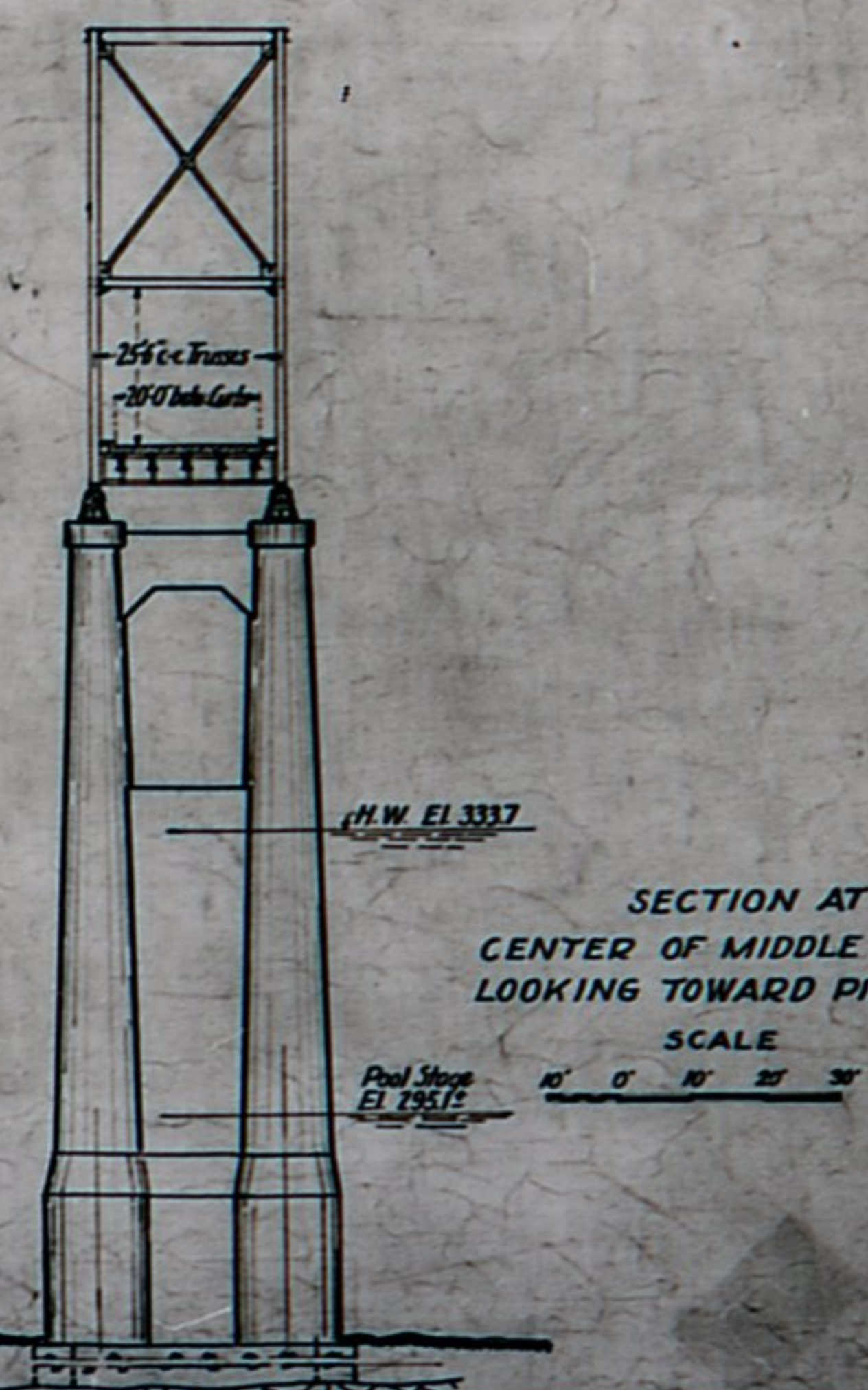
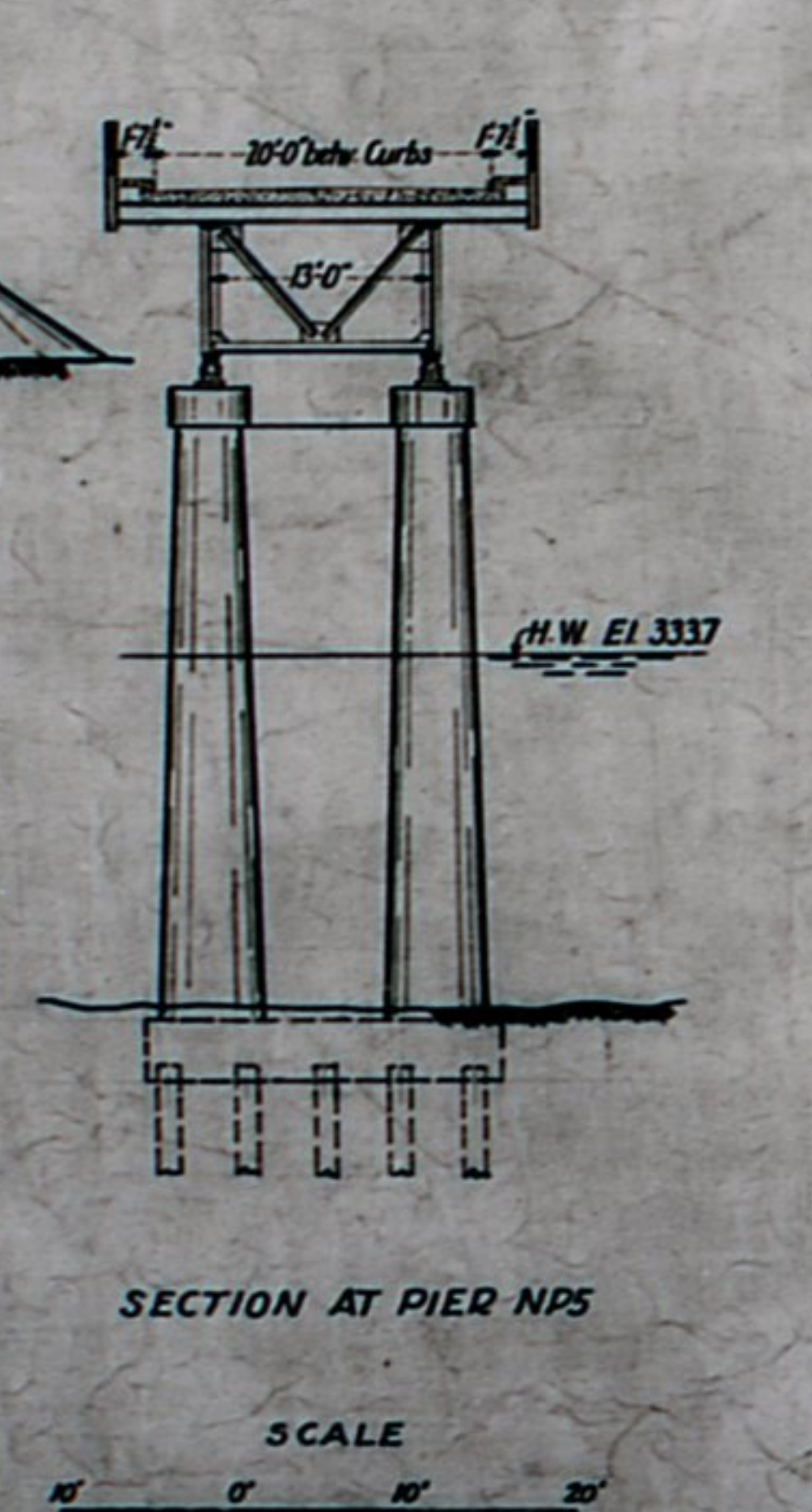
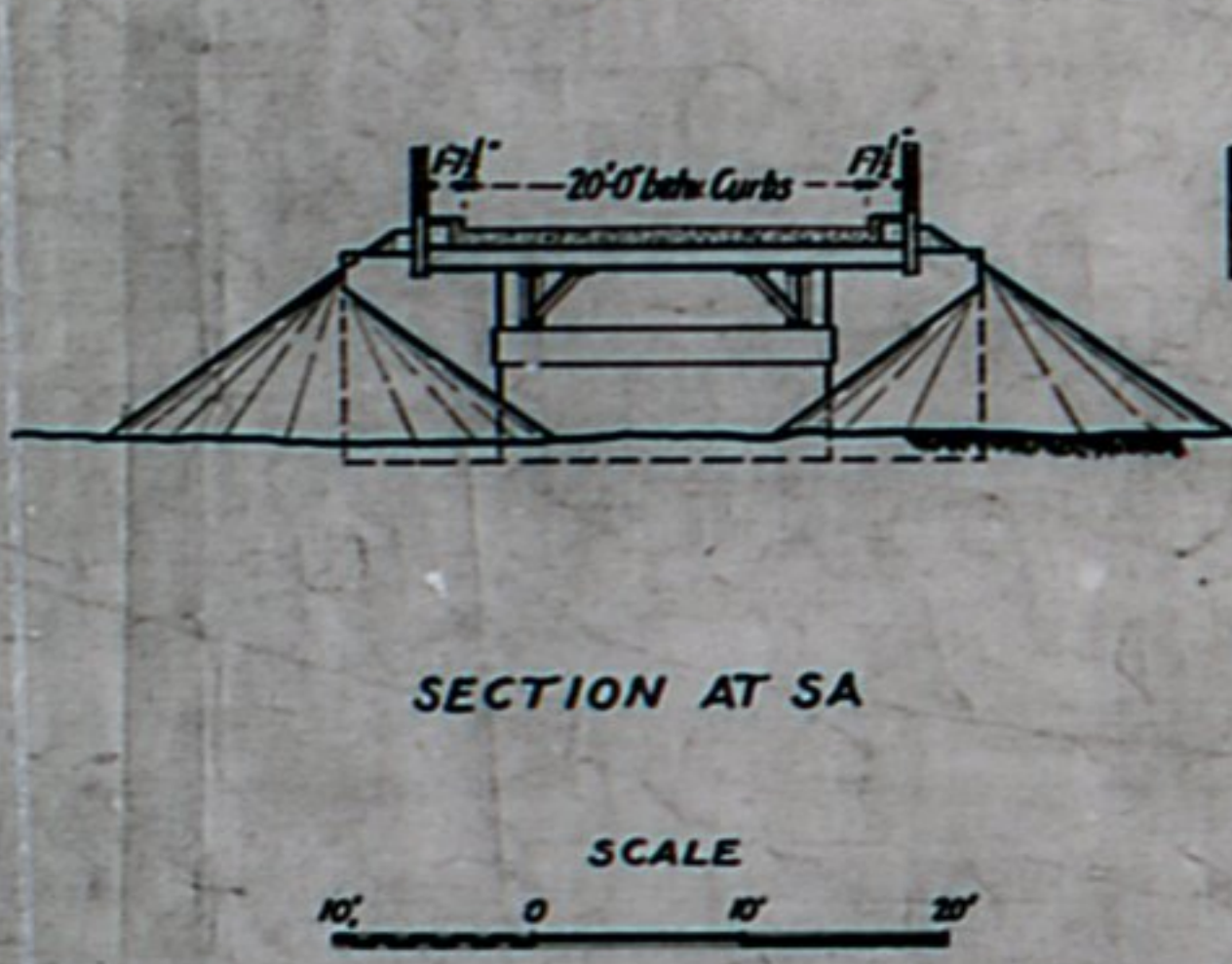


**ELEVATION**

**PLAN**



**LIST OF DRAWINGS**

CONTRACT NO.1 - SUBSTRUCTURE		SUPPLEMENTARY DRAWINGS	
Sheet No.	Title	Sheet No.	Title
1	General Plan and Elevation	1	Contour Map and Foundation Data.
2	Masonry Plan		River Hydrograph.
3	Substructure - Main Bridge		
4	Substructure - Approaches		

CONTRACT NO.2 - SUPERSTRUCTURE	
Sheet No.	Title
1	General Plan and Elevation
2	Masonry Plan
3	Stress Sheet
4	Typical Details - 400' Spans
5	Typical Details - 400' Spans
6	Typical Details - Approach Steelwork
7	Details of Roadway
8	Navigation Lights

**SYMBOLS OF ROADWAY SLAB JOINTS**

- E.J. - EXPANSION JOINT - 1/2" PREMOULDED FILLER
- C.J. - CONSTRUCTION JOINT
- E.D. - EXPANSION DAMS
- L.E.J. - LONGITUDINAL EXPANSION JOINT

M.C. - MANHOLE & COVER IN WALKWAY. SEE CONTRACT NO. 2, DRAWING NO. 7

Submitted by Modjeski & Masters  
CONSULTING ENGINEERS

Recommended for Approval J.M. Masters  
BRIDGE ENGINEER

Recommended for Approval \_\_\_\_\_  
STATE HIGHWAY ENGINEER

Approved \_\_\_\_\_  
Kentucky State Highway Commission

By \_\_\_\_\_  
CHAIRMAN

Date \_\_\_\_\_ Book No. \_\_\_\_\_ Page \_\_\_\_\_

APPROVED  
*Ray M. Moore*  
**J.M. Masters**  
CONSULTING ENGINEERS

COMMONWEALTH OF KENTUCKY  
STATE HIGHWAY DEPARTMENT  
**TENNESSEE RIVER BRIDGE**  
NEAR PADUCAH, KY.  
**GENERAL PLAN AND ELEVATION**

SCALE IN FEET  
100 50 0 100 200

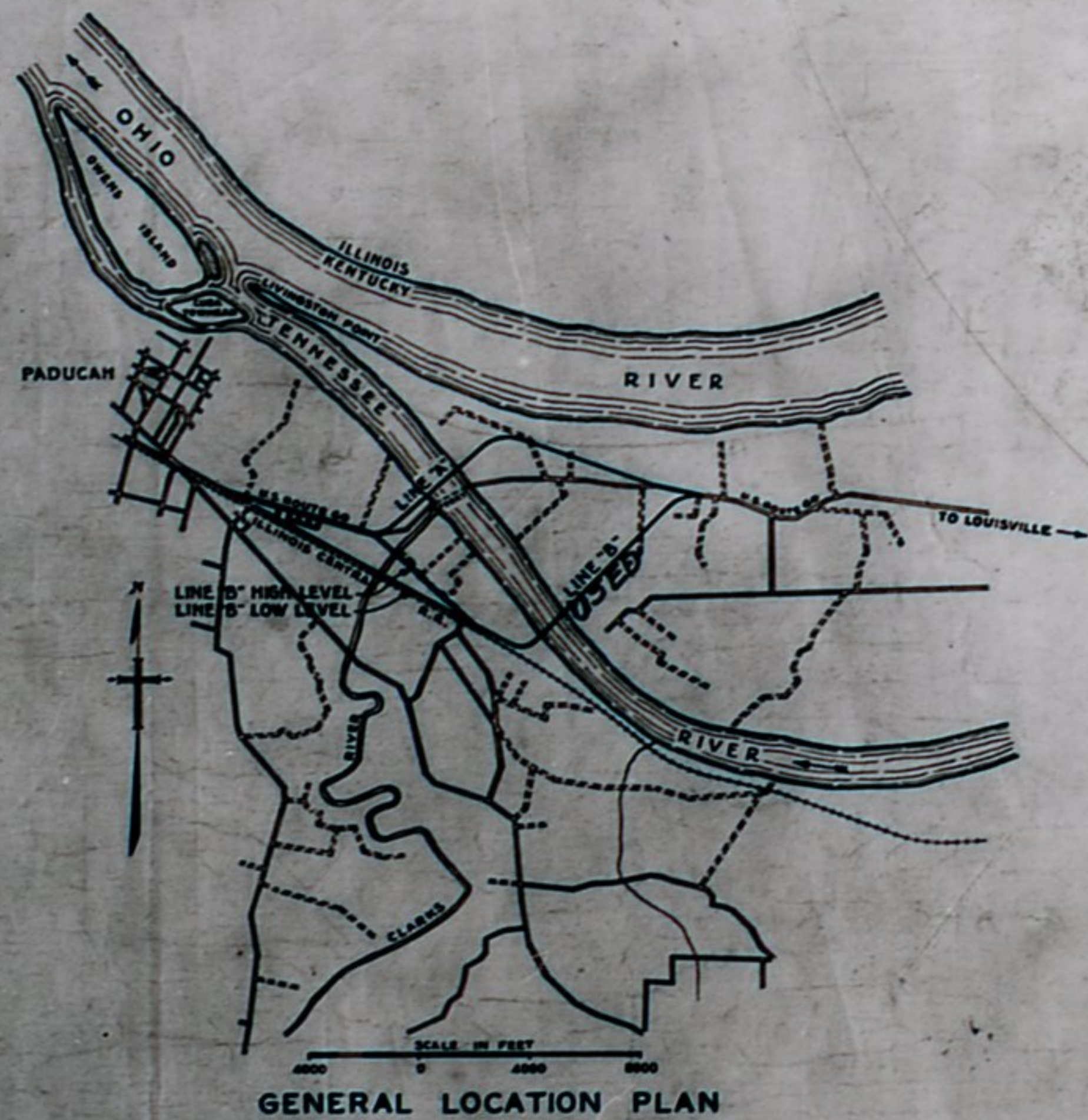
MAY 1929  
DRAWING NO. 1  
CONTRACTS NO. 1 & 2  
**MODJESKI & MASTERS**  
ENGINEERS

Revised April 1932 to conform to actual construction.

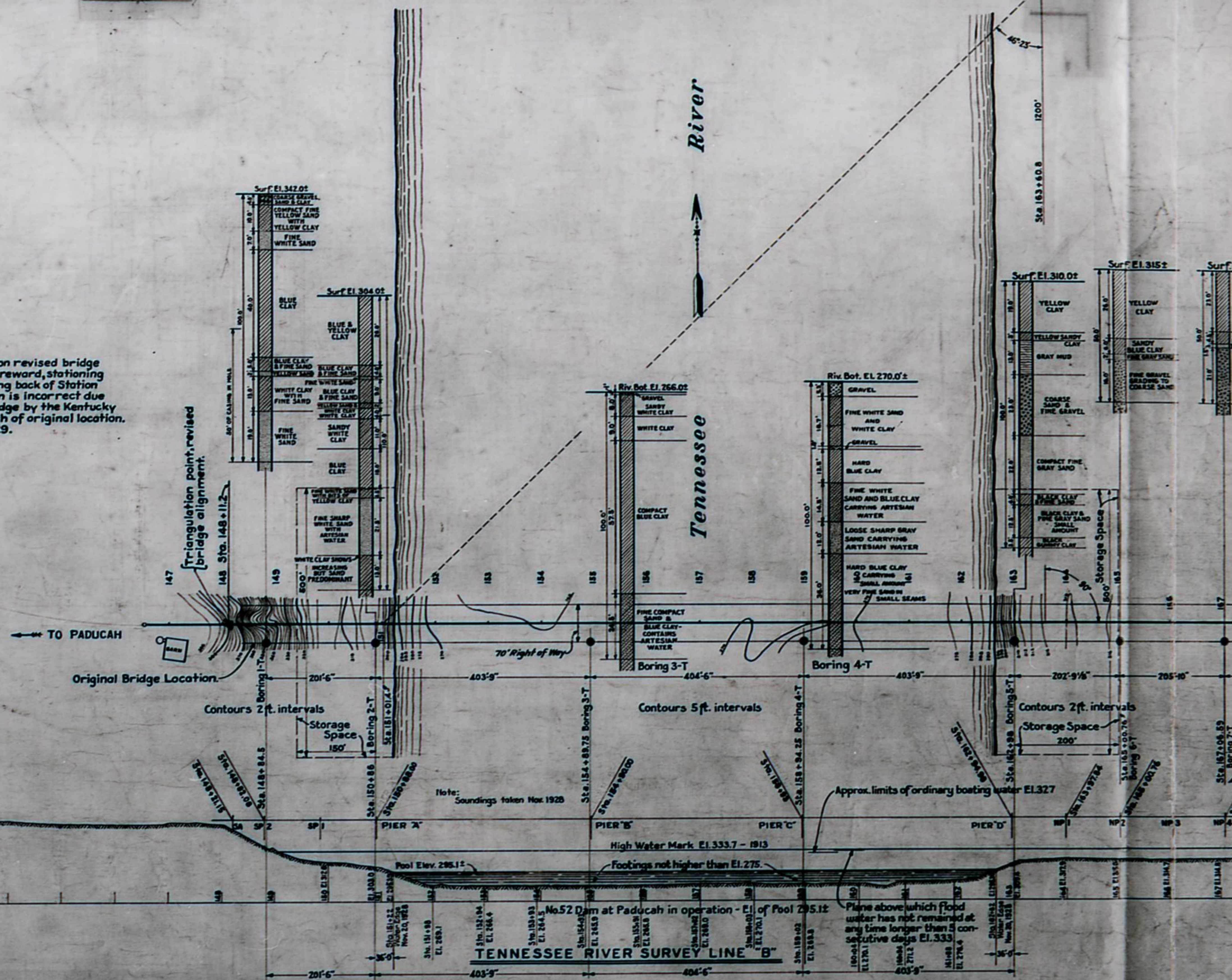
Revised Jan. 1930. Crown of Roadway Elevation raised.

Sheet 2

Dwg 6828

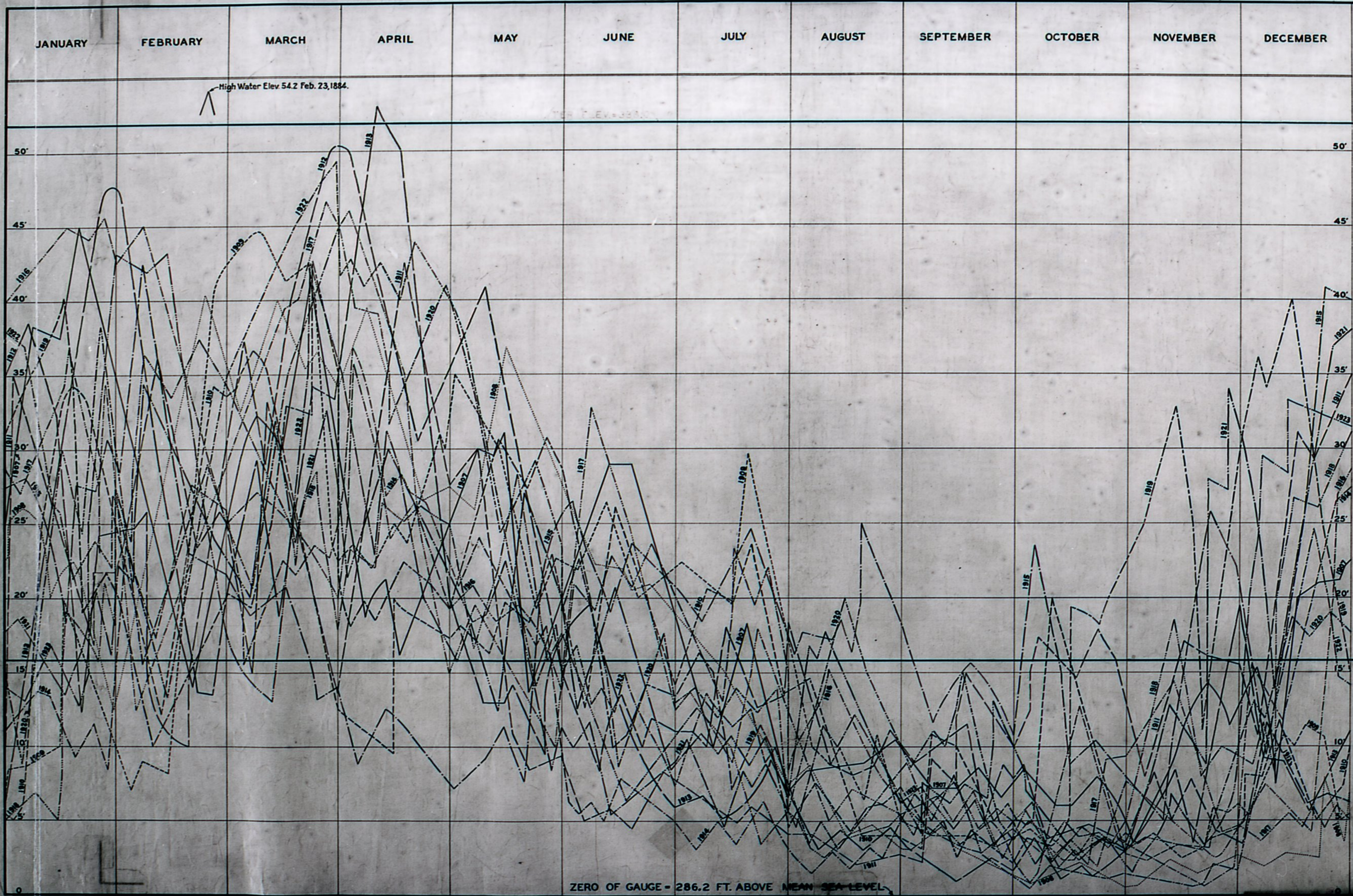


**-NOTE-**  
 From new triangulation point on revised bridge alignment at Station 148+11.2 forward, stationing as shown is correct. All stationing back of Station 148+11.2 and curve data as shown is incorrect due to shifting of center line of bridge by the Kentucky State Highway Dept. 35'-0" North of original location. Date of revision, December 1929.



Dwg 6828  
 Sheet 1A





YEAR	HIGH		LOW	
	MONTH	ELEV.	MONTH	ELEV.
1907	JAN.	45.0	NOV.	3.0
1908	FEB.	40.5	NOV.	1.0
1909	MARCH	44.5	OCT.	2.5
1910	MARCH	37.0	NOV.	2.5
1911	APRIL	43.0	SEPT.	2.0
1912	MARCH	50.0	OCT.	4.0
1913	APRIL	53.0	SEPT.	1.0
1914	APRIL	37.0	NOV.	0.5
1915	FEB.	42.5	NOV.	4.5
1916	JAN.	46.0	NOV.	2.5
1917	MARCH	47.0	OCT.	2.0
1918	FEB.	37.5	OCT.	2.0
1919	MARCH	43.0	SEPT.	2.5
1920	MARCH	45.0	OCT.	3.0
1921	DEC.	37.0	OCT.	3.0
1922	MARCH	48.0	OCT.	0.5
1923	FEB.	43.0	NOV.	2.0

To convert from Tennessee River 1909 Elevations to Ohio River Elevations or M.S.L. add 6.778 feet at site of Bridge.

To convert from Cumberland River Elevations to Ohio River Elevations or M.S.L. add 2.25 feet.

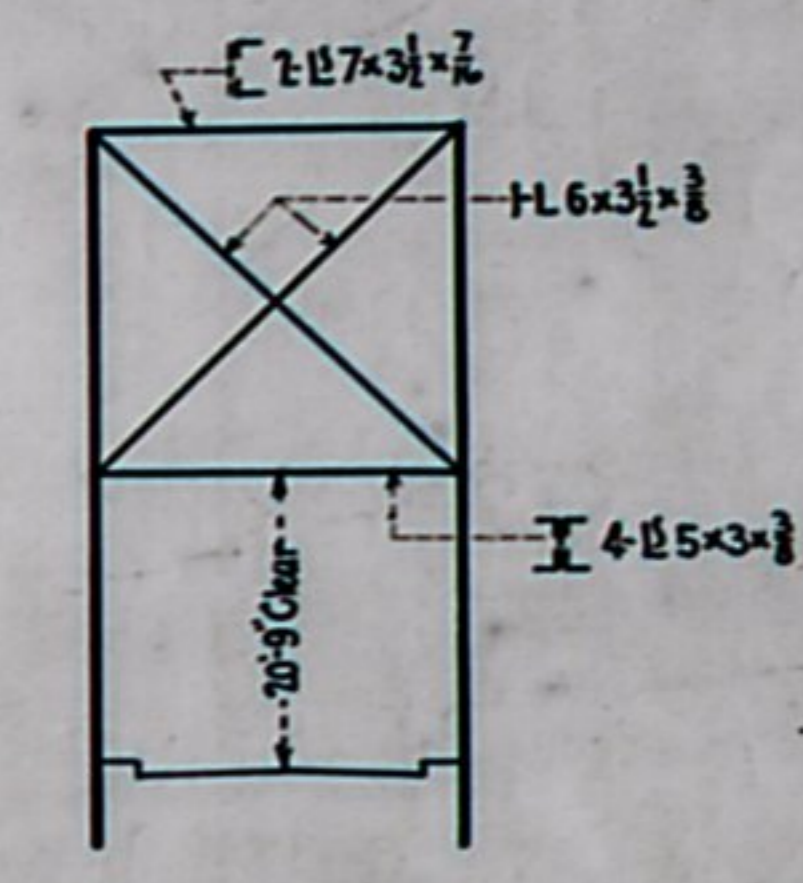
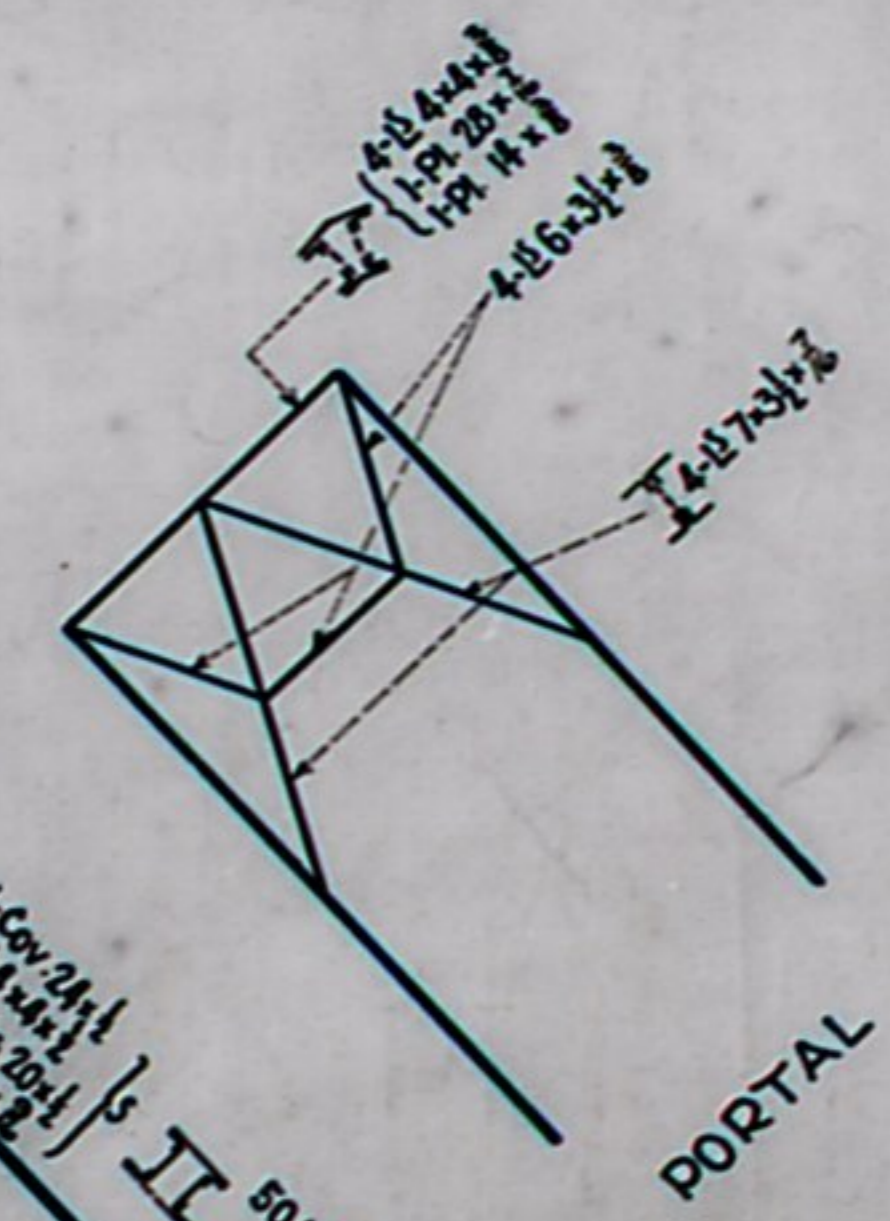
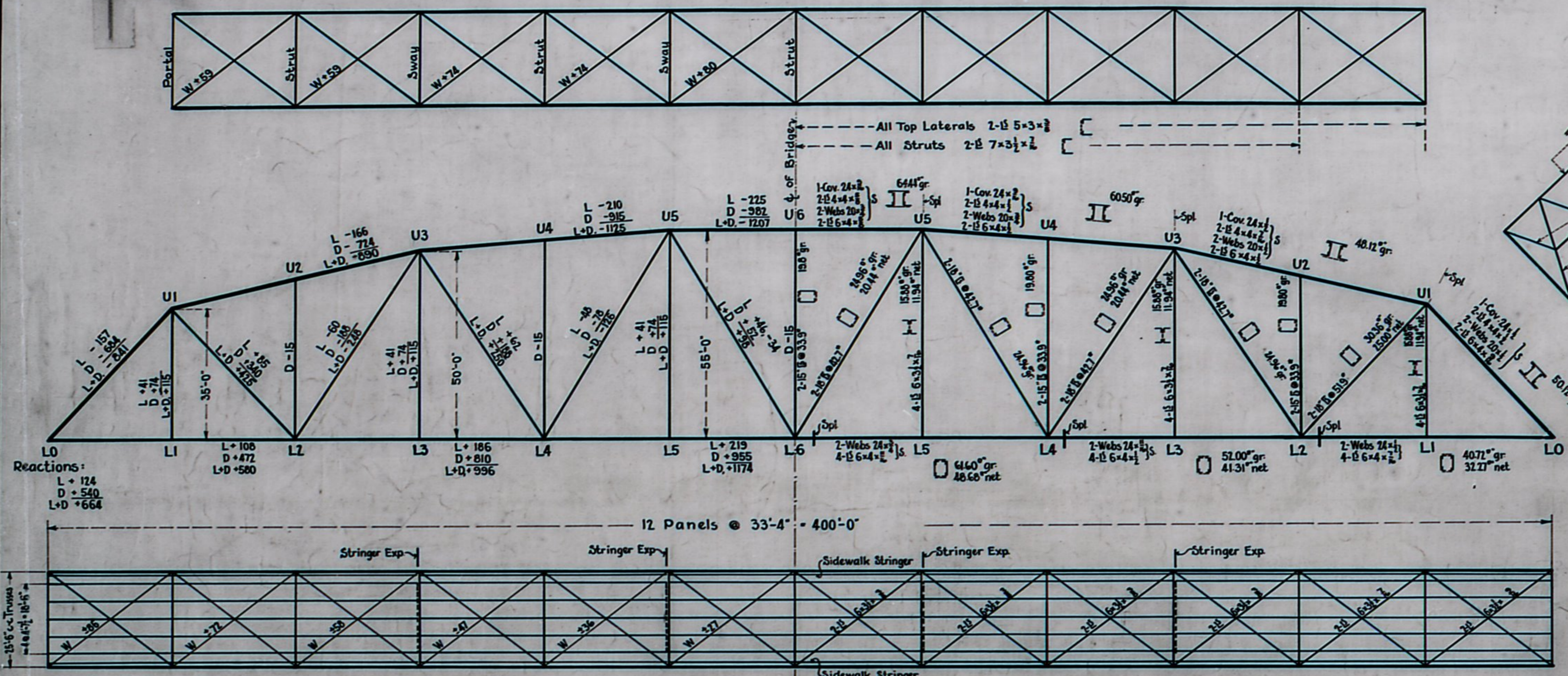
COMPILED FROM DATA FURNISHED BY WAR DEPARTMENT CORPS OF ENGINEERS UNITED STATES ARMY.

ELEV. OF POOL - BROOKPORT, ILL. U.S. DAM NO. 52  
ELEV. = 302.0' Sheet 3

Dwg 6828  
HYDROGRAPH  
OF THE  
OHIO RIVER  
AT  
PADUCAH, KY.

MODJESKI & MASTERS  
CONSULTING ENGINEERS  
HARRISBURG, PA.

Made by GMA  
Printed by F&S



Total Weight of Bridge 4,747,690 steel

ASSUMED LOADINGS

D-Dead Loads - 400' Truss Span

Future Paving	300
Conc. Rdwy & Curbs	2325
Reinf. Steel	150
Railings	100
Floor Steel	525
Bracing	330
Trusses	1670
Total pr. lin. ft. of Bridge	5400

L-Live Loads Class B

21 Ton Truck

(Above loads are for one lane of traffic)

Floorbeams and Trusses designed for 211 Lanes of Traffic, evenly distributed between the two Trusses

Impact:- included in Live Load Allowances

Wind:- 30' pr. sq. Ft. on 1/2 times projected elevation of Structure, plus 200' pr. lin. ft. of Bridge.

Stresses Sections  
Symmetrical about  $\phi$  of Bridge

101'-2" GIRDER SPANS

Dead Loads

Future Paving	300
Conc. Rdwy & Curbs	2350
Reinf. Steel	150
Railings, Post & Curbs	110
Floor Steel	160
Girders	750
Cross Frames	40
Total pr. lin. ft.	3650

45'-0" BEAM SPANS

Dead Loads

Future Paving	300
Conc. Rdwy & Curbs	2350
Reinf. Steel	150
Railings, Post & Curbs	110
Floor Steel	160
Girders	400
Total pr. lin. ft.	3470

60'-0" GIRDER SPANS

Dead Loads

Future Paving	300
Conc. Rdwy & Curbs	2350
Reinf. Steel	150
Railings, Post & Curbs	110
Floor Steel	160
Girders	460
Cross Frames	40
Total pr. lin. ft.	3570

CROSS BEAMS (over Approach Girders)

Moments	at Girder	at center
L	49	73
D	14	3
L+D	63	76

16" C.B. @ 43"

FLOORBEAMS

Shear	Moment	Section
L	41	318
D	56	392
L+D	97	710

Web 88 x 7/8  
4-13 8 x 6 1/2  
2-Covs. 18 x 7/8  
2-Lvs. 18 x 7/8 x 5'

ROADWAY STRINGERS

Shear	Moment	Section
L	19	146
D	10	88
L+D	29	234

24" C.B. @ 70"

SIDEWALK STRINGERS

Shear	Moment	Section
L	19	146
D	10	88
L+D	29	234

6" C @ 105"

Reaction	Shear	Moment
L	58	54
D	100	93
L+D	158	147

Reaction	Moment
L	50
D	40
L+D	90

30" C.B. @ 200"

Reaction	Shear	Moment
L	54	49
D	54	45
L+D	108	94

Web 71 x 7/8  
4-12 6 x 6 x 2

In all cases where CB or other special sections are shown, the contractor may substitute, subject to the Engineers approval, sections of equal weight and strength.

Revised April 1932 to conform to actual construction.

APPROVED

*Ray M. Masters*  
*J. M. Masters*

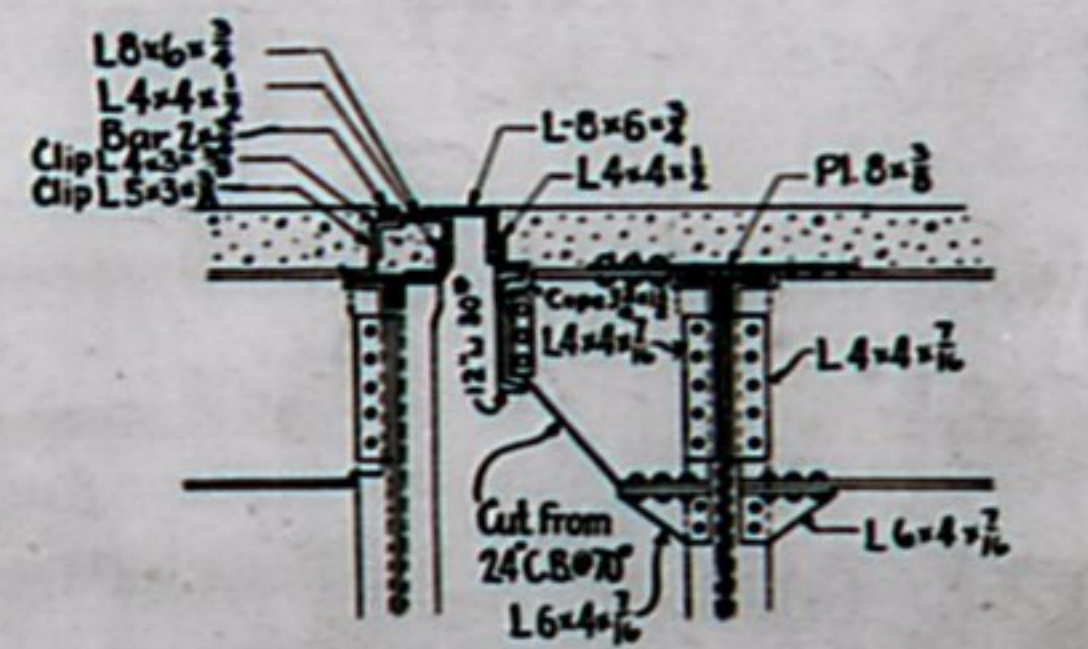
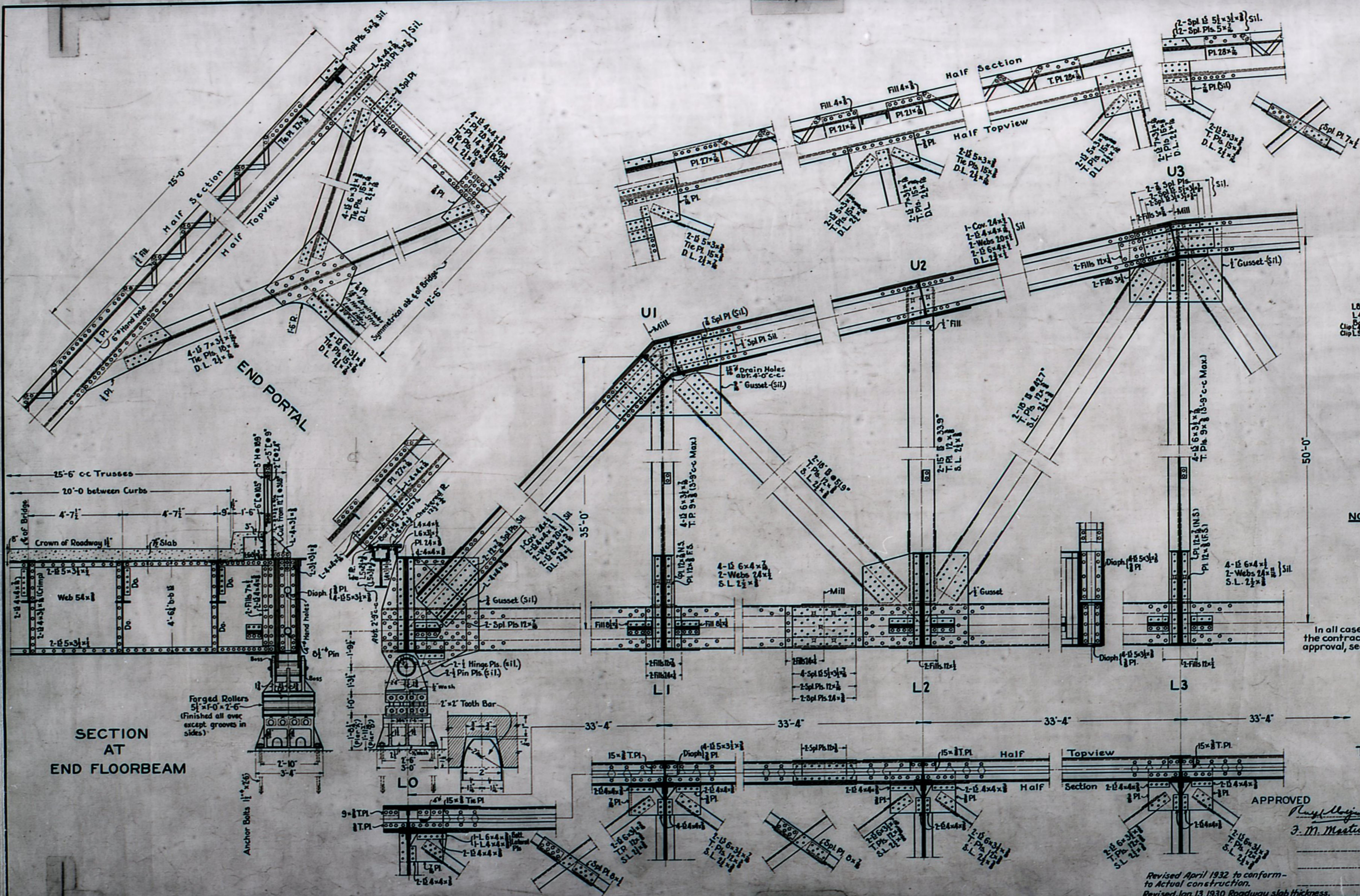
NOTES:-

Stresses in thousands of pounds  
 Moments in thousands of footpounds  
 + denotes Tension  
 - denotes Compression  
 S- indicates Silicon Steel  
 I- indicates Field Splice  
 Material:- Medium Carbon Steel except as noted.

Revised Jan. 13, 1930 { Wt. per lin. ft. Concrete Rdwy. & Curbs.  
 Wt. per lin. ft. Future Paving.

COMMONWEALTH OF KENTUCKY  
 STATE HIGHWAY DEPARTMENT  
 TENNESSEE RIVER BRIDGE  
 NEAR PADUCAH, KY  
 SUPERSTRUCTURE  
 STRESS SHEET  
 SCALE IN FEET  
 1" = 10'-0"  
 MAY 1929  
 DRAWING NO. 3  
 CONTRACT NO. 2  
 MODJESKI AND MASTERS  
 ENGINEERS

Dwg 6828



Detail of Expansion Joint at Piers B & C.

- NOTES:-**
- Material:- Medium Carbon Steel except Castings, Rollers, and where noted, Silicon Steel (Sil)
  - Rivets:- 1" in Trusses (incl Floorbeam Connections) 3/4" in Floorbeams, Stringers, Bracing and in Lacing for Web Members & Bottom Chords. Similar to that of Approach Spans. See Drawing No 6
  - Castings:- Cast Steel annealed.
  - Rollers:- Forged Steel.

In all cases where CB or other special sections are shown the contractor may substitute, subject to the Engineers approval, sections of equal weight and strength.

Sheet 5

Dwg 6828

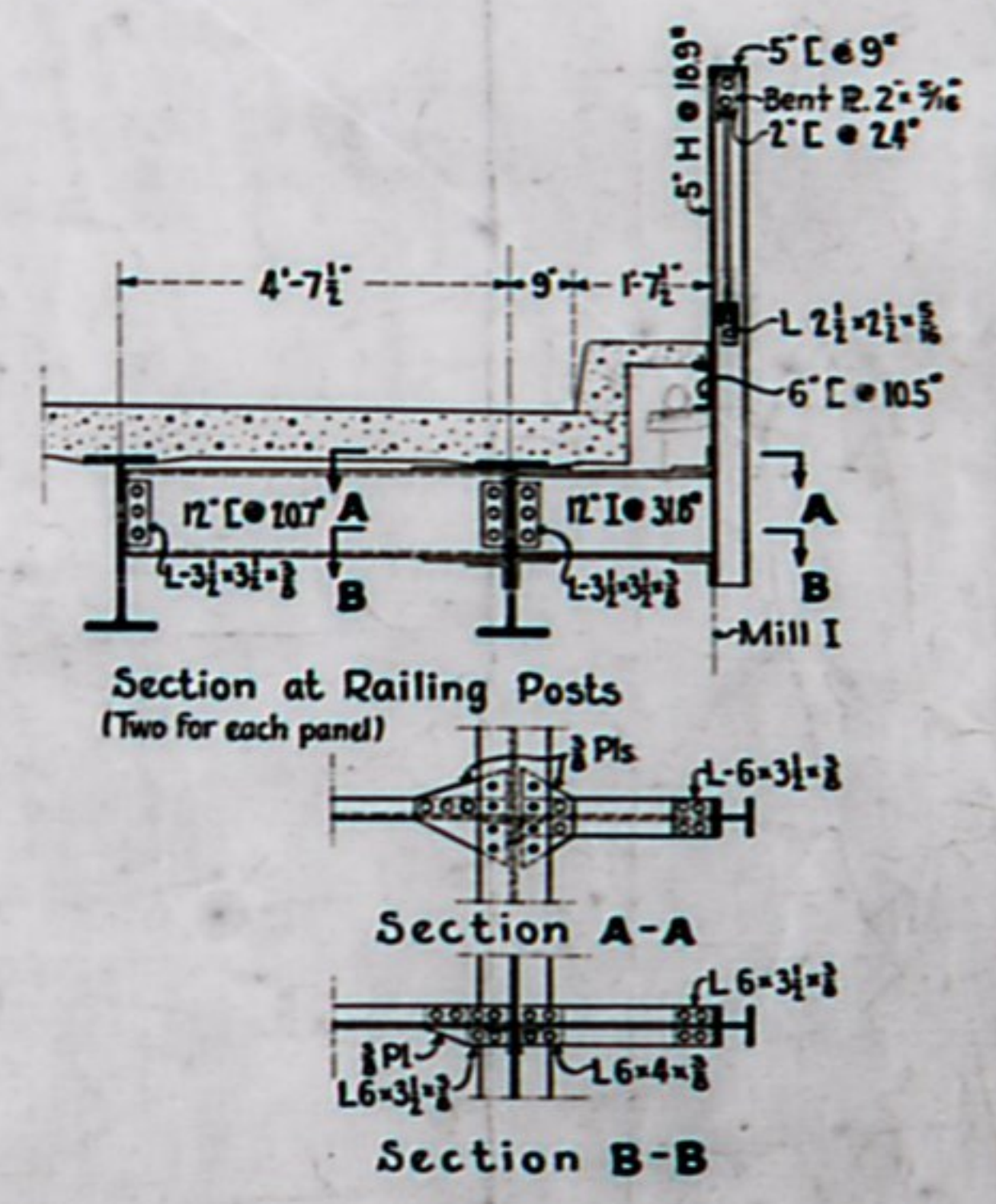
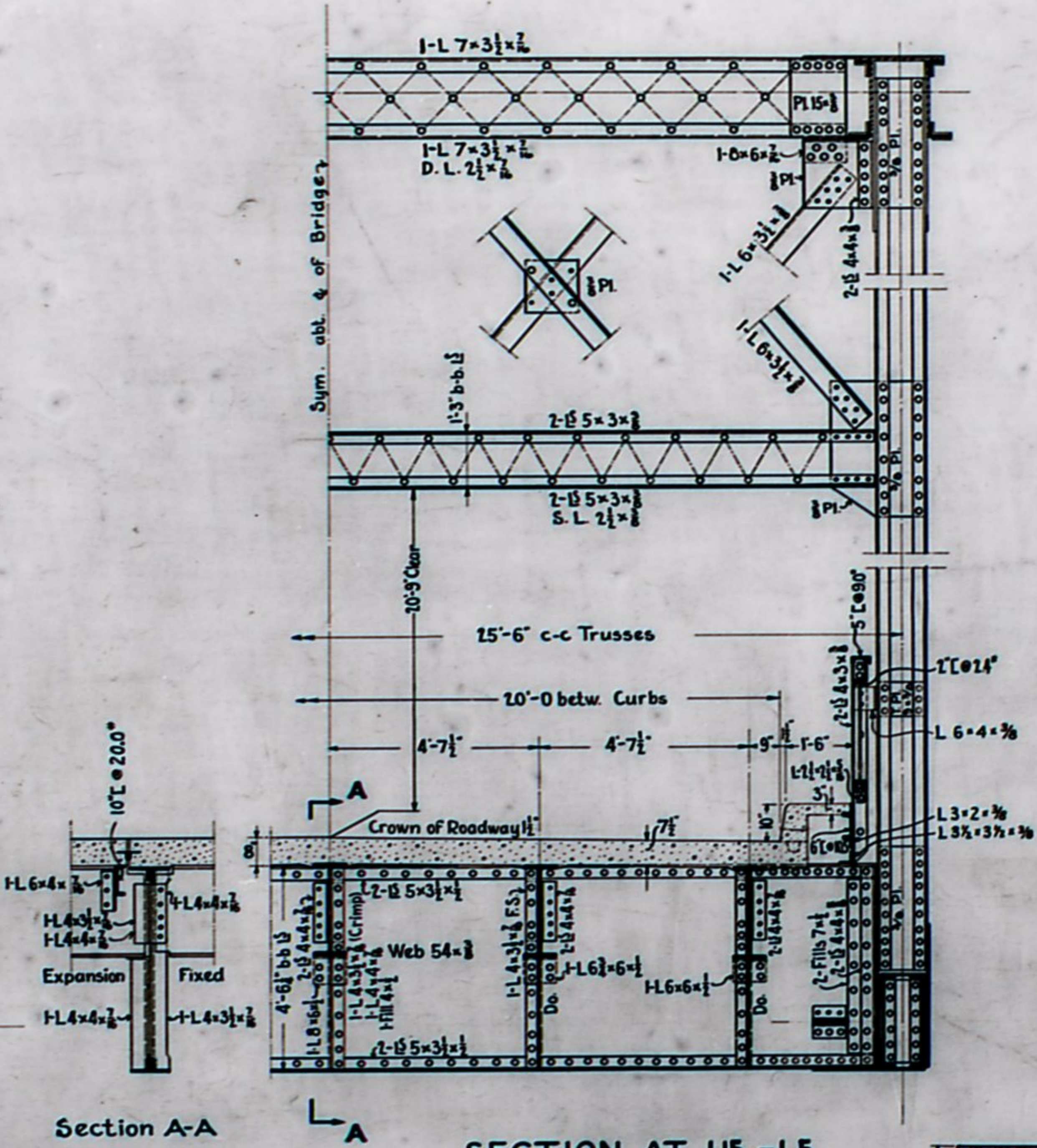
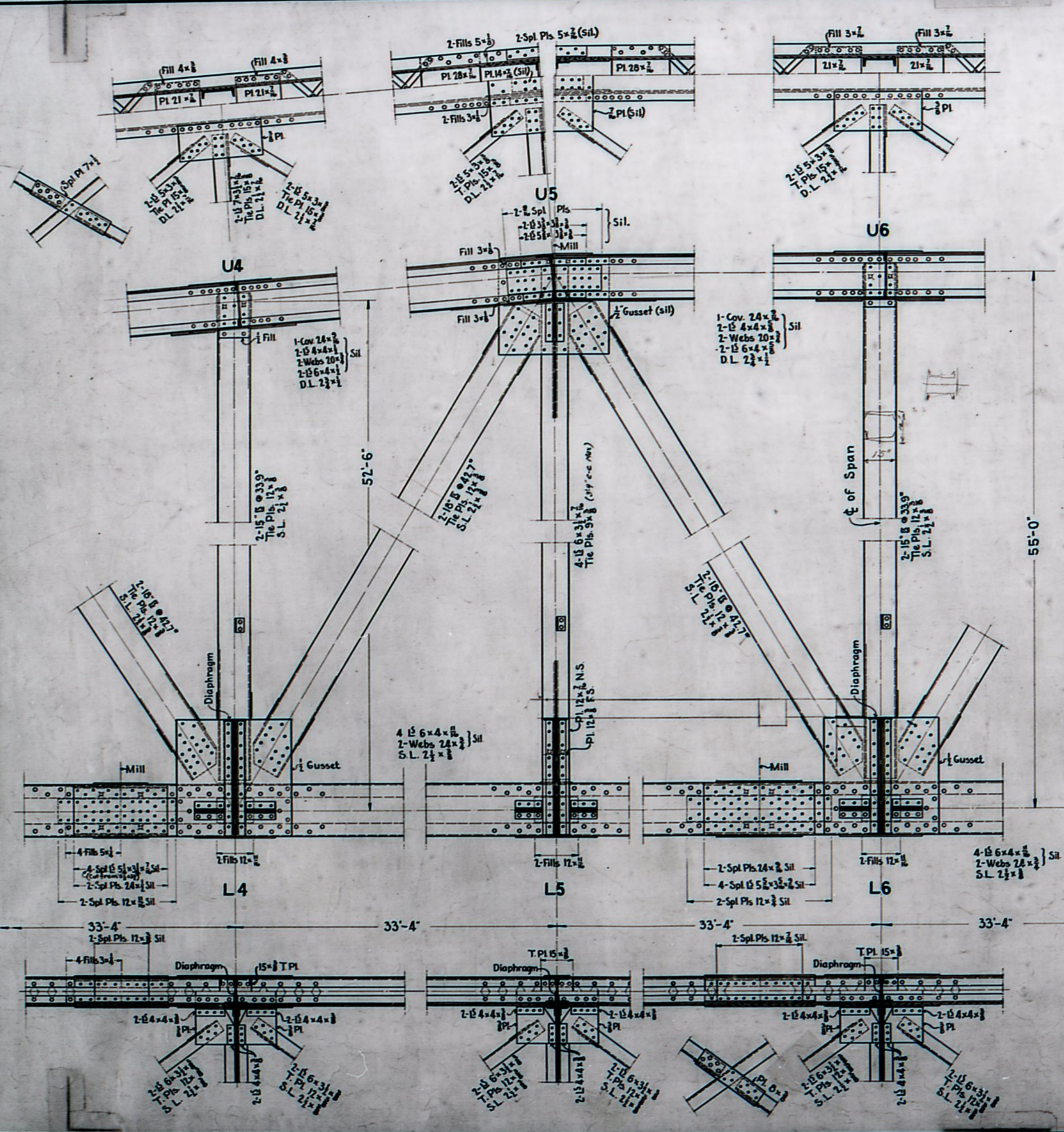
COMMONWEALTH OF KENTUCKY  
STATE HIGHWAY DEPARTMENT  
TENNESSEE RIVER BRIDGE  
NEAR PADUCAH KY.

**SUPERSTRUCTURE**  
**DETAILS OF 400' SPAN**  
SCALE IN FEET  
0 1 2 3 4

APPROVED  
*Russell M. Masters*  
F. M. Masters

Revised April 1932 to conform to Actual construction.  
Revised Jan. 13, 1930 Roadway slab thickness.

MAY 19'9  
DRAWING NO. 4  
CONTRACT NO. 2  
MODJESKI AND MASTERS  
ENGINEERS

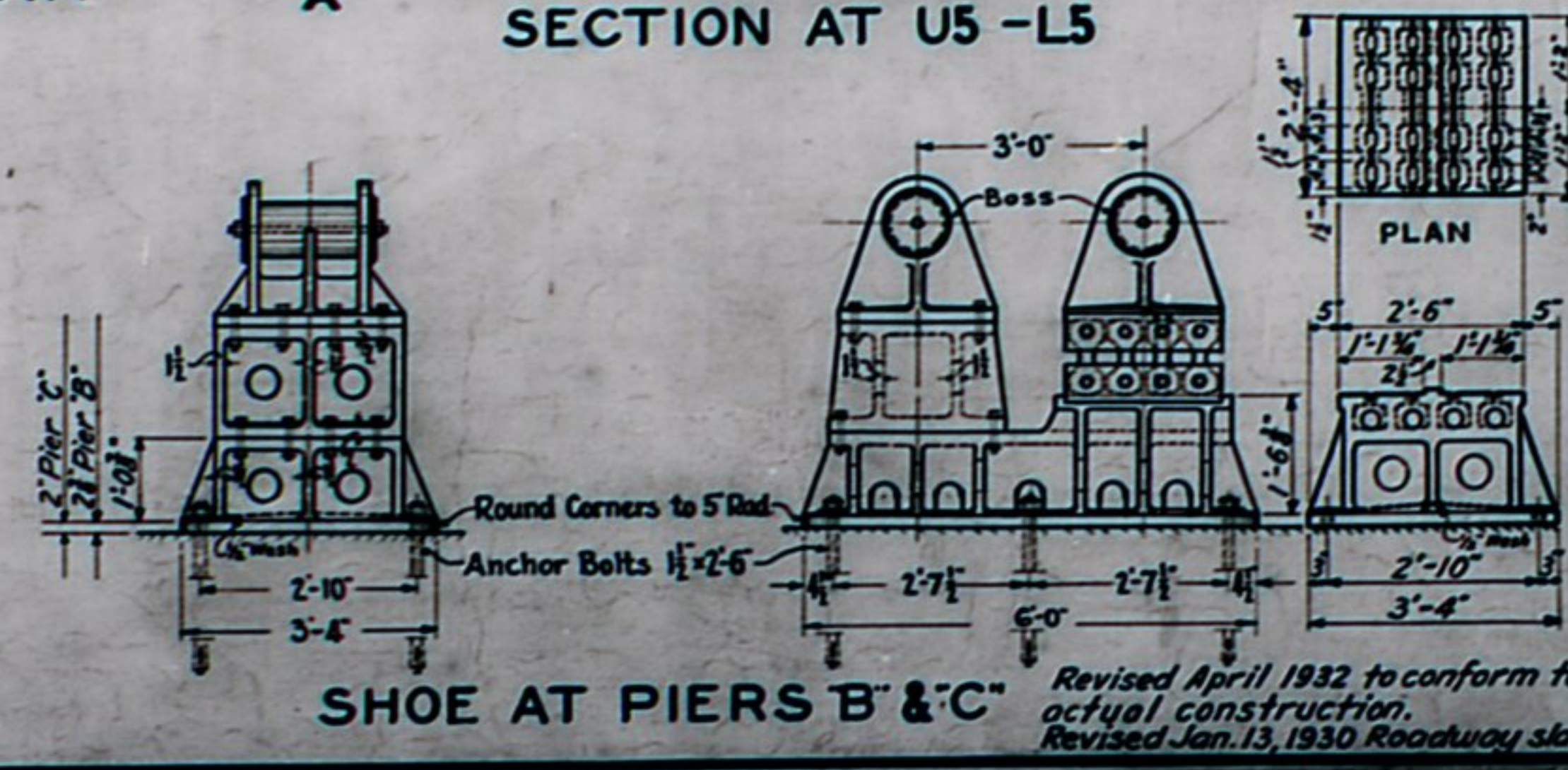


**NOTES:-**  
 Material:- Medium Carbon Steel except Castings, Rollers and where noted, Silicon Steel (S11)  
 Rivets:- 1/2" in Trusses (incl. Floorbeam Connections) 5/8" in Floorbeams, Stringers, Bracing and in Lacing for Web Members & Bottom Chords  
 Railing:- Similar to that of Approach Spans - See Drawing No. 6  
 Castings:- Cast Steel annealed  
 Rollers:- Forged Steel

APPROVED  
*Roy H. ...*  
*F. M. ...*

Sheet 6

Dwg 6828

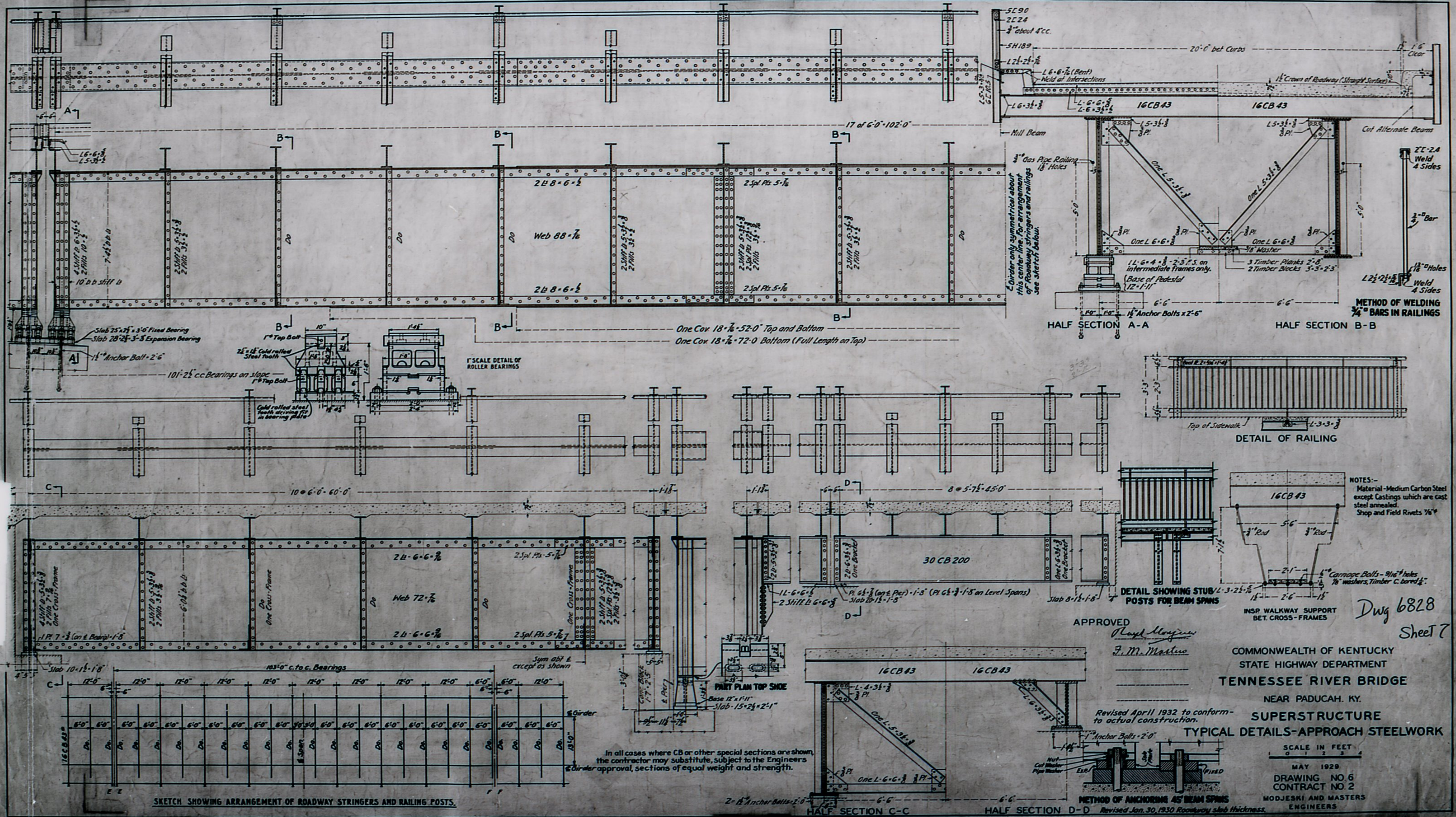


COMMONWEALTH OF KENTUCKY  
 STATE HIGHWAY DEPARTMENT  
**TENNESSEE RIVER BRIDGE**  
 NEAR PADUCAH, KY.  
**SUPERSTRUCTURE**  
**DETAILS OF 400' SPAN**  
 SCALE IN FEET  
 1" = 10'

MAY 1929  
 DRAWING NO. 5  
 CONTRACT NO. 2

MODJESKI AND MASTERS  
 ENGINEERS

Revised April 1932 to conform to actual construction.  
 Revised Jan. 13, 1930 Roadway slab thickness.



HALF SECTION A-A

HALF SECTION B-B

DETAIL OF RAILING

DETAIL SHOWING STUB POSTS FOR BEAM SPANS

HALF SECTION C-C

HALF SECTION D-D

SKETCH SHOWING ARRANGEMENT OF ROADWAY STRINGERS AND RAILING POSTS.

NOTES:-  
Material - Medium Carbon Steel except Castings which are cast steel annealed.  
Shop and Field Rivets 7/8"

APPROVED  
*Raymond Morgan*  
*F. M. Mastino*

COMMONWEALTH OF KENTUCKY  
STATE HIGHWAY DEPARTMENT  
**TENNESSEE RIVER BRIDGE**  
NEAR PADUCAH, KY.  
**SUPERSTRUCTURE**  
**TYPICAL DETAILS-APPROACH STEELWORK**

SCALE IN FEET  
0 1 2 3 4  
MAY 1929  
DRAWING NO. 6  
CONTRACT NO. 2  
MODJESKI AND MASTERS  
ENGINEERS

Dwg 6828  
Sheet 7

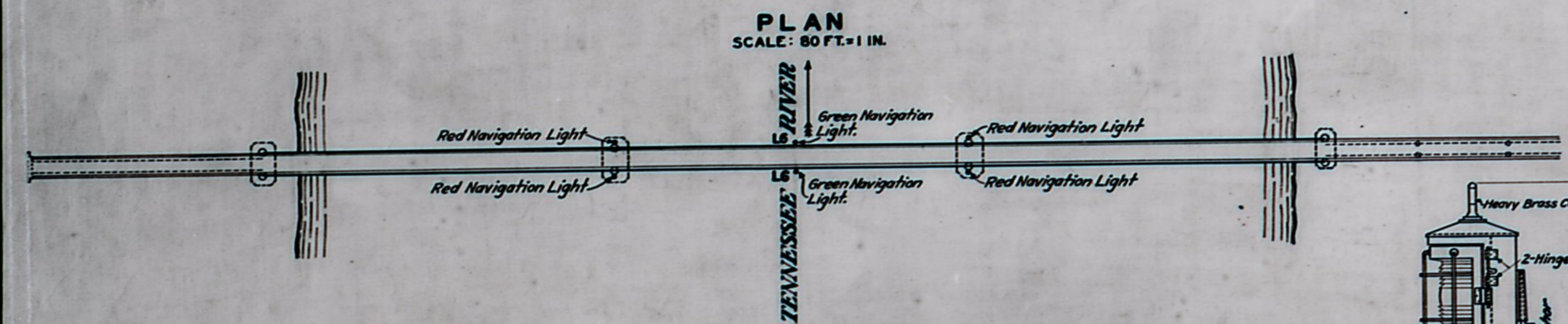
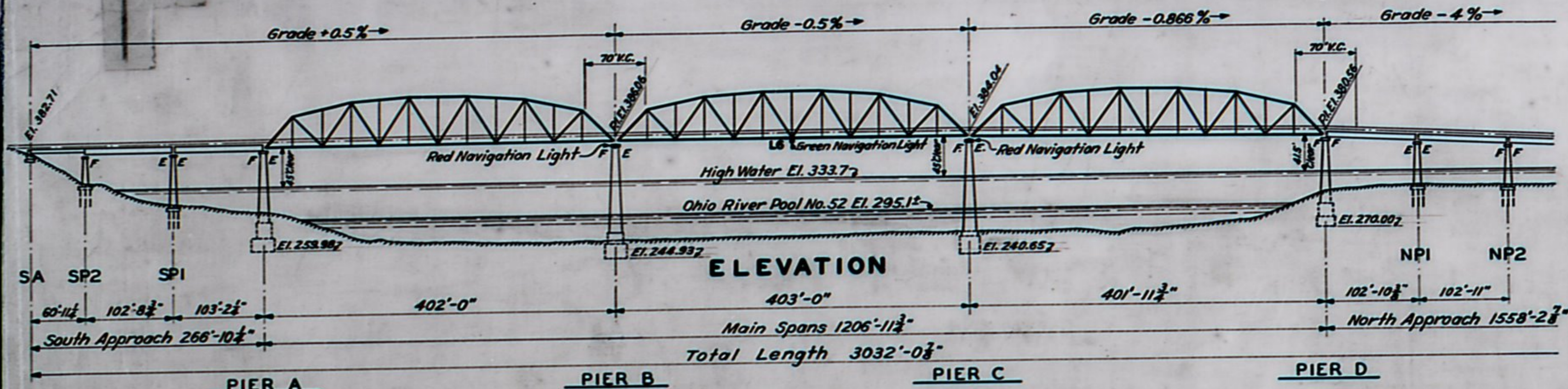
In all cases where CB or other special sections are shown the contractor may substitute, subject to the Engineers approval, sections of equal weight and strength.

Revised April 1932 to conform to actual construction.

Method of Anchoring 45' Beam Spans  
Revised Jan. 30, 1930 Roadway slab thickness.







**REQUIREMENTS FOR NAVIGATION LIGHT FIXTURE.**

The fixture shall be made of heavy copper not less than Number 13, B.W.G. with hinged front door securely latched and fastened. The fixtures are to be water tight and dust proof. Fixtures to be of a type suitable for oil burning.

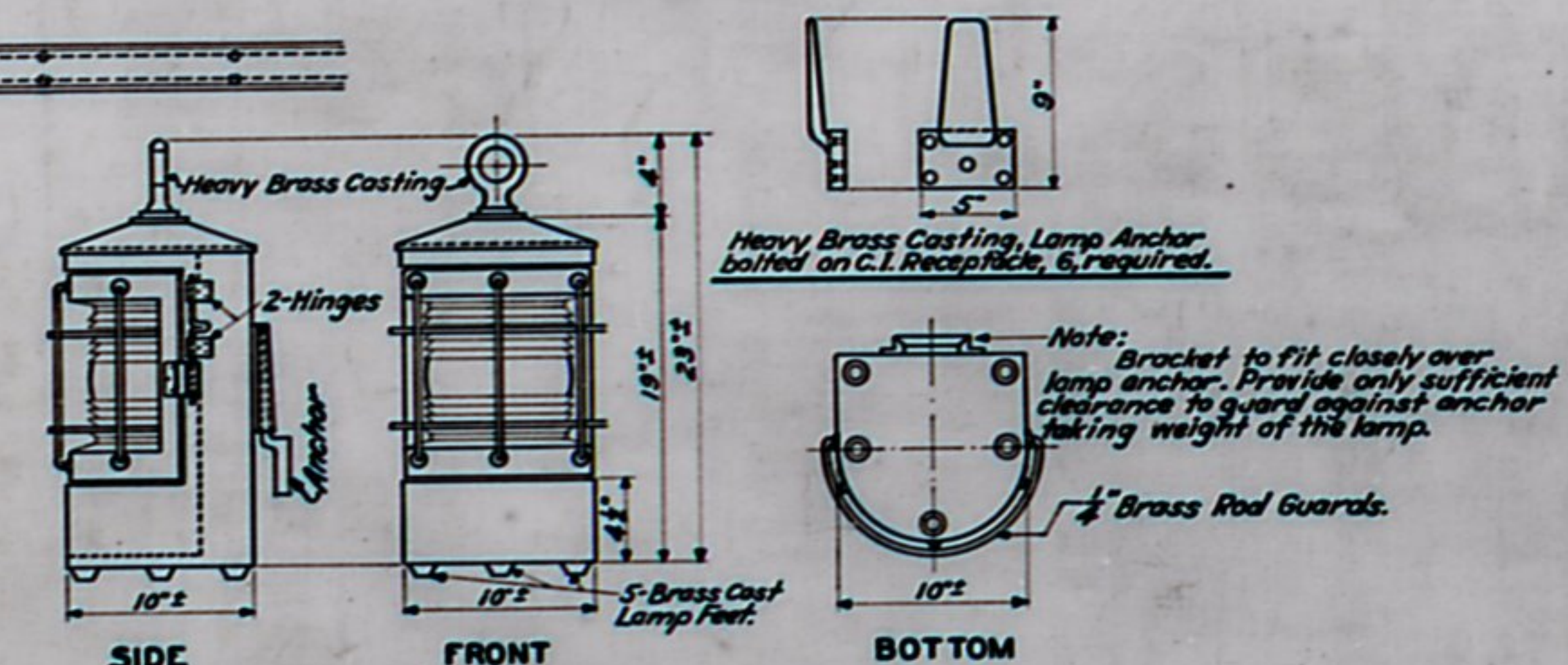
Eight inch half section fresnel type, or equal lenses are required to show 180° to the horizon. Lens to be green for the channel lights and ruby for the pier lights.

Reflectors are to be provided for all lamps.

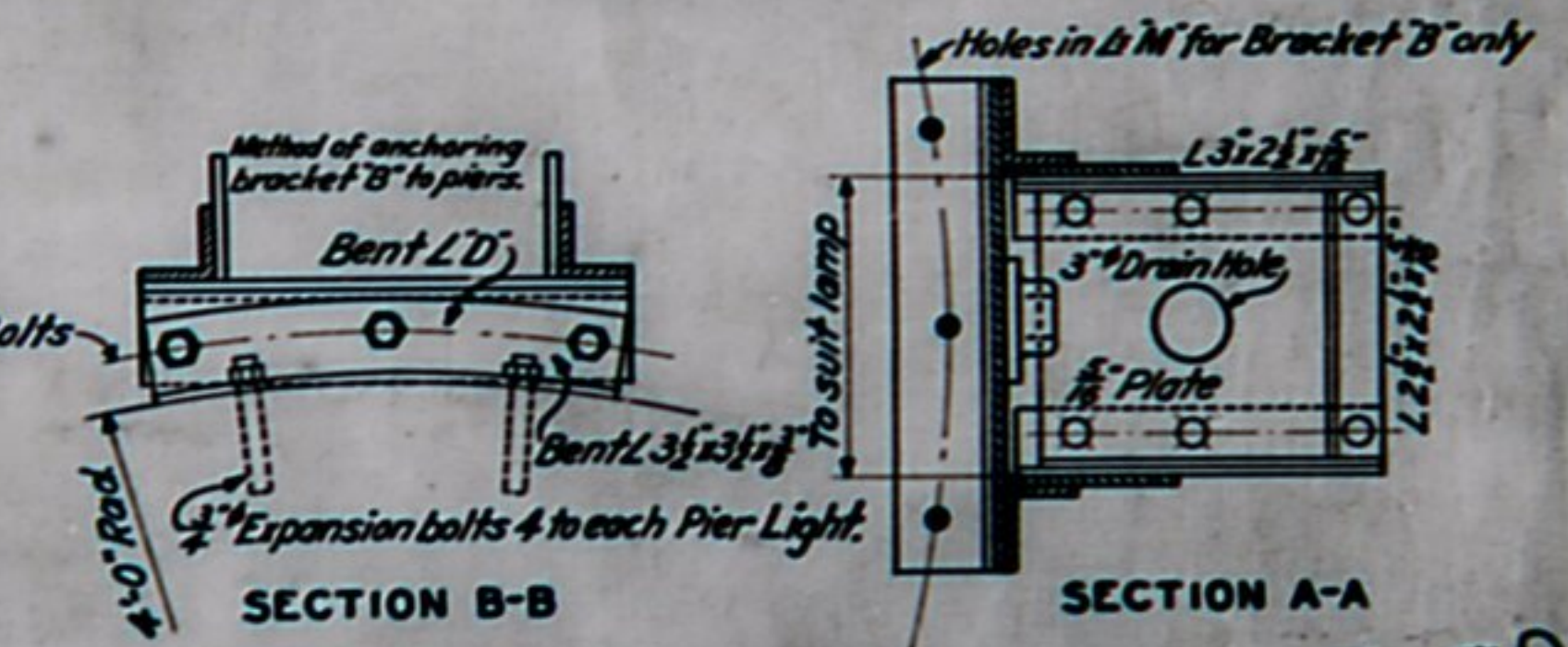
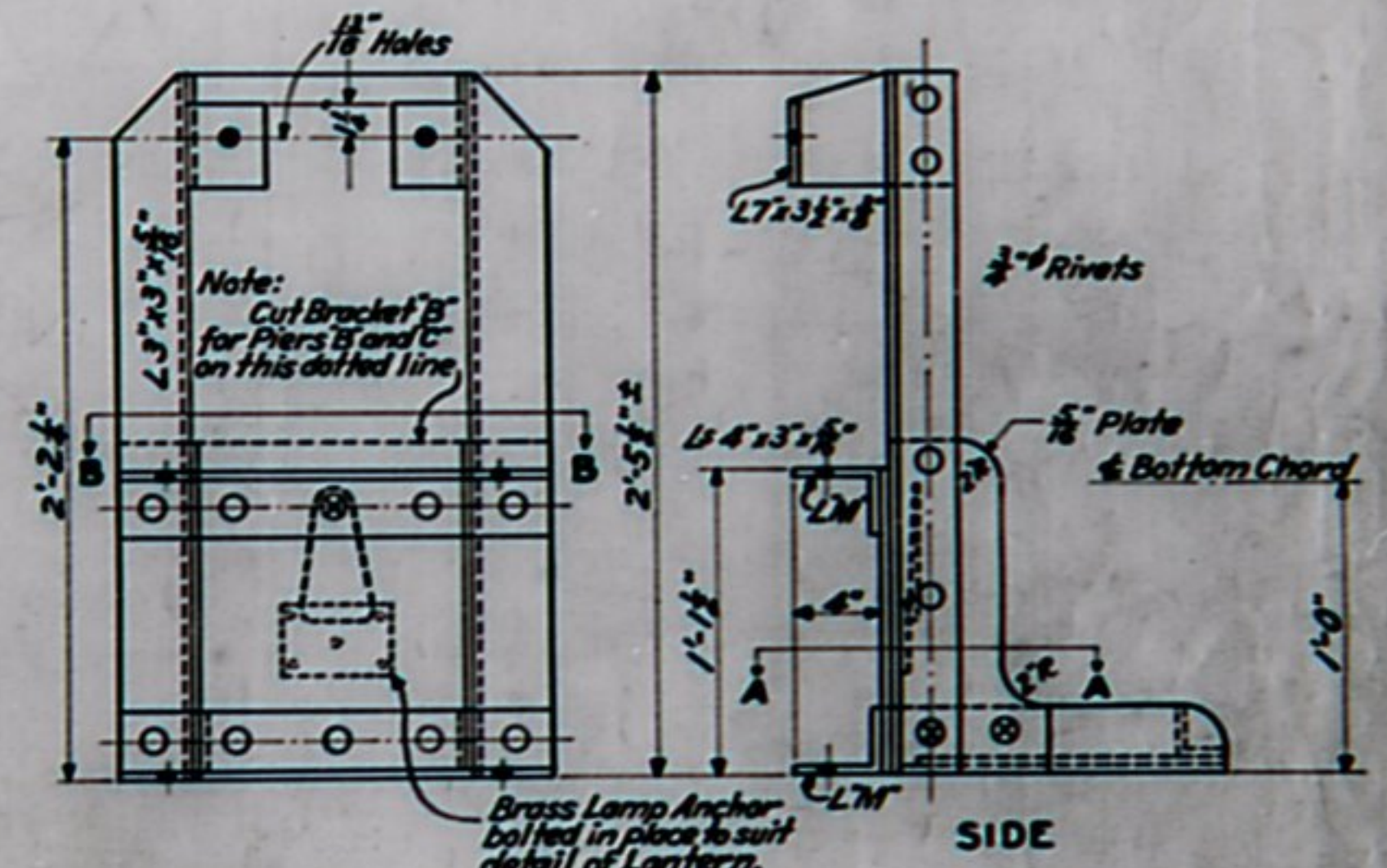
A strong galvanized metal chain shall be firmly fastened to a heavy cast brass ring at the top of fixture, as shown on the drawing, in order that fixture can be lifted from the holding bracket.

Two (2) fixtures are required for Green lights.

Four (4) fixtures are required for Red lights.



DETAIL OF NAVIGATION LIGHT  
SCALE: 1 1/2" = 1'-0"



DETAIL OF BRACKETS 'A' & 'B'  
SCALE: 1 1/2" = 1'-0"

Dwg 6828

COMMONWEALTH OF KENTUCKY  
STATE HIGHWAY DEPARTMENT  
**TENNESSEE RIVER BRIDGE**

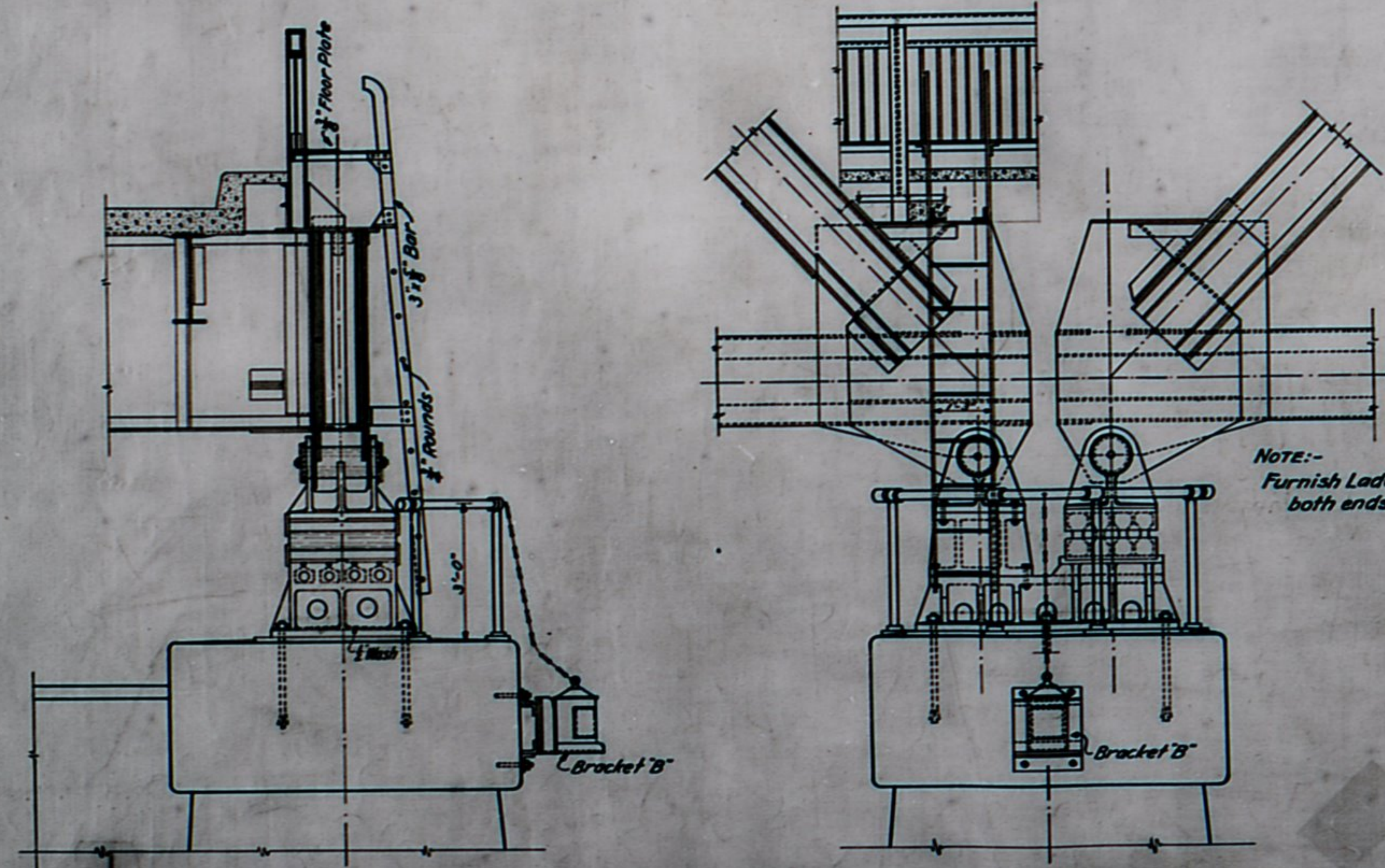
NEAR PADUCAH, KY.  
**NAVIGATION LIGHTS**

SCALE: AS NOTED  
DECEMBER 1929  
DRAWING NO. 8  
CONTRACT NO. 2

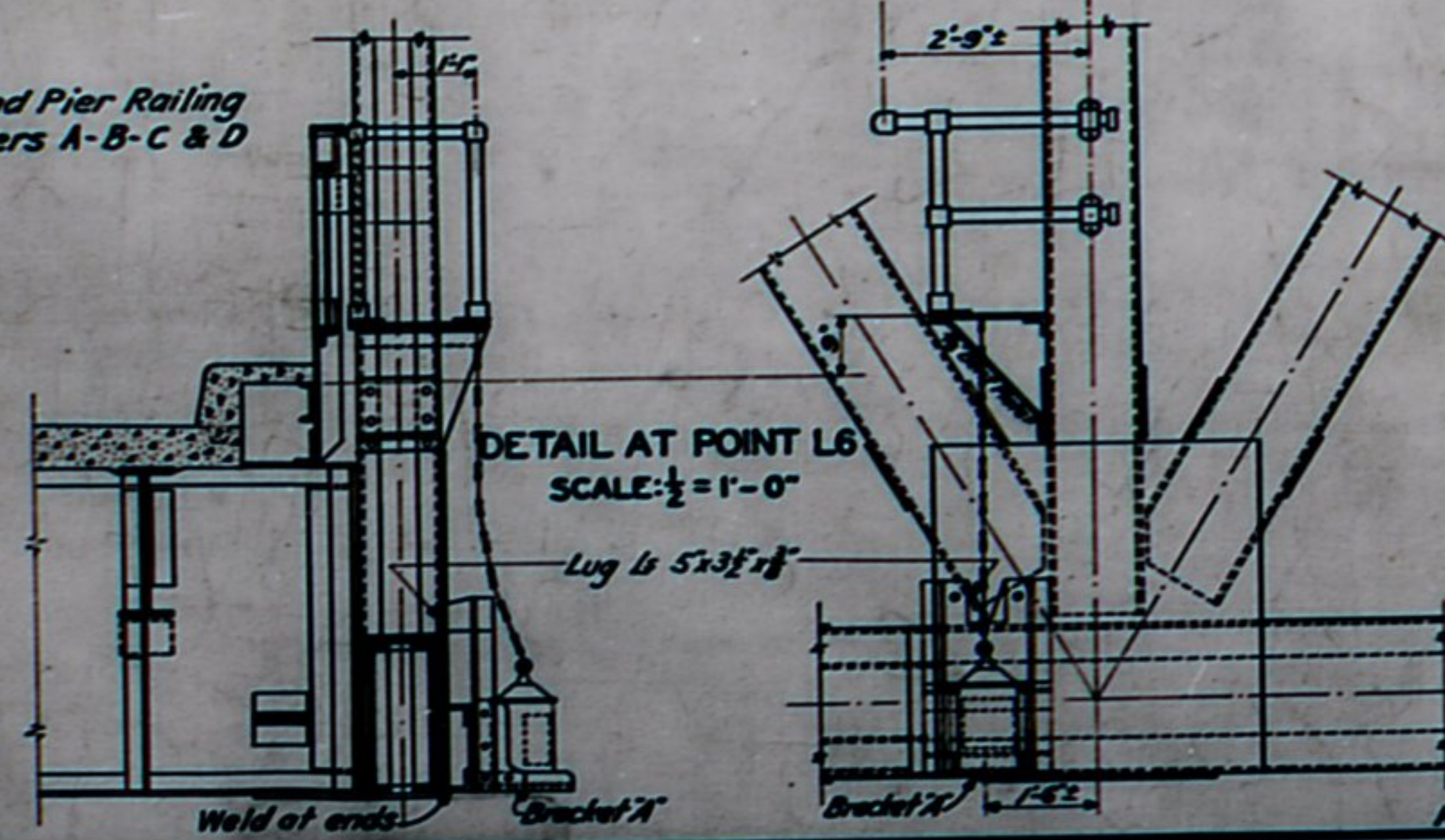
MODJESKI AND MASTERS  
ENGINEERS

APPROVED: *Ray M. Masters*

Revised April 1932 to conform to actual construction.  
Revised Jan. 13, 1930 Crown of Roadway Elevation raised 6"

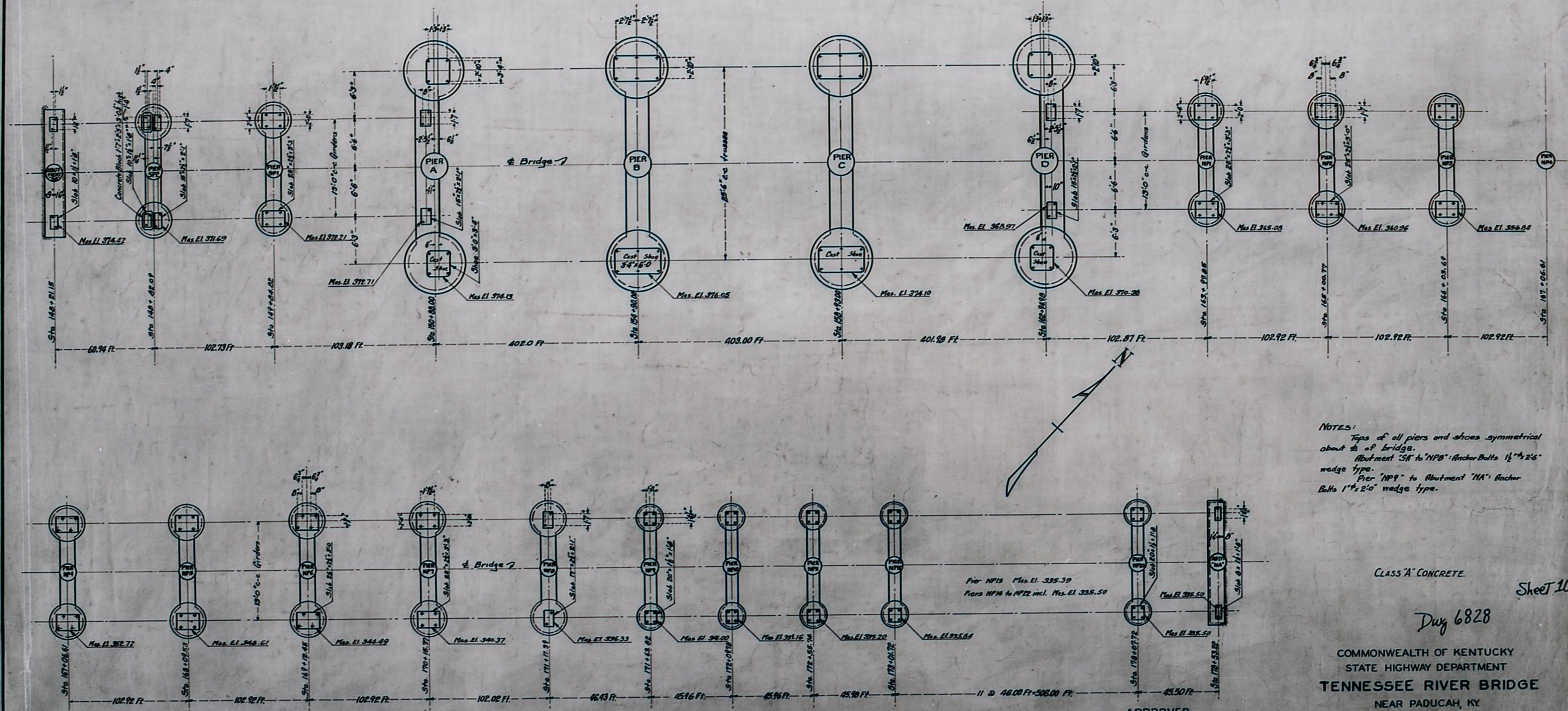


DETAIL AT PIERS B AND C  
SCALE: 1/2" = 1'-0"



DETAIL AT POINT L6  
SCALE: 1/2" = 1'-0"

Sheet 9



NOTES:  
 Tops of all piers and shoes symmetrical about  $\pm$  of bridge.  
 Abutment "NA" to "NP": Anchor Bolts  $1\frac{1}{2}$ " x 2'-6" wedge type.  
 Pier "NP" to Abutment "NA": Anchor Bolts 1" x 2'-0" wedge type.

Pier NP13 Max. El. 335.39  
 Piers NP14 to NP22 incl. Max. El. 335.50

CLASS "A" CONCRETE.

Sheet 10

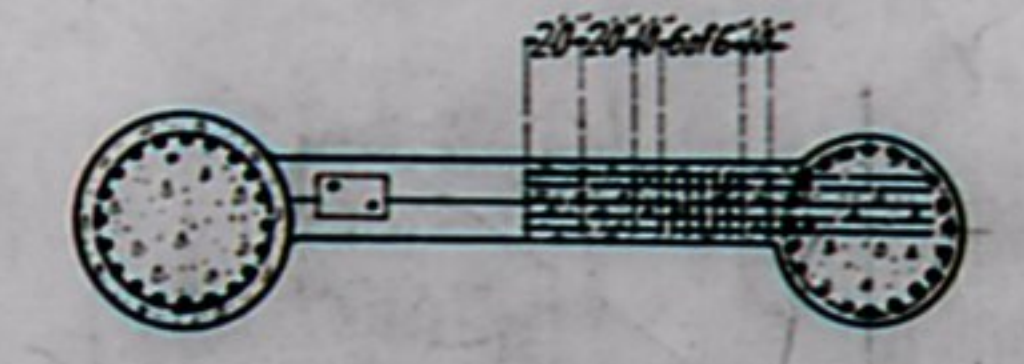
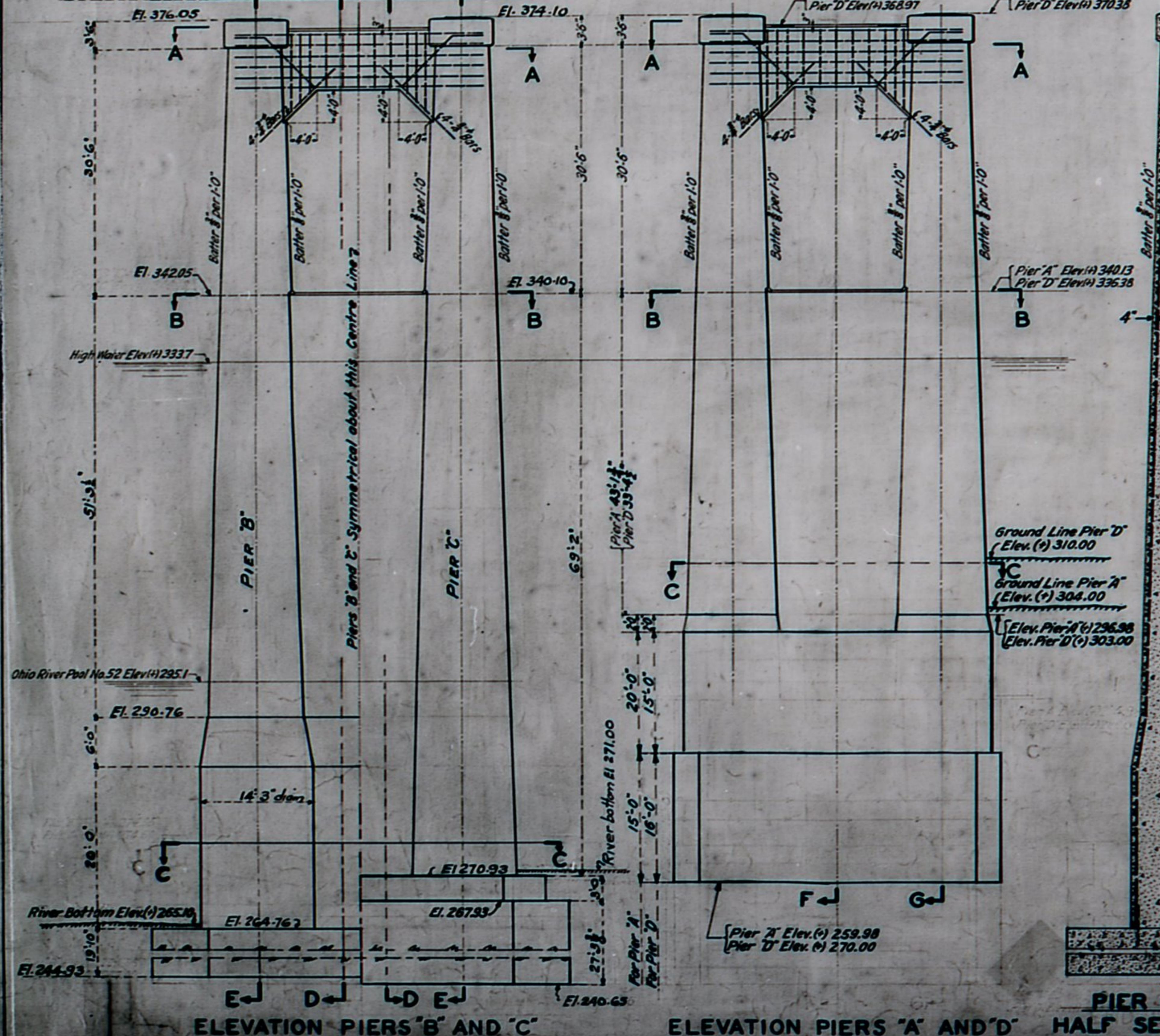
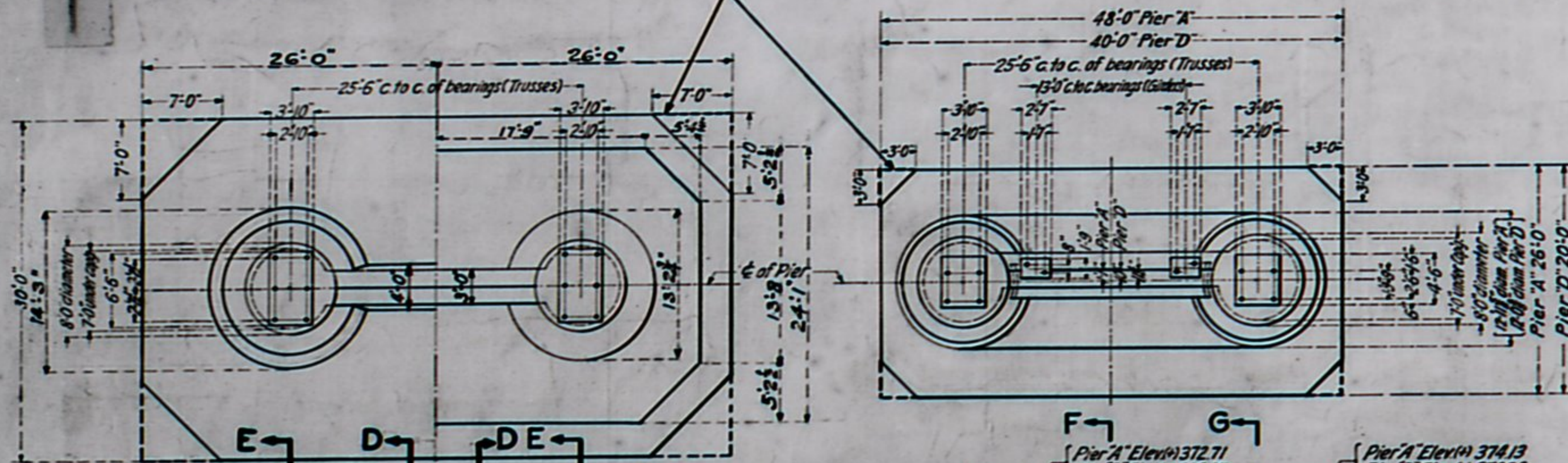
Dwg 6828

COMMONWEALTH OF KENTUCKY  
 STATE HIGHWAY DEPARTMENT  
**TENNESSEE RIVER BRIDGE**  
 NEAR PADUCAH, KY

APPROVED  
*[Signature]*  
 S. M. Maston

**MASONRY PLAN**  
 SCALE IN FEET  
 MAY 1929  
 DRAWING NO. 2.  
 CONTRACT NO. 1 & 2.  
 MODJESKI AND MASTERS  
 ENGINEERS

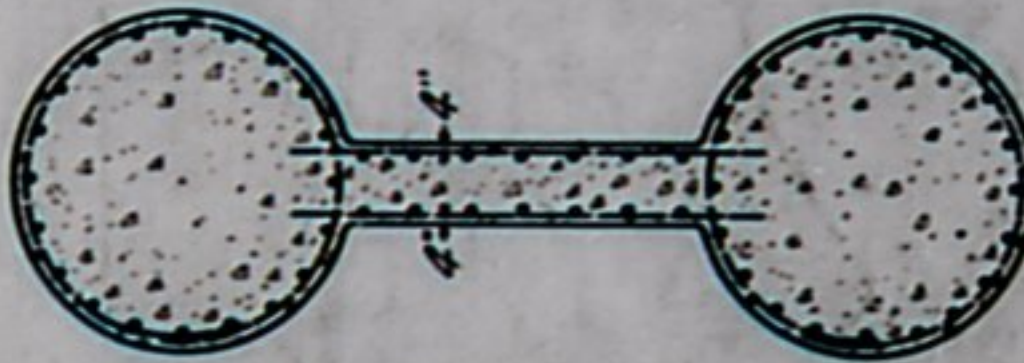
NOTE- Footing built as shown by request of Contractor.



SECTION A-A



SECTION B-B



SECTION C-C

APPROVED  
*Roy M. Jones*  
 J. M. Masten

CLASS 'A' CONCRETE.

Sheet 11

July 6828

COMMONWEALTH OF KENTUCKY  
 STATE HIGHWAY DEPARTMENT  
 TENNESSEE RIVER BRIDGE  
 NEAR PADUCAH, KY.

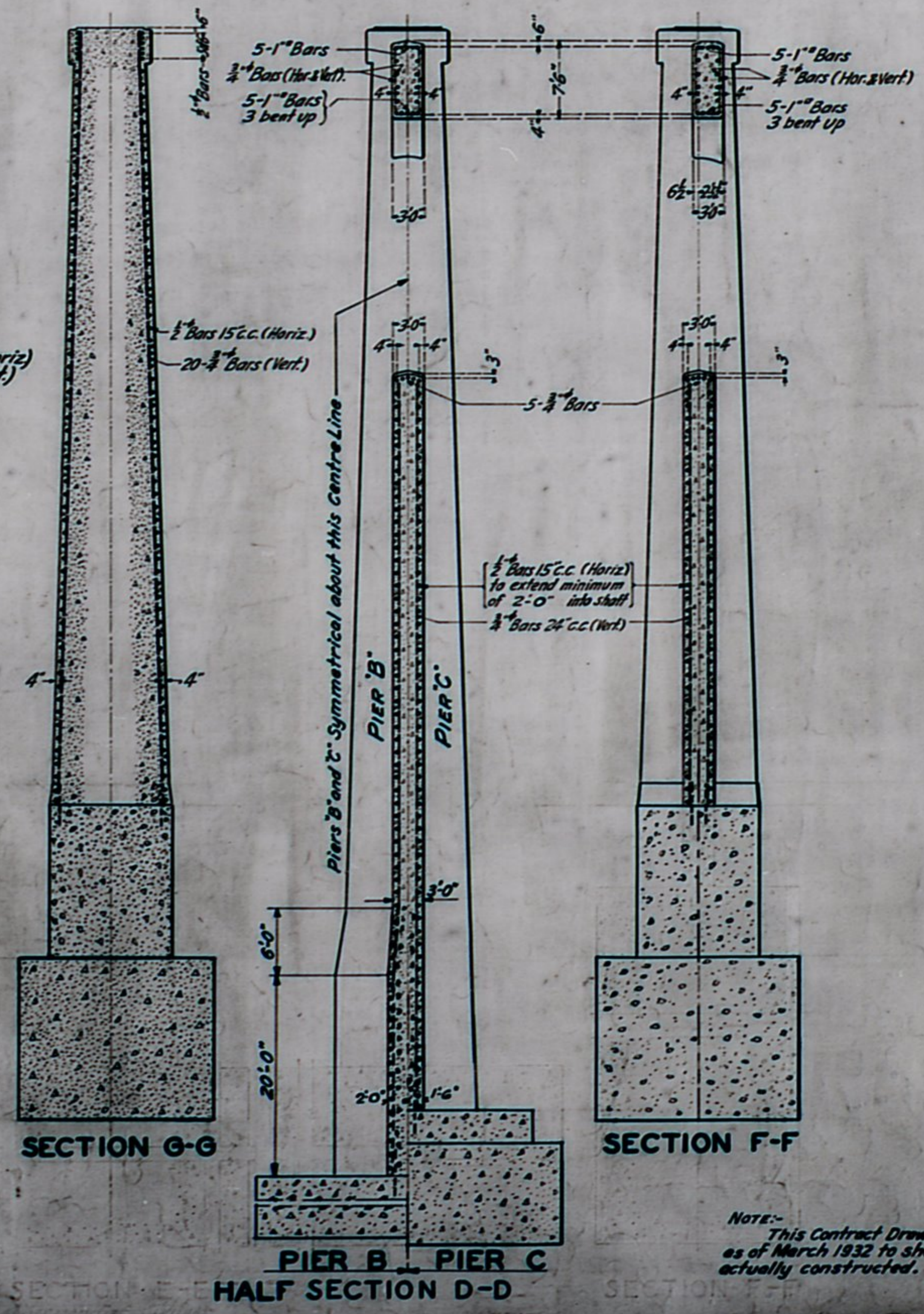
SUBSTRUCTURE-MAIN BRIDGE

SCALE IN FEET  
 1" = 10'

MAY 1929

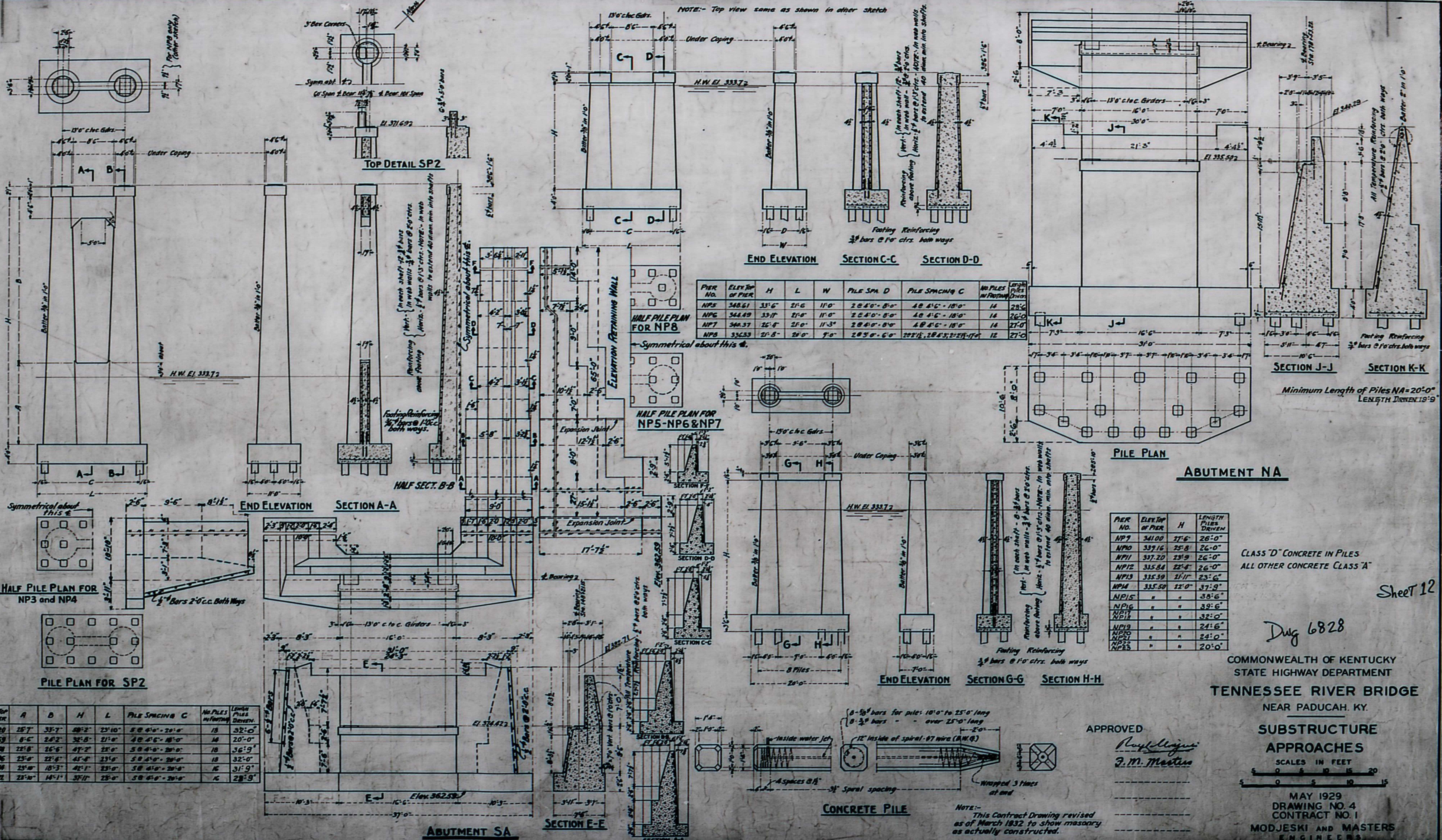
DRAWING NO. 3  
 CONTRACT NO. 1

MODJESKI AND MASTERS  
 ENGINEERS



NOTE:- This Contract Drawing revised as of March 1932 to show piers as actually constructed.

NOTE: Top view same as shown in other sketch



PIER NO.	ELEV. TOP OF PIER	A	B	H	L	PILE SPACING C	NO. PILES IN FOOTING	LENGTH PILES DRIVEN
SP1	572.20	25'-7"	33'-7"	58'-2"	23'-10"	5 @ 4'-0" x 20'-0"	18	32'-0"
SP2	571.63	8'-5"	24'-2"	32'-8"	21'-0"	4 @ 4'-6" x 18'-0"	14	20'-0"
NP1	365.08	22'-8"	26'-6"	47'-2"	23'-0"	5 @ 4'-0" x 20'-0"	18	36'-9"
NP2	368.26	23'-0"	22'-6"	45'-8"	23'-0"	5 @ 4'-0" x 20'-0"	18	32'-0"
NP3	366.84	23'-0"	18'-3"	42'-1"	23'-0"	5 @ 4'-0" x 20'-0"	18	31'-9"
NP6	362.72	22'-10"	14'-1"	37'-11"	23'-0"	5 @ 4'-0" x 20'-0"	18	28'-9"

PIER NO.	ELEV. TOP OF PIER	H	L	W	PILE SPA D	PILE SPACING C	NO. PILES IN FOOTING	LENGTH PILES DRIVEN
NP5	348.61	33'-6"	21'-6"	11'-0"	2 @ 4'-0" x 8'-0"	4 @ 4'-6" x 18'-0"	14	28'-0"
NP6	348.49	33'-7"	21'-0"	11'-0"	2 @ 4'-0" x 8'-0"	4 @ 4'-6" x 18'-0"	14	26'-0"
NP7	348.37	25'-4"	21'-0"	11'-3"	2 @ 4'-0" x 8'-0"	4 @ 4'-6" x 18'-0"	14	27'-0"
NP8	336.33	21'-8"	24'-0"	9'-0"	2 @ 5'-0" x 6'-0"	2 @ 2'-0" x 2'-0" @ 1'-0" intervals	12	27'-0"

PIER NO.	ELEV. TOP OF PIER	H	LENGTH PILES DRIVEN
NP7	341.00	27'-6"	26'-0"
NP8	339.16	25'-8"	26'-0"
NP11	337.20	23'-9"	26'-0"
NP12	335.84	22'-4"	26'-0"
NP13	335.39	21'-11"	23'-6"
NP14	335.50	12'-0"	37'-9"
NP15	"	"	38'-6"
NP16	"	"	39'-6"
NP17	"	"	32'-0"
NP18	"	"	24'-6"
NP20	"	"	24'-0"
NP21	"	"	20'-0"
NP22	"	"	"
NP23	"	"	"

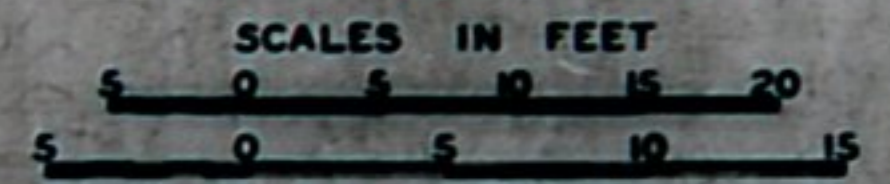
CLASS "D" CONCRETE IN PILES  
ALL OTHER CONCRETE CLASS "A"

Dwg 6828

COMMONWEALTH OF KENTUCKY  
STATE HIGHWAY DEPARTMENT  
TENNESSEE RIVER BRIDGE  
NEAR PADUCAH, KY.

APPROVED  
*Roy H. Jones*  
P. M. Masters

SUBSTRUCTURE  
APPROACHES



MAY 1929  
DRAWING NO. 4  
CONTRACT NO. 1

MODJESKI AND MASTERS  
ENGINEERS

Sheet 12

NOTE: This Contract Drawing revised as of March 1932 to show masonry as actually constructed.

