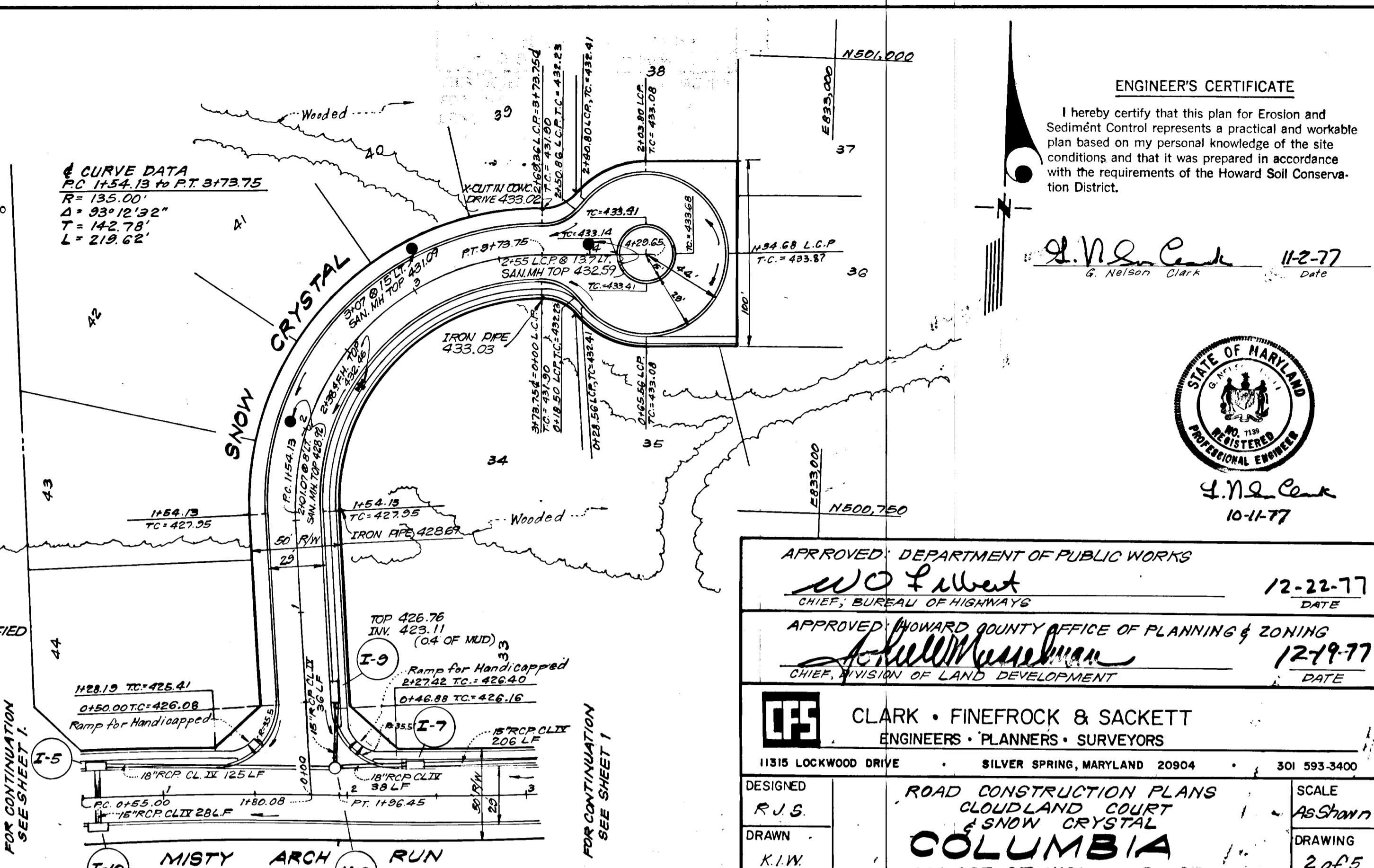


PLAN
CLOUDLAND COURT
Scale: 1"=50'



PLAN
SNOW CRYSTAL
SCALE: 1"=50'

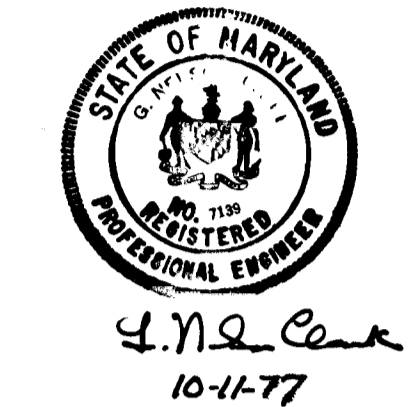
DEVELOPER'S CERTIFICATE
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.
John H. Nash
Signature 11/2/77
Date

NOTE
AS-BUILT INFORMATION VERIFIED BY MALCOLM E. HUDKINS REG. MD. LAND SURVEYOR NO. 5095
Reviewed for... HOWARD S.C.D. Name
and meets Technical Requirements
Wayne Ray 12/15/77 Date
Signature
U.S. Soil Conservation Service

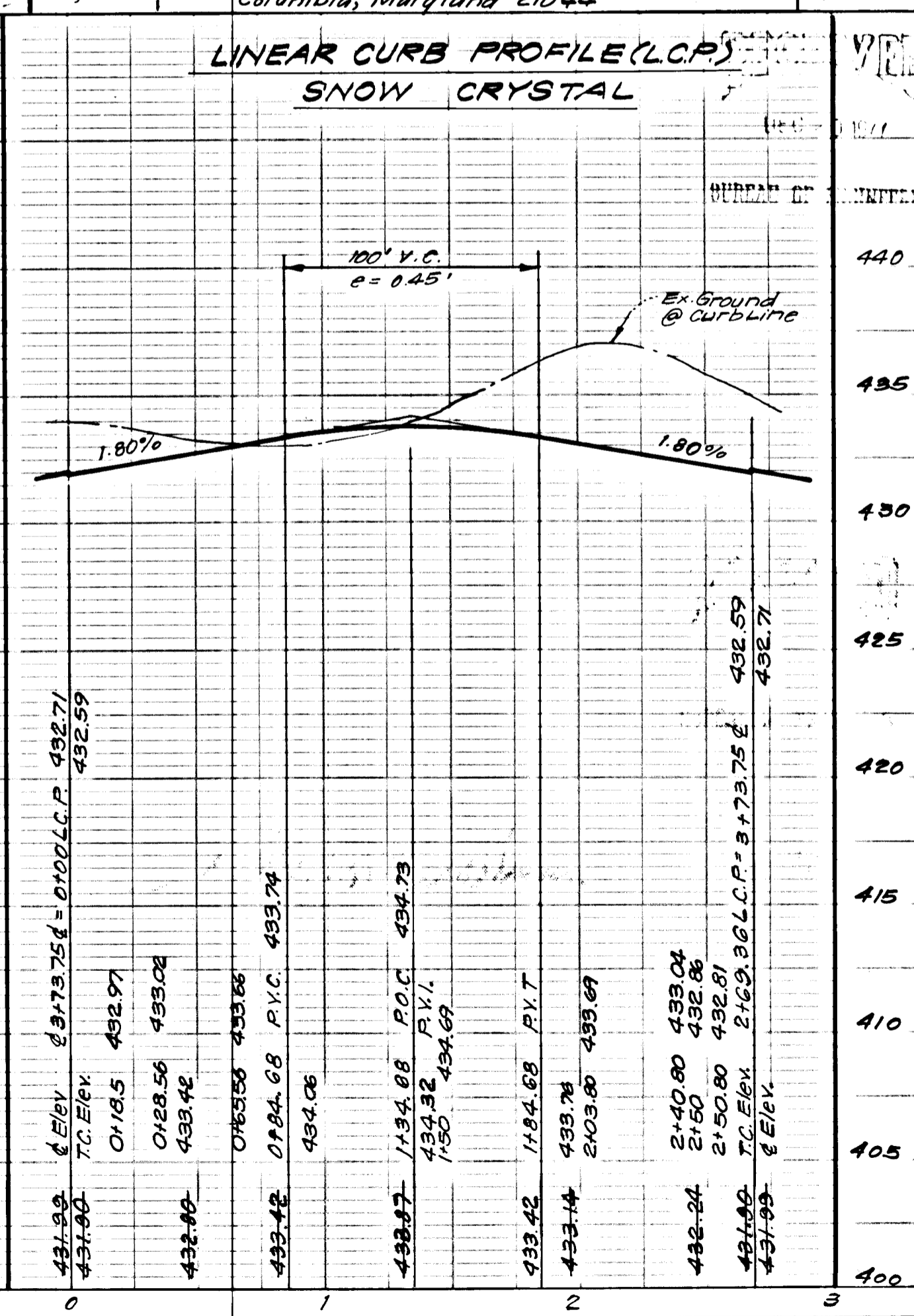
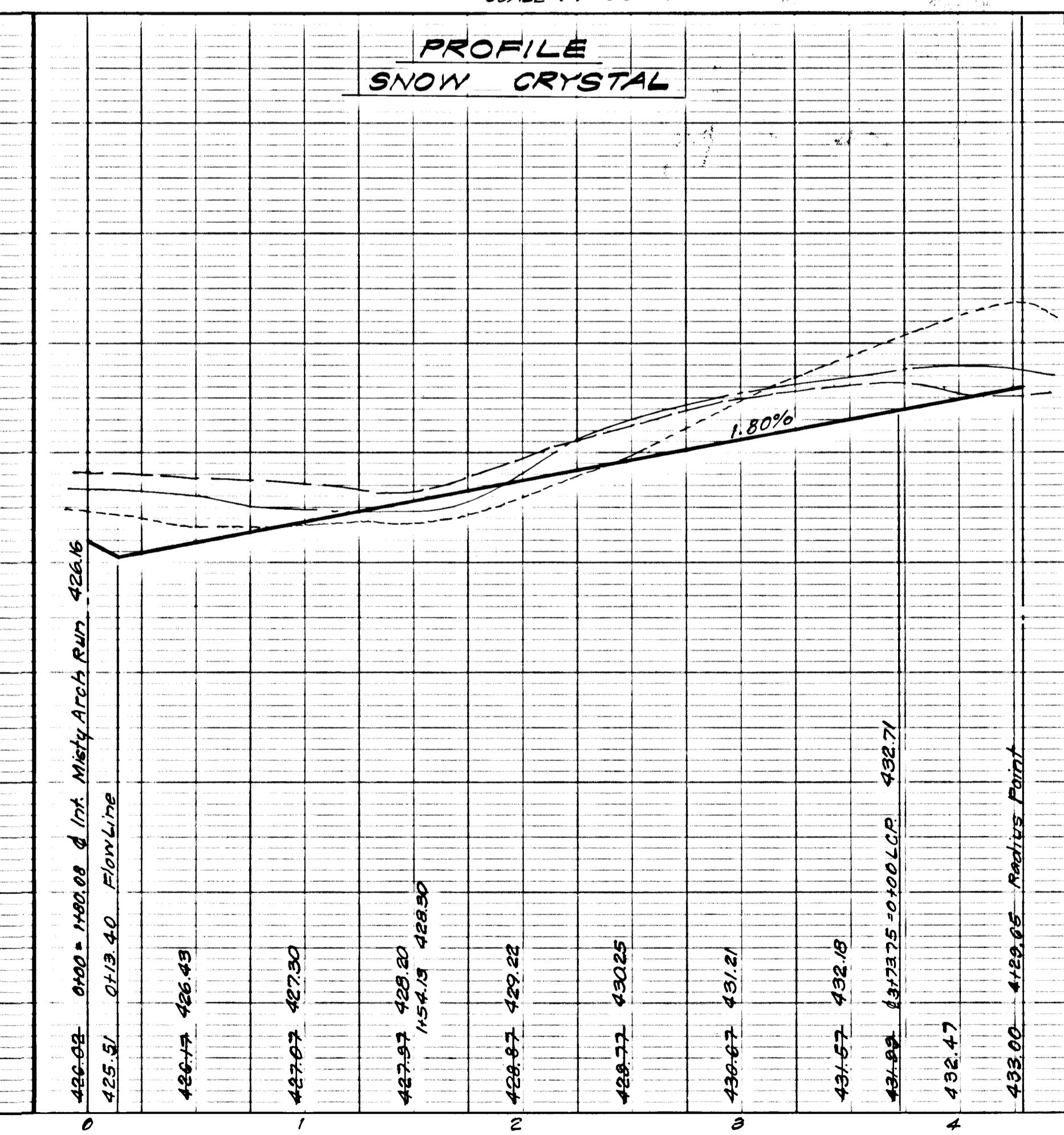
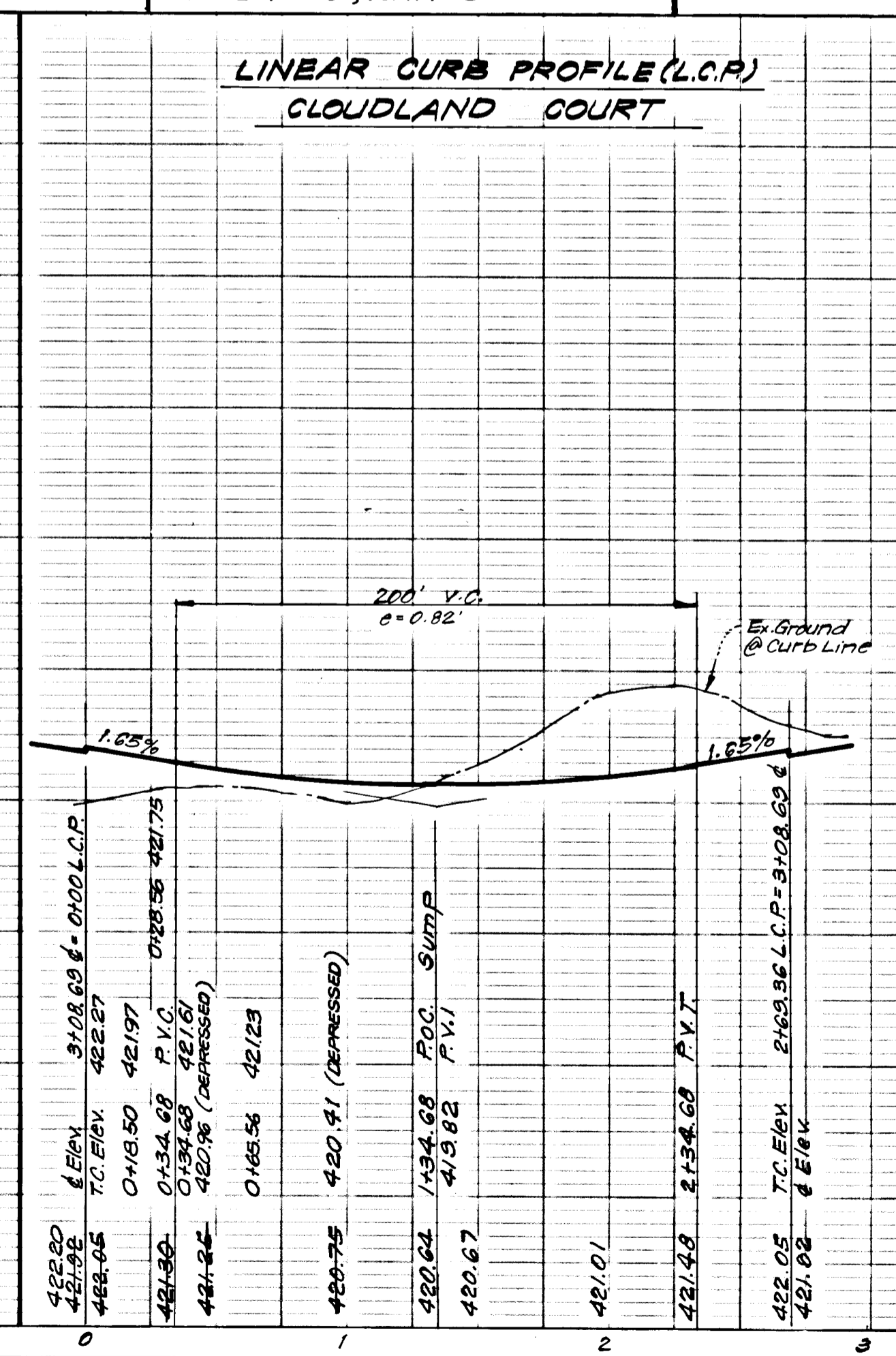
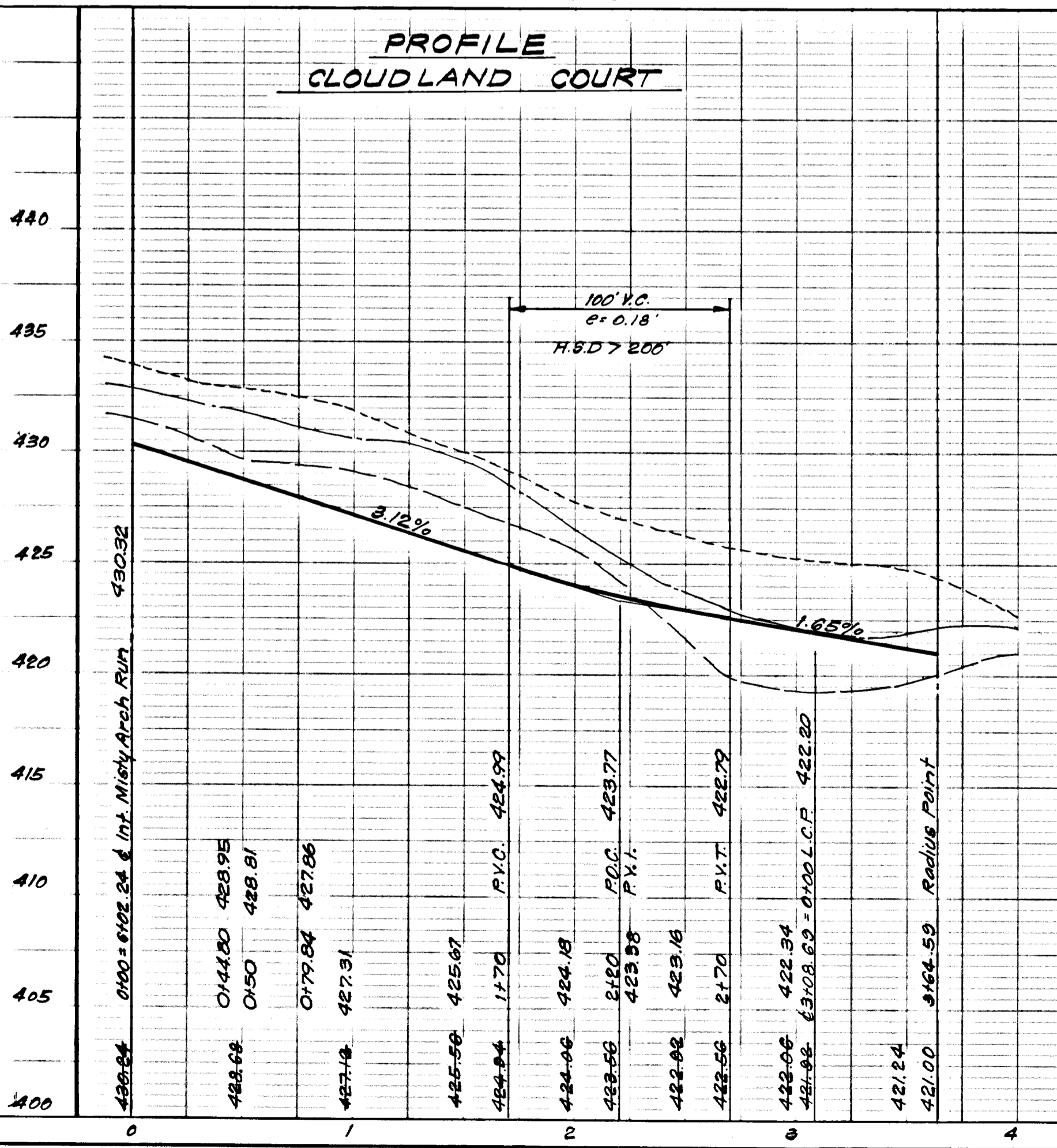
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Nes Epp Approved
Date 12/15/77

PROFILE LEGEND
1. Profile Grade Line
2. Existing G.
3. Right B.R.L.
4. Left B.R.L.
PROFILE SCALE
Horiz: 1"=50', Vert: 1"=5'

ENGINEER'S CERTIFICATE
I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
J. Nelson Clark
G. Nelson Clark
12-27
Date

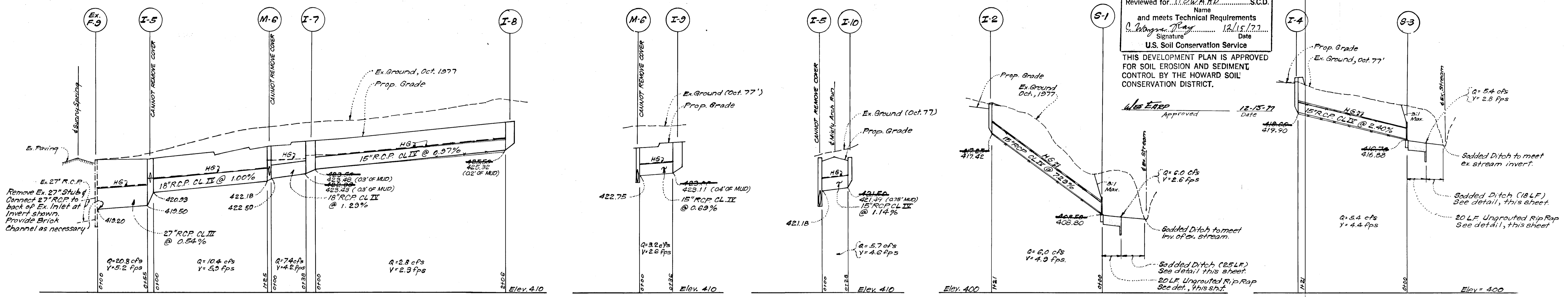


APPROVED DEPARTMENT OF PUBLIC WORKS <i>W.C. Lubert</i> CHIEF, BUREAU OF HIGHWAYS 12-22-77 DATE	
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING <i>Richard H. ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT 12-19-77 DATE	
CLARK • FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 301 593-3400	
DESIGNED R.J.S.	SCALE As Shown
DRAWN K.I.W.	DRAWING 2 of 5
CHECKED D.A.B.	
DATE Oct, 1977	FILE NO 1211-D



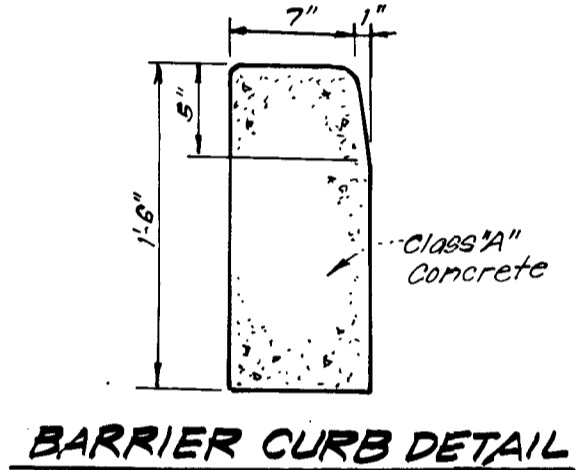
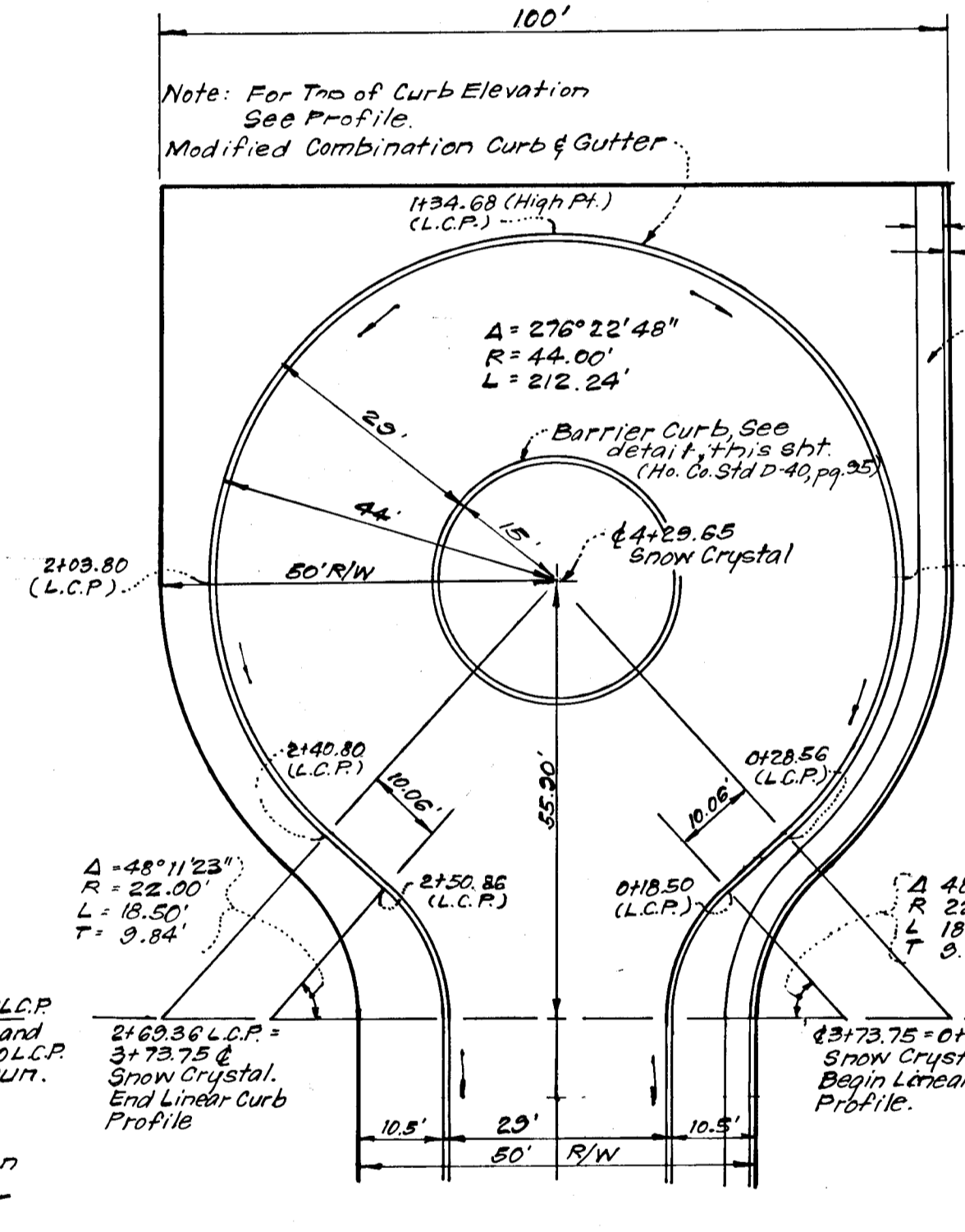
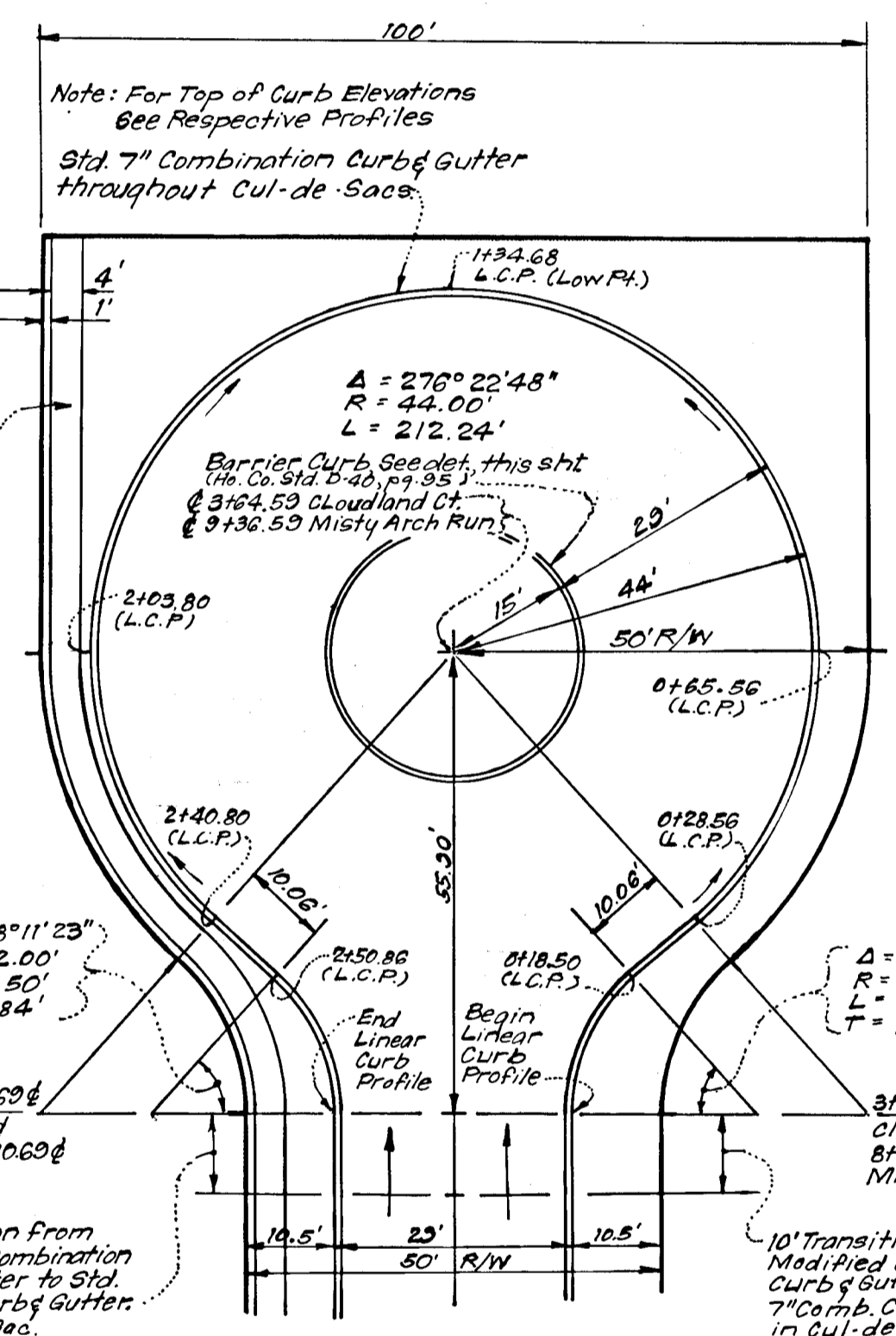
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AS-BUILT JULY 19, 1979



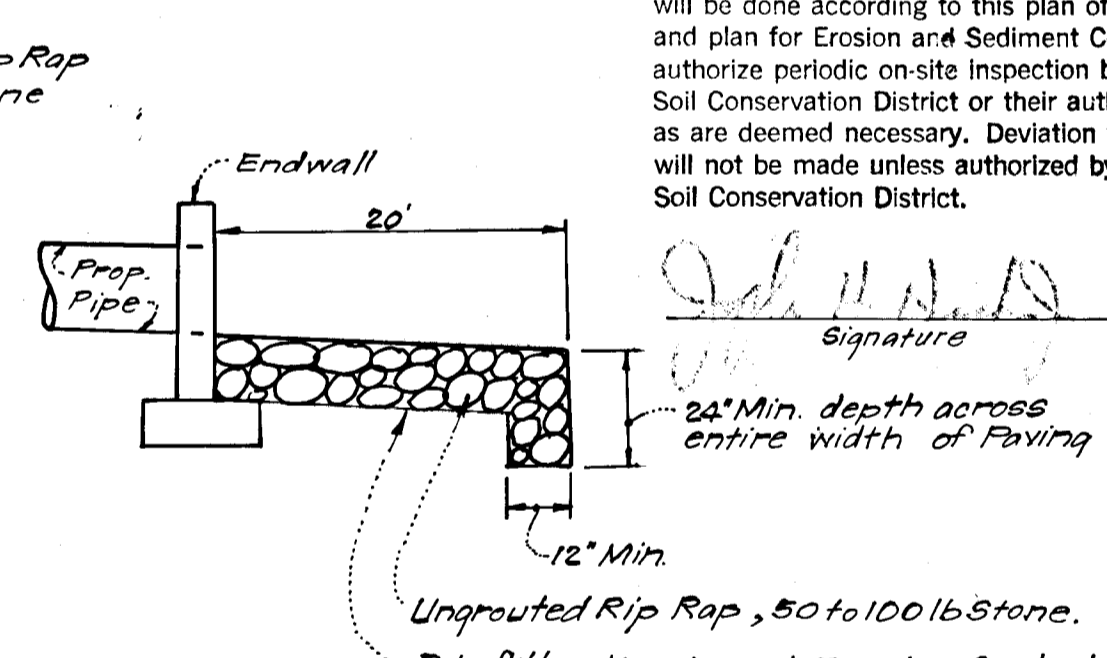
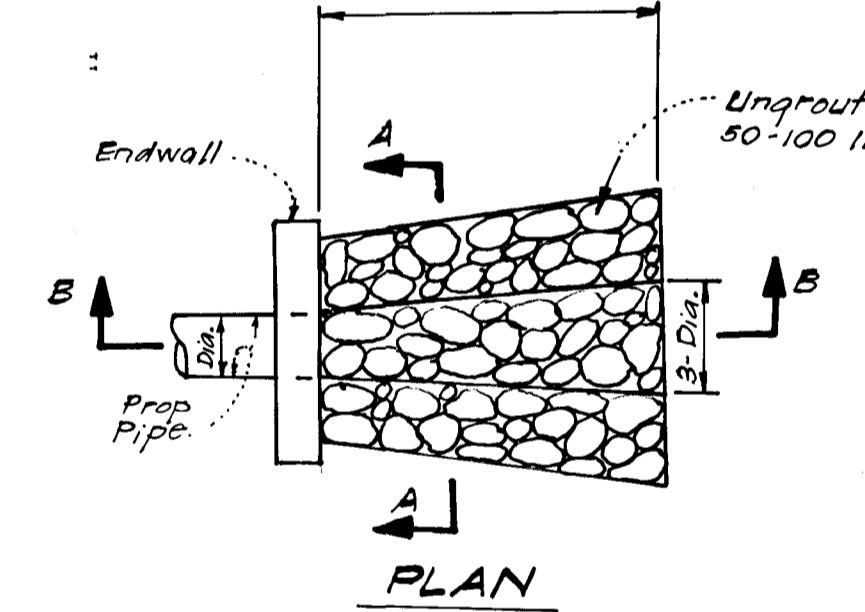
Reviewed for H. HOWARD R.P. S.C.D. Name
 and meets Technical Requirements
 C. Wilson, P.E. Date 12/15/77
 Signature
 U.S. Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Approved 12-15-77
 Date 410.66
 419.90

STORM DRAINAGE PROFILES



PIPE SCHEDULE

SIZE	TYPE	LENGTH
15"	R.C.P. CLASS IX	512 L.F.
18"	R.C.P. CLASS IX	163 L.F.
27"	R.C.P. CLASS III	55 L.F.



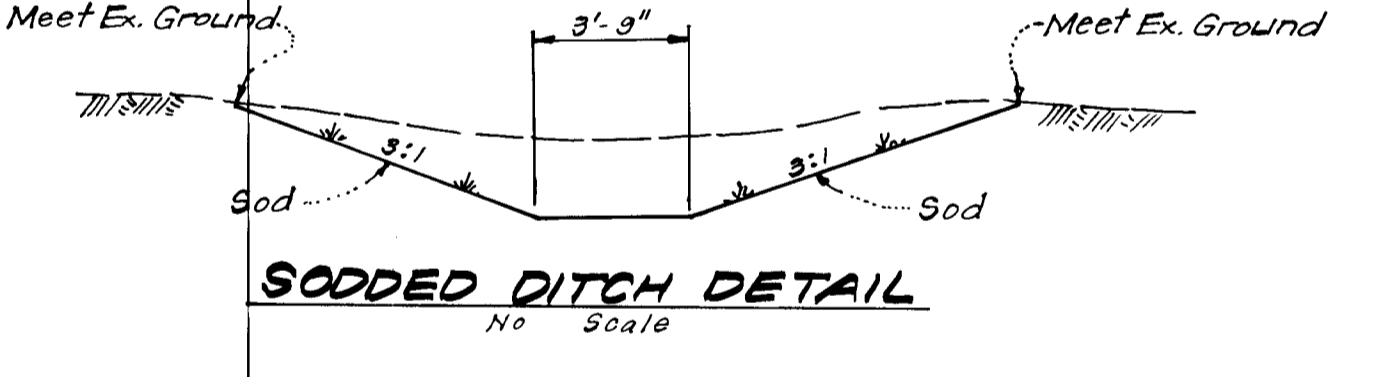
STRUCTURE SCHEDULE

NO	TYPE	INVT. IN	INVT. OUT	TOP ELEVATION UPPER LOWER	REMARKS	LOCATION
S-1	"C" Endwall	408.50	—	—	Howard Co. Std. D-52, Pg. 107 Dia=15"	See Plan
I-2	A-10 Inlet	—	417.25	420.64	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	L.C.P. 412.68
S-3	"C" Endwall	416.70	—	—	Howard Co. Std. D-52, Pg. 107 Dia=15"	See Plan
I-4	A-10 Inlet	—	419.60	423.53	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	L.C.P. 412.98
I-5	A-10 Inlet	420.93	419.50	425.14 425.03	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	4163.66, 13.88' Lt.
M-6	B Manhole *	422.50	422.18	425.60	Howard Co. Std. S.D.D.-9	4193.50, 15.00' Lt.
I-7	A-10 Inlet	423.50	422.93	426.56 426.45	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	4157.08, 13.88' Lt.
I-8	A-5 Inlet	—	425.50	428.63	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	4153.16, 13.88' Lt.
I-9	A-10 Inlet	—	423.00	426.43 426.23	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	4156.54, 13.88' Lt.
I-10	A-10 Inlet	—	421.50	425.14 425.03	Howard Co. Std. D-64-A, Pg. 119-A W=2'-6"	4163.66, 13.88' Lt.

* Construct in accordance with S.D.D.-9 except bottom slab to be concrete. Cast Manhole Frame & Cover in 10" top slab as needed.

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.

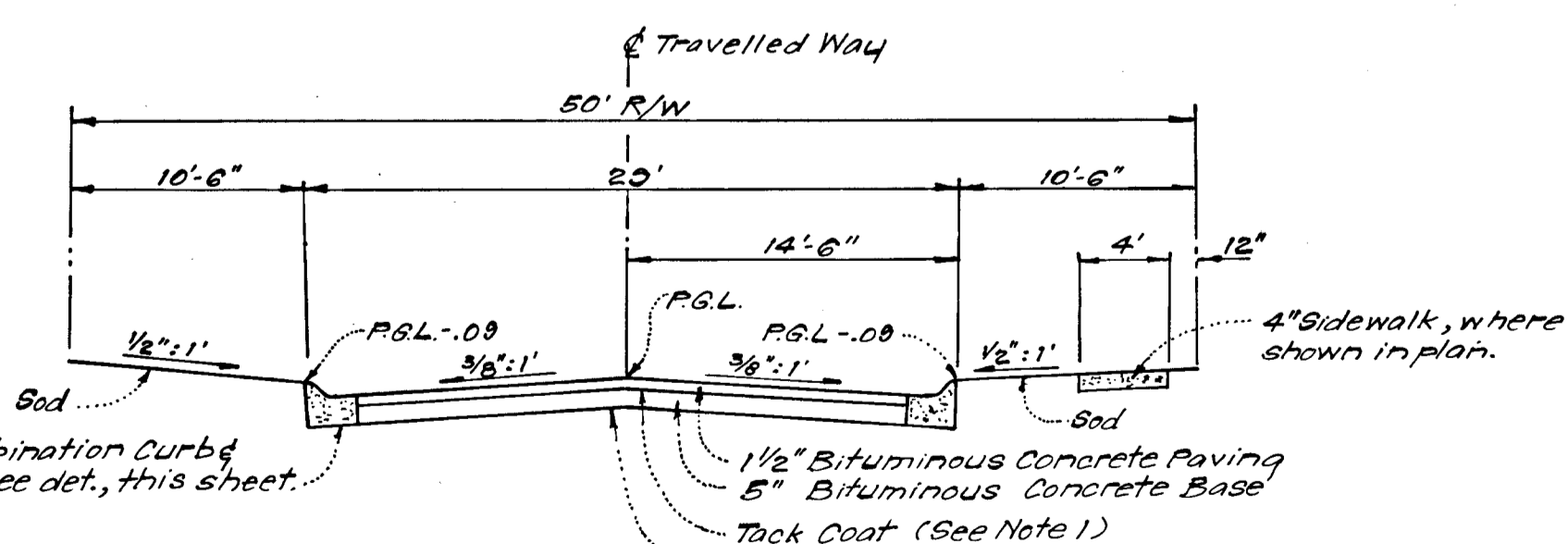
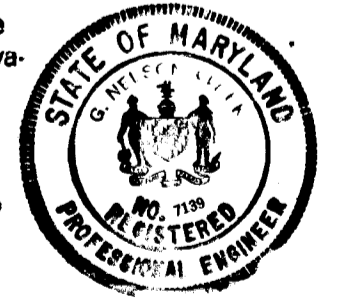
Signature: [Signature]
 Date: 11/17/77



- GENERAL SODDING NOTES**
1. Apply 10-10-10 fertilizer @ 1000# per acre (25#/1000#).
 2. Apply Ground Agricultural Limestone @ 2000#/acre (50#/1000#).
 3. Incorporate both Lime & Fertilizer into soil by discing. Firm up after incorporation.
 4. Lay Sod to a tight fit. Roll to insure contact with underlying soil. Water as necessary for 1st two weeks (in summer) to insure establishment.

ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: G Nelson Clark
 Date: 11-2-77



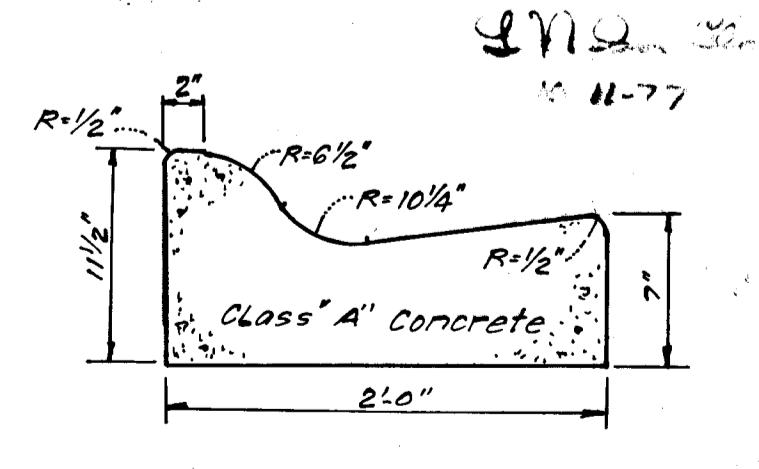
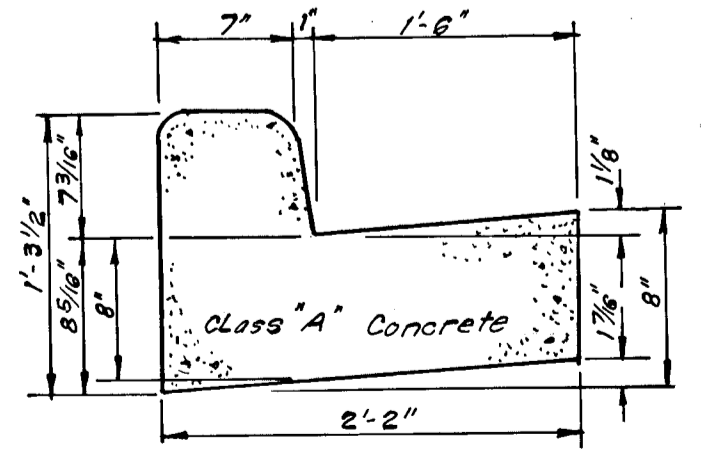
- Notes:
 1. Tack Coat 5" Base Course in accordance with Howard Co. Specs. C-31-4.
 2. Prime Coat Ex. Subbase in accordance with Howard Co. Specs. C-30-3.
 3. Std. 7" Combination Curb & Gutter to be used in Cul-De-Sacs in Misty Arch Run & Cloudland Ct.
 4. Design Speed: 30 mph.

TYPICAL PAVING SECTION
 MISTY ARCH RUN (0+00 to 0+196.65)
 SNOW CRYSTAL (0+00 to 4+29.65)
 CLOUDLAND COURT (0+00 to 3+64.59)
 No Scale

PAVING SECTION
 No Scale

Layer	Thickness	Phase
Bituminous Concrete Surface	1 1/2"	Final Phase
Bituminous Concrete Base (Placed in one course)	5"	First Phase

Clearing & Grading Subgrade Article C-1
 Base Course Article C-2
 Surface Course Article C-31 or C-33
 Article C-3
 To be constructed in accordance with Howard Co. Road Construction Code and Specifications.



APPROVED: DEPARTMENT OF PUBLIC WORKS

Signature: W.O. Lambert
 Date: 12-22-77

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Signature: [Signature]
 Date: 12-19-77

CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS
 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400

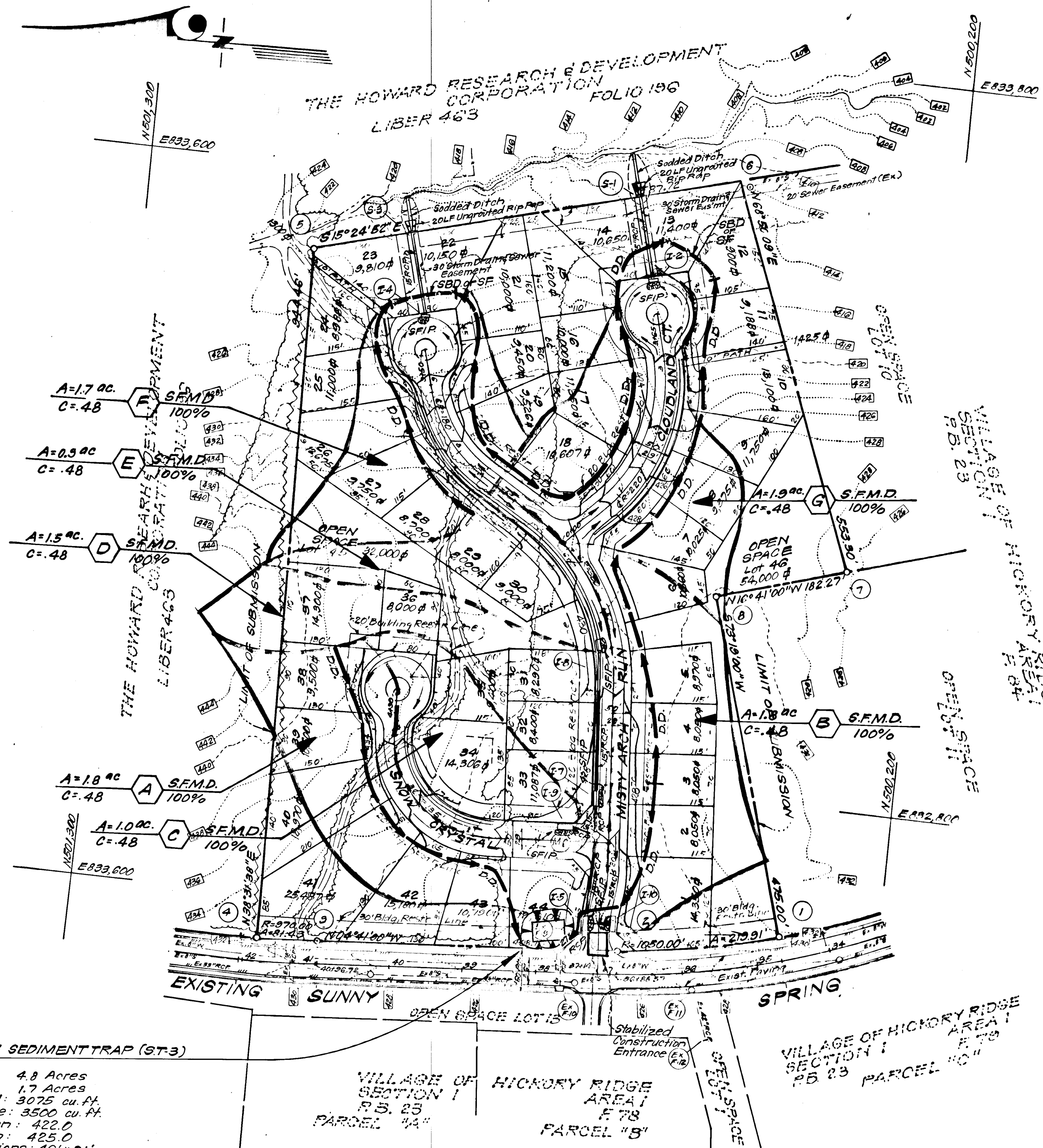
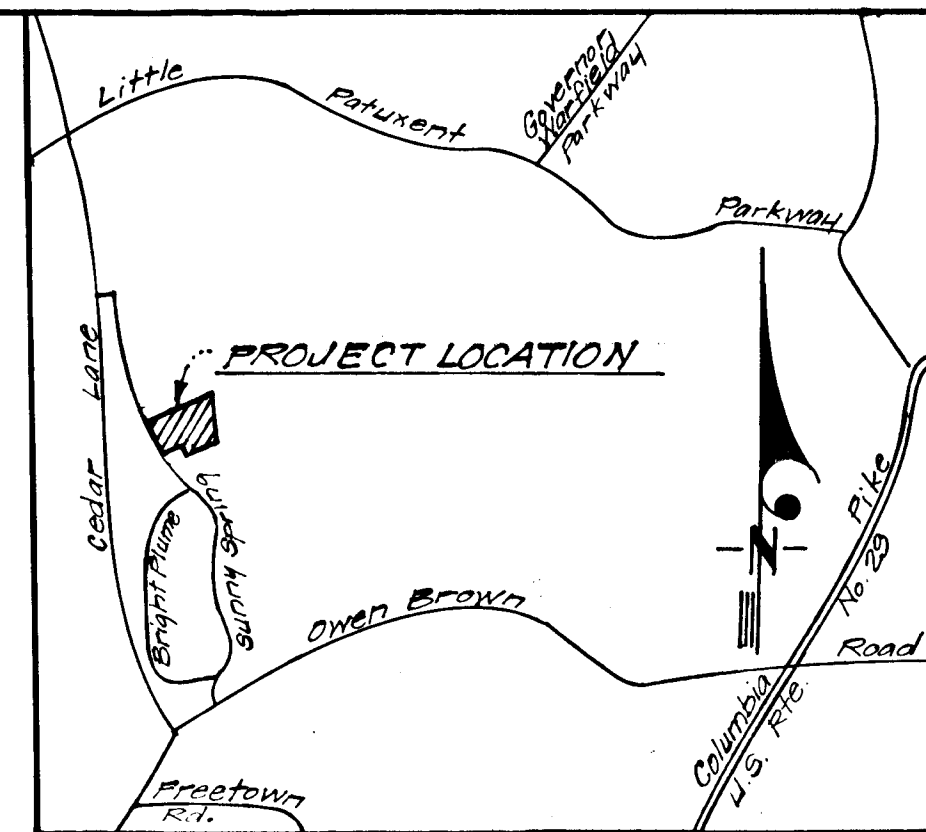
DESIGNED R.J.S.
 DRAWN K.I.W.
 CHECKED D.A.B.
 DATE Oct. 1977

ROAD CONSTRUCTION PLANS
 DETAILS AND PROFILES
COLUMBIA
 VILLAGE OF HICKORY RIDGE SECTION
 54th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE As Shown
 DRAWING 3 of 5
 JOB NO.
 FILE NO. 1211-D

LEGEND

- 1. Contour Interval 2 Ft.
- 2. Existing Contour
- 3. Proposed Contour
- 4. Existing Sewer
- 5. Existing Storm Drainage
- 6. Proposed Storm Drainage
- 7. Limit of Subdivision
- 8. Diversion Dike
- 9. Straw Bale Dike or Silt Fence
- 10. Stone Filter Inlet Protection
- 11. Stabilized Construction Entrance



STONE OUTLET SEDIMENT TRAP (ST-3)
 Drainage Area: 4.8 Acres
 Disturbed Area: 1.7 Acres
 Volume Required: 3075 cu. ft.
 Volume Available: 3500 cu. ft.
 Bottom Elevation: 422.0
 Crest Elevation: 425.0
 Bottom Dimensions: 46' x 31'

NOTE: Existing Storm Drainage in Sunny Spring was designed to accommodate the storm runoff from the development of Hawthorn North. See Drainage Area Map and computations by Green Associates dated March, 1972.

Reviewed for... HOWARD.....S.C.D.
 Name
 and meets Technical Requirements
 C. Wayne Ray Date 12/15/77
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE 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 & Sediment Control, and I 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.

Wes Esco Approved 12-17 Date
 W. E. Woodson Signature 10/14/77 Date

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

H. V. Clark 10-11-77 Date
 H. V. Clark Signature

APPROVED: DEPARTMENT OF PUBLIC WORKS
 W. O. Lambert 12-22-77
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 D. W. ... 1/27
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS
 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 583-3400

DESIGNED R.J.S. SCALE 1"=100'
 DRAWN K.I.W. DRAWING 4 of 5
 CHECKED D.A.B. JOB NO.
 DATE FOR: HOWARD RESEARCH & DEVELOPMENT CORP. FILE NO. 1211-D
 Oct, 1977 The Rouse Company Building Columbia, Maryland 21040 See Also 117-P



H. V. Clark 10-11-77 Date
 H. V. Clark Signature

GENERAL NOTES

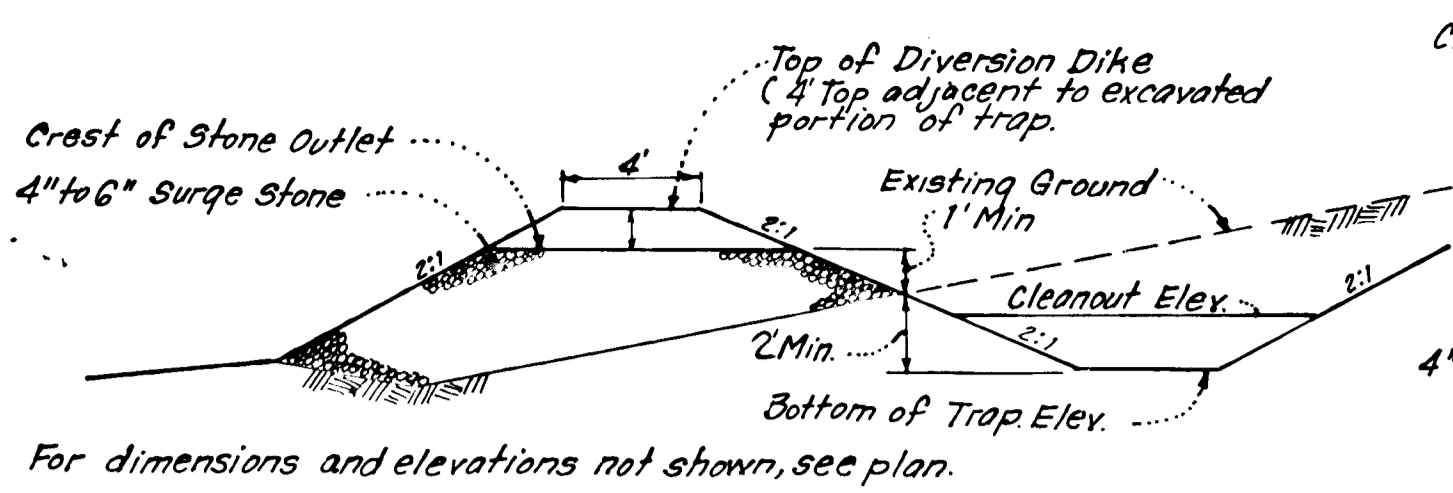
- All Sediment and Erosion Control Measures will be installed and stabilized according to this plan prior to any other grading, clearing, or disturbance of the existing surface of the site. See Note #5 for stabilization except that the seed mixture will be annual rye applied at the rate of 1.4 lbs / 1000 sq. ft.
- Notify the Bureau of Inspections and Permits at least 24 hrs before starting any work.
- All Sediment Control Practices to conform to the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" and shall be adjusted to meet actual field conditions.
- Stabilization of disturbed ground to be done as soon after construction as possible.
- All grading shall be treated in accordance with the following Specifications:
 - Seed - certified 85% germination applied at the rate of 3lbs/1000 sq. ft. mixture - 40% Kentucky Blue, 20% Chewing Fescue, 20% Kentucky 31, and 20% Annual Rye.
 - Fertilizer - 10-10-10 applied at the rate of 23lbs/1000 sq. ft. Ground agricultural lime or dolomitic lime applied at the rate of 46 lbs / 1000 sq. ft.
 - Mulch - Weed free grain straw applied at the rate of 70lbs / 1000sq. ft. Mulch shall be secured to the ground by any approved method, i.e. asphalt tacks, chemical binder, wood chips, etc.
- All Structural Sediment Control Measures are to remain in place until permission for their removal has been obtained from the Bureau of Inspections and Permits.
- On site inspection and maintenance of all sediment control measures including cleanout of sediment traps and dikes, and proper establishment of all planned vegetative measures will be the responsibility of the Developer or his representative on the site, on a continuing day to day basis.
- Protection of stabilized area from sediment runoff shall be provided by the use of an approved sediment control device, i.e. straw bales, diversion dikes, etc.
- The Contractor shall keep all public roads free of sediment deposits left from traffic leaving construction site.
- A complete site grading plan must be developed and approved before building permits can be issued.
- Upstream ends of all Storm Drainage Pipes shall be blocked at the end of each working day. See detail, this sheet.

CONSTRUCTION SEQUENCE

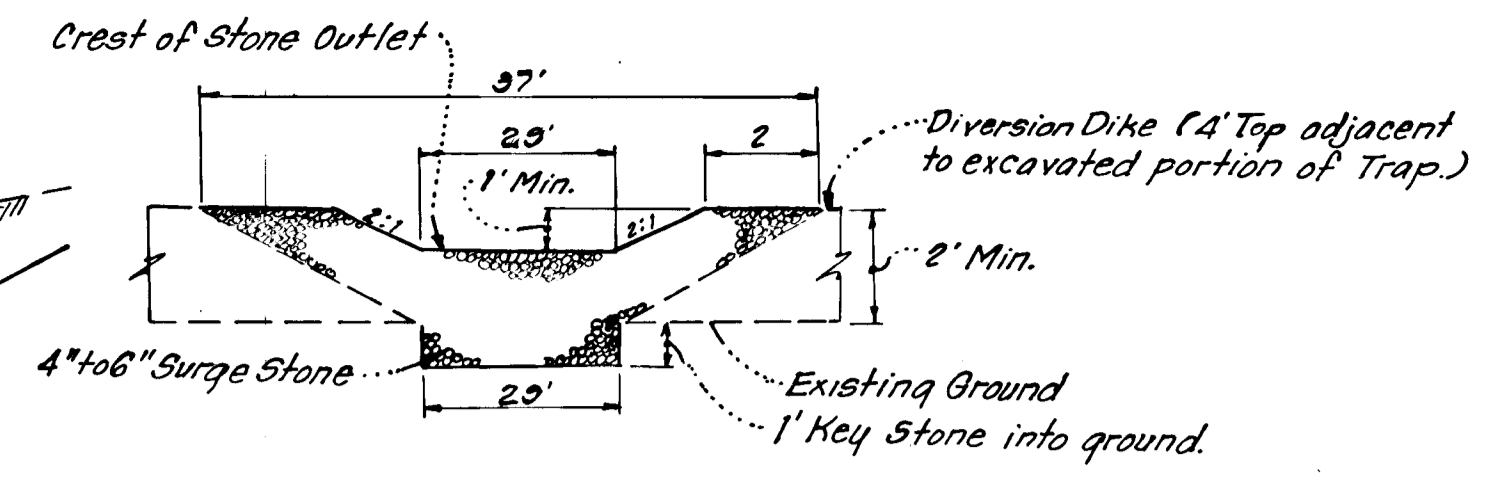
- Install all Sediment Control Practices.
- Rough Grade Street and Install Storm Drainage. Block Curb openings of all inlets with stone or boards.
- Construct Streets.
- Stabilize all Disturbed Areas.
- Remove Sediment & Erosion Control (with permission of Howard Soil Conservation District).

SITE ANALYSIS

1. Total Area of Site:	15.20 Acres
2. Disturbed Area:	2.40 Acres
3. Area to be Paved:	1.30 Acres
4. Area to be Stabilized:	1.10 Acres



TYPICAL PROFILE



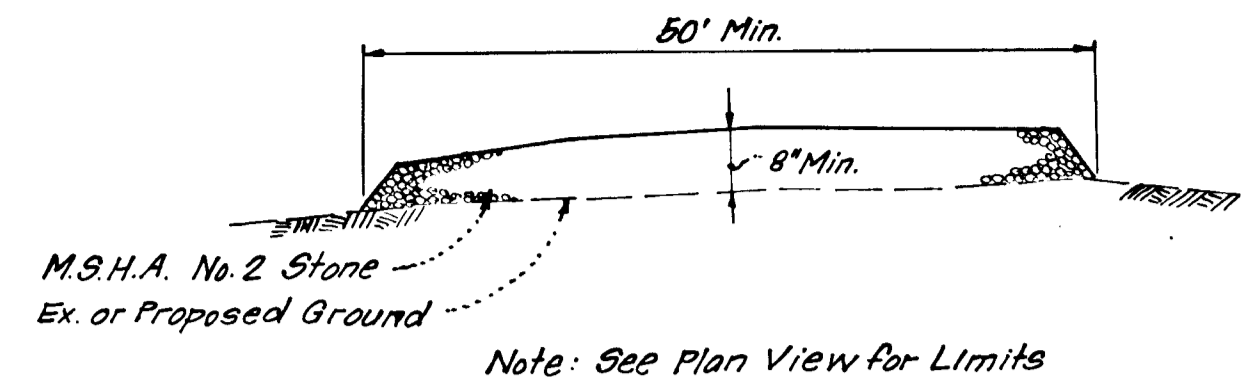
TYPICAL CROSS SECTION

STONE FILTER OUTLET NOTES

- Sediment Trap to be cleaned out when sediment reaches a level 1' ft. below the Crest of Stone Outlet.
- Bottom of Sediment Trap to be level and constructed to the dimensions shown on plan.
- Stone Outlet to be constructed through diversion dike adjacent to excavated portion of Sediment Trap.

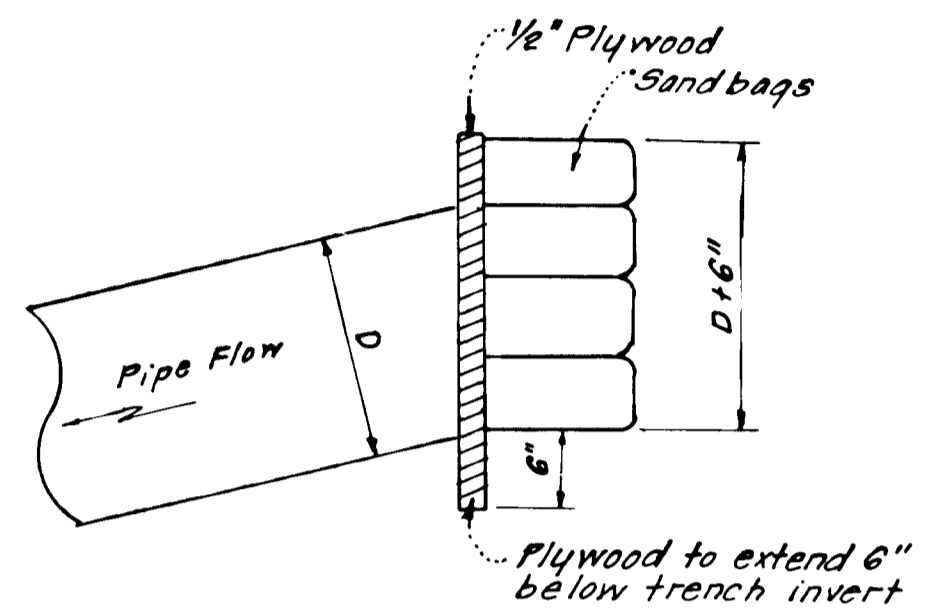
DETAILS OF STONE FILTER OUTLET (FOR STONE OUTLET SEDIMENT TRAP)

NO SCALE



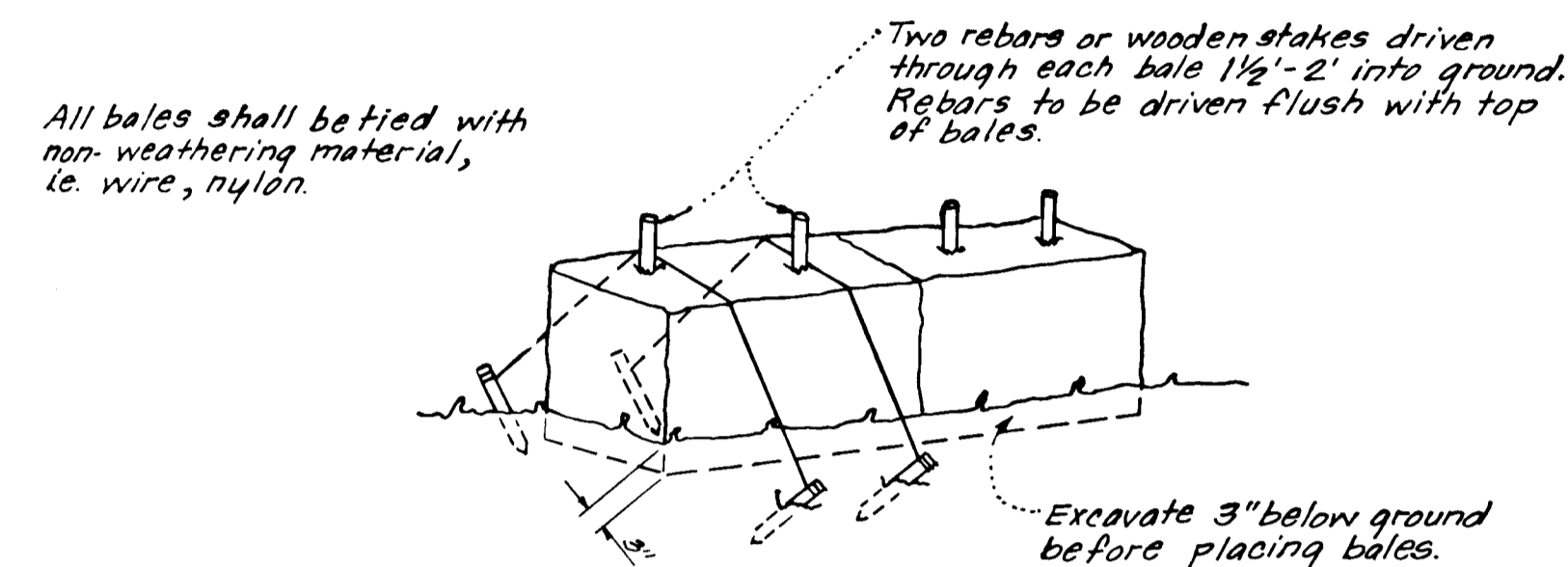
STABILIZED CONSTRUCTION ENTRANCE DETAIL

Note: See Plan View for Limits SECTION VIEW



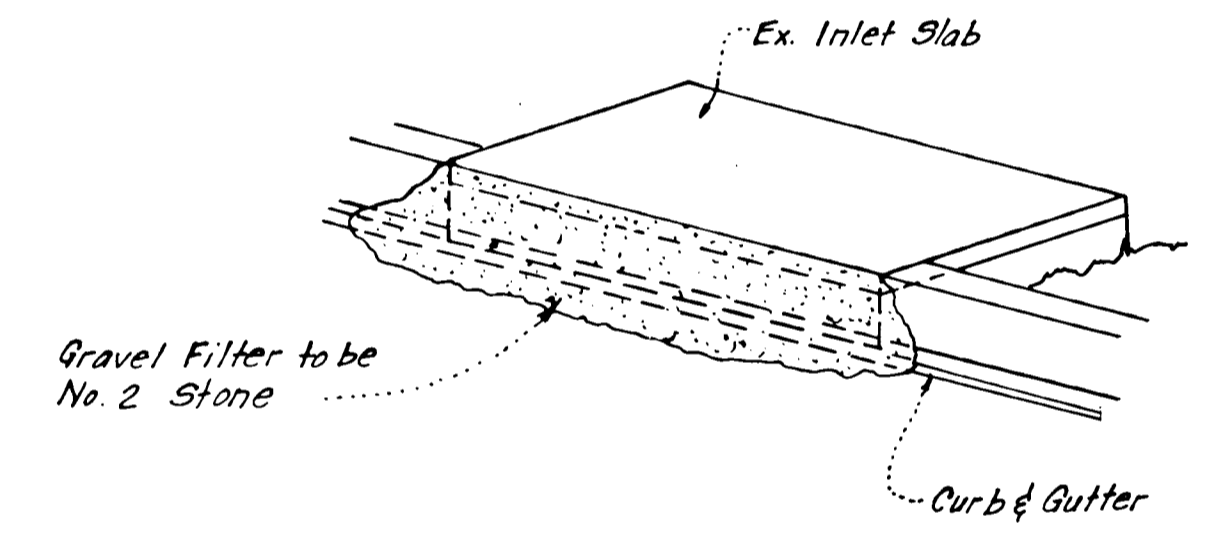
PIPE BLOCKING DETAIL

No Scale

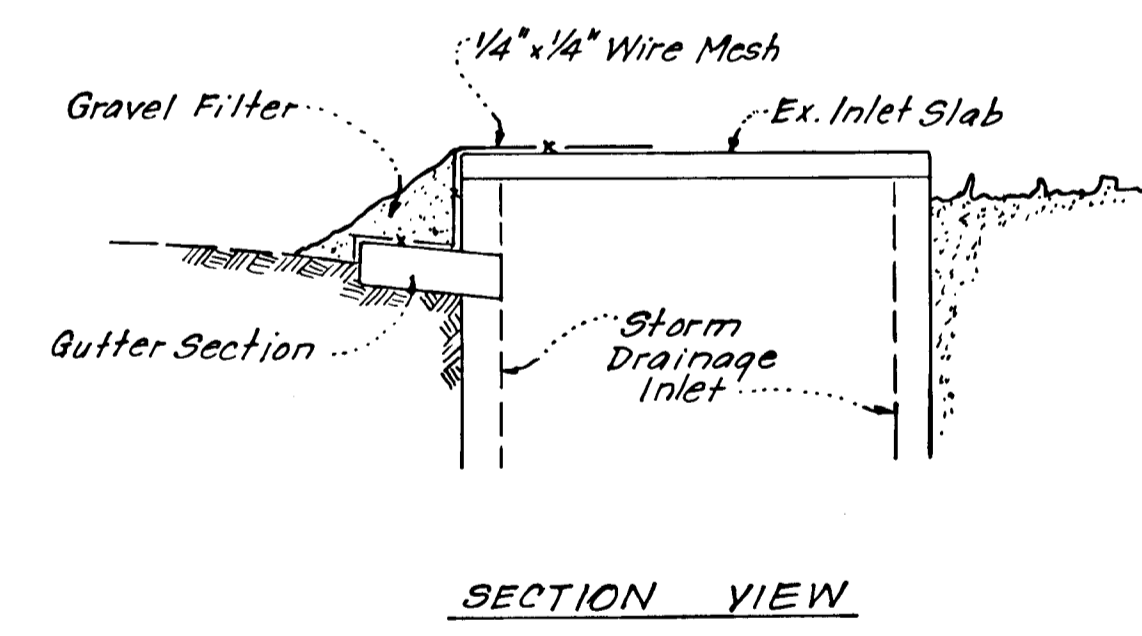


TYPICAL STRAW BALE DETAIL (S.B.D.)

No Scale



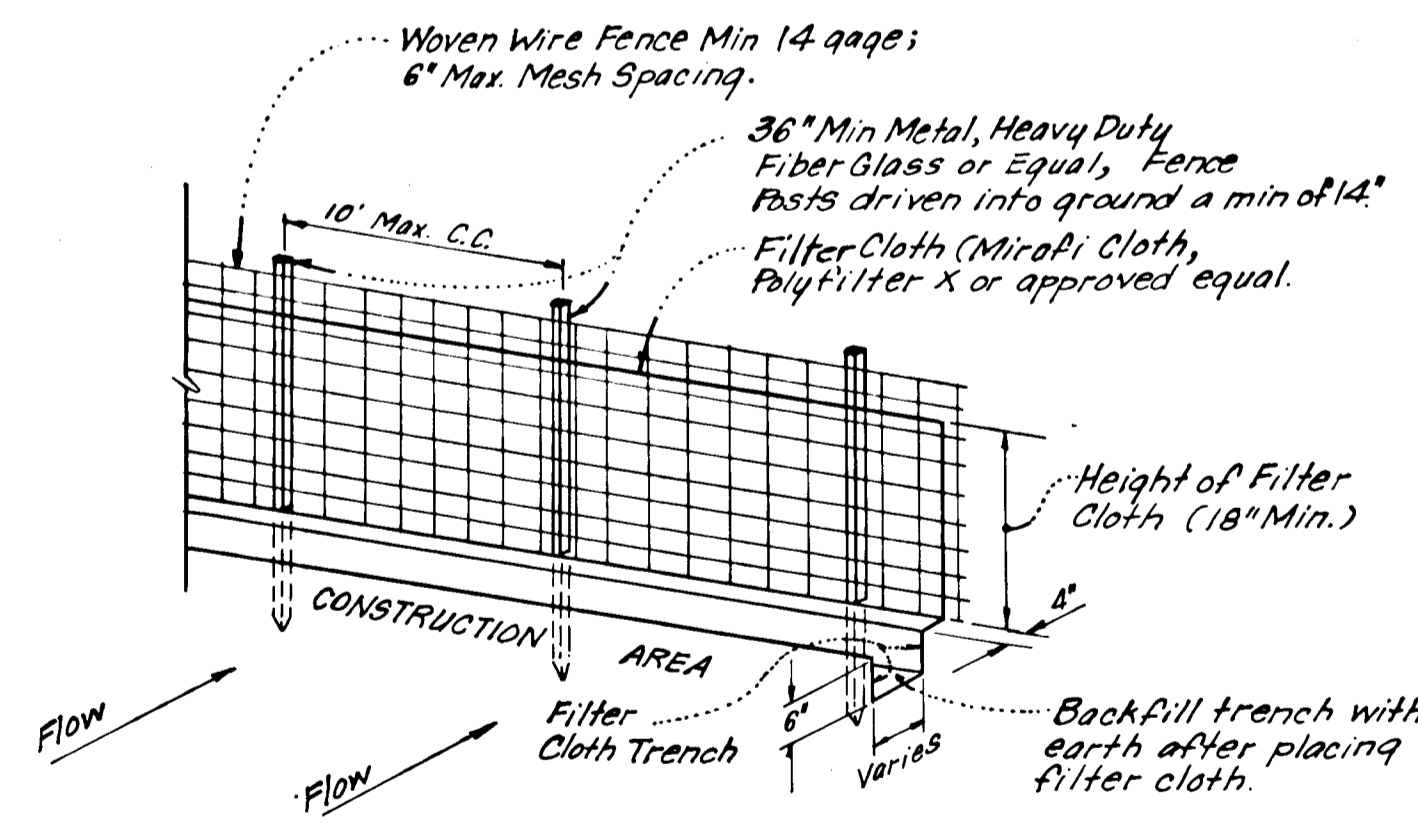
ISOMETRIC VIEW



SECTION VIEW

STONE FILTER INLET PROTECTION DETAIL (S.F.I.P.)

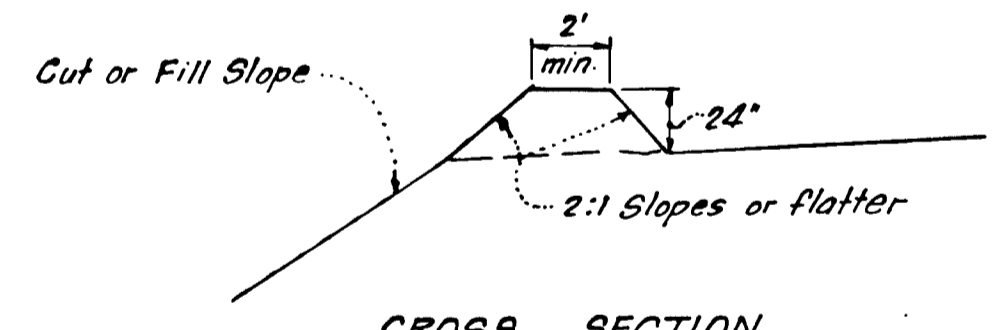
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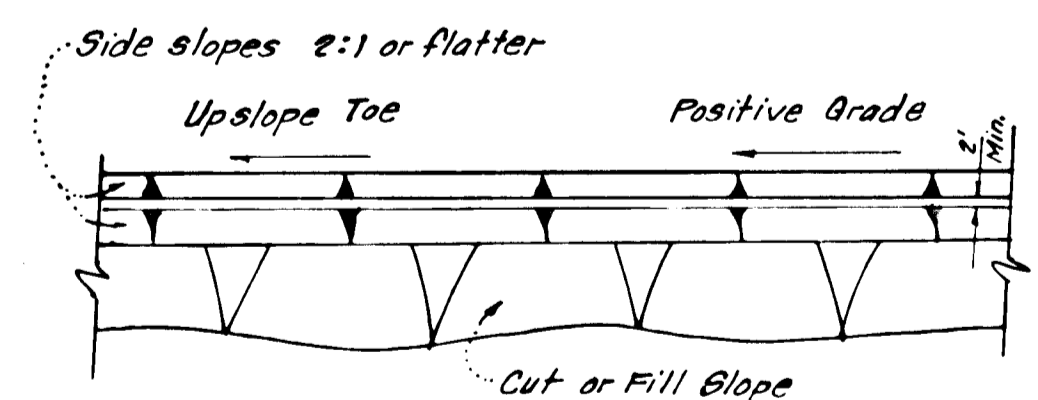
SILT FENCE DETAIL (S.F.)

No Scale

- NOTES:
- Woven Wire Fence to be fastened securely to fence posts by use of wire ties.
 - Filter Cloth to be fastened securely to woven wire fence by use of wire ties spaced every 24" x 24".



CROSS SECTION



PLAN VIEW

DIVERSION DIKE (D.D.)

No Scale

Reviewed for HOWARD S.C.D. Name
and meets Technical Requirements
C. Wayne Roy 12/15/77 Date
Signature
U.S. Soil Conservation Service

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

Wes Egan 12-15-77 Approved Date

DEVELOPER'S CERTIFICATE

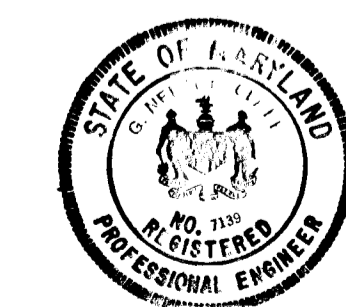
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from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

Walter Woodford 10/14/77 Signature Date

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

G. Nelson Clark 10-11-77 Date



APPROVED: DEPARTMENT OF PUBLIC WORKS
W. J. Falbert 12-22-77
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
[Signature] 12-19-77
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CLARK • FINEFROCK & SACKETT
ENGINEERS • PLANNERS • SURVEYORS
11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 993-3400

DESIGNED R.V.S.	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL DETAILS	SCALE As Shown
DRAWN K.I.W.	COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 1 AREA 5	DRAWING 5 of 5
CHECKED D.A.B.	5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO.
DATE Oct, 1977	FOR: HOWARD RESEARCH & DEVELOPMENT CORP. The Rouse Company Building Columbia, Maryland 21044	FILE NO. 12/1-D