METAL PIPE**  
1. Materials - METAL Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with watertight coupling bands.  
2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used 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.

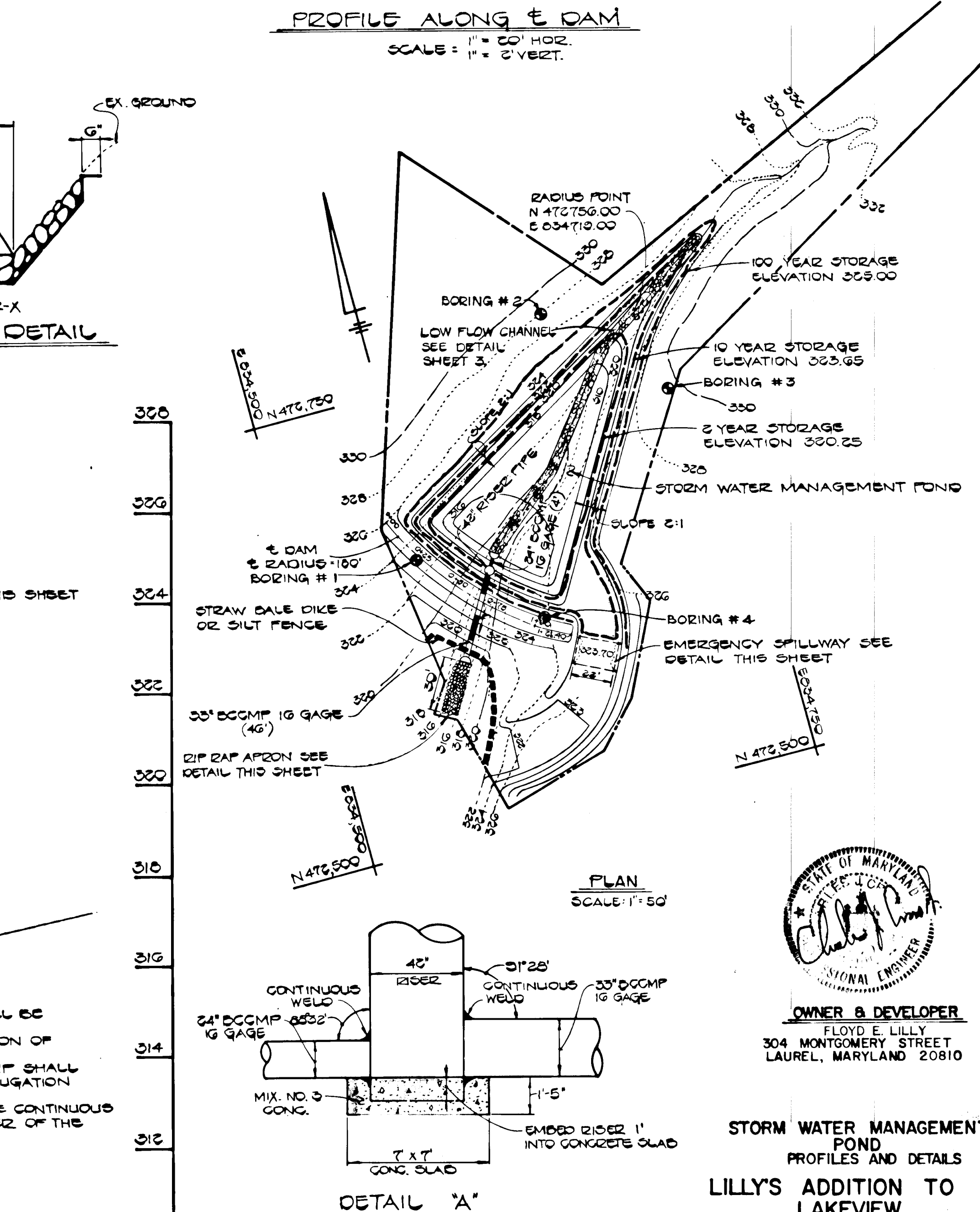
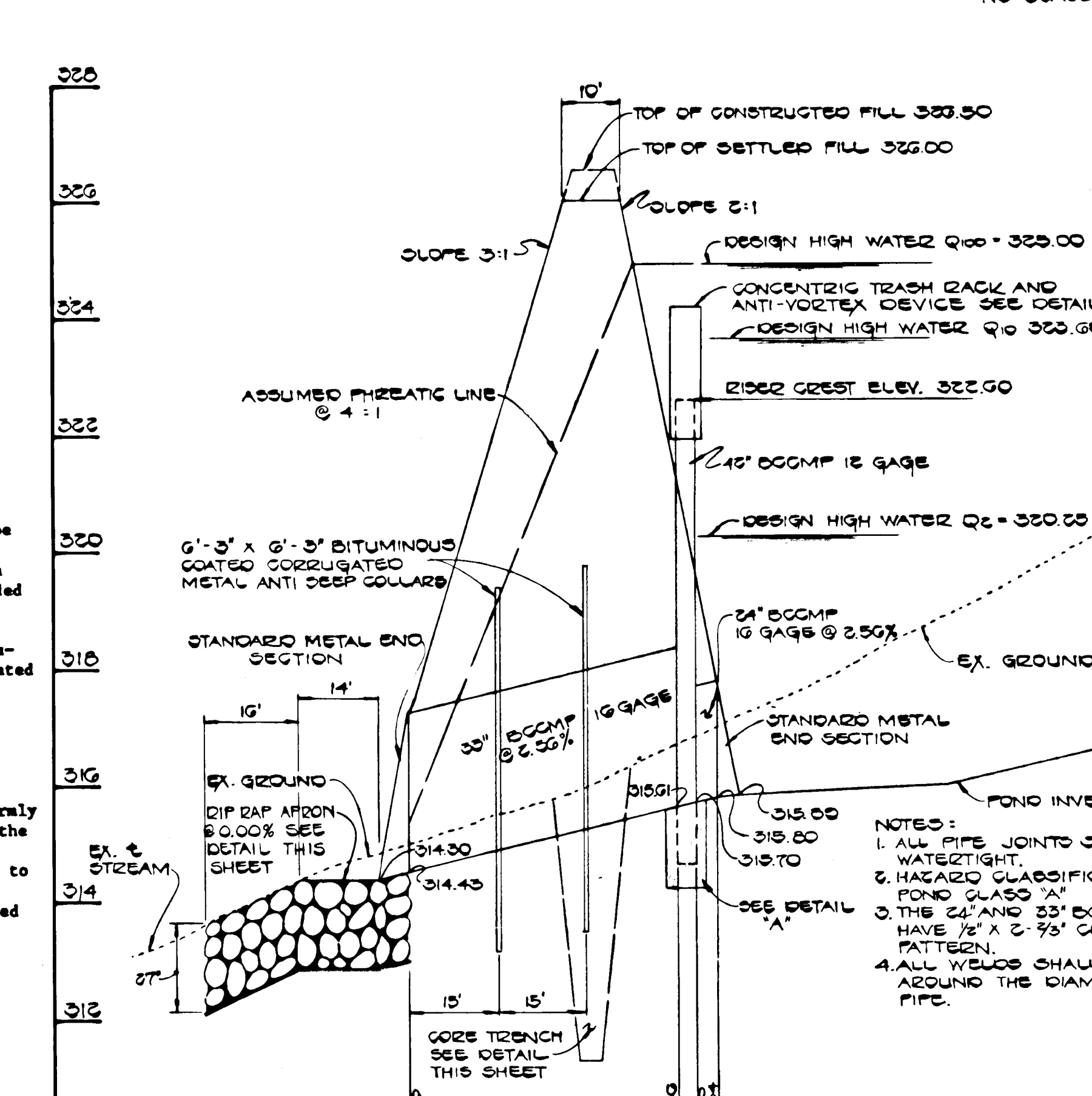
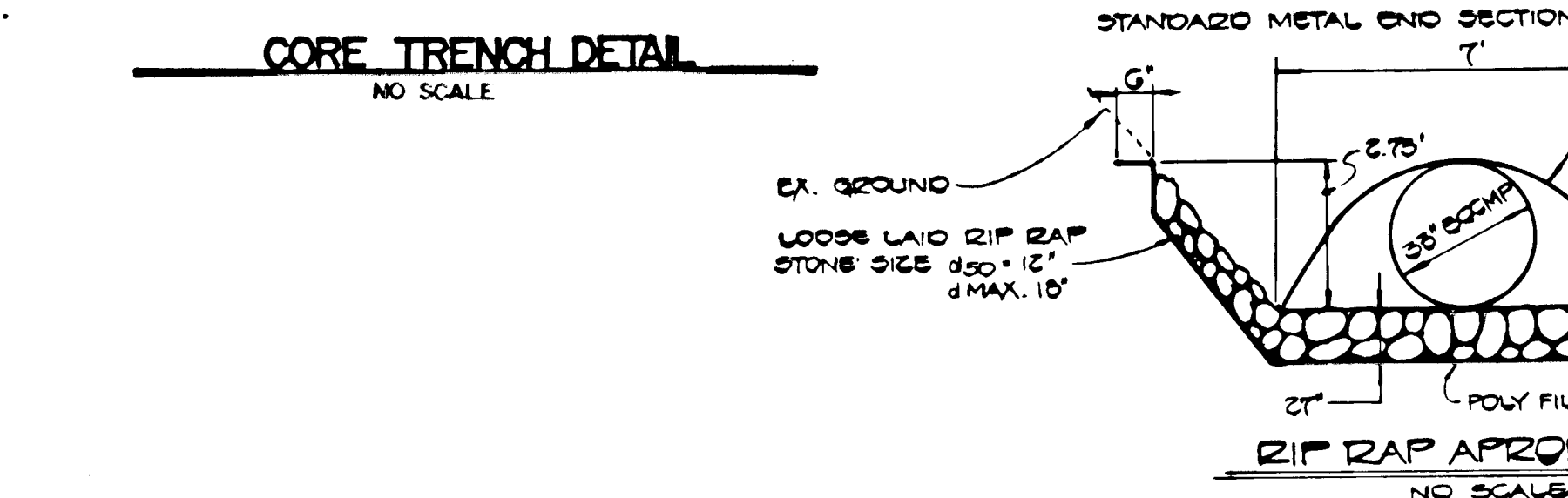
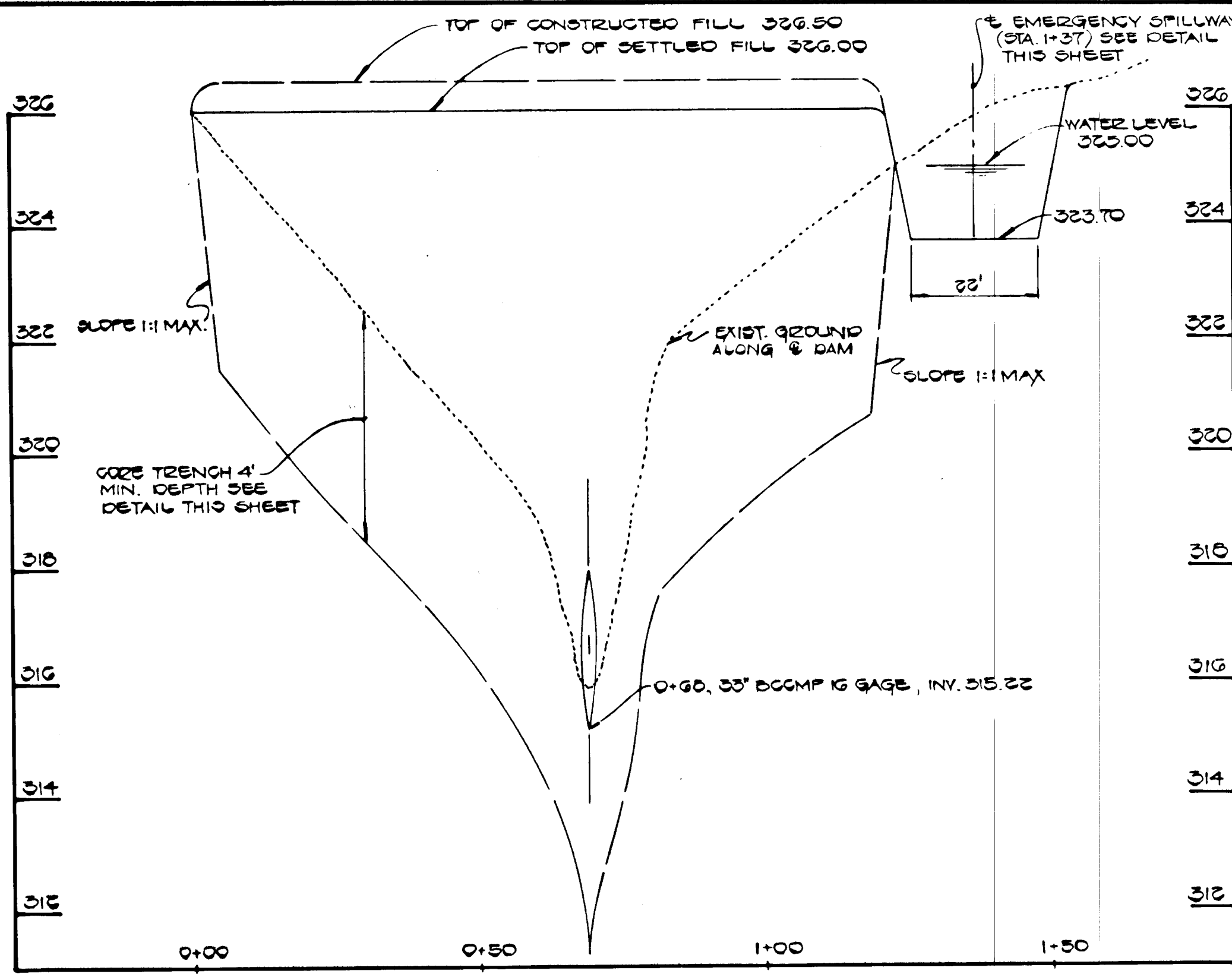
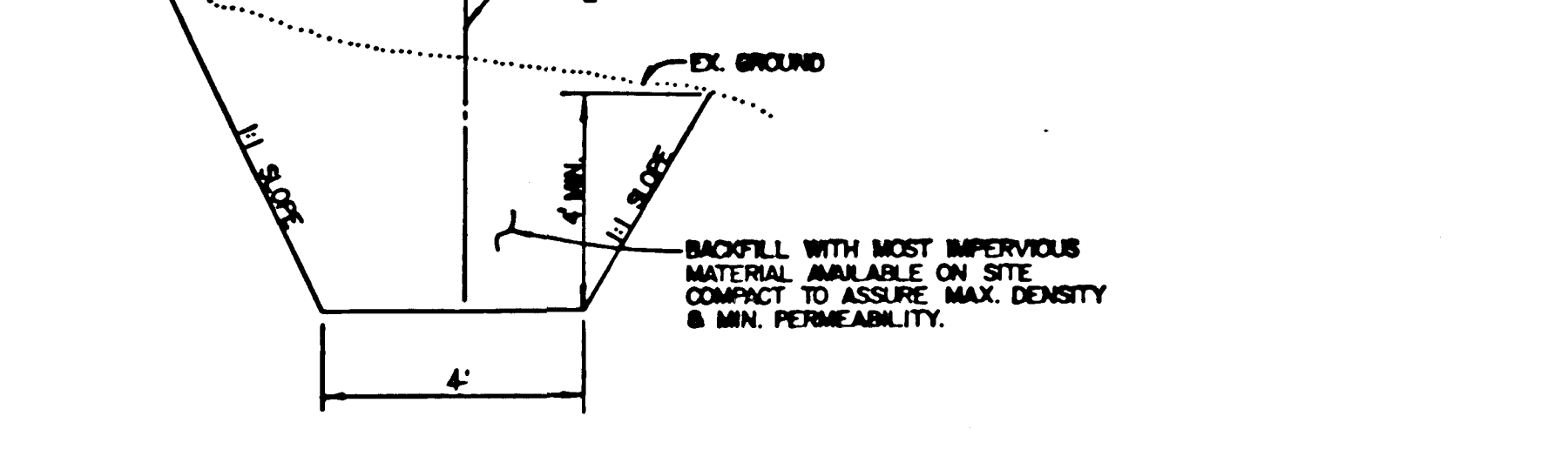
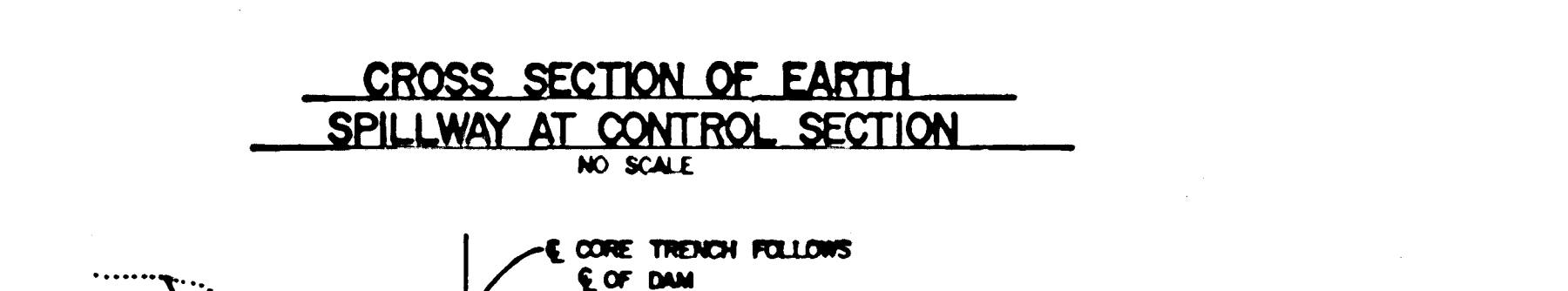
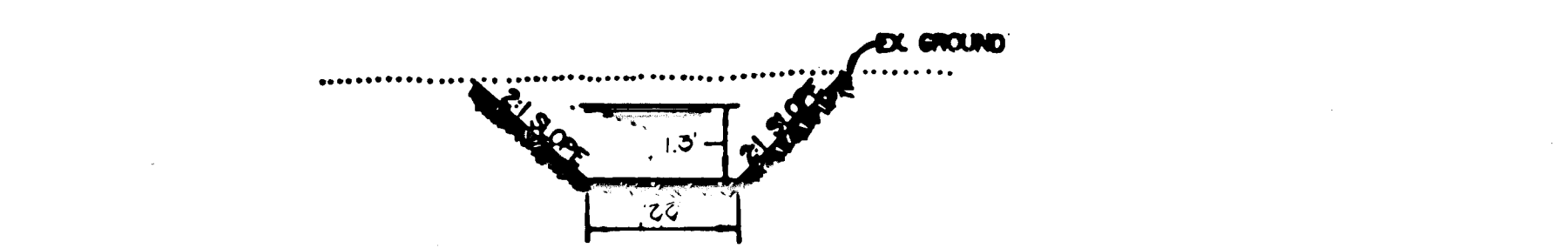
VI. **STABILIZATION**  
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by seeding and applying straw mulch and in accordance with Standards and Specifications for Soil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

All exposed areas of the embankment and pond shall be stabilized by:

- Spreading 4" topsoil
- Working in 1 ton of ground limestone and 1,000 pounds of 10-10-10 fertilizer per acre.
- Seed with 40 lbs./acre of "Kentucky 31" tall fescue, and 15 lbs./acre of Crownvetch inoculated.
- Mulch with 1-1/2 tons straw per acre.
- Tie down mulch with emulsified asphalt @ 348 gallons/acre.



**EMERGENCY SPILLWAY DETAILS**



**DETAIL 'A'**

NO SCALE

NOTES:

- ALL PIPE JOINTS SHALL BE WATERTIGHT.
- HAZARDOUS CLASSIFICATION OF POND CLASS 'A'
- THE 24" AND 33" BCCMP SHALL HAVE 1/2" X 2-7/8" CORRUGATION PATTERN.
- ALL WELDS SHALL BE CONTINUOUS AROUND THE DIAMETER OF THE PIPE.

**OWNER & DEVELOPER**  
FLOYD E. LILLY  
304 MONTGOMERY STREET  
LAUREL, MARYLAND 20810

**STORM WATER MANAGEMENT POND PROFILES AND DETAILS**  
**LILLY'S ADDITION TO LAKEVIEW SECTION 2**  
6TH ELECTION DISTRICT HOWARD CO., MD  
SCALE: AS SHOWN MAY 9, 1985  
SHEET 4 OF 4

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