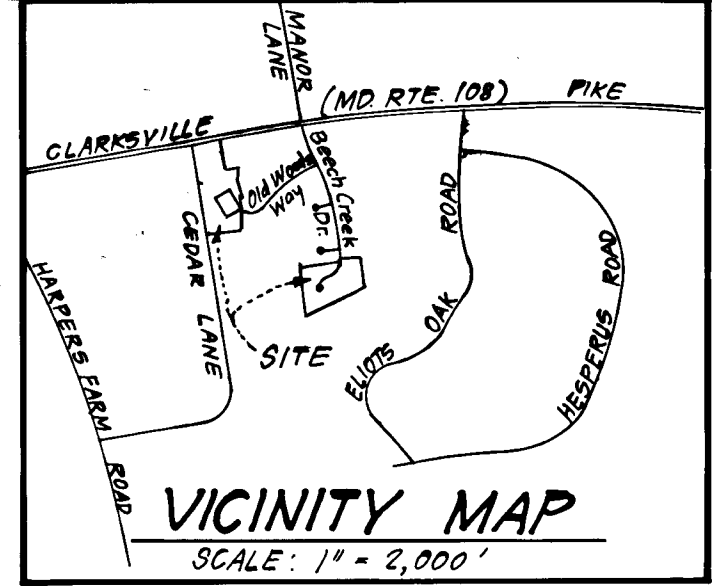


DEVELOPER'S/BUILDER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."
G. Nelson Clark
 Signature of Developer/Builder
 11-11-85
 Date



E CURVE DATA
 PC 7+67 to PT 8+82.19
 R = 160.00'
 $\Delta = 41^\circ 14' 58''$
 L = 115.13'
 T = 60.22'
 Chd. = $N67^\circ 08' 06'' W - 112.72'$

Reviewed for Howard Co. S.C.D.
 Name: Howard Co. S.C.D.
 and meets Technical Requirements: 3-20-86
 Signature: [Signature] Date: [Date]
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.
[Signature]
 Approved Date: 3/20/86

CURB & GUTTER LEGEND
 HoCoStd 7" Comb Curb & Gutter
 HoCo Reverse 7" Curb & Gutter
 HoCo Std. 6" Comb Curb & Gutter
 HoCo Reverse 6" Curb & Gutter



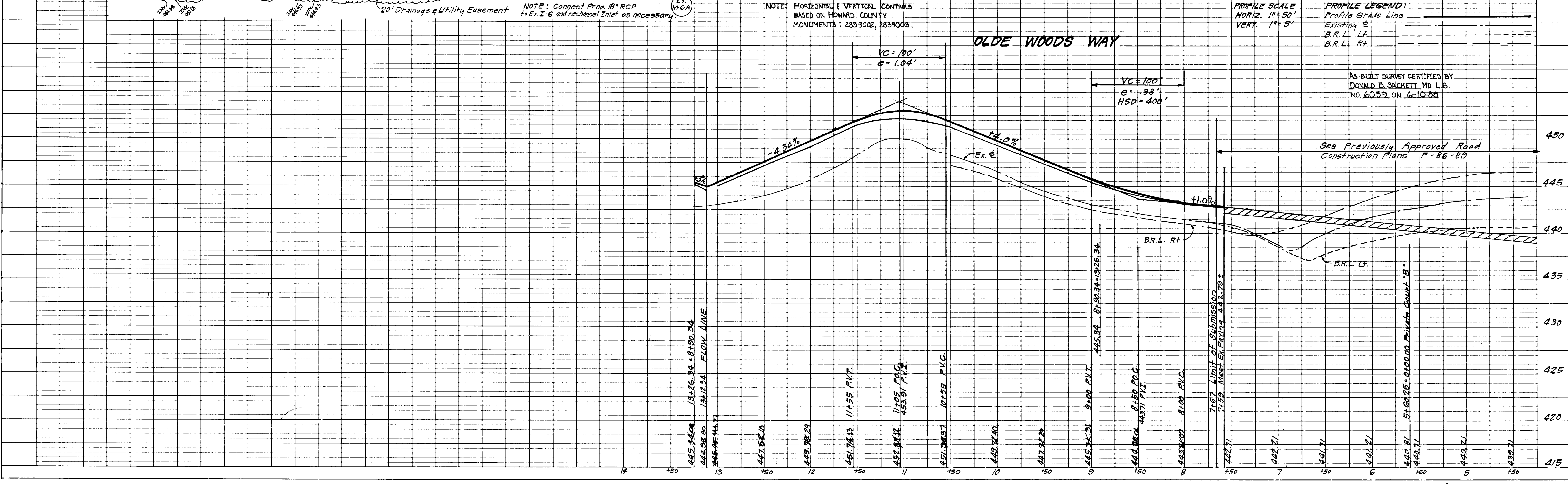
ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
G. Nelson Clark
 G. Nelson Clark
 Date: 11-08-85

GENERAL NOTES:

- All storm drain and paving shall be constructed in accordance with the latest Details and Specifications of Howard County & Md. SHA.
- Types of Storm Drain Structures refer to the Standard Details of Ho.Co. & Md. SHA.
- Trench compaction for Storm Drains, within Road or Street rights of way limits shall be in accordance with Howard Co. Design Manual Vol. III (Class C trench bedding to be used for all storm drain, unless otherwise shown.)
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevations of the mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
- All utility companies shall be notified 24 hours in advance of construction.
- All traffic control devices, parking and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices", 1978 Edition.
- Sag and Crest Vertical Curves were designed in accordance with Ho.Co. Design Manual, Volume III.
- Provide Concrete Sidewalk Ramps, Ho.Co. Std. Type A, R4.01 where shown in plan.
- Design Speed: 30 MPH
- Zoning: RSC
- Contractor or Developer shall contact the construction Inspection/Survey Division 24 hours before commencing work at 792-7272
- Storm Water Management provided in Central Facility in Beech Creek Section 1, Area 1, F-85-136.
- Street lights to be 250 Watt Mercury Vapor Lamp pendant fixtures on a 25' galvanized steel pole. All lights to be located and constructed in accordance with Ho.Co. Design Manual Vol. III.

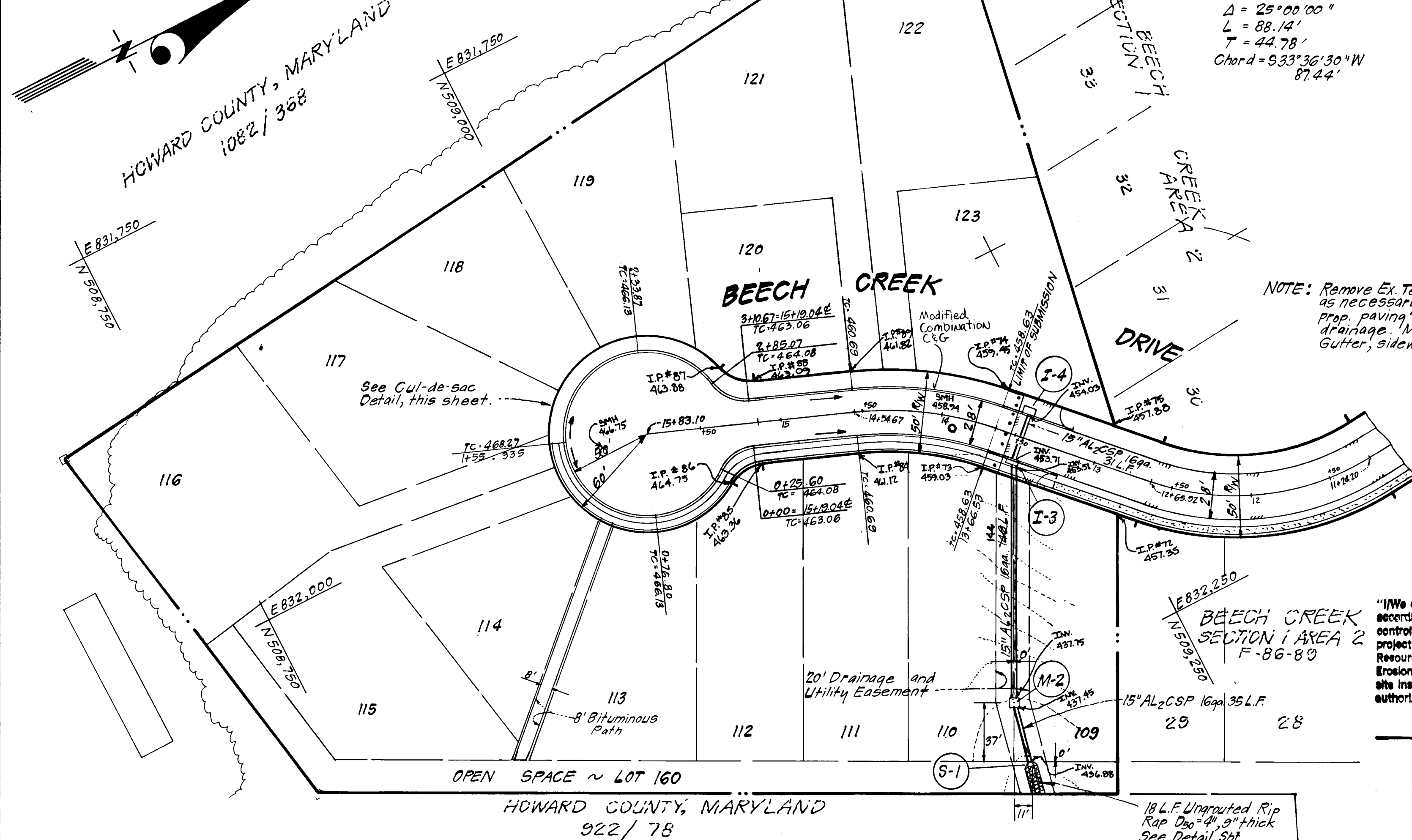
APPROVED: Department of Public Works
[Signature]
 Chief, Bureau of Engineering
 APPROVED: Howard County Office of Planning & Zoning
[Signature]
 Chief, Division of Land Development & Zoning Administration

CLARK FINEROCK & SACKETT ENGINEERS · PLANNERS · SURVEYORS 11315 LOCKWOOD DRIVE SILVER SPRING MARYLAND 20904 (301) 593-3400			
DESIGNED	JLS	ROAD CONSTRUCTION PLANS OLDE WOODS WAY	SCALE As Shown
DRAWN	VLA	BEECH CREEK	DRAWING 1 OF 8
CHECKED	JLS	SECTION 1 AREA 3 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 84-128
DATE	11-85	FOR: BEECH CREEK ASSOCIATES One Knoll North Drive, #502 Columbia, Maryland 21045	FILE NO. 84-128-D



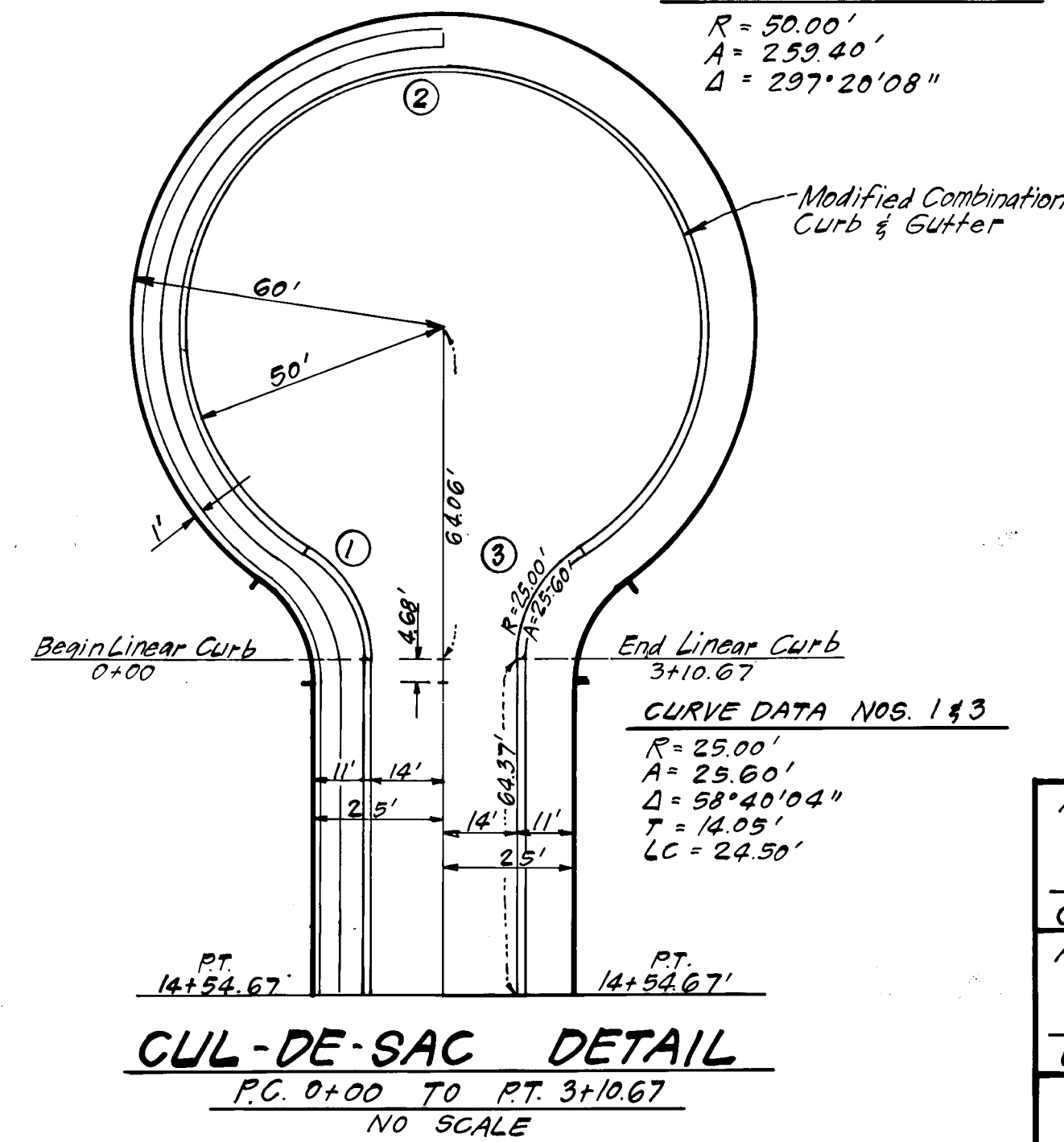
1164

PLAN VIEW
SCALE: 1" = 50'



1 CURVE DATA
FROM P.C. 13+66.53 TO 14+54.67
R = 202.00'
Δ = 25°00'00"
L = 88.14'
T = 44.78'
Chord = 933°36'30"W
87.44'

CURVE DATA NO. 2
R = 50.00'
A = 293.40"
Δ = 297°20'08"



Reviewed for Howard S.C.D. Name
and meets Technical Requirements
John M. Sackett 3-20-88 Date
Signature
U.S. Soil Conservation Service

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

John M. Sackett Approved Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

John M. Sackett 11-11-85 Date
Signature of Developer/Builder

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 11-85 Date
Signature of Engineer

APPROVED: Department of Public Works

William E. Ryan 3-24-88 Date
Chief, Bureau of Engineering

APPROVED: Howard County Office of Planning & Zoning

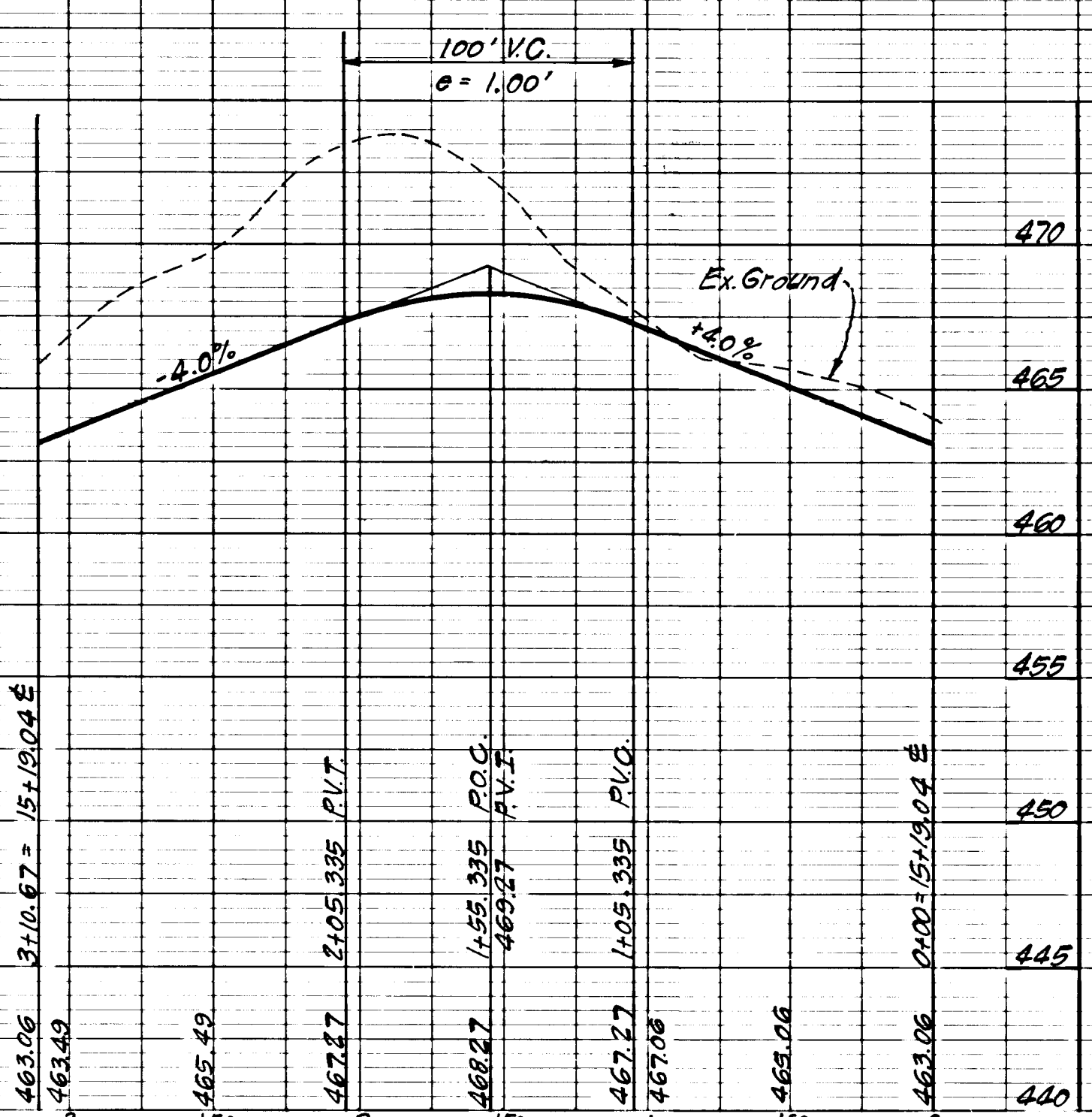
John M. Sackett 3-26-88 Date
Chief, Division of Land Development & Zoning Administration

CLARK FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS

11315 LOCKWOOD DRIVE SILVER SPRING MARYLAND 20904 (301)593-3400

DESIGNED	J.L.S.	ROAD CONSTRUCTION PLANS	SCALE
DRAWN	VLA	BEECH CREEK DRIVE	As Shown
CHECKED	J.L.S.	BEECH CREEK	DRAWING
DATE	11-85	SECTION 1 AREA 3	2 OF 8
		5TH ELECTION DISTRICT	JOB NO.
		HOWARD COUNTY, MARYLAND	84-128
		FOR: BEECH CREEK ASSOCIATES	FILE NO.
		One Knoll North Drive, #502	84-128-D
		Columbia, Maryland 21045	

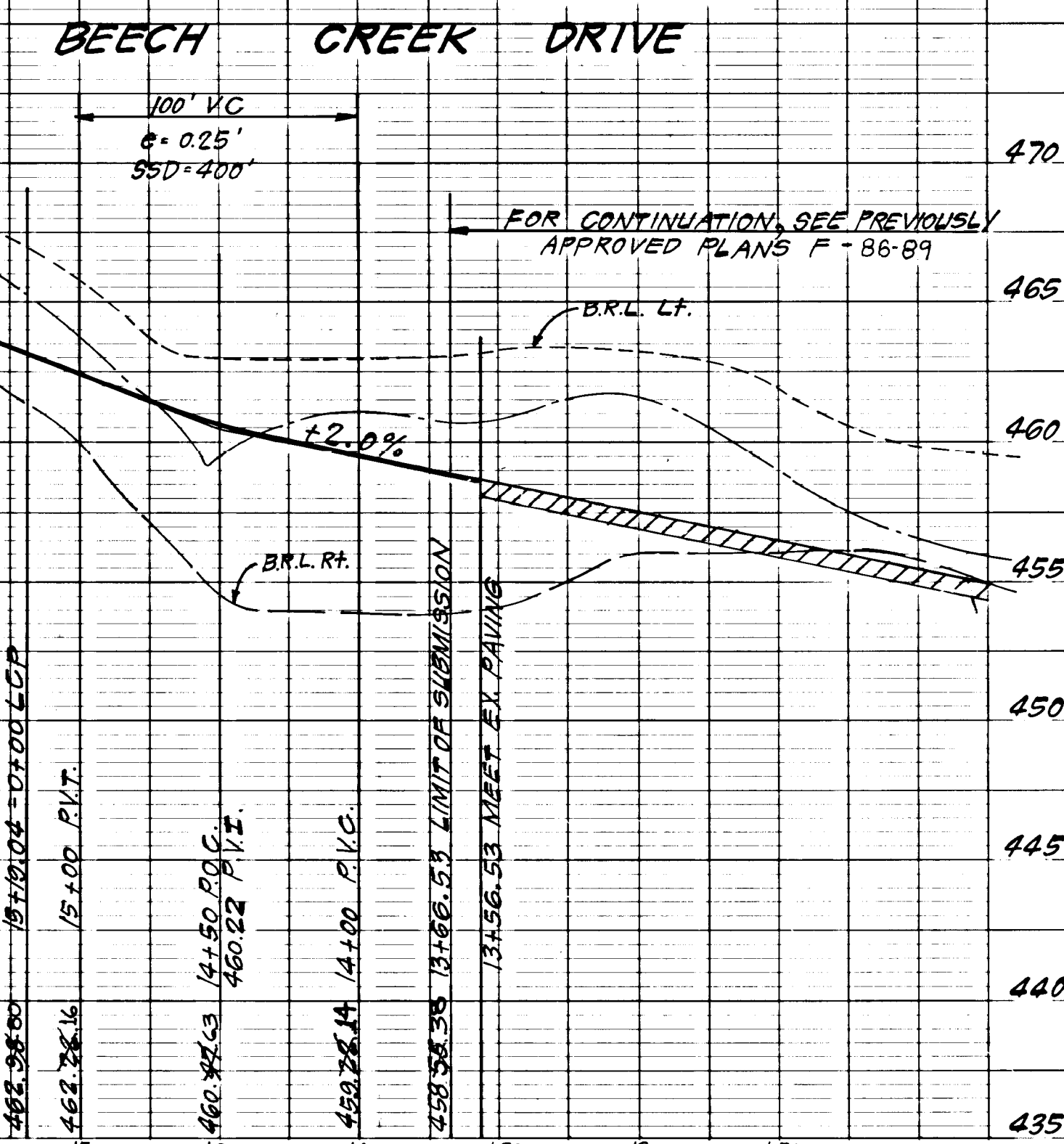
BEECH CREEK DRIVE (LINEAR CURB PROFILE)



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

PROFILE LEGEND:
Profile Grade Line
Existing B.R.L. LT.
B.R.L. RT.

AS-BUILT SURVEY CERTIFIED BY
DONALD P. SACKETT, MD. L.S.
NO. 6052 ON 6-10-88.



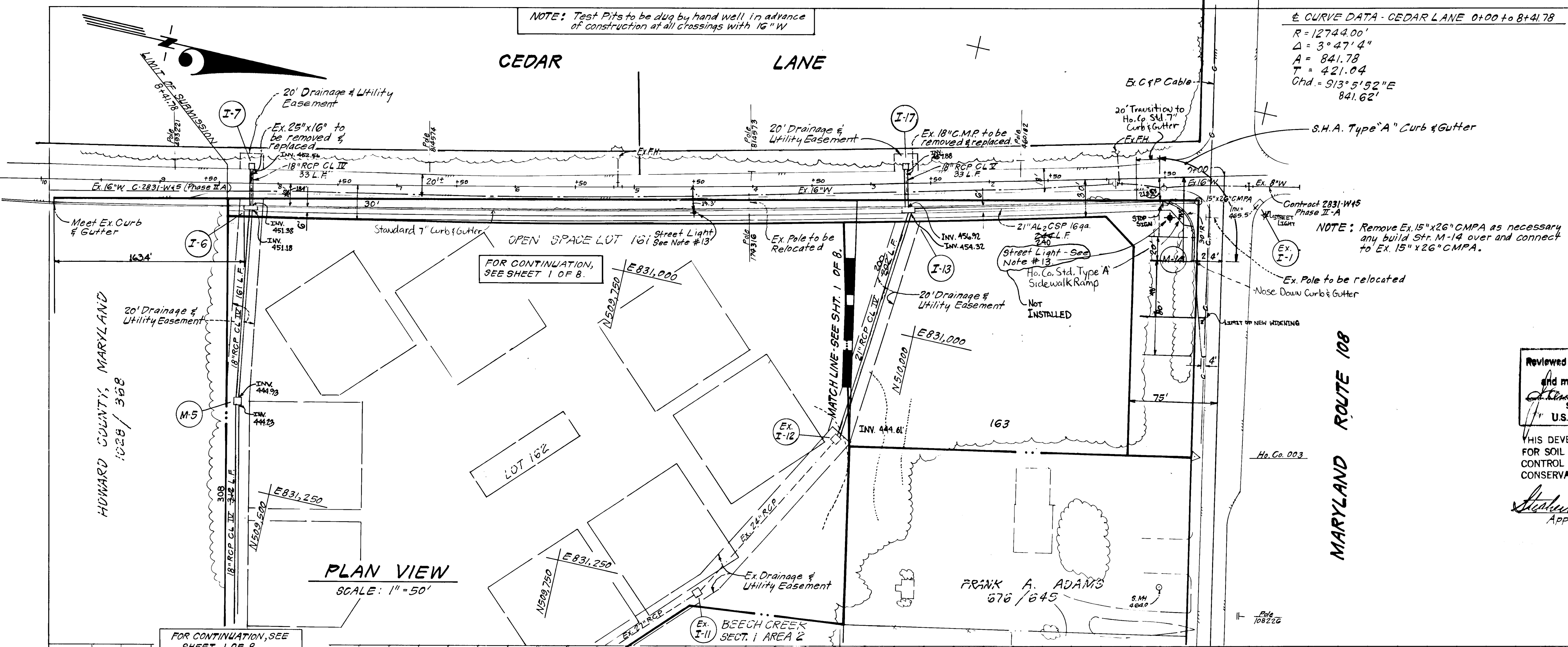
F-86-90 AS-BUILT 6-10-88

1164

NOTE: Test Pits to be dug by hand well in advance of construction at all crossings with 16" W

Curve Data - CEDAR LANE 0+00 to 8+41.78
 R = 12744.00'
 Δ = 3° 47' 4"
 A = 841.78
 T = 421.04
 Chd. = 913° 5' 52" E
 841.62'

1315 LOCKWOOD DRIVE SILVER SPRING MARYLAND 20904 (301) 593-3400		
DESIGNED	JLS	ROAD CONSTRUCTION PLANS MD ROUTE 108 & CEDAR LANE
DRAWN	VLA	BEECH CREEK
CHECKED	JLS	SECTION 1 AREA 3 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE	11-85	FOR: BEECH CREEK ASSOCIATES One Knoll North Drive, #502 Columbia, Maryland 21045
SCALE	As Shown	3 OF 8
DRAWING		84-128
JOB NO.		84-128-D
FILE NO.		
APPROVED: Department of Public Works		
<i>William R. P...</i> Chief, Bureau of Engineering		
APPROVED: Howard County Office of Planning & Zoning		
<i>William M...</i> Chief, Division of Land Development & Zoning Administration		



PLAN VIEW
SCALE: 1" = 50'

Reviewed for ... Howard ... S.C.D.
 Name
 and meets Technical Requirements
Thomas M. ...
 Signature
 3-20-86
 Date
 U.S. Soil Conservation Service

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

Stephen L. Fisher
 Approved
 Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 I hereby certify that all development and construction will be in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

J. E. ...
 Signature of Developer/Builder
 11-11-85
 Date

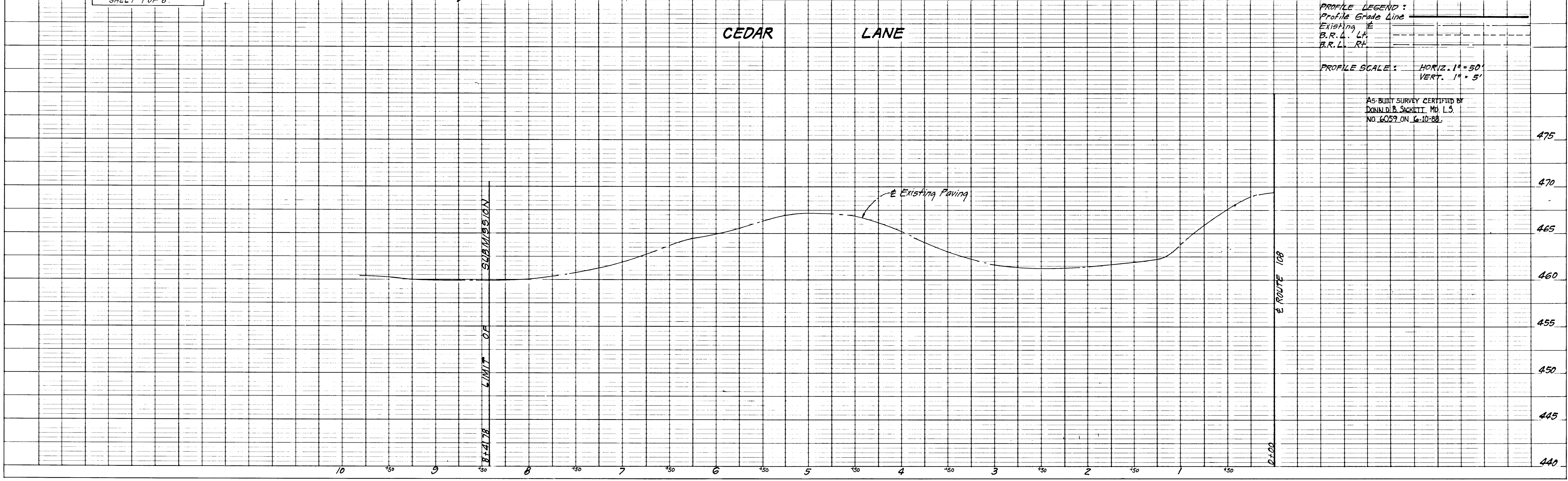
ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

G. Nelson Clark
 Date
 11-85

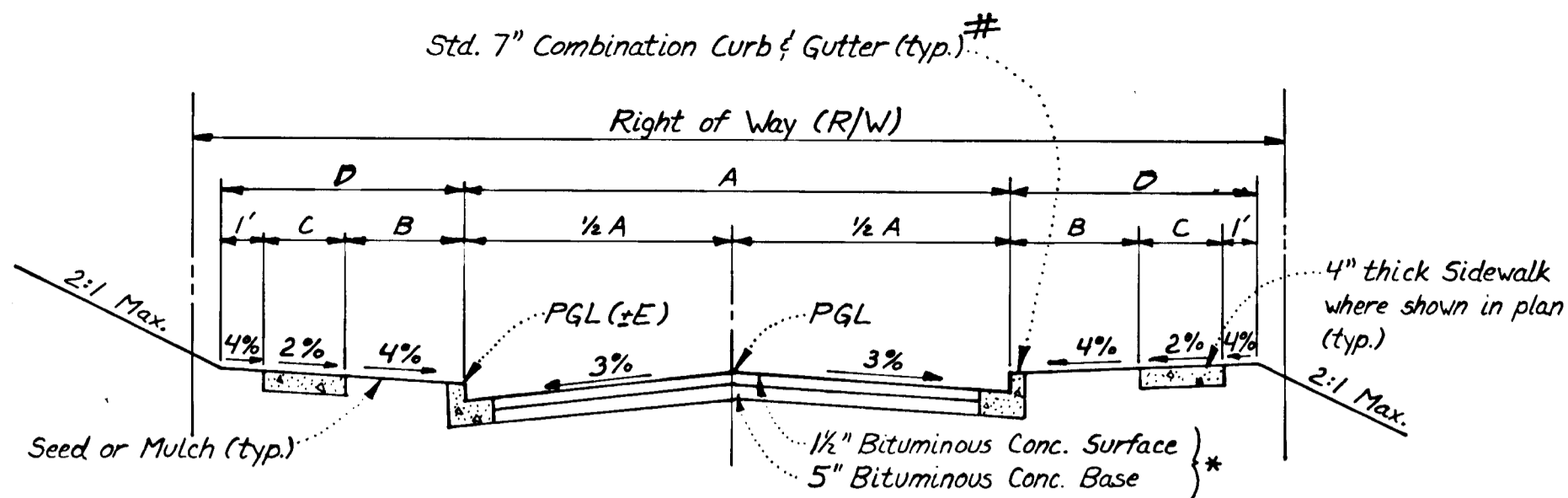
PROFILE LEGEND:
 Profile Grade Line
 Existing E
 B.R.L. - L.F.
 B.R.L. - R.F.

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

AS-BUILT SURVEY CERTIFIED BY
 DONALD B. SACKETT, MD. L.S.
 NO. 6059 ON 6-10-88.



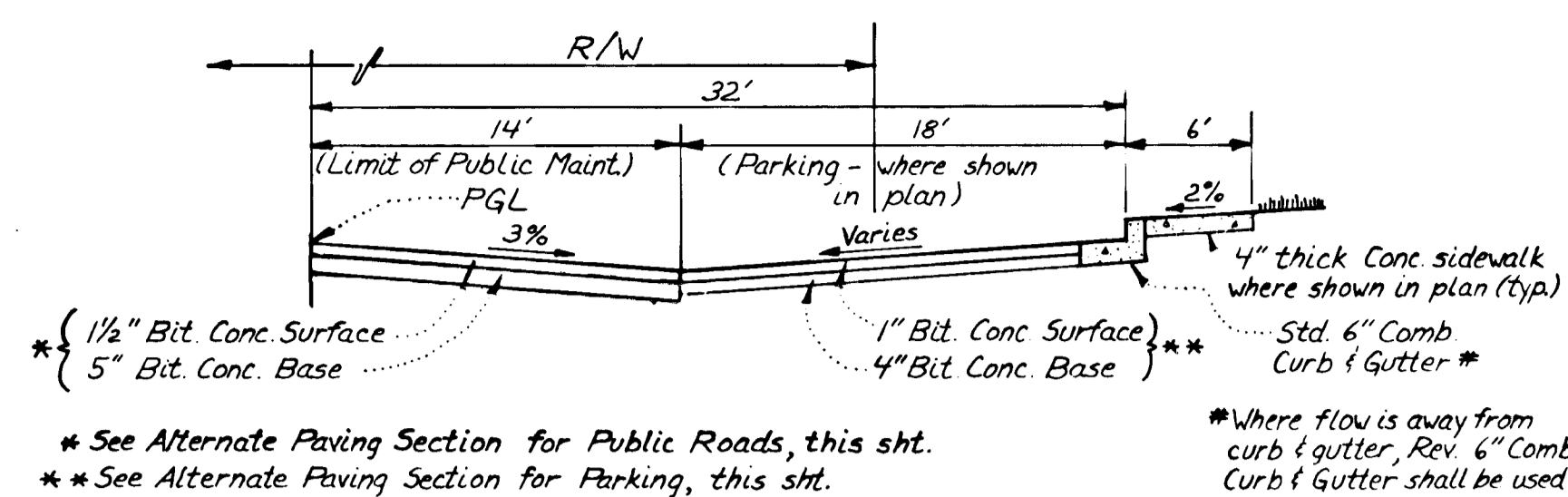
1164



TYPICAL PAVING SECTION - PUBLIC ROADS

* For Alternate Paving Section - See det. this sht.
 * Modified Combination Curb & Gutter for Beech Creek Drive

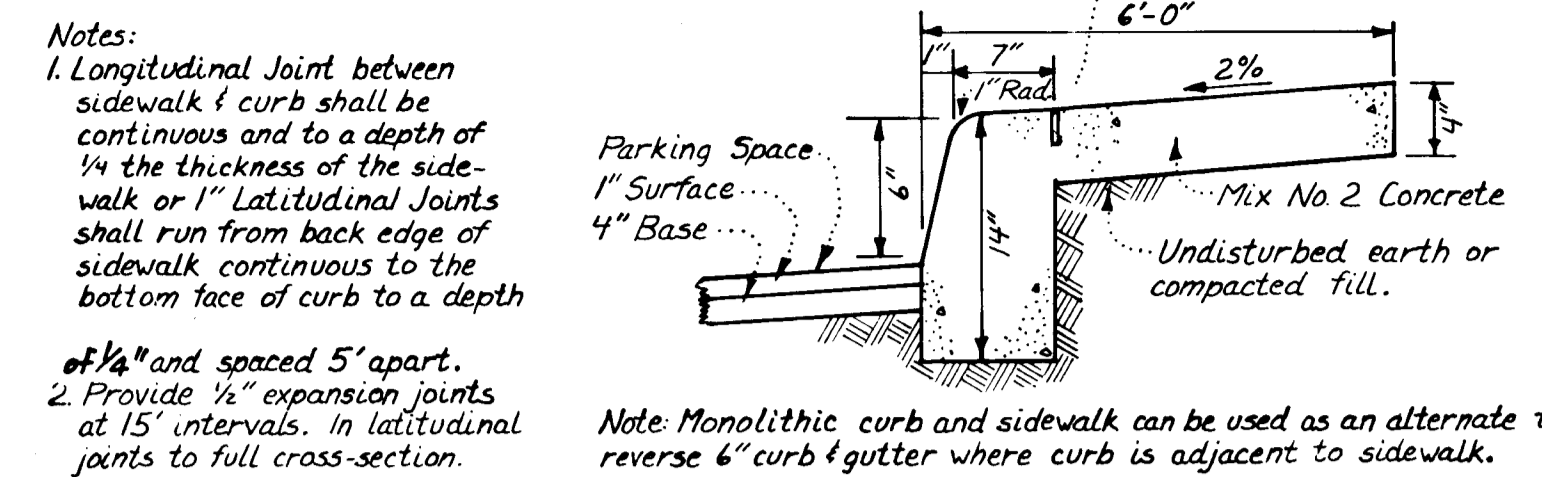
STREET NAME & STATION	TYPE OF TRAFFIC	A	B	C	D	R/W	ZONING	DESIGN SPEED	E
BEECH CREEK DRIVE 15+66.53 to 15+83.10	Cul-de-Sac	2B	4'	4'	9'	50'	RSC	30 MPH	*08'



TYPICAL HALF SECTION - PARKING ADJACENT TO PUBLIC ROADS

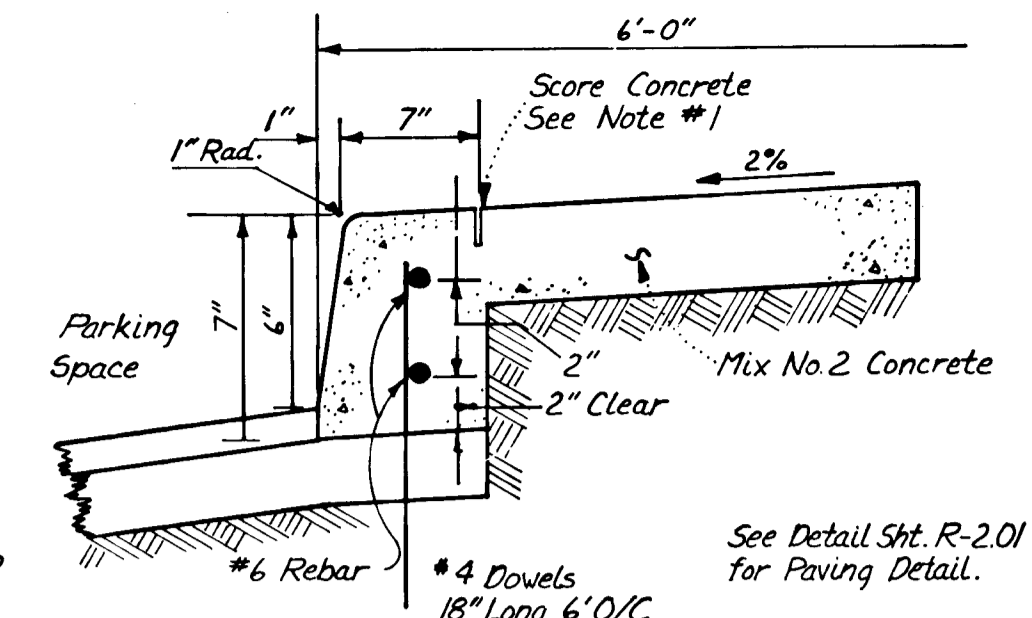
OLDE WOODS WAY STA. 7+36.58 to 13+26.34
 NO SCALE

* See Alternate Paving Section for Public Roads, this sht.
 * See Alternate Paving Section for Parking, this sht.
 * Where flow is away from curb & gutter, Rev. 6" Comb Curb & Gutter shall be used.



MONOLITHIC CURB & SIDEWALK - PRIVATE PARKING AREA

NO SCALE

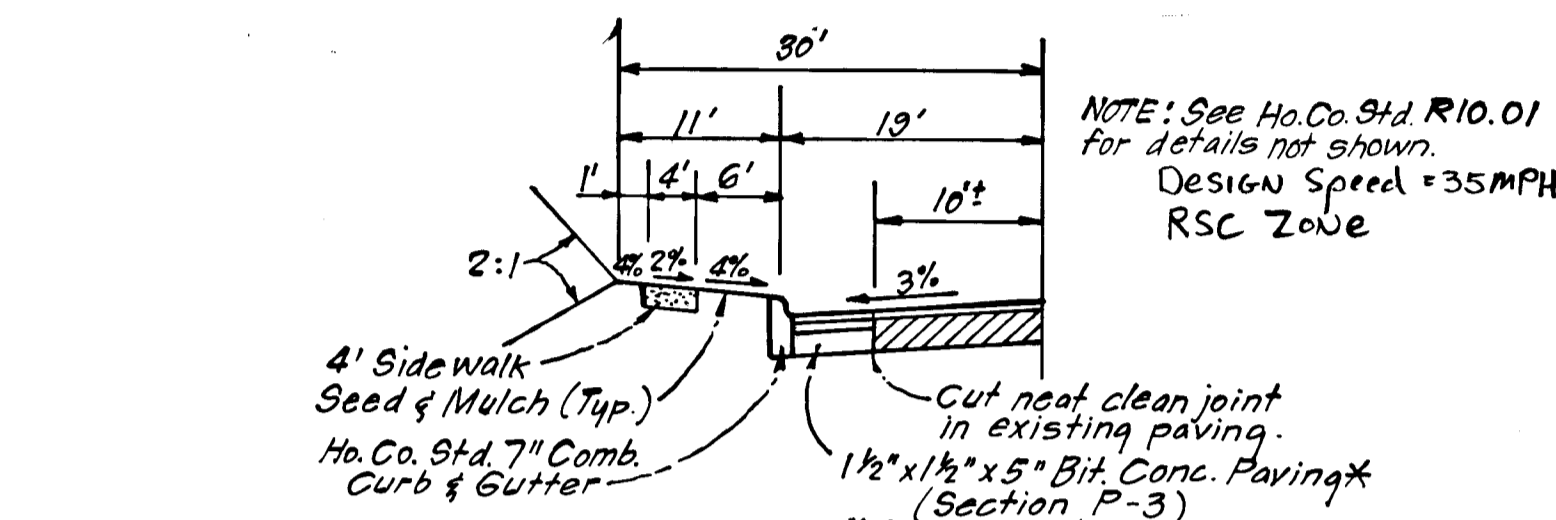


ALTERNATE SECTION

NO SCALE

Notes:
 1. Longitudinal Joint between sidewalk & curb shall be continuous and to a depth of 1/4 the thickness of the sidewalk or 1" longitudinal joints shall run from back edge of sidewalk continuous to the bottom face of curb to a depth of 1/2" and spaced 5' apart.
 2. Provide 1/2" expansion joints at 15' intervals. In longitudinal joints to full cross-section.
 Note: Monolithic curb and sidewalk can be used as an alternate to reverse 6" curb & gutter where curb is adjacent to sidewalk.

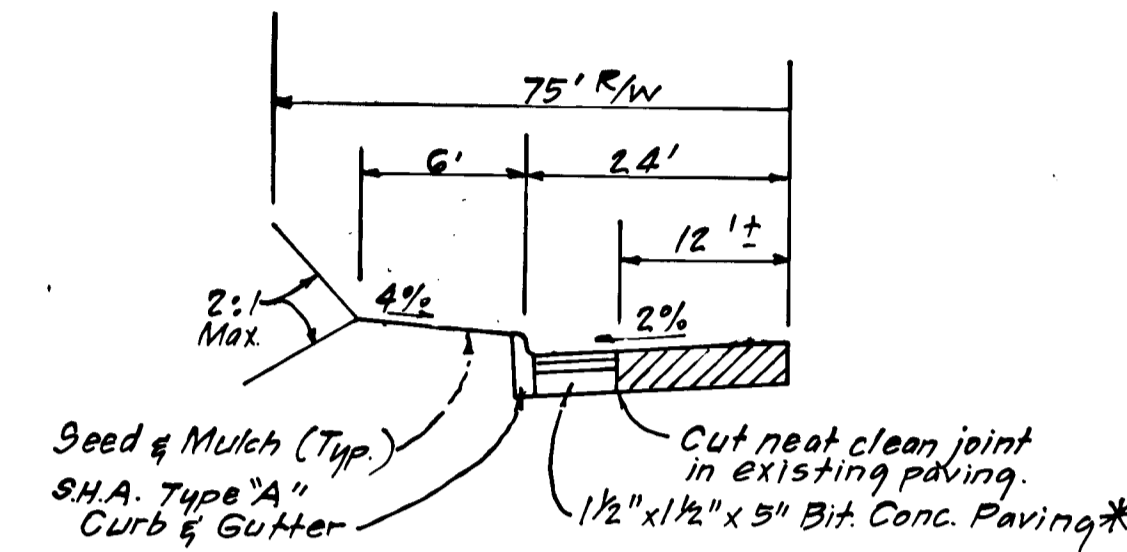
See Detail Sht. P-201 for Paving Detail.



TYPICAL HALF SECTION - CEDAR LANE (MINOR COLLECTOR)

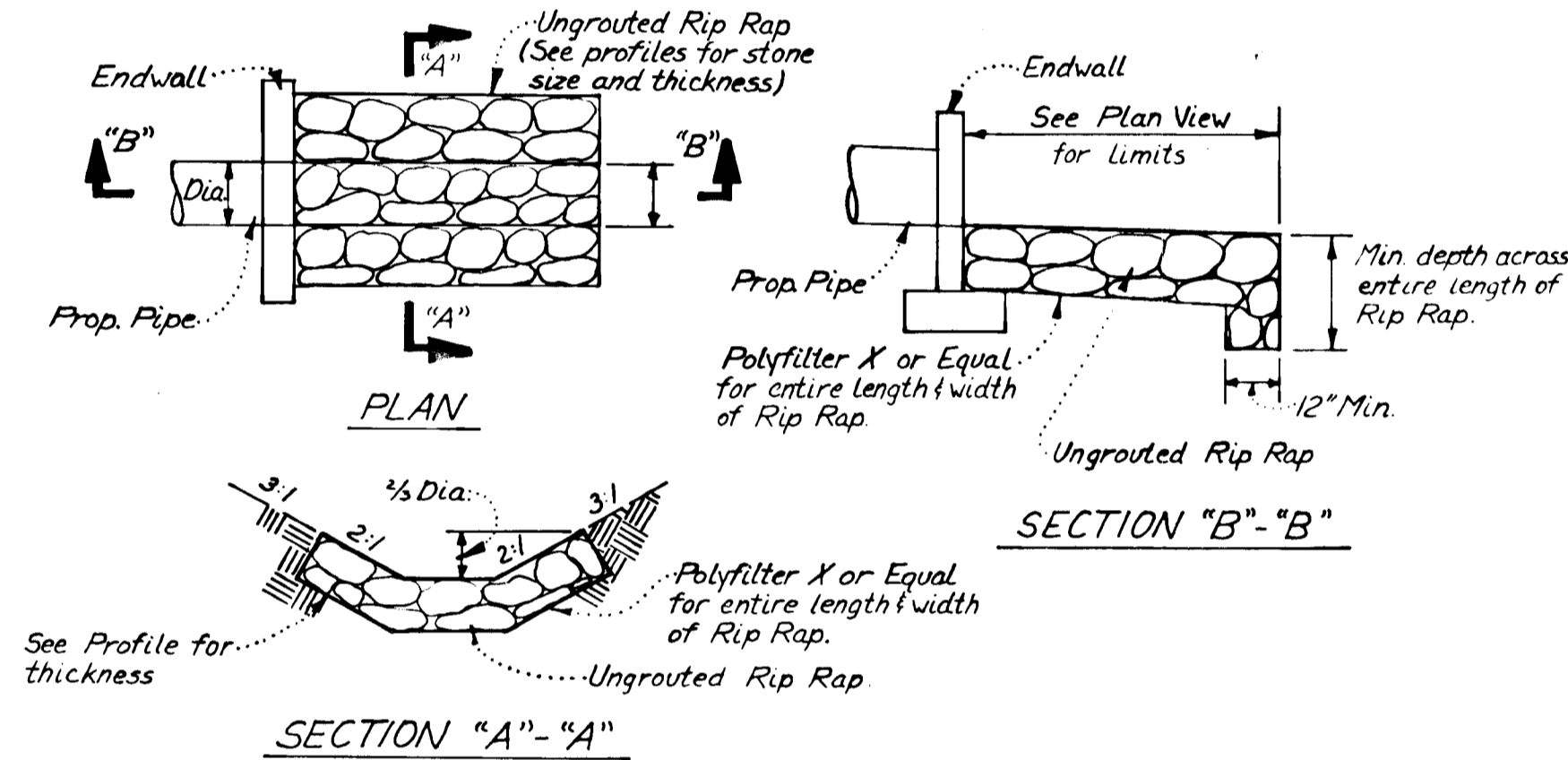
NO SCALE

NOTE: See Ho. Co. Std. R10.01 for details not shown.
 Design Speed = 35 MPH
 RSC Zone



TYPICAL HALF SECTION - ROUTE 108

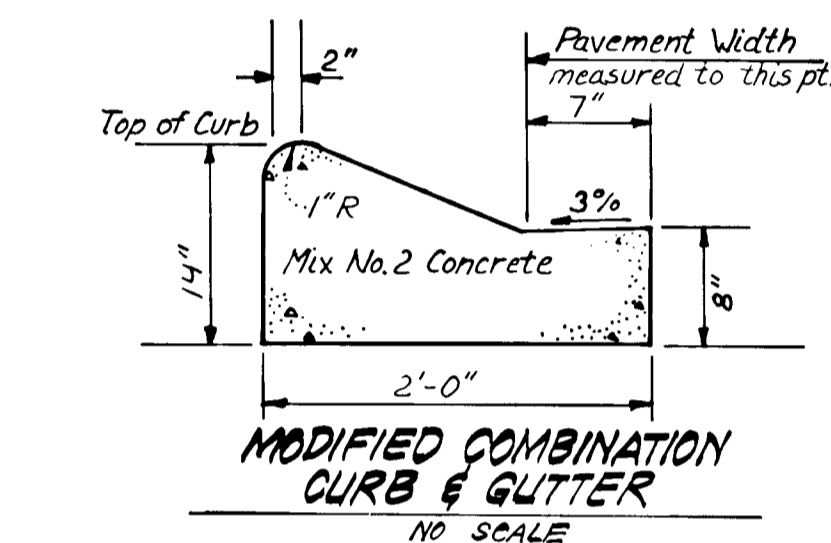
NO SCALE



UNGROUTED RIP RAP PAVING DETAILS

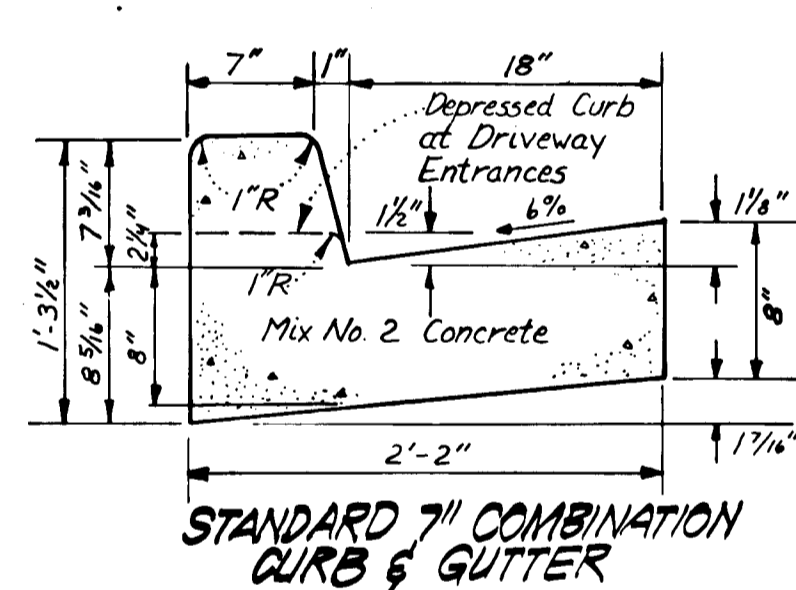
NO SCALE

See Profile for thickness



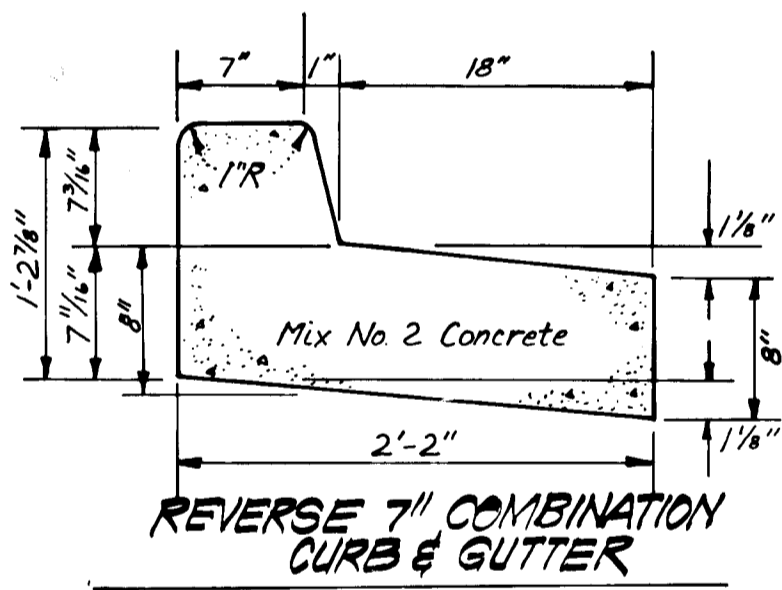
MODIFIED COMBINATION CURB & GUTTER

NO SCALE



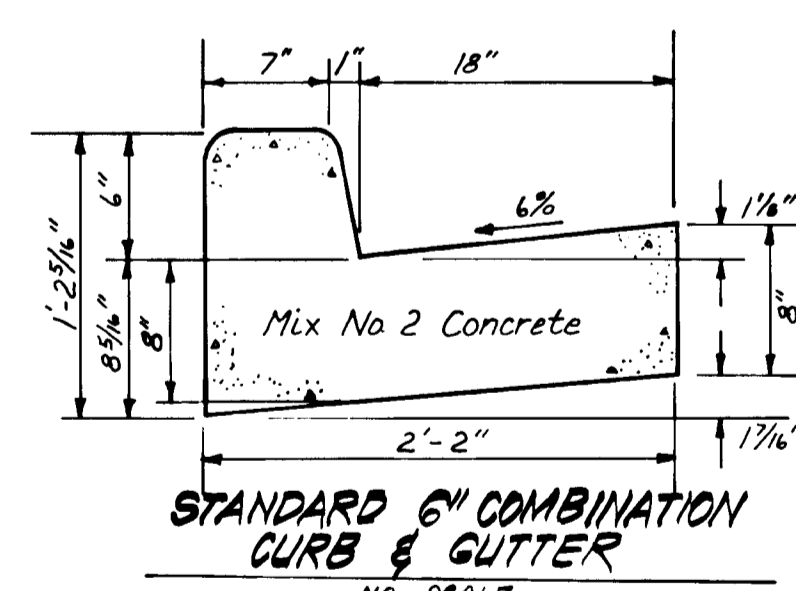
STANDARD 7" COMBINATION CURB & GUTTER

NO SCALE



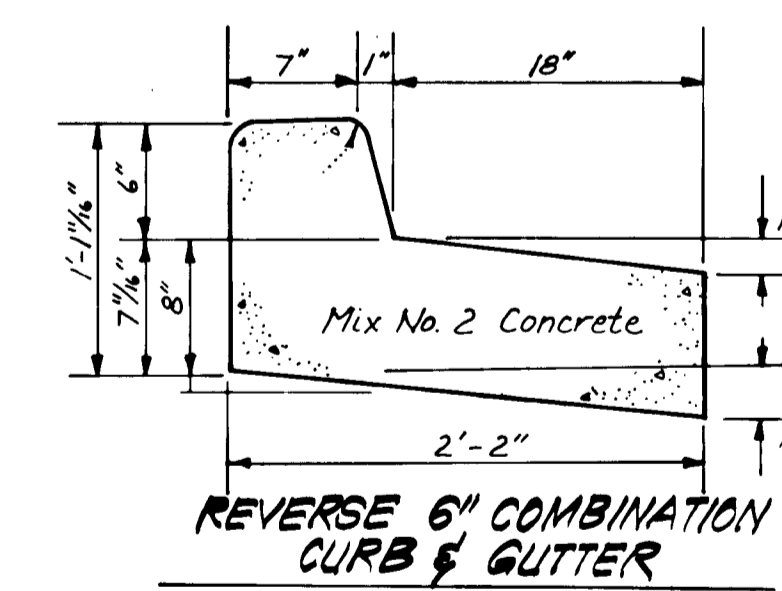
REVERSE 7" COMBINATION CURB & GUTTER

NO SCALE



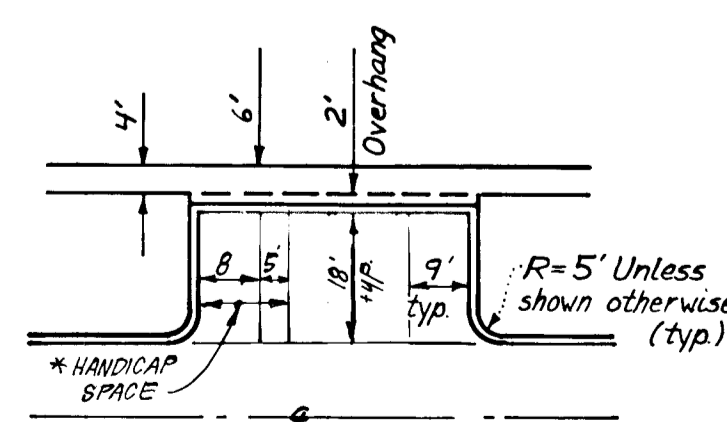
STANDARD 6" COMBINATION CURB & GUTTER

NO SCALE



REVERSE 6" COMBINATION CURB & GUTTER

NO SCALE



TYPICAL PARKING

NO SCALE

* Two 8' Handicap Spaces may share One 5' Aisle

Bituminous Conc. Surface	1/2"
Bituminous Conc. Base	2 1/4"
Prime	
8" Crusher Run Base Course	8"
or	
6" Dense Graded Stabilized Aggregate Base Course	6"

ALTERNATE PAVING SECTION FOR PUBLIC ROADS (SECTION P-2)

Bituminous Conc. Surface	1"
Bituminous Conc. Base	2"
Prime	
5" Crusher Run Base Course	5"
or	
4" Dense Graded Stabilized Aggregate Base Course	4"

ALTERNATE PAVING SECTION FOR PARKING AREAS (SECTION P-1)

Bituminous Conc. Surface	1 1/2"
Bituminous Conc. Base	4 1/2"
Prime	
6" Crusher Run Base Course	6"
or	
4 1/2" Dense Graded Stabilized Aggregate Base Course	4 1/2"

ALTERNATE PAVING SECTION FOR CEDAR LANE & RT. 108 (SECTION P-3)

Reviewed for: Howard S.C.D.
 Name
 and meets Technical Requirements
John M. H. H. H. 3-28-86
 Signature Date
 U.S. Soil Conservation Service

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

Stephen L. Fisher 3/20/86
 Approved Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as deemed necessary."
J. Ballinger 11-11-85
 Signature Date

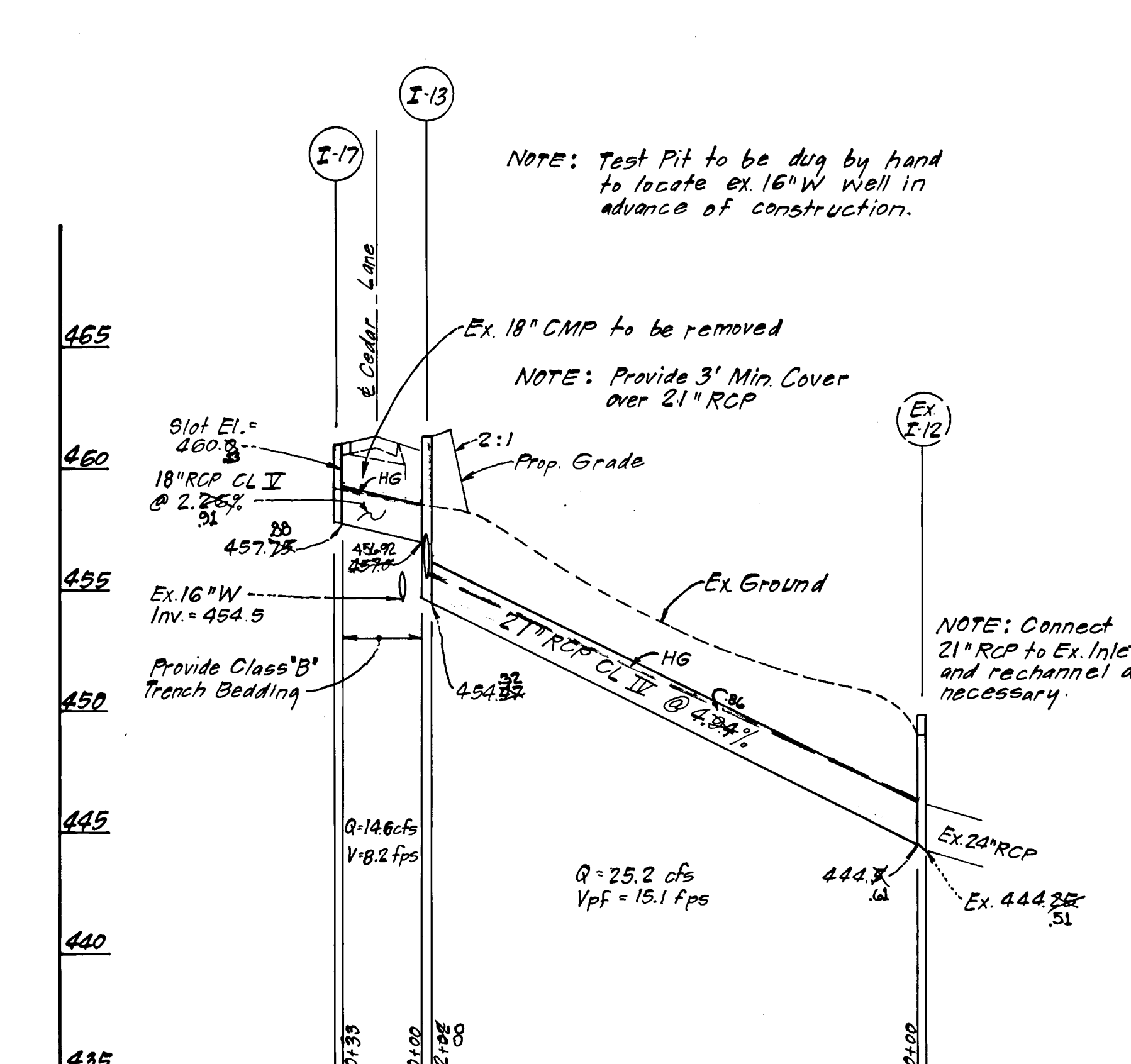
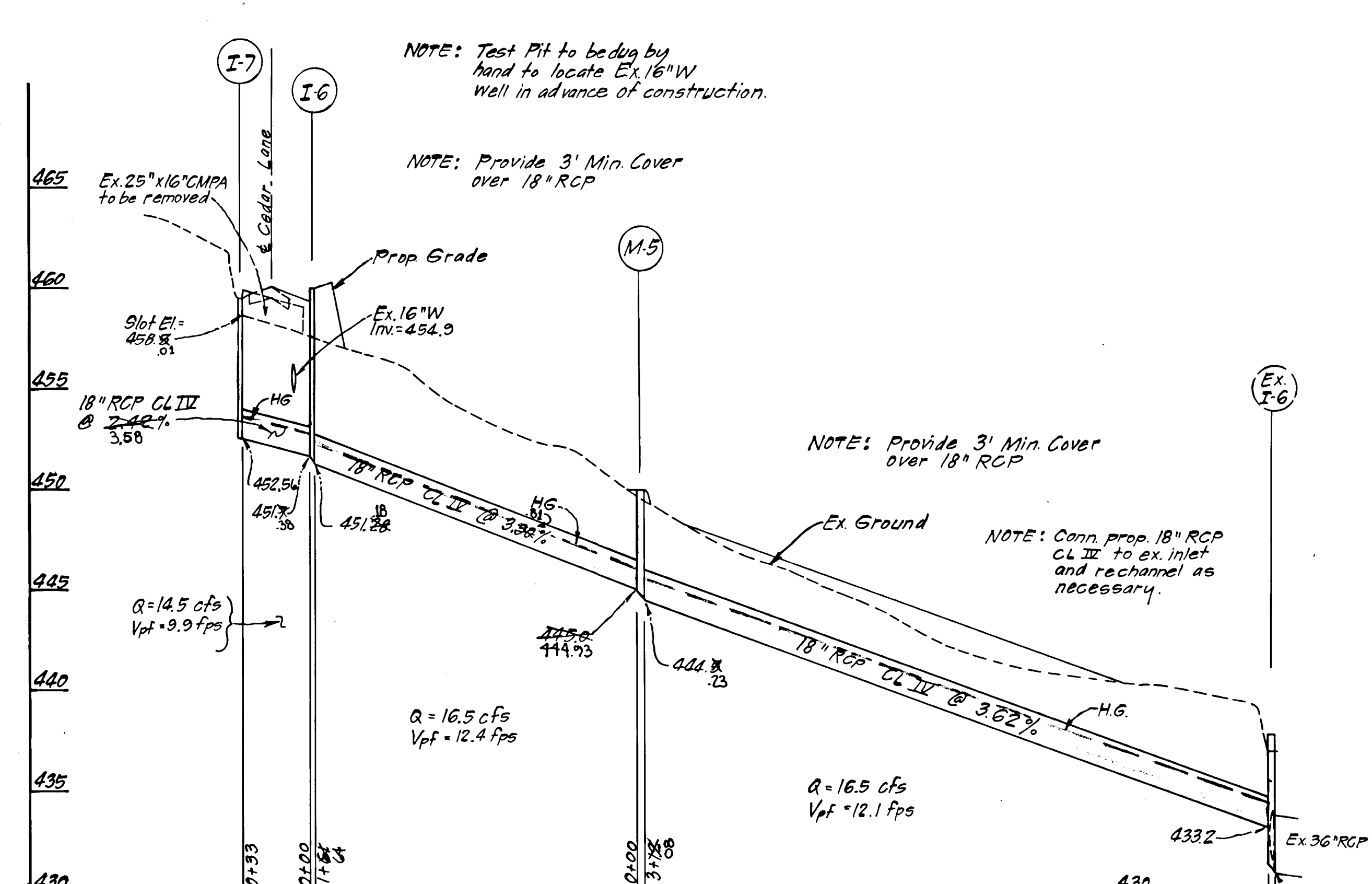
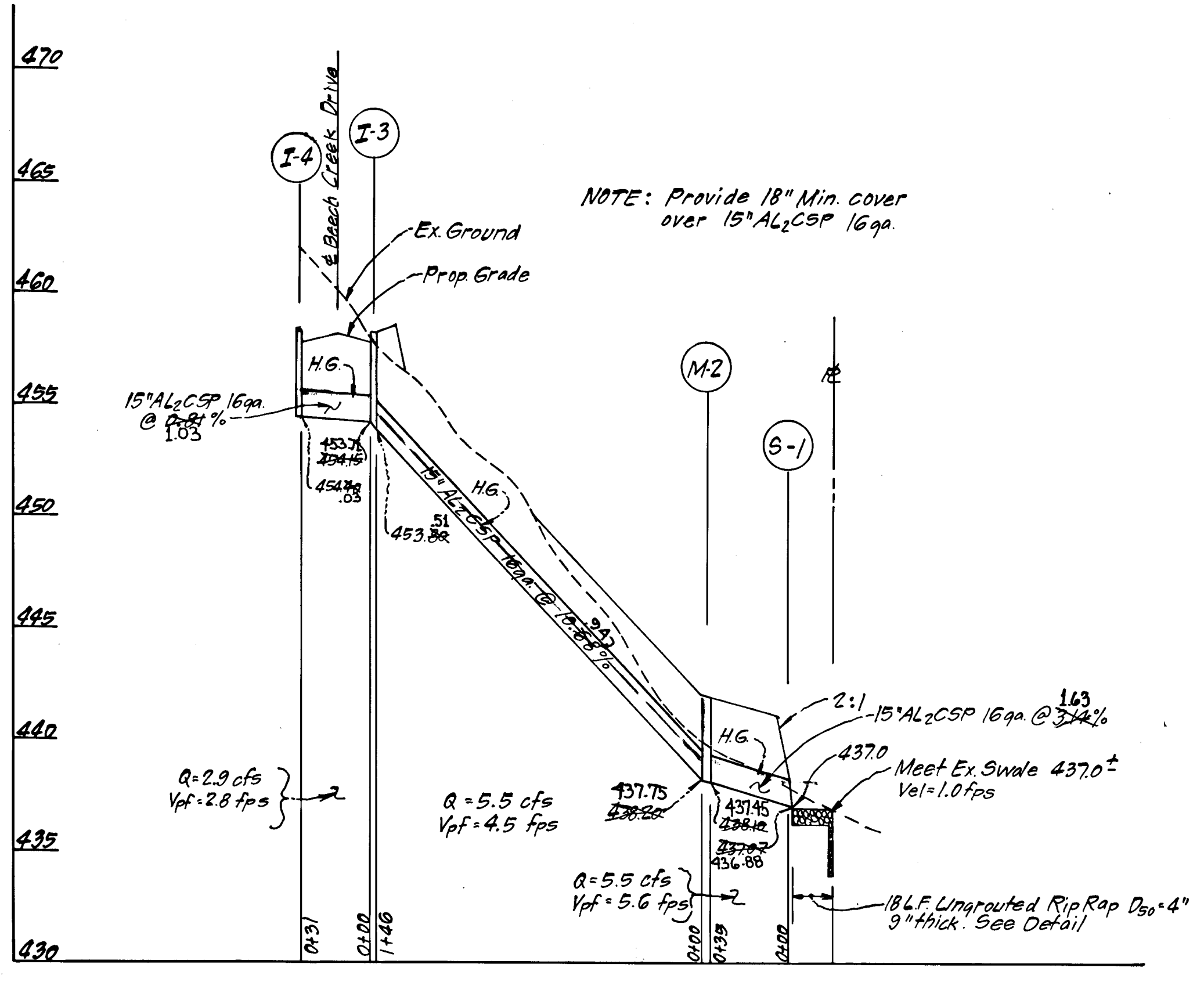
APPROVED: DEPARTMENT OF PUBLIC WORKS
John M. H. H. H. 3-24-86
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John M. H. H. H. 3-26-86
 Chief, Division of Land Development & Zoning Administration

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

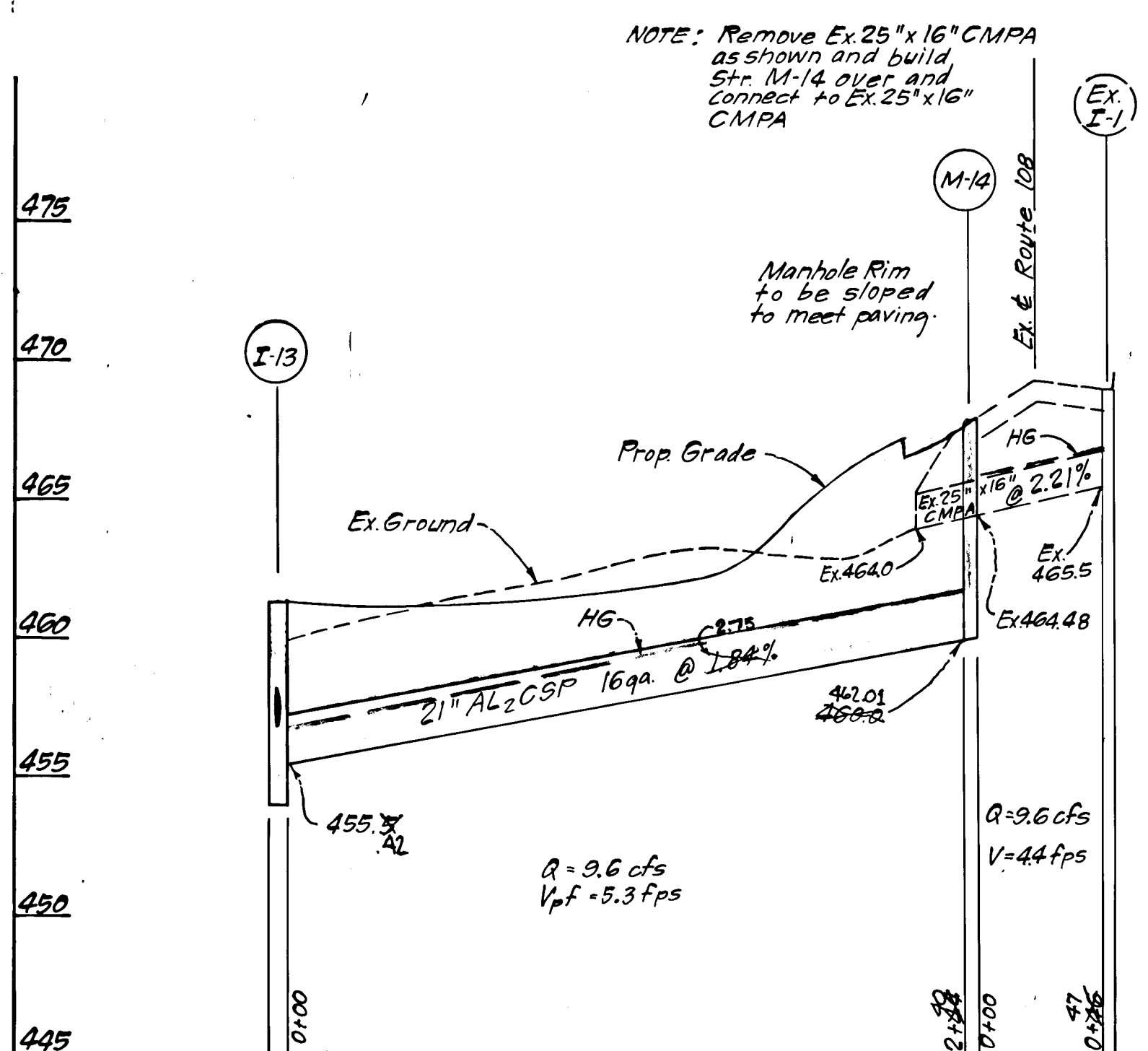
DESIGNED	J.L.S.	ROAD CONSTRUCTION PLANS	SCALE
DRAWN	V.L.A.	PROFILES AND DETAILS	AS SHOWN
CHECKED	J.L.S.	BEECH CREEK	DRAWING
DATE	11-85	SECTION 1 AREA 3	4 OF 8
		5TH ELECTION DISTRICT	JOB NO.
		HOWARD COUNTY, MARYLAND	84-128
		FOR: BEECH CREEK ASSOCIATES	FILE NO.
		One Knoll North Drive, #502	84-128-D
		Columbia, Maryland 21045	

G. Nelson Clark 11-85
 Date

1164



STORM DRAIN PROFILES
 HORIZONTAL: 1" = 50'
 VERTICAL: 1" = 5'



STRUCTURE SCHEDULE

No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION UPPER LOWER	REMARKS	LOCATION
I-4	A-5 Inlet w/Def.	-	454.40	458.38 458.28	Ho. Co. Std. S.D. 4.01 W-2'-6"	Inlet Sta. 13+48.00 M83' R/L
I-3	A-5 Inlet w/Def.	453.75	453.80	458.38 458.28	Ho. Co. Std. S.D. 4.01 W-2'-6"	Inlet Sta. 13+48.00 M83' L/T
M-2	Shallow Brick M	453.75	453.75	458.10	Ho. Co. Std. G.5.05 48" Sq.	See Plan
S-1	Metal End Sect.	453.75	453.75	458.10	Ho. Co. Std. S.D. 5.01 Dia. = 15"	" "
M-5	Shallow Brick M	453.75	453.75	444.30	Ho. Co. Std. G.5.05 48" Sq.	" "
I-6	A-10 Inlet	451.75	451.75	459.88	Ho. Co. Std. S.D. 4.02 W-2'-6"	" "
I-7	K Inlet	452.50	452.50	459.88	Ho. Co. Std. S.D. 4.12 3'-0" Sq.	" "
I-13	A-10 Inlet	451.75	451.75	461.28	Ho. Co. Std. S.D. 4.02 W-2'-6"	" "
M-14	Brick Manhole	464.48	464.48	464.48	Ho. Co. Std. G.5.01 48" Rd.	" "
I-17	K Inlet	-	457.75	461.28	Ho. Co. Std. S.D. 4.12 3'-0" Sq.	" "

Δ All inverts to be fully developed except Str. M-14.
 * See Ho. Co. Std. S.D. 4.03 for Inlet Deflectors.
 # See Ho. Co. Std. R.3.06 for transition at Inlets.

PIPE SCHEDULE

SIZE	TYPE	LENGTH
* 15"	AL ₂ O ₃ CSP 16ga	210 L.F.
18"	RCP CL IV	500 L.F.
* 21"	AL ₂ O ₃ CSP 16ga	240 L.F.
18"	RCP CL IV	33 L.F.
21"	RCP CL IV	200 L.F.

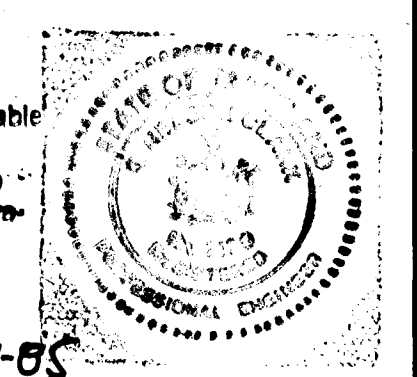
* 2 1/2" x 1/2" Corrugations
 NOTE: CSP with Aluminumized Coating may be substituted for AL₂O₃ CSP

Reviewed for Howard S.C.D. Name and meets Technical Requirements
 Signature Date
 U.S. Soil Conservation Service

DEVELOPER'S/BUILDER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."
 Signature Date
 11-11-85

Approved Date
 11-11-85

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 Date
 11-8-85



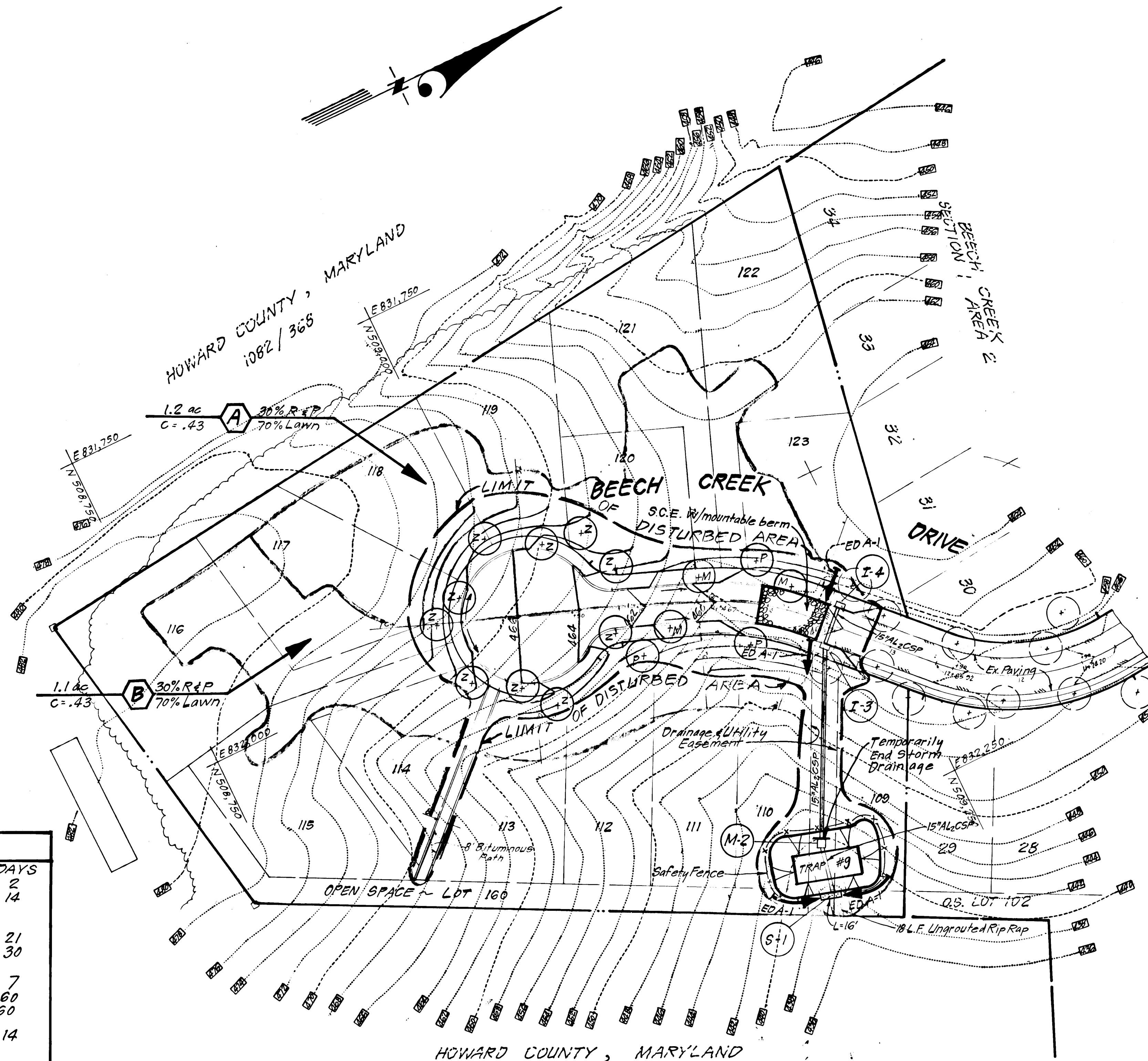
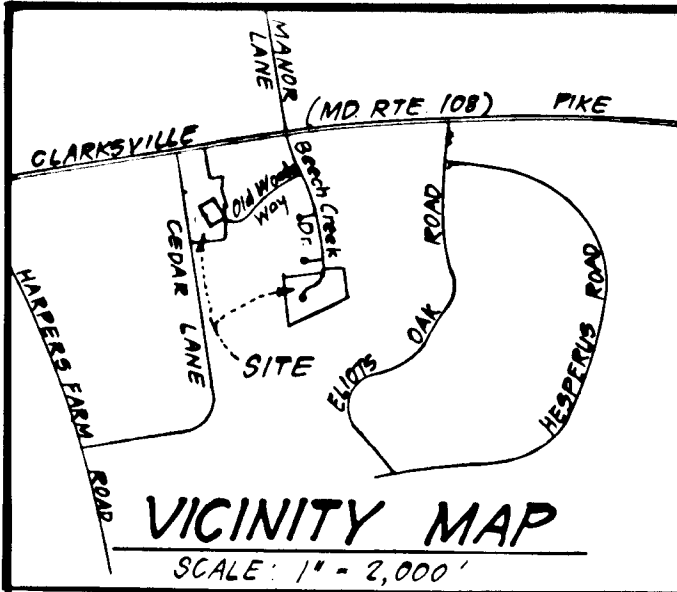
APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Chief, Division of Land Development & Zoning Administration

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

DESIGNED	ROAD CONSTRUCTION PLANS & PROFILES	SCALE	As Shown
DRAWN		DRAWING	5 OF 8
CHECKED		JOB NO.	84-128
DATE		FILE NO.	84-128-D

FOR: BEECH CREEK ASSOCIATES
 One Knoll North Drive, #502
 Columbia, Maryland 21045

AS-BUILT 6-10-88 F-86-90



PLANT SCHEDULE				
KEY	PLANT NAME	SIZE	QUANT	REMARKS
(P)	Quercus palustris Pin Oak	2 1/2" Cal. Min.	3	B & B Heavy Heads
(Z)	Zelkova serrata 'Village Green' Village Green Zelkova		3	
(A)	Acer rubrum 'Sunset' Sunset Maple		10	

- NOTE:
- Contractor shall verify location of underground utilities prior to digging.
 - Final locations of trees may be adjusted slightly to accommodate field conditions.
 - Planting procedures shall comply with "Landscape Specifications for Baltimore-Washington Metropolitan Areas".
 - Substitutions to the above species may be permitted provided that the planting is in accordance with the street tree and landscape requirements as specified in Section 16.131 of the Howard County Subdivision Regulations.

LEGEND:

- Existing Contour - - - - -
- Proposed Contour - - - - - 400
- Stabilized Construction Entrance - [Symbol] SCE
- Earth Dike -> ED A-1
- Storm Drainage Pipe -> ED A-1

CONSTRUCTION SEQUENCE

Task	DAYS
1. Obtain grading permit	2
2. Install Sediment & Erosion Control Measures	14
3. Construct Storm Drainage	
I-7 thru Ex. I-6, I-17 thru Ex. I-12 and M-14 to I-13 and install I.P.D.	21
4. Clear and Rough grade site	30
5. Construct remaining storm drainage except M-2 to S-1.	7
6. Construct utilities	60
7. Fine grade and construct paving (except Parking Area 8 to 7.36' to 8.50')	60
8. Stabilize all disturbed areas on site in accordance with Standards and Specs.	14
9. Upon approval of the sediment control inspector remove sediment & erosion control measures and stabilize and construct storm drainage M-2 to S-1 (remaining Parking Area 14 and Curb & Gutter.	

DEVELOPER'S/BUILDER'S CERTIFICATE

"We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

J. Sullivan 11-11-85
Secretary of Development

TRAP #9 SOST ST V
 D.A. = 4.0 Acres
 Storage Required = 4.0 x 1800 = 7200 cf
 Storage Provided = 7200 cf
 Depth = 4'
 Top of Stone Crest = 438.5
 Bottom Elevation = 433.5
 Bottom Dimensions = 52' x 32'
 Cleanout Elev. = 435.5

Reviewed for Howard S.C.D.
 Name and meets Technical Requirements
[Signature] 3-20-85
 Signature Date
 U.S. Soil Conservation Service

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

[Signature] Approved 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.

[Signature] 11-8-85
 G. Nelson Clark Date



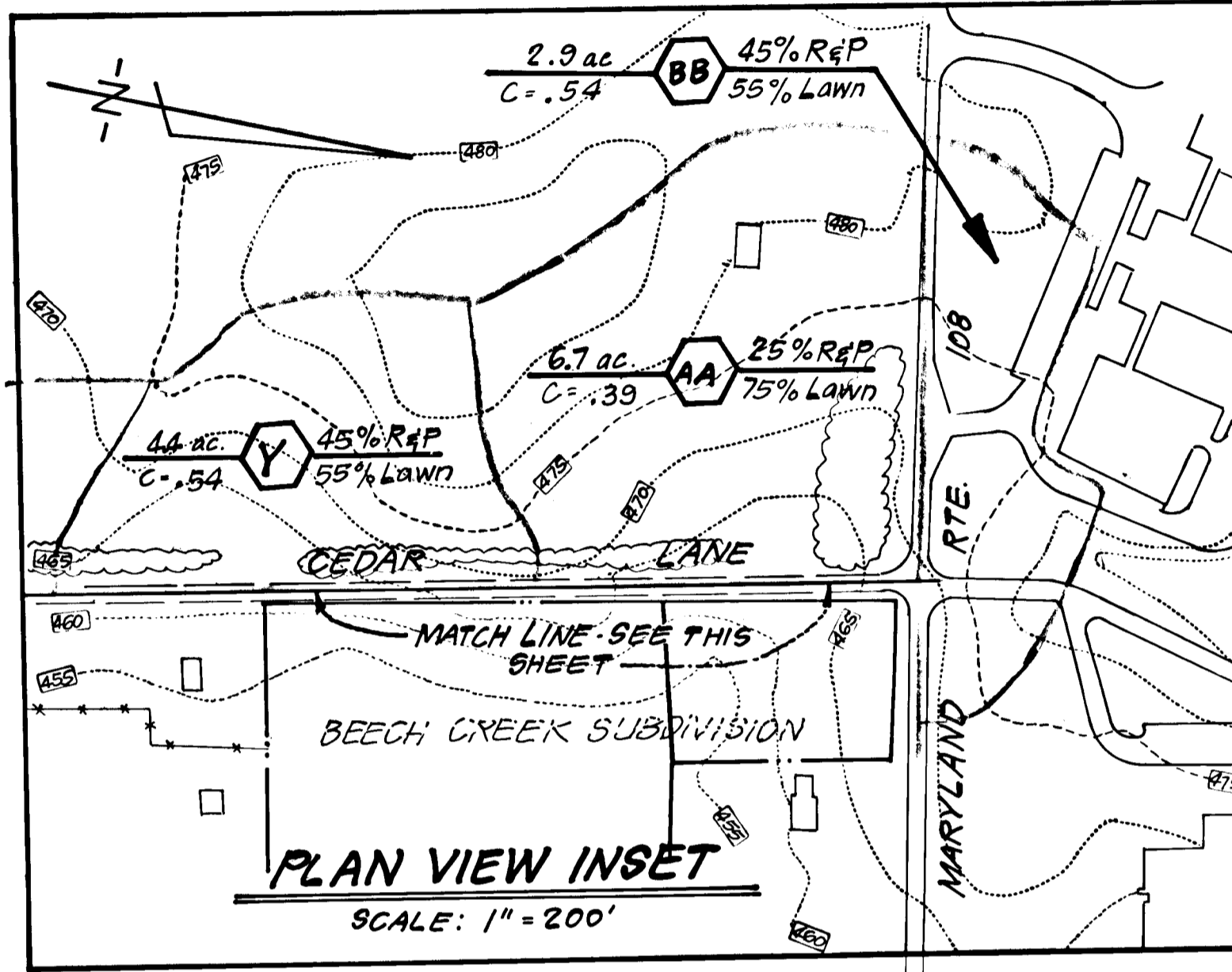
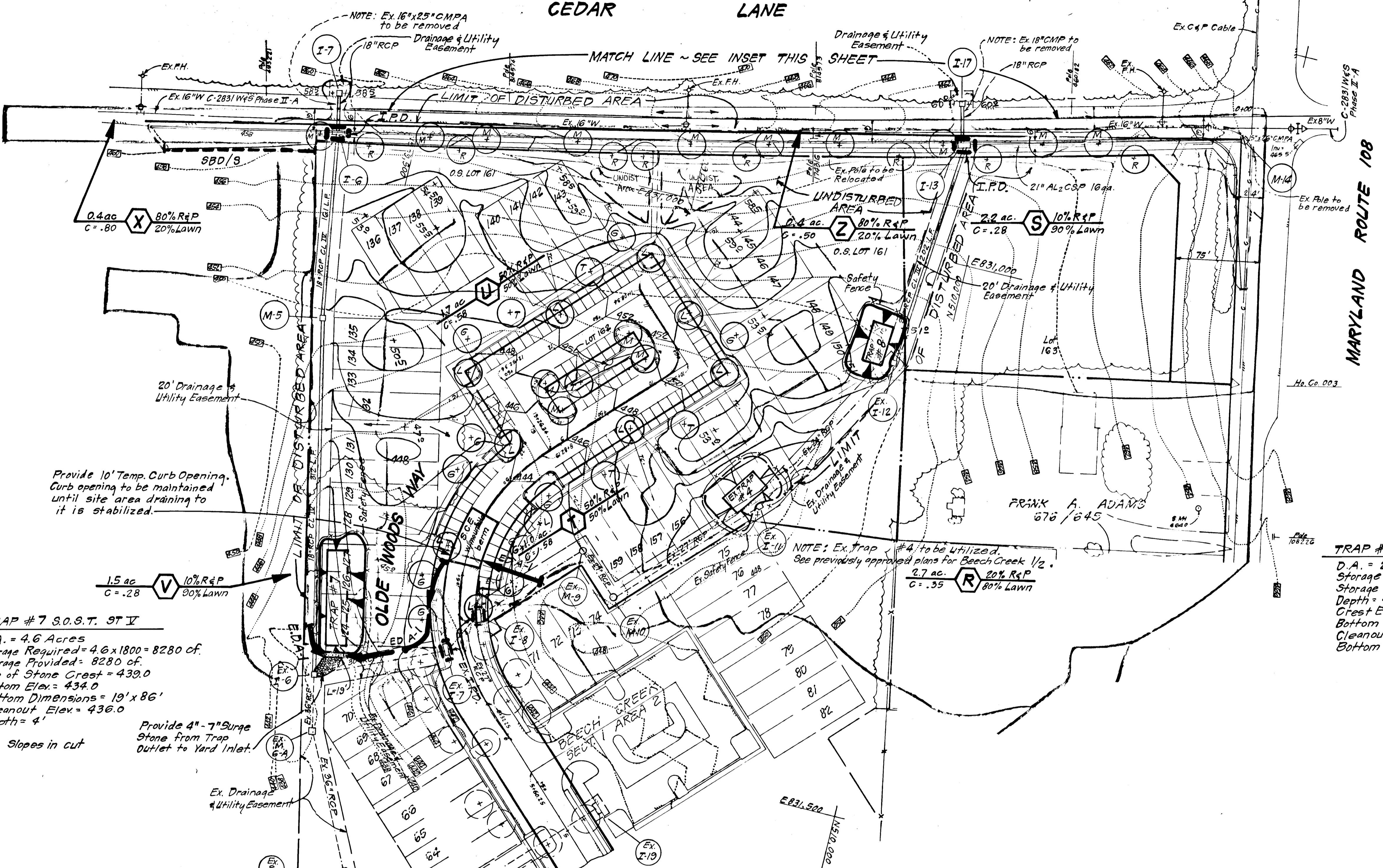
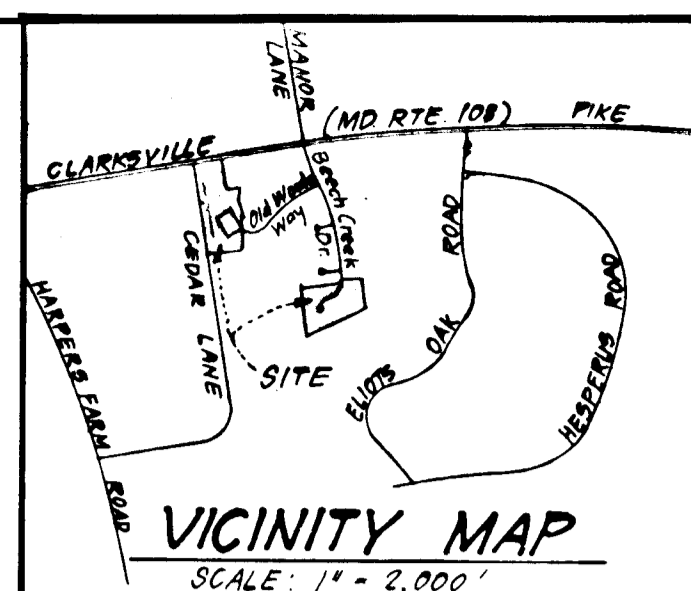
APPROVED: Department of Public Works
[Signature] 3-24-85
 Chief, Bureau of Engineering
 APPROVED: Howard County Office of Planning & Zoning
[Signature] 3/26/85
 Chief, Division of Land Development & Zoning Administration

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

DESIGNED	J.L.S.	SEDIMENT & EROSION CONTROL PLAN & DRAINAGE AREA MAP BEECH CREEK SECTION 1 AREA 3 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: BEECH CREEK ASSOCIATES One Knoll North Drive, # 502 Columbia, Maryland 21045	SCALE	As Shown
DRAWN	V.L.A.		DRAWING	6 OF 8
CHECKED	J.L.S.		JOB NO.	84-128
DATE	11-85		FILE NO.	84-128-D

1164

NOTE: Test pits to be dug by hand to locate Ex. 16" Water Main at all crossings prior to construction.



*** TRAP #7 S.O.S.T. ST IV**
 D.A. = 4.6 Acres
 Storage Required = 4.6 x 1800 = 8280 cf.
 Storage Provided = 8280 cf.
 Top of Stone Crest = 439.0
 Bottom Elev. = 434.0
 Bottom Dimensions = 19' x 86'
 Cleanout Elev. = 436.0
 Depth = 4'
 Provide 4" - 7" Surge Stone from Trap Outlet to Yard Inlet.
 * 1:1 Slopes in cut

TRAP #8 S.I.S.T. ST III
 D.A. = 2.6 Acres
 Storage Required = 2.6 x 1800 = 4680 cf.
 Storage Provided = 4680 cf.
 Depth = 4'
 Crest Elev. = 442.0
 Bottom Elev. = 445.0
 Cleanout Elev. = 447.0
 Bottom Dimensions = 37' x 18'

LEGEND:
 1. Existing Contour
 2. Proposed Contour
 3. Stabilized Construction Entrance
 4. Storm Drainage Pipe

PLANT SCHEDULE

KEY	PLANT NAME	SIZE	QUANT.	REMARKS
(M)	Acer rubrum 'Sunset' Sunset Maple	2 1/2" CAL MIN	14	B & B Heavy Heads
(L)	Platanus acerfolia London Planetree		10	
(G)	Fraxinus p. lanceolata 'Marshalls' Marshalls' Green Ash		10	
(T)	Tilia cordata Littleleaf Linden		5	
(Q)	Quercus rubra Northern Red Oak		8	

NOTE:
 1. Contractor shall verify location of underground utilities prior to digging.
 2. Final locations of trees may be adjusted slightly to accommodate field conditions.
 3. Planting procedures shall comply with "Landscape Specifications for Baltimore-Washington Metropolitan Areas".
 4. Substitutions to the above species may be permitted provided that the planting is in accordance with the street tree and landscape requirements as specified in Section 16.131 of the Howard County Subdivision Regulations.

PLAN VIEW
 SCALE: 1" = 50'

Reviewed for... **Howard** S.C.D.
 Name
 and meets Technical Requirements
 Signature: *[Signature]* Date: 3-20-86
 U.S. Soil Conservation Service

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

[Signature] Approved Date: 3/20/86

DEVELOPER'S/BUILDER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as deemed necessary."

[Signature] Signature of Developer/Builder Date: 11-11-85

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: 11-8-85

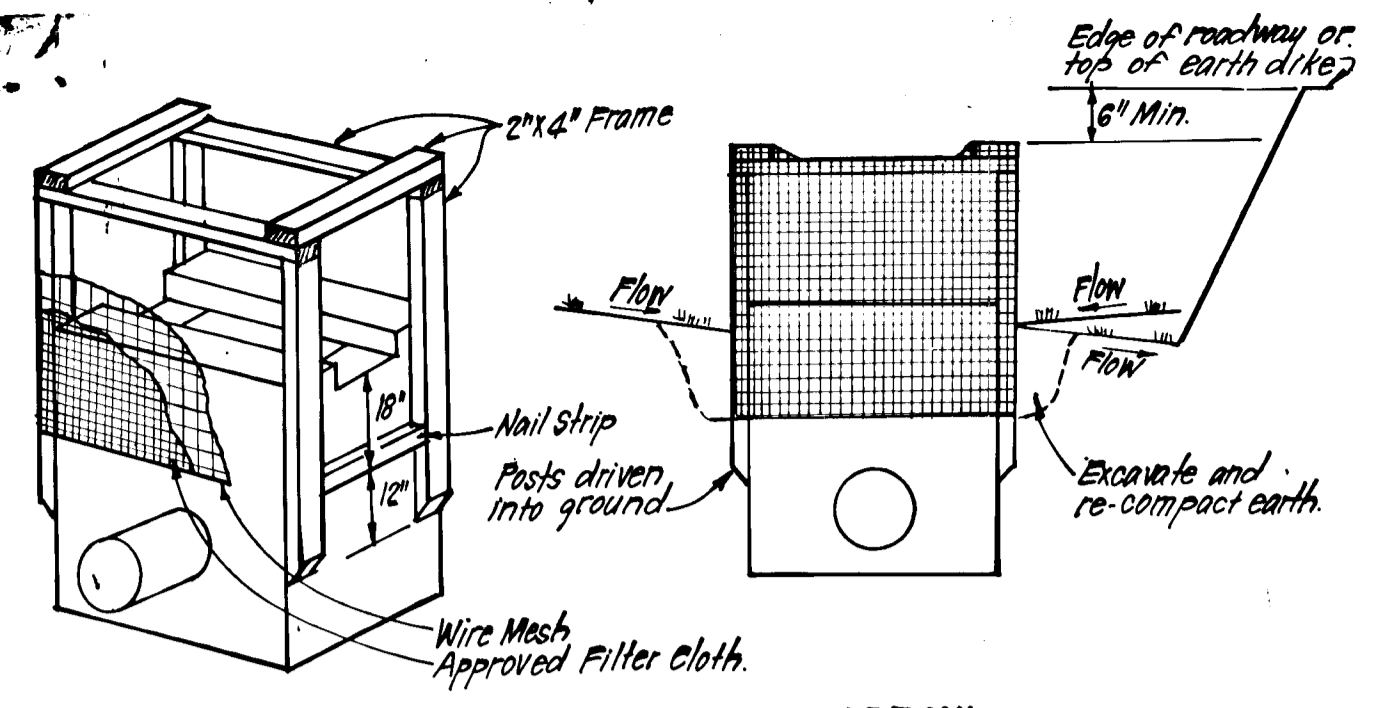
APPROVED: Department of Public Works
[Signature] 3-24-86 Date
 Chief, Bureau of Engineering
 APPROVED: Howard County Office of Planning & Zoning
[Signature] 3-26-86 Date
 Chief, Division of Land Development & Zoning Administration

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 11315 LOCKWOOD DRIVE SILVER SPRING MARYLAND 20904 (301) 593-3400

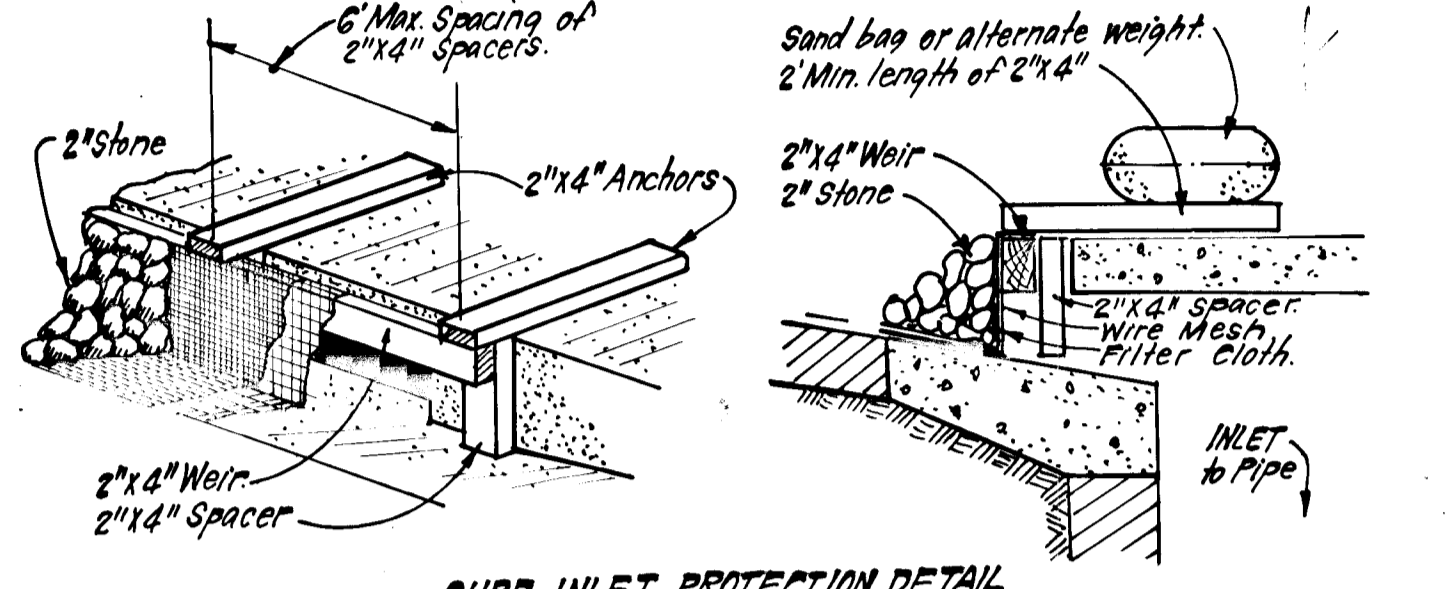
DESIGNED	JLS	SCALE	As Shown
DRAWN	JLS	DRAWING	7 OF 8
CHECKED	VLA	JOB NO.	84-128
DATE	JLS	FILE NO.	84-128-D

FOR: BEECH CREEK ASSOCIATES
 One Knoll North Drive, #502
 Columbia, Maryland 21045

1164



SWALE INLET PROTECTION DETAIL



CURB INLET PROTECTION DETAIL

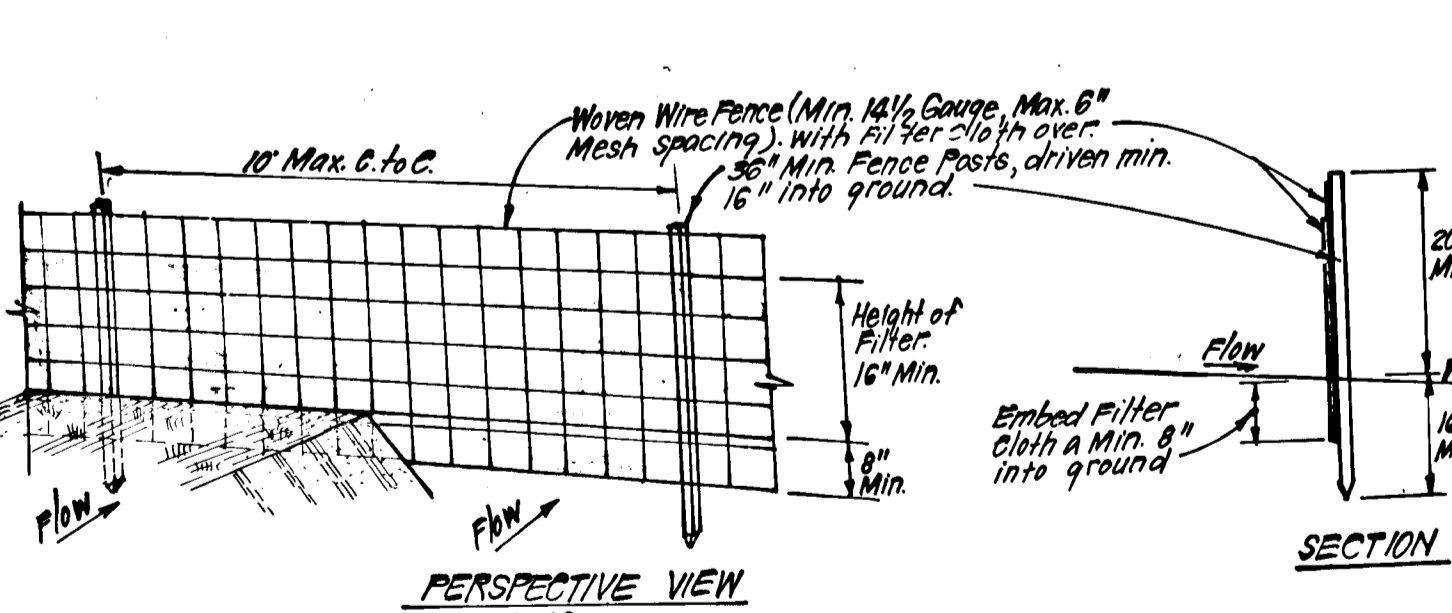
CONSTRUCTION SPECIFICATIONS:
MATERIALS:
 A. Wooden frame is to be constructed of 2x4 construction grade lumber.
 B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
 C. Filter cloth must be of a type approved for this purpose; resistant to sunlight with sieve size, E15, 40-85, to allow sufficient passage of water and removal of sediment.
 D. Stone is to be 2\"/>

II PROCEDURE: SWALE, DITCHLINE OR YARD INLET PROTECTION
 1. Excavate completely around inlet to a depth of 18\"/>

II PROCEDURE: CURB INLET PROTECTION
 1. Attach a continuous piece of wire mesh (30\"/>

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
 8. Assume that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow to inlet.

INLET PROTECTION DETAIL (I.P.D.)
NO SCALE

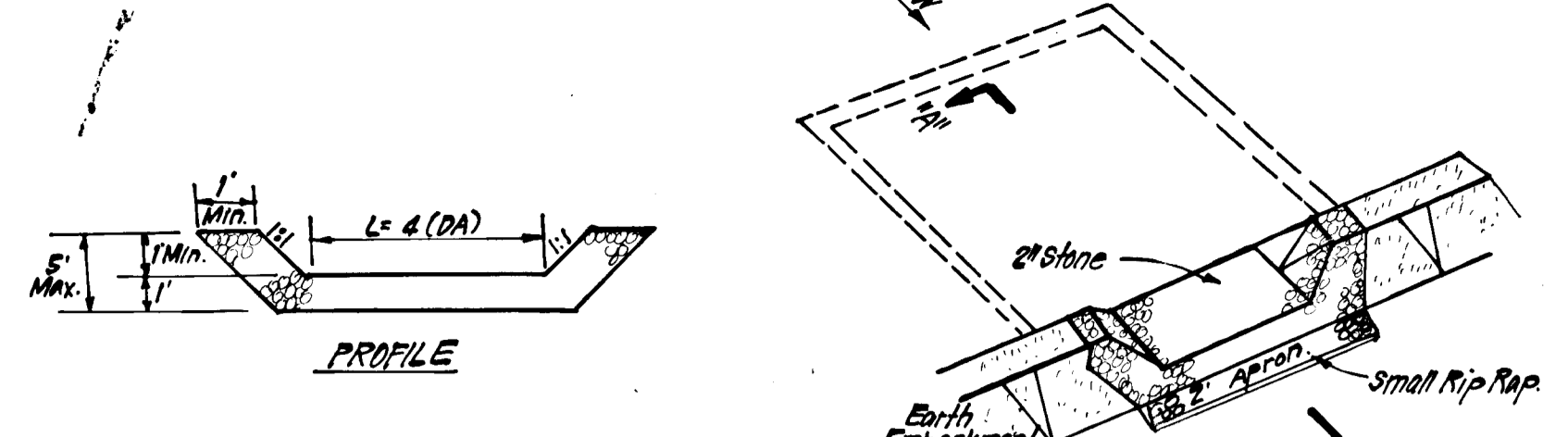


SILT FENCE DETAIL (S)
NO SCALE

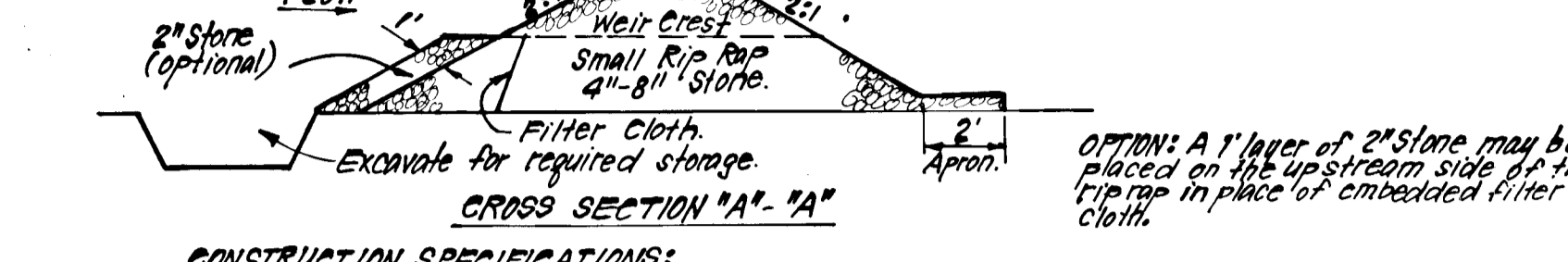
CONSTRUCTION SPECIFICATIONS:
 1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24\"/>

DEVELOPER'S/BUILDER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their duly authorized agents, if so deemed necessary."

Signature: J. E. Sullivan
Date: 11-11-85

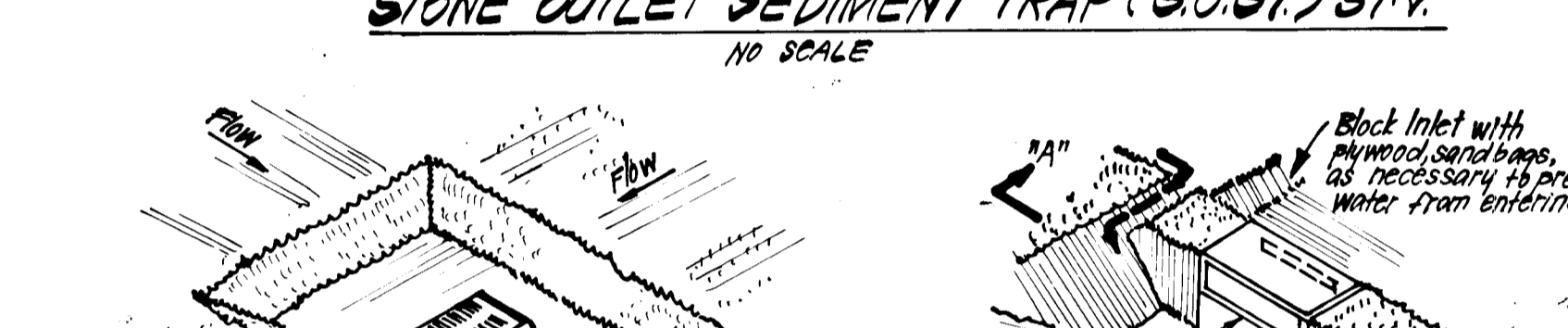


STONE OUTLET SEDIMENT TRAP (S.O.ST.) ST.V.
NO SCALE



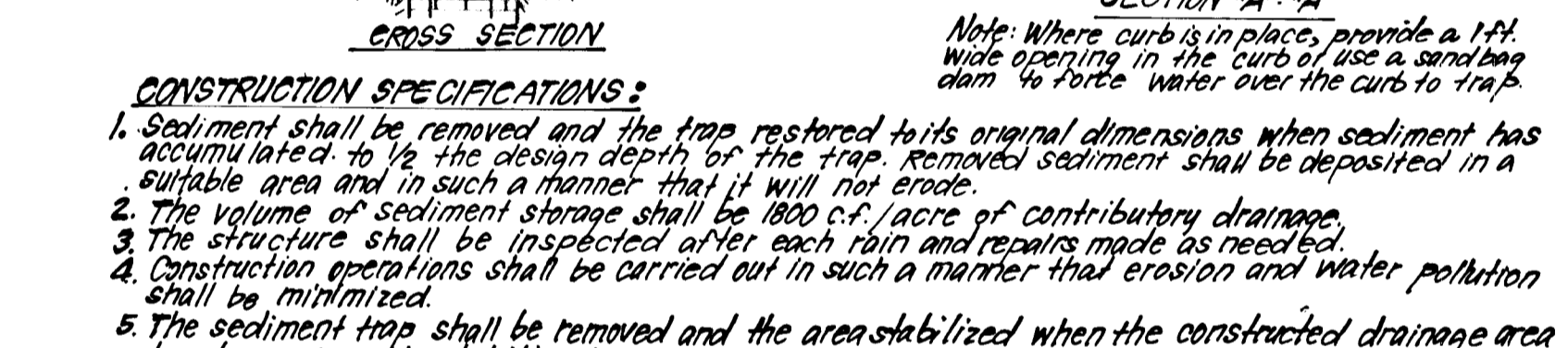
YARD DRAIN and CURB INLET
NO SCALE

CONSTRUCTION SPECIFICATIONS:
 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil shall be compacted.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as any 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 rip rap 4\"/>

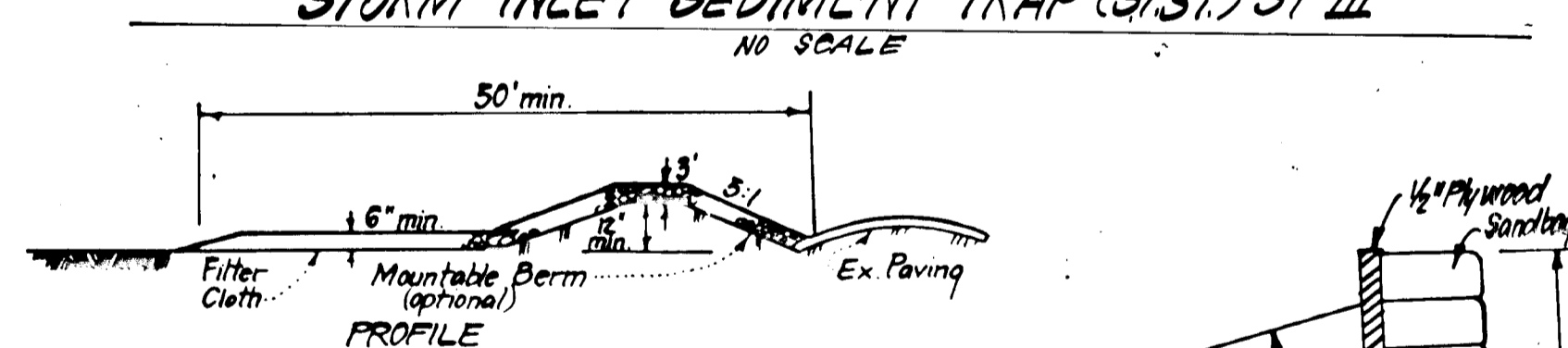


STORM INLET SEDIMENT TRAP (S.I.ST.) ST.III
NO SCALE

CONSTRUCTION SPECIFICATIONS:
 1. Sediment shall be removed and the trap restored to its original dimensions when sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 2. The volume of sediment storage shall be 1800 cu. ft. per acre of contributory drainage.
 3. The structure shall be inspected after each rain and repairs made as needed.
 4. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
 5. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
 6. All cut slopes shall be 1:1 or flatter.



PIPE BLOCKING DETAIL
NO SCALE



STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE

CONSTRUCTION SPECIFICATIONS:
 1. Stone size - Use 2\"/>

6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 3:1 slopes will be permitted.
 7. 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 be conditional 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.
 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 9. Periodic inspection and needed maintenance shall be provided after each rain.

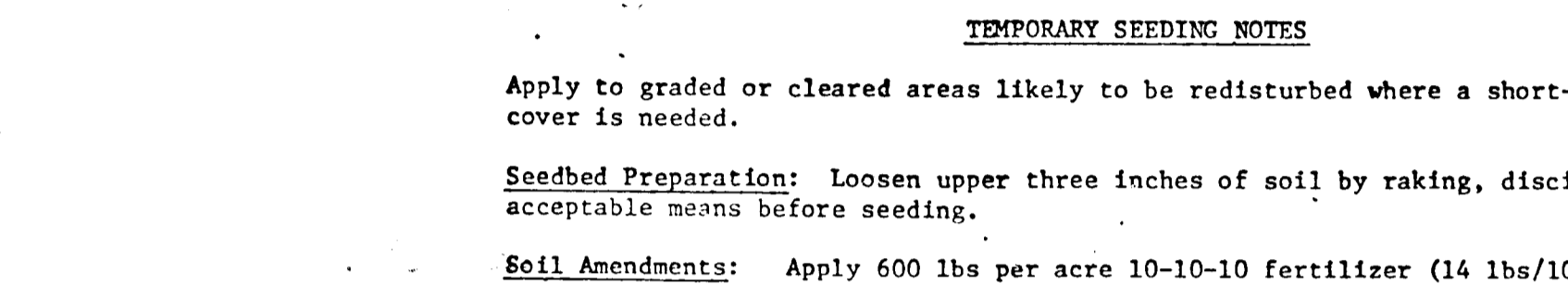
Signature: Stanton L. Pule
Date: 3/20/86

APPROVED: Department of Public Works
 Signature: G. Nelson Clark
Date: 11-8-85

PERMANENT SEEDING NOTES
 Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of 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 31 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/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.
Maintenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES
 Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)
Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.
 Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



EARTH DIKE DETAIL (E.D.)
NO SCALE

CONSTRUCTION SPECIFICATIONS:
 1. All dikes shall be compacted by earth-moving equipment.
 2. All dikes shall have positive drainage to an outlet.
 3. Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
 4. Dike location should be adjusted as needed to utilize a stabilized slope outlet.
 5. Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
 6. Stabilization shall be: (A) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) flow channel as per chart below.

FLOW CHANNEL STABILIZATION

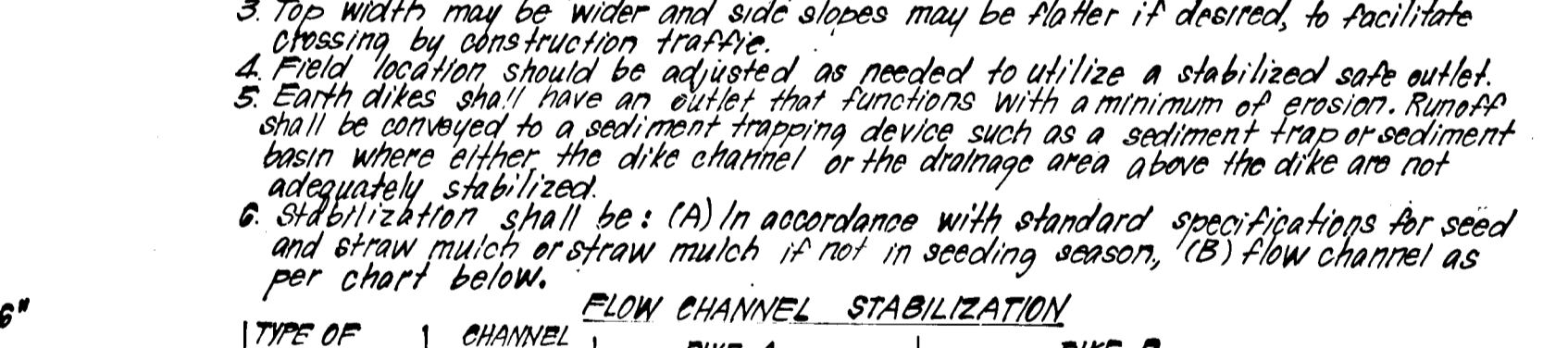
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5 - 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	3.1 - 5.0%	Seed & Straw Mulch	Seed mulch, or Excelsior's Sod, 2\"/>
3	5.1 - 8.0%	Seed mulch or Sod; 2\"/>	
4	8.1 - 20.0%	Lined Rip Rap 4-8\"/>	

A. Stone to be 2\"/>

B. Rip Rap to be 4\"/>

C. Approved equivalents can be substituted for any of the above materials.

7. Periodic inspection and required maintenance must be provided after each rain.



STRAW BALE DIKE DETAIL (SBD)
NO SCALE

CONSTRUCTION SPECIFICATIONS:
 1. Bales shall be placed at the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
 2. Each bale shall be embedded in the soil a min. of 4\"/>

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: 11-8-85

APPROVED: Department of Public Works
 Signature: G. Nelson Clark
Date: 11-8-85

APPROVED: Howard County Office of Planning & Zoning
 Signature: G. Nelson Clark
Date: 11-8-85

SEDIMENT CONTROL 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. (992-2437)
 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
 6) 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.
 7) Site Analysis:
 Total Area of Site: 11.52 Acres
 Area Disturbed: 6.00 Acres
 Area to be roofed or paved: 1.14 Acres
 Area to be vegetatively stabilized: 4.86 Acres
 Total Cut: 2,900 Cu. yds
 Total Fill: 15,100 Cu. yds
 Offsite waste/borrow area location: N/A

8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 9) Additional sediment control must be provided, if deemed necessary by the Howard County DEW sediment control inspector.
 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
 11) If houses are to be constructed on an "As-Sold" basis, at frame, Single Lot Sediment Control as shown below shall be implemented. N/A
 12) All pipes to be blocked at the end of each day (see detail below).
 13) The total amount of straw bale dikes/silt fence equals 135 L.F.

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

DESIGNED	SEDIMENT & EROSION CONTROL NOTES AND DETAILS	SCALE
JLS	BEECH CREEK SECTION 1 AREA 3 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	As Shown
DRAWN		8 of 8
CHECKED		JOB NO. 84-128
DATE		FILE NO. 84-128-D

FOR: BEECH CREEK ASSOCIATES
 One Knoll North Drive #502
 Columbia, Maryland 21045

AS-BUILT F-86-90 6-10-88

1164