

**NOTES**

Assumed Live Load: HS (14)

For other design data and general notes see steel S&N.

The contractor will be required to drive one 12" prestressed concrete test pile 54' long in place at bents #1, 5 & 9. The test piles shall be paid for as they are driven. The order lengths for 12" prestressed concrete piles will be given after the test piles have been driven.

Piles for all bents to be driven to a minimum bearing capacity of 30 tons each.

Piles for End Bents #1 & 2 to be driven through the roadway fill.

Minimum traffic is to be maintained.

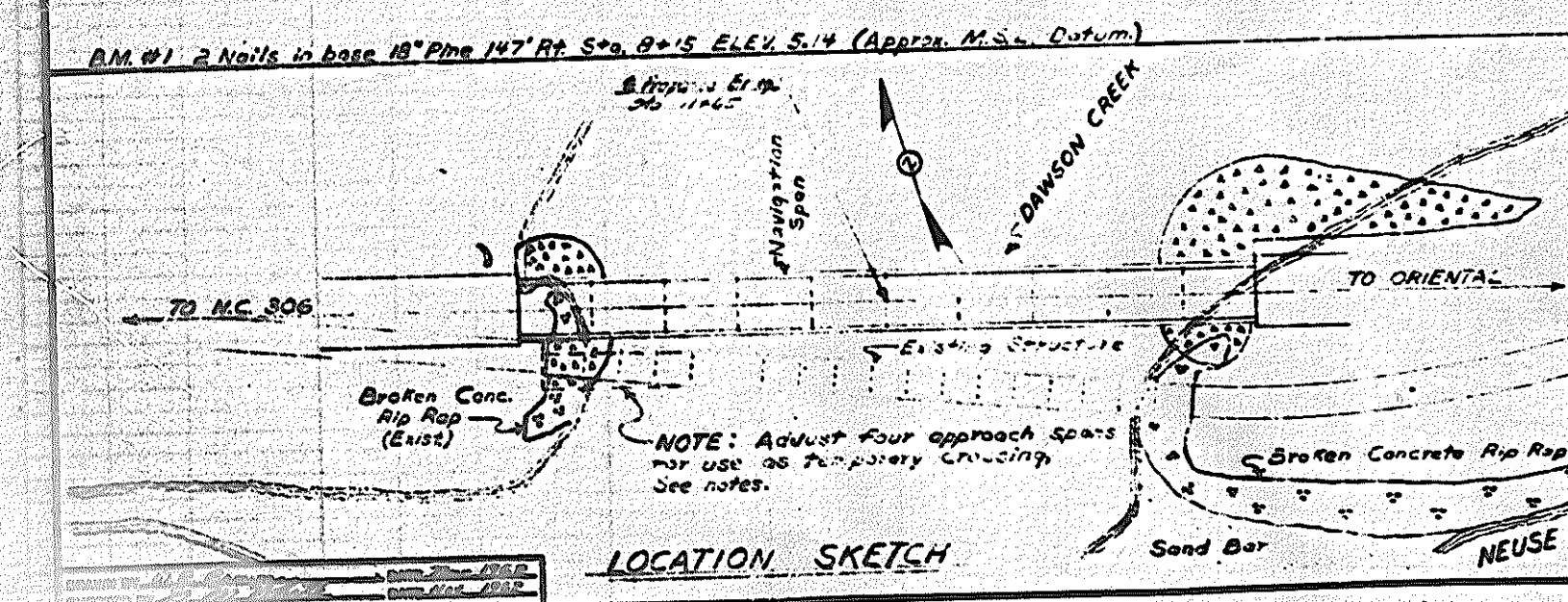
Maintenance and Removal of Existing Structure: After serving as a temporary crossing the existing structure consisting of 4 @ 17' timber spans @ 34.5' I-beam span, and 2 @ 17' timber spans on Crosstied timber piles and caps with clear roadway of 17'-0" and overall length of 35.9' and located 37' down stream from proposed structure shall be removed as follows:  
 Superstructure completely.  
 Substructure to an elevation of at least 10 foot below natural ground line or bed of stream.  
 See Specifications and Special Provisions.

Maintenance of Water Traffic: The contractor will be required to maintain water traffic in a manner satisfactory to both the Engineer and the US Coast Guard and in accordance with the Special Provisions.

The contractor will be required to adjust the four spans on the west end of the existing structure so as to clear the proposed construction while being used as a temporary crossing. The entire cost of this work, including additional piles and timbers required, shall be included in the lump sum contract price bid for Maintenance and Removal of Existing Structure.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS BUILT ACCORDING TO PLANS.

SIGNED: *J. S. Strider*  
 RESIDENT ENGINEER  
 PROJECT No. 8.22504  
 PAMLICO COUNTY  
 STATION 11+65



*Included in Length shown of 12" Prest. Concrete Piles*

No.	L.P.	TOTAL BILL OF MATERIAL		Lump Sum	No.	Lin. Ft.	Sq. Yds.
		Reinf. Concrete	Structural Steel				
Superstructure	346.0	27,555	171,100				
End Bent #1	29	2,226			6	324.0	330.34
Bent #1	6.6	1,322			5	270.0	
Bent #2	6.6	1,322			5	270.0	
Bent #3	6.6	1,322			5	270.0	
Bent #4	6.6	1,322			5	270.0	
Bent #5	6.6	1,322		5,516	5	270.0	
Bent #6	6.6	1,322			5	270.0	
Bent #7	6.6	1,322			5	270.0	
Bent #8	6.6	1,322			5	270.0	
Bent #9	6.6	1,322			5	270.0	
End Bent #2	29	2,226			6	291.0	753.62
<b>TOTALS</b>		<b>425.2</b>	<b>24,195</b>	<b>171,100</b>	<b>57</b>	<b>2,980.0</b>	<b>1,083.96</b>

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 GENERAL DRAWING FOR  
 BRIDGE OVER DAWSON CREEK  
 ON SR-1302 BETWEEN  
 N.C. 306 AND ORIENTAL  
 NOV, 1962

APPROVED BY: *J. S. Strider*  
 RESIDENT ENGINEER

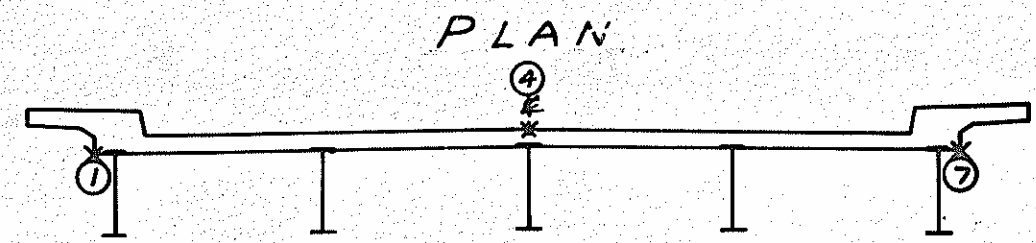
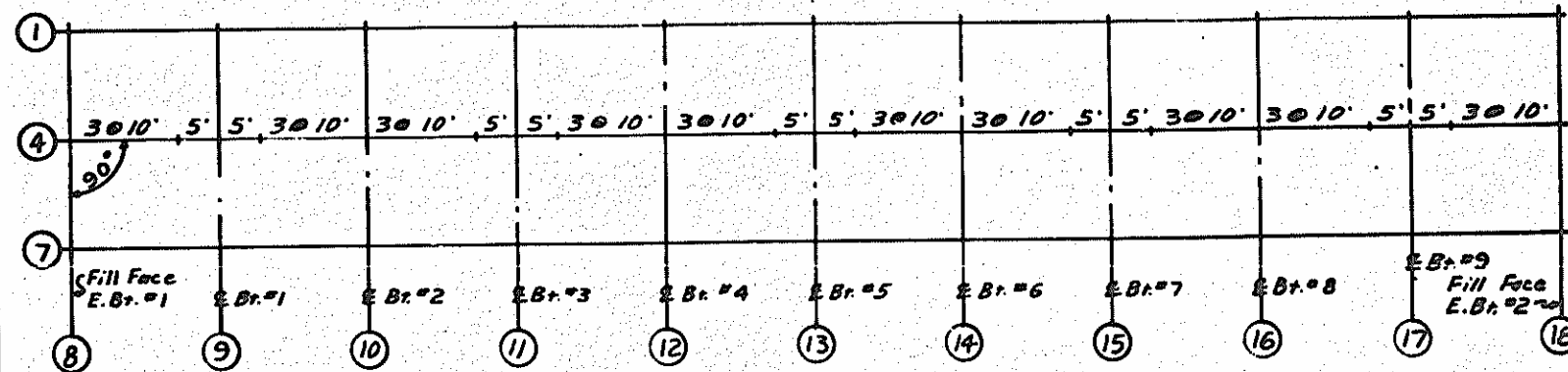
**GRADE DATA**

+ 2.0% - 1.175%

P.I. STA. 11 + 00  
P.I. Elev. 17.60  
LENGTH OF CURVE = 400'  
G1 = 2.0% G2 = 1.175%

FIELD NO.	STATE	PROJECT NO.
1	N.C.	8.22504
S.A. PROJECT 5-15490		

Column 1 Bottom of overhang	Column 2 Top of curb	Column 3 E of beam	Column 4 E of roadway	Column 5 E of beam	Column 6 Top of curb	Column 7 Bottom of overhang
Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.
10'-0" 12.205 Fill Face	Begin Curb	Fill Face	10'-0" 15.079 Fill Face	Fill Face	Begin Curb	Col. 7 is identical to Col. 1
10'-0" 379			10'-0" 205			
10'-0" 687			10'-0" 328			
10'-0" 528 Sta. 10+20			10'-0" 428 Sta. 10+20			
5'-0" 677 E. Br. #1			5'-0" 480 E. Br. #1			
5'-0" 695 Sta. 10+30			5'-0" 529 Sta. 10+30			
10'-0" 703			10'-0" 622			
			10'-0" 707			
			10'-0" 784 E. Br. #2			
			10'-0" 853			
			10'-0" 914			
			10'-0" 967 Sta. 10+30			
			5'-0" 991 E. Br. #3			
			5'-0" 1012 Sta. 11+00			
			10'-0" 1050			
			10'-0" 1079			
			10'-0" 1101 E. Br. #4			
			10'-0" 1114			
			10'-0" 1120			
			10'-0" 117 Sta. 11+60			
			5'-0" 113 E. Br. #5			
			5'-0" 107 Sta. 11+70			
			10'-0" 108			
			10'-0" 1062			
			10'-0" 16 028 E. Br. #6			
			10'-0" 15 986			
			10'-0" 936			
			10'-0" 878 Sta. 12+30			
			5'-0" 846 E. Br. #7			
			5'-0" 812 Sta. 12+30			
			10'-0" 738			
			10'-0" 685			
			10'-0" 567 E. Br. #8			
			10'-0" 469			
			10'-0" 364			
			10'-0" 250 Sta. 13+00			
			5'-0" 191 E. Br. #9			
			5'-0" 133 Sta. 13+10			
			10'-0" 15 015			
			10'-0" 14 858			
			10'-0" 14 780 Fill Face			



Elevations shown in columns 1 thru 18 are final required elevations of the completed structure. In setting up the form and screed elevations, provisions must be made for deflections where required.

For columns 8 thru 18, given elevations are at 2'-0" intervals normal to E of roadway from the 1% gutter line to the right gutter line.

	ALL SPAN'S SPAN	SPAN	SPAN
INT	5/8		
EXT	5/8		

**HEADERS**

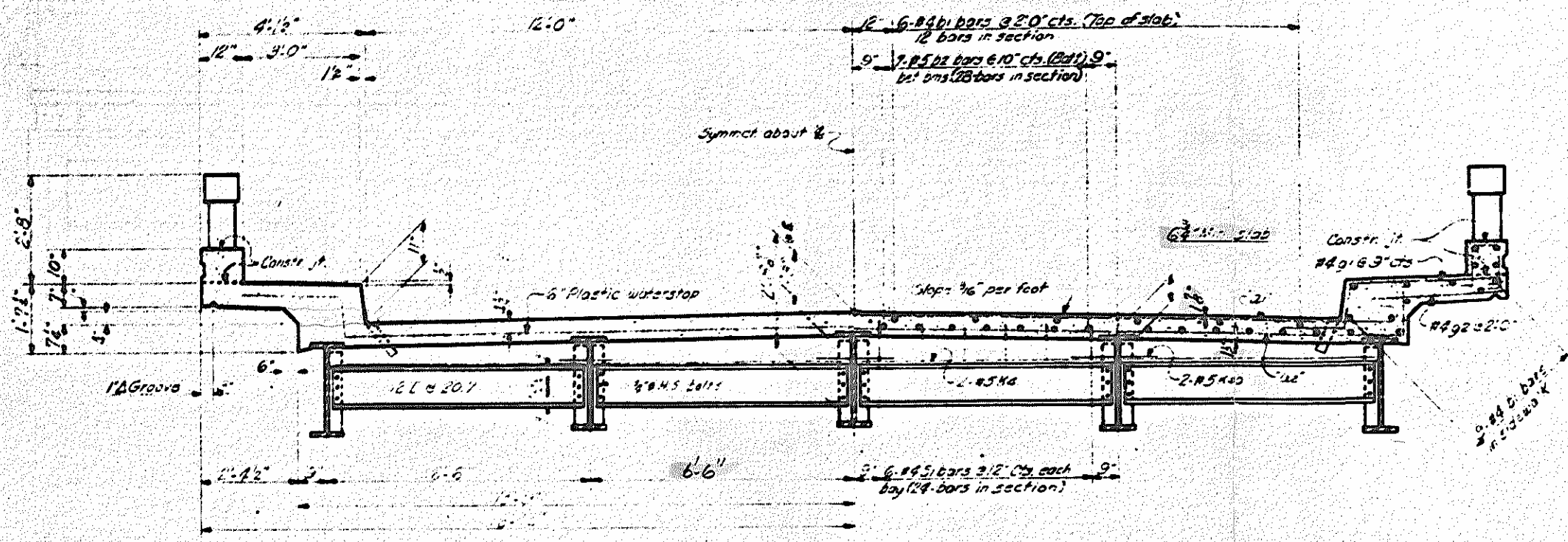
Column 1 Fill Face of E.Br. #1	Column 2 E. Br. #1	Column 3 E. Br. #2	Column 4 E. Br. #3	Column 5 E. Br. #4	Column 6 E. Br. #5	Column 7 E. Br. #6	Column 8 E. Br. #7	Column 9 E. Br. #8	Column 10 E. Br. #9	Column 11 Fill Face E.Br. 2
Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.	Dist. Elev.
14 832	15 293	15 597	15 804	15 914	15 924	15 891	15 859	15 827	15 795	14 593
923	324	628	835	945	957	923	891	857	825	622
928	325	629	836	946	958	924	892	858	826	623
14 985	385	689	897	1007	1019	985	953	921	889	686
15 077	418	722	929	1039	1051	1017	985	953	921	718
14 948	449	753	960	1071	1083	1049	1017	985	953	749
14 879	482	785	991	1103	1115	1081	1049	1017	985	780
14 810	492	793	999	1111	1123	1087	1055	1023	991	781
15 017	418	722	929	1039	1051	1017	985	953	921	718
14 985	449	753	960	1071	1083	1049	1017	985	953	749
14 923	353	657	865	975	987	953	921	889	857	654
14 832	324	628	835	945	957	923	891	857	825	622
	15 293	15 597	15 804	15 914	15 924	15 891	15 859	15 827	15 795	14 593

PROJECT No. 8.22504  
PAMLICO COUNTY  
STATION: 11 + 65

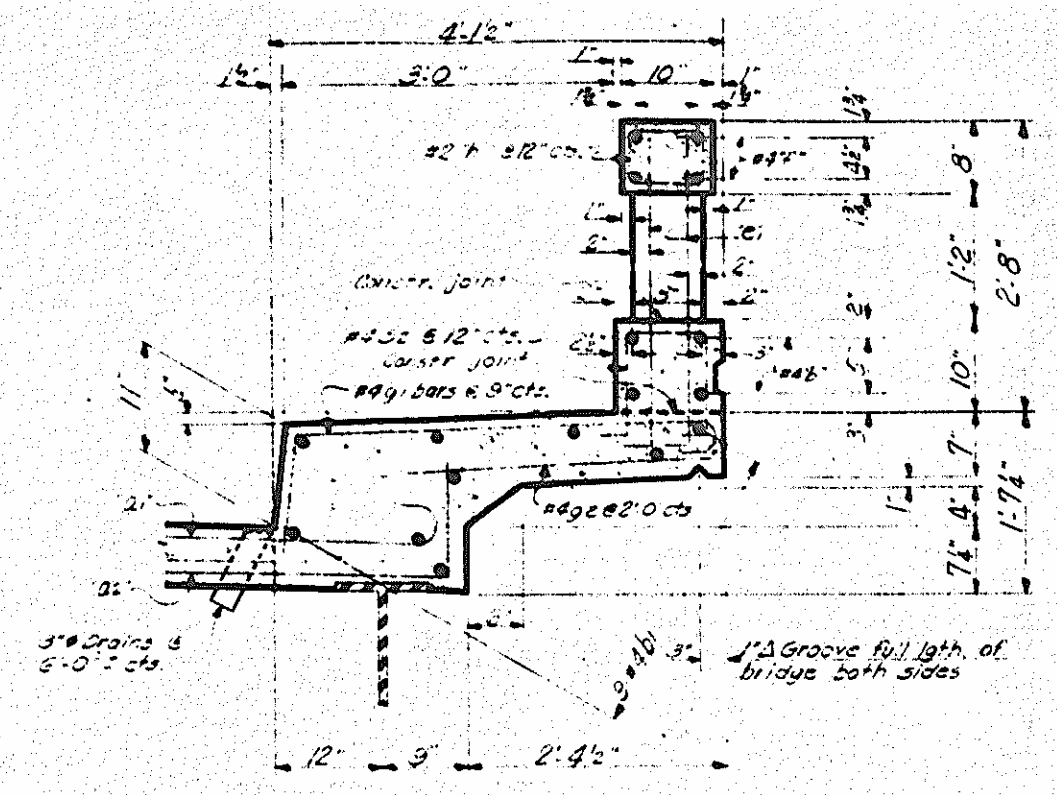
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH  
ELEVATIONS  
FOR  
SETTING UP  
FORMS AND SCREEDS  
MAY 1961

REVISIONS				SHEET NO. 0			
NO.	BY	DATE	NO.	BY	DATE		
1			2				
2			4				

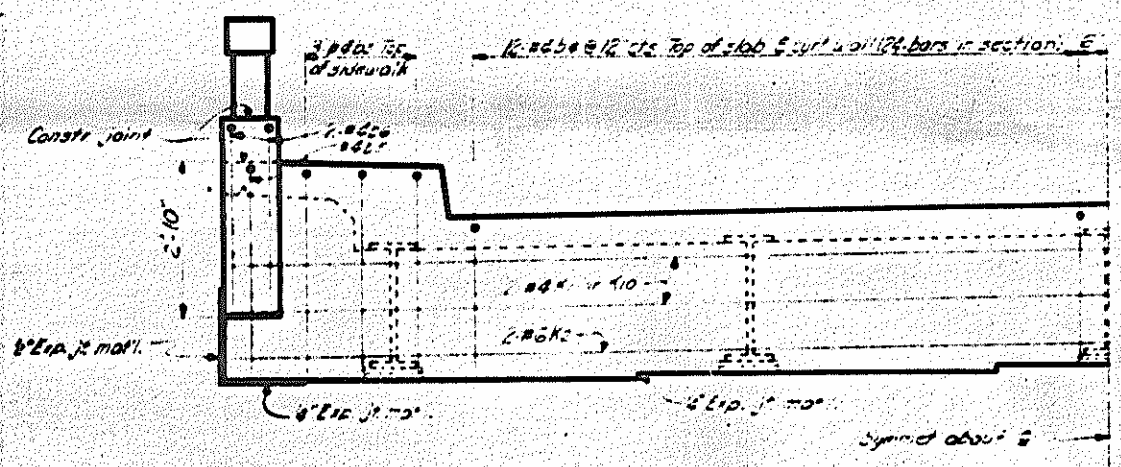
FIELD NO.	DATE	PROJECT NO.
8	11/65	822504
P.A. PROJECT 5-15490		



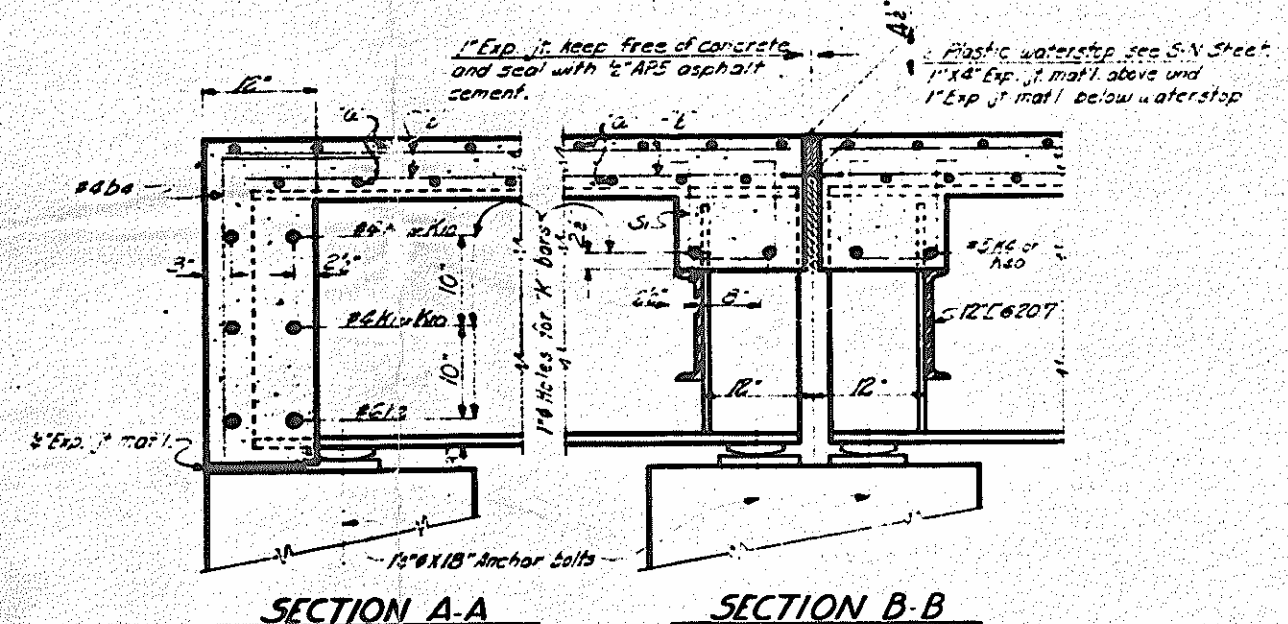
**TYPICAL SECTION**  
SIZE AS INDICATED UNLESS NOTED



**SECTION THRU SIDEWALK**

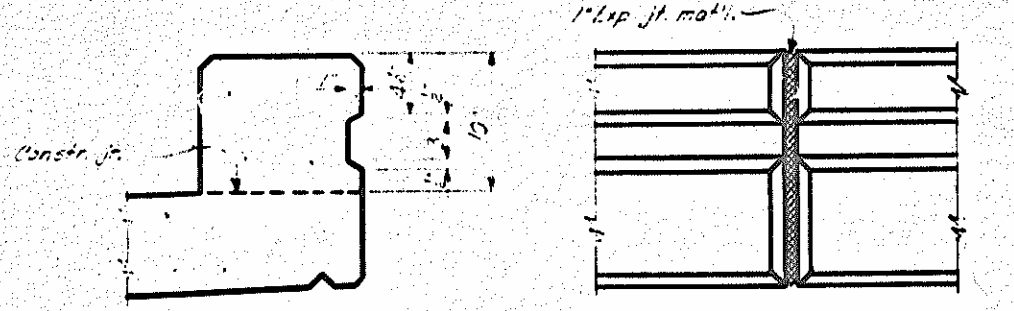


**HALF END ELEVATION**

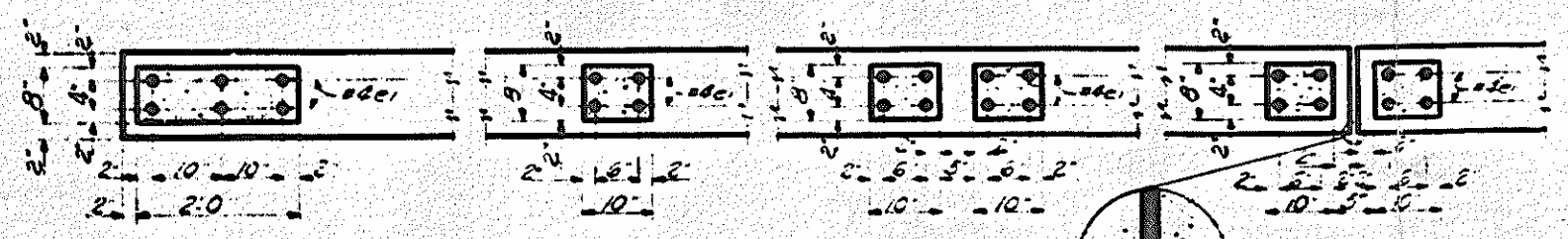


**SECTION A-A**

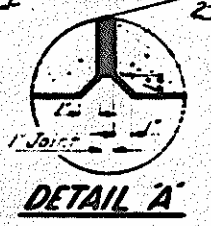
**SECTION B-B**



**DETAIL OF PARAPET GROOVE**



**POST DETAILS**



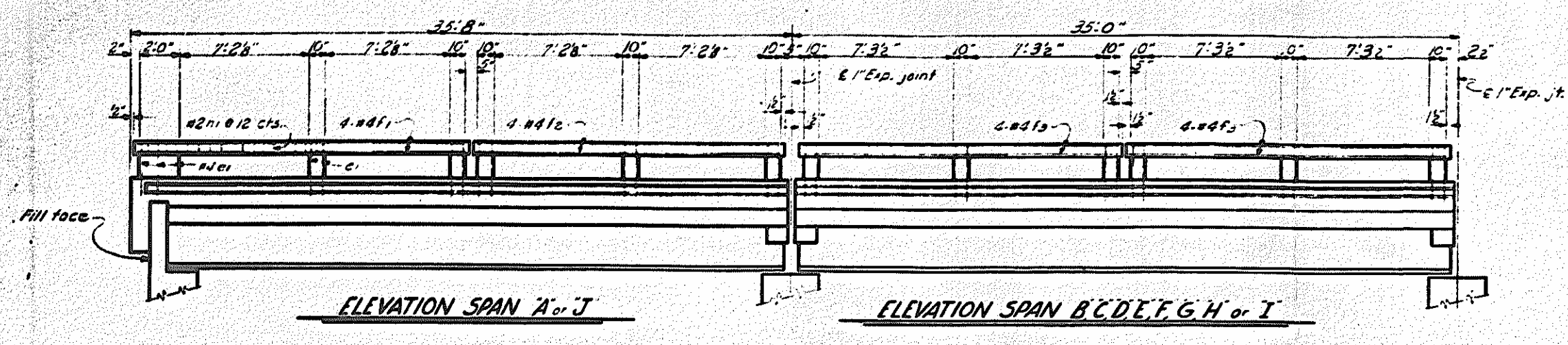
**DETAIL A**

PROJECT No. 822504  
 PAMLICO COUNTY  
 STATION: 11+65

REVISIONS	DATE	BY	CHKD.

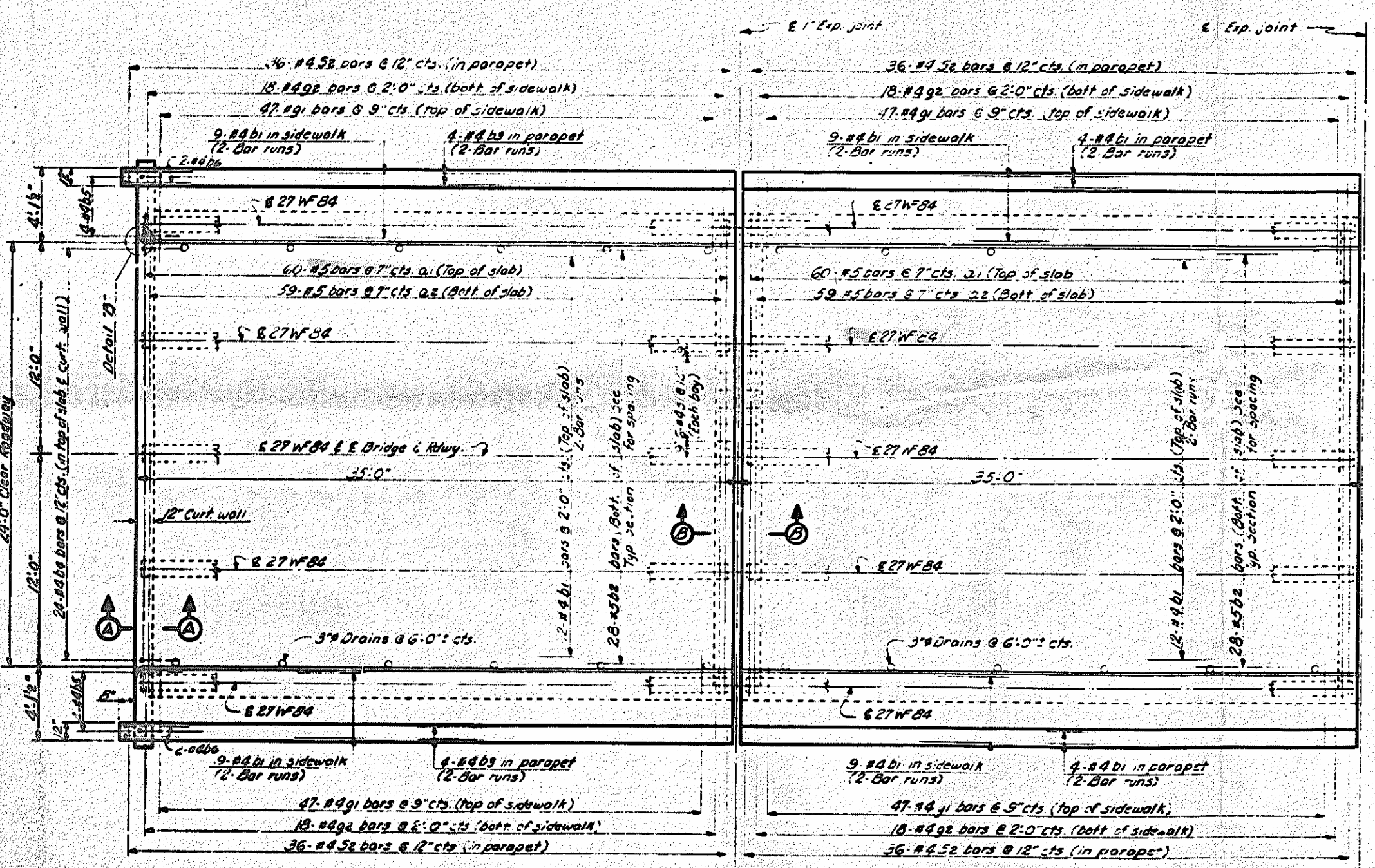
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
**SUPERSTRUCTURE**  
**SECTIONS & DETAILS**  
 NOV. 1962

DESIGNED BY: [Signature] DATE: 11/65  
 CHECKED BY: [Signature] DATE: 11/65  
 DRAWN BY: [Signature] DATE: 11/65



ELEVATION SPAN A or J

ELEVATION SPAN B, C, D, E, F, G, H or I



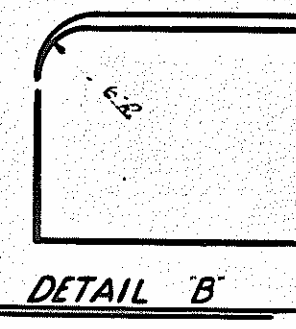
PLAN - SPAN A or J

PLAN - SPAN B, C, D, E, F, G, H or I

BAR BENDING DETAILS		BILL OF MATERIAL FOR TEN SPANS				
1		BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
2		21	#5	1	28'-4"	17,751
3		22	#5	2	29'-2"	17,946
4		b1	#4	5fr	18'-0"	8,753
5		b2	#4	5fr	34'-8"	10,120
6		b3	#4	5fr	18'-0"	392
7		b4	#4	3	4'-8"	150
8		b5	#4	3	5'-7"	60
9		b6	#4	3	5'-8"	29
10		c1	#4	4	3'-4"	1,087
11		f1	#4	5fr	18'-0"	192
12		f2	#4	5fr	16'-10"	180
13		f3	#4	5fr	17'-7"	1,461
14		g1	#4	5	6'-8"	4,186
15		g2	#4	5fr	2'-8"	641
16		h1	#2		2'-7"	311
17		h2	#4	5fr	17'-3"	92
18		h3	#4	5fr	15'-9"	84
19		h4	#6	5fr	31'-11"	192
20		k1	#5	5fr	6'-4"	951
21		k2	#5	5fr	3'-6"	394
22		j1	#4	6	1'-2"	914
23		j2	#4	6	3'-6"	1,683

REINFORCING STEEL LBS. 67,555  
 STRUCTURAL STL. APPROX. LBS. 171,100  
 CLASS "A" CONCRETE CU.YDS. 346.0

Note: All bar dimensions are out to out



DETAIL B

PROJECT NO. 822504  
 PAMLICO COUNTY  
 STATION: 11+65

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SUPERSTRUCTURE  
 PLAN

NOV. 1962

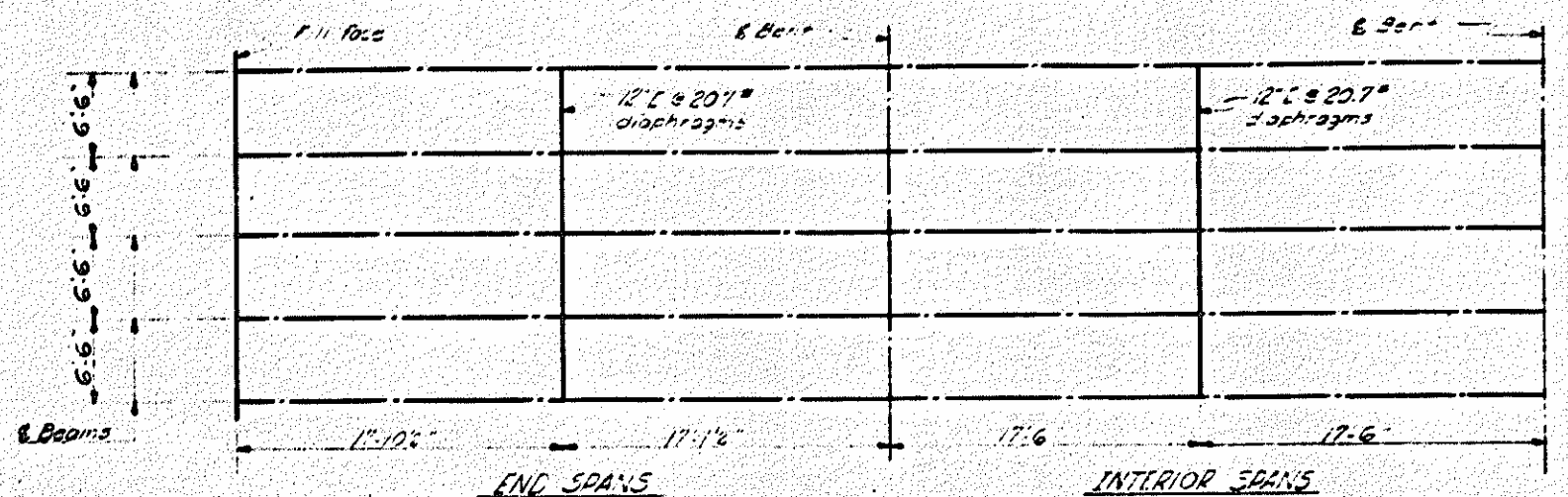
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			1		
2			2		

DRAWN BY: [Name]  
 DATE: [Date]

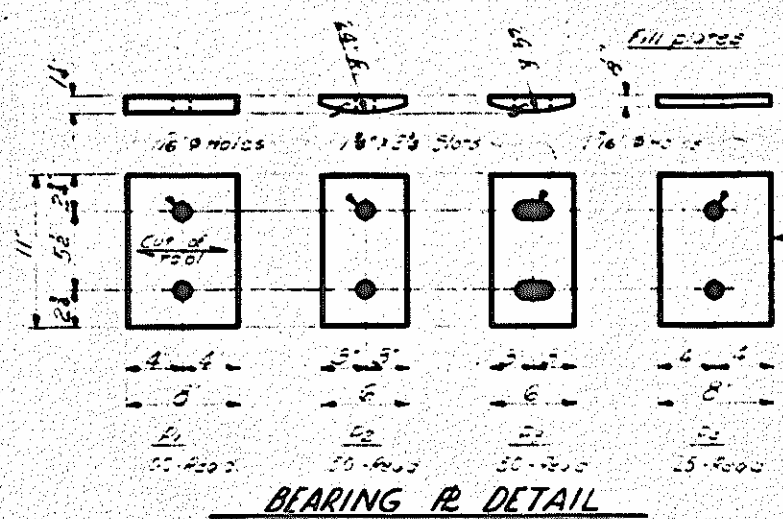
PLAN ROAD DIST. NO.	STATE	FEDERAL AID DIST. NO.
5	N.C.	822504
P.A. PROJECT S-1549(U)		

**NOTES:**

All beams shall be of ASTM A36 structural steel. See Sheet S-N.  
No camber other than natural mill camber is required.

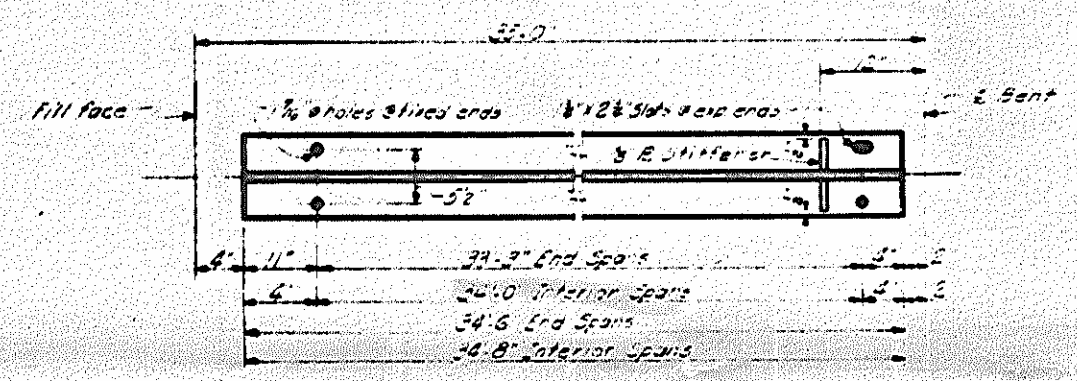


**STEEL DIAPHRAGM LAYOUT SKETCH**

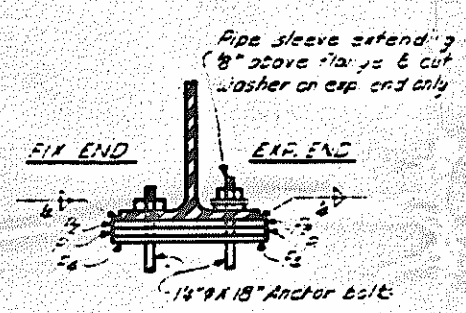


**BEARING PLATE DETAIL**

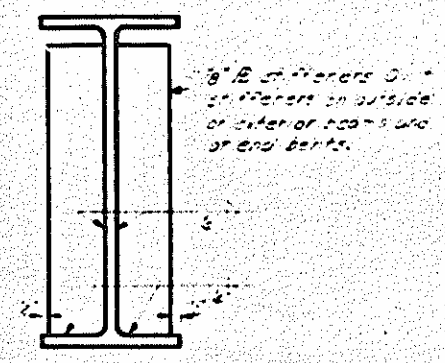
1/2\"/>



**BOTTOM FLANGE DETAIL**

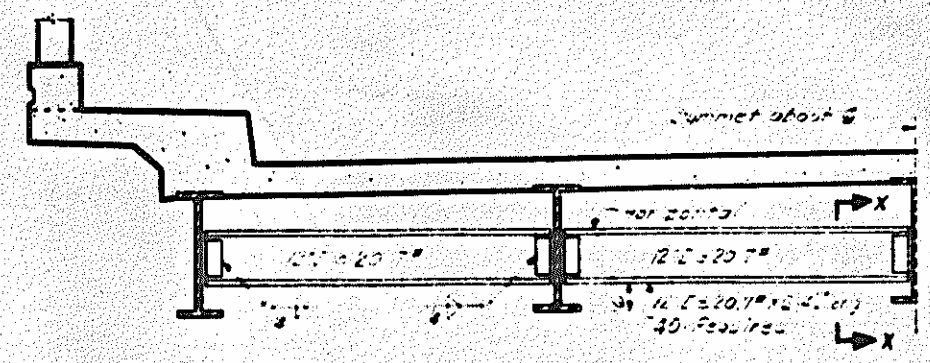


**SECTION THRU BEAM**

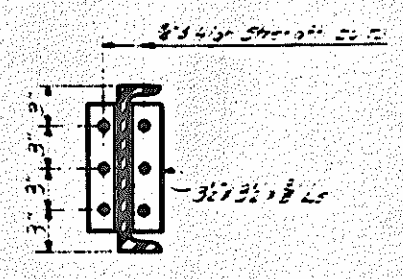


**STIFFENER DETAIL**

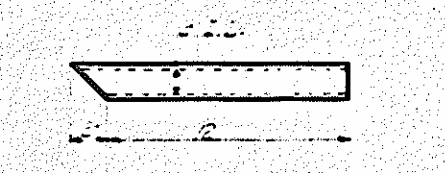
DEFLECTION TABLE	INT. BMS.	EXT. BMS.
Deflect. due to self weight	1/4"	1/8"
Deflect. due to Superimposed D.L.	1/8"	3/16"
Total Deflection	3/8"	1/4"
Vertical Curvature (Spans A thru I)	0"	0"
BEAM CAMBER	0"	0"



**DIAPH. CONN. @ MIDSPAN**



**SECTION X-X**



Drains to be set in joint steel slabs & flange carried with 2 coats of minimum 20 mil. 20-REG-20.  
Top of floor drains to be set 3/8\"/>

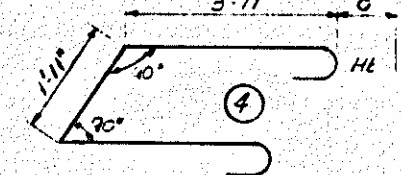
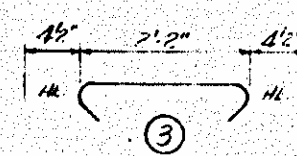
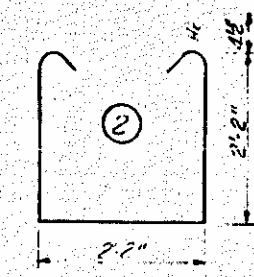
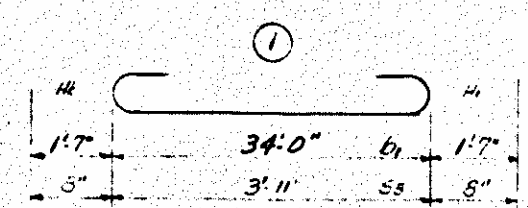
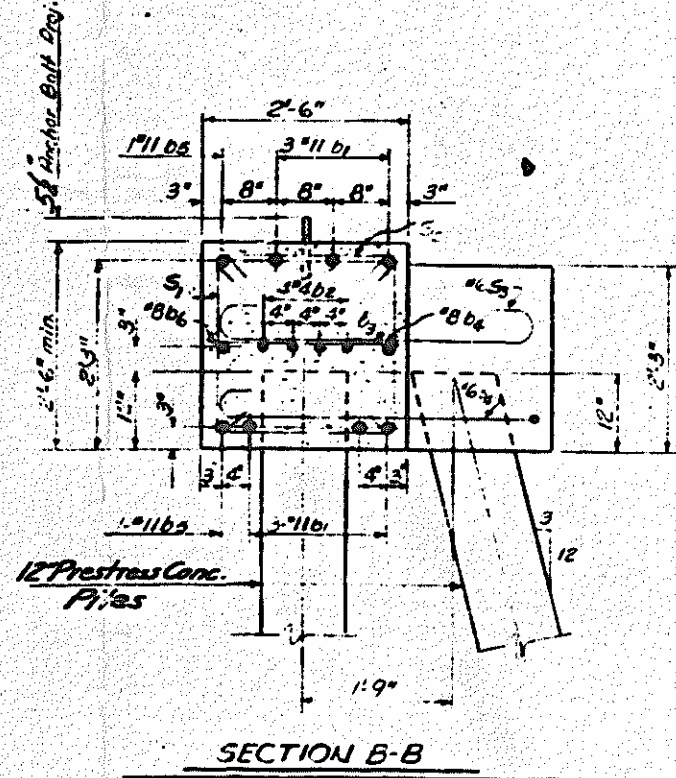
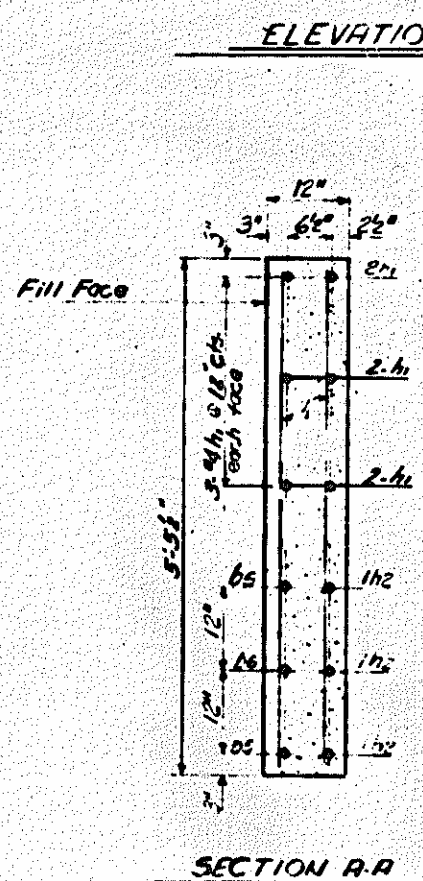
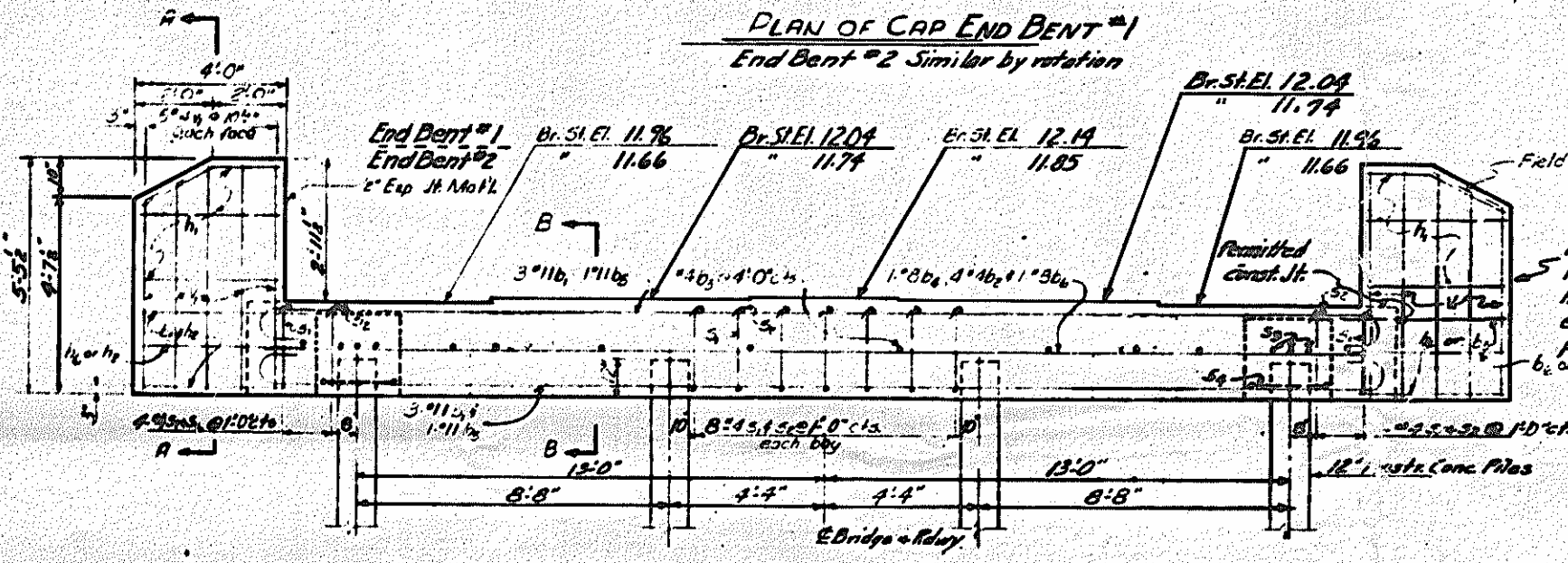
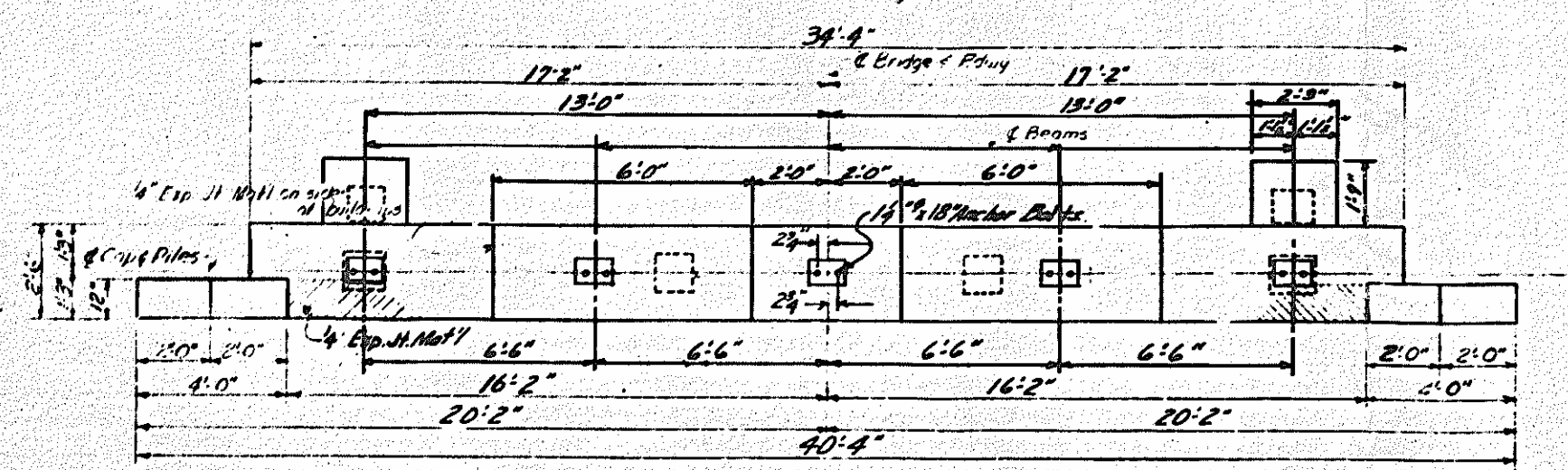
**DRAIN DETAIL**

PROJECT No. 822504  
PAMLICO COUNTY  
STATION 11465

DATE	BY	REVISIONS
NOV 1962		

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
RALEIGH  
**STRUCTURAL STEEL DETAILS**

FED. ROAD DIST. NO.	STATE	PROJECT NO.
J	N. C.	822504
F. A. PROJECT 5-1549(1)		



BAR TYPES  
All dimensions are cut to out

**BILL OF MATERIAL**

For One End Bent (2 Reg'd)

BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
01	6	#11	1	37'-2"	118.5
02	8	#4 str.		17'-9"	95
03	8	#4 str.		2'-2"	12
04	1	#5 str.		30'-0"	91
05	2	#11 str.		40'-0"	425
06	1	#8 str.		40'-0"	107
11	12	#4 str.		3'-8"	29
12	6	#4 str.		4'-4"	17
11	20	#4 str.		5'-7"	68
21	32	#4	2	7'-3"	155
22	32	#4	3	2'-11"	62
33	6	#6	1	5'-3"	27
34	2	#6	4	11'-1"	33

Reinforcing Steel Lbs. 2326  
Class "A" Concrete Cu Yds. 99  
12" Prestress Conc. Piles No. 6  
Lin. Ft. 300

PROJECT NO. 822504  
PAMLICO COUNTY  
STATION: 11+65

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION

END BENT #1 & #2

REVISIONS				
NO.	BY	DATE	NO.	DATE
1			1	
2			1	

SEARCHED BY: [Signature] DATE: 1/16/62  
CHECKED BY: [Signature] DATE: 1/16/62



FED. ROAD DIST. NO.	STATE	PROJECT NO.
3	N. C.	82250A

Design Data:  
 Concrete: 5,000 p.s.i.  
 2,000 p.s.i.  
 Impact in handling - 50%  
 In driving piles, a method approved by the Engineer shall be used, whereby the head of the piles is not damaged.

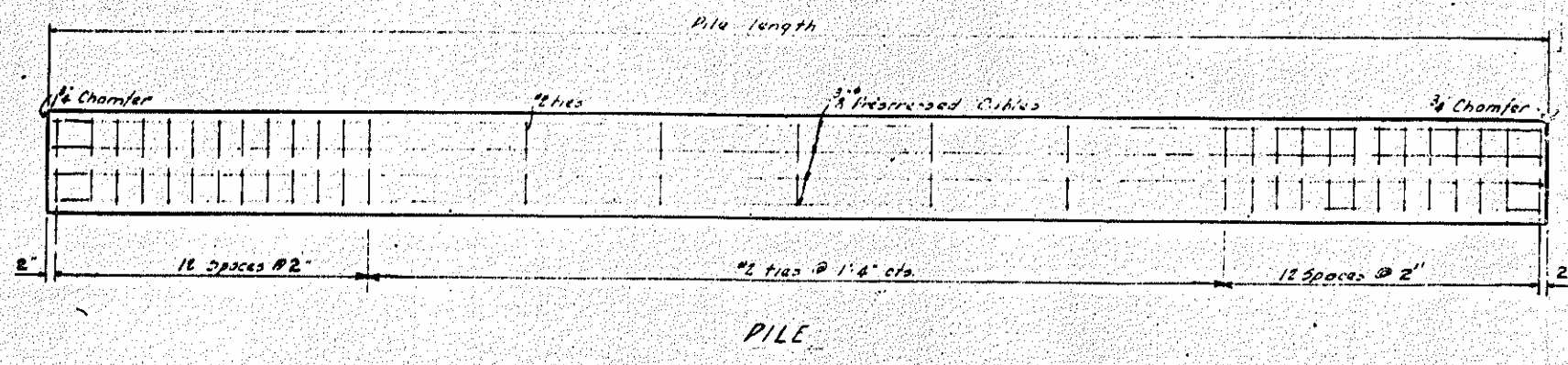
All material and workmanship as per the Specifications of North Carolina State Highway Commission

The contractor may use either #2 ties or #1 Gauge Wire Spiral as shown.

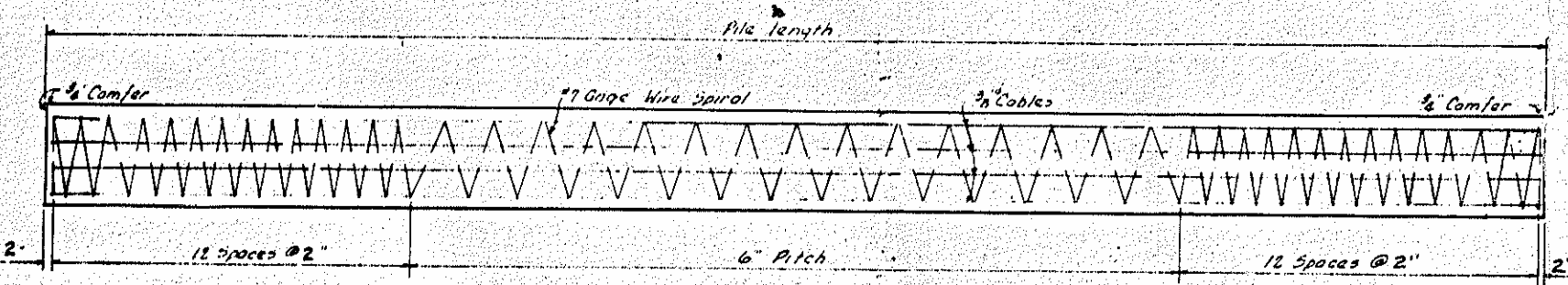
Build up where necessary shall be done in accordance with the specifications, except that the reinforcing steel required in the build-ups shall be included in the contract unit price per foot for the pile and will not be paid for us reinforcing steel.

All prestressing strand shall be 7-wire stress relieved cables in accordance with the Specifications. The contractor may, at his option, use either of the two types of cable listed below; however, all cables in a pile shall be of the same type:

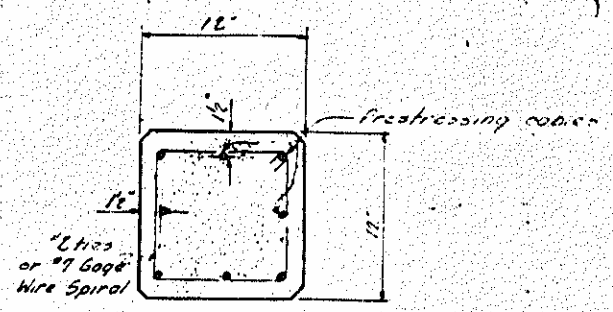
Type	Area	Ultimate Strength	Approx. Prestress
#2 High Strength	0.0880"	23,000" per cable	16,100" per cable
#2 Standard	0.1060"	27,000" per cable	18,900" per cable



PILE

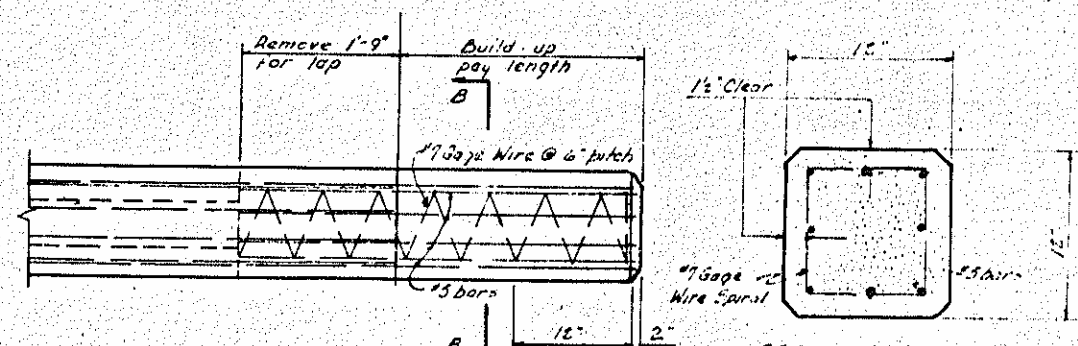


ALTERNATE PILE



TYPICAL SECTION

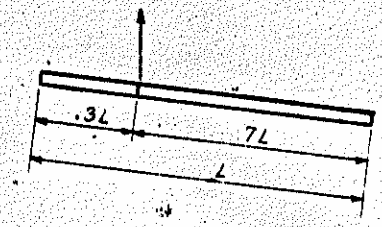
Wt. of Pile - 150 Lbs. per foot length



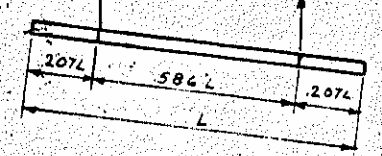
PILE BUILD-UP

If additional driving is required 2" pitch shall be used for spiral wire within these limits.

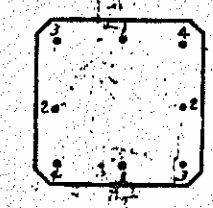
Devices for lifting the piles from the casting beds shall be approved by the Engineer. Where piles will be exposed to view in the structure, inserts set in the piles to receive threaded eye-bolts or similar approved devices shall be used. Loops of cable cast in the pile will not be permitted except for piles for end bents and foundations which will not be exposed to view. The use of steel factory clamps or similar will be permitted where this is practicable without the use of lifting devices cast in the piles. After eye-bolts or other attachments have been removed, the openings shall be repaired in satisfactory manner before delivery to the bridge site in order to obtain a uniform appearance. It will not be necessary to remove loops of cable or other lifting devices in piles for end bents and foundations which will not be exposed to view.



Method of picking up piles up to 50 feet 1 pick point



Method of picking up Piles 50 feet to 70 feet 2 pick up points



TYPICAL PATTERN FOR BURNING CABLES

If cable stress is to be relieved by burning, the cables shall be burned in opposite pairs as indicated in the pattern shown above. Cables 1-1 to be burned before 2-2 cables. Not more than 2 cables, say 1-1 and 2-2, may be burned at any one section before these same pairs are burned at both ends of the bed and between each pair of piles in the bed.

	No.	Size	Length	Lin. Ft.
	34	12 <sup>th</sup>	45'-0"	1530
	20	"	51'-0"	1020
Test Piles	3	"	54'-0"	162
Total	57	12 <sup>th</sup>		2712

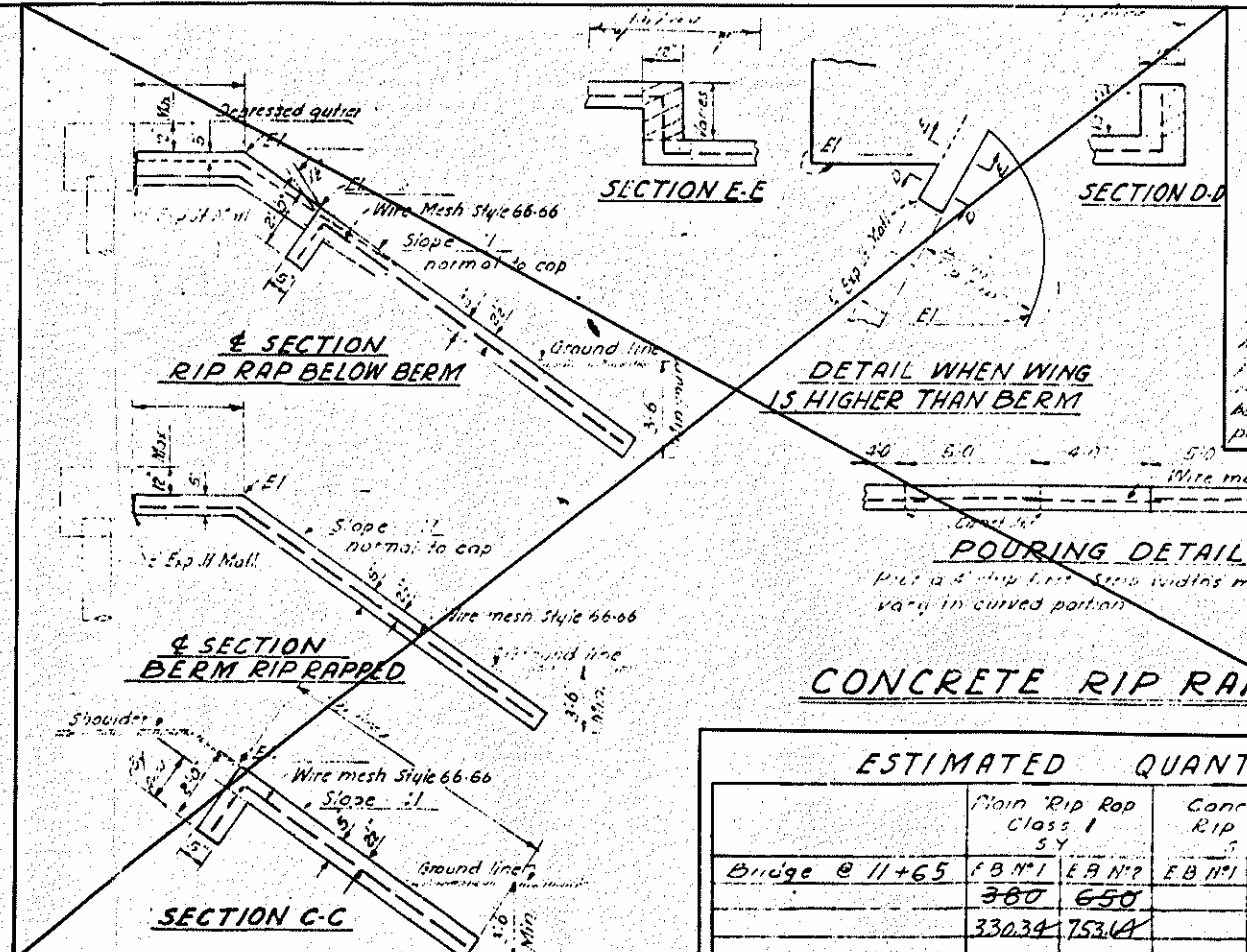
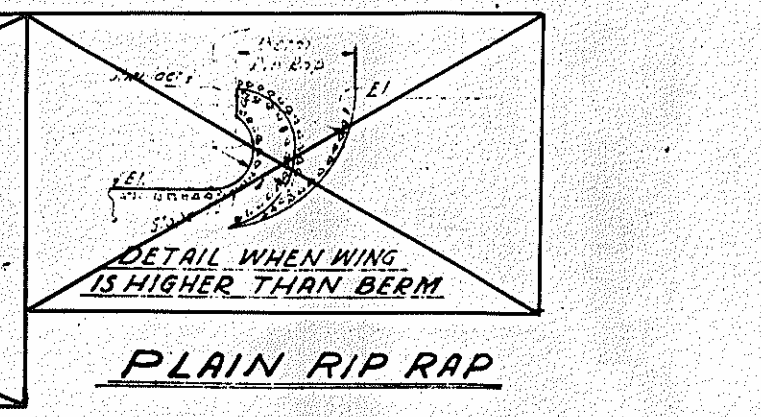
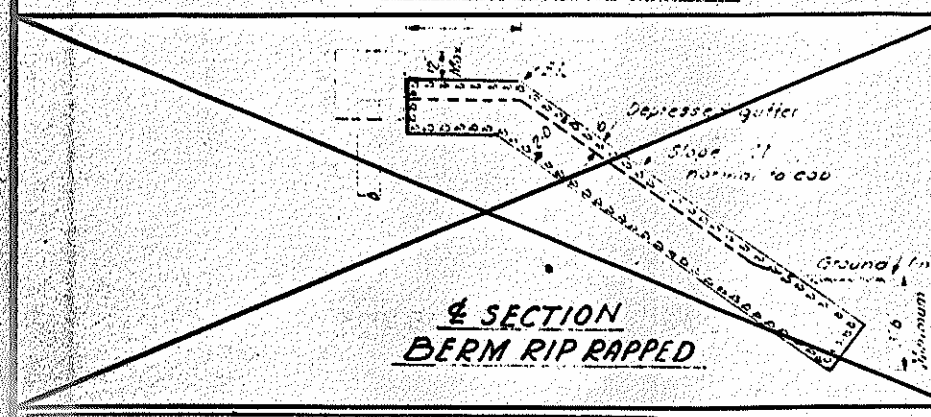
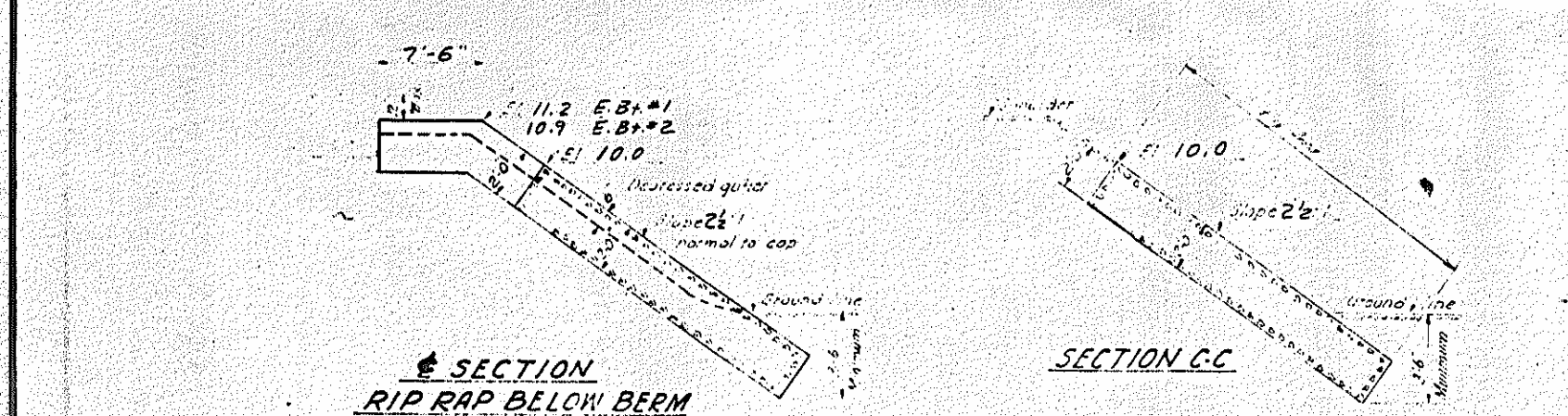
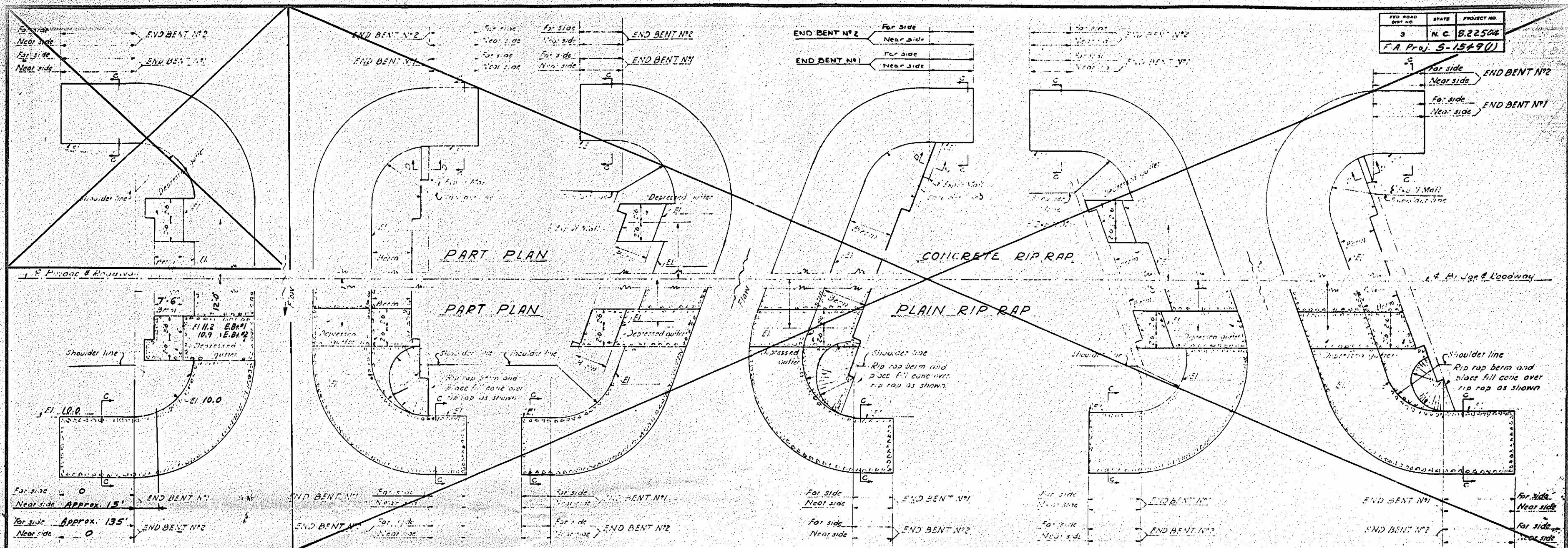
PROJECT NO. 82250A  
 PAMLICO COUNTY  
 STATION: 11+65

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 STANDARD  
 12" PRESTRESSED CONCRETE  
 PILES  
 MARCH, 1937

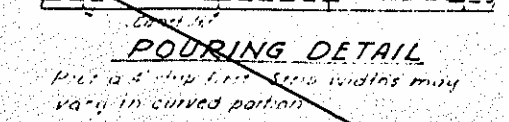
SPECIAL	APPROVED BY: <i>[Signature]</i> DATE: <i>Nov. 1962</i>
STANDARD	DESIGNED BY: <i>[Signature]</i> DATE: <i>7-1-57</i>
	CHECKED BY: <i>[Signature]</i> DATE: <i>7-11-57</i>

Revised to show pattern for set of burning cables Jan. 5, 1960 V.M.H. Revised for spacing of wire spiral at ends of pile Nov. 1962 J.M.H. Revised to change number of cables from 4 to 2 cables 12-12-62 J.M.H. Revised to clarify building detail 1-10-63 by E.T.L. Revised for pick up points 1-30-57 by E.T.L.

3 N.C. 822504  
 F.A. Proj. S-15490



**NOTE**  
 CONCRETE RIP RAP shall be Class B Concrete using Std size No. 3 coarse aggregate. Wire mesh conforming to the 5/16x6-66-66 wide ribbed runs of wire mesh to top of bent. Concrete rip rap to be poured in alternate 4'x5' strips as shown in Pouring Detail.  
 TOP WALLS shall be constructed at ends of rip rap similar to that shown for the top of the rip rap. (For Concrete Rip Rap Only) DEPRESSED GUTTERS to be formed as indicated for type of rip rap specified. Gutter area in Plain Rip Rap to be grouted with 1:3 cement mortar. All work and material incident to forming and grouting shall be included in the unit price bid for Rip Rap.  
 Note: Concrete in walls shall be finished with a smooth surface. All work and material incident to forming and grouting shall be included in the price bid for Rip Rap.



**ESTIMATED QUANTITIES**

	Plain Rip Rap Class I	Concrete Rip Rap	Wire Mesh 60 wide approx. 30 ft.
Bridge @ 11+65	FB #1 EB #2	FB #1 EB #2	
	380	650	
	33034	75312	

PROJECT NO. 822504  
 PAMLICO COUNTY  
 STATION: 11+65

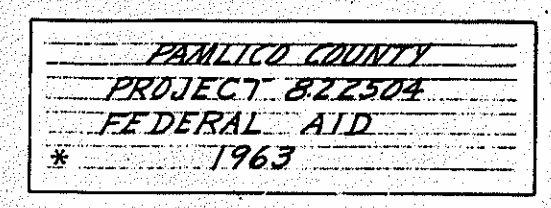
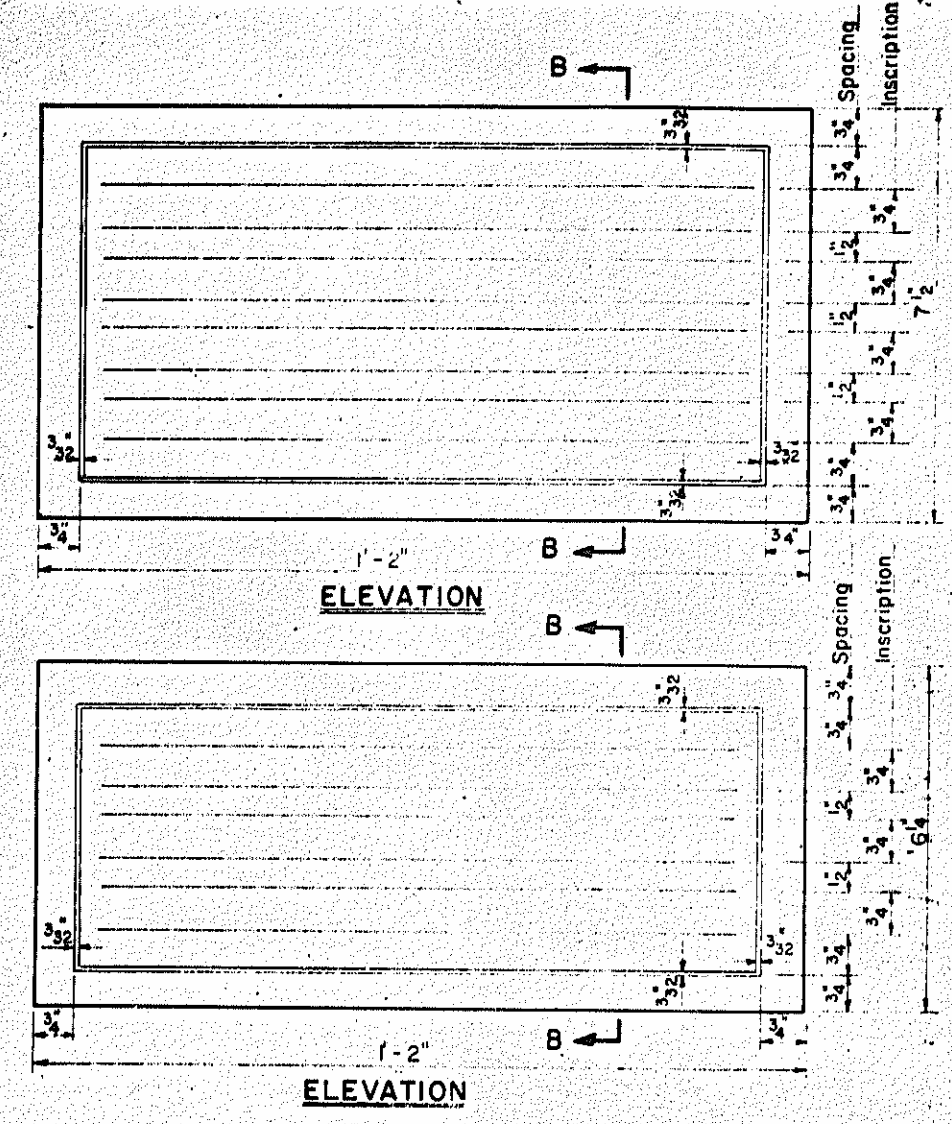
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 PALMER  
**STANDARD RIP RAP DETAILS**  
 AUGUST 1953

SPECIAL ASSEMBLED BY *[Signature]* DATE *Mar. 1962*  
 CHECKED BY *[Signature]* DATE *Dec. 1962*  
 STANDARD DESIGNED BY *[Signature]* DATE *July 10, 1953*  
 CHECKED BY *[Signature]* DATE *Dec. 1953*

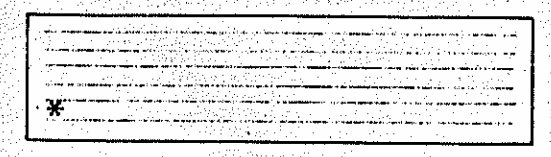
Revision No. 2 - Revised to eliminate toe wall for plain Rip Rap --- By: C.J.K. ✓ By: A.L.B. Date: July 25, 1961  
 Revision No. 1 - Revised to show wing dimensions from end of End Bent. Oct 1958 R.T.J. ✓ R.H.U.

STANDARD M RR-10

F.A. Proj- S-15490



DETAIL SHOWING CORRECT WORDING NAME PLATE USING FOUR LINES



DETAIL SHOWING CORRECT WORDING NAME PLATE USING THREE LINES

\*The date to be shown on the name plates is the year in which the structure will be finished. This date shall be verified by the Resident Engineer before the name plate inscription is ordered.

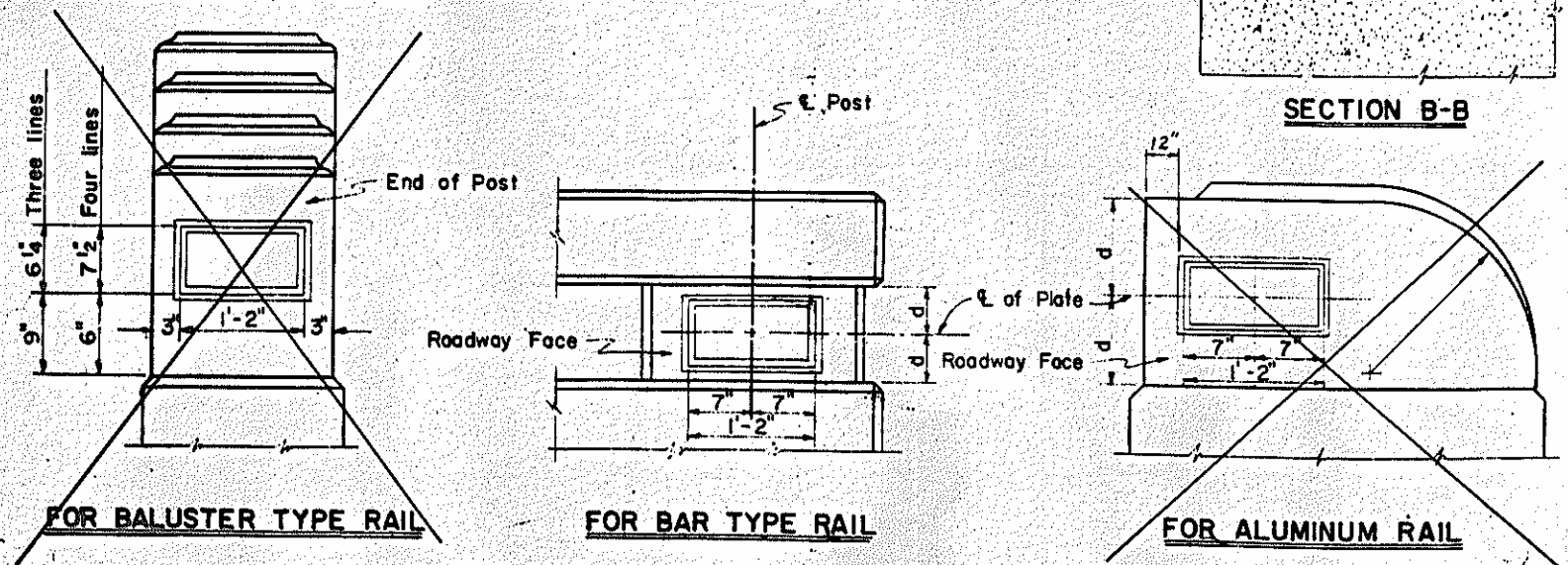
**GENERAL NOTES**

For bridges on which there will be two-way traffic, 2 name plates are required for each bridge. For bridges on which there will be one-way traffic, one name plate is required for each bridge. Name plate to be placed on the right hand end post approaching the bridge, and shall be placed parallel to grade of curb. See LOCATION DETAIL.

The name plates are to be made of granite. Granite shall be light gray, fine or medium grained, sound in quality and free from defects that would mar its appearance. Exposed face of plates to have a fine rubbed finish.

Lettering shall be sandblast sunk, 3/4" high, vertical, Modern Roman style. The wording shall be as shown in the "DETAIL SHOWING CORRECT WORDING."

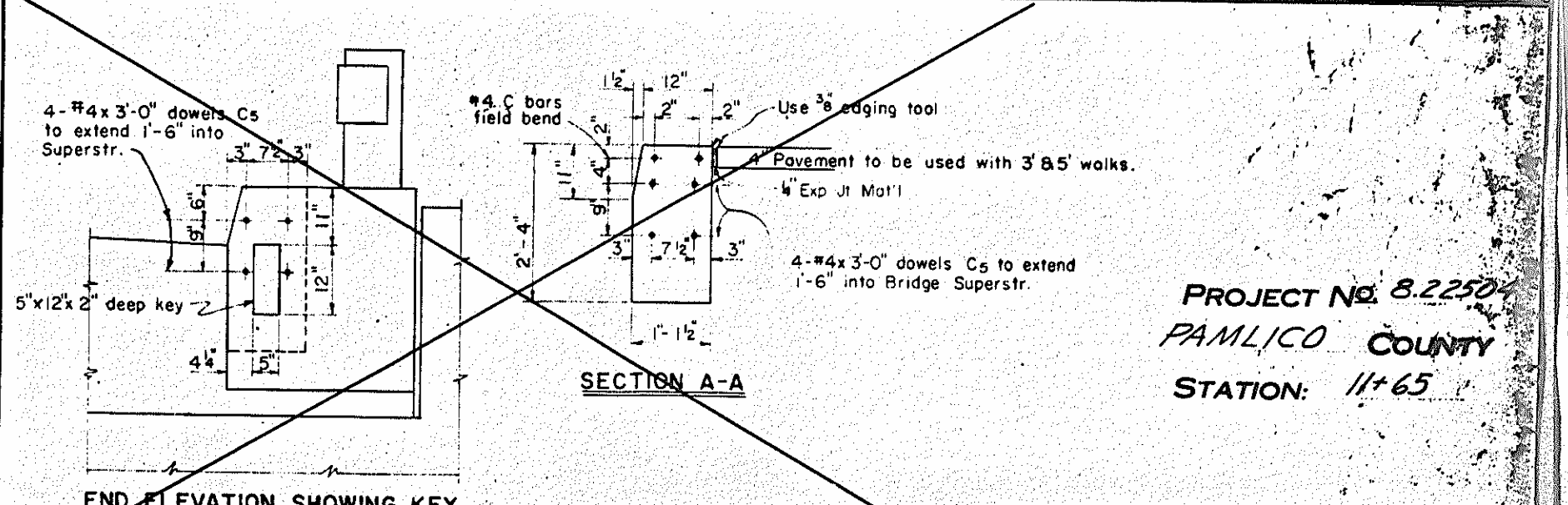
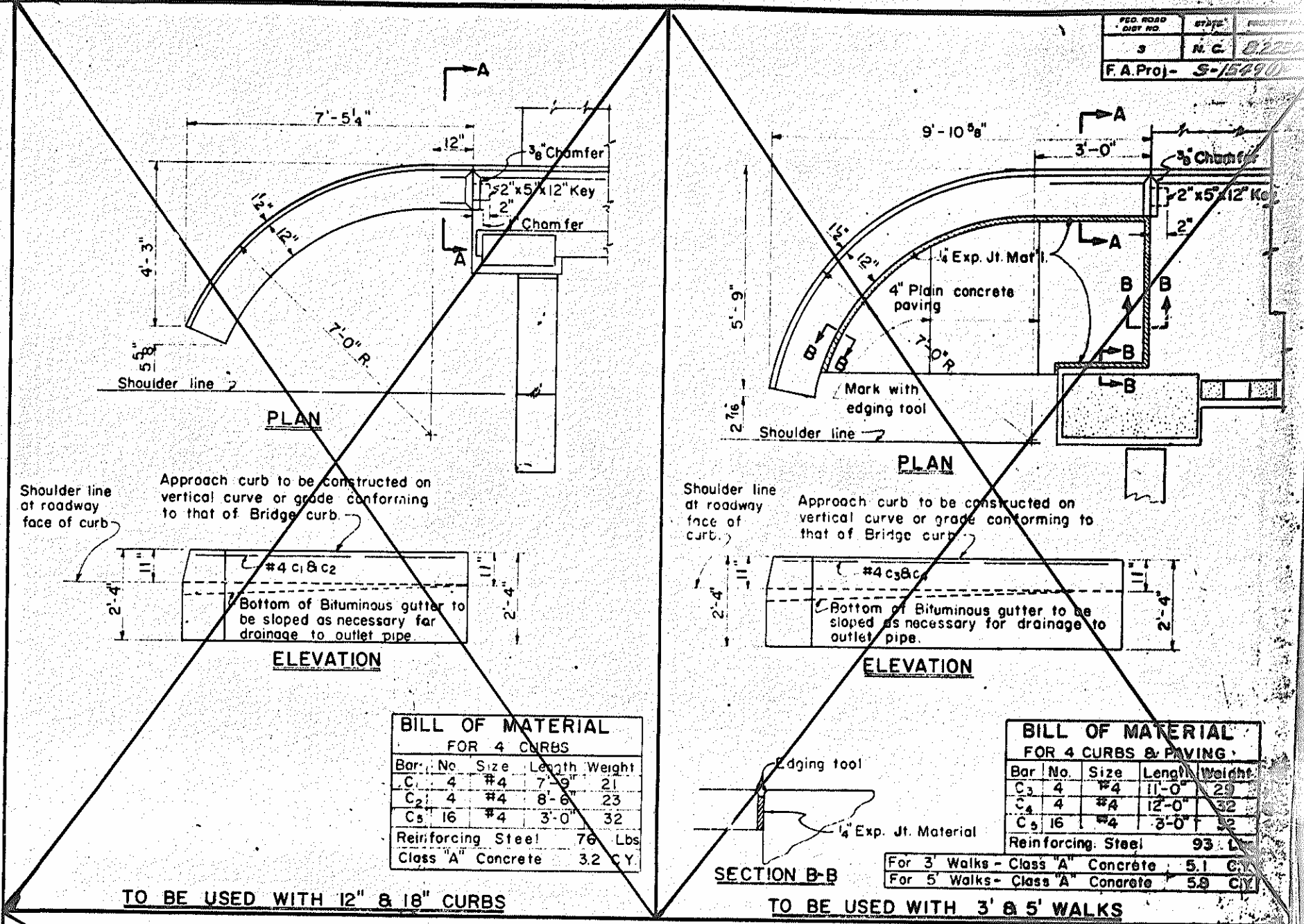
The entire cost of the name plates, complete in place, shall be included in the contract price bid for Class "A" Concrete.



LOCATION DETAIL FOR NAME PLATES

**NAME PLATES**

SPECIAL APPROVED BY *[Signature]* DATE *Nov. 1962*  
 CHECKED BY *[Signature]* DATE *Nov. 1962*  
 DESIGNED BY *[Signature]* DATE *April 1, 1960*  
 TRACED BY *[Signature]* DATE *April 2, 1960*  
 CHECKED BY *[Signature]* DATE *April 2, 1960*



END ELEVATION SHOWING KEY IN SUPERSTRUCTURE

**APPROACH CURBS**

NOTE: The excavation for curbs will not be measured and paid for as a separate item. The entire cost for same is to be included in the unit price bid for Class "A" Concrete.

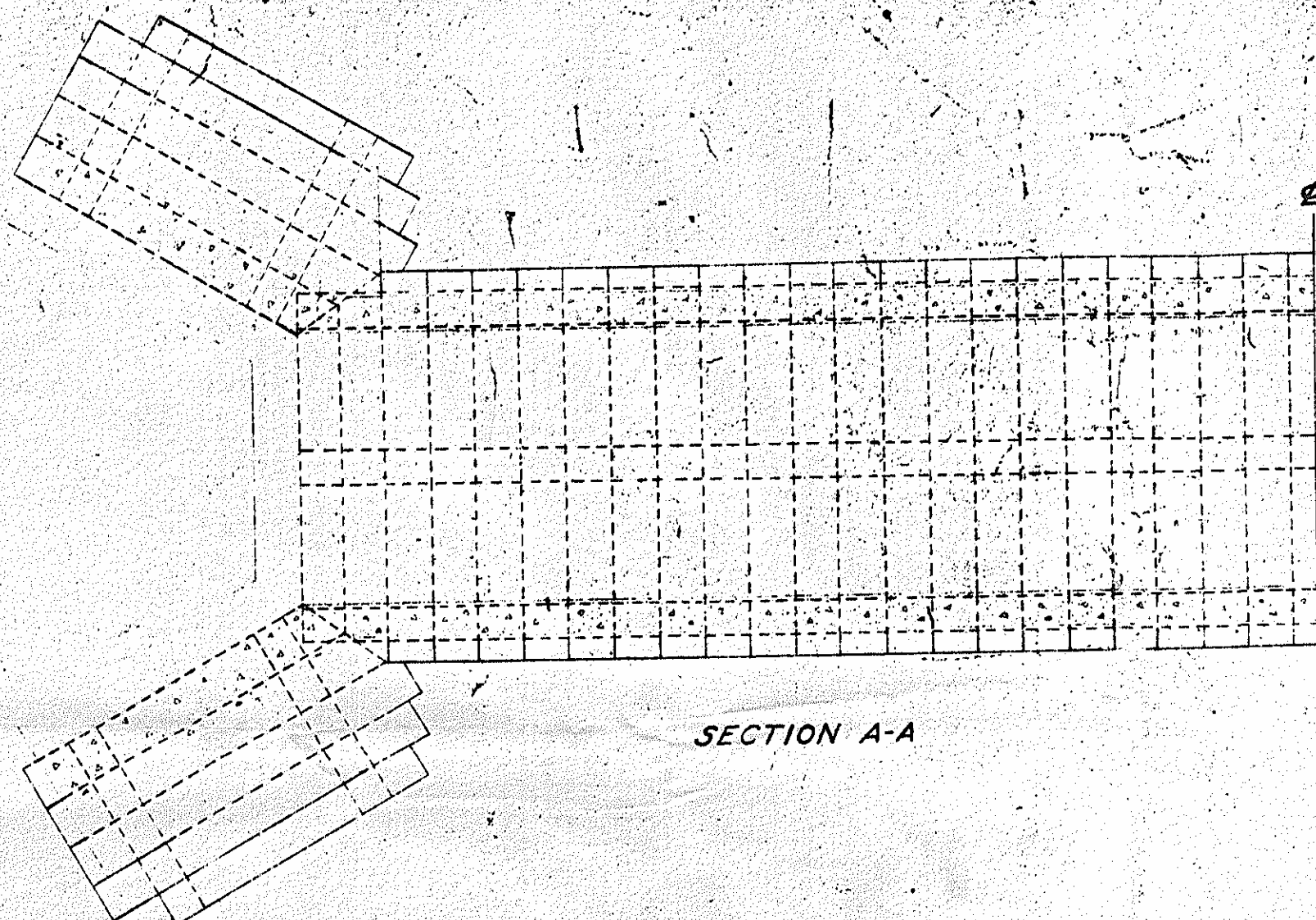
Drains and Bituminous surfacing at ends of Bridge to be furnished and placed by the Roadway Contractor.

PROJECT NO. 822504  
 PAMLICO COUNTY  
 STATION: 11+65

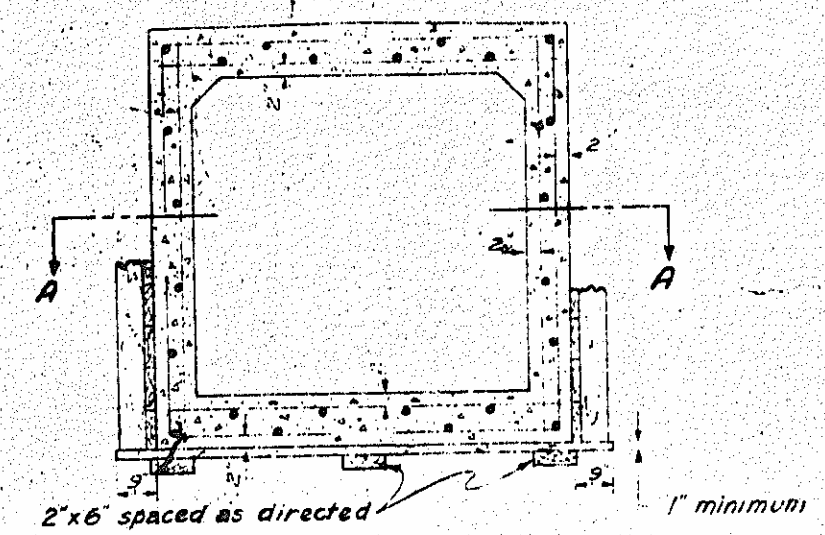
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 STANDARD  
 APPROACH CURBS  
 AND  
 NAME PLATES  
 SEPT. 1960

PROJECT NO.	STATE	DISTRICT NO.	DATE	SCALE
9	N.C.	22504	17	32

FA No. 5-1509(1)



SECTION A-A



SECTION OF BARREL

NOTE: Bottom of Slab to be formed only when in the opinion of the Construction Engineer foundation conditions warrant it.

SPECIAL	DATE	BY
STANDARD	DATE	BY
	May 1935	J. J. POWELL
	Jan. 1933	J. J. POWELL
	Feb. 1933	J. J. POWELL

STATE OF NORTH CAROLINA  
 STATE HIGHWAY  
 COMMISSION

BASED ON  
**STANDARD DETAILS  
 SHOWING METHOD OF  
 CONSTRUCTING FLOOR FORMS  
 FOR R.C. BOX CULVERTS  
 JANUARY 1953**

*W. B. Rogers*  
 Chief Engineer