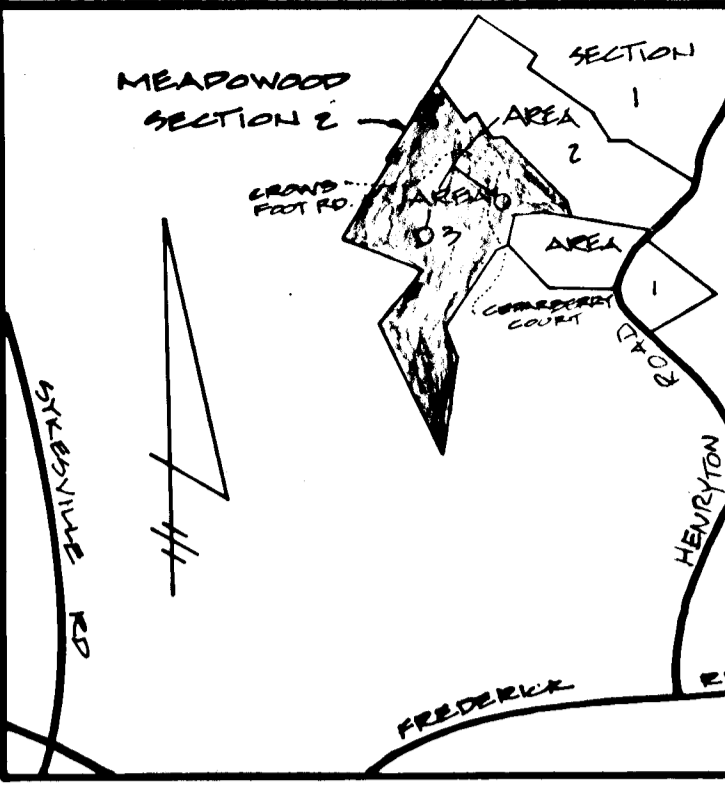
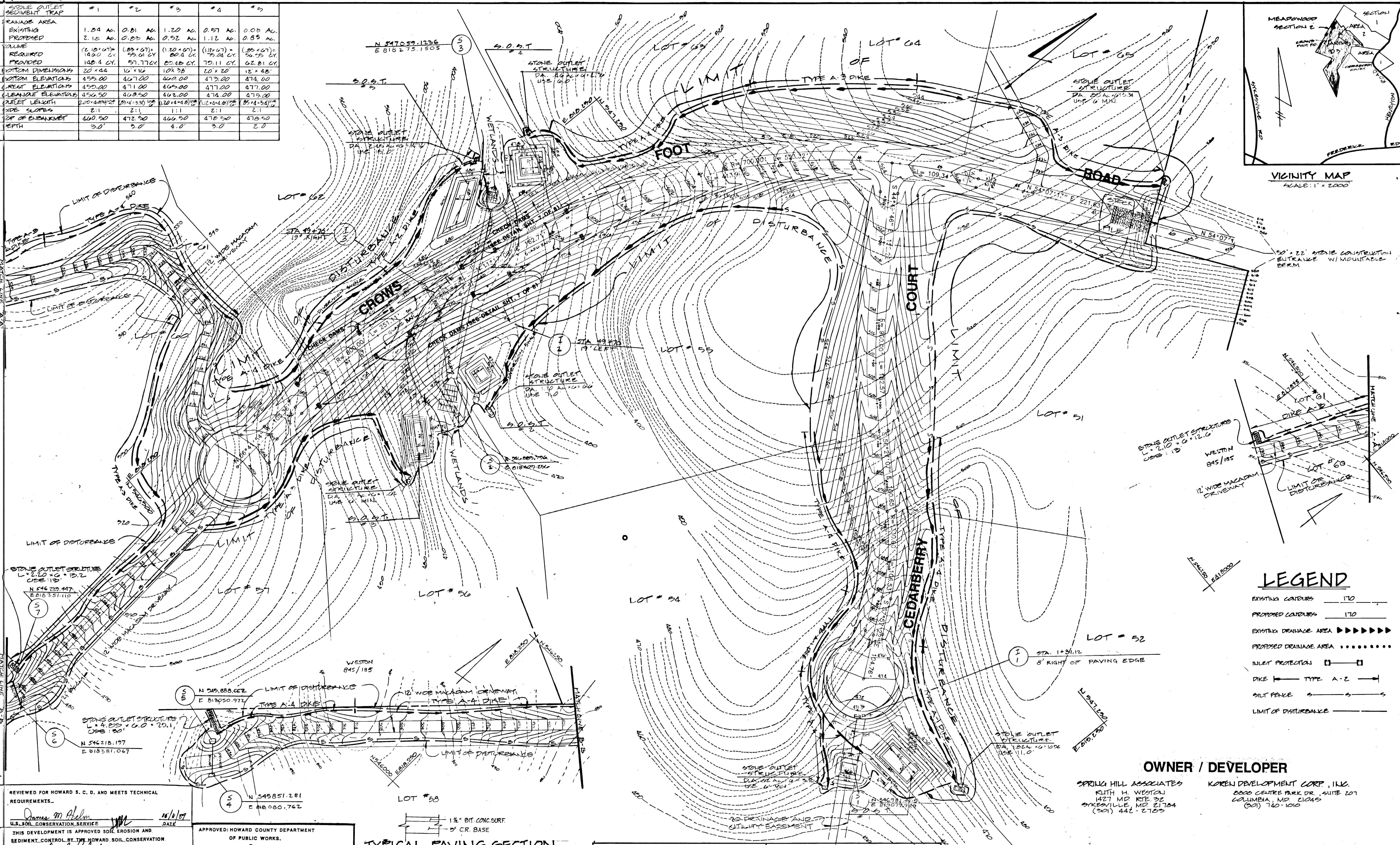


| STONE OUTLET SEDIMENT TRAP | #1 | #2 | #3 | #4 | #5 |
|----------------------------|---------------------------------|-------------------------------|---------------------------------|---------------------------------|-------------------------------|
| RAINAGE AREA EXISTING | 1.04 AC. | 0.81 AC. | 1.20 AC. | 0.57 AC. | 0.08 AC. |
| RAINAGE AREA PROPOSED | 2.15 AC. | 0.23 AC. | 0.52 AC. | 1.12 AC. | 0.85 AC. |
| VOLUME REQUIRED | (16.10') ³ 190.0 CY. | (8.85') ³ 59.0 CY. | (11.20') ³ 142.4 CY. | (11.20') ³ 142.4 CY. | (8.85') ³ 59.0 CY. |
| VOLUME PROVIDED | 57.77 CY. | 82.48 CY. | 79.11 CY. | 82.81 CY. | 59.75 CY. |
| BOTTOM DIMENSIONS | 20' x 44' | 10' x 16' | 10' x 38' | 20' x 20' | 12' x 48' |
| BOTTOM ELEVATIONS | 455.00 | 467.00 | 469.00 | 473.00 | 474.00 |
| TREST ELEVATIONS | 455.00 | 471.00 | 465.00 | 477.00 | 477.00 |
| CREANLINE ELEVATIONS | 456.50 | 468.50 | 462.00 | 474.00 | 475.00 |
| OUTLET LENGTH | 200' @ 2.0% SLOPE | 100' @ 2.0% SLOPE | 100' @ 2.0% SLOPE | 100' @ 2.0% SLOPE | 100' @ 2.0% SLOPE |
| DIKE SLOPES | 2:1 | 2:1 | 1:1 | 2:1 | 2:1 |
| TOP OF EMBANKMENT | 460.50 | 472.50 | 466.50 | 478.50 | 478.50 |
| DEPTH | 3.0' | 3.0' | 4.0' | 3.0' | 2.0' |



VICINITY MAP
SCALE: 1" = 2000'

LEGEND

- EXISTING CONTOURS ——— 170
- PROPOSED CONTOURS ——— 170
- EXISTING DRAINAGE AREA >>>>>>>
- PROPOSED DRAINAGE AREA
- INLET PROTECTION []
- DIKE — TYPE A-Z —
- SILT FENCE — S — S — S
- LIMIT OF DISTURBANCE ———

REVIEWED FOR HOWARD S. C. D. AND MEETS TECHNICAL REQUIREMENTS.

James M. Helm 10/10/89
U.S. SOIL CONSERVATION SERVICE

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

John L. Roberts 11/3/89
SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

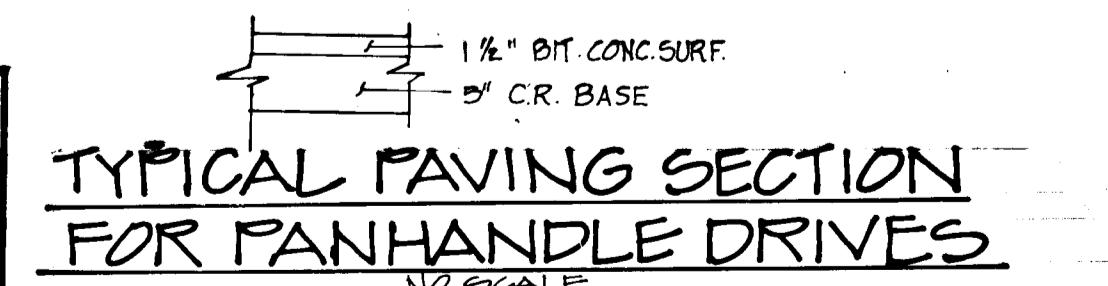
Paul J. Rogers 11/10/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Ronald D. Spear 11/3/89
Chief, Land Development Div.

Brunville W. Williams 11/3/89
Chief, Bureau of Highways

11/3/89
Chief, Bureau of Engineering



DEVELOPER'S CERTIFICATION

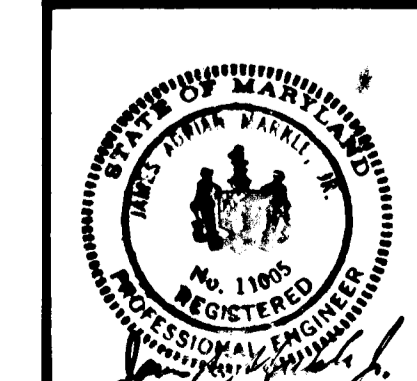
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING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

W. Wayne Caplan 7/17/89
DEVELOPER

ENGINEER'S CERTIFICATE

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

Van A. Hall 5/3/89
ENGINEER



TITLE: GRADING & SEDIMENT CONTROL PLAN

PROJECT: MEADOWOOD SECTION 2 AREA 2

O.P. & Z. FILE NOS.: W-2014-04-01-02-07-13, P-20-72

TAX MAP: 10, BLOCK: 7, PARCEL: P-2 170

3RD ELECTION DISTRICT, HOWARD COUNTY, MD.

DES. BY: K.L.R. DRAWN BY: CAB. CHKD. BY: T.H.M. DATE: 12-00

CIVIL ENGINEERS - SITE PLANNERS SURVEYORS

DST & A Inc.

11 WARREN ROAD
BALTIMORE, MD. 21208
(301) 484-4100

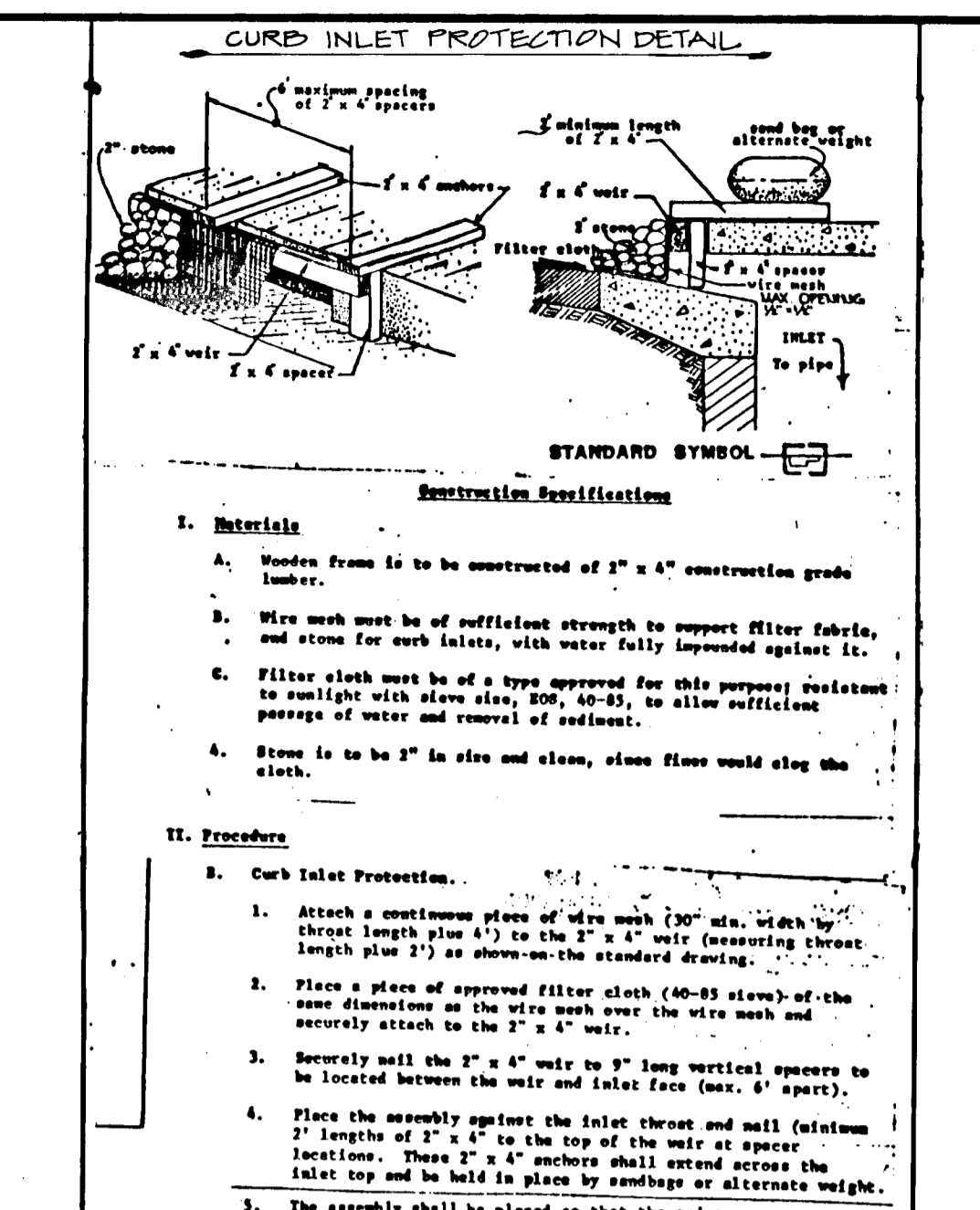
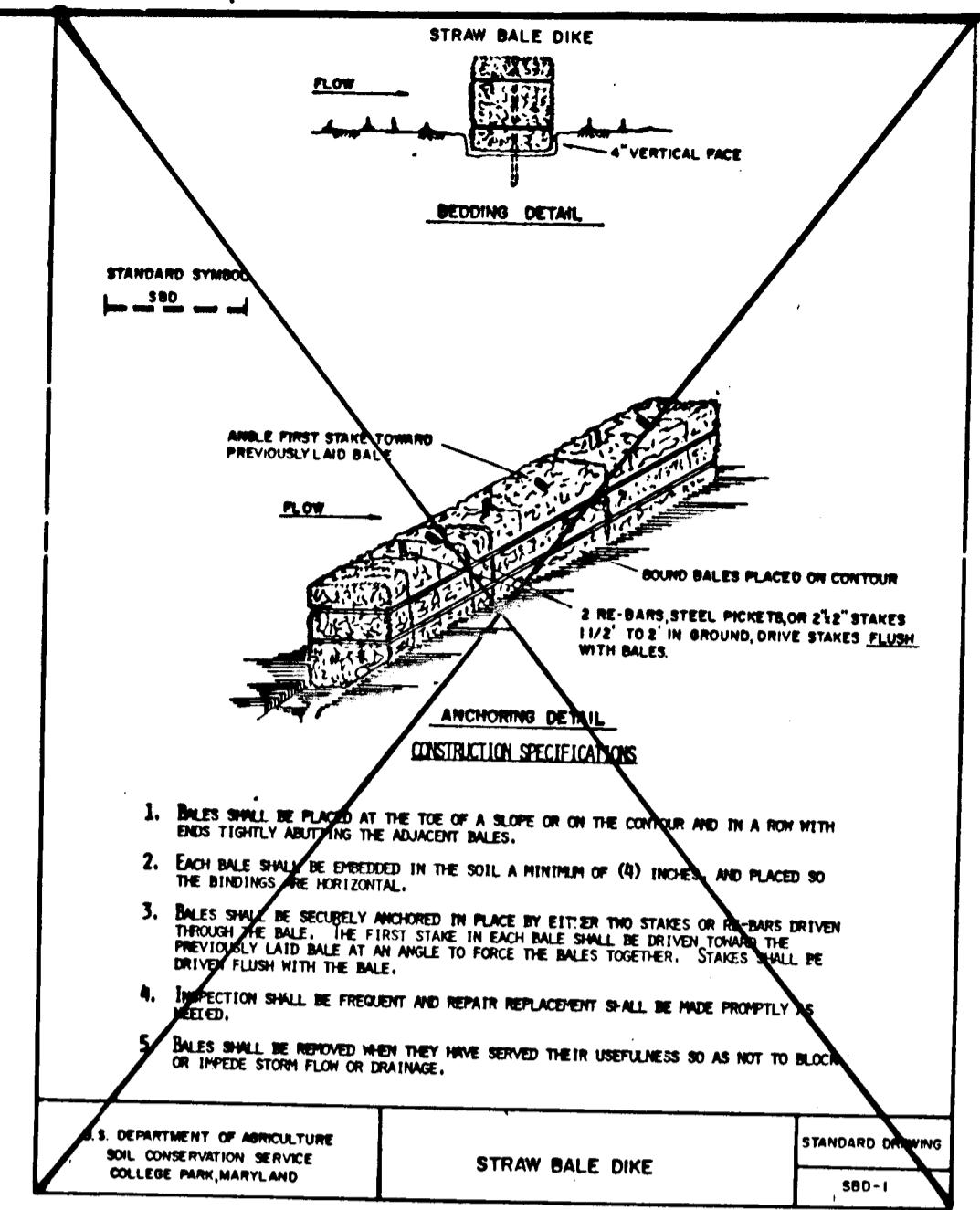
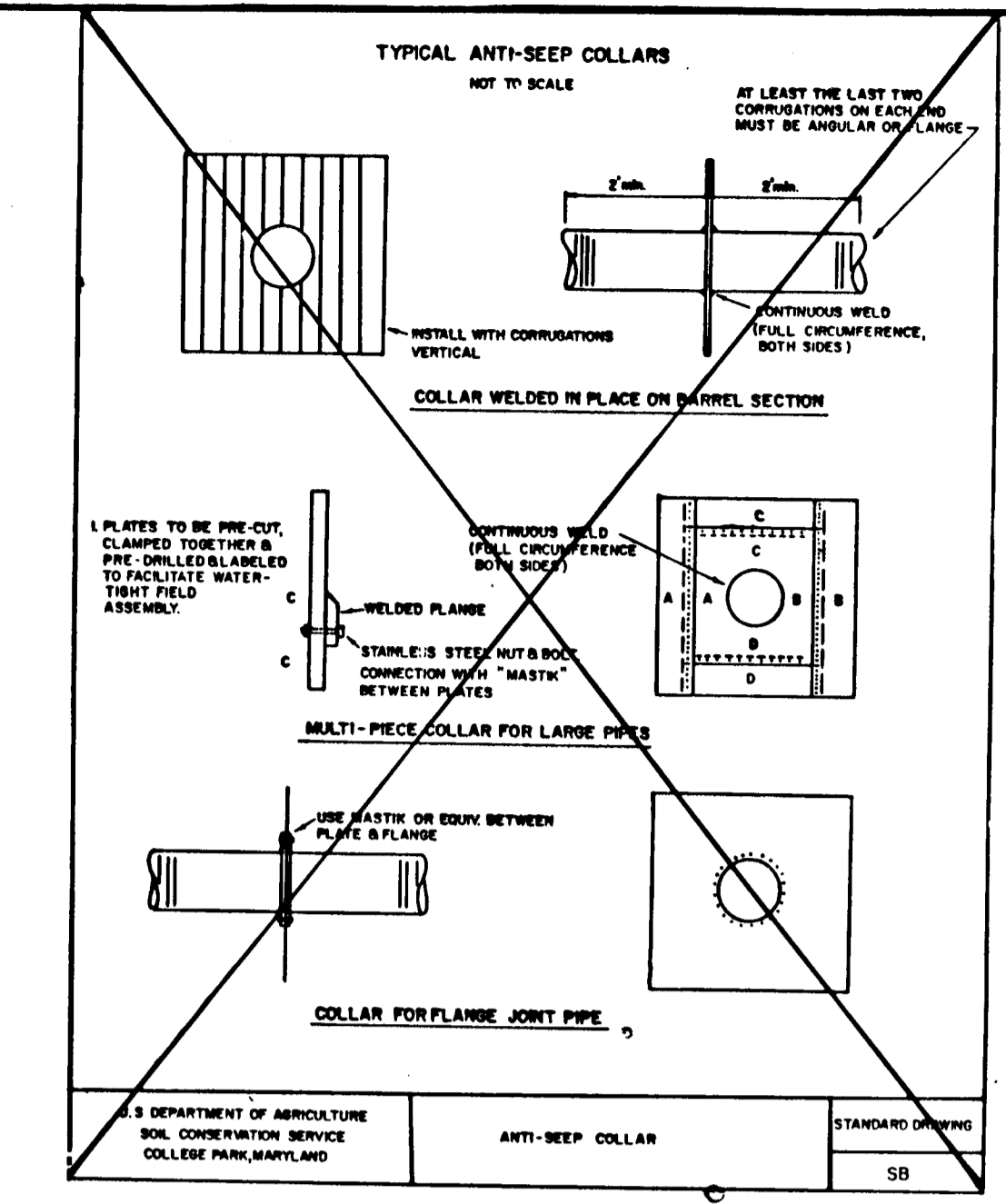
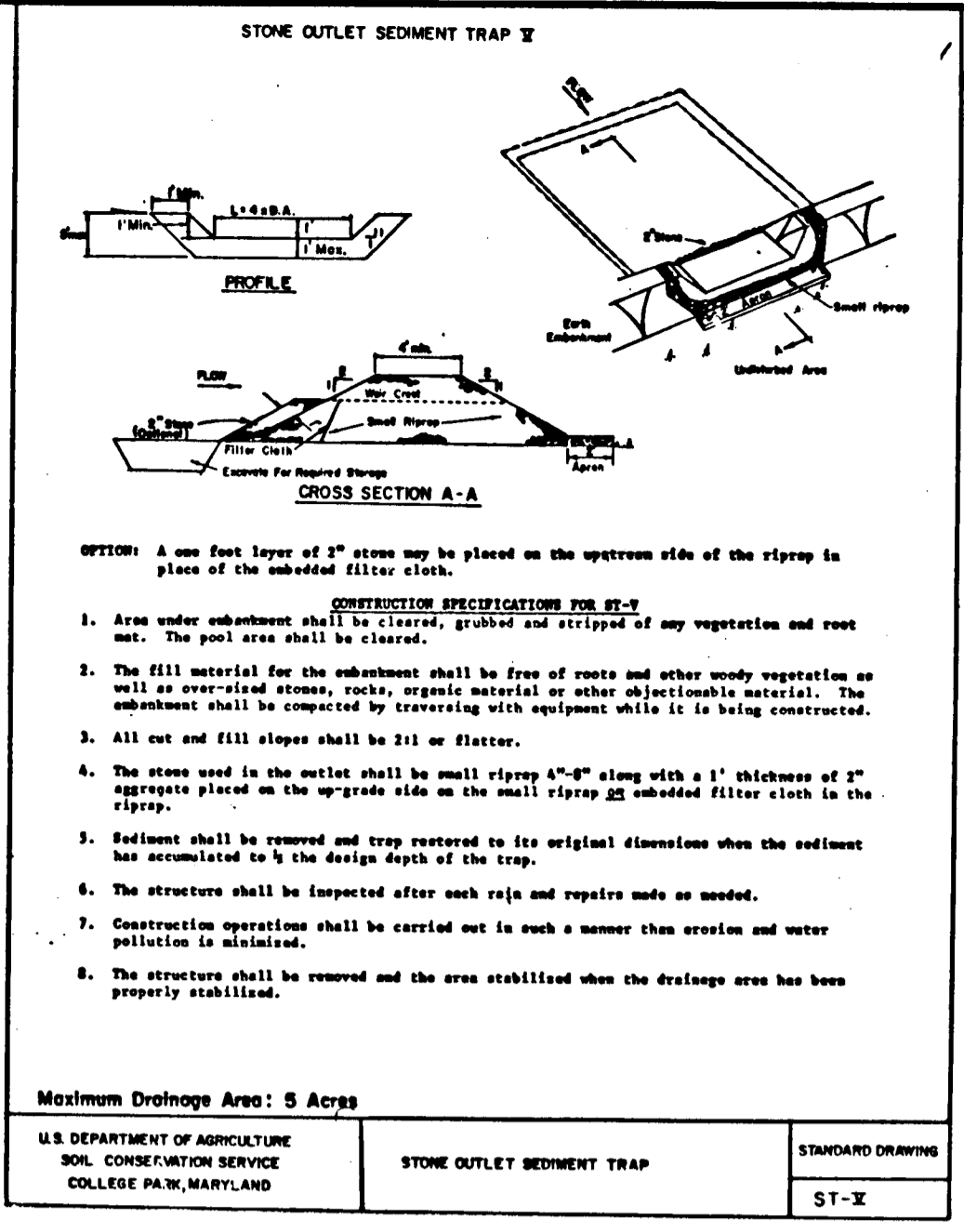
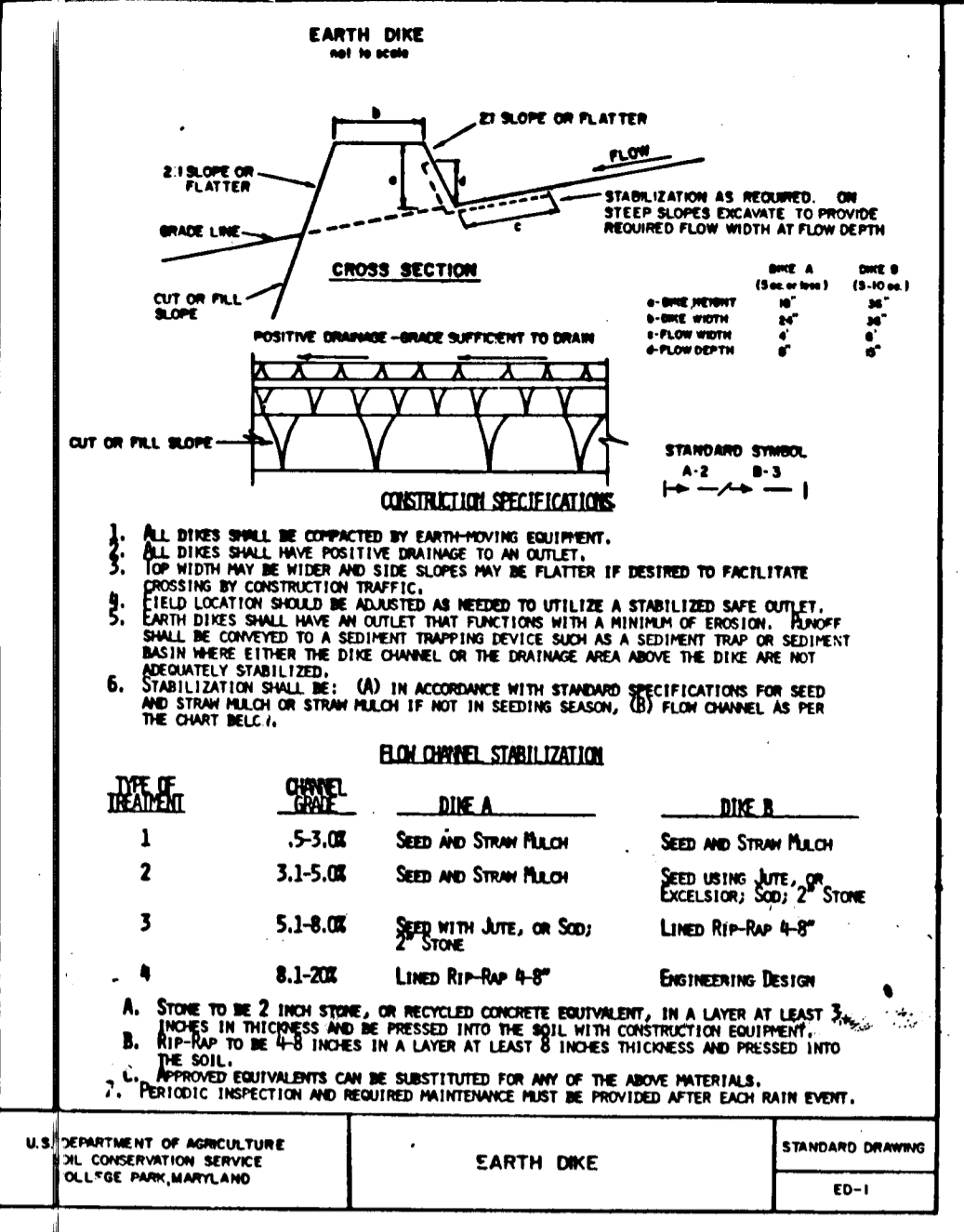
SCALE: 1" = 20' SHEET 1 OF 5

OWNER / DEVELOPER

SPRING HILL ASSOCIATES
KATH H. WESTON
1427 MD. RTE. 30
SMYRNAVILLE, MD. 21784
(301) 442-2700

KOREN DEVELOPMENT CORP., INC.
6000 CENTRE PARK DR., SUITE 207
COLUMBIA, MD. 21045
(301) 740-1010

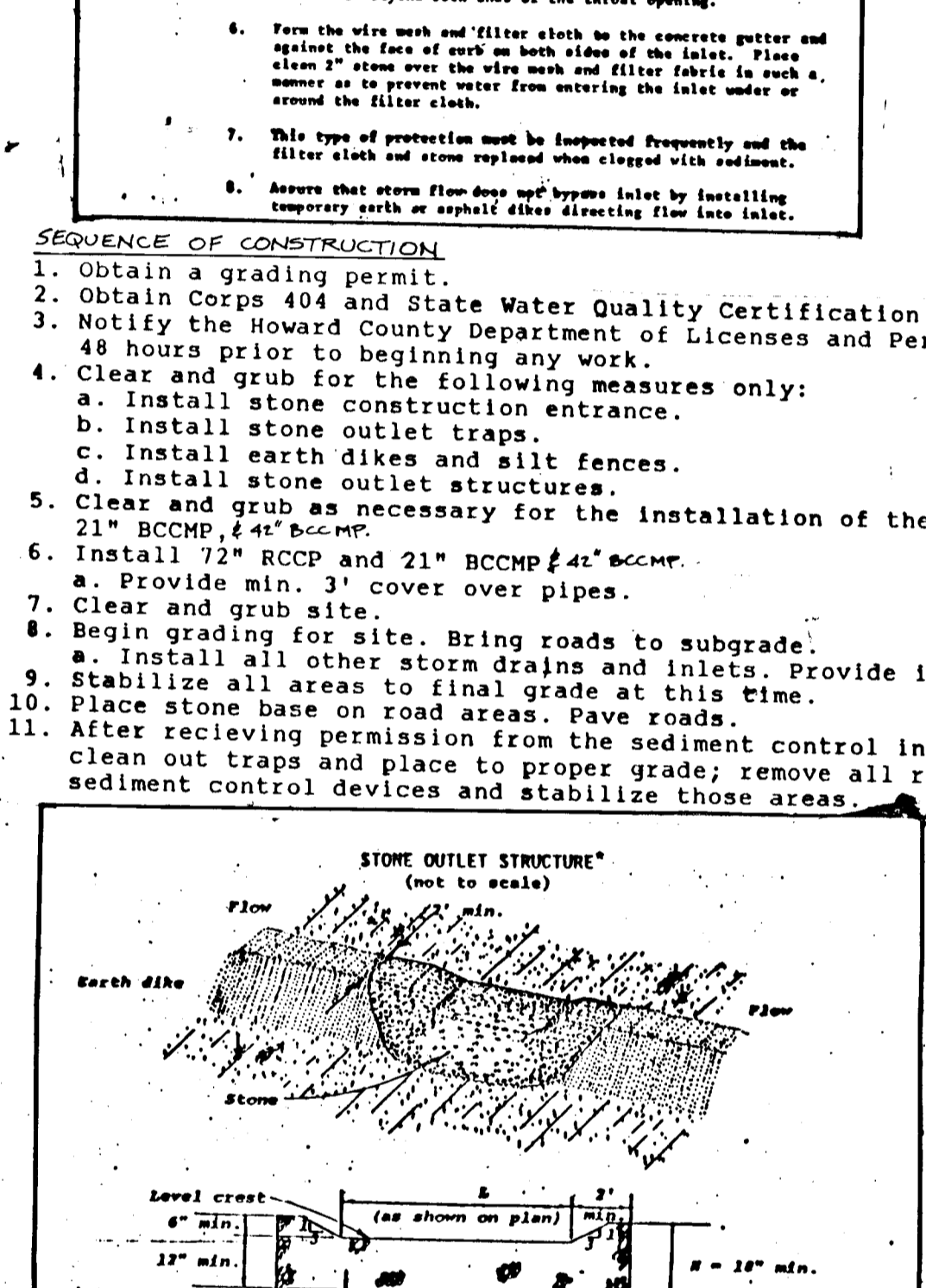
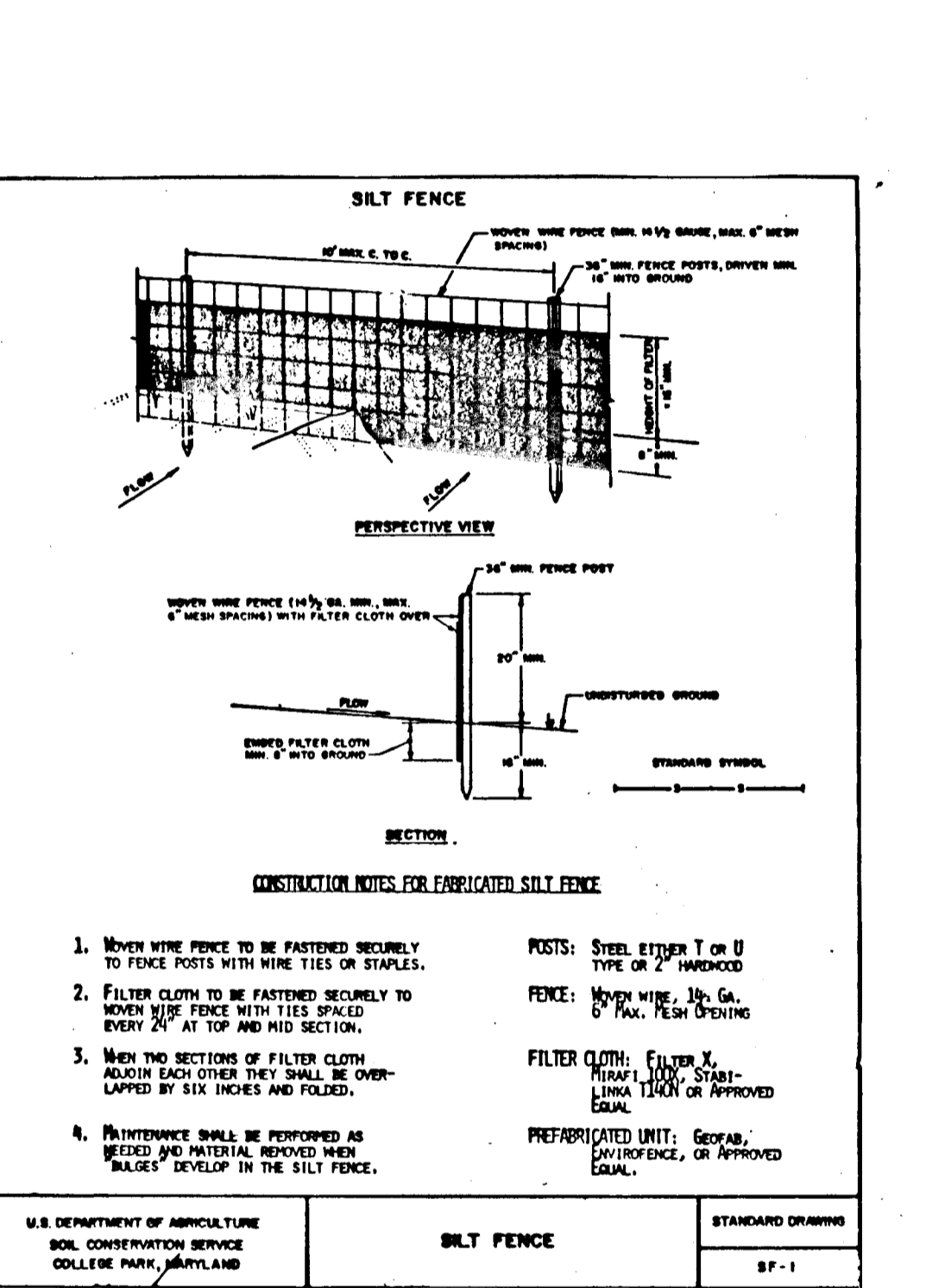
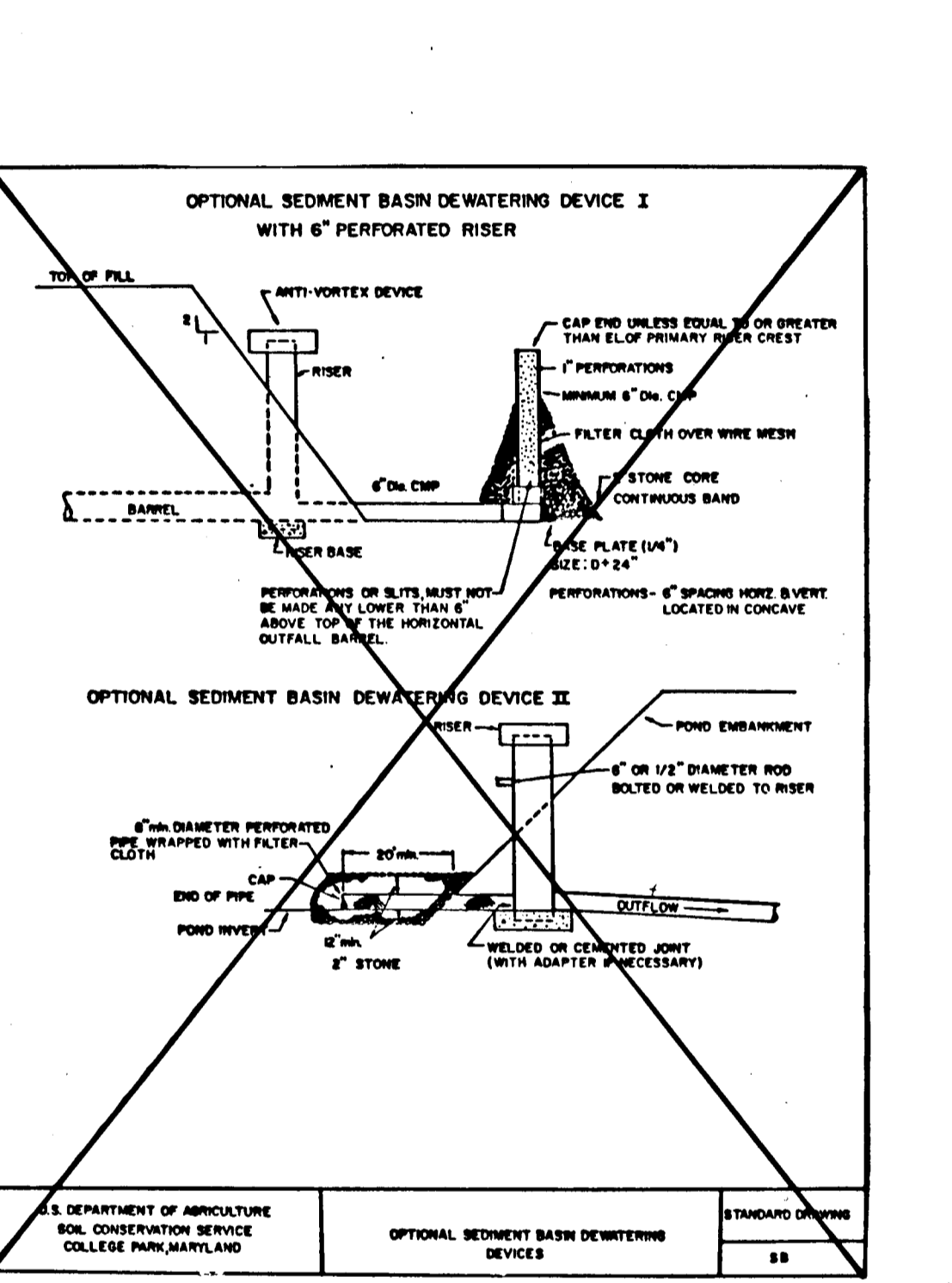
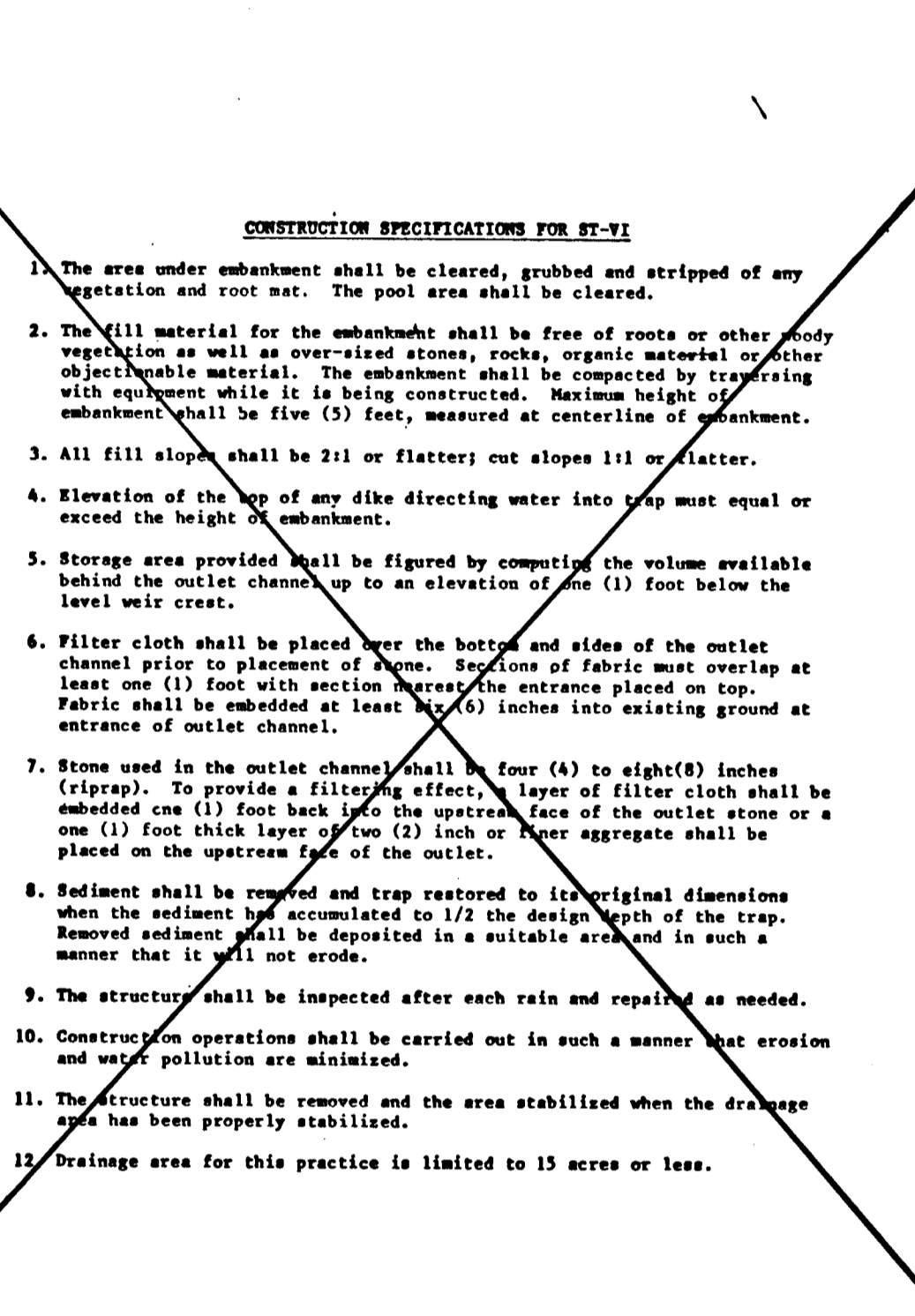
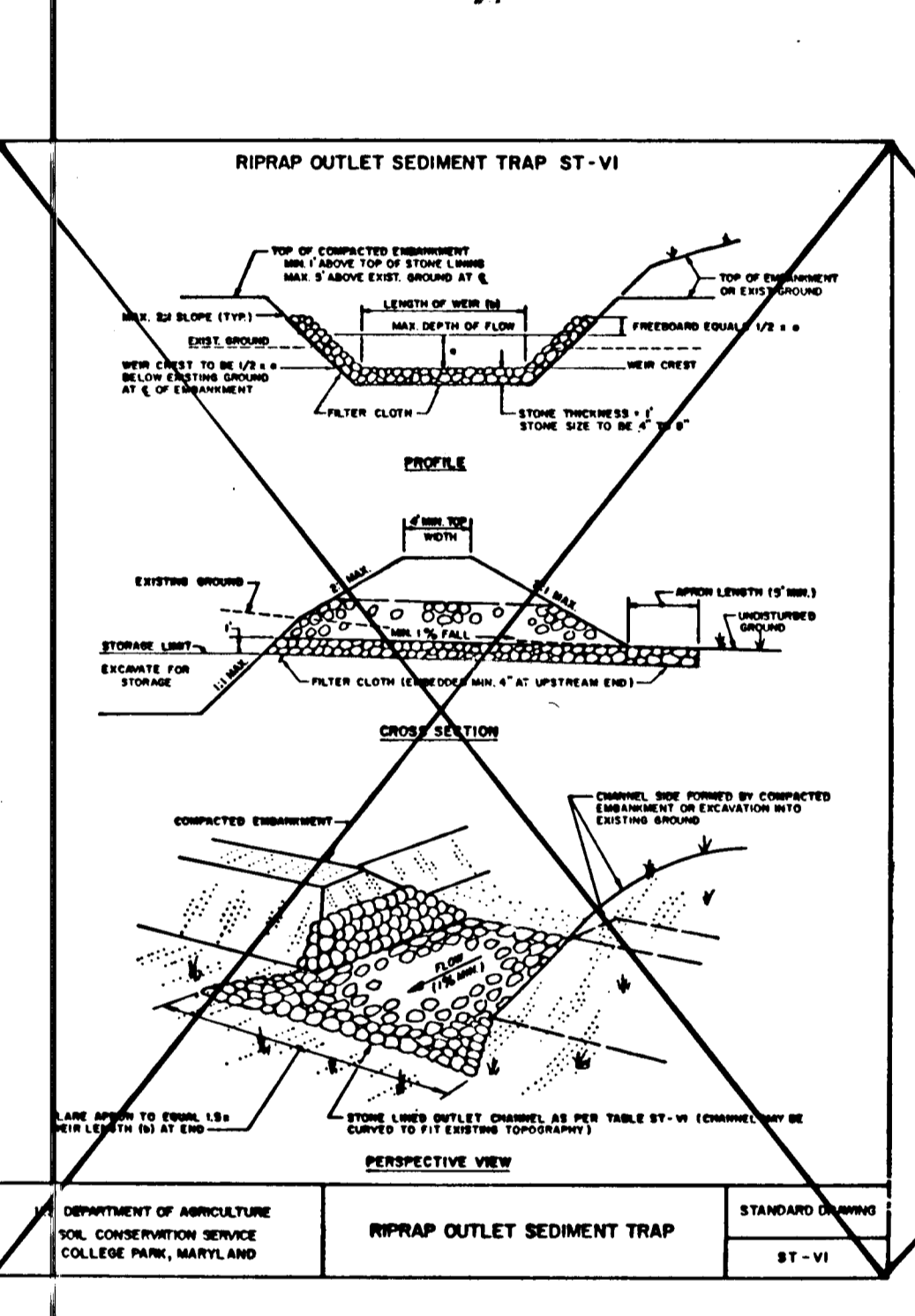
1318



SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction activity (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 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, 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/ditches shown shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Section 2000.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1993 MANAGEMENT STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and sod (Sec. 54). Temporary seedings (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 their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

| | | |
|------------------------------------|-------|----------|
| Total Area of Site | 77.92 | Acres |
| Area Disturbed | 1.00 | Acres |
| Area to be roofed or paved | 1.00 | Acres |
| Area to be vegetatively stabilized | 75.92 | Acres |
| Total Cut | 1.00 | Cu. Yds. |
| Total Fill | 1.00 | Cu. Yds. |
| Gravels, waste/borrow location | | |



PERMANENT SEEDING NOTES

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is required.
- Seeded Preparation: Loosen upper three inches of soil by hand or machine. In lieu of soil test recommendations, use one of the following schedules:
 - Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs per acre (1.4 lbs/1000 sq. ft.)) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 urea-form fertilizer (10 lbs/1000 sq. ft.).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (20 lbs/1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.
- Seeding: For the periods March 1 through April 30, and August 1 through October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs per acre (1.4 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 through February 28, protect site by option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the Spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre anchored straw. Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (3 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.

Seeded Preparation: Loosen upper three inches of soil by hand or machine. In lieu of soil test recommendations, use one of the following schedules:

- Preferred: For periods March 1 through April 30 and from August 15 through November 15, seed with 2 1/2 bushels per acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1 through August 14, seed with 3 lbs per acre of weeping lovegrass (0.7 lbs/1000 sq. ft.). For the period November 16 through 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.
- Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (3 gal/1000 sq. ft.) for anchoring.

 Refer to the 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 11/16/89
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

REVIEWED FOR HOWARD S. C. D. AND MEETS TECHNICAL REQUIREMENTS

[Signature] 10/16/89
 U.S. SOIL CONSERVATION SERVICE

HIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

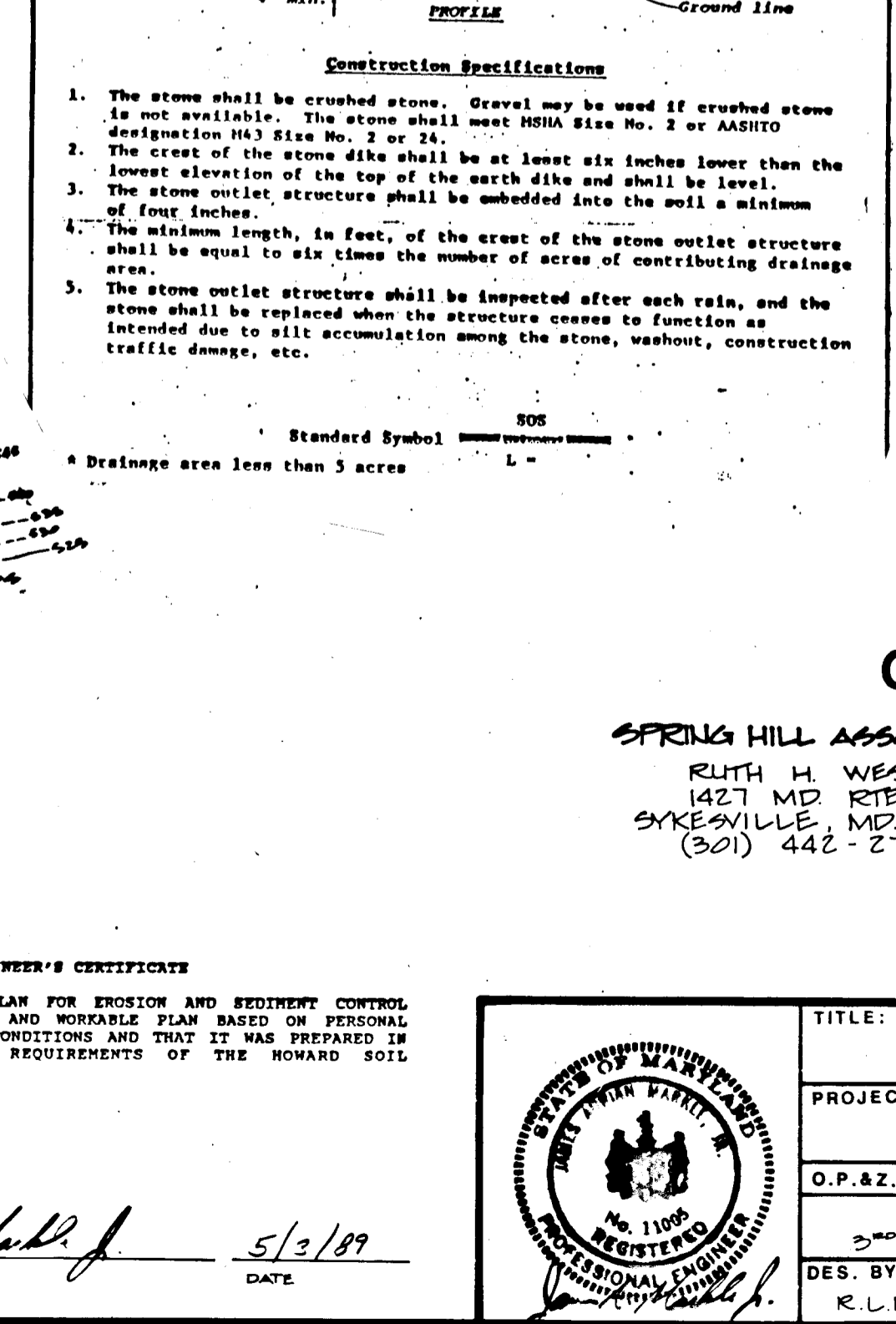
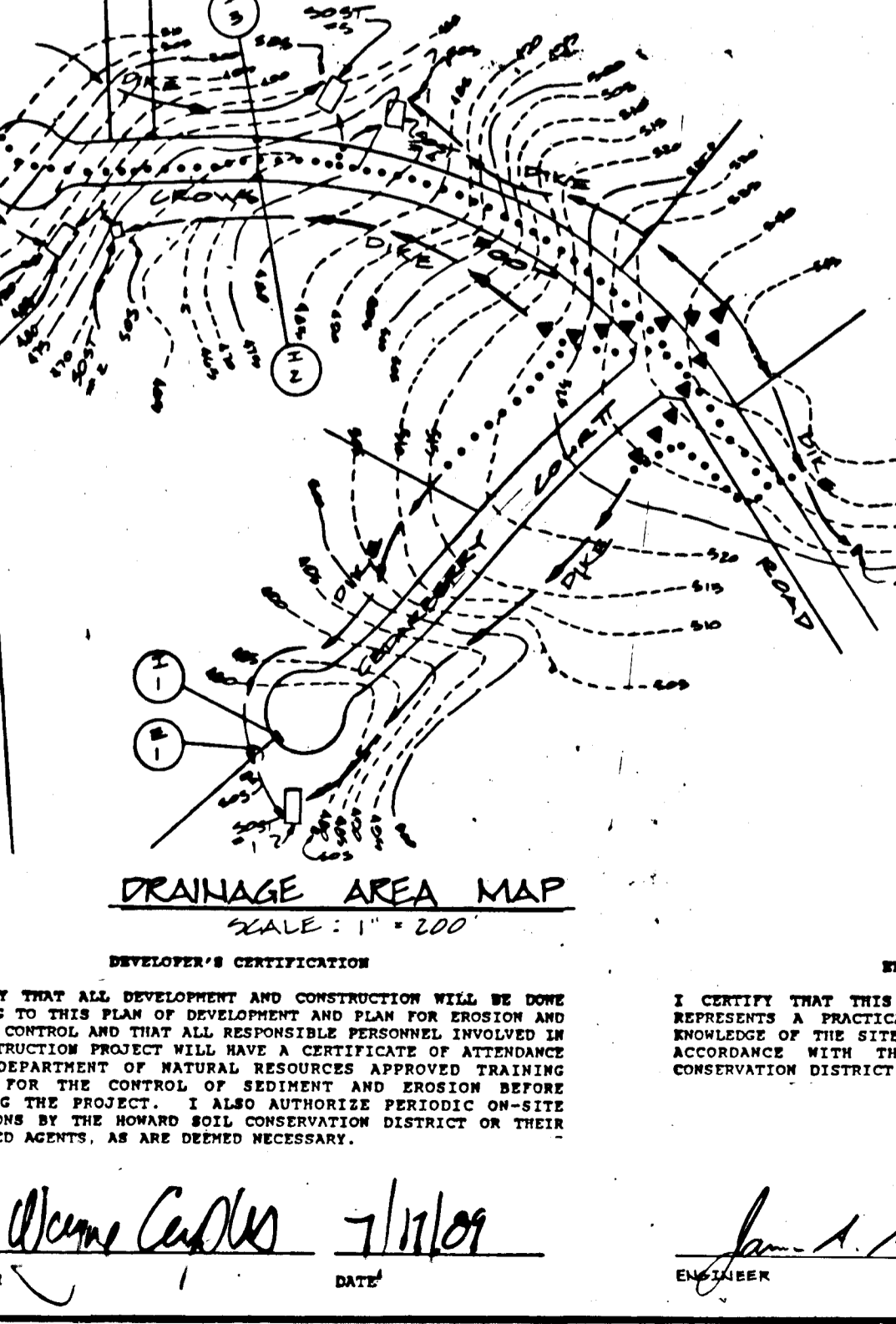
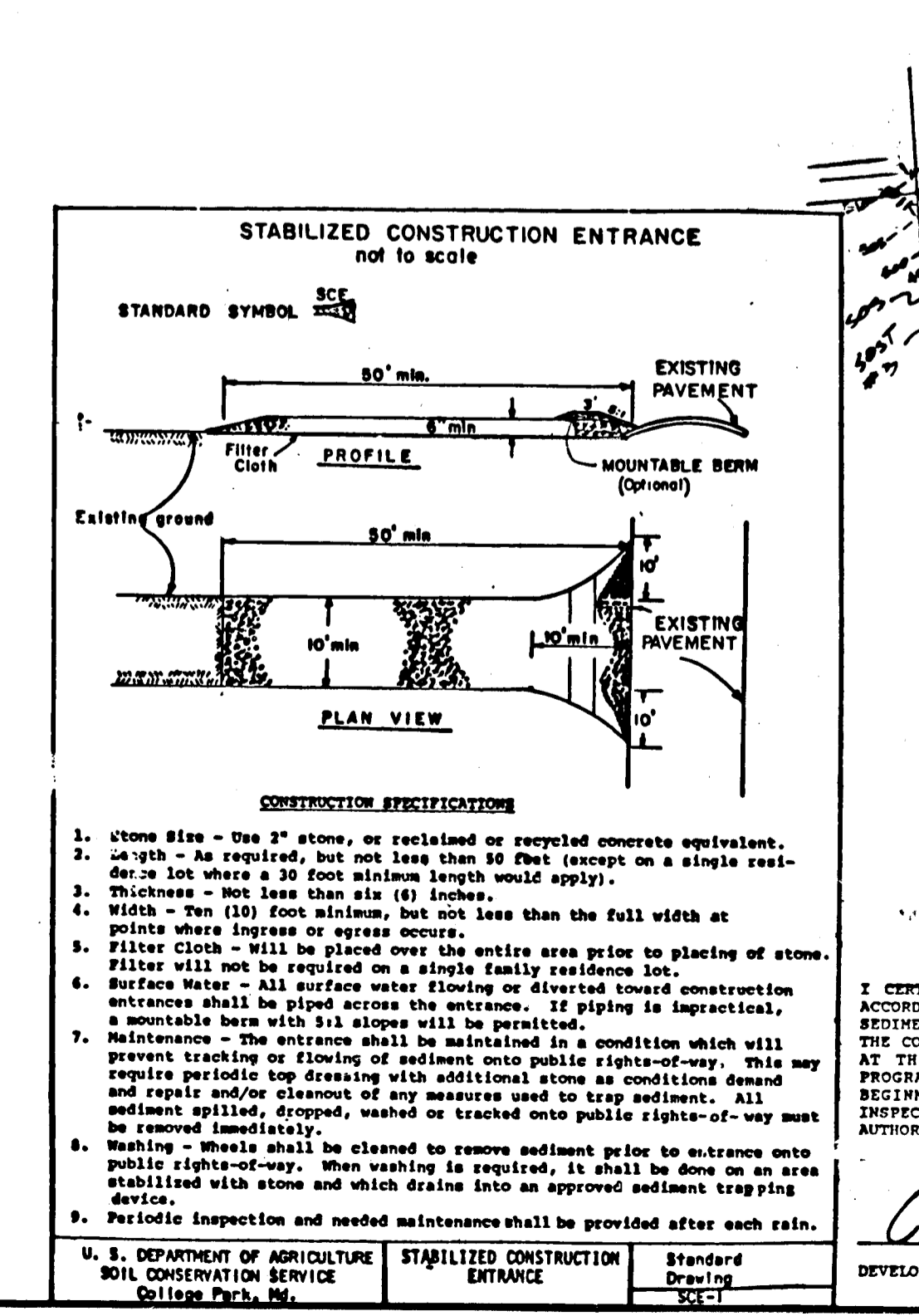
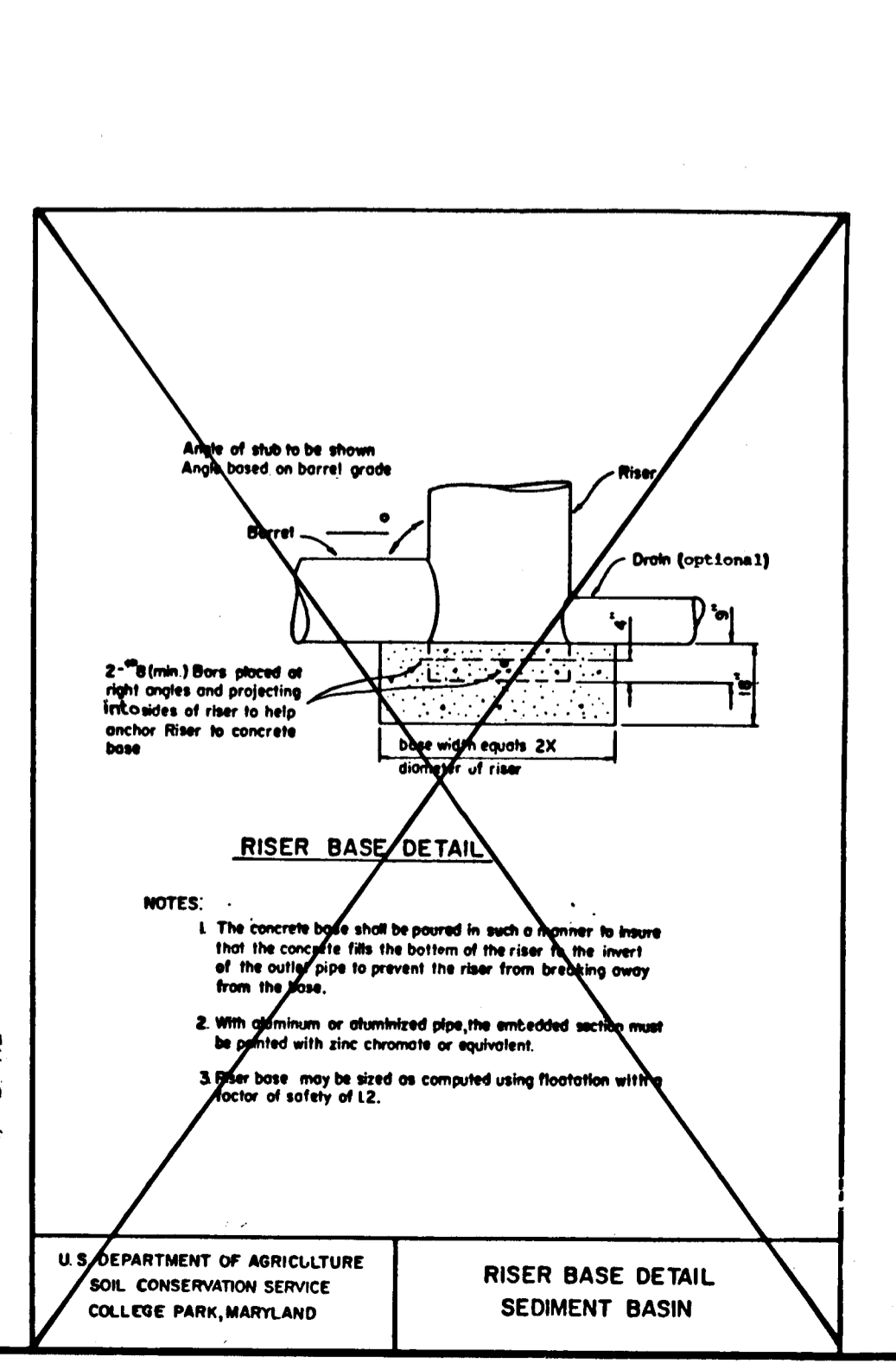
[Signature] 10/16/89
 SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[Signature] 11/5/89
 Chief, Land Development Div. Date

[Signature] 11/20/89
 Chief, Bureau of Highways Date

[Signature] 11/20/89
 Chief, Bureau of Engineering Date



OWNER / DEVELOPER

SPRING HILL ASSOCIATES
 RUTH H. WESTON
 1427 MD RTE. 30
 SPOKESVILLE, MD 21154
 (301) 442-2703

KOREJ DEVELOPMENT CORP., INC.
 SUITE 201, 8000 CENTRE PARK DRIVE
 COLUMBIA, MD 21045
 (301) 740-1010

DETAILS

PROJECT: MEADOWOOD SECTION 2, AREA 3 F-22-214

O.P. & Z. FILE NOS. VP-04-20-AL-S-04-10-07-10-00-00

TAX MAP: 10, BLOCK: 7, PARCEL: 7/15

ELECTION DISTRICT: HOWARD COUNTY, MD.

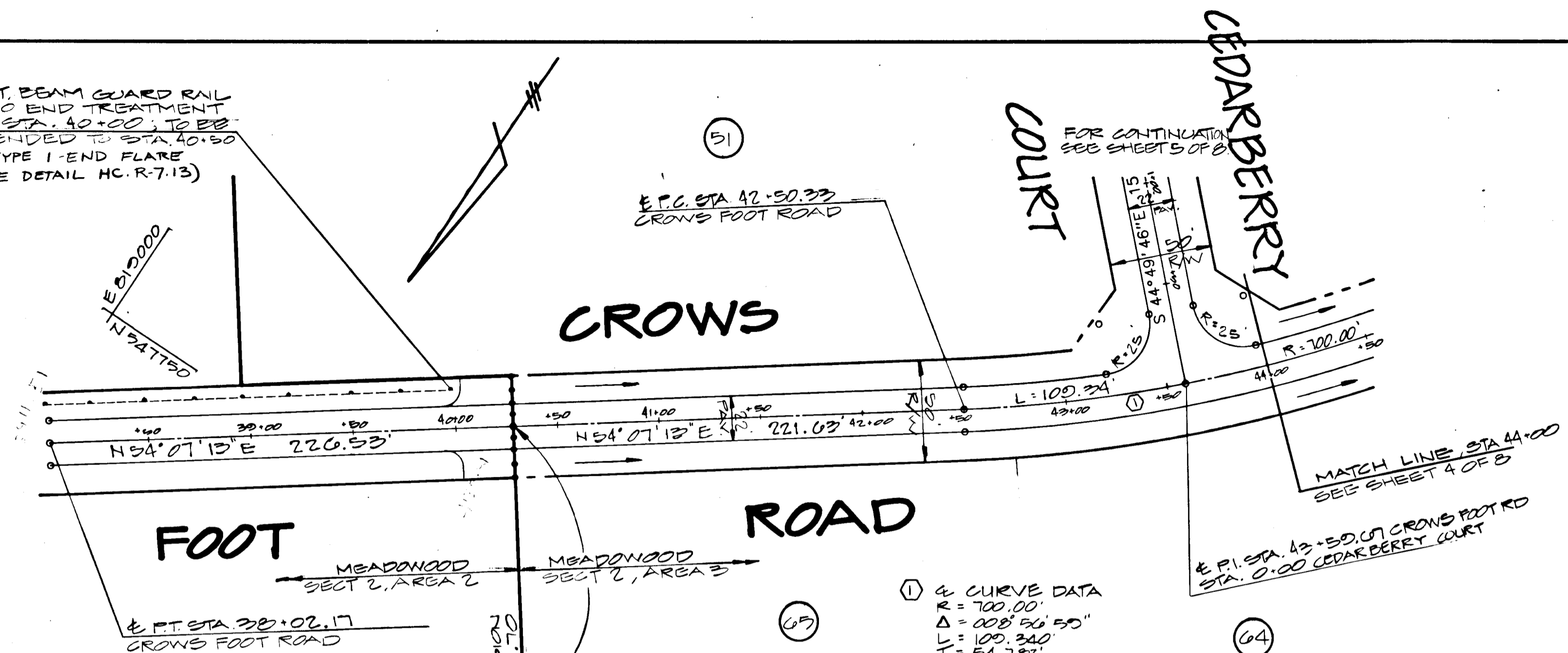
DES. BY: R.L.R. DRAWN BY: C.A.B. CHKD. BY: T.H.M. DATE: 4-3-80

11 WARREN ROAD
 BALTIMORE, MD 21208
 (301) 484-4100
 SCALE: AS SHOWN SHEET 2 OF 8

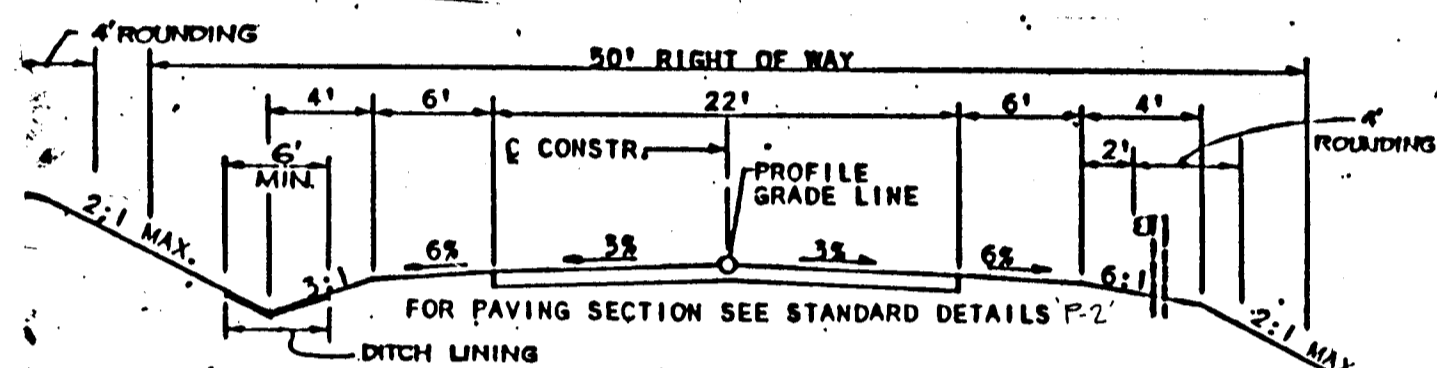
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Mark J. [Signature] 11/16/09
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Frank [Signature] 11/3/09
 Chief, Land Development Div.
Travis W. [Signature] 11/16/09
 Chief, Bureau of Highways
[Signature] 11/16/09
 Chief, Bureau of Engineering

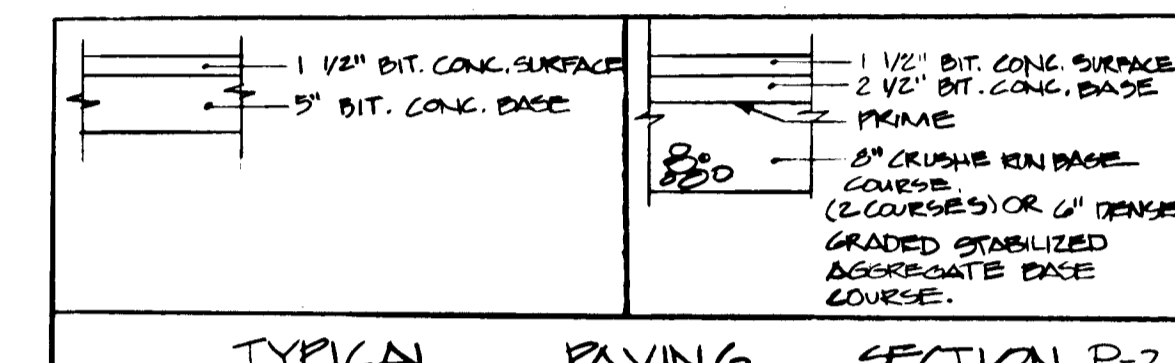
EXIST BEAM GUARD RAIL W/ NO END TREATMENT END STA. 40+00 TO BE EXTENDED TO STA. 40+50 W/ TYPE 1 END FLARE (SEE DETAIL HC-R-7.13)



- NOTES:
- 1) USE GUARDRAIL WHERE INDICATED BY FIGURE 2.17.
 - 2) SEE THE STORM DRAINAGE DESIGN MANUAL FOR CRITERIA GOVERNING DITCH LINING AND SPREAD OF PAVEMENT. THE DITCH SECTION MAY BE MODIFIED TO MEET THE SPREAD CRITERIA.
 - 3) THIS SECTION APPLIES ONLY TO CUL-DE-SAC STS. WITH A.D.T. OF 500 OR LESS.



1. CROWS FOOT ROAD - CL STA. 40+00 TO 44+00
2. EXISTING ZONING 'R'
3. LOCAL ROAD
4. DESIGN SPEED: 30 MPH
5. PAVING SECTION: 'P-2'
6. NOT TO SCALE



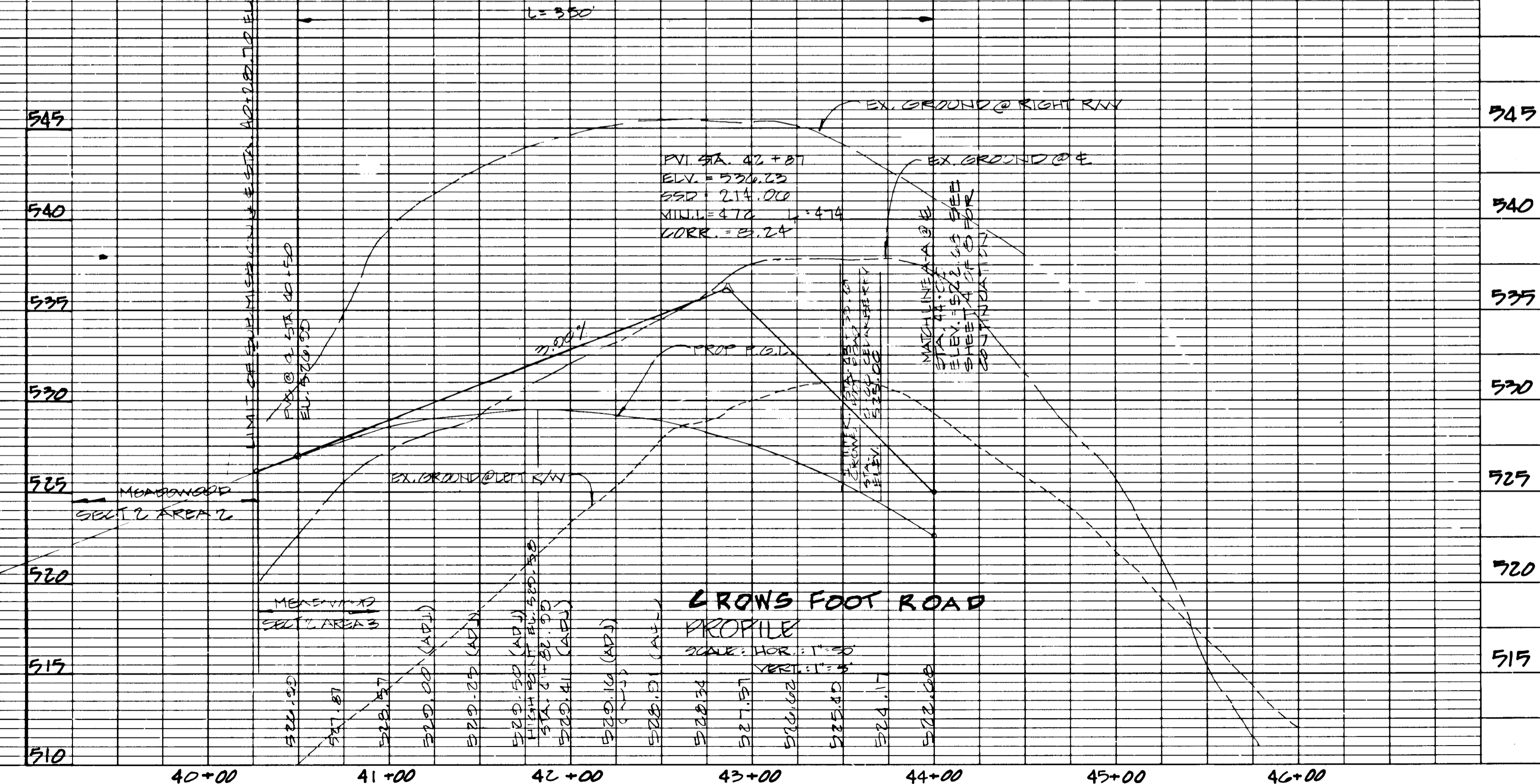
TITLE: ROAD CONSTRUCTION PLAN
CROWS FOOT ROAD
 PROJECT: MEADOWOOD SEC. 2, AREA 3
 LOTS 51-67

O.P. & Z. FILE NOS.: P0142 987.13
 TAX MAP: 12, BLOCK: 7, PARCEL: P10 130
 ELECTION DISTRICT: HOWARD COUNTY, MD.

DES. BY: J.T.N. DRAWN BY: C.A.B. CHKD. BY: T.H.M. DATE: APRIL, 1990

CIVIL ENGINEERS - SITE PLANNERS SURVEYORS
DST & A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: AS NOTED SHEET 3 OF 8

NOTE:
 TYPING SLIGHT DIFFERENCES (997)
 CALCULATED HEIGHTS ARE BASED ON SSD = 3.25 V² / [32 (t-g)] AS SHOWN ON PAGE 24.2 IN THE HOWARD COUNTY DESIGN MANUAL VOL III WITH A FRICTION FACTOR (f) OF 0.35 FOR A DESIGN SPEED OF 30 MPH (V).



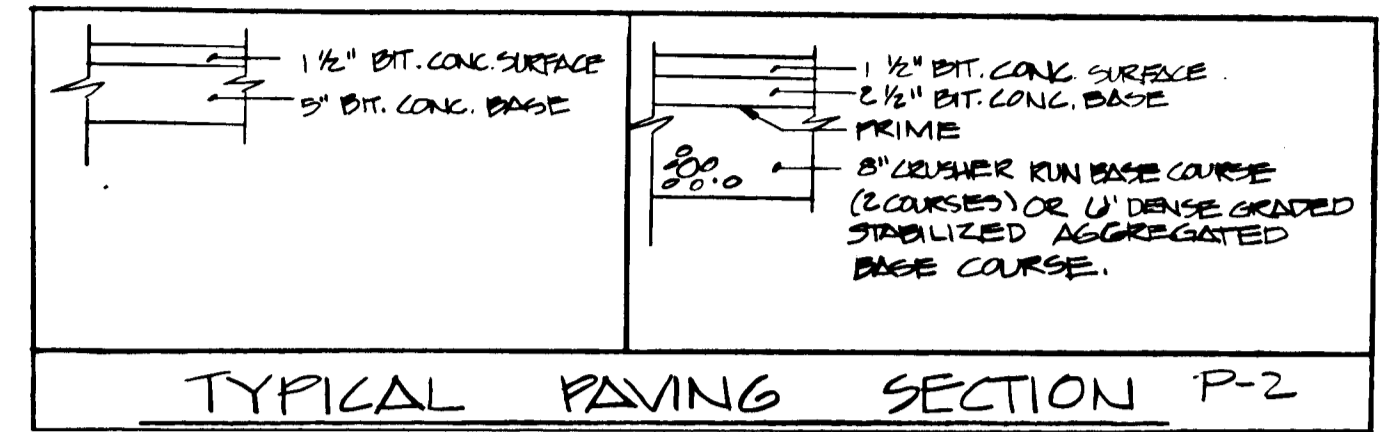
DATE: _____ BY: _____
 SURVEYED: _____
 NOTE BOOK: _____
 NO. _____

DATE: _____ BY: _____
 SURVEYED: _____
 NOTE BOOK: _____
 NO. _____

① CURVE DATA
 R = 700.00'
 Δ = 008° 56' 59"
 L = 109.340'
 T = 54.782'
 CHORD = 54.938 44' W
 109.219'

② CURVE DATA
 R = 700.00'
 Δ = 023° 53' 05"
 L = 412.081'
 T = 213.242'
 CHORD = 528 13' 42" W
 407.974'

③ CURVE DATA
 R = 200.00'
 Δ = 17° 50' 04"
 L = 251.111'
 T = 126.000'
 CHORD = 802' 17" 31" W
 250.000'

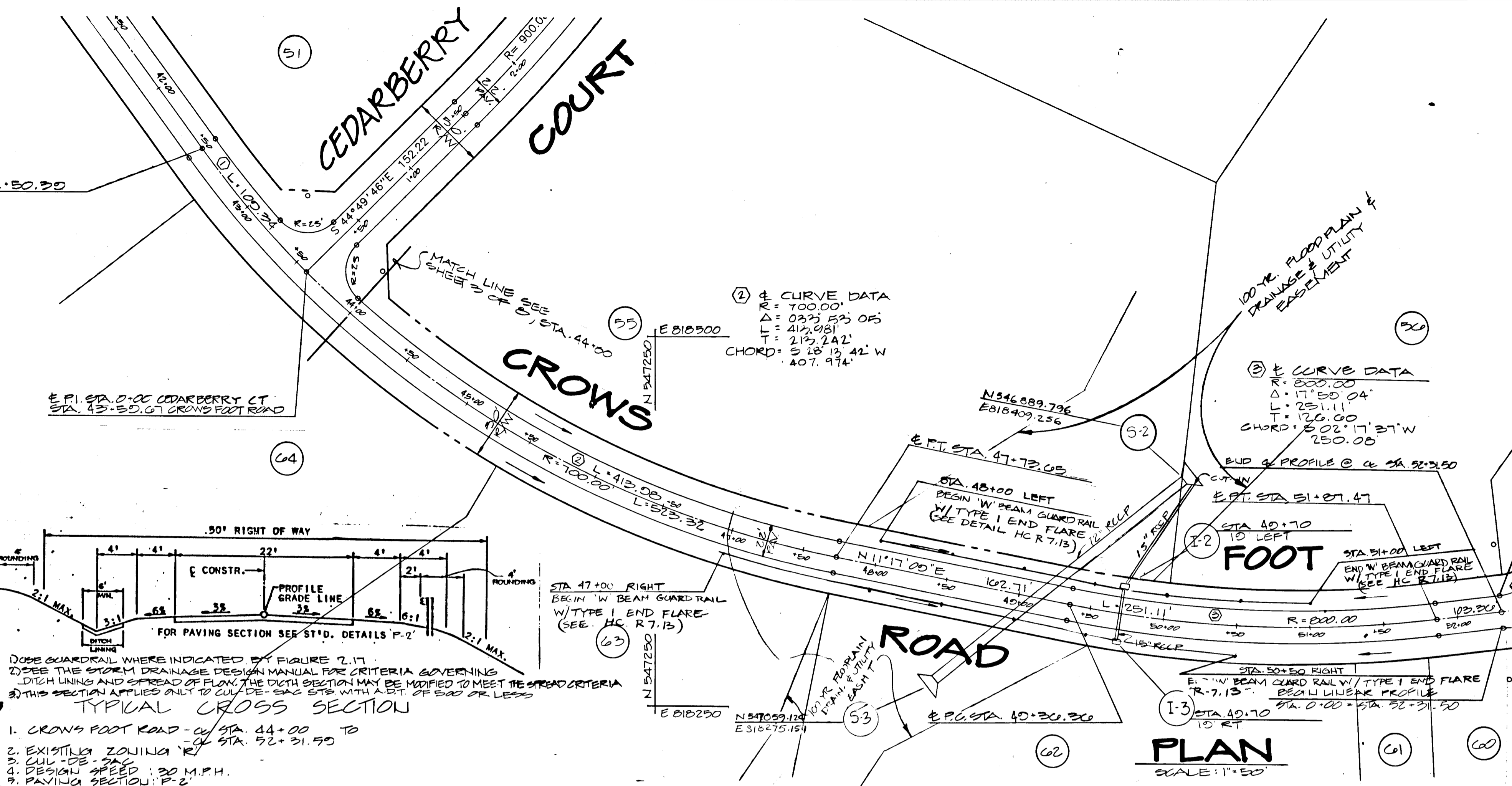


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Frank St.oughton
 Chief, Division of Community Planning and Date Land Development 11/10/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Franklin W. Wellwood
 Chief, Bureau of Highways Date 11/10/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James B. Ray
 Chief, Bureau of Engineering Date 11/10/89

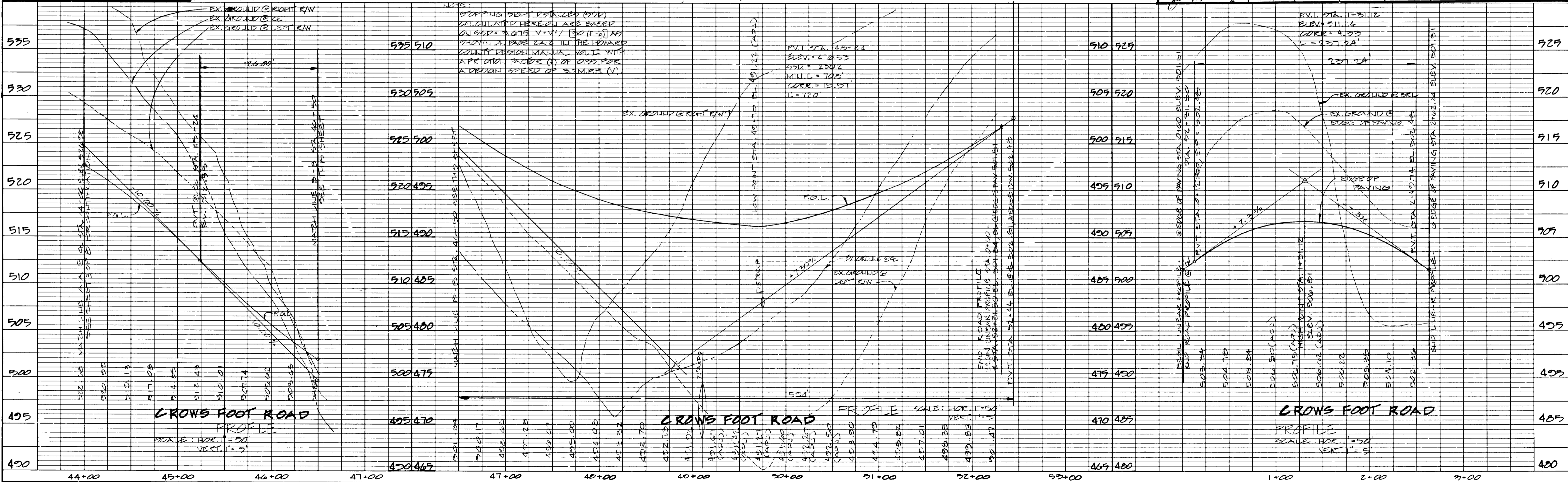
- TYPICAL CROSS SECTION
- CROWS FOOT ROAD - 44+00 TO 52+31.50
 - EXISTING ZONING
 - CURV. 10% - 2%
 - DESIGN SPEED: 30 M.P.H.
 - PAVING SECTION: P-2
- DOSE GUARDRAIL WHERE INDICATED BY FIGURE 2.17.
 2) SEE THE STORM DRAINAGE DESIGN MANUAL FOR CRITERIA GOVERNING DITCH LINING AND SPREAD OF FLOW. THE DITCH SECTION MAY BE MODIFIED TO MEET THE SPREAD CRITERIA.
 3) THIS SECTION APPLIES ONLY TO CURV. OF 5% OR GREATER WITH A DIST. OF 500' OR LESS.



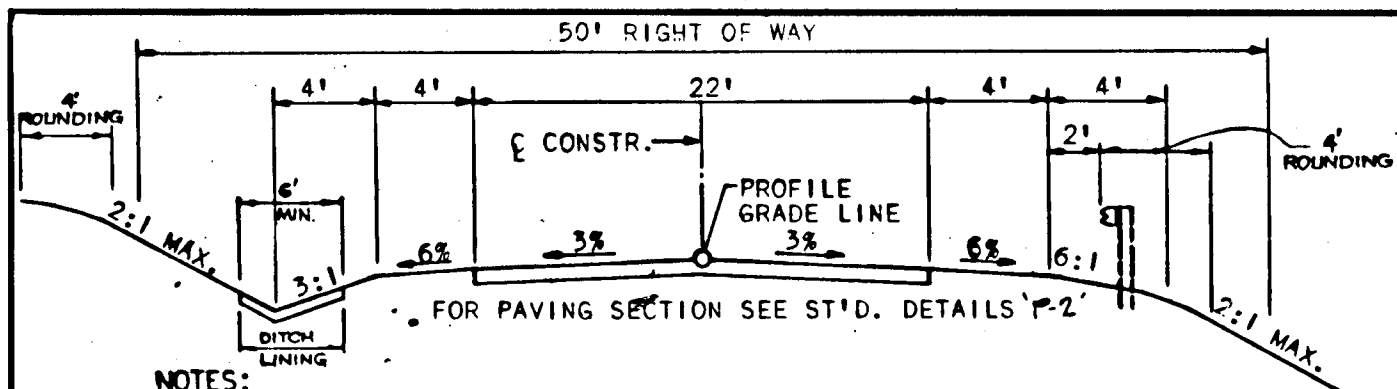
TITLE: ROAD CONSTRUCTION PLAN
 PROJECT: MEADOWOOD, SEC. 2, AREA 3
 NOTES: 51-65, P. 2-24
 O.P. & Z. FILE NOS.: 77-84-30-A, 84-28-08-13, 17-88-7B
 TAX MAP: 123 BLOCK: 1, PARCELL: P1 150
 ELECTION DISTRICT: HOWARD COUNTY, MD.

DES. BY: R.R. CHKD. BY: T.H.M. DATE: APRIL 1989

CIVIL ENGINEERS & SITE PLANNERS
DST & A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: AS NOTED SHEET 4 OF 5



1310



NOTES:
 1. USE GUARDRAIL WHERE INDICATED BY FIGURE 2.17.
 2. SEE THE STORM DRAINAGE DESIGN MANUAL FOR CRITERIA GOVERNING DITCH LINING AND SPREAD OF FLOW. THE DITCH SECTION MAY BE MODIFIED TO MEET THE SPREAD CRITERIA.
 3. THIS SECTION APPLY ONLY TO CUL-DE-SAC STS. WITH A.D.T. OF 500 OR LESS.
 OPEN SECTION - 'R' DISTRICT

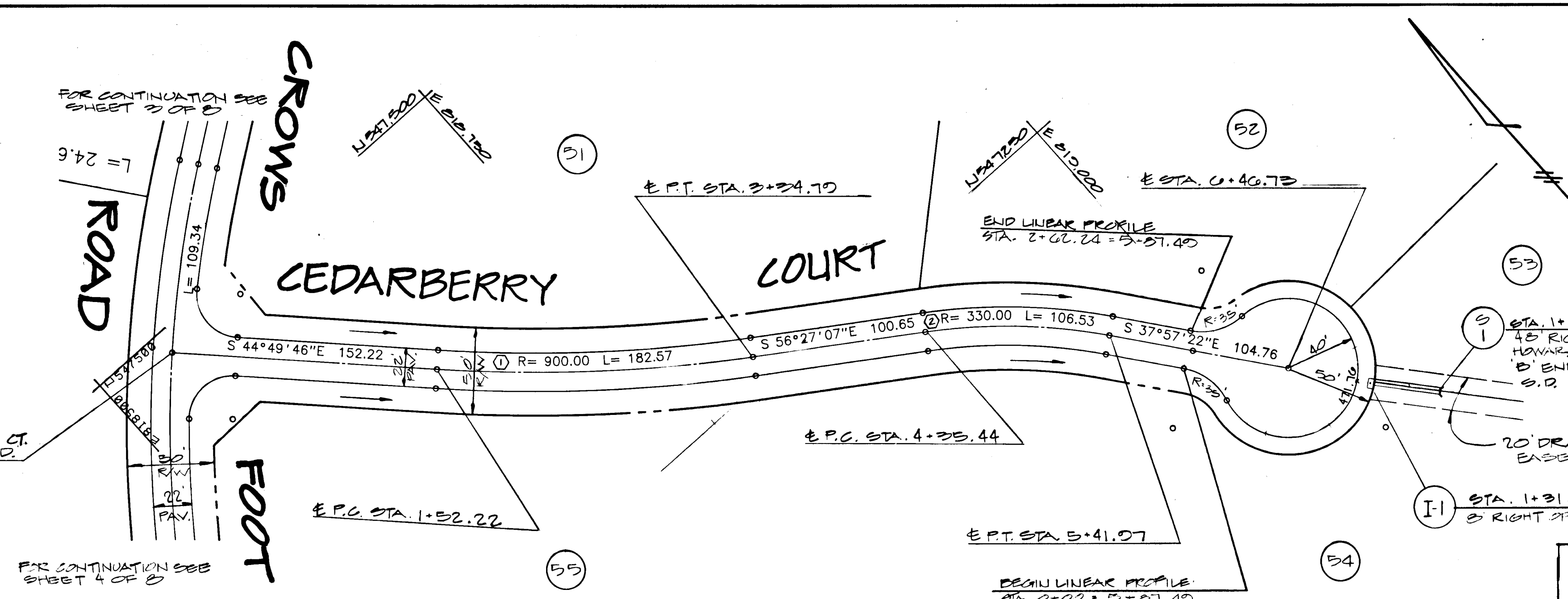
TYPICAL CROSS SECTION

1. CEDARBERRY COURT STA. 0+00.00 TO STA. 0+37.40
2. EXISTING ZONING 'R'
3. CUL-DE-SAC
4. DESIGN SPEED: 30 MPH
5. PAVING SECTION: P-2

NOTE:
 STOPPING SIGHT DISTANCES (SSD) CALCULATED HEREON ARE BASED ON $SSD = 3.675 V + V^2 / (20(f \cdot g))$ AS SHOWN ON PAGE 2A-2 IN THE HOWARD COUNTY DESIGN MANUAL VOL. III WITH A FRICTION FACTOR (f) OF 0.35 FOR A DESIGN SPEED OF 30 MPH (V).
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

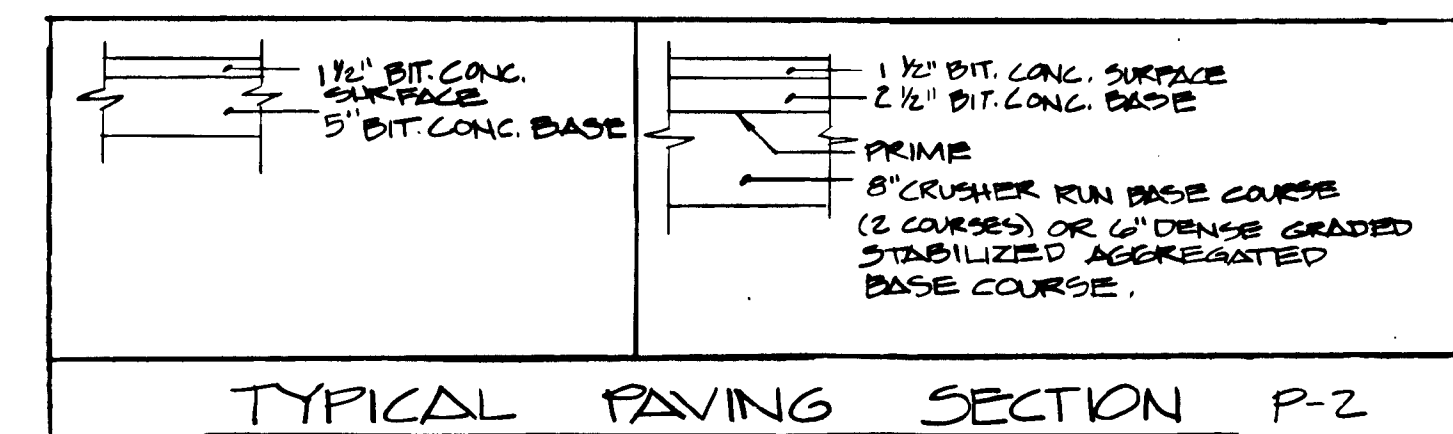
Shirley V. Taylor 11/13/89
 Chief, Division of Community Planning and Land Development
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Paul D. Larson 11/13/89
 Chief, Land Development Div.
James H. Wenzel 11/13/89
 Chief, Bureau of Highways
William R. Ray
 Chief, Bureau of Engineering



① CURVE DATA
 R = 900.00
 Δ = 011°37'21"
 L = 182.57
 T = 91.59
 CHORD = 5.50 28 20 E
 182.26'

② CURVE DATA
 R = 330.00
 Δ = 018°29'45"
 L = 106.53
 T = 53.72
 CHORD = 5.47 12 11 E
 106.00'

PLAN
 SCALE: 1"=50'



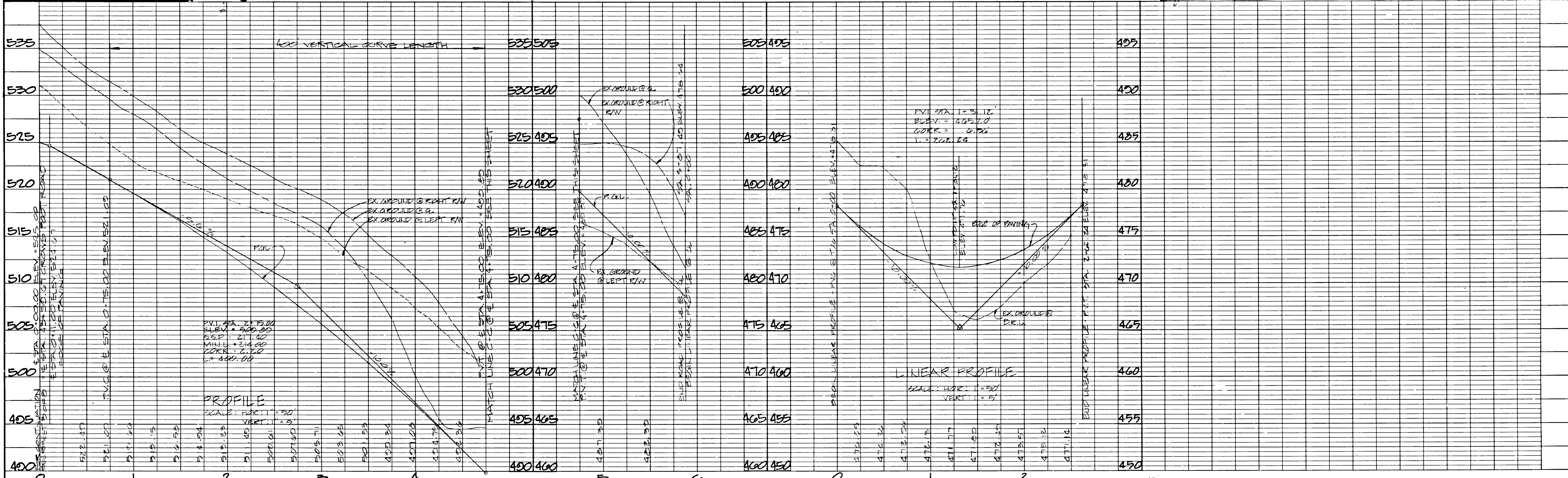
TYPICAL PAVING SECTION P-2

TITLE: ROAD CONSTRUCTION PLAN
CEDARBERRY COURT
 PROJECT: MEADOWOOD SECTION 2, AREA 5
 LOTS 31-39

O.P. & Z. FILE NOS.: P-27-42, 5-27-13, F-89-24
 TAX MAP: 16, BLOCK: 7, PARCEL: P-2 130

DES. BY: J.T.L. DRAWN BY: M.L.T. CHKD. BY: T.H.M. DATE: MARCH 1990

CIVIL ENGINEERS & SITE PLANNERS
DST & A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: AS NOTED SHEET 5 OF 8



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

DATE: _____ BY: _____
 SURVEYED: _____
 NOTE BOOK: _____
 NO. OF WAY CHECKED: _____
 STRUCTURE NOTATIONS CHECKED: _____

Frank J. ... 11/13/09
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

Frank J. ... 11/13/09
 Chief, Land Development Div.
Francis W. ... 10/16/09
 Chief, Bureau of Highways
...
 Chief, Bureau of Engineering

HOWARD CO TYPE A HEADWALL
 N 5470 59.124
 E 818275.151

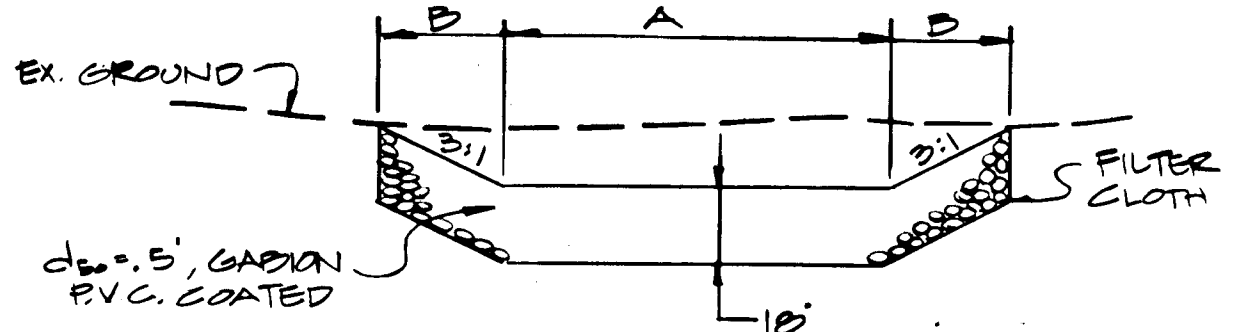
3" x 6" x 1.5" THICK CLASS II GABIONS SEE DETAIL THIS SHEET

3" x 6" x 1.5" THICK CLASS II GABIONS SEE DETAIL THIS SHEET

HOWARD CO TYPE A HEADWALL
 N 546889.726
 E 618493.236

NOTE: THE CULVERT AS SHOWN ON THIS SHEET SHALL BE CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN THE STREAM AREA.

PLAN
 SCALE: 1" = 20'

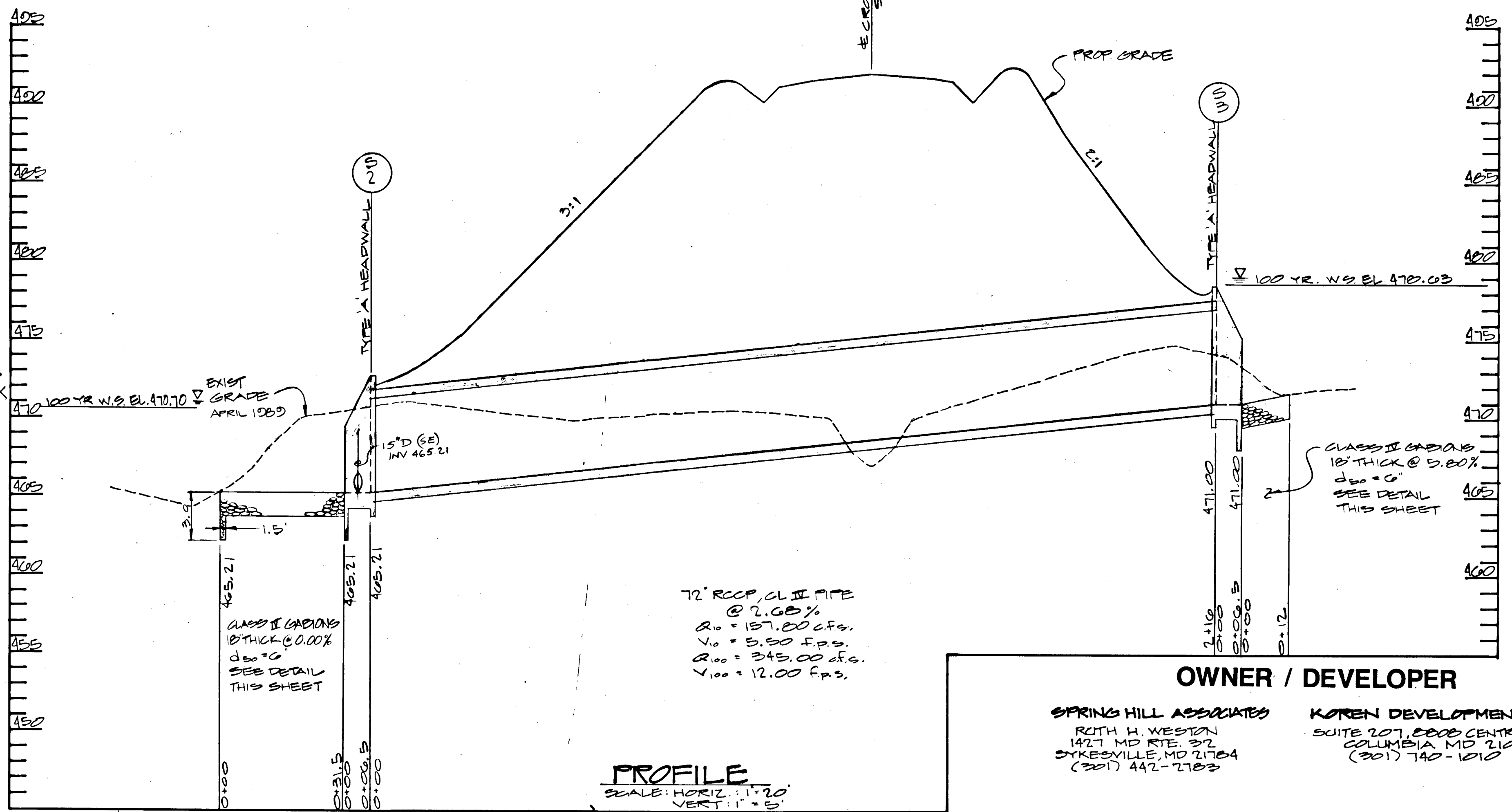


PROPOSED STREAM PROTECTION
 NOT TO SCALE

| GABION SCHEDULE | | | | |
|-----------------|-----|-----|-----------|----|
| OUTFALL | A | B | 16TH C.Y. | |
| S-2 | 15' | 15' | 43.5' | 40 |
| S-3 | 12' | 0' | 12' | 8 |

CULVERT DESIGN DATA - SUMMARY

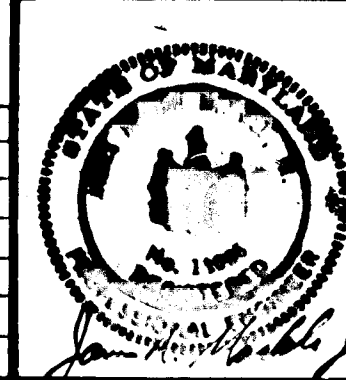
TOTAL P.A. TO CULVERT = 72.70 AC.
 RUNOFF CURVE NUMBER = 02.00
 TIME OF CONCENTRATION = 0.12 HR.
 PEAK DISCHARGES: 2 YR = 44.00
 10 YR = 157.00
 100 YR = 343.00
 HEADWATER (WATER SURFACE):
 100 YR = 478.00 HEC-2



OWNER / DEVELOPER

SPRING HILL ASSOCIATES
 RUTH H. WESTON
 1427 MD. RTE. 302
 SYKESVILLE, MD 21784
 (301) 442-2783

KOREN DEVELOPMENT CORP., INC
 SUITE 207, 8800 CENTRE PARK DRIVE
 COLUMBIA, MD 21045
 (301) 740-1010



TITLE: GRADING PLAN & PROFILE
CULVERT
 PROJECT: SECTION 2, AREA 3
MEADOWOOD
 O.P.A.Z. FILE NOS.: VP-04-20-A, 304-02, 07-13, P-20-10
 TAX MAP: 10, BLOCK: 7, PARCEL: 7/0 130
 3rd. ELECTION DISTRICT, HOWARD COUNTY, MD.
 DES. BY: M.L.T. DRAWN BY: M.L.T. CHKD. BY: T.H.M. DATE: APRIL 09

CIVIL ENGINEERS - SITE PLANNERS SURVEYORS
DST&A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: AS SHOWN SHEET 6 OF 8

| DATE | DESCRIPTION | BY |
|------|-------------|----|
| | REVISIONS | |

Mark J. Campbell 11/13/89
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

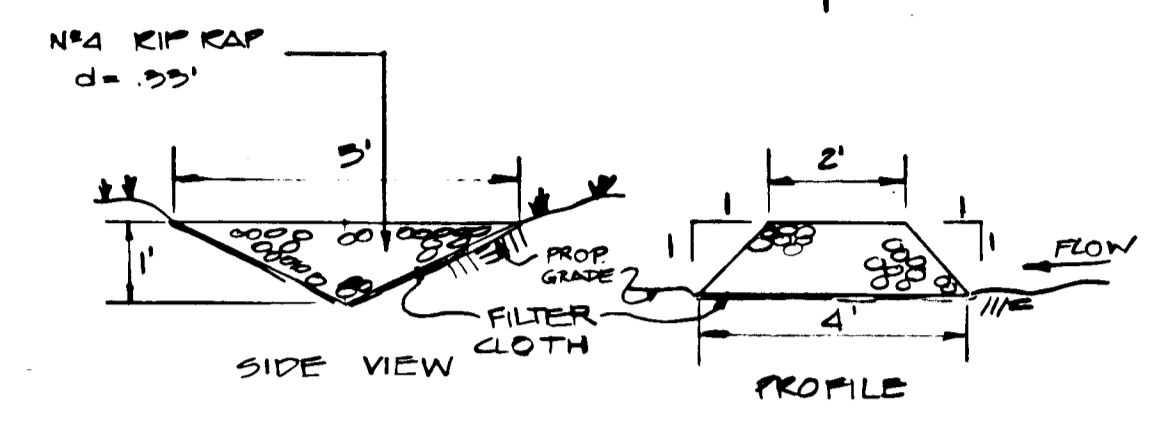
Paul D. Ryan 11/3/89
 Chief, Land Development Div.

Francis W. Chace 10/20/89
 Chief, Bureau of Highways

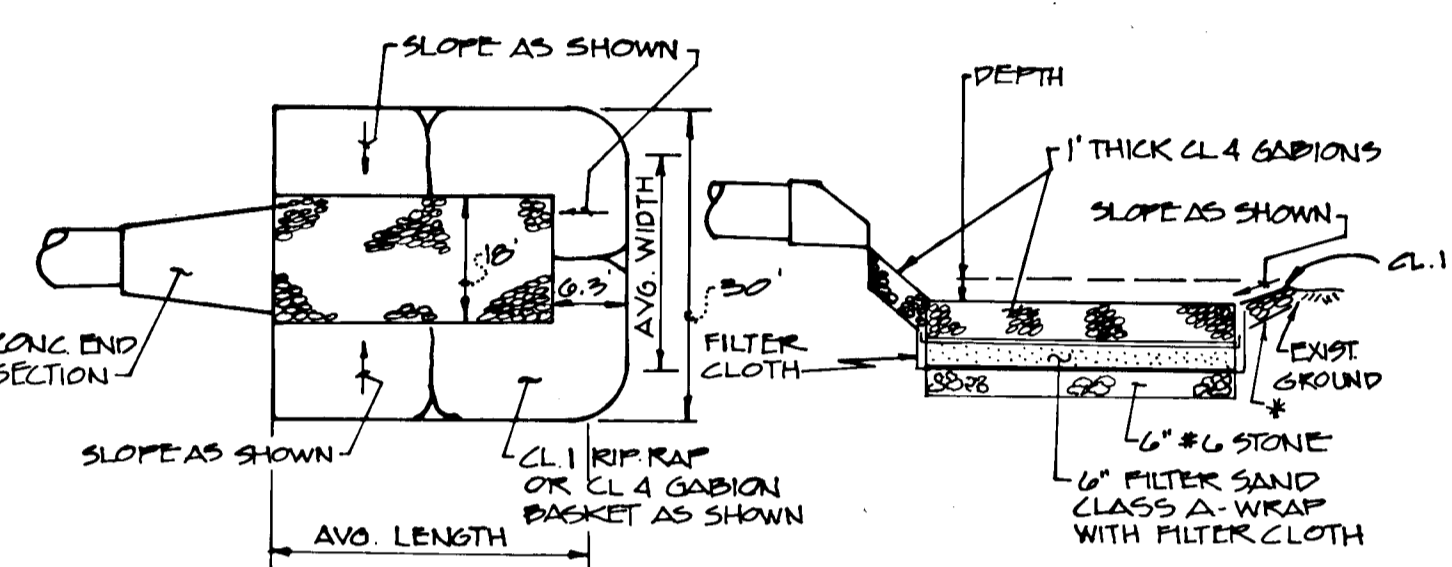
William J. Ryan 11/3/89
 Chief, Bureau of Engineering

STRUCTURE SCHEDULE

| NO | TYPE | INV. IN. | INV. OUT. | TOP EL. | REMARKS |
|-----|-----------------|----------|-----------|---------|------------------------------------|
| I-1 | DOUBLE S | — | 402.10 | 470.10 | |
| I-2 | DOUBLE S | 462.11 | 481.81 | 480.32 | |
| I-3 | DOUBLE S | — | 482.77 | 480.32 | |
| S-1 | TYPE B END SECT | 450.33 | 450.33 | 401.40 | |
| S-2 | TYPE A | 465.21 | 465.21 | 472.71 | |
| S-3 | TYPE A | 471.00 | 471.00 | 478.50 | |
| S-4 | END SECT | 470.80 | 470.80 | 480.73 | SEE DRAINAGE AREA MAP SHEET 2 OF 2 |
| S-5 | END SECT | 478.75 | 478.75 | 482.62 | |
| S-6 | END SECT | 477.78 | 477.78 | 479.68 | |
| S-7 | END SECT | 480.40 | 480.40 | 482.38 | |

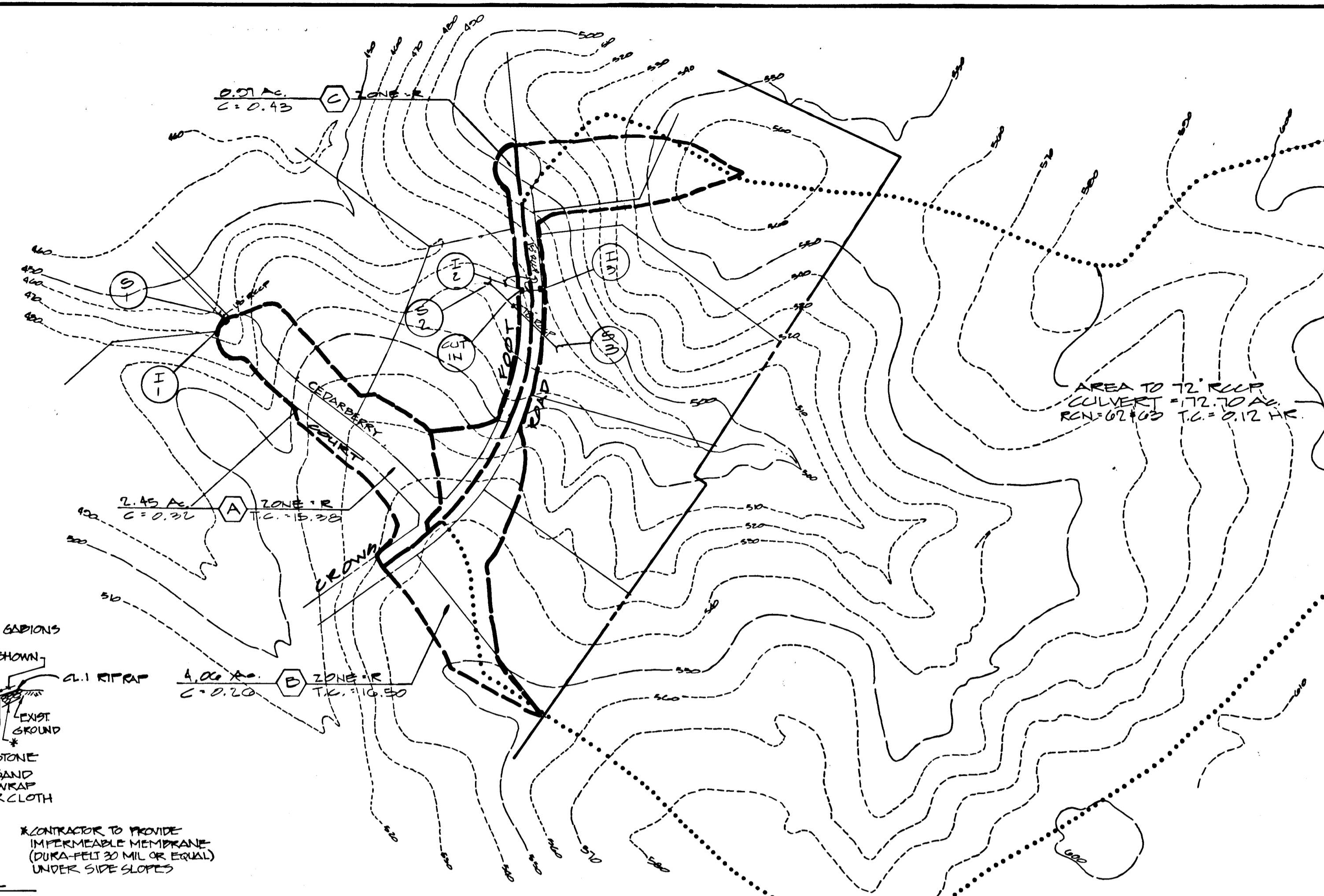


TYPICAL CHECKDAM
NOT TO SCALE

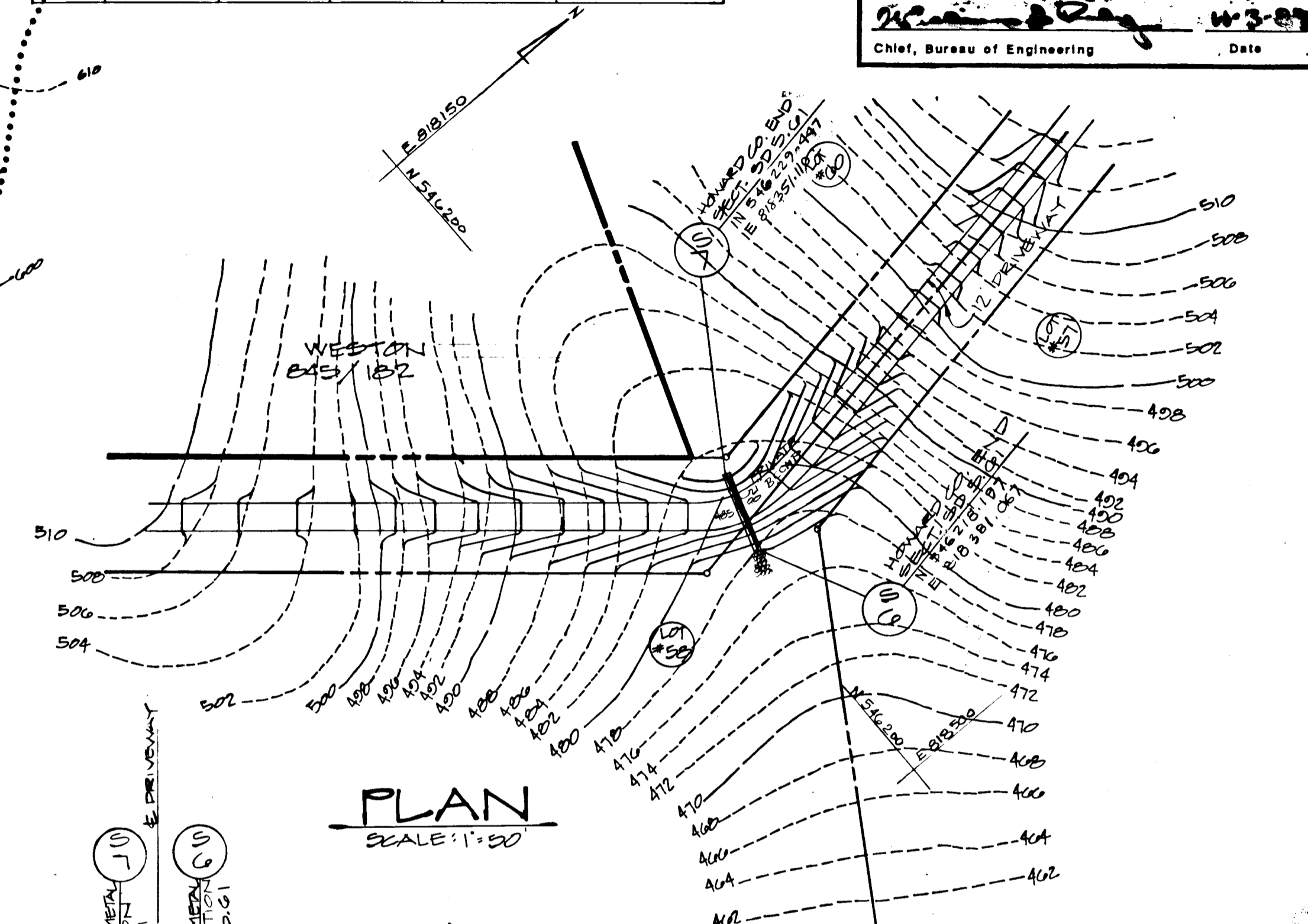


PLAN SECTION
WATER QUALITY STRUCTURE DETAIL

CONTRACTOR TO PROVIDE IMPERMEABLE MEMBRANE (DUKA-FELT 20 MIL OR EQUAL) UNDER SIDE SLOPES

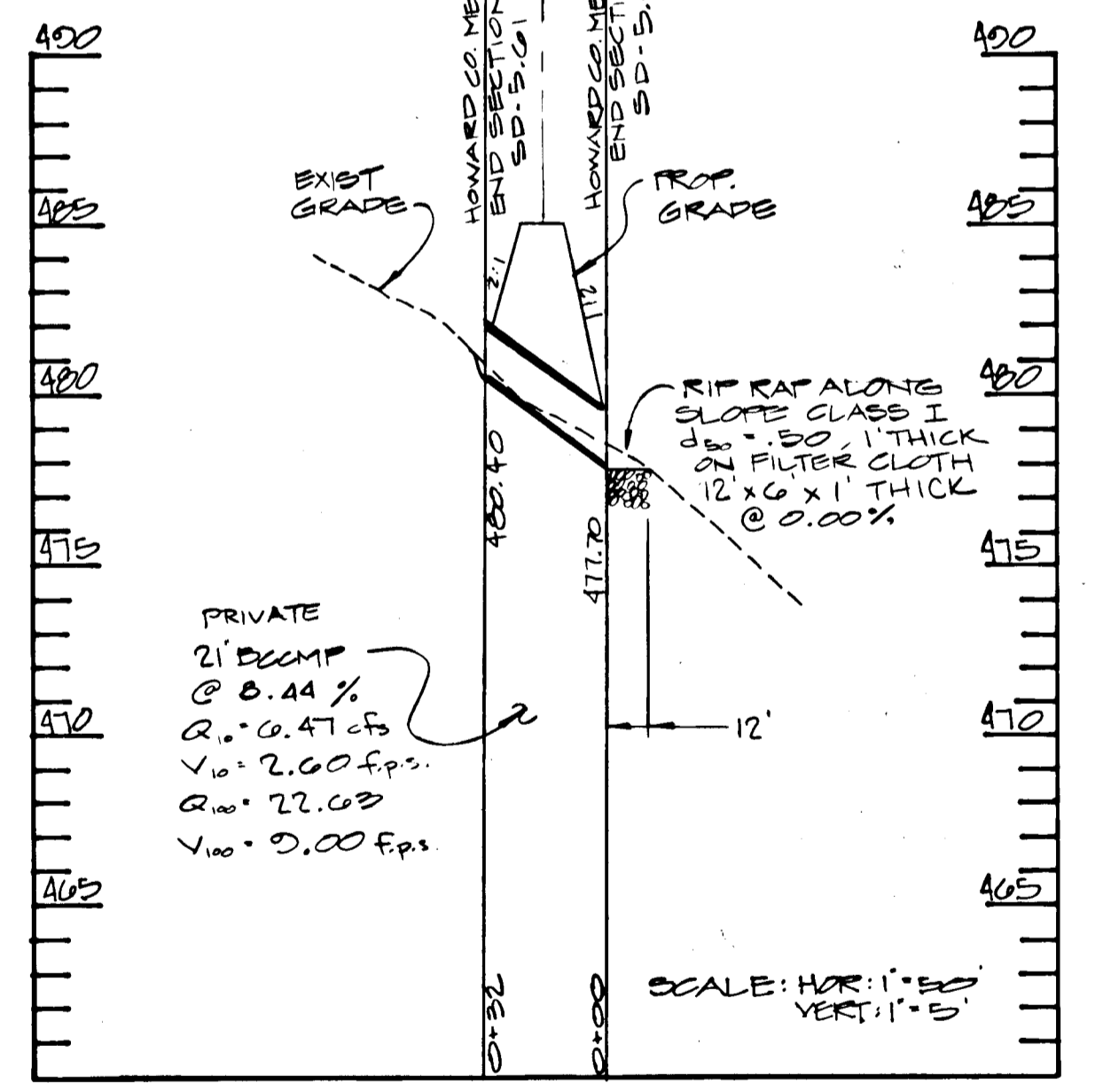
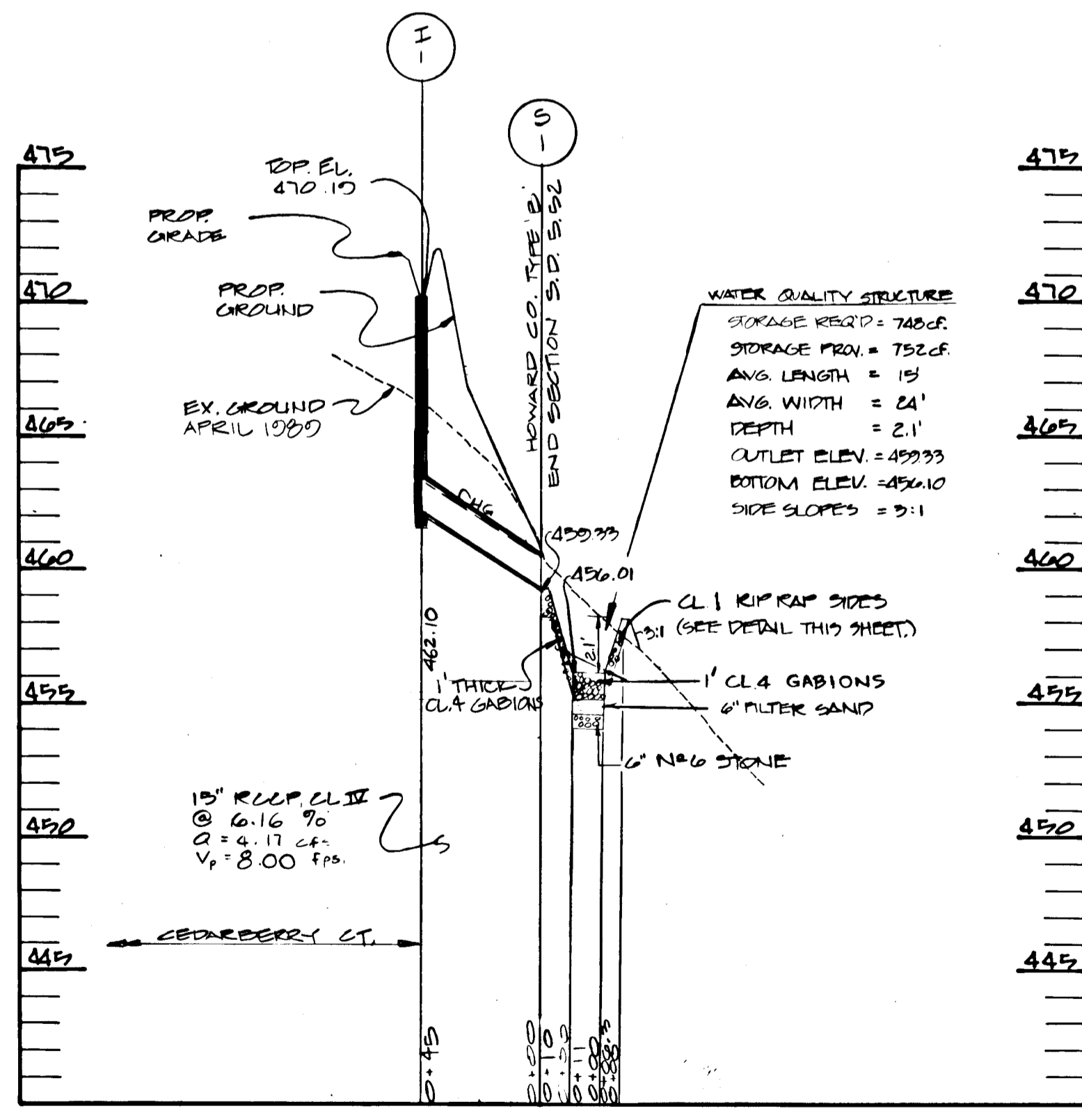
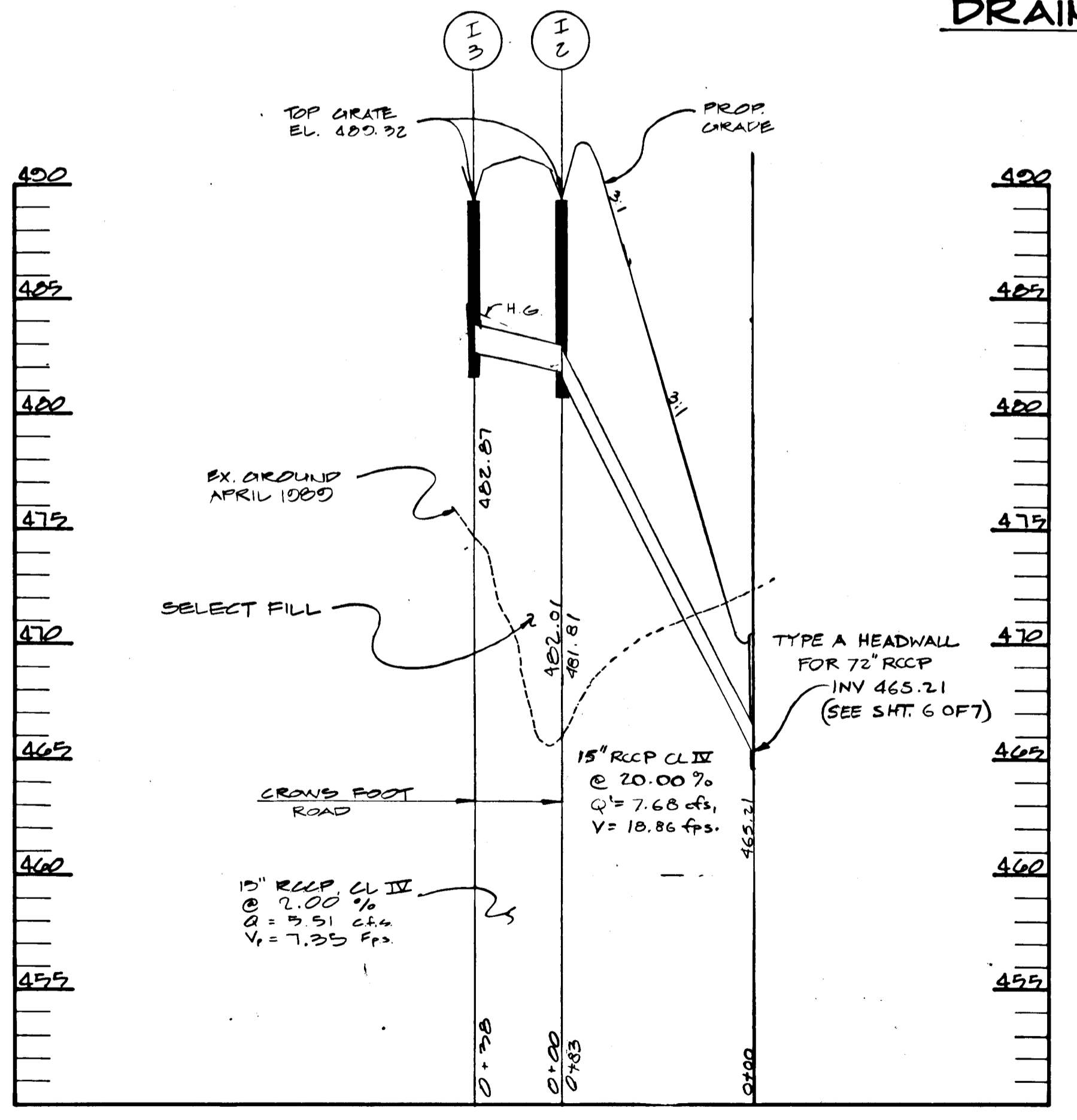


DRAINAGE AREA MAP
SCALE 1" = 200'



PLAN
SCALE 1" = 50'

NOTE: SEE DRAINAGE AREA MAP SHEET 2 OF 2.
 NOTE: 21' BCCMP SHALL BE PRIVATELY OWNED & MAINTAINED.



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

OWNER / DEVELOPER

SPRING HILL ASSOCIATES
 RUTH H. WESTON
 1427 MD RTE 32
 SYKEVILLE, MD 21784
 (301) 442-2703

KOREN DEVELOPMENT CORP, INC.
 SUITE 201, 8820 CENTRE PARK DRIVE
 COLUMBIA, MD 21045
 (301) 740-1010



TITLE: DRAINAGE AREA MAP & PROFILE
 PROJECT: SECTION 2, AREA 3
MEADOWOOD
 O.P.#2, FILE NOS. 1984-30-AL, 20-00-00-13, P. 20-10
 TAX MAP: 10, BLOCK: 7, PARCEL: P10-150
 ELECTION DISTRICT: HOWARD COUNTY, MD.
 DES. BY: M.L.T. DRAWN BY: G.A.D. CHKD. BY: T.H.M. DATE: APRIL 1990
 CIVIL ENGINEERS - SITE PLANNERS SURVEYORS
DST&A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: AS SHOWN SHEET 7 OF 8

| DATE | DESCRIPTION | BY |
|------|-------------|----|
| | | |
| | | |
| | | |

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CULVERT DESIGN DATA - SUMMARY

TOTAL D.A. TO CULVERT
 RULOFF CURVE NUMBER
 TIME OF CONCENTRATION
 PEAK DISCHARGE

| | |
|-----------------|--------|
| 2 YR. - 10.04 | C.F. - |
| 10 YR. - 43.0 | C.F. - |
| 100 YR. - 31.00 | C.F. - |

HEADWATER (WATER SURFACE) 100 YR. - 403.30

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

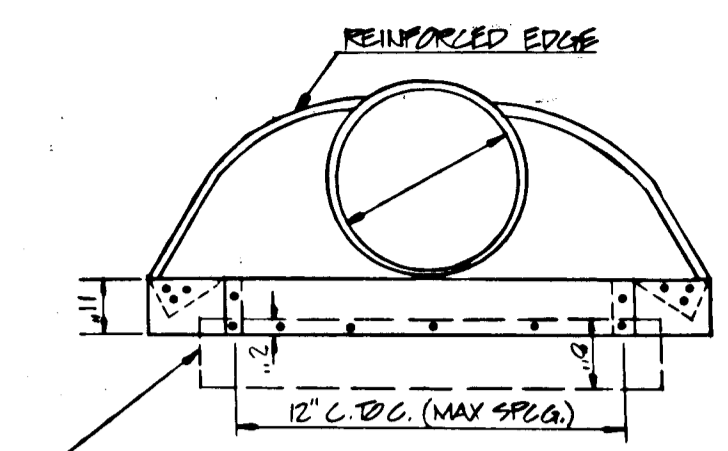
Paul J. J. [Signature]
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 11/3/89
 Chief, Land Development Div. Date

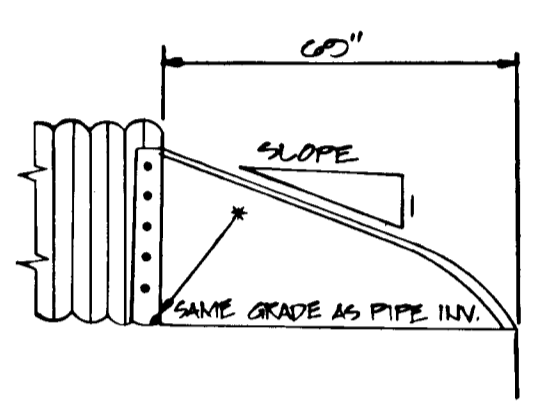
[Signature] 10/1/89
 Chief, Bureau of Highways Date

[Signature] 11/3/89
 Chief, Bureau of Engineering Date



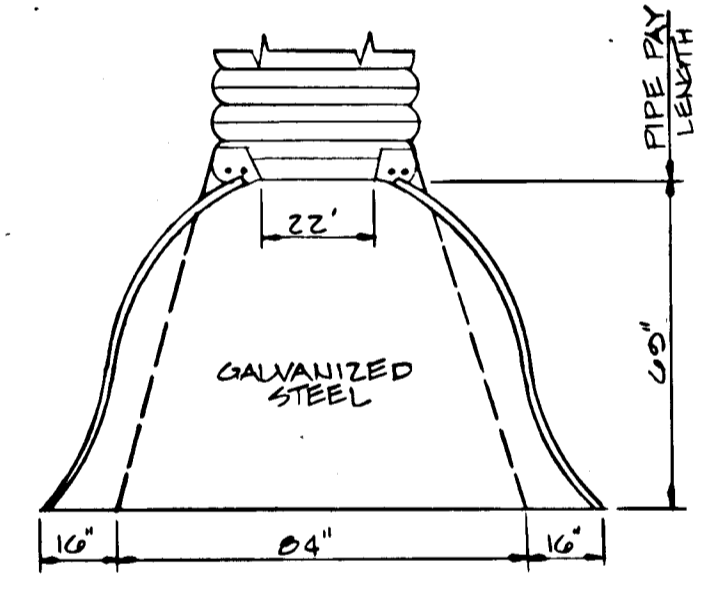
END VIEW
 NOT TO SCALE

OPTIONAL GALVANIZED PLATE (SEE NOTES #3)

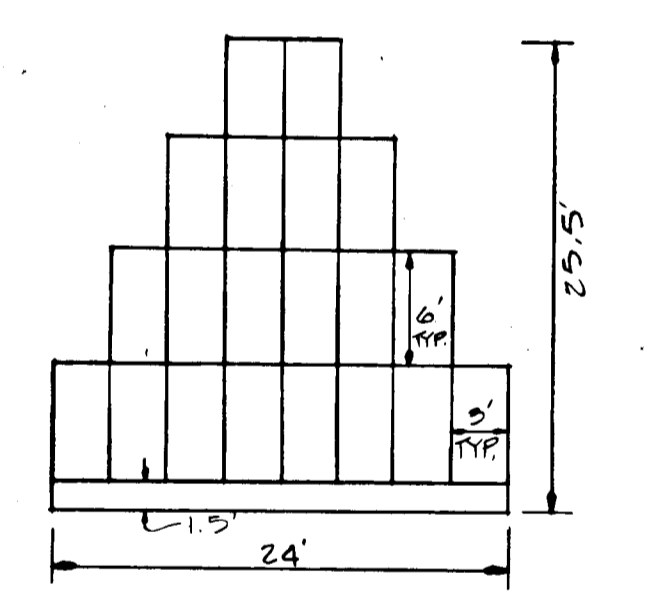


LONGITUDINAL SECTION
 NOT TO SCALE

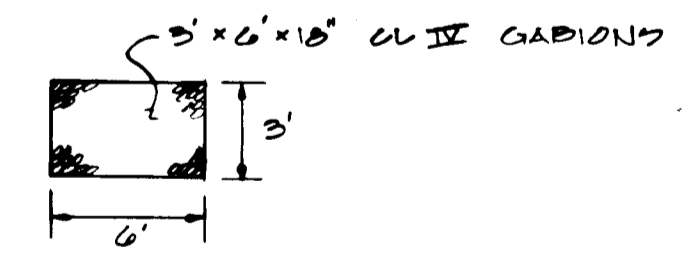
• INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS.



METAL END SECTION
 NOT TO SCALE

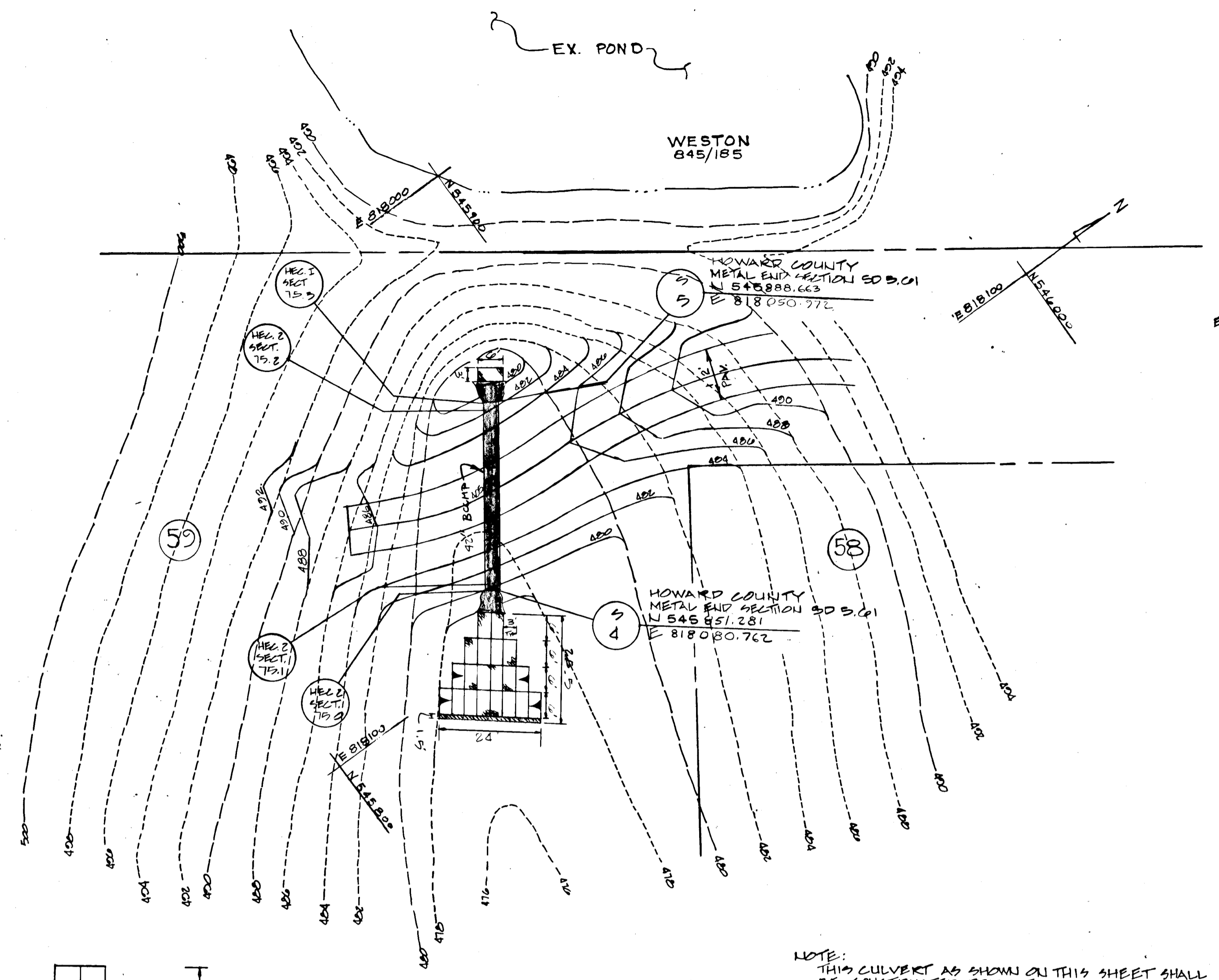


OUTFALL GABIONS
 NOT TO SCALE

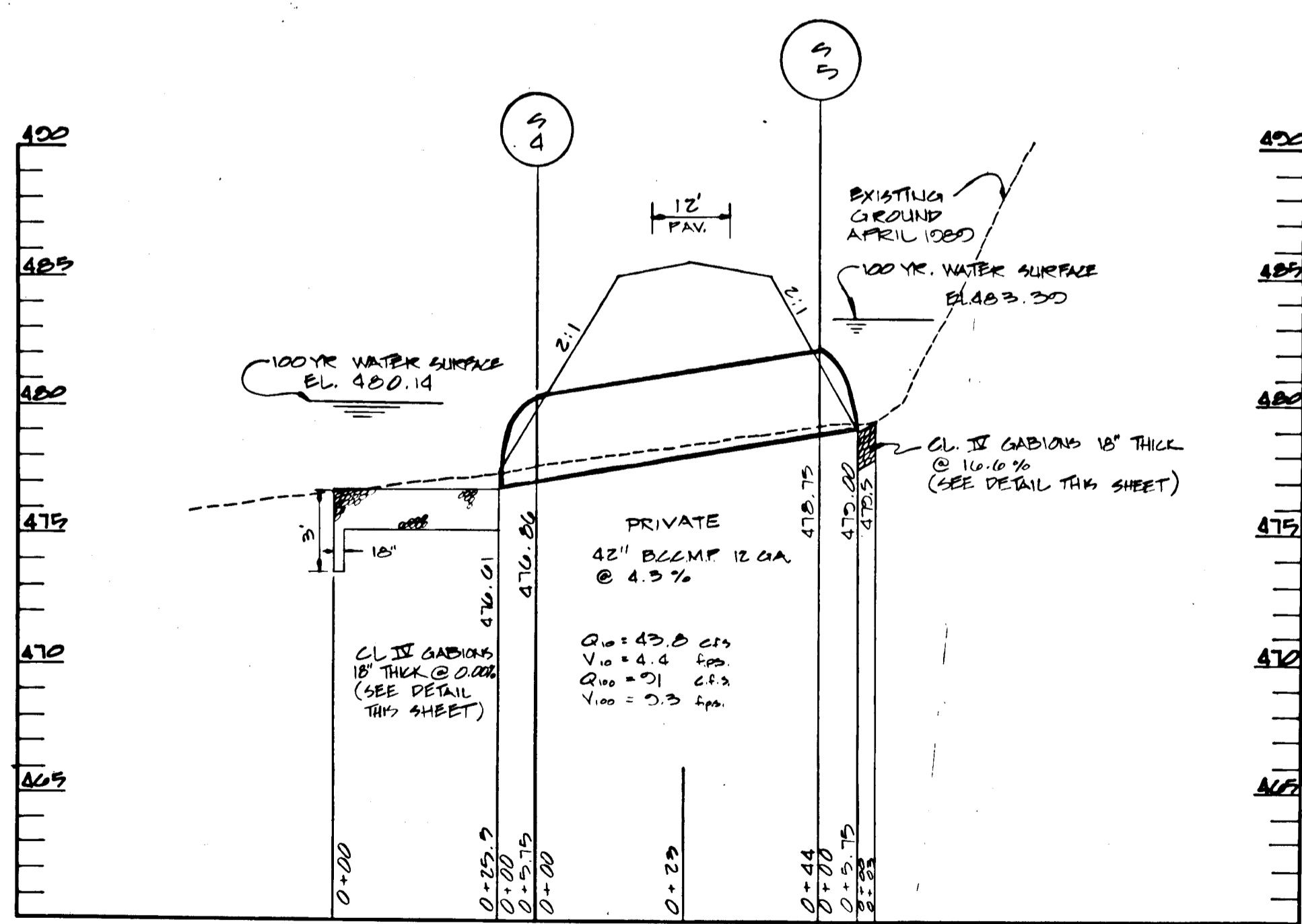


GABION DETAIL
 NOT TO SCALE

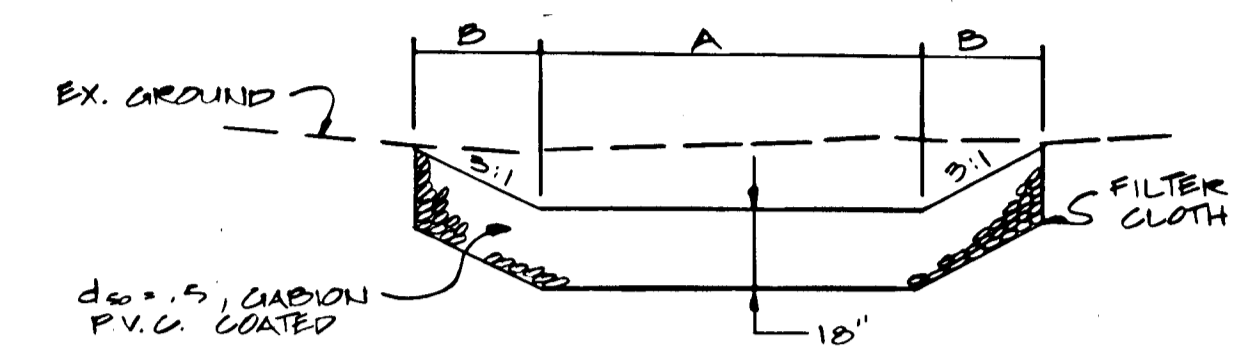
- NOTES:**
- ALL 3 PIECE BODIES TO HAVE 12 GA SIDES AND 16 GA CENTER PANELS. WIDTH OF CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIPHERY. MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY 3/8" GALVANIZED RIVETS OR BOLTS.
 - FOR 60" THRU 84" SIZES, REINFORCED EDGES TO BE SUPPLEMENTED WITH GALVANIZED STIFFENER ANGLES. THE ANGLES WILL BE 2" x 2" x 1/4" FOR 60" THRU 72" DIAMETER AND 2 1/2" x 2 1/2" x 1/4" FOR 72" AND 84" DIAMETER. THE ANGLES TO BE ATTACHED BY 3/8" GALVANIZED WELDS AND BOLTS.
 - THE PLATE SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF THE PLATE TO BE INCLUDED IN BID PRICE PER EACH OF METAL END SECTION.
 - TYPE 3 COLLECTION INCLUDES ONE FOOT OF PIPE LENGTH FOR 42" THRU 60" DIAMETER AS A CONNECTOR. THE COLLECTION SECTION WILL BE ATTACHED TO THE END SECTION BY GALVANIZED RIVETS OR BOLTS.



NOTE: THIS CULVERT AS SHOWN ON THIS SHEET SHALL BE CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN THE STREAM AREA.



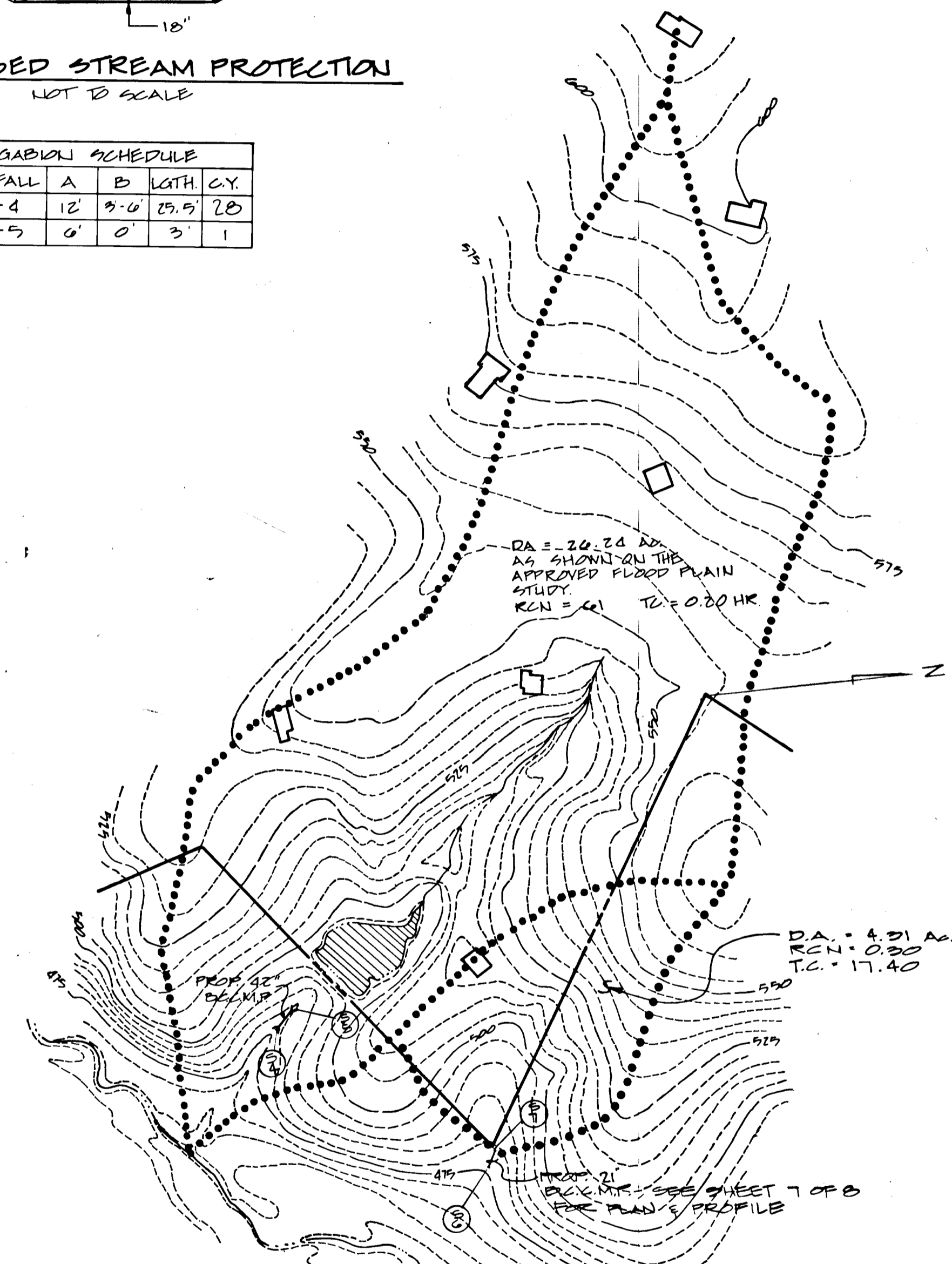
NOTE: 42" BCCMP SHALL BE PRIVATELY OWNED & MAINTAINED.



PROPOSED STREAM PROTECTION
 NOT TO SCALE

GABION SCHEDULE

| OUTFALL | A | B | LGTH | CY |
|---------|-----|-------|-------|----|
| S-4 | 12' | 9'-0" | 19.5' | 20 |
| S-5 | 0' | 0' | 3' | 1 |



DRAINAGE AREA MAP
 SCALE: 1" = 200'

OWNER / DEVELOPER

SPRING HILL ASSOCIATES
 1427 MD RTE. 32
 STYKEVILLE, MD. 21104
 (301) 442-2703

KOREN DEVELOPMENT CORP., INC.
 8008 SEAFIRE PARK DR., SUITE 207
 COLUMBIA, MD. 21045
 (301) 742-1010

| DATE | DESCRIPTION | BY |
|------|-------------|----|
| | | |
| | | |

TITLE: GRADING PLAN & PROFILE
CULVERT

PROJECT: SECTION 2 AREA 33
MEADOWOOD

O.P. & Z. FILE NOS.: 10-24-30 A1, 5-04-08, 5-07-15, F-20-70
 TAX MAP: 10, BLOCK: 7, PARCEL: P10 150
 5th ELECTION DISTRICT: HOWARD COUNTY, MD.

DES. BY: R.L.R. DRAWN BY: C.A.B. CHKD. BY: T.H.M. DATE: APRIL '90

CIVIL ENGINEERS - SITE PLANNERS SURVEYORS

DST & A Inc.

11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: AS SHOWN SHEET 3 OF 8

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