

CO 291

291 B

PROJECT N° 291-B
FINAL ESTIMATE
OF
BRIDGE

NORTH CAROLINA
STATE HIGHWAY COMMISSION
DISTRICT N° 2

JANEY

Bridge Sta. 321+78

Sheet No. 1 Title Sheet

General Drawing Sheet No. 2

Superstructure spans A and C " " 3

Extension curtain wall span A and C " " 5-11

Superstructure Span B " " 4

Substructure Piers 1 and 2 " " 6

" Bents 1 and 2 " " 11

Bent 1 and 2 old and new built material " " 11 A

Name Plates " " 10

FINAL ESTIMATE ON NORTH CAROLINA STATE PROJECT NO 291-B

**FOR
BRIDGE**

WILSON COUNTY

DISTRICT NO 2

Contractor: John M. Ogden and Son.

Pollocksville N. C.

Contract Let. 4-1-1923

Work Completed 11-1-23

R. E. SNOWDEN - DISTRICT ENGINEER

W. W. BAKER - RESIDENT ENGINEER

D. S. HICKS - MASONRY INSPECTOR

Note:

1 Masonry Book showing detail of construction.

1 Material Book.

1 Diary showing working days

INDEX OF SHEETS

- Sheet No. 1. This Page.
- " " 2. General Drawing
- " " 3. 2-33'-6" R.C. Spans
- " " 4. 1-50'-0" R.C. Span
- " " 5. Detail Of Bents 1 and 2
- " " 6. Detail Of Piers 1 and 2
- " " 7. Bar Specialties for Superstructures
- " " 8. " " Abutments
- " " 9. " " Piers
- " " 10. Name Plates.

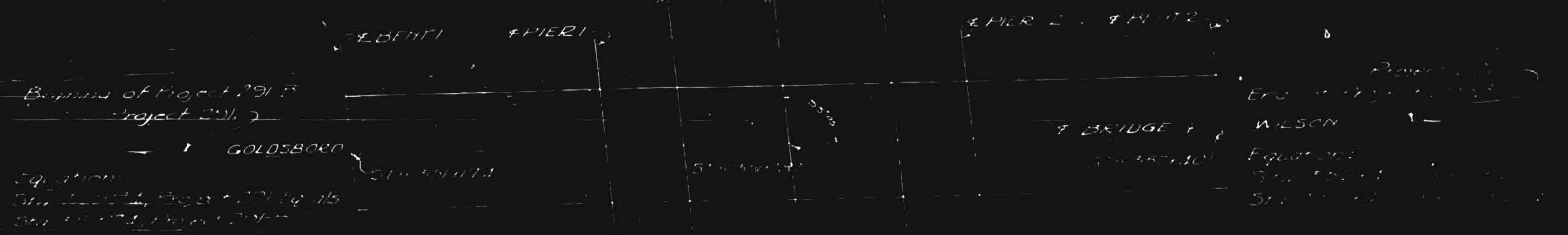
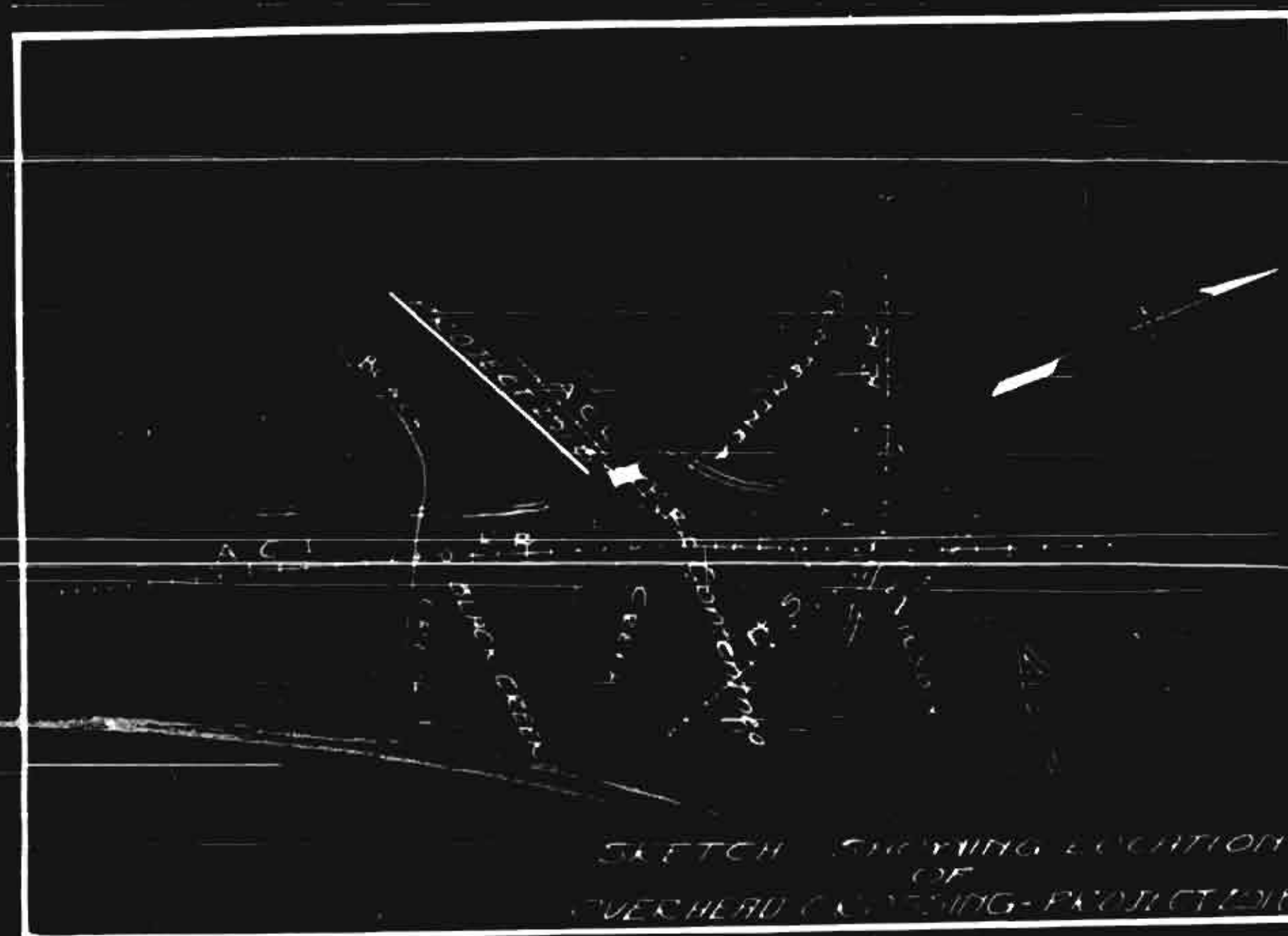
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY

WILSON COUNTY
STATE PROJECT NO. 291-B
BRIDGE OVER A.C.L.R.R.
BETWEEN WILSON AND GOLDSBORO

CONVENTIONAL SIGNS

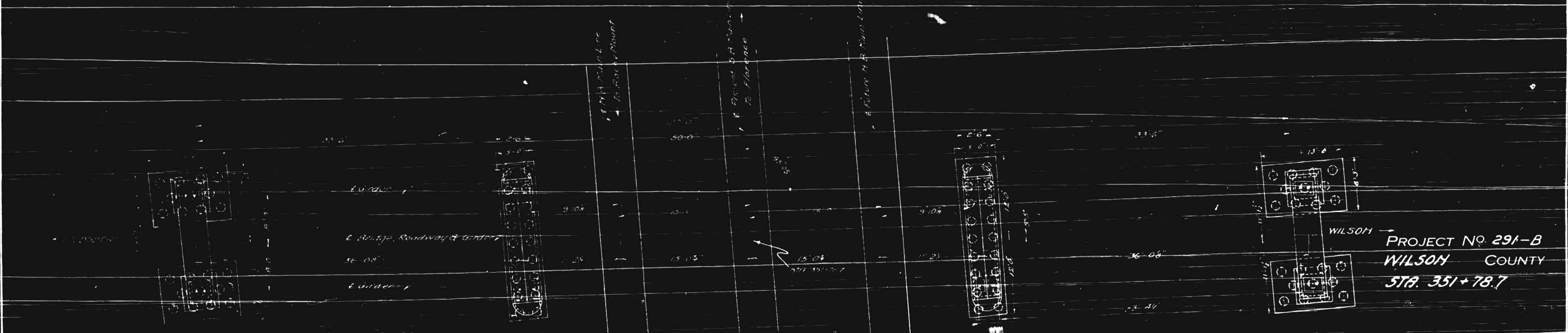
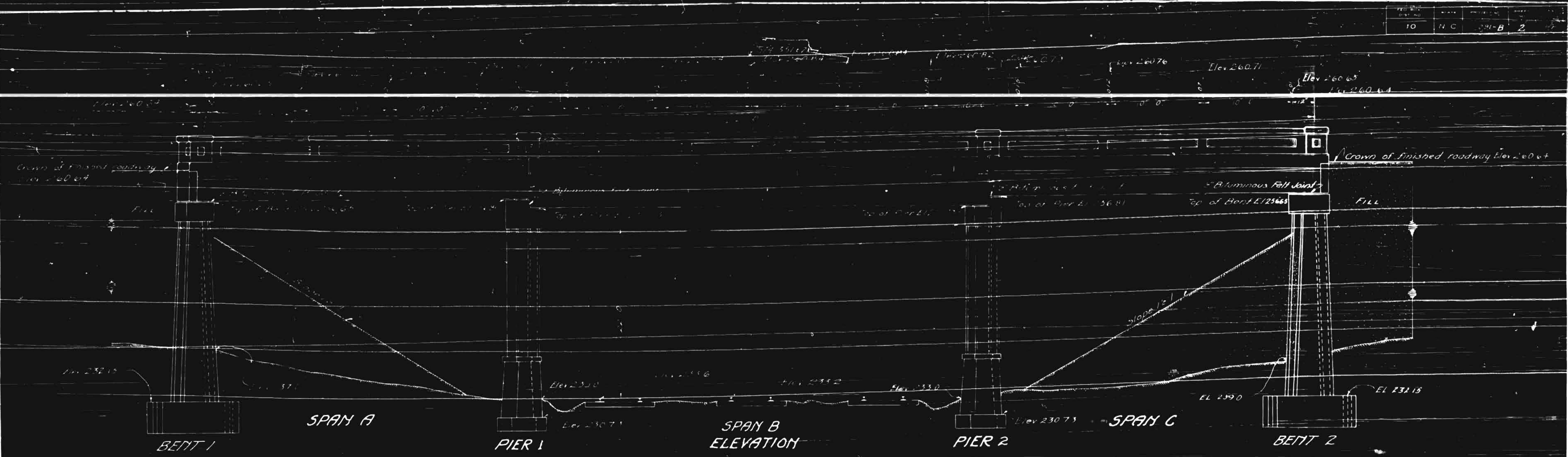
- County Line
- Township Line
- City or Town Line
- Right of Way Line
- Survey Line
- Property Line
- Wire Fence
- Board Fence
- Present Paved Road
- Roadway
- Grade Elevation
- Ground Elevation
- Pipe Culvert
- Box Culvert
- Woods
- Telephone or Telegraph Pole
- Tower Pole and Line
- Power Pole



Design Office,
State Highway Commission,
Raleigh, N. C.

Surveyed by
Checked by
Date

Recommended by
Approved by
Date



WILSON COUNTY
 PROJECT NO. 291-B
 STA. 351+78.7

TOTAL BILL OF MATERIAL

ITEM	QUANTITY	UNIT	PRICE	TOTAL
BENT 1	471	sq ft	7.637	3,599.027
BENT 2	471	sq ft	7.637	3,599.027
PIER 1	30.4	sq ft	8.007	2,433.708
PIER 2	14.8	sq ft	8.007	1,184.946
SPAN A	4.5	sq ft	9.951	44.7795
SPAN B	5.8	sq ft	17.368	100.7344
SPAN C	4.0	sq ft	9.862	39.448
TOTALS	147	sq ft	52,039	7,660.878

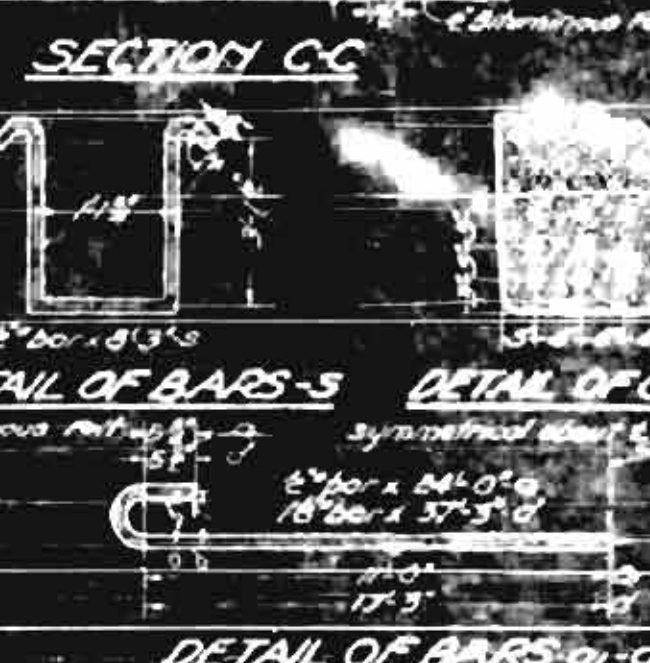
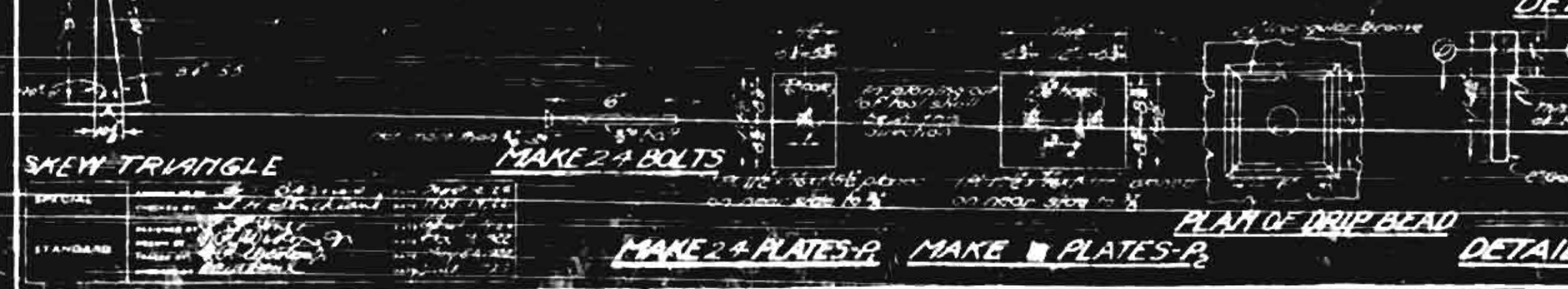
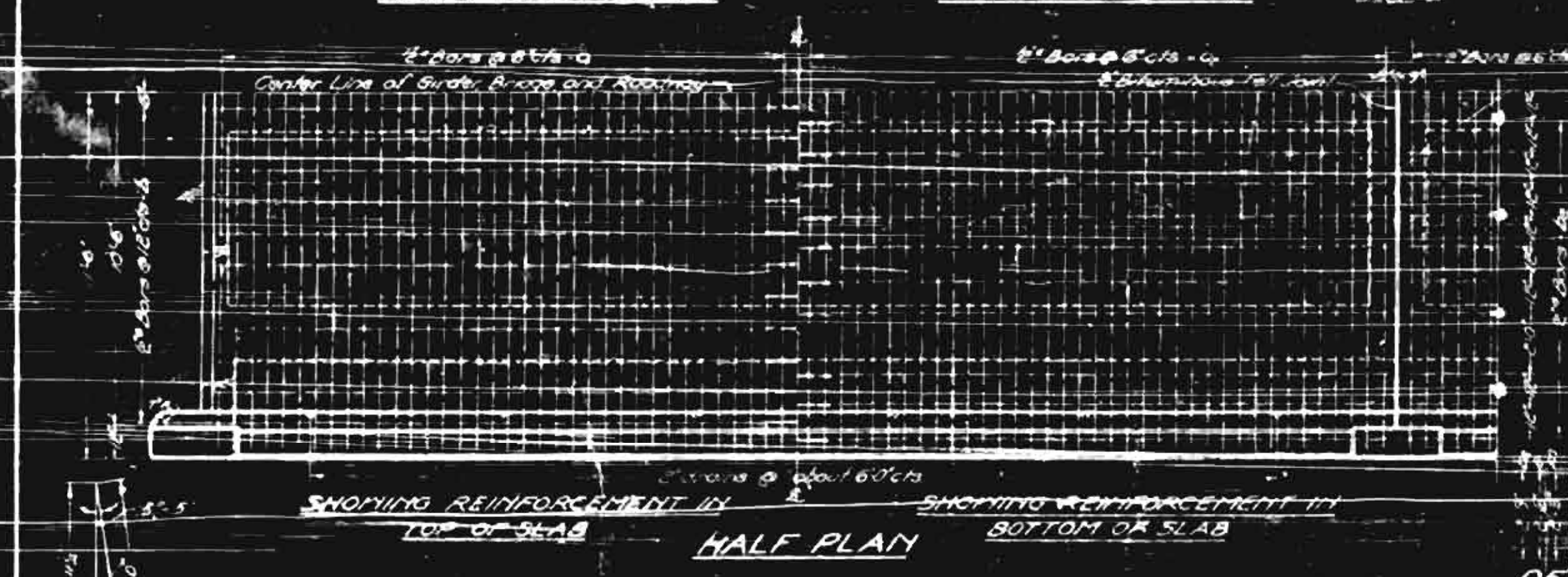
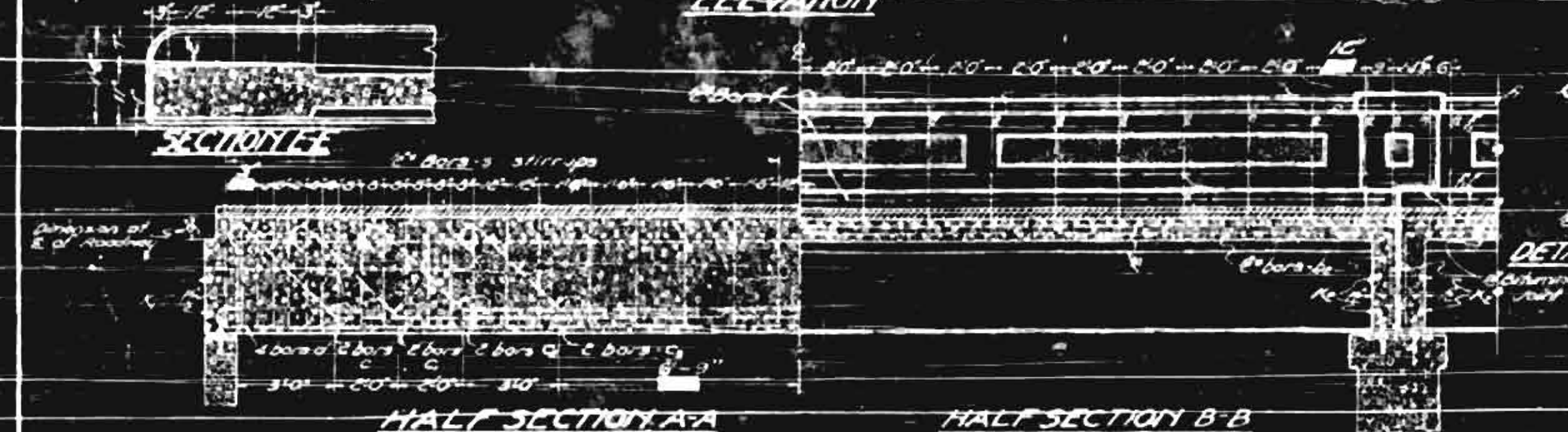
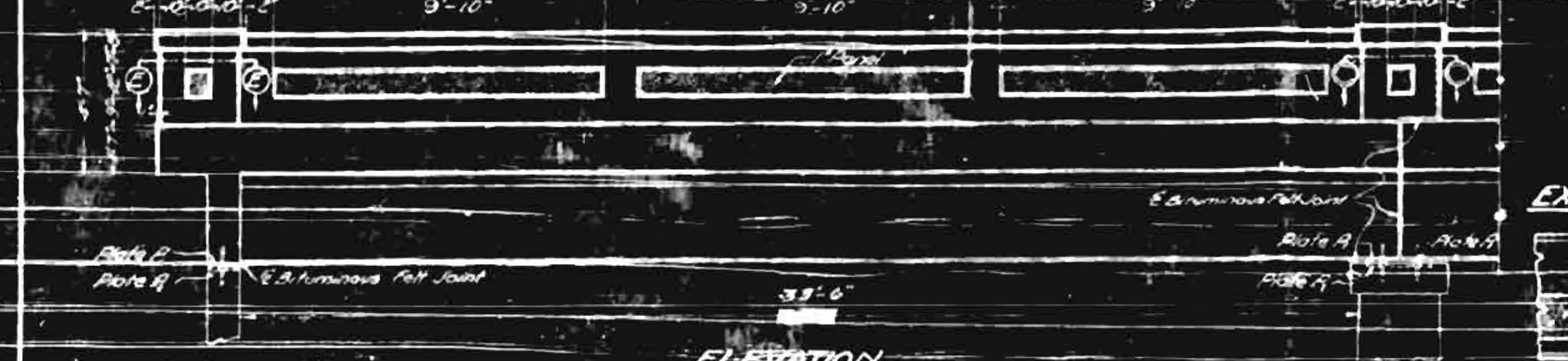
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
GENERAL DRAWING
OVERHEAD CROSSING
A. C. L. R. R.
NEAR
CONTENTHEA, N.C.
SEPT. 1922.

SUBMITTED BY: W. G. ...
 DRAWN BY: ...
 CHECKED BY: ...
 PLAN NO. 98.1.0

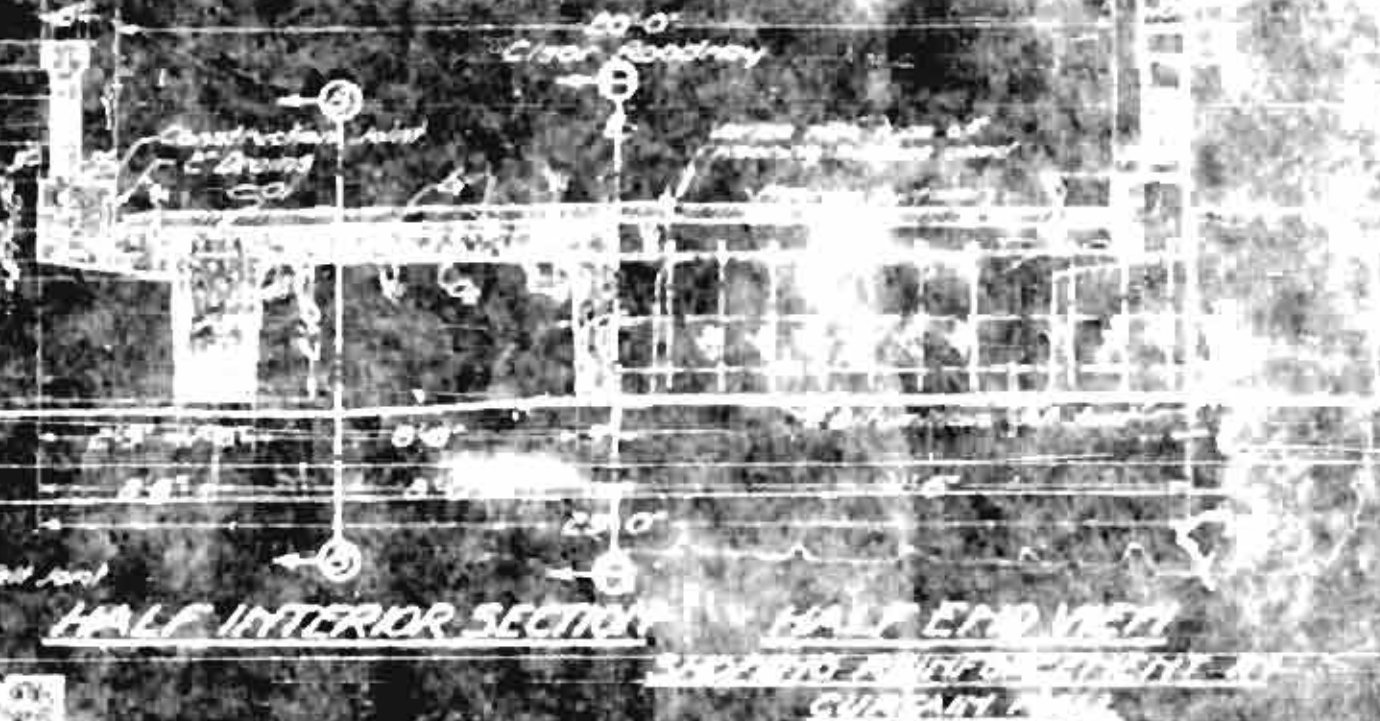
SPECIAL INSTRUCTIONS
 1. ...
 2. ...

Revised for additional height of Bent No. 2 by G. D. ...
 Revised for additional height of Piers 1 & C by ...

NO.	DESCRIPTION	AMOUNT	UNIT	TOTAL	NO.	DESCRIPTION	AMOUNT	UNIT	TOTAL
1	CONCRETE	100	CU YD	100	11	STEEL	100	LBS	100
2	FORMS	200	SQ YD	200	12	PAINT	100	LBS	100
3	BRICK	500	SQ YD	500	13	GLASS	100	SQ FT	100
4	CEMENT	100	TONS	100	14	INSULATION	100	SQ YD	100
5	SAND	100	CY	100	15	PLASTER	100	SQ YD	100
6	GRAVEL	100	CY	100	16	ROOFING	100	SQ YD	100
7	WATER	100	CU YD	100	17	FINISH	100	SQ YD	100
8	LABOR	100	HOURS	100	18	MECHANICAL	100	SQ YD	100
9	ELECTRICAL	100	CU YD	100	19	PLUMBING	100	SQ YD	100
10	PAINT	100	LBS	100	20	OTHER	100	SQ YD	100
TOTAL									



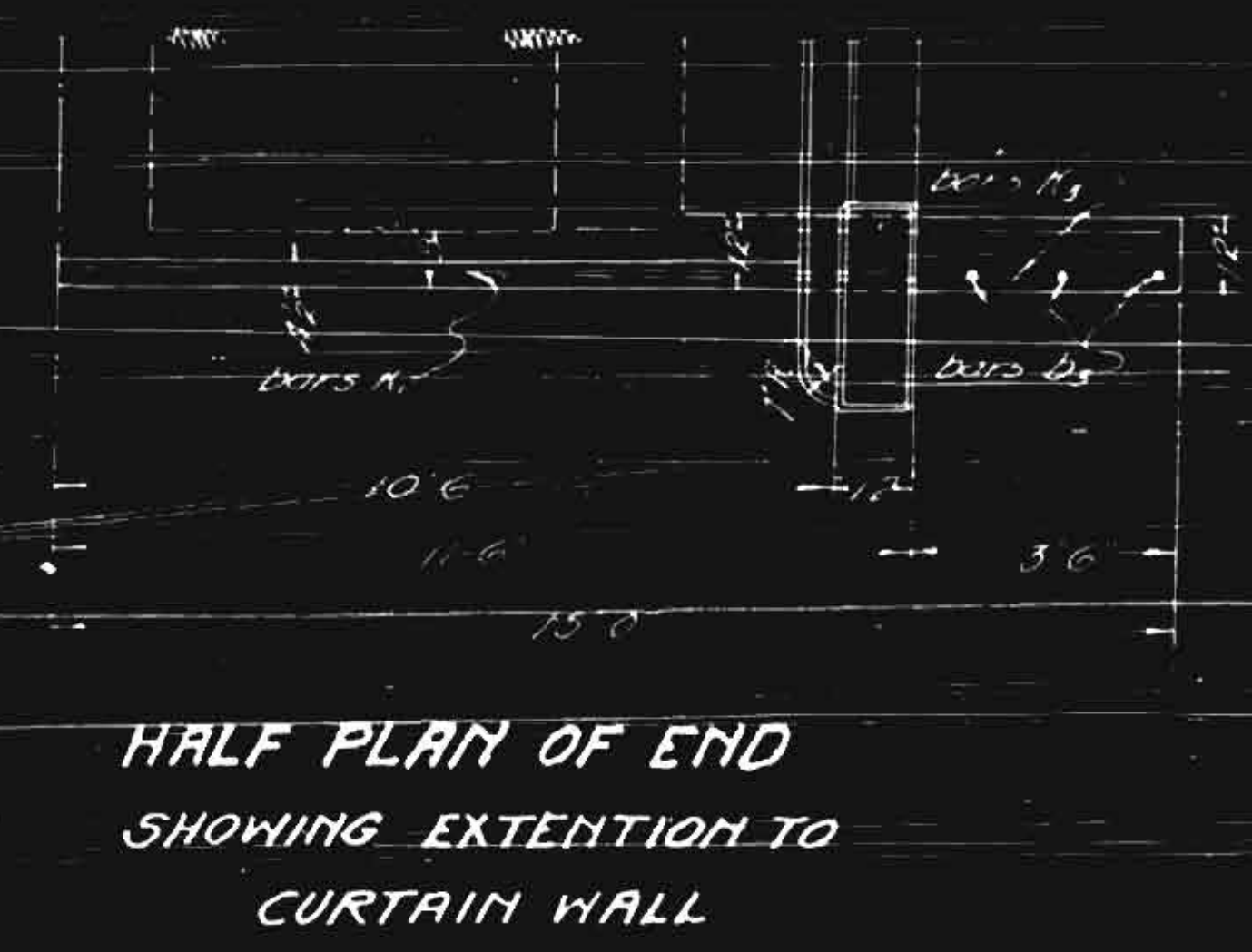
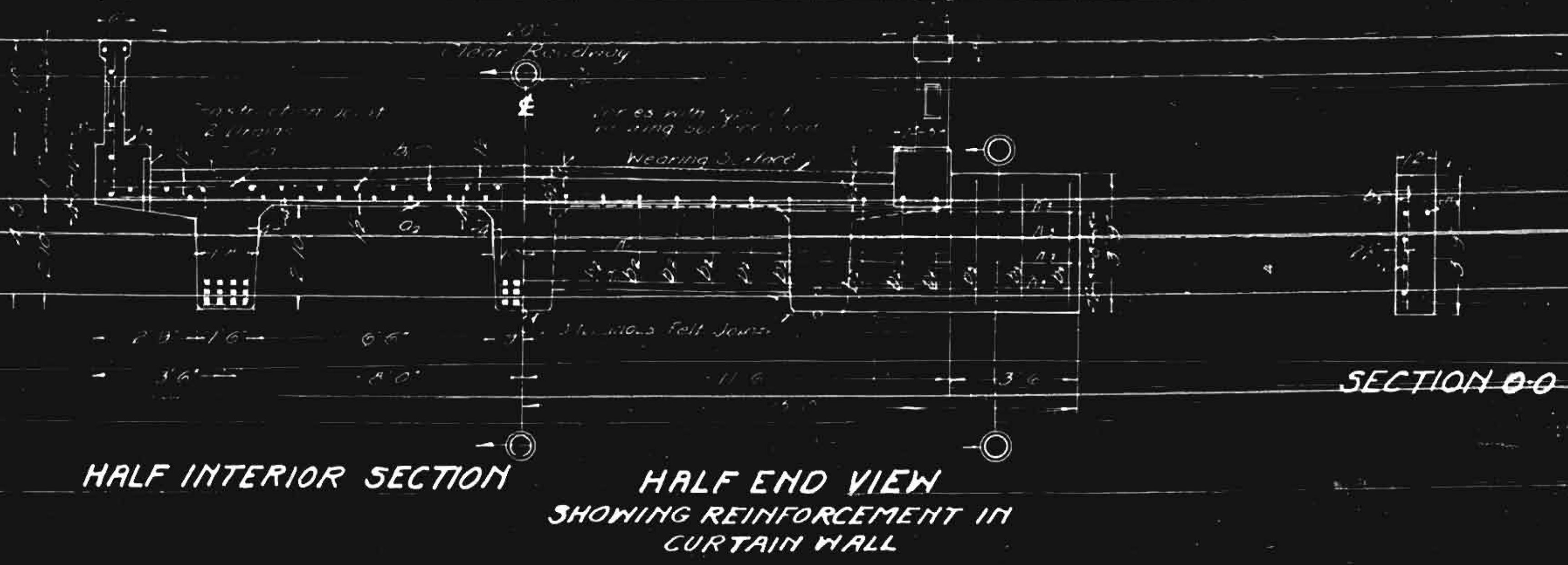
Note for detail of certain wall extension see sheet No. 2



DESIGN DATA
 Specifications for Load, Impact, Allowance, etc.
GENERAL NOTE
 The contractor shall be responsible for the proper installation of all materials and workmanship in accordance with the specifications and drawings.

NO.	DESCRIPTION	AMOUNT	UNIT	TOTAL
1	CONCRETE	100	CU YD	100
2	FORMS	200	SQ YD	200
3	BRICK	500	SQ YD	500
4	CEMENT	100	TONS	100
5	SAND	100	CY	100
6	GRAVEL	100	CY	100
7	WATER	100	CU YD	100
8	LABOR	100	HOURS	100
9	ELECTRICAL	100	CU YD	100
10	PAINT	100	LBS	100
11	STEEL	100	LBS	100
12	PAINT	100	LBS	100
13	GLASS	100	SQ FT	100
14	INSULATION	100	SQ YD	100
15	PLASTER	100	SQ YD	100
16	ROOFING	100	SQ YD	100
17	FINISH	100	SQ YD	100
18	MECHANICAL	100	SQ YD	100
19	PLUMBING	100	SQ YD	100
20	OTHER	100	SQ YD	100
TOTAL				

PROJECT NO. 281-2
 HILL COUNTY
 TWO YEARS 11/16
 AT 3/28/21



PROJECT NO. 291-B
WILSON COUNTY
STATION 351+78.7

BILL OF MATERIAL

No.	Description	Quantity
1	3" x 6" x 1/2" concrete	10
2	3" x 6" x 1/2" concrete	4
3	3" x 6" x 1/2" concrete	10

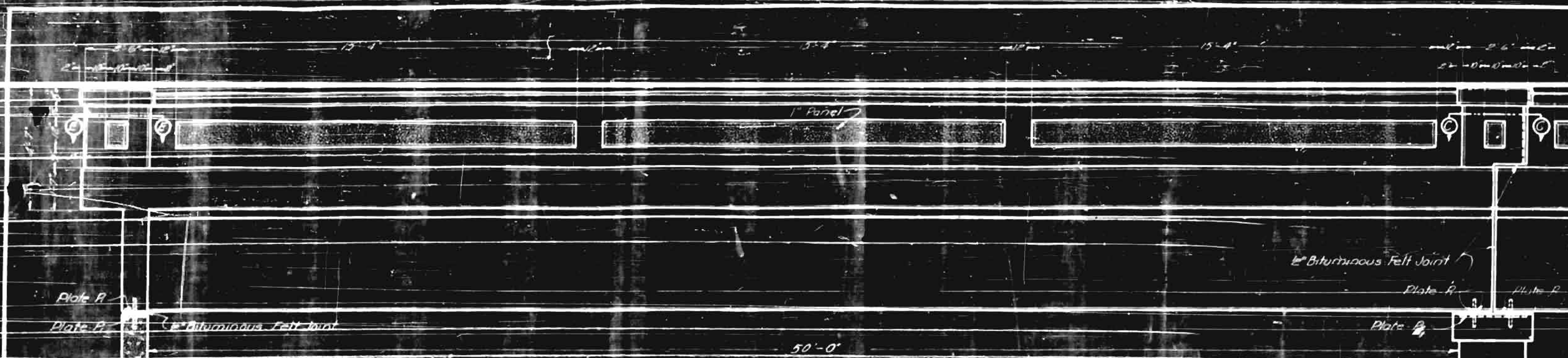
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION

SPECIAL
DETAIL SHOWING EXTENSION
TO CURTAIN WALL
AT END BENTS

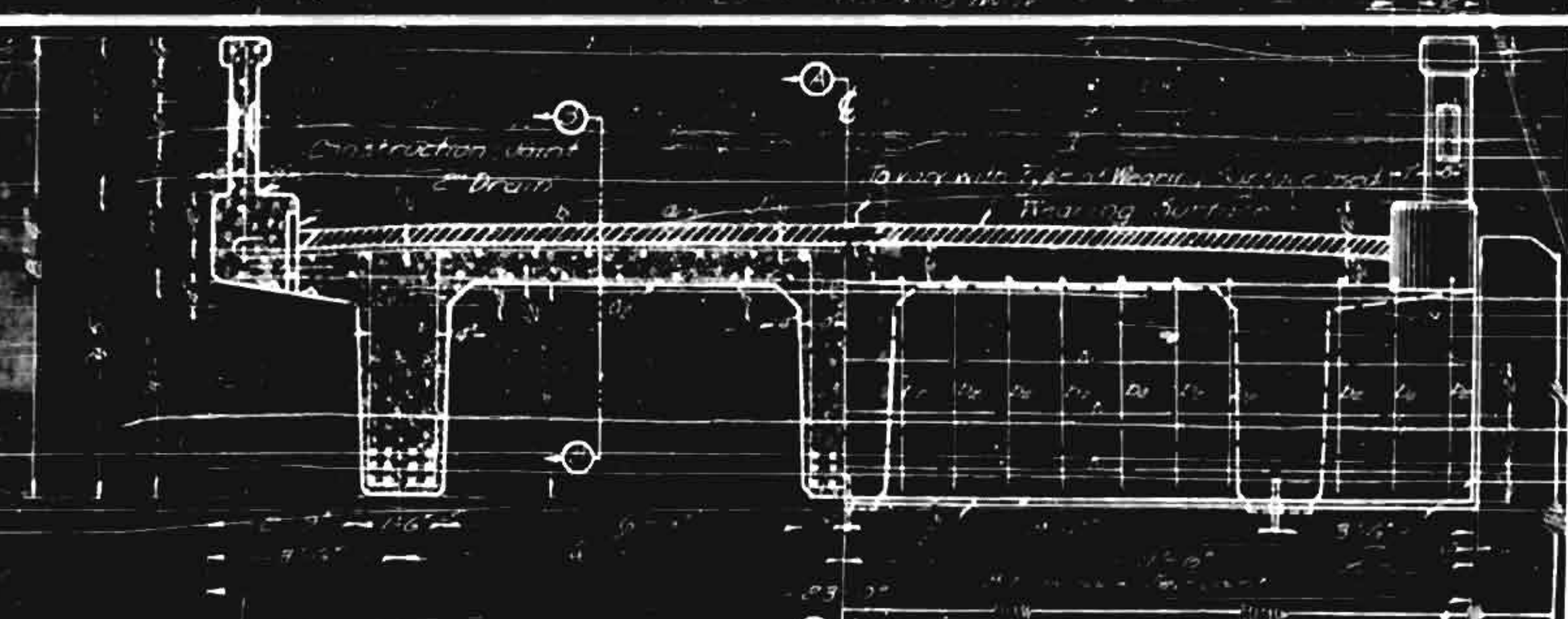
JUNE 1923 Scale 3/8"=1'-0"

W. P. Brown
Chas. L. Pham

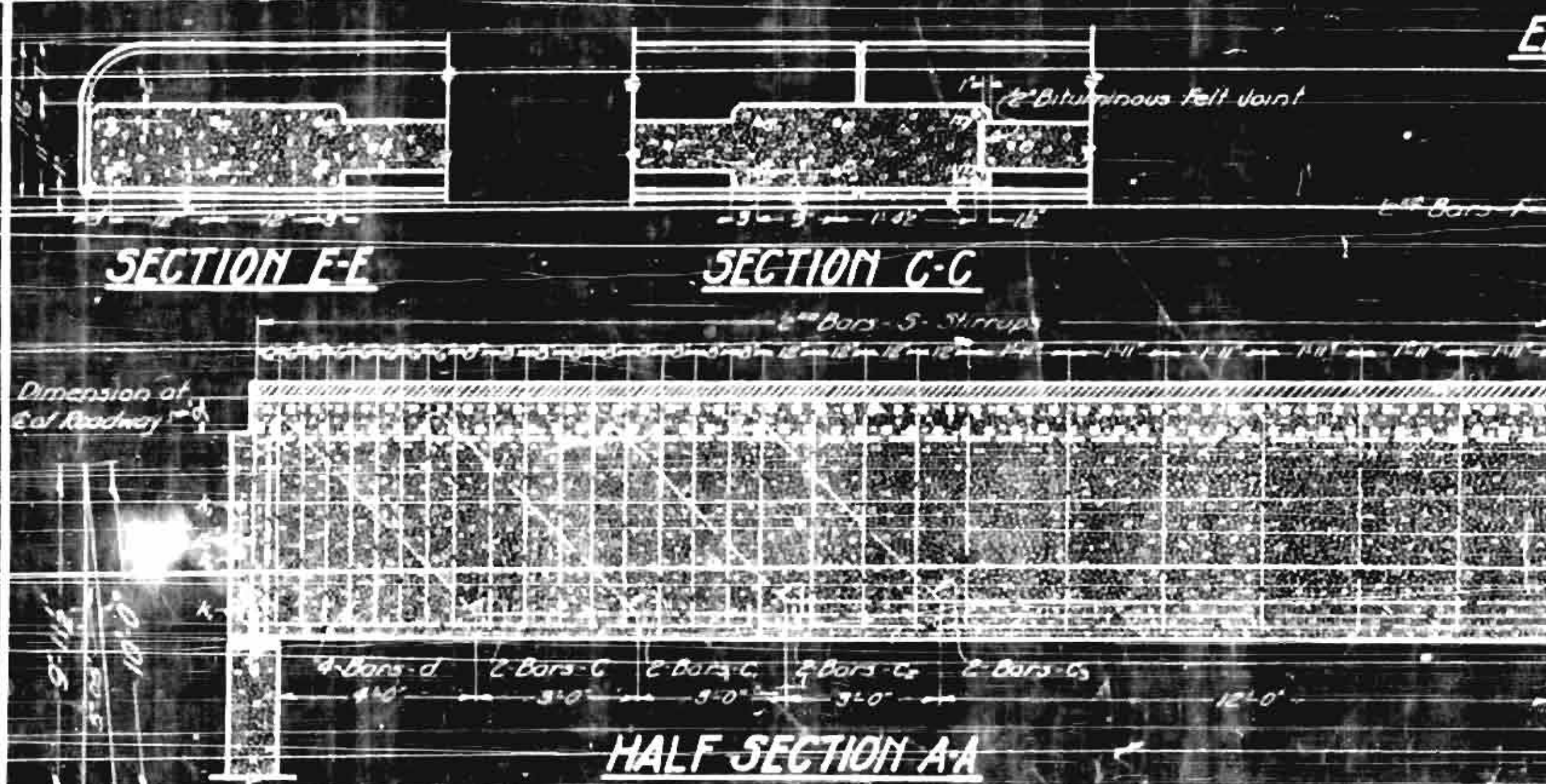
PLAN NO. 291-B 37



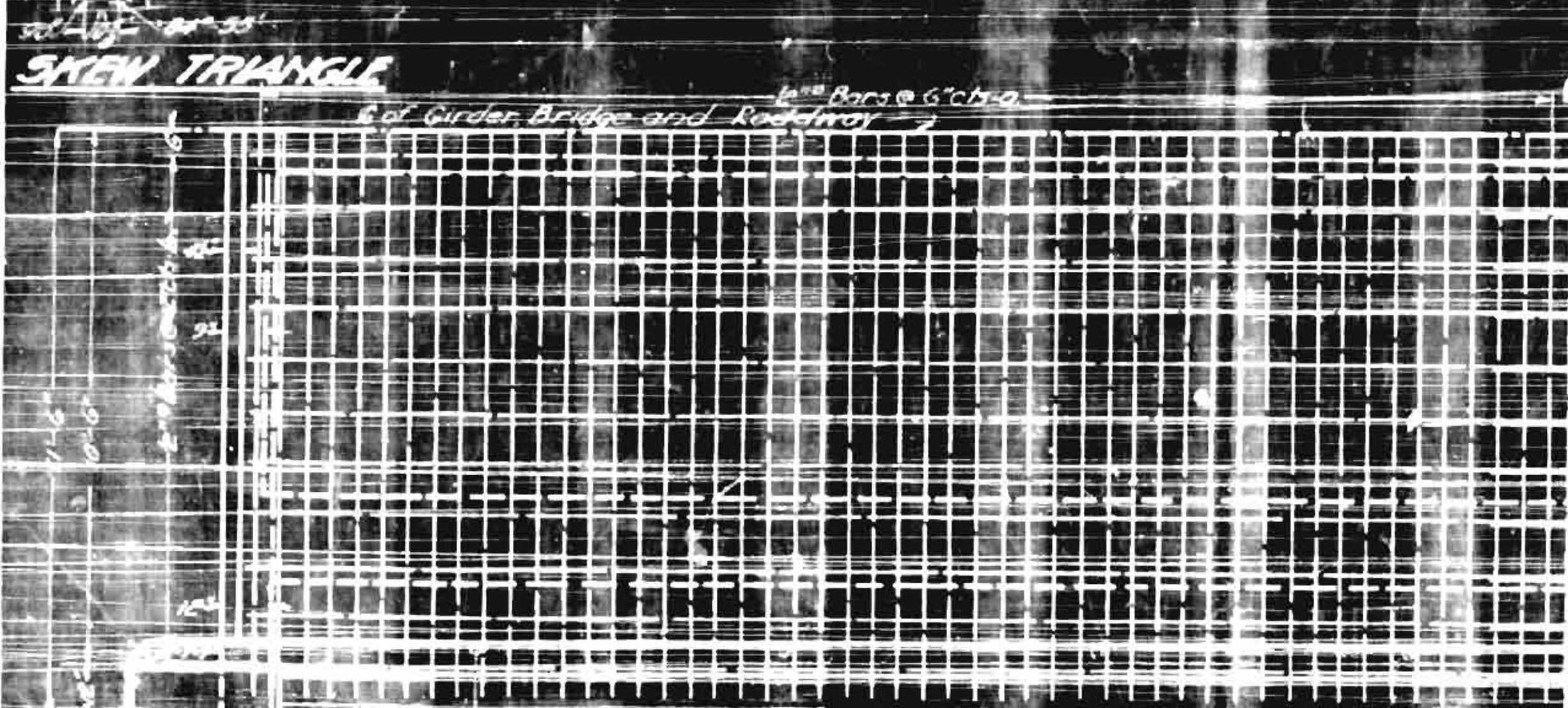
ELEVATION
 NOTE
 Bars a and c to be placed parallel to face of pier



HALF INTERIOR SECTION
HALF END VIEW SHOWING REINFORCEMENT IN CURTAIN WALL



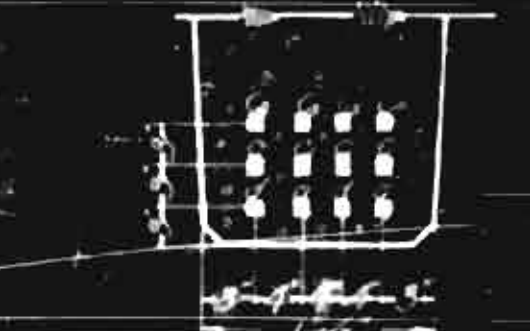
SECTION E-E
SECTION C-C



SKYLINE TRIANGLE



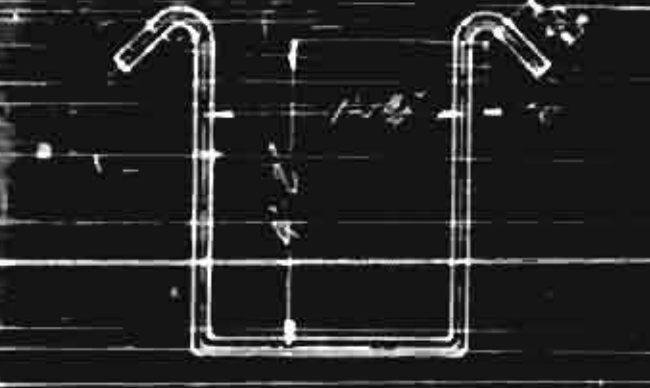
HALF SECTION B-B



DETAIL OF GIRDER



DETAIL OF EXPANSION JOINT



DETAIL OF BARS 5

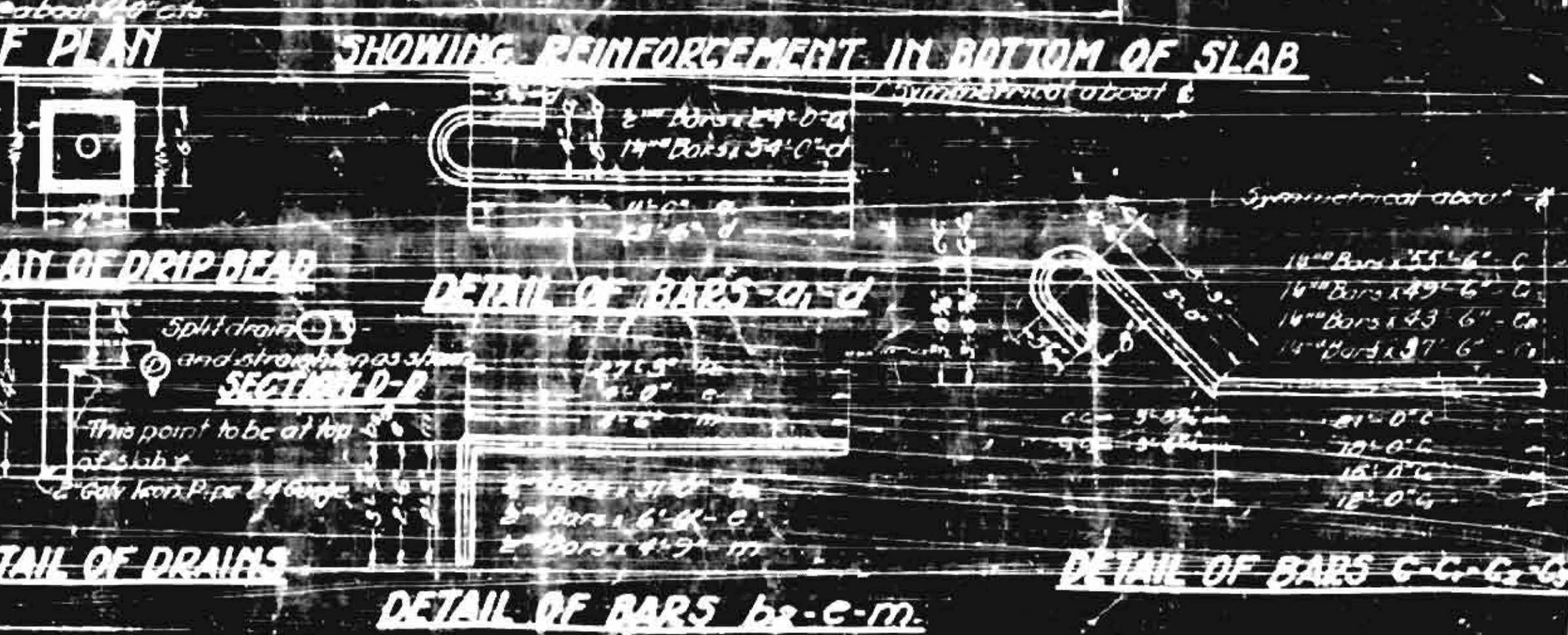
DESIGN DATA
 Specifications: North Carolina Highway Commission
 Assumed Live Load: 1500 lbs. per sq. ft. (Typical 15-ton Truck's parking)
 Impact Allowance: 30% of Live Load
 Wearing Surface: 1 1/2 in. x 100 lbs. per square foot
 Steel Reinforcement: 6000 lbs. per sq. ft.
 Concrete Compression: 650 lbs. per sq. in.
 This design is based on the net areas of bars as follows:
 1/4" dia. 10.98 sq. in.
 1/2" dia. 43.98 sq. in.
 3/4" dia. 101.06 sq. in.
 1" dia. 176.02 sq. in.

GENERAL NOTE
 Class A concrete to be used in all slabs, girders and curbs. Proportions: Class A Concrete to be used in all slabs and rafts above top of curb's. Proportions: 1:1.5:3.
 All reinforcing steel shall be galvanized bars. Square twisted bars are not to be used. See details for lap splices.
 All dimensions relative to reinforcement are to centers of bars unless otherwise shown. The depth of bars shall be permitted. All reinforcing steel shall be secured to the concrete by means of approved metal spacers or chairs, or by placing concrete separators and bars in the places showing typical details. The girders, slabs, and curbs must be placed in the manner shown, allowing the time for initial set to take place between them. Construction joints, permitted only at top of curbs. Camber to be 1/4" at center of span in single span bridges. For multiple span bridges see Camber Diagram.
 Two name plates to be placed on bridge, one on the inside of each right hand post approaching bridge. The corresponding panel insofar as it is omitted.
 Allowances to be observed unless "Special Provisions" the wearing surface is to be laid by the Road Contractor. The Engineer shall make certain that the top of the slab is at the correct elevation for finish and curbing used.
 All materials and workmanship as per the standard specifications of the N.C. State Highway Commission.

PROJECT NO. 291-B
WILSON COUNTY
ONE SPAN BRIDGE STA. 351+78.7



SHOWING REINFORCEMENT IN TOP OF SLAB
HALF PLAN



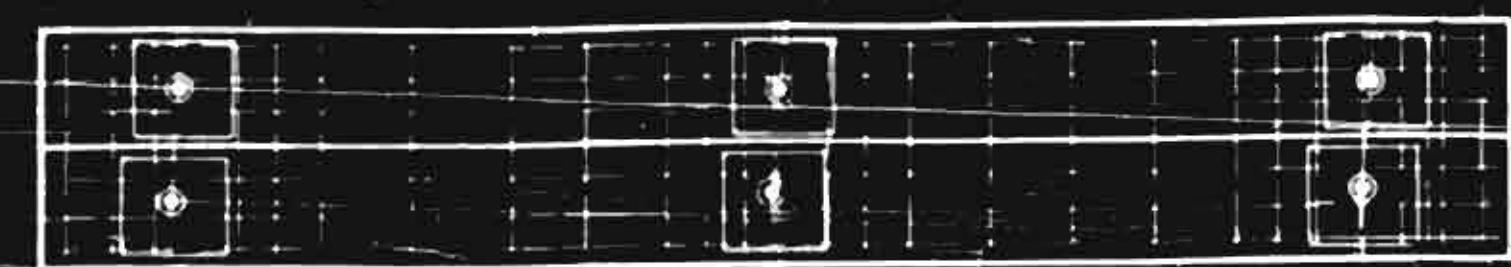
SHOWING REINFORCEMENT IN BOTTOM OF SLAB
DETAIL OF BARS

BAR	SIZE	LENGTH	NO. PER SPAN	TOTAL LENGTH
A	1/4"	36.00	4	144.00
B	1/4"	36.00	4	144.00
C	1/4"	36.00	4	144.00
D	1/4"	36.00	4	144.00
E	1/4"	36.00	4	144.00
F	1/4"	36.00	4	144.00
G	1/4"	36.00	4	144.00
H	1/4"	36.00	4	144.00
I	1/4"	36.00	4	144.00
J	1/4"	36.00	4	144.00
K	1/4"	36.00	4	144.00
L	1/4"	36.00	4	144.00
M	1/4"	36.00	4	144.00
N	1/4"	36.00	4	144.00
O	1/4"	36.00	4	144.00
P	1/4"	36.00	4	144.00
Q	1/4"	36.00	4	144.00
R	1/4"	36.00	4	144.00
S	1/4"	36.00	4	144.00
T	1/4"	36.00	4	144.00
U	1/4"	36.00	4	144.00
V	1/4"	36.00	4	144.00
W	1/4"	36.00	4	144.00
X	1/4"	36.00	4	144.00
Y	1/4"	36.00	4	144.00
Z	1/4"	36.00	4	144.00
1	1/4"	36.00	4	144.00
2	1/4"	36.00	4	144.00
3	1/4"	36.00	4	144.00
4	1/4"	36.00	4	144.00
5	1/4"	36.00	4	144.00

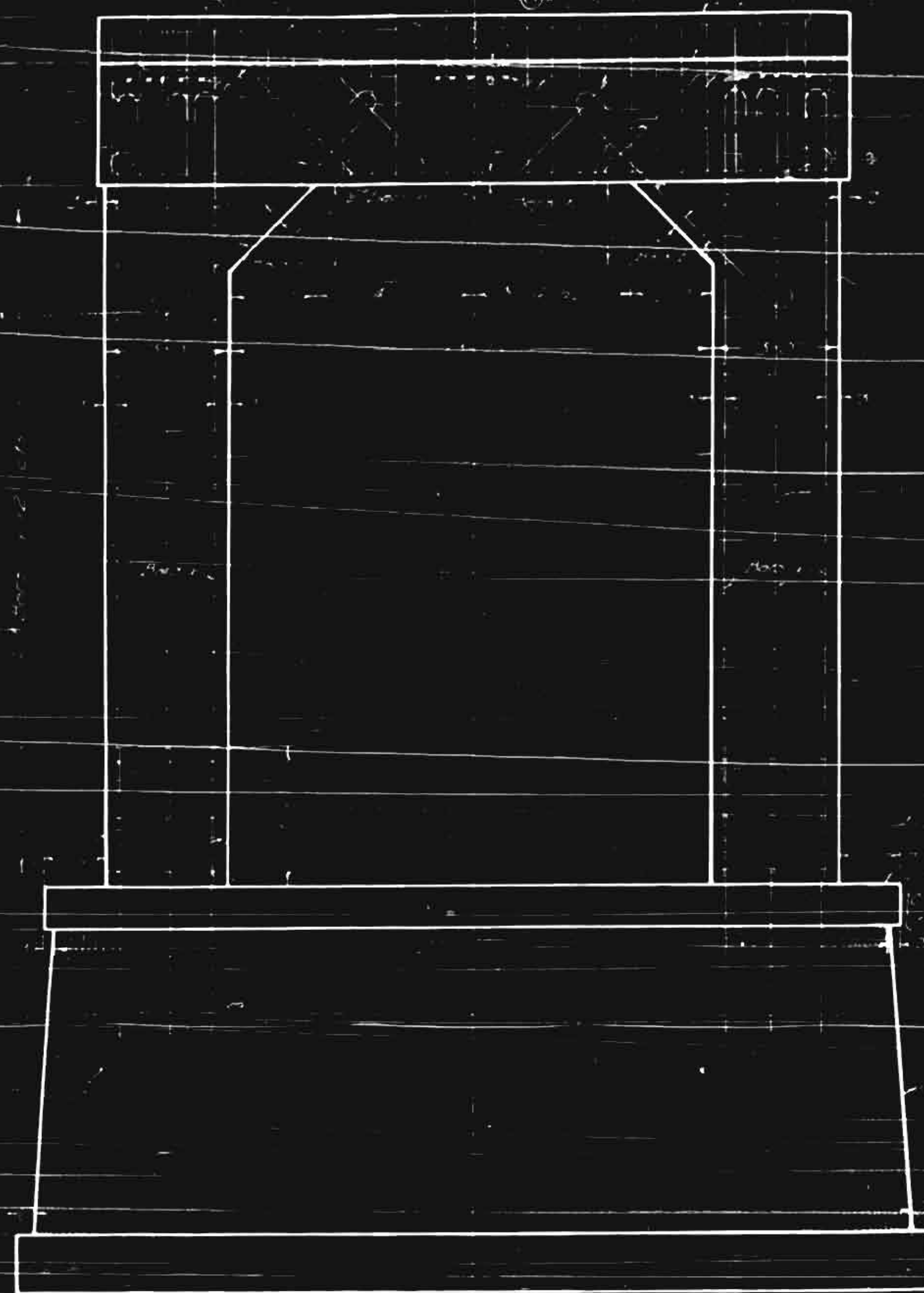
BAR	SIZE	LENGTH	NO. PER SPAN	TOTAL LENGTH
A	1/4"	36.00	4	144.00
B	1/4"	36.00	4	144.00
C	1/4"	36.00	4	144.00
D	1/4"	36.00	4	144.00
E	1/4"	36.00	4	144.00
F	1/4"	36.00	4	144.00
G	1/4"	36.00	4	144.00
H	1/4"	36.00	4	144.00
I	1/4"	36.00	4	144.00
J	1/4"	36.00	4	144.00
K	1/4"	36.00	4	144.00
L	1/4"	36.00	4	144.00
M	1/4"	36.00	4	144.00
N	1/4"	36.00	4	144.00
O	1/4"	36.00	4	144.00
P	1/4"	36.00	4	144.00
Q	1/4"	36.00	4	144.00
R	1/4"	36.00	4	144.00
S	1/4"	36.00	4	144.00
T	1/4"	36.00	4	144.00
U	1/4"	36.00	4	144.00
V	1/4"	36.00	4	144.00
W	1/4"	36.00	4	144.00
X	1/4"	36.00	4	144.00
Y	1/4"	36.00	4	144.00
Z	1/4"	36.00	4	144.00
1	1/4"	36.00	4	144.00
2	1/4"	36.00	4	144.00
3	1/4"	36.00	4	144.00
4	1/4"	36.00	4	144.00
5	1/4"	36.00	4	144.00

SPECIAL	APPROVED BY	DATE
STANDARD	CHECKED BY	DATE

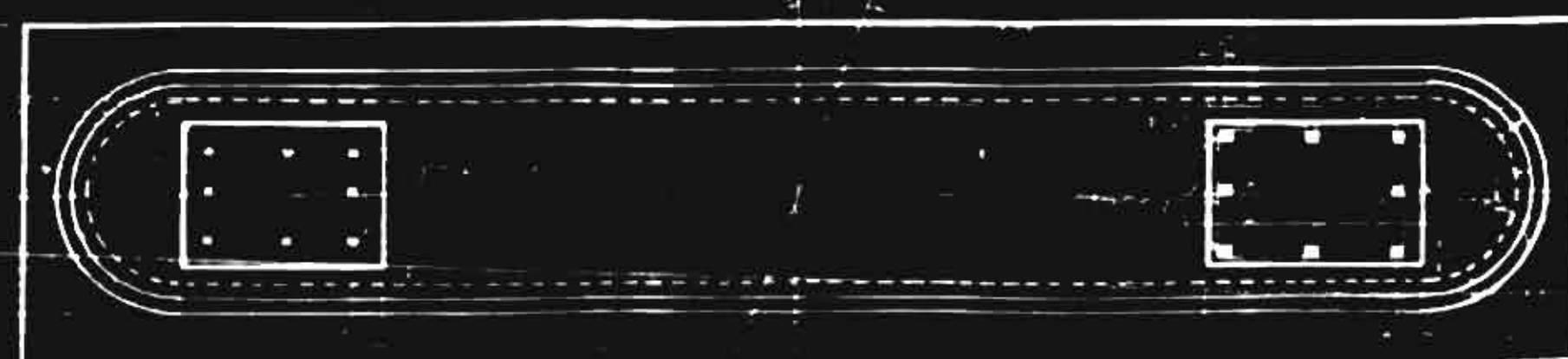
STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION
STANDARD REINFORCED CONCRETE DECK GIRDER 50'S/RH 5 50'-0" SPAN 20'-0" ROADWAY JULY 1922 SCALE 3/8"=1'-0"
SUBMITTED BY APPROVED BY PEEN NO.



PLAN OF COPING



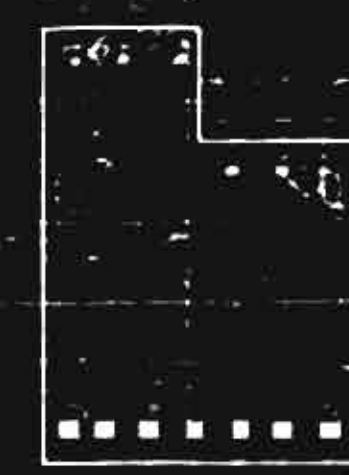
ELEVATION



PLAN
SHOWING FOOTING REINFORCEMENT SHOWING POST REINFORCEMENT



SECTION AA



DETAIL OF COPING

DETAIL OF BARS-V

DETAIL OF BARS-S

DETAIL OF BARS-h₂

DETAIL OF BARS-h-h₁

DETAIL OF BARS-b-b₂

DESIGN DATA

GENERAL NOTE

SKEW TRIANGLE

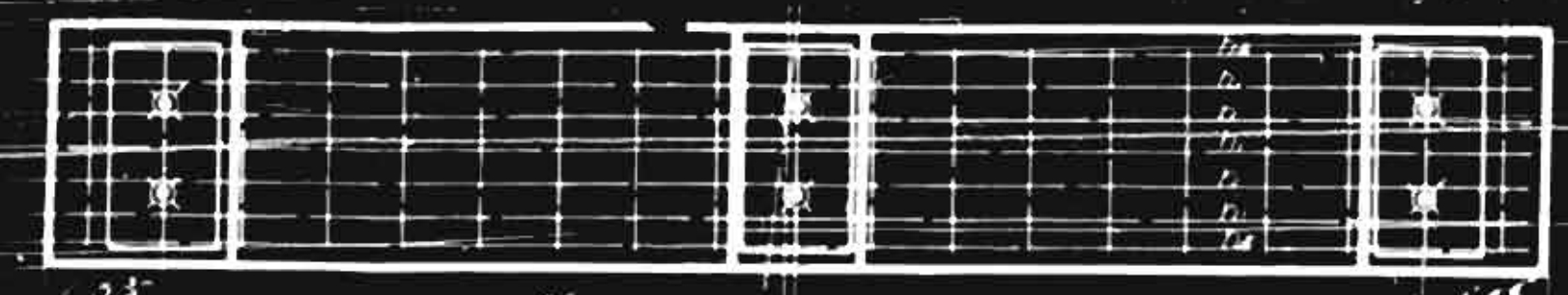
PROJECT NO. 291-B
WILSON COUNTY
STA. 351+78.2

BILL OF MATERIAL
PIERS, 1 OR 2
Bars No. Size Length Height

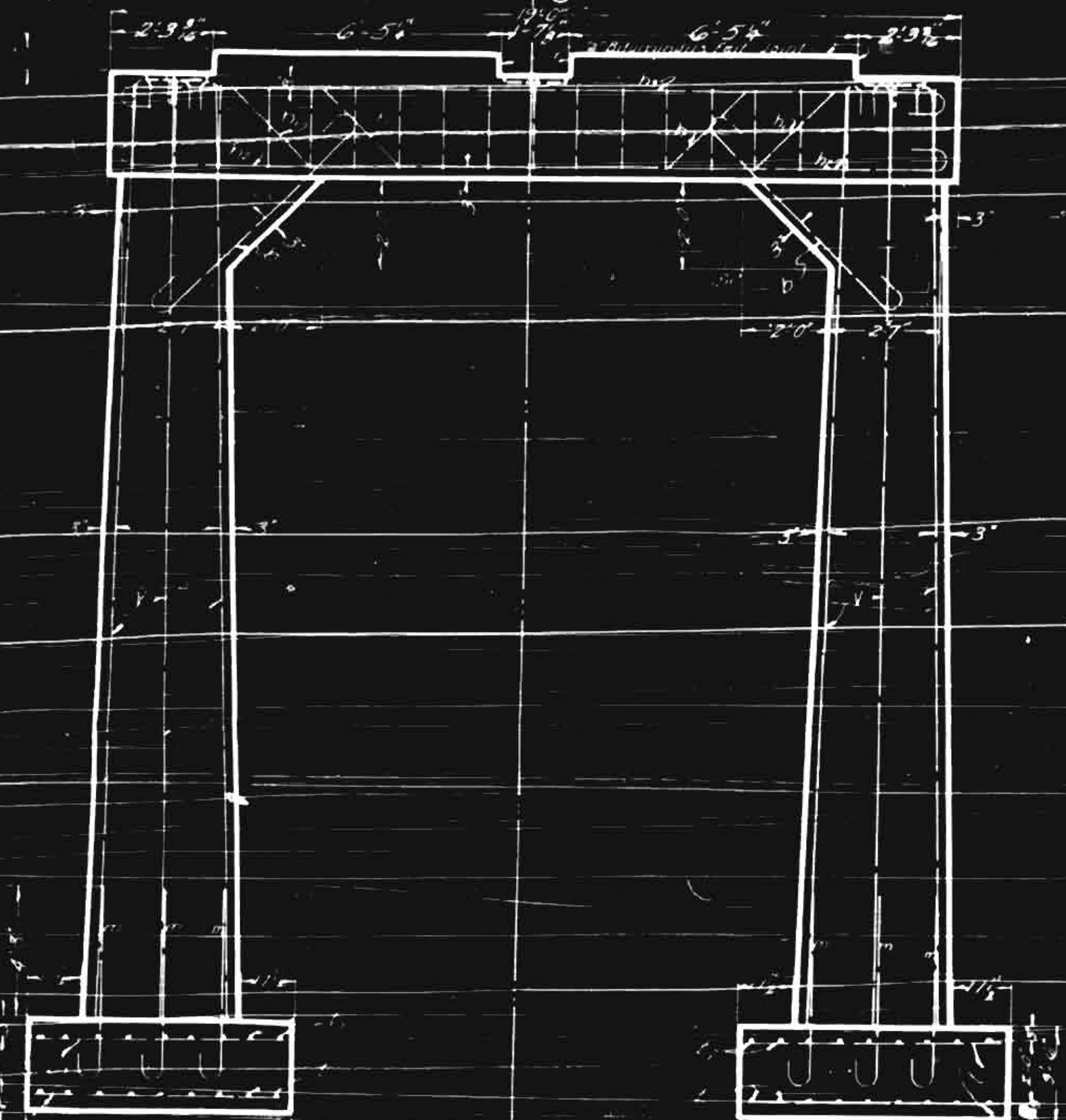
DETAIL
OF REINFORCEMENT
FOR PIER
NO. 291-B
WILSON COUNTY
NOV 1922



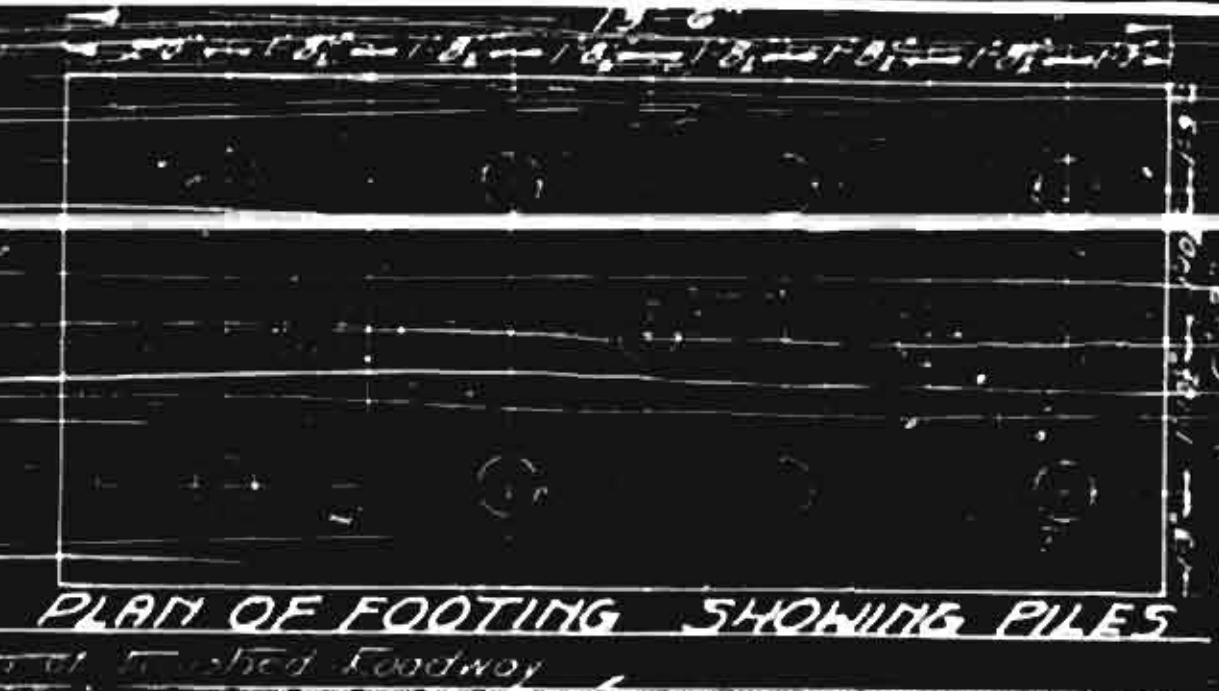
PROJECT NO.	DATE	SCALE	SHEET NO.	TOTAL SHEETS
10	N.C.	2 1/2" = 1'	7	10



PLAN OF COPING



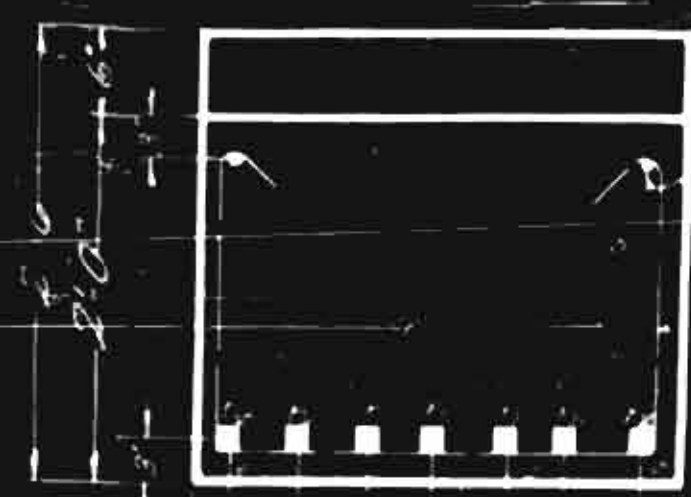
ELEVATION



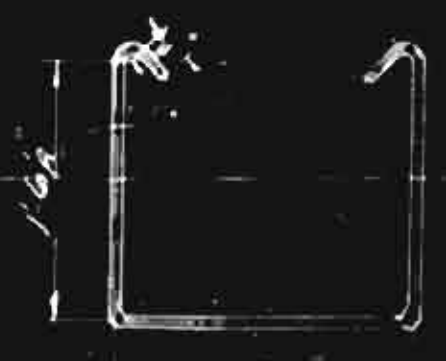
PLAN OF FOOTING SHOWING PILES



SECTION A-A



DETAIL OF COPING



DETAIL OF BARS s



DETAIL OF BARS h-h1

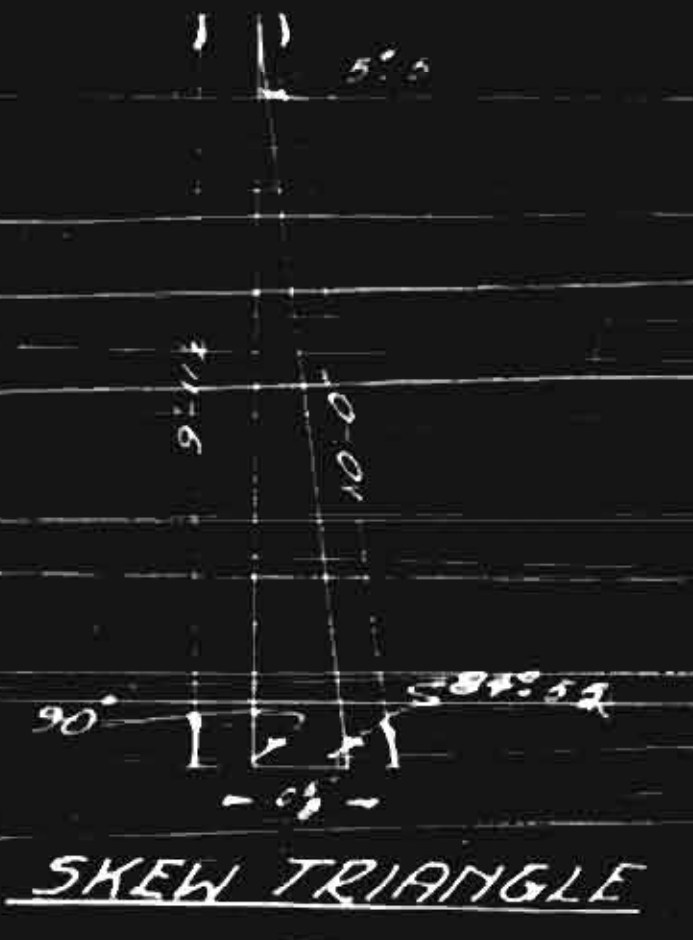
DESIGN DATA

Span length 110'-0" (center to center of piers)
 Deck width 40'-0" (clear width)
 Pier width 15'-0" (clear width)
 Pier height 22'-6" (to top of coping)
 Pier height 28'-0" (to top of footing)
 This design is based on the use of concrete with a compressive strength of 3000 lbs. per sq. in. and reinforcement with a yield strength of 60,000 lbs. per sq. in.

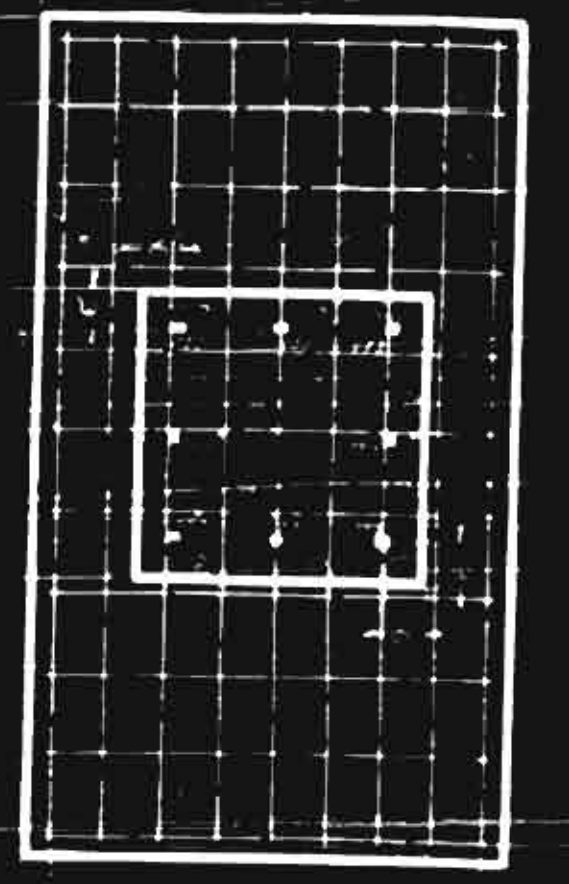
GENERAL NOTE

All reinforcement shall be placed in accordance with the provisions of the Specifications for Highway Bridges, 1922, and the provisions of the Specifications for Highway Structures, 1922, as amended. The spacing of reinforcement shall be such as to provide the required strength and rigidity. The reinforcement shall be placed in accordance with the provisions of the Specifications for Highway Bridges, 1922, and the provisions of the Specifications for Highway Structures, 1922, as amended. All reinforcement shall be placed in accordance with the provisions of the Specifications for Highway Bridges, 1922, and the provisions of the Specifications for Highway Structures, 1922, as amended.

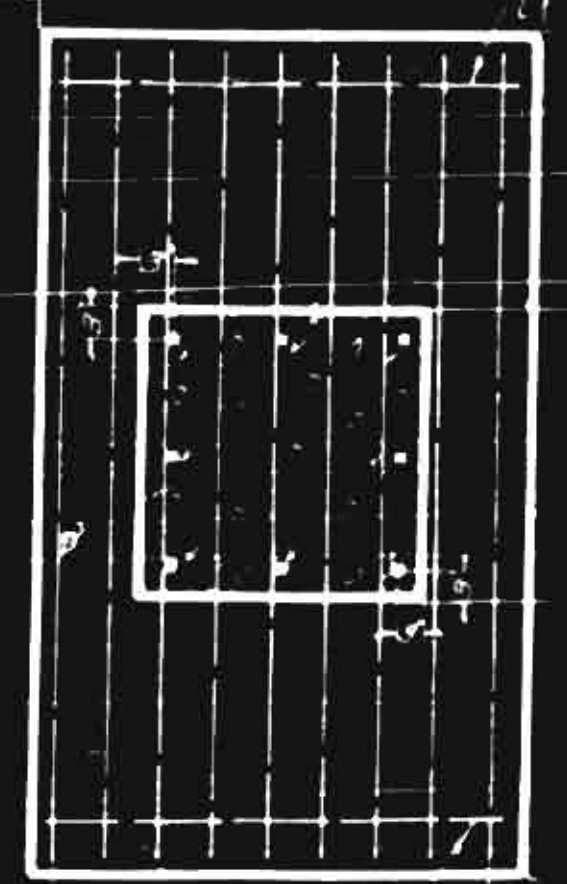
PROJECT NO. 291-B
 WILSON COUNTY
 STA. 351+78.7



SKEW TRIANGLE



PLAN IN BOTTOM OF FOOTING



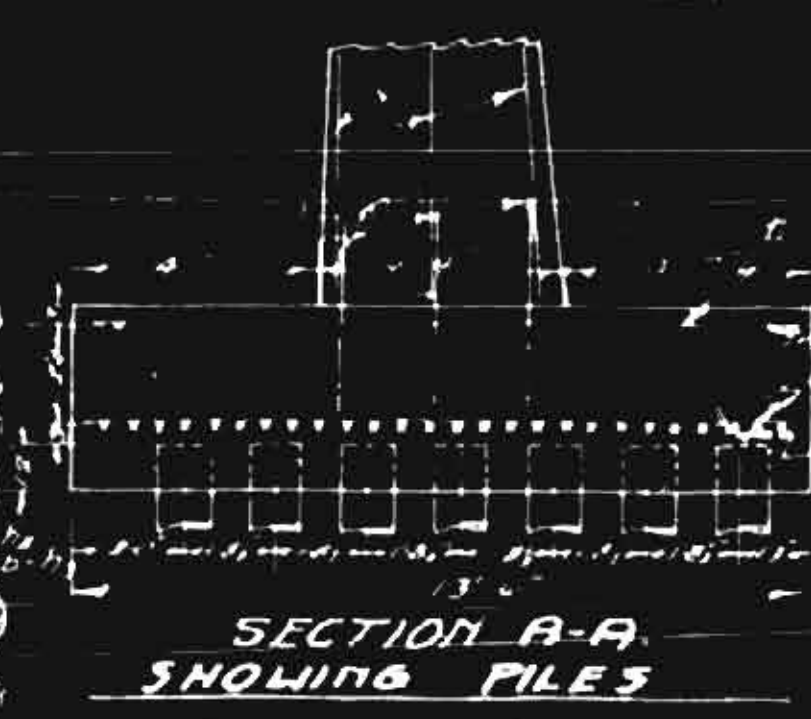
PLAN SHOWING REINFORCEMENT IN TOP OF FOOTING AND IN POST



DETAIL OF BARS m-y



DETAIL OF BARS b-h2



SECTION A-A SHOWING PILES

BILL OF MATERIALS
 BENT NO. 1 OR 2

ITEM	QUANTITY	UNIT	AMOUNT
1	1.00	cu yd	1.00
2	1.00	cu yd	1.00
3	1.00	cu yd	1.00
4	1.00	cu yd	1.00
5	1.00	cu yd	1.00
6	1.00	cu yd	1.00
7	1.00	cu yd	1.00
8	1.00	cu yd	1.00
9	1.00	cu yd	1.00
10	1.00	cu yd	1.00
11	1.00	cu yd	1.00
12	1.00	cu yd	1.00
13	1.00	cu yd	1.00
14	1.00	cu yd	1.00
15	1.00	cu yd	1.00
16	1.00	cu yd	1.00
17	1.00	cu yd	1.00
18	1.00	cu yd	1.00
19	1.00	cu yd	1.00
20	1.00	cu yd	1.00
21	1.00	cu yd	1.00
22	1.00	cu yd	1.00
23	1.00	cu yd	1.00
24	1.00	cu yd	1.00
25	1.00	cu yd	1.00
26	1.00	cu yd	1.00
27	1.00	cu yd	1.00
28	1.00	cu yd	1.00
29	1.00	cu yd	1.00
30	1.00	cu yd	1.00
31	1.00	cu yd	1.00
32	1.00	cu yd	1.00
33	1.00	cu yd	1.00
34	1.00	cu yd	1.00
35	1.00	cu yd	1.00
36	1.00	cu yd	1.00
37	1.00	cu yd	1.00
38	1.00	cu yd	1.00
39	1.00	cu yd	1.00
40	1.00	cu yd	1.00
41	1.00	cu yd	1.00
42	1.00	cu yd	1.00
43	1.00	cu yd	1.00
44	1.00	cu yd	1.00
45	1.00	cu yd	1.00
46	1.00	cu yd	1.00
47	1.00	cu yd	1.00
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58	1.00	cu yd	1.00
59	1.00	cu yd	1.00
60	1.00	cu yd	1.00
61	1.00	cu yd	1.00
62	1.00	cu yd	1.00
63	1.00	cu yd	1.00
64	1.00	cu yd	1.00
65	1.00	cu yd	1.00
66	1.00	cu yd	1.00
67	1.00	cu yd	1.00
68	1.00	cu yd	1.00
69	1.00	cu yd	1.00
70	1.00	cu yd	1.00
71	1.00	cu yd	1.00
72	1.00	cu yd	1.00
73	1.00	cu yd	1.00
74	1.00	cu yd	1.00
75	1.00	cu yd	1.00
76	1.00	cu yd	1.00
77	1.00	cu yd	1.00
78	1.00	cu yd	1.00
79	1.00	cu yd	1.00
80	1.00	cu yd	1.00
81	1.00	cu yd	1.00
82	1.00	cu yd	1.00
83	1.00	cu yd	1.00
84	1.00	cu yd	1.00
85	1.00	cu yd	1.00
86	1.00	cu yd	1.00
87	1.00	cu yd	1.00
88	1.00	cu yd	1.00
89	1.00	cu yd	1.00
90	1.00	cu yd	1.00
91	1.00	cu yd	1.00
92	1.00	cu yd	1.00
93	1.00	cu yd	1.00
94	1.00	cu yd	1.00
95	1.00	cu yd	1.00
96	1.00	cu yd	1.00
97	1.00	cu yd	1.00
98	1.00	cu yd	1.00
99	1.00	cu yd	1.00
100	1.00	cu yd	1.00

NOTE: Revised for additional height and for piles 5-3-23 by R.M. Chad. 5/15

STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 DETAIL
 OF
 R.C. END BENT
 FOR
 R.C. DECK GIRDER
 AUG 1922

PLAN NO.

OLD BILL OF STEEL BENT N° 1	

NEW BILL OF STEEL BENT N° 1				WHERE OBTAINED

BILL OF STEEL TO BE ORDERED

OLD BILL OF STEEL BENT N° 2	

NEW BILL OF STEEL BENT N° 2				WHERE OBTAINED

PROJECT NO 297 B
WILSON COUNTY
MAY 1957

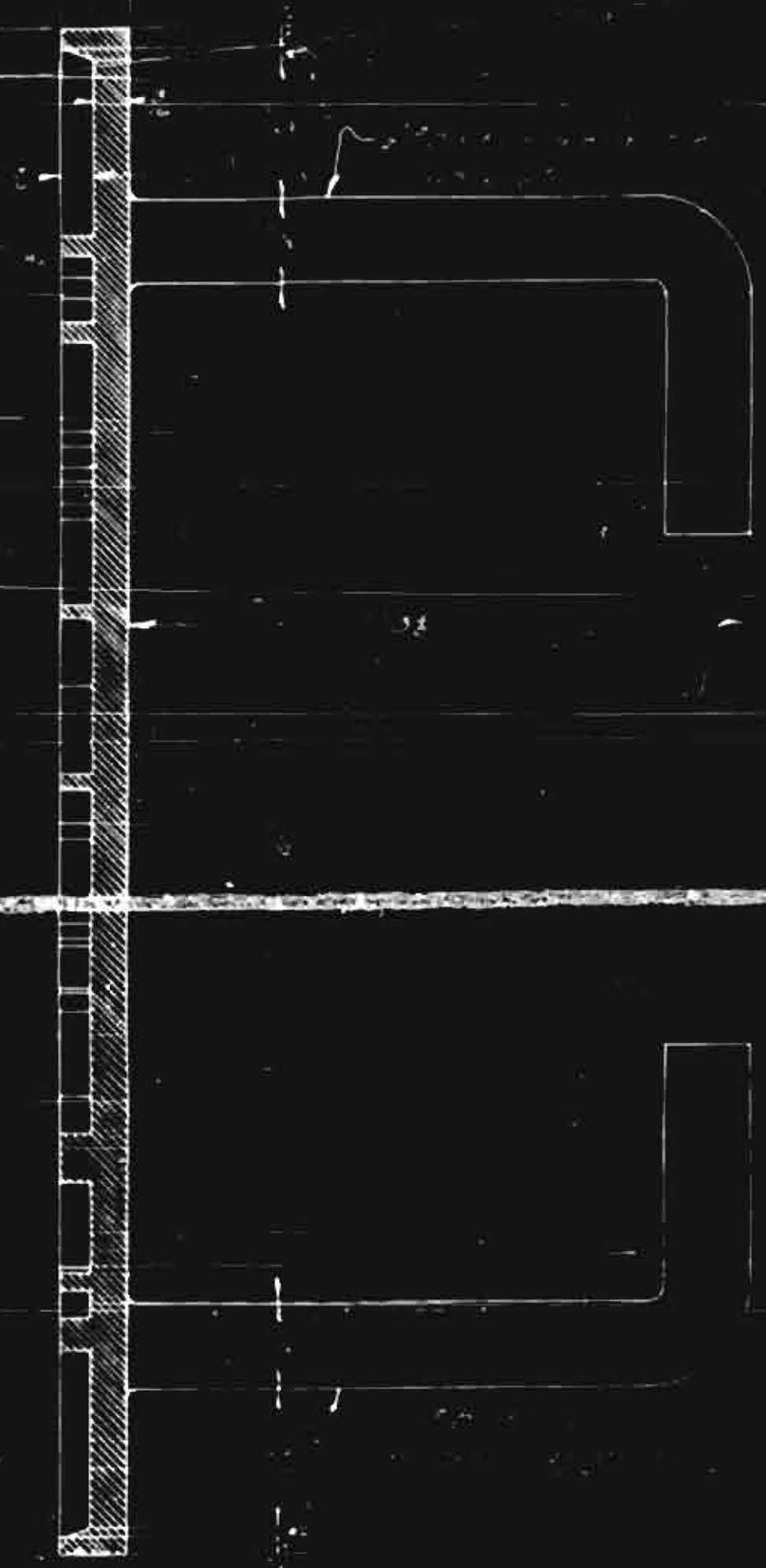
STATE HIGHWAY COMMISSION
JULIEN A. MC GEE
BILL OF STEEL
MAY 1957

GENERAL NOTE

Two name plates are required for each bridge. One is to appear on each right hand and post approaching the bridge. It is to be securely fastened to the end of R.C. thru Girders or on the roadway side of handrail posts of R.C. Slabs and R.C. Deck Girders.

The plates are to be made of copper or bronze. The border and all lettering shall be raised to form the face of the plate. The top surface of the raised border and lettering shall be smooth till lettering shall be square cut and not tapered. The height of the letters shall be 1/2 inch. The lettering shall be as shown in the Detail Showing Correct Lettering.

ENO RIVER BRIDGE
ORANGE COUNTY
PROJECT NO 453
BUILT BY
NORTH CAROLINA
STATE HIGHWAY COMMISSION
1922



PROJECT NO 453
WILSON COUNTY

SECTION A-A

WILSON COUNTY
STATE HIGHWAY COMMISSION
1922

SEE DETAIL SHOWING CORRECT LETTERING

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
STANDARD
NAME PLATE
FOR
CONCRETE BRIDGES
APPROX 1/2" SCALE FULL SIZE

SPECIAL	DESIGNED BY	DATE
	W. H. HARRIS	1922
STANDARD	DESIGNED BY	DATE
	W. H. HARRIS	1922

