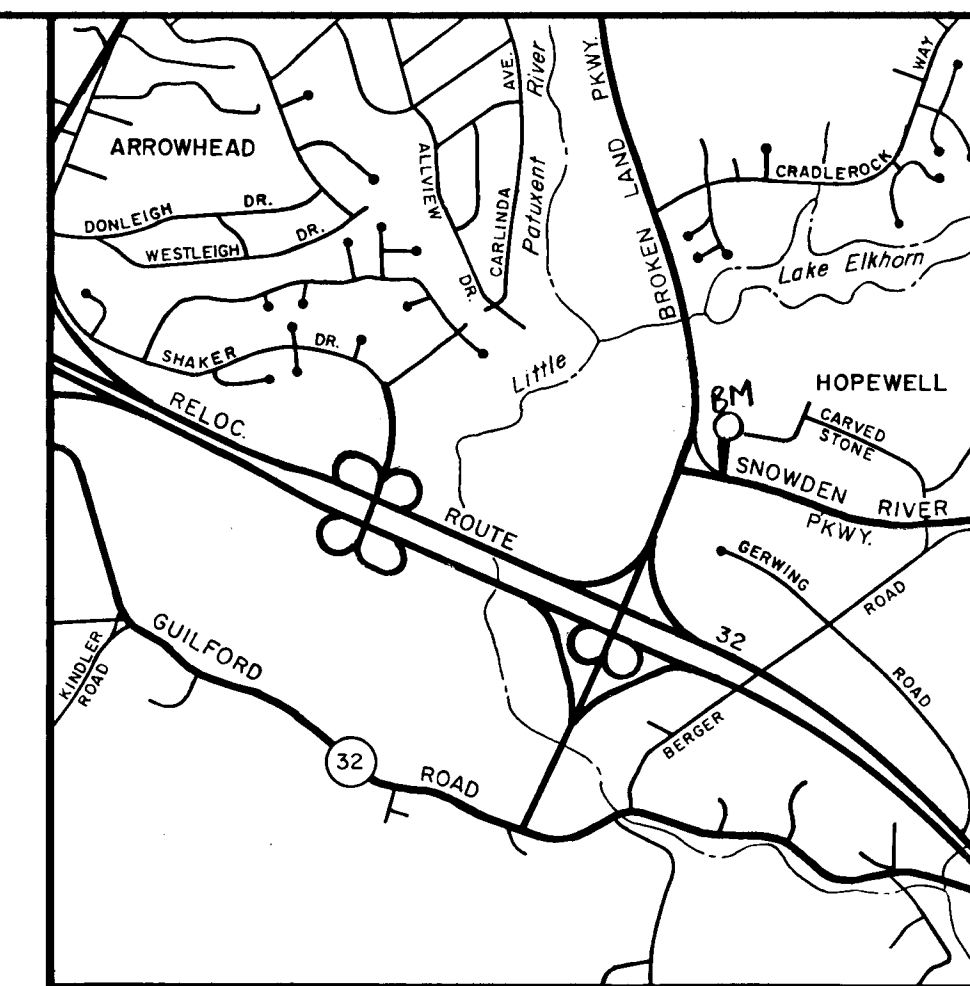


# INTERSECTION AT BROKEN LAND PARKWAY & SNOWDEN RIVER PARKWAY

## ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND



VICINITY MAP  
0 2000 4000 6000  
SCALE: 1" = 2000'

W.R.4. B.M.#M-3  
R.R. SPIKE IN 10" TWIN OAK, 100' RT  
OF STA 3+30, P.P.K. 0014-002  
ELEV. 342.88

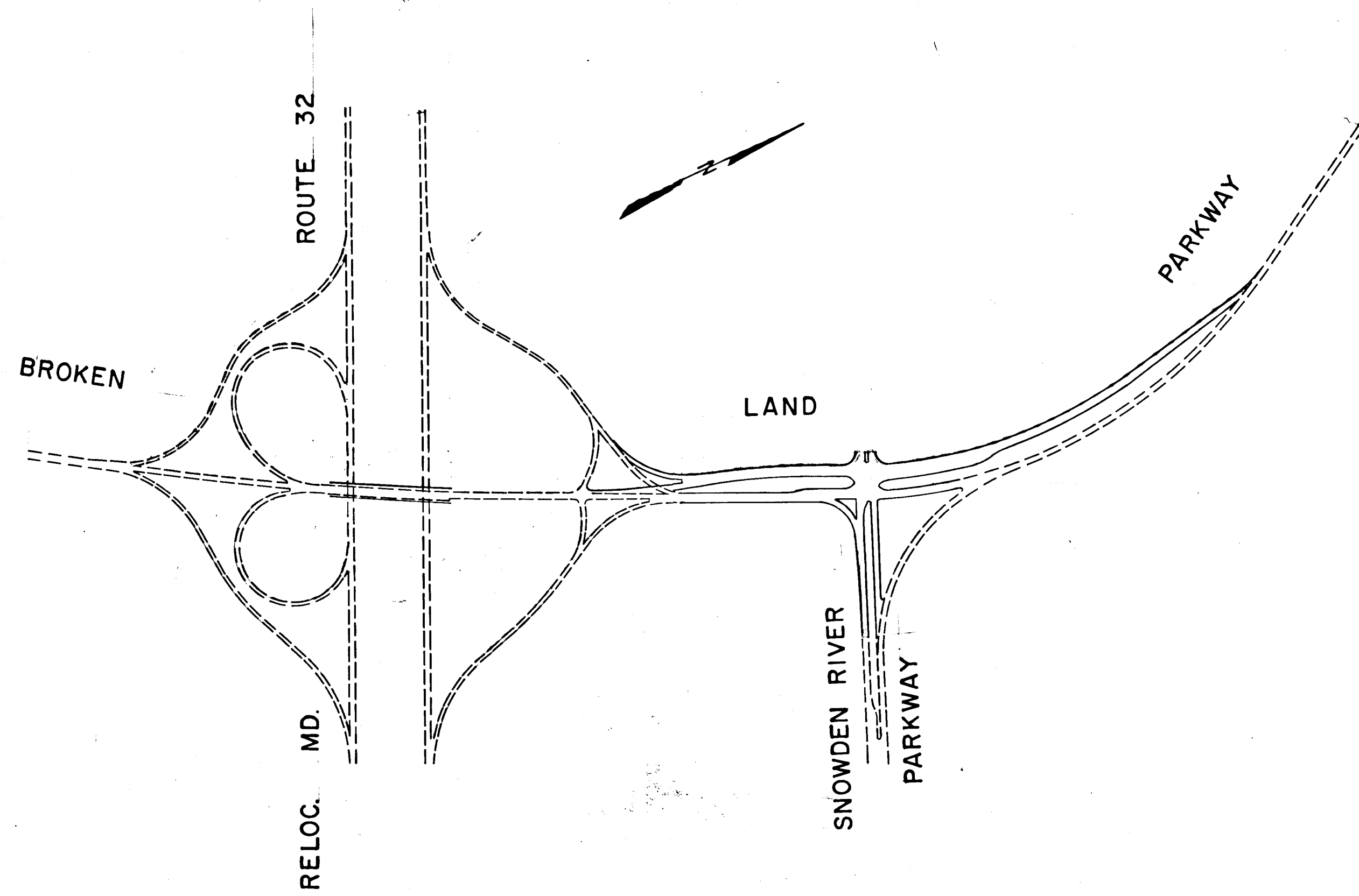
### GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV, "STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION".
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THIS/THESE DRAWINGS:
  - STATE HIGHWAY ADMINISTRATION - 531-5533
  - BALTIMORE GAS AND ELECTRIC CO. (Underground Electric Distribution) Customer Service: 685-0123
  - BALTIMORE GAS AND ELECTRIC CO. (Underground Gas Distribution) Customer Service: 685-0123
  - ENGINEERING "DAMAGE CONTROL" - 234-5621
  - "MISS UTILITY" - (1) 539-0100
  - CHESAPEAKE AND POTOMAC (C. & P.) Telephone Company: 725-9976
  - AMERICAN TELEPHONE AND TELEGRAPH Cable Location Division: 393-3553
  - COLONIAL PIPELINE COMPANY: 781-4641
  - BUREAU OF UTILITIES HOWARD COUNTY: 992-2365
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1971 REVISED EDITION.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III.

VARIABLE RIGHT-OF-WAY, 50 M.P.H.

- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
- SEDIMENT CONTROL PER CP 84-89
- ALL STORM DRAIN BEDDING SHALL BE CLASS 'C' UNLESS OTHERWISE NOTED.

10. **STREET TREES**  
The location, type and number of trees shown on these plans are tentative and are used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and builder's landscape program. Bond release is contingent upon Section 16.131 of the Howard County Subdivision and Land Development Regulations, as approved by the office of Planning and Zoning.

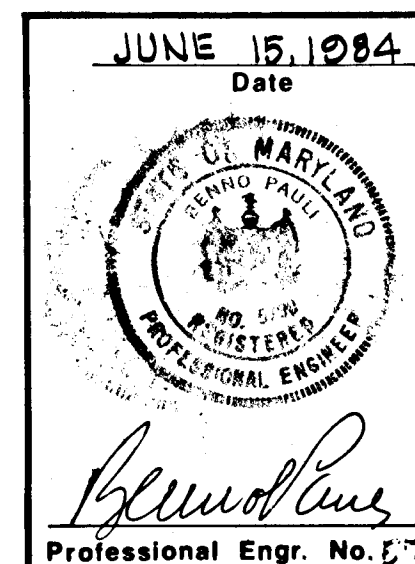


LOCATION MAP  
SCALE: 1" = 400'

AS-BUILT APRIL 8, 1985  
ALL SIGNAL POLES & GUARD RAILS ARE IN PLACE

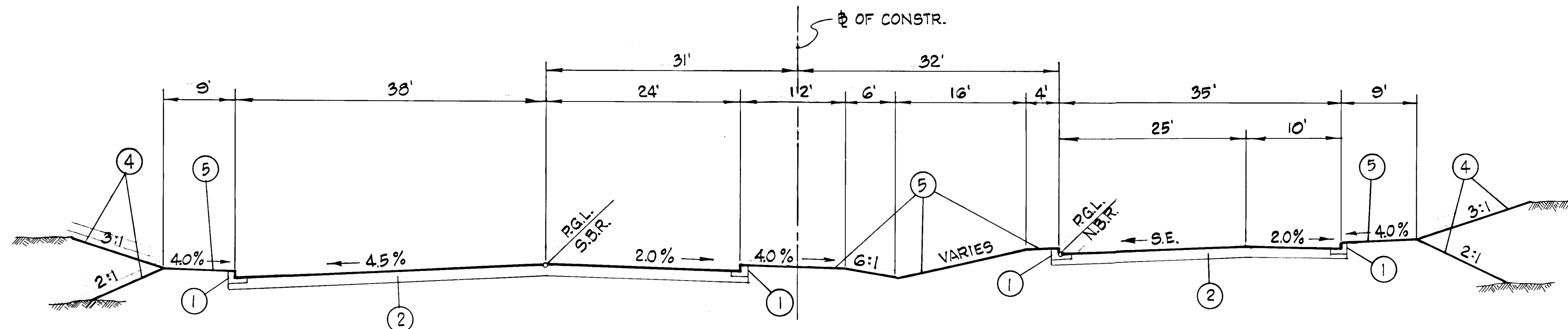
NO.	TITLE
1	TITLE SHEET
2	TYPICAL SECTIONS AND PAVING DETAIL
3	TYPICAL SECTIONS
4	PLAN - STA. 104+50 TO STA. 119+00
5	PROFILE - STA. 104+50 TO STA. 119+00
6	PLAN AND PROFILE - STA. 119+00 TO STA. 132+00
7	PROFILES - SNOWDEN RIVER PARKWAY, MED. X-OVER, TEMP. RAMP 'C'
8	STORM DRAIN PROFILES
9	DRAINAGE AREA MAP
10	SEDIMENT CONTROL DETAILS AND NOTES
11-13	TRAFFIC SIGNAL AND SIGNING

DEPARTMENT OF PUBLIC WORKS:		
<i>William E. Reilly</i>	9-28-84	DATE
CHIEF, BUREAU OF ENGINEERING		
DEPARTMENT OF PLANNING AND ZONING:		
<i>William E. Reilly</i>	7-9-84	DATE
CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM.		
Date	No	Revision Description
VILLAGE OF OWEN BROWN Section 6, Area 2		
6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
THE ROUSE COMPANY Columbia, Maryland		
CENTURY ENGINEERING, INC. CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204		
AREA	TAX MAP 42 - PART OF PARCEL 18	
TITLE	TITLE SHEET	
Des By	Scale	Proj No 1781
Drn By F.W.	Date 6-6-84	Drawing No. 1 OF 1
Chk By J.T.J.	Approved	

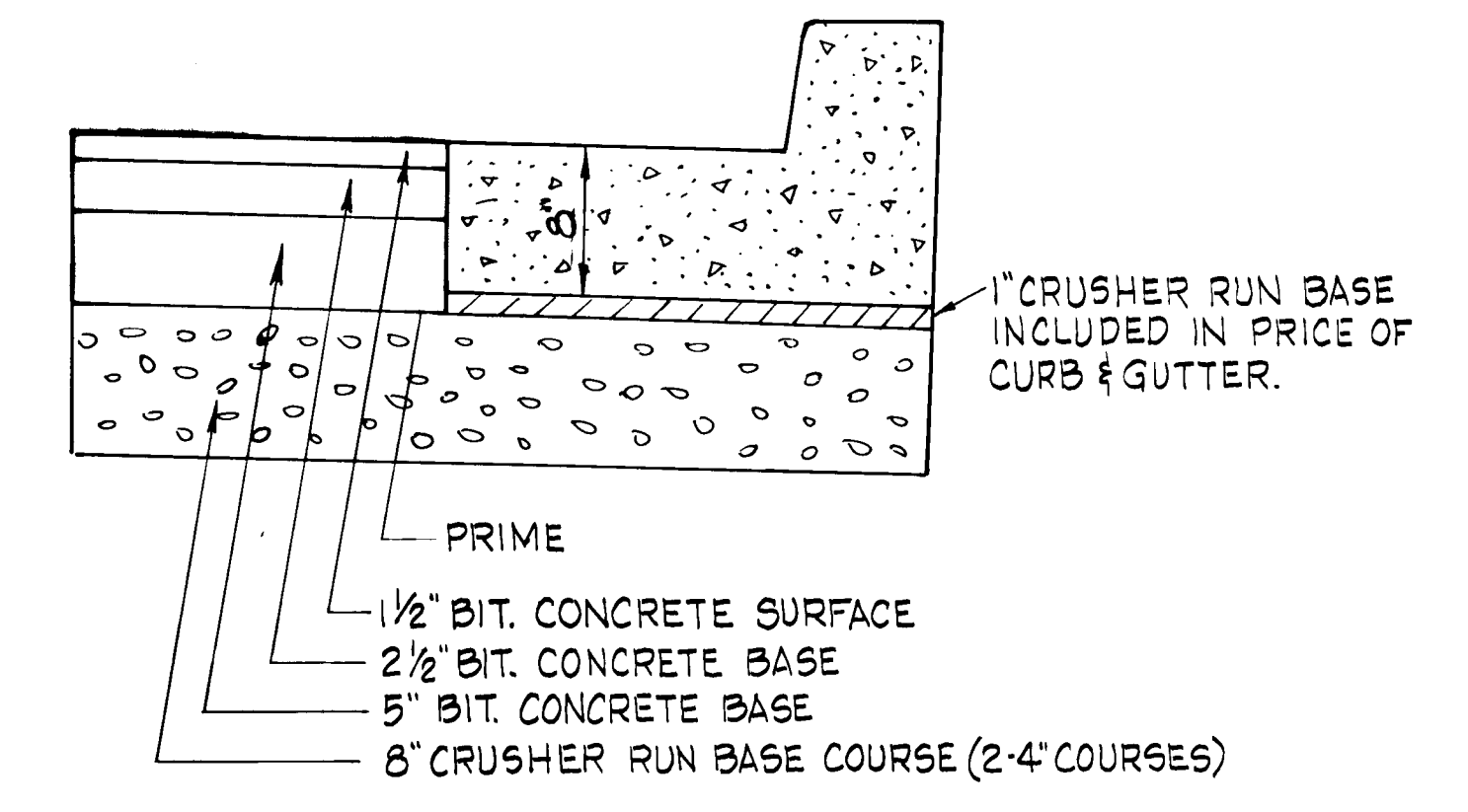


F-85-13

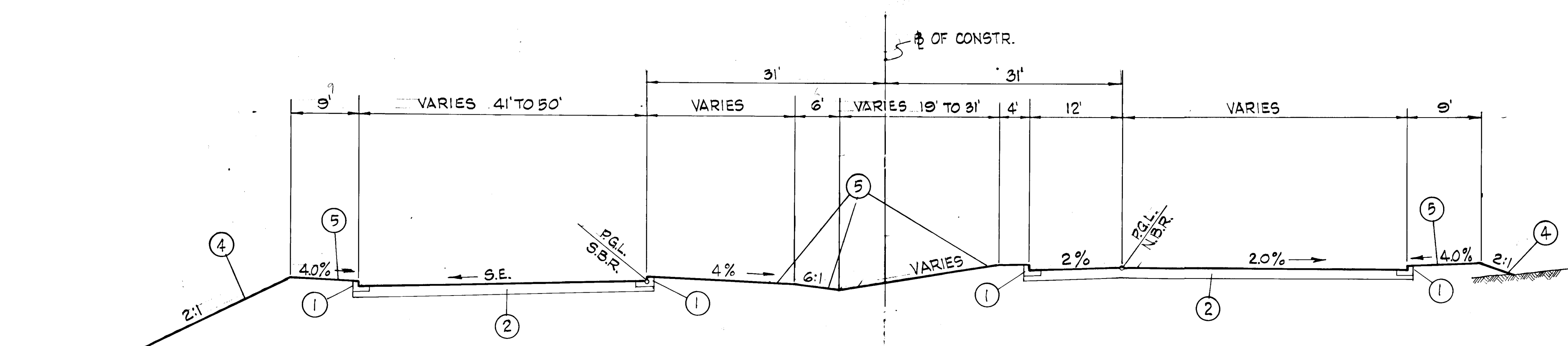
BRUNING 44-132 53864



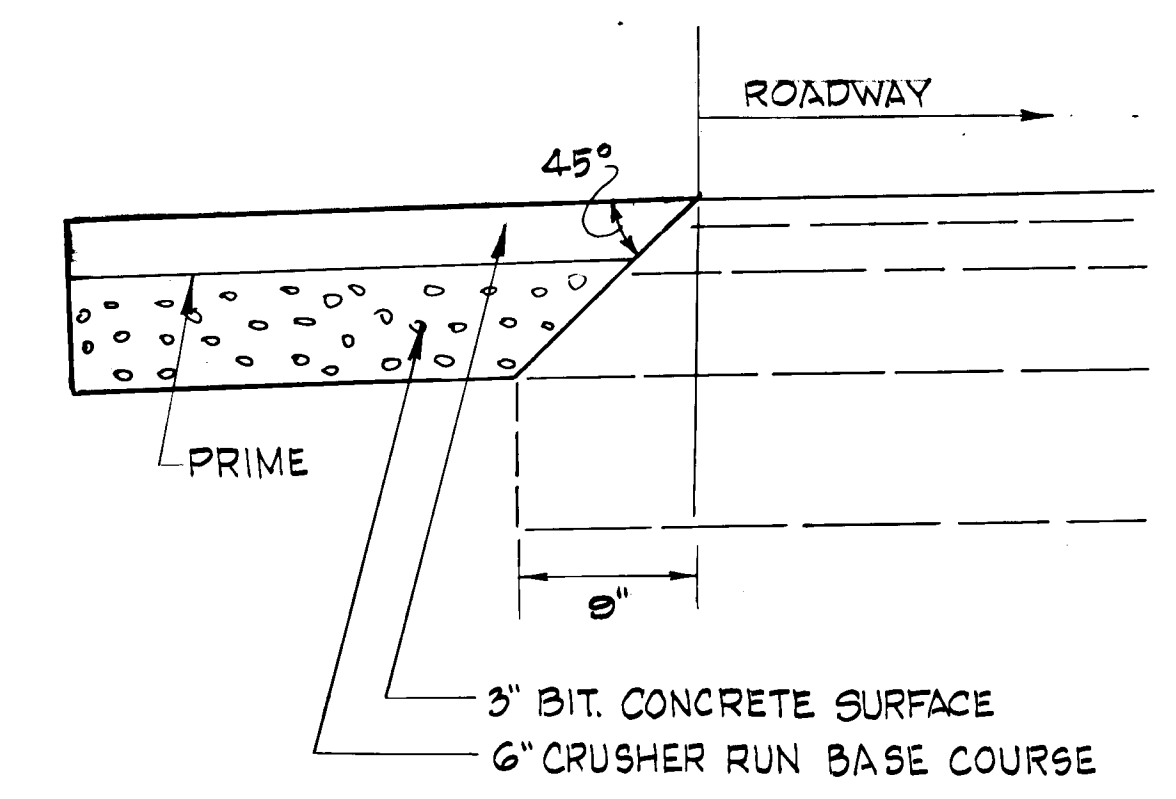
**BROKEN LAND PARKWAY**  
 STA. 113+00 TO STA. 116+00  
 MINOR ARTERIAL  
 DESIGN SPEED 50 M.P.H.



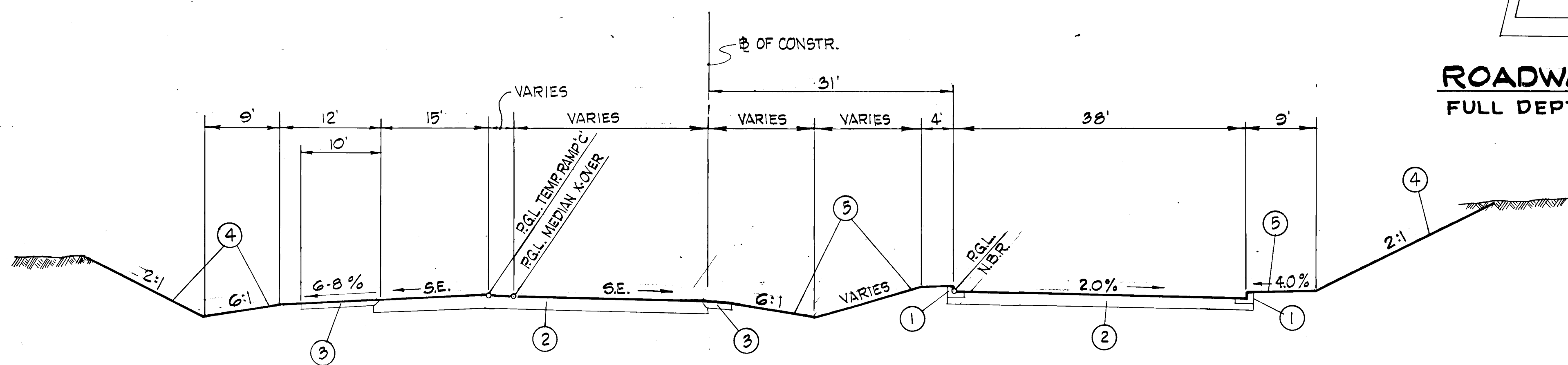
**ROADWAY PAVING DETAIL ②**



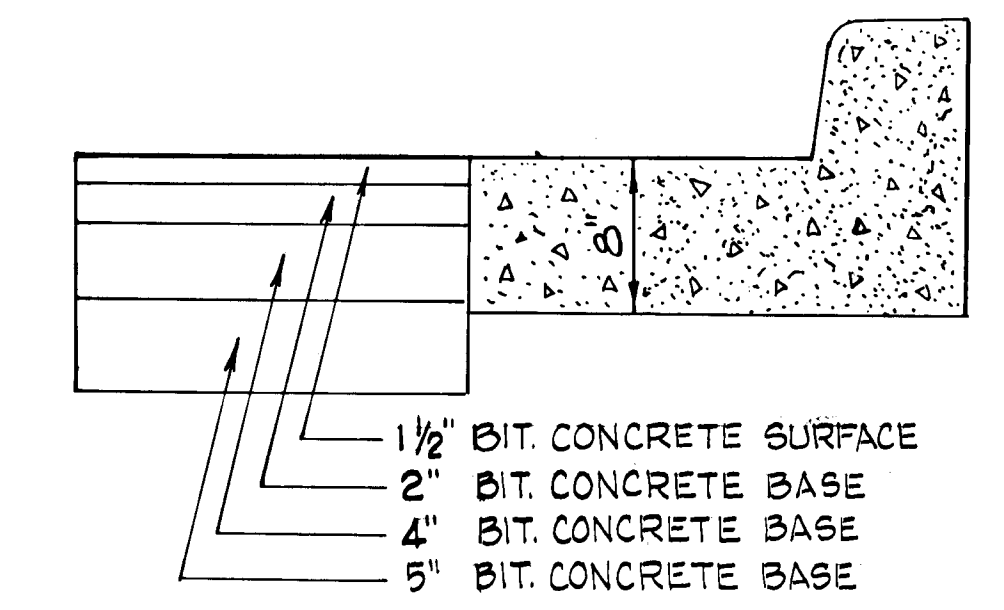
**BROKEN LAND PARKWAY**  
 STA. 109+25 TO STA. 111+00  
 MINOR ARTERIAL  
 DESIGN SPEED 50 M.P.H.



**SHOULDER PAVING DETAIL ③**



**BROKEN LAND PARKWAY**  
 STA. 104+50 TO STA. 109+25  
 MINOR ARTERIAL  
 DESIGN SPEED 50 M.P.H.

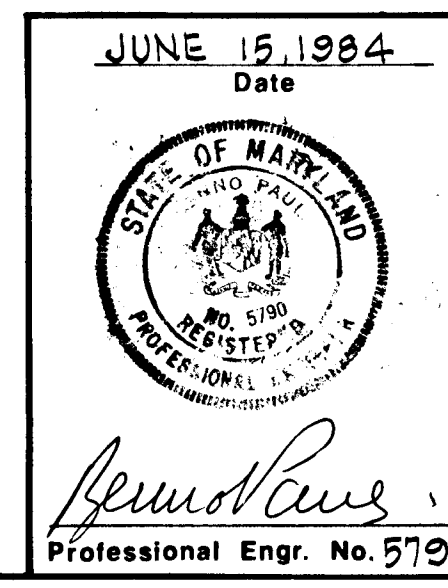


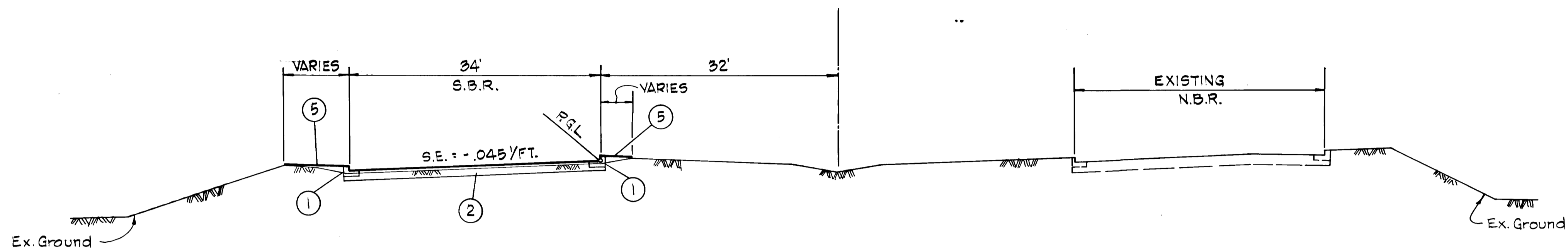
**ROADWAY PAVING DETAIL ②**  
 FULL DEPTH BIT. CONC. ALTERNATE

**LEGEND**

- ① STANDARD T COMBINATION CURB & GUTTER. (HO. CO. R-3.01)
- ② ROADWAY PAVEMENT (SEE PAVING DETAIL)
- ③ SHOULDER PAVEMENT (SEE SHOULDER DETAIL)
- ④ 2" TOPSOIL, SEED & MULCH
- ⑤ 4" TOPSOIL, SEED & MULCH

DEPARTMENT OF PUBLIC WORKS:		
<i>William D. Peltz</i>		9-20-84
CHIEF, BUREAU OF ENGINEERING		DATE
DEPARTMENT OF PLANNING AND ZONING:		
<i>William M. ...</i>		9-18-84
CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM.		DATE
Date	No	Revision Description
		VILLAGE OF OWEN BROWN
		SECTION 6 AREA 2
		6TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER
		THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
		THE ROUSE COMPANY
		COLUMBIA, MARYLAND
		<b>CENTURY ENGINEERING, INC.</b>
		CONSULTING ENGINEERS - PLANNERS
		TOWSON, MARYLAND 21204
AREA	TAX MAP 42	
	PART OF PARCEL 18	
TITLE	TYPICAL SECTIONS AND PAVING DETAILS	
Des By	Scale 1"=10'	Proj No 1781
Drn By F.W.	Date 6-6-84	Drawing No.
Chk By J.T.J.	Approved	2 OF 13

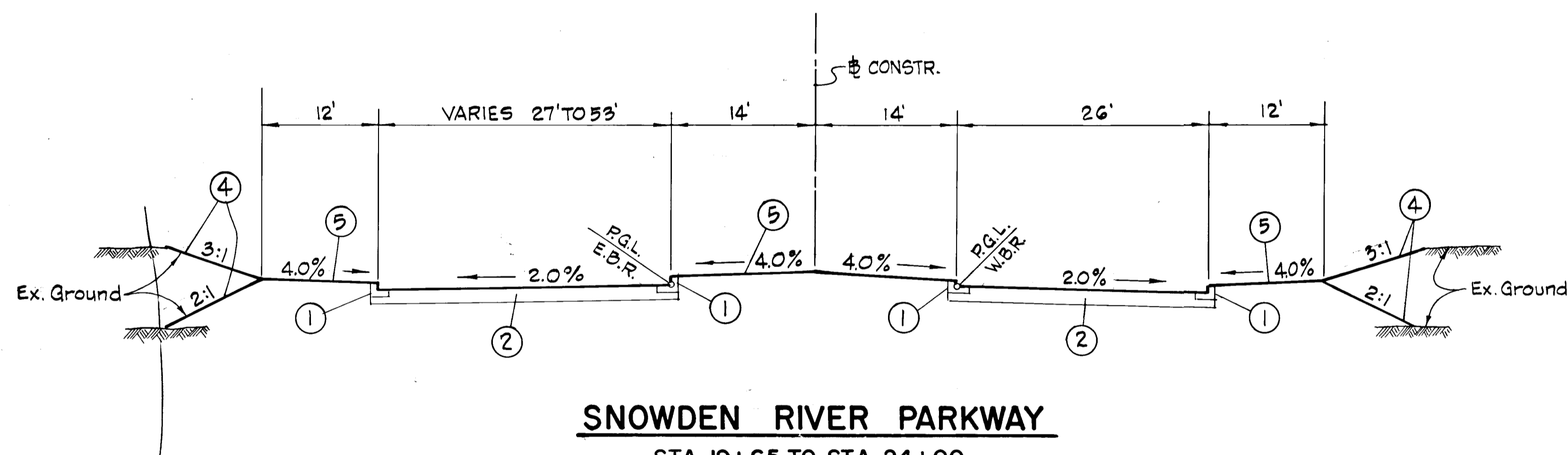




**BROKEN LAND PARKWAY**

STA. 117+ TO STA. 123+25

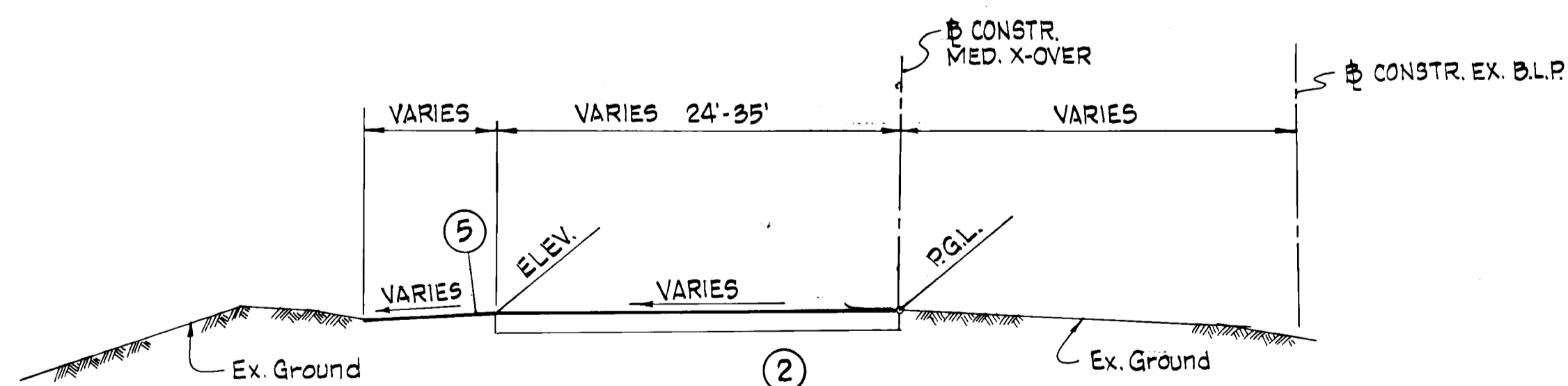
MINOR ARTERIAL  
DESIGN SPEED 50 M.P.H.



**SNOWDEN RIVER PARKWAY**

STA. 19+65 TO STA. 24+00

MINOR ARTERIAL  
DESIGN SPEED 50 M.P.H.



**BROKEN LAND PARKWAY  
MEDIAN CROSS-OVER**

P.O.T. STA. 23+25 TO STA. 29+77±  
P.O.C. STA. 125+25

MINOR ARTERIAL  
DESIGN SPEED 50 M.P.H.

DEPARTMENT OF PUBLIC WORKS:

*[Signature]* 9-20-84  
CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF PLANNING AND ZONING:

*[Signature]* 9-18-84  
CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM. DATE

Date	No	Revision Description

VILLAGE OF OWEN BROWN  
Section 6, Area 2  
6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
OWNER AND DEVELOPER  
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
THE ROUSE COMPANY  
Columbia, Maryland

CENTURY ENGINEERING, INC.  
CONSULTING ENGINEERS • PLANNERS  
TOWSON, MARYLAND 21204

AREA  
TAX MAP 42 - PART OF PARCEL 18

TITLE  
TYPICAL SECTIONS

Des By	Scale 1" = 10'	Proj No 1781
Drn By F.W.	Date 6/6/1984	Drawing No.
Chk By J.T.J.	Approved	3 OF 13

JUNE 15, 1984  
Date

*[Signature]*  
Professional Engr. No. 5790

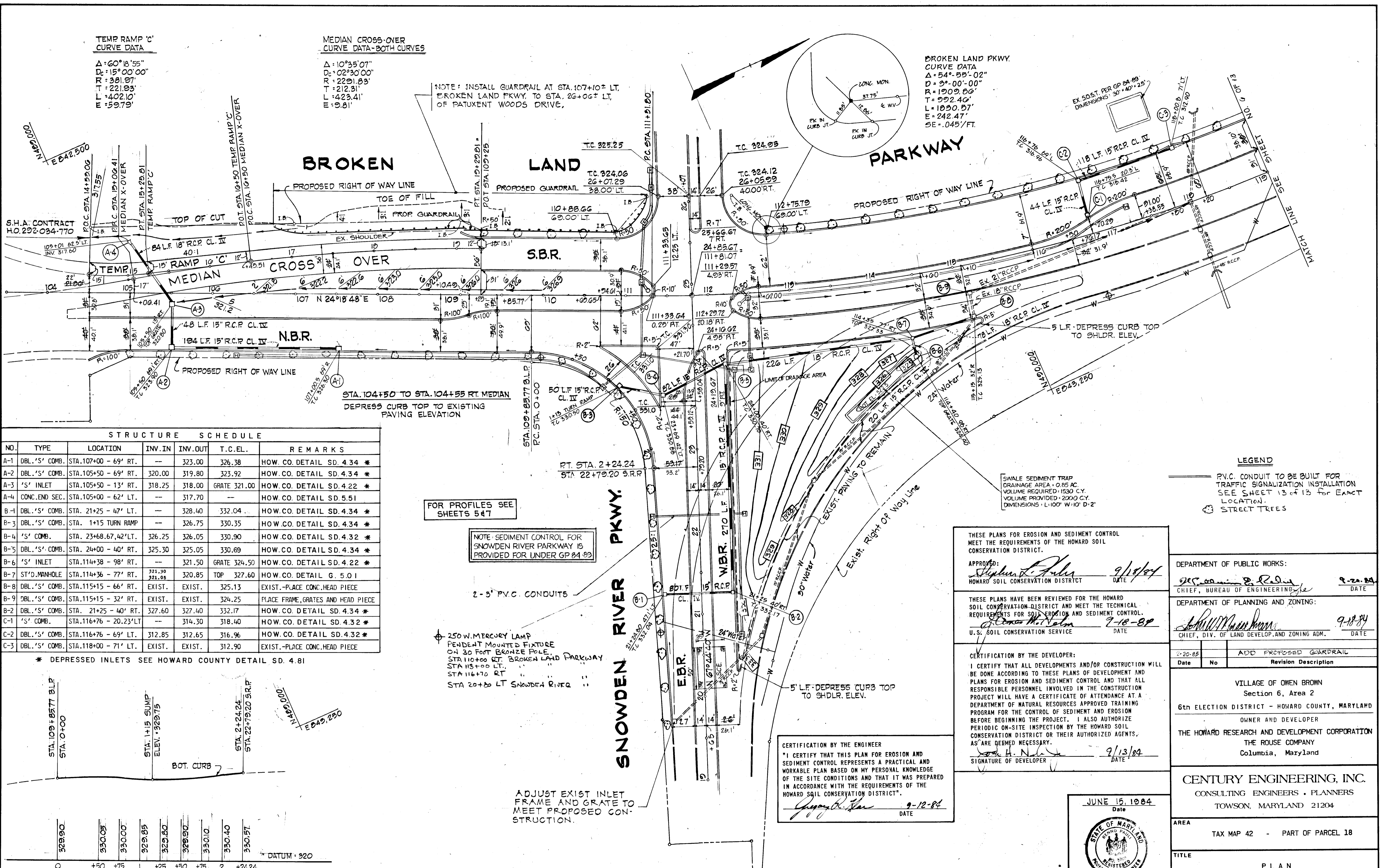


TEMP RAMP 'C'  
CURVE DATA  
 $\Delta = 60^{\circ} 18' 55''$   
 $D_c = 15^{\circ} 00' 00''$   
 $R = 381.97'$   
 $T = 221.93'$   
 $L = 402.10'$   
 $E = 59.79'$

MEDIAN CROSS-OVER  
CURVE DATA - BOTH CURVES  
 $\Delta = 10^{\circ} 35' 07''$   
 $D_c = 02^{\circ} 30' 00''$   
 $R = 2291.83'$   
 $T = 212.31'$   
 $L = 423.41'$   
 $E = 9.81'$

BROKEN LAND PKWY.  
CURVE DATA  
 $\Delta = 54^{\circ} 55' 02''$   
 $D = 3^{\circ} 00' 00''$   
 $R = 1909.86'$   
 $T = 992.40'$   
 $L = 1850.57'$   
 $E = 242.47'$   
 $SE = .045'/FT.$

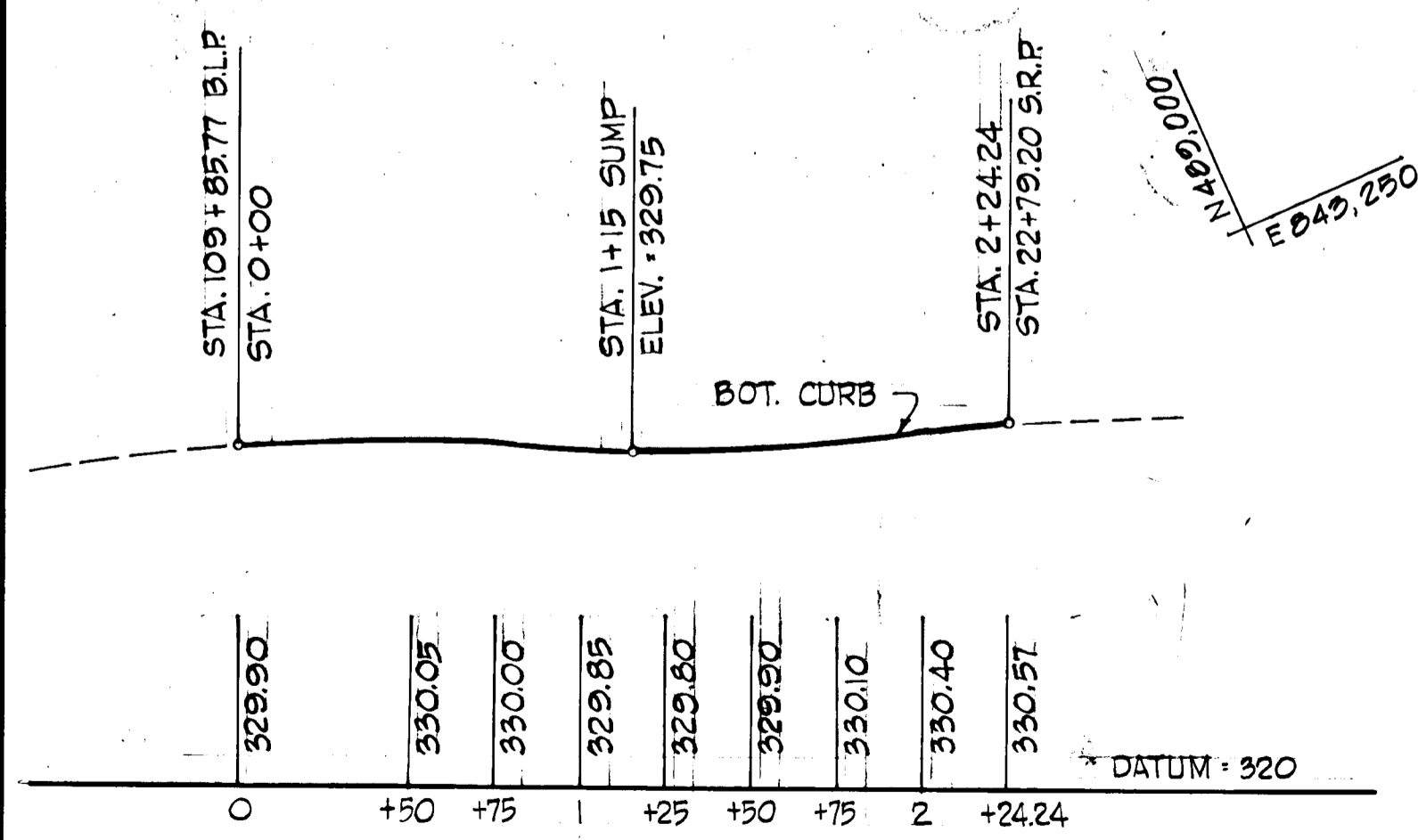
NOTE: INSTALL GUARDRAIL AT STA. 107+10= LT. BROKEN LAND PKWY. TO STA. 26+06= LT. OF PATUXENT WOODS DRIVE.



STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	T.C. EL.	REMARKS
A-1	DBL. 'S' COMB.	STA. 107+00 - 69' RT.	---	323.00	326.38	HOW. CO. DETAIL SD. 4.34 *
A-2	DBL. 'S' COMB.	STA. 105+50 - 69' RT.	320.00	319.80	323.92	HOW. CO. DETAIL SD. 4.34 *
A-3	'S' INLET	STA. 105+50 - 13' RT.	318.25	318.00	GRATE 321.00	HOW. CO. DETAIL SD. 4.22 *
A-4	CONC. END SEC.	STA. 105+00 - 62' LT.	---	317.70	---	HOW. CO. DETAIL SD. 5.51
B-1	DBL. 'S' COMB.	STA. 21+25 - 47' LT.	---	328.40	332.04	HOW. CO. DETAIL SD. 4.34 *
B-3	DBL. 'S' COMB.	STA. 1+15 TURN RAMP	---	326.75	330.35	HOW. CO. DETAIL SD. 4.34 *
B-4	'S' COMB.	STA. 23+68.67, 42' LT.	326.25	326.05	330.90	HOW. CO. DETAIL SD. 4.32 *
B-5	DBL. 'S' COMB.	STA. 24+00 - 40' RT.	325.30	325.05	330.69	HOW. CO. DETAIL SD. 4.34 *
B-6	'S' INLET	STA. 114+38 - 98' RT.	---	321.50	GRATE 324.50	HOW. CO. DETAIL SD. 4.22 *
B-7	ST'D. MANHOLE	STA. 114+36 - 77' RT.	321.30 321.05	320.85	TOP 327.60	HOW. CO. DETAIL G. 5.01
B-8	DBL. 'S' COMB.	STA. 115+15 - 66' RT.	EXIST.	EXIST.	325.13	EXIST. - PLACE CONC. HEAD PIECE
B-9	DBL. 'S' COMB.	STA. 115+15 - 32' RT.	EXIST.	EXIST.	324.25	PLACE FRAME, GRATES AND HEAD PIECE
B-2	DBL. 'S' COMB.	STA. 21+25 - 40' RT.	327.60	327.40	332.17	HOW. CO. DETAIL SD. 4.34 *
C-1	'S' COMB.	STA. 116+76 - 20, 23' LT.	---	314.30	318.40	HOW. CO. DETAIL SD. 4.32 *
C-2	DBL. 'S' COMB.	STA. 116+76 - 69' LT.	312.85	312.65	316.96	HOW. CO. DETAIL SD. 4.32 *
C-3	DBL. 'S' COMB.	STA. 118+00 - 71' LT.	EXIST.	EXIST.	312.90	EXIST. - PLACE CONC. HEAD PIECE

\* DEPRESSED INLETS SEE HOWARD COUNTY DETAIL SD. 4.81



RIGHT TURN LANE - STA. 111+00

FOR PROFILES SEE SHEETS 547

NOTE: SEDIMENT CONTROL FOR SNOWDEN RIVER PARKWAY IS PROVIDED FOR UNDER GP 84.89

2-3" P.V.C. CONDUITS  
 250 W. MERCURY LAMP PENDENT MOUNTED FIXTURE ON 30 FOOT BRONZE POLE STA. 110+00 RT. BROKEN LAND PARKWAY STA. 118+00 LT. BROKEN LAND PARKWAY STA. 116+70 RT. STA. 20+86 LT. SNOWDEN RIVER

ADJUST EXIST INLET FRAME AND GRATE TO MEET PROPOSED CONSTRUCTION.

LEGEND  
 P.V.C. CONDUIT TO BE BUILT FOR TRAFFIC SIGNALIZATION INSTALLATION SEE SHEET 13 OF 13 FOR EXACT LOCATION.  
 STREET TREES

THESE PLANS FOR EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 APPROVED: *Stephen L. Fisher* 9/13/84  
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.  
 APPROVED: *Thomas M. Nelson* 7-18-89  
 U.S. SOIL CONSERVATION SERVICE DATE

CERTIFICATION BY THE DEVELOPER:  
 I CERTIFY THAT ALL DEVELOPMENTS AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT 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.  
 APPROVED: *John A. Nelson* 9/13/84  
 SIGNATURE OF DEVELOPER DATE

CERTIFICATION BY THE ENGINEER  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
 APPROVED: *Gregory B. Jones* 9-12-84  
 DATE

DEPARTMENT OF PUBLIC WORKS:  
*John A. Nelson* 9-22-84  
 CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF PLANNING AND ZONING:  
*John A. Nelson* 9-18-84  
 CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM. DATE

Date	No	Revision Description
2-20-83		ADD PROPOSED GUARDRAIL

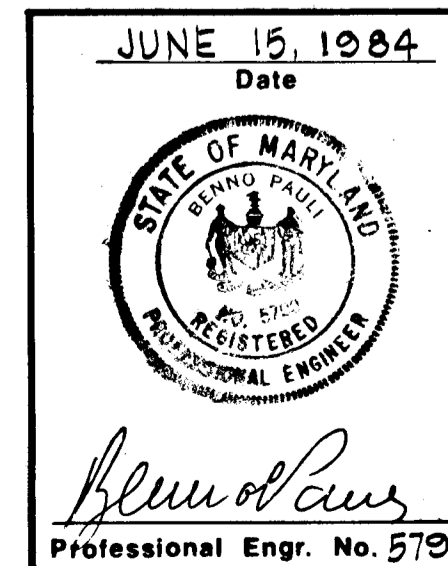
VILLAGE OF OWEN BROWN  
 Section 6, Area 2  
 6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland

CENTURY ENGINEERING, INC.  
 CONSULTING ENGINEERS - PLANNERS  
 TOWSON, MARYLAND 21204

AREA  
 TAX MAP 42 - PART OF PARCEL 18

TITLE  
 PLAN

Des By	Scale 1" = 50'	Proj No 1781
Drn By F.W.	Date 6/6/1984	Drawing No. 4 OF 13
Chk By J.T.J.	Approved	



AS-BUILT APRIL 5, 1985

FOR GRADE BACK  
SEE S.H.A. CONTR.  
HO 292-034-770

P.O.T. STA. 104+50 N.B.R.  
ELEV. = 322.42

+1.64%

P.V.C. STA. 108+00  
ELEV. = 320.16 N.B.R.

SEE MEDIAN  
X-OVER PROFILE

BEGIN TRANSITION STA. 109+13.13 N.B.R.

ELEV. = 323.00  
P.O.C. STA. 109+25 S.B.R.

LEVEL  
STA. 110+15.13 N.B.R.

TRANSITION N.B.R.

N.B.R.  
P.V.I. STA. 112+00  
ELEV. = 334.74  
V.C. = 800'  
CORR. = -5.08'  
S.S.D. = 475'

PLANE INCLINED  
STA. 111+15.13 N.B.R.

+1.64%

-3.44%

S.B.R.  
P.V.I. STA. 112+00  
ELEV. = 334.74  
V.C. = 1200'  
CORR. = -7.62'  
S.S.D. = 570'

BEGIN FULL S.E. = +.045'/FT.  
N.B.R.

S.E. = +.045'/FT.  
N.B.R.

R.G.L. N.B.R.

R.G.L. S.B.R.

P.V.T. STA. 116+00  
ELEV. = 320.96 N.B.R.

P.O.T. STA. 116+50 N.B.R.  
ELEV. = 319.24

LIMIT OF CONSTRUCTION  
N.B.R.

P.V.T. STA. 118+00  
ELEV. = 314.10 S.B.R.

FOR PLAN SEE  
SHEET 4

TRANSITION S.B.R.

BEGIN FULL S.E. = -.045'/FT.  
S.B.R.

BEGIN TRANSITION STA. 110+48.41 S.B.R.

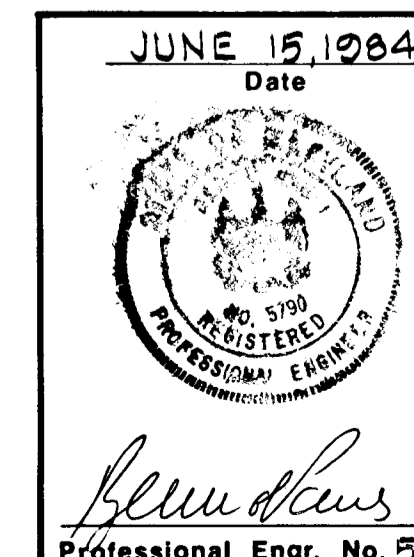
DATUM = 290  
N.B.R. S.B.R.

322.44 322.42	323.25 323.25	324.05 324.05	324.95 324.95	325.75 325.75	326.50 326.50	327.32 327.32	328.20 328.20	329.00 329.00	329.92 329.92	328.05 329.95 328.10	328.07 330.20 328.10	327.91 330.28 328.01	327.90 330.29 327.90	327.52 330.08 327.55	327.12 329.67 327.15	326.60 329.10 326.60	326.01 328.42 326.02	325.30 327.88 325.30	324.90 328.54 324.90	323.60 329.42 323.60	322.50 324.08 322.50	321.39 322.60 321.39	320.18 320.95 320.18	319.60 319.24 319.60	317.35 317.35	315.60 315.60	314.12 314.12	312.40 312.40	310.70 310.66 310.70
------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	------------------	------------------	------------------	------------------	-------------------------

DATUM = 290

**BROKEN LAND PARKWAY N.B.R. & S.B.R.**

DEPARTMENT OF PUBLIC WORKS:		
<i>[Signature]</i>		9-20-84
CHIEF, BUREAU OF ENGINEERING		DATE
DEPARTMENT OF PLANNING AND ZONING:		
<i>[Signature]</i>		9-18-84
CHIEF, DIV. LAND DEVELOP. AND ZONING ADM.		DATE
Date	No	Revision Description
VILLAGE OF OWEN BROWN Section 6, Area 2		
6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER		
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE COMPANY Columbia, Maryland		
CENTURY ENGINEERING, INC. CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204		
AREA TAX MAP 42 - PART OF PARCEL 18		
TITLE PROFILES		
Des By	Scale 1" = 50' HORIZ. 1" = 5' VERTICAL	Proj No. 1781
Drn By F.W.	Date 6/6/1984	Drawing No.
Chk By J.T.J.	Approved	5 OF 13



AS-BUILT APRIL 8, 1985



CERTIFICATION BY THE ENGINEER  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*James R. Ka* 9-12-84  
 DATE

DEPARTMENT OF PUBLIC WORKS:  
*James R. Ka* 9-20-84  
 CHIEF, BUREAU OF ENGINEERING DATE  
 DEPARTMENT OF PLANNING AND ZONING:  
*John M. Macchman* 9-18-84  
 CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM. DATE

VILLAGE OF OWEN BROWN  
 Section 6, Area 2  
 6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland  
 CONSULTING ENGINEERS  
 TOWSON, MARYLAND

TAX MAP 42 - PART OF PARCEL 18  
 PLAN AND PROFILE  
 1" = 50'  
 6/6/1984  
 J.T.J.  
 1781  
 DRAWING NO.  
 6 OF 10

STA. 121+80 LT. - 60' LT.

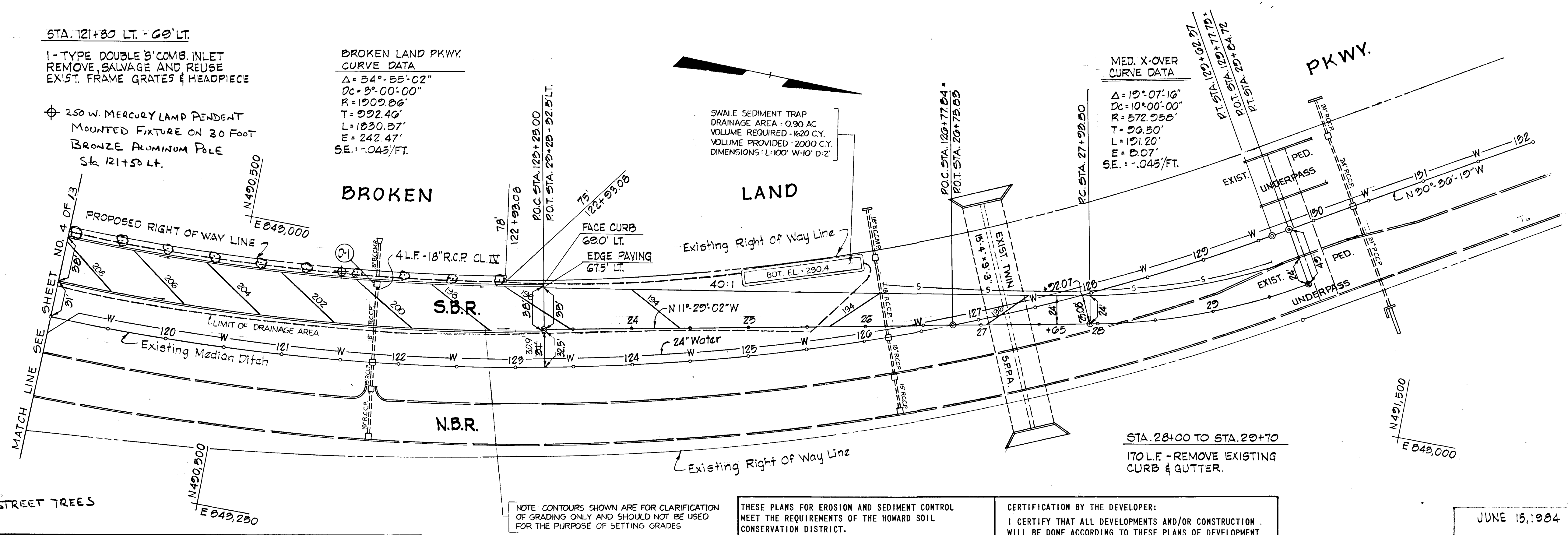
1-TYPE DOUBLE 'S' COMB. INLET  
 REMOVE, SALVAGE AND REUSE  
 EXIST. FRAME GRATES & HEADPIECE

250 W. MERCURY LAMP PENDENT  
 MOUNTED FIXTURE ON 30 FOOT  
 BRONZE ALUMINUM POLE  
 STA. 121+50 LT.

BROKEN LAND PKWY.  
 CURVE DATA  
 $\Delta = 34^\circ - 55' - 02''$   
 $DC = 3^\circ - 00' - 00''$   
 $R = 1900.06'$   
 $T = 292.46'$   
 $L = 1030.57'$   
 $E = 242.47'$   
 $SE = -.045'/FT.$

SWALE SEDIMENT TRAP  
 DRAINAGE AREA - 0.90 AC  
 VOLUME REQUIRED - 1620 C.Y.  
 VOLUME PROVIDED - 2000 C.Y.  
 DIMENSIONS: L'100' W'10' D'2'

MED. X-OVER  
 CURVE DATA  
 $\Delta = 19^\circ - 07' - 16''$   
 $DC = 10^\circ - 00' - 00''$   
 $R = 572.250'$   
 $T = 20.50'$   
 $L = 191.20'$   
 $E = 0.07'$   
 $SE = -.045'/FT.$



STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV. IN	INV. OUT	T.C. EL.	REMARKS
D-1	DBL'S COMB.	STA. 121+80.69' LT.	295.15	295.00	299.92	REMOVE EXIST. INLET

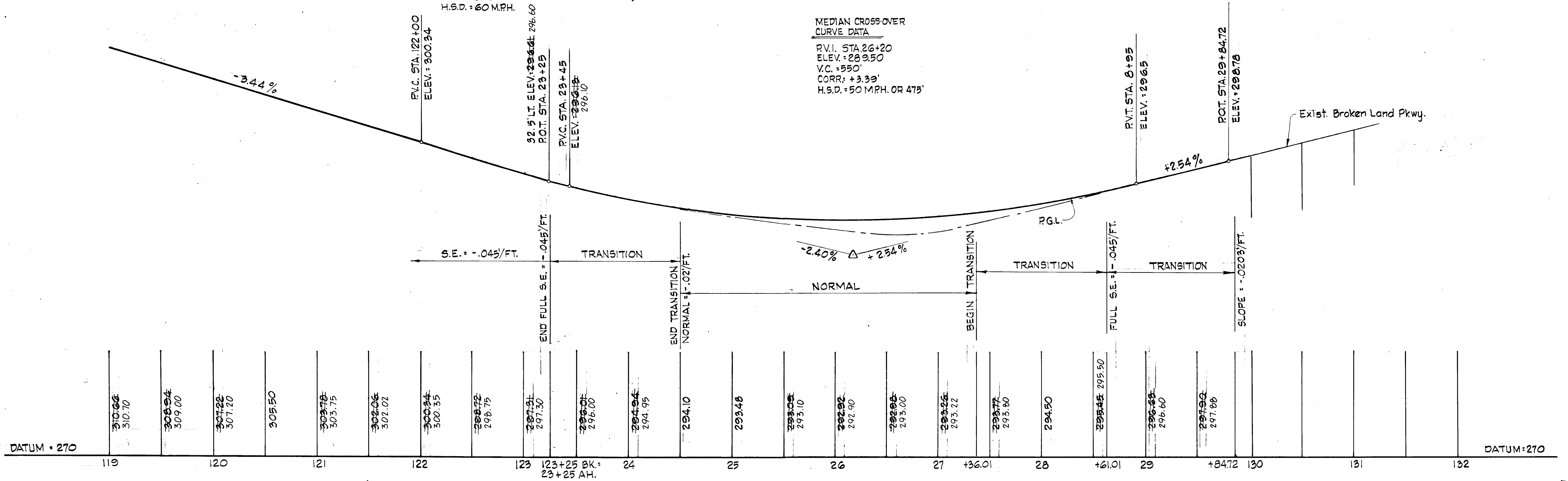
THESE PLANS FOR EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 APPROVED: *Stephen L. Gunders* 9-18-84  
 HOWARD SOIL CONSERVATION DISTRICT DATE

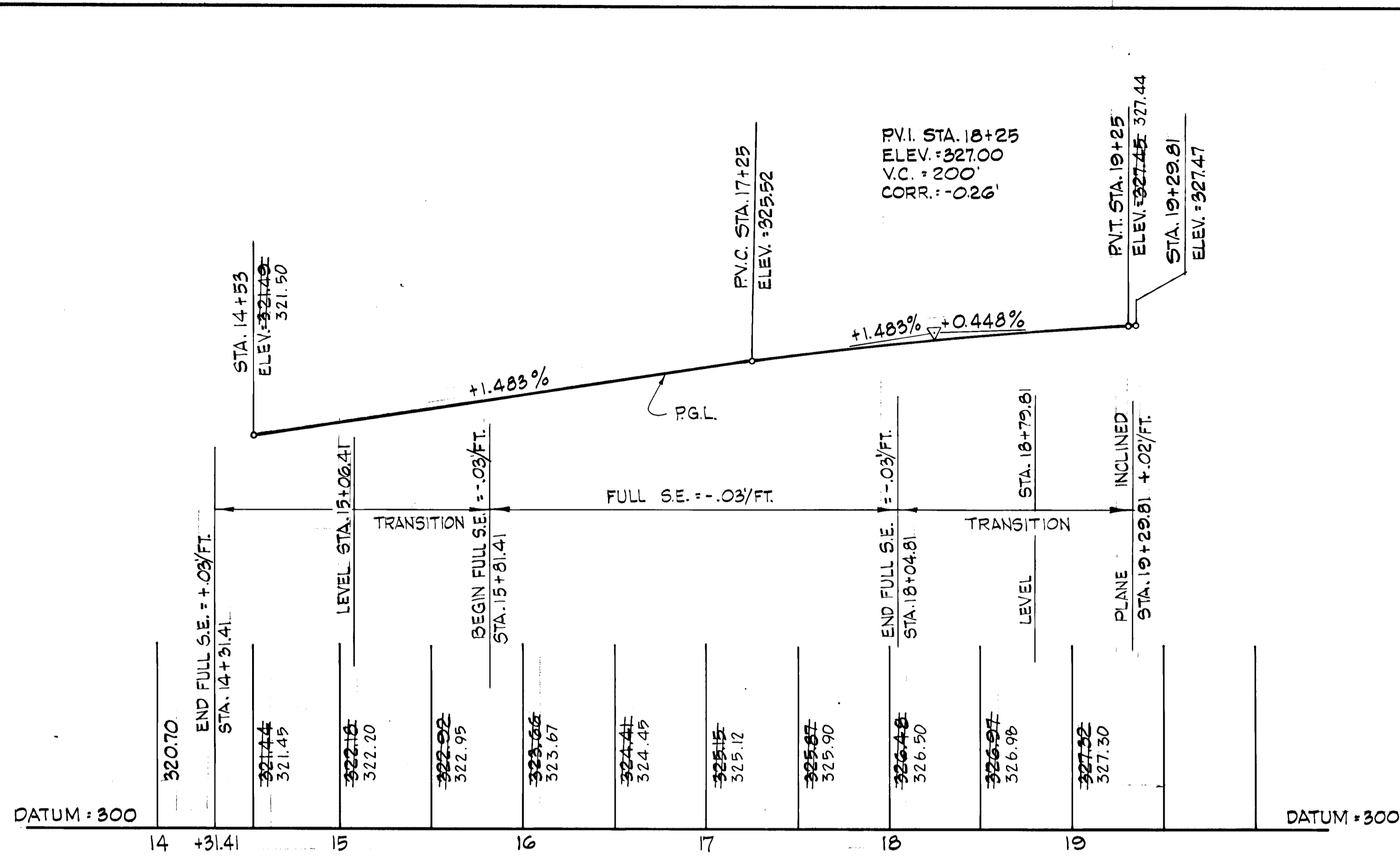
CERTIFICATION BY THE DEVELOPER:  
 I CERTIFY THAT ALL DEVELOPMENTS AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT 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 H. Niles* 9/13/84  
 SIGNATURE OF DEVELOPER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.  
*James M. Mittleman* 9-8-84  
 U.S. SOIL CONSERVATION SERVICE DATE

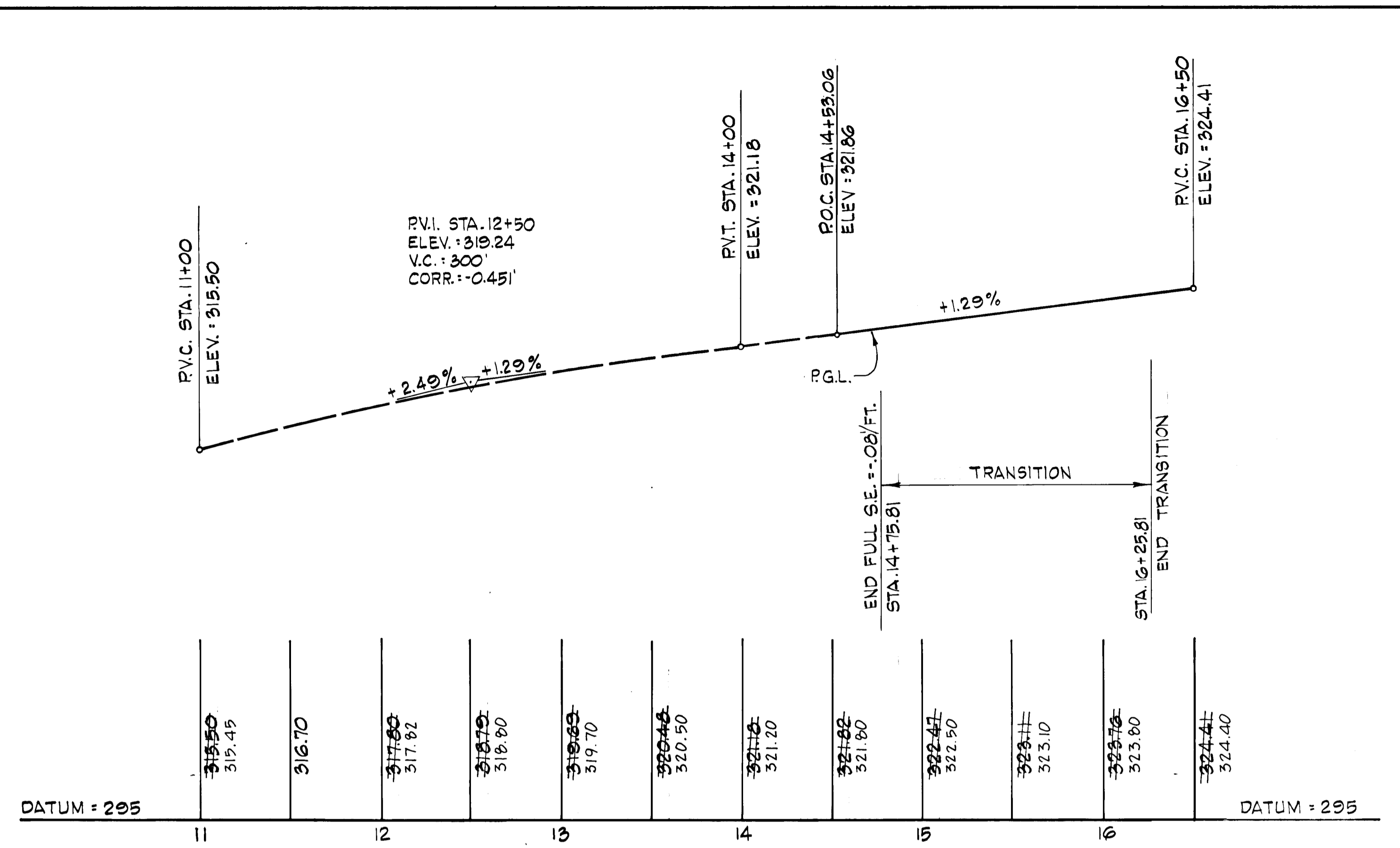
S.B.R.  
 CURVE DATA  
 P.V.I. STA. 126+50  
 ELEV. = 284.26  
 V.C. = 500'  
 CORR. = 0.28'  
 H.S.D. = 60 MPH.

MEDIAN CROSS-OVER  
 CURVE DATA  
 P.V.I. STA. 26+20  
 ELEV. = 289.50  
 V.C. = 550'  
 CORR. = +3.39'  
 H.S.D. = 50 MPH. OR 475'

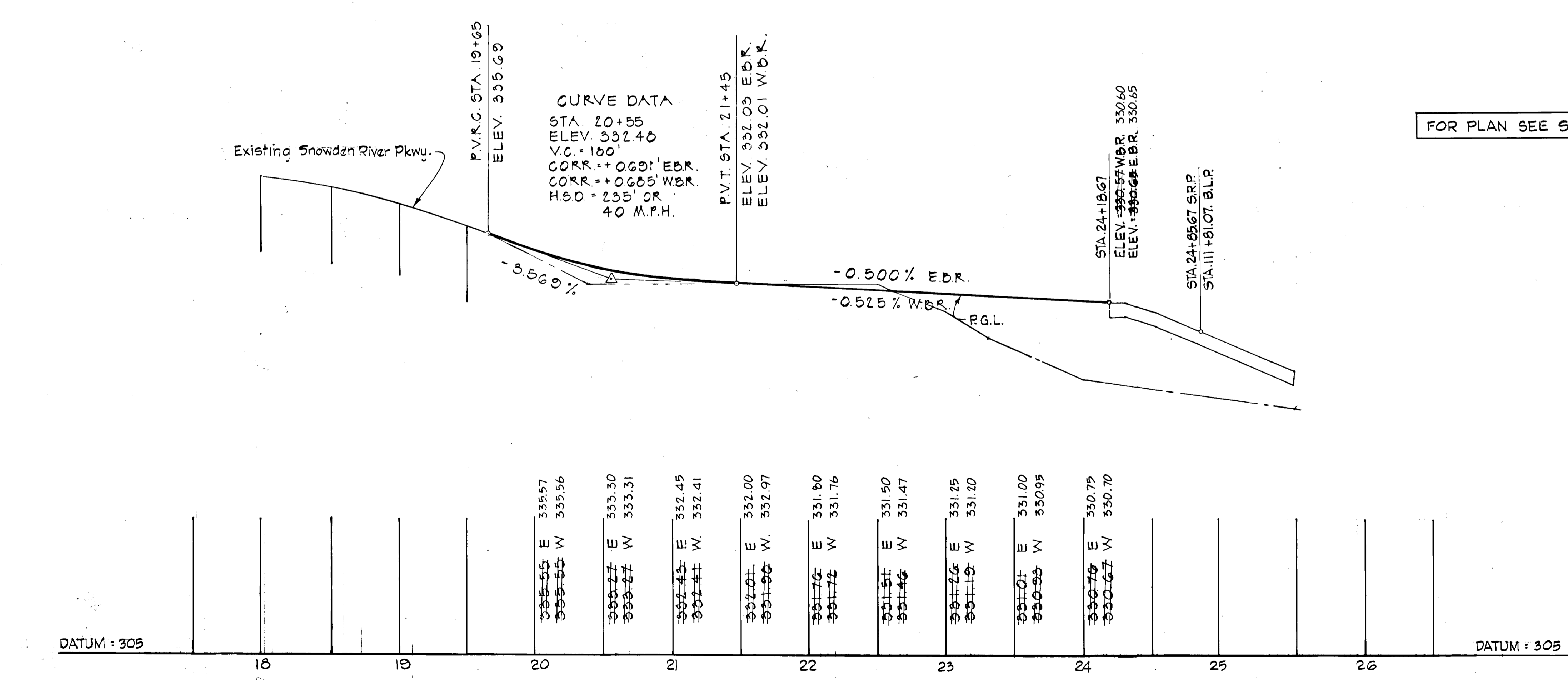




**MEDIAN CROSS-OVER**  
TIE TO SHA ROUTE 32 INTERCHANGE



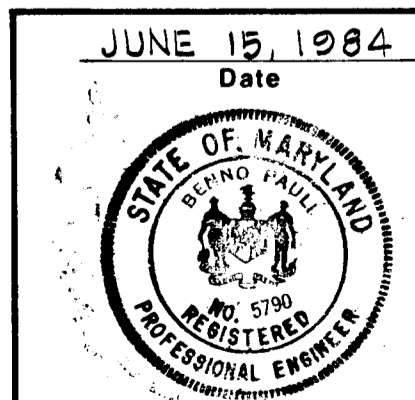
**TEMPORARY RAMP 'C'**  
TIE TO SHA ROUTE 32 INTERCHANGE



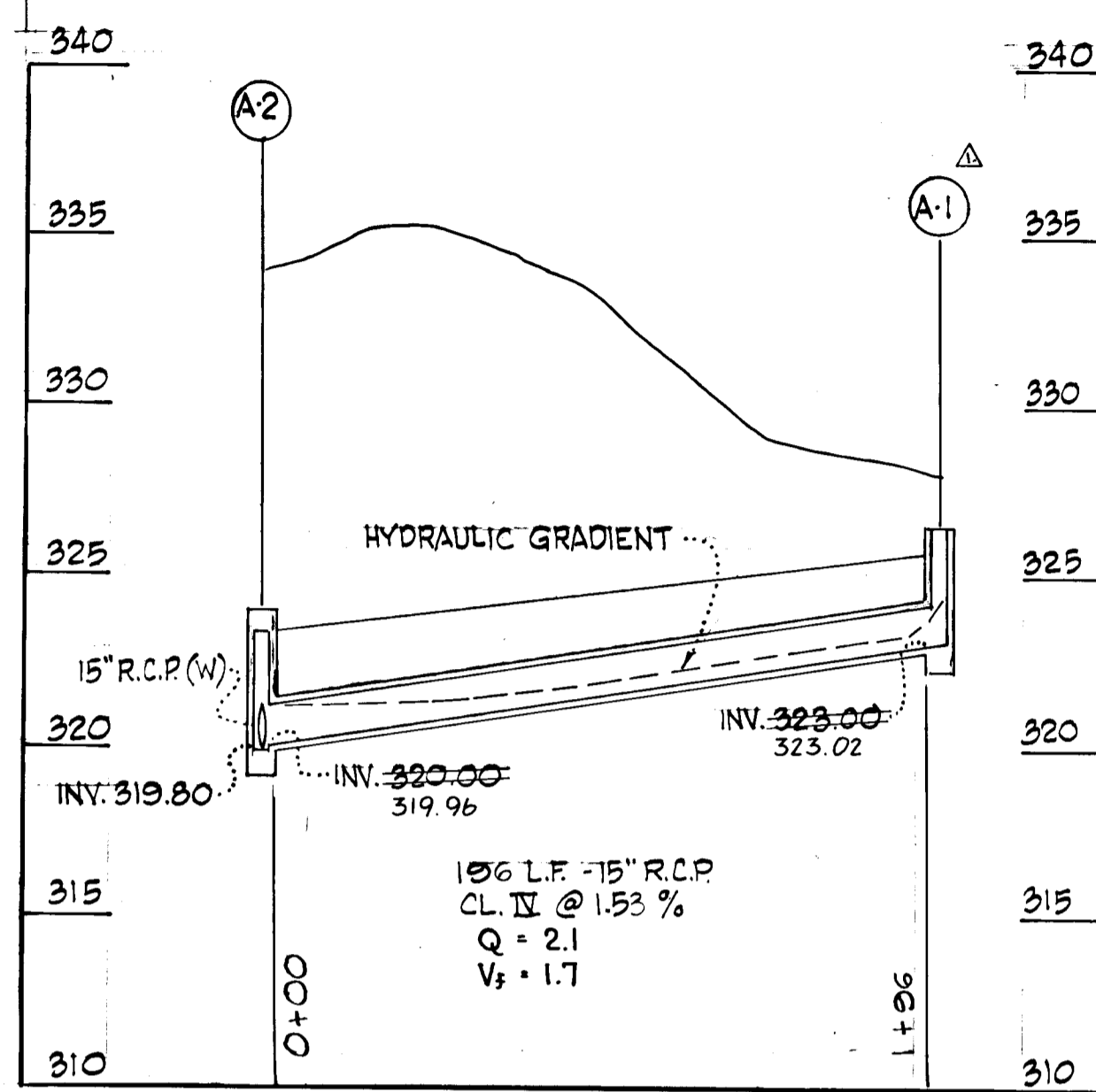
**SNOWDEN RIVER PARKWAY**

FOR PLAN SEE SHEET 4

DEPARTMENT OF PUBLIC WORKS:		9-20-84	
CHIEF, BUREAU OF ENGINEERING		DATE	
DEPARTMENT OF PLANNING AND ZONING:		7-18-84	
CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM.		DATE	
Date	No	Revision Description	
VILLAGE OF OWEN BROWN Section 6, Area 2 6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE COMPANY Columbia, Maryland			
<b>CENTURY ENGINEERING, INC.</b> CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204			
AREA TAX MAP 42 - PART OF PARCEL 18			
TITLE PROFILES			
Des By	Scale 1" = 50' HORIZ. 1" = 5' VERTICAL	Proj No 1781	
Drn By F.W.	Date 6/6/1984	Drawing No.	
Chk By J.T.J.	Approved	7 OF 13	

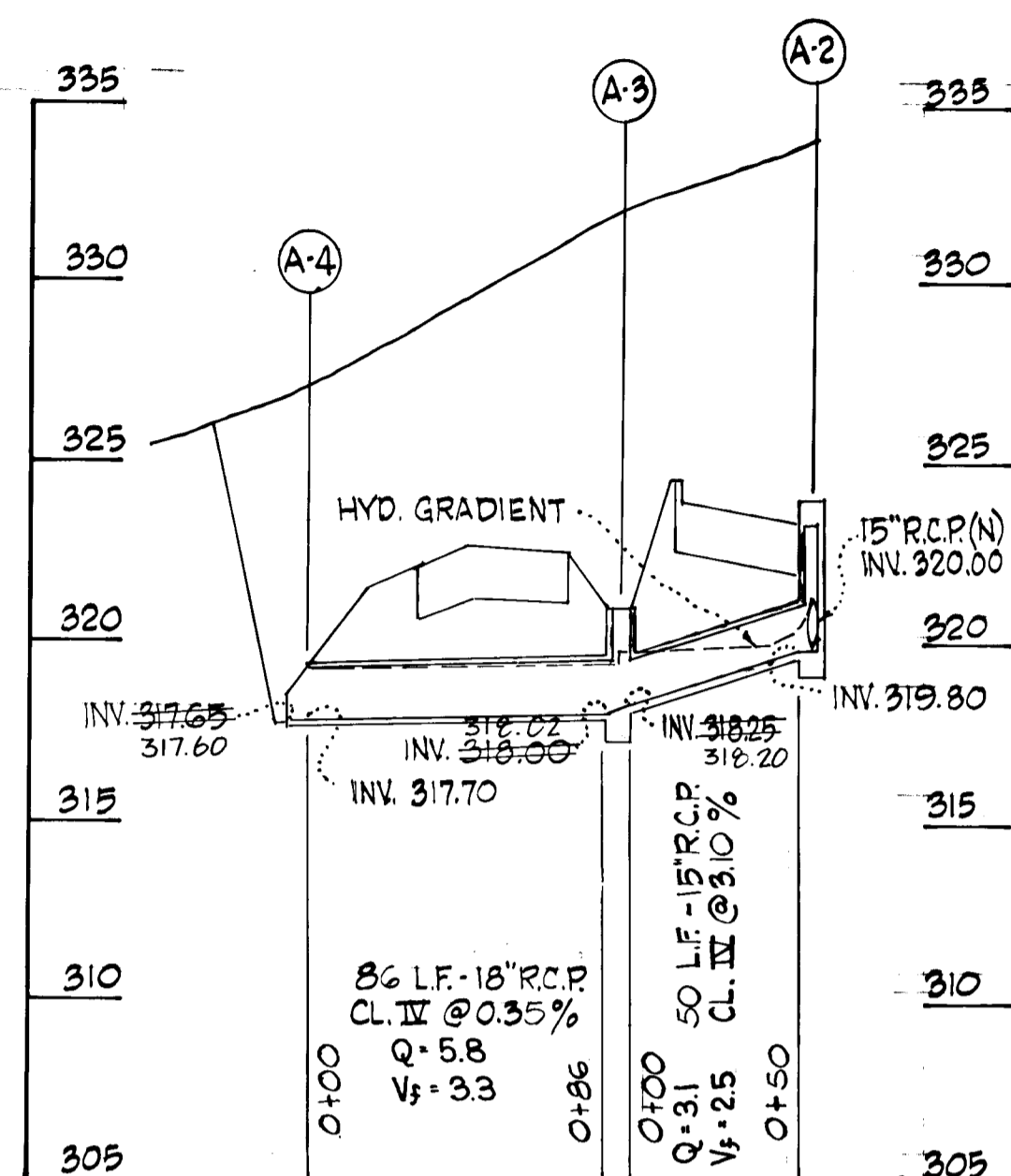


AS-BUILT APRIL 8, 1985



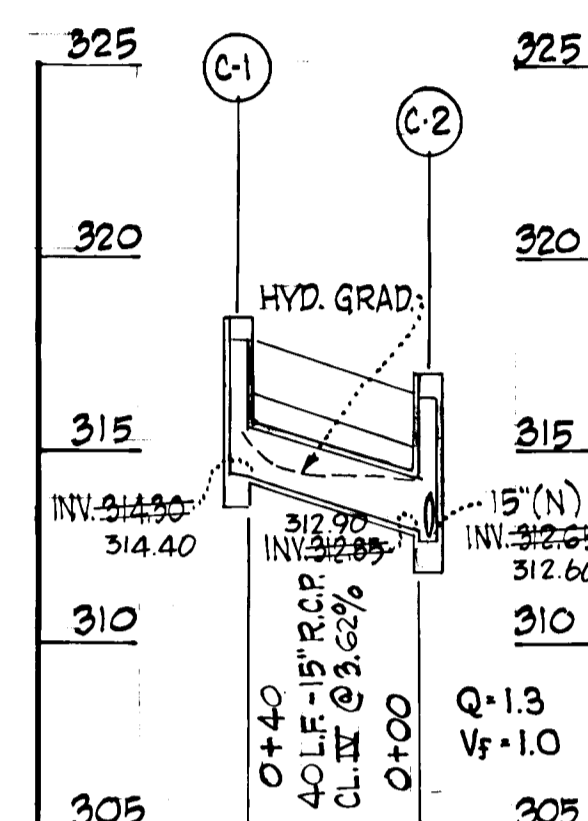
**SYSTEM 'A'**

STA. 105+50 TO STA. 107+50 RT.



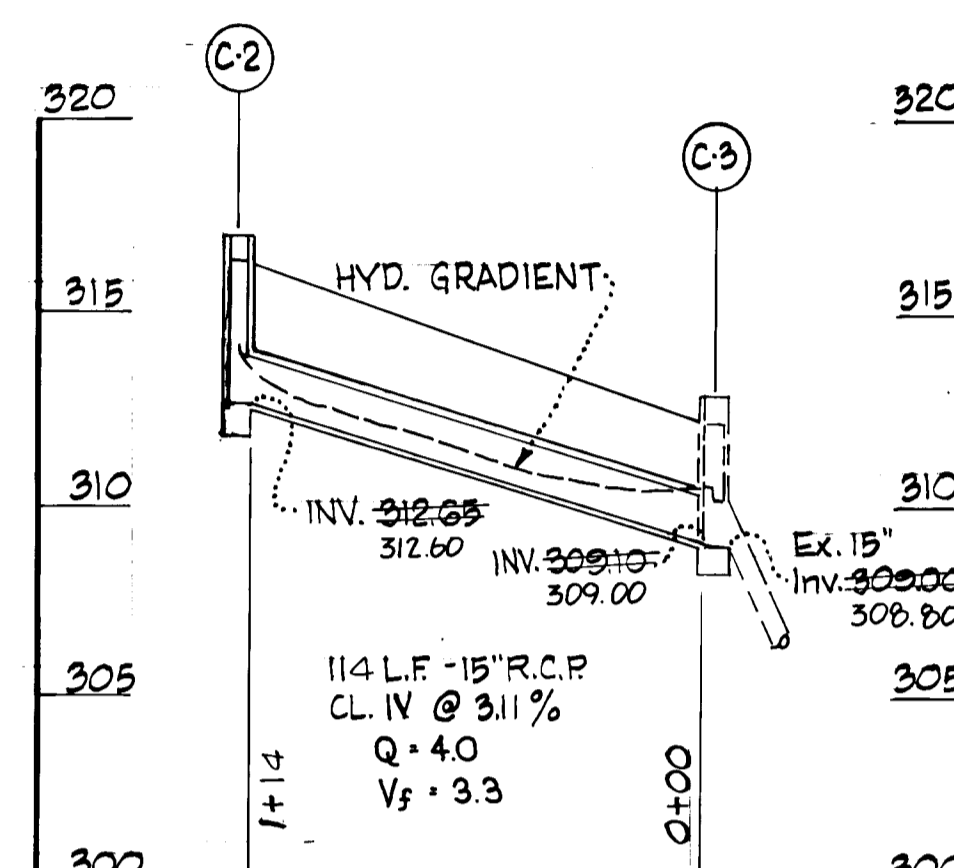
**SYSTEM 'A'**

STA. 105+50



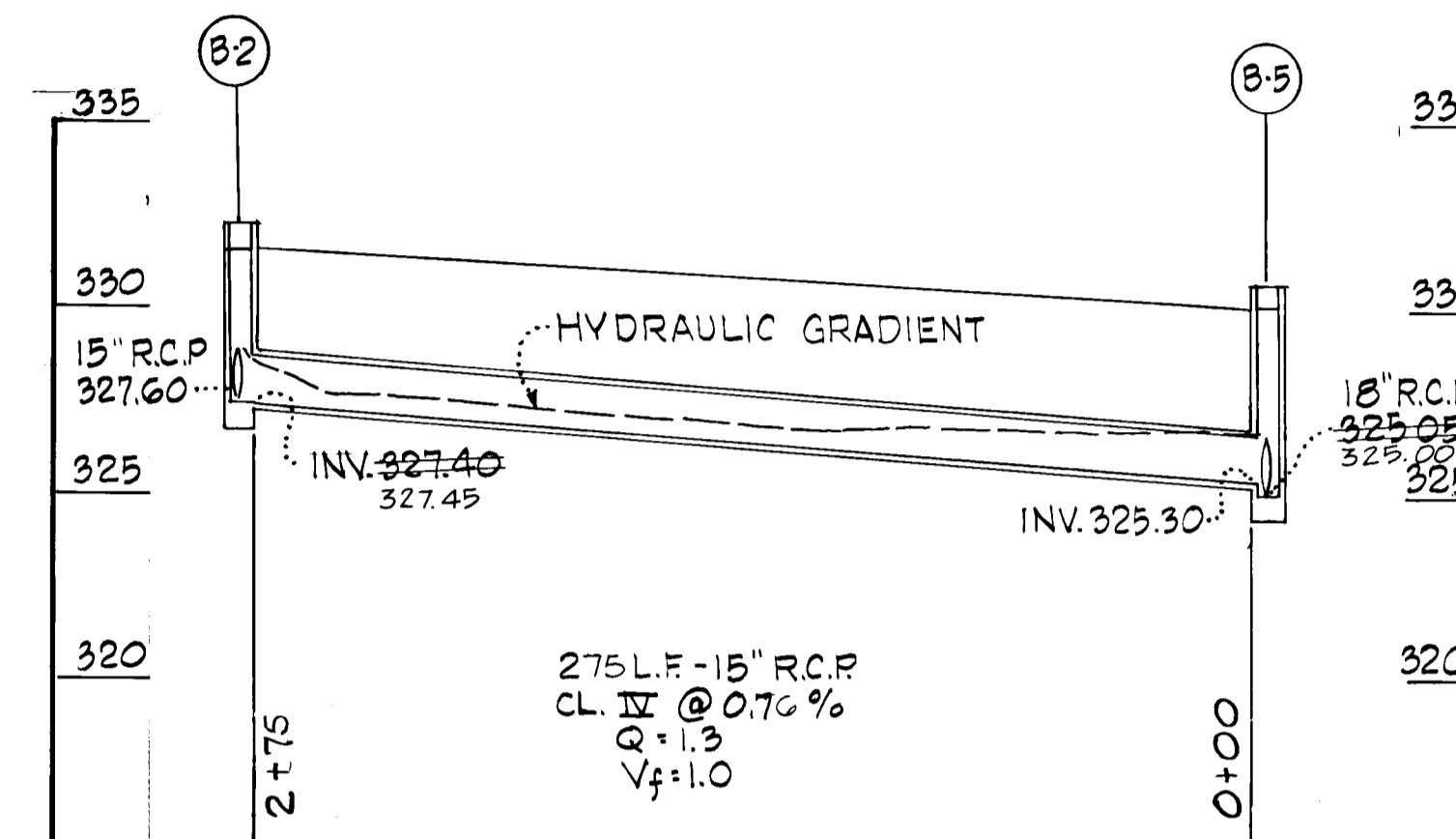
**SYSTEM 'C'**

STA. 116+76



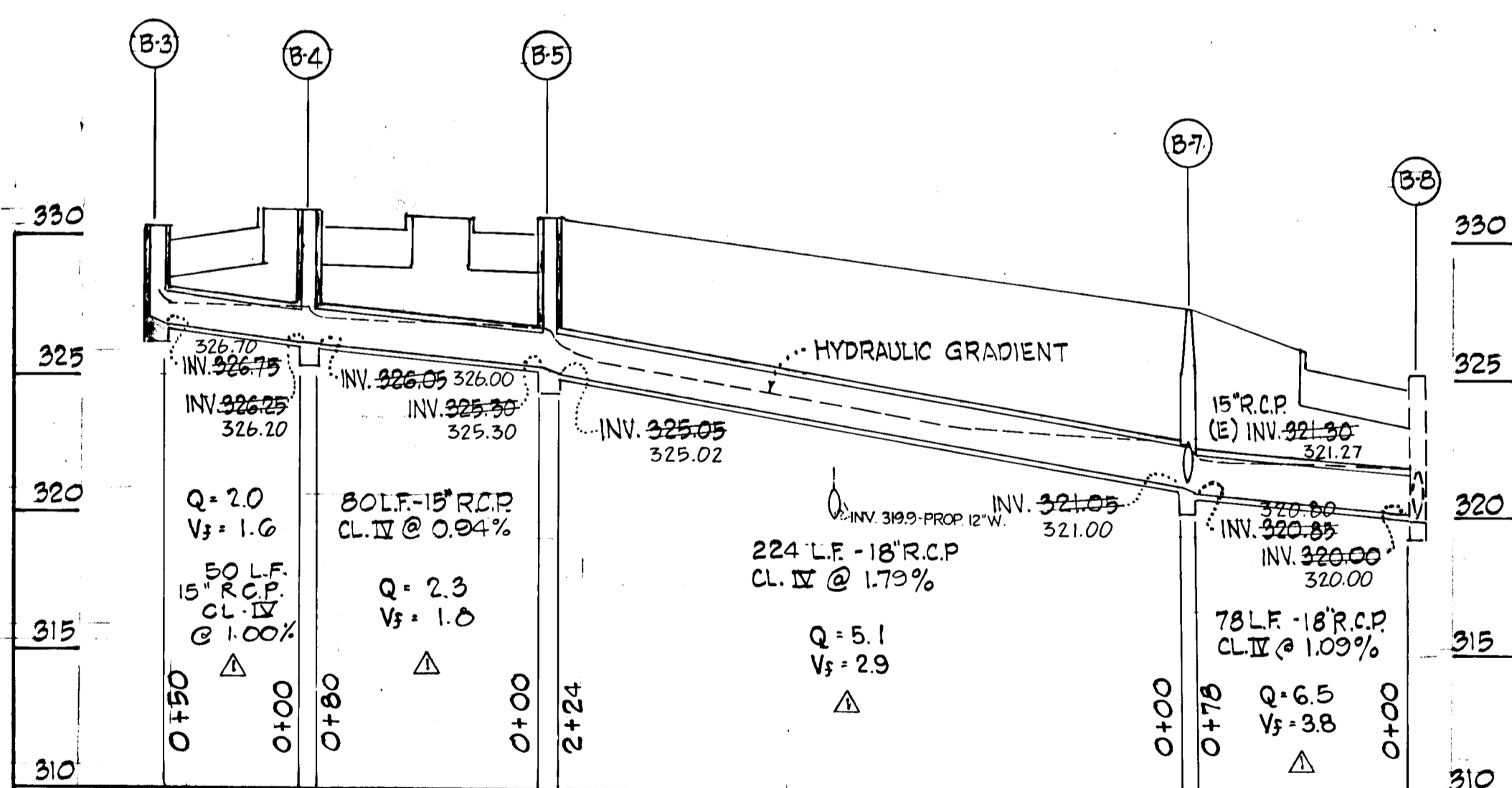
**SYSTEM 'C'**

STA. 116+76 TO STA. 118+00 LT.



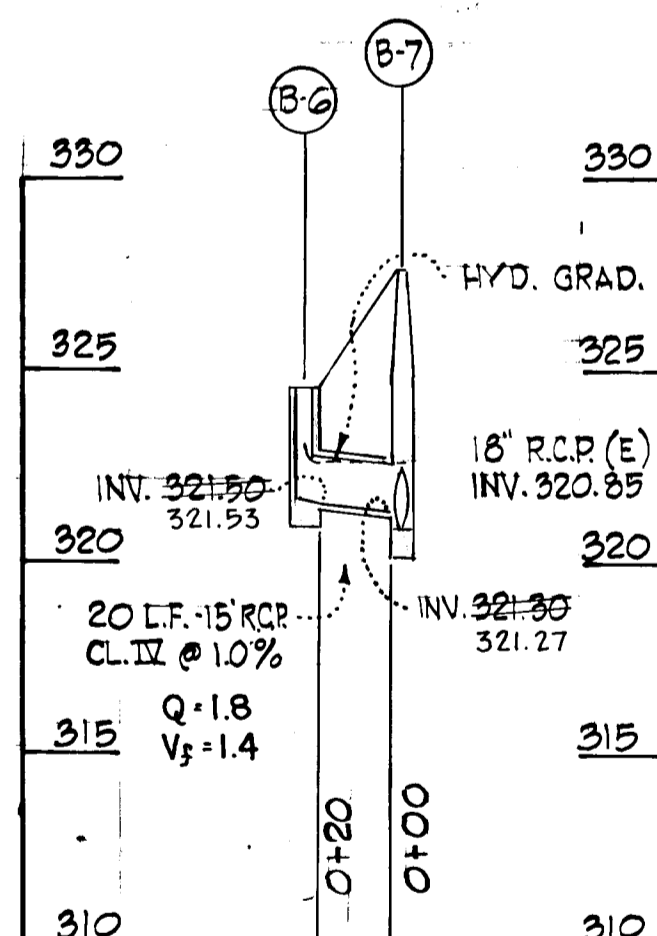
**SYSTEM 'B'**

STA. 21+25 TO STA. 24+00 RT.



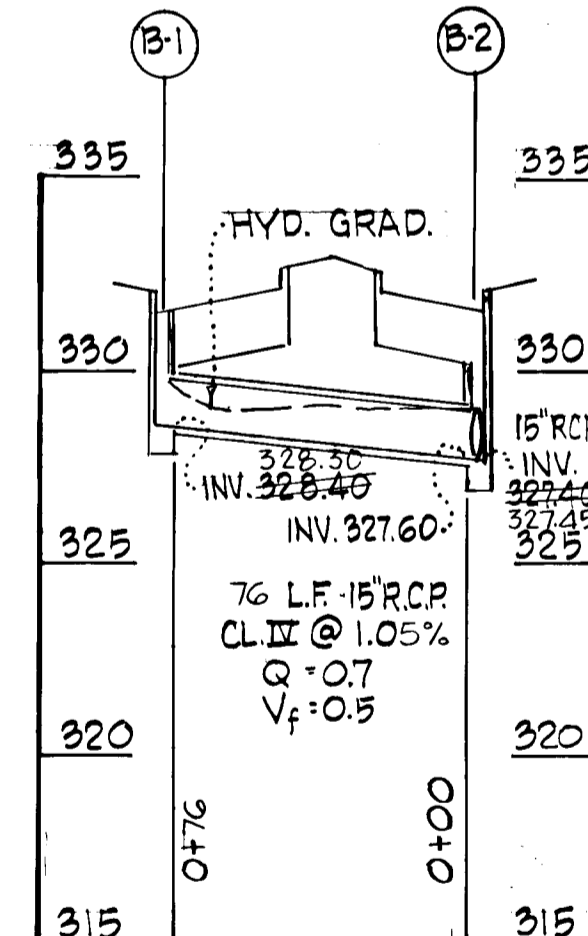
**SYSTEM 'B'**

STA. 111+00 TO STA. 115+00



**SYSTEM 'B'**

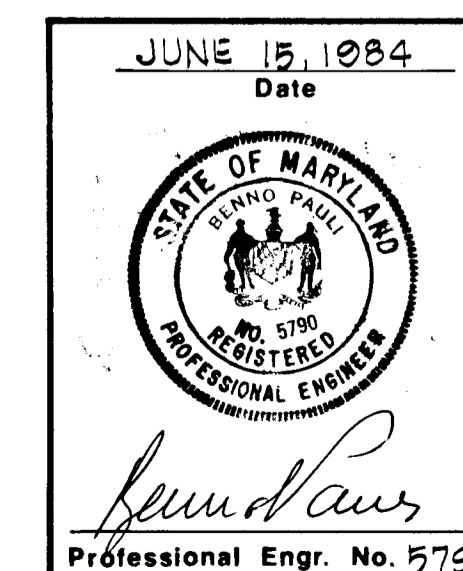
STA. 114+36 RT.



**SYSTEM 'B'**

STA. 21+25 S.R.P.

DEPARTMENT OF PUBLIC WORKS:		DATE	
CHIEF, BUREAU OF ENGINEERING		9-29-84	
DEPARTMENT OF PLANNING AND ZONING:		DATE	
CHIEF, DIV. OF LAND DEVELOP. & ZONING ADM.		9-18-84	
8-1-85	2	Revisions per notes issued	7-31-85
1-4-85	1	Revised System to match prior data	1-21-85
Date	No	Revision Description	
VILLAGE OF OWEN BROWN Section 6, Area 2			
6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND			
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE COMPANY Columbia, Maryland			
CENTURY ENGINEERING, INC. CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204			
AREA TAX MAP 42 - PART OF PARCEL 18			
TITLE STORM DRAIN PROFILES			
Des By	Scale 1" = 50' HOR. / 1" = 5' VERT.	Proj No	1731
Drn By F.W.	Date 6-6-84	Drawing No.	8 OF 13
Chk By J.T.J.	Approved		

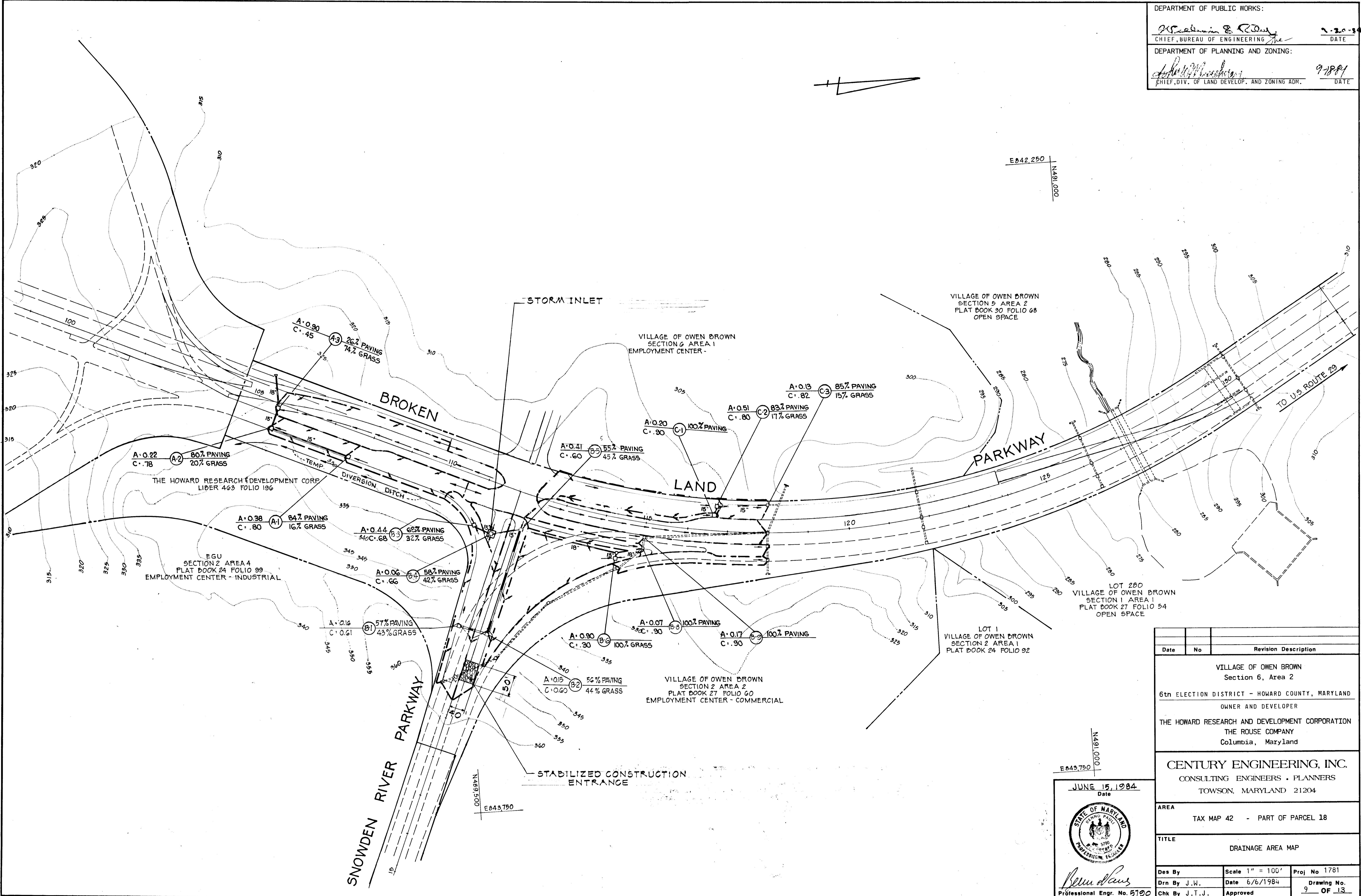


AS-BUILT APRIL 6, 1985



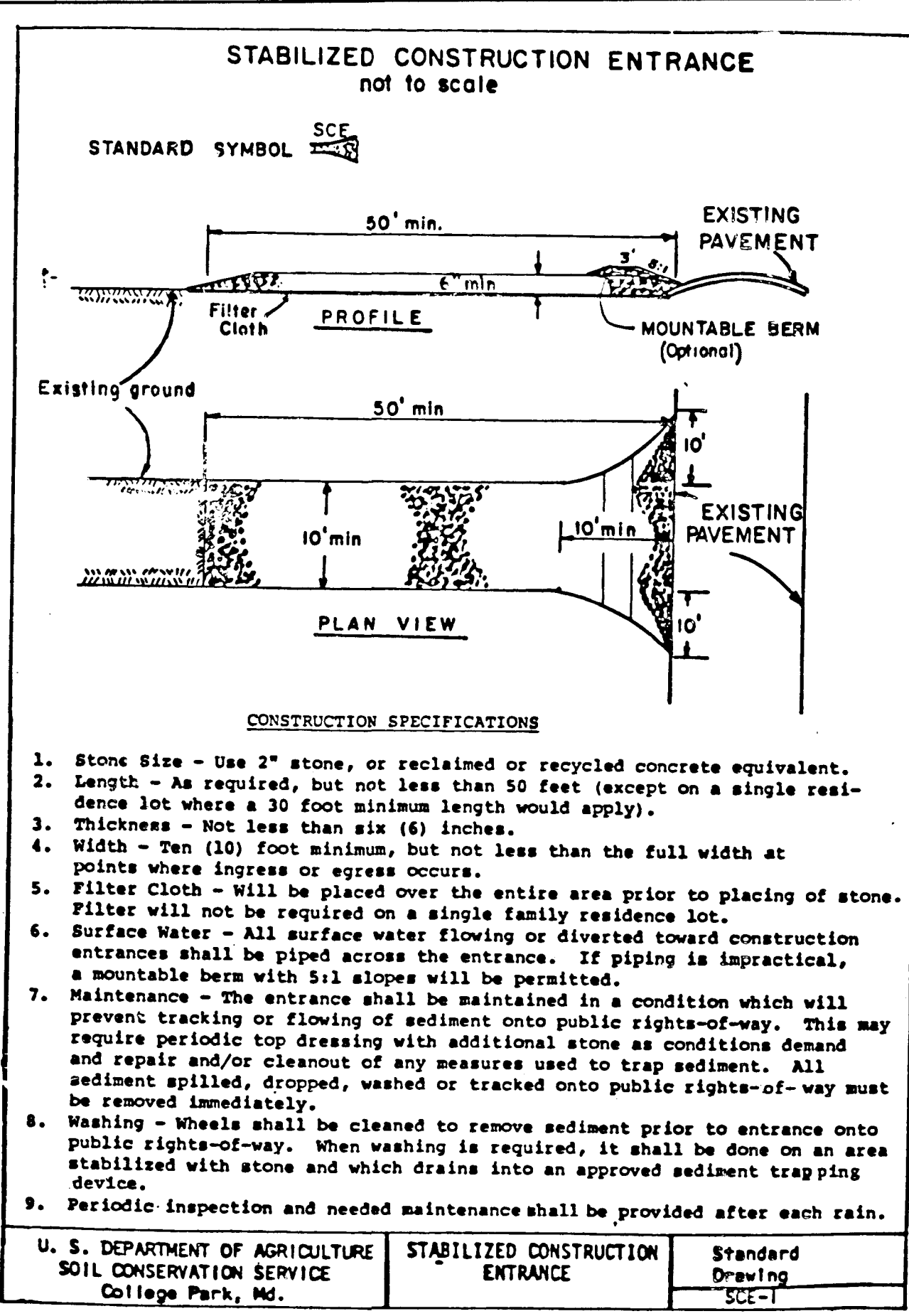
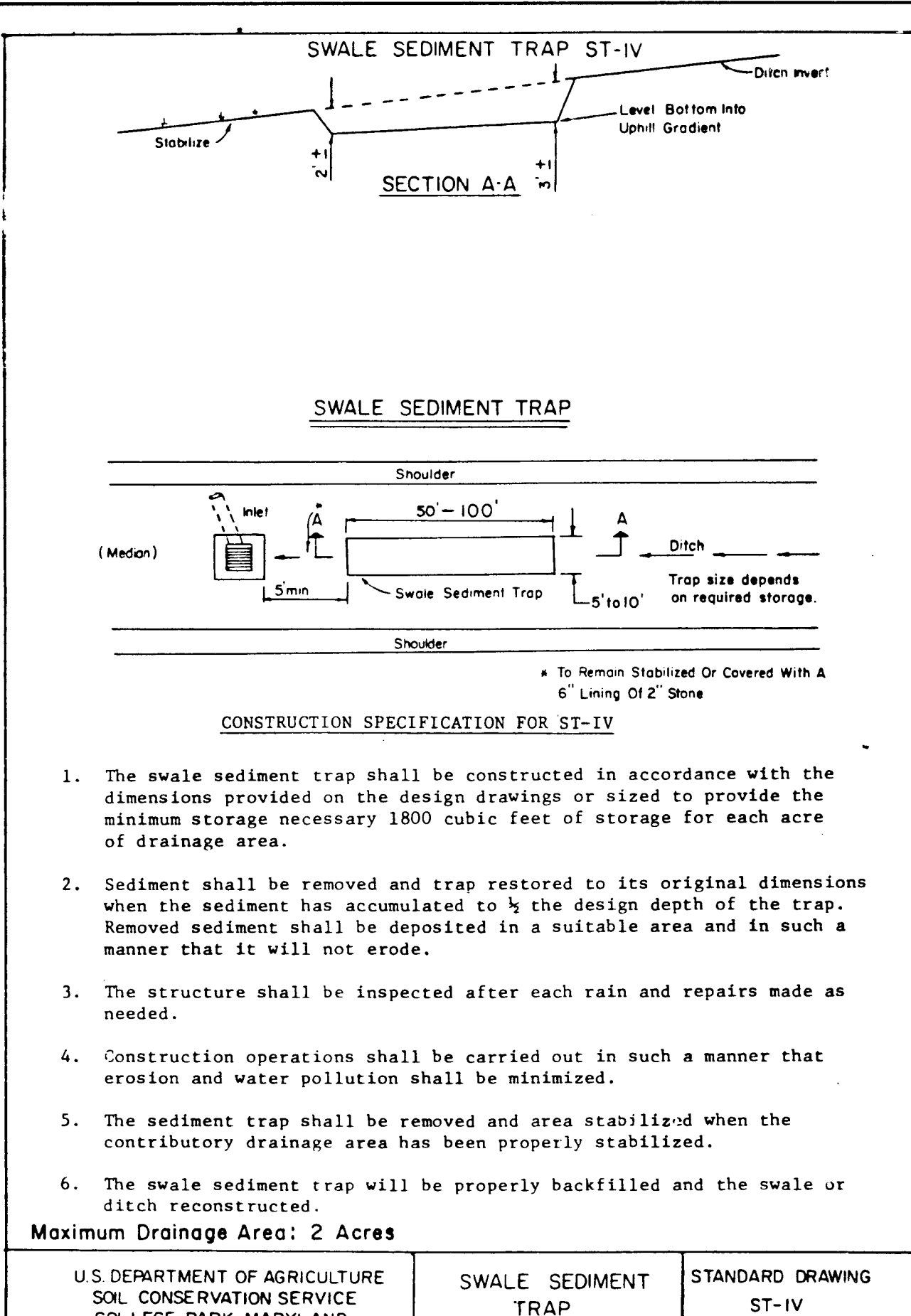
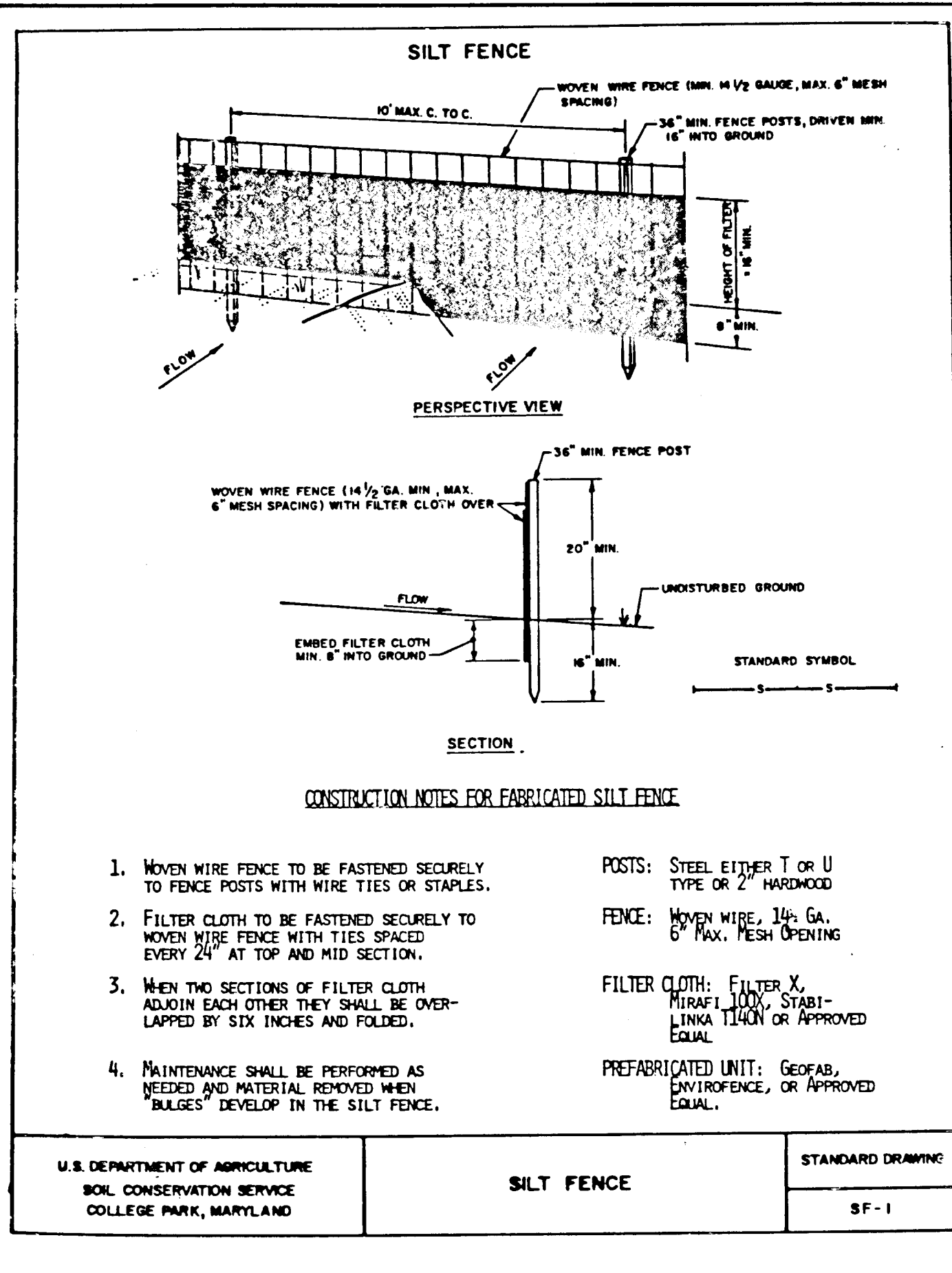
DEPARTMENT OF PUBLIC WORKS:  
*William E. Kelly* 7-20-84  
 CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF PLANNING AND ZONING:  
*John W. ...* 9-18-84  
 CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM. DATE



Date	No	Revision Description
		VILLAGE OF OWEN BROWN Section 6, Area 2
		6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE COMPANY Columbia, Maryland
		CENTURY ENGINEERING, INC. CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204
		AREA TAX MAP 42 - PART OF PARCEL 18
		TITLE DRAINAGE AREA MAP
Des By	Scale 1" = 100'	Proj No 1781
Drn By J.W.	Date 6/6/1984	Drawing No.
Chk By J.T.J.	Approved	9 OF 13

E043,750  
 N491,000  
 Date  
 JUNE 15, 1984  
 State of Maryland Professional Engineer Seal  
*John W. ...*  
 Professional Engr. No. 5700



**GENERAL NOTES**

- A minimum 24 hours notice must be given to the Howard County Office of Inspection and Permit prior to the start of any construction (922-2070).
- All sediment control structures will be installed in accordance with the standards and specifications for soil erosion and sediment control in developing areas as prepared by the U.S. Department of Agriculture Soil Conservation Service.
- Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
- All disturbed areas are to be dressed and stabilized according to the temporary or permanent seeding schedules as soon as proper weather conditions exist for the establishment of a permanent vegetative cover.
- Sediment will be removed from traps when the depth reaches the clean out elevation shown on the plans.
- Fertilizer and lime rates may be changed through authorization by the Howard Soil Conservation District if soil tests determine a reduction in the specified rates is justified.
- 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.
- References called for on the Sediment Control Construction Plan and Details are made to the standards and specifications for soil erosion and sediment control in developing areas.

**TEMPORARY SEEDING**

Area to be seeded shall be recently loosened. If the ground is packed, crusted or hard, the top layer of soil shall be loosened, by racking or other acceptable means.

- Apply 10-20-10 fertilizer (or equivalent) at the rate of 25 lbs. per 1000 square feet.
- Where soil is known to be highly acid, apply dolomitic limestone at the rate of 1 ton per acre.
- Work both into soil and seed with Cyclone Seeder, Drill, Cultivator Seeder or Hydroseeder (slurry will include seed and fertilizer) at the rate of 40 lbs. per acre of Italian or Perennial Ryegrass.
- Mulch with unweathered small grain straw at the rate of 1 1/2 to 2 tons per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gallons per 1000 square foot.

**PERMANENT SEEDING**

Final stabilization will take place as soon as possible as weather conditions permit, as follows:

- Apply dolomitic limestone at the rate of 2 tons per acre (one ton per acre if application of ton per acre was made for temporary seeding).
- Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre. Narrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3" lawns or high maintenance areas will be dragged and leveled with a yolk rake. At the time of seeding apply 400 lbs. of 38-0-0 ureaform fertilizer and 500 lbs. of 30-20-20 or equivalent fertilizer per acre.
- Seed with a mixture of certified "Merion" Kentucky Bluegrass at 40 lbs. per acre; common Kentucky Bluegrass at 40 lbs. per acre; Red Fescue, Pennlawn or Jamestown at 20 lbs. per acre.
- Mulch with unweathered small grain straw at the rate of 1 1/2 to 2 tons per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gallons per 1000 square feet.
- Seed all slopes with a mixture of certified Kentucky 31 Tall Fescue at 50 lbs. per acre and Inoculated Korean Lespedeza at 15 lbs. per acre.

ACCEPTED AND APPROVED FOR CONSTRUCTION BY:

OWNER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED: FOR PUBLIC WATER AND PRIVATE SEWAGE SYSTEM  
 HOWARD COUNTY HEALTH DEPARTMENT

\_\_\_\_\_  
 COUNTY HEALTH OFFICER DATE

THESE PLANS FOR EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: \_\_\_\_\_ 9/18/84  
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

\_\_\_\_\_  
 U.S. SOIL CONSERVATION SERVICE DATE 9-18-84

CERTIFICATION BY THE DEVELOPER:

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT 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 OF DEVELOPER DATE 9-13-84

CERTIFICATION BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT".

\_\_\_\_\_  
 DATE 9-12-84

DEPARTMENT OF PUBLIC WORKS:

\_\_\_\_\_  
 CHIEF, BUREAU OF ENGINEERING DATE 9-20-84

DEPARTMENT OF PLANNING AND ZONING:

\_\_\_\_\_  
 CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM. DATE 9-18-84

Date	No	Revision Description

VILLAGE OF OWEN BROWN  
 Section 6, Area 2  
 6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland

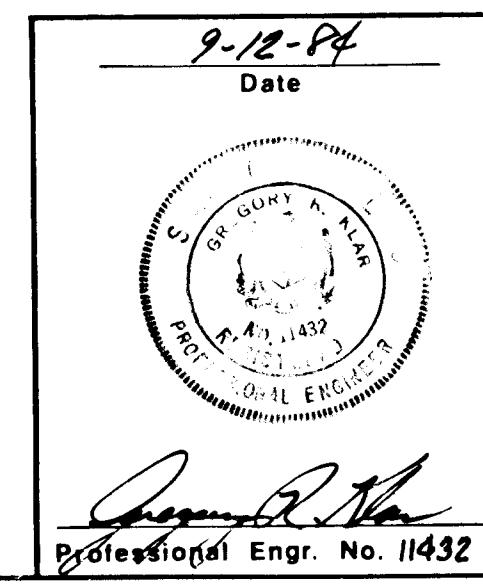
CENTURY ENGINEERING, INC.  
 CONSULTING ENGINEERS, PLANNERS  
 TOWSON, MARYLAND 21204

AREA  
 TAX MAP 42 - PART OF PARCEL 18

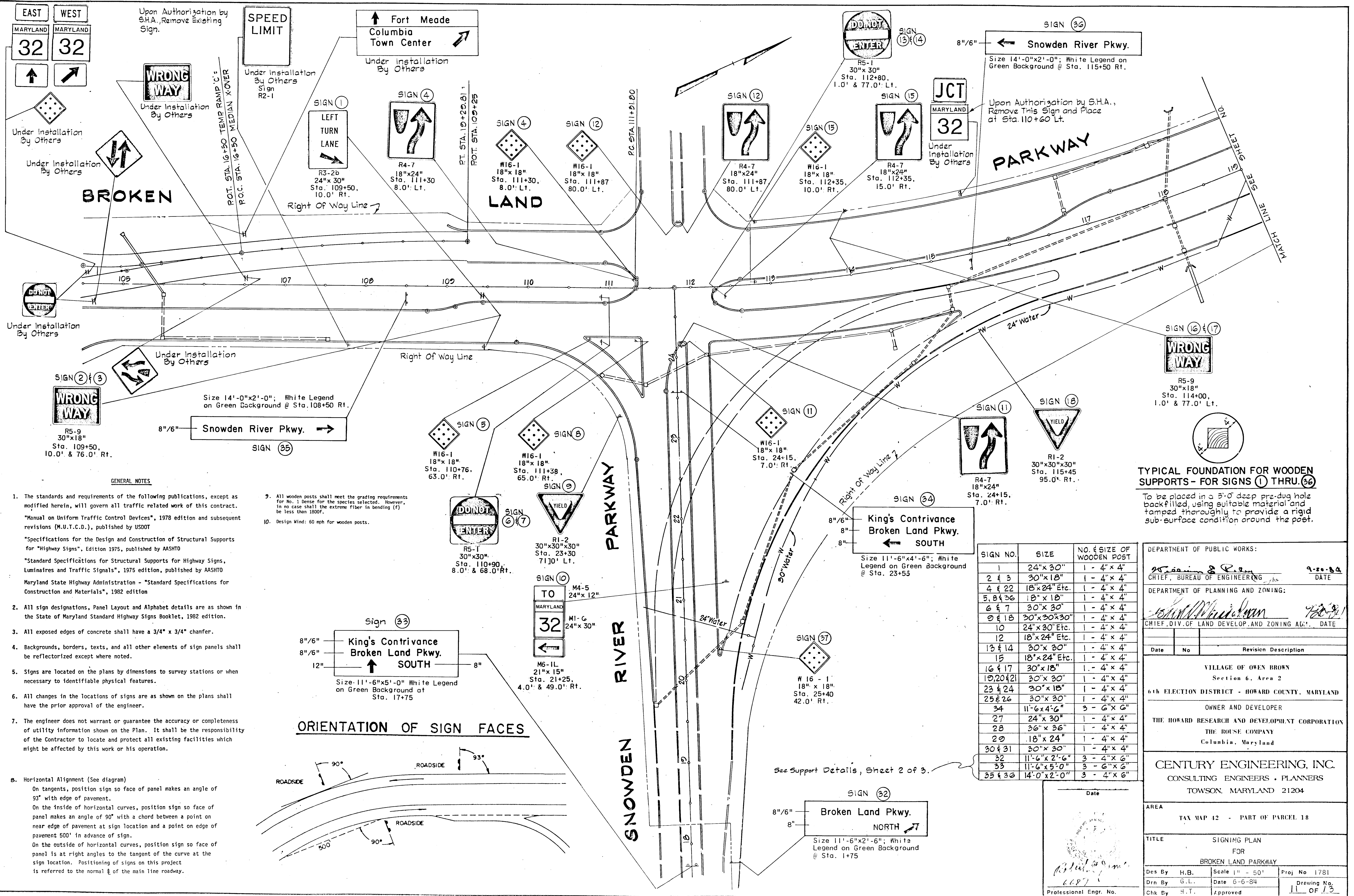
TITLE  
 SEDIMENT CONTROL NOTES AND DETAILS

Des By	PDC	Scale	AS SHOWN	Proj No	1781
Drn By	AEB	Date	6-6-84	Drawing No.	10 OF 13
Chk By	FT	Approved			

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:  
 1) SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.  
 2) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.







Upon Authorization by S.H.A., Remove Existing Sign.

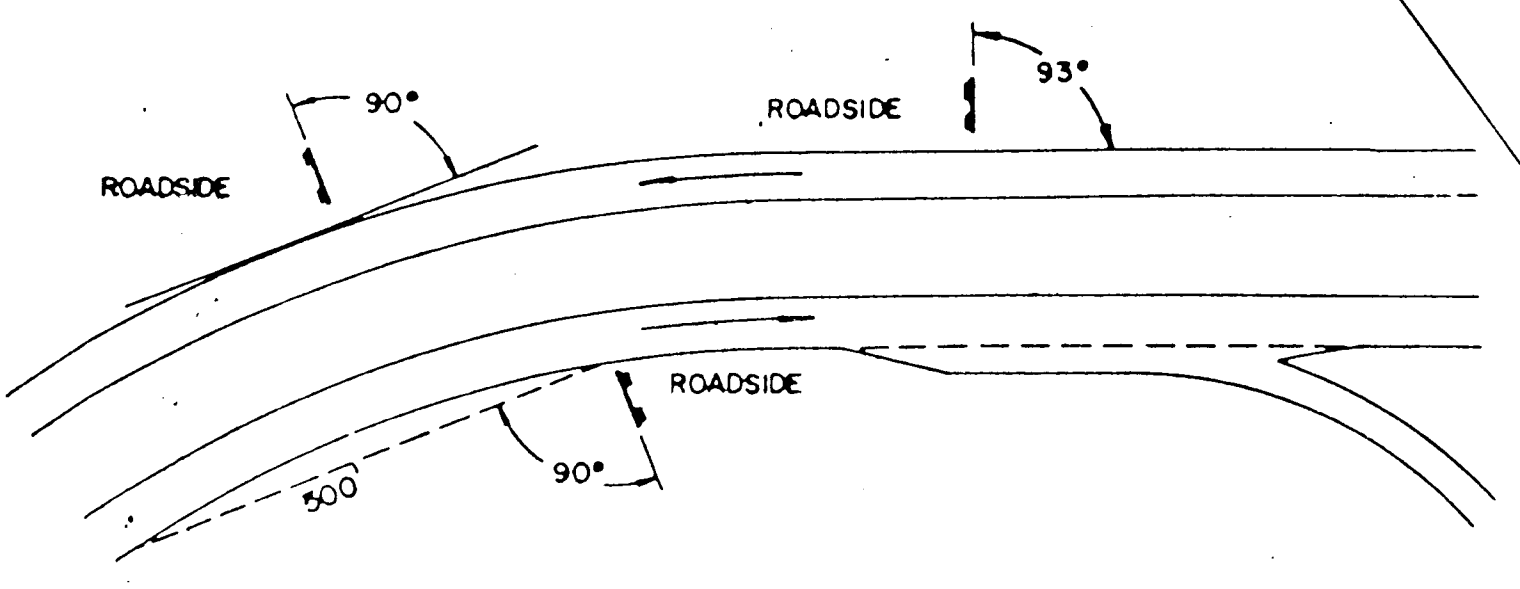
Upon Authorization by S.H.A., Remove This Sign and Place at Sta. 110+60 Lt.

**TYPICAL FOUNDATION FOR WOODEN SUPPORTS - FOR SIGNS 1 THRU 36**  
 To be placed in a 5'-0" deep pre-dug hole backfilled, using suitable material and tamped thoroughly to provide a rigid sub-surface condition around the post.

**GENERAL NOTES**

- The standards and requirements of the following publications, except as modified herein, will govern all traffic related work of this contract. "Manual on Uniform Traffic Control Devices", 1978 edition and subsequent revisions (M.U.T.C.D.), published by USDOT. "Specifications for the Design and Construction of Structural Supports for Highway Signs", Edition 1975, published by AASHTO. "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", 1975 edition, published by AASHTO. Maryland State Highway Administration - "Standard Specifications for Construction and Materials", 1982 edition.
  - All sign designations, Panel Layout and Alphabet details are as shown in the State of Maryland Standard Highway Signs Booklet, 1982 edition.
  - All exposed edges of concrete shall have a 3/4" x 3/4" chamfer.
  - Backgrounds, borders, texts, and all other elements of sign panels shall be reflectorized except where noted.
  - Signs are located on the plans by dimensions to survey stations or when necessary to identifiable physical features.
  - All changes in the locations of signs are as shown on the plans shall have the prior approval of the engineer.
  - The engineer does not warrant or guarantee the accuracy or completeness of utility information shown on the Plan. It shall be the responsibility of the Contractor to locate and protect all existing facilities which might be affected by this work or his operation.
8. Horizontal Alignment (See diagram)  
 On tangents, position sign so face of panel makes an angle of 93° with edge of pavement.  
 On the inside of horizontal curves, position sign so face of panel makes an angle of 90° with a chord between a point on near edge of pavement at sign location and a point on edge of pavement 500' in advance of sign.  
 On the outside of horizontal curves, position sign so face of panel is at right angles to the tangent of the curve at the sign location. Positioning of signs on this project is referred to the normal of the main line roadway.

**ORIENTATION OF SIGN FACES**



SIGN NO.	SIZE	NO. & SIZE OF WOODEN POST
1	24" x 30"	1 - 4" x 4"
2 & 3	30" x 18"	1 - 4" x 4"
4 & 22	18" x 24" Etc.	1 - 4" x 4"
5, 8 & 36	18" x 18"	1 - 4" x 4"
6 & 7	30" x 30"	1 - 4" x 4"
8 & 18	30" x 30" x 30"	1 - 4" x 4"
10	24" x 30" Etc.	1 - 4" x 4"
12	18" x 24" Etc.	1 - 4" x 4"
13 & 14	30" x 30"	1 - 4" x 4"
15	18" x 24" Etc.	1 - 4" x 4"
16 & 17	30" x 18"	1 - 4" x 4"
19, 20 & 21	30" x 30"	1 - 4" x 4"
23 & 24	30" x 18"	1 - 4" x 4"
25 & 26	30" x 30"	1 - 4" x 4"
34	11'-6" x 4'-6"	3 - 6" x 6"
27	24" x 30"	1 - 4" x 4"
28	36" x 36"	1 - 4" x 4"
29	18" x 24"	1 - 4" x 4"
30 & 31	30" x 30"	1 - 4" x 4"
32	11'-6" x 2'-6"	3 - 4" x 6"
33	11'-6" x 5'-0"	3 - 6" x 6"
35 & 36	14'-0" x 2'-0"	3 - 4" x 6"

DEPARTMENT OF PUBLIC WORKS:  
*William S. Ryan* 9-20-84  
 CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF PLANNING AND ZONING:  
*Shirley M. Winkler* 9-20-84  
 CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADJ. DATE

Date	No.	Revision Description

VILLAGE OF OWEN BROWN  
 Section 6, Area 2  
 6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland

CENTURY ENGINEERING, INC.  
 CONSULTING ENGINEERS - PLANNERS  
 TOWSON, MARYLAND 21204

AREA  
 TAX MAP 42 - PART OF PARCEL 18

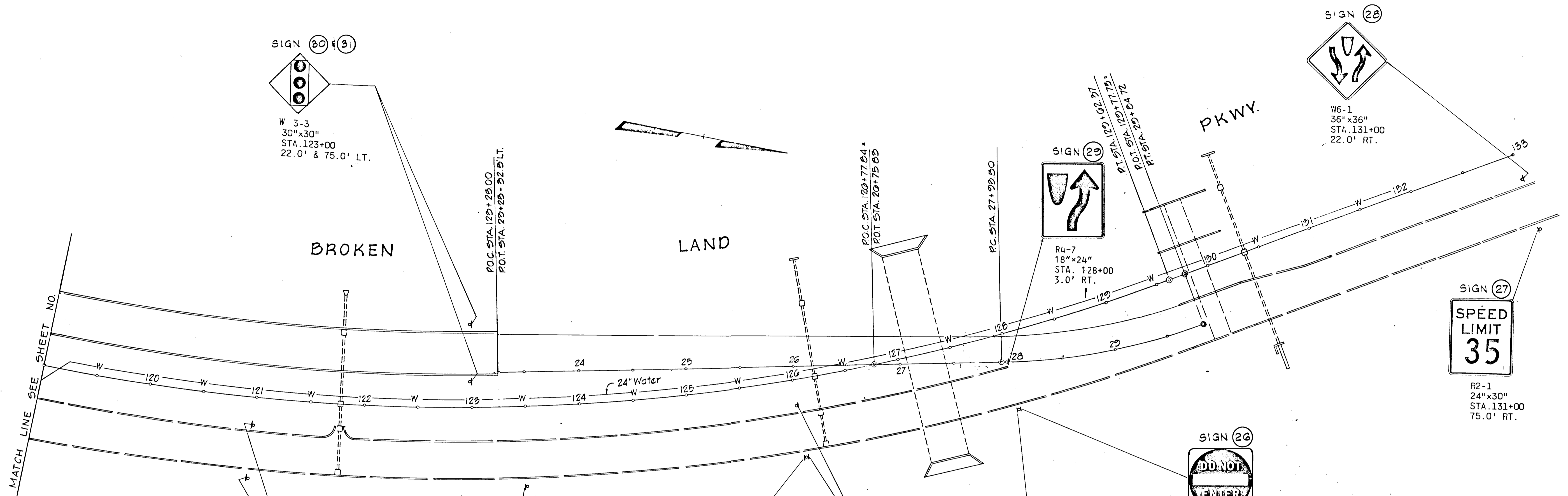
TITLE  
 SIGNING PLAN  
 FOR  
 BROKEN LAND PARKWAY

Des By	H.B.	Scale	1" = 50'	Proj No	1781
Drn By	G.L.	Date	6-6-84	Drawing No.	11 OF 13
Chk By	H.T.	Approved			

Professional Engr. No. \_\_\_\_\_

#61





MATCH LINE SEE SHEET NO.

SIGN (30) & (31)  
 W 3-3  
 30" x 30"  
 STA. 123+00  
 22.0' & 75.0' LT.

SIGN (19) & (20)  
 W4-2L  
 30" x 30"  
 STA. 121+00  
 23.0' & 75.0' RT.

SIGN (21)  
 W6-2  
 30" x 30"  
 STA. 123+50  
 75.0' RT.

SIGN (22)  
 R4-1  
 18" x 24"  
 STA. 126+00  
 75.0' RT.

SIGN (23) & (24)  
 R5-9  
 30" x 18"  
 STA. 126+00  
 22.0' & 75.0' RT.

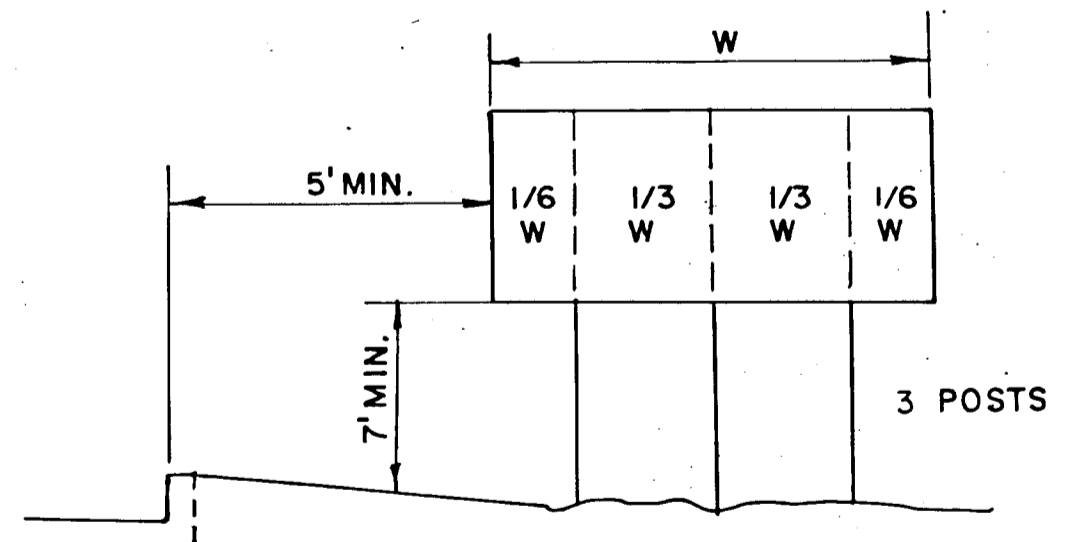
SIGN (25)  
 W6-3  
 30" x 30"  
 STA. 127+95  
 28.0' RT.

SIGN (26)  
 R5-1  
 30" x 30"  
 STA. 28+00  
 48.0' RT.

SIGN (27)  
 R2-1  
 24" x 30"  
 STA. 131+00  
 75.0' RT.

SIGN (28)  
 W6-1  
 36" x 36"  
 STA. 131+00  
 22.0' RT.

SIGN (29)  
 R4-7  
 18" x 24"  
 STA. 128+00  
 3.0' RT.



DEPARTMENT OF PUBLIC WORKS:		
<i>[Signature]</i>	9-20-84	DATE
CHIEF, BUREAU OF ENGINEERING		
DEPARTMENT OF PLANNING AND ZONING:		
<i>[Signature]</i>	9-20-84	DATE
CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM.		
Date	No	Revision Description
VILLAGE OF OWEN BROWN Section 6, Area 2 Gtn ELECTION DISTRICT - HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE COMPANY Columbia, Maryland		
CENTURY ENGINEERING, INC. CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204		
AREA TAX MAP 42 - PART OF PARCEL 18		
TITLE SIGNING PLAN FOR BROKEN LAND PARKWAY		
Des By	Scale 1" = 50'	Proj No 1781
Drn By G.L.	Date 6-6-84	Drawing No. 12 OF 13
Chk By H.T.	Approved	

Date  
*[Signature]*  
 6687  
 Professional Engr. No.

#61

**GENERAL NOTES**

- All highway marking and sign removal shall be the responsibility of the Division of Traffic Engineering of the Bureau of Engineering, Department of Public Works, of Howard County, Maryland, and is not to be considered a part of this contract.
- Approximate location of existing utilities is shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense.
  - The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities. Cost shall be incidental to the items in the Proposal Itemization.
  - Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:
    - Miss Utility (Collect) 1-559-0100
    - Baltimore Gas & Electric Company - Underground Electric Distribution Engineering "Damage Control" - 234-5691
    - Baltimore Gas & Electric Company - Underground Gas Distribution Engineering "Damage Control" - 234-5533
  - Clear all utilities by a minimum of 6". Clear all poles 2'-0" minimum or tunnel as required. Cost for tunneling or bracing at poles shall be incidental to the items in the Proposal Itemization. The locations of poles, handboxes, conduit and controller shall be adjusted, if necessary to avoid existing utilities.
  - Power source for street light shall be separate from that of the traffic signal.
- All materials and workmanship employed under this contract shall conform with the "GENERAL SPECIFICATIONS FOR INSTALLATION OF AND EQUIPMENT FOR TRAFFIC SIGNALS FOR HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS" dated October 7, 1974; revised February 18, 1976, and included in the contract specifications as the General Provisions.
- All disturbed areas shall be properly restored in accordance with the Contract Specifications.
- All signal heads shall be securely wrapped and/or bagged in burlap, when not in use.
- Sign designation and layout shown here are as shown in the State of Maryland's Standard Highway Signs Booklet.

**LOOPS AND DETECTORS**

1. The following new loops shall be installed:

Number	Dimensions	Phase	Mode
1, 2, 3*	6' x 40'	4	Presence, non-lock
4	6' x 20'	4	Pulse, non-lock
5 & 6*	6' x 40'	1 & 2	Presence, non-lock
7	6' x 20'	1 & 2	Pulse, non-lock
8	6' x 20'	5	Pulse, non-lock
9 & 10*	6' x 40'	5	Presence, non-lock
11	6' x 20'	3	Pulse, non-lock

\* Loop to be installed with 6' x 3' Power Head for detection of small vehicles.

2. All loops shall be wired to timing loop amplifiers and each loop shall have a separate amplifier.

3. Loop amplifiers shall be Sarasota 2357/MS or approved equal.

4. All wiring shall be in accordance with manufacturer's recommendations for correct operation.

5. All loop corners shall be cut at a 45° angle, at least 6" long.

**EXISTING**

- E
- E
- W
- T
- W.V.

**LEGEND**

- C
- E
- S
- L
- T
- W
- W.V.

**PROPOSED**

- C
- E
- S
- L
- T
- W
- W.V.

- CONTROLLER W/ELECTRIC METER
- DETECTOR LOOP (LIGHTING POLE & LUMINAIRE BY OTHER)
- HAND BOX
- MAST ARM
- SIGNAL HEAD
- STEEL POLE
- STOP BAR (BY OTHERS)
- UNDERGROUND SIGNAL WIRING
- WHITE LANE ARROWS (BY OTHERS)
- SINGLE WHITE STRIPE (BY OTHERS)
- DOUBLE YELLOW STRIPE (BY OTHERS)
- PS POWER SUPPLY

**UNDERGROUND WIRING**

- Underground wiring shall be placed in new PVC Conduits under the road surface and in grass areas, as shown on the Contract Drawings.
- Under existing pavement new conduit will be pushed for installation.
- The use of direct lay cable or a combination of conduit and direct lay shall not be acceptable.
- Centerline of handbox shall be 3' behind face of curb unless otherwise indicated.
- Cable is to be placed in saw cut between detector and curbline and in conduit between curbline and handbox.

**Proposed Poles:**

- Two poles with twin support arms and a single lighting arm. Also a single pole with one support arm.
- Style and appearance shall be equivalent to Union Metal Design No. 50300 Finish shall be bronze paint.
- Pole Number

**Description**

- TWIN SUPPORT ARMS, ONE OF WHICH WITH 20' SPREAD SUPPORTING TWO SIGNAL HEADS; NO. 5, 9 & 6 AND THE REMAINING WITH 38' ARM SUPPORTING TWO SIGNAL HEADS NOS 9, 8, 10, AND 12' LIGHTING ARM.
- TWIN SUPPORT ARMS, ONE OF WHICH WITH 40' SPREAD SUPPORTING TWO SIGNAL HEADS NOS 5, 9 & 6 AND THE REMAINING WITH 38' ARM SUPPORTING TWO SIGNAL HEADS NOS 7, 8 & 10 AND 12' LIGHTING ARM.
- SIGNAL ARM WITH 40' SPREAD SUPPORTING SIGNAL HEADS NOS 1 & 2.

**CONTROLLER AND ACCESSORIES**

- NEMA eight-phase programmable controller with solid state circuitry and digital timing, equivalent to the Econolite KMC Series Digital Control unit, equivalent manufactured by Eagle Signal Corporation or Crouse-Hinds or approved equal.
  - a. Equipped with five vehicular actuated modules and capable of interface package for coordination.
  - b. Vehicular actuated phase modules shall be capable of the following functions: Minimum Green, Extension, Yellow, All-Red Clearance, Dual Maximum, Recall and Memory.
  - c. Five-phase signal overlap capability.
- Conflict Monitor and Solid State load switches.
- Solid State flasher and switch accessible through police door panel.
- Ground mounted traffic controller cabinet large enough to accommodate the above control equipment. The cabinet shall be furnished with a thermostatically controlled cabinet vent fan.
- Finish of the cabinet shall be all-weather bronze paint.
- Meter Box shall be installed in a vandal proof enclosure supplied by the Contractor and be painted bronze.
- Install 3' x 4' x 5" concrete slab in front of the controller cabinet.

**SIGNAL HEADS & OVERHEAD SIGN**

- The Contractor shall provide the following new signal heads:
 

Signal Number	Description
1, 2, 5 through 8, 9 & 10	12" diameter red indication and 8" amber and green indications
3 and 4	12" red indication; 12" amber and green indications, including turn arrows
- All signals shall have brown baked enamel finish and shall be furnished with tunnel visors. All signals shall be vertically mounted on the mast arms with rigid adjustable brackets equivalent to the "Veped Traffic Controls, Inc. Astro-Brac (Model No. 0-AB-101)" or approved equal. Signal arrangement shall be as shown in the Phase and Sequence Diagram.
- Signal heads 5 and 6 shall have backplates.
- A "Yield When Turning on Green" sign shall be installed adjacent to signal head Number 5. See Standard Details.
- Install one (1) sign R3-5 (size 30" x 36") adjacent to signal head Number 7. Similarly, install one (1) sign R3-6 (size 30" x 36") adjacent to signal head Number 8, as shown.
- Signals are to be aimed at approximately 1,000 ft. to insure good visibility.
- Signal Heads shall have the color of the bronze paint with "M.A. Bruder & Sons, Inc. Seashore Glass Trim 27721 Duronodic Bronze Code 755758 or approved equal.

**SCHEDULE OF POLES**

POLE NO.	LOCATION
1.	STA. 111+27; @ D.L.P. 5.0 LT.
2.	STA. 112+37; @ D.L.P. 12.5 RT.
3.	STA. 111+14.5; @ D.L.P. 34.5 LT.

Date: *Robert J. ...*  
Professional Engr. No. *6687*

PHASE AND SEQUENCE DIAGRAM	TRAFFIC SIGNAL HEADS										MIN. GREEN	YELLOW	RED CLEARANCE	VEH. EXT.	MAX. GREEN	RECALL
	1	2	3	4	5	6	7	8	9	10						
	R	R	G	G	R	R	R	R	R	R	6	3	1	18	25	OFF
	R	R	G	G	R	R	R	R	R	R	11	4	1	3	20	OFF
	G	G	Y	Y	R	R	R	R	R	R	11	—	—	3	30	ON
	Y	Y	R	R	Y	Y	R	R	R	R	4	1	—	—	—	—
	R	R	R	R	R	R	R	G	G	R	6	—	—	32	20	OFF
	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	10	—	—	2	40	OFF

DEPARTMENT OF PUBLIC WORKS  
*Robert J. ...* 9-20-84  
 CHIEF, BUREAU OF ENGINEERING  
 DEPARTMENT OF PLANNING AND ZONING:  
*John M. ...* 9-20-84  
 CHIEF, DIV. OF LAND DEVELOP. AND ZONING ADM.

VILLAGE OF OWEN BROWN  
 Section 6, Area 2  
 6th ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland

CENTURY ENGINEERING, INC.  
 CONSULTING ENGINEERS - PLANNERS  
 TOWSON, MARYLAND 21204

AREA TAX MAP 42 - PART OF PARCEL 18

TITLE SIGNALIZATION PLAN FOR BROKEN LAND PARKWAY & SNOWDEN RIVER PARKWAY

Des By H.B.	Scale 1" = 30'	Proj No 1781
Drn By F.W.	Date 6-6-84	Drawing No. 13 OF 13
Chk By H.T.	Approved	

BRUNING 44-132-53864

F 83 13