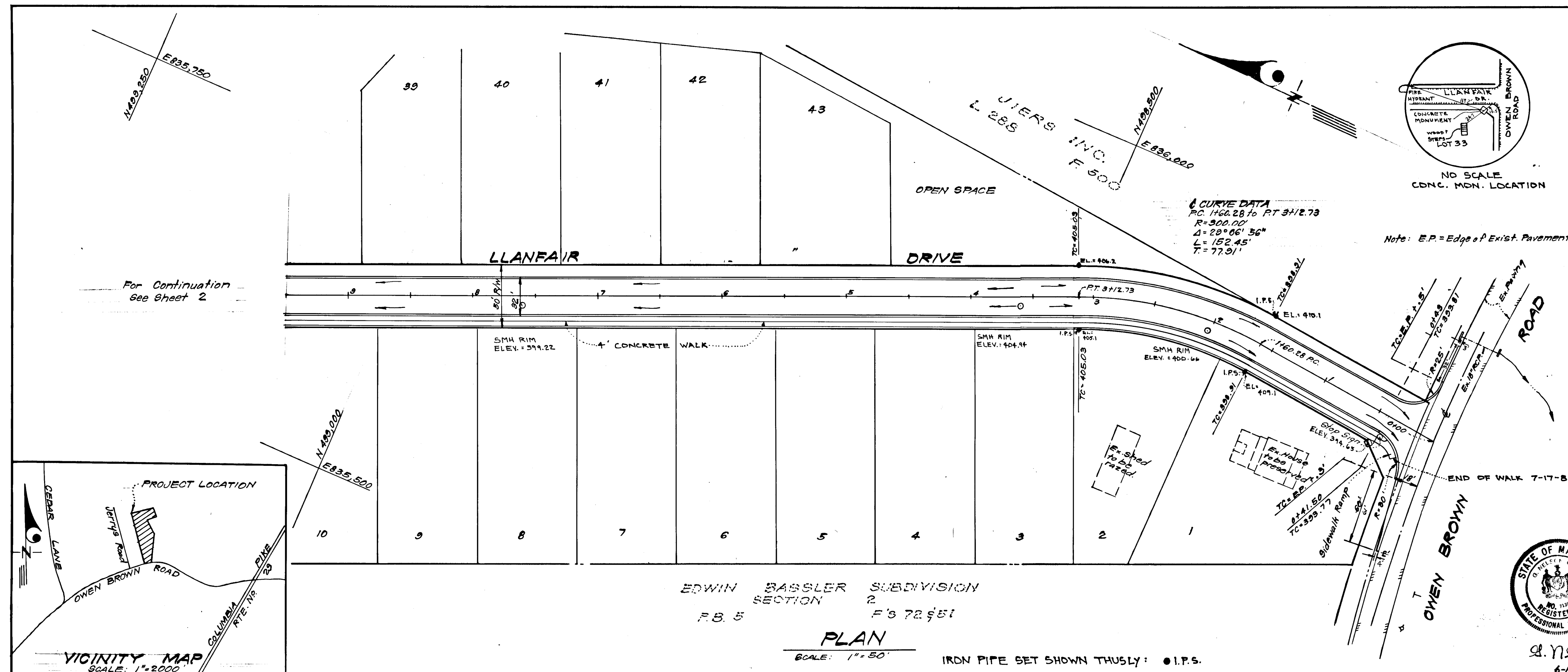


GENERAL NOTES

- All Storm Drain & Paving shall be constructed in accordance with the latest details and specifications of Howard Co. & Md. S.H.A.
- Types of Storm Drain Structures refer to the Standard Details of Howard County & Maryland State Highway Administration.
- Trench Compaction for Storm Drains within Road or Street right of way limits shall be in accordance with the latest Howard Co. Road Code.
- Information concerning underground utilities was obtained from available records, but the Contractor must determine the exact location and elevation 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 hrs in advance of construction.
- All traffic control services, parking, and signing to be done in accordance with the Manual of Uniform Traffic Control Devices, 1971 Edition.
- Sag and Crest Vertical Curves were designed in accordance with A Policy on Geometric Design of Rural Highways, 1965, by A.A.S.H.O.
- Provide Concrete Sidewalk Ramps in curbs where shown in plan. See detail sheet.
- Design Speed for All Roads is 30 mph.



No.	Revisions	Date
1	Revised sidewalks on sheets 2 and 4.	9-8-81

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. J. ... 8-28-78
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John W. ... 8-28-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

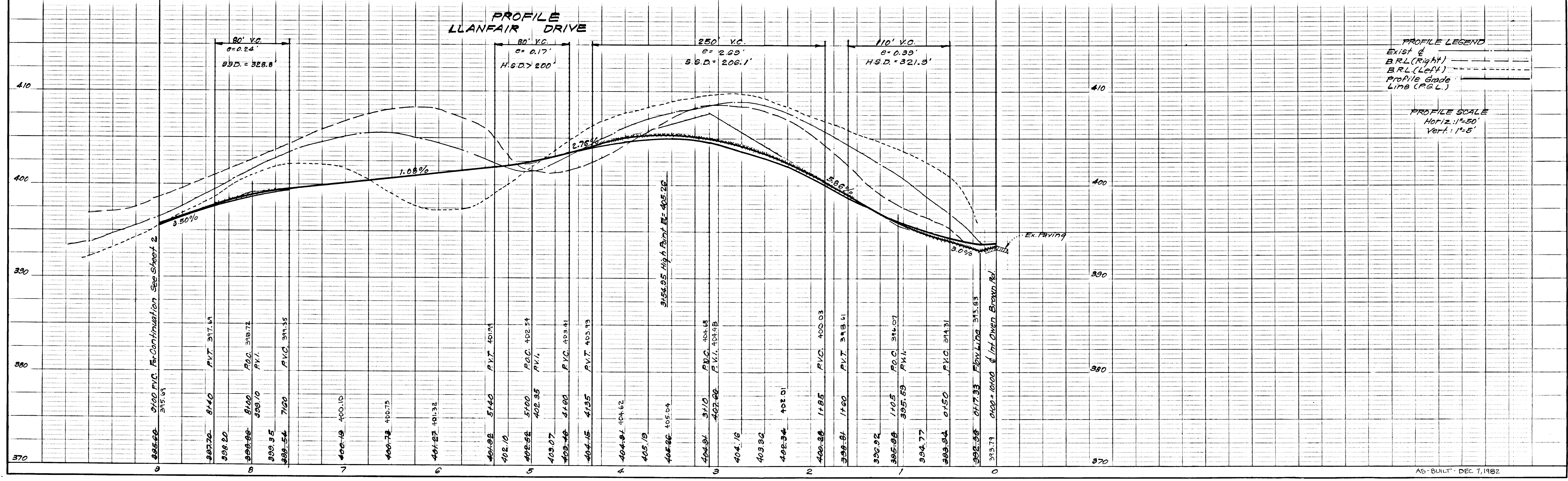
CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS
 11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED D.A.B. ROAD CONSTRUCTION PLAN LLANFAIR DRIVE SCALE 1"=50'

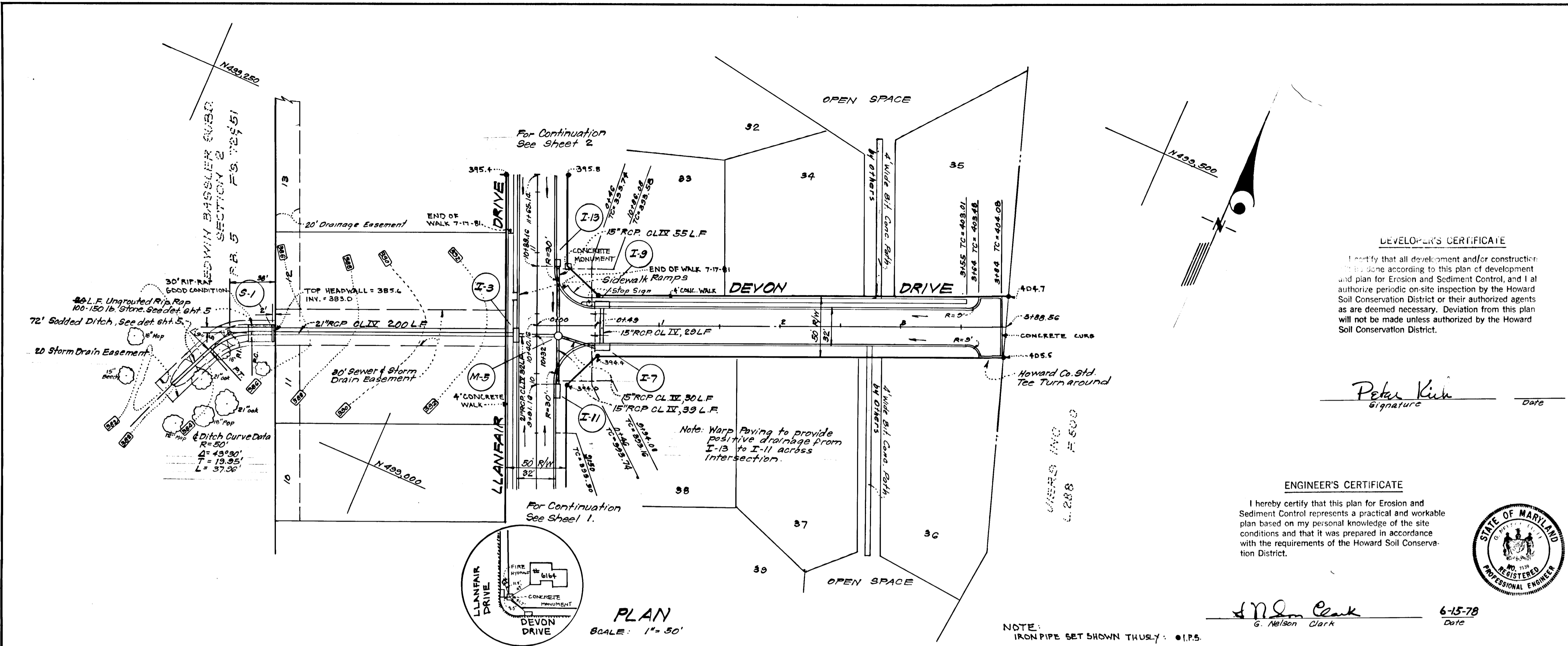
DRAWN K.I.W. OWEN BROWN ESTATES DRAWING 1017

CHECKED R.J.S. SECTION 1 AREA 1 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE Jun, 1978 FOR: K.M. DEVELOPMENT, Suite 312 Teachers Building Columbia, Maryland 21044 FILE NO. 1238-D



#662
 Jan 1, 1981



DEVELOPER'S CERTIFICATE

I certify that all development and/or construction to be done according to this plan of development and plan for Erosion and 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.

Peter Klein
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
Signature Date 6-15-78

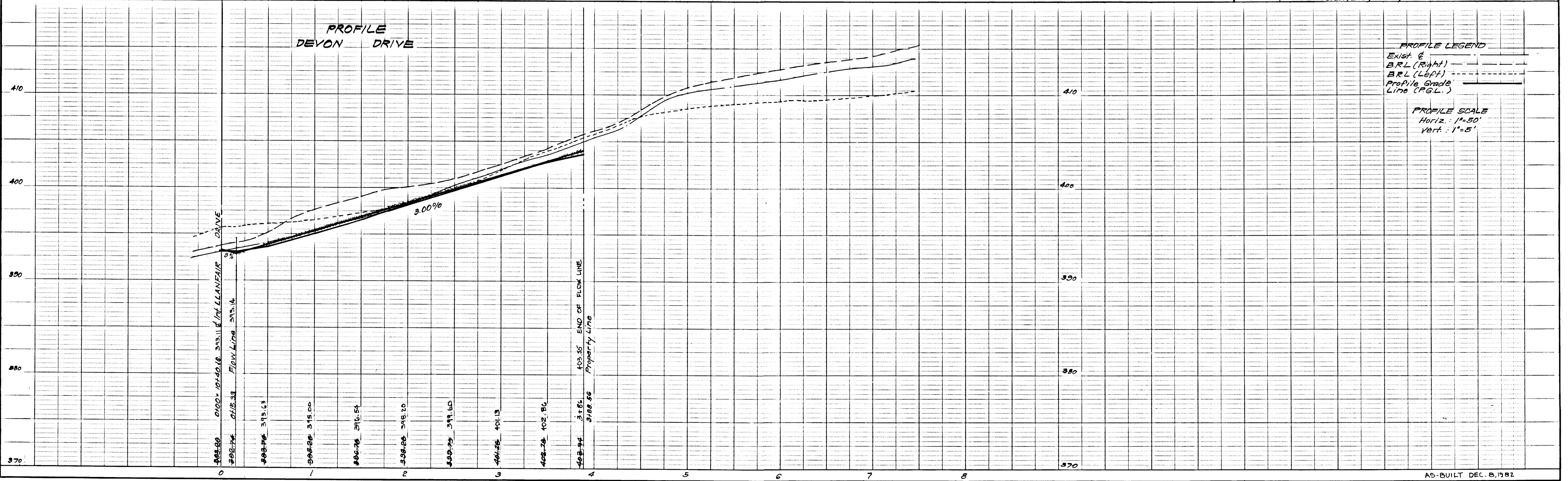


Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
C. Wayne May 6-10-78
Signature Date
U.S. Soil Conservation Service

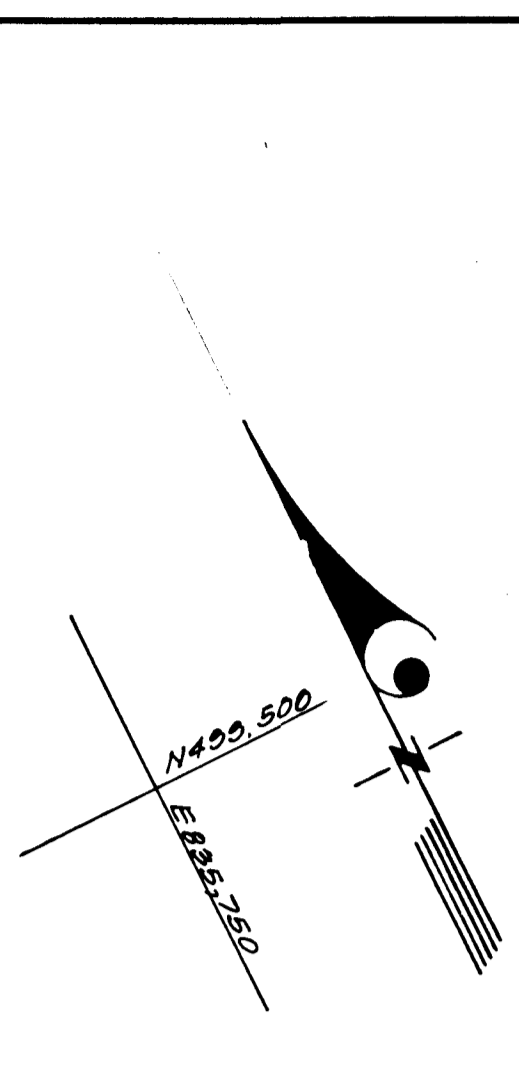
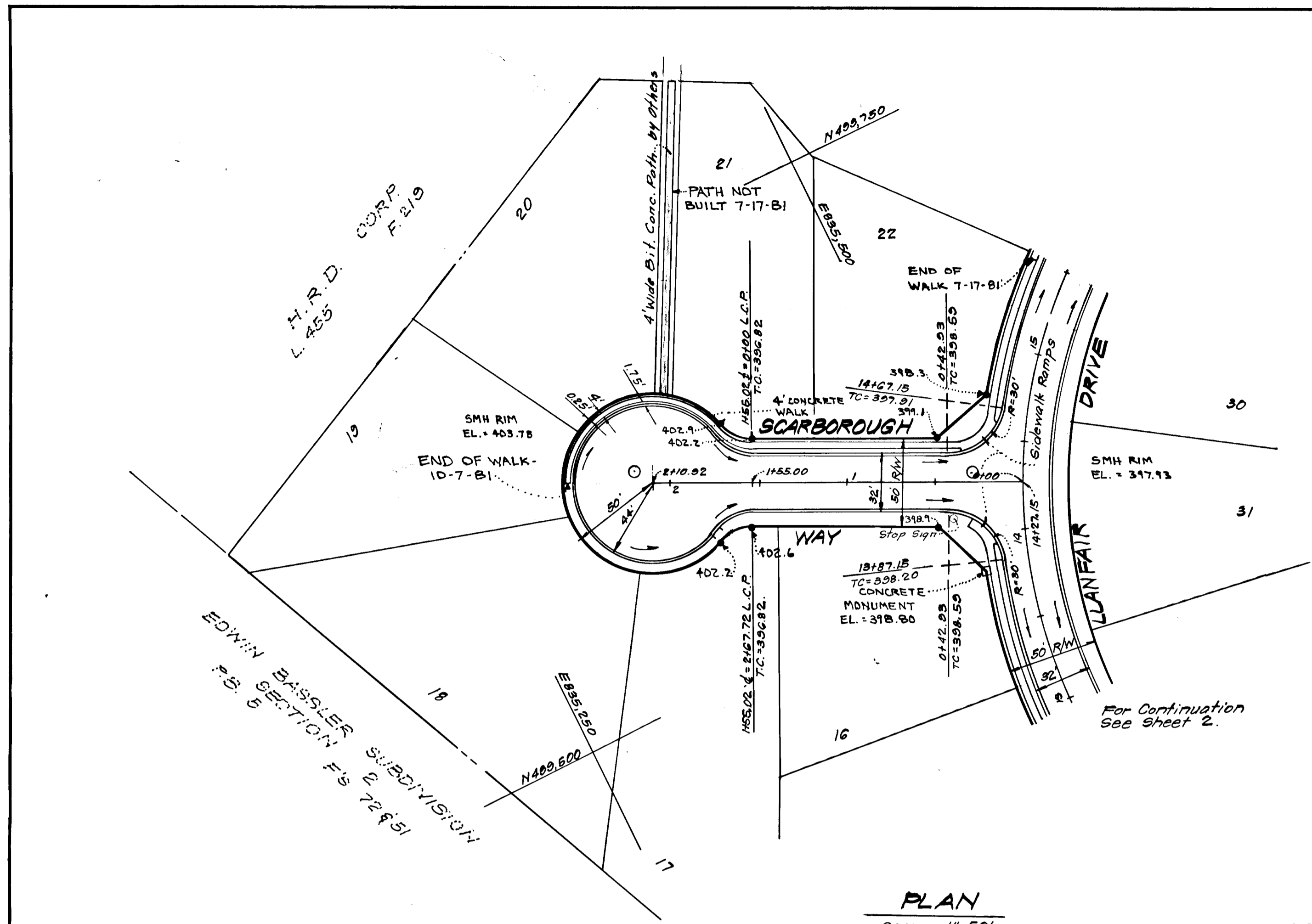
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Les EARP
Approved Date 6-27-78

APPROVED: DEPARTMENT OF PUBLIC WORKS		
<i>W.O. Linder</i> CHIEF, BUREAU OF ENGINEERING	8-28-78	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING		
<i>John W. Washburn</i> CHIEF, DIVISION OF LAND DEVELOPMENT	8-28-78	DATE
CLARK • FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS		
11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400		
DESIGNED D.A.B.	ROAD CONSTRUCTION PLANS DEVON DRIVE	SCALE 1" = 50'
DRAWN K.I.W.	OWEN BROWN ESTATES	DRAWING 3 of 7
CHECKED R.U.S.	SECTION 1 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
DATE Jun, 1978	FOR: K.M. DEVELOPMENT Suite 312 Teachers Building Columbia, Maryland 21044	FILE NO. 1238-D



#663
June 1, 1978



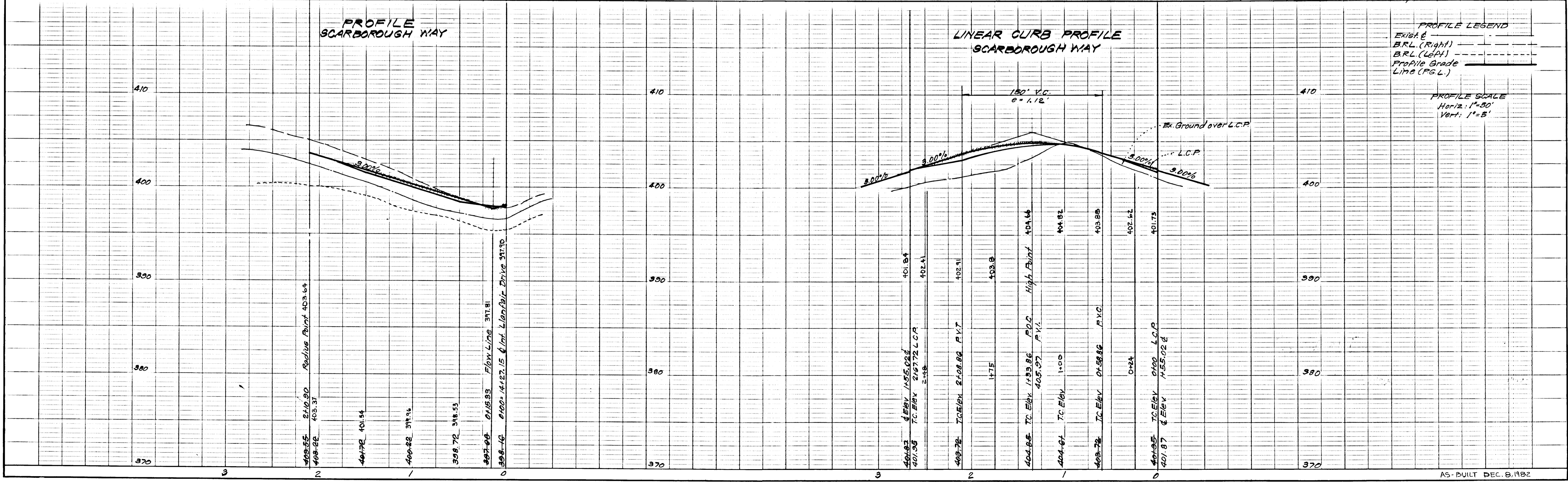
No.	Revision	Date
1	Revised sidewalk.	8-8-81

APPROVED: DEPARTMENT OF PUBLIC WORKS
W.O. Fallick 8-28-78
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John W. Mueselmann 8-28-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CF CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS
 1315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

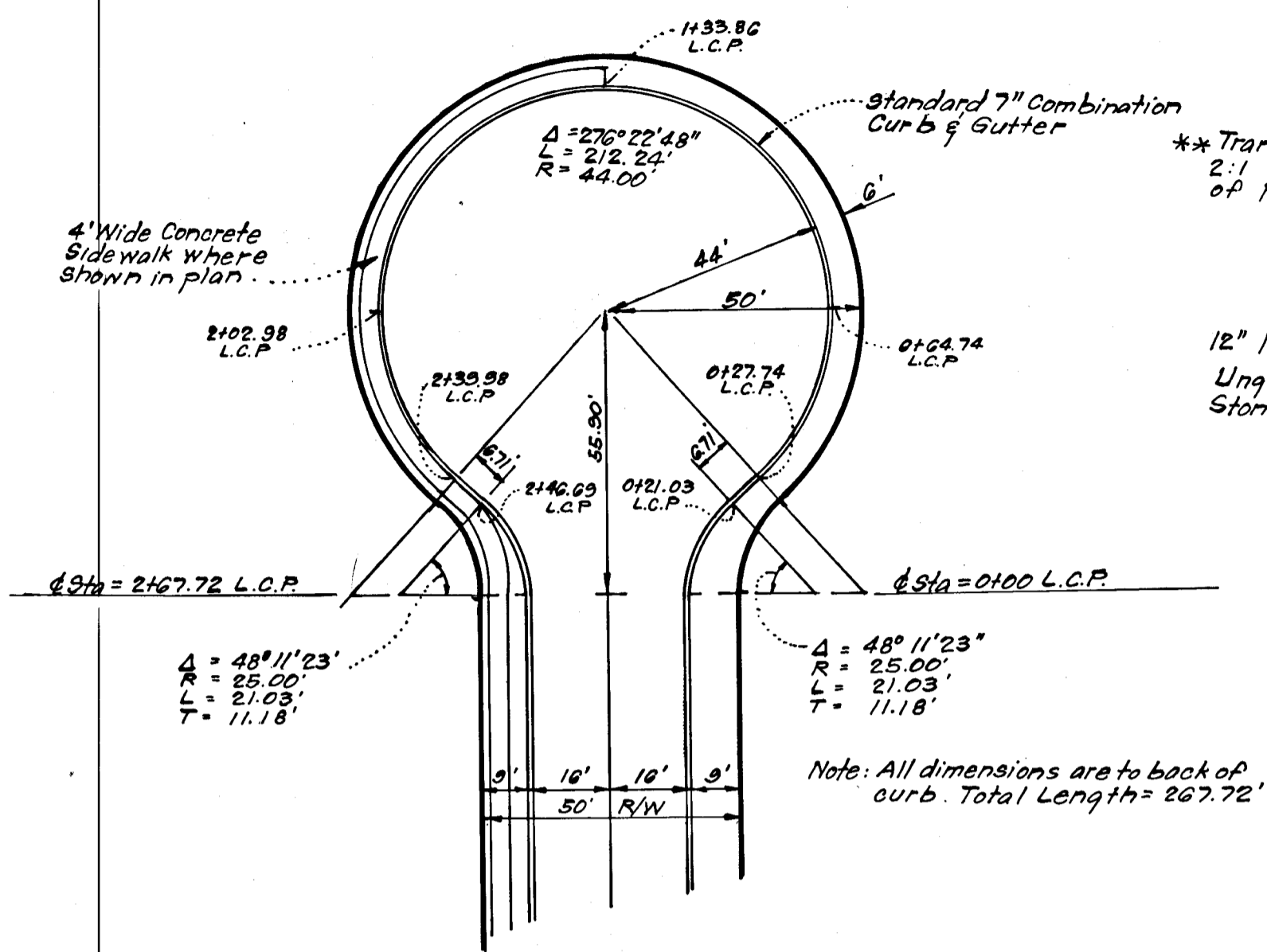
DESIGNED D.A.B.	ROAD CONSTRUCTION PLAN SCARBOROUGH WAY	SCALE 1"=50'
DRAWN K.I.W.	OWEN BROWN ESTATES	DRAWING 4 of 7
CHECKED R.J.S.	SECTION 1 AREA 1 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
DATE June, 1978	FOR: K.M. DEVELOPMENT, Suite 312 Teachers Building Columbia, Maryland 21044	FILE NO. 1238-D



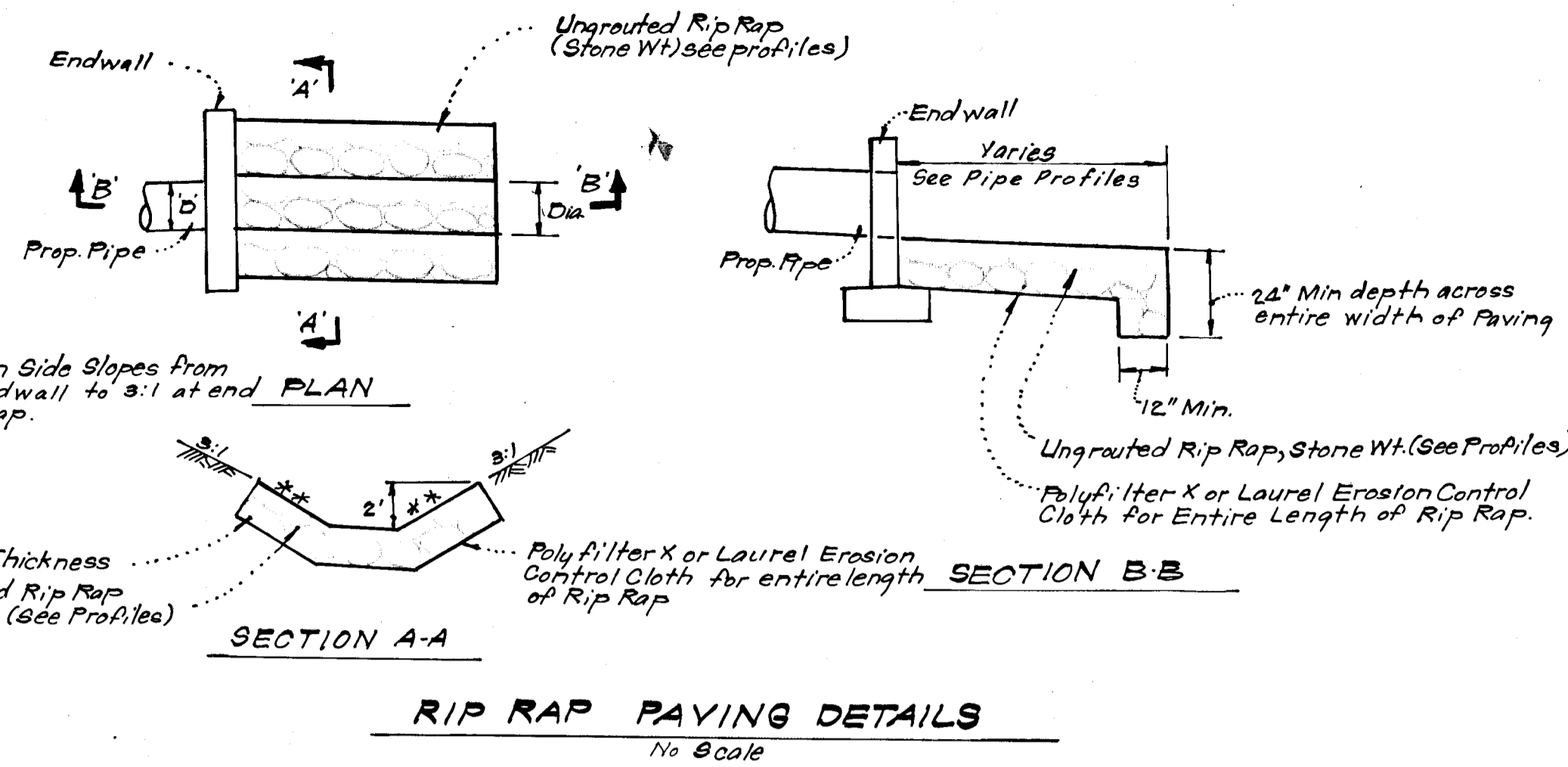
#662
See 1-A

F-78-198 1238-D

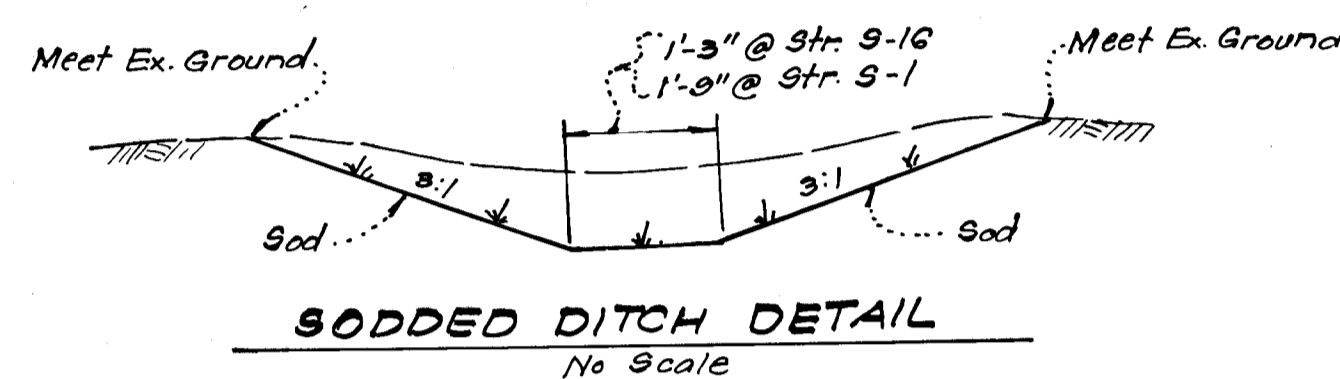
Note: For Top of Curb Elevations See Respective Profiles



TYPICAL OUL-DE-SAC DETAIL
Scale: 1" = 30'



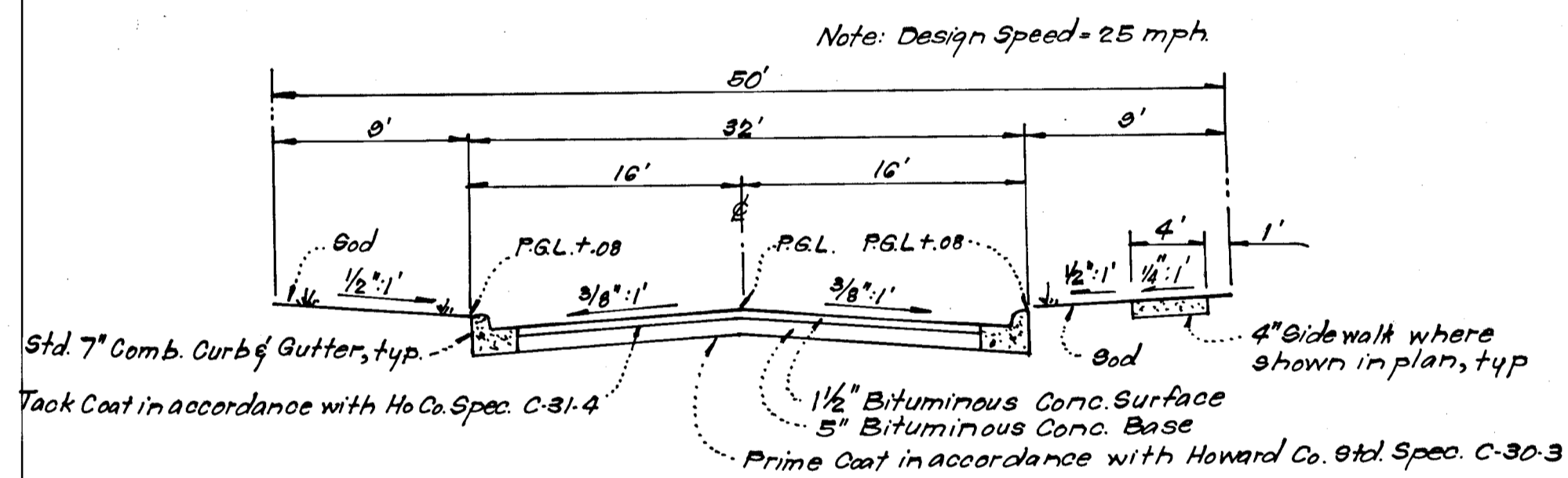
RIP RAP PAVING DETAILS
No Scale



SODDED DITCH DETAIL
No Scale

GENERAL SODDING NOTES

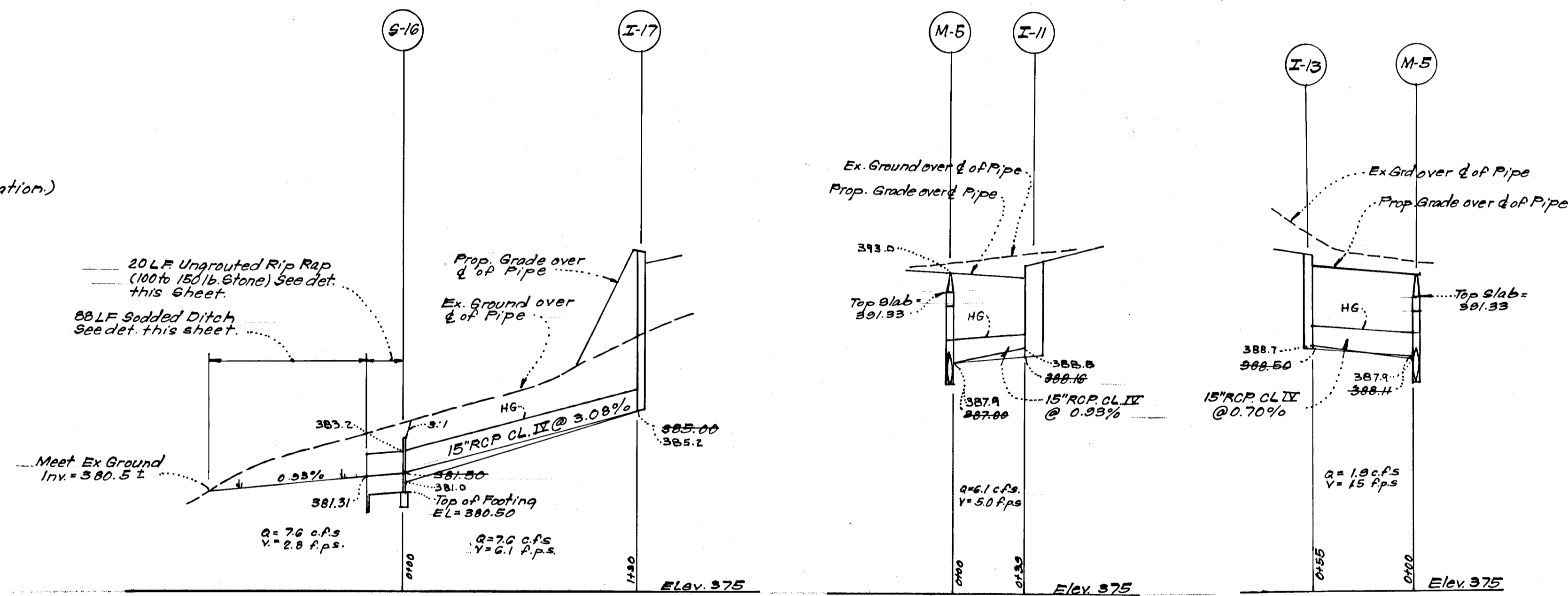
1. Apply 10-10-10 Fertilizer @ 1000#/acre (25#/1000 ϕ)
2. Apply Ground Agricultural Limestone @ 2000#/acre (50#/1000 ϕ)
3. Incorporate both Lime & Fertilizer into soil by discing (Firm up after incorporation)
4. Lay sod to a tight fit. Roll to insure contact with underlying soil. Water as necessary for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



TYPICAL PAVING SECTION

LLANFAIR DRIVE (0+00 to 17+32.01), DEVON DR (0+00 to 3+85.56)
SCARBOROUGH WAY (0+00 to 2+10.30)
No Scale
Pg. 72 Drawing "D-17"

STANDARD 7" COMBINATION CURB & GUTTER
No Scale

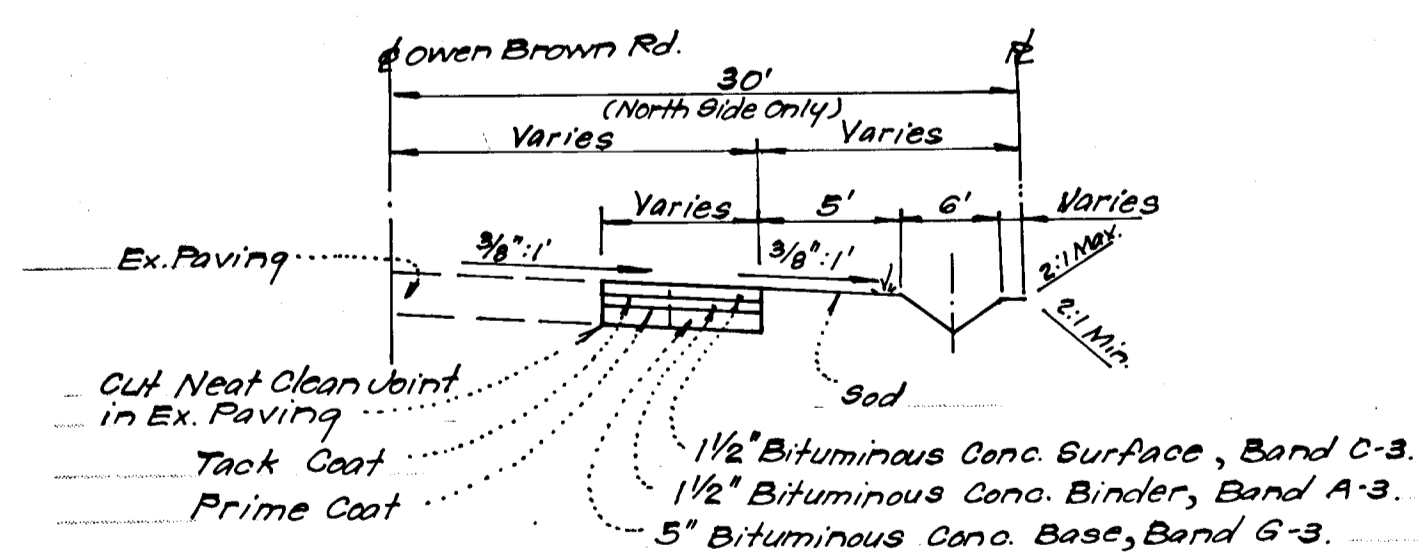


STORM DRAIN PROFILES

SCALE: Horiz: 1"=50' Vert: 1"=5' SEE PROFILES FOR ELEVATIONS

No.	TYPE	INV.		TOP ELEVATION		REMARKS	LOCATION
		IN	OUT	UPPER	LOWER		
* 8-1	C-Endwall	382.81	382.81			Ho. Co. Std. Fig. 5.21 Dia=24"	See Plan
I-3	A-10 Inlet	385.53	393.28	393.28	393.28	Ho. Co. Std. Fig. 4.02 W=2'-6"	Sta. 10+32.15-33' RT.
M-5	B-Manhole	385.53	386.63	386.63	386.63	Ho. Co. Std. Fig. 3.03 48" Sp.	Sta. 10+32.15-33' RT.
I-7	A-10 Inlet w/Deflector	388.10	388.10	394.17	393.03	Ho. Co. Std. Fig. 4.02 W=3'-0"	Sta. 0+49.15-33' RT.
I-9	A-10 Inlet	388.00	388.00	394.17	393.03	Ho. Co. Std. Fig. 4.02 W=2'-6"	Sta. 0+49.15-33' RT.
I-11	A-10 Inlet	388.16	388.16	393.40	393.16	Ho. Co. Std. Fig. 4.02 W=2'-6"	Sta. 0+49.15-33' RT.
I-13	A-5 Inlet	388.50	388.50	393.71	393.02	Ho. Co. Std. Fig. 4.01 W=2'-6"	Sta. 10+89.08-15.33' RT.
S-10	C-Endwall	381.50	381.50			Ho. Co. Std. Fig. 5.21 Dia=15"	See Plan
* I-17	A-10 Inlet	385.00	385.00	393.80	393.80	Ho. Co. Std. Fig. 4.02 W=2'-6"	See Plan

Note: Refer to Chapter 13 "Standard Details", Howard County Storm Drainage Manual for All Structures

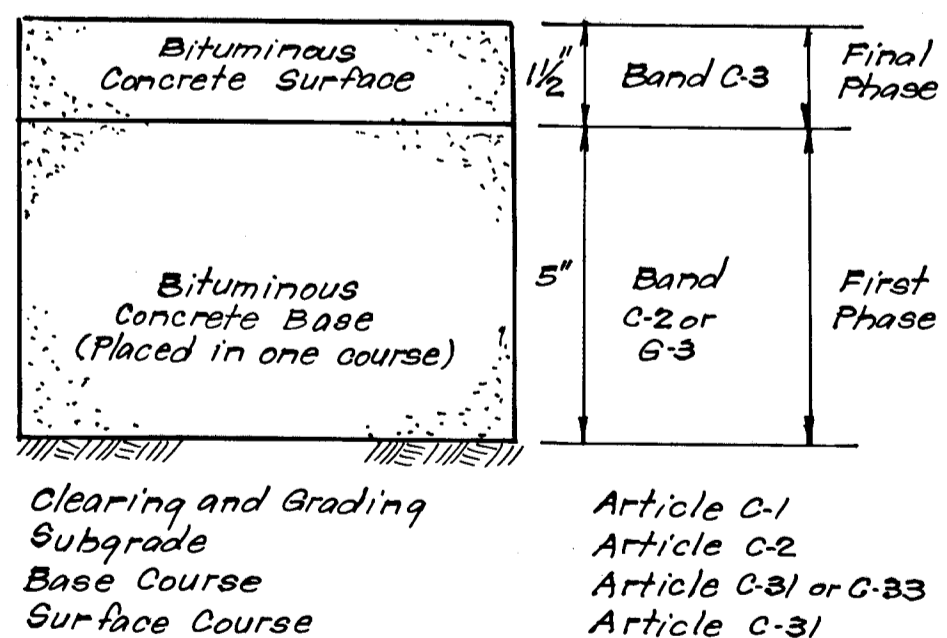


TYPICAL HALF SECTION OWEN BROWN ROAD
No Scale

Reviewed for Howard S.C.D. Name and meets Technical Requirements
C. Wayne Pidgeon 8-10-78
Signature Date
U.S. Soil Conservation Service

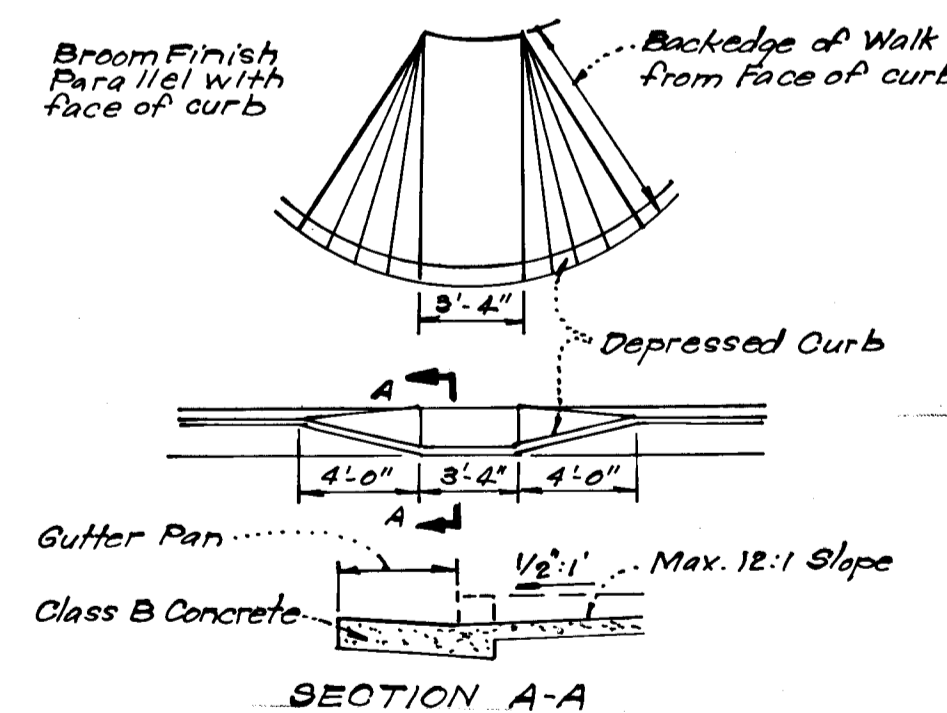
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved Date



PAVING SECTION FOR PUBLIC ROADS AND ENTRANCES TO PUBLIC ROADS
No Scale

To be constructed in accordance with the Howard County Road Construction Code and Specifications.
Pg. 66 Drawing "D-11"



SIDEWALK RAMP DETAILS
No Scale

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 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 Date



SIZE	TYPE	LENGTH
15"	R.C.P. CLASS IX	315 L.F.
21"	R.C.P. CLASS IX	232 L.F.

APPROVED: DEPARTMENT OF PUBLIC WORKS

W. P. Pelt Date 8-28-78
CHIEF, Bureau of Engineering

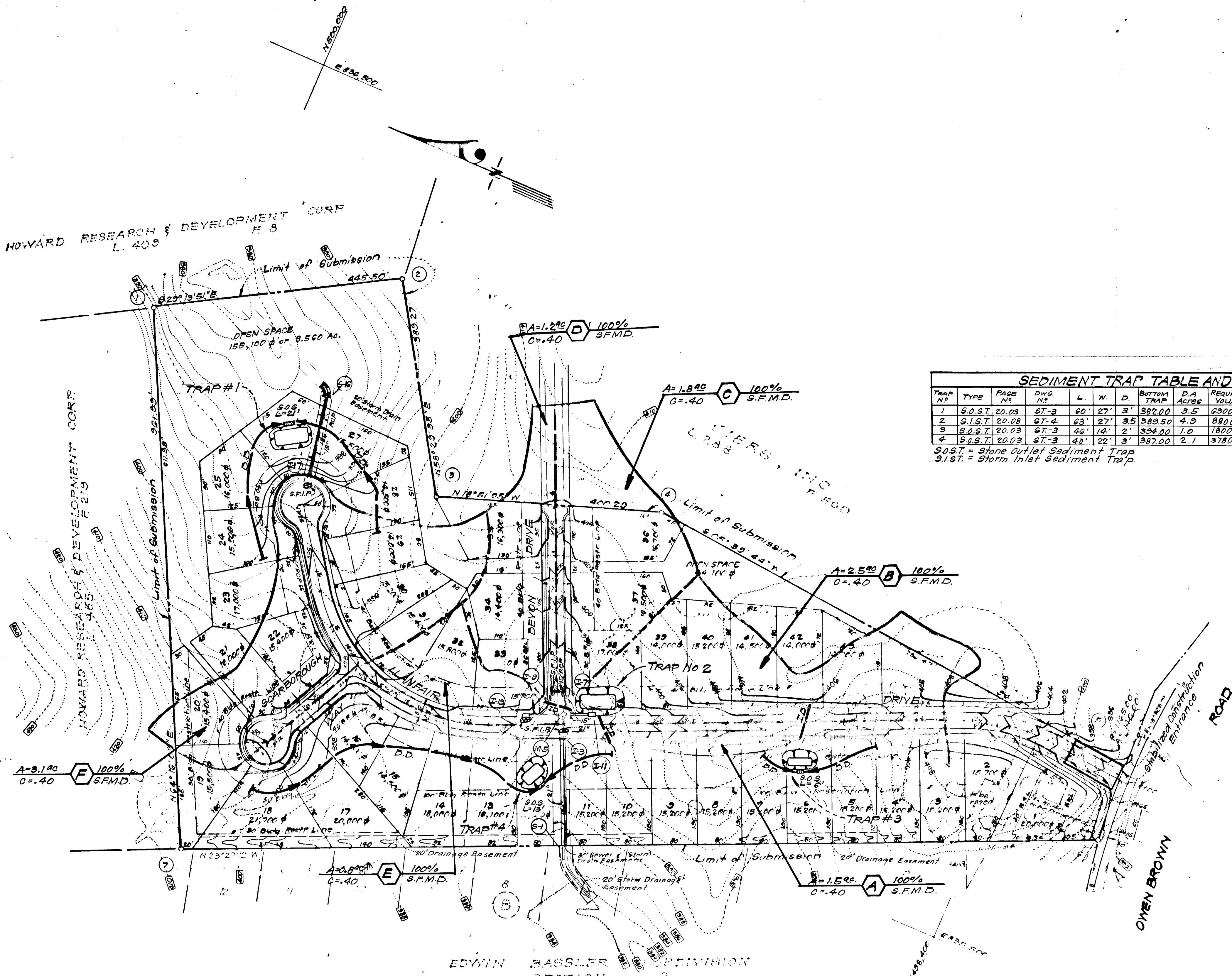
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
J. W. M. M. Date 8-28-78
CHIEF, Division of Land Development

CLARK • FINEFROCK & SACKETT
ENGINEERS • PLANNERS • SURVEYORS

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

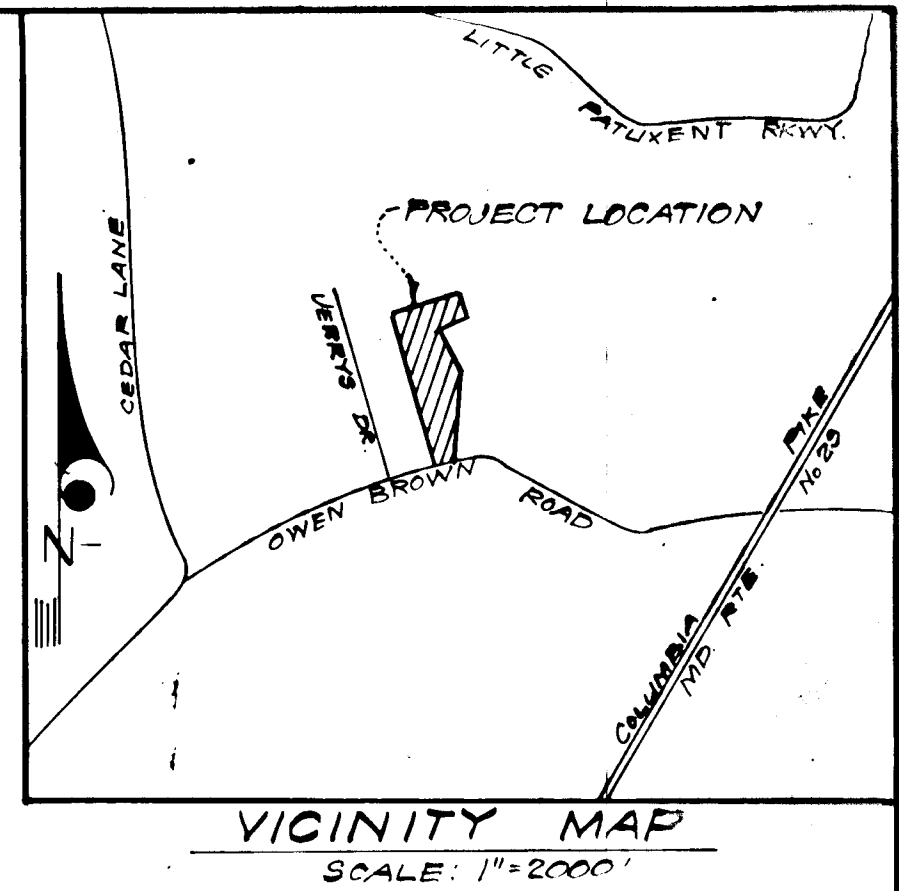
DESIGNED	ROAD CONSTRUCTION PLANS	SCALE
P.A.B.		As Shown
DRAWN		DRAWING
K.I.W.	OWEN BROWN ESTATES	5 of 7
CHECKED		JOB NO.
D.A.B.	SECTION 1 AREA 1	
DATE	6TH ELECTION DISTRICT	FILE NO.
June, 1978	FOR: K.M. DEVELOPMENT, Suite 312	1238-D
	Teachers Building	
	Columbia, Maryland 21044	

F-78-198 AS-BUILT DEC. 9, 1982



LEGEND

- 1. Contour Interval 2 FT.
- 2. Existing Contour
- 3. Existing Storm Drain
- 4. Proposed Storm Drain
- 5. Proposed Contour 400
- 6. Diversion Dike
- 7. Sediment Trap
- 8. Stone Filter Inlet Protection S.F.I.P.
- 9. Interception Dike I.D.



SEDIMENT TRAP TABLE AND DIMENSIONS

TRAP NO.	TYPE	PAGE NO.	DWG. NO.	L.	W.	D.	BOTTOM TRAP	D.A. ACRES	REQUIRED VOLUME	PROVIDED VOLUME	STONE/OUTLET DRESTEL	TOP ELEV.
1	S.O.S.T.	20.03	ST-3	60'	27'	3'	382.00	3.5	2300 c.f.	2300 c.f.	388.00	387.00
2	S.I.S.T.	20.08	ST-4	63'	27'	3.5	389.50	4.9	8800 c.f.	8800 c.f.	N/A	393.00
3	S.O.S.T.	20.03	ST-3	42'	14'	2'	394.00	1.0	1800 c.f.	1800 c.f.	397.00	398.00
4	S.O.S.T.	20.03	ST-3	42'	22'	3'	387.00	2.1	3780 c.f.	3780 c.f.	391.00	392.00

S.O.S.T. = Stone Outlet Sediment Trap
S.I.S.T. = Storm Inlet Sediment Trap

Reviewed for... **HOWARD**S.C.D.
Name
and meets Technical Requirements
A. Wagner Signature Date **8-10-78**
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 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.

A. Wagner Approved Date **8-10-78**

Peter Kuh 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 Signature Date **8-15-78**



APPROVED: DEPARTMENT OF PUBLIC WORKS
W. J. White DATE **8-28-78**
CHIEF, BUREAU OF ENGINEERING
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
William M. ... DATE **8-28-78**
CHIEF, DIVISION OF LAND DEVELOPMENT

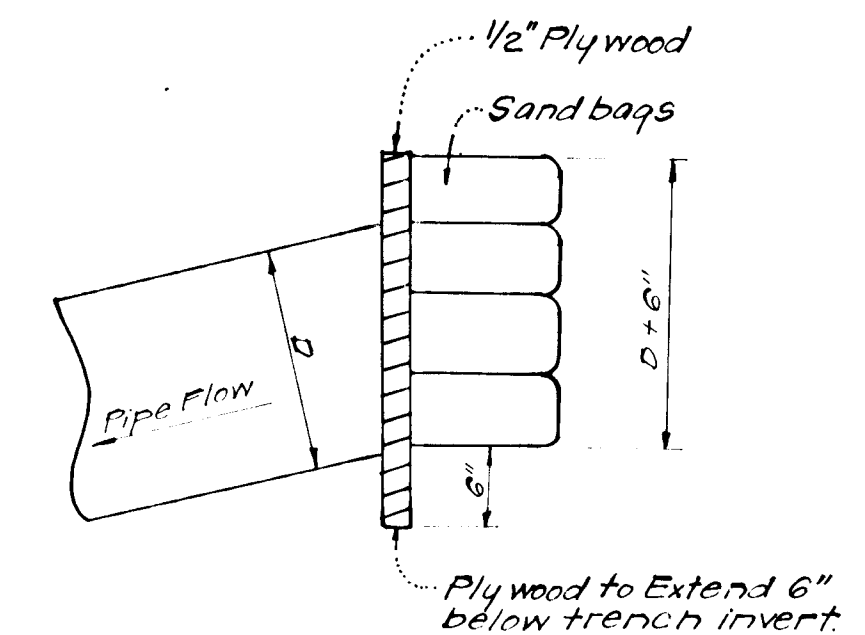
CLARK • FINEFROCK & SACKETT
ENGINEERS • PLANNERS • SURVEYORS
11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400

DESIGNED D.A.B.	ROAD CONSTRUCTION PLANS SEDIMENT EROSION CONTROL PLAN AND DRAINAGE AREA MAP OWEN BROWN ESTATES SECTION 1 AREA 1 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: K.M. DEVELOPMENT, SUITE 312 Teachers Building Columbia, Maryland 21044	SCALE 1" = 100'
DRAWN K.I.W.		DRAWING 60-7
CHECKED R.J.S.		JOB NO.
DATE Feb, 1978		FILE NO. 1238-D

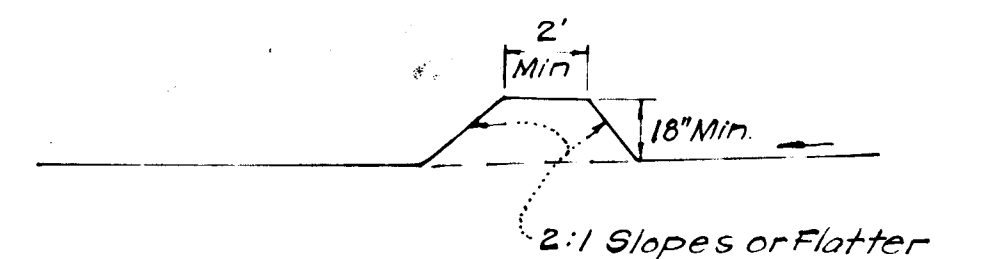
AS-BUILT DEC. 9, 1982

GENERAL NOTES

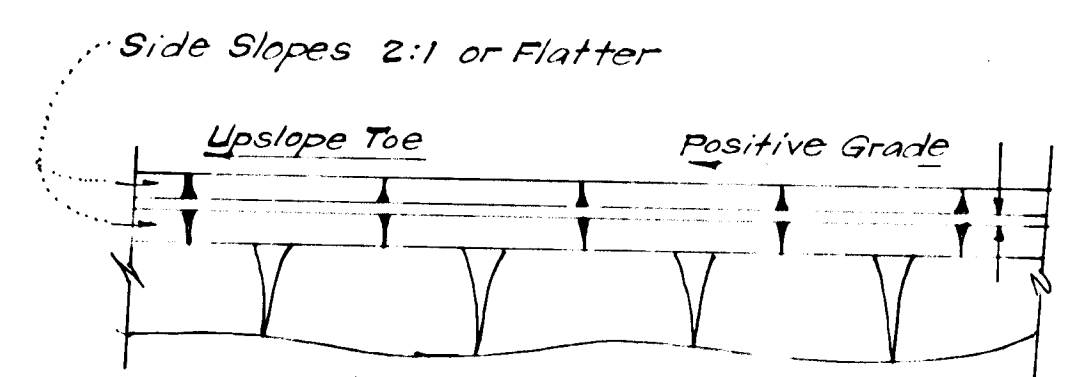
- All Sediment and Erosion Control Measures will be installed and stabilized according to this plan prior to any other grading, clearing or disturbance of the existing surface of the site. See Note #5 for stabilization except that the seed mixture will be annual rye applied at a rate of 1.4 lbs/1000 sq. ft.
- Notify the Bureau of Inspections and Permits at least 24 hours 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 3 lbs/1000 sq. ft. mixture - 40% Kentucky Blue, 20% Chewink Fescue, 20% Kentucky 31, and 20% annual rye.
 - Fertilizer - 10-10-10 applied at the rate of 23 lbs/1000 sq. ft. Ground Agricultural Lime or Dolomitic Lime applied at the rate of 40 lbs/1000 sq. ft.
 - Mulch - weed free grain straw applied at the rate of 70 lbs/1000 sq. 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 clean out 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 bale, diversion dike, etc.
- The Contractor shall keep all public roads free of sediment deposits left from traffic leaving construction site.
- Stabilized Construction Entrances shall be placed at all construction entrances.
- It will be the Developer's responsibility to provide additional Sediment & Erosion Control devices to protect stabilized areas under construction.
- Upstream ends of all storm drain pipes shall be blocked at the end of each working day. See detail this sheet.
- A complete site grading plan must be developed and approved before building permits can be issued.
- SITE ANALYSIS:**
 - Total Area: 23.0 Acres
 - Area to be Paved: 1.3 Acres
 - Area to be Seeded: 4.5 Acres
 - Area Undisturbed: 17.2 Acres
- CONSTRUCTION SEQUENCE:**
 - Grading Permits shall be obtained prior to any installation of Sediment Control or Grading.
 - Install all Sediment & Erosion Control.
 - Grade streets & parking areas as necessary to properly install storm drainage. Install storm drainage & block inlets with S.F.I.P.'s.
 - Construct Paving.
 - Stabilize all disturbed areas in accordance with General Note #5.
 - Sediment Control devices to be removed only after areas draining to these devices have been stabilized.



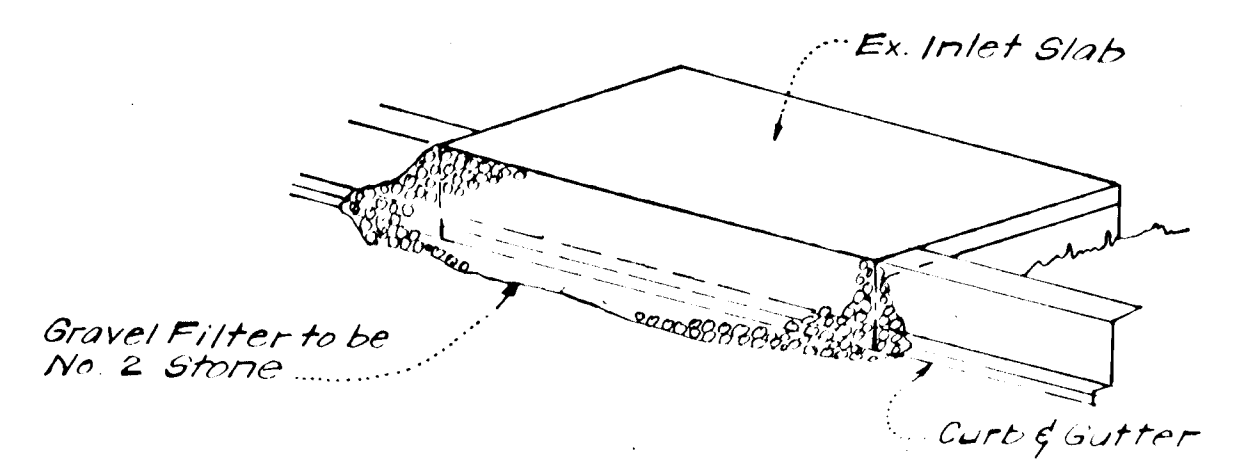
PIPE BLOCKING DETAIL
No Scale



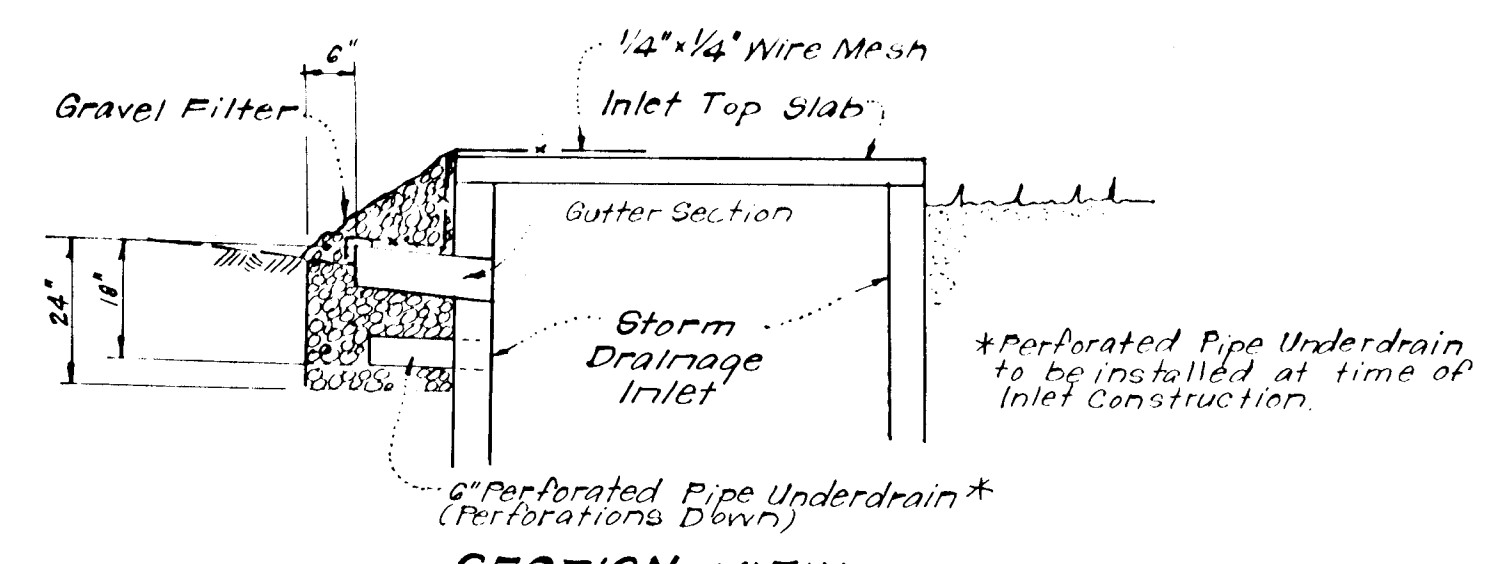
CROSS SECTION



PLAN VIEW
DIVERSION DIKE (D.D.)
No Scale

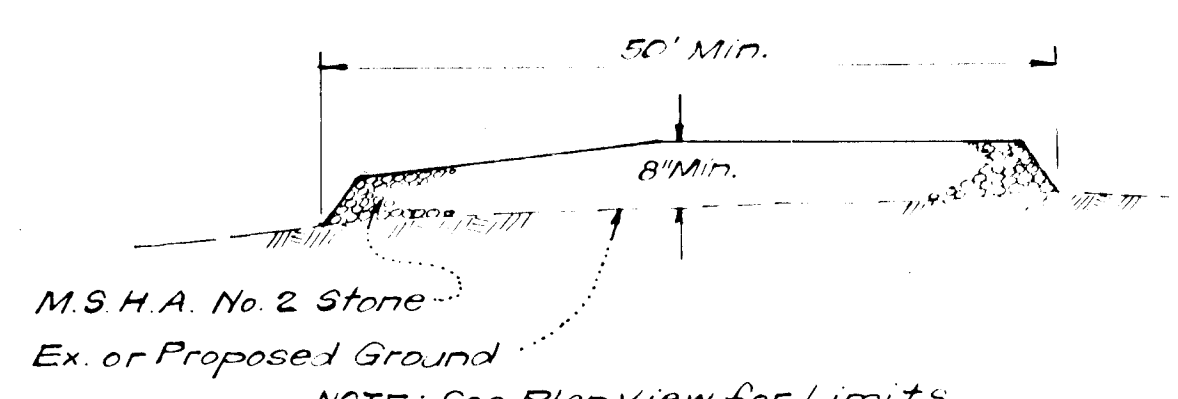


ISOMETRIC VIEW



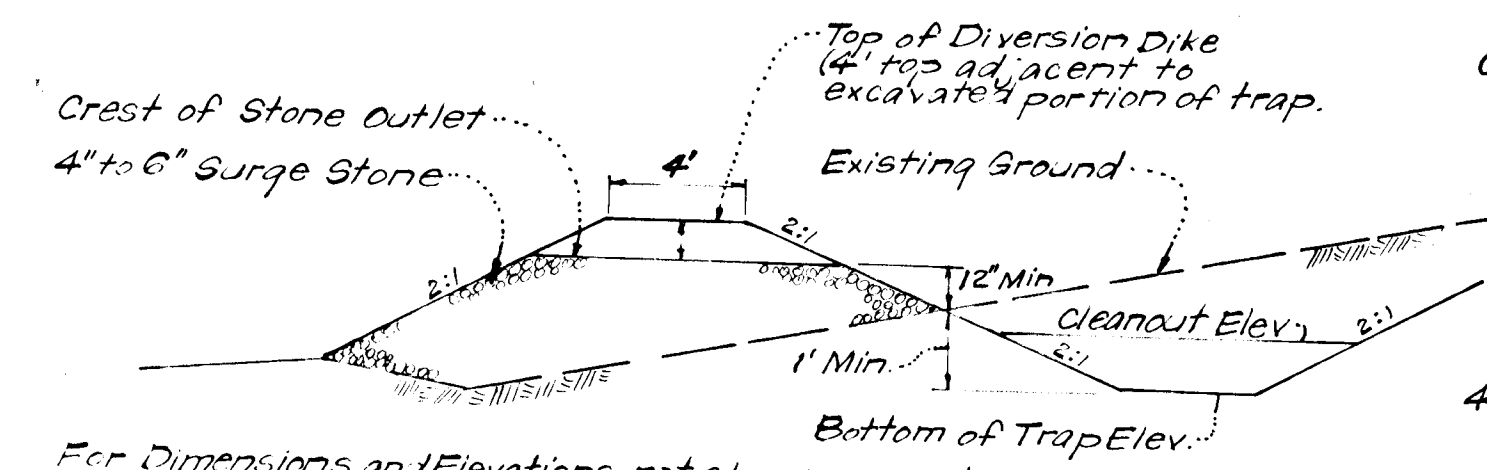
SECTION VIEW

STONE FILTER INLET PROTECTION
DETAIL (S.F.I.P.)
No Scale

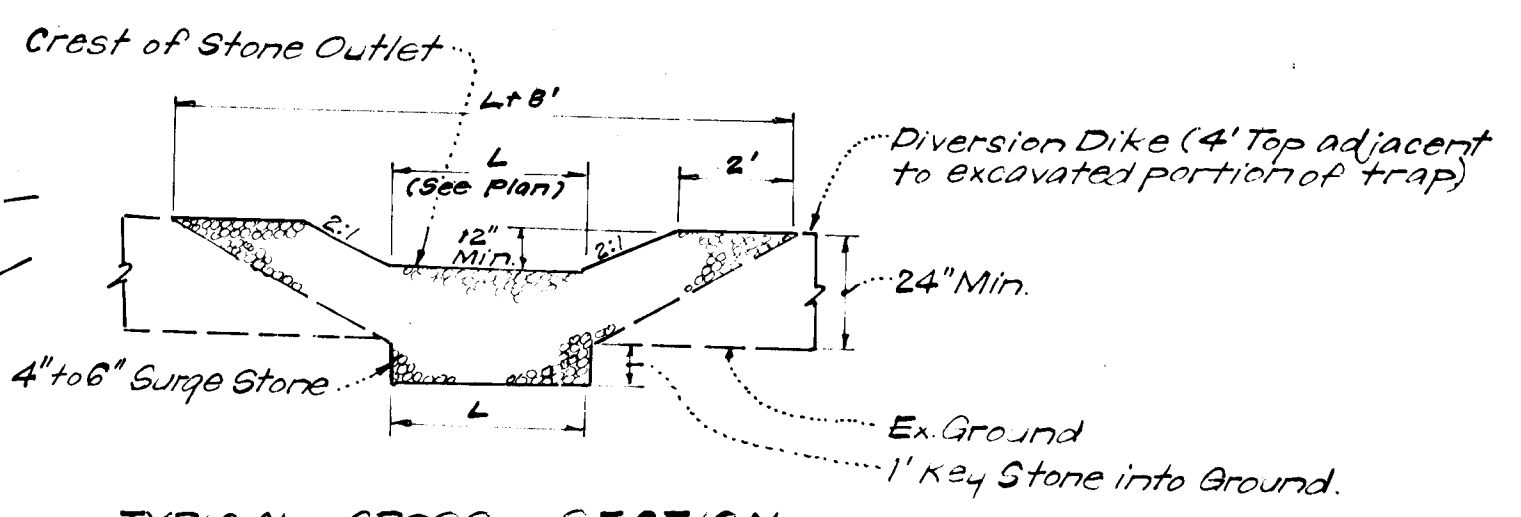


SECTION VIEW

STABILIZED CONSTRUCTION ENTRANCE
No Scale



TYPICAL PROFILE



TYPICAL CROSS SECTION

DETAILS OF STONE FILTER OUTLET
(FOR STONE OUTLET SEDIMENT TRAP)
No Scale

- STONE FILTER OUTLET NOTES:**
- Sediment Trap to be cleaned out when sediment reaches a level of 9 feet below the Crest of Stone Outlet.
 - Bottom of Sediment Trap to be level and constructed to the dimensions shown in plan.
 - Stone Outlet to be constructed through diversion dike adjacent to excavated portion of Sediment Trap.

Reviewed for... HOWARD.....S.C.D.
Name
and meets Technical Requirements
C. Wayne Key 8-10-78
Signature Date
U.S. Soil Conservation Service

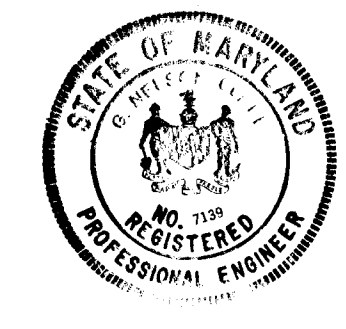
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S CERTIFICATE
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion 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.

Peter Kirk
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.

John C. Clark 6-15-78
Signature Date



APPROVED: DEPARTMENT OF PUBLIC WORKS		8-28-78
<u>W.D. Smith</u> CHIEF, BUREAU OF ENGINEERING		DATE
APPROVED: HOWARD COUNTY OF PLANNING & ZONING		8-28-78
<u>William W. ...</u> CHIEF, DIVISION OF LAND DEVELOPMENT		DATE
CLARK • FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS 11315 LICKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400		
DESIGNED D.A.B.	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL DETAILS	SCALE As Shown
DRAWN K.I.W.	OWEN BROWN ESTATES	DRAWING 7 of 7
CHECKED D.A.B.	SECTION 1 AREA 1 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO.
DATE June, 1978	FOR: K.M. DEVELOPMENT, Suite 312 Teachers Building Columbia, Maryland 21044	FILE NO. 1238-D

#6622
12.1.1.1.1.1

Wes Eard Approved DATE Date