SHEET INDEX

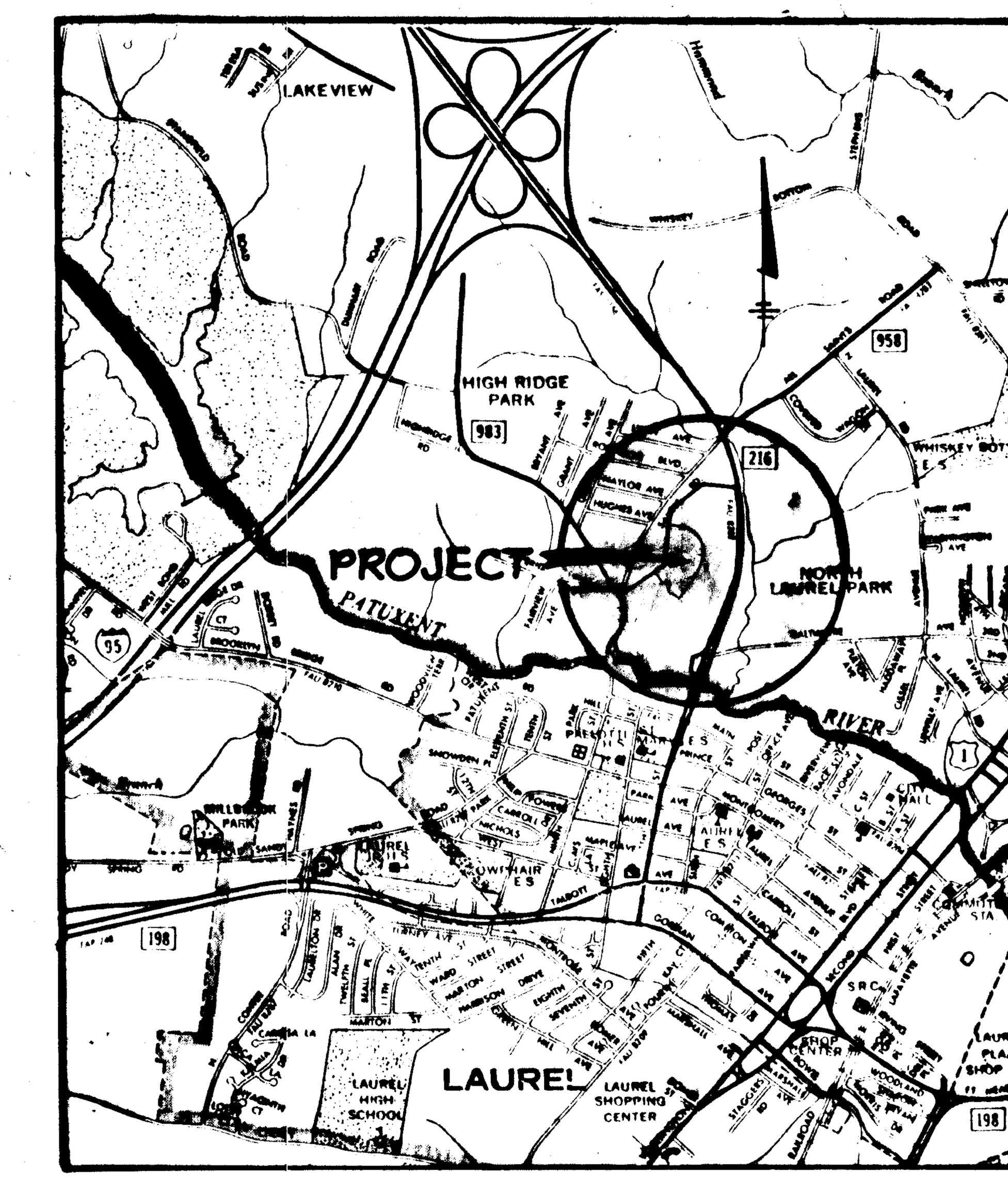
NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN & PROFILE: HARVEST WAY & CROSS TIMBERS
3	DETAILS
4	D.A.M., S.W.M., GRADING & SEDIMENT CONTROL PLAN
5	SEDIMENT CONTROL & STORM WATER MANAGEMENT DETAILS

ROADWAY, STORM DRAIN & STORM WATER MANAGEMENT

SETTLER'S LANDING

SECTION 2, AREA 1

6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
Scale: 1" = 2000'

BENCH MARKS

B.M. #1 ELEV. 228.50
PIN IN A 12" MAPLE 5' SOUTH OF EXISTING FENCE LINE.

B.M. #2 ELEV. 200.03
PIN IN BASE OF 36" W. OAK APPROX. 305'± SOUTHWEST OF B.M. #1

GENERAL NOTES

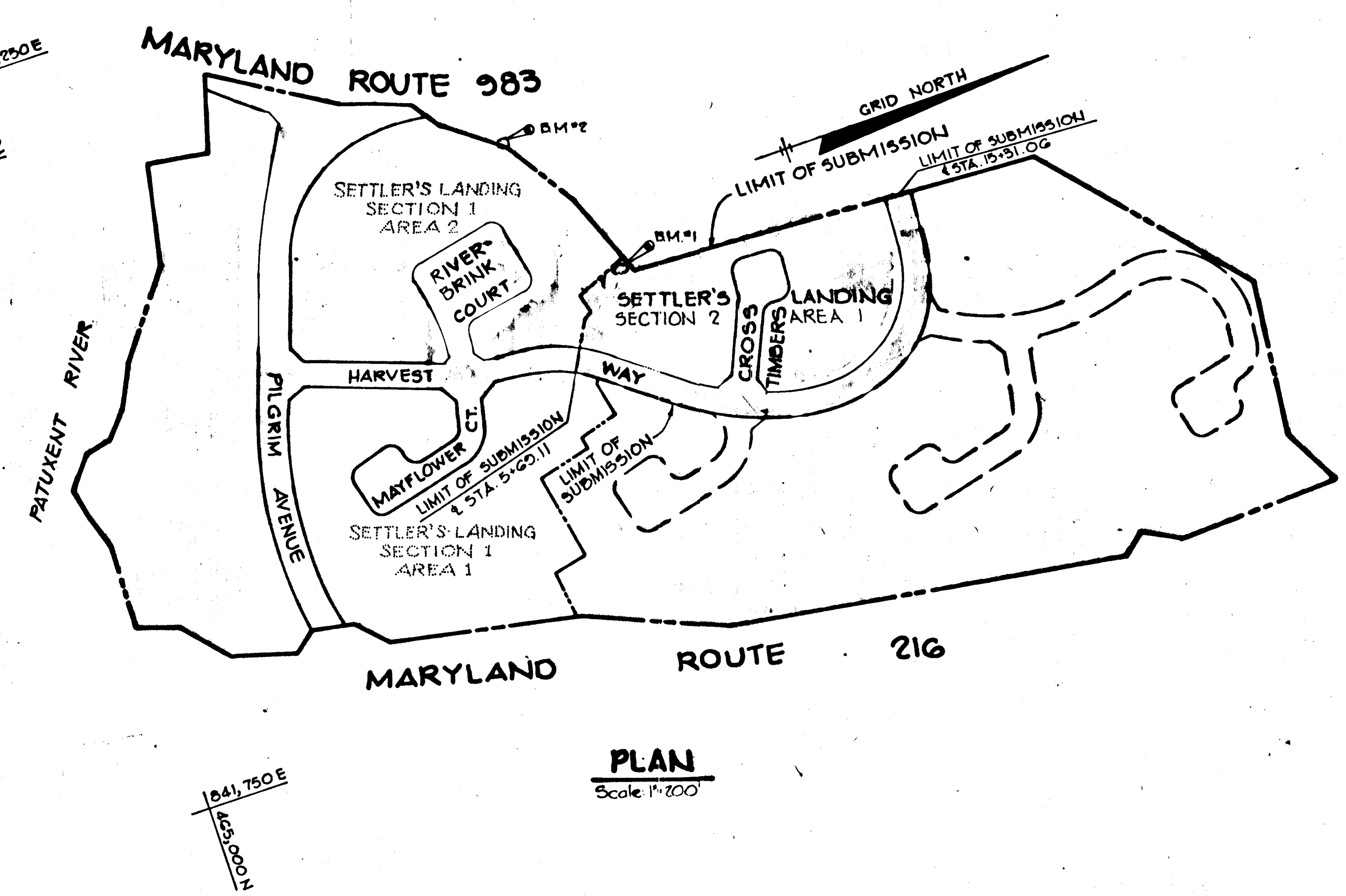
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION
2. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
4. CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

MISS UTILITY	559-0100
BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS AND ELECTRIC COMPANY	539-8000, EXT. 691
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	992-2417/2418

5. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
6. ALL STREET CURB RETURNS SHALL HAVE 35.0' RADII UNLESS OTHERWISE NOTED.
7. STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
8. INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1971 EDITION.
9. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
10. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

    ALL 50' RIGHT-OF-WAYS 35 M.P.H.

11. ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
12. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% COMPACTION.
13. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
14. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
15. SUBJECT PROPERTY ZONED R-SA PER 10-03-77 COMPREHENSIVE ZONING PLAN.



PLAN
Scale 1" = 200'

ITEM	SEC. I/AREA I	SEC. I/AREA II	SEC. II, AREA I	AS APPROVED ON P-82-26
1) GROSS AREA	7.08	5.56	4.73	35.20
2) FLOODPLAIN/STEEP SLOPES	.22	.52	NONE	1.30
3) NET AREA	6.86	5.04	4.73	33.90
4) NO. OF D.U. ALLOWED	54.8	40.5	37.8	271.1
5) FLOODPLAIN LOT ADJUSTMENT LOT ALLOWENCE	N/A	N/A	N/A	N/A
6) TOTAL NO. D.U. ALLOWED	54.8	40.5	37.8	271.1
7) TOTAL NO. D.U. PROPOSED	48	42	38	271
8) DENSITY PER ACRE	-	-	-	7.9

OPEN SPACE REQUIRED = 0.946 Ac.
OPEN SPACE PROVIDED = 1.64 Ac. - .262 (S.W.M.F.) = 1.402 Ac.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

10-21-83
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

10-17-83
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

SETTLER'S LANDING ASSOCIATES
BRANTLEY DEVELOPMENT CORPORATION GENERAL PARTNER
SUITE 105, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

PROJECT: **SETTLER'S LANDING**
SECTION 2, AREA I LOTS 96 THRU 134

AREA
ELECTION DISTRICT No. 6 HOWARD COUNTY, MARYLAND
TAX MAP No. 50 PARCEL 346

TITLE: TITLE SHEET

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301 461-2690

7-13-83
DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE III — NO. 8707 REGISTERED PROFESSIONAL ENGINEER

FORMERLY EASTON (P-80-20)
DESIGNED BY: L.J.D.
DRAWN BY: T.E.S.
PROJECT NO: 001500
DATE: 5/27/83
SCALE: AS SHOWN
DRAWING NO. 1 OF 5

F-82-87
AUGUST 15, 1983

℄ CURVE DATA - HARVEST WAY
FROM ℄ STA. 5+69.11 TO ℄ STA. 6+46.83

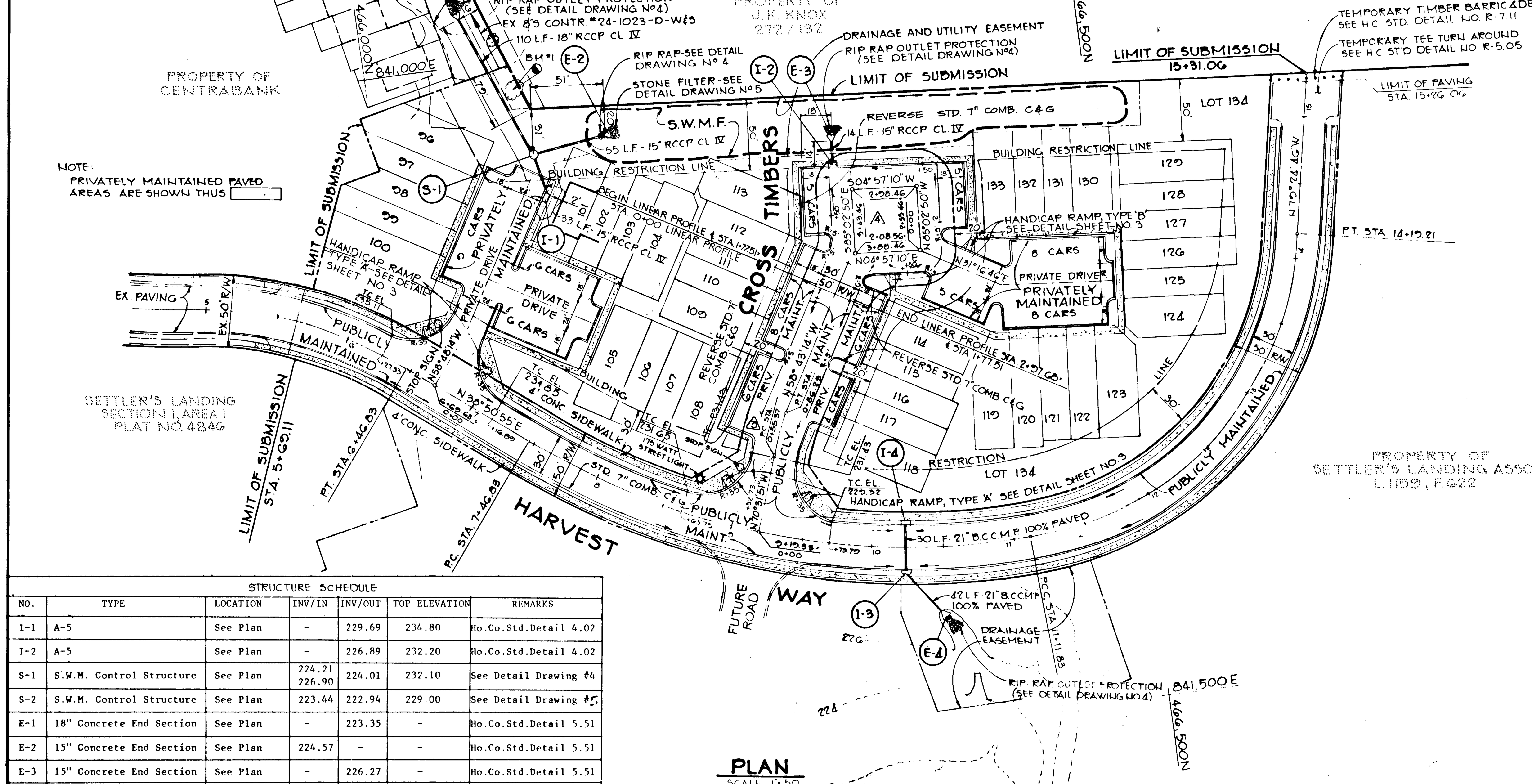
Δ = 16°11'25"
R = 275.00'
L = 77.71'
T = 39.12'
Chd = N 30°45'10" E, 77.46'

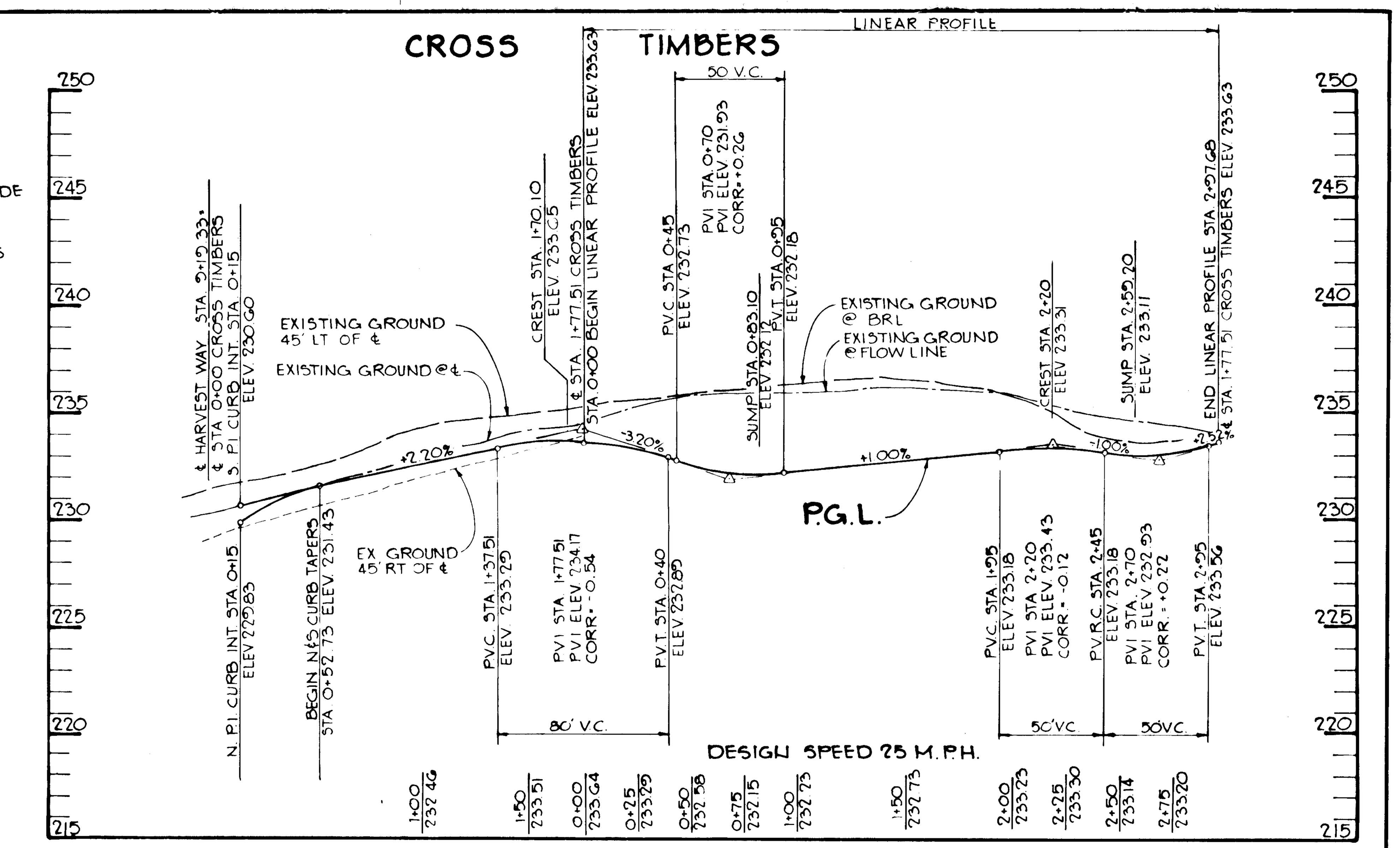
℄ CURVE DATA - HARVEST WAY
FROM ℄ STA. 7+46.83 TO ℄ STA. 9+74.87

Δ = 25°37'10"
R = 510.00'
L = 228.09'
T = 115.96'
Chd = N 26°02'20" E, 226.15'

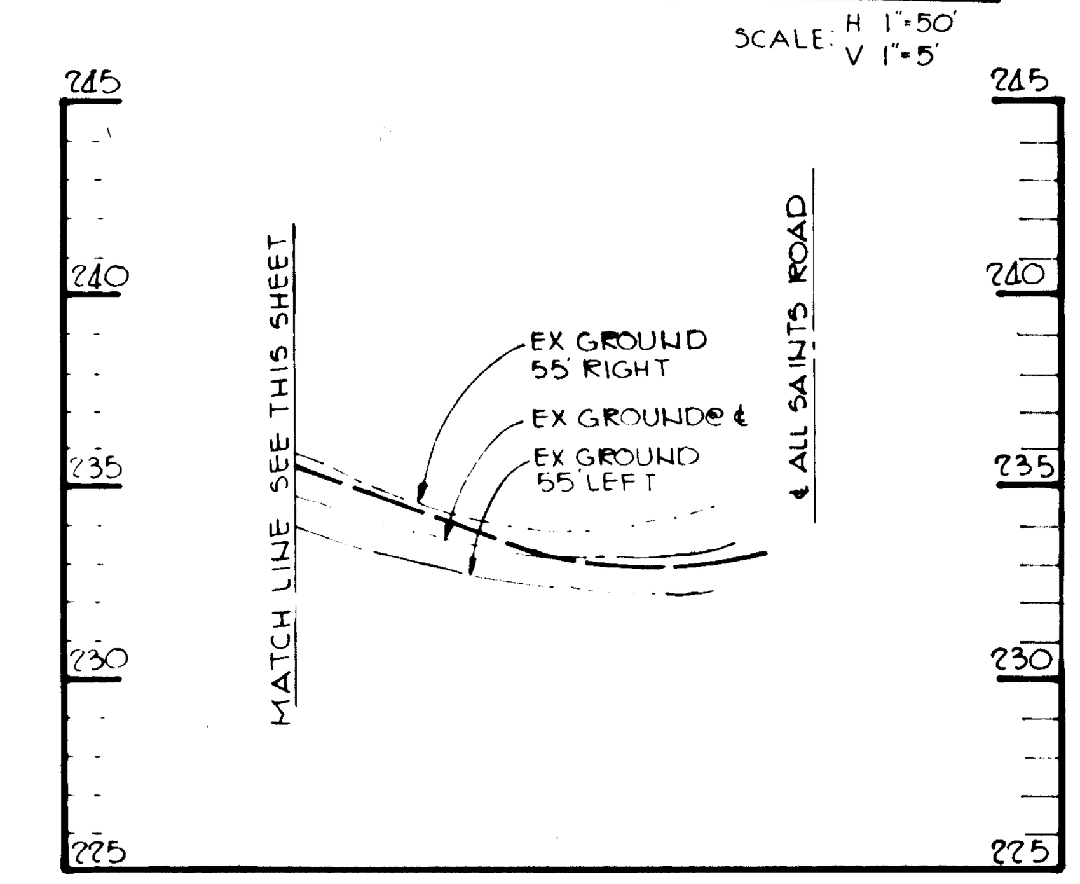
℄ CURVE DATA - CROSS TIMBERS
FROM ℄ STA. 0-55.37 TO ℄ STA. 0+86.29

Δ = 11°48'37"
R = 150.00'
L = 30.92'
T = 15.52'
Chd = N 64°37'33" W, 30.87'



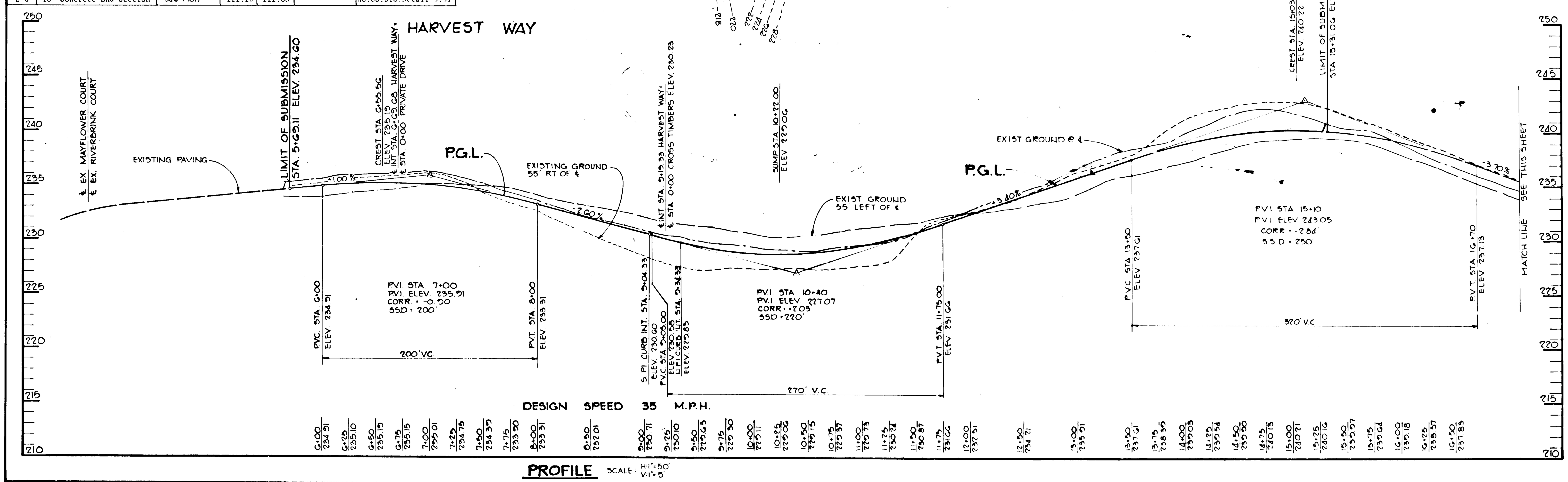


PROFILE
SCALE: H 1"=50' V 1"=5'



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

STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV/IN	INV/OUT	TOP ELEVATION	REMARKS
I-1	A-5	See Plan	-	229.69	234.80	Ho.Co.Std.Detail 4.02
I-2	A-5	See Plan	-	226.89	232.20	Ho.Co.Std.Detail 4.02
S-1	S.W.M. Control Structure	See Plan	224.21 226.90	224.01	232.10	See Detail Drawing #4
S-2	S.W.M. Control Structure	See Plan	223.44	222.94	229.00	See Detail Drawing #5
E-1	18" Concrete End Section	See Plan	-	223.35	-	Ho.Co.Std.Detail 5.51
E-2	15" Concrete End Section	See Plan	224.57	-	-	Ho.Co.Std.Detail 5.51
E-3	15" Concrete End Section	See Plan	-	226.27	-	Ho.Co.Std.Detail 5.51
I-3	A-5	15'RT of Sta.10+22.00	225.24	225.04	229.06	Ho.Co.Std.Detail 4.02
I-4	A-10	15' LT of Sta.10+22.00	-	225.64	229.06	Ho.Co.Std.Detail 4.03
E-4	21" Concrete End Section	48'RT of Sta.10+51.00	224.20	-	-	Ho.Co.Std.Detail 5.51
E-5	18" Concrete End Section	See Plan	223.70	223.61	-	Ho.Co.Std.Detail 5.51
E-6	18" Concrete End Section	See Plan	222.28	222.00	-	Ho.Co.Std.Detail 5.51



PROFILE SCALE: H 1"=50' V 1"=5'

DATE	NO.	REVISION
3-7-88	4	REMOVED ISLAND IN CROSS TIMBERS
10-10-84	3	ADDED 2 PARKING SPACES
3/2/84	2	CHANGE ALL LOT NUMBERS
1/10/84	1	CHANGED PIPE SIZE BETWEEN I-4 & I-3 AND I-3 & E-4

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

[signature] 10-17-83
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 10-21-83
CHIEF, BUREAU OF ENGINEERING — DATE

OWNER / DEVELOPER
SETTLER'S LANDING ASSOCIATES
PRANTLY DEVELOPMENT CORPORATION GENERAL PARTNER
SUITE 105 5501 TWIN KNOLLS ROAD
COLUMBIA MARYLAND 21045

PROJECT **SETTLER'S LANDING**
SECTION 2, AREA 1 LOTS 96 THRU 134

AREA
ELECTION DISTRICT Nº 6 HOWARD COUNTY, MARYLAND
TAX MAP Nº 50 PARCEL 346

TITLE: PLAN AND PROFILES OF HARVEST WAY AND CROSS TIMBERS

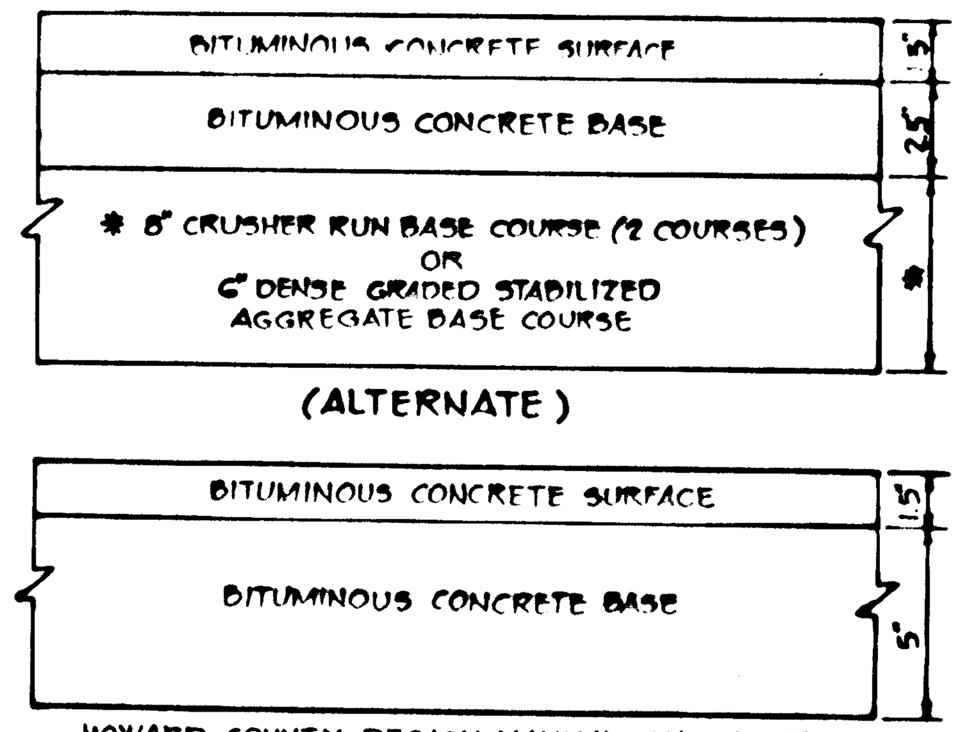
THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301 461-2690

9-13-83
DATE
STATE OF MARYLAND — ARTHUR E. MUEGGE III — NO. 8707 REGISTERED PROFESSIONAL ENGINEER
[signature]

FORMERLY EASTON (P-80-20)
DESIGNED BY: L.J.D.
DRAWN BY: D.A.M.
PROJECT NO: 001500
DATE: 5/27/83
SCALE: AS SHOWN
DRAWING NO. 2 OF 5

F-82-87 OCTOBER 6, 1983

882



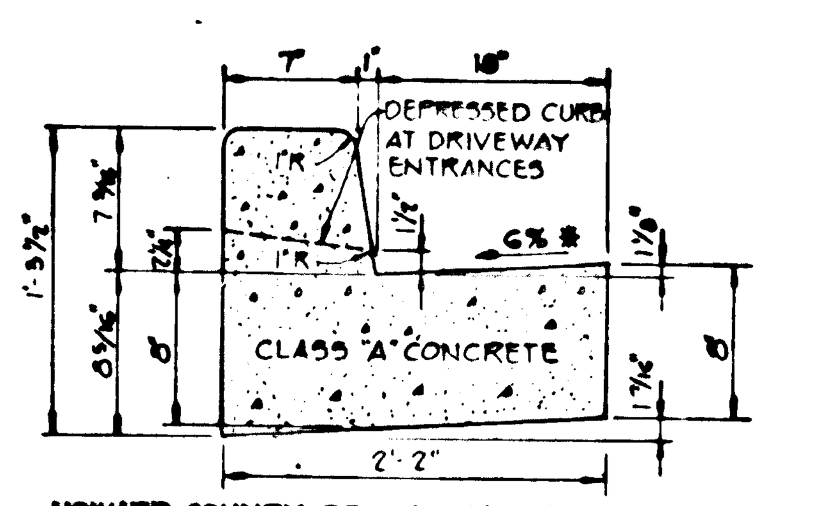
HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

(6 1/2 PAVING, P-2)

PUBLICLY MAINTAINED AREAS AND PRIVATELY MAINTAINED AREAS

TYPICAL PAVING SECTION

NO SCALE

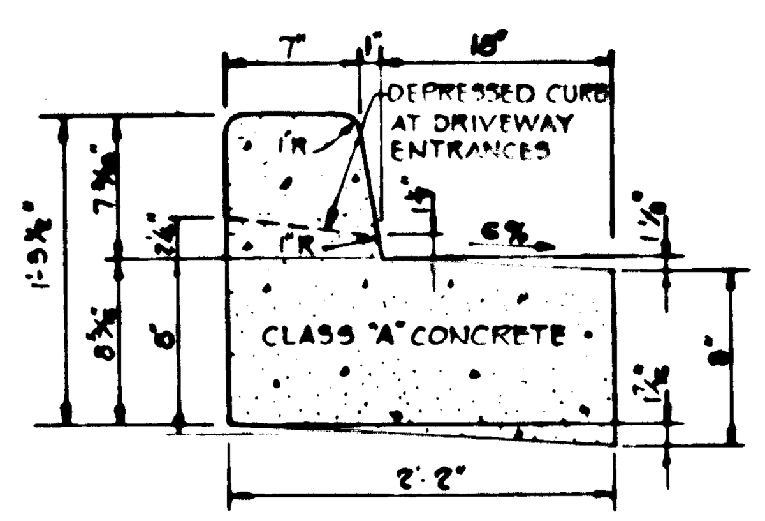


HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01)

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

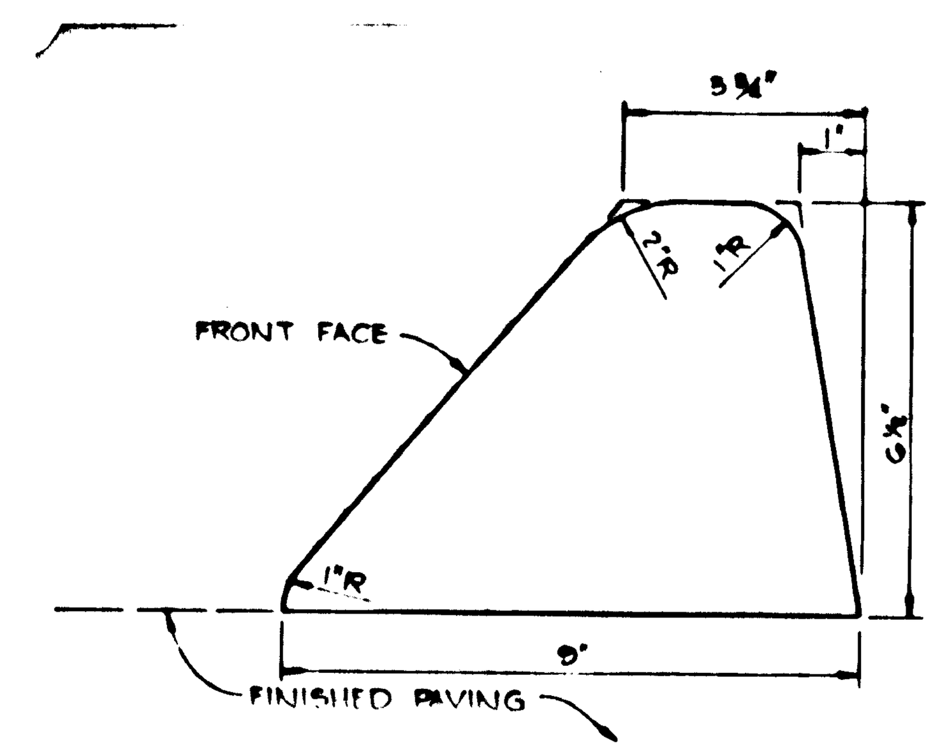
STANDARD 7" COMBINATION CURB AND GUTTER

No Scale



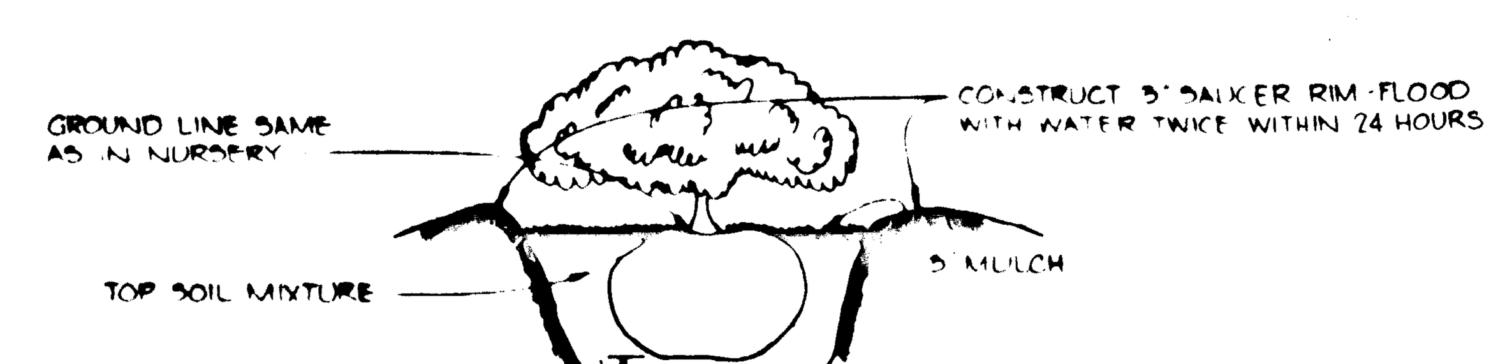
REVERSE 7" COMBINATION CURB AND GUTTER

No Scale



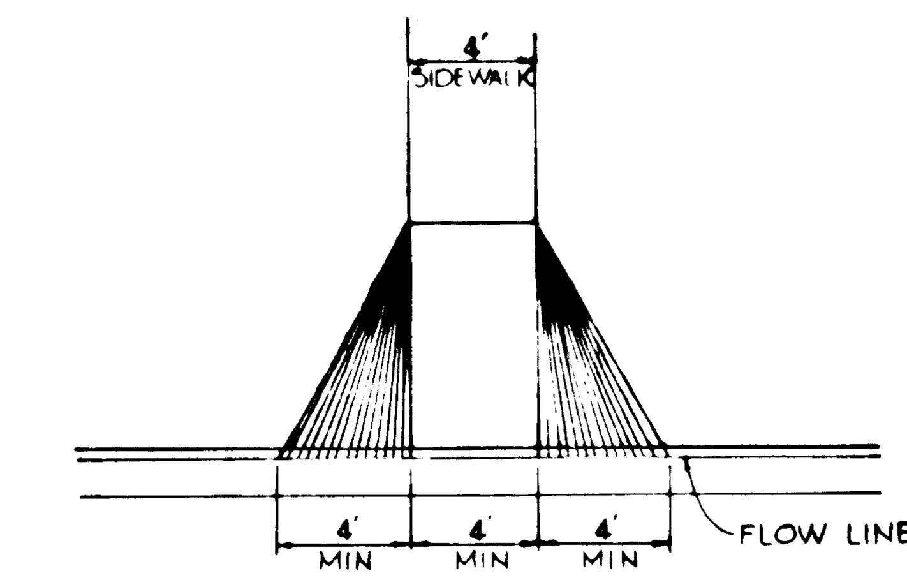
BITUMINOUS CURB

No Scale

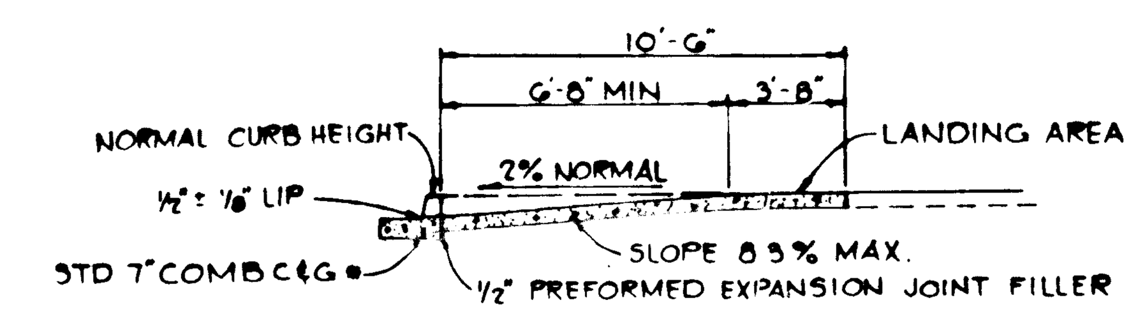


SHRUB PLANTING DETAIL

No Scale



PLAN



SURFACE TEXTURE OF CONCRETE RAMP SHALL BE COARSE BROOMING OR OTHER NON-SKID TYPE FINISH

* STANDARD 7" COMBINATION CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MOD CURB AND GUTTER AND BIT. CURB EXCEPT THAT FLOW LINE LIP IS TO BE OMITTED.

SECTION

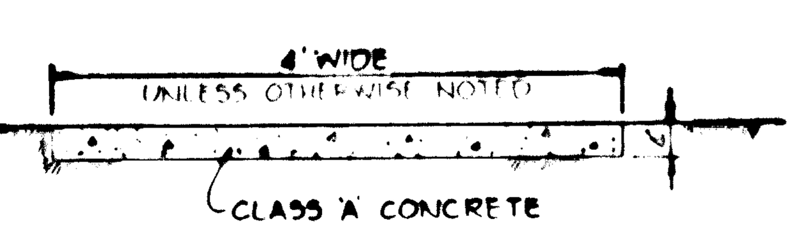
TYPICAL HANDICAP RAMP TYPE 'B'

No Scale

NOTES:

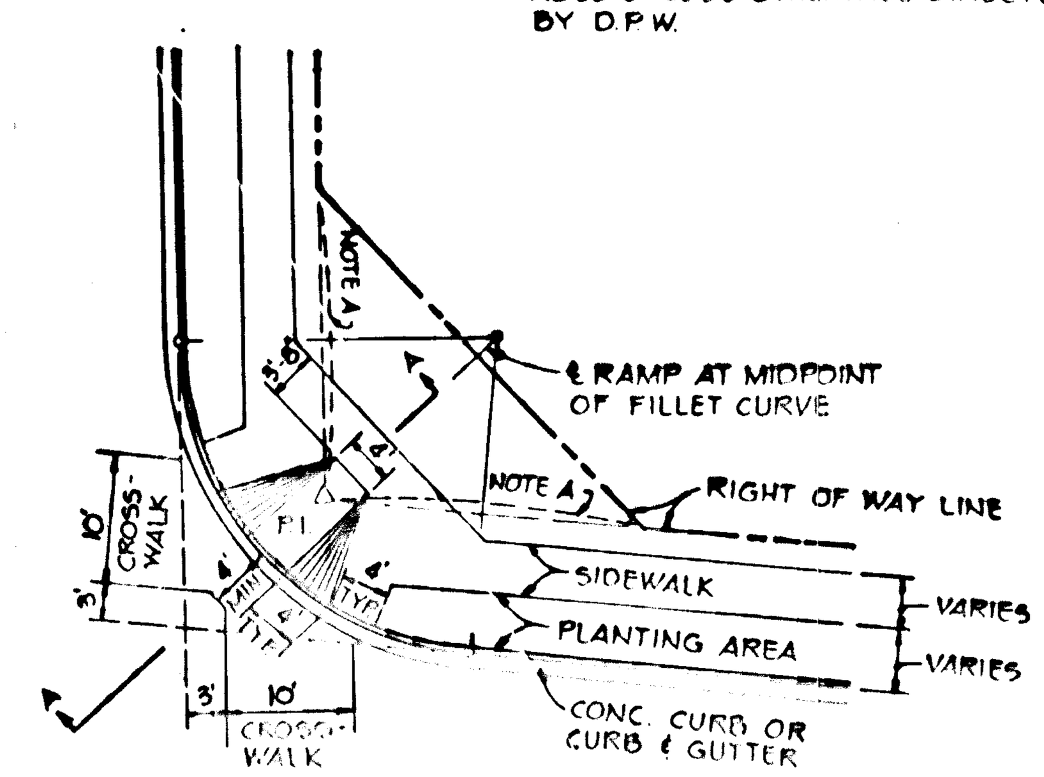
A. RIGHT OF WAY LINE TRUNCATION TO BE SET 25' FROM P.I. ALONG EACH OF THE INTERSECTING LINES AS SET FORTH IN SECTION 16-115, PAR. F5 OF SUBDIVISION REGULATIONS. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT OF WAY LINE TO BE 1 FOOT.

B. TYPE 'A' RAMP TO BE USED FOR ALL NEW CONSTRUCTION WHERE APPLICABLE UNLESS OTHERWISE DIRECTED BY D.P.W.

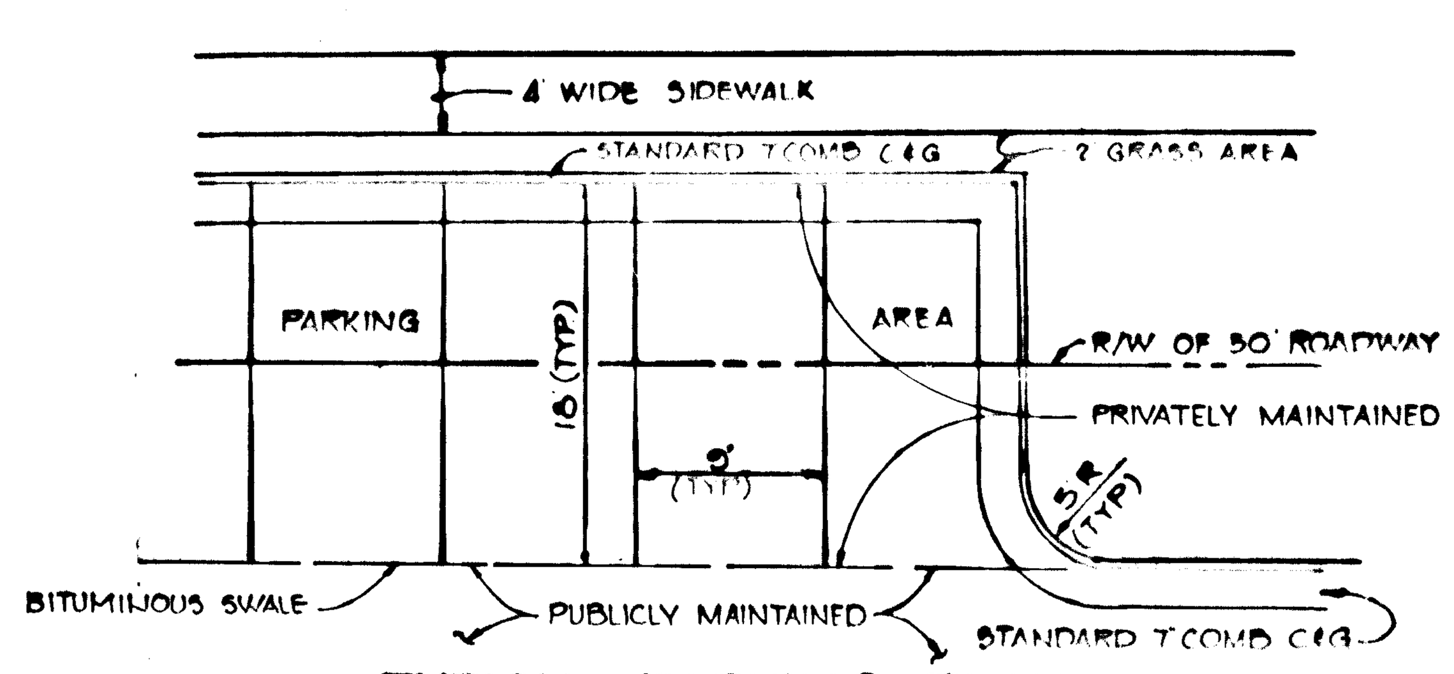


SIDEWALK DETAIL

No Scale

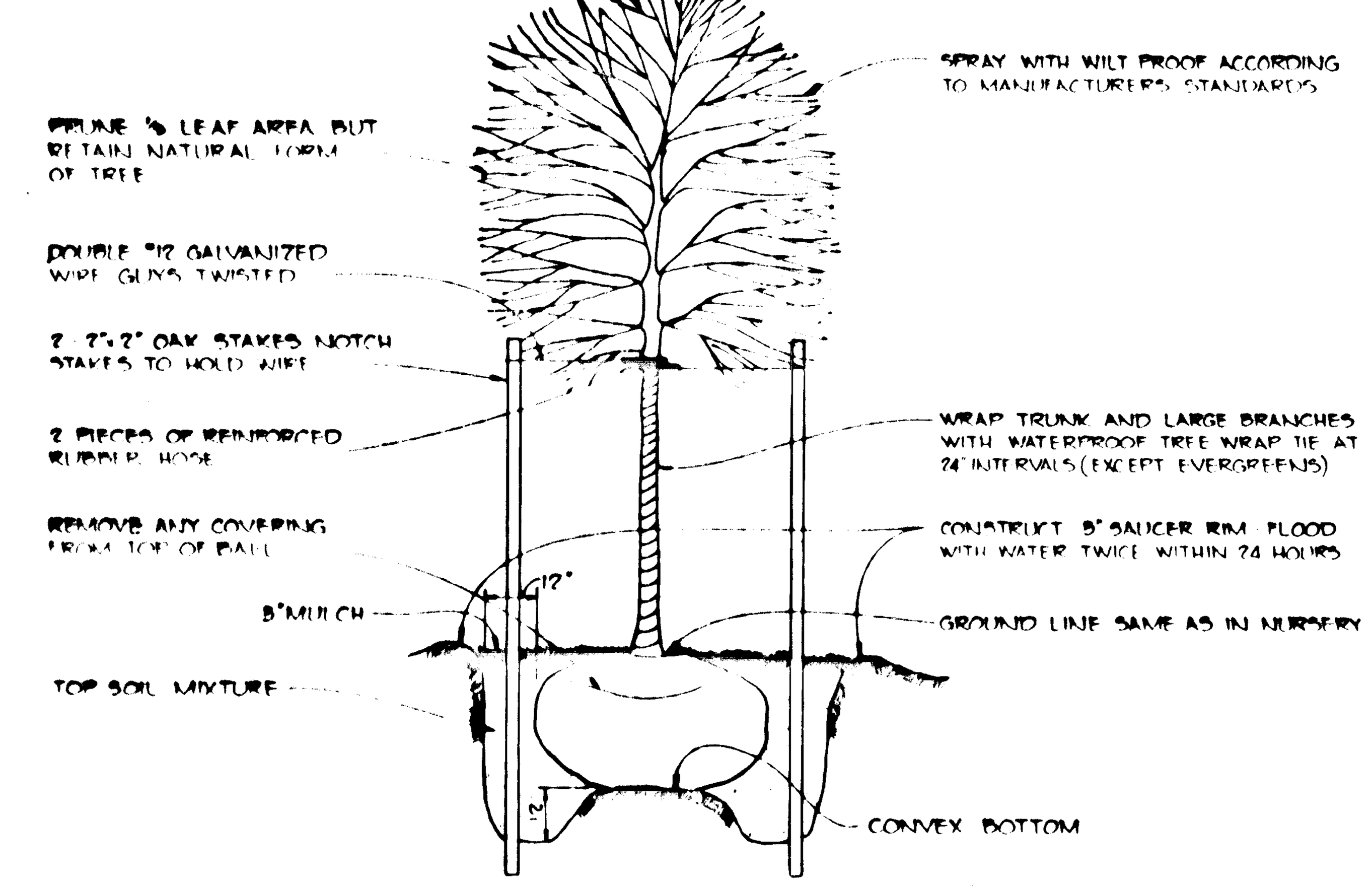


PLAN



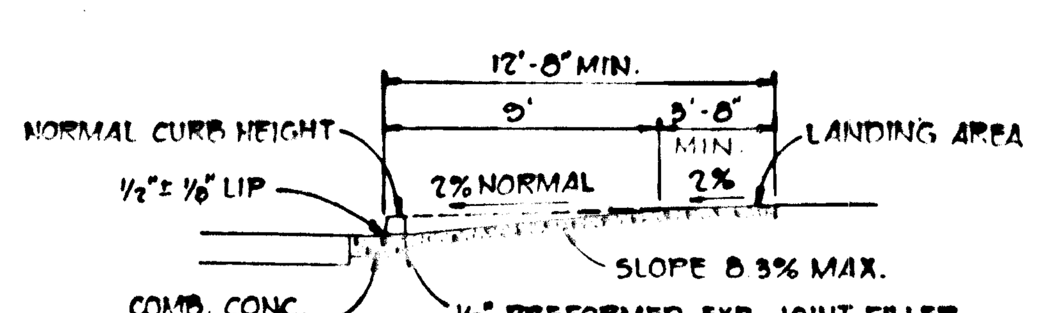
TYPICAL PARKING PLAN

NO SCALE



TREE PLANTING DETAIL

No Scale



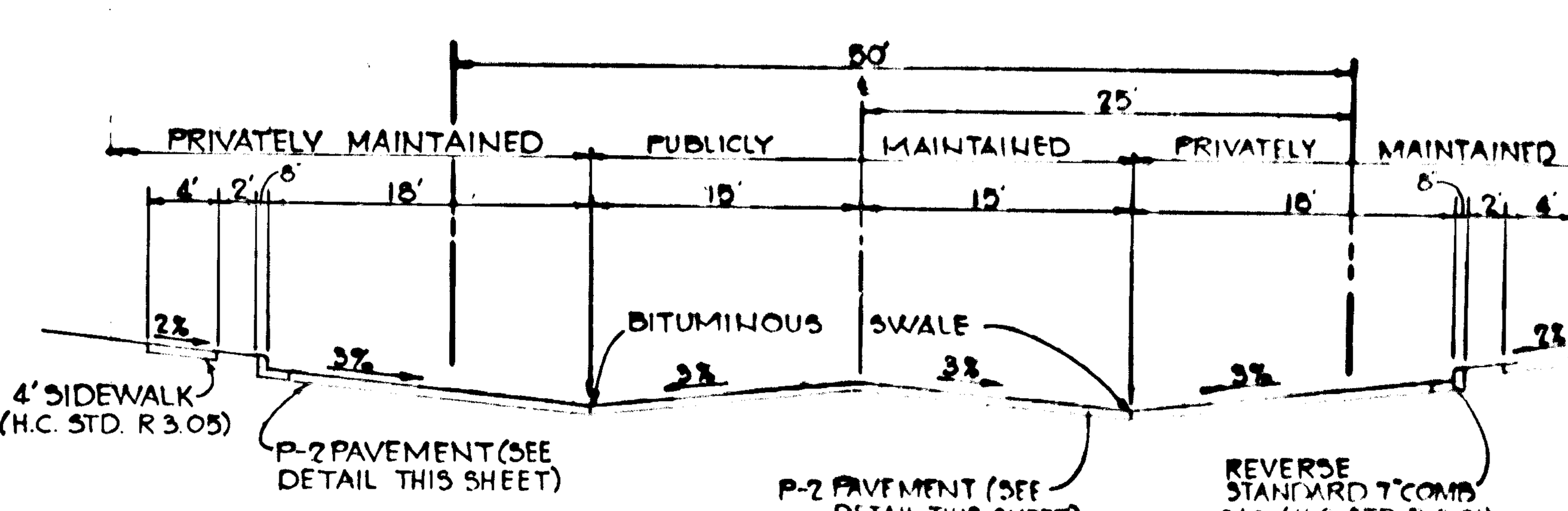
SURFACE TEXTURE OF CONC. RAMP SHALL BE COARSE BROOMING OR OTHER NON-SKID TYPE FINISH.

* STANDARD 7" COMBINATION CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MOD. CURB AND GUTTER AND BIT. CURB EXCEPT THAT FLOW LINE LIP IS TO BE OMITTED.

SECTION 'A'-'A'

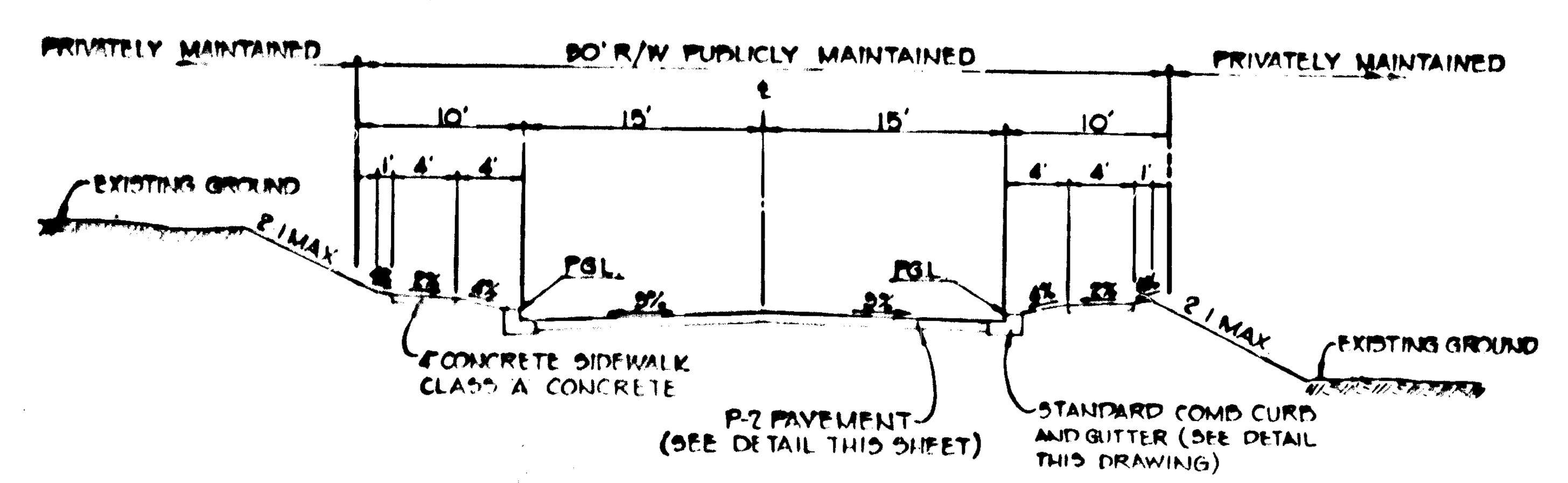
TYPICAL HANDICAP RAMP TYPE 'A'

No Scale



TYPICAL SECTION THROUGH PARKING

No Scale



HARVEST WAY - STA 8+65.11 TO STA 15+51.06

CROSS TIMBERS - STA 0+52.75 TO STA 1+77.51

DESIGN SPEED - 35 M.P.H.

TYPICAL SECTION - 50' R/W

No Scale

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

(signature) 10-21-83

CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

(signature) 10-17-83

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

SETTLER'S LANDING ASSOCIATES
BRANTLEY DEVELOPMENT CORPORATION GENERAL PARTNER
SUITE 105, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

PROJECT: SETTLER'S LANDING
SECTION 2, AREA 1 LOTS 96 THRU 134

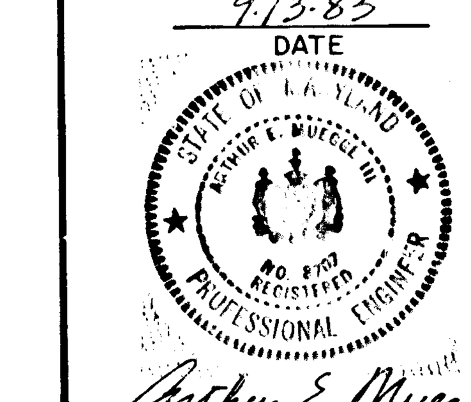
AREA: ELECTION DISTRICT Nº6 HOWARD COUNTY MARYLAND
TAX MAP Nº50 PARCEL 346

TITLE: DETAILS

THE RIEMER GROUP, INC.

The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301 461-2690

9-13-83
DATE



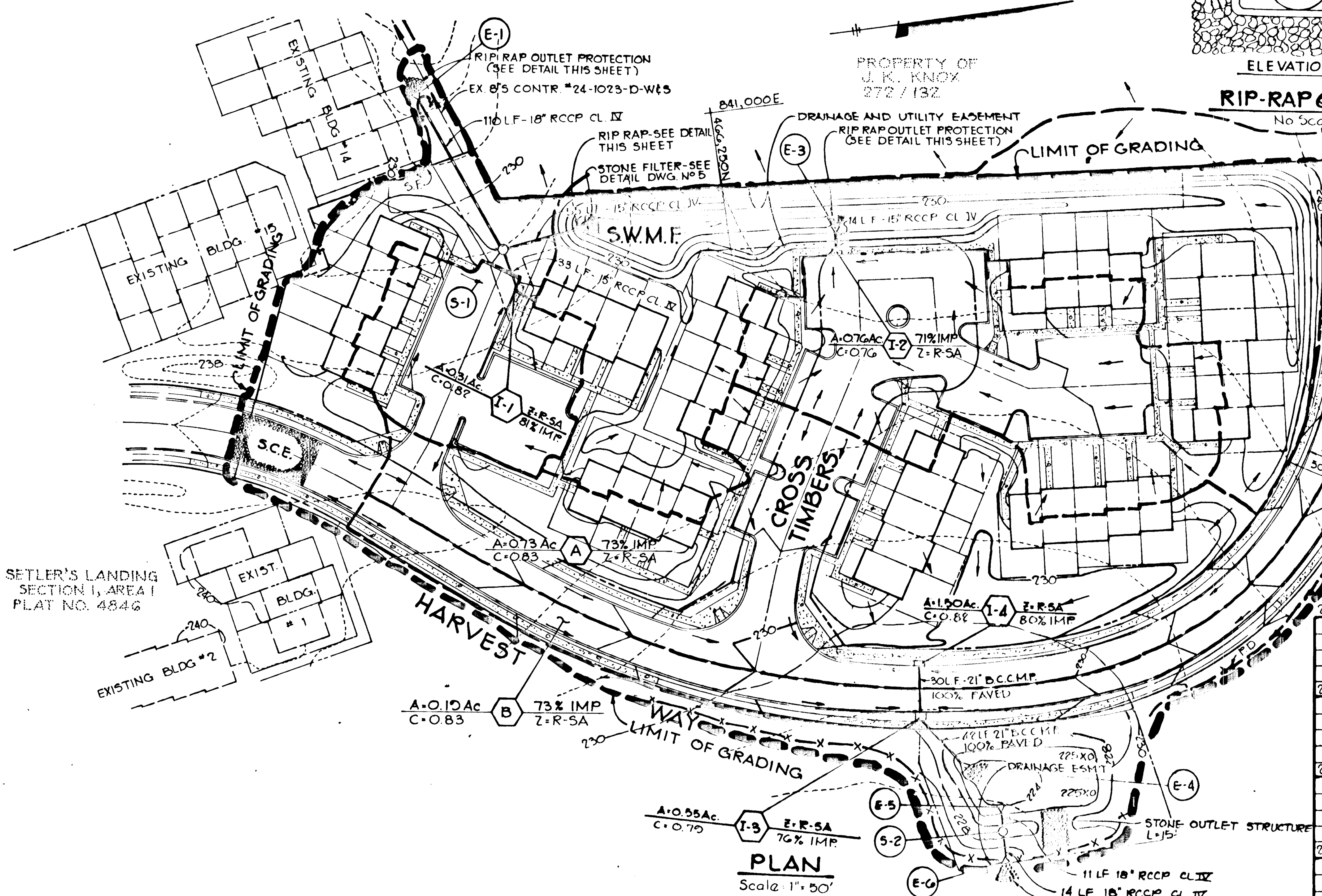
(signature)

FORMERLY EASTON (P-80-20)	
DESIGNED BY:	L.J.D.
DRAWN BY:	D.A.M.
PROJECT NO:	001500
DATE:	5/27/83
SCALE:	AS SHOWN
DRAWING NO.	3 OF 5

F-82-87

AUGUST 10, 1983

882

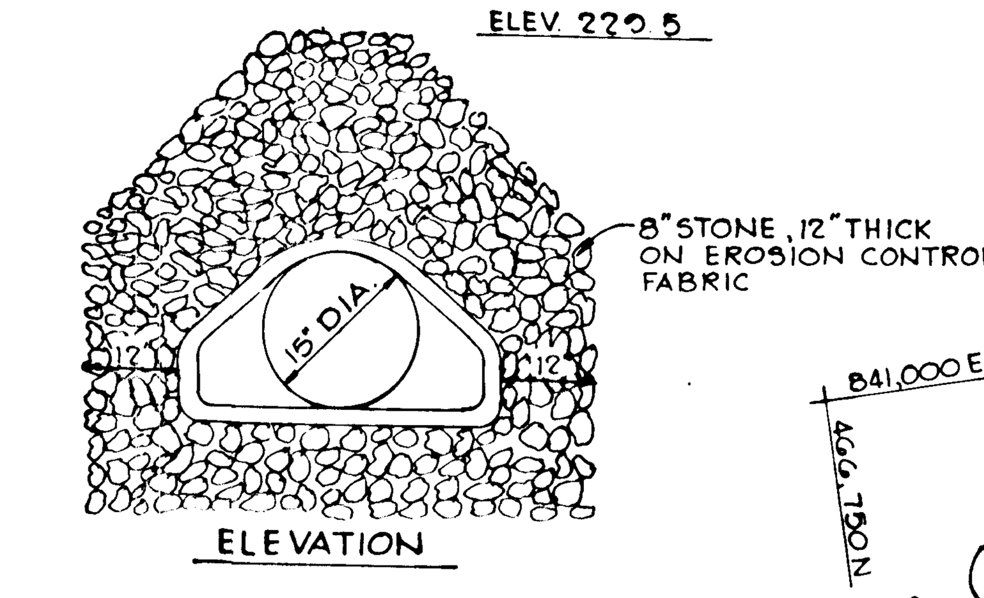


PLAN

Scale 1"=50'

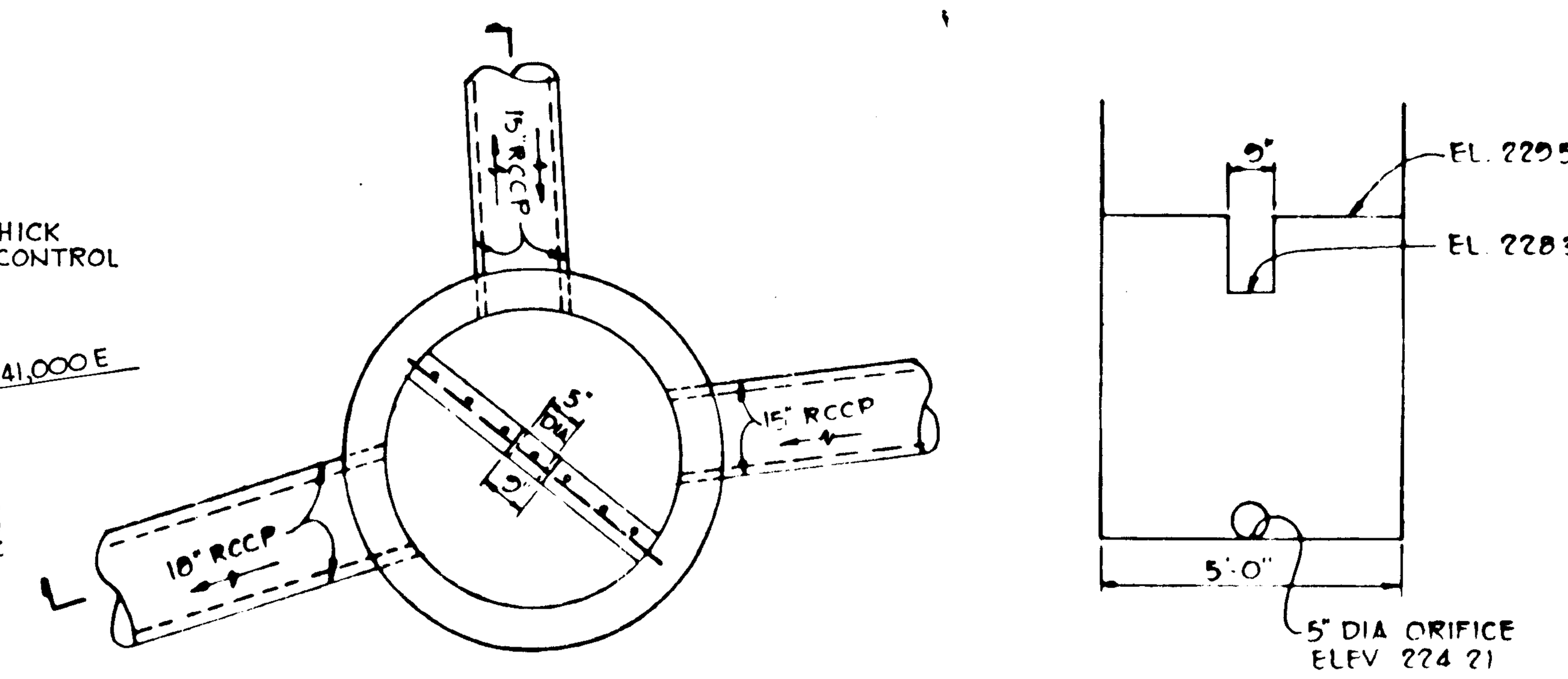
SEDIMENT TRAP DATA NO. 2

DRAINAGE AREA	2.65 Ac
DISTURBED AREA	1.67 Ac
VOLUME REQUIRED	4,810 CF
VOLUME PROVIDED	4,590 CF
CREST ELEVATION	228.5
BOTTOM ELEV.	226.5
CLEANOUT ELEV.	227.5
BOTTOM DIMENSION	27'x85'



RIP-RAP @ E-2

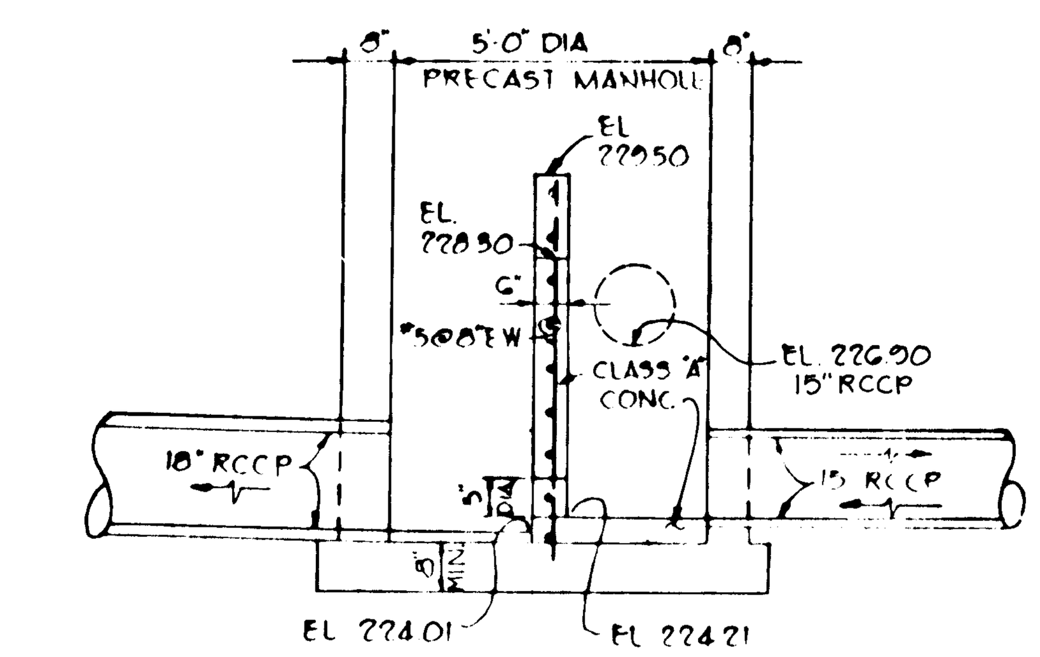
No Scale



PLAN

WEIR DETAIL

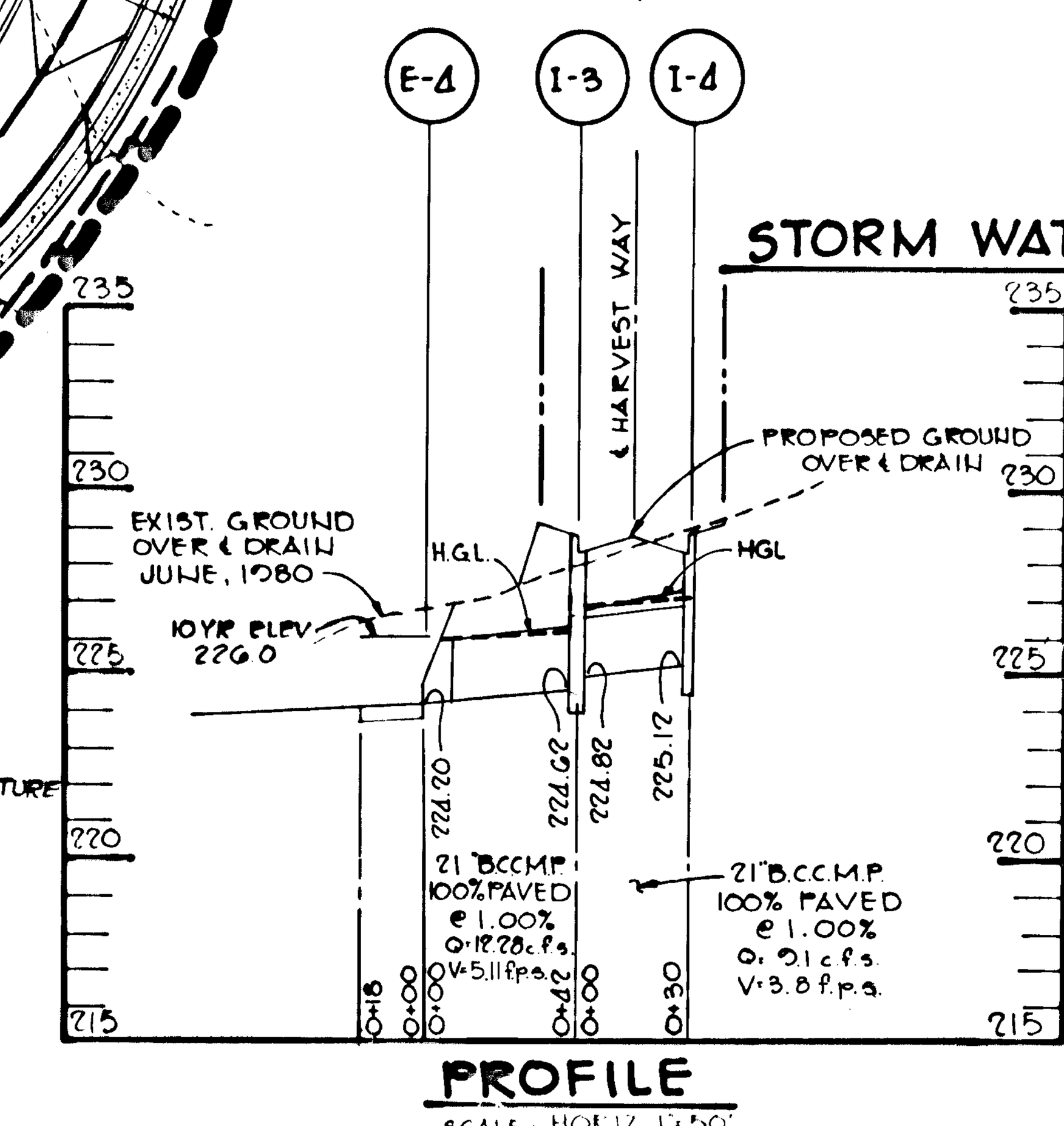
NOTE: CARRY REINFORCING STEEL INTO WALLS & BASE. GROUT AROUND STEEL PRIOR TO POURING WEIR.



SECTION

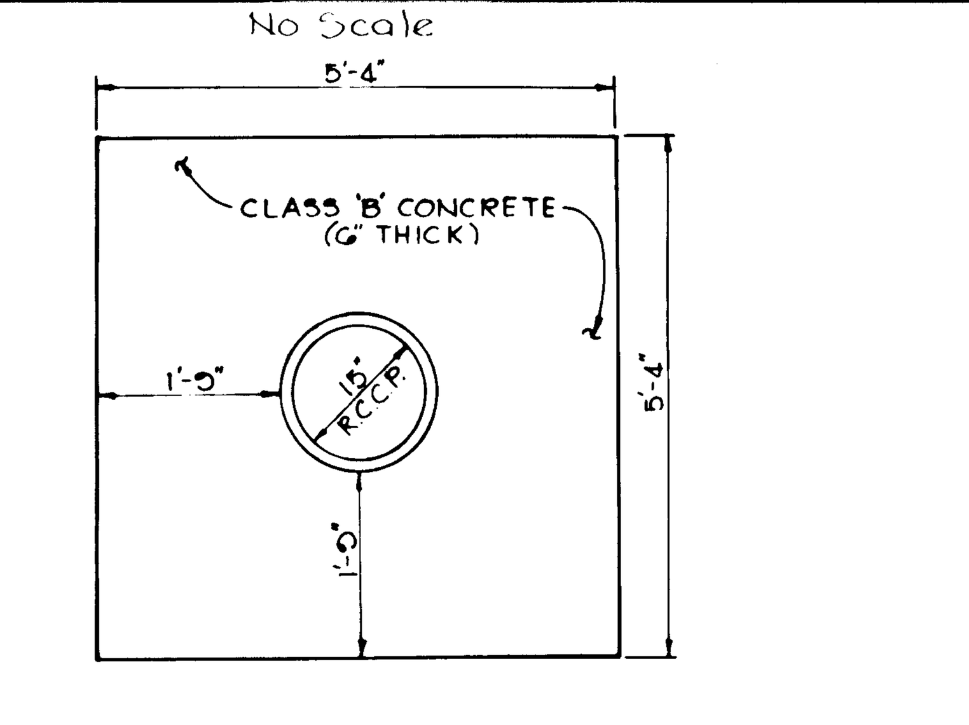
STORM WATER MANAGEMENT STRUCTURE S-1

No Scale



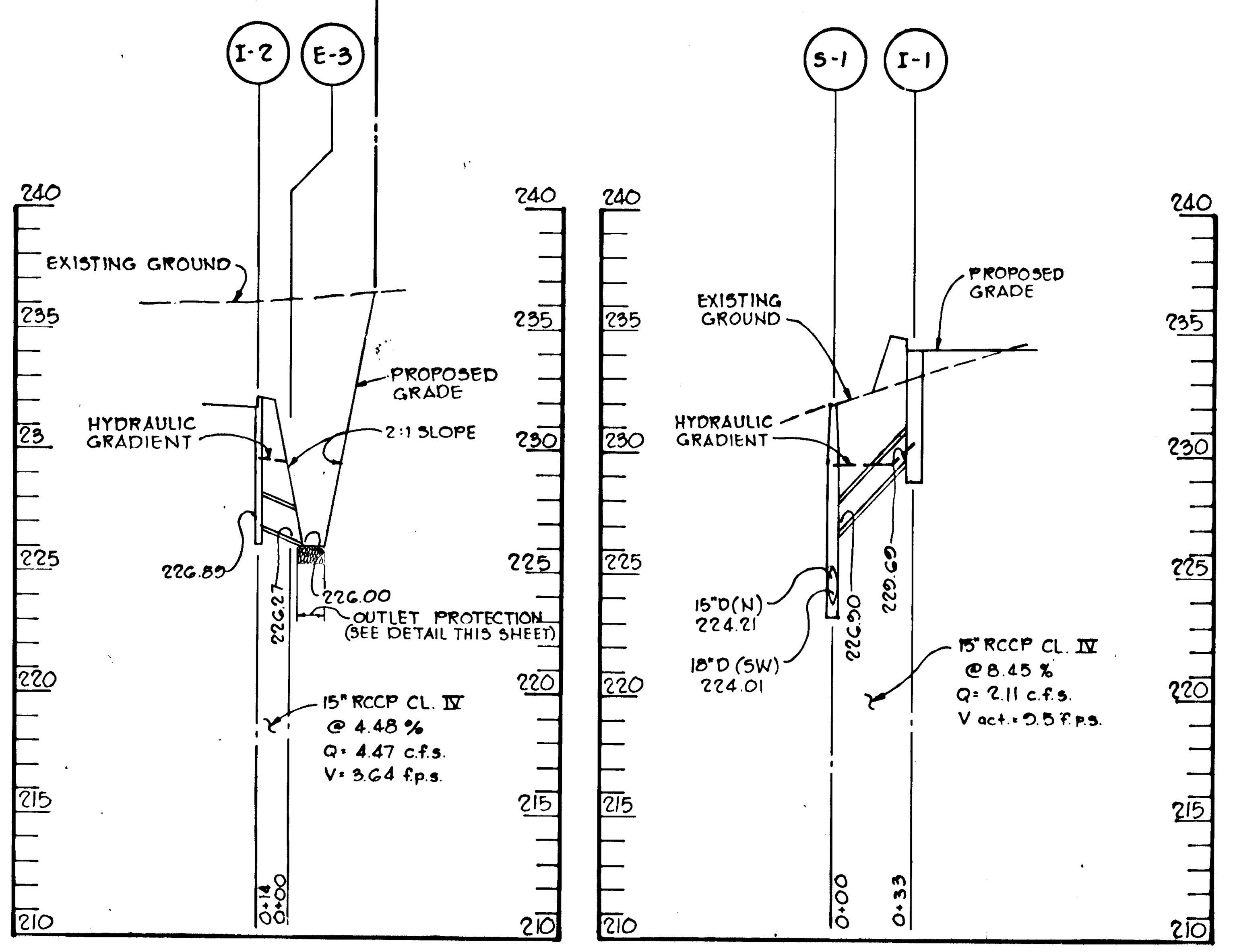
PROFILE

SCALE HORIZ 1"=50' VERT 1"=5'



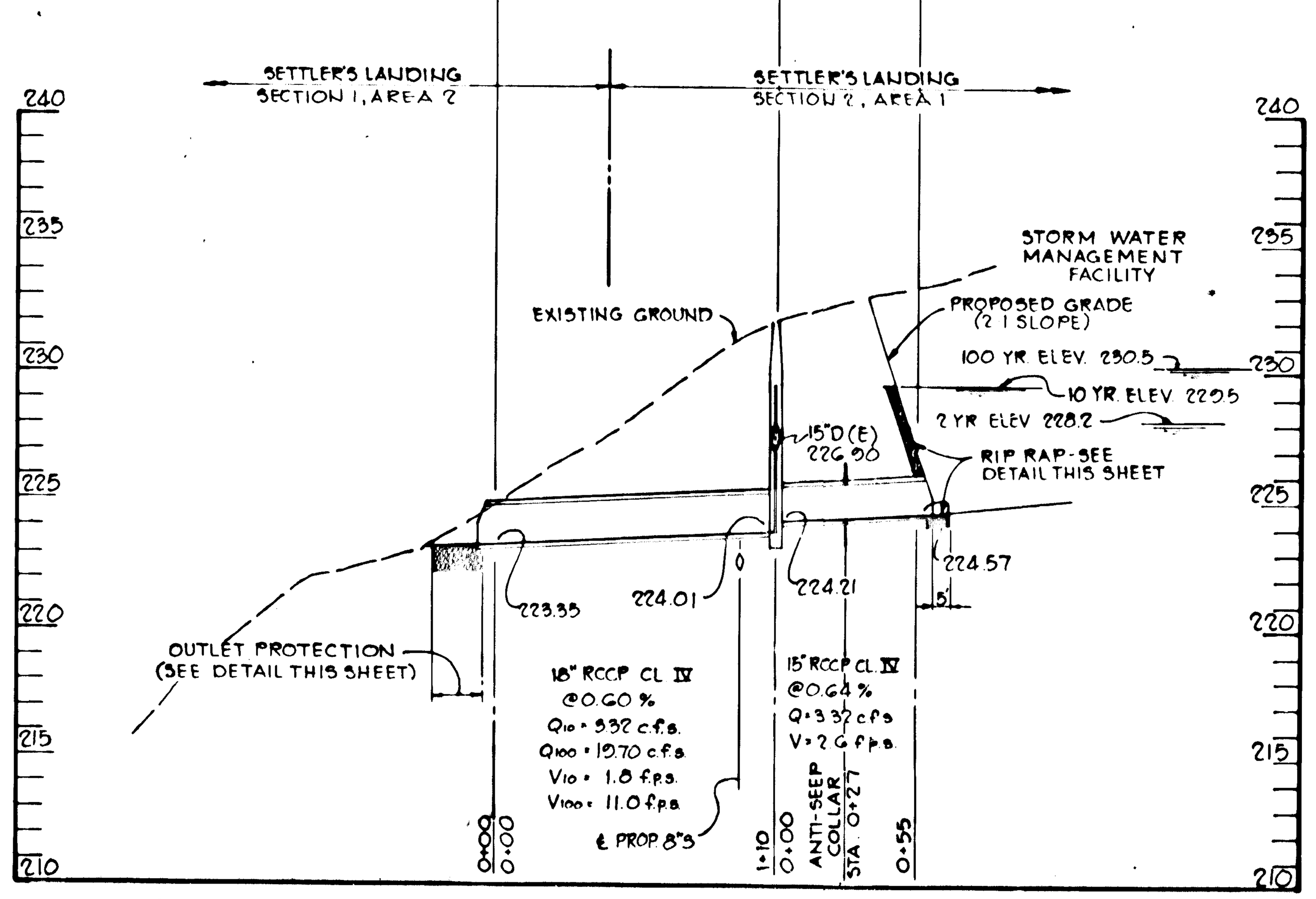
ANTI-SEEP COLLAR

No Scale

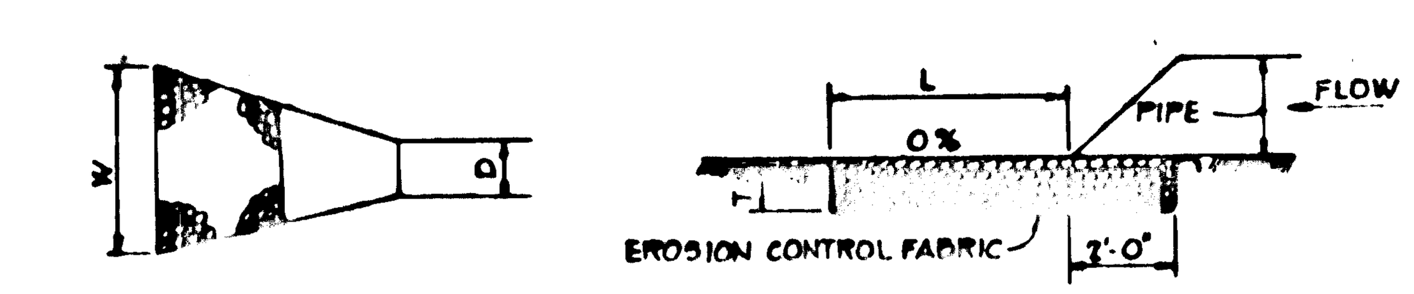


PROFILES

Scale H: 1"=50' V: 1"=5'



STORM WATER MANAGEMENT SPILLWAY STRUCTURE



PLAN SECTION

STRUCTURE	MEDIUM STONE DIA	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	6"	17'	18.5'	0.5'
E-3	3"	8'	9.3'	0.8'
E-4	5"	12'	13.5'	0.9'
E-6	6"	12'	13.5'	0.9'

OUTLET PROTECTION DETAIL

No Scale

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

[signature] 10-17-83

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 10-21-83

CHIEF, BUREAU OF ENGINEERING — DATE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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."

[signature] 10/11/83

SIGNATURE OF DEVELOPER — DATE

BY THE ENGINEER:

"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."

Arthur E. Mueller 9.13.83

SIGNATURE OF ENGINEER — DATE

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

[signature] 10-13-83

HOWARD S.C.D. — DATE

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

[signature] 10-14-83

SOIL CONSERVATION SERVICE — DATE

DATE	NO.	REVISION
11/19/84	2	CHANGED V IN PROFILE BETWEEN I-4 & I-3 AND I-3 & E-4
1-10-84	1	REVISED SIZE & SLOPE OF PIPE BETWEEN I-4 & I-3 AND I-3 & E-4

OWNER / DEVELOPER

SETTLER'S LANDING ASSOCIATES
BRANTLEY DEVELOPMENT CORPORATION GENERAL PARTNER
SUITE 103, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

PROJECT: **SETTLER'S LANDING**
SECTION 2, AREA 1 LOTS 96 THRU 134

AREA: ELECTION DISTRICT Nº6 — HOWARD COUNTY MARYLAND
TAX MAP Nº50 — PARCEL 346

TITLE: DRAINAGE AREA MAP, S.W.M., GRADING & SEDIMENT CONTROL PLAN

THE RIEMER GROUP, INC.

The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
8659 Baltimore National Pike, Ellicott City, Maryland 21043 301 461-2600

9-13-83 DATE

[Professional engineer seal — State of Maryland]

Arthur E. Mueller

FORMERLY EASTON (P-80-20)	
DESIGNED BY:	L.J.D.
DRAWN BY:	D.A.M.
PROJECT NO:	201500
DATE:	5-27-83
SCALE:	AS SHOWN
DRAWING NO.	4 OF 5

F-82-87 OCTOBER 6, 1983

SEDIMENT CONTROL CONSTRUCTION NOTES
GENERAL NOTES

1. 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 (922-2070).
2. ALL SEDIMENT CONTROL STRUCTURES WILL BE INSTALLED IN ACCORDANCE WITH "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" AS PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
3. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
4. ALL DISTURBED AREAS ARE TO BE DRESSED AND STABILIZED ACCORDING TO THE TEMPORARY OR PERMANENT SEEDING SCHEDULES AS SOON AS PROPER WEATHER CONDITIONS EXIST FOR THE ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER.
5. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN THE DEPTH REACHES THE CLEAN OUT ELEVATION SHOWN ON THE PLANS.
6. FERTILIZER AND LIME RATES MAY BE CHANGED THROUGH AUTHORIZATION BY THE HOWARD SOIL CONSERVATION DISTRICT IF SOIL TESTS DETERMINE A REDUCTION IN THE SPECIFIED RATES IS JUSTIFIED.
7. 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.
8. REFERENCES CALLED FOR ON THE SEDIMENT CONTROL CONSTRUCTION PLAN AND DETAILS ARE MADE TO "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS".
9. SEDIMENT CONTROL WILL BE INSTALLED BEFORE CLEARING AND GRUBBING REMAINDER OF SITE.

TEMPORARY SEEDING

AREA TO BE SEEDED SHALL BE RECENTLY LOOSENED. IF THE GROUND IS PACKED, CRUSTED OR HARD, THE TOP LAYER OF SOIL SHALL BE LOOSENED BY DISCING, RACKING OR OTHER ACCEPTABLE MEANS.

A. APPLY 10-20-10 FERTILIZER (OR EQUIVALENT) AT THE RATE OF 600 LBS. PER ACRE OR 15 LBS. PER 1000 SQ. FT.

B. WHERE SOIL IS KNOWN TO BE HIGHLY ACID, APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TON PER ACRE.

C. WORK BOTH INTO SOIL AND SEED WITH CYCLONE SEEDER, DRILL, CULTIPAKER SEEDER OR HYDROSEEDER (SLURRY WILL INCLUDE SEED AND FERTILIZER) AT THE RATE OF 40 LBS. PER ACRE OF ITALIAN OR PERENNIAL RYEGRASS.

D. MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS. PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.

PERMANENT SEEDING

FINAL STABILIZATION WILL TAKE PLACE AS SOON AS POSSIBLE AS WEATHER CONDITIONS PERMIT, AS FOLLOWS:

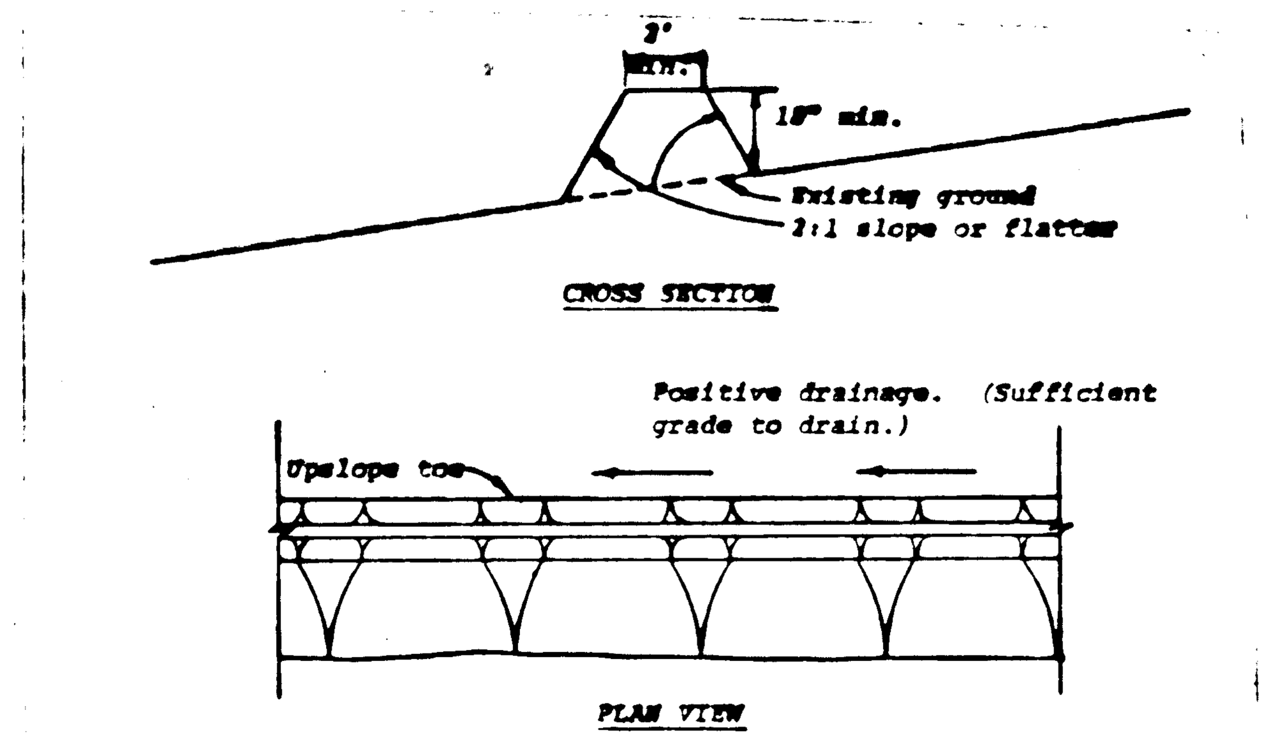
A. APPLY DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE (ONE TON PER ACRE IF APPLICATION OF TON PER ACRE WAS MADE FOR TEMPORARY SEEDING).

B. APPLY 0-20-20 FERTILIZER AT THE RATE OF 600 LBS. PER ACRE HARROW OR DISC LIME AND 0-20-20 FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 3" LAWNS OR HIGH MAINTENANCE AREAS WILL BE DRAGGED AND LEVELED WITH A YORK RAKE. AT THE TIME OF SEEDING APPLY 400 POUNDS OF 38-0-0 UREAFORM FERTILIZER AND 500 LBS. OF 10-20-20 OR EQUIVALENT FERTILIZER PER ACRE.

C. SEED WITH A MIXTURE OF CERTIFIED "MERION" KENTUCKY BLUEGRASS - 40 LBS. PER ACRE; COMMON KENTUCKY BLUEGRASS @ 40 LBS. PER ACRE; RED FESCUE, PENNLAWN OR JAMESTOWN @ 20 LBS. PER ACRE.

D. MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.

E. SEED ALL SLOPES WITH A MIXTURE OF CERTIFIED KENTUCKY 31 TALL FESCUE @ 50 LBS. PER ACRE AND INOCULATED KOREAN LESPEDEZA @ 15 LBS. PER ACRE.



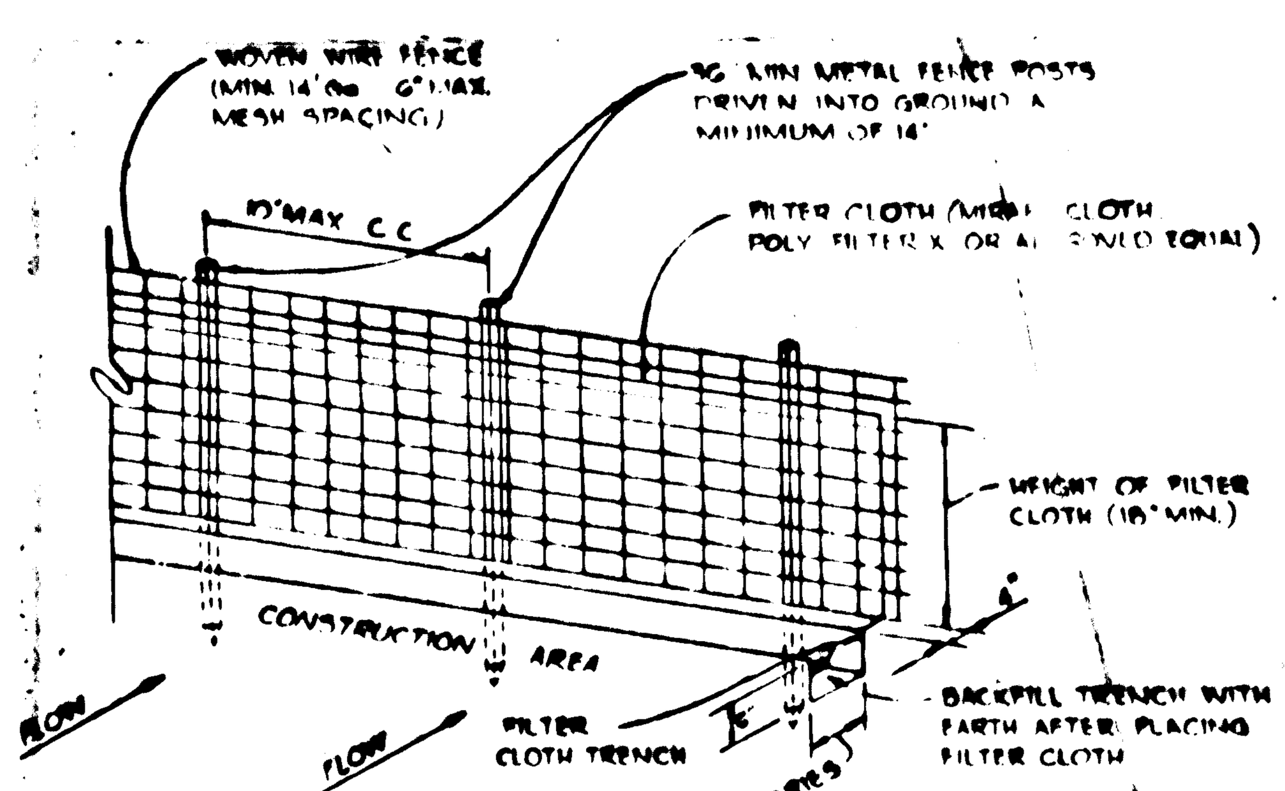
Construction Specifications

1. All dikes shall be machine compacted.
2. All perimeter dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area or into a level spreader or grade stabilization structure.
   B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, when required, shall be done in accordance with Standard and Specifications for Grassed Waterway. The minimum area to be stabilized shall be the channel flow area.
5. Periodic inspection and required maintenance shall be provided.

Standard Symbol —PD→

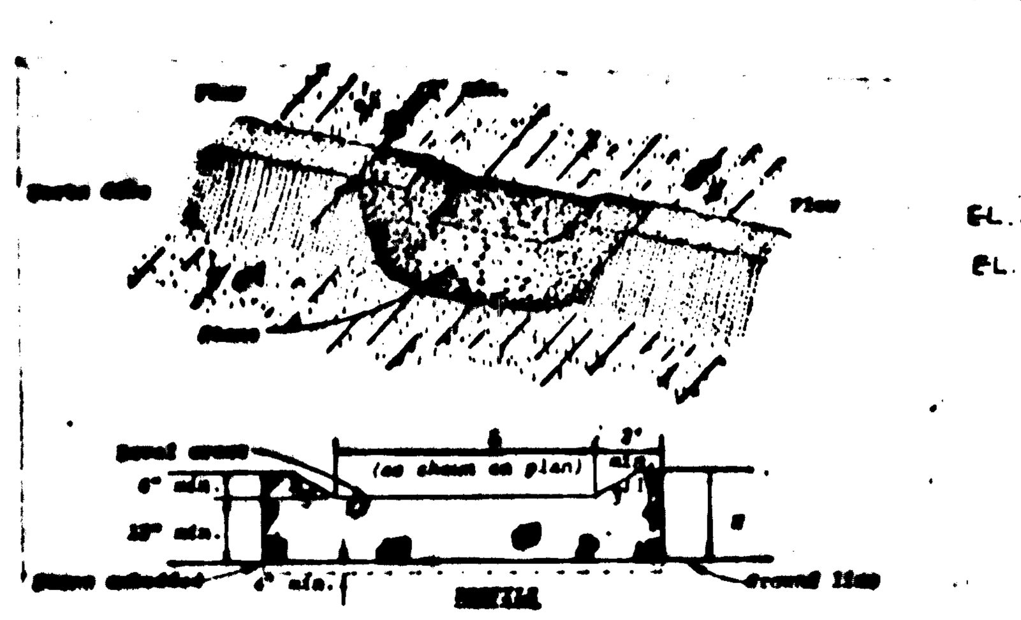
* Drainage area less than 5 acres

PERIMETER DIKE
No Scale



NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS BY USE OF WIRE TIES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE BY USE OF WIRE TIES SPACED EVERY 24"x24".
3. SILT FENCE TO BE PLACED IN LIEU OF STRAW BALES AND/OR DIVERSION DIKES AT THE OPTION OF THE DEVELOPER.

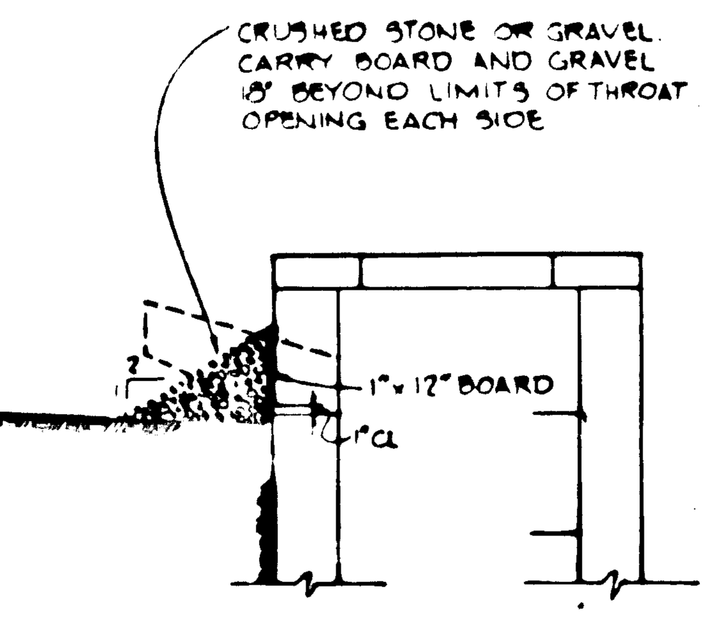
SILT FENCE DETAIL
No Scale



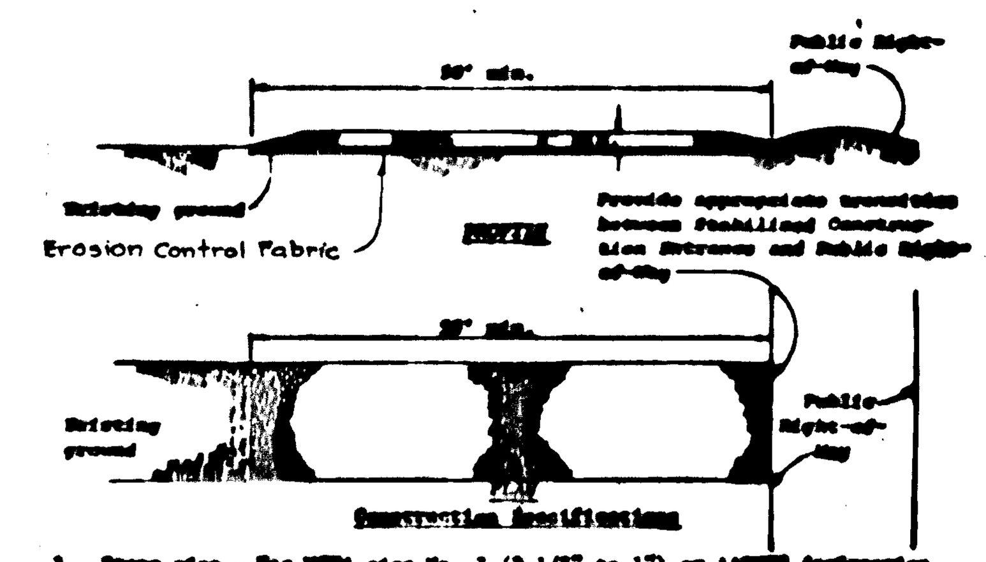
Construction Specifications

1. The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet NSMA Size No. 2 or AASHTO designation M43 Size No. 2 or 24.
2. The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of four inches.
4. The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
5. The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, washout, construction traffic damage, etc.

STONE OUTLET STRUCTURE
No Scale



TYPICAL INLET BLOCKING DETAIL
No Scale

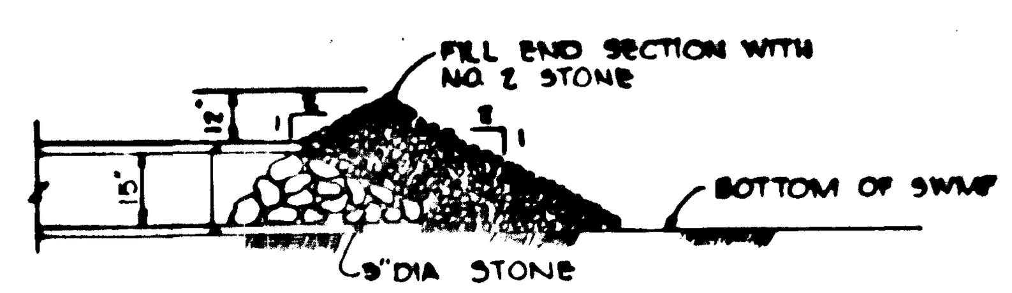


Construction Specifications

1. Stone size - Use NSMA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
2. Length - As effective, but not less than 50 feet.
3. Thickness - Not less than eight (8) inches.
4. Width - Not less than full width of all points of ingress or egress.
5. Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
6. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

Standard Symbol

STABILIZED CONSTRUCTION ENTRANCE
No Scale



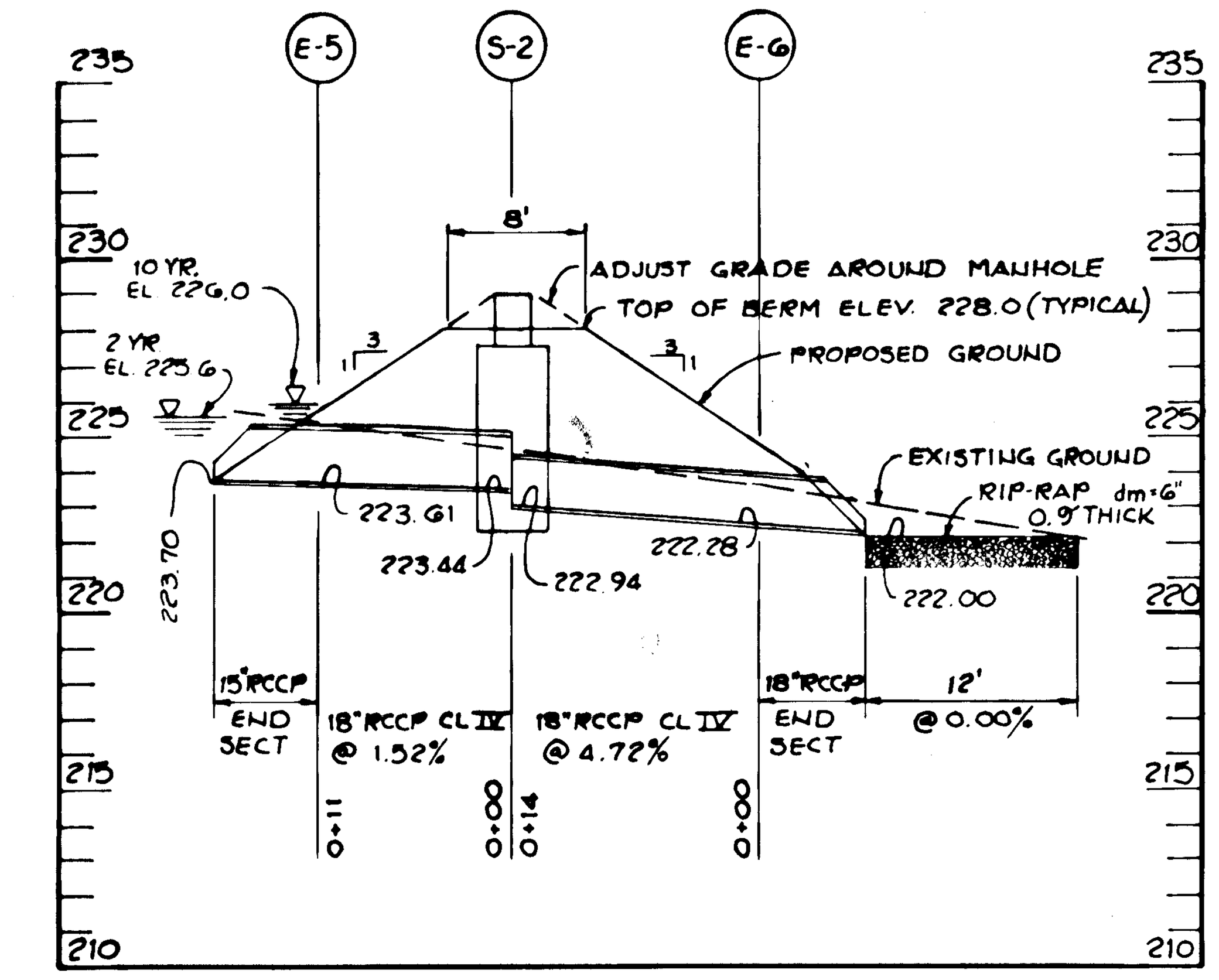
STONE FILTER @ E-2
NO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. CLEAR AND GRUB AREAS OF SEDIMENT CONTROL DEVICES.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
4. INSTALL STORM WATER MANAGEMENT/SEDIMENT CONTROL POND NO. 1 AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
5. INSTALL SEDIMENT TRAP NO. 2 WITH STONE OUTLET STRUCTURE, *SILT FENCE*, AND *PERIMETER DIKES* AND SEED IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.
6. COMPLETE GRADING.
7. INSTALL UTILITIES (WATER, SEWER AND STORM DRAINS).
8. BLOCK ALL INLETS IN ACCORDANCE WITH DETAIL.
9. COMPLETE ALL CONSTRUCTION AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
10. UPON APPROVAL OF THE SOIL CONSERVATION INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND CONVERT THE SEDIMENT POND NO. 1 INTO A PERMANENT STORM WATER MANAGEMENT FACILITY AS FOLLOWS:
    - (A) PUMP OUT ANY IMPOUNDED WATER.
    - (B) REMOVE SILT AND STONE FILTER AND RESTORE BASIN TO ORIGINAL DIMENSIONS. *FOR SWM FACILITY NO. 2, INSTALL CONTROL STRUCTURE AS SHOWN IN DETAILS.*
    - (C) REMOVED SILT SHALL BE SPREAD IN THE AREA BEHIND LOTS 78 THRU 87 AND THE WEST RIGHT-OF-WAY LINE OF FUTURE HARVEST WAY AND STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

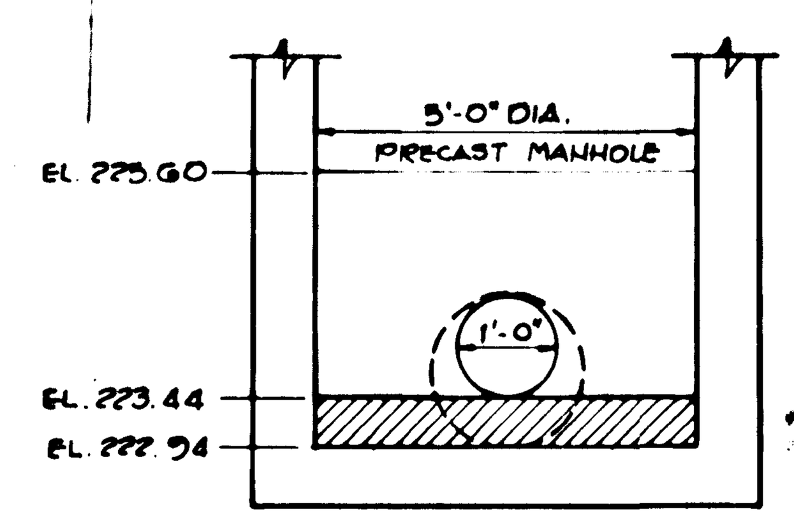
SITE ANALYSIS

1.) TOTAL AREA THIS SUBMISSION	4.73 Ac.
2) TOTAL AREA DISTURBED	4.73 Ac.
3) AREA OF IMPERVIOUS SURFACE	2.38 Ac.
4) AREA TO BE REVEGETATED	2.35 Ac.

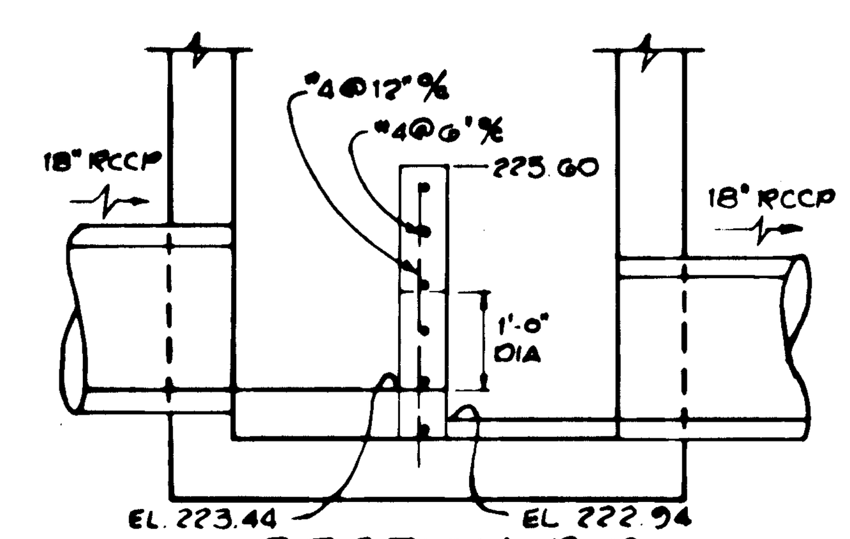


PROFILE
SCALE: H: 1"=5' V: 1"=10'

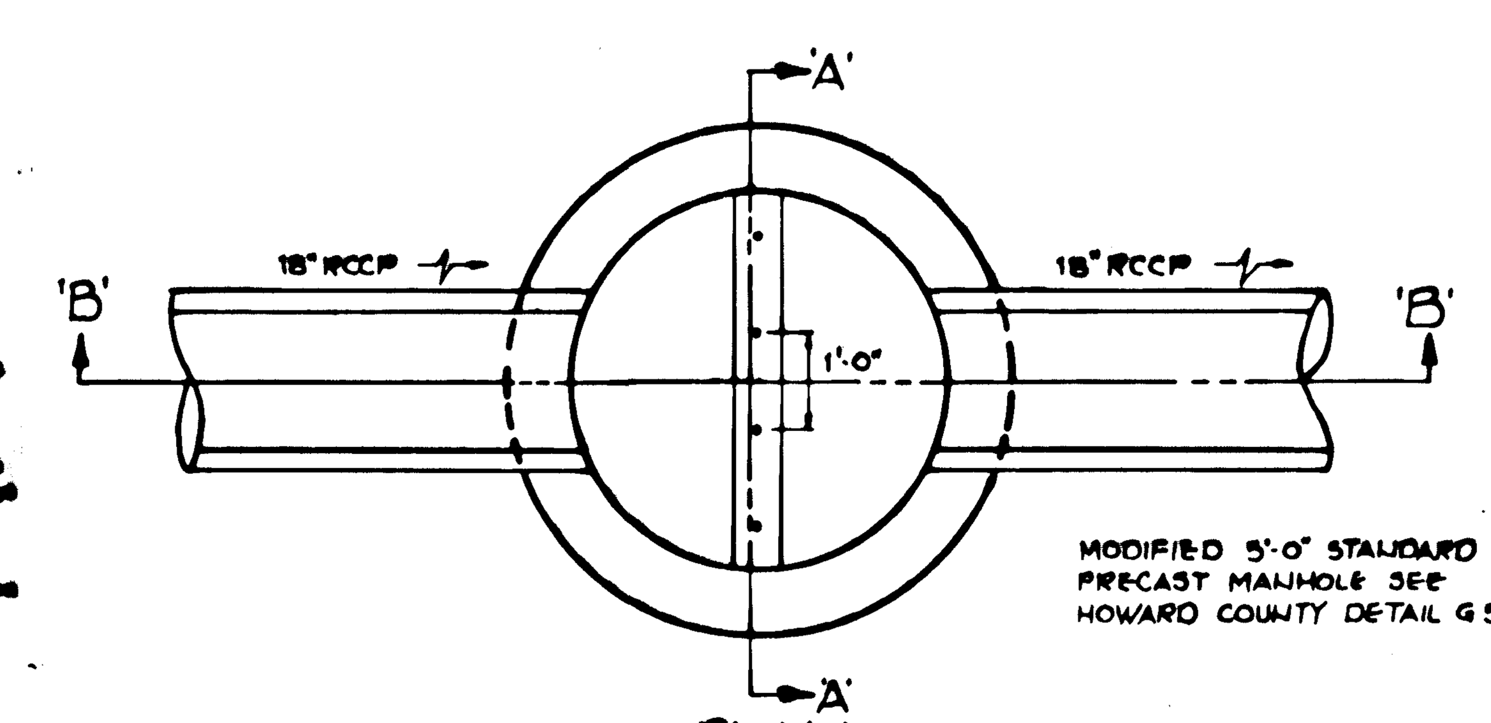
SWM POND #2



SECTION A-A



SECTION B-B



PLAN
SWM STRUCTURE S2

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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."

SIGNATURE OF DEVELOPER — DATE 10/11/83

BY THE ENGINEER:

"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."

Arthur E. Muegge — SIGNATURE OF ENGINEER — DATE 9.13.83

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

HOWARD S.C.D. — DATE 10-13-83

REVIEWED FOR Howard (NAME) S.C.D. AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 10-14-83

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 10-21-83

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 10-17-83

DATE	NO.	REVISION

OWNER/DEVELOPER

SETTLER'S LANDING ASSOCIATES
BRANTLEY DEVELOPMENT CORPORATION GENERAL PARTNER
SUITE 105, 5501 TWIN KNOLLS ROAD
COLUMBIA, MARYLAND 21045

PROJECT: **SETTLER'S LANDING**
SECTION 2, AREA 1 LOTS 96 THRU 134

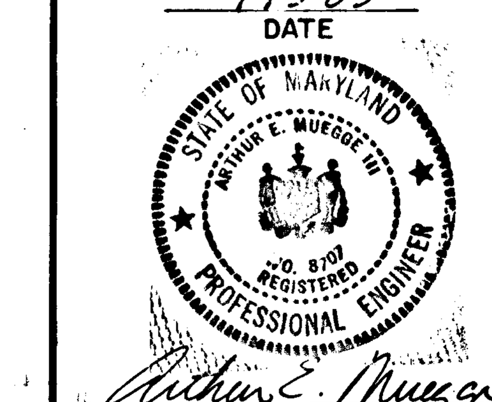
AREA
ELECTION DISTRICT Nº6 HOWARD COUNTY, MARYLAND
TAX MAP Nº50 PARCEL 346

TITLE:
SEDIMENT CONTROL AND STORM WATER MANAGEMENT DETAILS

THE RIEMER GROUP, INC.

The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301 461-2690

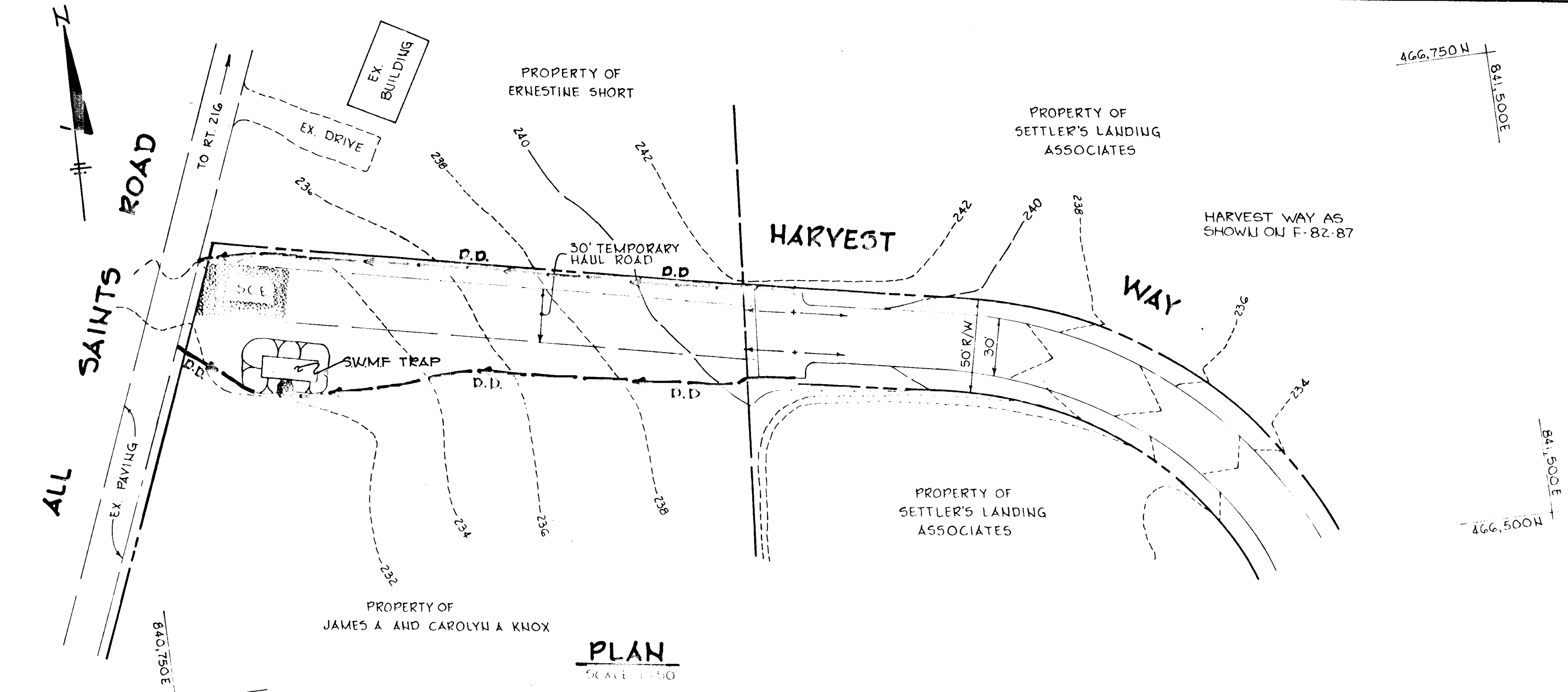
9.13.83
DATE



FORMERLY EASTON (P-80-20)	
DESIGNED BY:	J.K.T.
DRAWN BY:	D.A.M.
PROJECT NO	001500
DATE:	5/27/83
SCALE:	AS SHOWN
DRAWING NO.	5 OF 5

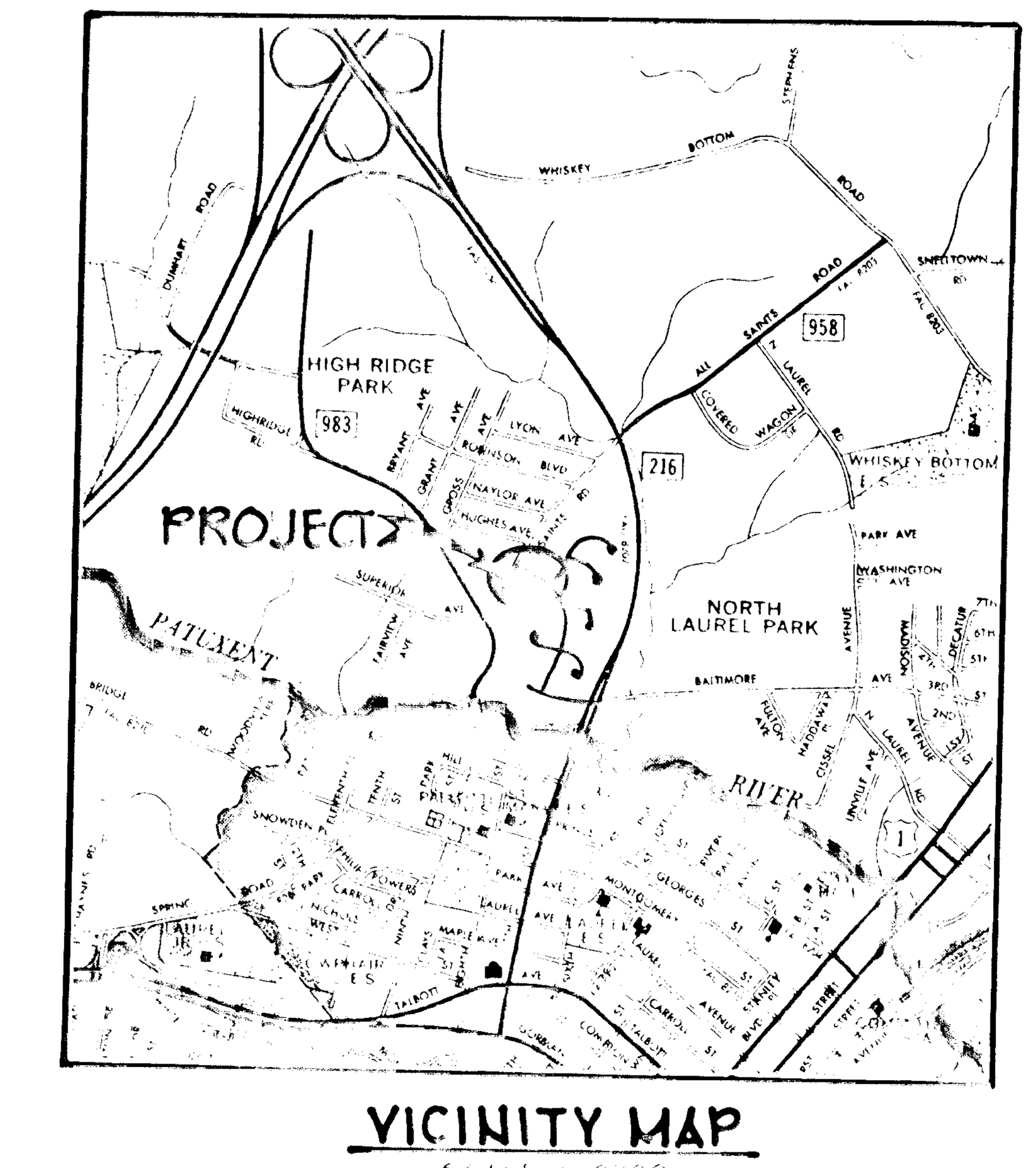
F-82-87

SEPTEMBER 13, 1983



PLAN

SCALE 1"=50'



VICINITY MAP

SCALE 1"=2000'

SEDIMENT CONTROL CONSTRUCTION NOTES

GENERAL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction. (992-2437)
2. All sediment control structures will be installed in accordance with '1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control' as published by Soil Conservation Service, Water Resources Administration and State Soil Conservation Committee.
3. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
4. All perimeter sediment control structures, dikes, swales, ditches, perimeter slopes and all slopes greater than 3:1 will be stabilized with in (7) seven calander days and all other disturbed or graded areas on the site with in (14) fourteen calender days.
5. Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.
6. Fertilizer and lime rates may be changed through authorization by the Howard Soil Conservation District if soil test determine a reduction in the specified rates is justified.
7. 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.
8. References called for on the sediment control construction plan and details are made to '1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control.'
9. Sediment control will be installed before clearing and grubbing remainder of the site.

TEMPORARY SEEDING

Area to be seeded shall be recently loosened. If the ground is packed, crusted or hard, the top layer of soil shall be loosened by discing, raking or other acceptable means.

A. Apply 10-20-10 fertilizer (or equivalent) at the rate of 600 lbs. per acre or 15 lbs. per 1000 square feet.
B. Where soil is known to be highly acid, apply dolomitic limestone at the rate of 1 ton per acre.
C. Work both into soil and seed with cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry will include seed and fertilizer) at the rate of 40 lbs. per acre of Italian or perennial ryegrass.
D. Mulch with unweathered small grain straw at the rate of 1½ to 2 tons, per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gal. per 1000 square feet.

PERMANENT SEEDING

Final stabilization will take place as soon as possible as weather conditions permit, as follows:

A. Apply dolomitic limestone at the rate of 2 tons per acre (one ton per acre if application of ton per acre was made for temporary seeding.)
B. Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre harrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3" lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding apply 400 pounds of 30-0-0 ureaform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.
C. Seed with a mixture of certified "Merion" Kentucky bluegrass - 40 lbs. per acre; common Kentucky bluegrass @ 40 lbs. per acre; Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre.
D. Mulch with unweathered small grain straw at the rate of 1½ to 2 tons per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gallons per 1000 square feet.
E. Seed all slopes with a mixture of certified Kentucky 31 tall fescue @ 50 lbs. per acre and inoculated Korean Lespedeza @ 15 lbs. per acre.
F. Sodded swales shall be Kentucky 31 tall fescue.

SEQUENCE OF CONTRUCTION

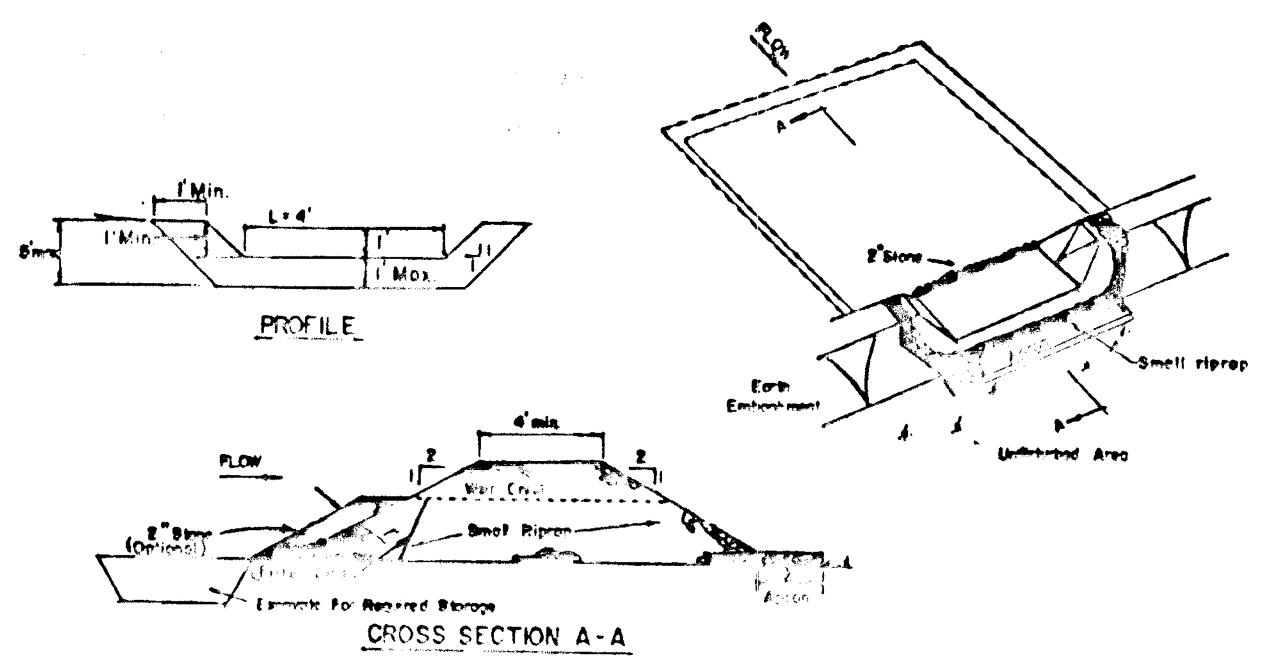
1. OBTAIN A GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND CONSTRUCT DIVERSION DIKES AND THE STONE OUTLET SEDIMENT TRAP.
3. UPON COMPLETION OF CONSTRUCTION, REGRADE ROAD WAY TO ORIGINAL GRADE AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.
4. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROLS AND STABILIZE ALL AREAS DISTURBED BY THEIR REMOVAL IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

SWMF/SEDIMENT TRAP DATA

DRAINAGE AREA	= 0.49 Ac.
VOLUME REQUIRED	= 882 CF
VOLUME PROVIDED	= 2052 CF
CREST ELEVATION	= 233.0
BOTTOM ELEVATION	= 230.0
CLEAN OUT ELEVATION	= 231.0
BOTTOM DIMENSION	= 12' x 30'
WEIR LENGTH	= 4'

SITE ANALYSIS

DISTURBED AREA:	0.49 Ac.
TO BE REVEGETATED:	0.49 Ac.



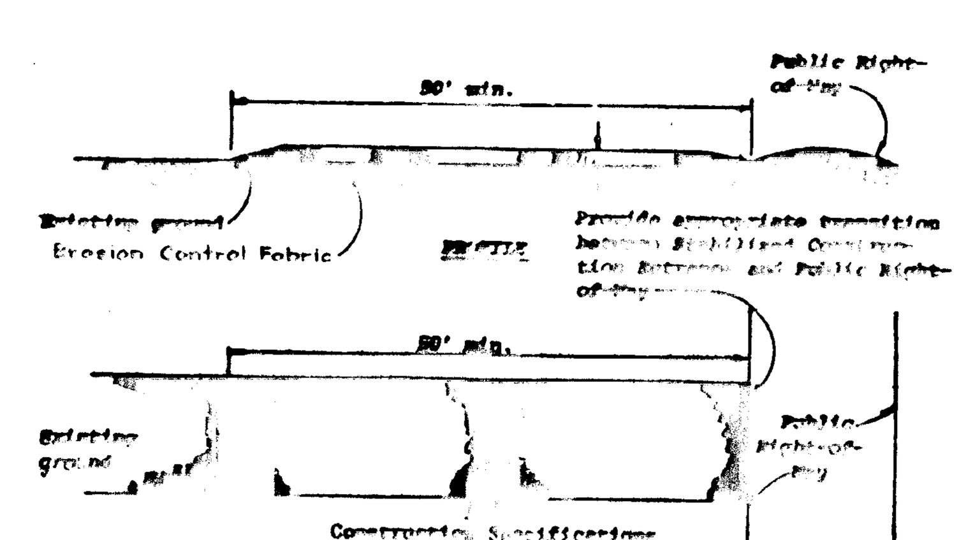
OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-V

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. 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 OR embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

SEDIMENT TRAP

NO SCALE



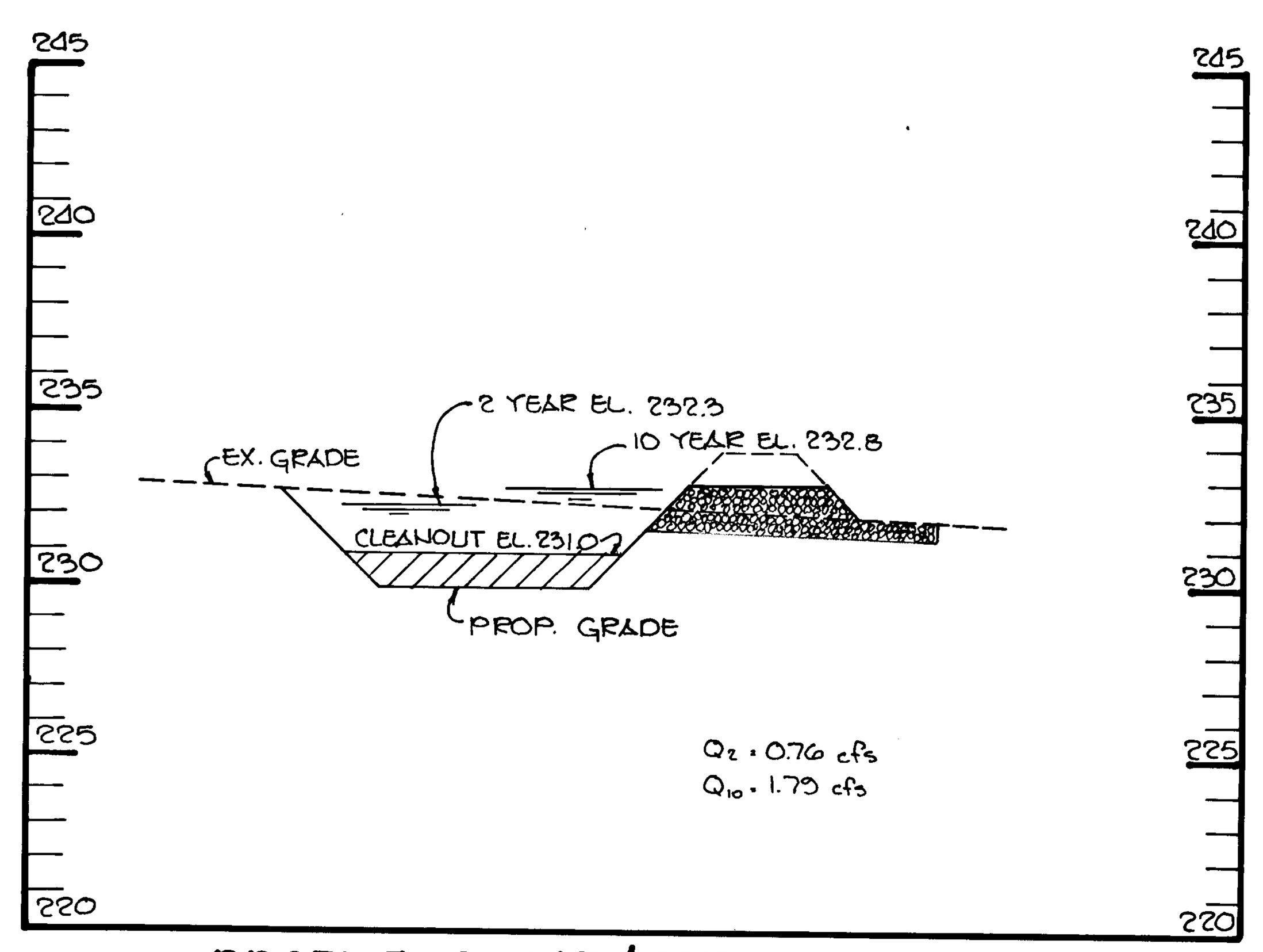
Construction Specifications

1. Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
2. Length - As effective, but not less than 50 feet.
3. Thickness - Not less than eight (8) inches.
4. Width - Not less than full width of all points of ingress or egress.
5. Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
6. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. [illegible] repair and/or cleanout of any [illegible] used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.

Standard Symbol SCE

STABILIZED CONSTRUCTION ENTRANCE

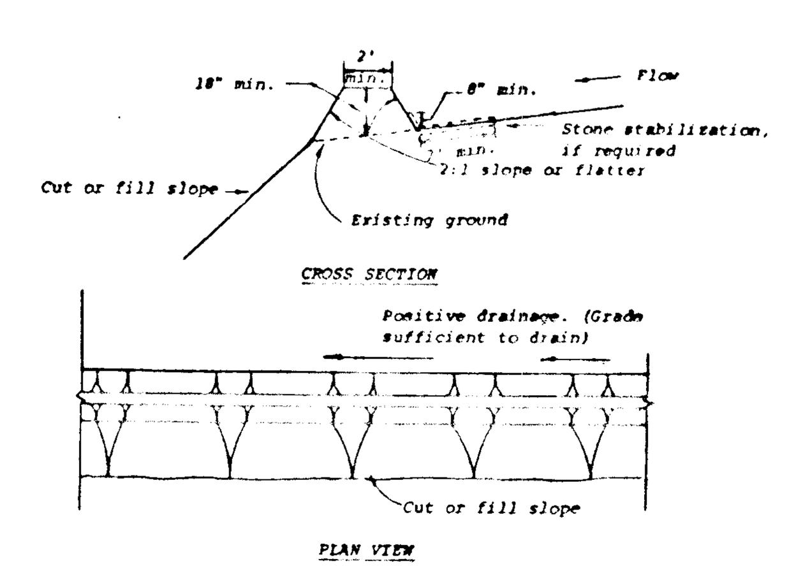
NO SCALE



PROFILE SWM.F/SEDIMENT TRAP

SCALE: HORIZ. 1"= 10'
VERT. 1"= 5'

(1)



Construction Specifications.

1. All dikes shall be machine compacted.
2. All diversion dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized area shall outlet directly to an undisturbed stabilized area or into a level spreader or grade stabilization structure.
   B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, as specified by the plans, shall be: (1) in accordance with Standard and Specifications for Grassed Waterway, and the area to be stabilized shall be the channel (flow area); or (2) the flow area shall be lined with stone that meets MSHA size No. 2 or AASHTO M43 size No. 2 or 24 which is placed in a 3 inch thick layer and pressed into the soil. The area covered by the stone shall be as shown on the drawing above.
5. Periodic inspection and required maintenance shall be provided.

Standard Symbol DD

* Drainage area less than 5 acres

DIVERSION DIKE

NO SCALE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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."

G. Miller (Agent) — DEVELOPER — 9-28-84 DATE

BY THE ENGINEER:

"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."

Arthur E. Mueller — ENGINEER — 9.27.84 DATE

REVIEWED FOR Howard S.C.D.
NAME
AND MEETS TECHNICAL REQUIREMENTS

[signature] — U.S. SOIL CONSERVATION SERVICE — 10-2-84 DATE

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

Stephen [signature] — HOWARD S.C.D. — 10-2-84 DATE

DATE	NO	REVISION
10.4.84	1	ADDED SWMF PROFILE

OWNER: JAMES A. & CAROLYN A. KNOX, 9411 ALL SAINTS ROAD, LAUREL, MARYLAND 20706

DEVELOPER: SETTLER'S LANDING ASSOC.
BRANTLY DEVELOPMENT CORPORATION, GENERAL PARTNER
SUITE 105, 550 TWIN KNOLL ROAD
COLUMBIA, MARYLAND 21045

PROJECT **SETTLER'S LANDING**
SECTION 2, AREA 1 LOTS 96 THRU 134

AREA ELECTION DISTRICT Nº6 HOWARD CO., MARYLAND
TAX MAP Nº 50 PARCEL 346

TITLE **KNOX PROPERTY SWM/SEDIMENT CONTROL PLAN FOR TEMPORARY ACCESS**

THE RIEMER GROUP, INC.
A LAND PLANNING, DESIGN & CIVIL ENGINEERING FIRM
3105 HEALTH PARK DRIVE, ELLICOTT CITY, MD. 21043 301 461-2690

APPROVED, DEPARTMENT OF PUBLIC WORKS
[signature] — CHIEF, LAND DEVELOPMENT DIVISION — 10-8-84 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
[signature] — CHIEF, BUREAU OF ENGINEERING — 10-5-84 DATE

9.27.84
DATE

Arthur E. Mueller

DESIGNED BY	L.J.D.
DRAWN BY	W.C.W.
PROJECT NO	012500
DATE	09/07/84
SCALE	AS SHOWN
DRAWING NO	1 OF 1

#882

F 82-87

SEPTEMBER 27, 1984