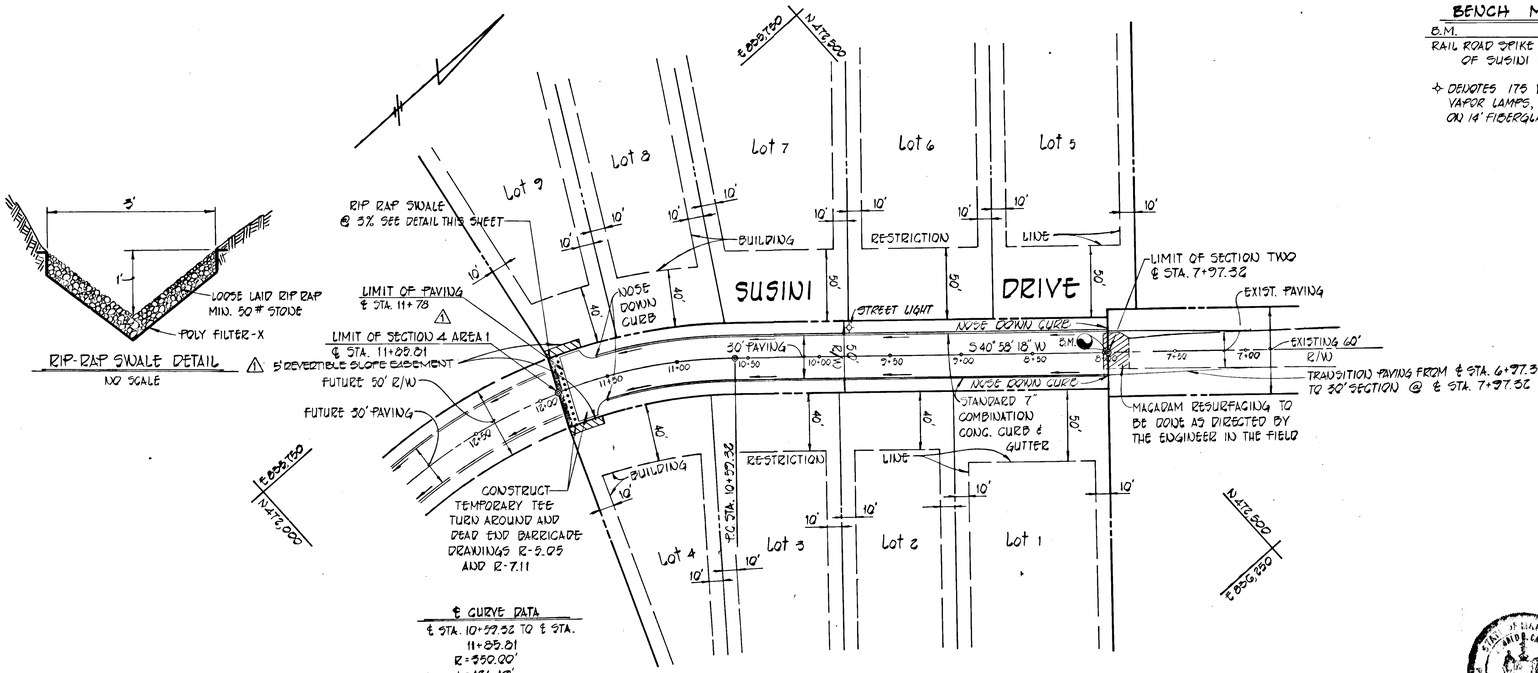
RIP-RAP SWALE DETAIL
NO SCALE

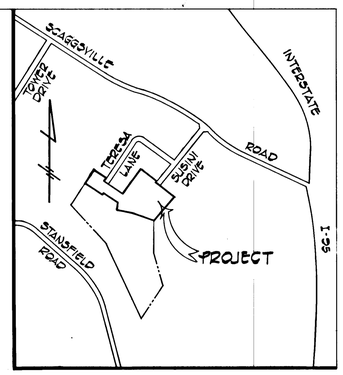


PLAN
SCALE 1" = 50'

℄ CURVE DATA
℄ STA. 10+59.32 TO ℄ STA. 11+85.01
R = 350.00'
L = 126.69'
Δ = 20° 42' 26"
T = 63.74'
CHD = S 30° 36' 35" W
125.01'

BENCH MARK
B.M. ELEV. 365.73
RAIL ROAD SPIKE SET @ END OF SUSINI DRIVE

✧ DENOTES 175 WATT MERCURY VAPOR LAMPS, POST TOP FIXTURES ON 14' FIBERGLASS POLE



VICINITY MAP
SCALE: 1" = 800'

APPROVED
DEPARTMENT OF PUBLIC WORKS
12/31/81
DATE

APPROVED
OFFICE OF PLANNING AND ZONING
12-29-81
DATE

REVISIONS		
NO.	DATE	DESCRIPTION
1	10-15-82	ADD REVERTIBLE SLOPE EASEMENT, CHANGE SECTION 5 AREA 1 TO SECTION 4 AREA 1

LAKEVIEW
SECTION 4, AREA 1
6 TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

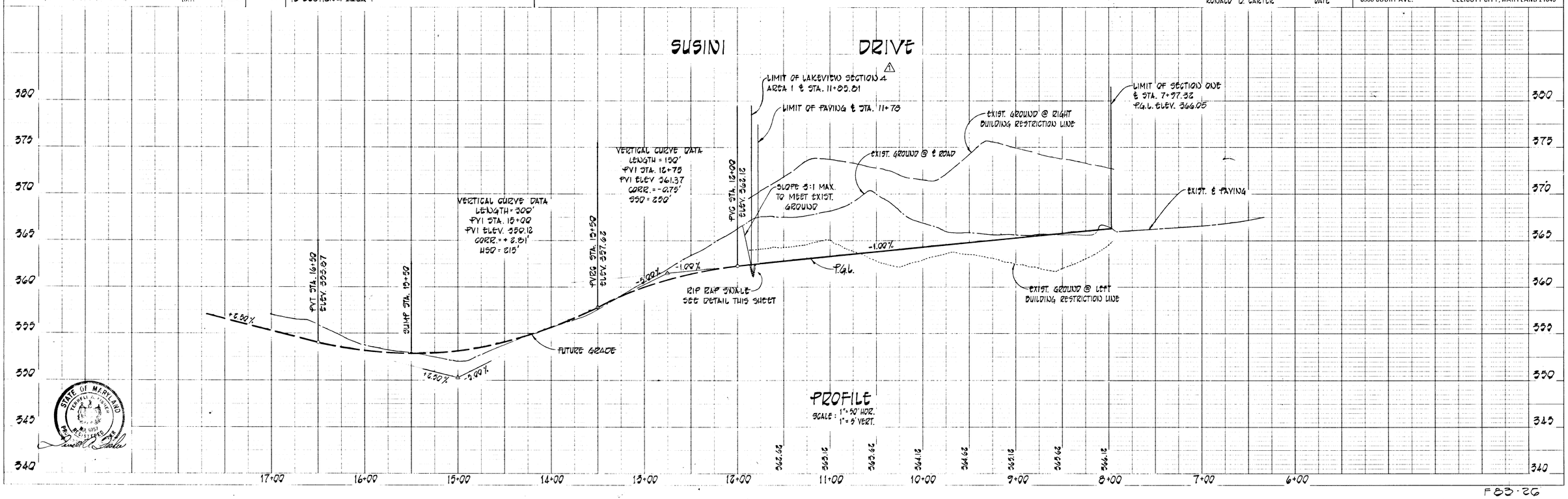
SUSINI DRIVE
PLAN AND PROFILE

OWNER AND DEVELOPER
LAKEVIEW JOINT VENTURE
SUITE 103, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

SCALE: AS SHOWN	DATE: 8/21/81	DWG. NO. 1 OF 4
DES.: C. CROVO	DRN.: A. BOGDAN	CHK.: R. CARTER

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

STATE OF MARYLAND — RONALD B. CARTER — 10706 — REGISTERED PROFESSIONAL LAND SURVEYOR
Ronald B. Carter
RONALD B. CARTER
9-16-81
DATE



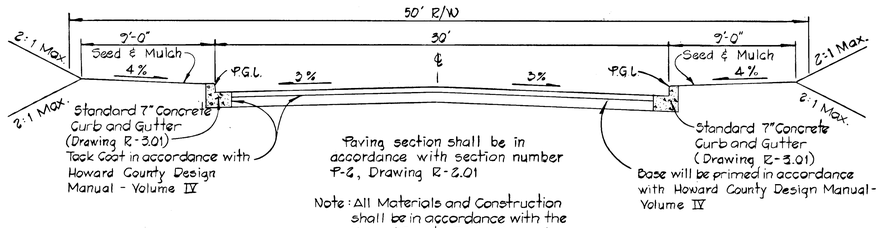
PROFILE
SCALE: 1"=50' HOR.
1"=5 VERT.

STATE OF MARYLAND — RONALD B. CARTER — 10706 — REGISTERED PROFESSIONAL LAND SURVEYOR

#283

F83-26

Type of Trafficway - Local Residential Zoned R-20 Design Speed 30 M.P.H.



Note: All Materials and Construction shall be in accordance with the Howard County Design Manual - Volume IV - Standard specifications and details for construction

TYPICAL ROADWAY SECTION

No Scale

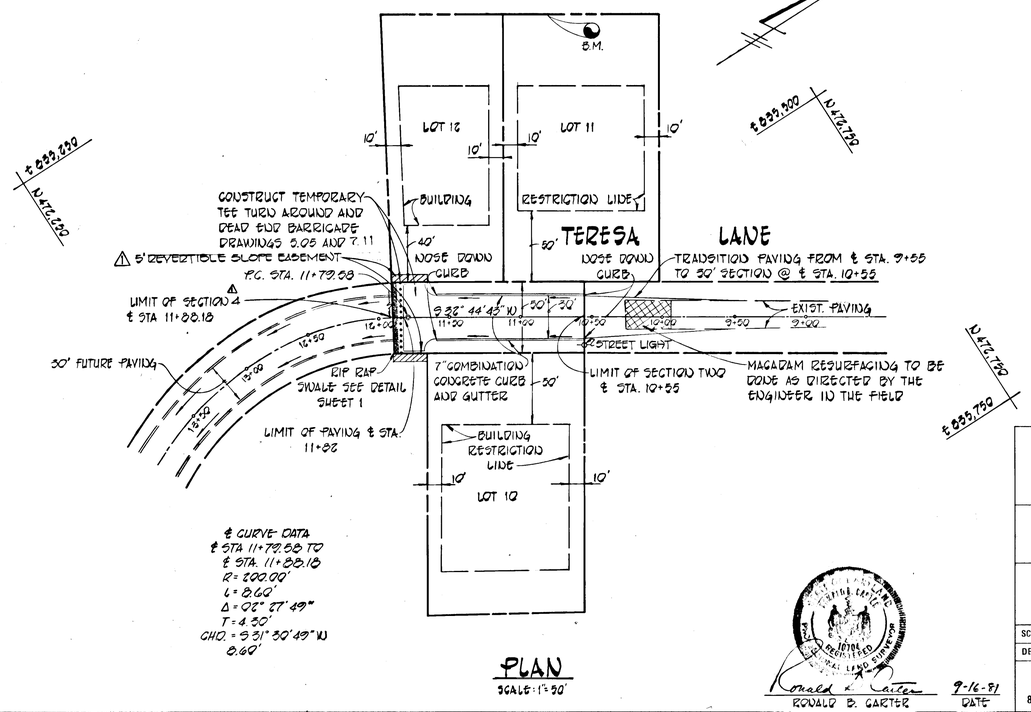
TERESA LANE AND SUSINI DRIVE

℄ STA. 10+55 TO ℄ STA 11+58 ℄ STA. 7+97.32 TO ℄ STA 11+94

BENCH MARK

B.M. ELEV. 386.70

IRON PIPE SET - TRAVERSE STA. E-5



℄ CURVE DATA
℄ STA 11+79.58 TO
℄ STA. 11+88.18
R = 200.00'
L = 8.60'
Δ = 02° 27' 49"
T = 4.30'
CHD = S 31° 30' 49" W
8.60'

PLAN

SCALE: 1" = 50'

LAKEVIEW
SECTION 4, AREA 1

6 TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TERESA LANE
PLAN AND PROFILE
PAVING SECTION DETAIL

OWNER AND DEVELOPER
LAKEVIEW JOINT VENTURE
SUITE 103, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

SCALE: AS SHOWN	DATE: 8/21/81	DWG. NO. 2 OF 4
DES.: C. CROVO	DRN.: A. BOGDAN	CHK.: R. CARTER

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

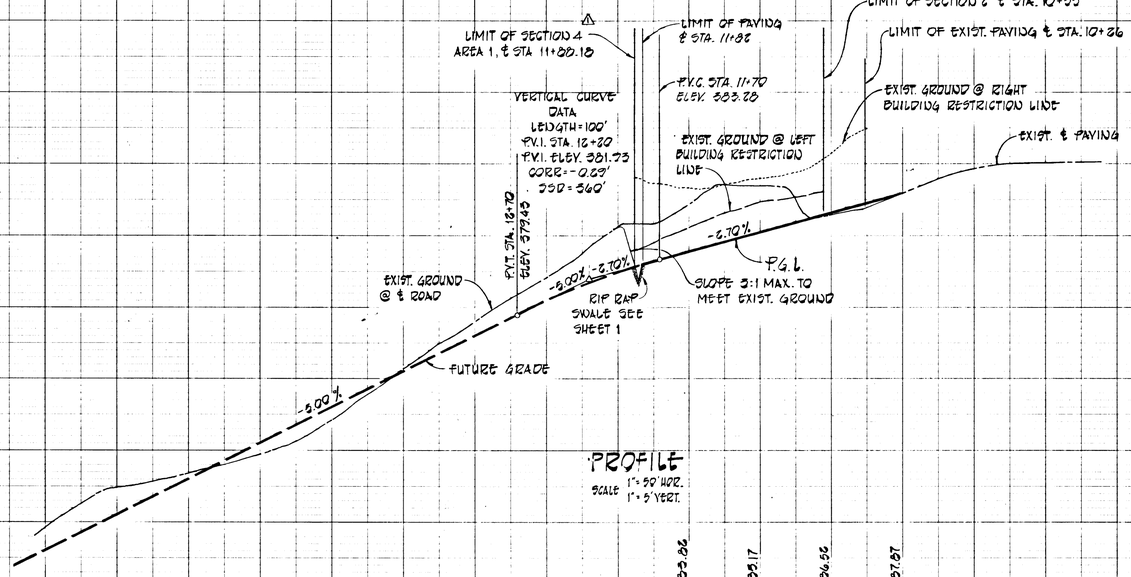
Ronald B. Carter 9-16-81
RONALD B. CARTER DATE

APPROVED
DEPARTMENT OF PUBLIC WORKS
12/31/81
DATE

APPROVED
OFFICE OF PLANNING AND ZONING
12-29-81
DATE

REVISIONS		
NO.	DATE	DESCRIPTION
1	10-15-82	ADD REVERTIBLE SLOPE EASEMENT, CHANGE SECTION 3 AREA 1 TO SECTION 4 AREA 1, ADD STREET LIGHT

TERESA DRIVE



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

F83-26

EROSION AND SEDIMENT CONTROL CERTIFICATION AND APPROVAL

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 — DATE 12-16-1981

DEVELOPER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER — DATE 11/27/81

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

U.S. SOIL CONSERVATION SERVICE — DATE

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

DISTRICT COORDINATOR — DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED:
DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 12-31-81

APPROVED:
OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 12-29-81

STONE OUTLET SEDIMENT TRAP DATA

TRAP #1	TRAP #2
1. Drainage Area 1.4 Ac.±	1. Drainage Area 3.8 Ac.±
2. Storage Required @ 67 C.Y./Ac. = 93.8 C.Y.	2. Storage Required @ 67 C.Y./Ac.± = 254.6 C.Y.
3. Storage Provided 97 C.Y.	3. Storage Provided 256 C.Y.
4. Bottom Dimension 27' x 13'	4. Bottom Dimensions 48' x 36'
Top Dimension 45' x 31'	Top Dimension 60' x 48'
Depth 3'	Depth 3'
Length of Stone Filter @ 6'/Ac. - 8.4'	Length of Stone Filter @ 6'/Ac.=22.8'
Bottom of Trap Elev. 382.0	Bottom of Trap Elev. 360.0'
Weir Crest Elev. 385.5	Weir Crest Elev. 363.5'
Cleanout Elev. 383.5	Cleanout Elev. 361.5
Sideslopes 2:1	Sideslopes 2:1

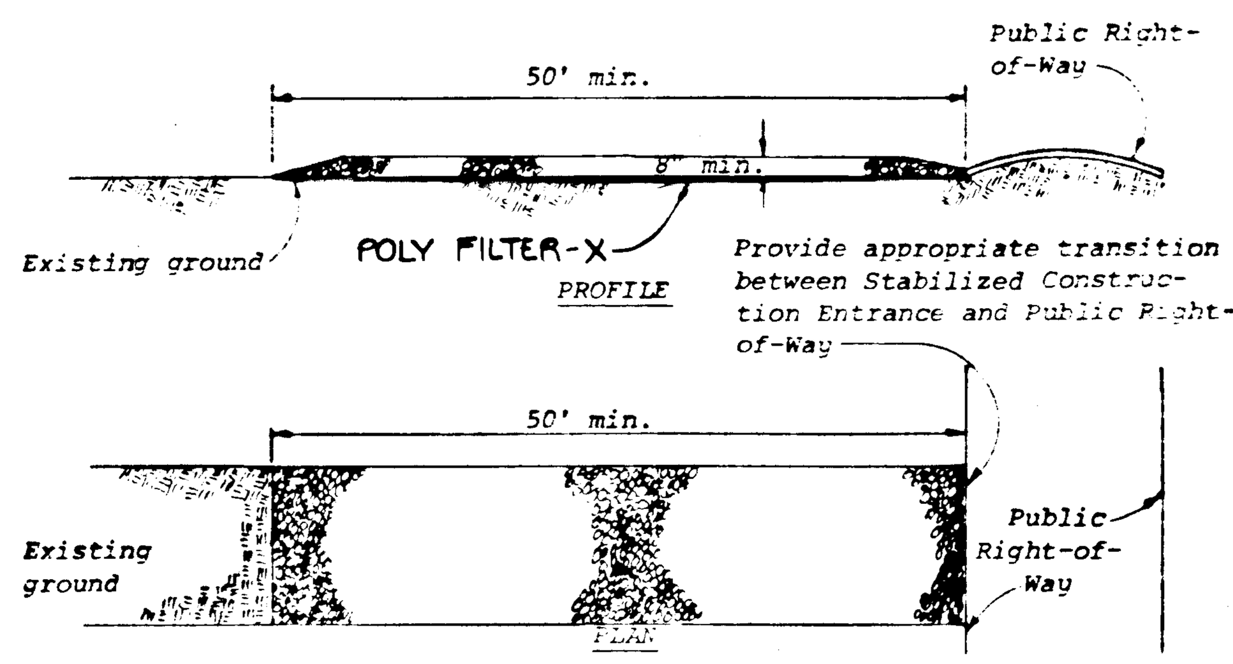
SEDIMENT CONTROL NOTES

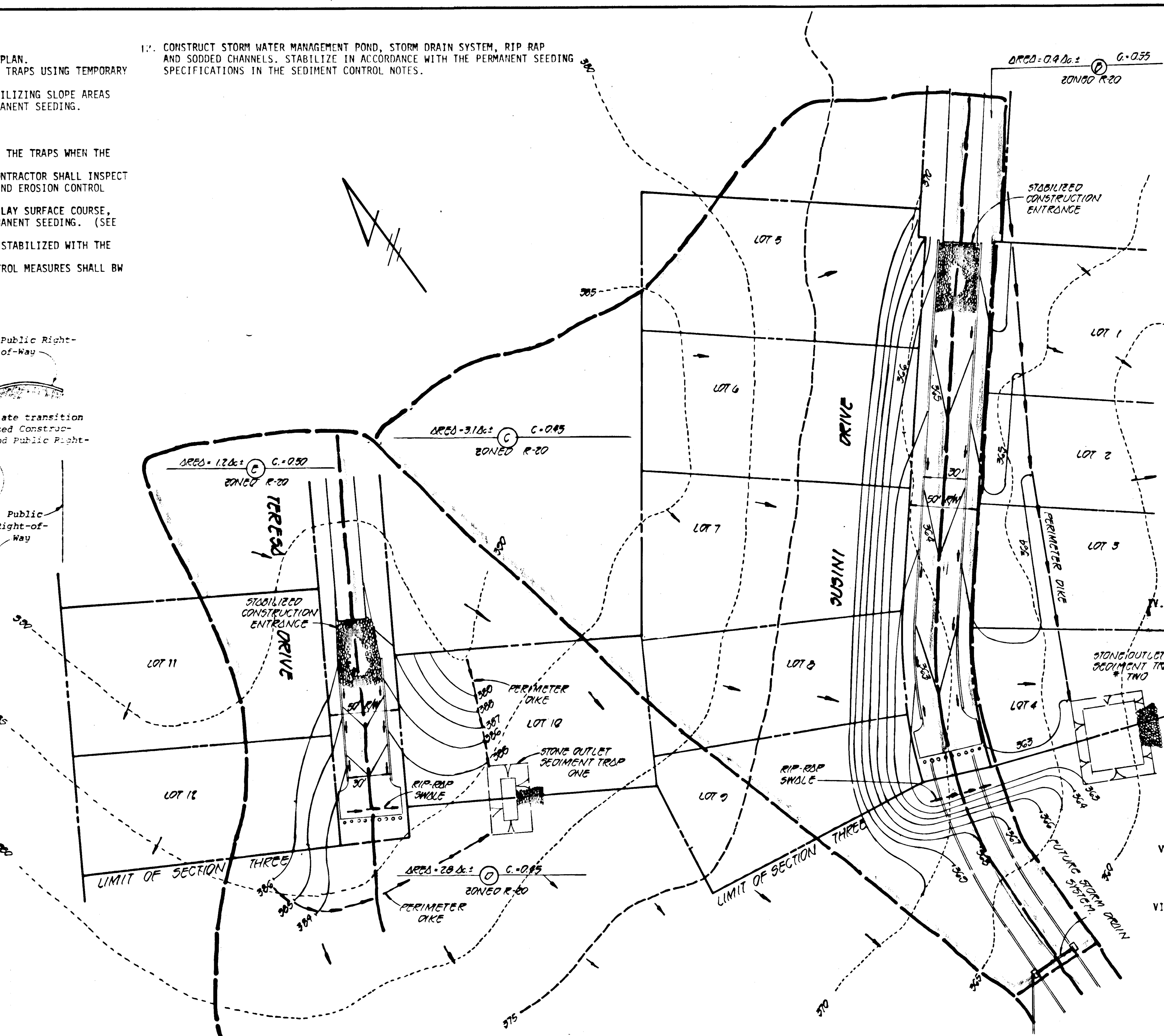
1. Specifications for the Sediment Control Details shown hereon are included in the U.S.D.A. Soil Conservation Service "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas".
2. The developer shall notify the Howard County Office of Inspection and Permits at least 24 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 seeded 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% Merion Blue Grass, 40% South Dakota Blue Grass and 20% Penn Lawn Creeping Fescue.
      - B. The seeded area shall then be raked with a York Rake (a minimum of 2 passes) covered and compacted with Cultipacker or other approved method.
   3. Mulching
      - A. Seeded 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 neeting.
6. A grading plan must be developed by the builder and approved before beginning construction of dwellings.

CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT.
2. CONSTRUCT STONE CONSTRUCTION ENTRANCES AS SHOWN ON PLAN.
3. CONSTRUCT PERIMETER DIKES AND STONE OUTLET SEDIMENT TRAPS USING TEMPORARY SEEDING. (SEE SEDIMENT CONTROL NOTES)
4. PLACE TERESA LANE AND SUSINI DRIVE TO SUBGRADE STABILIZING SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB USING PERMANENT SEEDING. (SEE SEDIMENT CONTROL NOTES)
5. INSTALL UTILITIES.
6. LAY BASE COURSE.
7. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE TRAPS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.
8. DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
9. CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSE, LAY SURFACE COURSE, BITUMINOUS CURB, AND STABILIZE SHOULDERS USING PERMANENT SEEDING. (SEE SEDIMENT CONTROL NOTES)
10. THE SEDIMENT TRAPS SHALL BE BACKFILLED, GRADED AND STABILIZED WITH THE PERMANENT SEEDING SPECIFICATIONS.
11. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BW GRADED AND STABILIZED BY PERMANENT SEEDING.
12. CONSTRUCT STORM WATER MANAGEMENT POND, STORM DRAIN SYSTEM, RIP RAP AND SODDED CHANNELS. STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS IN THE SEDIMENT CONTROL NOTES.

STABILIZED CONSTRUCTION ENTRANCE
(not to scale)





S.W.M. POND SPECIFICATION:

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, oversize 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.

Compaction
95% of Standard Proctor by A.S.T.M. 698

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 - Aluminum 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 sightly 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.

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

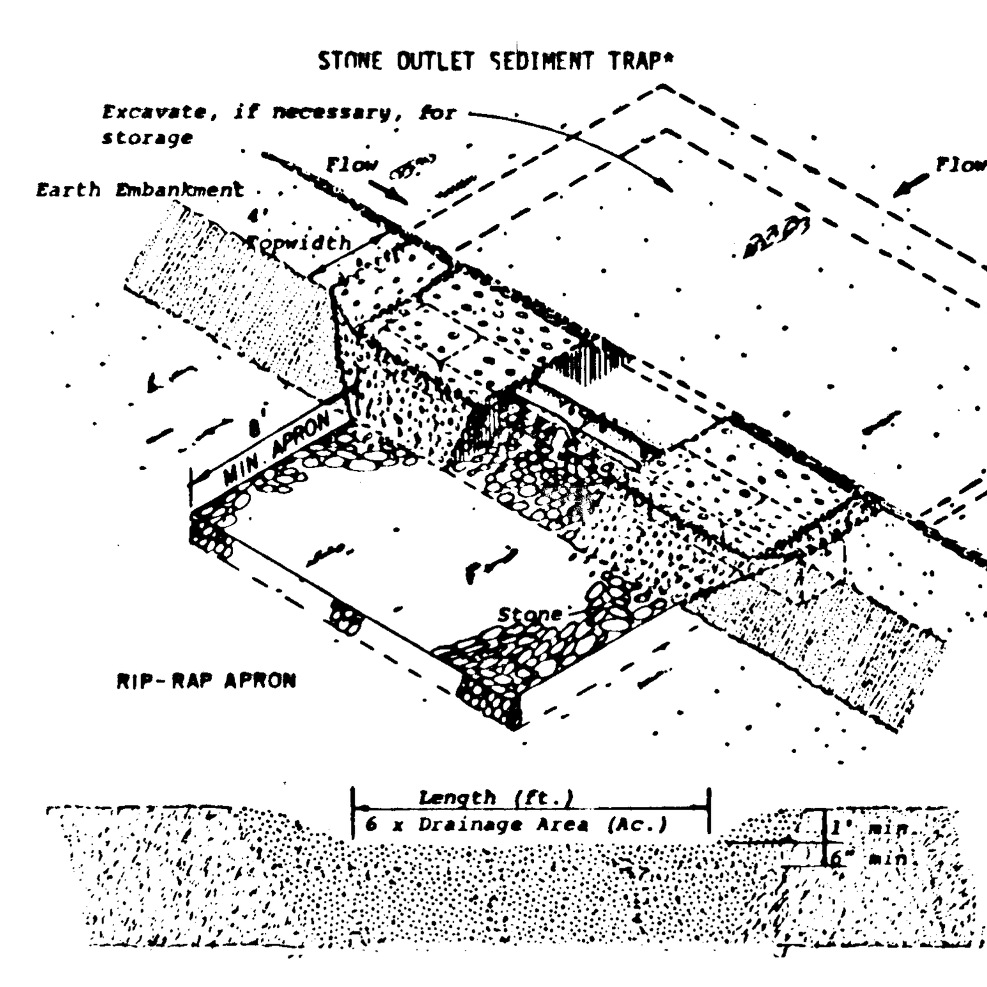
- a. Spreading 4" topsoil
- b. Working in 1 ton of ground limestone and 1,000 pounds of 10-10-10 fertilizer per acre.
- c. Seed with 40 lbs./acre of "Kentucky 31" tall fescue, and 15 lbs./acre of Crownvetch inoculated.
- d. Mulch with 1-1/2 tons straw per acre.
- e. Tie down mulch with emulsified asphalt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

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.

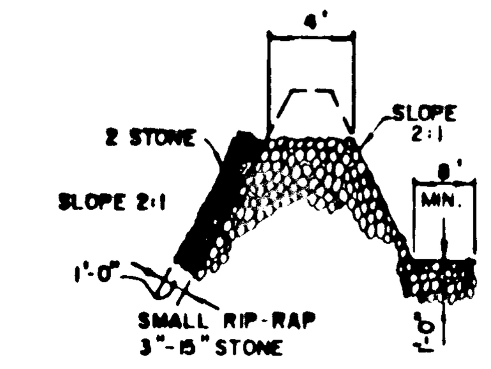
U.S. SOIL CONSERVATION SERVICE — DATE 12/29/81

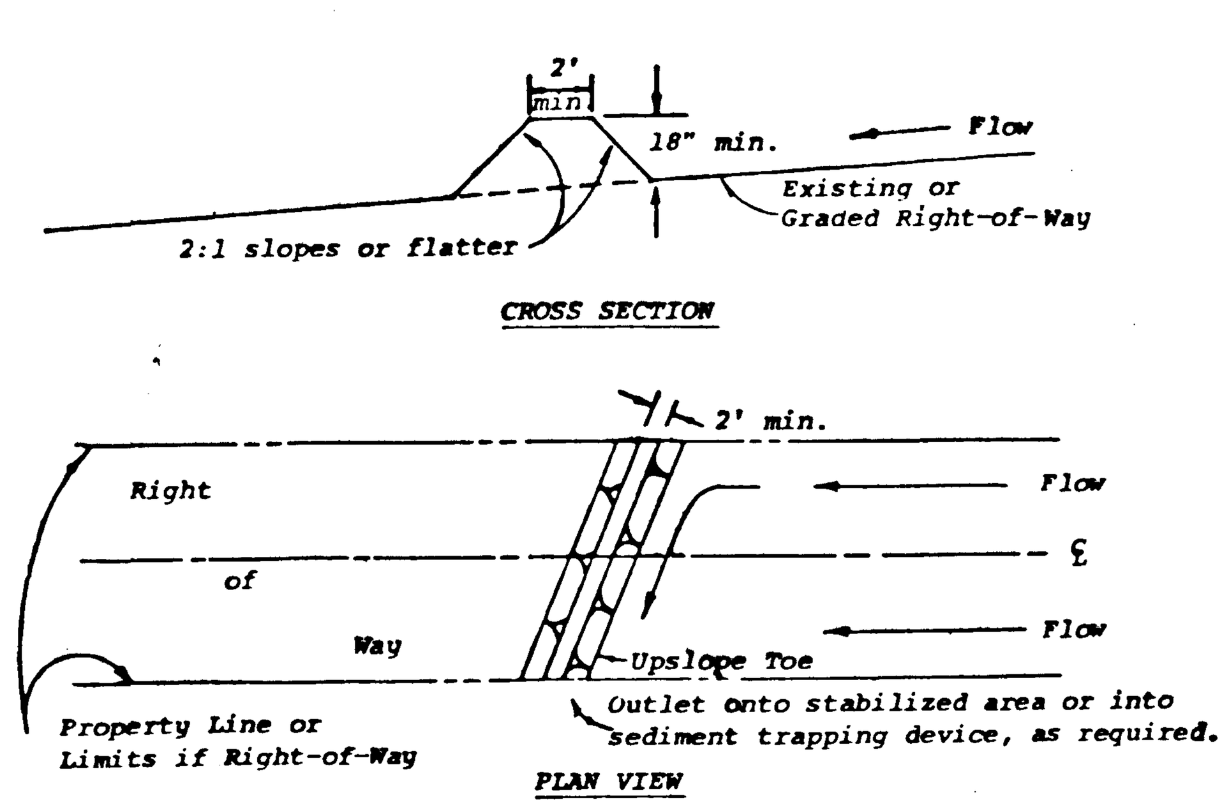
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/29/81



STONE OUTLET SEDIMENT TRAP





INTERCEPTOR DIKE

SITE ANALYSIS
1. TOTAL AREA OF PROPERTY ....5.5 Ac.±
2. TOTAL AREA TO BE REVEGETATED .....1.4 Ac.±
3. IMPERVIOUS AREA ....0.4 Ac.±
4. UNDISTURBED AREA ....3.7 Ac.±

REVISIONS

NO	DATE	DESCRIPTION
△	10-15-82	CHANGE SECTION 3 AREA 1 TO SECTION 4 AREA 1

FISHER, COLLINS AND CARTER INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8808 COURT AVENUE
ELLICOTT CITY, MARYLAND
21043
301-461-2855

OWNER AND DEVELOPER
LAKEVIEW JOINT VENTURE
SUITE 103, TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

RONALD B. CARTER REG. L.S. 10704 — DATE 12-16-1981

DRAINAGE AREA MAP & SEDIMENT CONTROL PLAN
LAKEVIEW
SECTION FOUR △ AREA ONE
TAX MAP 46 PARCEL 55
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE 1"=50' SHEET 3 OF 4 OCTOBER 27, 1981

F 83-26

ENGINEER'S CERTIFCATE

I 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] 10/27/81

STATE OF MARYLAND · NO. 9757 · REGISTERED PROFESSIONAL ENGINEER

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 SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY."

[signature] 9/14/81
DATE

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

[signature] 11-12-81
U.S. SOIL CONSERVATION SERVICE — DATE

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

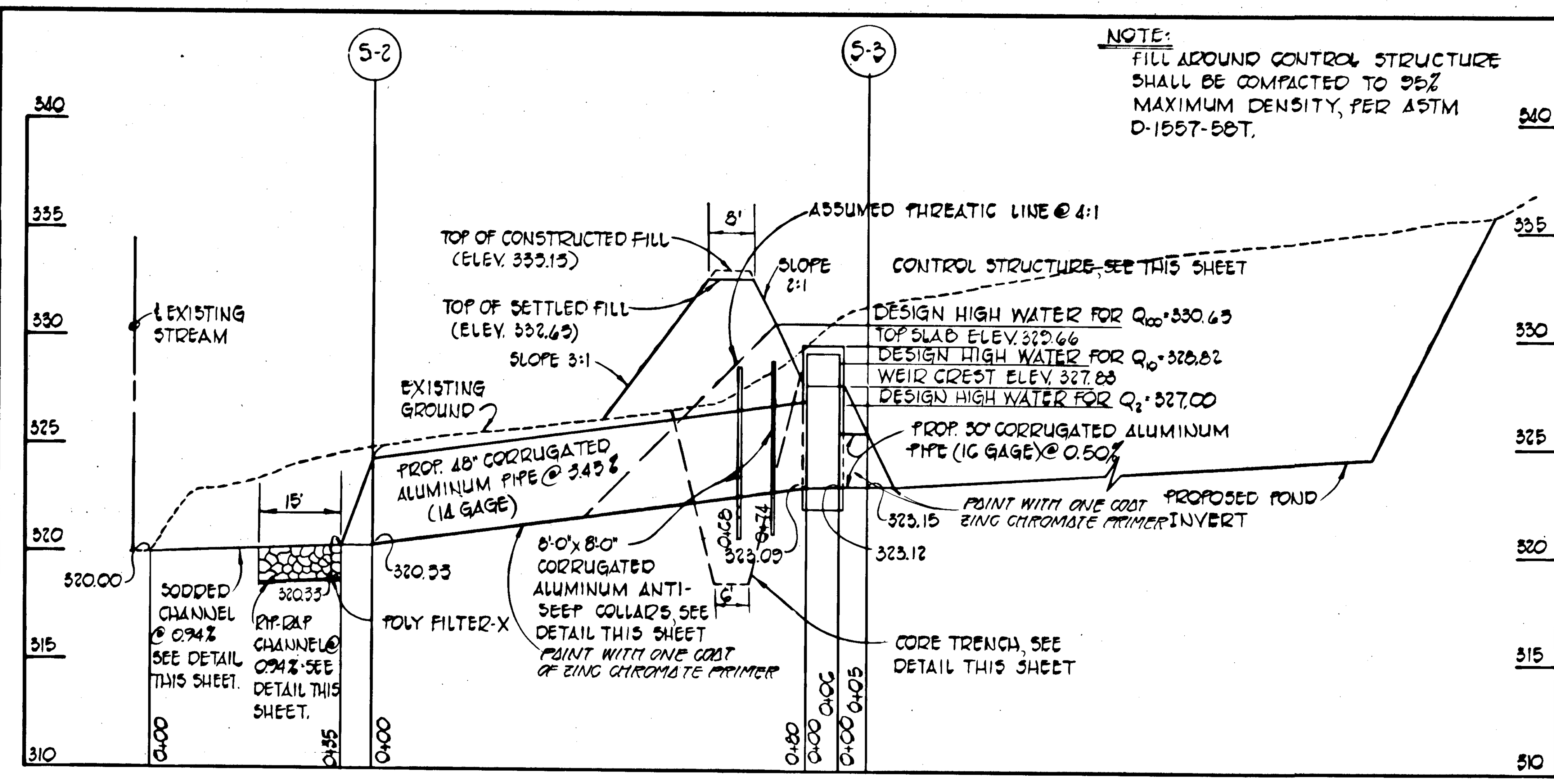
APPROVED: [signature] 11-12-81
DISTRICT COORDINATOR, HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED:
DEPARTMENT OF PUBLIC WORKS

[signature] 12-31-81
CHIEF, BUREAU OF ENGINEERING — DATE

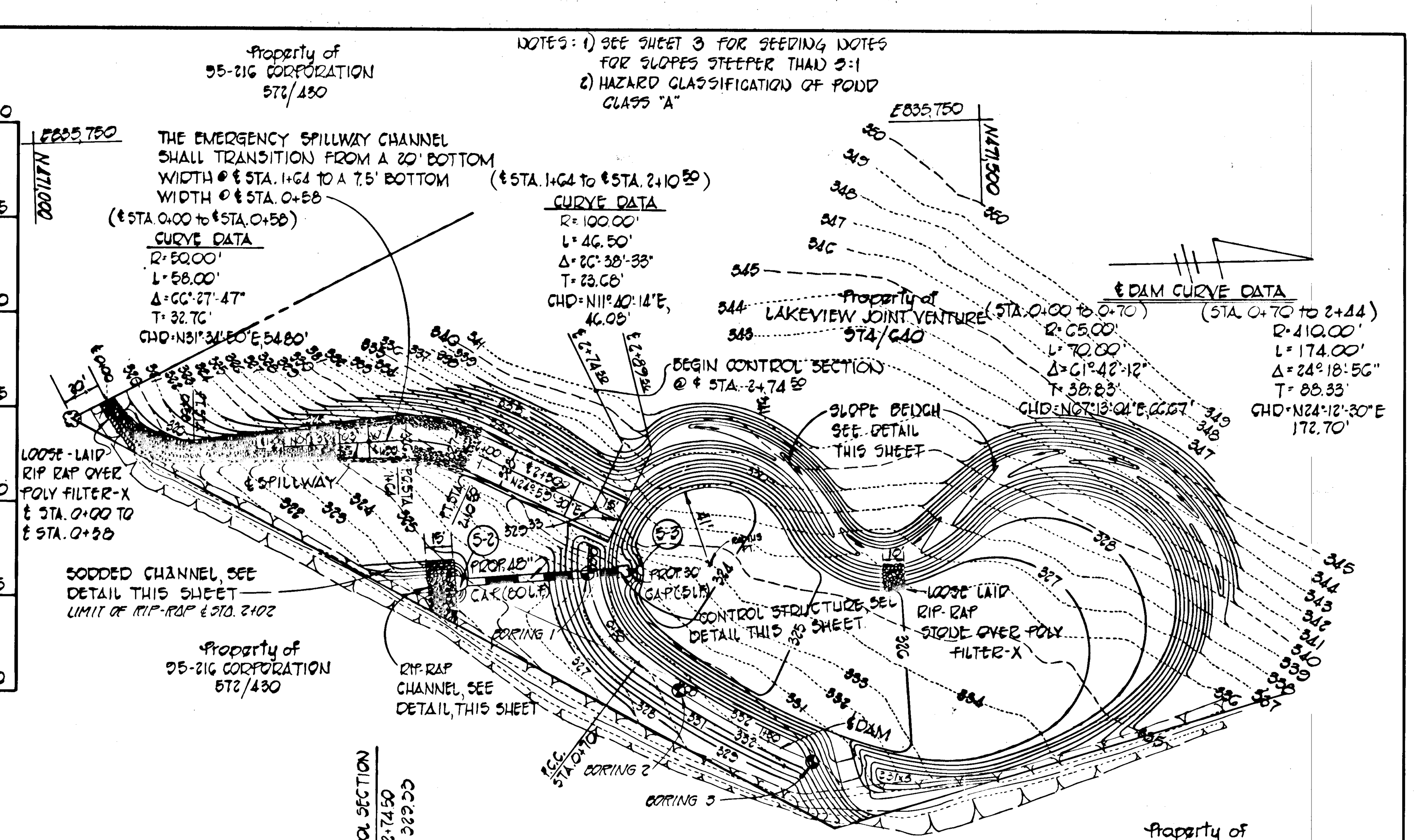
APPROVED:
OFFICE OF PLANNING AND ZONING

[signature] 11-16-81
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE



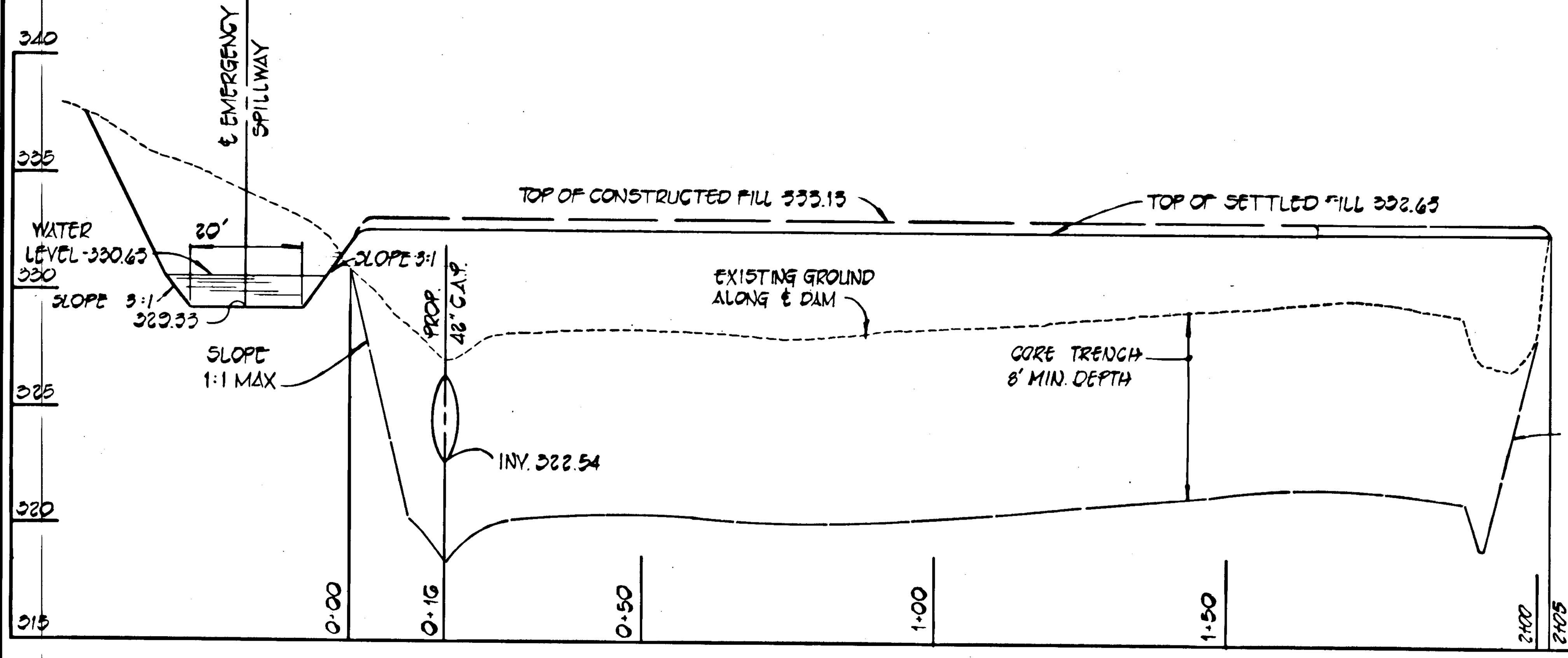
PERMANENT STORM WATER MANAGEMENT PROFILE

SCALE: Hor.: 1"= 20' Ver.: 1"= 5'



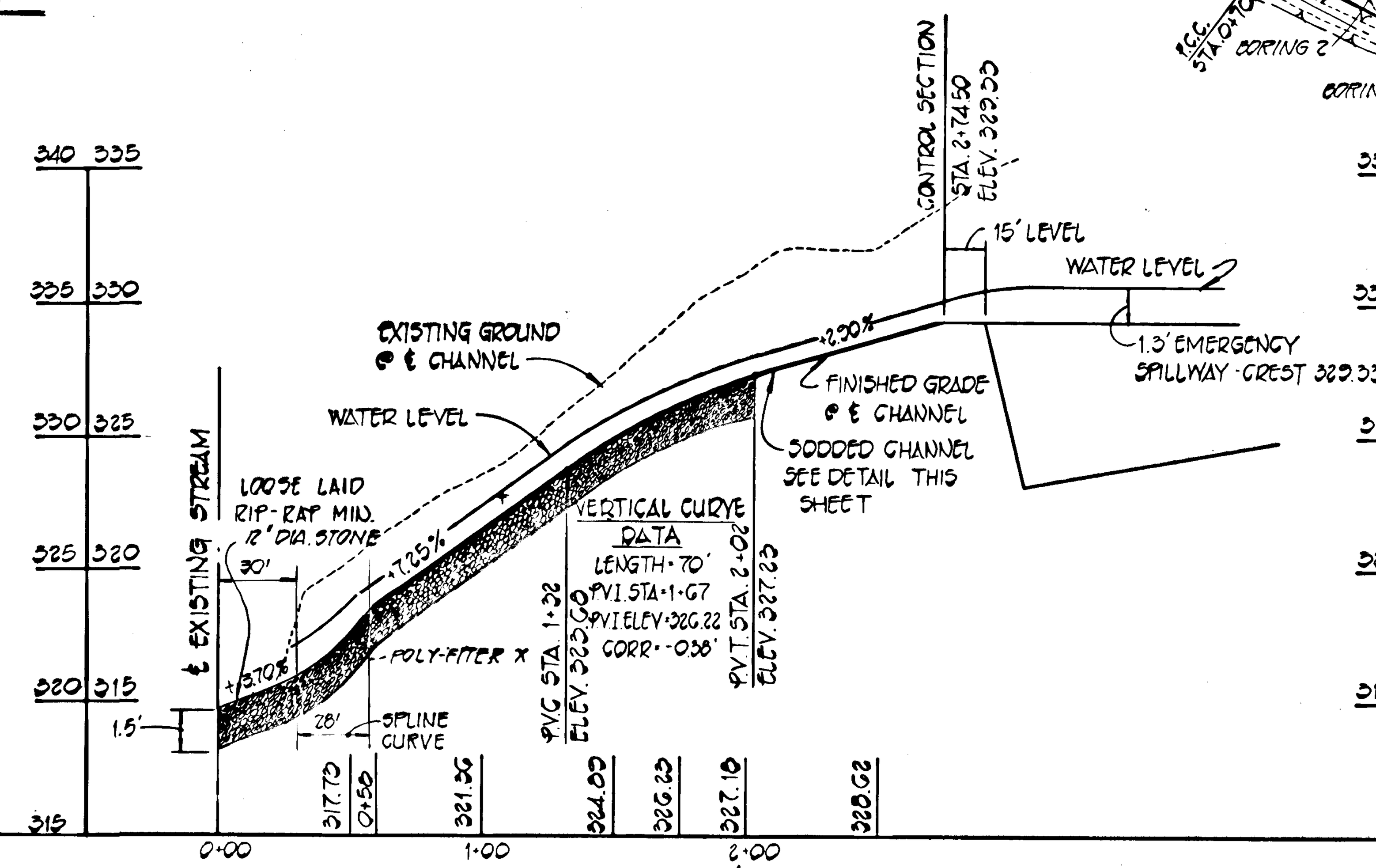
PLAN

SCALE: 1"=50'



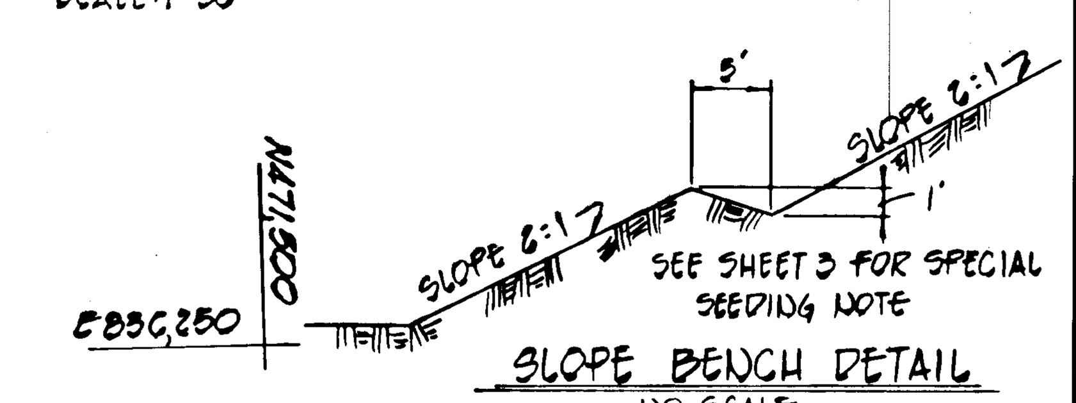
PROFILE ALONG ℄ DAM

SCALE: 1"= 20' HOR. 1"= 5' VERT.



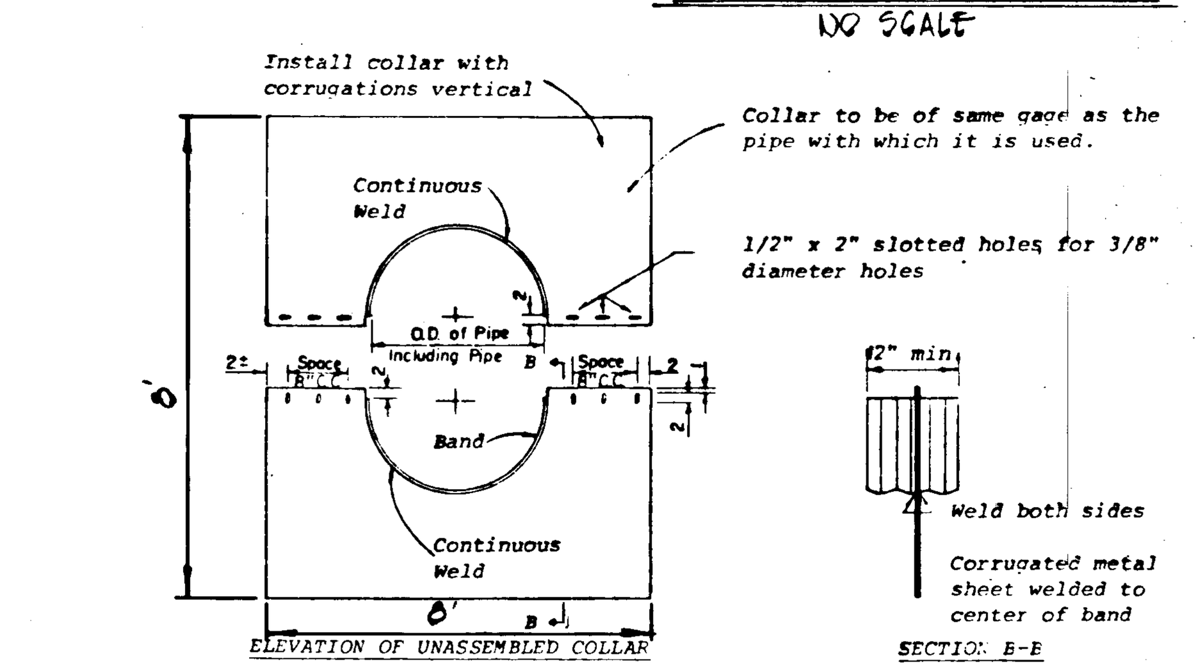
PROFILE ALONG ℄ OF EARTH SPILLWAY

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



SLOPE BENCH DETAIL

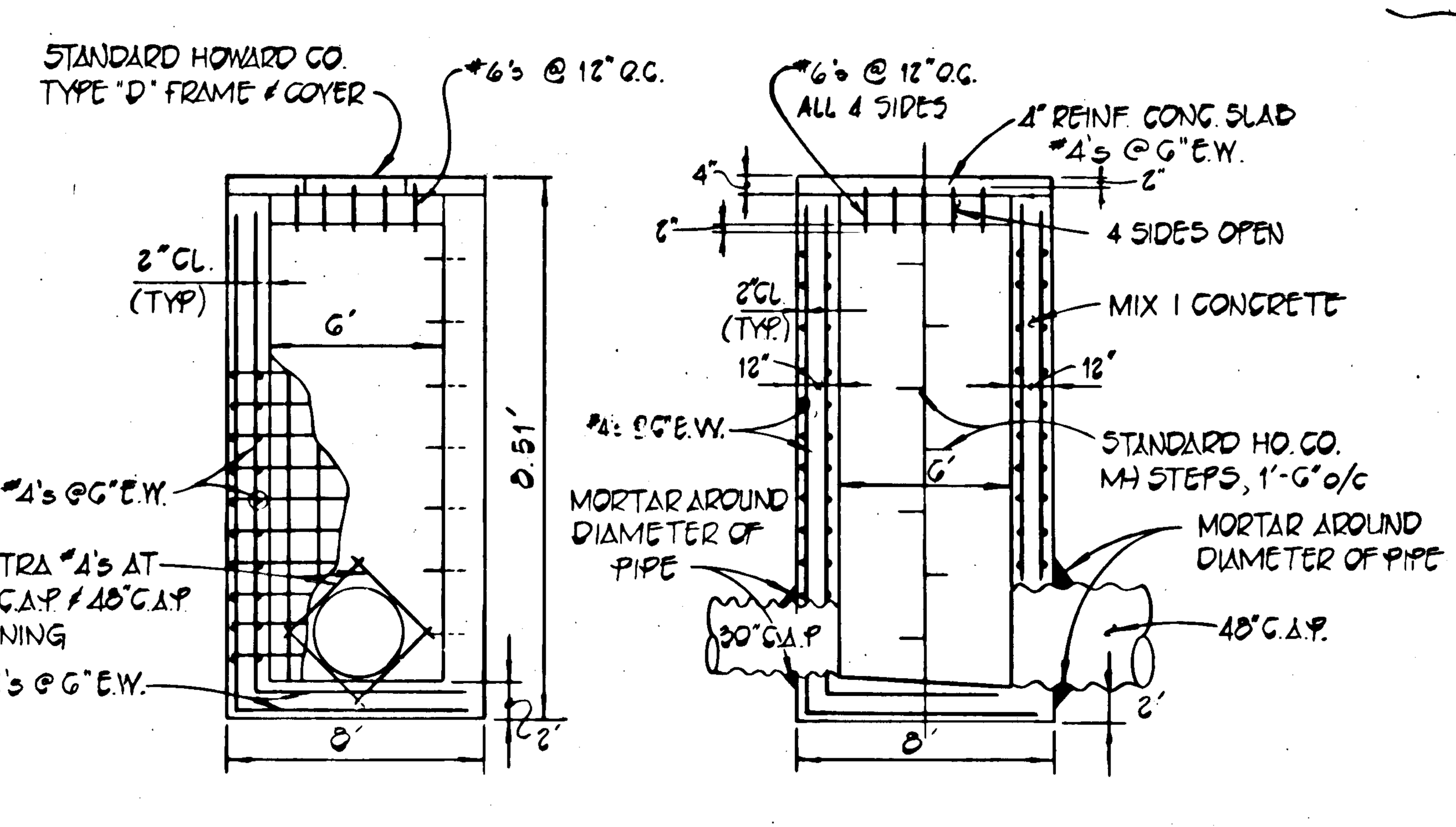
NO SCALE



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. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
5. Each collar shall be furnished with two 1/2" diameter rods with standard tank lugs for connecting collars to pipe.

DETAILS OF CORRUGATED METAL ANTI-SEEP COLLAR

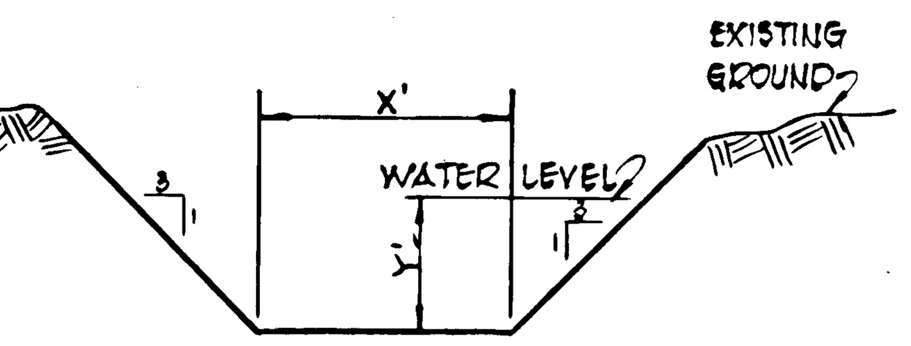


CONTROL STRUCTURE

NO SCALE

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] 11-12-81
U.S. Soil Conservation Service — Date



SODDED CHANNEL DESIGN DATA @ S-2 & EMERGENCY SPILLWAY

DATA @ S-2

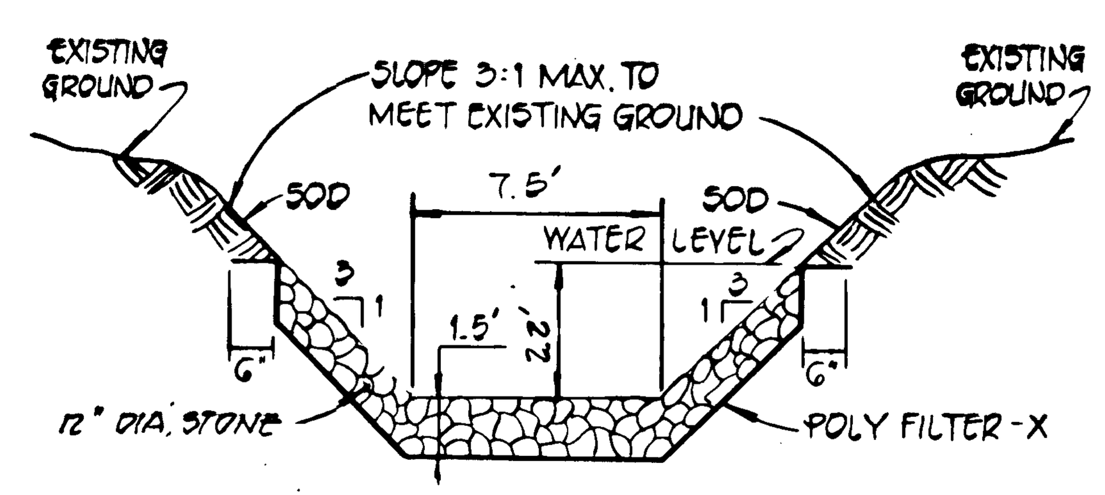
A· 25.05′′ — V· 1.486/.03 × 1.182 × 0.097 · 5.48 fps
P· 19.92′ — Q· A×V
R· 1.2548 — Q· 25.90 × 5.48 · 142.5 cfs
R⅔· 1.182 — X· 7.50′
S· 0.94 % — Y· 1.90′
S½· 0.0970
n· 0.03

DATA @ STA. 2+02 to 2+74.50

A· 15.71′′ — V· 1.486/.04 × 0.7454 × 0.1703 · 4.70 fps
P· 24.50′ — Q· A×V
R· 0.641 — Q· 15.71′′ × 4.70 fps · 73.8 cfs
R⅔· 0.7454 — X· 20′
S· 2.90 % — Y· 0.71
S½· 0.1703
n· 0.04

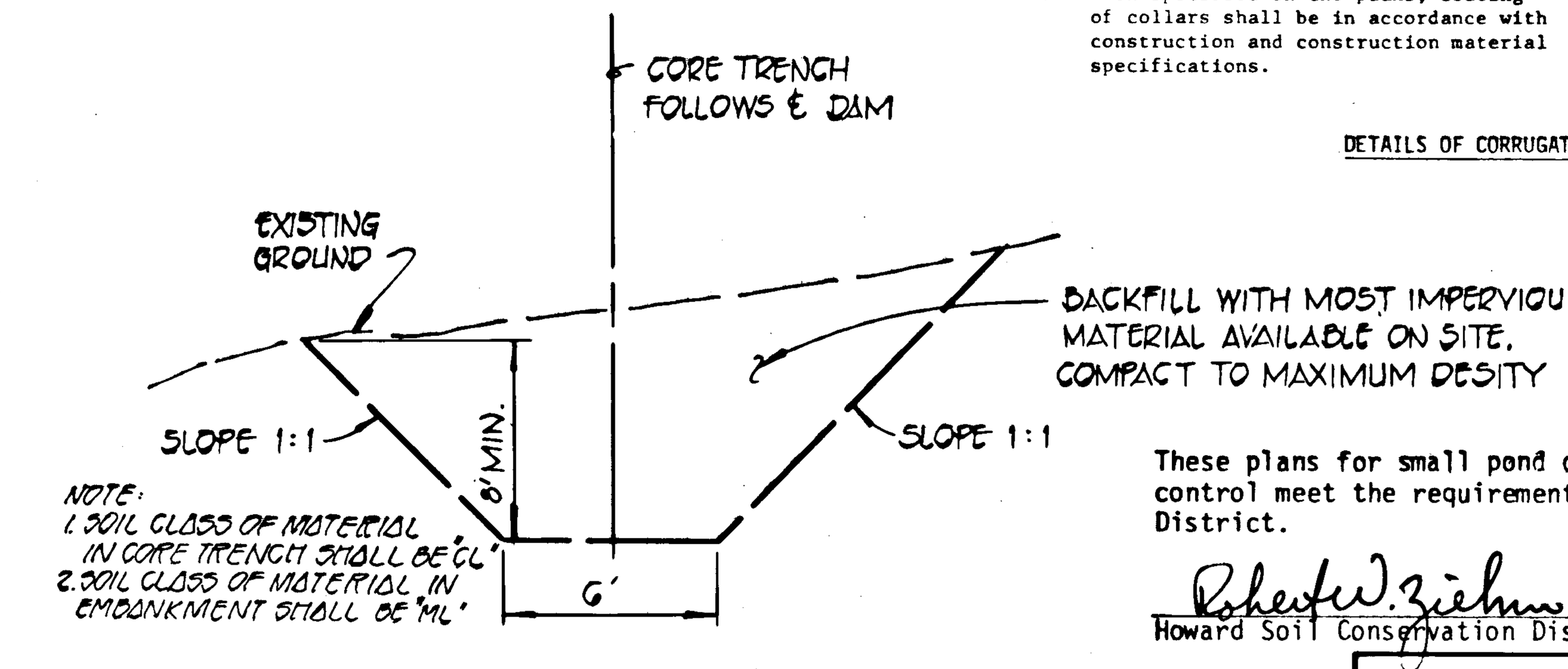
DATA @ STA. 0.58 to 1+32

A· 9.31′′ — S· 7.25% — Q· 9.31 × 7.90 · 73.5 c.f.s.
P· 13.26′ — S½· 0.2693 — X· 7.50′
R· 0.7021 — n· 0.04 — Y· 0.71′
R⅔· 0.7877 — V· 1.486/.04 × 0.7877 × 0.2693 · 7.90 f.p.s.



RIPRAP CHANNEL DESIGN DATA @ S-2

Δ· 31.02′′ — V· 1.486/.04 × 1.280 × 0.0976 · 4.6 fps
P· 21.42′ — Q· A×V
R· 1.448 — Q· 31.02 × 4.6 · 142.7 cfs
R⅔· 1.280
S· 0.94 %
S½· 0.0970
n· 0.04
Water Depth· 2.2′



CORE TRENCH DETAIL

NO SCALE

REVISIONS		
NO.	DATE	DESCRIPTION
⚠1	10-19-82	CHANGE SECTION 3 AREA 1 TO SECTION 4 AREA 1

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] 10/27/81
Signature of Engineer — Date

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] 9-14-81
Signature of Developer — Date

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

[signature] 11/12/81
Howard Soil Conservation District ⚠1 — Date

SECTION FOUR, AREA ONE
LAKEVIEW
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

STORM WATER MANAGEMENT PLAN, PROFILES & DETAILS

OWNER AND DEVELOPER
FOXLEIGH JOINT VENTURE
SUITE 103, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

SCALE: AS SHOWN	DATE: FEB. 3, 1981	DWG. NO. 4 OF 4
DES. C.J.C.	DRN. D.B.S./A.M.V.	CHK. R.B.C.

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

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