

PLAN
Scale: 1" = 50'

NOTE:
For Storm Drain Profiles & Details,
See Sheet 3 of 5

NOTE:
For Typical Paving Section,
See this Sheet.

OWNER & DEVELOPER
The Ardwin Co.
2221 Maryland Ave.
Balto. Md. 21218

For Continuation of Plan & Profile
See Sheet 1 of 5

For Continuation of Plan & Profile
See Sheet 1 of 5



DESIGNED: J.E.P.
DRAWN: S.A.F.
CHECKED: W.L.D.
DATE: 7/14/82
LIC. NO. 10,300

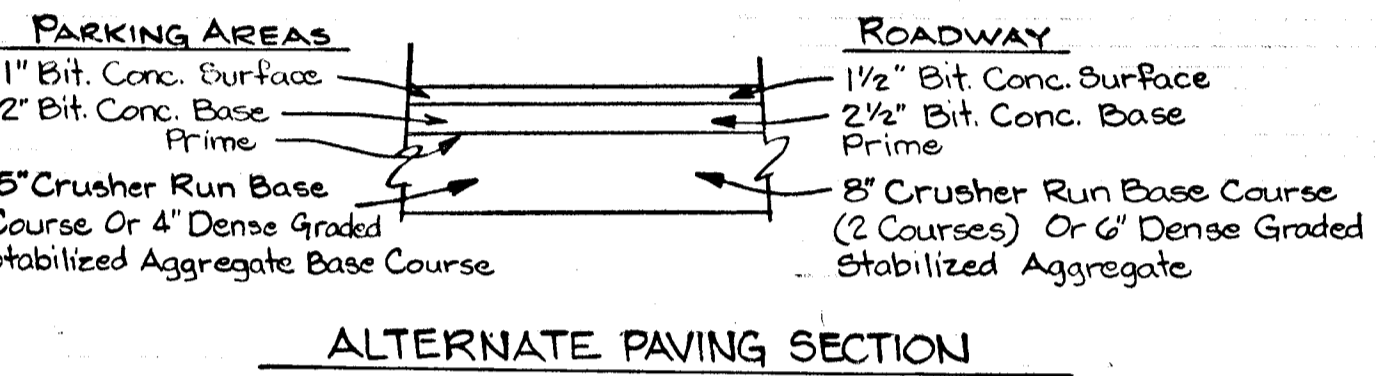
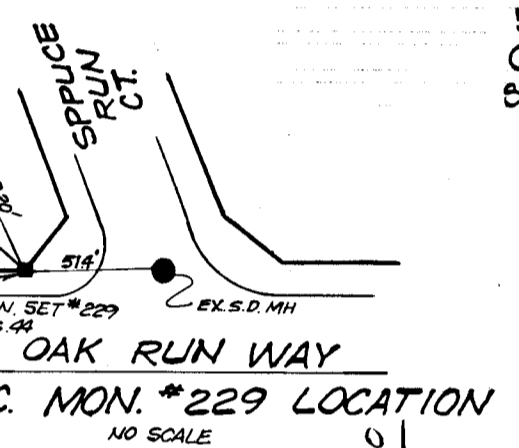
APPROVED: DEPARTMENT OF PUBLIC WORKS
Allen S. Brown
CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
DATE: 6/30/82

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
SECTION 1 AREA 2
SPRUCE RUN COURT
SUBDIVISION: TIMBER RUN VALLEY
DISTRICT NO. 2

JOB ORDER NO.
SHEET 2 of 5
DATE: 7/14/82



ALTERNATE PAVING SECTION

TYPICAL PAVING SECTION
SCALE: 1" = 5'

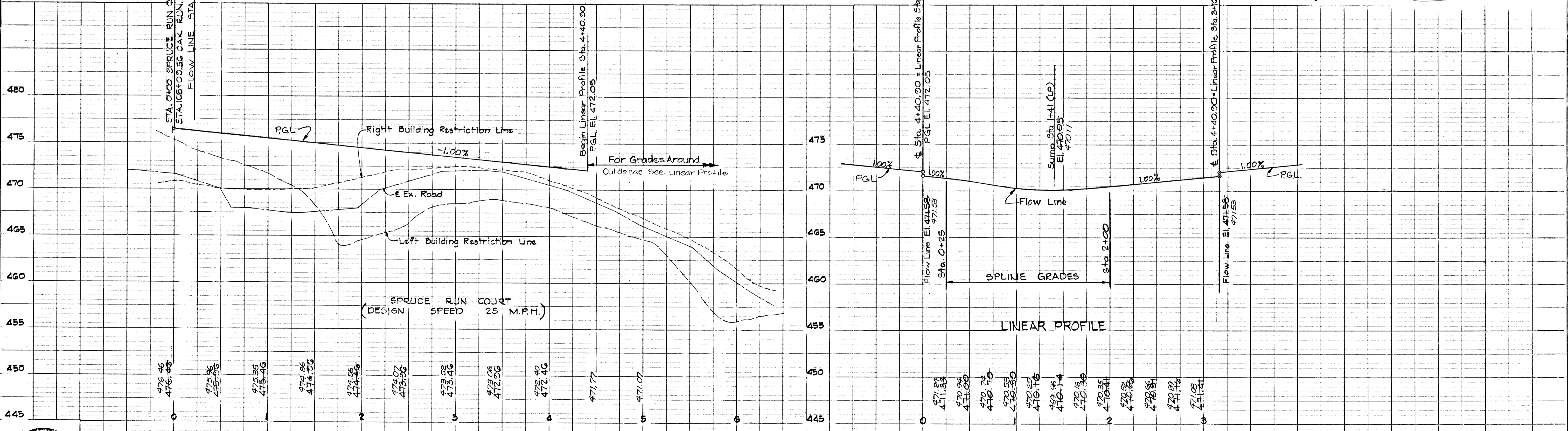
ROAD NAME & STATIONS COVERED BY THIS TYPICAL
SPRUCE RUN COURT STA. 0+00 TO STA. 5+77

DEVELOPER'S CERTIFICATE
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion & Sediment Control, and I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

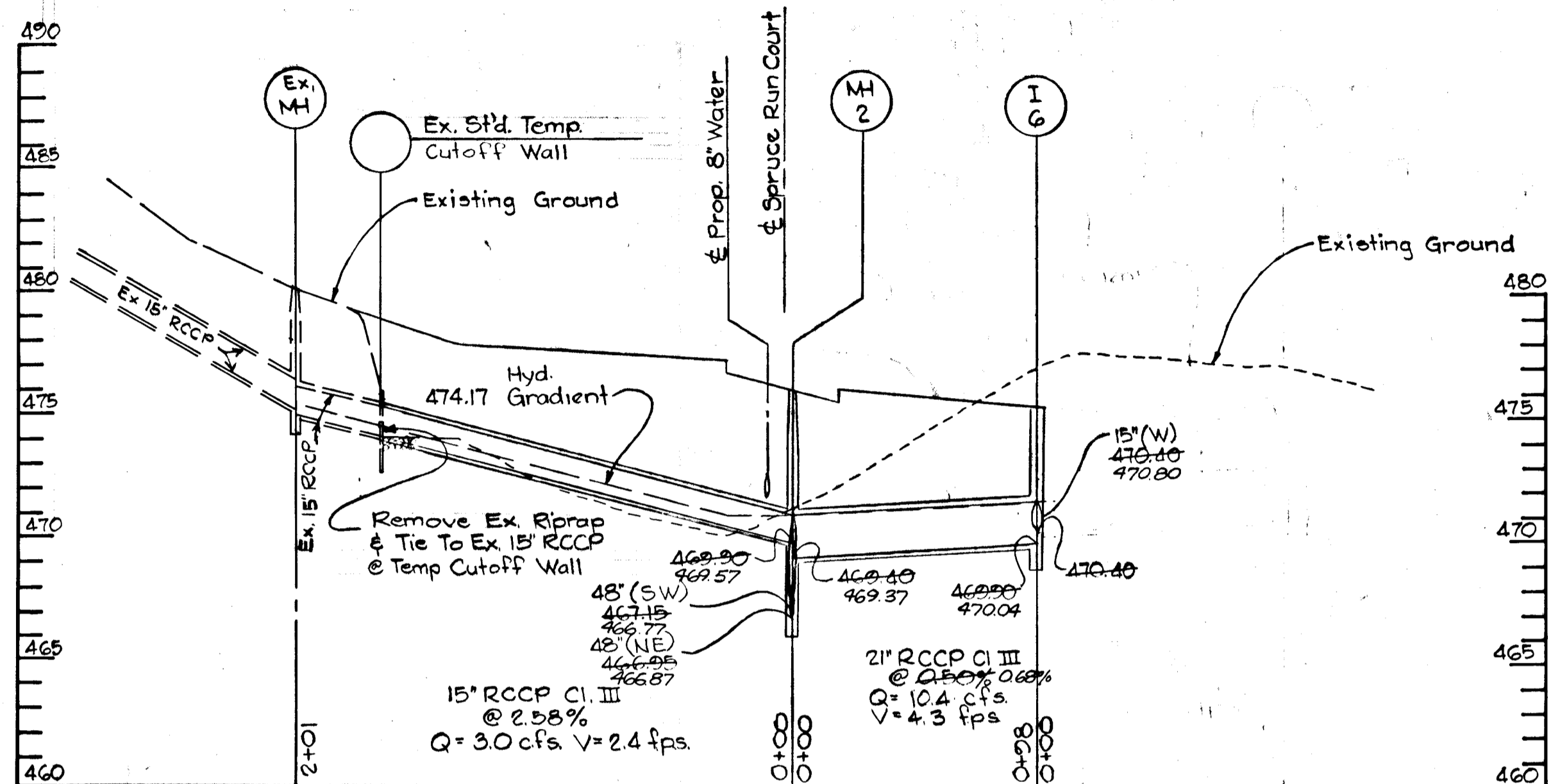
The Ardwin Company
Signature: *[Signature]* Date: 2/21/80

ENGINEER'S CERTIFICATE
I hereby certify that this plan for Erosion & 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.

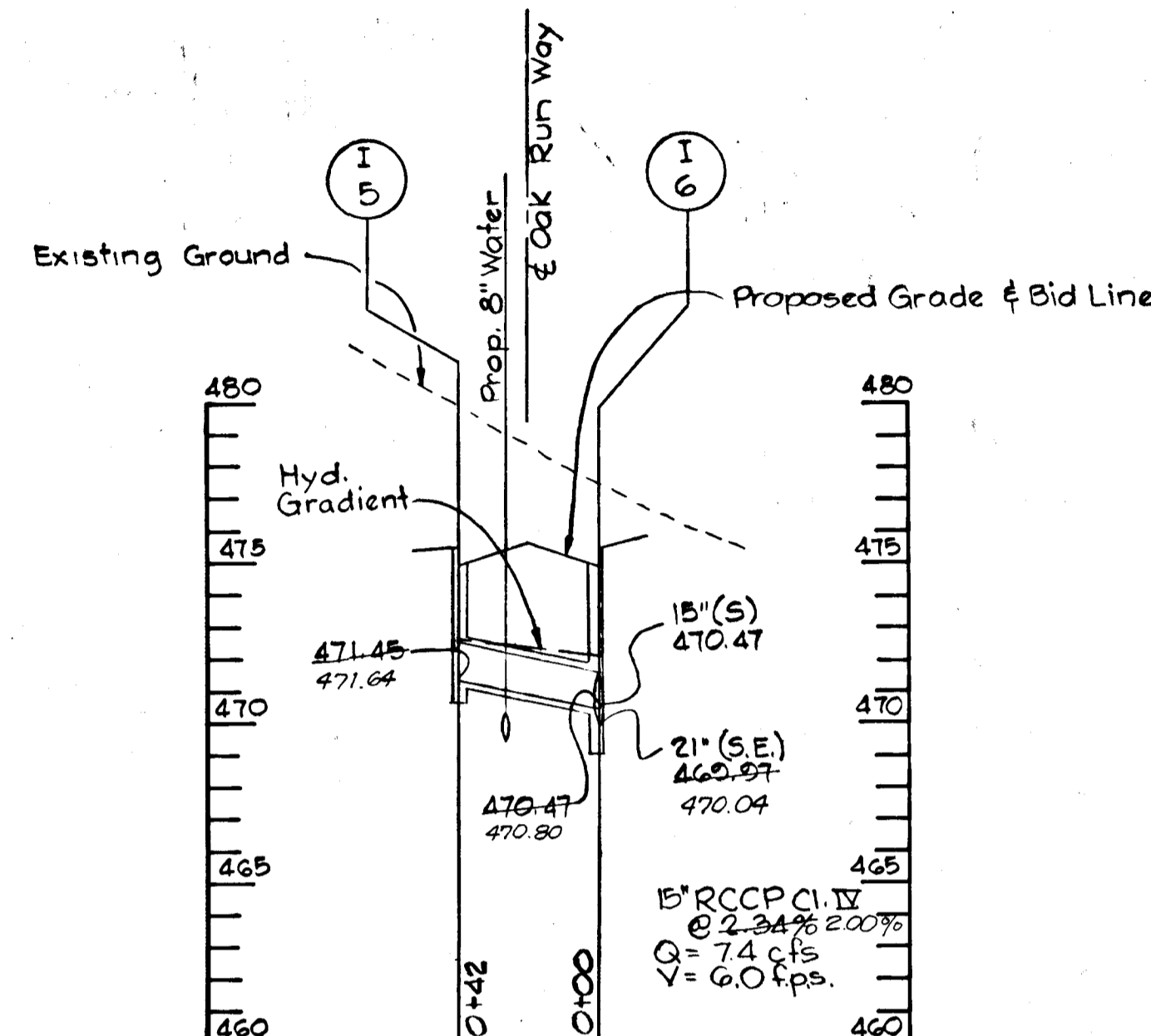
Signature: *[Signature]* Date: FEB. 21, 1980



LINEAR PROFILE



FOR PLAN SEE SHEET 1 OF 5



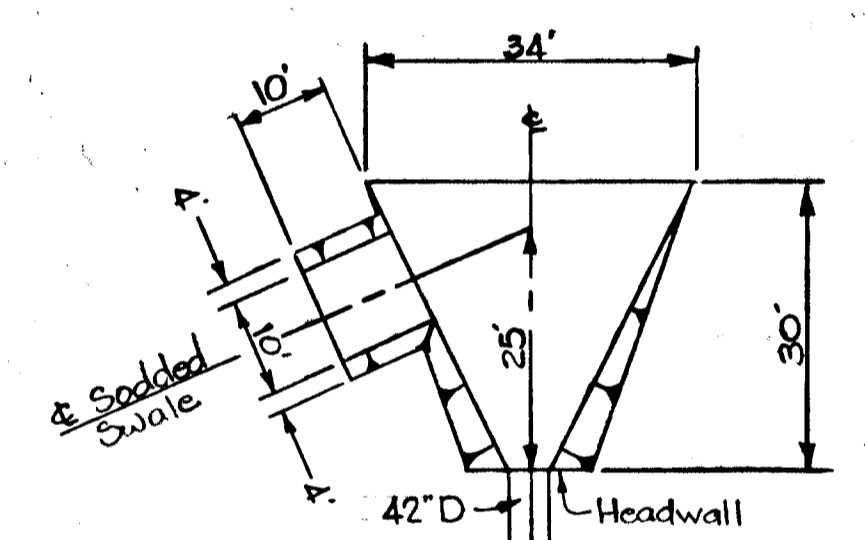
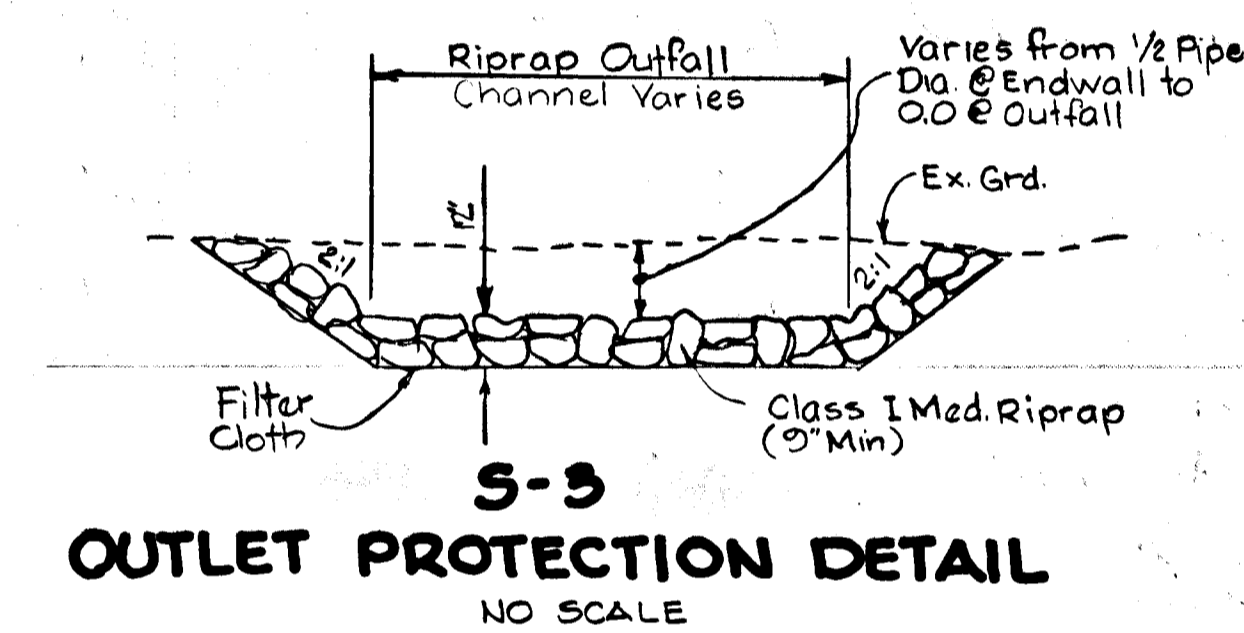
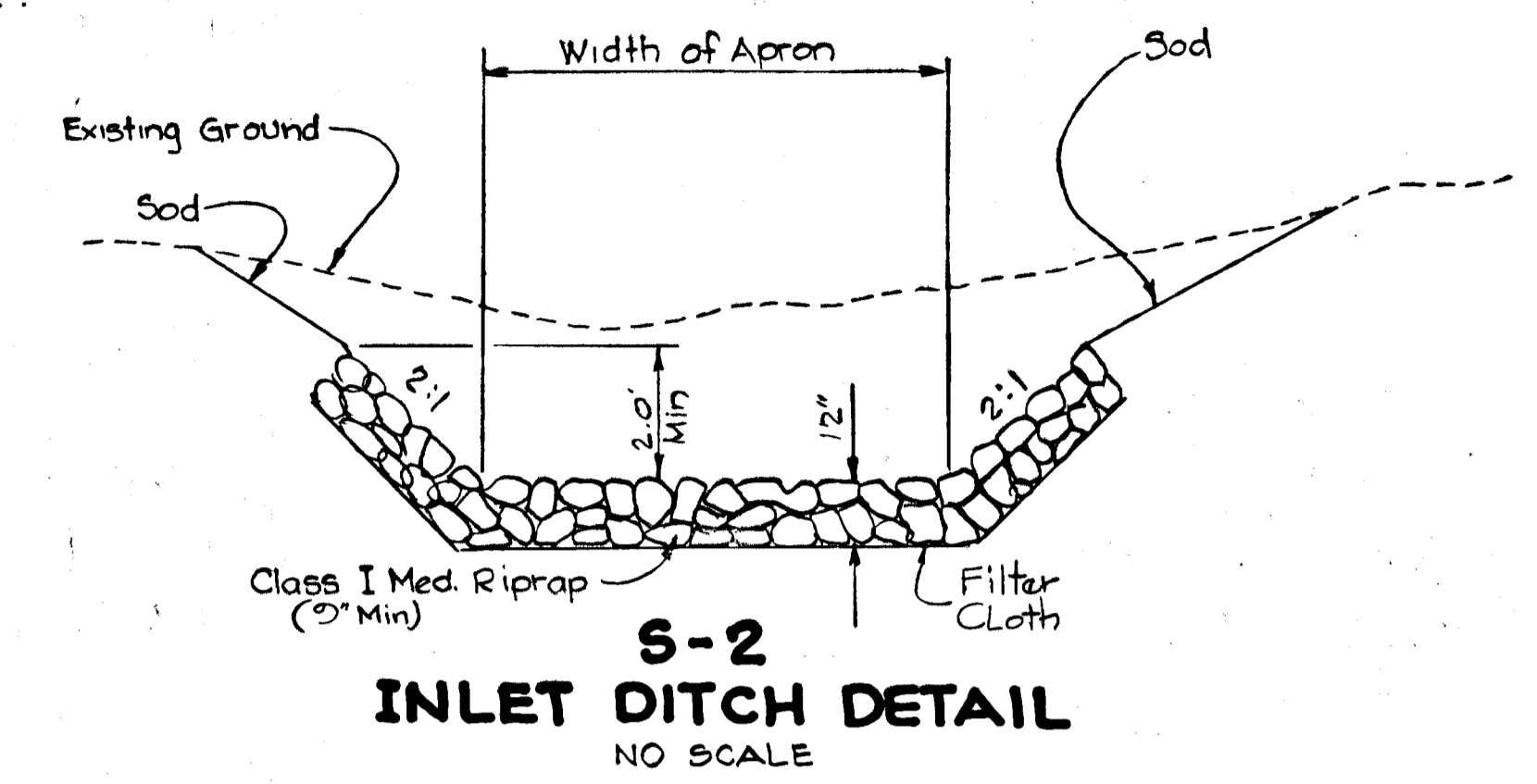
FOR PLAN SEE SHEET 1 OF 5

STRUCTURE SCHEDULE				
NO.	TYPE	SIZE	TOP ELEV.	INV. ELEV.
S-2	B	48"	479.00	467.89
S-3	C	42"	460.50	456.16

MANHOLE SCHEDULE				
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
MH-2	Std.	48"	466.95	476.0

INLET SCHEDULE				
NO.	TYPE	Q	INV. OUT	TOPELEV.
I-4	A-5	8.2	471.64	475.74
I-5	UPL WR	7.4	471.64	474.45
I-6	A-5	2.9	471.64	474.95
I-7	A-10	7.7	461.01	470.65
			461.01	470.98

* Deleted
 * Modified Double Gate Tandem



PLAN S-3 OUTLET PROTECTION No Scale

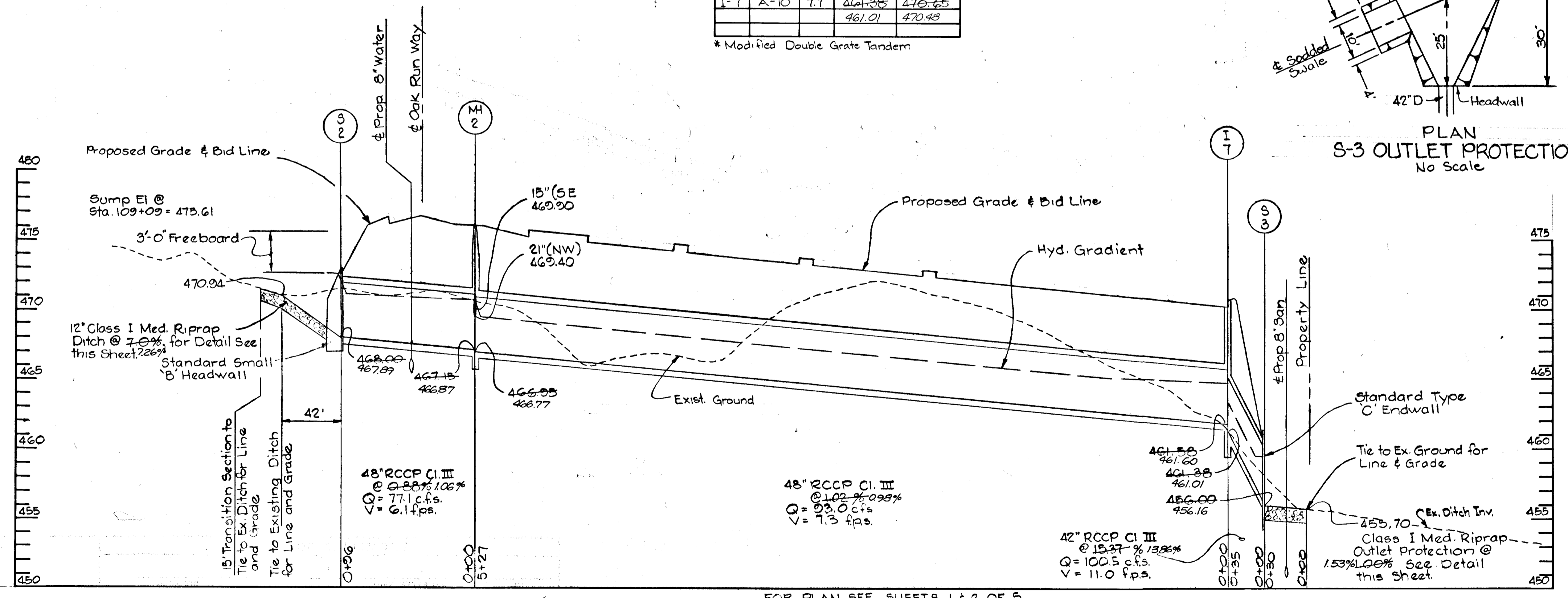
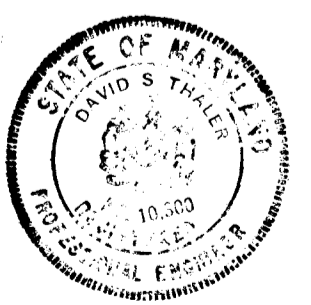
OWNER & DEVELOPER
 The Ardwin Co.
 2221 Maryland Ave.
 Balto. Md. 21218

DEVELOPER'S CERTIFICATE
 I Certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District

Signature: *By [Signature]* Date: 2/21/80

ENGINEERS CERTIFICATE
 I Herby 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: *[Signature]* Date: Feb 21, 1980



FOR PLAN SEE SHEETS 1 & 2 OF 5

AS-BUILT 9-12-83
 AS-BUILT SURVEY CERTIFIED
 BY HENRY F. SPOLER, MD. REG.
 ENGINEER No. 12869

NOTE:
 1. FOR PLANS AND LOCATIONS OF STORM DRAINS, SEE ROAD PLAN & PROFILES SHEET

DESIGNED: J.E.P. D.S. THALER & ASSOC., INC.
 DRAWN: J.E.P. ENGINEER: *[Signature]*
 CHECKED: W.L.D. DATE: 7/14/80 LIC. NO. 10300

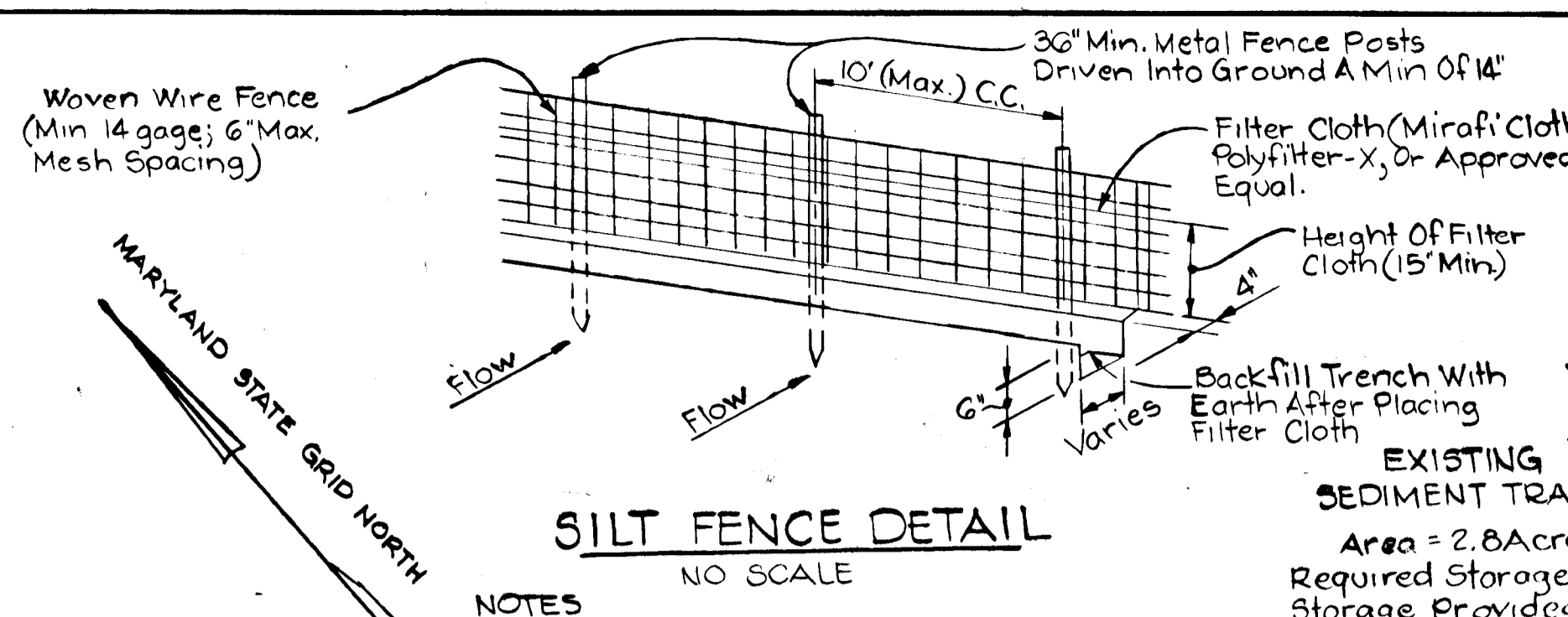
APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION DATE: 6/30/82

DATE	REVISION	BY

SCALE: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING
 PLAN: NA
 PROFILE: HOR. 1"=50' VERT. 1"=5'
 SUBDIVISION: TIMBER RUN VALLEY SECTION 1 AREA 2 EL. DISTRICT NO. 2

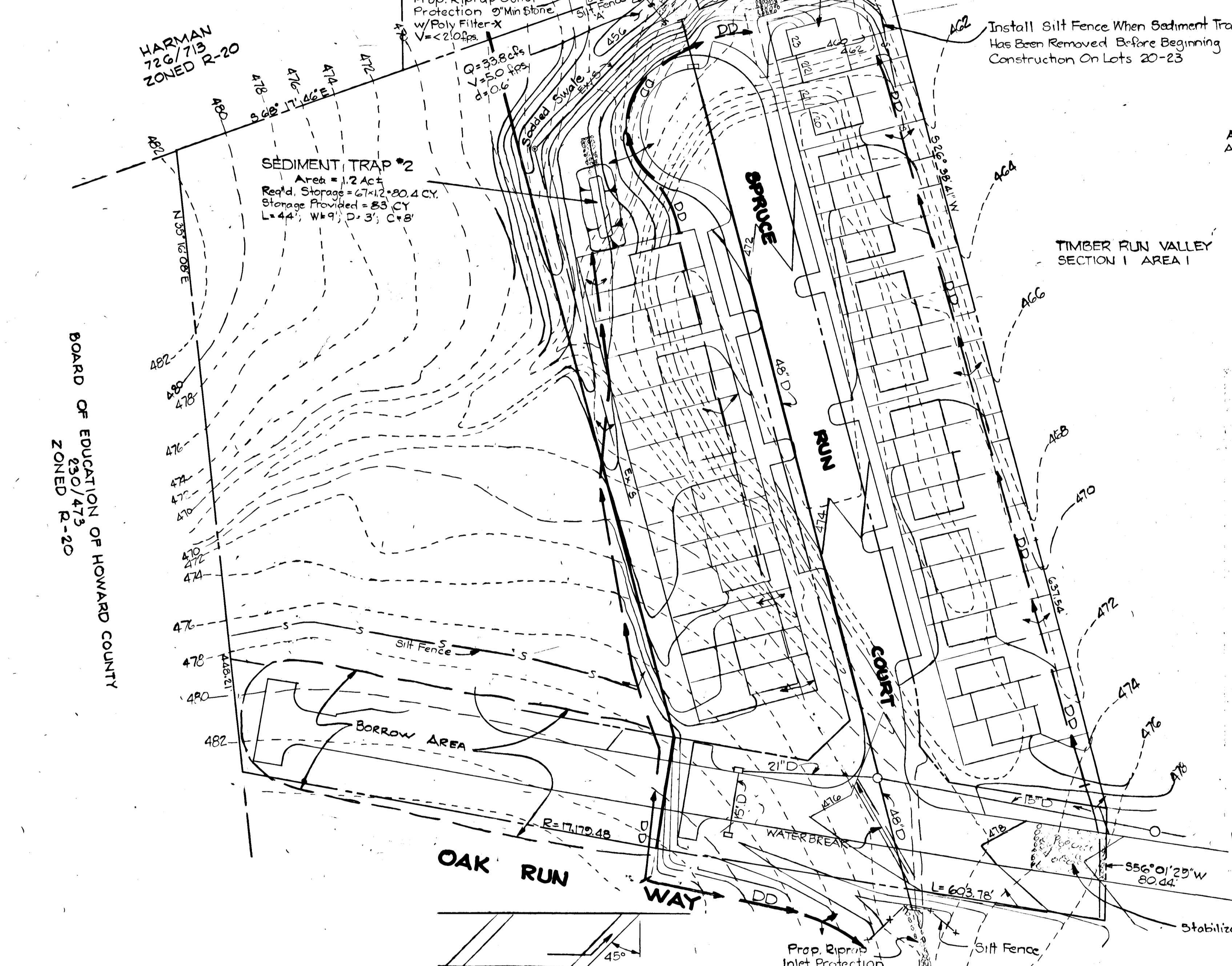
JOB ORDER NO.
 SHEET 3 OF 5
 DWG. NO.
 FILE:

796

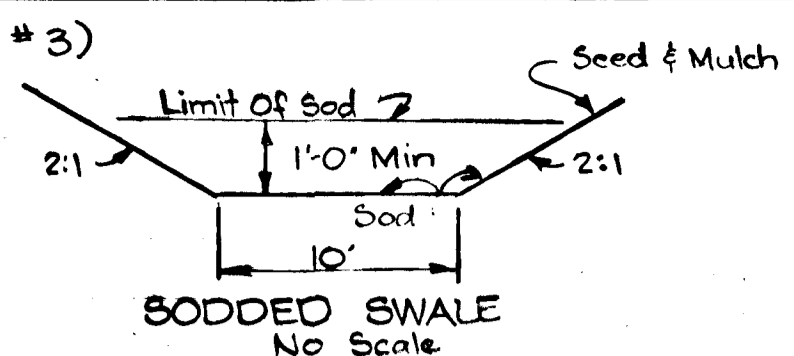


SILT FENCE DETAIL
NO SCALE

- 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" x 24"



Design Comp. (Ref BPR. # 3)
C = 33.8 C.F.
V = 5.0 C.F.P.
d = 0.6'
S = 2.5% n = 0.030

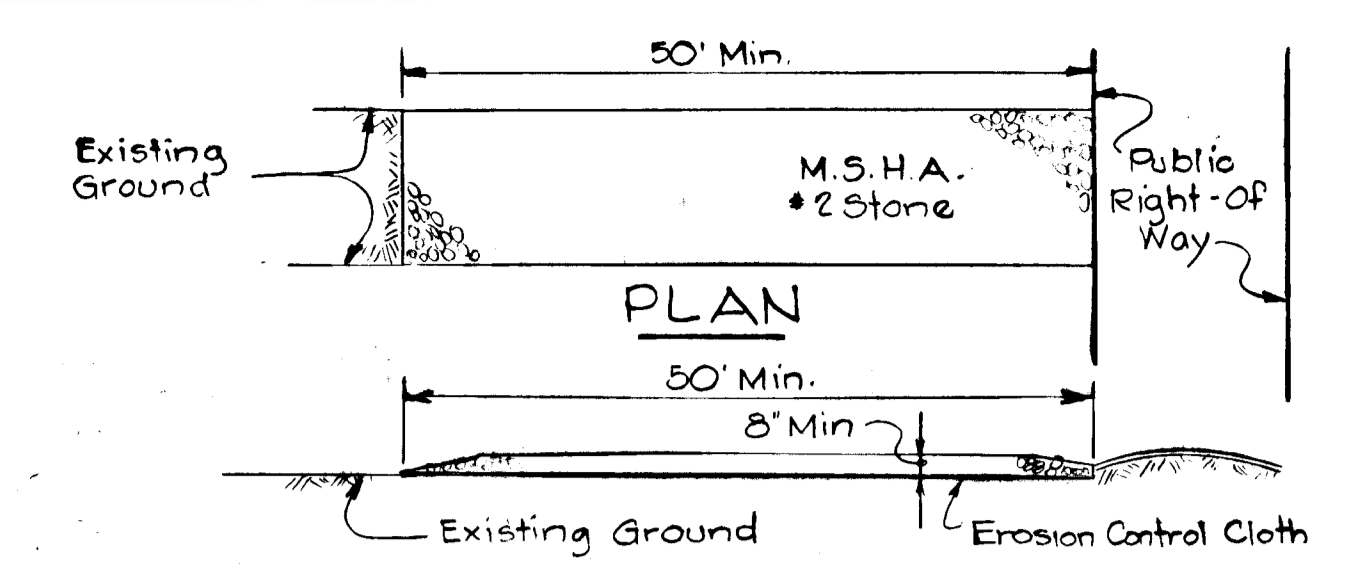


BODDED SWALE
NO SCALE

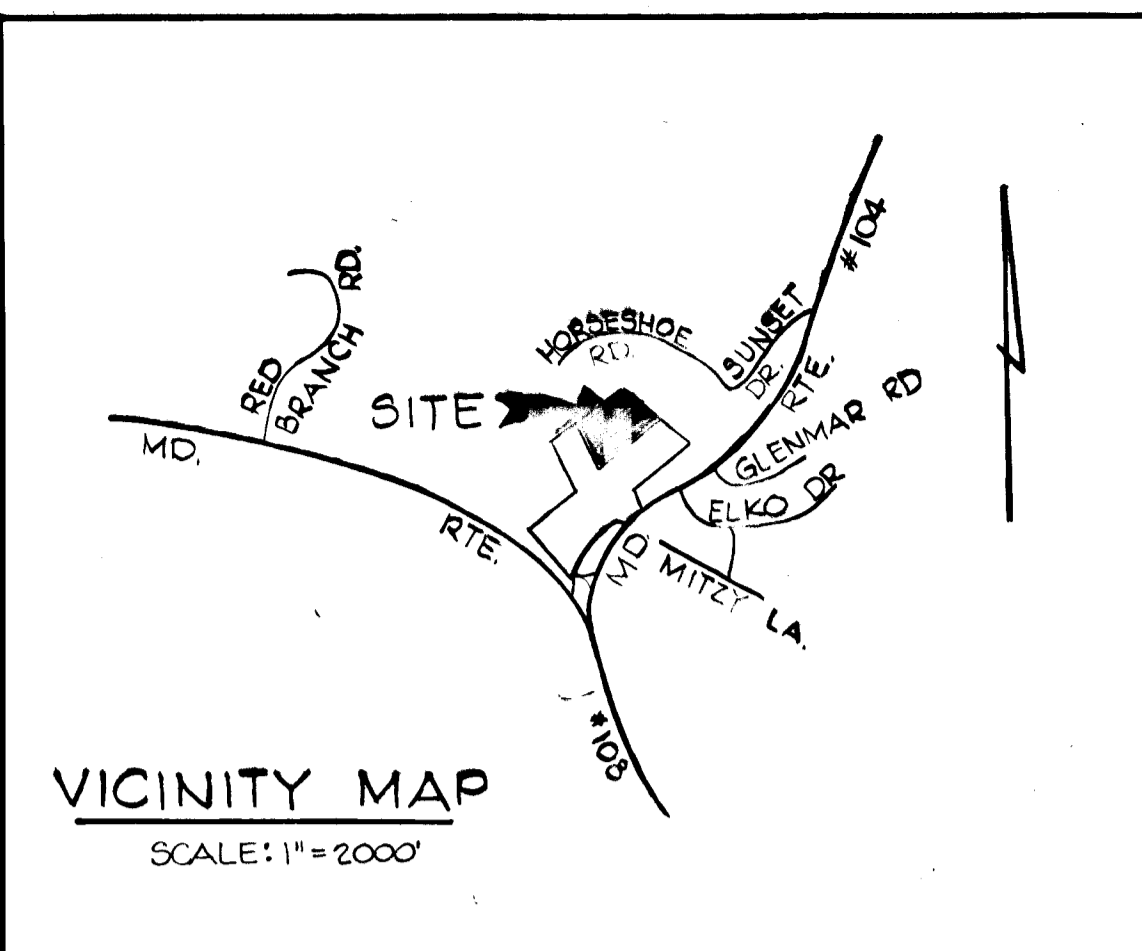
NOTE:
Silt Fence 'X' To Be Removed When Swale Is Tied To Exist Drainage Ditch

The Developer Shall Be Responsible; That The Sediment Traps Remain In A Functioning Condition Thru All Phases Of Construction

NOTE: Units On Lots 20-23 Are To Be Constructed When The drainage Area To Trap #1 Has Been Stabilized And The Trap Removed

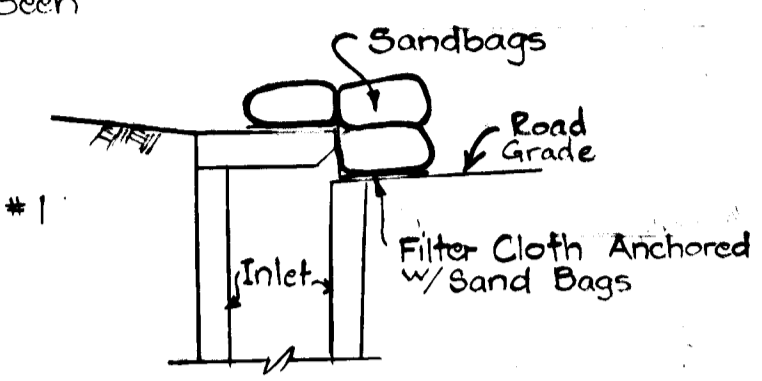


STABILIZED CONSTRUCTION ENTRANCE
NO SCALE



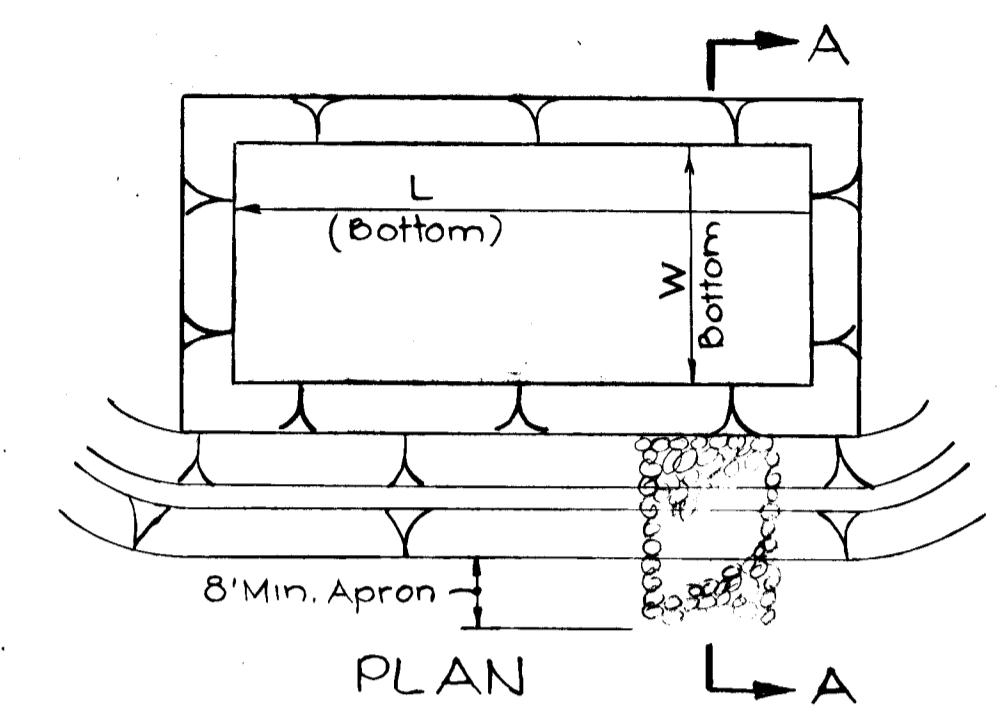
VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS
Total Disturbed Area = 4.8 Ac.
Area To Be Impervious = 0.9 Ac.
Area To Be Revegetated = 3.9 Ac.

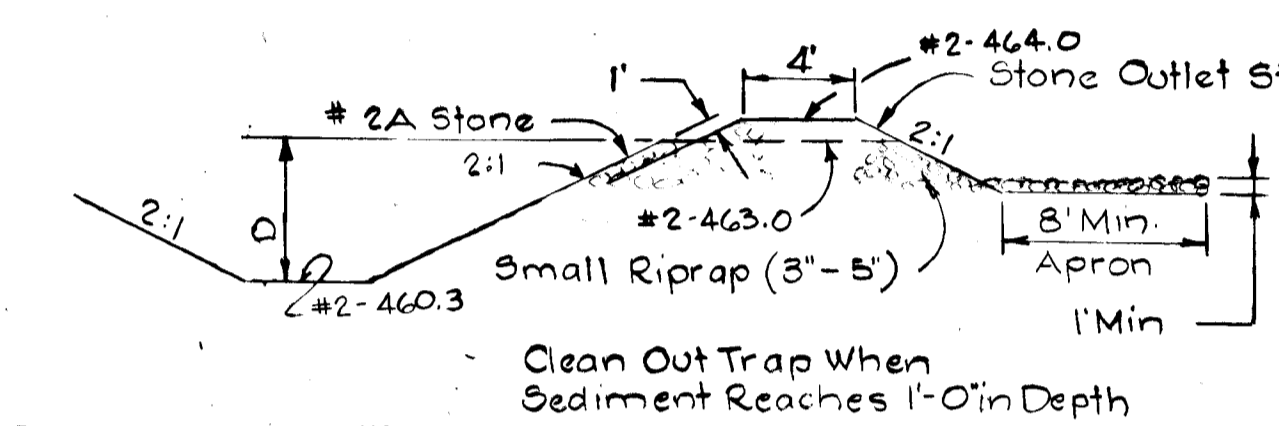


INLET PROTECTION DETAIL
NO SCALE

All Inlets To Be Protected Until Drainage Area Has Been Stabilized



PLAN



STONE OUTLET SEDIMENT TRAP
NO SCALE

PERMANENT SEEDING NOTES

All disturbed areas shall be stabilized as follows:
Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.
Soil Amendments: Apply 2 tons per acre dolomitic limestone (92 lbs/1,000 sq. ft.) and 600 lbs per acre 0-20-20 fertilizer (14 lbs/1,000 sq. ft.). Harrow or disc lime and fertilizer into upper three inches of soil. At time of seeding, apply 400 lbs per acre (9.2 lbs/1,000 sq. ft.) of 38-0-0 ureaform fertilizer and 500 lbs per acre (11.5 lbs/1,000 sq. ft.) of 10-20-20 fertilizer.
Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1,000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky Tall Fescue per acre and 2 lbs per acre (.05 lbs/1,000 sq. ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by: Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) use sod. Option (3) seed with 60 lbs/acre Kentucky Tall Fescue and mulch with 2 tons/acre well anchored straw.
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1,000 sq. ft.) of unratted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gallons/1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gallons = 1,000 sq. ft.) for anchoring.
Maintenance: Inspect all seeded areas and make needed repairs, replacements, and reseedings.

TEMPORARY SEEDING NOTES

Seedbed preparation: Loosen upper 3 inches by discing, raking, other acceptable means.
Soil Amendments: Apply 600 lbs per acre (15 lbs/1,000 sq. ft.) of 10-20-10 fertilizer. Seeding for periods March 1 thru April 30, and from August 15 thru November 15. Seed with 2 1/2 bushels per acre (3.2 lbs/1,000 sq. ft.) of annual rye. For the period May 1 thru August 14, seed with 3 lbs/acre (0.07 lbs/1,000 sq. ft.) of weeping lovegrass.
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1,000 sq. ft.) of unratted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gallons/1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher use 348 gallons per acre (8 gallons/1,000 sq. ft.) for anchoring.

GENERAL NOTES

1. Refer to USDA - Soil Conservation Service standards and specifications for Soil Erosion and Sediment Control In Developing areas For Standard Details and Detailed Specifications of Each Practice Specified Hereon.
2. Structural Measures, Such As Berms, Dikes, Traps, Basins, etc. Will Be Installed And Stabilized According To This Plan Prior To Any Other Grading, Clearing, Or Disturbances Of The Existing Surface Of The Site.
3. Continual Inspection And Maintenance Of Sediment Control Facilities Shall Be Performed Until Permission For Their Removal Has Been Obtained From The Howard County Soil Conservation Inspector.
4. Notify The Howard Co. Soil Conservation At Least 48 Hours Before Starting Any Work.
5. All Sediment Control Measures To Be Adjusted To Meet Field Conditions.
6. All Sub-base Material And Storm Drain Systems To Be Installed As Soon As Possible After Subgrading Operations.
7. All Slopes Steeper Than 3:1 Shall Be Stabilized With Sod As Soon As Possible.
8. All Remaining Disturbed Areas Not To Be Paved Shall Be Stabilized With Term. Seeding In Accordance With Pg. 5: 01 Of The Standards & Specifications For Soil Erosion & Sediment Control In Developing Areas.
9. During The Layout Of Sediment Control Practices Required On The Plan Minor Field Adjustments Can And Will Be Made To Insure The Arrest And Control Of Any Sediment Before It Leaves The Construction Site. Change In Sediment Control Practices Require Prior Approval Of The Sediment Control Inspector And The Howard Co. Soil Conservation District.
10. At The End Of Ea. Working Day, All Sediment Control Practices Will Be Inspected And Left In Operational Condition.
11. Silt Fence Shall Be Periodically Inspected And Replaced When And If Where Necessary As Deemed By The Sediment Control Inspector.
12. All Diversion Dikes, Interceptor Swales And Water Breaks In Building Areas Are To Be Maintained, Adjusted And/Or Repaired Daily.

SEQUENCE OF OPERATIONS

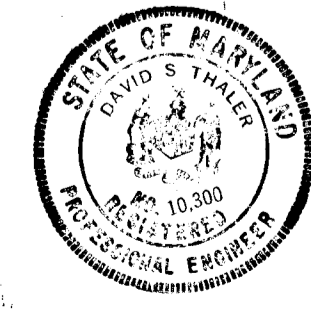
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|-------|--|
| Mar | 1. Notify Howard Co. Department Of Permits And Licenses |
| Mar | 2. Sediment Control Inspector At Least 48 Hours Before Working. |
| Mar | *2. Install And Stabilize All Sediment Control Measures |
| April | 3. Clear And Grub Site And Stockpile Topsoil. |
| April | 4. Rough Grade Site. |
| April | 5. Fine Grade And Place Sub-Base On All Streets |
| May | 6. Stabilize All Disturbed soil Outside Of Building Constr. Area |
| May | 7. Stabilize Remainder Of Site. |
| May | 8. Remove Temporary Sediment Control Measures And Stabilize Area After Obtaining Permission From Sediment Control Inspector. |

*Utilities May Be Installed AFTER This Point

NOTE: If Project Is Stopped Due To Weather The Entire Graded Site Will Be Mulched & Stabilized With Liquid Asphalt.

SEDIMENT CONTROL PLAN
SECTION 1 AREA 2
TIMBER RUN VALLEY

2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50'
 TAX MAP 31 PARCEL 302
 LIBER 724 FOLIO 671
 SHEET 4 OF 5



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 Approved William Shuman Date 6/27/82
 Howard S.C.D.

ENGINEER'S CERTIFICATION
 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
David S. Thaler Date FEB 10, 1980

Reviewed for HOWARD S.C.D.
 and meets Technical Requirements
James M. Nelm Date 6-27-82
 Signature
 U.S. SOIL CONSERVATION SERVICE

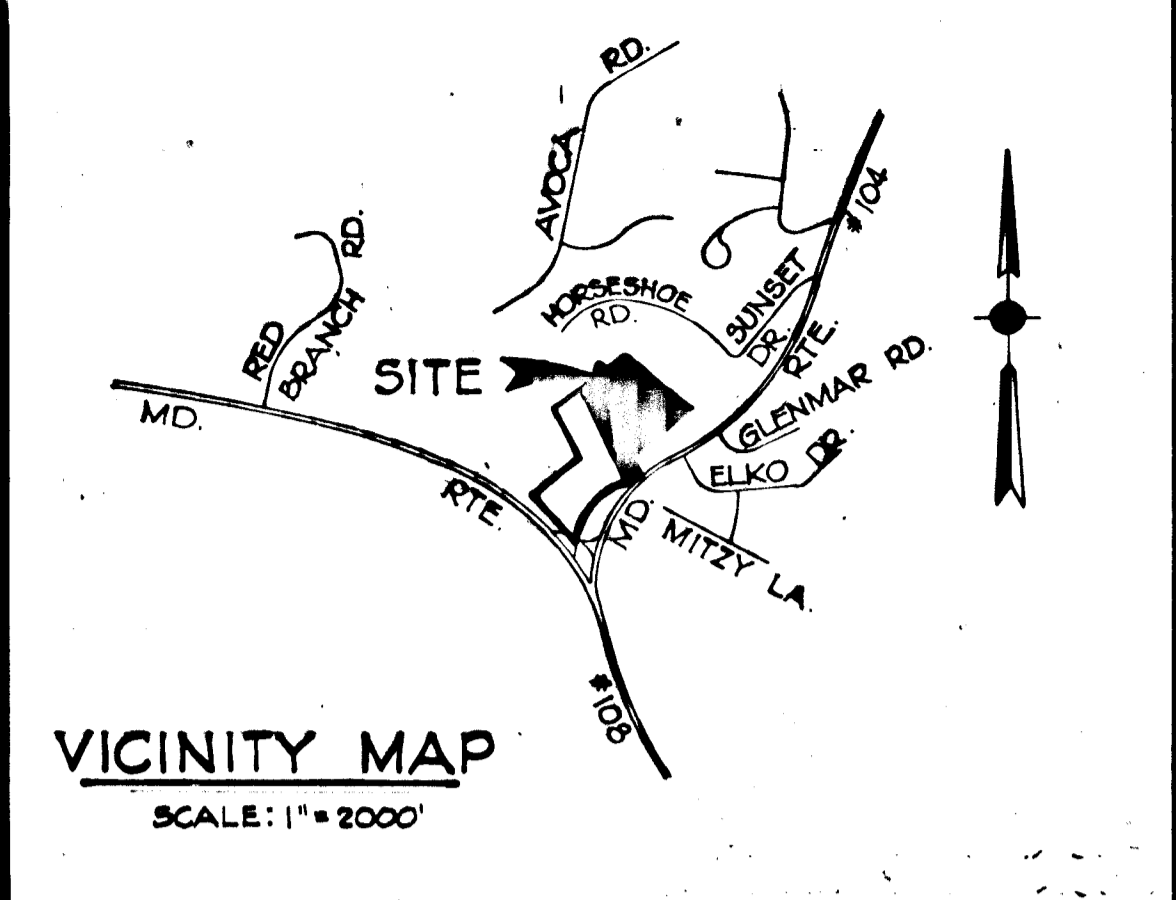
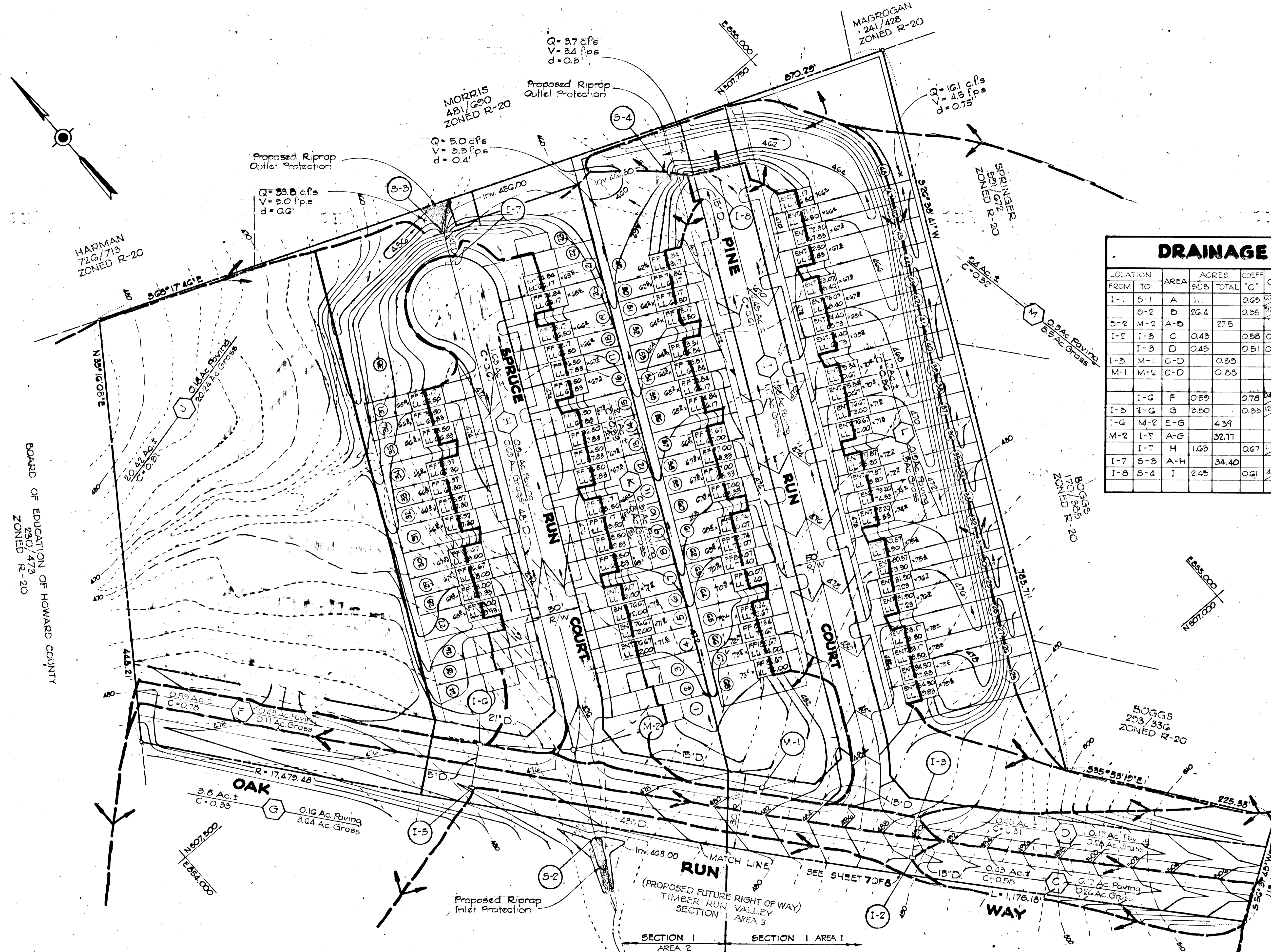
DEVELOPER'S CERTIFICATION
 I/We Hereby Certify That Any Clearing, Grading Construction And/Or Development Will Be Done Pursuant To This Plan, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project.
Jerome Beronholtz Date 3/23/82

WATERBREAK DETAIL
NO SCALE

- NOTES:**
1. The Waterbreak Is Installed 30°-45° Downslope
 2. The Outlet End Is Open And Extends Beyond The Surface Of The Road
 3. The Depth Is At Least 12 Inches Below The Road Surface.
 4. The Inlet End Extends Into The Side Ditch Or Cut Slopes

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Allen J. Brown 7/14/82
 CHIEF BUREAU OF ENGINEERING DATE
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
William Shuman 6-30-82
 CHIEF DIVISION OF LAND DEPARTMENT & ZONING ADMINISTRATION, DATE
ENGINEERS
D. S. THALER & ASSOCIATES
 11 WARREN ROAD
 BALTIMORE, MARYLAND 21208

196



DRAINAGE AREA CALCULATIONS

LOCATION	AREA	ACRES	COEFF	CA	KCA	TIME CONC. MIN.	INTEN	Q-CIA	PIPE D = 0.014	REMARKS			
FROM	TO	SUB	TOTAL	"C"		INLET	DRAIN	TOTAL	"I"				
									SIZE	SLOPE	VEL	LGTH	
I-1	S-1	A	1.1	0.09	0.09	8.9	15.0	8.9	15"	0.81	4.6	30'	20 Yr. Freq. SUMP
	S-2	B	26.4	0.35	9.24	15.0	15.0	30.24	15"	0.81	7.7	10 Yr. Freq.	10 Yr. Freq.
S-2	M-2	A-B	27.5	0.58	15.97	15.0	15.0	31.94	18"	0.38	6.1	90'	
I-2	I-3	C	0.43	0.58	0.25	10.7	10.7	10.7	15"	0.62	1.2	44'	
	I-3	D	0.45	0.51	0.23	7.0	7.0	7.0	15"	0.62	1.2	44'	
I-3	M-1	C-D	0.88	0.48	0.48	10.7	11.3	11.3	15"	0.25	2.4	107'	
M-1	M-2	C-D	0.88	0.48	0.48	10.7	11.3	11.3	15"	0.25	2.4	201'	
I-5	I-G	F	0.59	0.78	0.46	11.9	11.9	11.9	15"	1.50	6.0	44'	20 Yr. Freq. SUMP
I-5	I-G	G	0.60	0.83	0.49	12.5	12.5	12.5	15"	1.50	6.0	44'	20 Yr. Freq. SUMP
I-G	M-2	E-G	4.39	1.96	1.96	15.0	15.0	15.0	10.4	0.50	4.3	98'	
M-2	I-7	A-G	32.71	17.71	17.71	15.5	15.5	33.22	48"	0.46	7.3	53"	
I-7	H		1.63	0.67	0.67	9.8	9.8	9.8	15"	0.62	1.2	44'	20 Yr. Freq. SUMP
I-7	S-3	A-H	34.40	18.36	18.36	15.0	15.7	34.12	42"	1.20	11.0	20'	20 Yr. Freq. SUMP
I-8	S-4	I	2.45	0.91	0.91	9.9	9.9	9.9	10.4	1.5	6.5	35'	20 Yr. Freq. SUMP

NOTE:
1. SEE SHEET 7 OF 8, FOR OTHER DRAINAGE AREAS.

APPROVED:

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Allen S. Brown 7/1/82
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: FOR PUBLIC/PRIVATE WATER AND PUBLIC/PRIVATE SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICE DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Shirley M. Brown 6-30-82
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION DATE

ENGINEERS
D. S. THALER & ASSOCIATES, INC.
11 WARREN ROAD
BALTIMORE, MARYLAND 21208

PLAN
SCALE: 1" = 50'



ENGINEER
NO. 10,300
DATE Feb 21, 1980

DRAINAGE AREA MAP
TIMBER RUN VALLEY
ELECTION DISTRICT #2
SCALE: 1" = 50'
HOWARD COUNTY, MARYLAND
FEB. 10, 1980