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7	SEDIMENT CONTROL PLAN
8	BRIDGE WIDENING

# COLUMBIA

HOWARD COUNTY, MARYLAND  
6TH ELECTION DISTRICT

## ROAD CONSTRUCTION PLANS OWEN BROWN ROAD AND TEMPORARY BROKEN LAND PKWY. CONNECTION

OWNER AND DEVELOPER

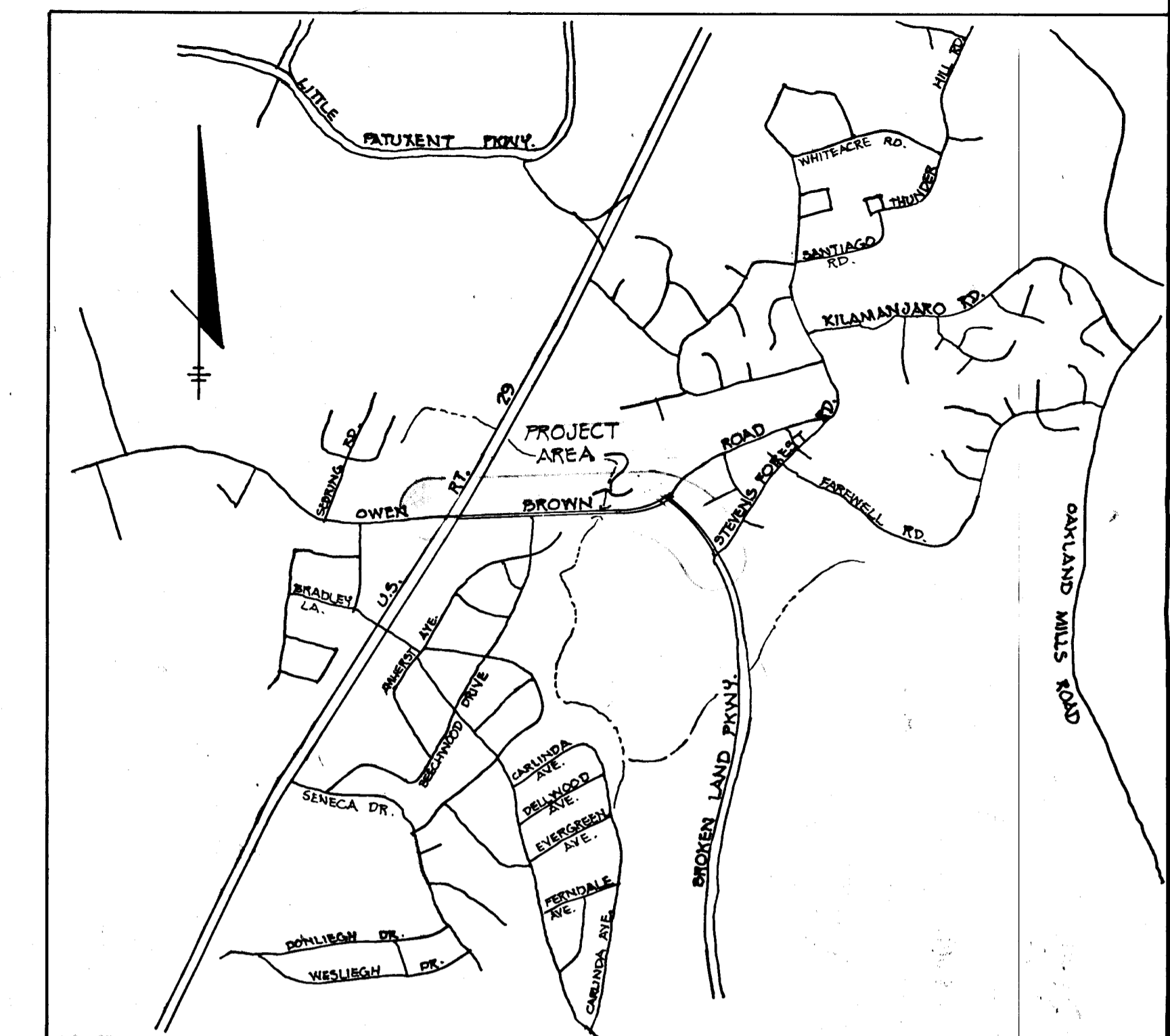
THE HOWARD RESEARCH AND DEVELOPMENT CORP.  
COLUMBIA, MARYLAND

GENERAL NOTES

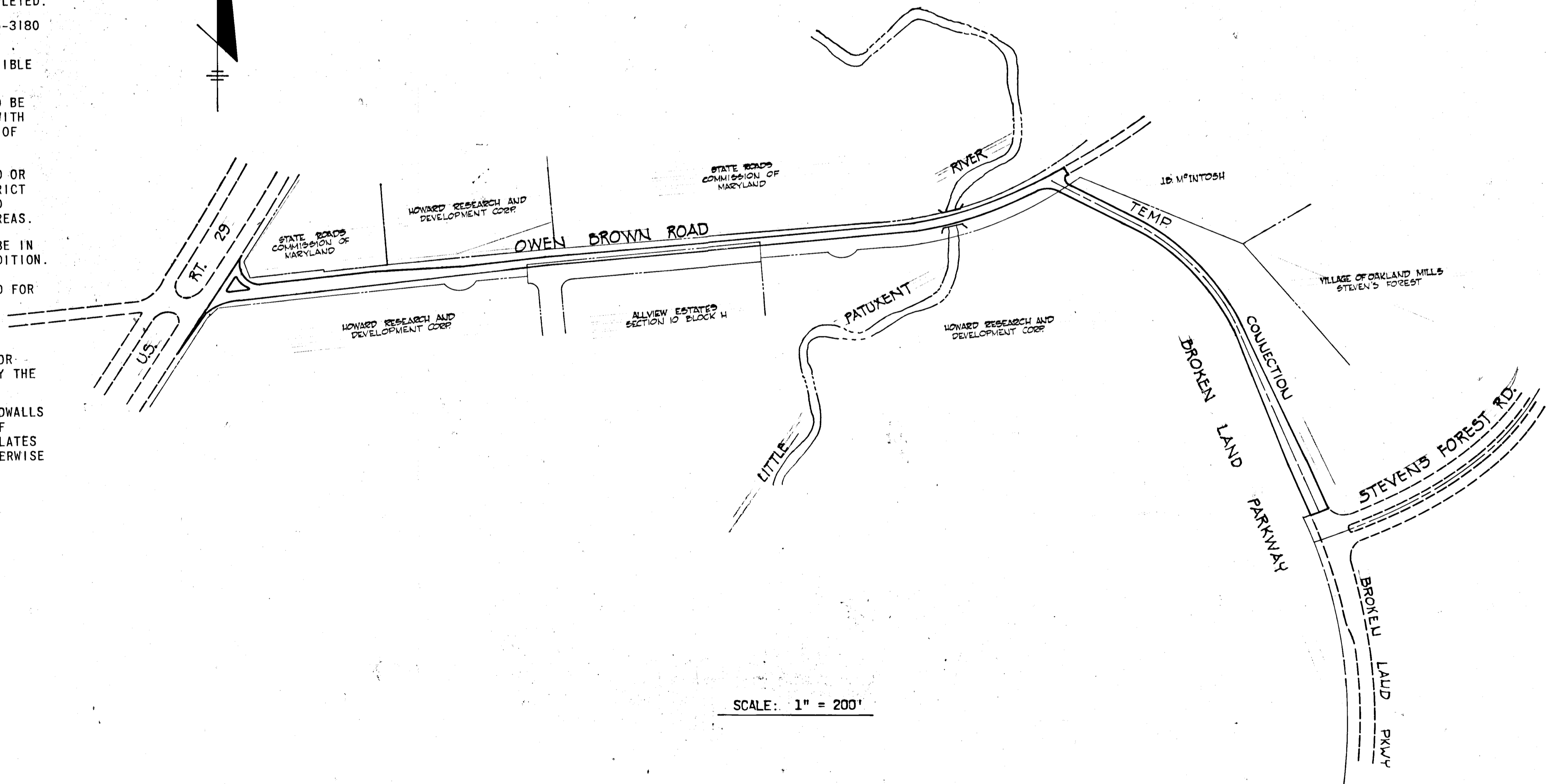
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY 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:
 

BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS & ELECTRIC CO.	539-8000 EXT. 691
- STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICAL STANDARDS.
 

OWEN BROWN ROAD	- 30 M.P.H.
TEMP. CONNECTION	- 30 M.P.H.
- ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
- CONTRACTOR TO NOTIFY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT 465-3180 AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- ON ALL FILLS IN SUMP AREAS, RELIANCE PLASTIC & CHEMICAL COMPANY "FLEXIBLE TUBE DOWN DRAIN AND PANS" OR APPROVED EQUAL, SHALL BE USED.
- TEMPORARY, COMPACTED, 27 INCH HIGH EARTH FILLED DIVERSION BERMS SHOULD BE CONSTRUCTED ABOVE THE LIPS OF FILL SLOPES ON THE R-O-W CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOD AREAS AT THE END OF EACH DAY.
- ALL SWALES SHALL BE SODDED AND TAMPED, AND ALL SLOPES SHALL BE SEEDDED OR SODDED IN ACCORDANCE WITH THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND THE HOWARD COUNTY PLANNING BOARD STANDARDS ENTITLED "STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN URBANIZING AREAS.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1971 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- END WALLS: THE TYPES OF ENDWALLS SHOWN ON THE PLANS ARE SUBJECT TO CHANGE, AND ARE NOT TO BE CONSTRUCTED UNTIL GRADING IS COMPLETED. DIMENSIONS OF ENDWALLS AS SHOWN ON STANDARD PLATES MAY BE MODIFIED FOR USE WITH CORRUGATED METAL PIPE, PIPE ARCH OR OTHERWISE AS DIRECTED BY THE ENGINEER.
- INVERT OF INLETS AND HEADWALLS: INVERT ELEVATIONS OF INLETS AND HEADWALLS MAY BE MODIFIED TO MEET CONDITIONS ENCOUNTERED DURING INSTALLATION OF DRAINAGE STRUCTURES. DIMENSIONS OF STRUCTURES AS SHOWN ON STANDARD PLATES MAY BE MODIFIED FOR USE WITH CORRUGATED METAL PIPE, PIPE ARCH OR OTHERWISE AS DIRECTED BY THE ENGINEER.



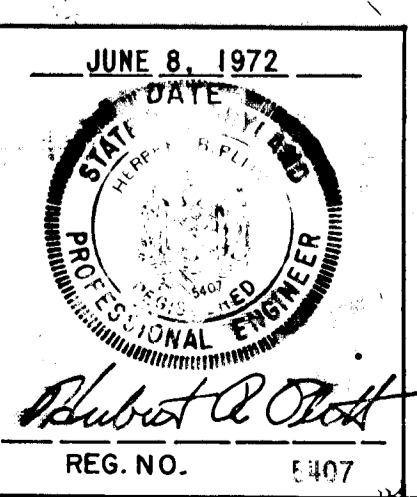
VICINITY MAP  
SCALE IN MILES  
0 1/2



SCALE: 1" = 200'

APPROVED  
DIVISION OF LAND DEVELOPMENT  
AND TRANSPORTATION PLANNING  
HOWARD COUNTY, MARYLAND  
DATE 4/20/73  
[Signature]

DEPARTMENT OF PUBLIC WORKS	
<i>W.O. Elbert</i>	6-19-73
CHIEF, BUREAU OF HIGHWAYS	DATE
OFFICE OF PLANNING AND ZONING	
<i>J.H. Clawson</i>	6/14/73
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING	DATE
GREEN ASSOCIATES, INC. CONSULTING ENGINEERS 32 WEST ROAD BALTIMORE, MARYLAND	



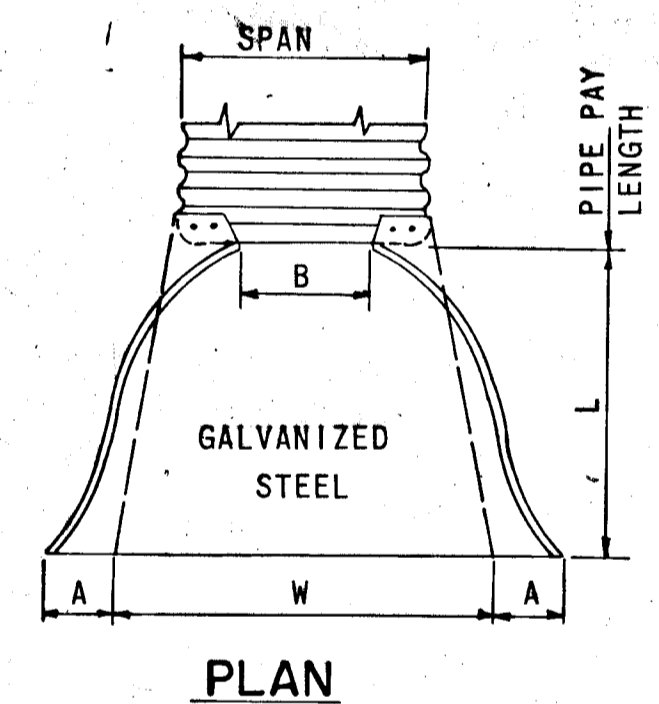
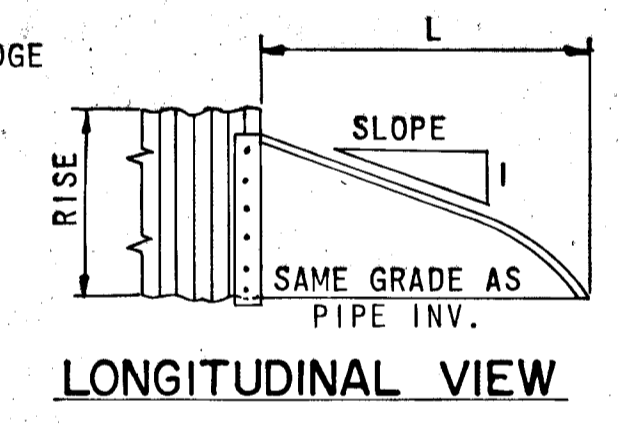
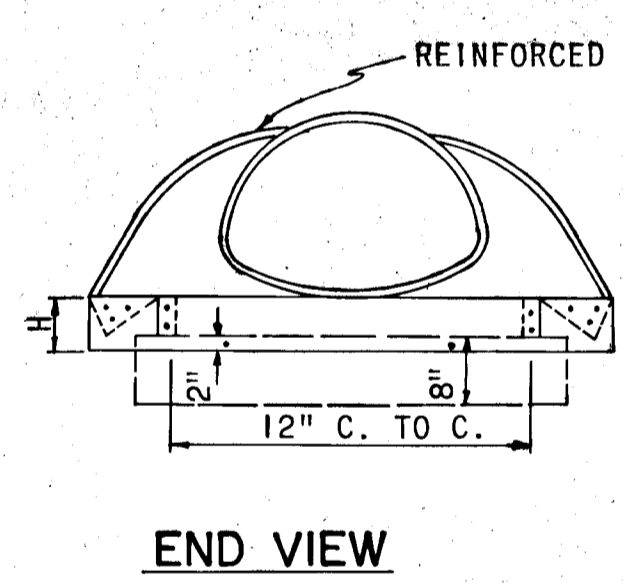
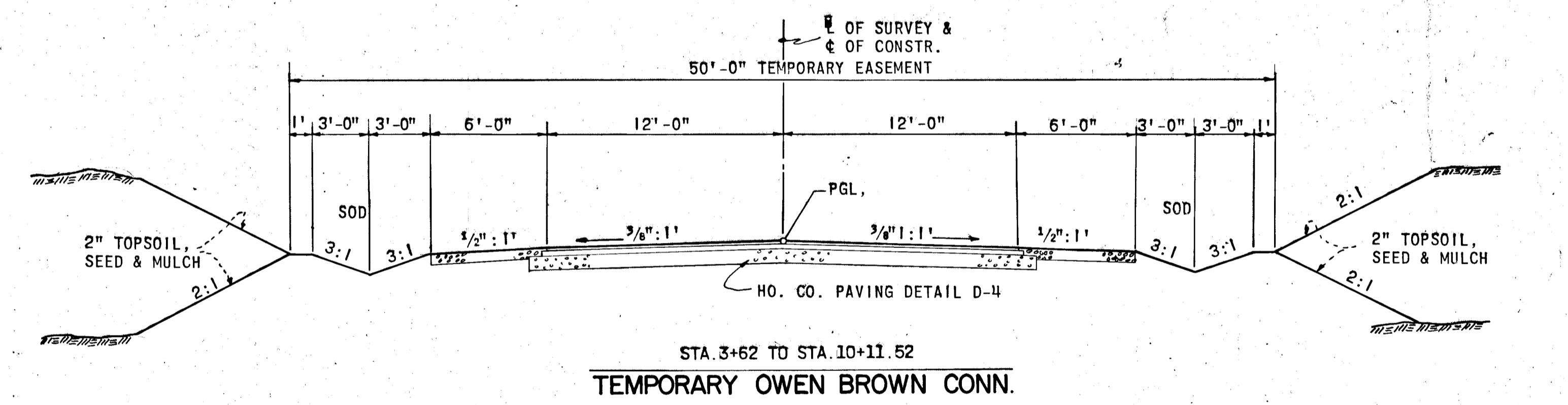
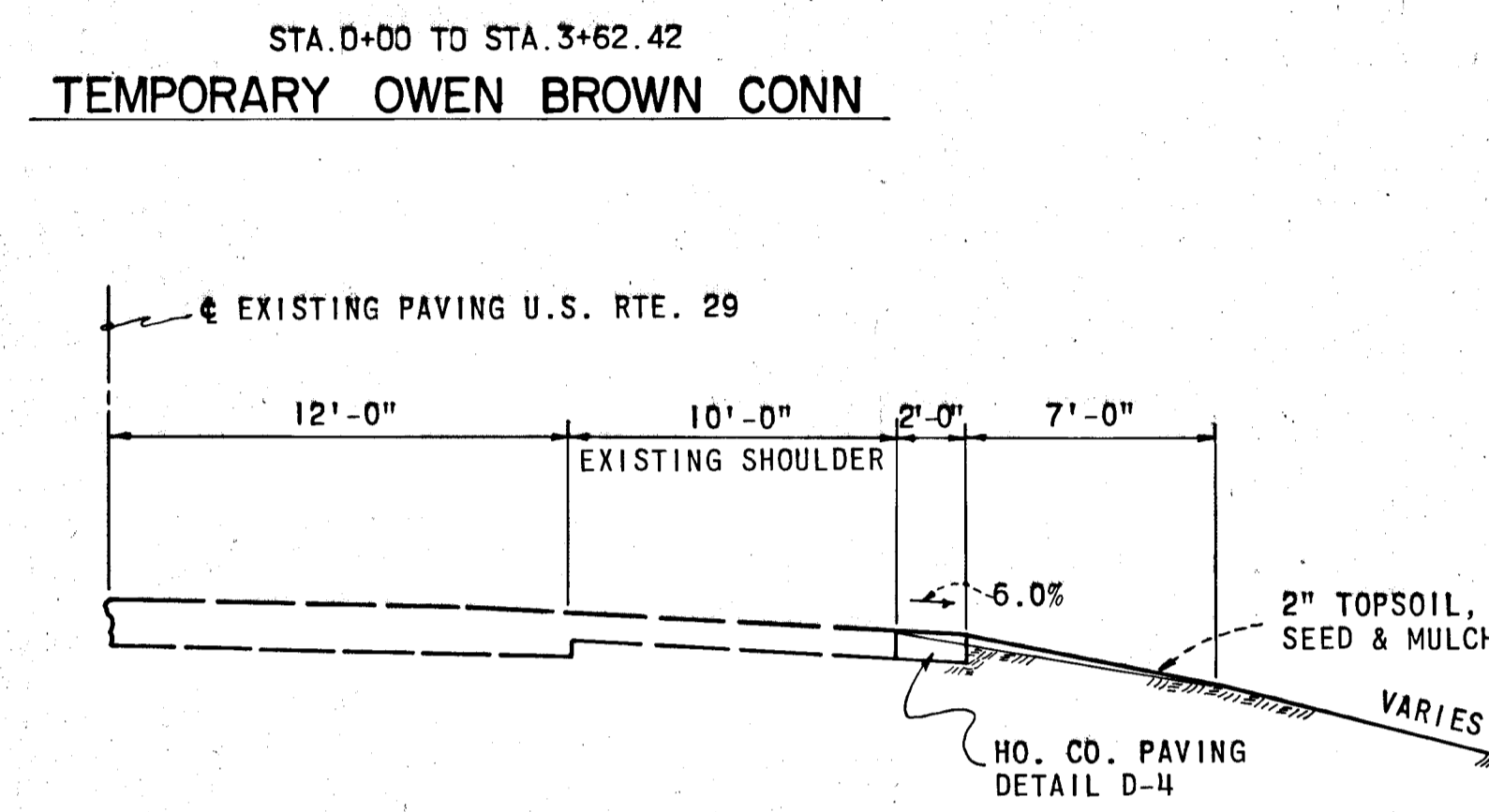
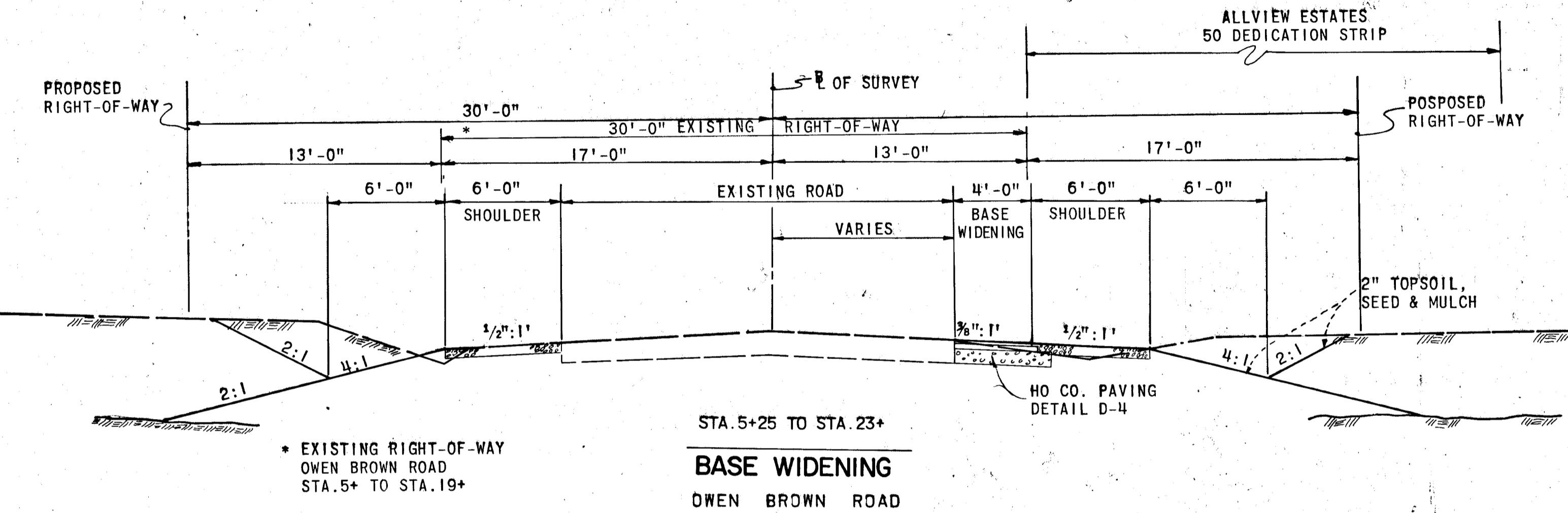
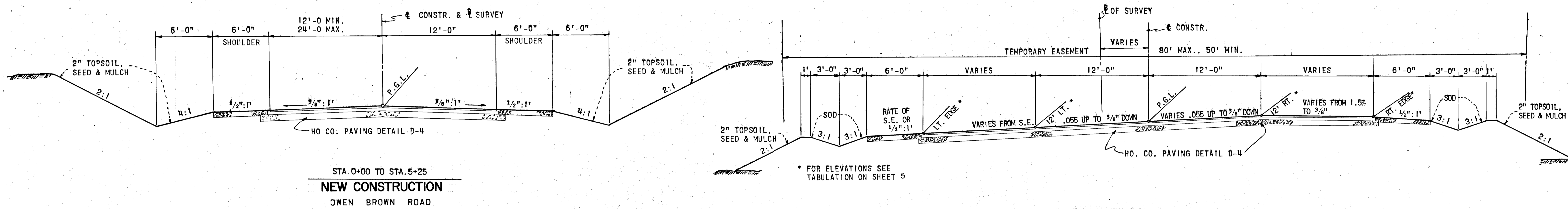
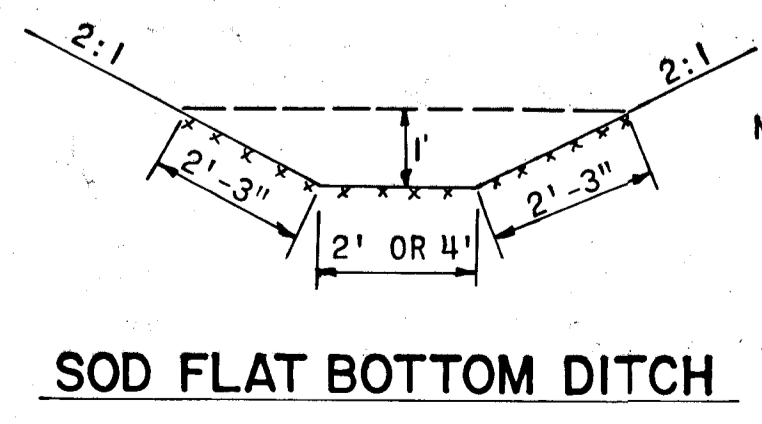
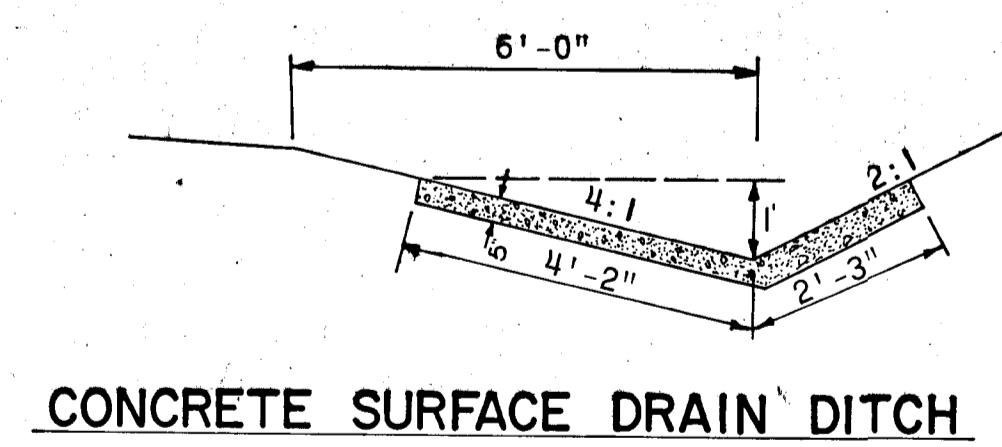
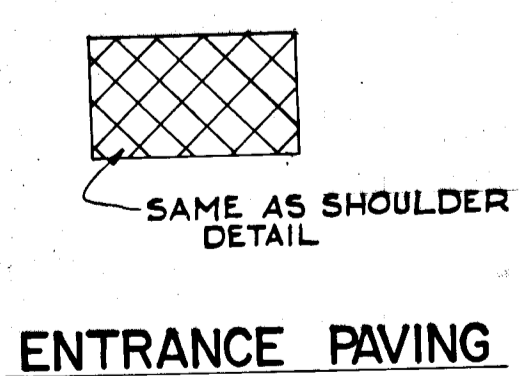
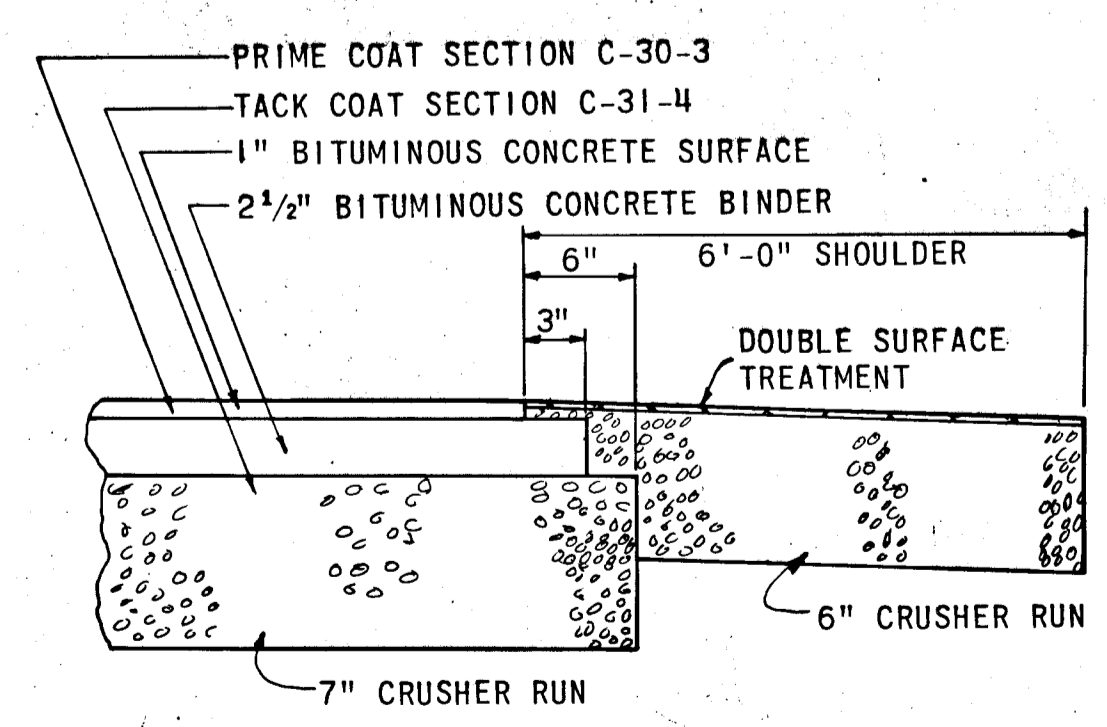


TABLE OF DIMENSIONS								
PIPE 1/2" DIMENSION	GA.	A	B	H	L	W	APPROX. SLOPE	BODY
18"	11"	16	7"	9"	6"	19"	30"	2 1/2
15"	16	7"	8"	6"	26"	30"	2 1/2	1PC.
48"	12	18"	27"	12"	78"	90"	2 1/4	2PC.

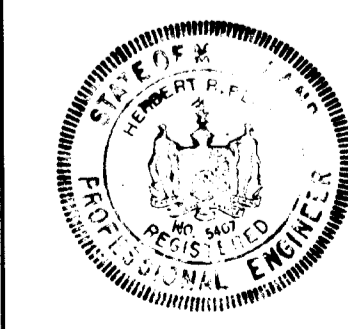
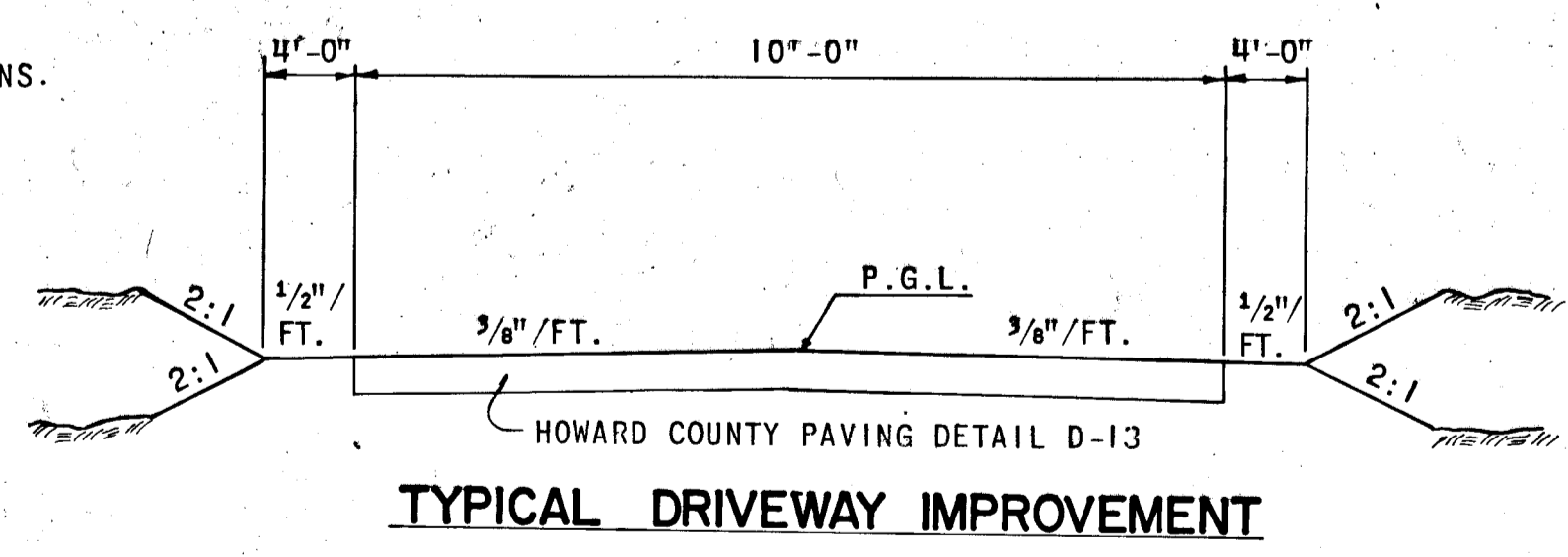
NOTE:  
ALL 3 PIECE BODIES TO HAVE 12 GA. SIDES AND 10 GA. CENTER PANELS. WIDTH OF CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIPHERY. MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY 3/8" Ø GALVANIZED RIVETS OR BOLTS.

APPROVED  
DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING  
HOWARD COUNTY, MARYLAND  
DATE 4/22/73

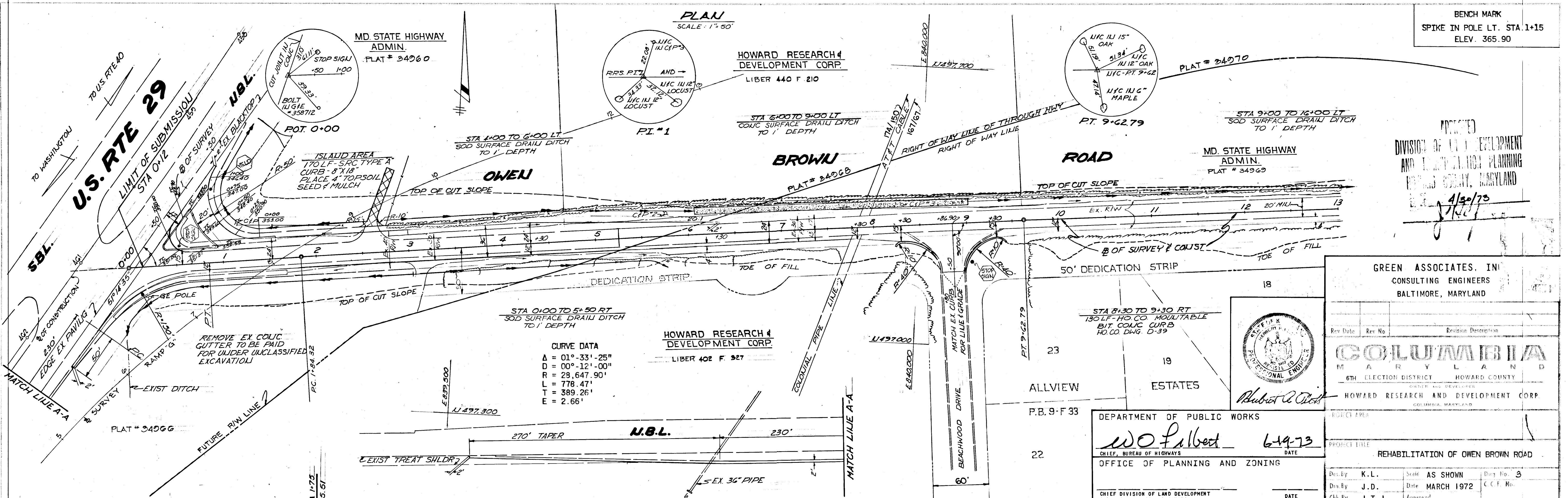


NOTE: SOD DITCH HAS SAME DIMENSIONS.

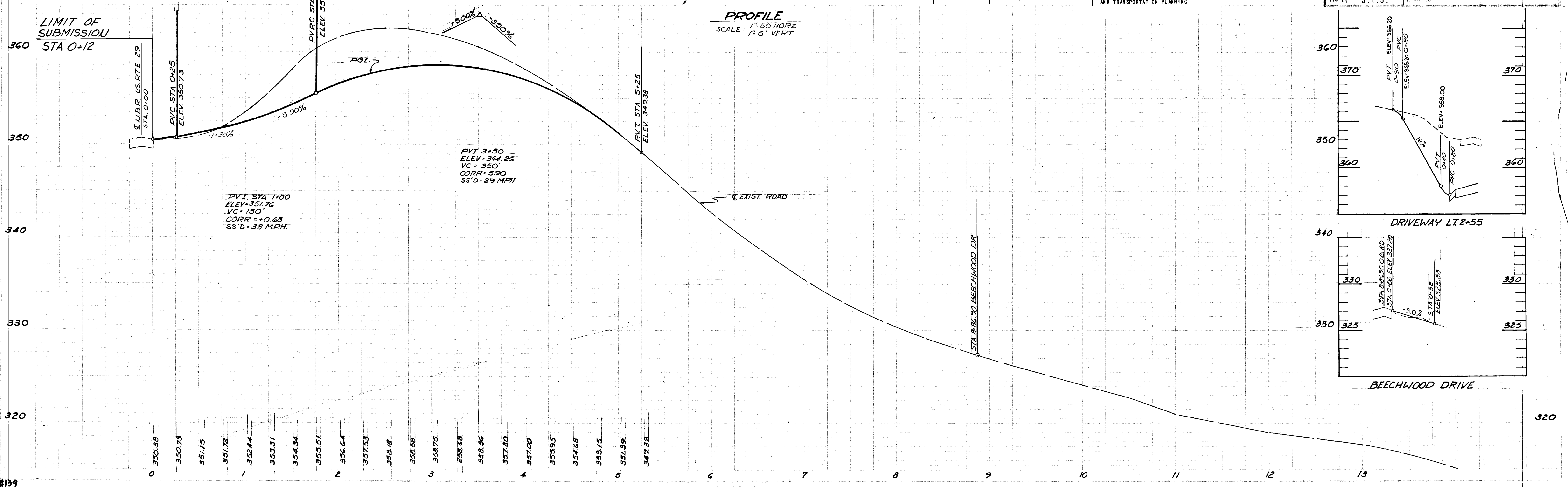
NOTE: CONC. DITCH HAS SAME DIMENSIONS.



DEPARTMENT OF PUBLIC WORKS  
*W. O. Albert* 6-14-73  
 CHIEF, BUREAU OF HIGHWAYS DATE  
 OFFICE OF PLANNING AND ZONING  
 CHIEF DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE  
 GREEN ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 BALTIMORE, MARYLAND  
 Rev. Date: Rev. No.: Revision Description:  
**COLUMBIA**  
 6TH ELECTION DISTRICT HOWARD COUNTY  
 HOWARD RESEARCH AND DEVELOPMENT CORP.  
 PROJECT AREA:  
 PROJECT TITLE: REHABILITATION OWEN BROWN ROAD  
 Dis. By: K.L. Scale: AS SHOWN Div. No. 2  
 By: J.D. Date: MARCH 1972 C.C.S.  
 Ck. By: J.T.J. Approved:



**CURVE DATA**  
 A = 01°-33'-25"  
 D = 00°-12'-00"  
 R = 28,647.90'  
 L = 778.47'  
 T = 389.26'  
 E = 2.66'



**GREEN ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
BALTIMORE, MARYLAND

**COLUMBIA**  
MARYLAND  
6TH ELECTION DISTRICT HOWARD COUNTY

**HOWARD RESEARCH AND DEVELOPMENT CORP.**

**DEPARTMENT OF PUBLIC WORKS**  
OFFICE OF PLANNING AND ZONING

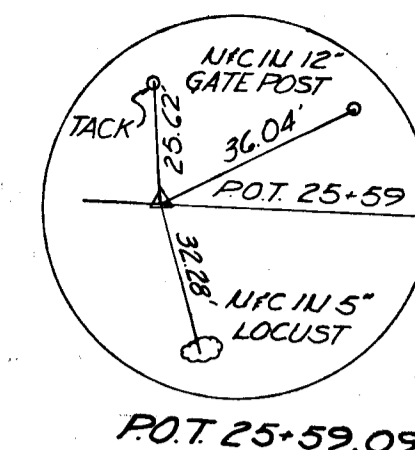
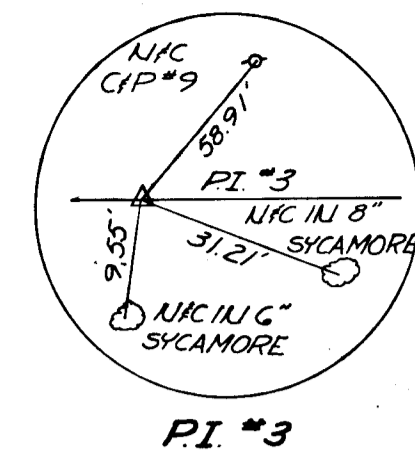
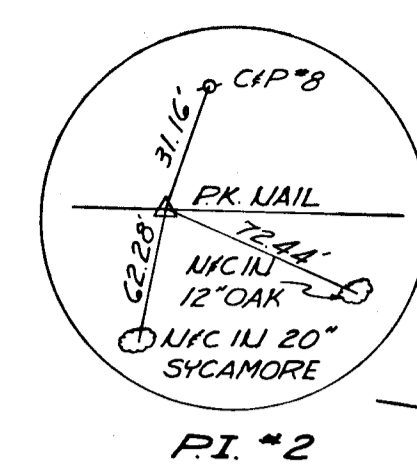
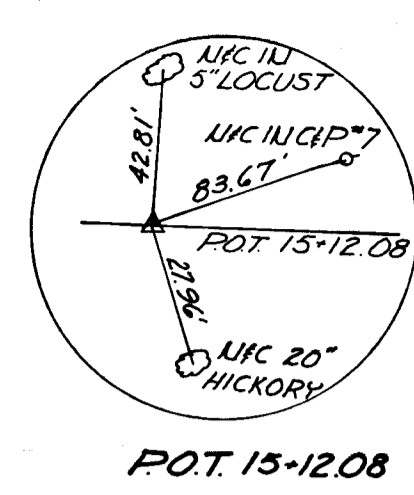
**W. O. Falbert** 6-19-73  
CHIEF, BUREAU OF HIGHWAYS DATE

**REHABILITATION OF OWEN BROWN ROAD**

Des. By: K. L. Scale: AS SHOWN Day No. 3  
 Dra. By: J. D. Date: MARCH 1972 C.C.F. No.  
 Chk. By: J. T. J. Approved

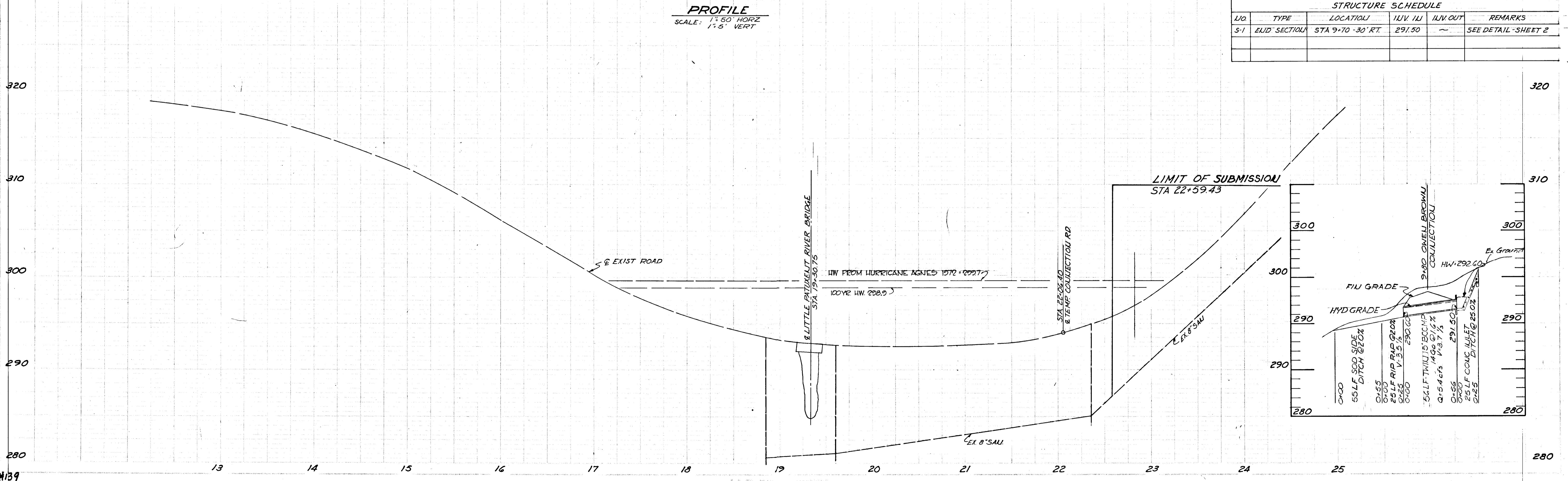
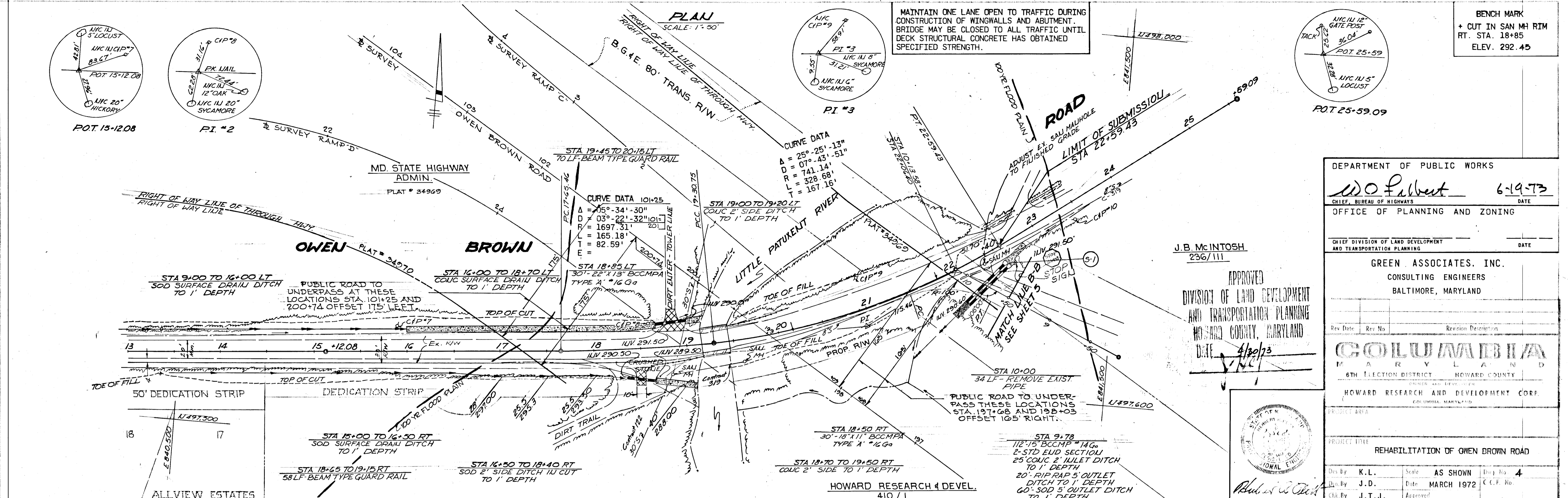
**BENCH MARK**  
SPIKE IN POLE LT. STA. 1+15  
ELEV. 365.90

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DIVISION OF LAND DEVELOPMENT  
AND TRANSPORTATION PLANNING  
HOWARD COUNTY, MARYLAND  
4/30/73



BENCH MARK  
+ CUT IN SAN M<sup>H</sup> RIM  
RT. STA. 18+85  
ELEV. 292.45

MAINTAIN ONE LANE OPEN TO TRAFFIC DURING CONSTRUCTION OF WINGWALLS AND ABUTMENT. BRIDGE MAY BE CLOSED TO ALL TRAFFIC UNTIL DECK STRUCTURAL CONCRETE HAS OBTAINED SPECIFIED STRENGTH.



DEPARTMENT OF PUBLIC WORKS

*W. O. Fulbert* 6-19-73  
 CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING

CHIEF DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

GREEN ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 BALTIMORE, MARYLAND

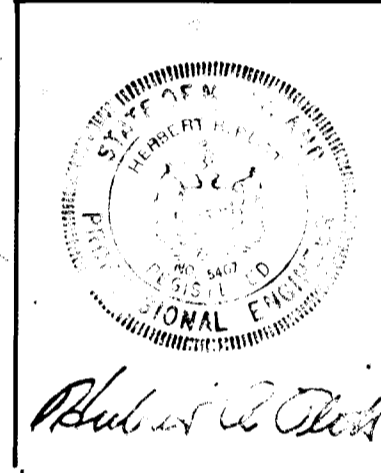
Rev Date: Rev No: Revision Description:

**COLUMBIA**  
 MARYLAND  
 6TH ELECTION DISTRICT HOWARD COUNTY  
 OWNER AND DEVELOPER  
 HOWARD RESEARCH AND DEVELOPMENT CORP.  
 COLUMBIA, MARYLAND

PROJECT AREA:

PROJECT TITLE: REHABILITATION OF OWEN BROWN ROAD

Des By: K.L. Scale: AS SHOWN Drawing No: 4  
 Des By: J.D. Date: MARCH 1972 C.C.F. No.  
 Chk By: J.T.J. Approved:



STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INLET	OUTLET	REMARKS
S-1	END SECTION	STA 9+70 - 30' RT.	291.50	~	SEE DETAIL-SHEET 2

CURVE DATA BROKEN LAUD PKWY  
 $\Delta = 65^\circ 41' 05"$   
 $D = 04' 30' 00"$   
 $R = 1273.24'$   
 $T = 821.68'$   
 $L = 1459.66'$   
 $E = 242.23'$

STA 0+00 TO 2+50 B CONST  
 50D 2' SIDE DITCH TO 1' DEPTH

STA 1+25 TO 5+20 LT  
 50D 4' SHLDR SWALE FOR FULL DEPTH

STA 2+50 TO 5+00 LT  
 50D 1.5' BERM DITCH TO 1' DEPTH

STA 5+20 TO 7+50 LT  
 50D SHLDR SWALE FOR FULL DEPTH

STA 6+00 TO 9+50 RT  
 50D SHLDR SWALE FOR FULL DEPTH

STA 1+25 TO 6+00 RT  
 50D SHLDR SWALE FOR FULL DEPTH

STA 0+00 LT & RT  
 40 LF BITUMINOUS CONC CURB

PVI STA 1+50  
 ELEV: 339.53  
 VC = 300'  
 CORR = 1.66'  
 SSD = 43 MPH

STA 3+00 TO 6+50 RT  
 50D 4' SIDE DITCH TO 1' DEPTH

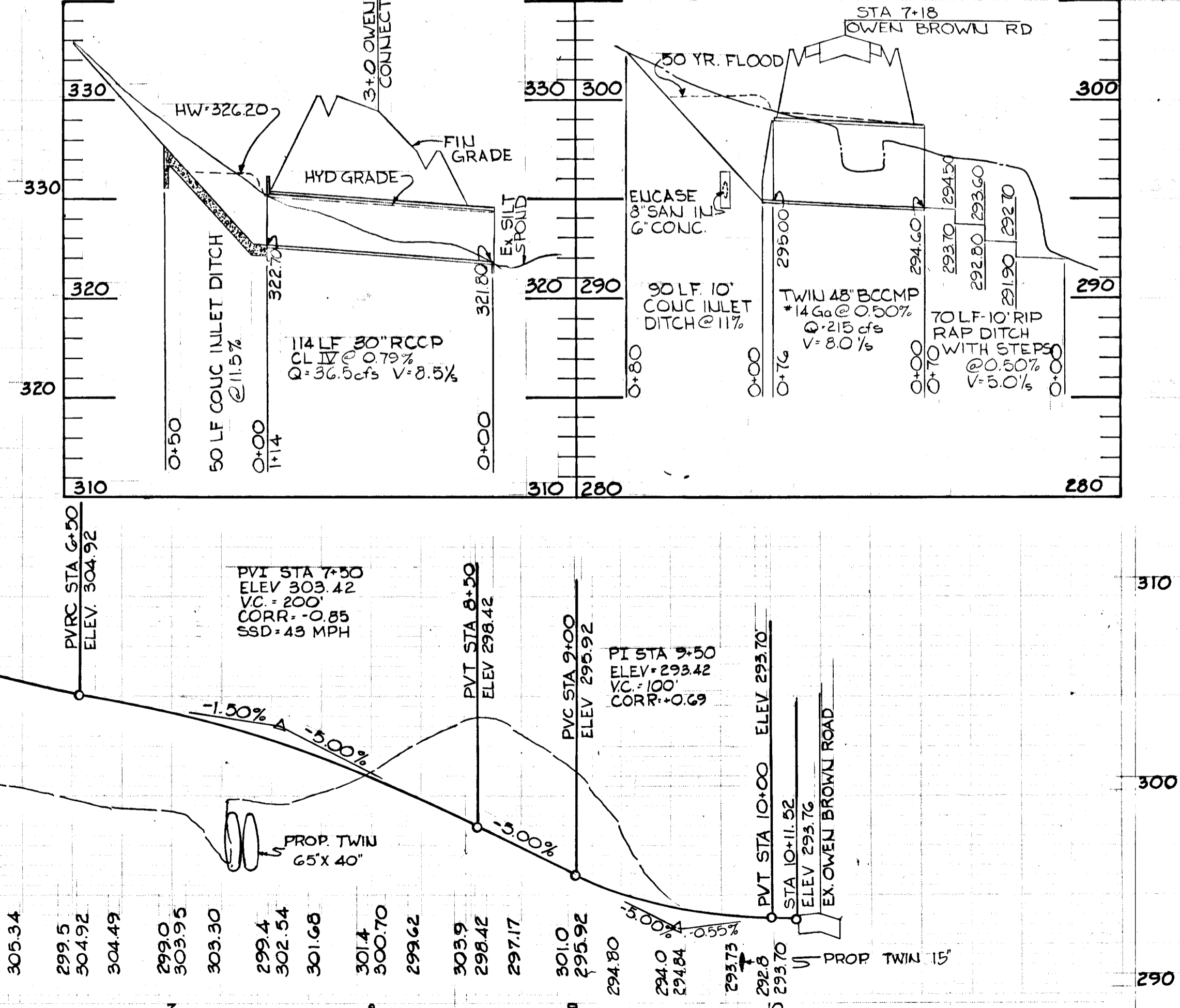
STA 6+50 TO 7+10 RT  
 CONC 4' SIDE DITCH TO 1' DEPTH

STA 6+90 RT  
 STA 7+15 RT  
 35 LF REMOVE EX PIPES

PAYING ELEVATIONS IN TRANSITION					
STATION	LT. EDGE	12' LT. P.G.E.	P.G.E.	12' RT. P.G.E.	RT. EDGE
D+00	341.69	342.35	343.01	343.67	343.49
D+25	341.18	341.78	342.38	342.98	342.80
D+50	340.59	341.13	341.67	342.21	342.03
D+75	339.89	340.37	340.85	341.33	341.15
1+00	339.11	339.53	339.95	340.37	340.19
1+16.14	338.57	338.95	339.33	339.71	339.53
1+25	338.20	338.58	338.96	339.32	339.14
1+50	337.11	337.49	337.87	338.17	337.99
1+75	335.94	336.31	336.69	336.93	336.76
2+00	334.67	335.03	335.41	335.59	335.42
2+25	333.33	333.66	334.04	334.16	334.00
2+50	331.94	332.21	332.59	332.65	332.50
2+73.82	330.51	330.73	331.11	331.11	330.97
2+75	330.43	330.65	331.03	331.03	330.89
3+00	328.84	329.01	329.39	329.33	329.19
3+25	327.21	327.32	327.70	327.58	327.45
3+48.51	325.67	325.73	326.11	325.93	325.81
3+50	325.57	325.63	326.01	325.82	325.69
3+75	323.93	323.94	324.32	324.07	323.92
3+98.28 = 2+64.25	NORMAL SECTION	323.10	322.81	322.67	
3+75		322.37	322.06	321.92	
3+00		320.68	320.31	320.19	
3+02.47		320.51	320.13	320.01	
3+25		318.99	318.61	318.53	
3+50		317.30	316.92	316.89	

STRUCTURE SCHEDULE					
NO	TYPE	LOCATION	INV. IN	INV. OUT	REMARKS
5-2	C-ENDWALL	STA 2+45-48' LT	322.70	~	HO CO DWG 57 PG 107
5-3	END SUP WALL	STA 3+35-44' RT	~	321.80	HO CO DWG 48 PG 101
5-4	END SECTION	STA 7+00-35' LT	294.00	~	SEE DETAIL - SHEET 2

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



TEMPORARY CONNECTION ROAD

THE HOWARD RESEARCH AND DEVELOPMENT CORP  
 LIBER 463 F. 192

THE HOWARD RESEARCH AND DEVELOPMENT CORP  
 LIBER 463 F. 192

APPROVED  
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING  
 HOWARD COUNTY, MARYLAND  
 DATE 6/19/73  
 J.C.E.



DEPARTMENT OF PUBLIC WORKS

*W.O. Albert* 6-19-73  
 CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING

CHIEF DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

GREEN ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 BALTIMORE, MARYLAND

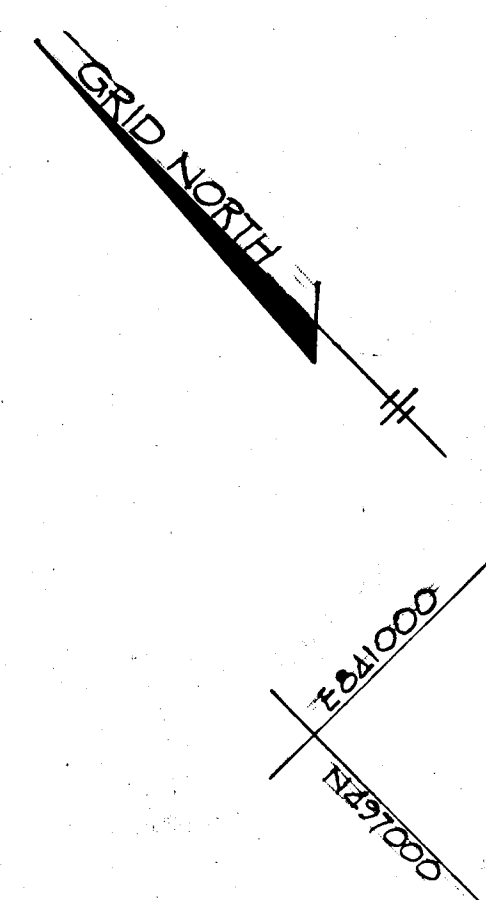
Rev Date Rev No Revision Description

**COLUMBIA**  
 MARYLAND  
 6TH ELECTION DISTRICT HOWARD COUNTY  
 HOWARD RESEARCH AND DEVELOPMENT CORP.  
 COLUMBIA, MARYLAND

PROJECT AREA

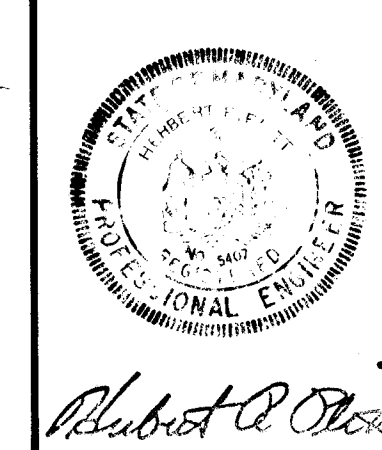
PROJECT TITLE  
 REHABILITATION OF OWEN BROWN ROAD

Des By K.L. Scale 1" = 50' Des No 5  
 Des By J.D. Date JUNE 1972 C.F.No.  
 CH By J.T.J. Approved



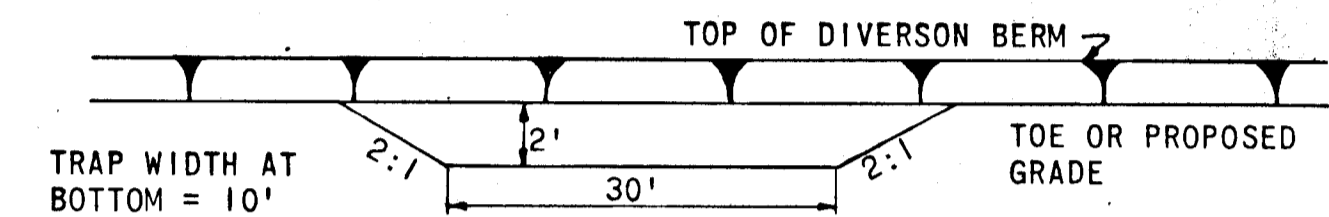
APPROVED  
DIVISION OF LAND DEVELOPMENT  
AND TRANSPORTATION PLANNING  
HOWARD COUNTY, MARYLAND  
DATE 11/30/73  
1261

DEPARTMENT OF PUBLIC WORKS		
<i>W.O. Felbert</i>		6-19-73
CHIEF, BUREAU OF HIGHWAYS		DATE
OFFICE OF PLANNING AND ZONING		
CHIEF DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING		DATE
GREEN ASSOCIATES, INC. CONSULTING ENGINEERS BALTIMORE, MARYLAND		
Rev. Date	Rev. No.	Revision Description
<b>COLUMBIA</b> FOR MARYLAND		
ELECTION DISTRICT		HOWARD COUNTY
HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND		
PROJECT AREA		
PROJECT TITLE <b>DRAINAGE AREA MAP</b>		
Des. By	K.A.L.	Scale 1" = 100'
Drawn By	A.W.R.	Date JUNE 1972
Chk. By	J.T.J.	Appr. G

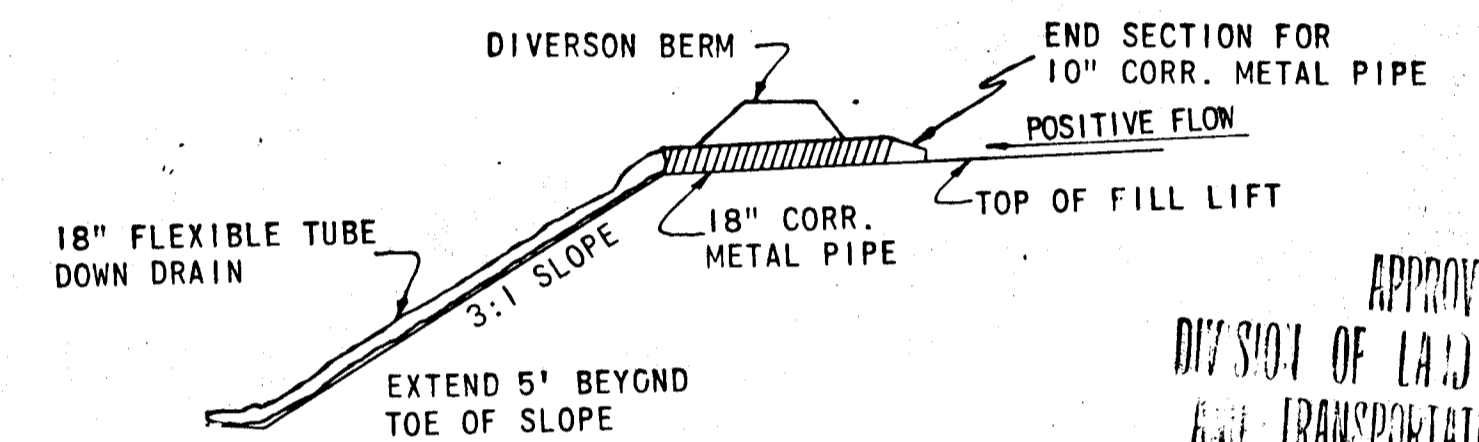


SEDIMENT CONTROL NOTES

1. IMMEDIATELY FOLLOWING THE START OF GRADING OPERATIONS THE DIVERSION BERMS SHOWN ON THIS PLAN WILL BE CONSTRUCTED USING 18" FLEXIBLE TUBE DOWN DRAINS WHERE GRADE STABILIZATION STRUCTURES ARE SHOWN.
2. DIVERSION BERMS WILL BE REBUILT AS THE FILLING OPERATION PROCEEDS IN LIFTS. SILT TRAPS, SWALES AND BERMS WILL BE RETAINED AFTER FINAL LIFT.
3. DISTURBED AREAS ARE TO BE MAINTAINED IN A ROUGH GRADED CONDITION UNTIL PROPER WEATHER CONDITIONS EXIST FOR THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
4. NO SLOPES SHALL BE STEEPER THAN 1' VERTICAL ON 3' HORIZONTAL (3:1).
5. FINAL STABILIZATION WITH VEGETATIVE COVER WILL TAKE PLACE AS EARLY IN THE SPRING AS WEATHER CONDITIONS PERMIT. IT WILL BE DONE AS FOLLOWS:
  - A. APPLY GROUND AGRICULTURAL LIMESTONE AT ONE TON PER ACRE.
  - B. APPLY 10-10-10 FERTILIZER 1000 LBS. PER ACRE.
  - C. WORK BOTH INTO SOIL AND PREPARE SEEDED AREA WITH YORK RAKE.
  - D. SEEDING
    1. SEED FLAT AREAS WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE.
    2. SEED ALL 3:1 SLOPES WITH 15 LBS. CROWN FETTER (INNOCULATED) PER ACRE 40 LBS. KENTUCKY 31 TALL FESCUE PER ACRE.
  - E. MULCHING
    1. UNWEATHERED SMALL GRAIN STRAW WILL BE APPLIED AT 1 1/2-2 TONS PER ACRE. MULCH WILL BE TIED DOWN WITH ASPHALT.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND MAINTAINED IN EFFECTIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD SOIL CONSERVATION DISTRICT. (465-3180 OR 465-5000 EXT. 291)
7. A MINIMUM 24 HOUR NOTICE MUST BE GIVEN TO THE HOWARD CONSERVATION DISTRICT (465-3180) PRIOR TO THE START OF ANY WORK.
8. SILT TRAPS WILL BE CLEANED OUT WHENEVER SILT REACHES A DEPTH OF ONE FOOT.
9. 18" FLEXIBLE TUBE DOWN DRAIN AVAILABLE AS "RELDRAIN-NO" FROM ELPHINSTONE INC. ROUTE 16, BALTIMORE, MD. OR AS APPROVED EQUAL.

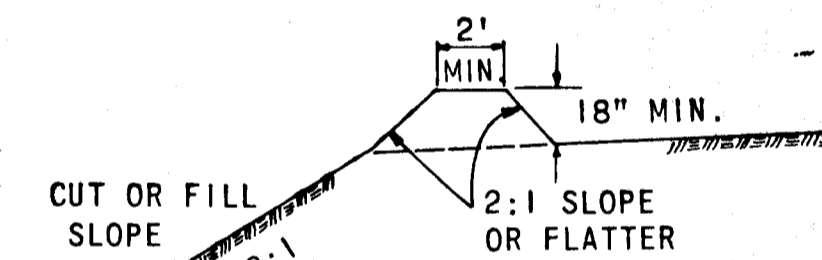


**SILT TRAP SECTION**

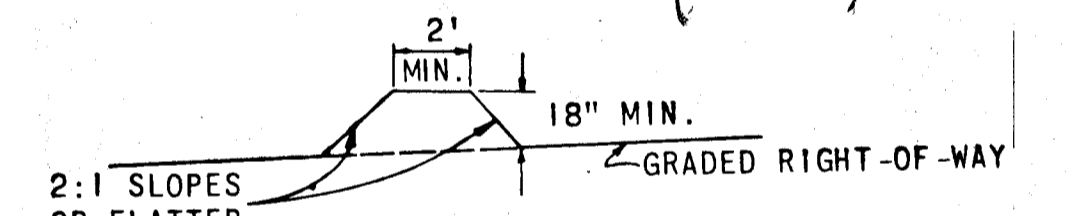


**FLEXIBLE TUBE DOWN DRAIN**

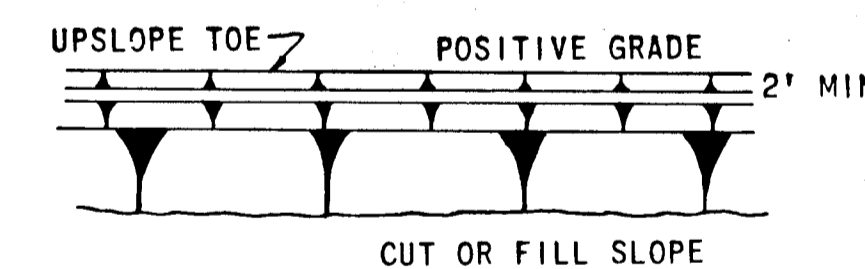
APPROVED  
 DIVISION OF LAND DEVELOPMENT  
 AND TRANSPORTATION PLANNING  
 HOWARD COUNTY, MARYLAND  
 DATE 4/30/73  
*[Signature]*



**CROSS SECTION**



**CROSS SECTION**



**DIVERSION BERM**

PLAN VIEW



**INTERCEPTOR BERM**

PLAN VIEW

**SEDIMENT CONTROL DETAILS**

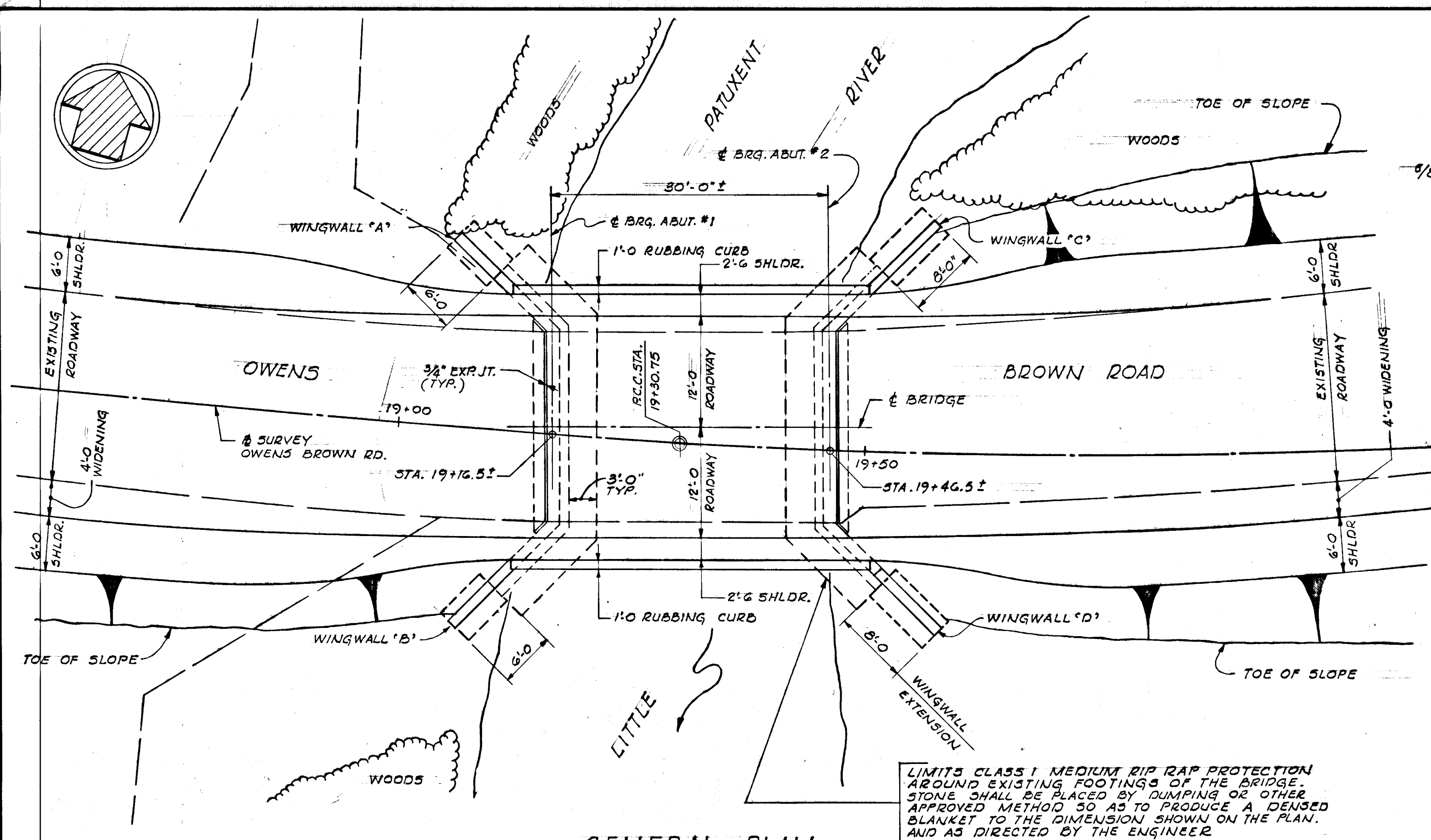
By the Developer:  
 "I certify that all development and/or construction will be done according to this plan of development and plan for Sediment and Erosion Control."  
*Richard W. [Signature]* 10-23-72  
 SIGNATURE OF DEVELOPER DATE

By the Engineer:  
 "I certify that this plan for erosion and sediment control has been prepared in accordance with the 'Standards and Specifications for Erosion and Sediment Control in Urbanizing Areas' as adopted by the Howard Soil Conservation District."  
*Richard C. [Signature]* MARCH, 1972  
 SIGNATURE OF ENGINEER DATE

"This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District."  
 REVIEWED: *Charles E. [Signature]* 6/14/73  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: *[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING

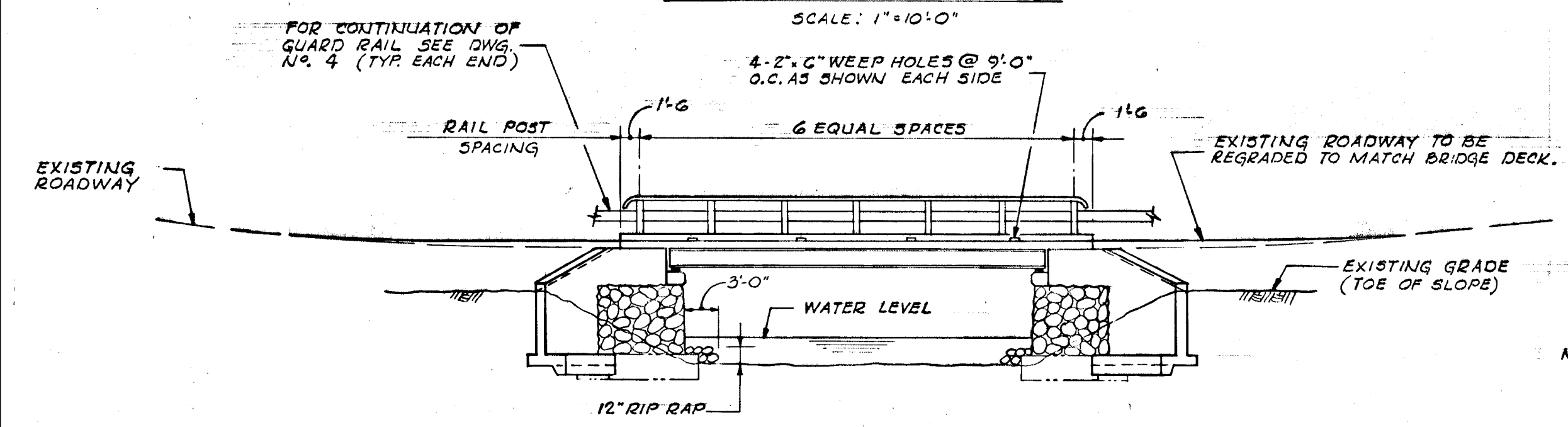
DEPARTMENT OF PUBLIC WORKS  
*W. O. [Signature]* 6-17-73  
 CHIEF, BUREAU OF HIGHWAYS  
 OFFICE OF PLANNING AND ZONING  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING

Rev Date	Rev No	Revision Description
<b>COLUMBIA</b> MARYLAND 5TH ELECTION DISTRICT HOWARD COUNTY OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND		
PROJECT AREA		
PROJECT TITLE SEDIMENT CONTROL DETAILS		
Des. By	K. L.	Scale NO SCALE
Dwn. By	J. D.	Date MARCH 1972
Chk. By	J. T. J.	Approved
Dwg. No.	7	C.C.F. No.

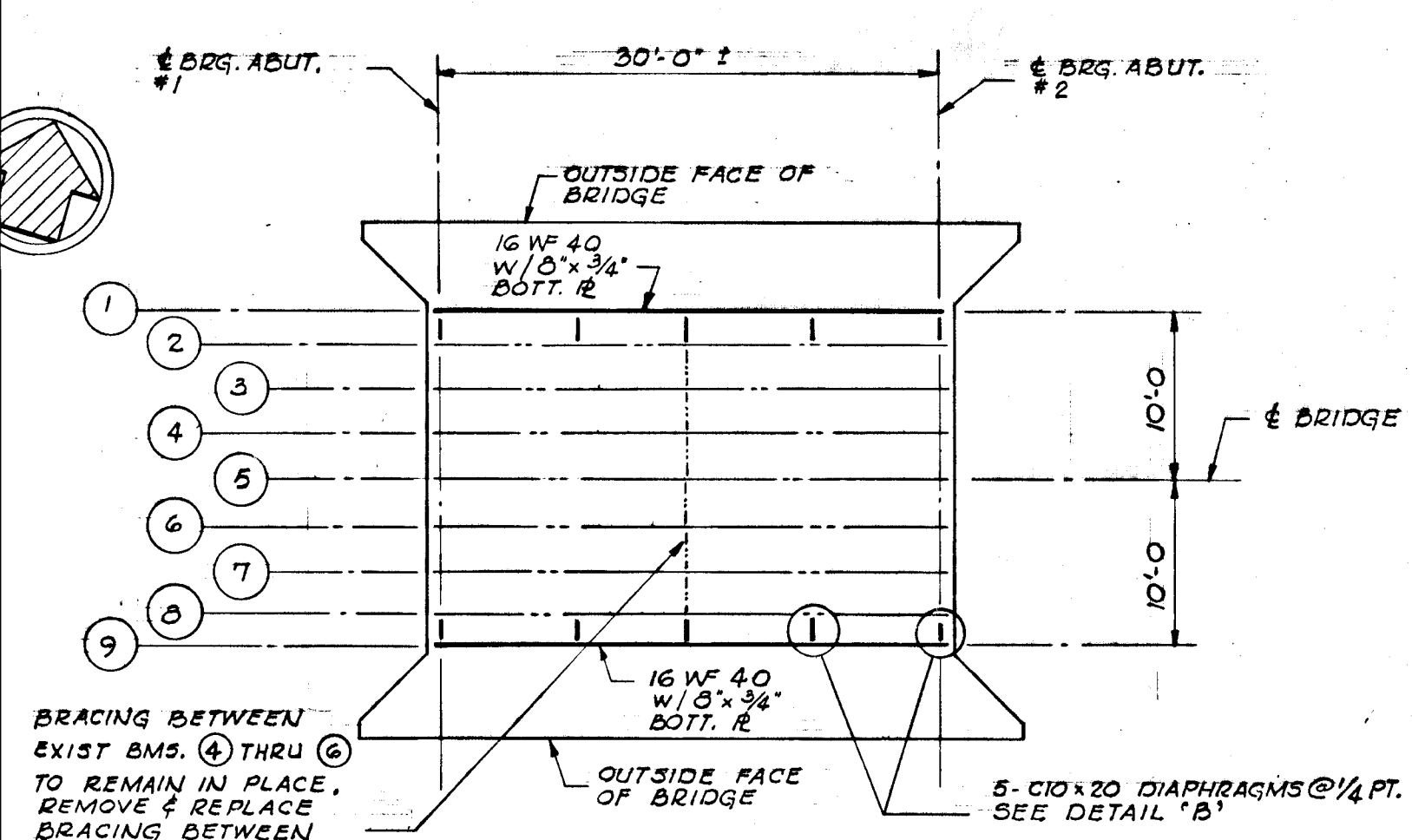


**GENERAL PLAN**  
SCALE: 1"=10'-0"

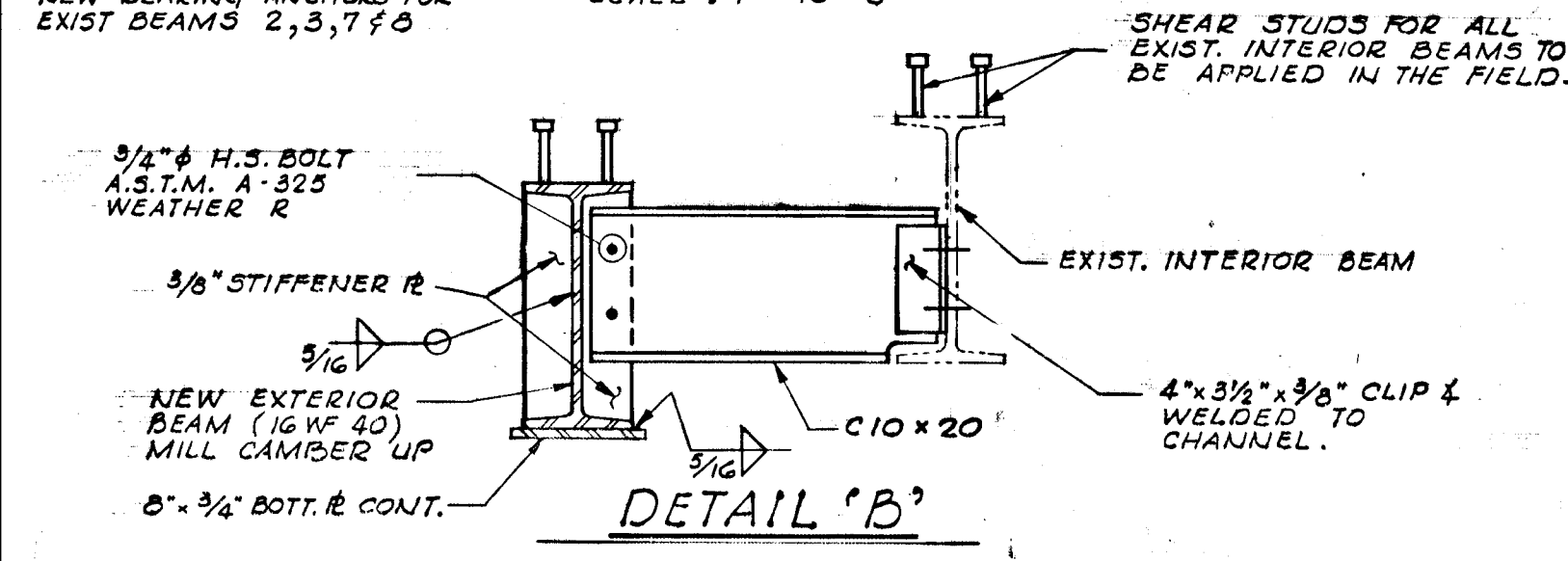
LIMITS CLASS 1 MEDIUM RIP RAP PROTECTION AROUND EXISTING FOOTINGS OF THE BRIDGE. STONE SHALL BE PLACED BY DUMPING OR OTHER APPROVED METHOD SO AS TO PRODUCE A DEPENDABLE BLANKET TO THE DIMENSION SHOWN ON THE PLAN, AND AS DIRECTED BY THE ENGINEER.



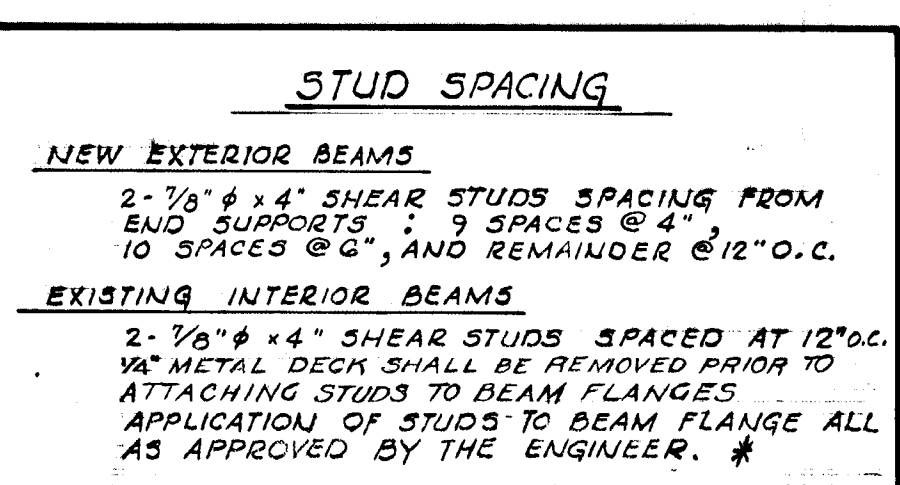
**ELEVATION**  
SCALE: 1"=10'-0"



**FRAMING PLAN**  
SCALE: 1"=10'-0"

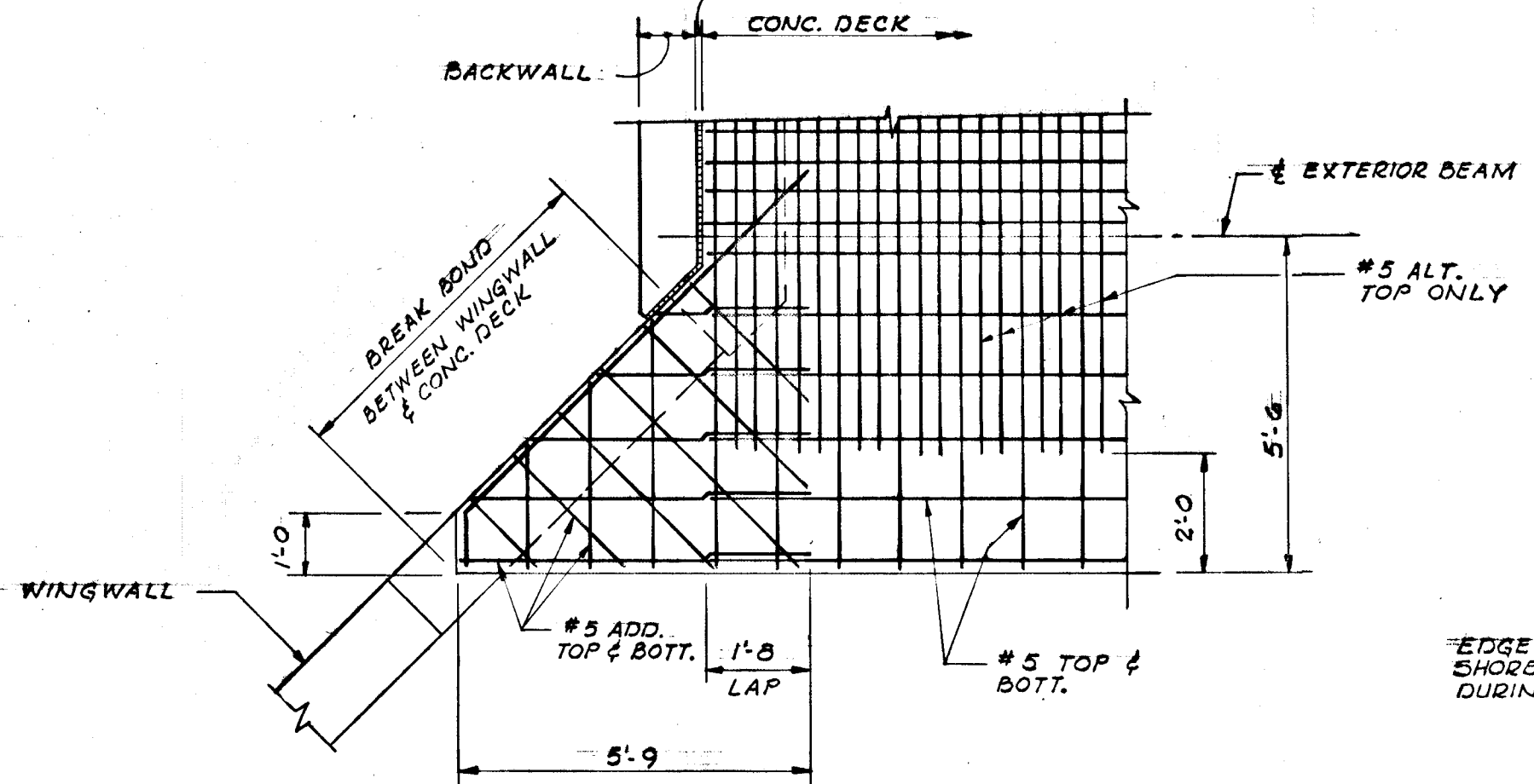


**DETAIL 'B'**  
SCALE: 1"=1'-0"

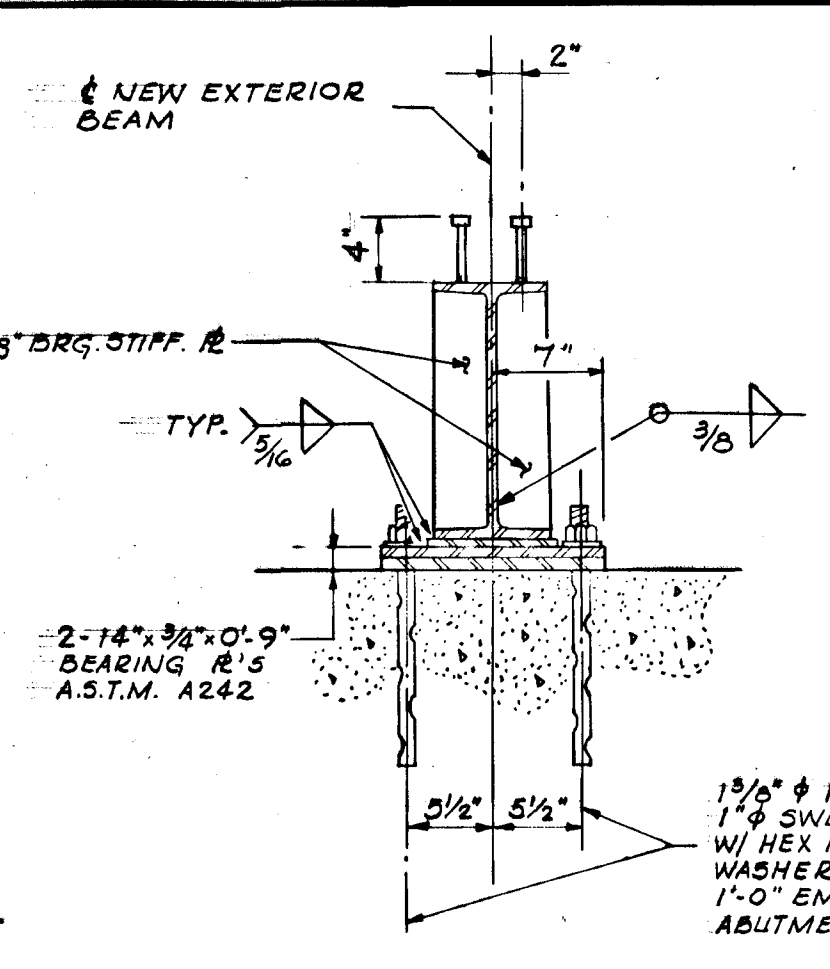


**STUD SPACING**

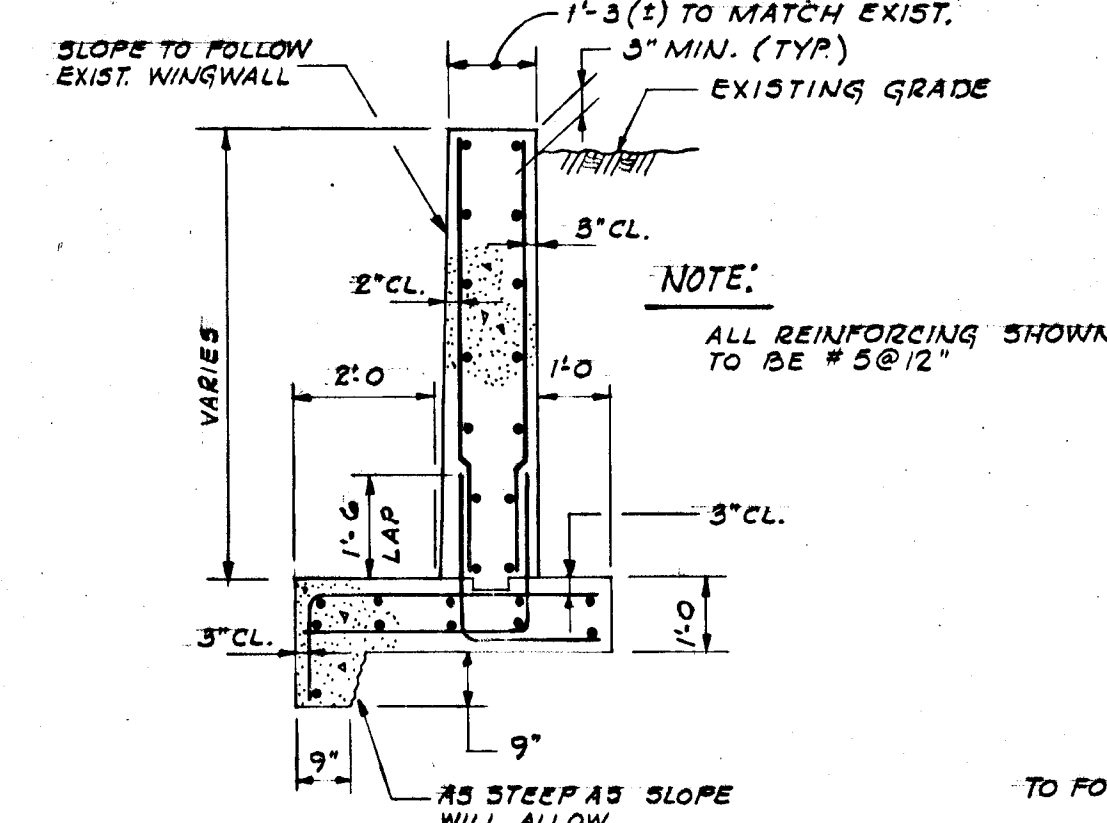
\* STUD WELDING SHALL CONFORM TO AWS STRUCTURAL WELDING CODE 1972 PART VI



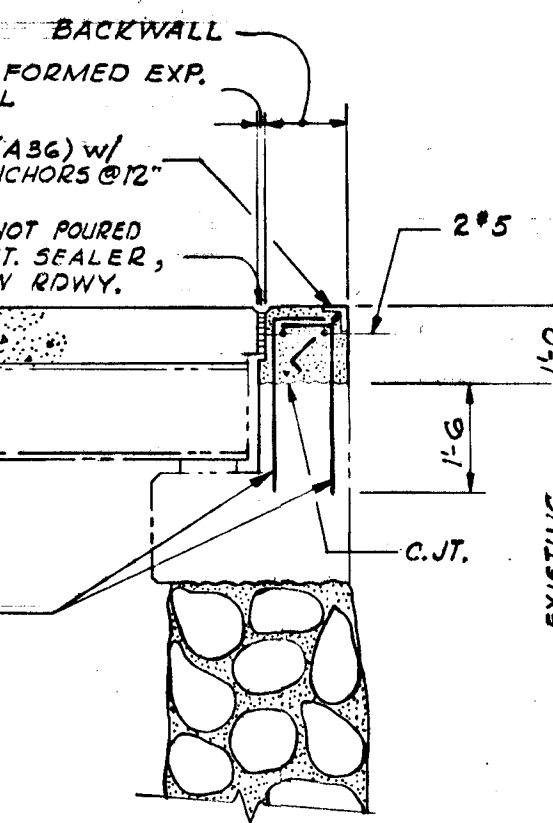
**PARTIAL DECK PLAN**  
SCALE: 3/8"=1'-0"



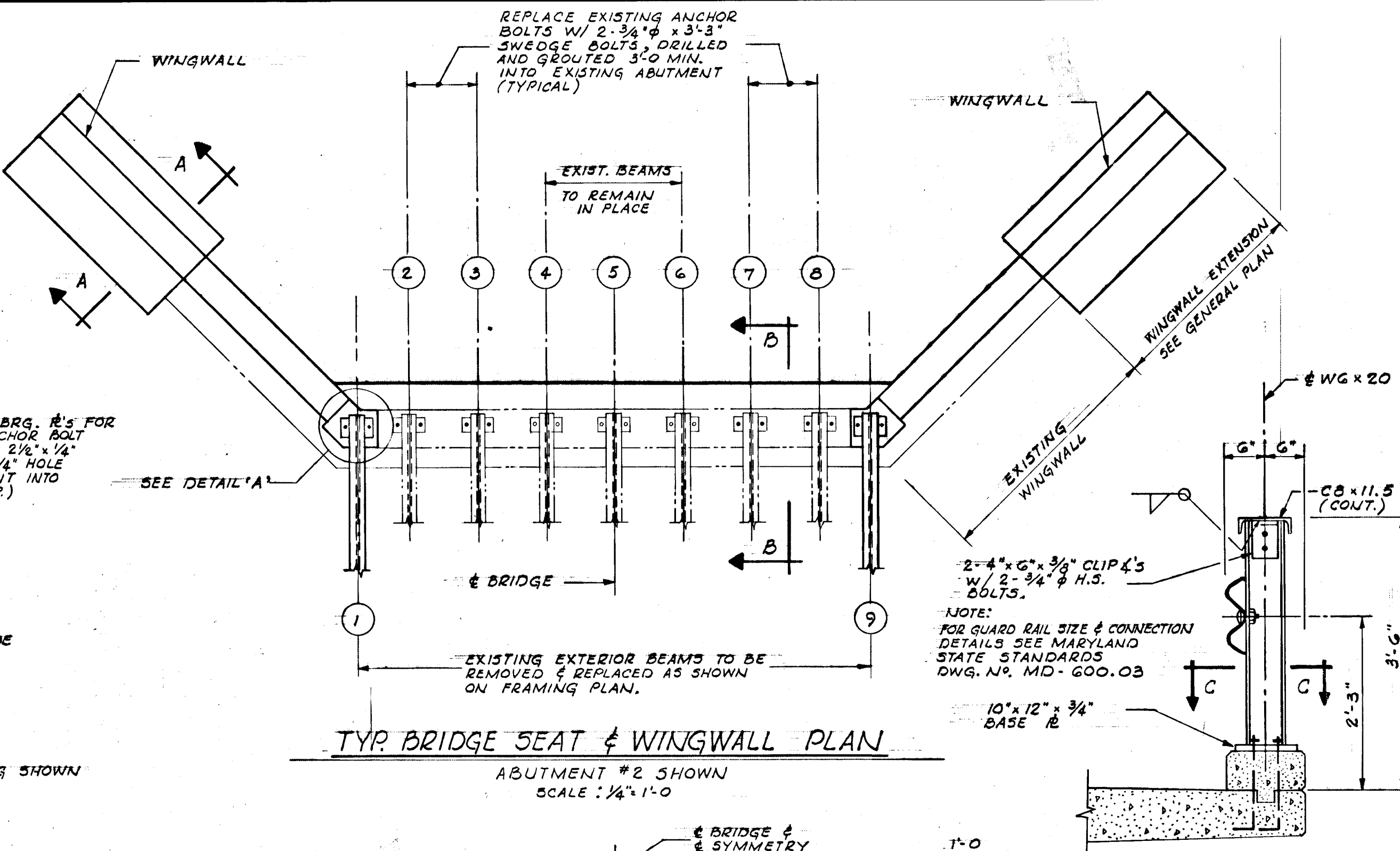
**DETAIL 'A'**  
SCALE: 1"=1'-0"



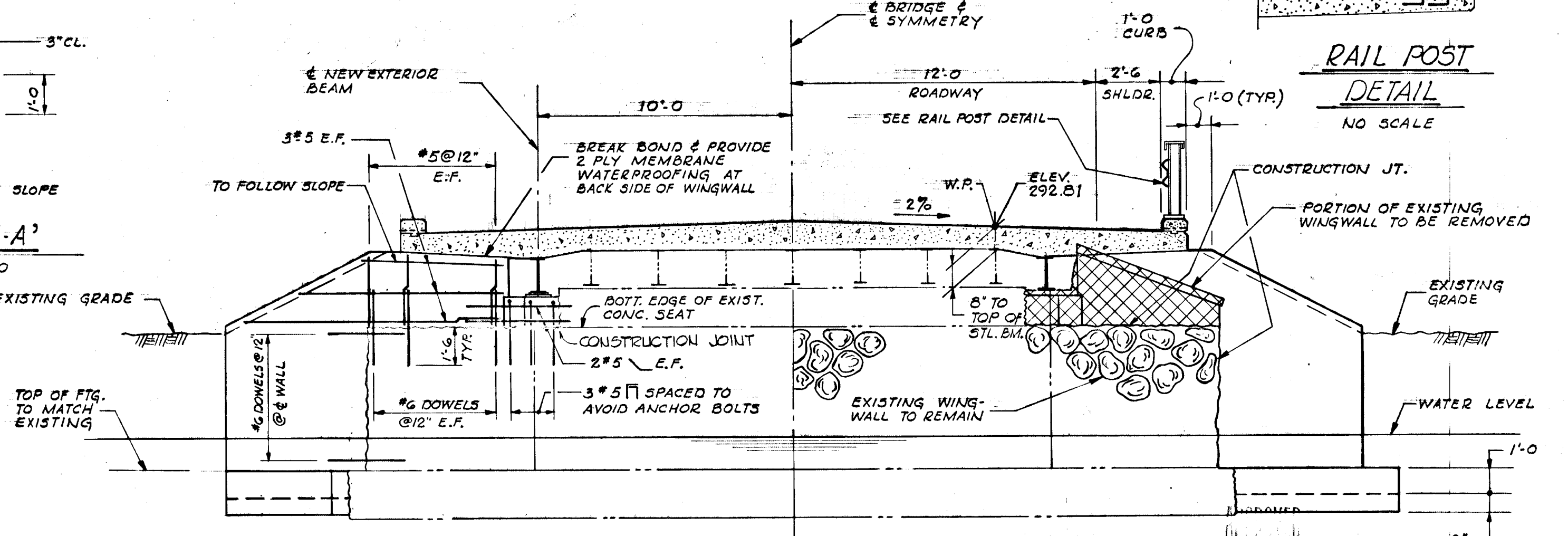
**SECTION 'A-A'**  
SCALE: 3/8"=1'-0"



**SECTION 'B-B'**  
SCALE: 3/8"=1'-0"



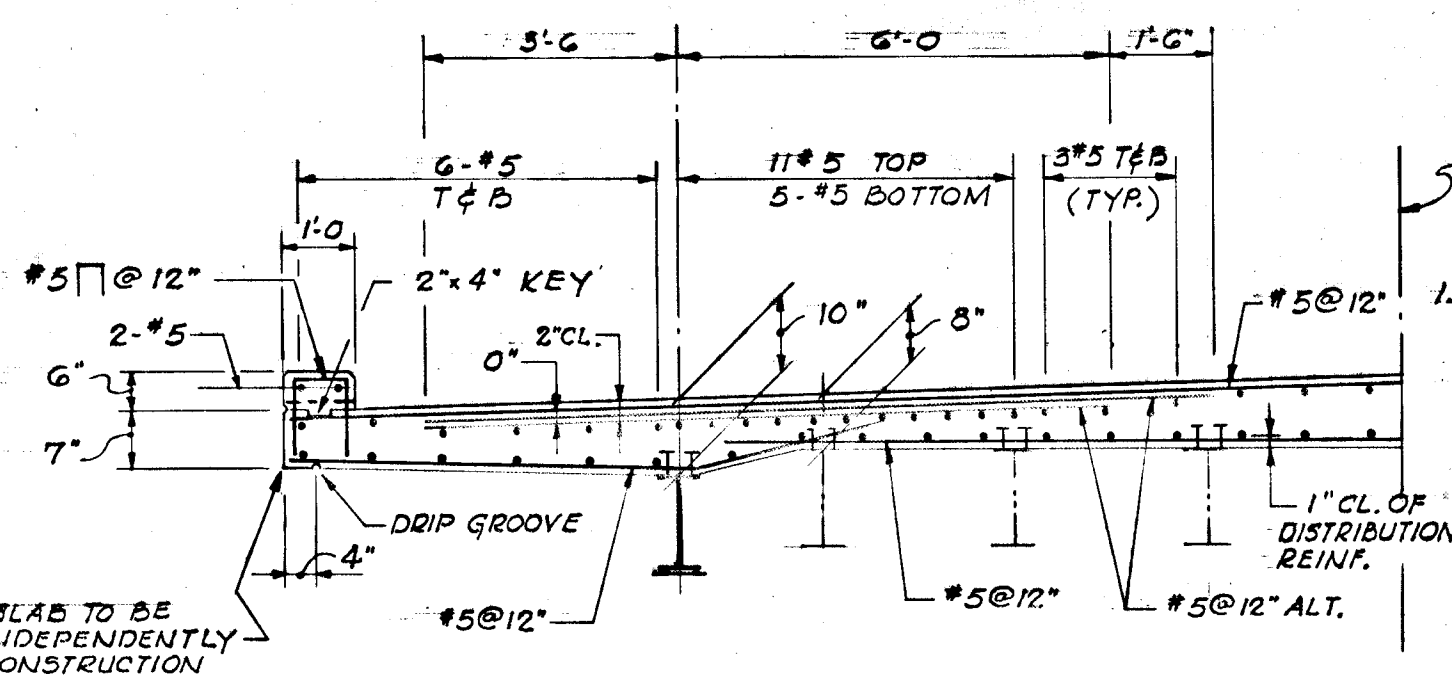
**TYP. BRIDGE SEAT & WINGWALL PLAN**  
ABUTMENT # 2 SHOWN  
SCALE: 1/4"=1'-0"



**TYP. ELEVATION AT ABUTMENT**  
SCALE: 1/4"=1'-0"

**GENERAL NOTES**

- SPECIFICATIONS: MATERIALS AND CONSTRUCTION - M.S.R.C. SPECIFICATIONS DATED MARCH, 1968 WITH SUBSEQUENT ADDENDA THERETO AND SPECIAL PROVISIONS.
- DESIGN - A.A.S.H.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1965, INCLUDING 1966-1967 INTERIM SPECIFICATIONS.
- LOADING: A.A.S.H.O. - H15-44 WITH PROVISIONS FOR FUTURE 2" WEARING SURFACE.
- REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO A.S.T.M. DESIGNATION A615 GRADE 60. ALL SPLICES SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS UNLESS OTHERWISE NOTED.
- CONCRETE: ALL STRUCTURAL CONCRETE SHALL BE CLASS "A-1", MINIMUM COMPRESSIVE STRENGTH OF ALL STRUCTURAL CONCRETE AT 28 DAYS SHALL BE 3,000 PSI. FOR DESIGN  $f_c = 1200$  LBS./SQ. IN. UNLESS OTHERWISE NOTED. DECK CONCRETE SHALL BE CLASS H.E.S. - 2 WITH MINIMUM COMPRESSIVE STRENGTH AT 3 DAYS SHALL BE 3,000 PSI. FOR DESIGN  $f_c = 1200$  LBS./SQ. IN.
- STRUCTURAL STEEL: STRUCTURAL STEEL SHALL BE A.S.T.M. DESIGNATION A588,  $F_y = 27,000$  PSI, UNLESS OTHERWISE NOTED.
- CHAMFER: ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED. CHAMFERS SHALL BE 3/4" x 3/4" UNLESS OTHERWISE NOTED.
- EXISTING STEEL: EXISTING STEEL BEAMS DESIGNED STRESS  $F_y = 18,000$  PSI.



**TYPICAL CROSS SECTION**  
SCALE: 3/8"=1'-0"

DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING  
HOWARD COUNTY, MARYLAND  
12/73

DEPARTMENT OF PUBLIC WORKS  
W. O. Falbert 6-19-73  
CHIEF, BUREAU OF HIGHWAYS  
OFFICE OF PLANNING AND ZONING  
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING

GREEN ASSOCIATES, INC.  
CONSULTING ENGINEERS  
BALTIMORE, MARYLAND

Rev. Date: Rev. No.: Revision Description:  
**COLUMBIA**  
M A R Y L A N D  
6TH ELECTION DISTRICT HOWARD COUNTY  
HOWARD RESEARCH AND DEVELOPMENT CORP.  
COLUMBIA, MARYLAND

PROJECT AREA: REHABILITATION OF OWEN BROWN ROAD BRIDGE WIDENING OVER LITTLE PATUXENT RIVER  
PROJECT TITLE: AS SHOWN  
Drawn By: M.V.B. Date: SEPT. 1972  
Checked By: R.J.F. Approved:

