

TRAP #1 S.S.T. ST II
 D.A. = 0.5 Ac.
 Storage Req'd. = 0.5 x 1800 = 900 cf.
 Depth = 2'
 Bottom El. = 418.0
 Bottom Dim. = 11 x 26'
 Cleanout El. = 419.0

STATIONS	RADIUS	ARC	DELTA	TAN	CHORD & BEARING
PC 6419.97 to PT 11433.72	520.00	5/3 75	56° 36' 25"	280.03	493.11' S10° 41' 48" E
PT 12167.32 to PT 21489.08	1350.00	8/1 76	38° 23' 00"	463.97	879.15' S19° 47' 30" E

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."

Harry L. Lundy
 Signature of Developer/Builder
 Date: 1-13-87

Reviewed for... **HOWARD** S.C.D.
 and meets Technical Requirements
John M. ...
 Signature Date: 4-18-87
 U.S. Soil Conservation Service

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

Stephen L. ...
 Approved Date: 4/14/87

TRAP #2 S.O.S.T. ST V

D.A. = 1.0 Ac.
 Storage Req'd. = 1 x 1800 = 1800 cf.
 Storage Prov. = 1800 cf.
 Depth = 3'
 Top of Stone Crest = 409.0
 Bottom Elev. = 405.0
 Bottom Dim. = 24' x 14'
 Cleanout Elev. = 406.5

TRAP #3 S.I.S.T. ST III*

D.A. = 4.0 Ac.
 Storage Req'd. = 4.0 x 1800 = 7200 cf.
 Storage Prov. = 7200 cf.
 Depth = 4'
 Slot Elev. = 395.43
 Bottom El. = 391.43
 Bottom Dim. = See Plan
 Cleanout El. = 393.43
 * 1:1 Side Slopes in Cut 358.24

PLAN

SCALE: 1" = 50'

PROFILE - MASTERS RUN

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

PROFILE LEGEND
 Profile Grade Line
 Existing & B.R.L. (R/L)
 B.R.L. (L/R)

NOTE: Horizontal and Vertical Controls based on Howard County Monuments No. 2937006 & 2938001

AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD. REG. P.E. No. 6059 ON 6-30-88

GENERAL NOTES

- All storm drain & paving shall be constructed in accordance with the latest edition and specifications of Howard County & MD SHA.
- Types of storm drainage refer to the Standard Details of Ho. Co. & MD SHA.
- Trench compaction for storm drains within road or street right of way limits shall be in accordance with "Ho. Co. Design Manual, Vol. II," Std. G-2.01.
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of manholes by digging test pits, by hand, at all utility crossings, well in advance of construction.
- All utility companies shall be notified 24 hrs in advance of construction.
- All traffic services, 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, Vol. II."
- Design Speed: See Table Sh. 7 Zoning: R. Rural
- The contractor/developer shall contact the Construction Inspection/Survey Division 24 hrs. in advance of commencement of work. Ph. 772-7272.

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.

John M. ...
 Signature Date: 1-13-87
 G. Nelson Clark Date

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John M. ...
 Chief, Division of Land Development & Zoning Administration Date: 4-15-87

APPROVED: DEPARTMENT OF PUBLIC WORKS

John M. ...
 Chief, Bureau of Engineering Date: 4-15-87

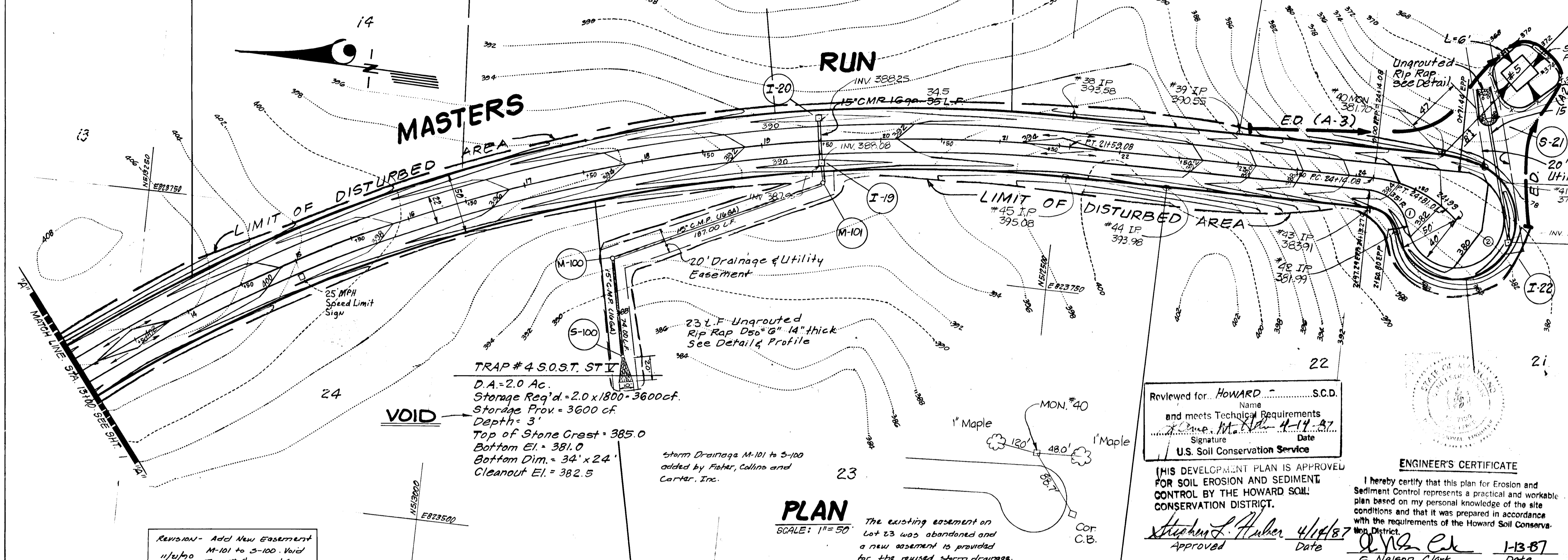
#1256

AS-BUILT 6-30-88 F-87-108

CENTERLINE CURVE DATA					
STATIONS	RADIUS	ARC	DELTA	TAN	CHORD & BEARING
PC 24+67.32 to PT 24+50.08	1330.00	891.76	38°25'00"	463.37	87°15'19"47.30"E
PT 24+50.08 to PT 24+81.01	104.00	66.93	36°52'23"	34.67	65°18'51"11"W
CURVE #1 @ CUL-DE-SAC	35	46.49	76°06'43"	21.40	43°15'13"78"21"E
CURVE #2 @ CUL-DE-SAC	40	179.36	256°54'46"	-	62.65 N 52°55'40"W

TRAP # 5 S.O.S.T. ST. I'
 D.A. = 1.3 Ac.
 Storage Req'd. = 1.3 x 1800 = 2340 cf.
 Storage Prov. = 2340 cf.
 Depth = 3'
 Top of Stone Crest = 371.0
 Bottom El. = 367.0
 Bottom Dim. = 24' x 20'
 Cleanout Elev. = 368.5

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: *Harby L. Lundy*
 Title: *Signature of Landowner/Builder*
 Date: *1-13-87*



TRAP # 4 S.O.S.T. ST. I'
 D.A. = 2.0 Ac.
 Storage Req'd. = 2.0 x 1800 = 3600 cf.
 Storage Prov. = 3600 cf.
 Depth = 3'
 Top of Stone Crest = 385.0
 Bottom El. = 381.0
 Bottom Dim. = 34' x 24'
 Cleanout El. = 382.5

Reviewed for HOWARD COUNTY S.C.D. Name: *Howard County*
 and meets Technical Requirements
 Signature: *John W. Musachian* Date: *4-14-87*
 U.S. Soil Conservation Service

(THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.)
 Approved: *Stephen L. Huber* Date: *4/14/87*

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: *1-13-87*

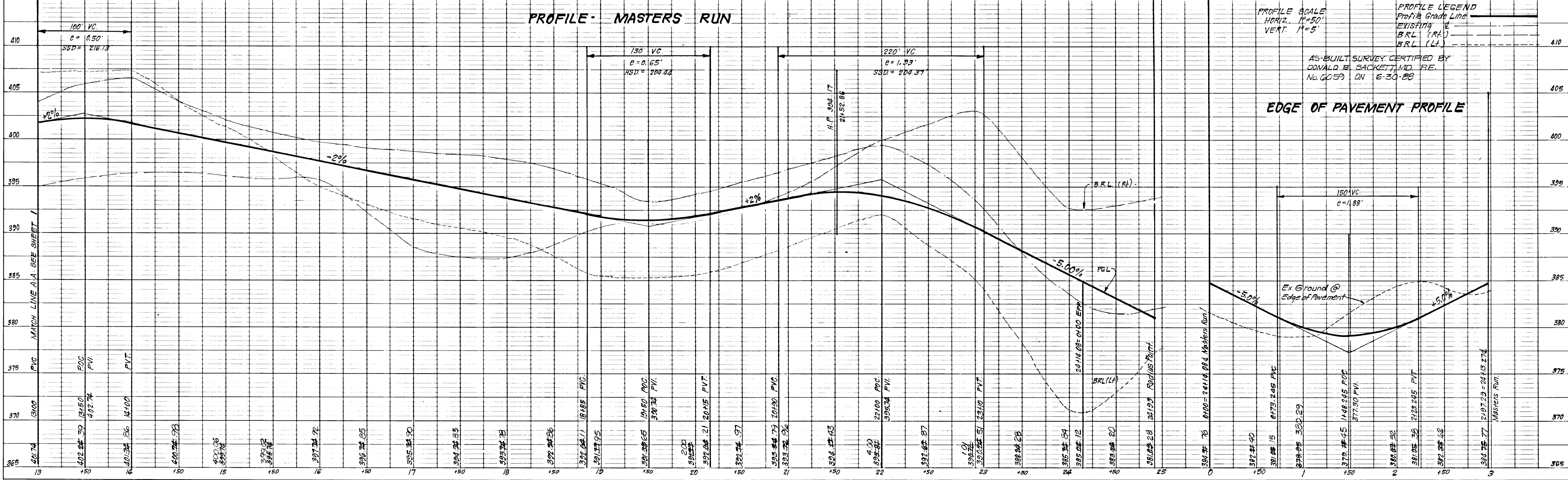
APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *John W. Musachian* Date: *4-20-87*
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Signature: *John W. Musachian* Date: *4-15-87*
 Chief, Division of Land Development & Zoning Administration

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

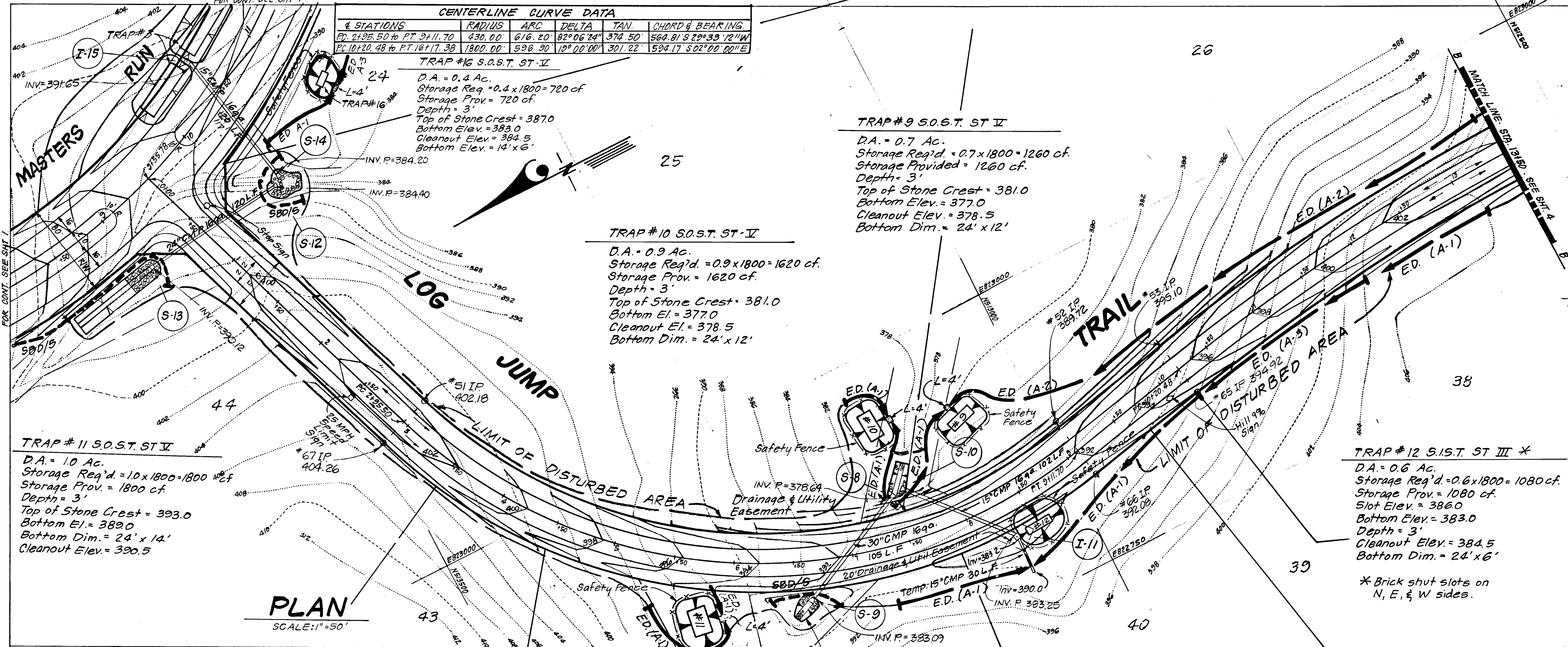
DESIGNED	JLS	SCALE	As Shown
DRAWN	VLM KIW	DRAWING	2 OF 10
CHECKED	JLS	JOB NO.	86-028
DATE	1-8-87	FILE NO.	86-028-D

Revision - Add New Easement
 11/1/80 M-101 to S-100 Void
 Trap # 4 U.S.

PLAN
 SCALE: 1" = 50'
 The existing easement on Lot 23 was abandoned and a new easement is provided for the revised storm drainage.



*1256



CENTERLINE CURVE DATA table with columns for stationing, radius, arc, delta, tan, and chord & bearing.

TRAP #16 S.O.S.T. ST-IV. D.A. = 0.4 Ac. Storage Req'd = 0.4 x 1800 = 720 cf. Storage Prov. = 720 cf. Depth = 3'. Top of Stone Crest = 3870. Bottom Elev. = 383.0. Cleanout Elev. = 384.5. Bottom Dim. = 14' x 6'.

TRAP #9 S.O.S.T. ST-IV. D.A. = 0.7 Ac. Storage Req'd = 0.7 x 1800 = 1260 cf. Storage Provided = 1260 cf. Depth = 3'. Top of Stone Crest = 381.0. Bottom Elev. = 377.0. Cleanout Elev. = 378.5. Bottom Dim. = 24' x 12'.

TRAP #10 S.O.S.T. ST-IV. D.A. = 0.9 Ac. Storage Req'd = 0.9 x 1800 = 1620 cf. Storage Prov. = 1620 cf. Depth = 3'. Top of Stone Crest = 381.0. Bottom El. = 377.0. Cleanout El. = 378.5. Bottom Dim. = 24' x 12'.

TRAP #11 S.O.S.T. ST-IV. D.A. = 1.0 Ac. Storage Req'd = 1.0 x 1800 = 1800 cf. Storage Prov. = 1800 cf. Depth = 3'. Top of Stone Crest = 393.0. Bottom El. = 389.0. Bottom Dim. = 24' x 14'. Cleanout Elev. = 390.5.

TRAP #12 S.I.S.T. ST-III*. D.A. = 0.6 Ac. Storage Req'd = 0.6 x 1800 = 1080 cf. Storage Prov. = 1080 cf. Slot Elev. = 386.0. Bottom Elev. = 383.0. Depth = 3'. Cleanout Elev. = 384.5. Bottom Dim. = 24' x 6'.

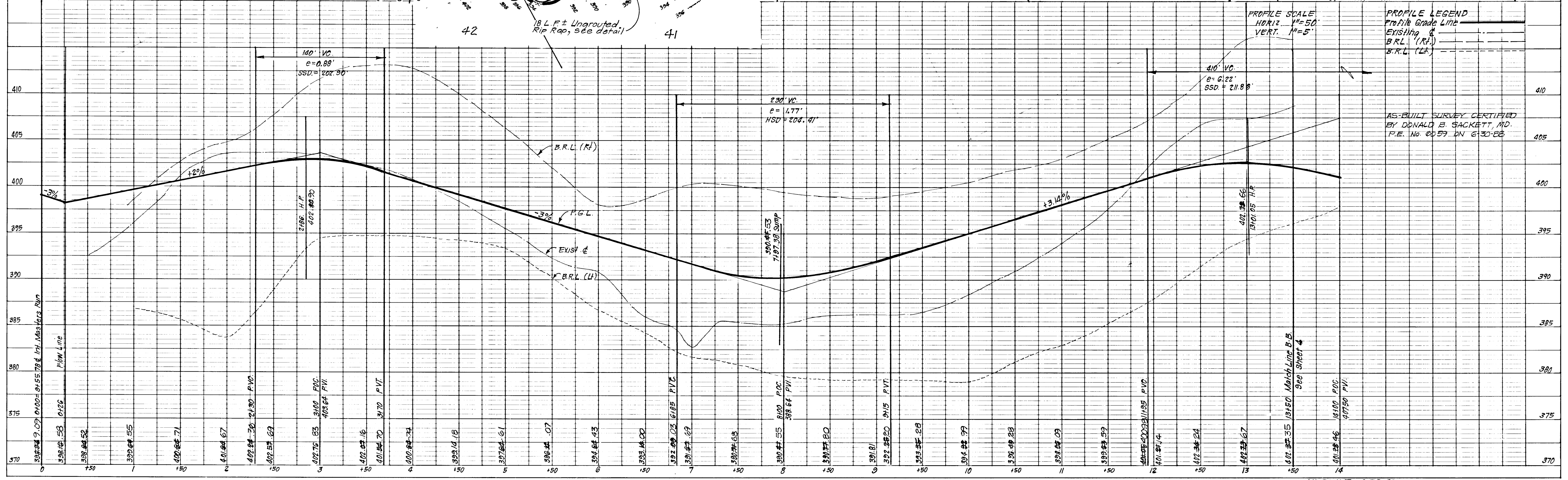
PLAN SCALE: 1"=50'

STATE OF MARYLAND ENGINEER'S CERTIFICATE. Reviewed for HOWARD S.C.D. Name: [Signature] Date: 1-13-87. Signature: Harry L. Lundy.

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. Approved: G Nelson Clark, 1-13-87. Date: Stephen L. Adams, 4/14/87.

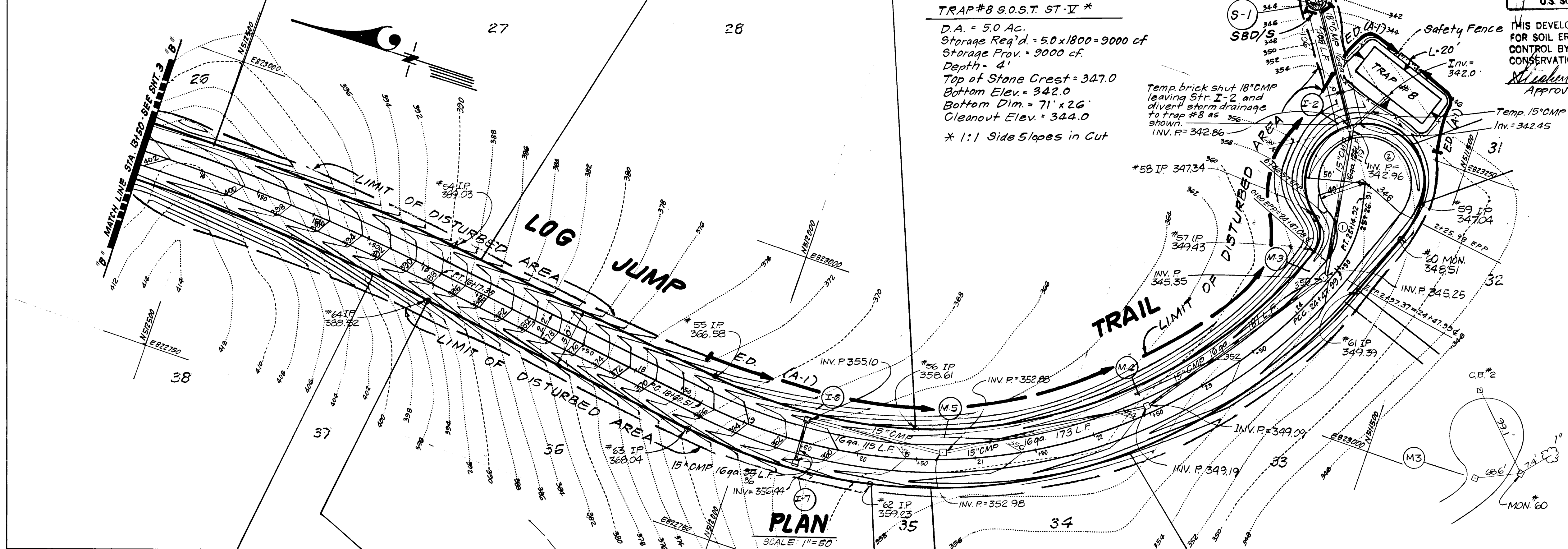
APPROVED: DEPARTMENT OF PUBLIC WORKS. Chief, Bureau of Engineering. Date: 4-20-87. APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING. Chief, Division of Land Development & Zoning Administration. Date: 4-15-87.

CLARK • FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS. 11315 LOCKWOOD DRIVE • SILVER SPRING MARYLAND 20904 • (301) 593-3400. ROAD CONSTRUCTION PLANS LOG JUMP TRAIL THE CHASE 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND. FOR: THE HOWARD ESTATE DEVELOPMENT CORP. P.O. Box 1018 Columbia Md. 21044. JOB NO. 86-028. FILE NO. 86-028-D.



PROFILE SCALE: HORIZ. 1"=50', VERT. 1"=5'. PROFILE LEGEND: Profile Grade Line, Existing & B.R.L. (R/L), B.R.L. (L/R). AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD. P.E. No. 2057 DN 6130-88.

CENTERLINE CURVE DATA					
STATIONS	RADIUS	ARC	DELTA	TAN	CHORD & BEARING
PC 10+10.48 to PT 16+17.38	1800.00	596.80	18° 00' 00"	301.22	594.17 S 82° 00' 00" W
PC 18+60.51 to PCC 24+47.89	440.00	587.48	76° 30' 00"	346.87	544.80 S 30° 45' 00" E
PC 24+47.89 to PT 25+14.92	184.00	60.93	30° 52' 23"	34.67	65.78 S 87° 28' 12" E
CURVE #1 @ CUL-DE-SAC	35	46.57	78° 13' 45"	27.46	43.21 N 73° 00' 12" E
CURVE #2 @ CUL-DE-SAC	40	179.36	256° 54' 44"	—	62.65 S 16° 39' 18" E



TRAP #8 S.O.S.T. ST-V *
 D.A. = 50 Ac.
 Storage Req'd. = 5.0 x 1800 = 9000 cf
 Storage Prov. = 9000 cf
 Depth = 4'
 Top of Stone Crest = 347.0
 Bottom Elev. = 342.0
 Bottom Dim. = 71' x 26'
 Cleanout Elev. = 344.0
 * 1:1 Side Slopes in Cut

Reviewed for... **HOWARD** S.C.D.
 Name
 and meets Technical Requirements
 Signature *Howard* Date *1-11-87*
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature *Howard* Date *4/14/87*
 Approved

DEVELOPER'S/BUILDER'S CERTIFICATE
 I hereby certify that all development and construction will be done according to the plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction 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 *Howard* Date *1-13-87*
 Harry L. Lundy



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 *Clark* Date *1-13-87*
 G. Nelson Clark

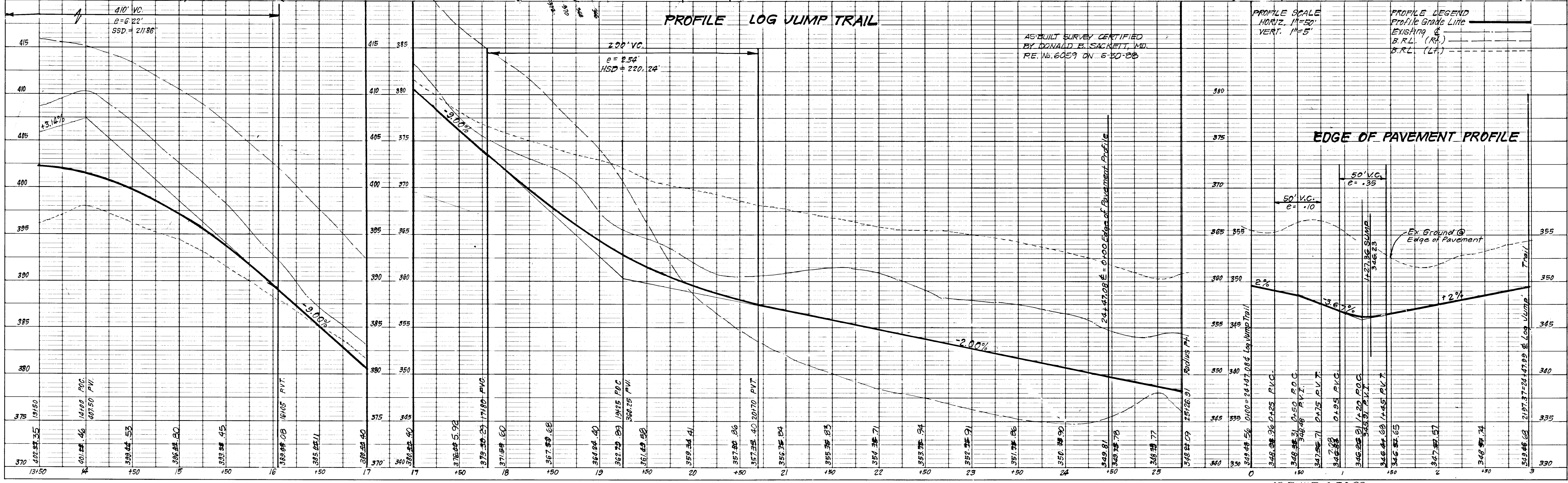
APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature *Clark* Date *4-22-87*
 Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Signature *Clark* Date *4-15-87*
 Chief, Division of Land Development & Zoning Administration

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

DESIGNED	VLS	SCALE	AS SHOWN
DRAWN	VLM KJW	DRAWING	4 OF 10
CHECKED	JLS	JOB NO.	86-028
DATE	1-8-87	FILE NO.	86-028-D

FOR: THE HOWARD ESTATE DEVELOPMENT CORP.
 P.O. Box 1018
 Columbia Md. 21044



AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD. RE. NO. 6059 ON 6-30-88

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

PROFILE LEGEND
 Profile Grade Line
 Existing & B.R.L. (Rk.)
 B.R.L. (Lr.)

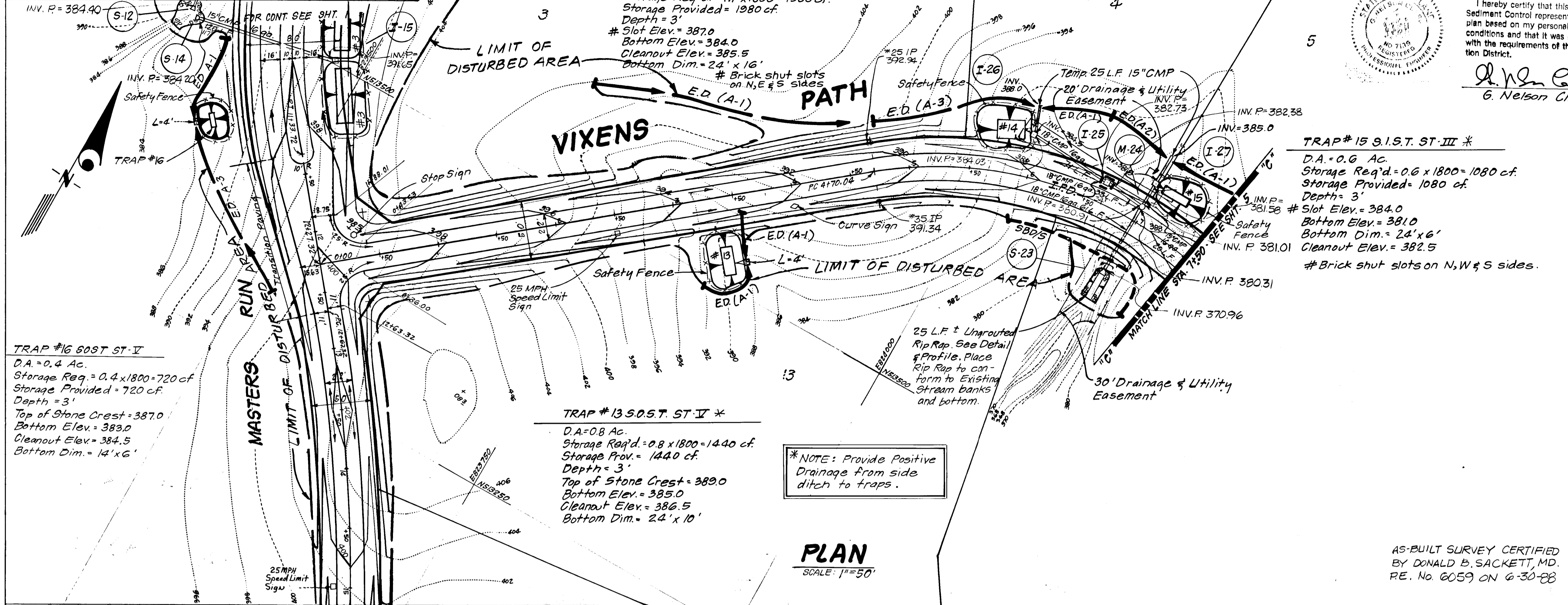
EDGE OF PAVEMENT PROFILE

AS-BUILT 6-30-88

F-87-108

#1256

GENERAL CURVE DATA				
STATIONS	RADIUS	ARC	DELTA	TAN
PC 4170.04 to PT 1218.79	325.00	748.75	182°00'00"	719.06'
CHORD & BEARING				
593.81' S63°00'00"E				



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
1-13-87
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.

Harry L. Lundy
Harry L. Lundy
1-13-87
Date

Reviewed for: **HOWARD** S.C.D.
Name
and meets Technical Requirements
Signature: *[Signature]* Date: 1-14-87
U.S. Soil Conservation Service

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

William L. Fuller 4/14/87
Approved Date

TRAP #16 BOST ST-II
D.A. = 0.4 Ac.
Storage Req'd = 0.4 x 1800 = 720 cf.
Storage Provided = 720 cf.
Depth = 3'
Top of Stone Crest = 387.0
Bottom Elev. = 383.0
Cleanout Elev. = 384.5
Bottom Dim. = 14' x 6'

TRAP #13 S.O.S.T. ST-II *
D.A. = 0.8 Ac.
Storage Req'd = 0.8 x 1800 = 1440 cf.
Storage Prov. = 1440 cf.
Depth = 3'
Top of Stone Crest = 389.0
Bottom Elev. = 385.0
Cleanout Elev. = 386.5
Bottom Dim. = 24' x 10'

TRAP #15 S.I.S.T. ST-III *
D.A. = 0.6 Ac.
Storage Req'd = 0.6 x 1800 = 1080 cf.
Storage Provided = 1080 cf.
Depth = 3'
Slot Elev. = 384.0
Bottom Elev. = 381.0
Bottom Dim. = 24' x 6'
Cleanout Elev. = 382.5
Brick shut slots on N,W & S sides.

*NOTE: Provide Positive Drainage from side ditch to traps.

PLAN
SCALE: 1" = 50'

AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD. RE. No. 6059 ON 6-30-88

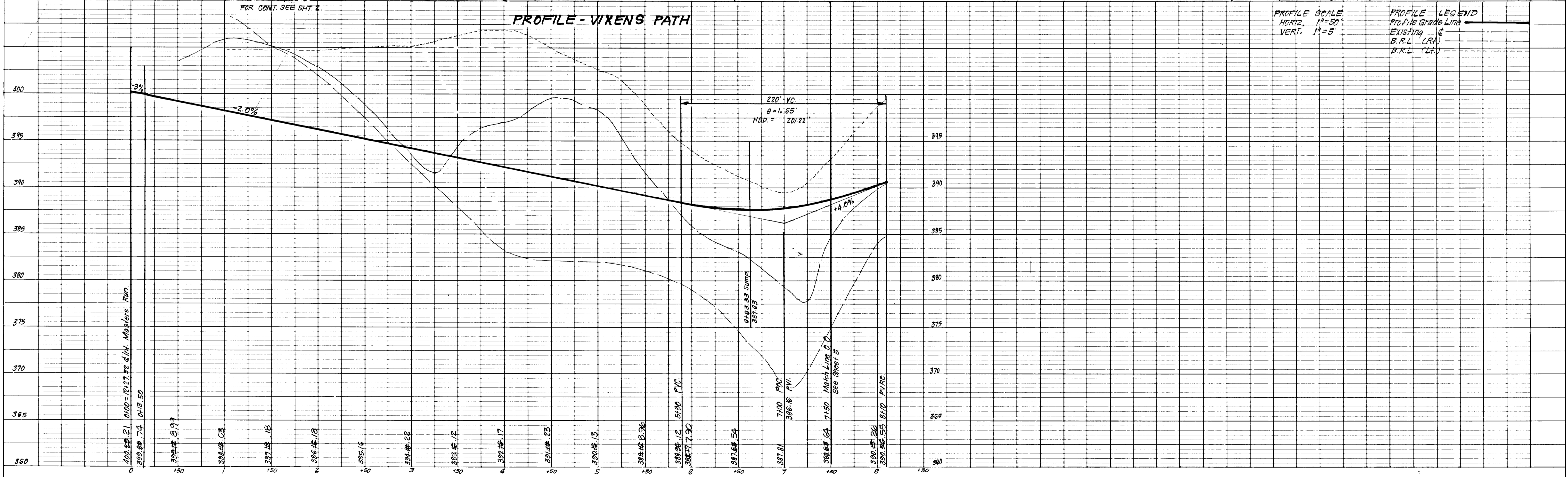
APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 4-20-87
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.
John W. Muehlman 4-15-87
Chief, Division of Land Development & Zoning Administration Date

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

DESIGNED JLS	ROAD CONSTRUCTION PLANS VIXENS PATH THE CHASE 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: THE HOWARD ESTATE DEVELOPMENT CORP P.O. Box 1018 Columbia, Md. 21044	SCALE As Shown
DRAWN VLM KIW		DRAWING 5 OF 10
CHECKED JLS		JOB NO. 86-028
DATE 1-8-87		FILE NO. 86-028-D

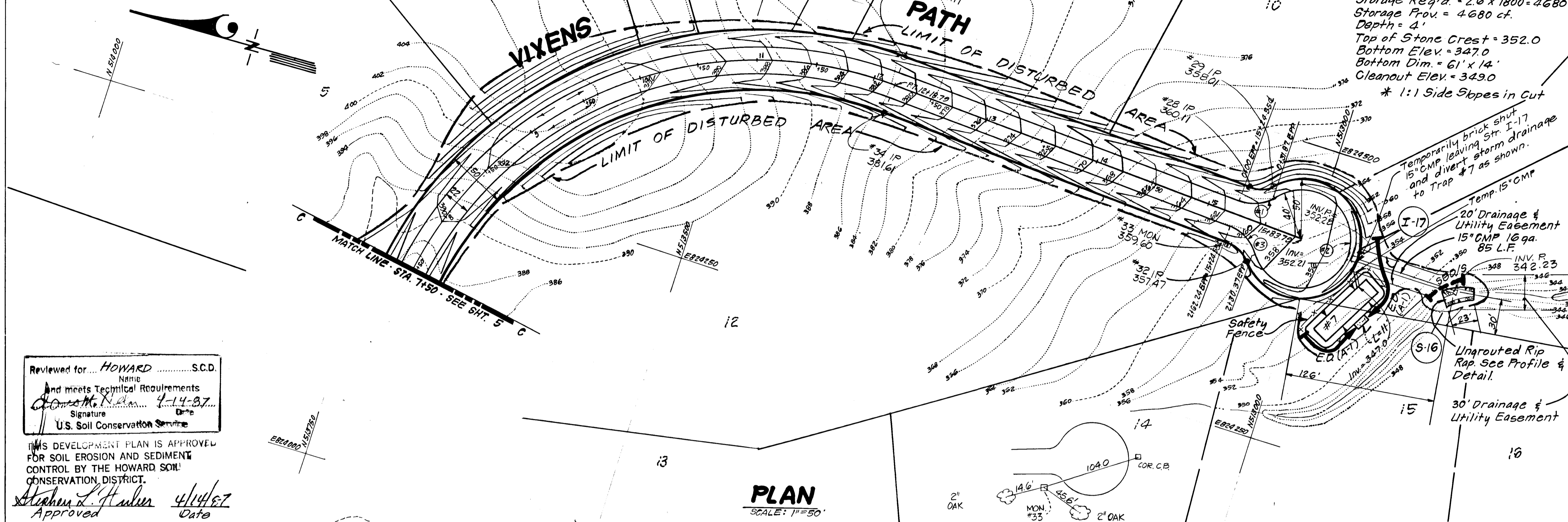
PROFILE - VIXENS PATH



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

PROFILE LEGEND
Profile Grade Line
EXISTING
B.R.L. (RA)
B.R.L. (LF)

STATIONS	RADIUS	ARC	DELTA	TAN	CHORD & BEARING
PC @ 1218.73	325.00	743.75	132°02'00"	729.36	523.81 S63°00'00" E
CURVE #1 @ CUL-DE-SAC	35.00	31.87	52°10'09"	17.14	30.78 S23°05'04" E
CURVE #2 @ CUL-DE-SAC	40.00	198.50	284°10'18"	-	49.07 N87°02'00" W
CURVE #3 @ CUL-DE-SAC	35.00	31.87	52°10'09"	17.14	30.78 N29°05'04" E



TRAP #7 S.O.S.T. ST. V *
 D.A. = 2.6 Ac.
 Storage Req'd. = 2.6 x 1800 = 4680 cf.
 Storage Prov. = 4680 cf.
 Depth = 4'
 Top of Stone Crest = 352.0
 Bottom Elev. = 347.0
 Bottom Dim. = 6' x 14'
 Cleanout Elev. = 349.0
 * 1:1 Side Slopes in Cut

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 shall 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.
 Harry L. Luddy
 1-13-87

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
 1-13-87

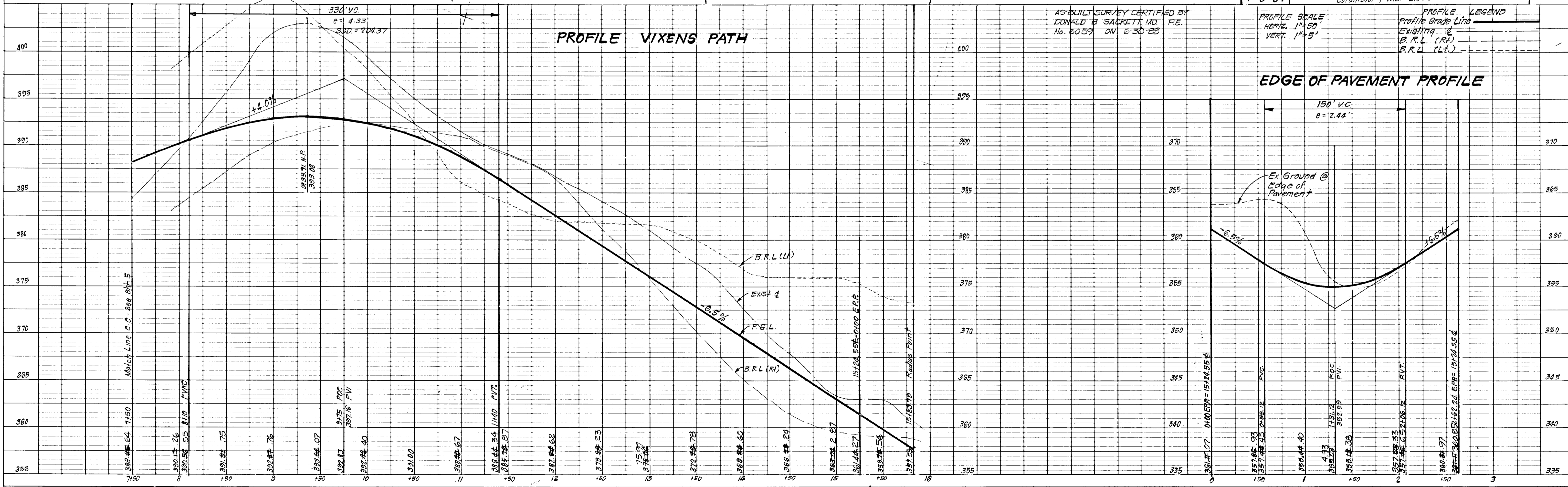
Reviewed for HOWARD S.C.D.
 Name
 and meets Technical Requirements
 Signature
 U.S. Soil Conservation Service
 Approved
 Date

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

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

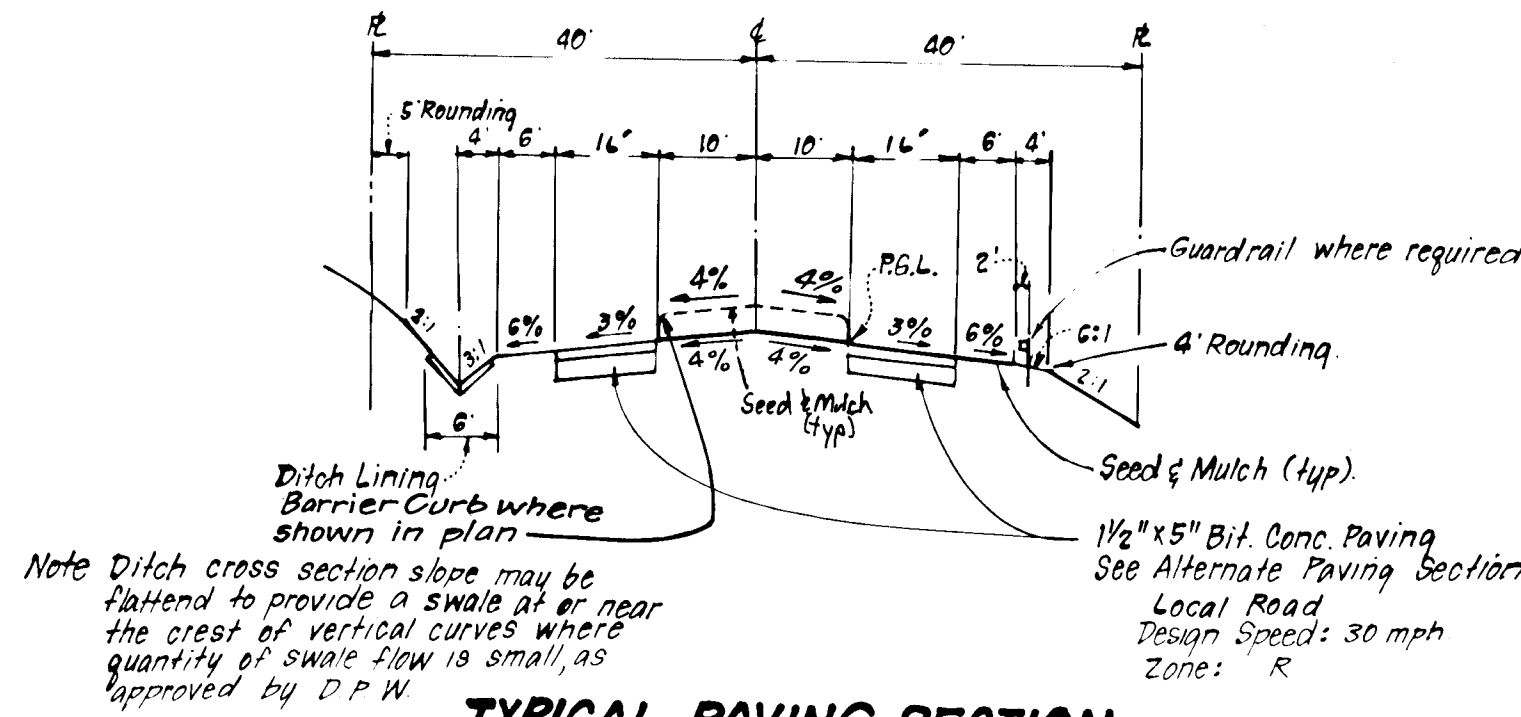
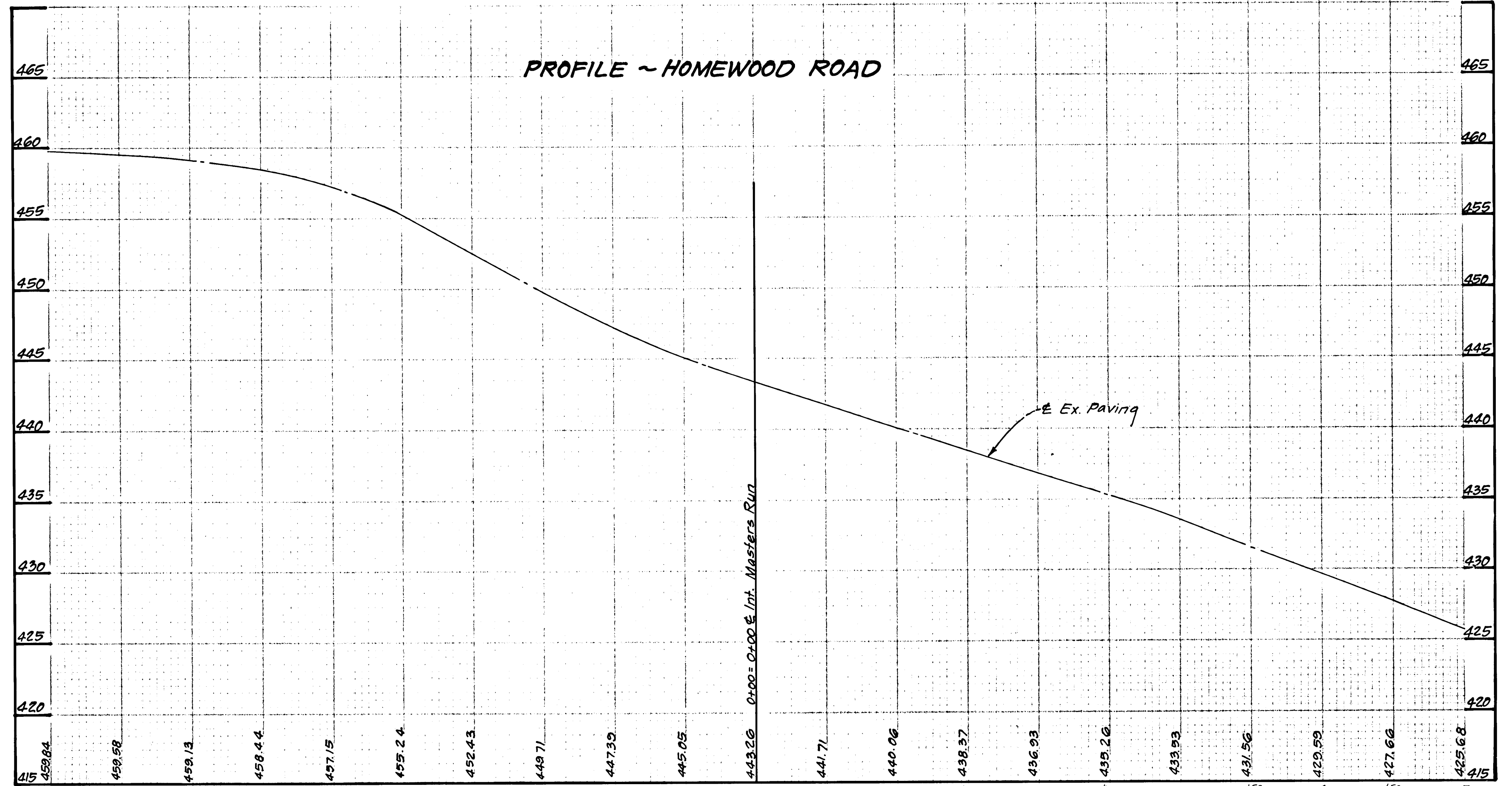
DESIGNED	JLS	SCALE	As Shown
DRAWN	VLM KIW	DRAWING	6 OF 10
CHECKED	JLS	JOB NO.	86-028
DATE	1-8-87	FILE NO.	86-028-D

ROAD CONSTRUCTION PLANS
VIXENS PATH
THE CHASE
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 FOR: HOWARD ESTATE DEVELOPMENT CORP.
 P.O. Box 1018
 Columbia, Md. 21044



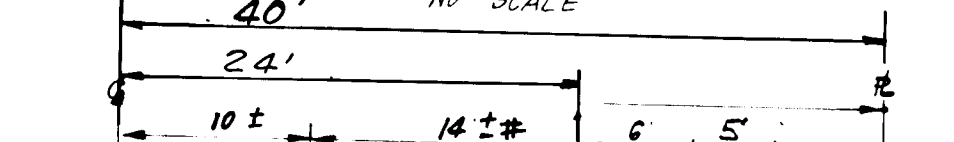
#1256

PROFILE ~ HOMEWOOD ROAD



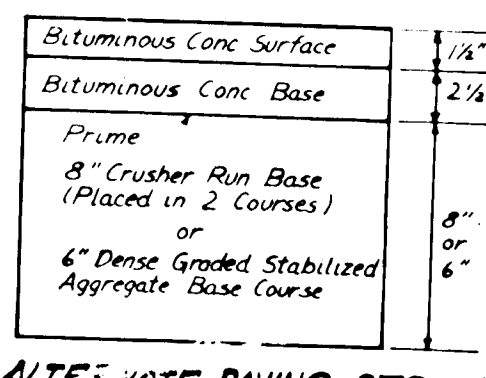
TYPICAL PAVING SECTION
MASTERS RUN - STA. 0+00 TO 12+27.32*

NO SCALE

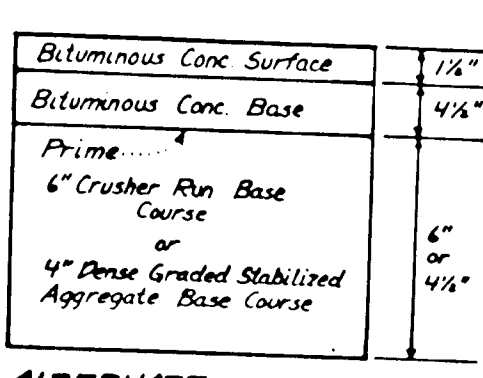


TYPICAL HALF SECTION - HOMEWOOD ROAD
STA. 0+00 TO 6+15 ±, -2+00 ± TO 5+33 ±

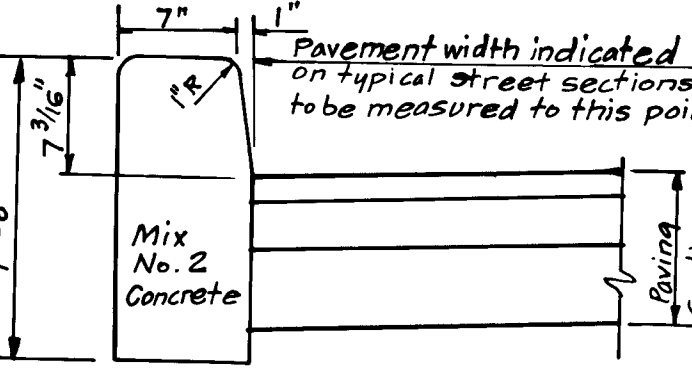
NO SCALE



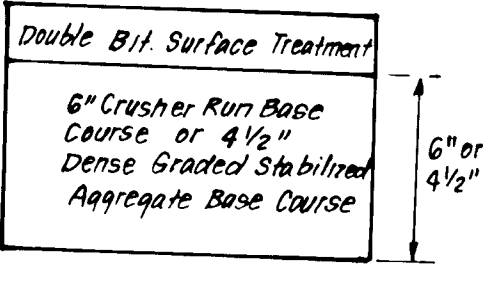
ALTERNATE PAVING SECTION FOR PUBLIC ROADS (SECTION P-2)



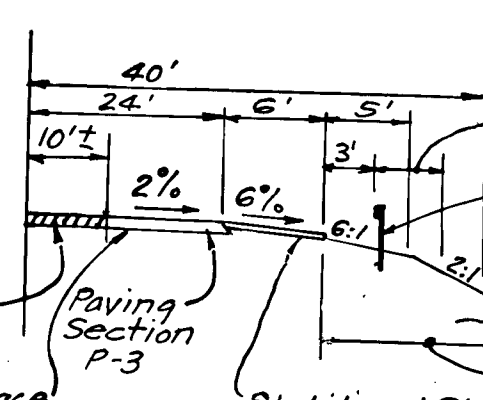
ALTERNATE PAVING SECTION FOR MAJOR MINOR COLLECTOR (SECTION P-3)



STANDARD BARRIER CURB NO SCALE

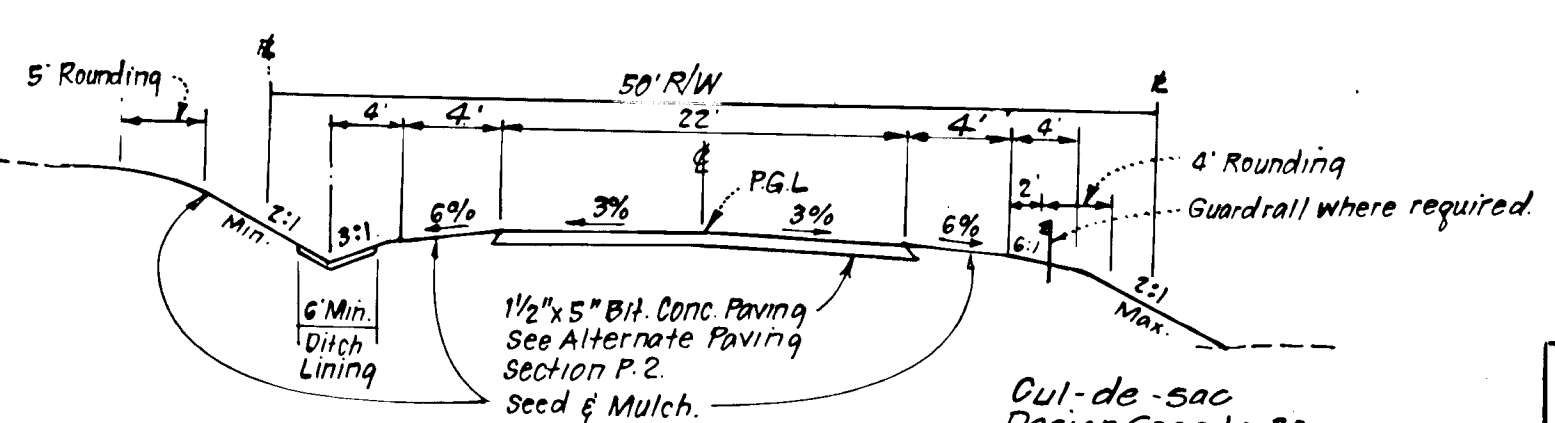


STABILIZED SHOULDER SECTION (SECTION P-7)



TYPICAL HALF SECTION - HOMEWOOD ROAD
STA. 0+00 TO -2+00 ±

NO SCALE



TYPICAL PAVING SECTION
MASTERS RUN STA. 12+27.32 TO 24+93
LOS JUMP TRAIL STA. 0+00 TO 25+26.91
VIXENS BATH STA. 0+00 TO 15+83.79

NO SCALE

* See plan view for paving transition.

NOTE: Provide Barrier Curb 25' from Fillet at Intersection with Masters Run. See plan view.

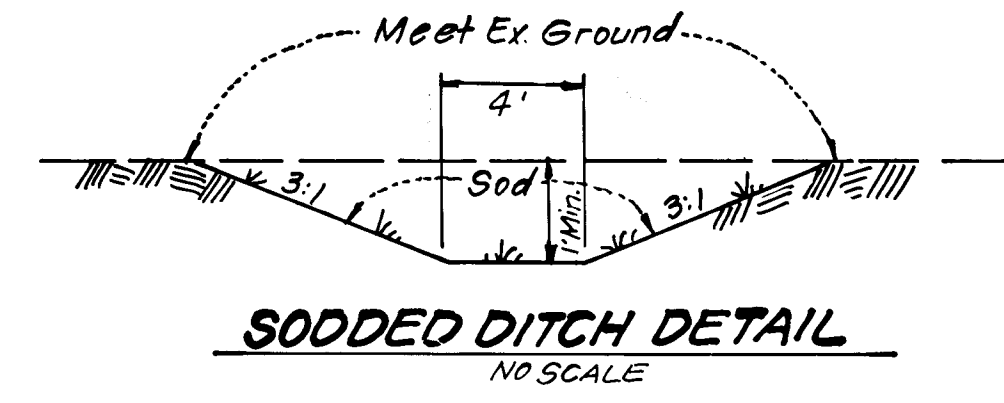
AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD RE. NO. 6059 ON 6-30-88

Storm Drainage M-101 to S-100 added by Fisher, Collins and Carter, Inc.

STRUCTURE SCHEDULE

NR	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
S-1	Metal End Section	340.31	340.28			Ho Co. Std. S.D. 5.61 18" Dia.	See Plan
I-2	K Inlet	342.80	342.49	345.91	346.16	" " S.D. 4.12 W-3'-0"	" " "
M-3	Shallow Brick Manhole	345.47	345.87	349.84	350.15	" " G. 5.05 48" Sq.	EM Sta. 24+38.14 Jump Trail 5' Lt.
M-4	Shallow Brick Manhole	349.32	349.22	353.54	353.79	" " G. 5.05 48" Sq.	" " 22+80 " " 7' Lt.
M-5	Shallow Brick Manhole	353.00	352.90	357.13	357.28	" " G. 5.05 48" Sq.	" " 20+72 " " 6' Lt.
I-6	K Inlet	356.23	355.38	360.84	360.60	" " S.D. 4.12 W-3'-0"	Inlet Sta. 19+50 " " 19' Lt.
I-7	K Inlet	-	356.50	360.84	360.64	" " S.D. 4.12 W-3'-0"	" " " " " " 19' Lt.
S-8	Metal End Section	378.50	378.31			" " S.D. 5.61 30" Dia.	Inlet Sta. 7+45 " " 30' Lt.
S-9	Metal End Section	383.32	383.13			" " S.D. 5.61 30" Dia.	" " 6+53 " " 30' Lt.
S-10	Metal End Section	378.41	378.31			" " S.D. 5.61 15" Dia.	" " 7+59 " " 42' Lt.
I-11	D Inlet	-	383.00	386.83	385	" " S.D. 4.11 2'-6" Sq.	Inlet Sta. 8+31 " " 32' Lt.
S-12	Metal End Section	384.13	384.00			" " S.D. 5.61 24" Dia.	Inlet Sta. 0+180 " " 80' Lt.
S-13	Metal End Section	390.17	390.00			" " S.D. 5.61 24" Dia.	" " 0+83 " " 50' Lt.
S-14	Metal End Section	384.13	384.00			" " S.D. 5.61 18" Dia.	" " 10+23 " " 70' Lt.
I-15	K Inlet	-	391.33	396.68		" " S.D. 4.12 W-3'-0"	Inlet Sta. 10+55 " " 36' Lt.
S-16	Metal End Section	342.29	342.00			" " S.D. 5.61 15" Dia.	See Plan
I-17	K Inlet	-	352.21	354.71	356	" " S.D. 4.12 W-3'-0"	Inlet Sta. 14+12 " " 8' Lt.
S-100	Metal End Section	382.31	382.27			" " S.D. 5.61 15" Dia.	Inlet Sta. 17+06 " " 156' Lt.
I-19	K Inlet	388.07	387.88	390.74	41	" " S.D. 4.12 W-3'-0"	Inlet Sta. 19+50 " " 19' Lt.
I-20	K Inlet	-	388.24	390.74	45	" " S.D. 4.12 W-3'-0"	" " " " " " 19' Lt.
S-21	Metal End Section	372.00	372.00			" " S.D. 5.61 15" Dia.	See Plan
I-22	K Inlet	-	374.67	378.86	62	" " S.D. 4.12 W-3'-0"	Inlet Sta. 14+24 " " 8' Lt.
S-23	Metal End Section	370.90	370.50			" " S.D. 5.61 18" Dia.	Inlet Sta. 6+97 " " 49' Lt.
M-24	Precast Manhole	380.93	380.23	387.27	21	" " G. 5.12 48" Rd.	Inlet Sta. 6+97 " " 14' Lt.
I-25	K Inlet	382.50	382.11	386.98		" " S.D. 4.12 W-3'-0"	Inlet Sta. 6+33 " " 19' Lt.
I-26	D Inlet	-	384.00	387.83	81	" " S.D. 4.11 2'-6" Sq.	" " 5+98 " " 36' Lt.
I-27	D Inlet	-	381.36	384.83	78	" " S.D. 4.11 2'-6" Sq.	" " 6+97 " " 30' Lt.
M-101	Shallow Brick Manhole	387.72	387.47	394.50		" " G. 5.05 48" Sq.	EM Sta. 10+55 " " 36' Lt.
M-100	Shallow Brick Manhole	383.75	383.70	394.00		" " G. 5.05 48" Sq.	EM Sta. 17+06 " " 156' Lt.

All inverts to be fully developed. * Provide slots in all sides. * Ho. Co. Std. G5.01 may be substituted. * "B" Dimension to be increased as necessary to meet inverts shown. O Precast inlets may be substituted, see detail on sheet 10 of 10.



SODDED DITCH DETAIL NO SCALE

- GENERAL SODDING NOTES:
1. Apply 10-10-10 Fertilizer @ 1000#/acre (25#/1000 sf)
 2. Apply Ground Agricultural Limestone @ 2000#/acre (50#/1000 sf)
 3. Incorporate both Lime and 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 2 weeks, in summer, to ensure establishment.
 5. All sod to be used must be certified by the state of Maryland.
 6. Sod to be pegged and stapled.

1	Revised Str. Schedule	8-28-87
N:	REVISION	DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

Chief, Division of Land Development & Zoning Administration

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

DESIGNED	JLS	PROFILES AND PAVING DETAILS	SCALE	As SHOWN
DRAWN	VLM	THE CHASE	DRAWING	7 OF 10
CHECKED	JLS		JOB NO.	86-028
DATE	1-8-87		FILE NO.	86-028-D

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15"	CMP 16ga.	1304 L.F.
18"	CMP 16ga.	270 L.F.
24"	CMP 16ga.	120 L.F.
30"	CMP 16ga.	105 L.F.

* 24" x 1/2" Corrugations

REVISION - Revised Structure Schedule, Added M-100 M-101 #1/10

Reviewed for Howard S.C.D. and meets Technical Requirements
Signature: Howard
Date: 4-11-87
U.S. Soil Conservation Service

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

Approved: Howard
Date: 4/11/87

DEVELOPER'S BUILDERS CERTIFICATE

I hereby 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.

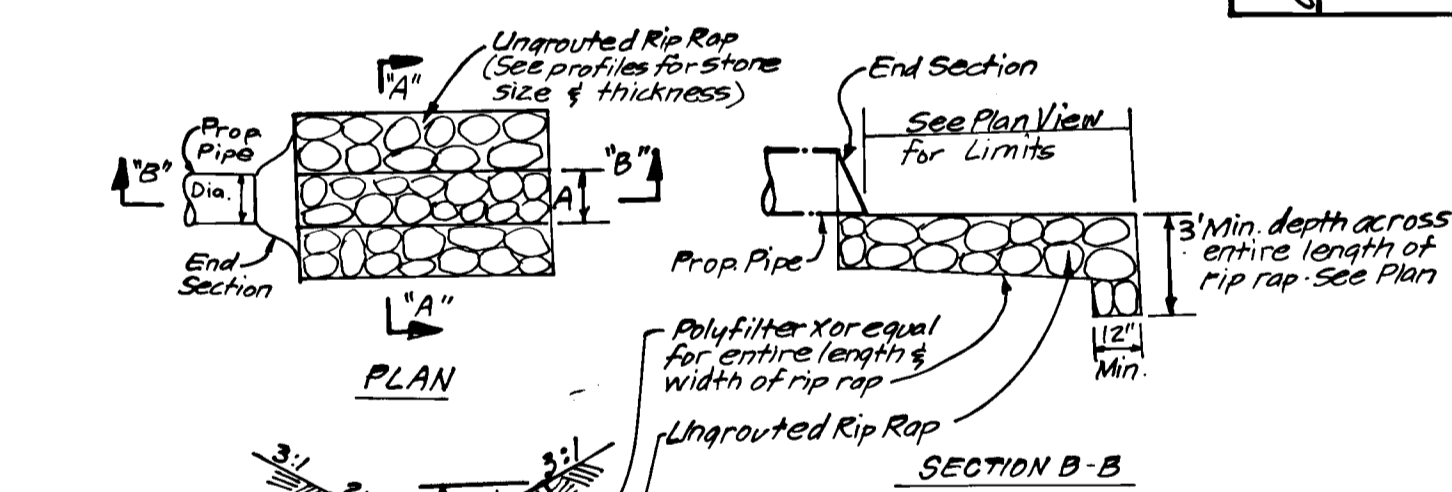
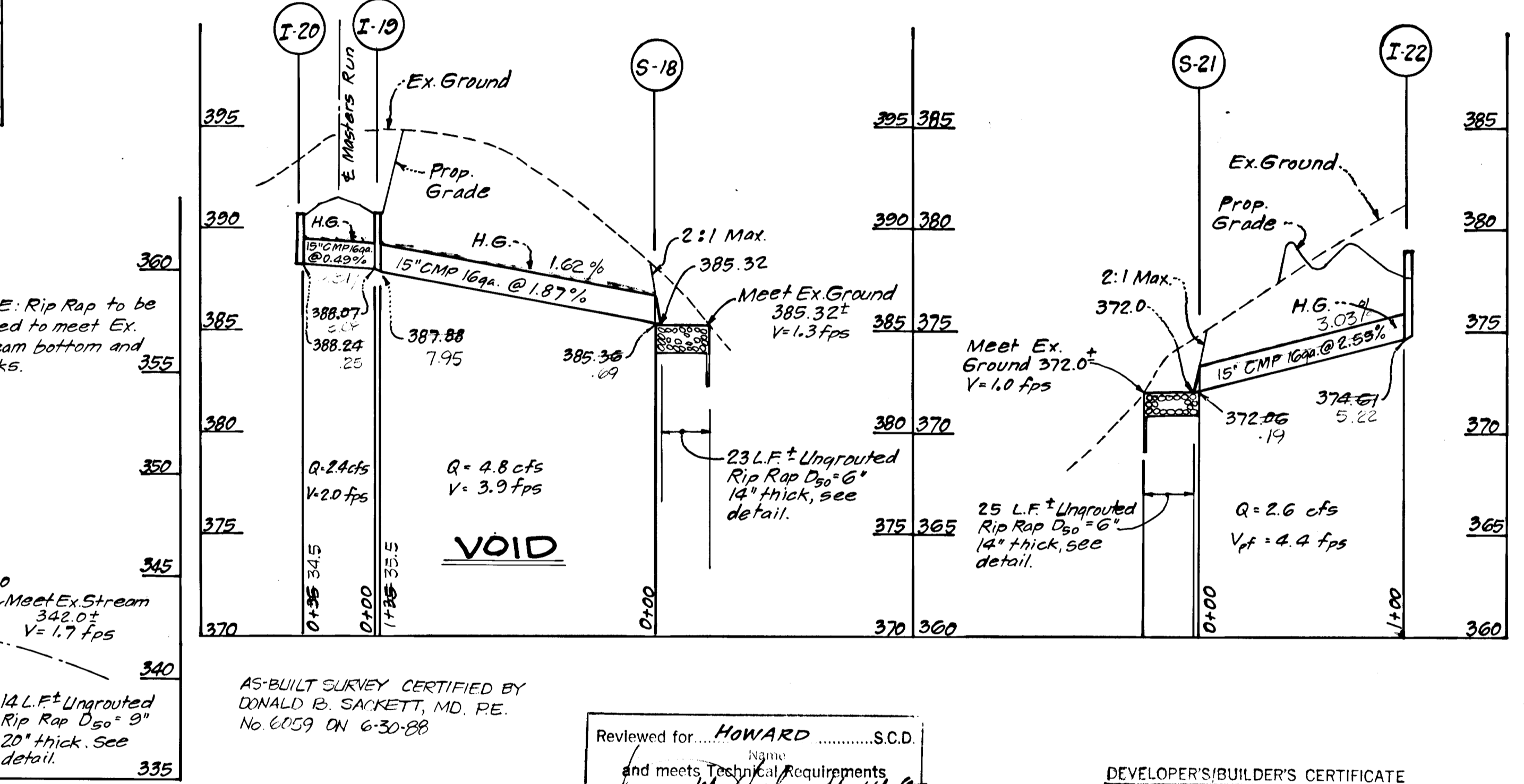
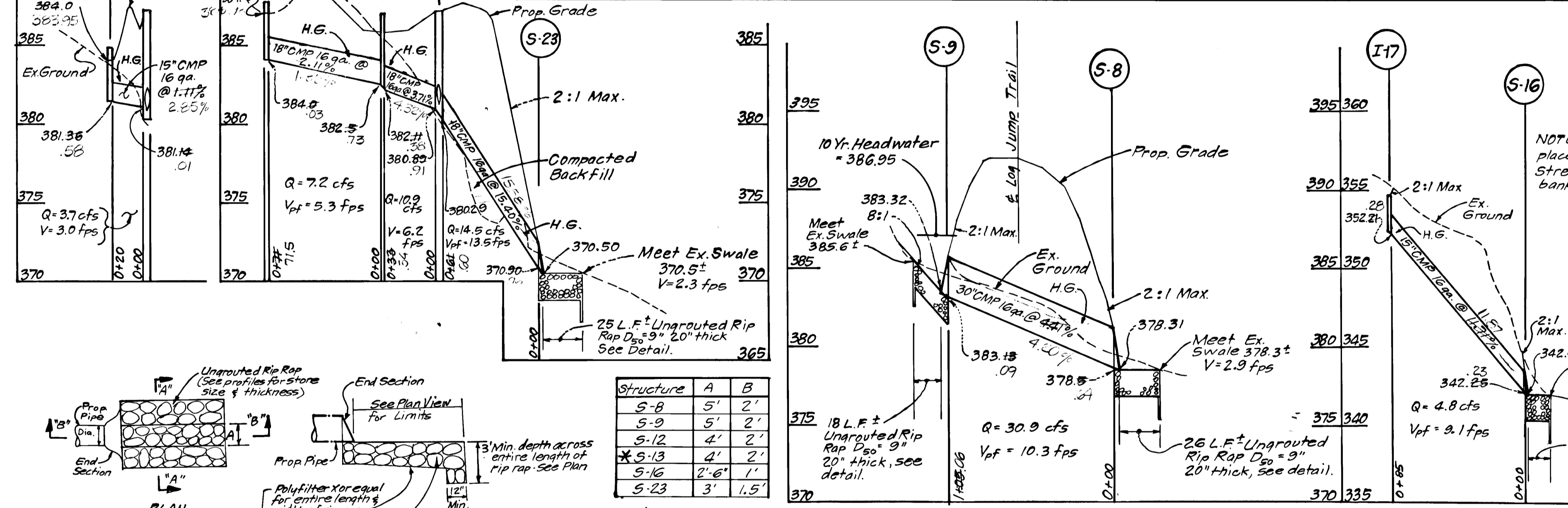
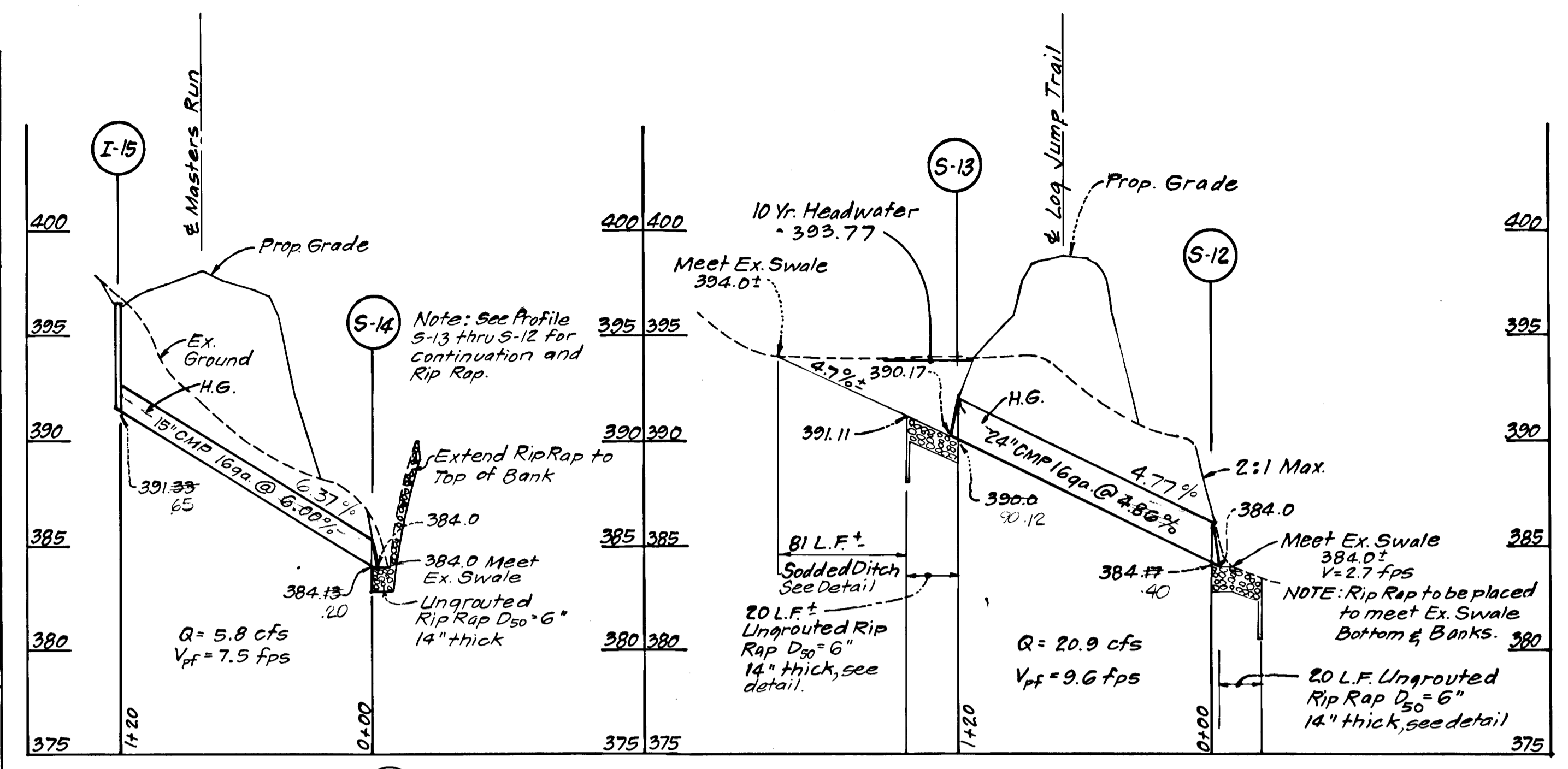
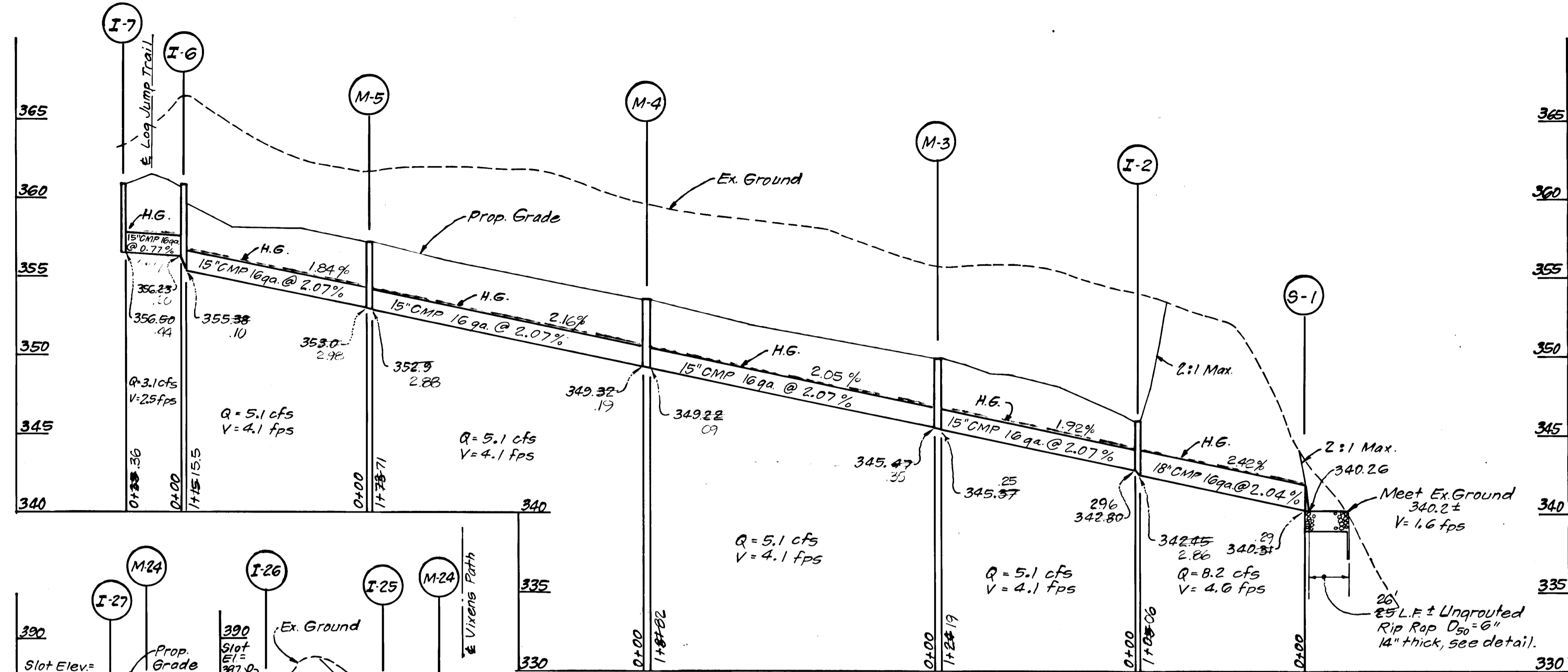
Signature: Harry L. Lundy
Date: 1-13-87

ENGINEER'S CERTIFICATE

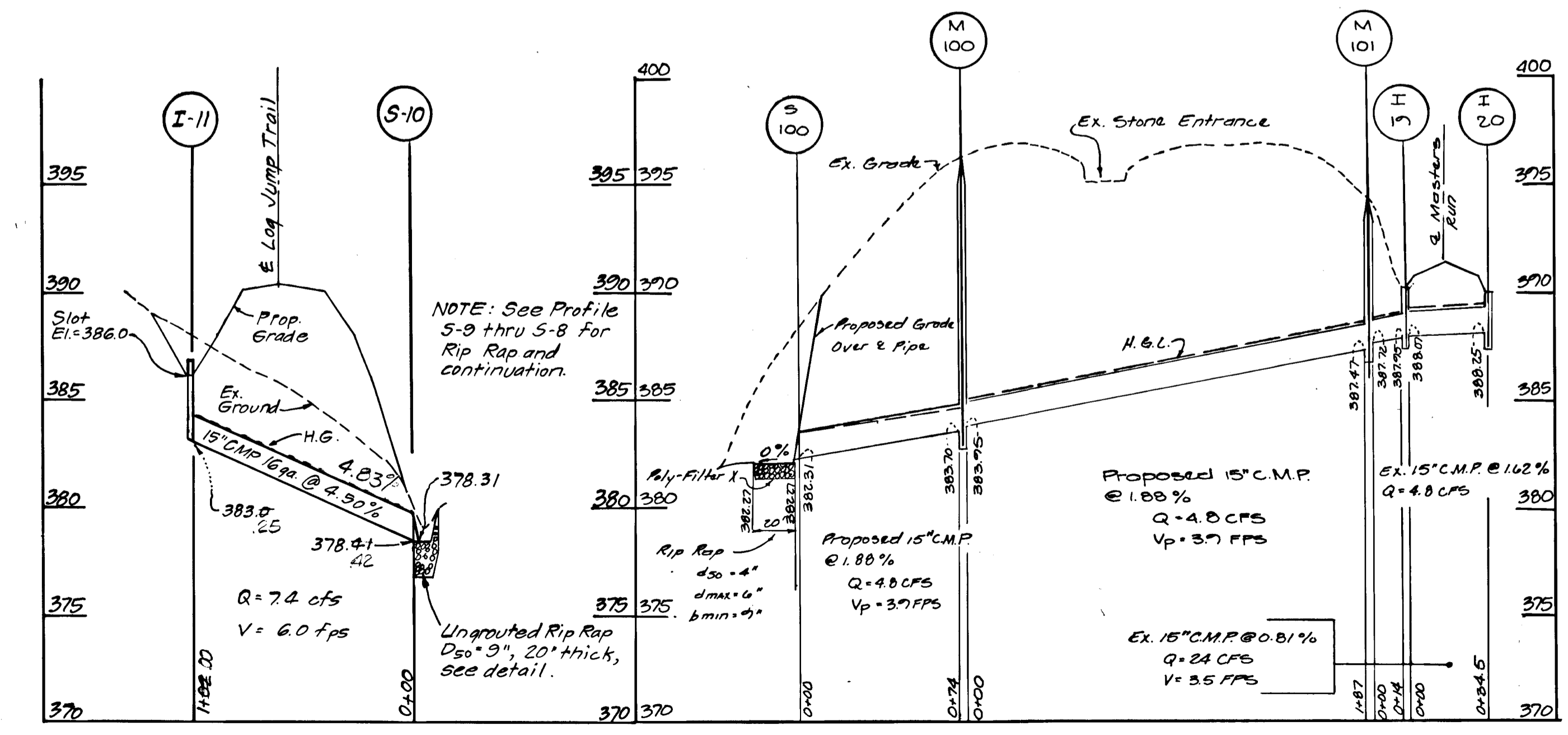
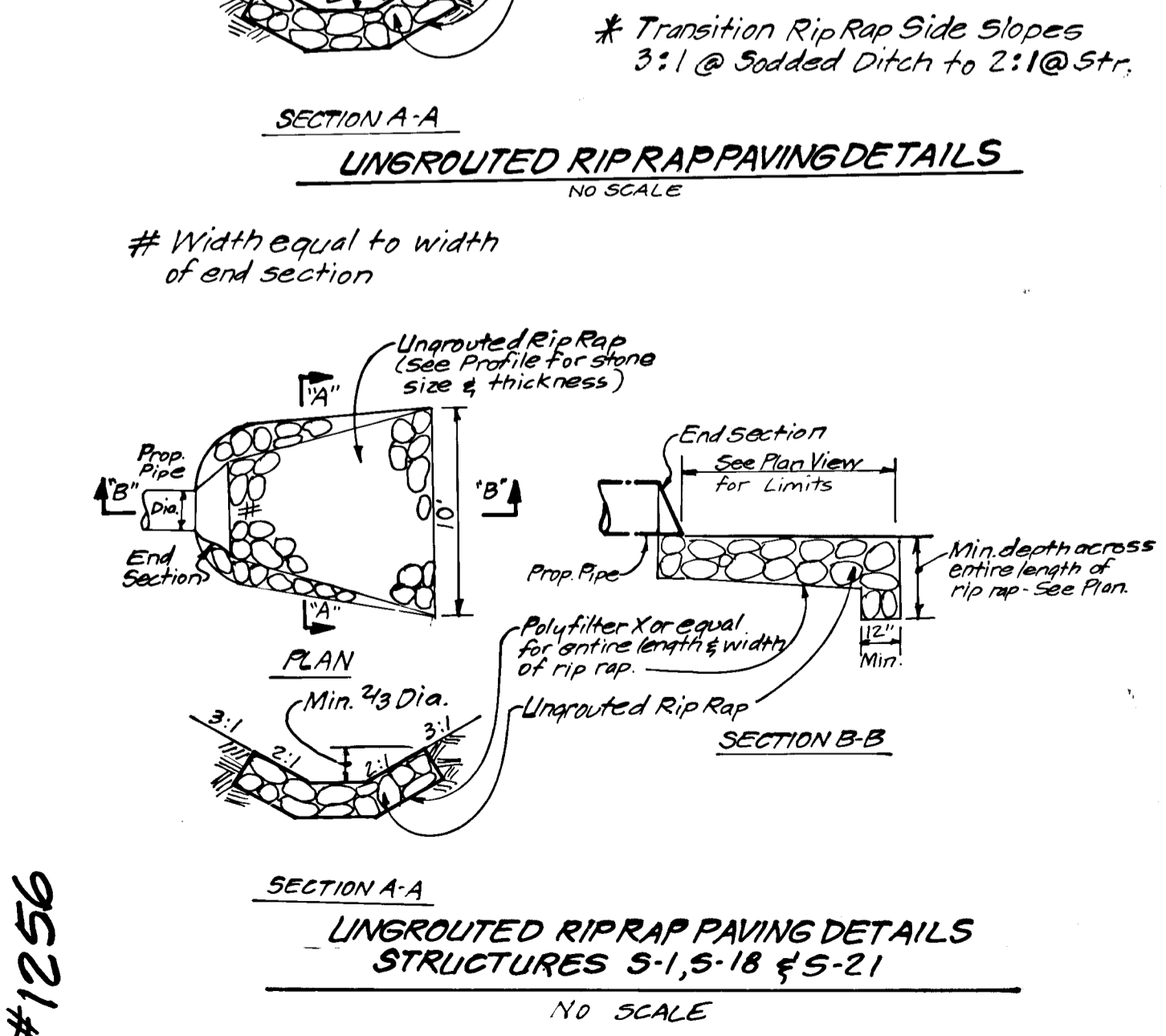
I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: G. Nelson Clark
Date: 1-13-87

1256



Structure	A	B
S-8	5'	2'
S-9	5'	2'
S-12	4'	2'
S-13	4'	2'
S-16	2'	1'
S-23	3'	1.5'



AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD. PE. No. 6059 ON 6-30-88

Reviewed for HOWARD S.C.D. and meets Technical Requirements
 Signature: *Howard* Date: 4-14-87
 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: *Harry L. Lundy* Date: 4-13-87

Approved: *Howard* Date: 4/14/87

Storm Drainage M-101 to S-100 added by Fisher, Collins and Carter, Inc.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *John W. Muehlman* Date: 4-20-87
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Signature: *John W. Muehlman* Date: 4-15-87
 Chief, Division of Land Development & Zoning Administration



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: 4-13-87

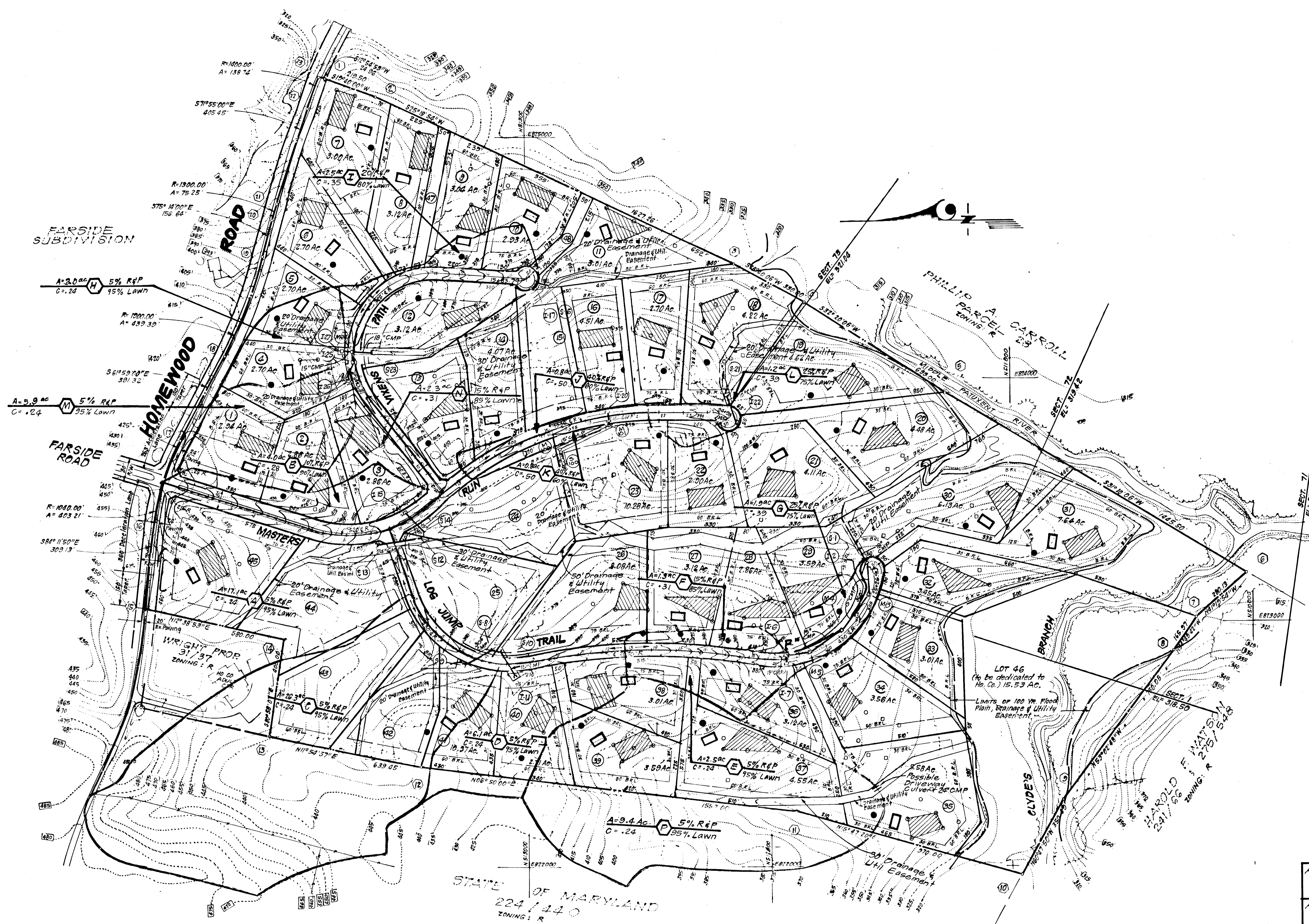
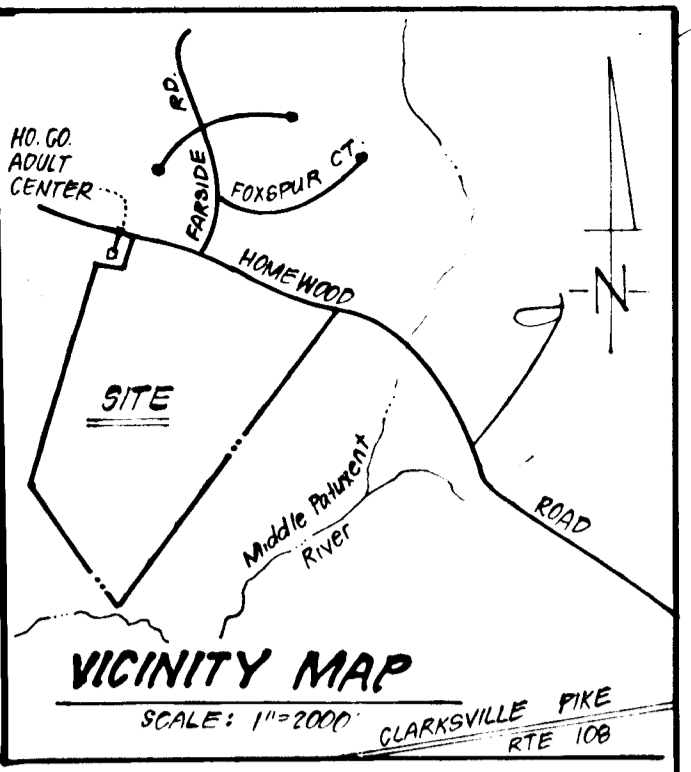
REVISION - Added Profile S-100 to I-20. B.Y. U.S. 11/2/90

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

DESIGNED	JLS	SCALE	As Shown
DRAWN	VLM	DRAWING	OF 10
CHECKED	JLS	JOB NO.	86-028
DATE	1-8-87	FILE NO.	86-028-D

5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 FOR: HOWARD ESTATE DEVELOPMENT CORP. (OWNER/DEVELOPER)
 P.O. Box 1018 Columbia, Md. 21044

#1256



Storm Drainage M-101 to S-100 added by Fisher, Collins and Carter, Inc.
 The existing easement was abandoned on Lot 25 and a new easement provided for the revised Storm Drainage.

NOTE: Flood Plain taken from Capital Project D-102B Middle Patuxent River Drainage Study, Sept. 1984 and Capital Project D-102B A Clydes Branch Drainage Study, May 1985.

APPROVED: DEPARTMENT OF PUBLIC WORKS		
<i>[Signature]</i>	Chief, Bureau of Engineering	4-20-87 Date
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING		
<i>[Signature]</i>	Chief, Division of Land Development & Zoning Administration	4-15-87 Date
CLARK • FINEFROCK • SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 11315 LUXWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400		
DESIGNED	JLS	SCALE 1" = 200'
DRAWN	VLM	DRAWING 9 OF 10
CHECKED	JLS	JOB NO. 86-028
DATE	1-8-87	FILE NO. 86-028 D

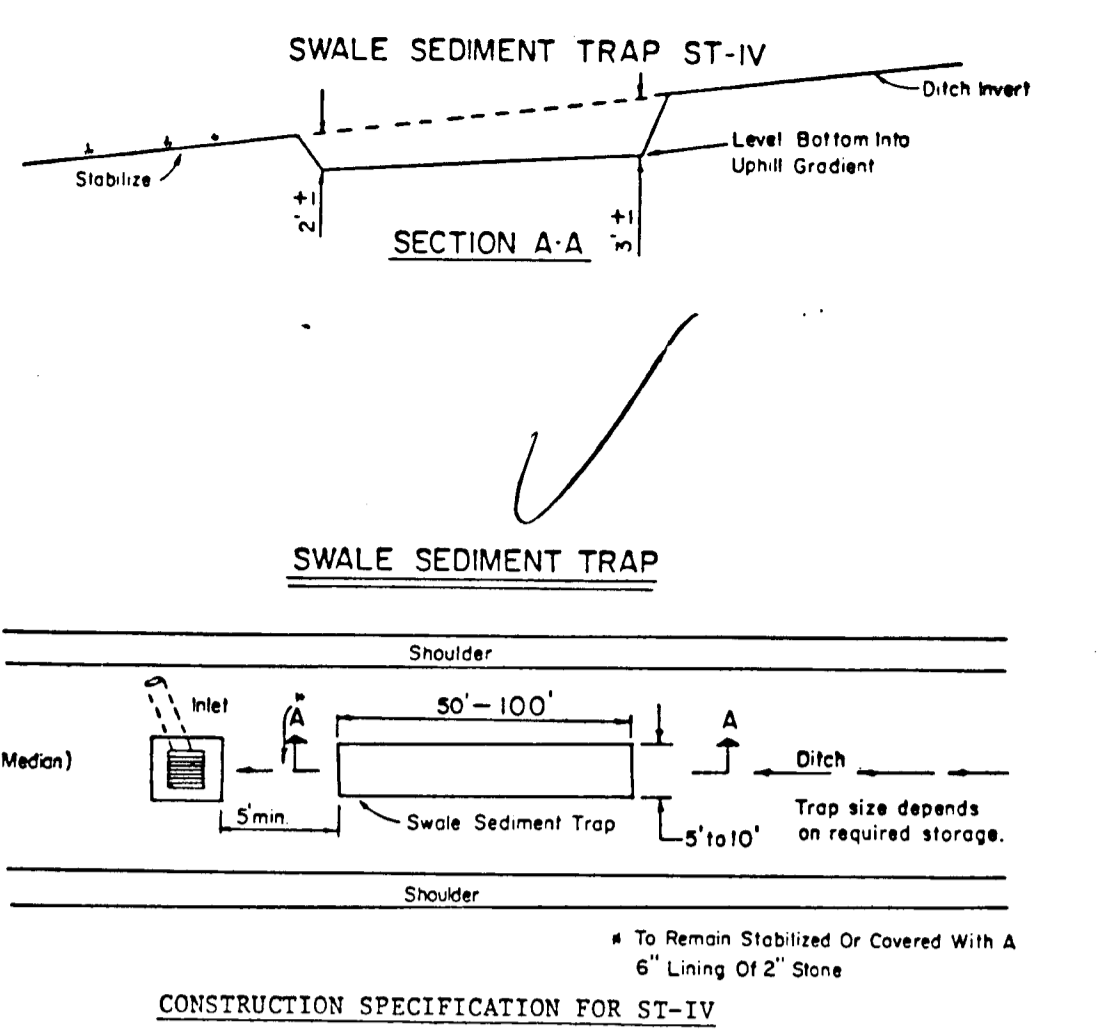
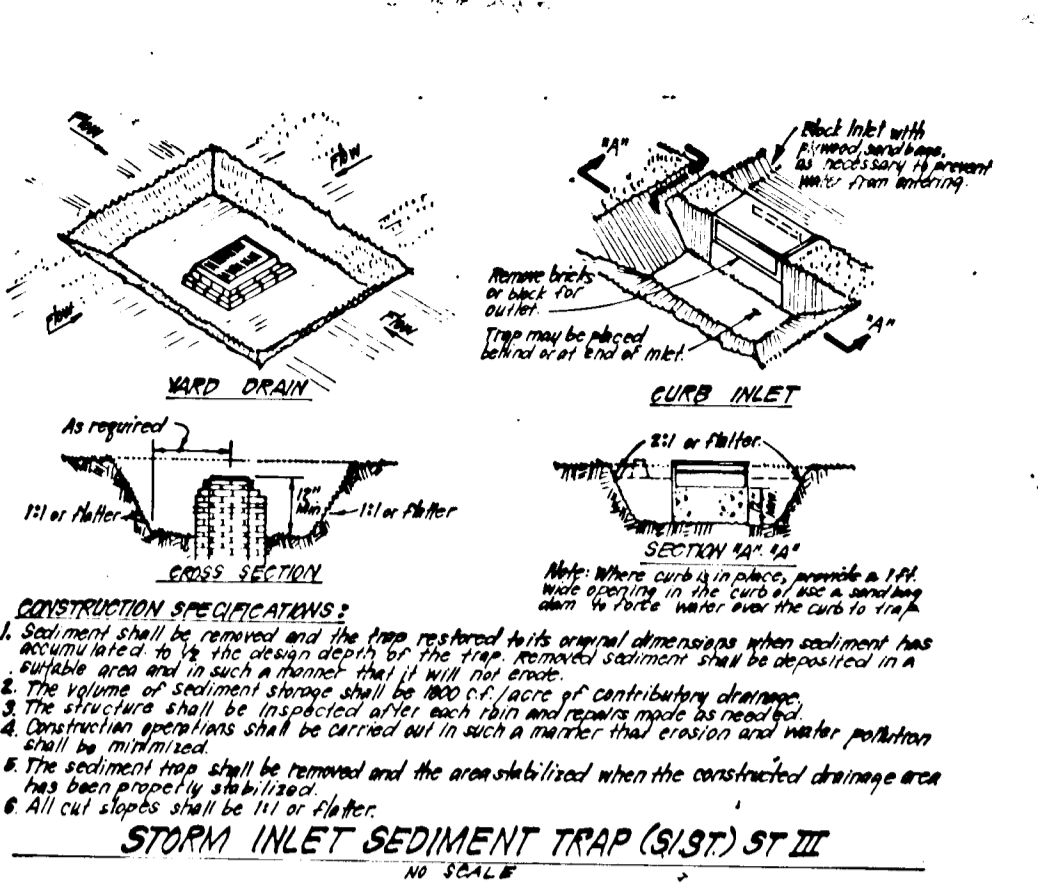
[Signature]
 1-8-87

REVISION - Revised Drainage Easement from M-101 to S-100 4/21/87

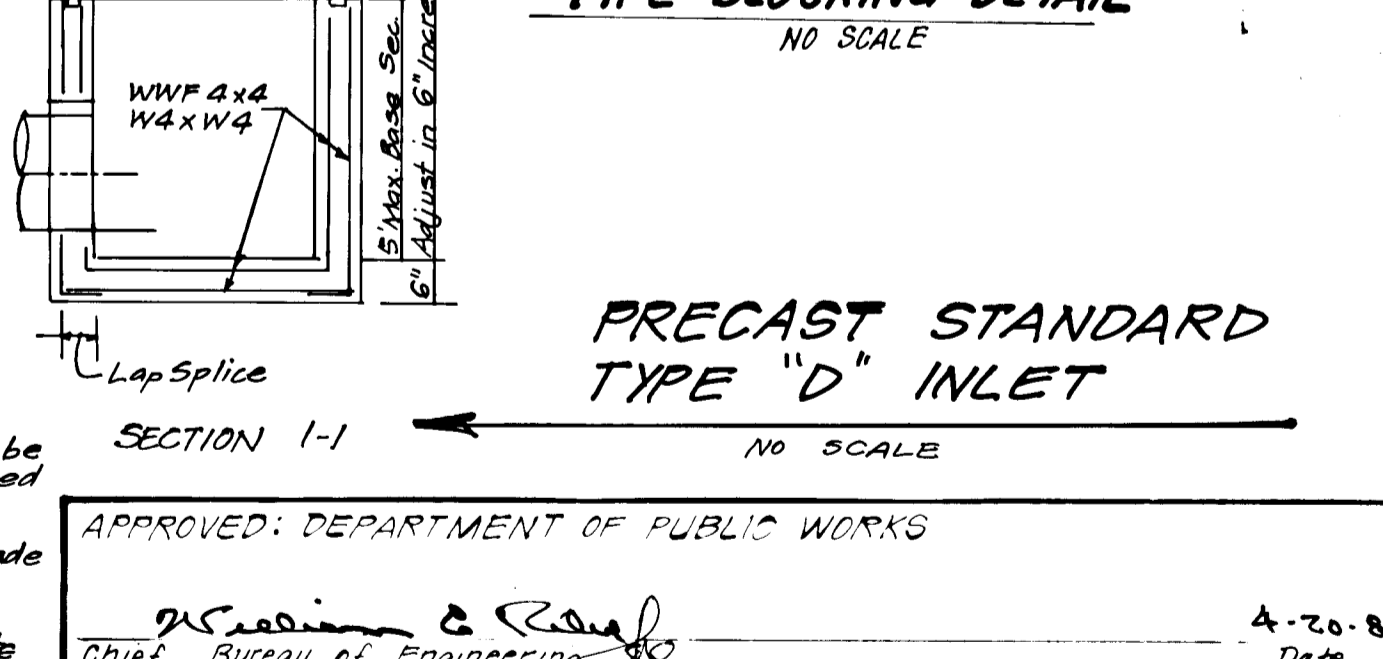
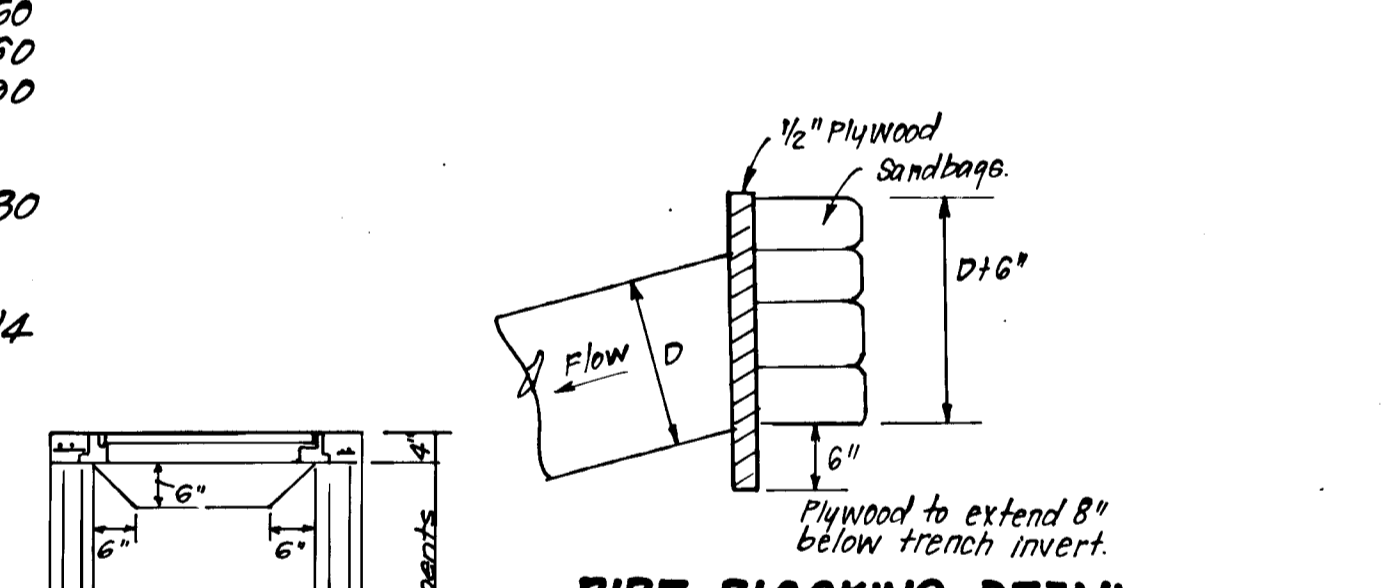
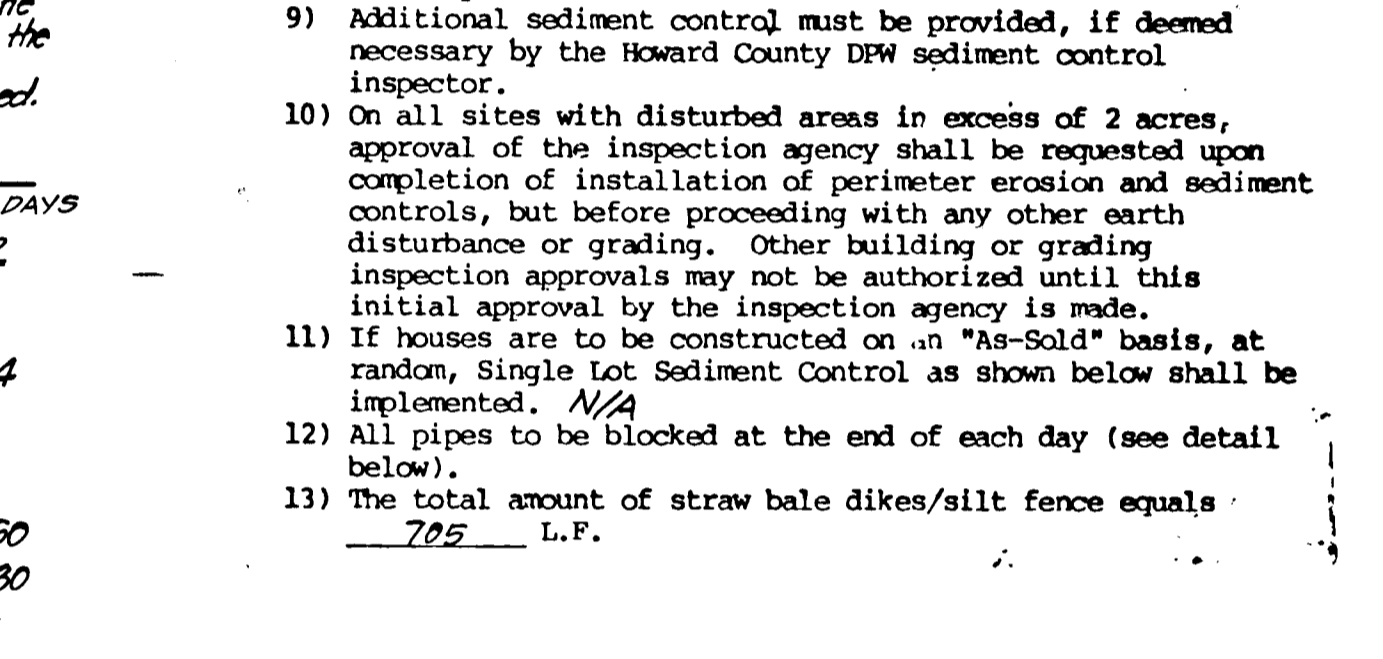
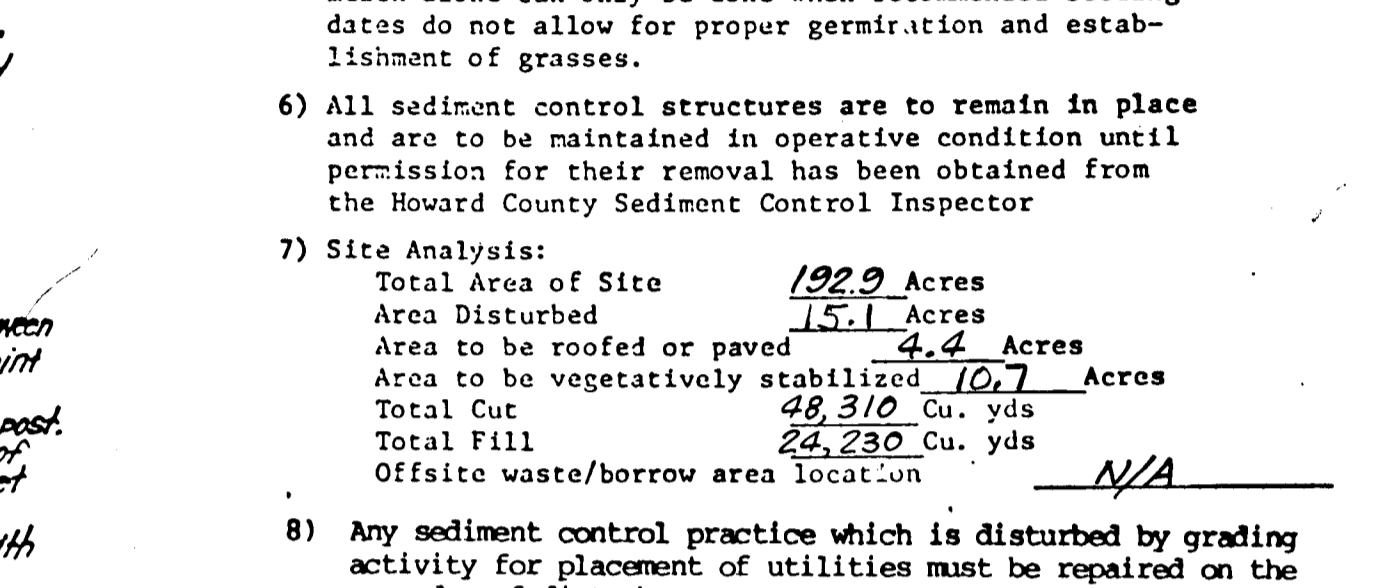
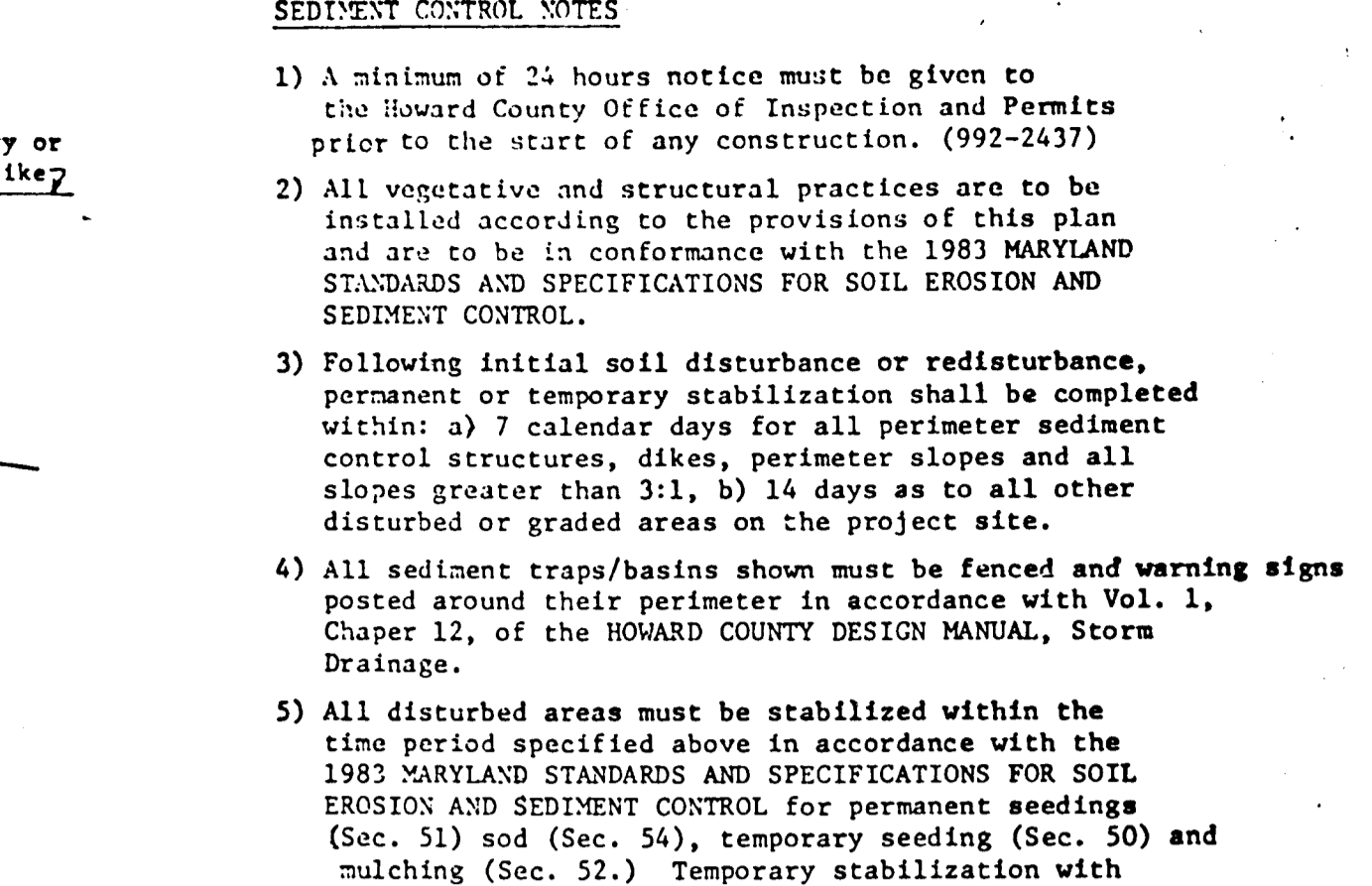
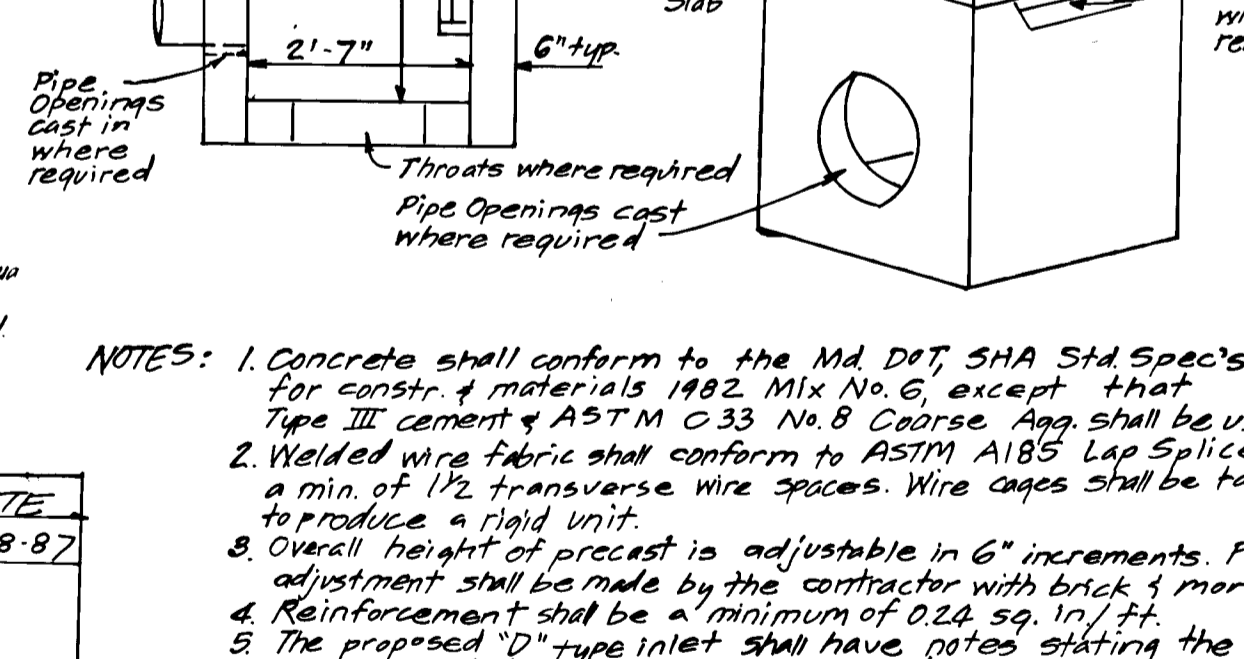
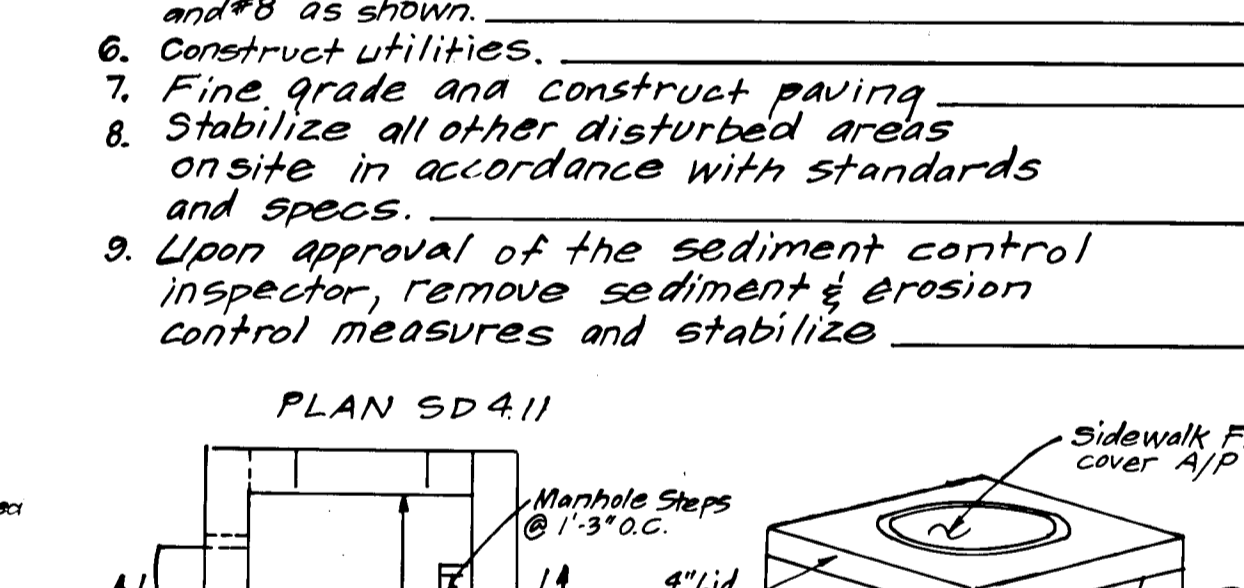
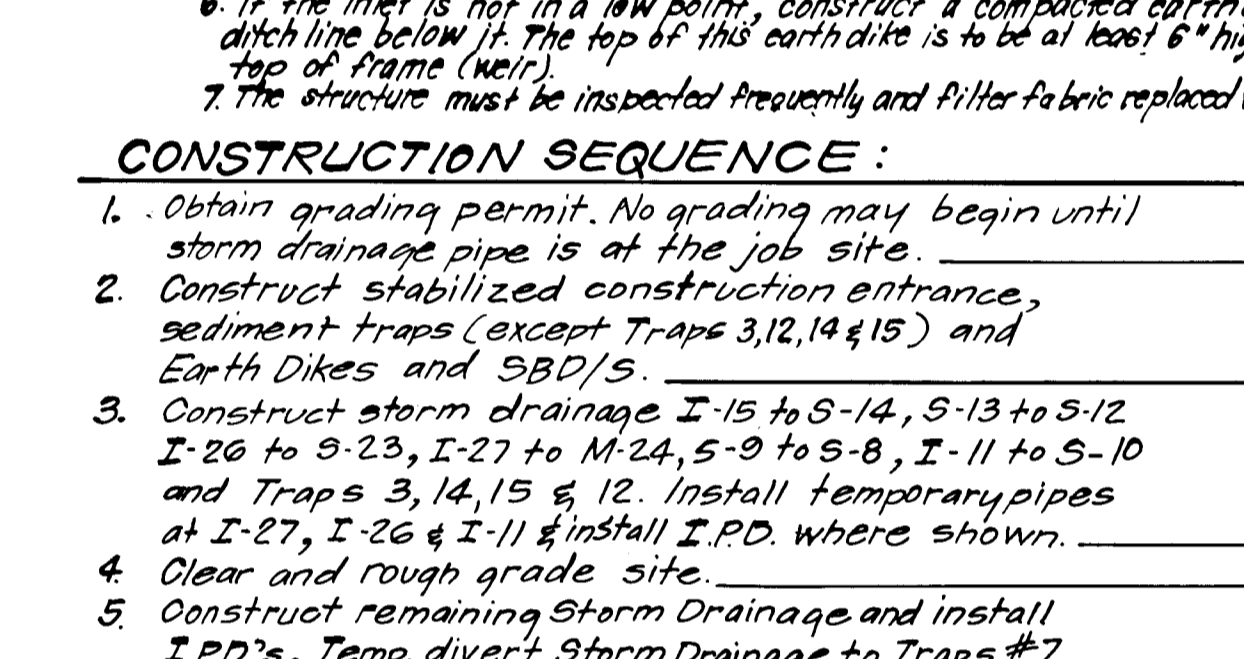
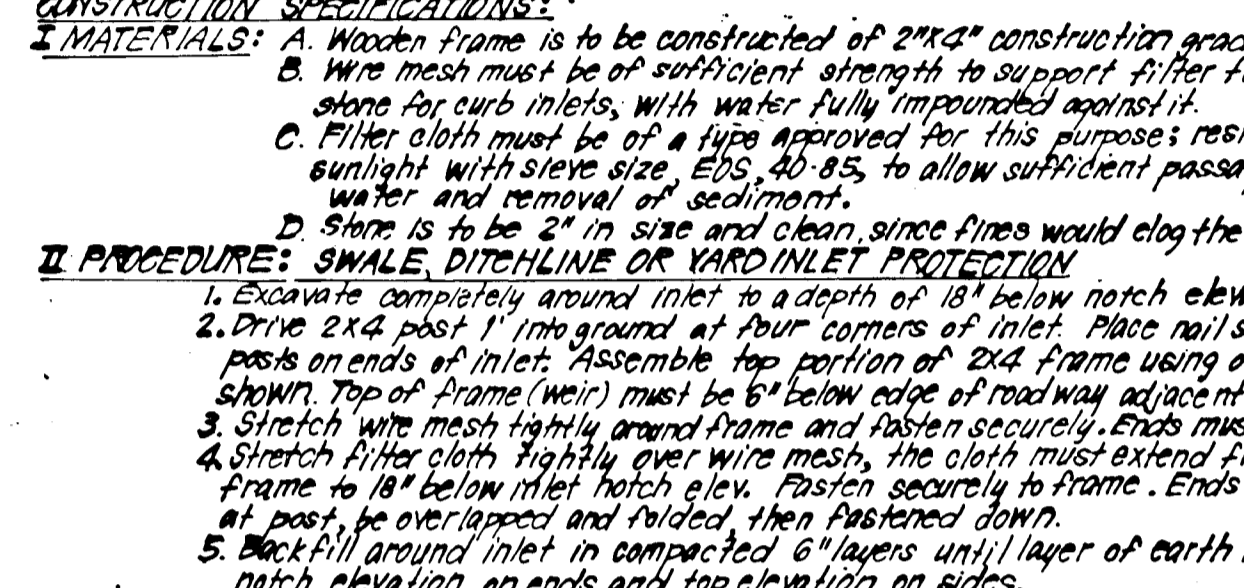
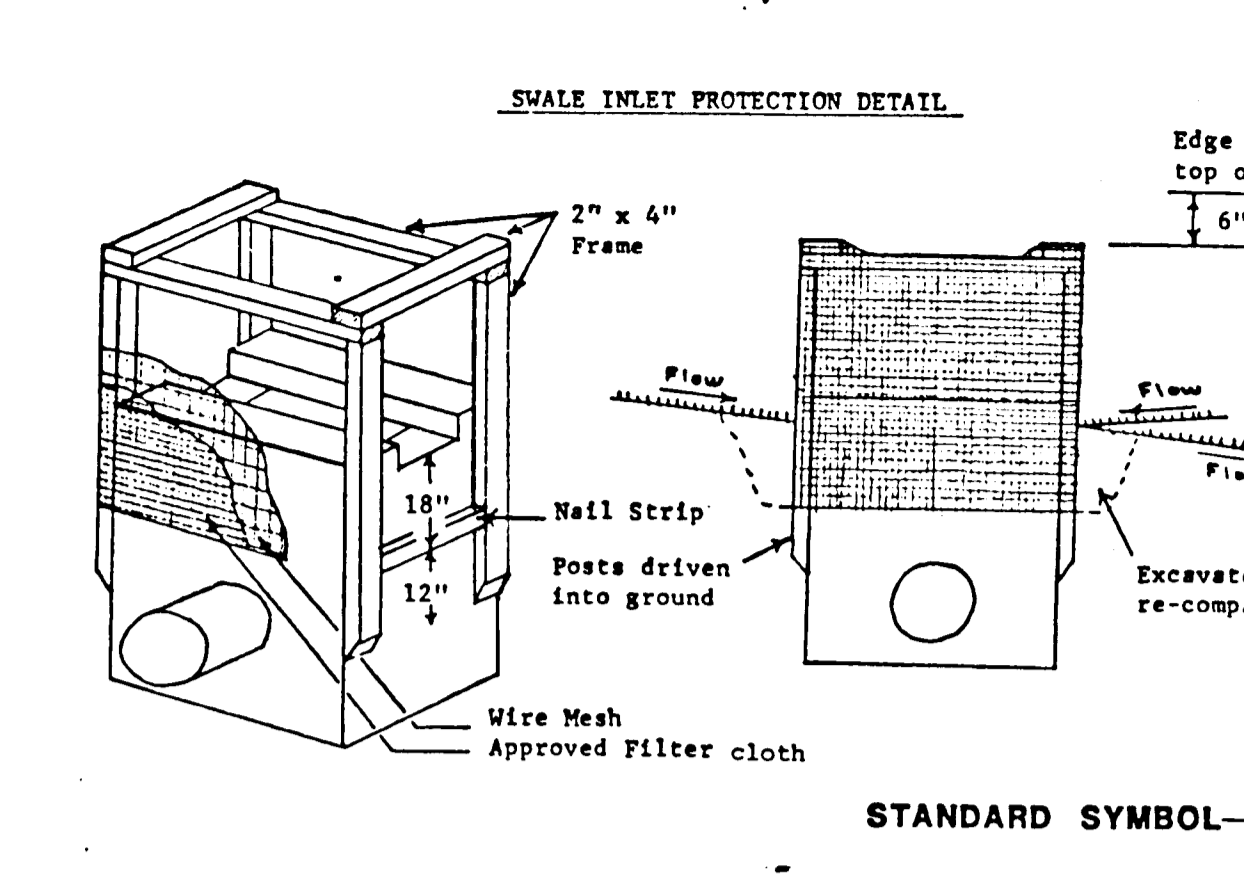
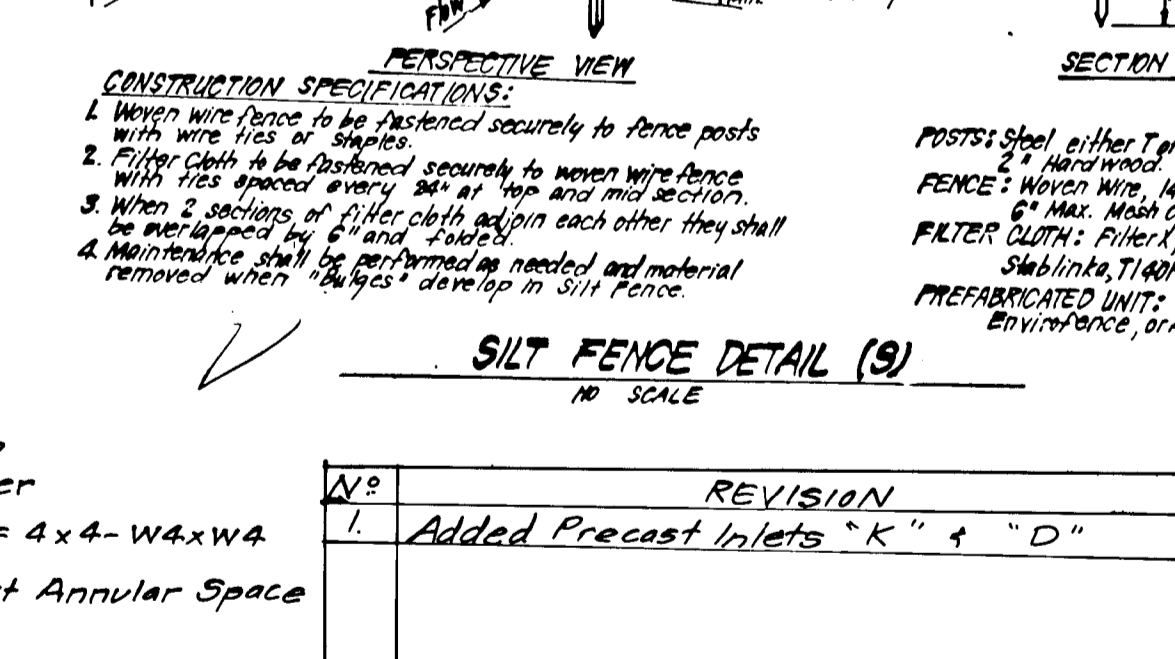
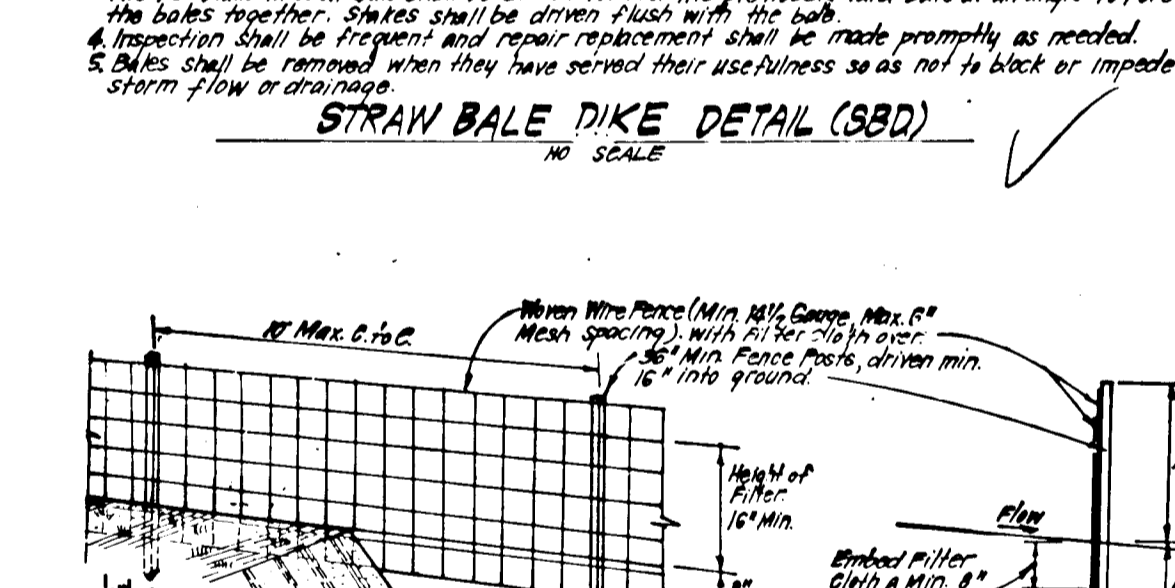
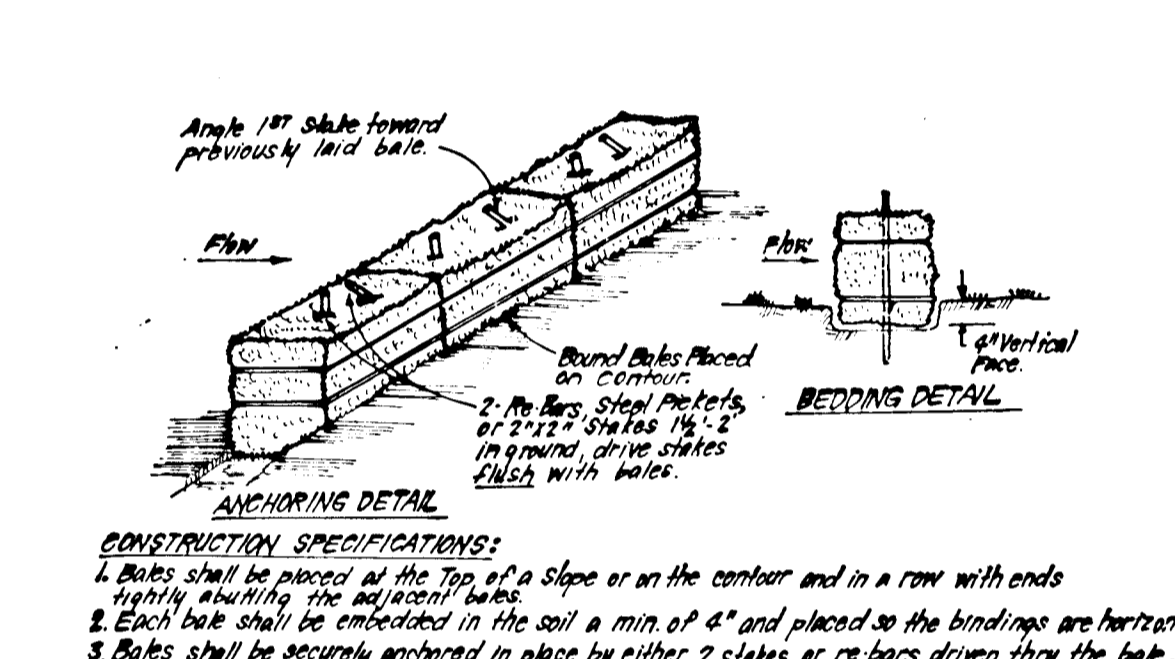
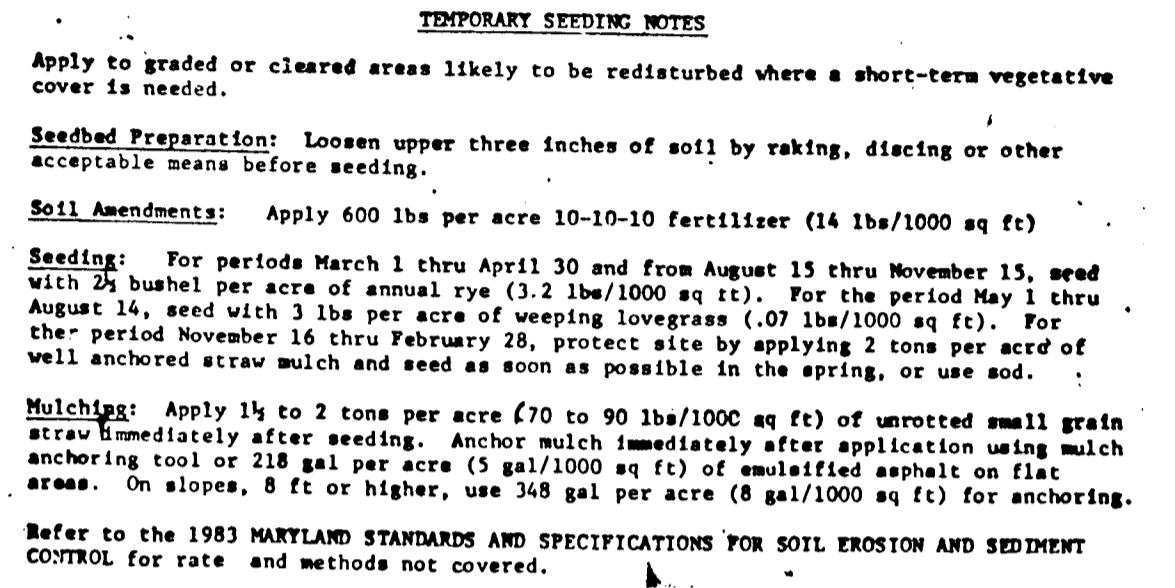
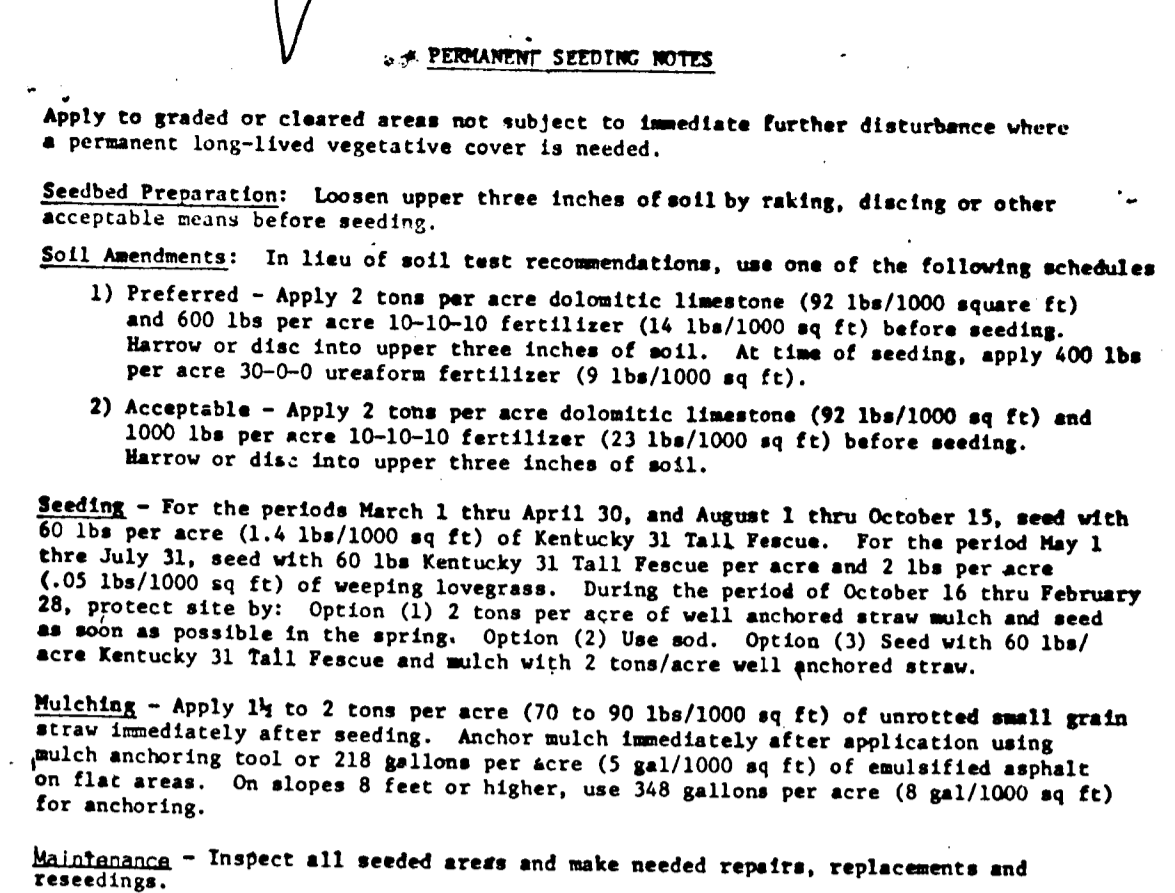
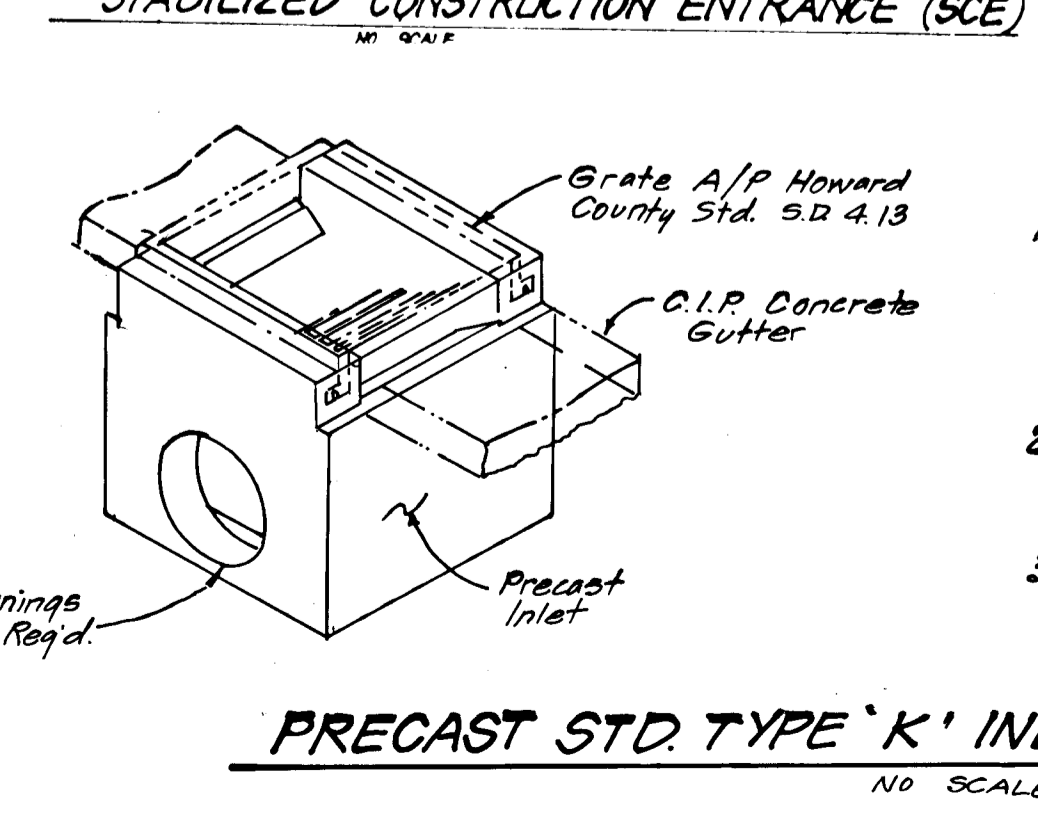
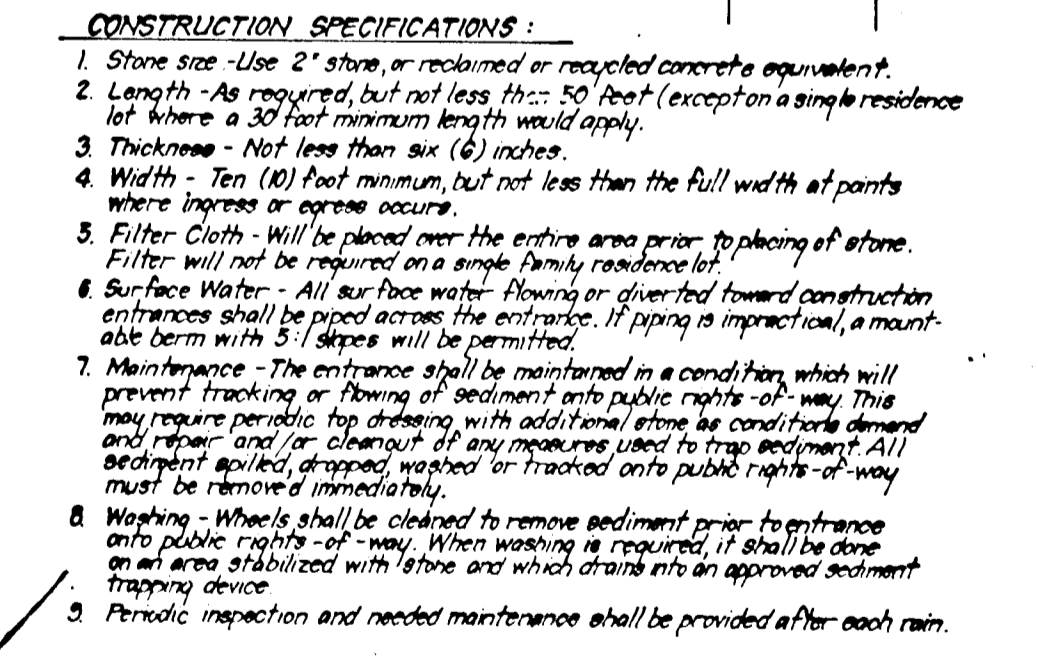
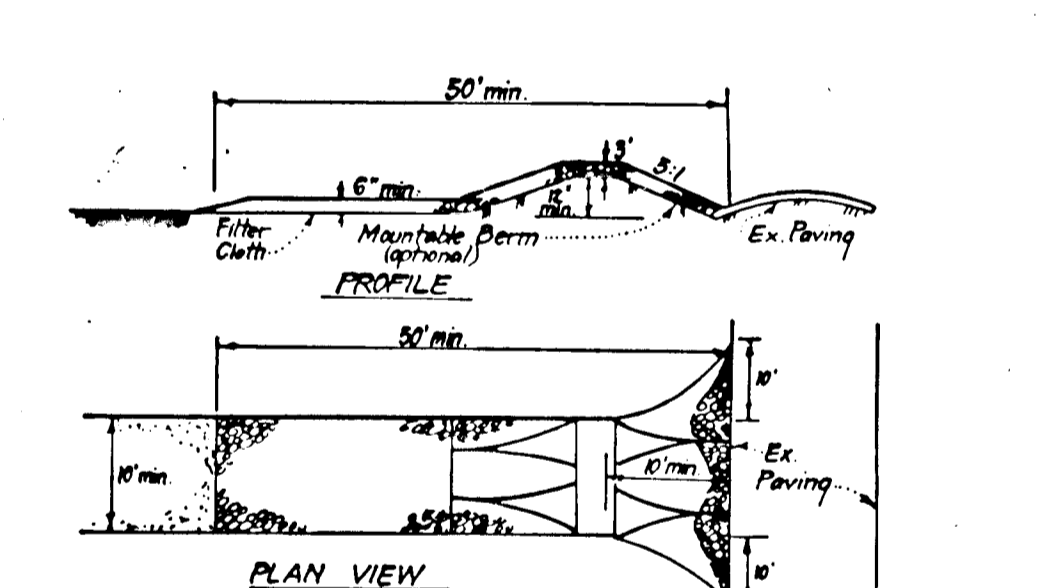
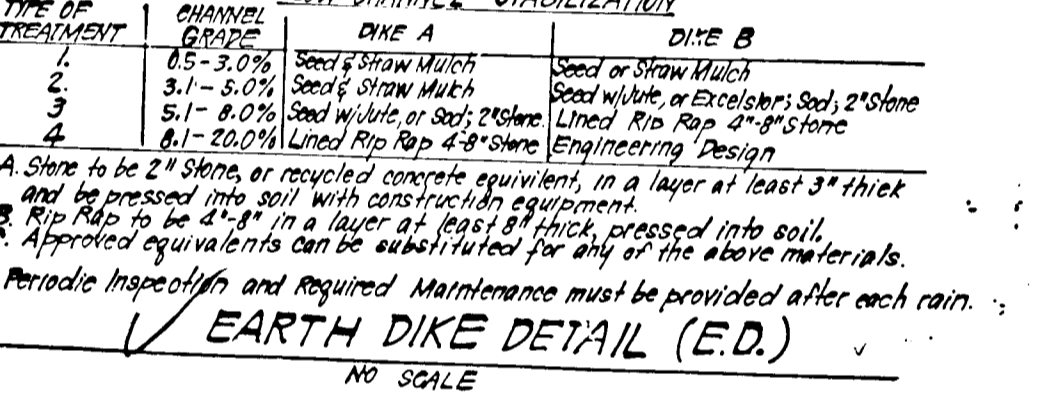
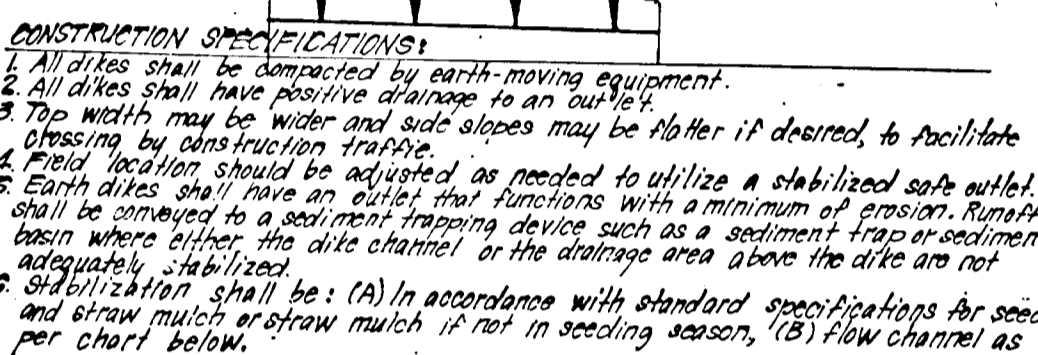
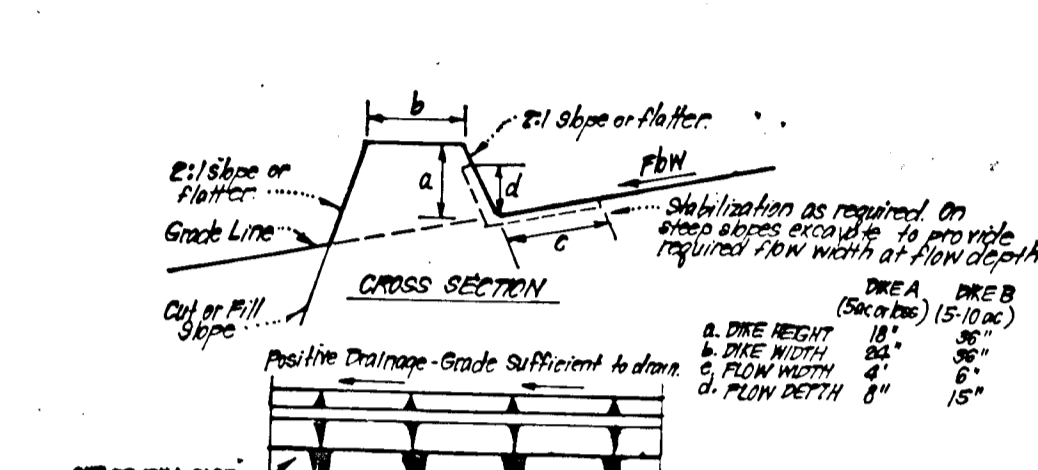
1256

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.
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. 53). 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 192.9 Acres, Area Disturbed 15.1 Acres, Area to be roofed or paved 4.4 Acres, Area to be vegetatively stabilized 10.7 Acres, Total Cur 48,310 Cu. yds, Total Fill 24,230 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 DW 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 in operative condition 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 random, 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 705 L.F.



- 1. The swale sediment trap shall be constructed in accordance with the dimensions provided on the design drawings or sized to provide the minimum storage necessary 1800 cubic feet of storage for each acre of drainage area.
2. Sediment shall be removed and trap restored to its original dimensions when the 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.
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 area stabilized when the contributory drainage area has been properly stabilized.
6. The swale sediment trap will be properly backfilled and the swale or ditch reconstructed.
Maximum Drainage Area: 2 Acres



APPROVED: DEPARTMENT OF PUBLIC WORKS, Chief: Bureau of Engineering, Date: 4-20-87. APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING, Chief: Division of Land Development & Zoning Administration, Date: 4-15-87. CLARK · FINEFROCK & SACKETT ENGINEERS · PLANNERS · SURVEYORS. 11315 LOCKWOOD DRIVE · SILVER SPRING MARYLAND 20904 · (301) 593-3406. SEDIMENT & EROSION CONTROL PLAN DETAILS. SCALE: As shown. DRAWN: JLS, K/W. CHECKED: JLS. DATE: 1-8-87. THE CHASE 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND. JOB NO: 86-028. FILE NO: 86-028-D. AS BUILT 6-30-88. F-87-108