

**GENERAL NOTES**

1. All dimensions shall be in feet and inches unless otherwise specified.

2. The bridge shall be constructed of reinforced concrete and steel.

3. The bridge shall be constructed on a firm sand foundation.

4. The bridge shall be constructed on a firm sand foundation.

5. The bridge shall be constructed on a firm sand foundation.

6. The bridge shall be constructed on a firm sand foundation.

7. The bridge shall be constructed on a firm sand foundation.

8. The bridge shall be constructed on a firm sand foundation.

9. The bridge shall be constructed on a firm sand foundation.

10. The bridge shall be constructed on a firm sand foundation.

11. The bridge shall be constructed on a firm sand foundation.

12. The bridge shall be constructed on a firm sand foundation.

13. The bridge shall be constructed on a firm sand foundation.

14. The bridge shall be constructed on a firm sand foundation.

15. The bridge shall be constructed on a firm sand foundation.

16. The bridge shall be constructed on a firm sand foundation.

17. The bridge shall be constructed on a firm sand foundation.

18. The bridge shall be constructed on a firm sand foundation.

19. The bridge shall be constructed on a firm sand foundation.

20. The bridge shall be constructed on a firm sand foundation.

**TOTAL BILL OF MATERIAL**

ITEM	QUANTITY	UNIT	PRICE	TOTAL
Concrete	127.5	Cu Yds	26.75	3412.88
Steel	21.5	Lbs	1.12	24.08
Cyc Piles	8	No	192	1536
Excavation	4.5	Cu Yds	1.50	6.75
Earthwork	11.0	Cu Yds	2.45	26.95
Approach	3.75	Lf	1.50	5.63
TOTAL				3488.29

PROJECT NO. 8-13972  
 ROBESON COUNTY  
 STATION 499+50 L&L C&E

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 GENERAL DRAWING  
 OF ONE-LANE BRIDGE OVER RAILROAD  
 SWAMP BY RELOCATION OF RR 301  
 BETWEEN LUMBER TOWN ST PILES  
 NOVEMBER 1938

COPIED - 7-16-92

DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE

LOCATION  
 SWITCH

NO.	BY	DATE	NO.	BY	DATE



**GENERAL NOTES**

1. All dimensions are in feet and inches unless otherwise noted.

2. The bridge shall be constructed on firm sand.

3. The roadway shall be 12 feet wide and 12 inches deep.

4. The bridge shall be constructed on firm sand.

5. The bridge shall be constructed on firm sand.

6. The bridge shall be constructed on firm sand.

7. The bridge shall be constructed on firm sand.

8. The bridge shall be constructed on firm sand.

9. The bridge shall be constructed on firm sand.

10. The bridge shall be constructed on firm sand.

**TOTAL BILL OF MATERIAL**

ITEM	QUANTITY	UNIT	PRICE	TOTAL
Concrete	100	cu yd	10.00	1000.00
Steel	100	lbs	0.10	10.00
Gravel	100	cu yd	5.00	500.00
Timber	100	lf	0.10	10.00
Rebar	100	lf	0.10	10.00
Formwork	100	sq ft	0.10	10.00
Paint	100	gal	0.10	10.00
Other	100	lf	0.10	10.00

PROJECT NO. 8-13974  
 RALSON COUNTY  
 STATION 499+50.2X-LANE

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 GENERAL DRAWING  
 OF LT. LANE BRIDGE OVER G. MARKS  
 SWAMP BY RELOCATION OF ST. 301  
 BETWEEN LUMBERTON ST. PAUL  
 NOVEMBER, 1958

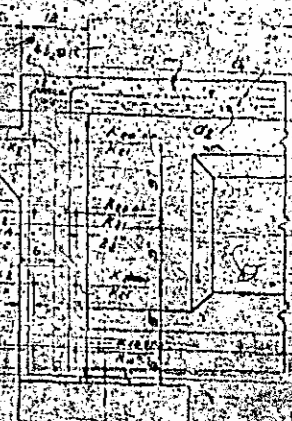
DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**REVISIONS**

NO.	BY	DATE	NO.	BY	DATE
1			1		
2			2		
3			3		



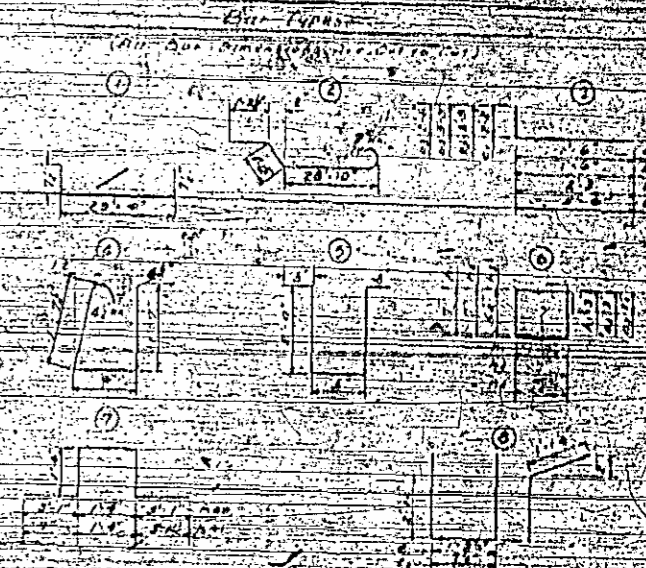
DATE: 1-25-1937



SECTION A-A

BAR SCHEDULE FOR 1050'-A, 1050'-0, 1050'-A

NO.	SIZE	TYPE	LENGTH	WEIGHT
0	260	#6	33'-7"	8824
0E	257	#6	31'-10"	8653
6	506	#4	15'-0"	5844
6E	78	#4	5'-6"	507
6I	12	#4	3'-0"	40
6J	12	#4	3'-0"	40
6K	112	#4	3'-3"	274
6L	112	#4	4'-7"	318
5	60	#4	4'-0"	274
5E	60	#4	4'-0"	274
7	1	#4	0	0
7E	160	#4	0	0
7I	372	#4	0	0
8	4	#4	17'-0"	166
8E	70	#4	5'-5"	42
8I	4	#4	5'-0"	12
8J	112	#4	17'-0"	166
8K	90	#4	4'-0"	78
8L	112	#4	3'-0"	122
8M	30	#4	4'-0"	166
8N	58	#4	10'-0"	274
8O	14	#4	8'-0"	42
9	4	#4	0	0
9E	50	#4	7'-0"	36
9I	76	#4	7'-0"	122
9J	50	#4	10'-0"	166



MAX DEAD LOAD DEFLECTION

Inl. Bm.    Lib. Bm.  
 1/4 up    1/4 up  
 1/4 down    1/4 down

SUPPLEMENTARY QUANTITIES FOR 1050'-A, 1050'-0, 1050'-A

Class A Concrete	137.3 cu yd
Reinforcing Steel	20,787 lbs
Prestressed Concrete Girder	10.00 cu yd

PROJECT NO. 11978  
 ROBESON COUNTY  
 STATION 4991.50+0

STATE HIGHWAY COMMISSION

STANDARD END SPAN  
 PRESTRESSED CONCRETE GIRDER  
 28 ROADWAY TO CURB

AUGUST 1937

SPAN A-B-C

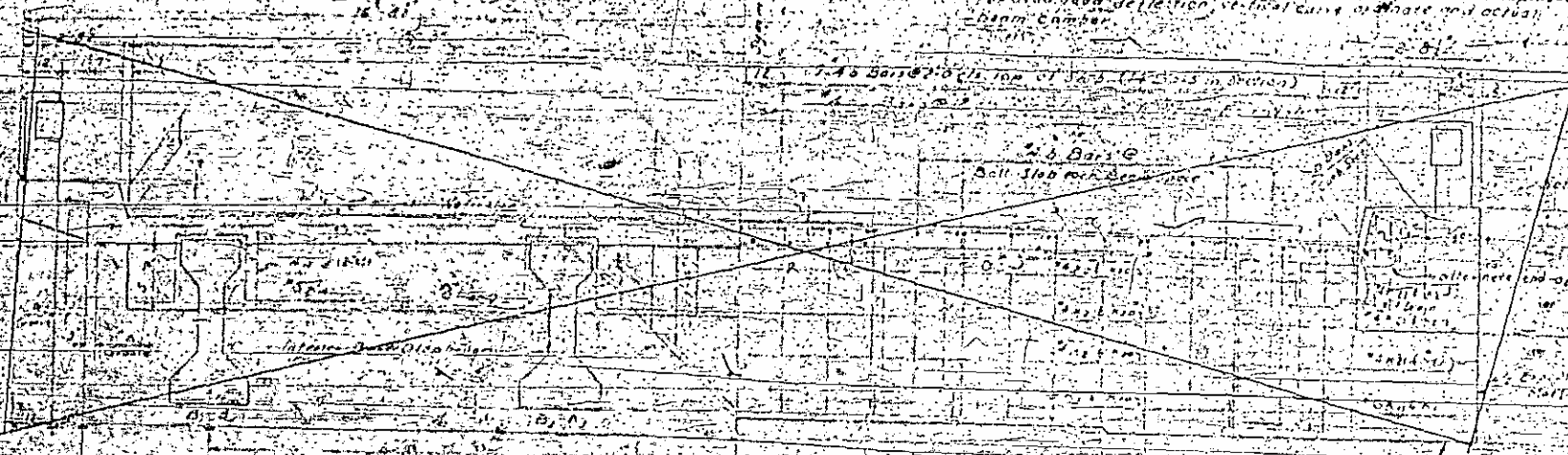
PLAN



Note A - For dimensions of concrete members, see Section 5.01 of the Specifications for Highway Construction, 1963 Edition, as amended. All dimensions shall be in feet and inches, rounded to the nearest 1/4 inch. All dimensions shall be in feet and inches, rounded to the nearest 1/4 inch. All dimensions shall be in feet and inches, rounded to the nearest 1/4 inch.

Note B - Temporary shoring shall be placed between prestressed girders adjacent to the slab and shall be removed on the 14th day after the concrete has been placed. The shoring shall be removed at least 7 days after concrete placement. The shoring shall be removed at least 7 days after concrete placement.

CROWN DIMENSION



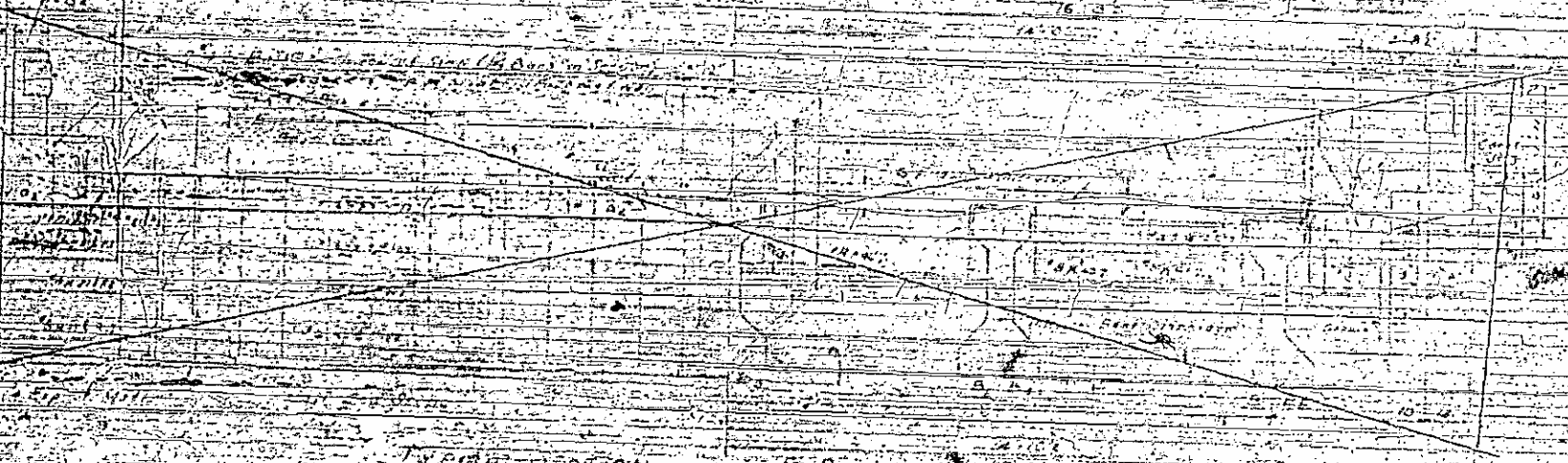
SECTION D-D

MID SPAN DIMENSION

DETAIL A

TYPICAL SECTION

4 BEAM SPANS



RAIL POST DETAILS

DETAIL A

DETAIL B

TYPICAL SECTION

5 BEAM SPANS



SECTION

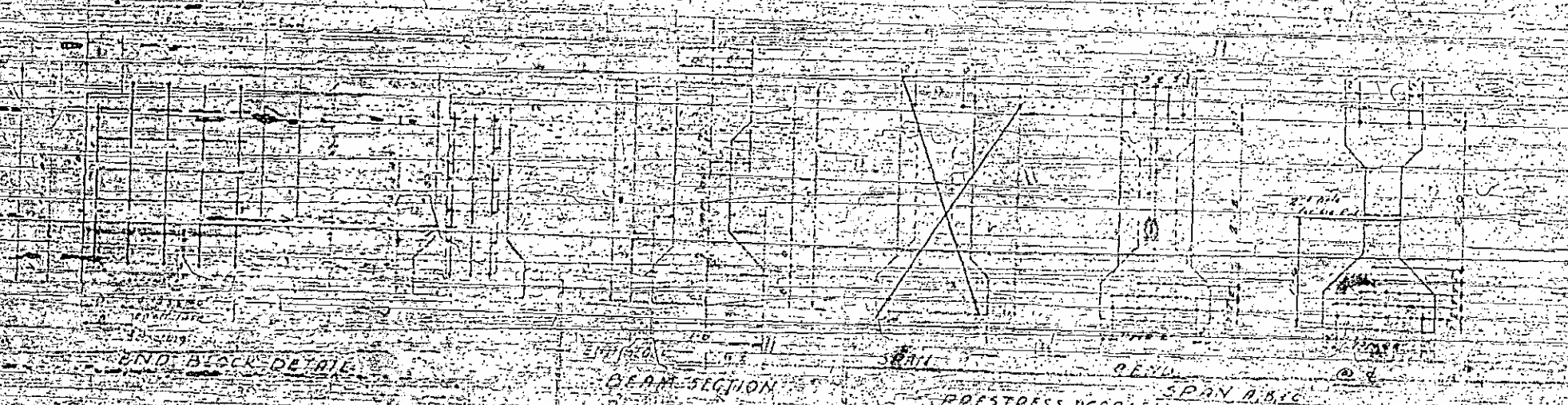
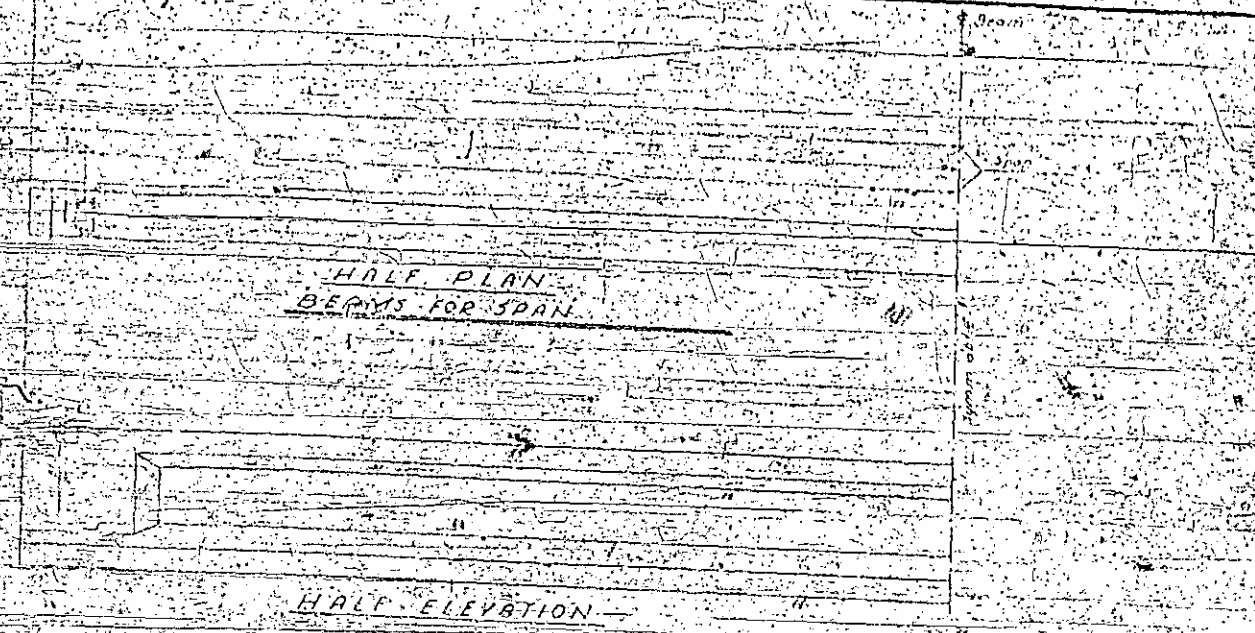
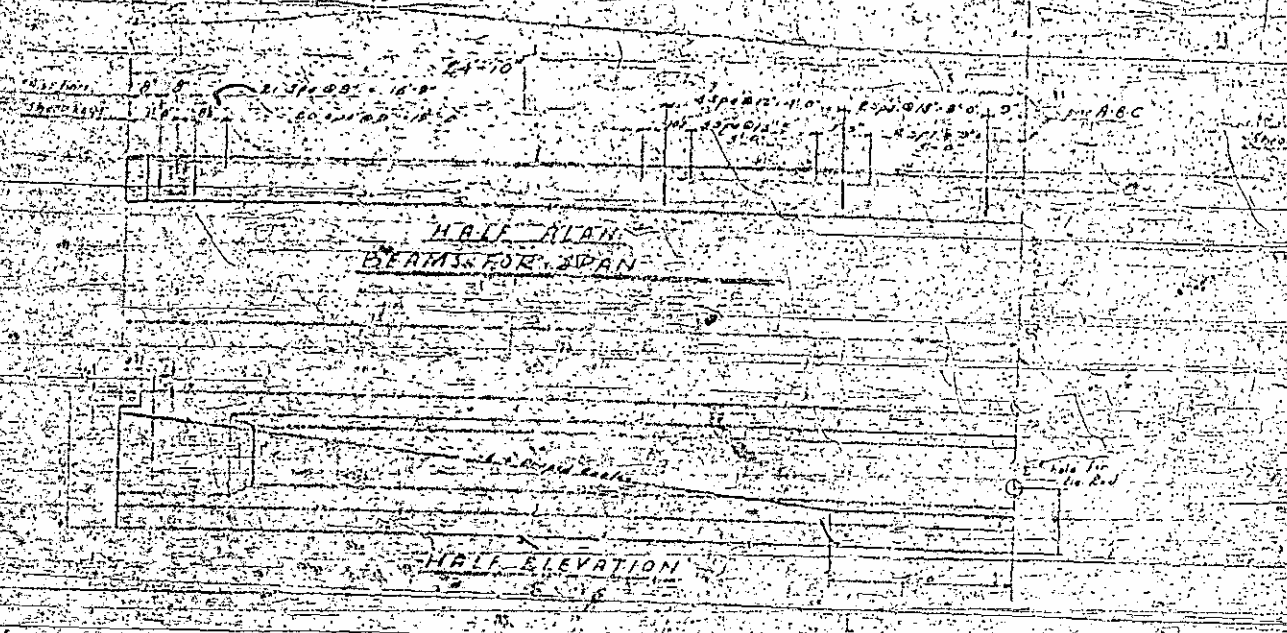
See Sheet 5-N

SECTION THRU CURB

PROJECT NO. 81572  
 SECTION COUNTY  
 STATION 199+30.00

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 STANDARD PRESTRESSED  
 TYPICAL SECTIONS  
 28 ROADWAY 15 COMBS  
 AUGUST 1964  
 SHEET 25 OF 30





REINFORCING STEEL FOR ONE BEAM

Bar	No.	Size	Length	Weight	Remarks
Beam	14	#4	3.00	4.20	
Beam	14	#4	3.00	4.20	
Beam	14	#4	3.00	4.20	
Beam	50	#4	1.00	6.60	
Beam	16	#4	1.00	6.60	
Beam	10	#4	1.00	6.60	
				506	Dimensional Weight



BEAMS REQUIRED

Span	Length	Beam
Span ABC <td>38.0</td> <td>11</td>	38.0	11
Span BCD <td>38.0</td> <td>11</td>	38.0	11
Span CDE <td>38.0</td> <td>11</td>	38.0	11
Span DEF <td>38.0</td> <td>11</td>	38.0	11

QUANTITIES ONE (1) BEAM

Reinforcing Steel	
Beam	506
Beam	11
Beam	11
Beam	11
3000 PSI Concrete	
Beam	11
Beam	11
Beam	11
Beam	11
Beam	11
Beam	11

PROJECT NO. 8/5972  
 ROBESON COUNTY  
 STATION 4591.00+1

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 STANDARD  
 36 PRESTRESSED  
 CONCRETE BEAM  
 APRIL 1958

DETAIL SKEW KEY

TOTAL  
 11





BILL OF MATERIALS				
ONE END BENT - TWO BEQUINAB				
NO.	SIZE	QUANTITY	UNIT	AMOUNT
1	24"	1	PIE	1217
2	24"	1	PIE	457
3	24"	1	PIE	25
4	24"	1	PIE	71
5	24"	1	PIE	71
6	24"	1	PIE	71
7	24"	1	PIE	173
8	24"	1	PIE	30
9	24"	1	PIE	2
10	24"	1	PIE	3
11	24"	1	PIE	155
12	24"	1	PIE	162
13	24"	1	PIE	53
14	24"	1	PIE	
15	24"	1	PIE	
16	24"	1	PIE	
17	24"	1	PIE	
18	24"	1	PIE	
19	24"	1	PIE	
20	24"	1	PIE	
21	24"	1	PIE	
22	24"	1	PIE	
23	24"	1	PIE	
24	24"	1	PIE	
25	24"	1	PIE	
26	24"	1	PIE	
27	24"	1	PIE	
28	24"	1	PIE	
29	24"	1	PIE	
30	24"	1	PIE	
31	24"	1	PIE	
32	24"	1	PIE	
33	24"	1	PIE	
34	24"	1	PIE	
35	24"	1	PIE	
36	24"	1	PIE	
37	24"	1	PIE	
38	24"	1	PIE	
39	24"	1	PIE	
40	24"	1	PIE	
41	24"	1	PIE	
42	24"	1	PIE	
43	24"	1	PIE	
44	24"	1	PIE	
45	24"	1	PIE	
46	24"	1	PIE	
47	24"	1	PIE	
48	24"	1	PIE	
49	24"	1	PIE	
50	24"	1	PIE	
51	24"	1	PIE	
52	24"	1	PIE	
53	24"	1	PIE	
54	24"	1	PIE	
55	24"	1	PIE	
56	24"	1	PIE	
57	24"	1	PIE	
58	24"	1	PIE	
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65	24"	1	PIE	
66	24"	1	PIE	
67	24"	1	PIE	
68	24"	1	PIE	
69	24"	1	PIE	
70	24"	1	PIE	
71	24"	1	PIE	
72	24"	1	PIE	
73	24"	1	PIE	
74	24"	1	PIE	
75	24"	1	PIE	
76	24"	1	PIE	
77	24"	1	PIE	
78	24"	1	PIE	
79	24"	1	PIE	
80	24"	1	PIE	
81	24"	1	PIE	
82	24"	1	PIE	
83	24"	1	PIE	
84	24"	1	PIE	
85	24"	1	PIE	
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87	24"	1	PIE	
88	24"	1	PIE	
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90	24"	1	PIE	
91	24"	1	PIE	
92	24"	1	PIE	
93	24"	1	PIE	
94	24"	1	PIE	
95	24"	1	PIE	
96	24"	1	PIE	
97	24"	1	PIE	
98	24"	1	PIE	
99	24"	1	PIE	
100	24"	1	PIE	

ELEVATION



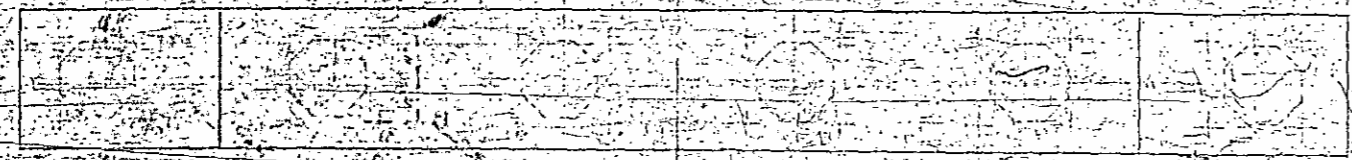
PROJECT NO. 913072  
 ROALSON COUNTY  
 STATION: 199+30

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**

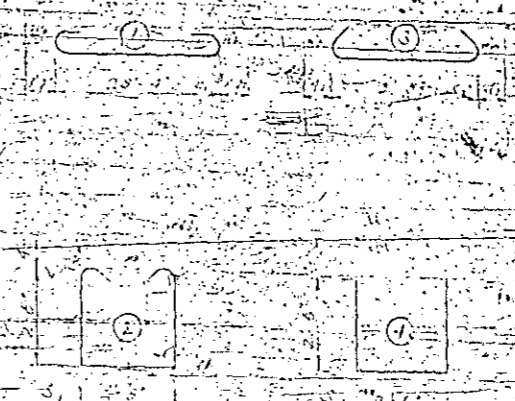
SUBSTRUCTURE  
 END BENTS AND T.L.P.  
 RIGHT OF LEFT LANES

DRAWING NO. \_\_\_\_\_

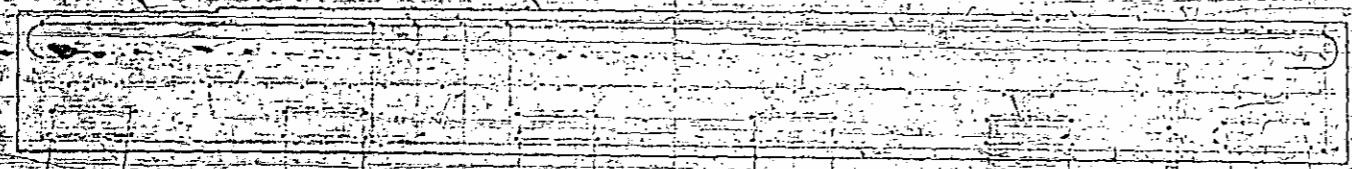




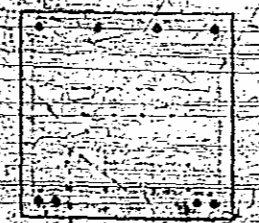
PLAN BENT No. 1 or BENT No. 2



BAR TYPES



ELEVATION BENT No. 1 or BENT No. 2



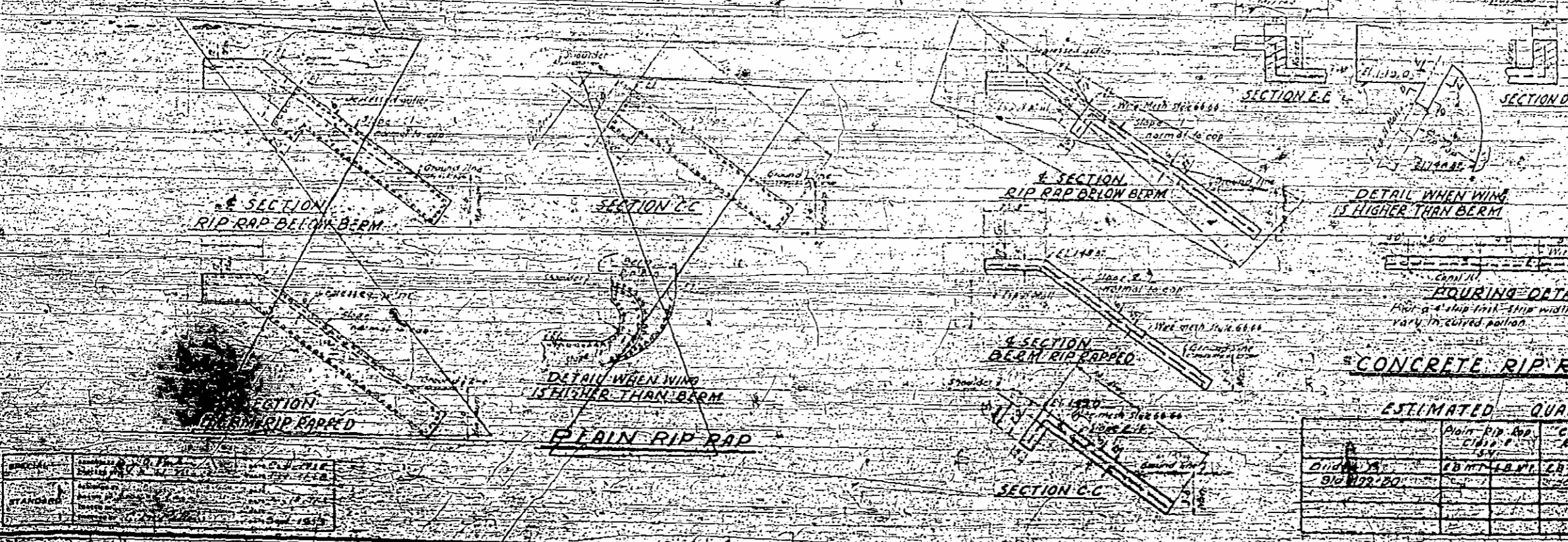
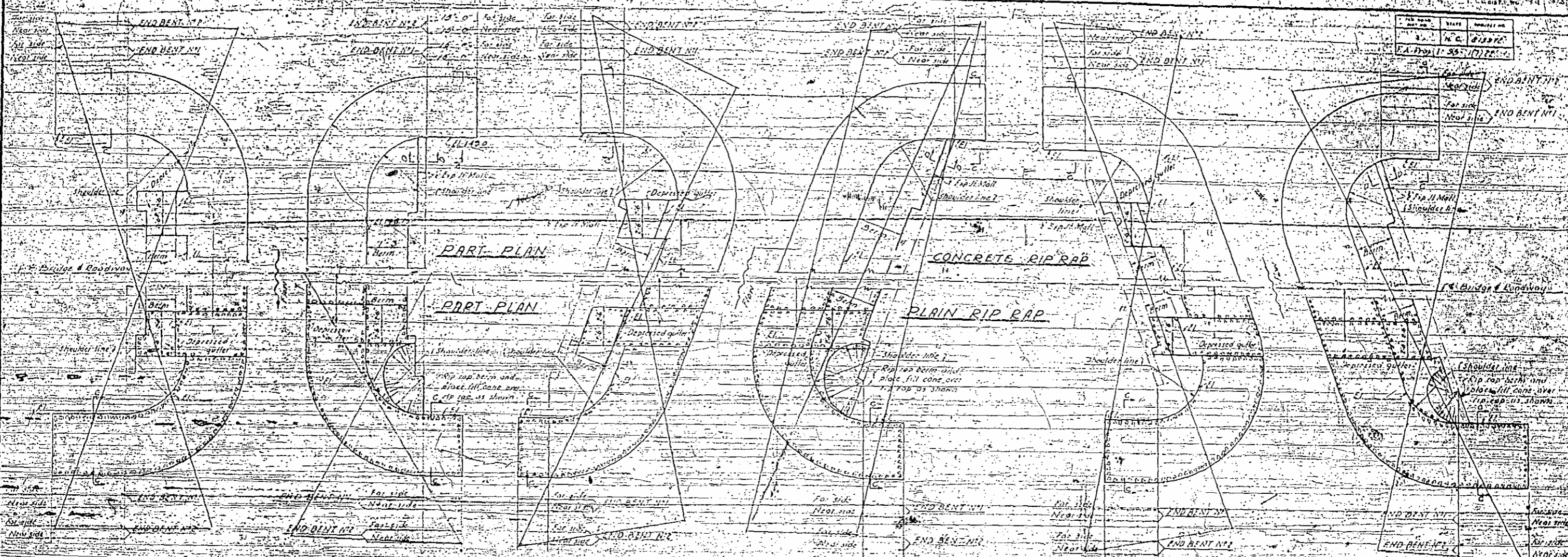
TYPICAL SECTION THROUGH BENT

BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A	1	1/2"	S	31.6	1.89
B	1	1/2"	S	27.1	1.62
C	1	1/2"	S	27.1	1.62
D	1	1/2"	S	27.1	1.62
E	1	1/2"	S	27.1	1.62
F	1	1/2"	S	27.1	1.62
G	1	1/2"	S	27.1	1.62
H	1	1/2"	S	27.1	1.62
I	1	1/2"	S	27.1	1.62
J	1	1/2"	S	27.1	1.62
K	1	1/2"	S	27.1	1.62
L	1	1/2"	S	27.1	1.62
M	1	1/2"	S	27.1	1.62
N	1	1/2"	S	27.1	1.62
O	1	1/2"	S	27.1	1.62
P	1	1/2"	S	27.1	1.62
Q	1	1/2"	S	27.1	1.62
R	1	1/2"	S	27.1	1.62
S	1	1/2"	S	27.1	1.62
T	1	1/2"	S	27.1	1.62
U	1	1/2"	S	27.1	1.62
V	1	1/2"	S	27.1	1.62
W	1	1/2"	S	27.1	1.62
X	1	1/2"	S	27.1	1.62
Y	1	1/2"	S	27.1	1.62
Z	1	1/2"	S	27.1	1.62

PROJECT NO. 8-13972  
 ROADS ON COUNTY  
 STATION 492+50

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SUBSTRUCTURE  
 BENTS No. 1 & 2  
 FOR RIGHT-OF-WAY LANE  
 NOVEMBER 1956





**NOTE**  
 CONCRETE RIP RAP shall be class B concrete using 3/4" dia. No. 4 wire aggregate. Wire mesh reinforcing to be 3/4" x 6" x 60" wide. All concrete runs of wire mesh to lap at least 6". Concrete rip rap to be poured in alternate 5' strips as shown in Planing Detail.  
 TOP WALLS shall be constructed at ends of rip rap similar to that shown for the top of the rip rap.  
 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 incidental to forming and grouting shall be included in the unit price bid for Rip Rap.  
 Note: Concrete to be used for rip rap shall be placed in 5' wide strips. Rip rap to be placed in 5' wide strips. Rip rap to be placed in 5' wide strips. Rip rap to be placed in 5' wide strips.  
 PROJECT NO. 81327E  
 COUNTY  
 STATION: 2+100.00 to 2+150.00

**ESTIMATED QUANTITIES**

Item	Plain Rip Rap	Concrete Rip Rap	5/8" x 1/2" x 60" Mesh
Quantity			
Unit Price			
Total			

STATE OF NORTH CAROLINA  
 STATE HIGHWAY AND  
 PUBLIC WORKS COMMISSION  
**STANDARD  
 RIP RAP  
 DETAILS**  
 AUGUST 1930  
 J. W. [Signature]  
 [Signature]







**GENERAL NOTES**

Reinforced concrete shall be in accordance with the 1941 or latest edition of the Specifications for Highway Construction, as amended, and general notes see sheet 30. For surface finish requirements see Special Provisions. The concrete shall be placed and finished to a minimum density of 140 lbs. per cu. ft. based on a wet weight of 150 lbs. per cu. ft. The concrete shall be placed and finished to a minimum density of 140 lbs. per cu. ft. based on a wet weight of 150 lbs. per cu. ft. The entire cost of reinforcement complete in place for precast concrete shall be included in the unit contract price bid by the contractor for these items. The contractor shall be required to provide and maintain all necessary forms and bracing for the concrete. The cost for all materials and labor for the concrete shall be included in the unit contract price bid by the contractor for these items. The contractor shall be required to provide and maintain all necessary forms and bracing for the concrete. The cost for all materials and labor for the concrete shall be included in the unit contract price bid by the contractor for these items. Road Mat and Muck shall be removed and back filled by the Roadway Contractor. The contractor shall be required to provide and maintain all necessary forms and bracing for the concrete. The cost for all materials and labor for the concrete shall be included in the unit contract price bid by the contractor for these items.

**TOTAL BILL OF MATERIAL**

Item	Quantity	Unit	Price	Total
Substructure	1.00	cu. yd.	12.00	12.00
Earth Ret. Wall	1.00	sq. ft.	10.00	10.00
Hand Rail	1.00	lb.	1.00	1.00
Form Work	1.00	sq. ft.	1.00	1.00
Reinforced Concrete	1.00	cu. yd.	12.00	12.00
Approved Grade	1.00	sq. ft.	1.00	1.00

**PROJECT NO. 813972**  
**ROBESON COUNTY**  
**STATION 491+50 - LT. LANE**

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 Raleigh  
 GENERAL DRAWING  
 OF LT. LANE BRIDGE OVER BIG MASH SWAMP ON RELOCATION OF U.S. 501 BETWEEN LUMBERTON & ST. PAULS  
 NOVEMBER 1938

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		
3			4		

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 IN CHARGE BY \_\_\_\_\_ DATE \_\_\_\_\_

EXPLANATION  
 SHEET

*Poor Quality FILM*

*Reel 693  
 Position - 27*

*BR # 95-46-2405*

*P. H. ...*



**GENERAL NOTES**

Assumed live load 100 lbs. per sq. ft. (44) or otherwise for other design data and general notes, see sheet 201 for surface finish requirements see Special Provisions.

Subgrade and Bents 201 & 202 shall be driven to a minimum bearing capacity of 30 tons per sq. ft. for bents shall be driven to a minimum bearing capacity of 15 tons per sq. ft.

The entire cost of reinforcement complete in place for precast concrete piles is to be included in the unit contract price and per linear foot for these piles. See Special Provisions.

The contractor will be required to drive and to verify test piles to make in bents 201 & 202. The test pile shall be paid for as many feet of full concrete pile. Order lengths of 20 ft., 25 ft. and 30 ft. concrete piles will be given after test pile has been driven. Piles shall be driven through roadway fill.

Root Mat and Muck shall be removed and back filled by the Roadway Contractor.

The contractor will be required to provide a minimum 14" x 14" spaced lattice 12" x 2" square driving piles. See Special Provisions.

**TOTAL BILL OF MATERIAL**

	Concrete	Steel	Cast Piles	Sub. Piles	Sub. Piles	Sub. Piles	Sub. Piles	Sub. Piles	Sub. Piles
	Cu. Yds.	Lbs.	No.	No.	No.	No.	No.	No.	No.
Substructure	29.5	26725							
Ext. Bent No. 1	1.0	2450	8	192					
Bent No. 2	2.4	1191	6	125	6	125	6	125	
Bent No. 3	2.5	1191	6	125	6	125	6	125	
Sub. Bent No. 4	11.0	2450	8	192					
Substructure Piles	2.0	40							
<b>TOTAL</b>	<b>48.4</b>	<b>33716</b>	<b>16</b>	<b>392</b>	<b>12</b>	<b>375</b>	<b>12</b>	<b>375</b>	<b>12</b>

**PROJECT NO. 813972**  
**ROFSON COUNTY**  
**STATION 499+50 - LT. LANE**

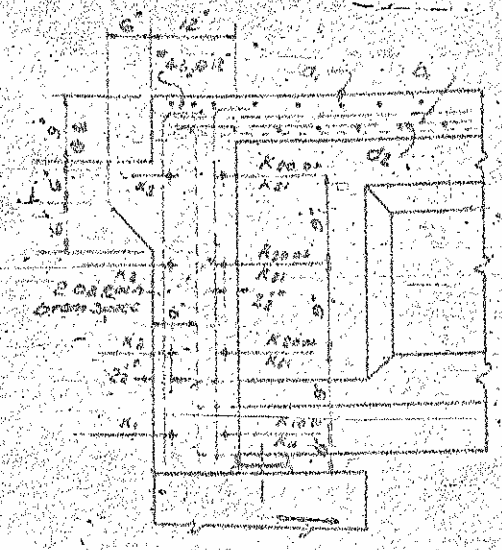
STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
 RALEIGH  
 GENERAL DRAWING  
 OF LT. LANE BRIDGE OVER BIG MASH SWAMP ON RELOCATION OF US 301 BETWEEN LUMBERTON & ST. PAULS  
 NOVEMBER, 1928

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
3			4		

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
 TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

LOCATION  
 SHEET



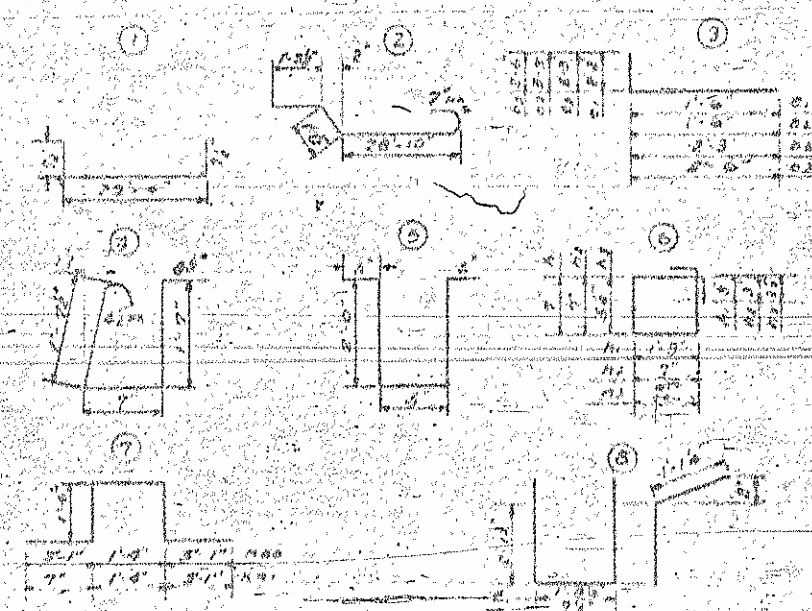


SECTION A-A

BAR SCHEDULE FOR 1050'-4", 1050'-0", 1050'-4"

NO.	NO.	SIZE	LENGTH	WEIGHT
1	200	#2	30'-7"	62.94
2	251	#3	31'-10"	85.93
3	306	#4	35'-2"	38.44
4	78	#4	5'-6"	9.81
5	18	#4	5'-6"	4.0
6	12	#4	5'-6"	2.0
7	112	#4	3'-3"	27.4
8	118	#4	4'-3"	31.8
9	26	#4	4'-0"	27.4
10	60	#4	5'-3"	27.0
11	3	#4	5'-0"	8
12	50	#4	5'-0"	25
13	322	#4	5'-0"	180
14	4	#6	17'-8"	106
15	10	#6	5'-3"	42
16	4	#6	5'-2"	19
17	12	#6	17'-4"	133
18	50	#6	5'-8"	72
19	12	#6	3'-8"	27
20	50	#6	4'-8"	102
21	50	#6	10'-8"	257
22	14	#6	8'-0"	242
23	4	#8	2'-3"	24
24	50	#8	2'-2"	360
25	10	#8	17'-5"	186
26	26	#8	16'-3"	408

MAX DEAD LOAD DEFLECTION  
 Tol. Cam 1/4" up  
 Cam placed in place 1/2" up  
 Tol. curb in place 1/4" down  
 Cam curb in place 1/4" down



PROJECT NO. 813972  
 ROBESON COUNTY  
 STATION 495+50.4

SUPERSTRUCTURE QUANTITIES FOR 1050'-4", 1050'-0", 1050'-4"

Class A Concrete	127.9	CK
Reinforcing Steel	26,701	LLP
Distressed Concrete (Roadway 28'-0" LK P)		

Sheet 1 of 4

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION

STANDARD END SPAN  
 PRESTRESSED CONCRETE GIRDERS  
 28' ROADWAY 18" CURBS

AUGUST 1957

SHEET 5 OF 56



FED. ROAD DIST. NO.	STATE	PROJECT NO.
3	N.C.	813972
F.A. Proj. 1-99-1(7)72		

20'-0"  
 6'-10 1/2"    6'-10 1/2"    6'-10 1/2"    6'-10 1/2"

86.3  
 79.5  
 50'-0"

SPAN A

PROJECT NO. 813972  
 ROBESON COUNTY  
 STATION: 4991+00 L.

Sheet 2 of 4

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION

STANDARD INTERIOR SPAN  
 PRESTRESSED CONCRETE GIRDERS  
 28' ROADWAY - 18" CURBS

AUGUST 1957

SHEET 2 OF 4

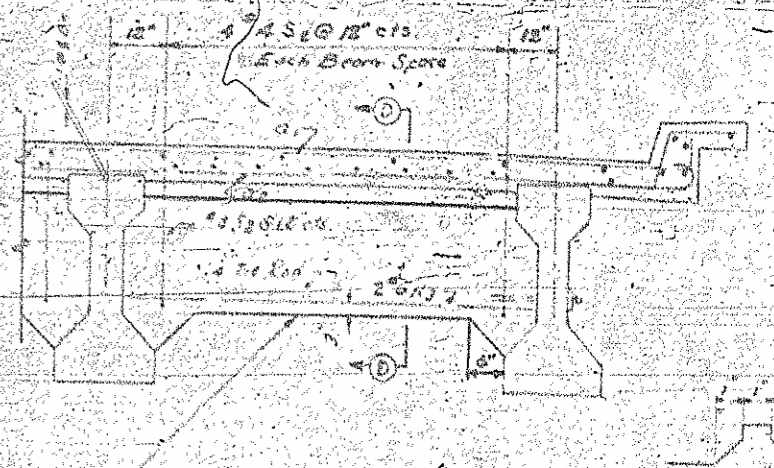
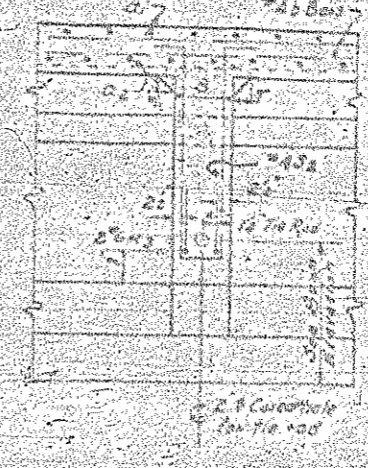
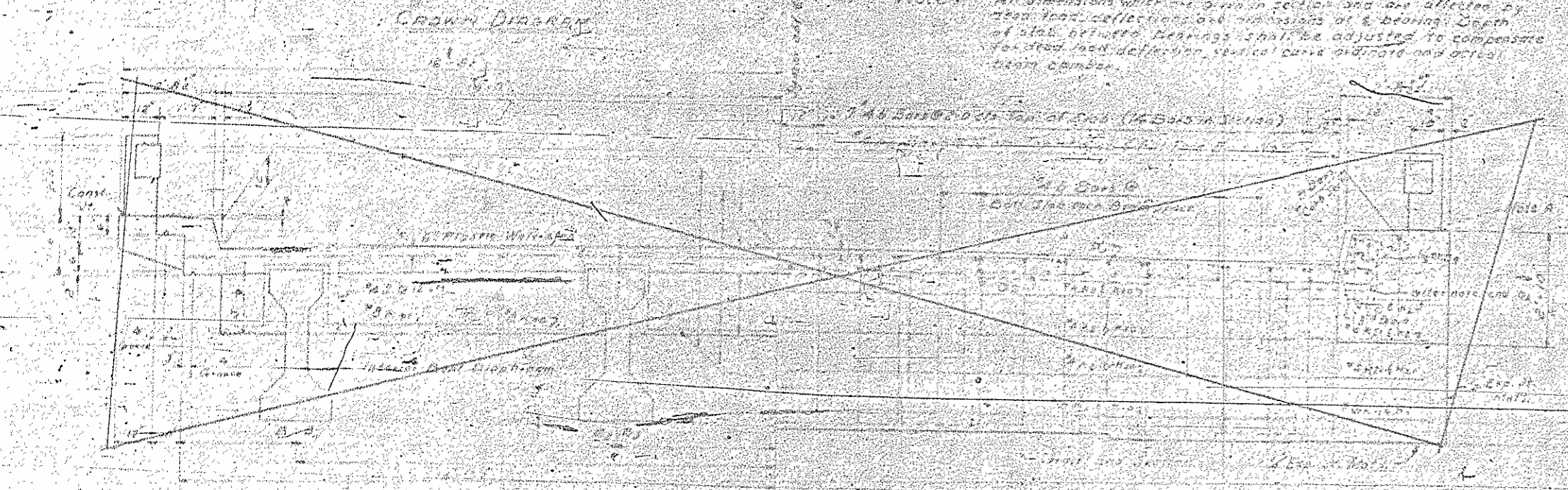


PROJECT NO.	DATE	SCALE	PROJECT NO.
3	N.C.	B/19972	F.A. Proj. 7-95-1(1)??

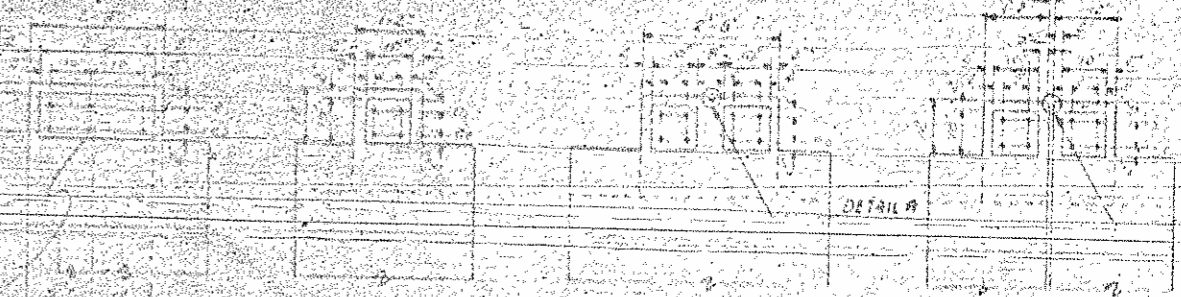
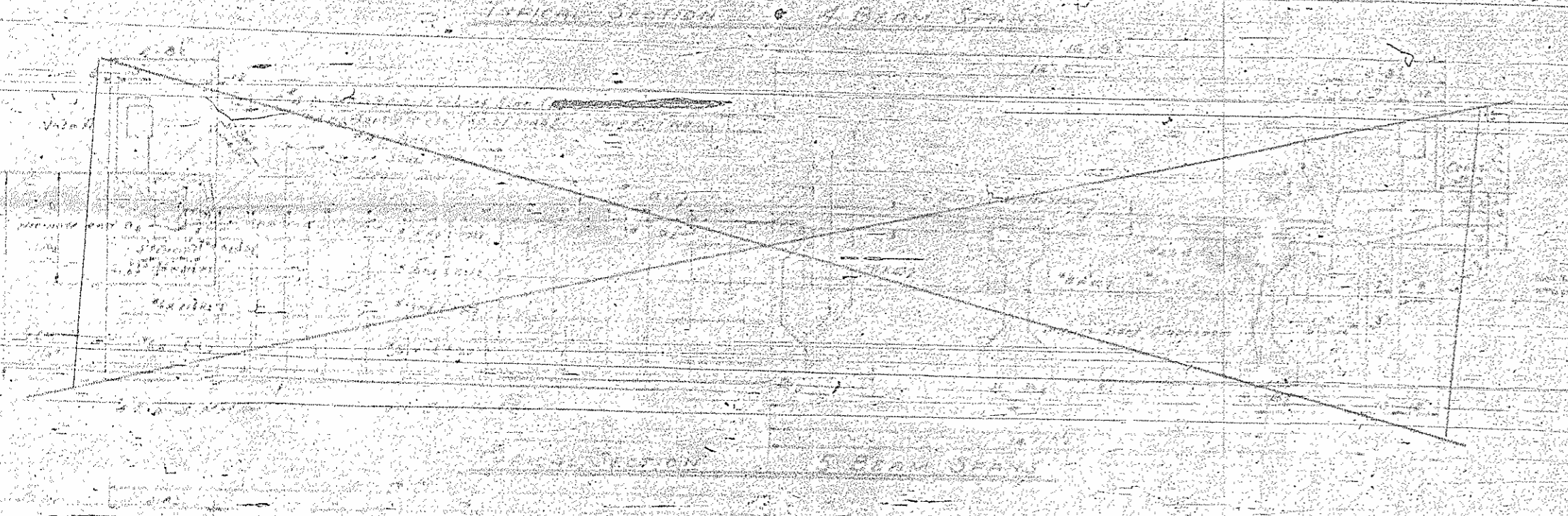
Note A For details and chapter details, see Appendix 2 of Part 1 of the Specifications.

Note: All dimensions which are given in section and are affected by shrinkage, deflection and camber shall be adjusted to compensate for such and deflection, shrinkage and camber shall be as shown.

NOTE: Temporary struts shall be placed between prestressed girders adjacent to the diaphragms and the ribs on the top of spans shall be fully braced before diaphragms are cast. Struts shall remain in place at least 3 days after concrete is placed. The struts shall be of lightened alloy struts have been replaced.

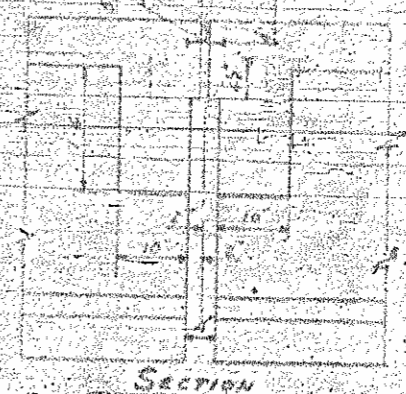


DETAIL A

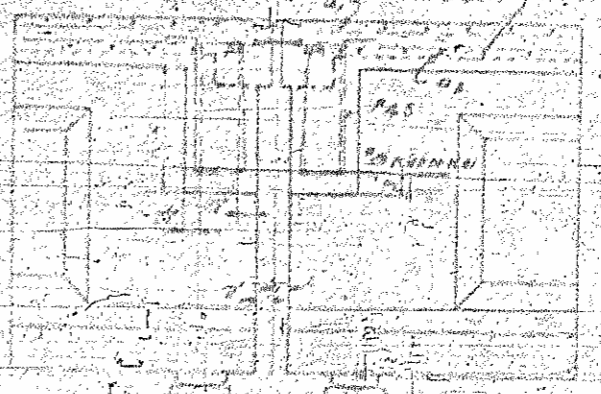


DETAIL B

DETAIL C



SECTION THRU CURB



PROJECT NO. 8/19972  
ROALSON COUNTY  
STATION: 499150 L

Sheet 3 of 4

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
STANDARD PRESTRESSED  
TYPICAL SECTIONS  
28 ROADWAY-10 CURBS

AUGUST 1957

SHEET 3 OF 50



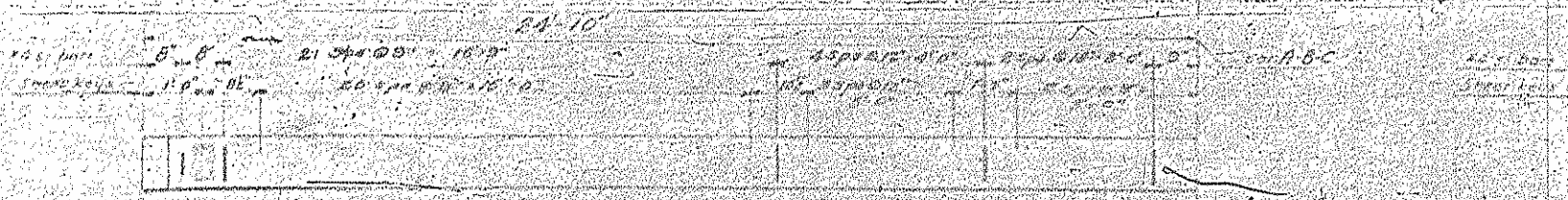
NOTE

All prestress strands face to stress achieved cables and each cable to be prestressed at 1920 lbs. cables shall be cut off within 1" of end of beam.

The prestressed beams shall be formed and cast in accordance with the special provisions. In the handling of beams they must be maintained in an upright position at all times and must be picked up from points within the solid concrete blocks at the beam ends. Breach of this requirement may lead to failure of the member.

Embedded 1/2" B. rods bearing 3/8" thick plates necessary for 1/2" anchor bolts with nuts and washers. Tie rod assemblies are not counted as stems and are to be included in the cost of prestressed concrete bearing.

No surface finish or paint required for prestressed concrete beams. However, the exterior face of exterior beams shall be carefully checked for crazing and other deterioration.



HALF PLAN BEAMS FOR SPAN



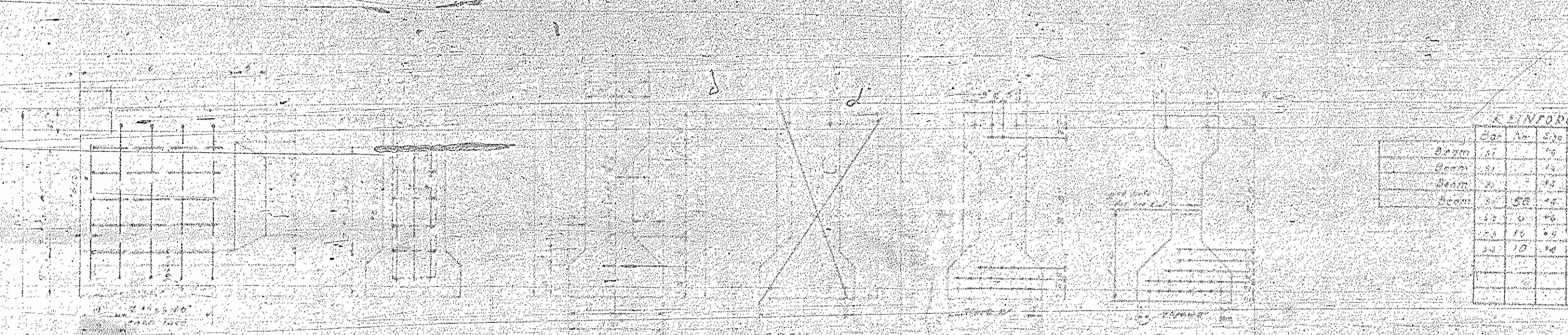
HALF PLAN BEAMS FOR SPAN



HALF ELEVATION



HALF ELEVATION



PRESTRESS CABIN LAYOUT

REINFORCING STEEL FOR ONE (1) BEAM

Bar	No.	Size	Length	Weight	Bending Diagram
Beam	12	1/2"	6'-9"	41	
Beam	8	1/2"	6'-9"	17	
Beam	20	1/2"	6'-9"	17	
Beam	30	1/2"	6'-9"	17	
	12	1/2"	6'-9"	17	
	10	1/2"	6'-9"	17	
	20	1/2"	6'-9"	17	
	24	1/2"	6'-9"	17	
				<b>362</b>	

Detailed drawings are omitted

END BLOCK DETAIL

BEAM SECTION

SPAN

SPAN A-B



EMBEDDED E.B. DETAIL

BEARING TYPE DETAIL

1/2" TIE ROD

DETAIL SHEAR KEY

BEAMS REQUIRED

12 @ 49'-0" length	804'-0"	41
8 @ length		17
8 @ length		17
8 @ length		17

QUANTITIES ONE (1) BEAM

Item	Quantity	Unit
Reinforcing steel		
Beam	362	lb.
Beam	18	lb.
Beam	10	lb.
Beam	17	lb.
3000 psi Concrete		
Beam	4.8	cu. yd.
Beam	2.1	cu. yd.
Beam	2.1	cu. yd.
Beam	2.1	cu. yd.
1/2" S.P. Cables		
Beam	11	lb.
Beam	11	lb.
Beam	11	lb.
Beam	11	lb.
Beam	11	lb.

TOTAL

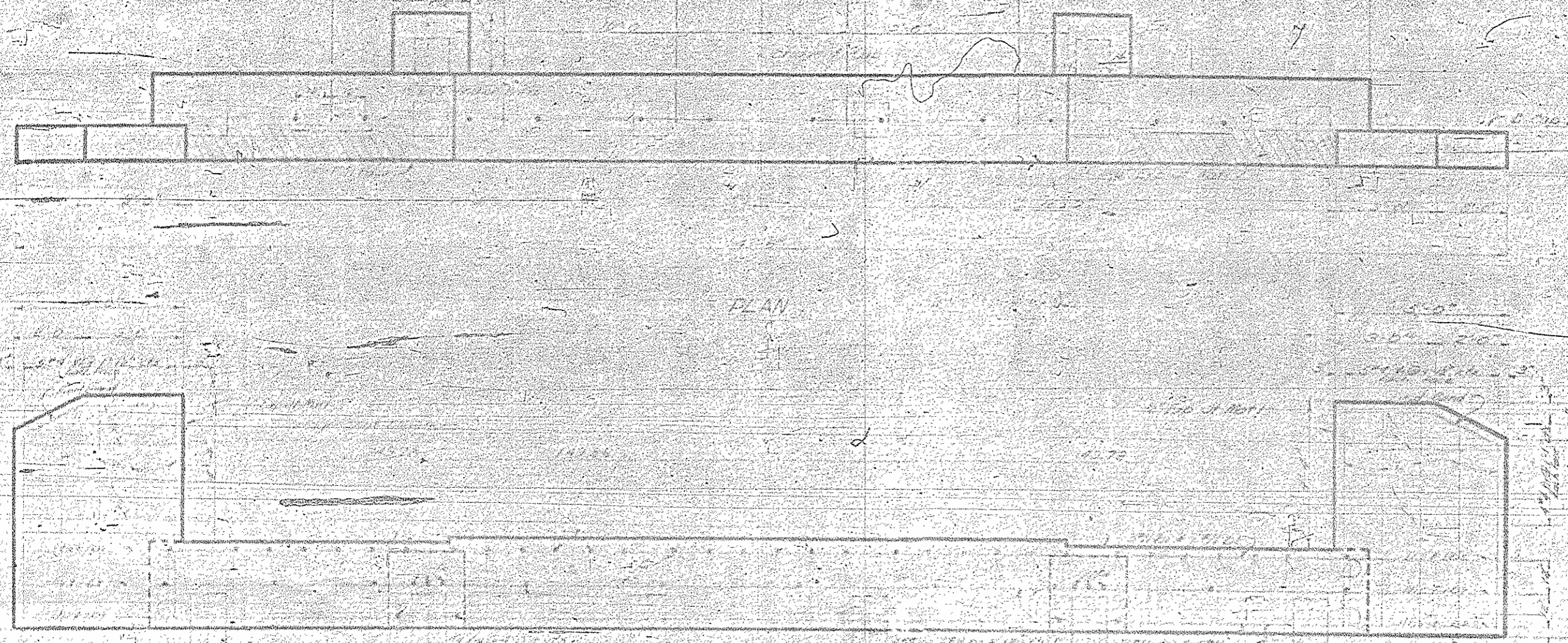
12
8
20
30
12
10
20
24

PROJECT NO. 813972  
ROBEESON COUNTY  
STATION: 199+00.1

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
STANDARD  
36" PRESTRESSED  
CONCRETE BEAM

APRIL 1948





**BILL OF MATERIAL**  
ONE END BENT - TWO REQUIRED

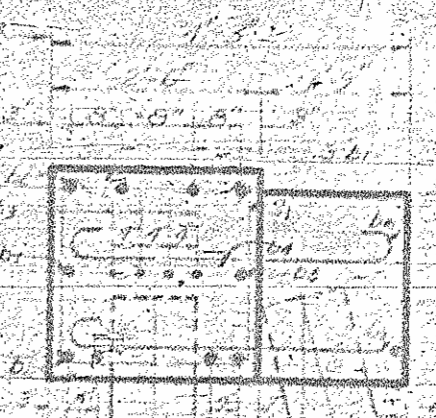
Bar No.	Size	Length	Weight
1	#11	38'-2"	1017
2	#11	43'-0"	1257
3	#4	10'-5"	28
4	#4	2'-2"	19
5	#3	33'-0"	33
6	#4	1	47
7	#3	43'-0"	115
8	#4	4'-6"	50
9	#4	5'-5"	57
10	#3	6'-6"	57
11	#4	2	155
12	#4	3	62
13	#4	4	33

Reinforcing Steel - Lbs 2450  
 Class A Concrete - Cu Yds 110  
 3" Spaced Concrete Piles - No. 4 Steel 20

\* Concrete designed by sub-contractor not shown detailed.

Note: Piles shall be driven to a minimum bearing capacity of 30 tons each.

**ELEVATION**



**SECTION A-A**

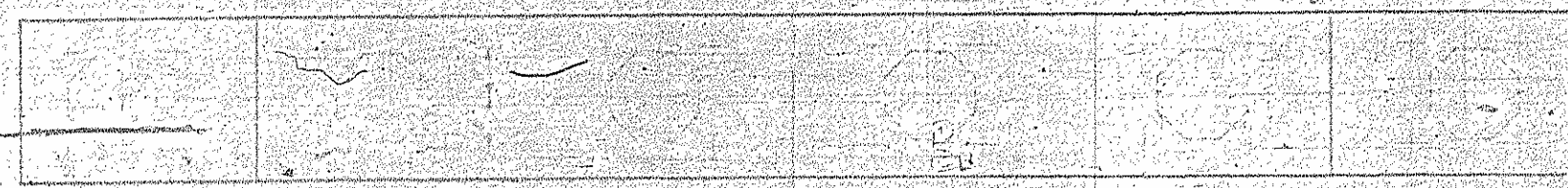
PROJECT NO. 813972  
 ROBERTSON COUNTY  
 STATION: 199+50

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SUBSTRUCTURE  
 END BENTS NO. 1 & 2  
 RIGHT OF LEFT LANES

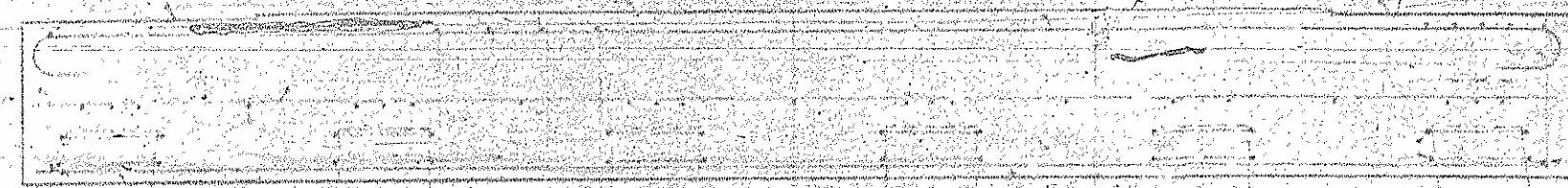
DATE: 11/11/72

SCALE	DATE
1" = 10'	11/11/72





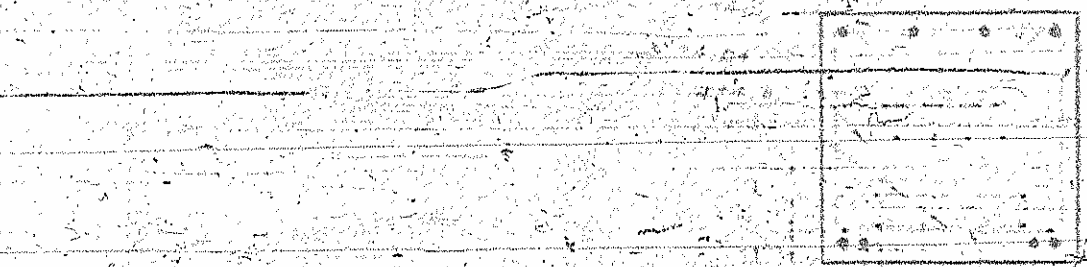
PLAN OF BENT NO. 1



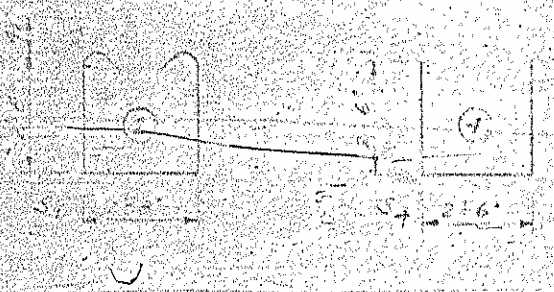
PLAN OF BENT NO. 2



ELEVATION OF BENT NO. 1



ELEVATION OF BENT NO. 2



BAR TYPES

(All dimensions are in feet)

Piles shall be driven to a minimum bearing capacity of 45 tons each.

Concrete displaced by pile heads and pier abutments.

**BILL OF MATERIAL**

PER BENT - 17122

BAR	No.	SIZE	TYPE	LENGTH	WEIGHT
B	4	#4		31.6	119
B	4	#4	ST	28.4	102
B	4	#4	ST	28.4	102
B	4	#4	ST	28.4	102
B	4	#4	ST	28.4	102
S	22	#4		8.9	128
S	16	#4		3.5	165
S	12	#4		0.7	57
S	2	#4		7.6	57

Reinforcing steel 201 1741  
 Cast A. Concrete 9.3  
 Piles to be 20 Piles in each  
 LEFT LANE  
 Bent 1 No. 6 11ft 100  
 Bent 2 No. 6 11ft 100  
 RIGHT LANE  
 Bent 1 No. 6 11ft 100  
 Bent 2 No. 6 11ft 100

PROJECT NO. 813972

ROBLESON COUNTY

STATION: 492 + 50

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION

SUBSTRUCTURE  
 BENTS NO. 1 & NO. 2  
 FOR RIGHT OR LEFT LANE

NOVEMBER 1958

REVISIONS

DATE

BY

NO.

DATE

BY

NO.

DATE

BY

NO.

DATE

BY

NO.

DATE

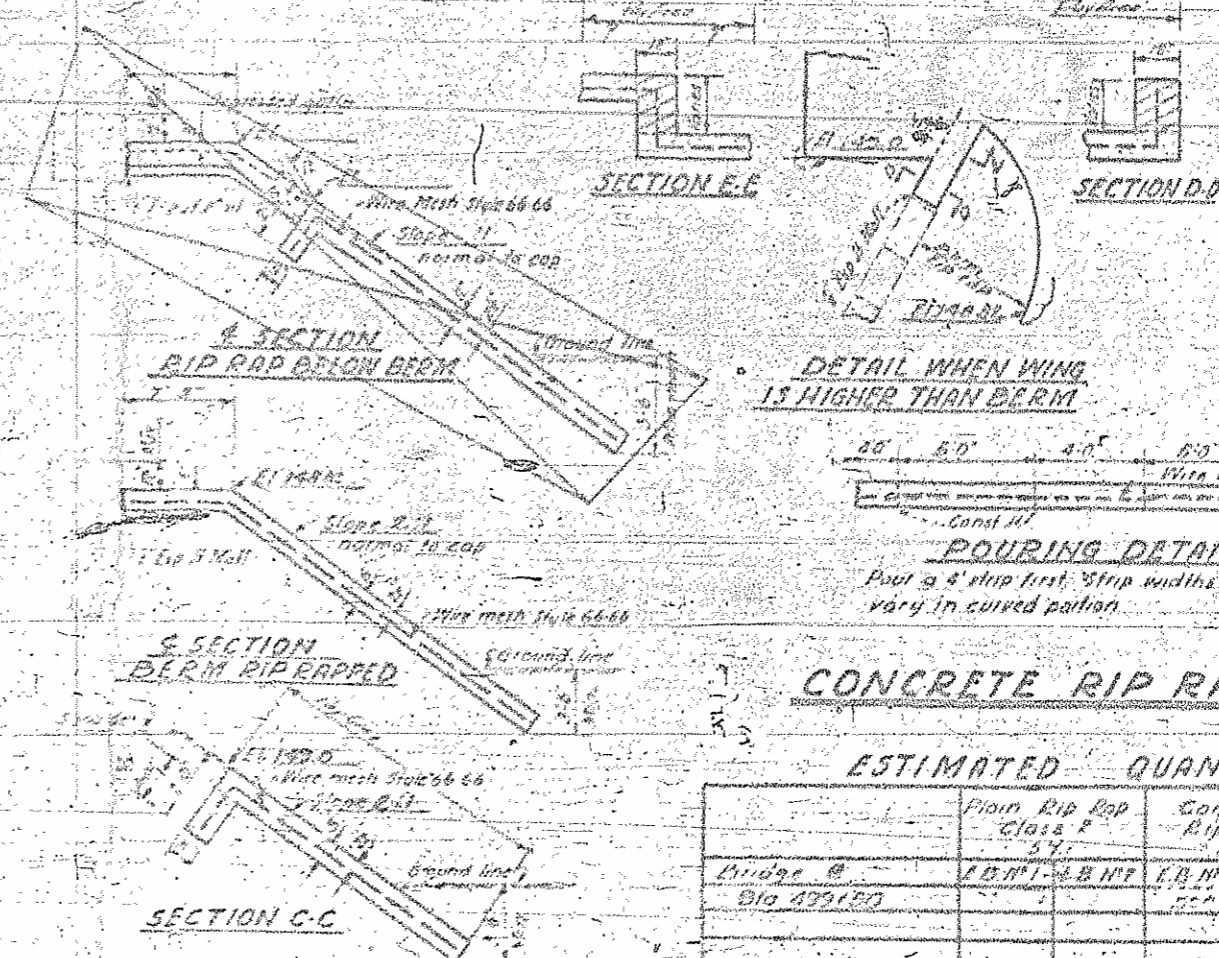
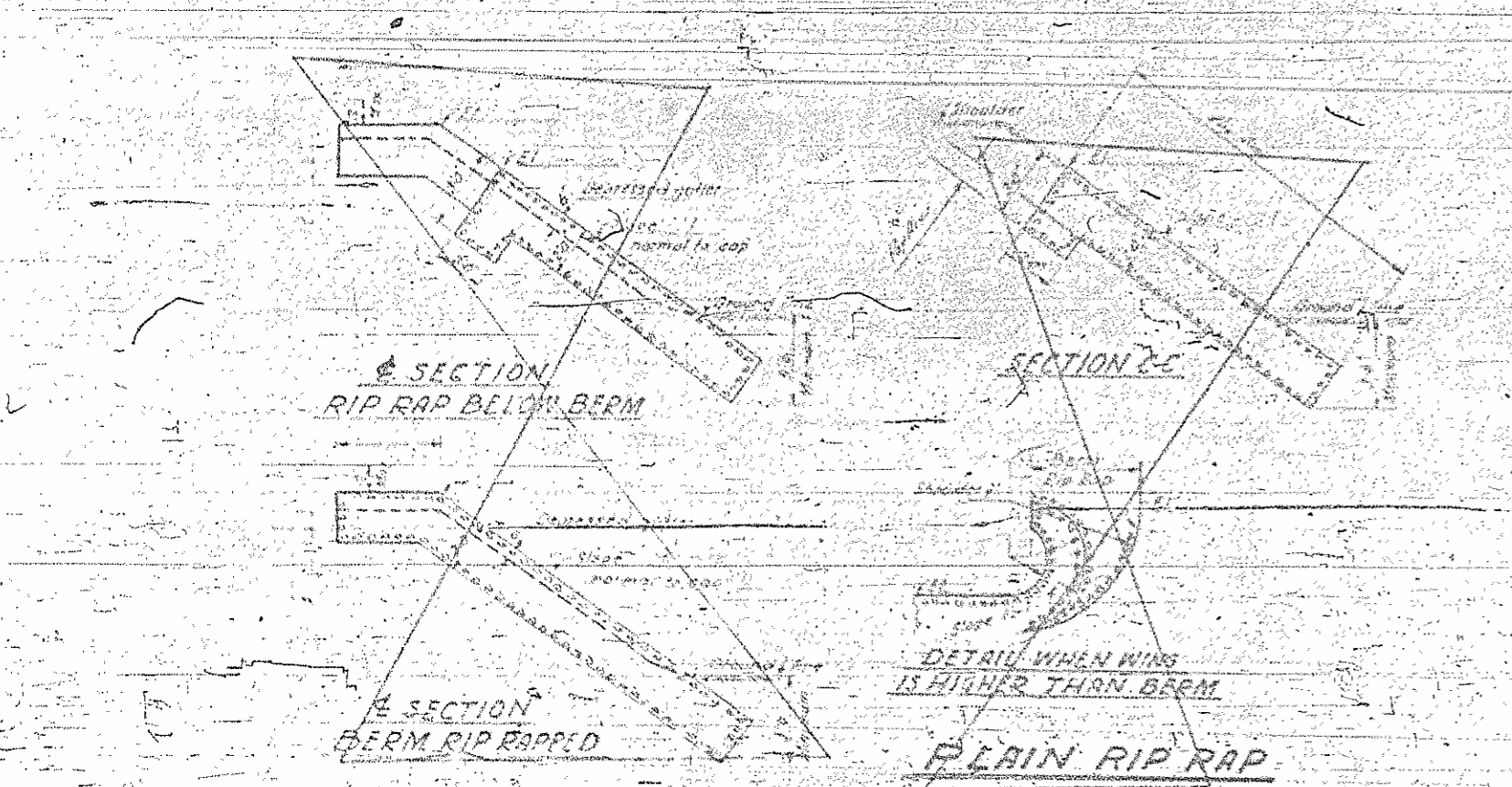
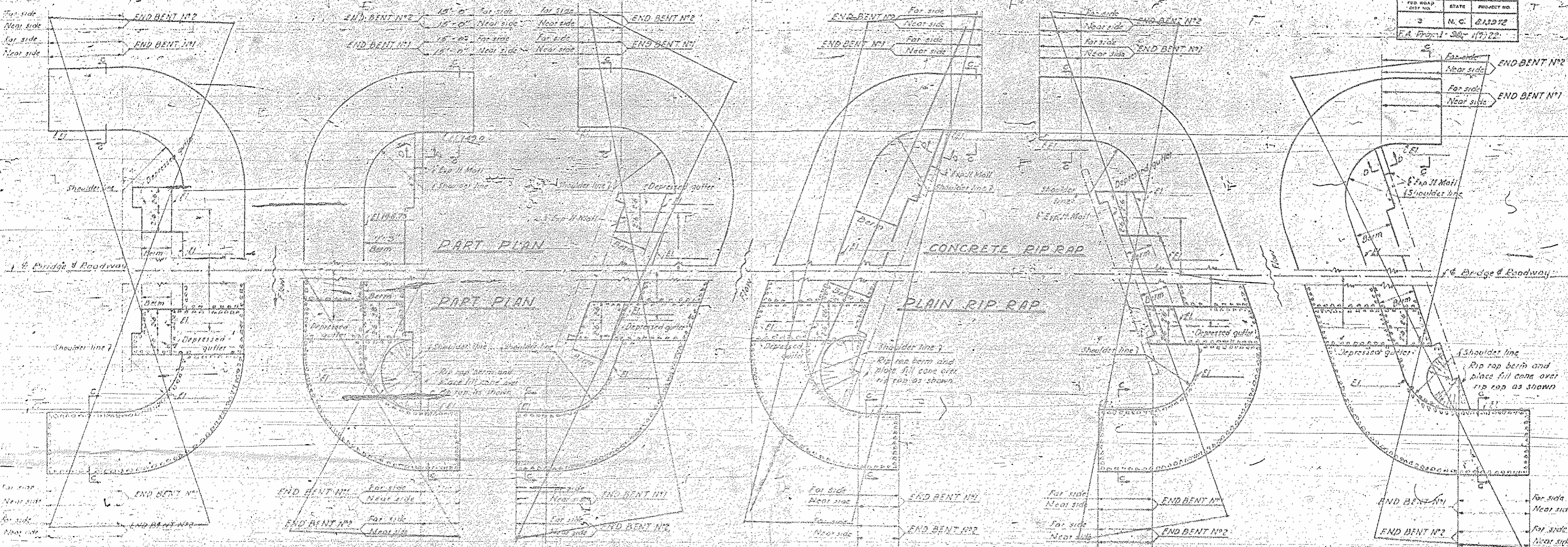
BY

NO.

DATE



FED. ROAD DIST. NO.	STATE	PROJECT NO.
3	N. C.	213172
C.A. Project - 307-11722		



**NOTE**  
 CONCRETE RIP RAP shall be Class B Concrete using Std. size No. 3 coarse aggregate. Wire mesh reinforcing to be Slope 60-60-60 wide. Rebar runs at wire mesh to top of least 6". Concrete rip rap to be poured in alternate 4' x 5' strips as shown in Pouring Detail.  
 TOR WALLS shall be constructed of ends of rip rap similar to that shown for the top of the rip rap.  
 DEPRESSED GUTTERS to be formed as indicated for type of rip rap specified. Gutter need 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 of end and head walls as indicated by 2" rebar shall be in accordance with Detail 2" and shall be measured as paid for in accordance with Item 1100 on the entire work of rip rap and included in the price bid per cu. yd. for concrete rip rap.

**PROJECT NO. 213172**  
**ROBERTSON COUNTY**  
**STATION: 172+50 to 176+00**

**ESTIMATED QUANTITIES**

	Plain Rip Rap Class B	Concrete Rip Rap	Wire Mesh 60" wide approx. 11 ft.
Bridge B	1,200 cu. yd.	1,200 cu. yd.	1,200 sq. ft.
Bridge C	1,200 cu. yd.	1,200 cu. yd.	1,200 sq. ft.
Bridge D	1,200 cu. yd.	1,200 cu. yd.	1,200 sq. ft.
Bridge E	1,200 cu. yd.	1,200 cu. yd.	1,200 sq. ft.

STATE OF NORTH CAROLINA  
 STATE HIGHWAY AND PUBLIC WORKS COMMISSION  
 BALTIMORE  
**STANDARD RIP RAP DETAILS**  
 AUGUST 1953  
 AUTHORIZED BY: [Signature]  
 APPROVED BY: [Signature]

SPECIAL	DESIGNED BY	DATE
STANDARD	DRAWN BY	DATE
	CHECKED BY	DATE