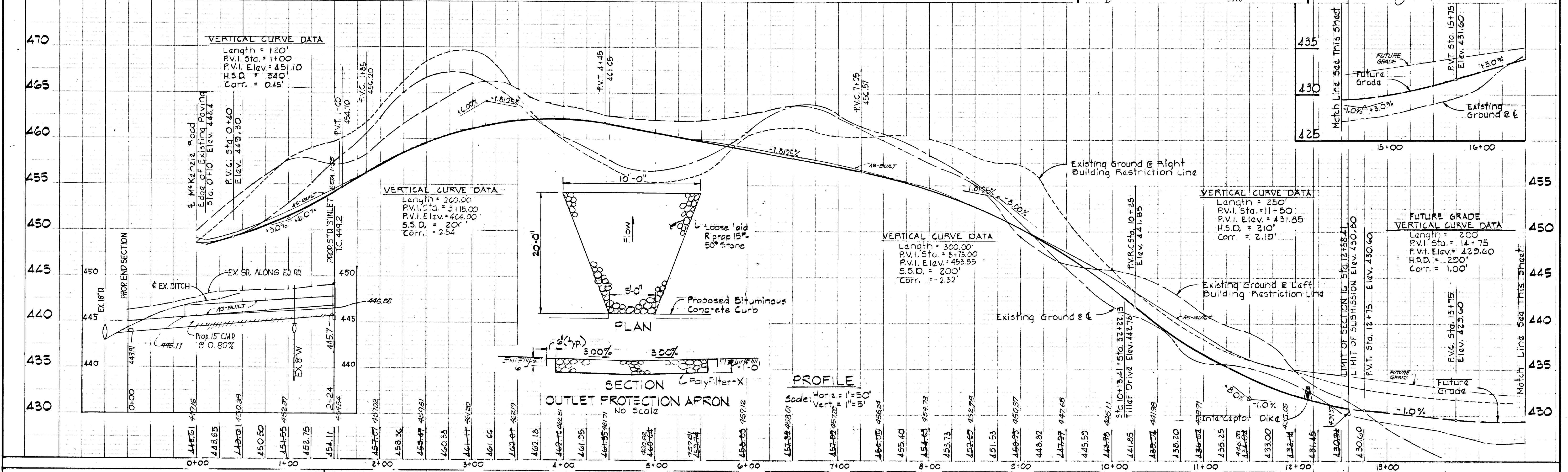


VICINITY MAP
Scale: 1"=1200'

Reviewed for Howard County Soil Conservation District and meets Technical Requirements.
 U.S. Soil Conservation District Service Date: 12-1-77
 This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
 APPROVED: *John D. Myers* District Coordinator 12-1-77
 Howard Soil Conservation District

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 onsite 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.
 Date: 12-1-77

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 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.
William G. Rasch, II 10/13/77
 Date

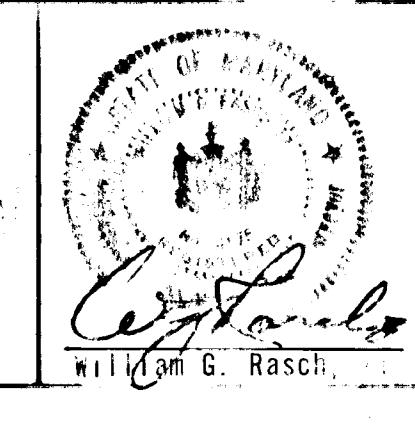


APPROVED: Department of Public Works
Earl D. Collins 12/12/77
 Chief, Bureau of Highways Date

APPROVED: Office of Planning and Zoning
William G. Rasch, II 12-13-77
 Chief, Division of Land Development And Zoning Administration Date

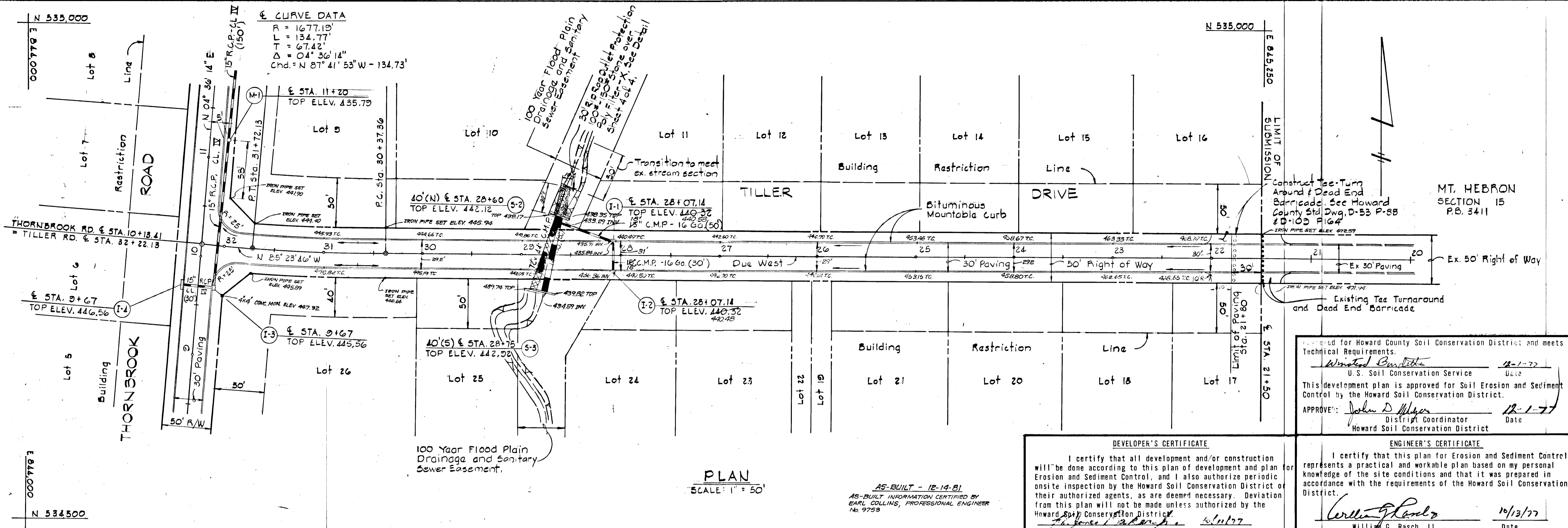
PURDUM & JESCHKE
 CONSULTING ENGINEERS
 LAND SURVEYORS
 1023 North Calvert Street
 Baltimore, Maryland 21202 301/837-0194

OWNER AND DEVELOPER
 MOUNT HEBRON, INC.
 2417 Mount Hebron Drive
 Ellicott City, Maryland 21043



PLAN AND PROFILE: THORNBROOK ROAD
MT. HEBRON
 2ND ELECTION DISTRICT SECTION 16 HOWARD COUNTY, MD.
 October 11, 1977 Scale: As Shown
 Rev. No. Date Description
 1 12-12-77 Lower grades Thornbrook Road
 AS-BUILT 1-30-79
 UP-DATED 12-14-81
 DESIGNED: P.W.K.
 DRAFTED: C.A.F., T.A.W.
 CHECKED: E.B.W.
 SHEET 1 OF 4

BRUNING 44-132 23442

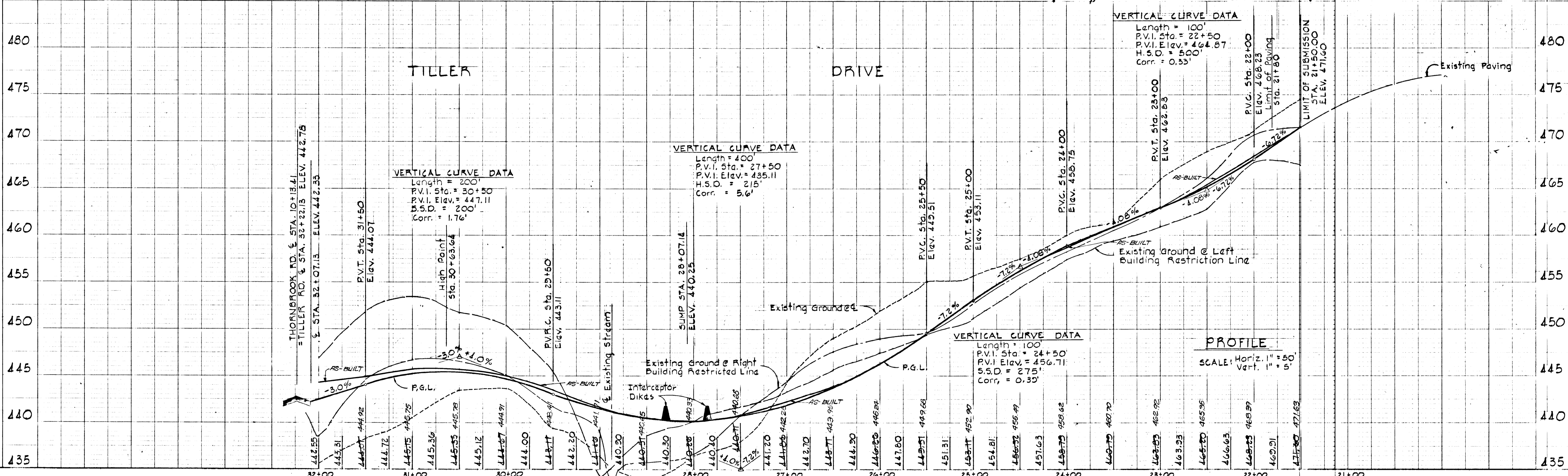


MT. HEBRON SECTION 15 P.B. 3411

Approved for Howard County Soil Conservation District and meets Technical Requirements.
 U.S. Soil Conservation Service Date 12-1-77
 This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
 APPROVED: John D. Meyer District Coordinator Date 12-1-77
 Howard Soil Conservation District

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 William G. Rasch, II Date 10/13/77



APPROVED: Department of Public Works
 Chief, Bureau of Highways
 Date 12/13/77

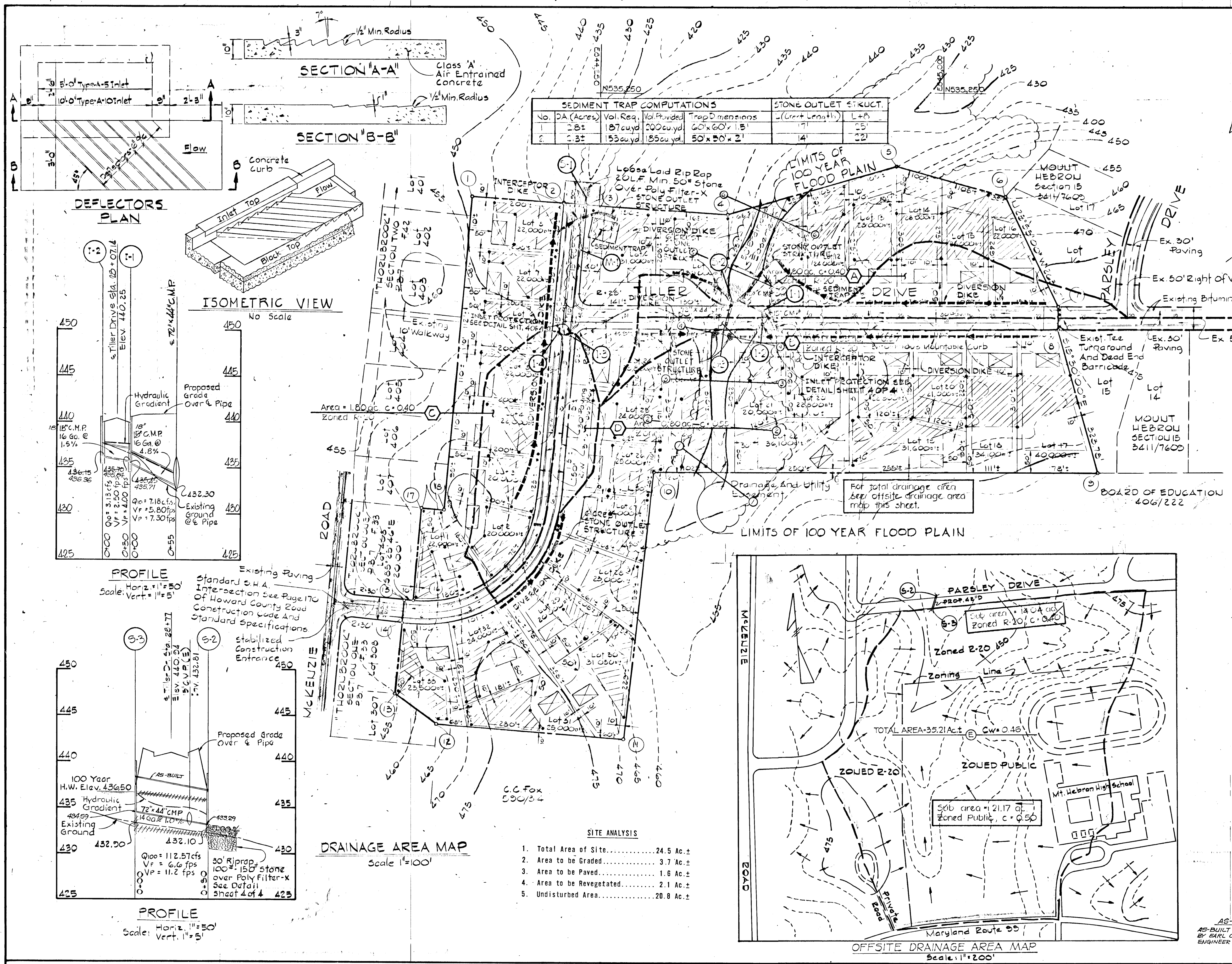
APPROVED: Office of Planning and Zoning
 Chief, Division of Land Development and Zoning Administration
 Date 12-13-77

FURDUM & JESCHKE
 CONSULTING ENGINEERS
 LAND SURVEYORS
 1023 North Calvert Street
 Baltimore, Maryland 21202
 301/837-0194

OWNER AND DEVELOPER
 MOUNT HEBRON, INC.
 2417 Mount Hebron Drive
 Ellicott City, Maryland 21043

PLANNING AND PROFILE: TILLER DRIVE
 MT. HEBRON
 2ND ELECTION DISTRICT SECTION 16 HOWARD COUNTY, MD.
 October 11, 1977
 Scale: As Shown

DESIGNED: A.J.V.
 DRAFTED: A.J.V.
 CHECKED: E.B.W.
 SHEET 2 OF 4
 Description: Lower grades Thornbrook Road



- SEDIMENT CONTROL NOTES**
- The developer shall notify the Ho. Co. Office of Inspections and Permits at least 24 hours prior to beginning any construction shown herein (465-5000 Ext. 365).
 - Dikes, sediment traps, etc., to be constructed prior to any onsite grading or disturbance to any existing surface material, and are to be stabilized as soon as constructed.
 - All Sediment Control structures to remain in place until permission for their removal has been obtained from the Ho. Co. Office of Inspection and Permits (465-5000 Ext. 365).
 - All graded areas not to be sodded shall be stabilized by seeding and mulching in accordance with the following:
 - Site Preparation:
 - Narrow or disc in areas proposed to be seeded with the following materials at the specified rate, to a depth of 3":
 - Pulverized Limestone at 1 1/2 tons/acre.
 - Commercial Fertilizer 10-10-10 at 1/2 tons/acre.
 - Super phosphate of 600 lbs./acre.
 - Seeding:
 - Sow the following seed mixture at the rate of 200 lbs/acre with a mechanical spreader:
 - Temporary: Italian or Perennial Rye Grass
 - Permanent: 40% Marion Blue Grass, 40% South Dakota Blue Grass and 20% Penn Lawn Creeping Red Fescue
 - The seeded area shall then be raked with a York Rake (minimum of 2 passes) covered and compacted with Cultipacker or other approved method.
 - Mulching:
 - Seeded areas shall be uniformly mulched immediately after seeding with unweathered small grain straw at the rate of 1 1/2 to 2 tons/acre.
 - Tie mulch down with liquid asphalt at 0.1 gal./s.y. or emulsified asphalt at 0.10 gal./s.y. on mulch netting.
 - Sodding:
 - Apply 10-10-10 Fertilizer @ 1000 lbs./acre (25 lbs./1000)
 - Apply Ground Agricultural Limestone @ 1000 lbs./acre (50 lbs./1000)
 - Incorporate both limes and fertilizer into soil by discing. Firm up after incorporation.
 - Lay sod to a tight fit. Roll to ensure contact with underlying soil. Water as necessary for first two weeks (in summer) to ensure establishment.
 - Sediment and Erosion Control Requirements shown are for road and storm drain construction only. Further development of individual lots are subject to additional Sediment and Erosion Control Requirements.
 - The Developer shall provide a sediment control plan for improvements for the individual lots, and if more than one lot is being developed at a time an overall plan for sediment control shall be submitted for review and approval.
 - The open end of all storm drain pipes must be capped at the end of each day with plywood sheathing and held in place by sand bags or other approved method.
 - All inlets shall be protected according to details on Sheet 4 of 4.

DEVELOPER'S CERTIFICATE

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John D. Myers 12/1/77
District Coordinator Date

Reviewed for Howard County Soil Conservation District and meets technical requirements.

William G. Rasch, II 12-1-77
U.S. Soil Conservation Service Date

This Development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

APPROVED: *John D. Myers* 12-1-77
District Coordinator Date

ENGINEER'S CERTIFICATE

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.

William G. Rasch, II 10/13/77
Date

- CONSTRUCTION SEQUENCE**
- Obtain grading permit.
 - Construct temporary stabilized construction entrance.
 - Construct diversion dikes and excavate sediment traps and place stone outlet structures as shown on plans.
 - Construct 72" x 44" CMP.
 - Stabilize diversion dikes using Temporary Seeding. (See Sediment Control Notes.)
 - Clear and grade roadways to subgrade
 - Install balance of storm drainage system.
 - Place pavement courses and bituminous concrete curbing.
 - Fine grade slopes between curb and property lines, roadway supporting slopes and slopes along channel.
 - Stabilize with permanent seeding and sodding as required.
 - Remove sediment control devices.

APPROVED: Department of Public Works

APPROVED: Office of Planning and Zoning

PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS

OWNER AND DEVELOPER: MOUNT HEBRON, INC. 2417 MOUNT HEBRON DRIVE ELLICOTT CITY, MARYLAND 21043

DESIGNED: A.J.V. DRAFTED: T.A.W. CHECKED: E.B.W. SHEET 3 OF 4

STORM DRAINS, SEDIMENT CONTROL PLAN & DRAINAGE AREA MAP

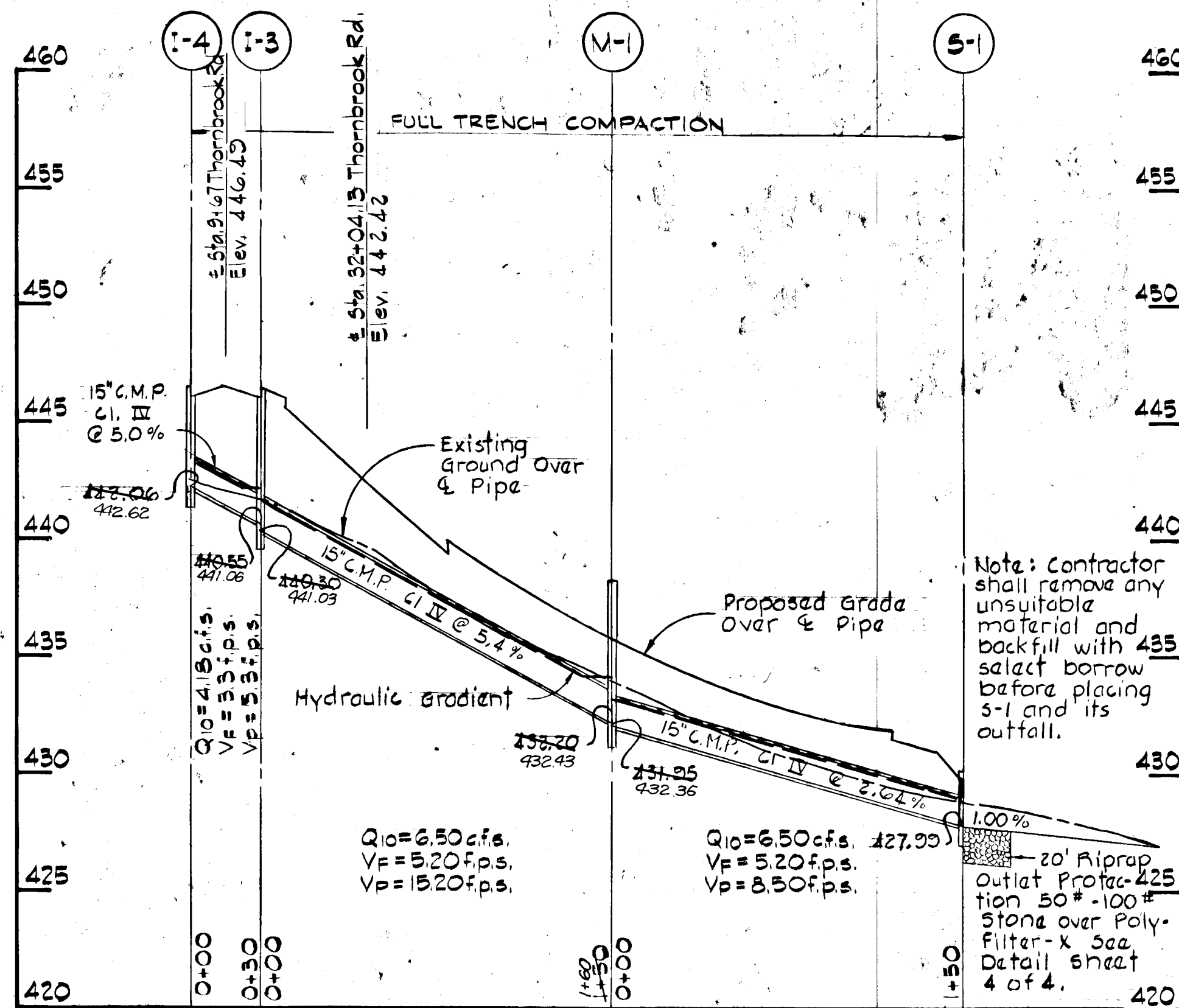
MT. HEBRON

2ND ELECTION DISTRICT SECTION 16 HOWARD COUNTY, MD. October 11, 1977 Scale: As Shown

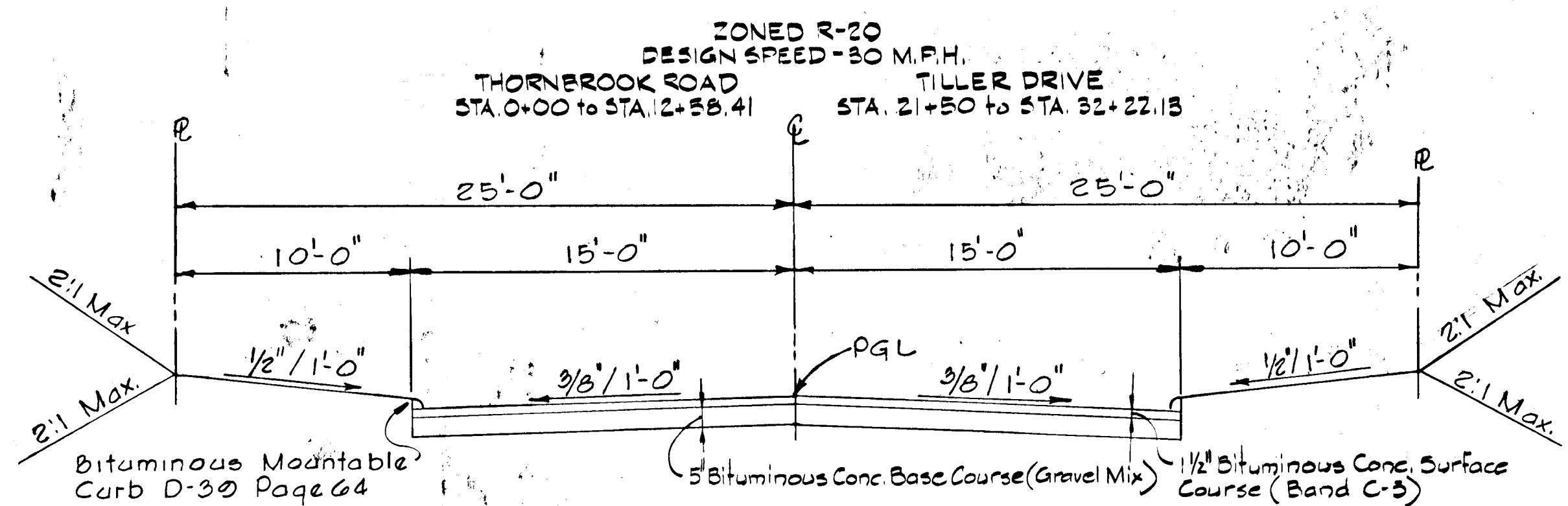
1023 North Calvert Street Baltimore, Maryland 21202 301/837-0194

AS-BUILT - 12-14-81

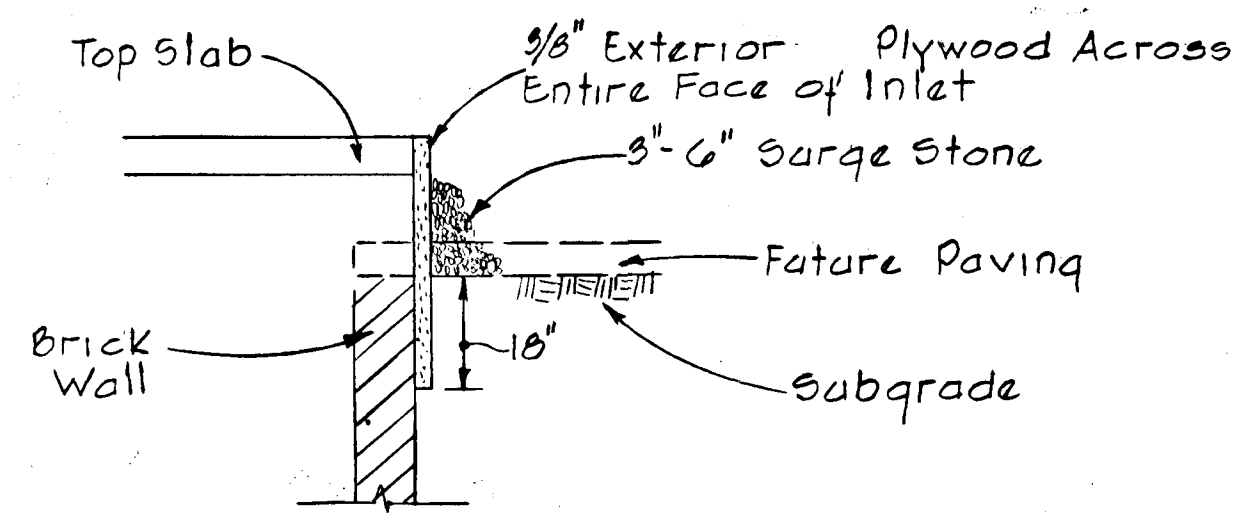
BRUNING 44-132 23442



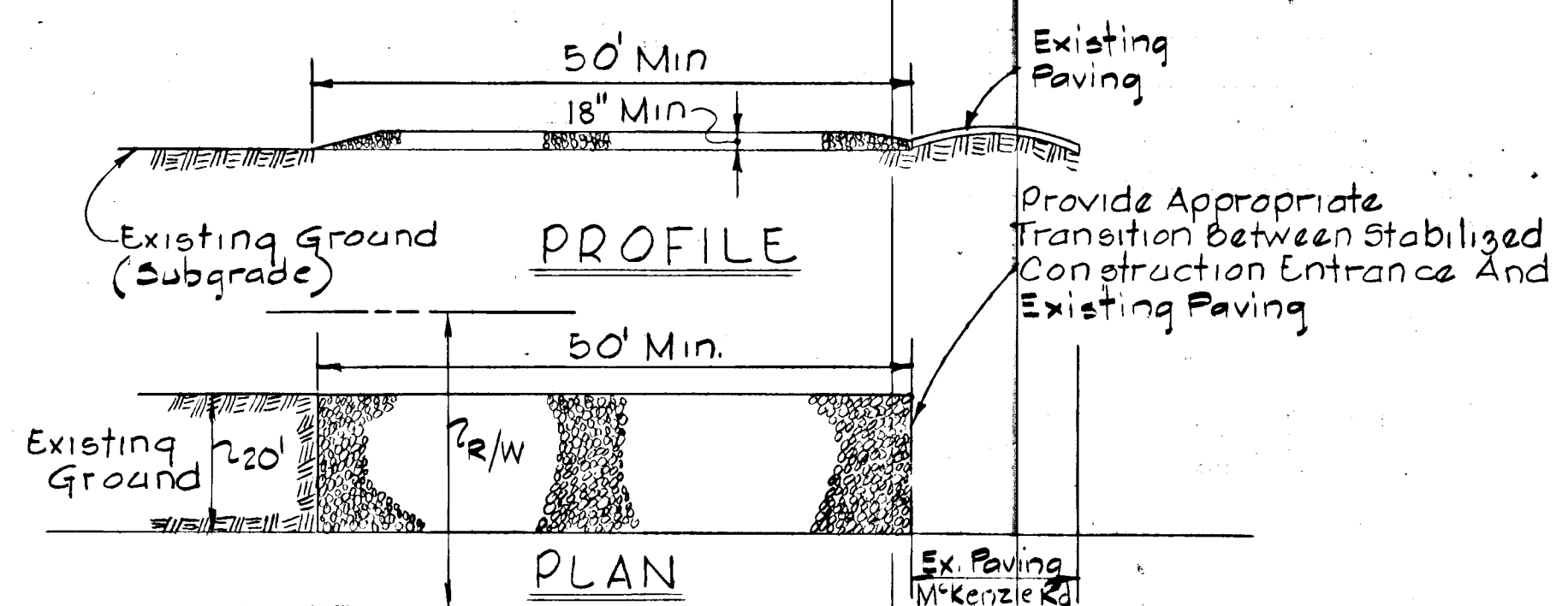
PROFILE
Scale: Horiz 1"=50'
Vert 1"=5'



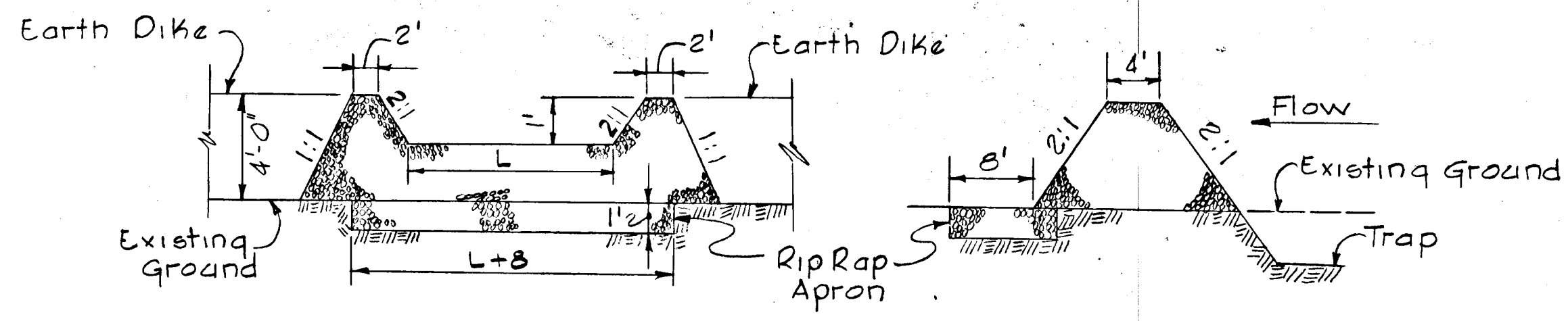
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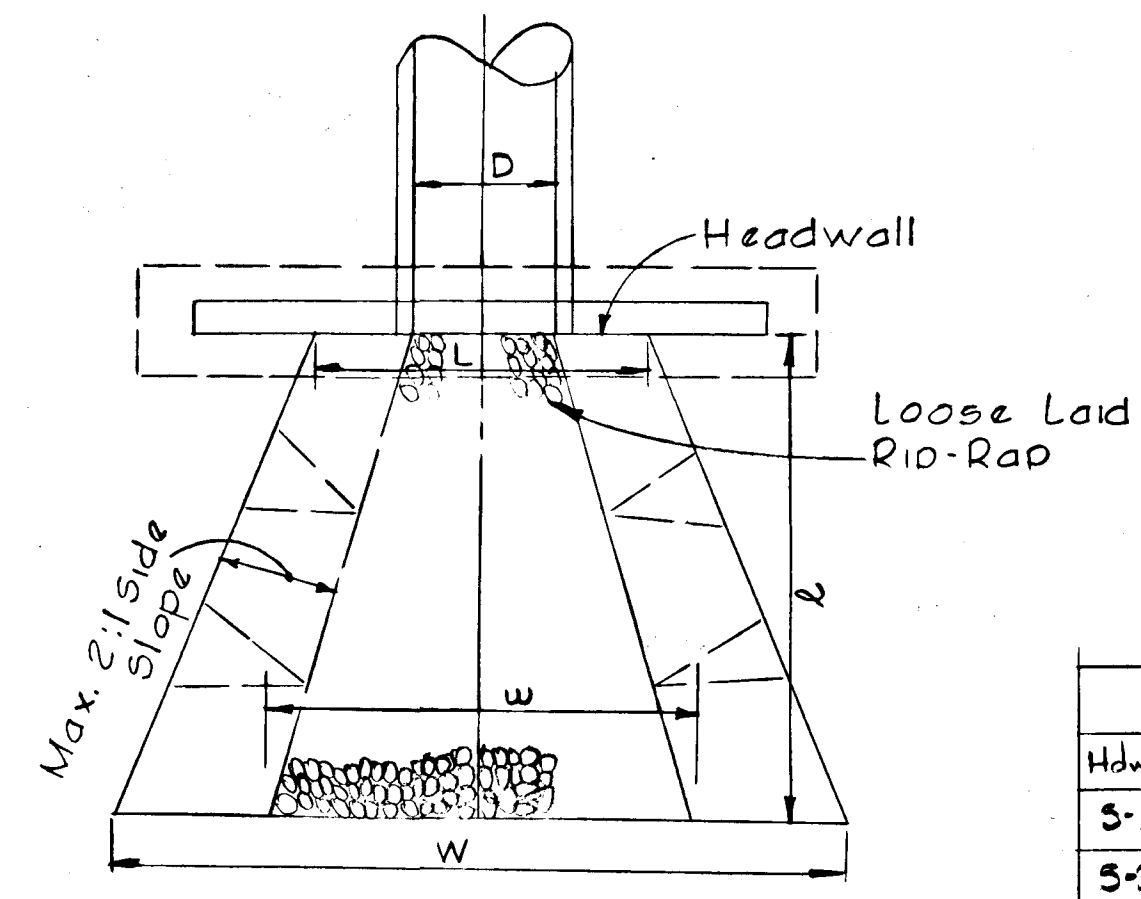
TYPE 'A' INLET PROTECTION DETAIL
No Scale



STABILIZED CONSTRUCTION ENTRANCE
Not To Scale



PROFILE OF STRUCTURE SECTION OF STRUCTURE
STONE OUTLET STRUCTURE
No Scale



PLAN

Rip Rap Dimensions						
Hdwl.	D	L	w	W	ℓ	Riprap Size
S-1	1.25'	5.25'	5'	7'	20'	100#-150#
S-2	6'	14'	18'	22'	30'	50#-100#

GENERAL NOTES

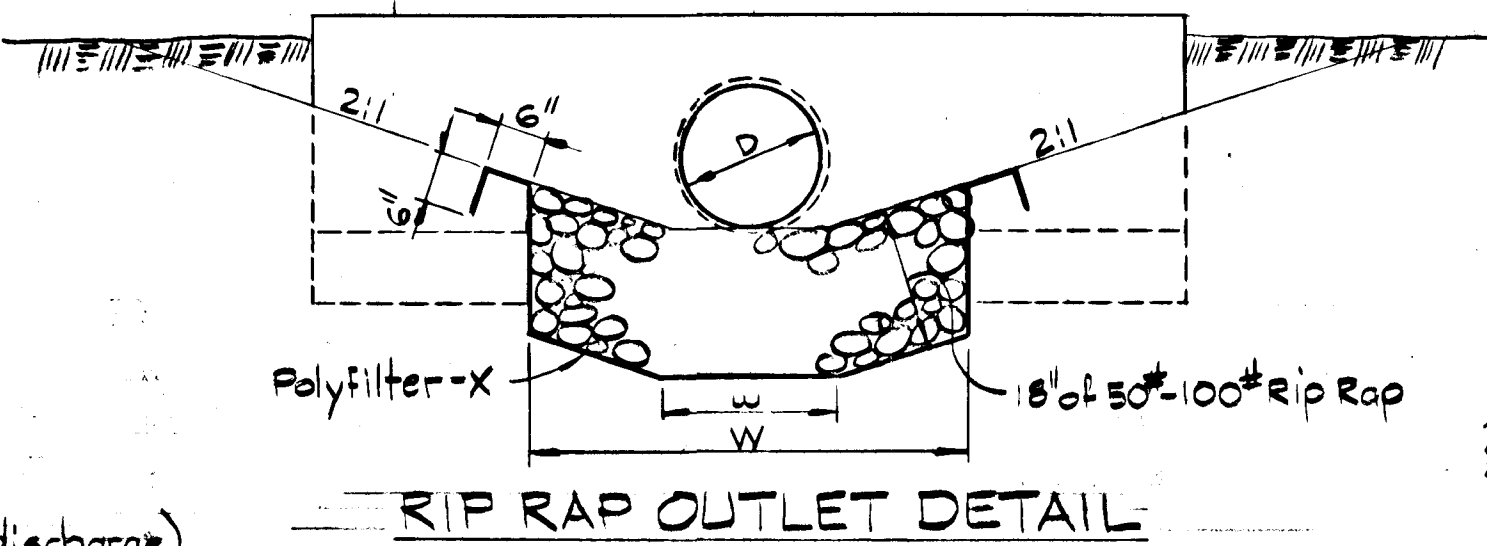
1. Present Zoning - R-20
2. Total Number of Lots - 35
3. Total Area of Parcel - 24.5 Ac.±
4. Public water and private sewer.
5. All Sediment and Erosion Control devices shall be constructed in accordance with the U.S.D.A. Soil Conservation Service Standards and Specifications for soil erosion and sediment control in developing unless otherwise noted.
6. All road construction details unless otherwise noted, will be constructed in accordance with the Howard County Road Construction Code and Standard Specifications.

STRUCTURE SCHEDULE								
NO.	TYPE	INV. IN	INV. OUT	TOP ELEV	REMARKS	INV. IN	INV. OUT	TOP ELEV
I-4	A-10'w Deflector	-	442.06	446.56	Dwg. 64-A, P.119-A	442.62	446.92	446.92
I-3	A-3'w Deflector	440.55	440.30	446.56	Dwg. 64-A, P.119-A	441.06	441.03	446.73
M-1	Std. Manhole	432.20	431.95	435.79	Dwg. D-103, P.15B	432.49	432.36	439.36
S-1	Std. Type 'C' Hdwl.	-	427.99	429.99	Dwg. D-52, P.107	-	-	430.80
I-2	A-5	-	436.15	440.33	Dwg. 64-A, P.119-A	436.86	440.48	440.48
I-1	A-5	435.70	435.15	440.33	Dwg. 64-A, P.119-A	435.84	435.71	440.58
S-3	Std. Type 'C'	-	432.20	437.32	Dwg. D-53, P.108	434.59	439.78	439.78
S-2	Arch Headwall	-	432.10	436.52	Dwg. D-53, P.108	433.29	438.26	438.26

* For Deflector Detail Sheet 3 of 4

HYDRAULIC COMPUTATIONS

S-1	d = 0.05	d = 1.0'
	a = 3.00'	a = 20'
	p = 7.00'	p = 22.5'
	R = 0.429	R = 0.89
	R ^{2/3} = 0.569	R ^{2/3} = 0.93
	n = 0.04	n = 0.04
	S = 0.01	S = 0.01
	S ^{1/2} = 0.1	S ^{1/2} = 0.1
	V = 2.11 fps (discharge)	V = 3.45 fps (discharge)
	Q = 6.33 cfs	Q ₁₀ = 69.0 cfs



RIP RAP OUTLET DETAIL

AS-BUILT - 12-14-81
AS-BUILT INFORMATION CERTIFIED BY
EARL D. COLLINS, PROFESSIONAL
ENGINEER No. 9758

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John D. Myers 12-1-77
Date

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William G. Rasch, II 12-1-77
U.S. Soil Conservation Service Date
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APPROVED: *John D. Myers* 12-1-77
District Coordinator Date
Howard Soil Conservation District

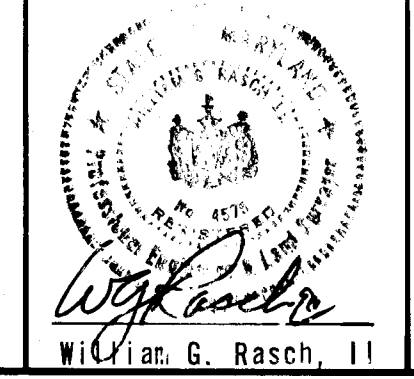
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APPROVED: Department of Public Works
John D. Myers 12/1/77
Chief, Bureau of Highways Date

APPROVED: Office of Planning and Zoning
John D. Myers 12/1/77
Chief, Division of Land Development and Zoning Administration Date

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OWNER AND DEVELOPER
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2417 MOUNT HEBRON DRIVE
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TYPICAL SECTION AND DETAILS
MT. HEBRON
2ND ELECTION DISTRICT SECTION 16 HOWARD COUNTY, MD.
October 11, 1977 Scale: As Shown SHEET 4 OF 4

DESIGNED: C.A.F.
DRAFTED: C.A.F.
CHECKED: E.B.W.
SHEET 4 OF 4