

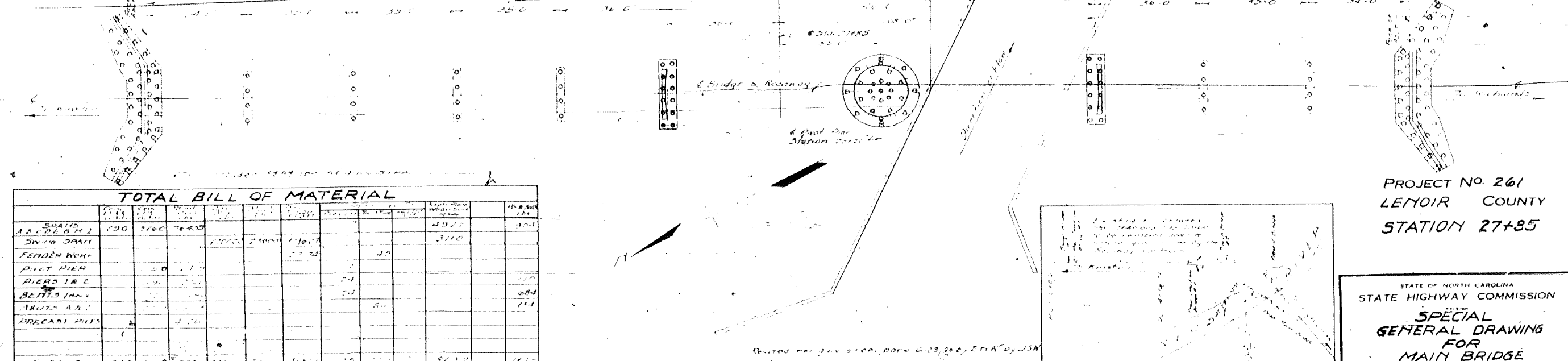
**BILL OF MATERIAL PER SPAN FOR CONCRETE SPANS**

SPAN	C	S	R	CONCRETE		STEEL		WOOD	TOTAL	WGT.	VOL.	COST	MARK	REMARKS
				CY	CU YD	TONS	CU YD							
SPAN A	70	10	15	12	32	12	32	41	2678	410	113	672		
SPAN B	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN C	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN D	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN E	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN F	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN G	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN H	25	5	10	12	28	10	28	41	2536	35	113	622		
SPAN I	25	5	10	12	28	10	28	41	2536	35	113	622		
TOTALS	300	40	100	150	400	150	400	500	26459	500	150	904		

**TABLE OF ELEVATIONS**

Point	Elevation
Abutment A	41.00
Bent No. 1	41.00
Bent No. 2	41.00
Bent No. 3	41.00
Bent No. 4	41.00
Pier No. 1	41.00
Pier No. 2	41.00
Pivot Pier	41.00
Bent No. 5	41.00
Bent No. 6	41.00
Abutment B	41.00

**GENERAL NOTE:**  
 Class A concrete is to be used throughout except in places specified and hereinbefore covered up of concrete. Class A concrete is to be used in all cast piles and foundations above top of water. Reinforcing steel is to be Class A galvanized steel. All lumber used in bridge work shall be dressed and free from knots. All lumber and sawing shall be given the treatment of the A.R.E.A. specifications. Machinery and electrical equipment shall meet all requirements of the latest edition of the A.R.E.A. specifications. The wearing surface shall be Bitumastic from as manufactured by the Philip Carey Co. or its equal. All material and construction shall conform with the A.R.E.A. Highway Specifications of 1930. All exposed surfaces shall be finished as shown on plans. The excavation and construction shall conform to the specifications of the water supply system as shown on the plans and the specifications of the State Highway Commission of 1930. The bridge shall be constructed in accordance with the instructions in Bulletin No. 261.



**TOTAL BILL OF MATERIAL**

Item	Quantity	Unit	Value
Concrete	1500	CY	1500
Steel	500	TONS	500
Wood	500	CU YD	500
Pier No. 1	1	PIER	1
Pier No. 2	1	PIER	1
Bent No. 1	1	BENT	1
Bent No. 2	1	BENT	1
Bent No. 3	1	BENT	1
Bent No. 4	1	BENT	1
Bent No. 5	1	BENT	1
Bent No. 6	1	BENT	1
Abutment A	1	ABUTMENT	1
Abutment B	1	ABUTMENT	1
Precast Piles	2	PILES	2
TOTALS	2200		2200

**Maintenance of River and Highway Traffic.** The Contractor will be required to maintain both river and highway traffic at all times at his own expense to the complete satisfaction of the River Department and the Highway Department. The Contractor shall indemnify and hold harmless the State Highway Commission and all of its agents and employees from and against all actions, claims, damages, or suits of any nature or description brought by or on behalf of any person or persons, or damage or injury to any person or persons in property or consequence of any neglect or the maintenance of river and highway traffic. The Contractor shall be required to remove the existing river bridge, including masonry structures, structures and timber piles, from the natural river to the satisfaction of the River Department and the Engineer.

**EXISTING RIVER BRIDGE, Opp. Down St. & Point of Turn, Since Elev. 34-71**

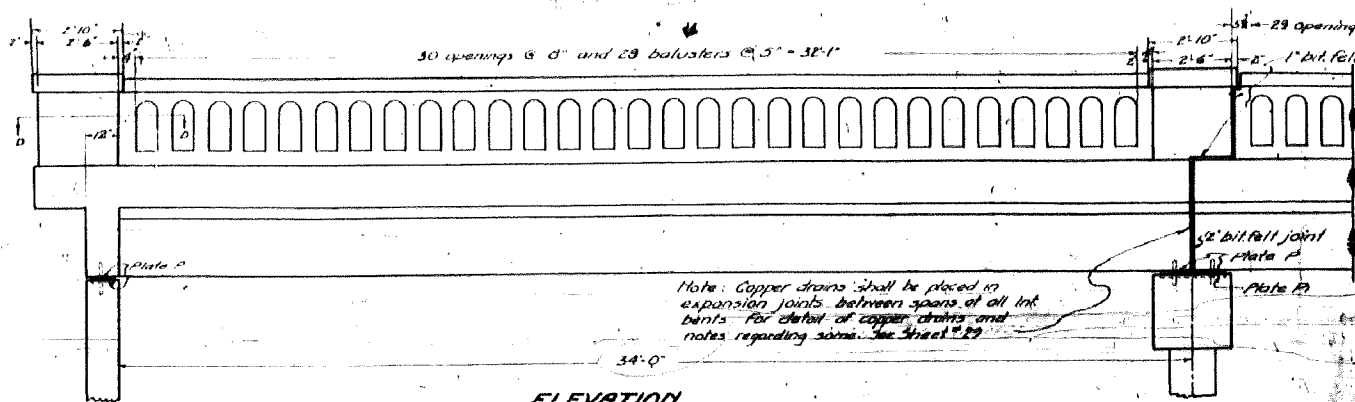
PROJECT NO. 261  
 LENOIR COUNTY  
 STATION 27+85

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
**SPECIAL GENERAL DRAWING FOR MAIN BRIDGE OVER NEUSE RIVER AT KINSTON MARCH 1930**

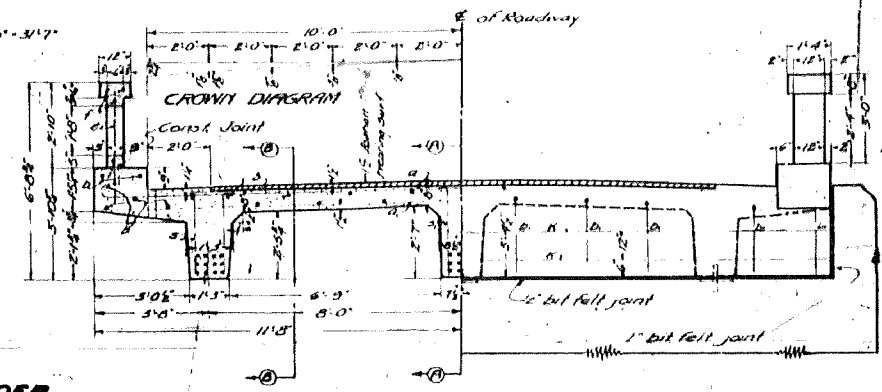
#42  
Lenoir

REEL 8

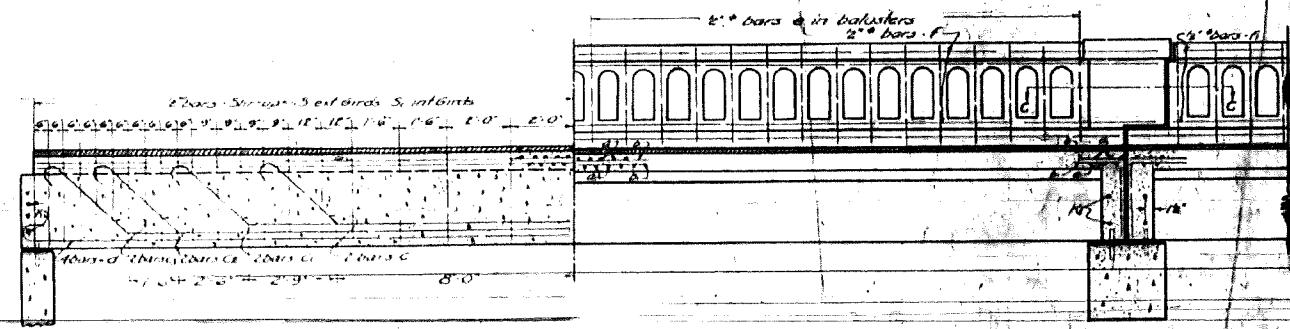
PROJECT NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N. C.	261	32	37



ELEVATION

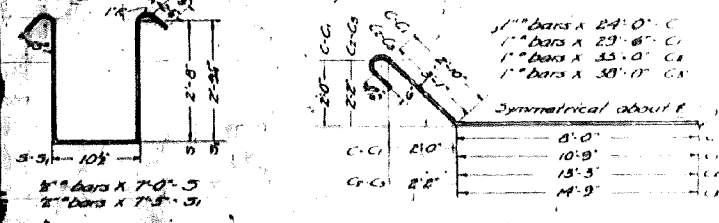


DETAIL OF GIRDER HALF INTERIOR SECTION HALF END VIEW



SECTION A-A

SECTION B-B



DETAIL OF BARS S-S

DETAIL OF BARS C-C-G-C

**DESIGN DATA**

Specifications: NC State Highway Commission

Loadings: HS 20 typical for truckway, 50% of live load

Impact Allowance: 30% of live load

**GENERAL NOTE:**

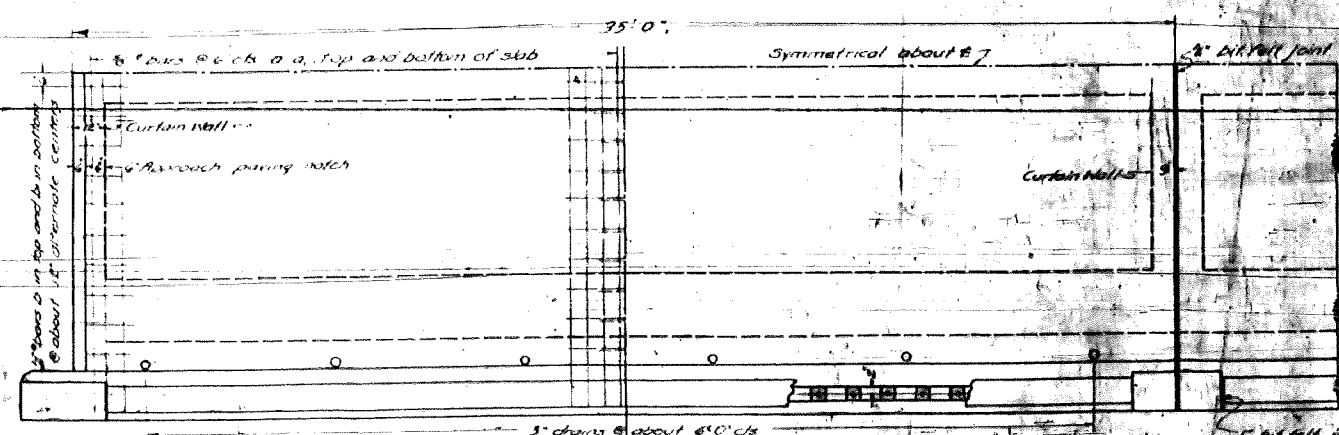
Class A concrete to be used throughout, except in handrails above top of curbs. Proportions 1:2:4

Class AA concrete to be used in handrails above top of curbs. Proportions 1:2:3

All reinforcing steel to be deformed bars.

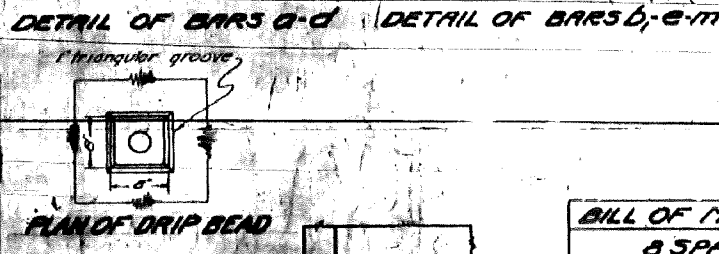
The girders, slab and curbs must be poured in one operation, allowing no time for initial set to take place between them. Construction joints allowed only at top of curbs.

Two name plates shall be placed on the bridge, one on the inside of each of right hand post approaches and all curved corners to be chamfered, except on hand rails and expansion joints. Corners of handrail coping and posts to be chamfered. Expansion joints and balusters to be given a chamfer unless otherwise specified under special provisions the wearing surface is to be placed by the Bridge Contractor. All material and workmanship as per the specifications of the NC State Highway Commission.



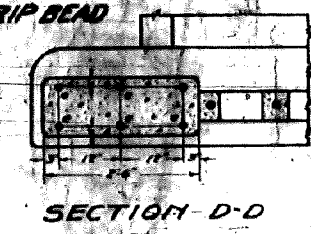
SHOWING REINFORCEMENT

SHOWING OUTLINES



DETAIL OF BARS D-D

DETAIL OF BARS E-M



SECTION D-D

**NOTE:**  
For Bill of Material per Span, see General Drawing Sheet No. 27

**BILL OF MATERIAL**

**8 SPANS**

Bar	No.	Size	Length	Weight
A	540	5"	24'-0"	14016
B	560	5"	25'-0"	13932
C	576	5"	18'-9"	4708
D	104	5"	20'-6"	1922
E	48	1"	24'-0"	3920
F	48	1"	29'-6"	4816
G	48	1"	35'-0"	5712
H	48	1"	38'-0"	6200
I	96	1"	36'-6"	1912
J	580	4"	5'-3"	2227
K	32	5"	19'-3"	422
L	36	5"	18'-6"	1100
M	4	5"	12'-9"	76
N	28	5"	17'-0"	426
O	24	5"	8'-6"	72
P	646	5"	7'-0"	3908
Q	328	5"	7'-3"	2024

Reinforcing Steel Lbs. 76959

Class AA Concrete Cu Yds. 29.0

Class AA Concrete Cu Yds. 326.0

Plates & Bolts Lbs. 904

Asphalt Wearing Surface Sq. Yds. 222

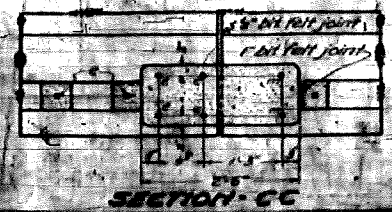
PROJECT NO. 261  
LENOIR COUNTY  
8 SPANS AT STATION 27K+5  
MAIN BRIDGE

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
SPECIAL  
DETAIL OF  
R. G. DECK GIRDER  
MARCH 1930

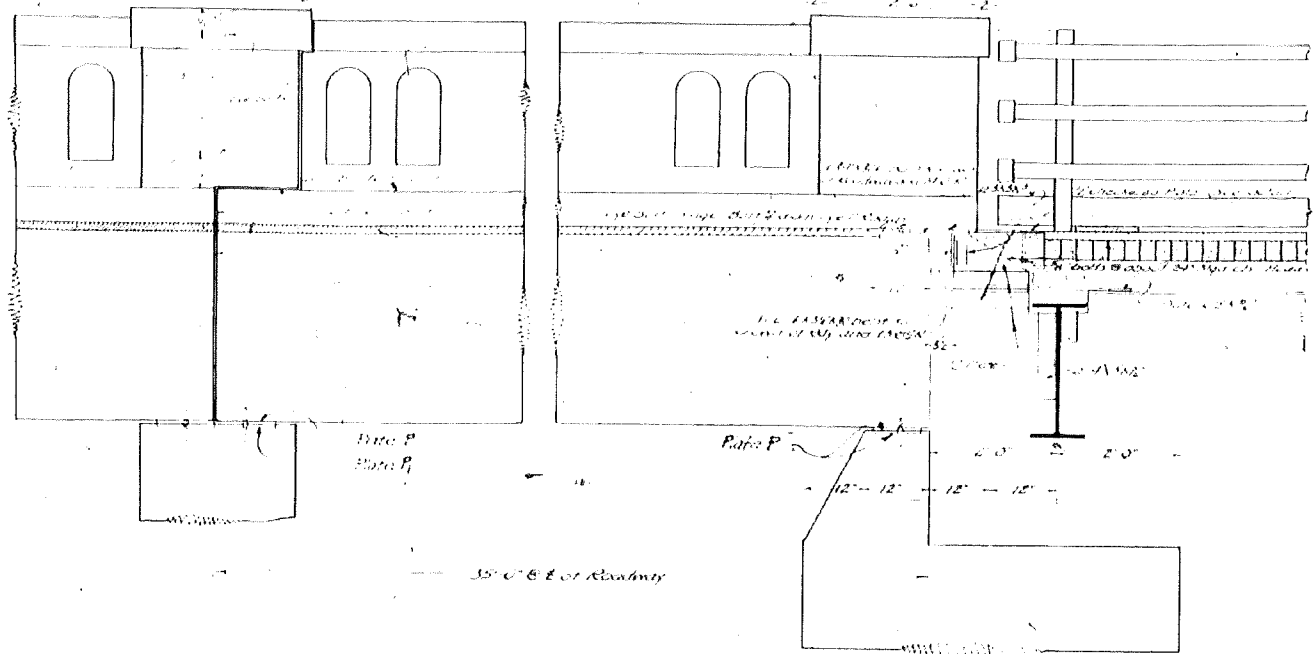
SPECIAL	ASSEMBLED BY	DATE	NO. OF SHEETS
STANDARD	DESIGNED BY	DATE	NO. OF SHEETS

MAKE 60 PLATES-P

MAKE 12 PLATES-P



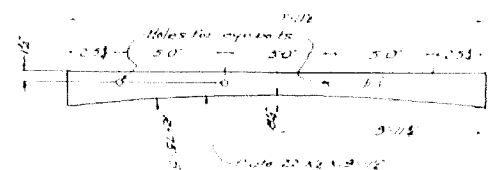
Revised for galv. steel bars  
6/22/30 by S.P.A. by J.S.W.



SECTION ON E OF ROADWAY



MAKE 2  
DETAIL OF OAK FLOOR PIECE  
FOR SWING SPAN



MAKE 2  
DETAIL OF CHECKERED PLATE  
FOR FLANKING SPAN

MAKE 2 WHEEL GUARDS - WG & WG3

MAKE 12 WHEEL GUARDS - WG2

DETAIL OF NAILING STRIPS - NS

DETAIL OF NAILING STRIPS - NS2

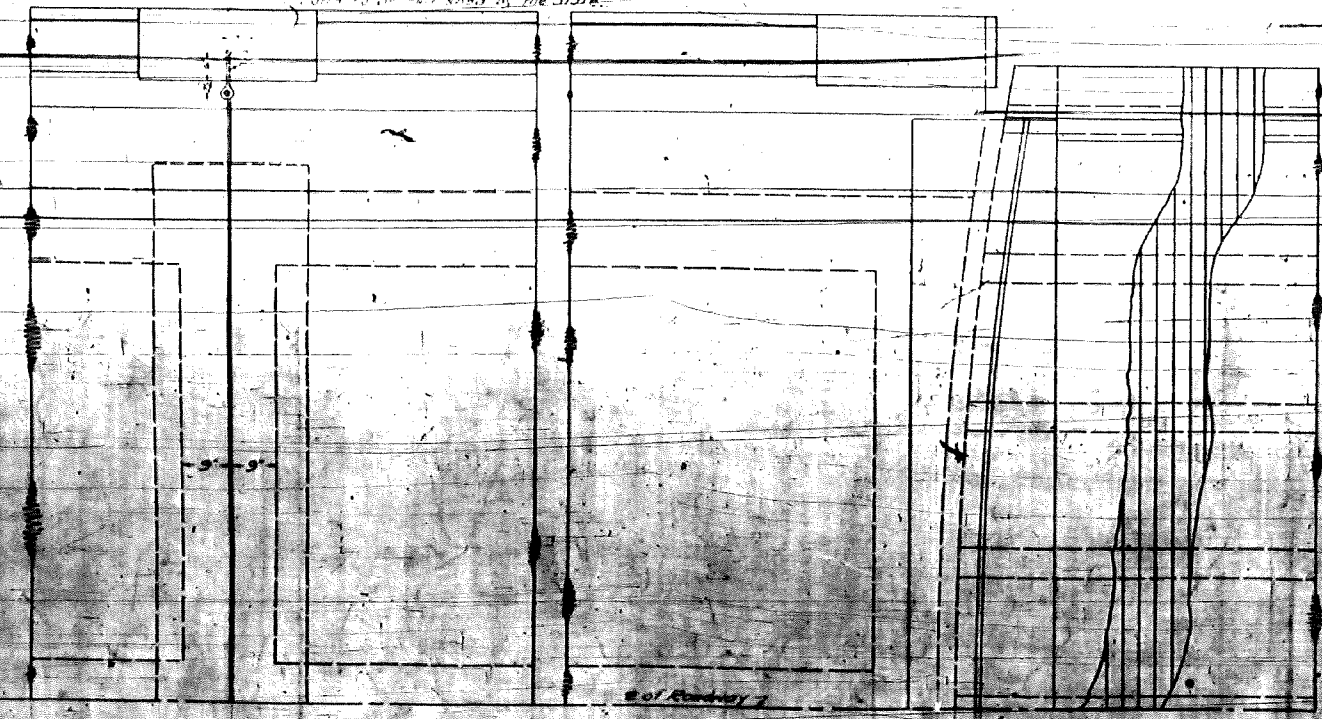
DETAIL OF NAILING STRIPS - NS3

Copper drains shall be placed in expansion joints between spans at all intermediate bents as shown. Copper for drains to be of the best grade #20 gauge 24 oz. sheet copper, and shall be shop bent the cost of same shall be included in contract unit price. Bill for reinforcing steel which price shall include cost of drains complete in place and all labor, tools and materials incidental thereto.



SECTION THRU EXPANSION JOINT AT INT. BENTS SHOWING COPPER DRAINS

PROJECT NO. 261  
LENOIR COUNTY  
STATION 27+55



HALE PLAN

MAKE 2  
DETAIL OF CHECKERED PLATE  
FOR SWING SPAN

20 gauge 24 oz. sheet  
1 piece 24' 10" x 18" &  
1 piece 24' 10" x 18" &  
required at each exp.  
joint.



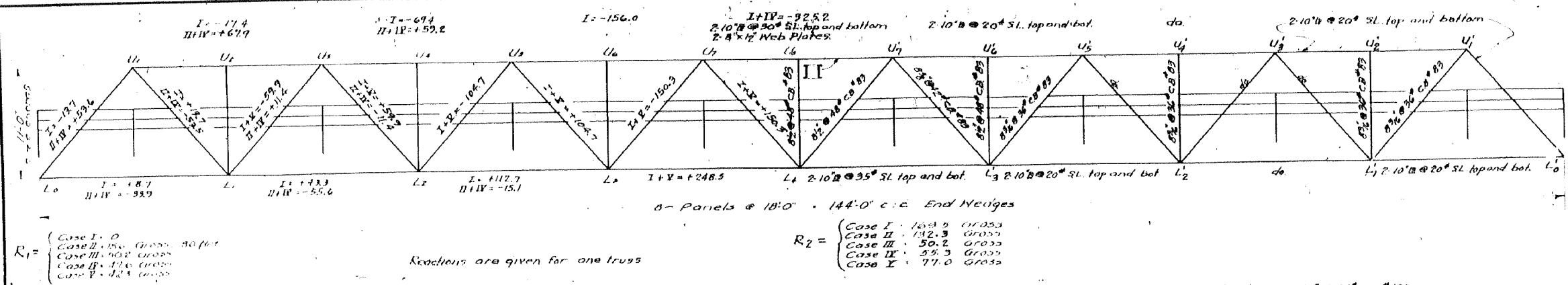
DETAIL OF COPPER DRAIN

BILL OF CREDOSOTED TIMBER FOR SWING SPAN						
SUM	ITEM	Mark	IN	Size	Length	FE. WT.
545	Wheel Guard	WG	2	6X6	17'-5"	180
		WG	12	6X6	18'-6"	200
		WG	5	6X6	21'-5"	170
315	Nailing Strip	NS	5	6X6	22'-0"	350
		NS	54	6X6	18'-0"	2800
		NS	9	6X6	18'-0"	450
510E	Flooring		650	3X4	21'-4"	25000
	Oak Floor Piece		2	6X16	21'-4"	200
	Reinforcing Strips		18	1X12	16'-0"	240
545	WG Blocks		60	3X8	1'-0"	180
			2	3X8	3'-0"	18
						19621

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
SPECIAL DETAILS  
SWING BRIDGE SPANS  
HALE  
HEISE AND RIVER  
AT KINSTON  
MARCH 1930

SPECIAL  
DESIGNED BY  
DRAWN BY  
CHECKED BY  
APPROVED BY

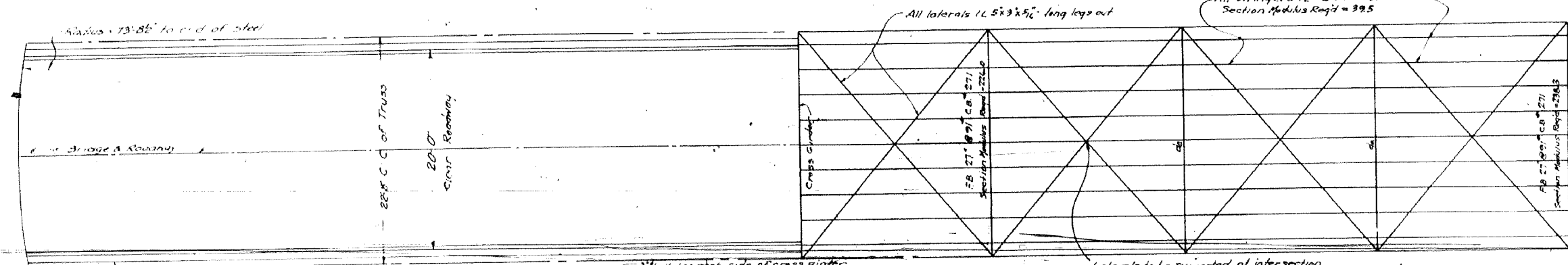
DESIGN NO.	DATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N. C.	261	30	30
		PAR. NO.		
		250-A		



Reactions are given for one truss

$$R_2 = \begin{cases} \text{Case I} & 168.9 \text{ Gross} \\ \text{Case II} & 182.3 \text{ Gross} \\ \text{Case III} & 50.2 \text{ Gross} \\ \text{Case IV} & 55.3 \text{ Gross} \\ \text{Case V} & 77.0 \text{ Gross} \end{cases}$$

a - Panels @ 18'-0" - 144'-0" c/c End Heights



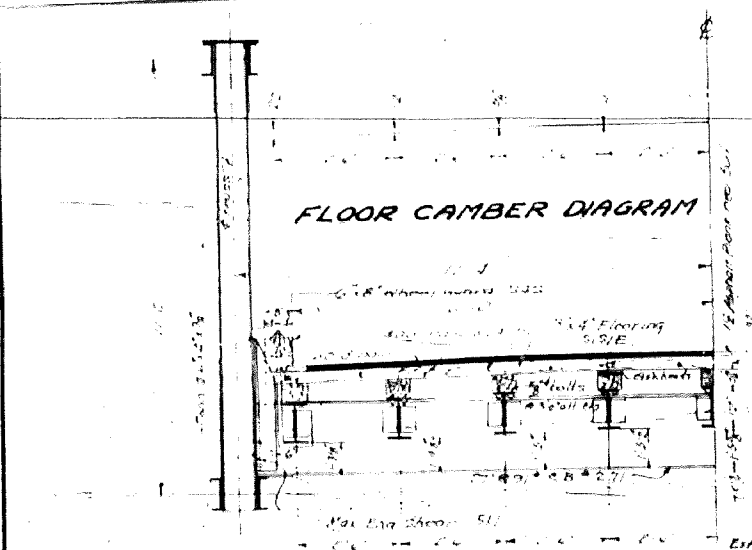
**DESIGN DATA:**  
Specifications - N.C. State Highway Commission  
Case I - Dead Load - Bridge open, wholly supported at center  
Case II - Dead Load - Bridge closed, ends raised to obtain a reaction of 8000' net or 18000' gross  
Case III - Live Load - One arm loaded, simple span action  
Case IV - Live Load - One arm loaded, continuous girder action  
Case V - Live Load - Both arms loaded continuous girder action  
Assumed Dead Floor Load - 24200'  
Roadway loads as per specifications for L.L.H.S. with from 20% to 80% impact added

**GENERAL NOTE:**  
**MACHINERY:**  
Swing Span shall be operated by hand. The machinery shall be so designed that one man can fully open swing span in 5 minutes. The machinery shall meet all the requirements of the latest edition of the AREA. Specs. All detail drawings shall be submitted for approval

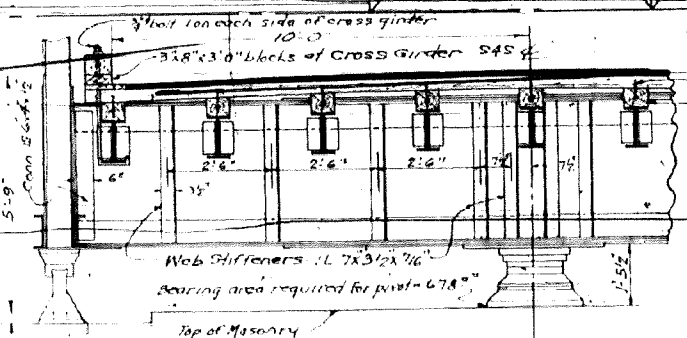
**STRUCTURAL STEEL:**  
Structural Steel shall meet all requirements of the N.C.S.H.C. Specifications. All field connections riveted. Rivets in cross girder and cross girder connections to be 7/8". All other rivets to be 3/4". Gussier plates at 1/4" to be 3/4". All other gussier plates to be 3/8". All detail drawings to be submitted for approval. All structural steel shall be given one shop coat and two field coats of paint as per Specs.

**TIMBER:**  
All timber shall be impregnated with at least 10 lbs. of preservative oil per cubic foot by the pressure method. See Specs.

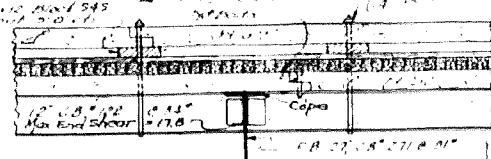
**HALF PLAN OF FLOOR**



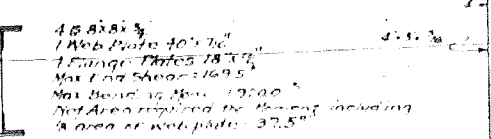
**HALF SECTION THRU FLOOR**



**HALF SECTION AT U6/L4**



**ELEVATION OF FLOOR**



**CROSS GIRDER - MAKE 1 GIRDER**

**HALF PLAN BOTTOM LATERALS**

Laterals to be supported at intersection  
Each piece of flooring to be fast-nailed to each nailing strip with one 6d nail.  
Nail nailing strip over cross girder  
+ Denotes Compression  
- Denotes Tension  
Stresses are given in kips

Member	Dead Load	Case II	Case III	Case IV	Case V	Compression	Tension
L0-U1	18.7	120.3	150.0	150.0	150.0	140	150
U1-U2	17.1	118.1	147.0	147.0	147.0	134	147
U2-U3	15.5	115.9	144.0	144.0	144.0	128	144
U3-U4	13.9	113.7	141.0	141.0	141.0	122	141
U4-U5	12.3	111.5	138.0	138.0	138.0	116	138
U5-U6	10.7	109.3	135.0	135.0	135.0	110	135
U6-U7	9.1	107.1	132.0	132.0	132.0	104	132
L1-U1	18.7	120.3	150.0	150.0	150.0	140	150
L1-U2	17.1	118.1	147.0	147.0	147.0	134	147
L1-U3	15.5	115.9	144.0	144.0	144.0	128	144
L1-U4	13.9	113.7	141.0	141.0	141.0	122	141
L1-U5	12.3	111.5	138.0	138.0	138.0	116	138
L1-U6	10.7	109.3	135.0	135.0	135.0	110	135
L1-U7	9.1	107.1	132.0	132.0	132.0	104	132

**ESTIMATED QUANTITIES**

Structural Steel - Lbs	10000
Machinery - Lbs	1000
Creo Timber - Ft BM	1000
Wearing Surface - Sq yds	1000

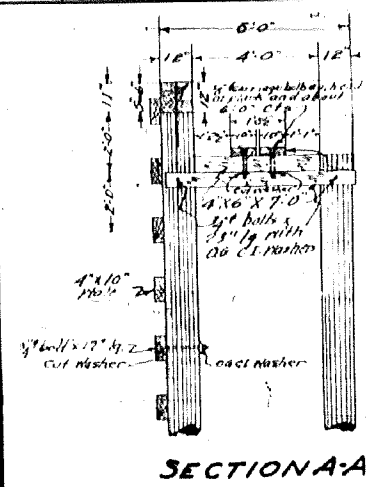
Prepared by J.P. Wilson, Inc. Feb. 1930  
Checked by F.W. Hubel and L.S.D.  
Approved by J.E. ...

PROJECT NO 261  
LEMOIR COUNTY  
STATION 27+85

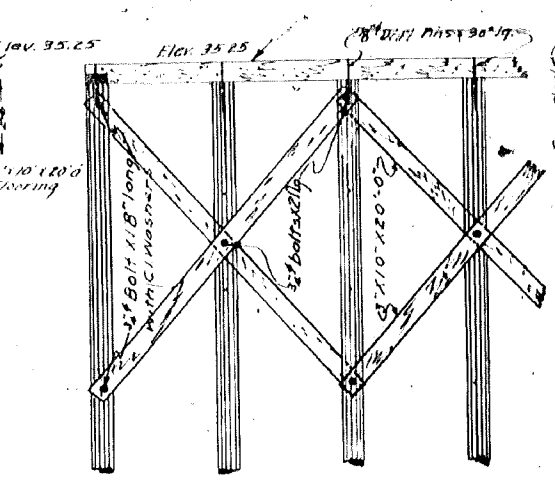
STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
SPECIAL SWING SPAN  
FOR  
MAIN BRIDGE  
OVER  
NEUSE RIVER  
AT KINSTON  
MARCH 1930

W. J. Cropper  
John L. Walcott

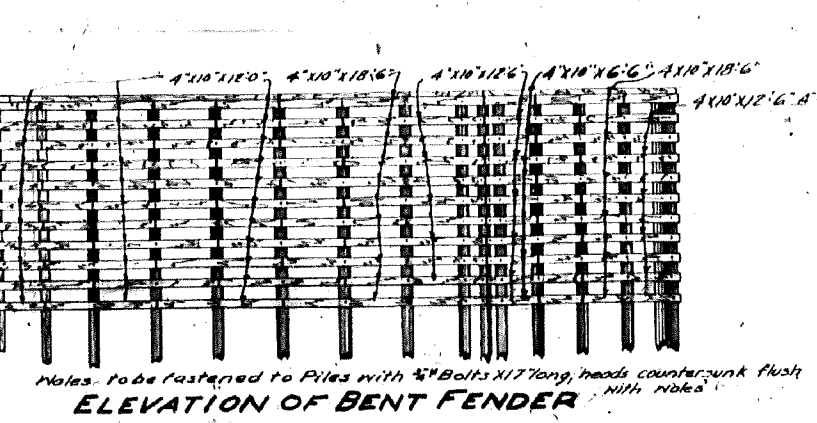
FED. ROAD DIST. NO.	STATE	PROJECT NO.	DATE	SCALE
10	N.C.	261	3/1	5/8
		RA Proj No. 250-A		



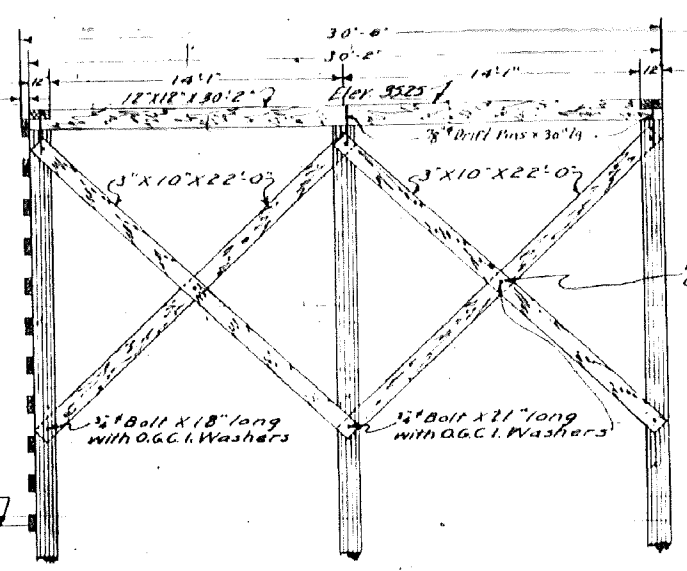
SECTION A



ELEVATION C-C



ELEVATION OF BENT FENDER

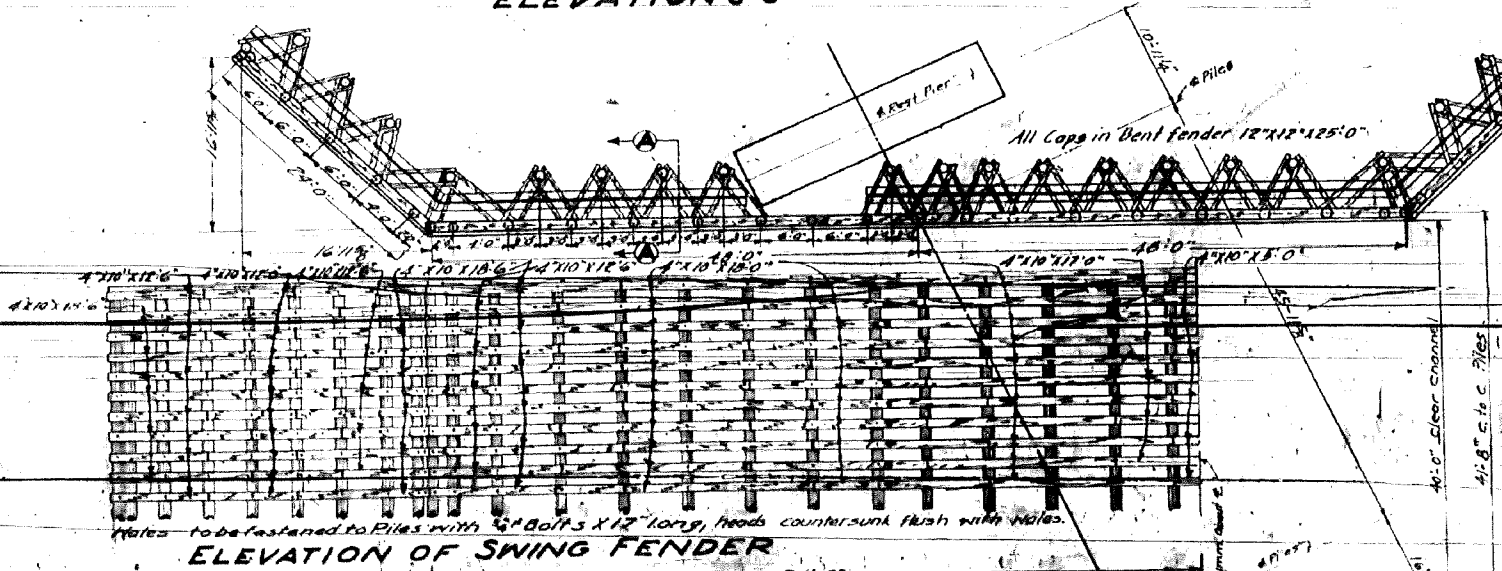


ELEVATION B-B

**GENERAL NOTE**

All piles to be impregnated with at least 10 lbs of creosote oil per cu ft. See Specifications.  
 All timber to be impregnated with at least 10 lbs of creosote oil per cu ft. See Specifications.  
 Timber to be cut to exact length, dips made, and holes bored in the field. The cut portions shall be saturated with hot creosote oil and then covered with hot asphaltum before putting in place.  
 All materials and workmanship as per specifications of the North Carolina State Highway Commission.

DETAIL OF GAP SPICE



ELEVATION OF SWING FENDER

CREOSOTED TIMBER		HARDWARE						
ITEM	NO.	SIZE	LENGTH	ITEM	NO.	SIZE	LENGTH	WEIGHT
Flooring	36	3x10	20'-0"	Bolts	15	3/4"	21"	16
Pile Bracing	192	4x6	7'-0"	Bolts	20	3/4"	18"	53
	16	4x6	8'-0"		208	3/4"	23"	683
Smay Bracing	8	3x10	22'-0"		1072	3/4"	17"	2790
	8	3x10	20'-0"		180	3/4"	10"	137
Smay Br. Block	7	10x12	4'-0"	D.Pins	87	3/8"	30"	445
Caps	7	12x12	19'-0"	O.G.W.	1558	for 3/4" bolts		975
	14	12x12	25'-0"	C.W.	128	for 3/4" bolts		9
	1	12x12	24'-0"		1072	for 3/4" bolts		100
	2	12x12	30'-0"					
	2	12x12	30'-2"					
	6	4x10	5'-0"					
	12	4x10	6'-6"					
	62	4x10	12'-0"					
	62	4x10	12'-6"					
	5	4x10	17'-0"					
	68	4x10	18'-0"					
	58	4x10	18'-6"					
Total Crea Timber		FT. BM.	27174					
Crea Timber Piles		NO.	145					
Approx. Lb. Crea Timber Piles			5525					

PROJECT NO. 261  
 LENOIR COUNTY  
 STATION 27+85

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SPECIAL  
 DETAIL OF FENDER  
 FOR  
 MAIN BRIDGE  
 AT KINSTON  
 MARCH 1930

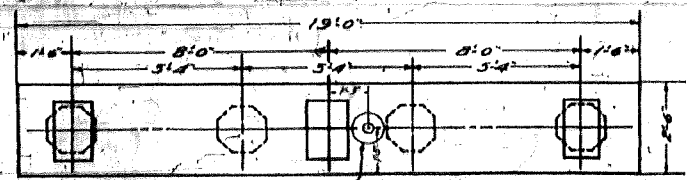
DESIGNED BY: W. J. ...  
 DRAWN BY: John ...

DATE: MAR 1930  
 DRAWN BY: ...  
 CHECKED BY: ...

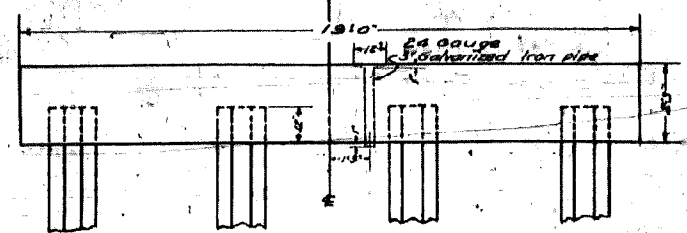
51' E. Top of R.E. Crossbar of Existing River Bridge Opposite  
 Downstream E. Point of Truss Shoe Elev. 84.71

Revised for fender dimensions 11' 30" by L.C.D.V. 3/30/30

NO.	DATE	BY	CHKD.
10	N.C.	P.B.L.	
		P.A. P.W.	
		TR. 2308	



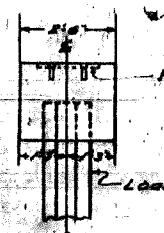
PLAN  
12" Circular depression sloped 1" to pipe drain forming catch basin



ELEVATION  
SHOWING OUTLINES



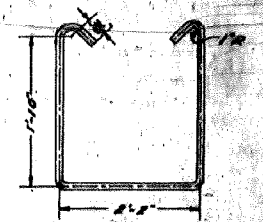
DETAIL OF BARS - A



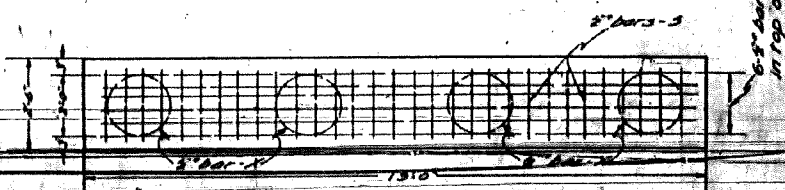
END VIEW



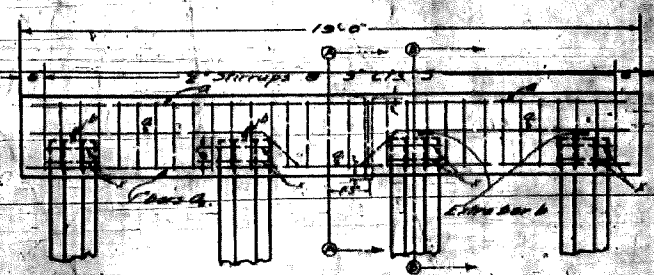
DETAIL OF BARS - X



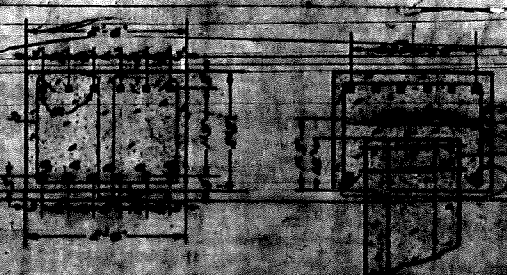
DETAIL OF BARS - S



PLAN OF REINFORCEMENT



ELEVATION  
SHOWING REINFORCEMENT



SECTION A-A SECTION B-B

**DESIGN DATA**

Specifications: N.C. State Highway Commission.  
 Steel in tension: 16000 lbs. per sq. in.  
 Concrete in compression: 650 lbs. per sq. in.  
 Shear Class 'A' concrete: 40 lbs. per sq. in.  
 This design is based on the net area of bars as follows: 6" - 0.250 sq. in.  
 4" - 0.442 sq. in. 1" - 1.000 sq. in.

**GENERAL NOTE**

Class 'A' concrete to be used throughout. Proportions 1:2:4.  
 All reinforcing steel shall be deformed bars. All dimensions relative to reinforcement are to centers of bars. No splices of bars will be permitted other than those shown on plans. All reinforcing steel shall be securely held in correct position. All materials and workmanship as per specifications of the North Carolina State Highway Commission.  
 All exposed corners to be chamfered 1".  
 The portion of the pile projecting into the cap shall be recognized, thoroughly cleaned, and wetted previous to pouring the cap.

NO.	DATE	BY	CHKD.
1	10/10/35	P.B.L.	
2	10/10/35	P.A. P.W.	
3	10/10/35	TR. 2308	
4	10/10/35		
5	10/10/35		
6	10/10/35		
7	10/10/35		
8	10/10/35		
9	10/10/35		
10	10/10/35		

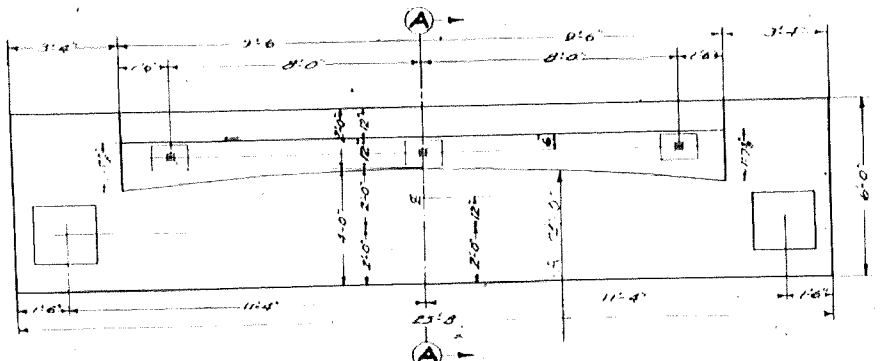
NO.	DATE	BY	CHKD.
1	10/10/35	P.B.L.	
2	10/10/35	P.A. P.W.	
3	10/10/35	TR. 2308	
4	10/10/35		
5	10/10/35		
6	10/10/35		
7	10/10/35		
8	10/10/35		
9	10/10/35		
10	10/10/35		

PROJECT NO. 261  
 LENOIR COUNTY  
 STATION 21+50  
 BENTS 1-2-3-4-5

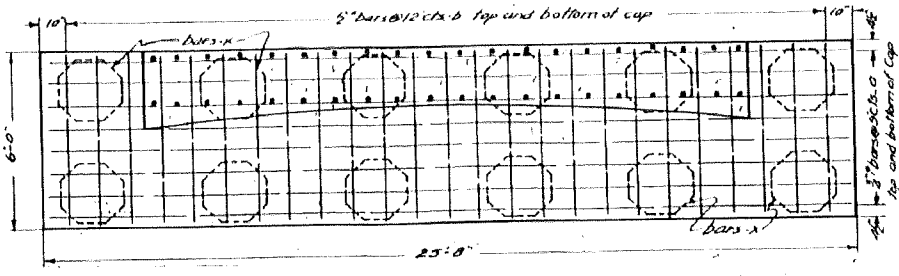
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SPECIAL  
 DETAIL OF INTERMEDIATE  
 PILE BENT CAPS  
 FOR  
 HIGHWAY 261  
 MARCH 1936

SPECIAL	10/10/35	P.B.L.	
	10/10/35	P.A. P.W.	
	10/10/35	TR. 2308	

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	N.C.	261		
		SA Proj. # 1501 A		

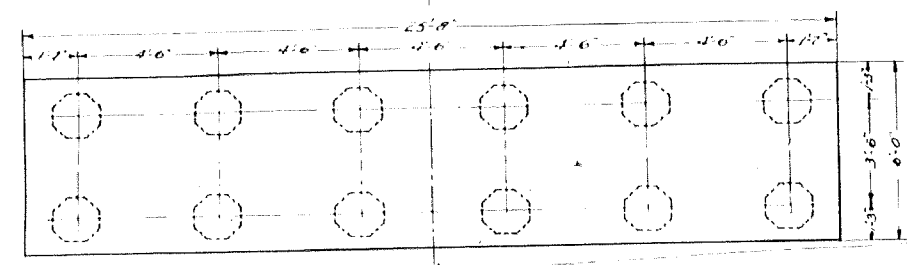


PLAN OF PIER CAP

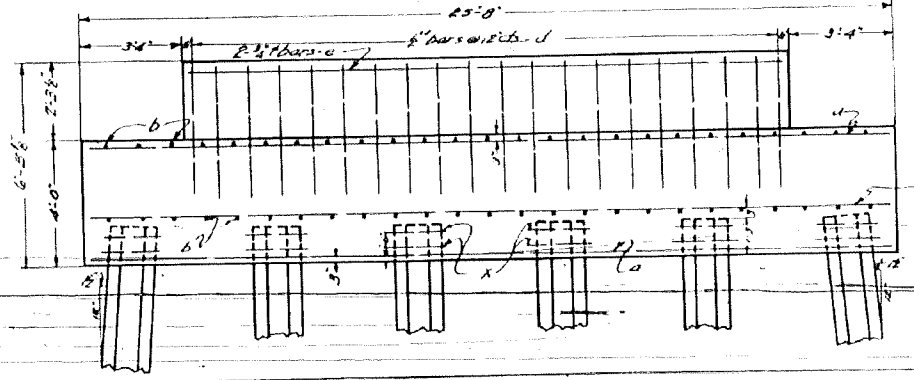


SECTION B-B.  
SHOWING REINFORCEMENT

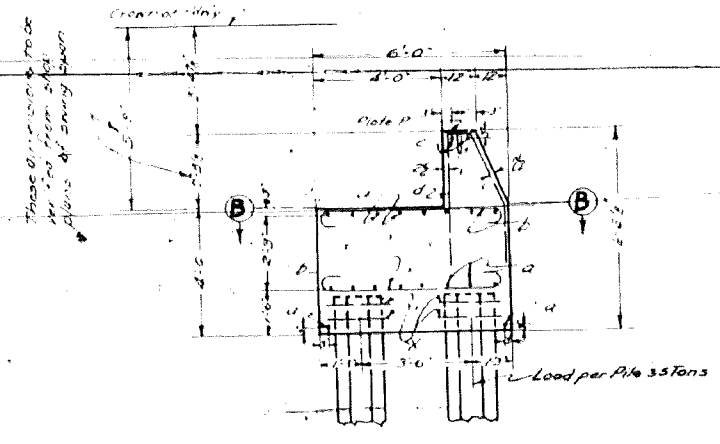
NOTE:  
For Design Data and General Note  
see sheet N° 32



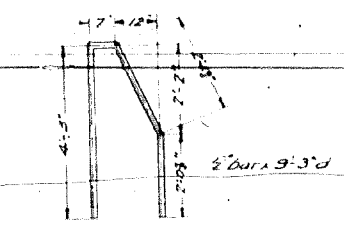
PLAN OF PILES



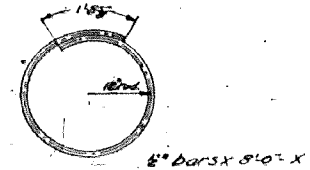
ELEVATION  
SHOWING REINFORCEMENT



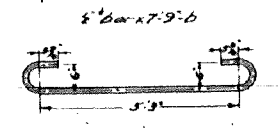
SECTION A-A



DETAIL OF BARS-d



DETAIL OF BARS-X



DETAIL OF BARS-b

PIER #1 OR #2

Bars	N°	Size	Length	Weight
A	18	3/4"	25'-3"	62.3
D	50	1/2"	7'-5"	57.9
d	19	1/2"	9'-3"	14.3
C	2	3/4"	16'-9"	5.6
X	24	1/2"	8'-0"	16.3

Reinforcing Steel lbs	138.0
Concrete Class A Cu Wts	24.7
R.C. Precast Piles N°	12
Plates & Bolts lbs.	5.5
Approx. L.H. Piles	5.0

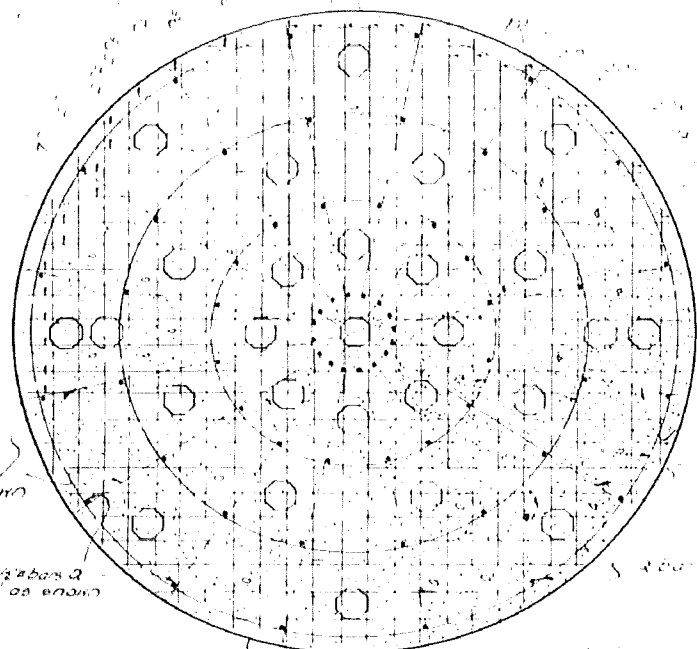
PROJECT NO. 261  
LENOIR COUNTY  
PIER #1 & #2  
STATION 27+65

STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
SPECIAL DETAIL  
OF ADJACENT PIERS  
FOR  
MAIN BRIDGE  
OVER  
NEUSER RIVER AT KINSTON

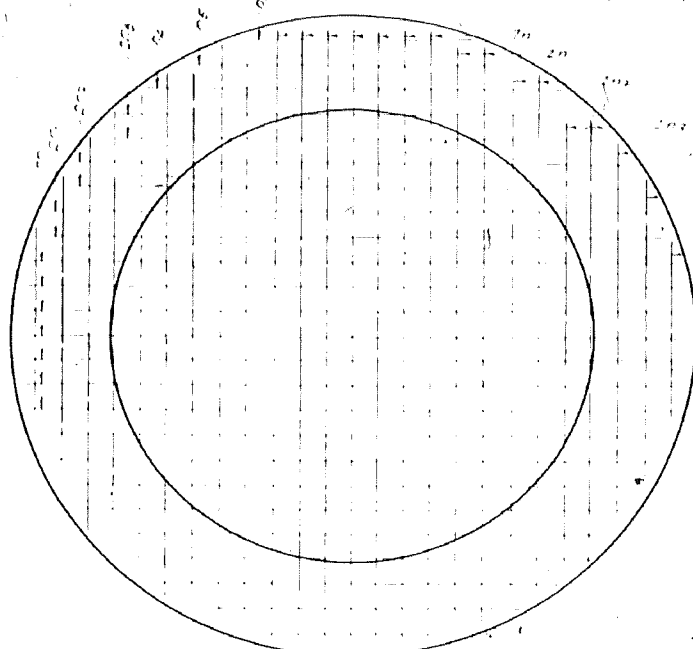
DESIGNED BY: W. J. Brown  
CHECKED BY: John E. Walden  
DATE: Feb. 1930

PLAN NO. 261-21  
Feb. 1930

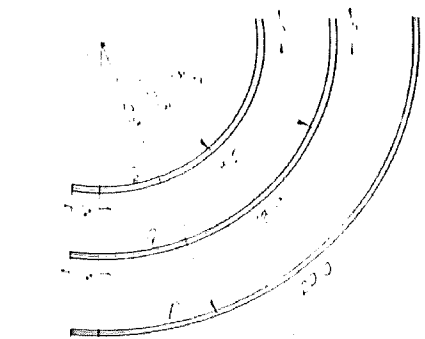
W. J. Brown  
Feb. 1930



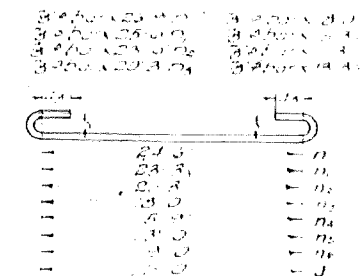
SECTION FF



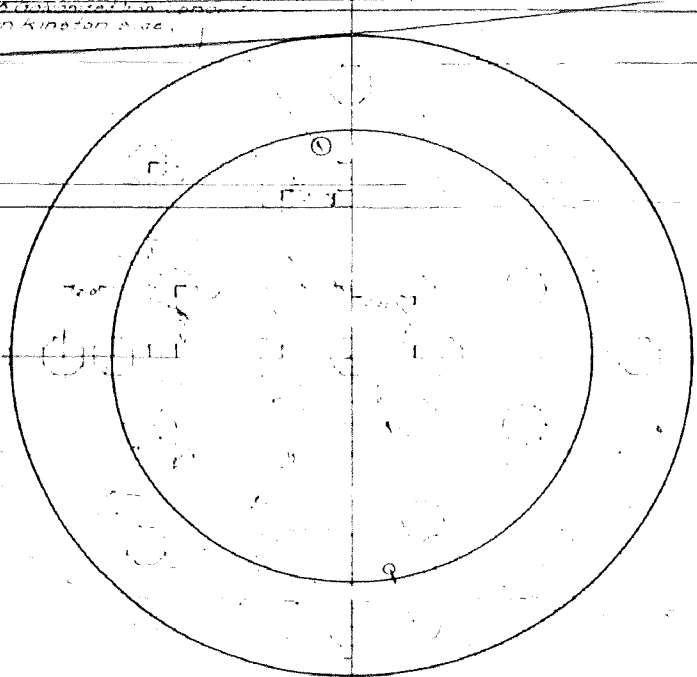
PLAN SHOWING REINFORCEMENT



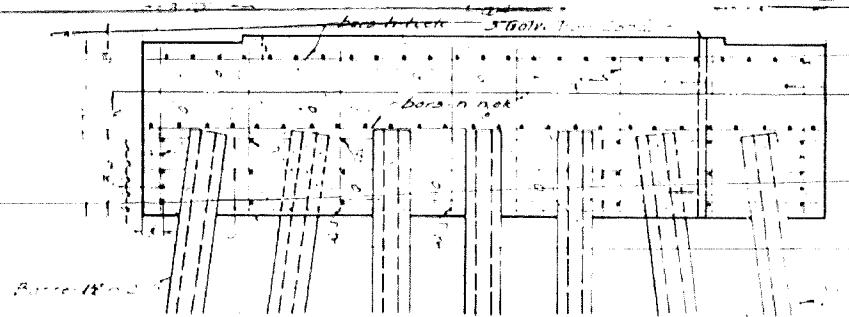
DETAIL BARS P-P



DETAIL BARS J&N, etc.



PLAN SHOWING PILES

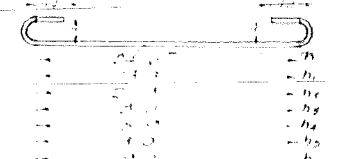


SECTION AA



DETAIL BARS Q

NOTE: 3" holes to be core drilled in pier cap for anchor bolts. Anchor bolts to be set and secured into place with 1:2 cement mortar.



DETAIL BARS H, H-bar, etc.

BILL OF MATERIAL				
NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT
1	Reinforcing Steel	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...
6	...	...	...	...
7	...	...	...	...
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...
11	...	...	...	...
12	...	...	...	...
13	...	...	...	...
14	...	...	...	...
15	...	...	...	...
16	...	...	...	...
17	...	...	...	...
18	...	...	...	...
19	...	...	...	...
20	...	...	...	...
21	...	...	...	...
22	...	...	...	...
23	...	...	...	...
24	...	...	...	...
25	...	...	...	...
26	...	...	...	...
27	...	...	...	...
28	...	...	...	...
29	...	...	...	...
30	...	...	...	...
31	...	...	...	...
32	...	...	...	...
33	...	...	...	...
34	...	...	...	...
35	...	...	...	...
36	...	...	...	...
37	...	...	...	...
38	...	...	...	...
39	...	...	...	...
40	...	...	...	...
41	...	...	...	...
42	...	...	...	...
43	...	...	...	...
44	...	...	...	...
45	...	...	...	...
46	...	...	...	...
47	...	...	...	...
48	...	...	...	...
49	...	...	...	...
50	...	...	...	...
51	...	...	...	...
52	...	...	...	...
53	...	...	...	...
54	...	...	...	...
55	...	...	...	...
56	...	...	...	...
57	...	...	...	...
58	...	...	...	...
59	...	...	...	...
60	...	...	...	...
61	...	...	...	...
62	...	...	...	...
63	...	...	...	...
64	...	...	...	...
65	...	...	...	...
66	...	...	...	...
67	...	...	...	...
68	...	...	...	...
69	...	...	...	...
70	...	...	...	...
71	...	...	...	...
72	...	...	...	...
73	...	...	...	...
74	...	...	...	...
75	...	...	...	...
76	...	...	...	...
77	...	...	...	...
78	...	...	...	...
79	...	...	...	...
80	...	...	...	...
81	...	...	...	...
82	...	...	...	...
83	...	...	...	...
84	...	...	...	...
85	...	...	...	...
86	...	...	...	...
87	...	...	...	...
88	...	...	...	...
89	...	...	...	...
90	...	...	...	...
91	...	...	...	...
92	...	...	...	...
93	...	...	...	...
94	...	...	...	...
95	...	...	...	...
96	...	...	...	...
97	...	...	...	...
98	...	...	...	...
99	...	...	...	...
100	...	...	...	...

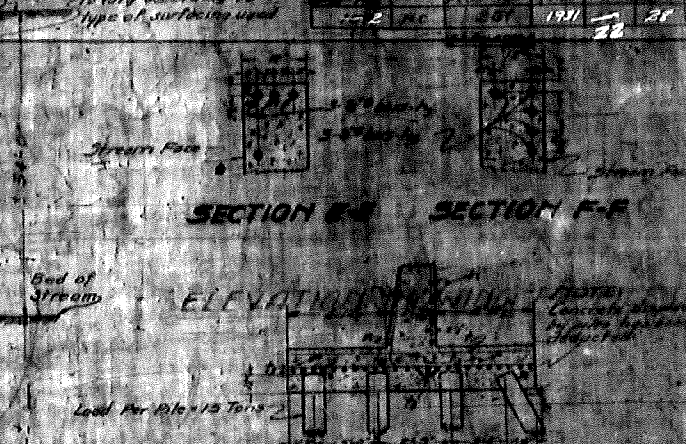
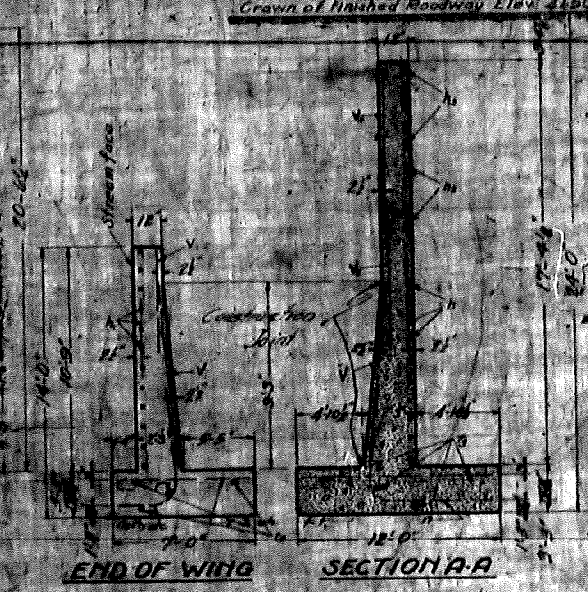
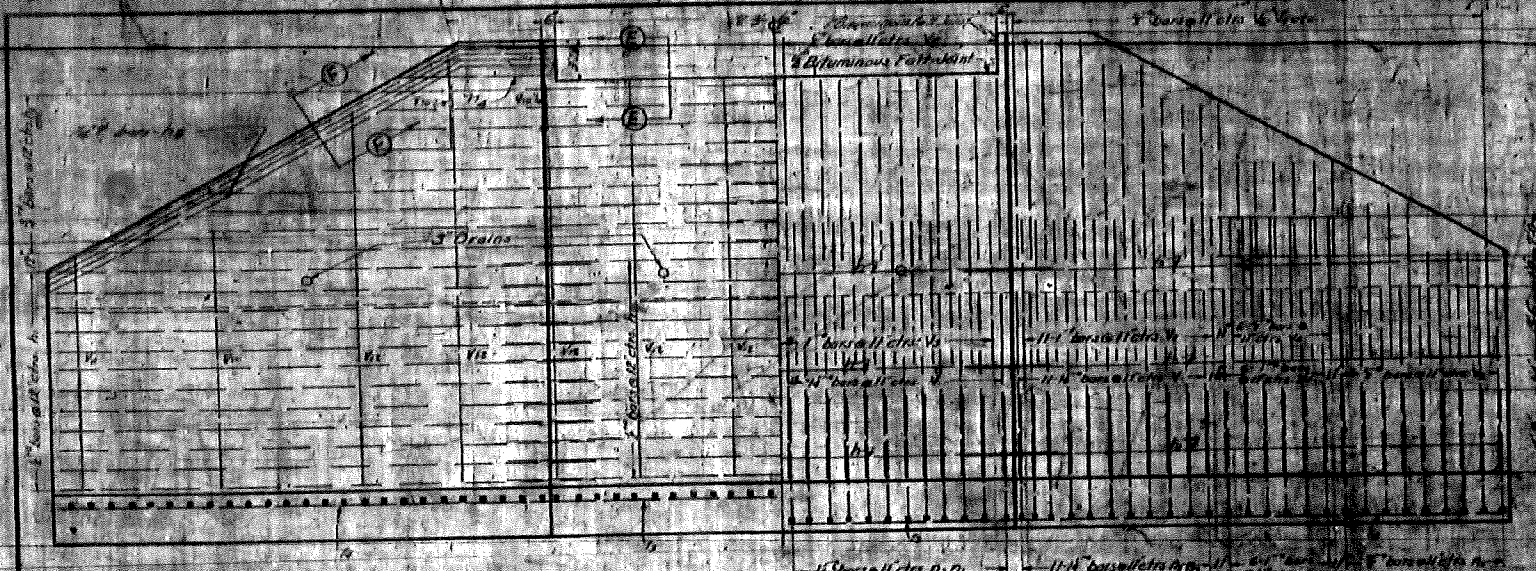
GENERAL NOTE:  
 The contractor shall be responsible for the correct placement and spacing of all reinforcement bars. The bars shall be placed in accordance with the drawings and specifications. The contractor shall also be responsible for the correct placement and spacing of all piles. The piles shall be placed in accordance with the drawings and specifications.

PROJECT NO 261  
 LENOIR COUNTY  
 STATION 27+35

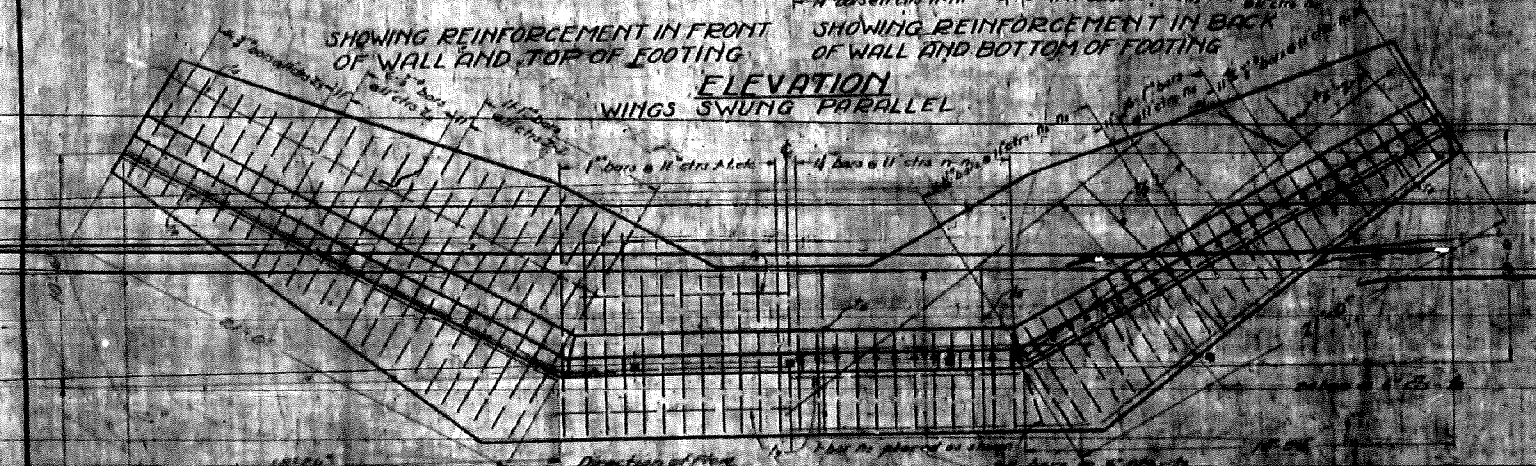
STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 SPECIAL  
 DETAIL OF PIVOT PIER  
 FOR  
 MAIN BRIDGE KINSTON BRIDGES  
 OVER  
 NEUSE RIVER  
 FEB. 1930

APPROVED: *[Signature]*  
 DATE: *[Date]*  
 DRAWN BY: *[Name]*  
 CHECKED BY: *[Name]*

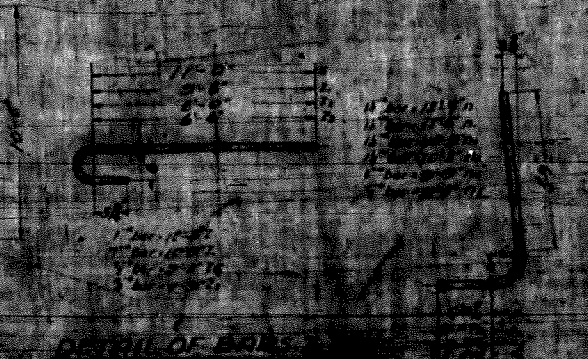
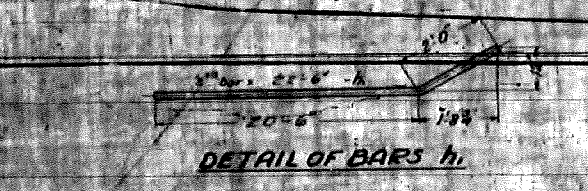
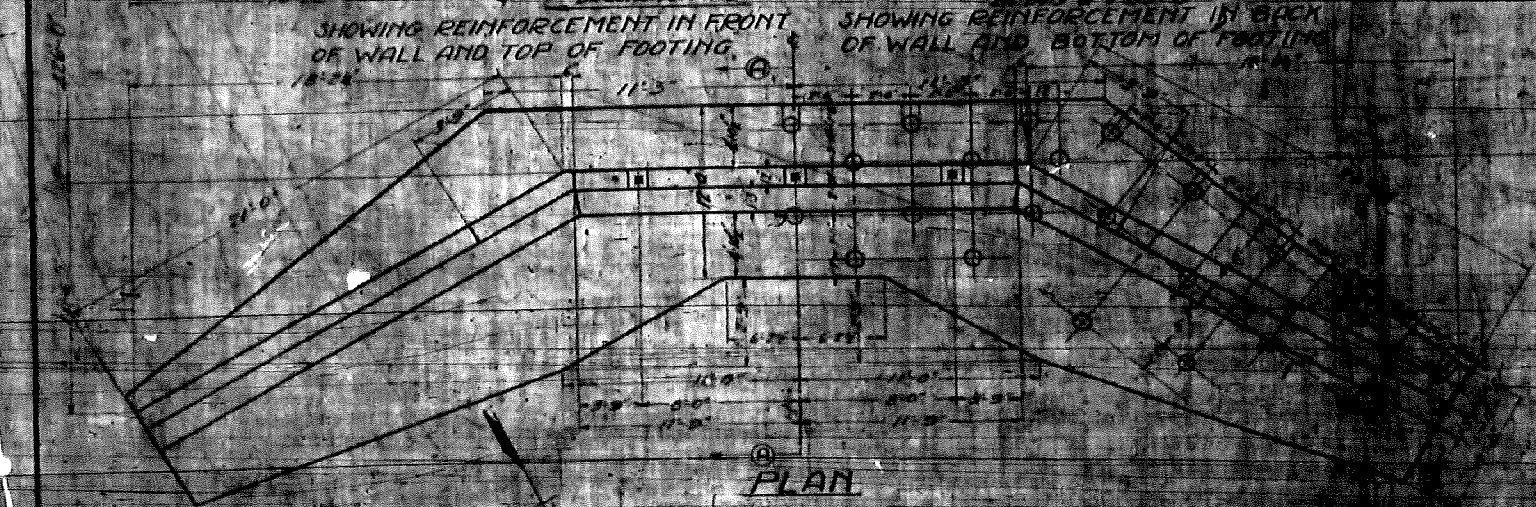




**DESIGN DATA**  
 Specifications N.C. State Highway Commission  
 Equivalent Fluid pressure 50 lbs per cu ft  
 Steel in tension 16000 lbs per sq in  
 Concrete in compression 650 lbs per sq in  
 Shear Class A concrete 40 lbs per sq in  
 This design is based on the net area of bars as follows:  
 #4 bars 0.307 sq in #5 bars 0.442 sq in #6 bars 0.785 sq in #7 bars 1.107 sq in #8 bars 1.563 sq in



**GENERAL NOTE**  
 Class A concrete to be used throughout. Proportions 1:2:4  
 Reinforcing steel shall be deformed bars. Square twisted bars are not to be considered deformed bars.  
 All dimensions relative to the centerline of the bridge.  
 No splices of bars will be permitted other than those shown on plan.  
 Bars to be placed at 10' centers in wings and abutments just above present ground line.  
 All reinforcing steel to be securely held in correct position by means of the following cast-in-place concrete: 1.00 cu yd per sq ft of area.  
 N.C. State Highway Commission



**ABUTMENTS A & B**  
**BILL OF MATERIALS**

BAR	NO.	SIZE	LENGTH	WEIGHT
V	1	#4	3'-0"	4.71
V	2	#4	3'-0"	4.71
V	3	#4	3'-0"	4.71
V	4	#4	3'-0"	4.71
V	5	#4	3'-0"	4.71
V	6	#4	3'-0"	4.71
V	7	#4	3'-0"	4.71
V	8	#4	3'-0"	4.71
V	9	#4	3'-0"	4.71
V	10	#4	3'-0"	4.71
V	11	#4	3'-0"	4.71
V	12	#4	3'-0"	4.71
V	13	#4	3'-0"	4.71
V	14	#4	3'-0"	4.71
V	15	#4	3'-0"	4.71
V	16	#4	3'-0"	4.71
V	17	#4	3'-0"	4.71
V	18	#4	3'-0"	4.71
V	19	#4	3'-0"	4.71
V	20	#4	3'-0"	4.71
V	21	#4	3'-0"	4.71
V	22	#4	3'-0"	4.71
V	23	#4	3'-0"	4.71
V	24	#4	3'-0"	4.71
V	25	#4	3'-0"	4.71
V	26	#4	3'-0"	4.71
V	27	#4	3'-0"	4.71
V	28	#4	3'-0"	4.71
V	29	#4	3'-0"	4.71
V	30	#4	3'-0"	4.71
V	31	#4	3'-0"	4.71
V	32	#4	3'-0"	4.71
V	33	#4	3'-0"	4.71
V	34	#4	3'-0"	4.71
V	35	#4	3'-0"	4.71
V	36	#4	3'-0"	4.71
V	37	#4	3'-0"	4.71
V	38	#4	3'-0"	4.71
V	39	#4	3'-0"	4.71
V	40	#4	3'-0"	4.71
V	41	#4	3'-0"	4.71
V	42	#4	3'-0"	4.71
V	43	#4	3'-0"	4.71
V	44	#4	3'-0"	4.71
V	45	#4	3'-0"	4.71
V	46	#4	3'-0"	4.71
V	47	#4	3'-0"	4.71
V	48	#4	3'-0"	4.71
V	49	#4	3'-0"	4.71
V	50	#4	3'-0"	4.71

All exposed corners to be chamfered.  
 J. L. Phillips

**PROJECT NO. 261**  
**LENOIR COUNTY**  
**STATION 27+96**  
**ABUTMENT NO. 1**

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 STANDARD  
 R.C. ABUTMENT  
 RIGHT OF WAY  
 MARKS

NOTE: Top of A.C. Crown of Existing River Bridge is 41.90 Elev. at 25' from Station 27+96