

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

PLAN OF PROPOSED BRIDGES
OVER
SULPHUR RIVER
MILLER COUNTY

ROUTE 71 SEC. 1
JOB NO 3147
FEDERAL AID PROJECT NO. 214-D

INDEX OF SHEETS

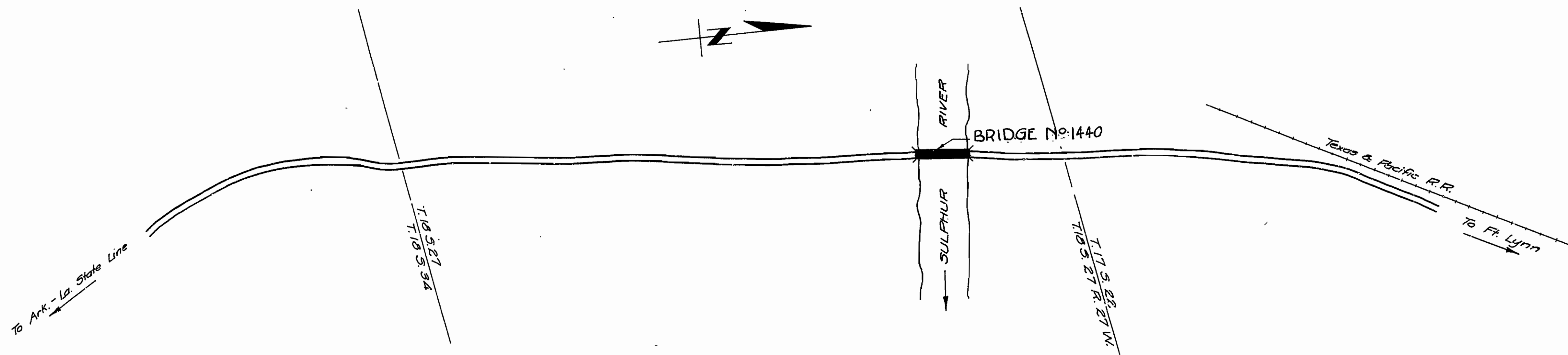
Sh. No.	Drwg. No.	Title Sheet
1	2812	Title Sheet
2	2813	Layout Bridge No. 1440
3	2814	Details of Center Pier
4	2815	Details of End Piers
5	2816	Miscellaneous Details
6	2455	Standard 225' Thru Truss 24' Roadway
7	2459	Details

Federal Aid Markers of approved design and furnished by the State will be placed on each end of the bridge.

ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	214-D	1930	1	7
		Job No.		Sheet No.	Total Sheets
		3147		1	7

QUANTITIES

Item No.	S.P. &	Description	Quantity
12	12	Earth Excavation	1105 cu. yds.
13	13	Dry Excavation Structures	925 "
54	54	Wet	1247 "
54	54	Class A Concrete	914.95 "
55	55	Class B Concrete	277.23 "
56	56	Reinforcing Steel	99,693 lbs.
74	74	Structural Steel	742,120 "
5.P.	5.P.	Precast Concrete Piling	1060 lin. ft.
5.P.	5.P.	Concrete Filling for Structure	12 "
5.P.	5.P.	Removal of Existing Structures	Lump Sum



Specifications approved by Chief, Bureau of Public Roads, September 28, 1925, and adopted by State Highway Commission May 30, 1925 with revisions and Special Provisions as follows:

REVISIONS

Pamphlet	Revised	Date	Approved
A	Revised Sept. 1st, 1928	Approved June 1st, 1929	
B	Revised Nov. 1st, 1929		
C			
D	Revised July 1st, 1928	Approved Nov. 24th, 1928	
E	Revised Jan. 1st, 1930		
F	Revised Aug. 1st, 1929		
G	Revised June 1st, 1929		
H	Revised Jan. 1st, 1930		
I			
J	Revised Jan. 1st, 1929	Approved June 1st, 1929	
K			
L	Revised Jan. 1st, 1929	Approved June 1st, 1929	

SPECIAL PROVISIONS

Item	No. of Sheets
Field Engineer's Office	1
Earth Excavation	3
Precast Concrete Piling	3
Removal of Existing Structure	1
Pamphlet I	51

LAYOUT
Scale: 1" = 500'

Gross & Net	LENGTH OF PROJECT	=	462'-0"	=	.868 mi.
	LENGTH OF BRIDGES	=	462'-0"		
	LENGTH OF EMBANKMENT	=	20'-0"		
	LENGTH OF JOB	=	483'-4"		

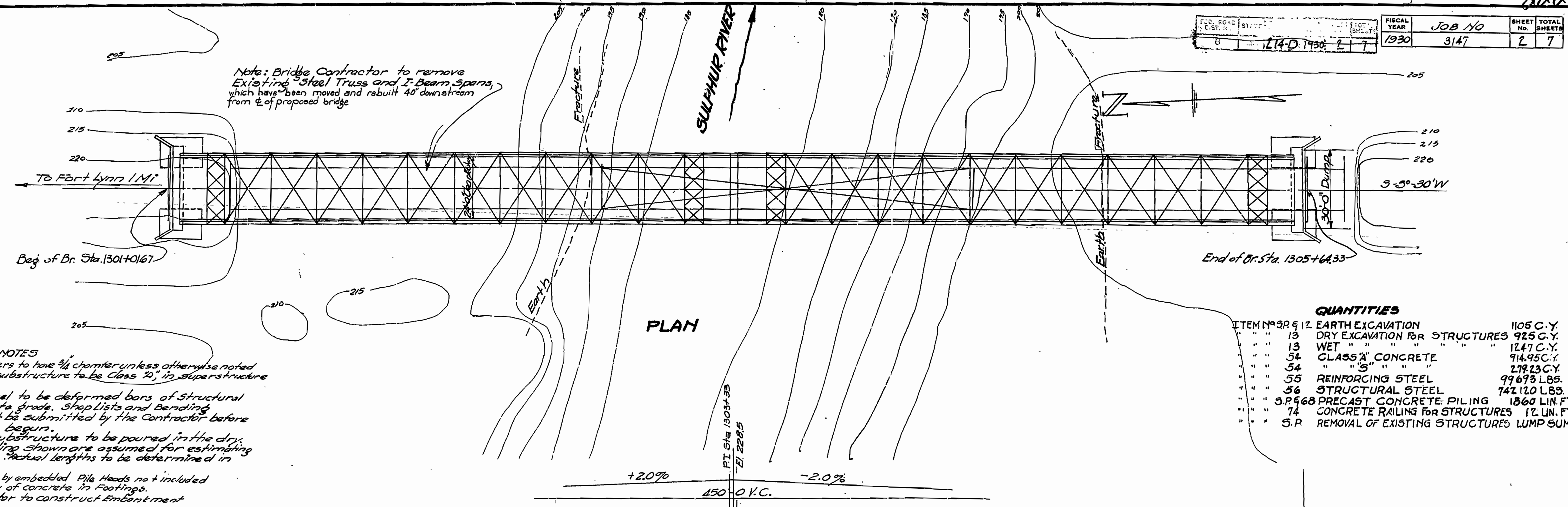
APPROVED
CHIEF ENGINEER - U. S. BUREAU OF PUBLIC ROADS
APPROVED
DISTRICT ENGINEER - U. S. BUREAU OF PUBLIC ROADS
APPROVED
CHIEF - U. S. BUREAU OF PUBLIC ROADS
APPROVED
CHAIRMAN - STATE HIGHWAY COMMISSION
APPROVED
STATE HIGHWAY ENGINEER

W.B. Brown
BRIDGE ENGINEER

BRIDGES No. 1440

DRAWING No. 2812

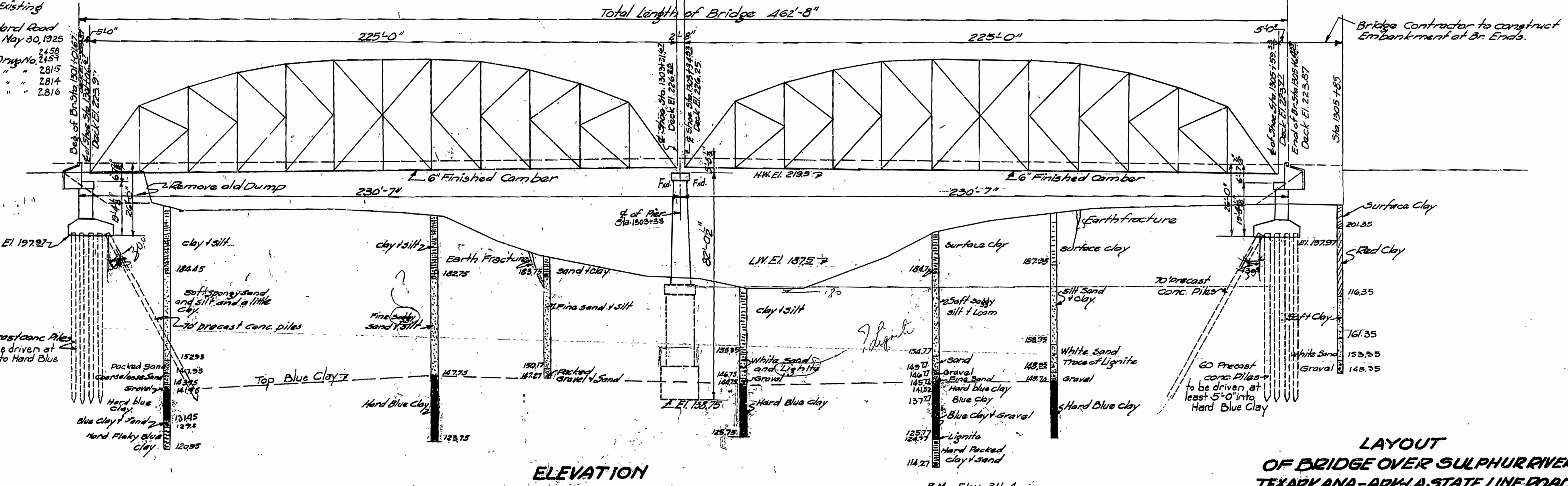
FISCAL YEAR	JOB NO	SHEET NO	TOTAL SHEETS
1930	3147	2	7



GENERAL NOTES
 All exposed corners to have 3/4" chamfer unless otherwise noted
 All concrete in substructure to be Class 70, in superstructure Class 5.
 Reinforcing steel to be deformed bars of structural or intermediate grade. Shop Lists and Bending Diagrams must be submitted by the Contractor before fabrication is begun.
 Concrete in substructure to be poured in the dry, lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field.
 Volume occupied by embedded Pile Heads not included in pay quantity of concrete in Footings.
 Bridge Contractor to construct Embankment at Bridge ends.
 Bridge Contractor to remove Existing Structure.
 Specifications of Arkansas Standard Road & Bridge Specifications adopted May 30, 1925 and Revised.
 For Details of Steel Truss See Drawings 2139, 2159, 2815, 2814, 2816
 Misc. Details " " " 2816

QUANTITIES

ITEM NO	DESCRIPTION	QUANTITY
12	EARTH EXCAVATION	1105 C.Y.
13	DRY EXCAVATION FOR STRUCTURES	925 C.Y.
13	WET " " " "	1247 C.Y.
54	CLASS "A" CONCRETE	914.95 C.Y.
54	" " " " " "	279.23 C.Y.
55	REINFORCING STEEL	99673 LBS.
56	STRUCTURAL STEEL	742120 LBS.
57	PRECAST CONCRETE PILING	1860 LIN. FT.
74	CONCRETE RAILING FOR STRUCTURES	12 LIN. FT.
5.P	REMOVAL OF EXISTING STRUCTURES	LUMP SUM



ELEVATION

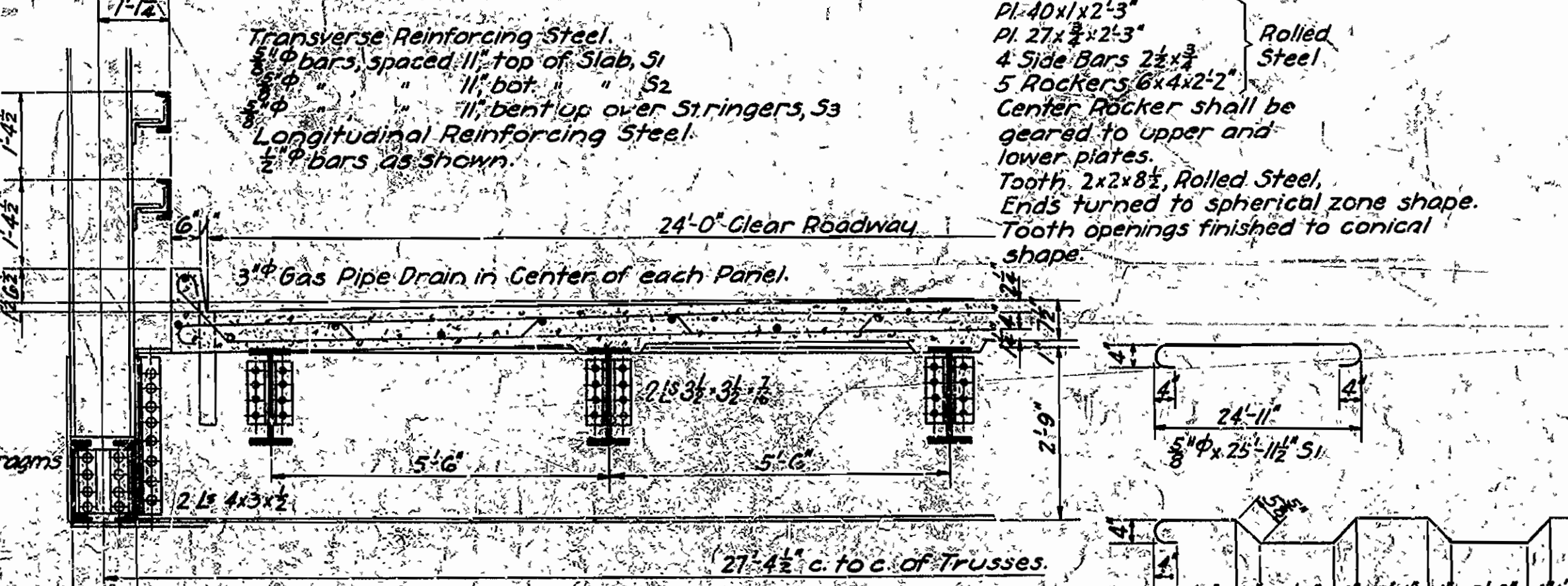
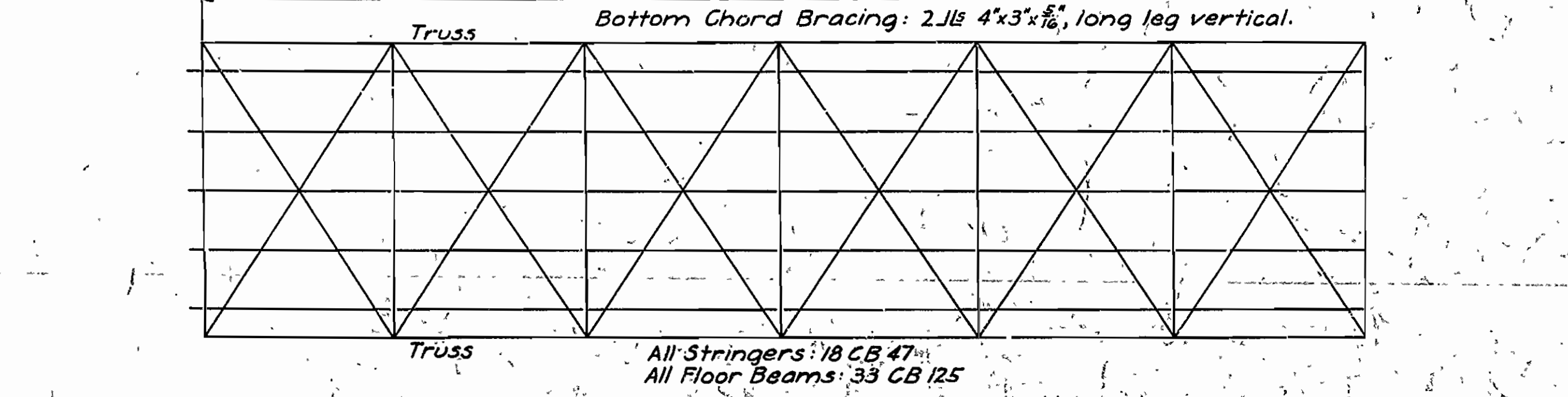
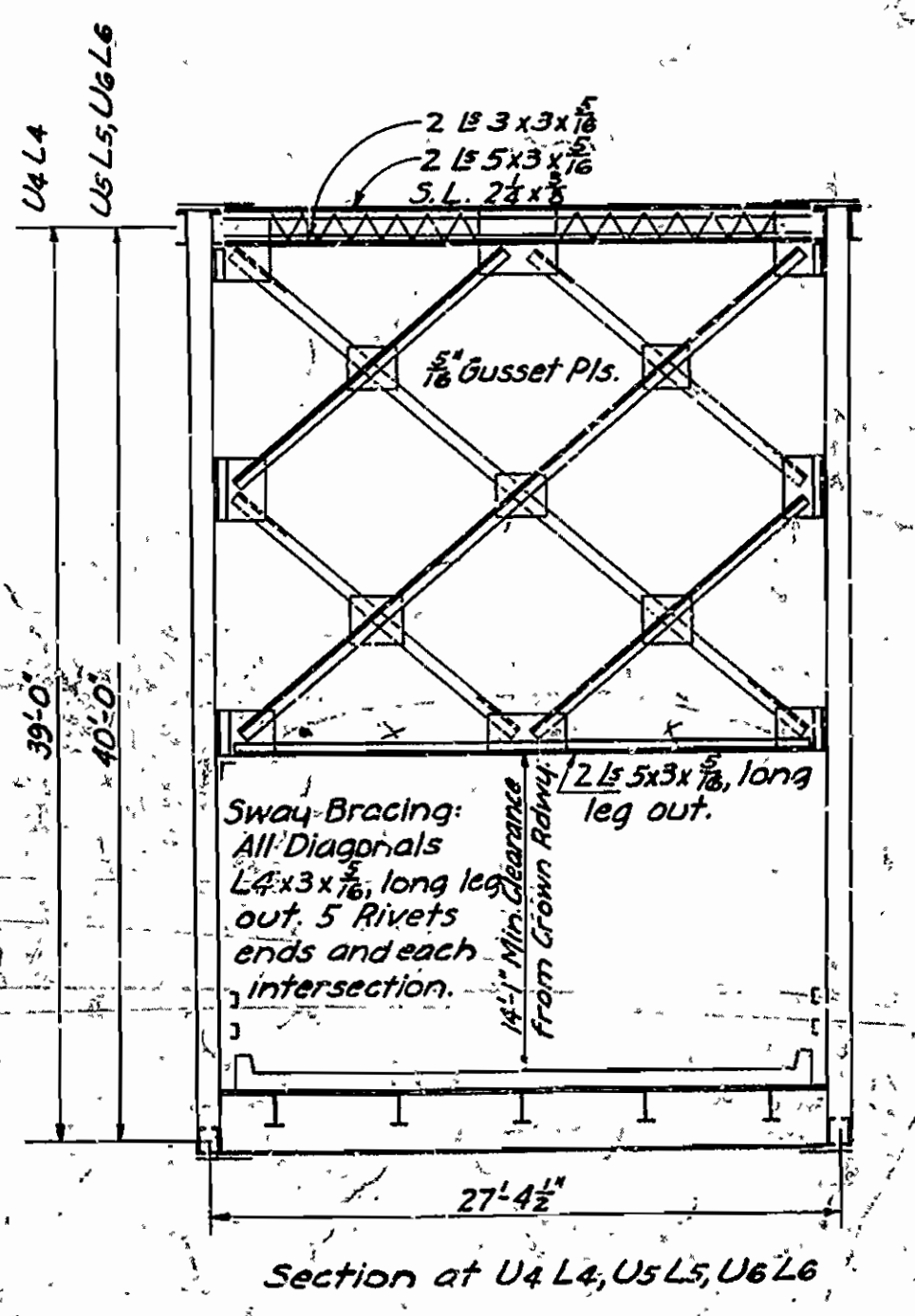
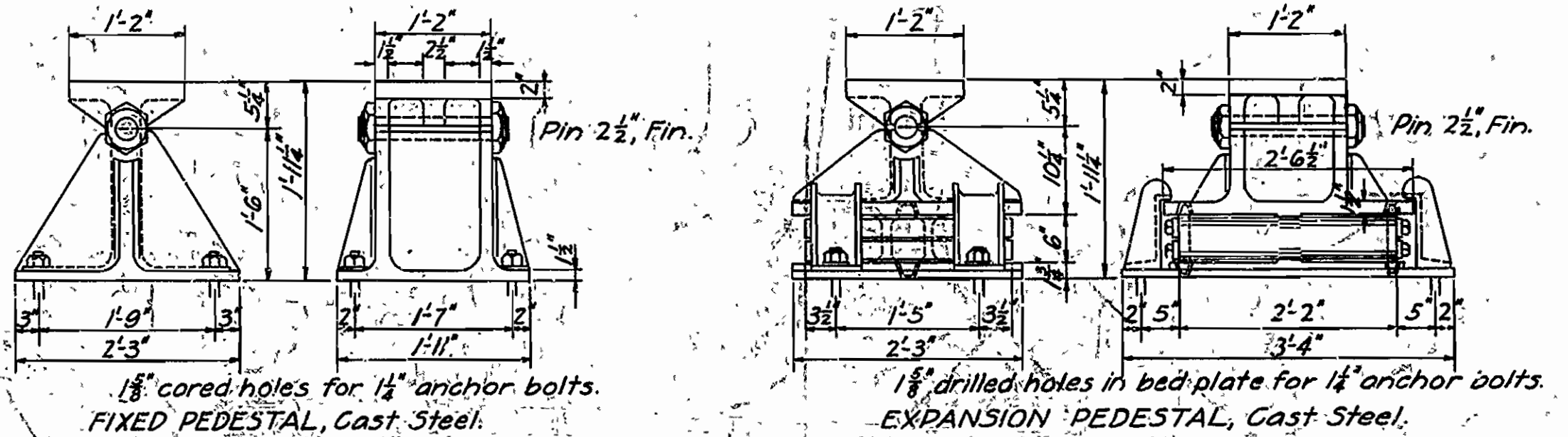
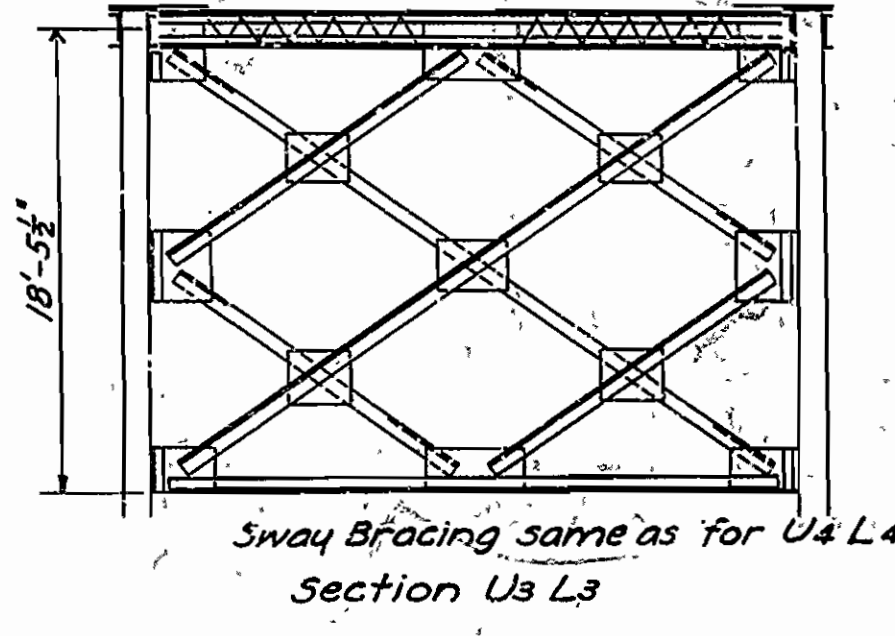
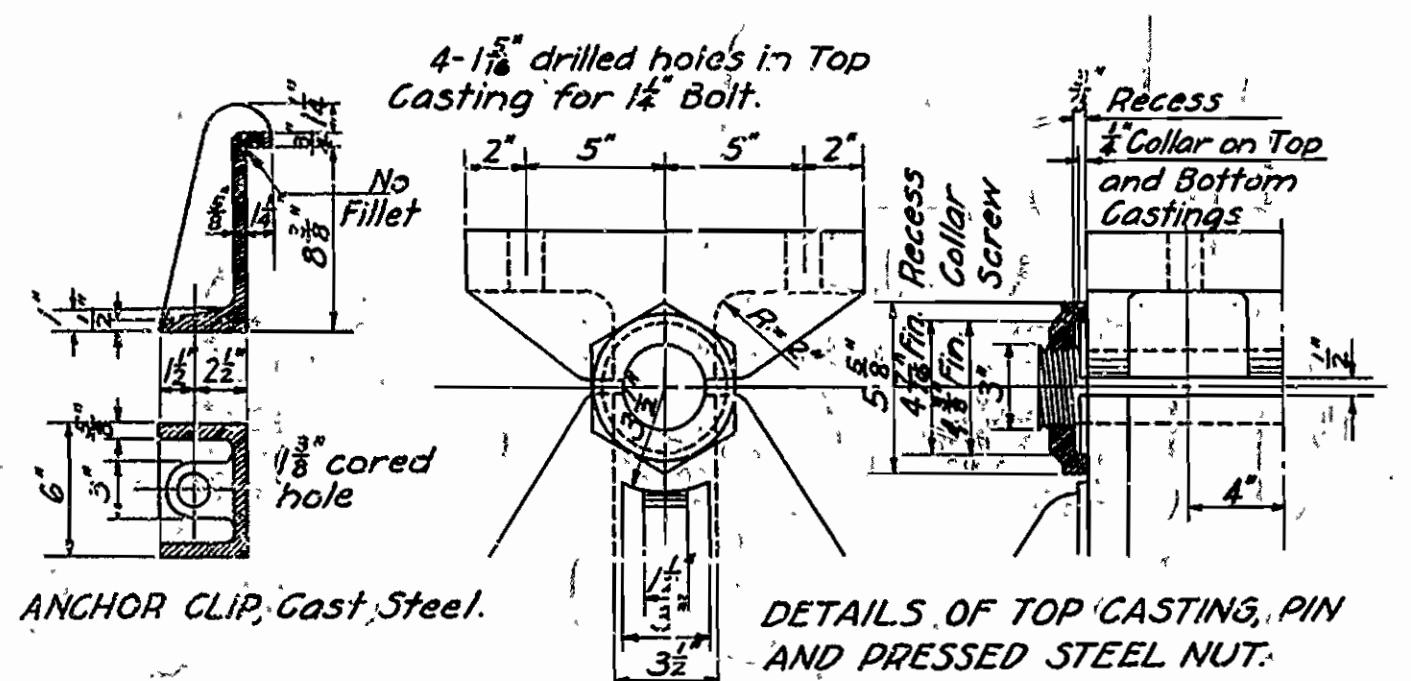
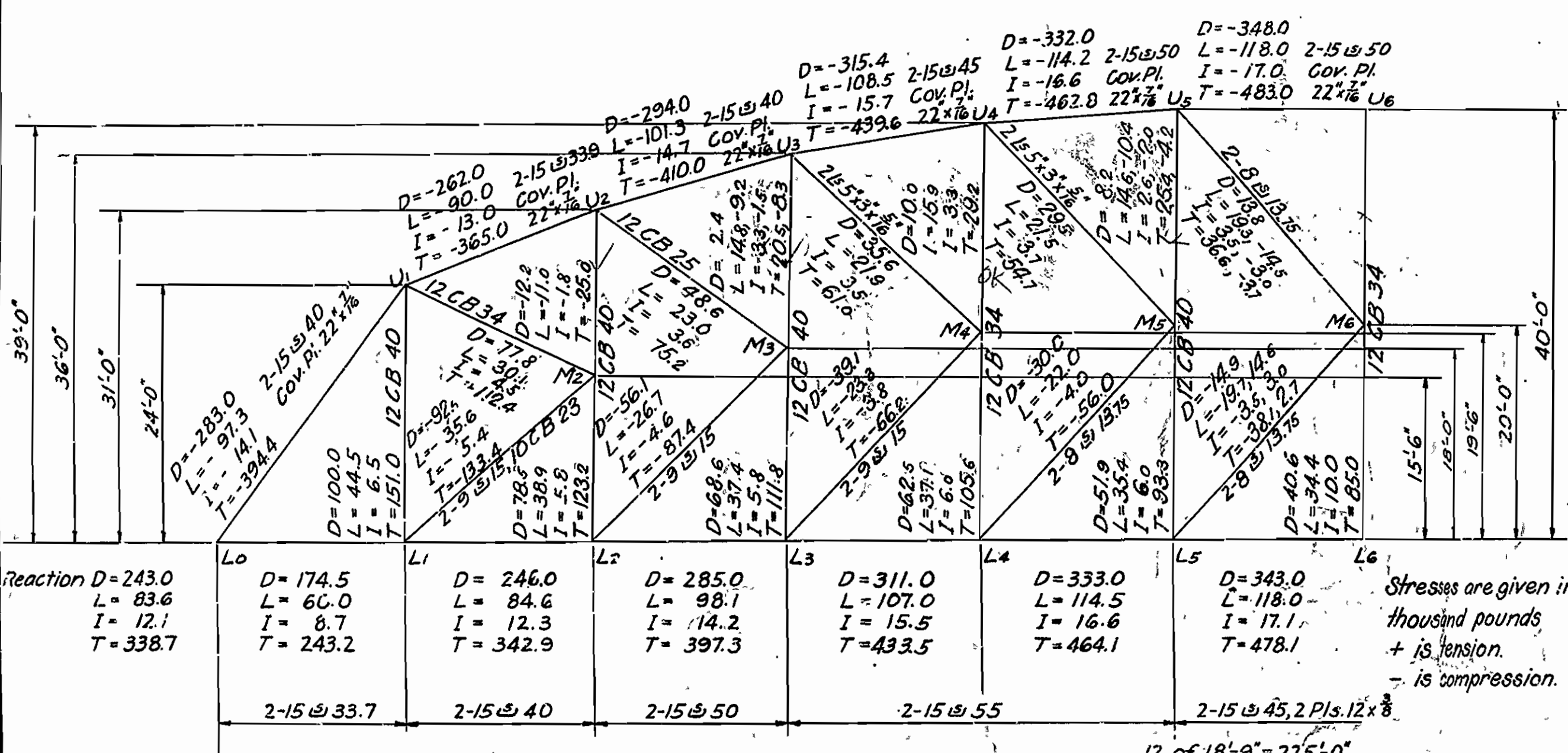
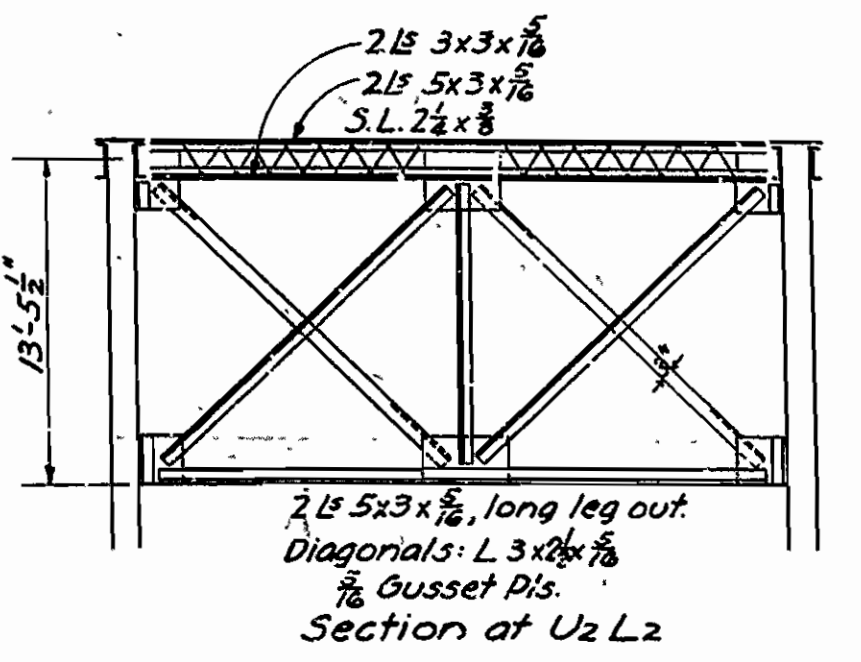
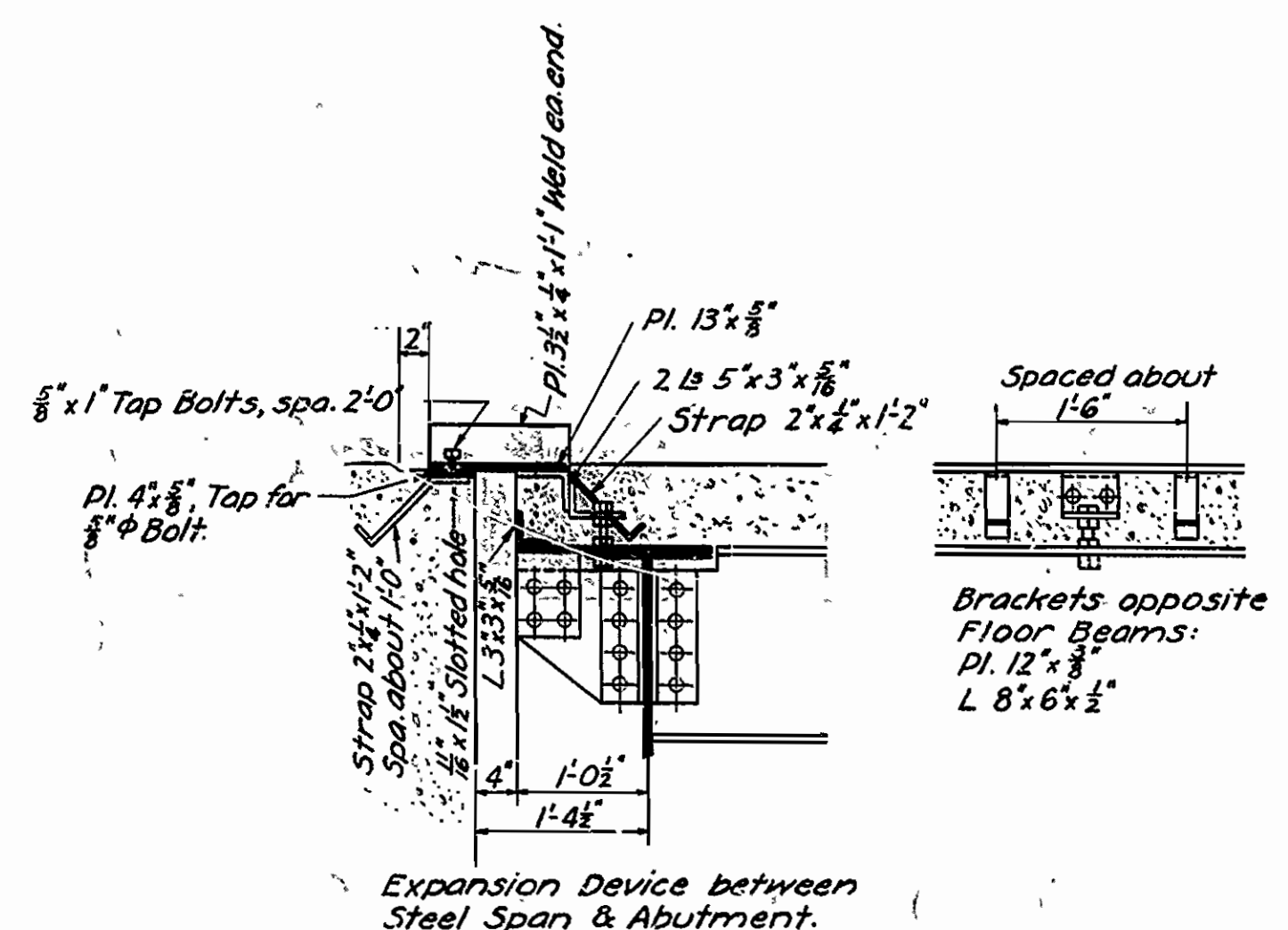
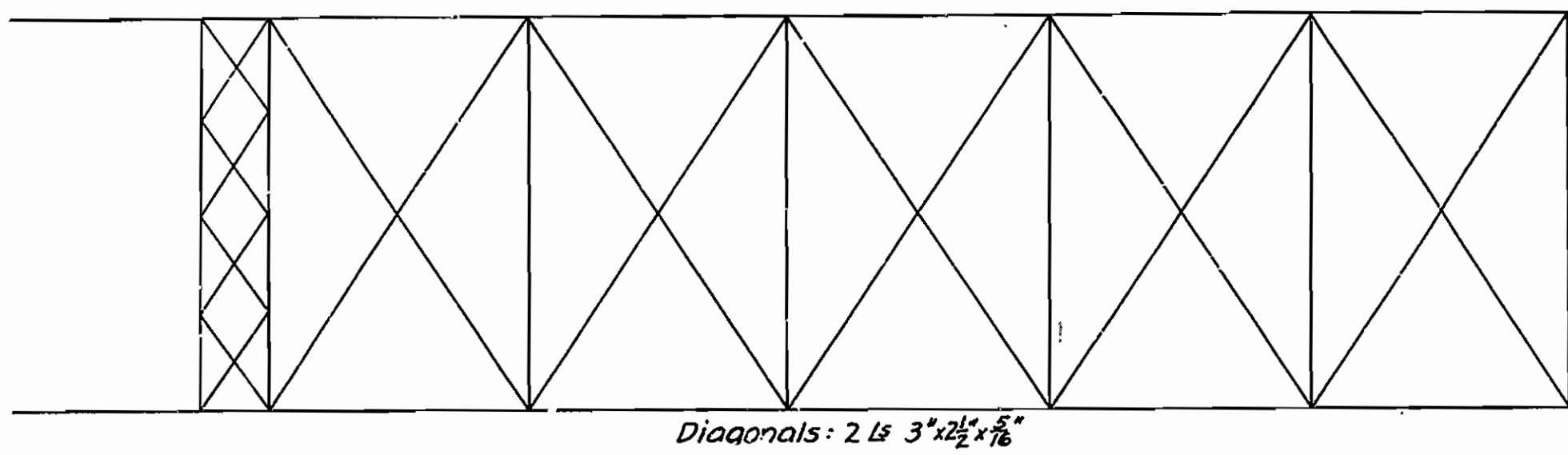
LAYOUT OF BRIDGE OVER SULPHUR RIVER
 TEXARKANA-ARKLA STATE LINE ROAD
 MILLER CO.
 ROUTE 71 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: *[Signature]* Date: 7-12-30
 Traced By: *[Signature]* Date: 7-12-30
 Checked By: *[Signature]* Date: *[Signature]*
 BRIDGE NO. 1440 DRAWING No. 2813

[Signature]
 BRIDGE ENGINEER

FISCAL YEAR	SHEET NO.	TOTAL SHEETS



Notes:
 1/8" Rivets, 3/8" Holes except in flanges of 9" B.
 All holes in truss connections to be punched 1/8" and reamed to size while truss is assembled; this applies to field as well as shop rivets.
 Floor Beam and Stringer Connections to be sub-punched and reamed to size through a metal template.
 All field connections shall be riveted.
 All Floor Beams and Stringers to be milled to exact lengths after framing angles have been riveted.
 Shapes of equal or greater strength may be substituted for structural shapes shown; payment, however, will be made in accordance with sizes given on this plan.
 Shop paint: After being completely assembled and shopwork finished all pieces shall be given one coat of red lead and raw linseed oil.
 Field paint: Apply two coats of different colors as specified by the Engineer.
 Floor Slab: Concrete shall be Class 5. One inch has been added for wear.

(notes continued)
 This drawing shows general features of design only. Shop drawings shall be made in compliance with specifications, submitted and approved before fabrication is begun.
 Specifications: Ark Standard Road and Bridge Specifications, adopted May 30th, 1925 & Revised.

DESIGN STRESSES AND STRUCTURAL MAKE-UP

Unit Stresses
 Concrete 1500 lbs. per sq. in.
 Reinforcing Steel 16,000
 Structural Steel 16,000
 Live load, H 15, 1925

ESTIMATED QUANTITIES
 Concrete, Class 5 130.4 cu. yds.
 Reinforcing Steel 23,100 lbs.
 Structural Steel 364.60
 Cast Steel 1500

Total Axle Loads

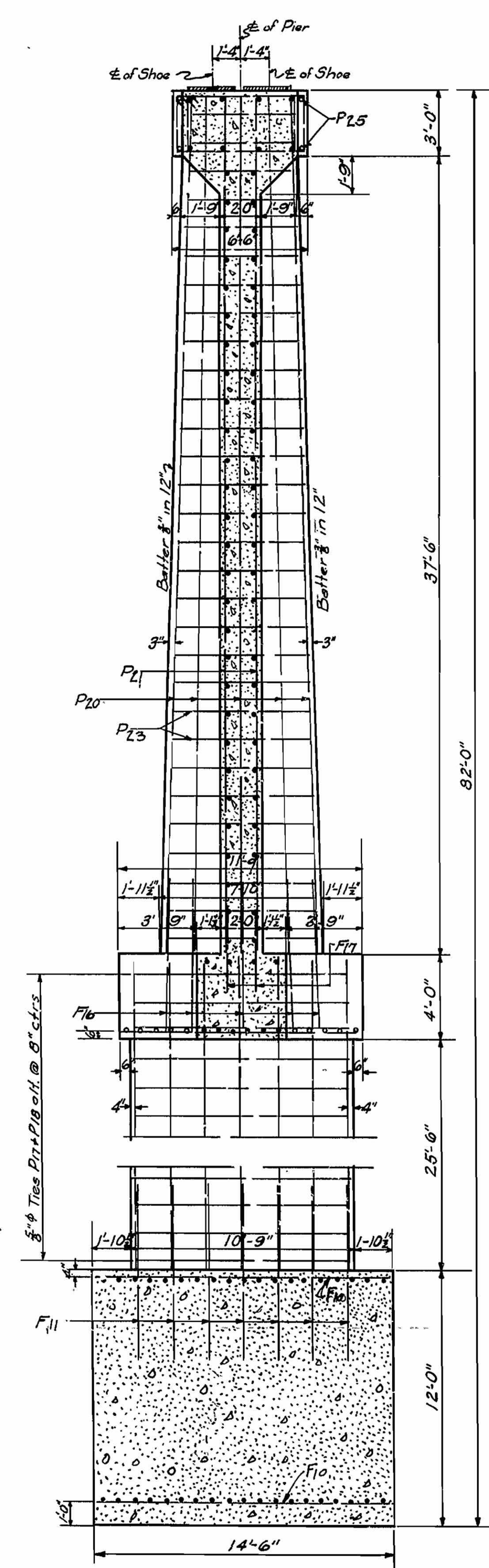
6000

24,000

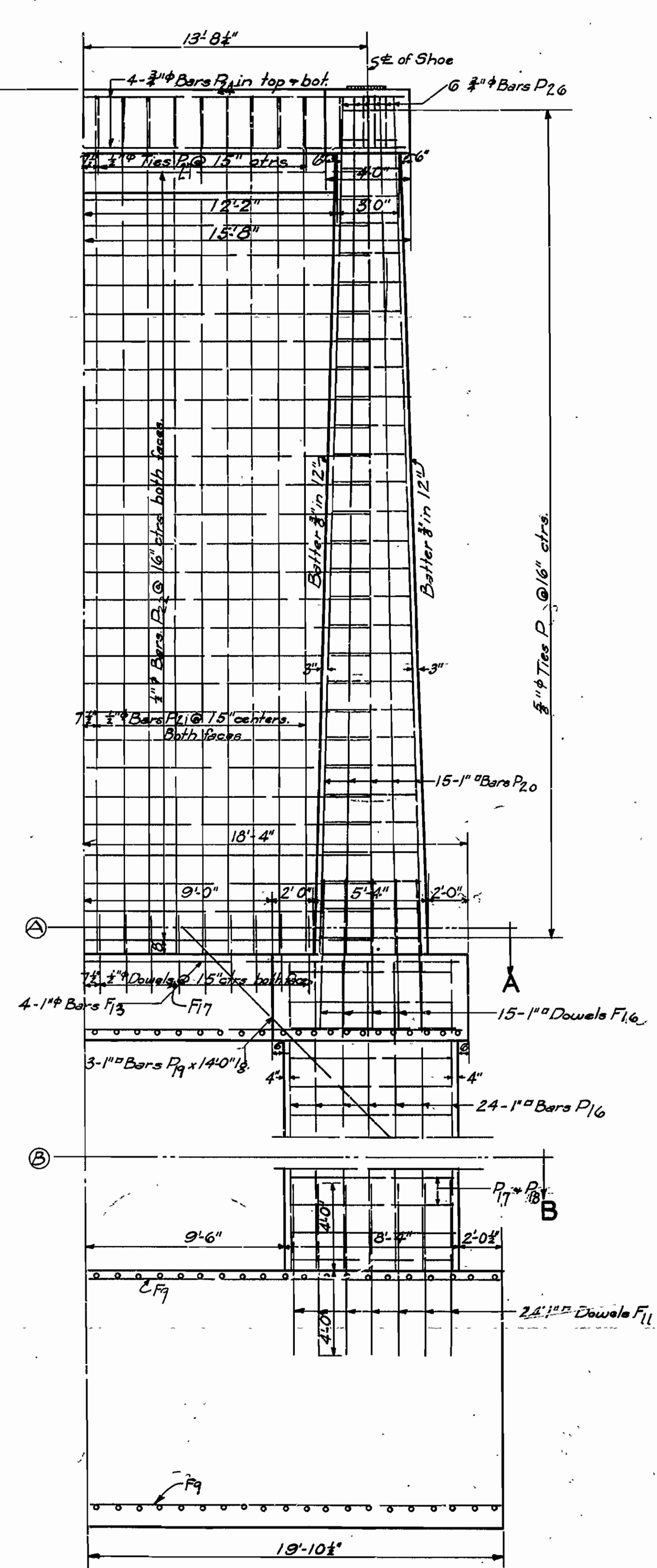
6'-0"

STANDARD PLAN
 225'-0" THROUGH TRUSS SPAN
 24'-0" CLEAR ROADWAY
 ROUTE 666
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: [Name] Date: 5-3-30
 Checked By: [Name] Date: 5-3-30
 Bridge No. [Number] Drawing No. 2459

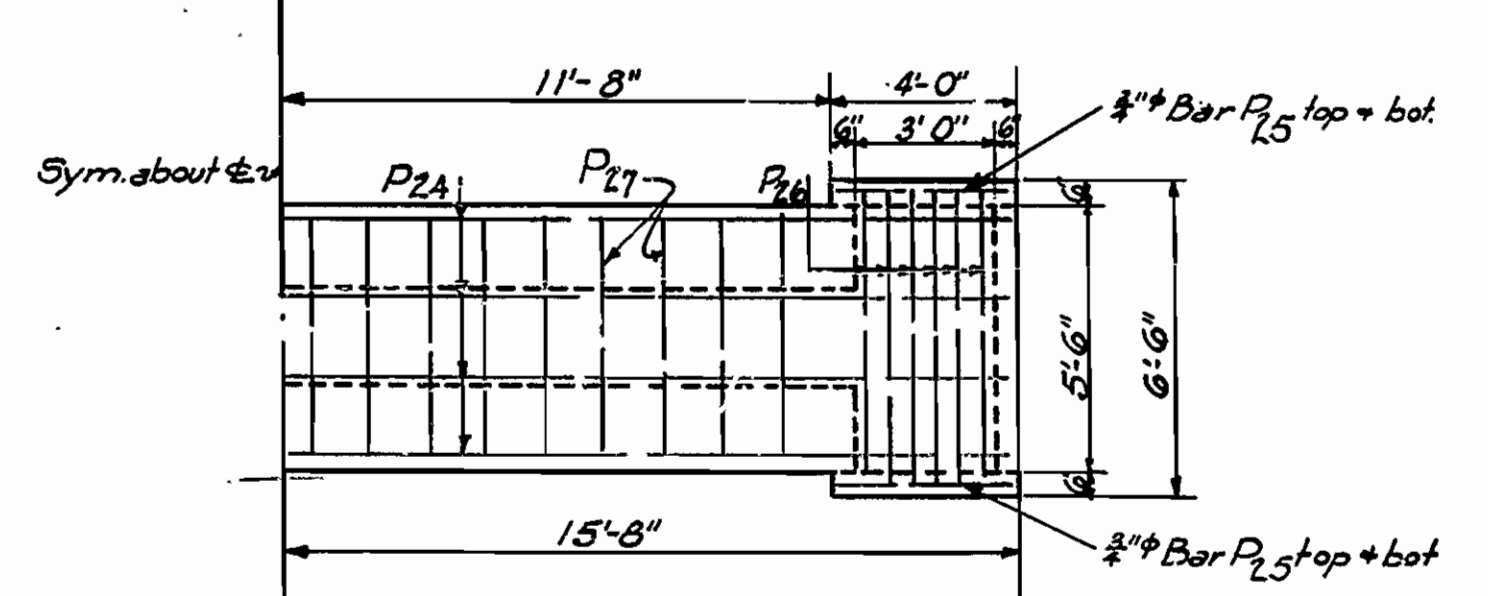
FISCAL YEAR 1930	JOB NO. 3147	SHEET NO. 5	TOTAL SHEETS 7
24-D 1930 3 17			



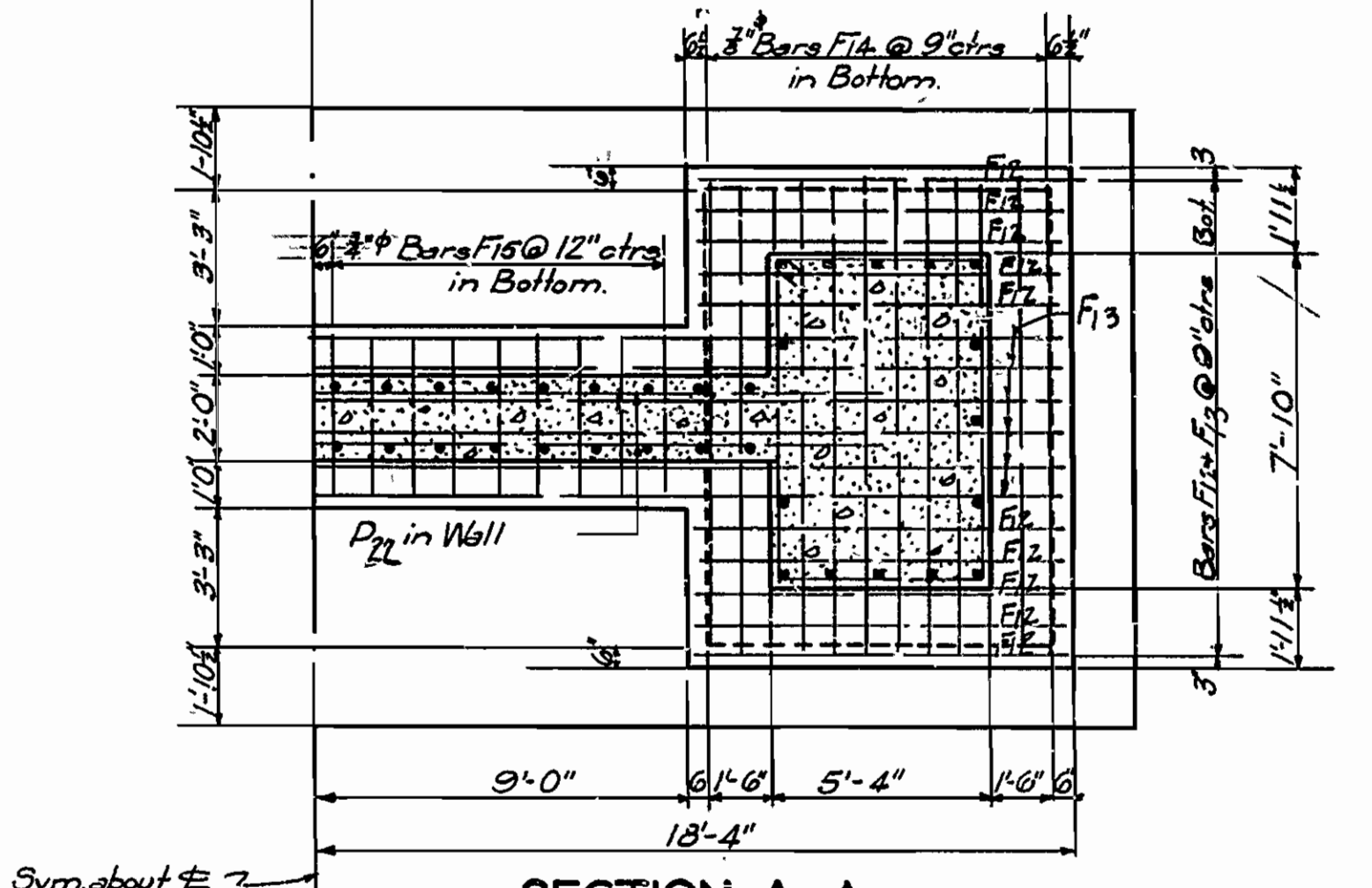
SECTION ON C



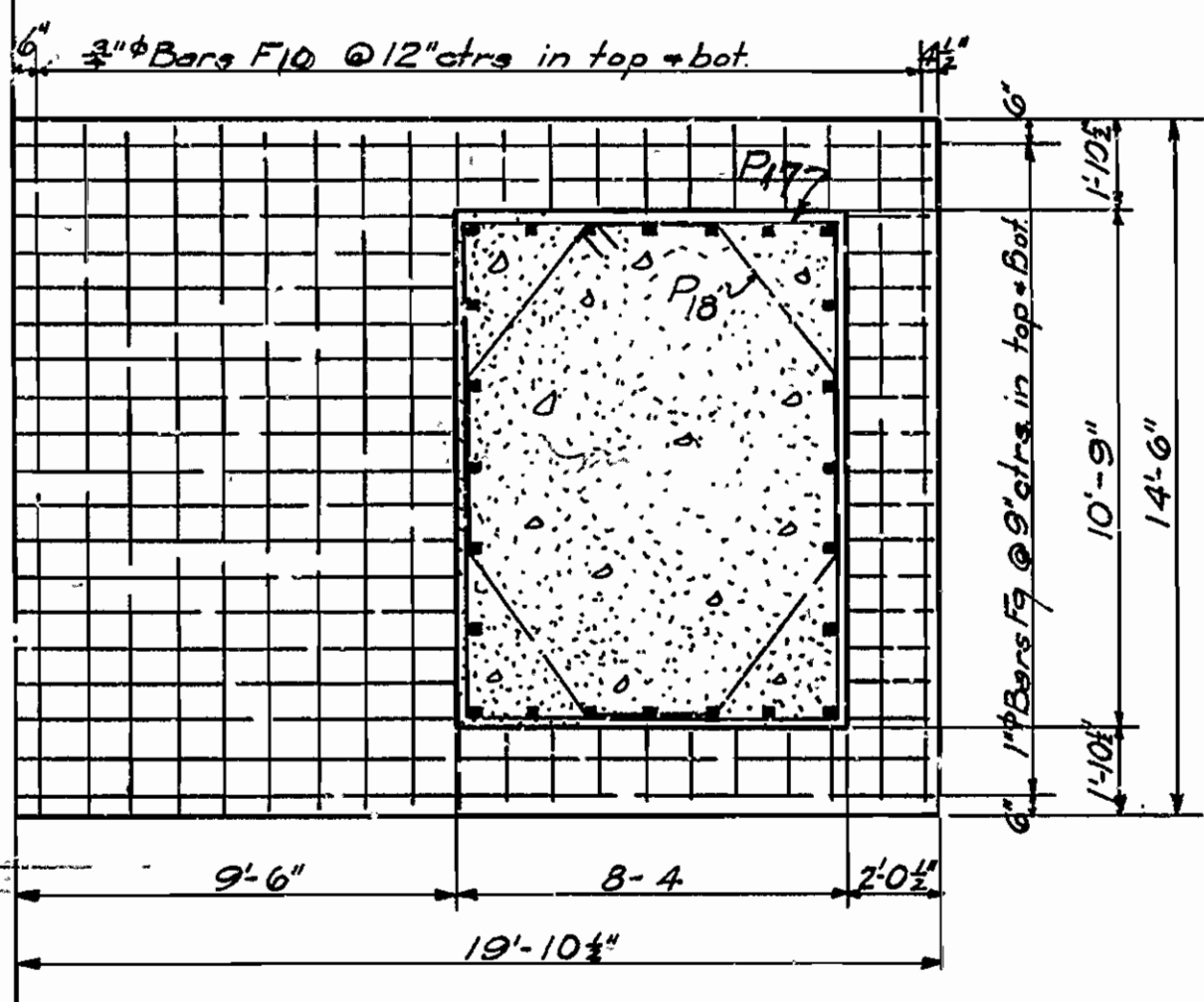
HALF ELEVATION



HALF PLAN OF CAP



SECTION A-A



SECTION B-B

MARK	SIZE	LENGTH	BENDING DIAGRAM	
P18	5/8" φ	30'-2"		
P17	5/8" φ	36'-11"	A	B
P23	5/8" φ	Average 20'-7"	Varies by 1" from 5'-0" to 7'-5" 26' to 41"	
P26	3/4" φ	18'-4"	6'-2"	2'-7 1/2"
P27	1/2" φ	16'-4"	5'-2"	2'-7 1/2"

For Details of Superstructure See Drawg. Nos. 2458 & 2459

General Notes
 All exposed corners to have 2" chamfer unless otherwise noted.
 All Concrete in Substructure, except Precast Concrete Piling, to be Class 4. Precast Concrete Piling to be Class 5.
 Reinforcing Steel to be deformed bars of Structural or Intermediate Grade. Shop List and Bending Diagrams must be submitted by the Contractor before fabrication is begun.
 All Concrete to be poured in the dry.
 Specifications: Arkansas Standard Road & Bridge Specifications adopted May 30, 1915 & revised.

**DETAILS OF PIERS
 FOR BRIDGE OVER SULPHUR RIVER
 TEXARKANA-LOUISIANA LINE ROAD
 MILLER COUNTY
 ROUTE 71 SEC. 1**

**ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.**

Drawn By: *Bas* Date: 7-2-30
 Traced By: *F.M.D.* Date: 7-7-30
 Checked By: _____ Date: _____
BRIDGE NO. 1440 DRAWING NO. 2814

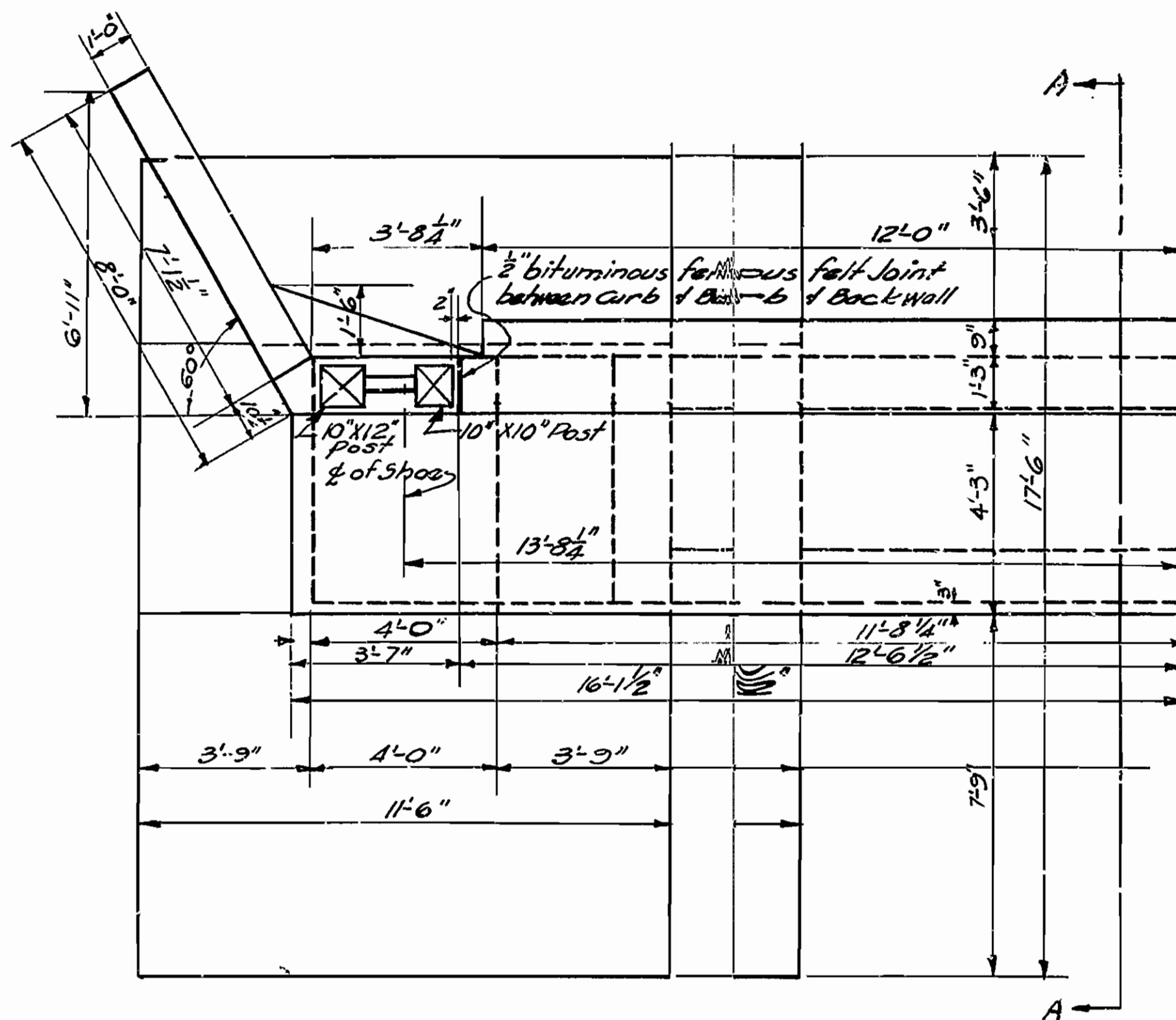
H.B. Gower
 BRIDGE ENGINEER

Noted See of Piers 13-14

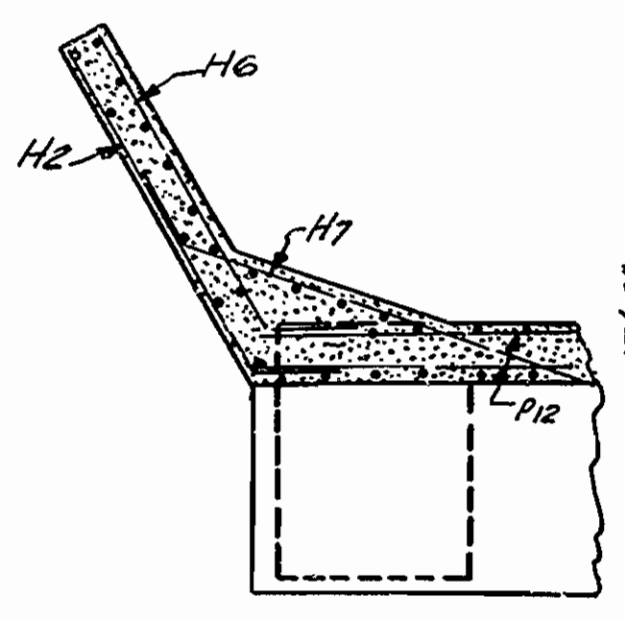
For Details of Superstructure See Drawg. No. 2453+2459
For General Notes See Drawg. No. 2813

FISCAL YEAR	JOB No.	SHEET TOTAL
1930	3147	4 7

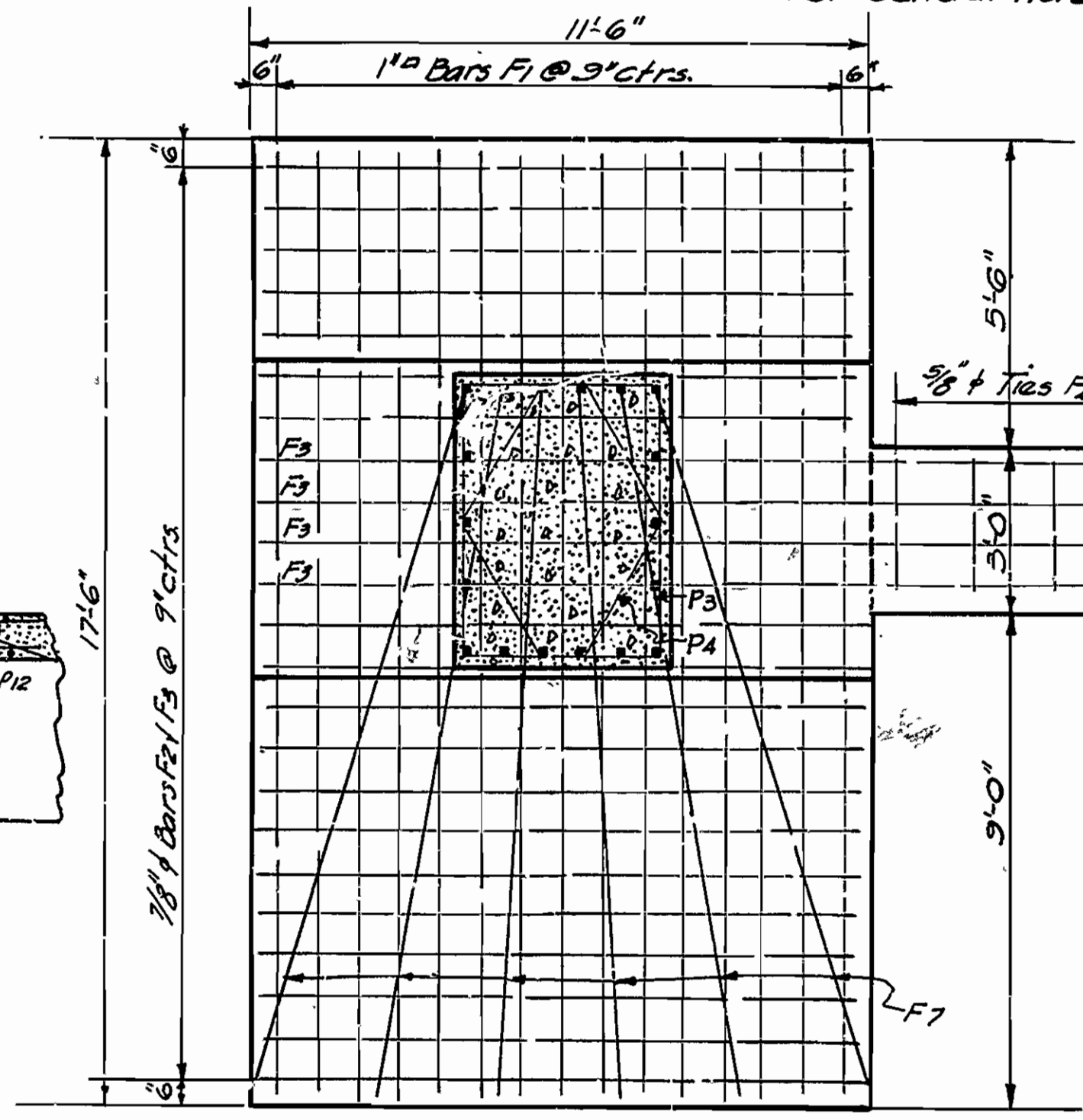
214-D 1930 4 7



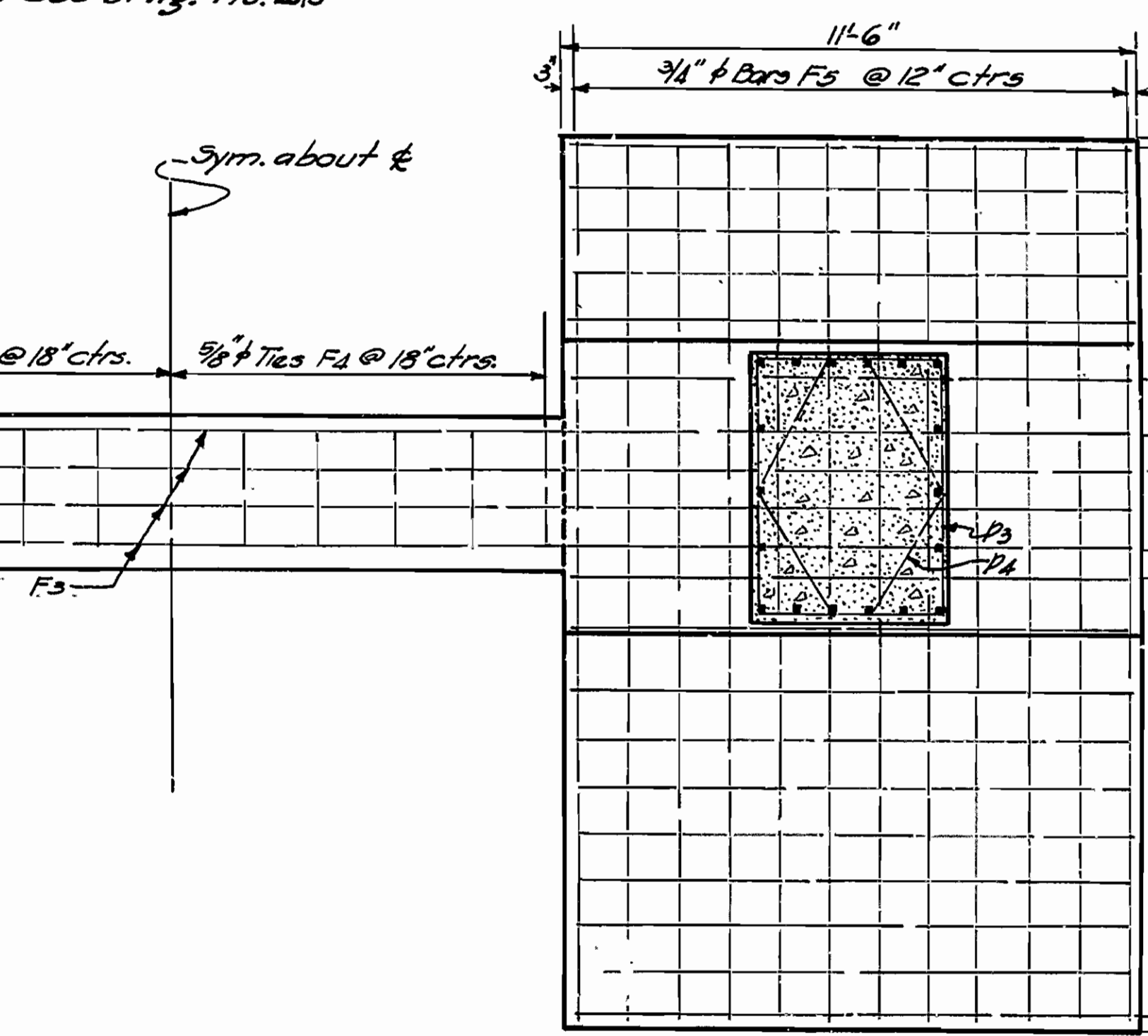
HALF PLAN



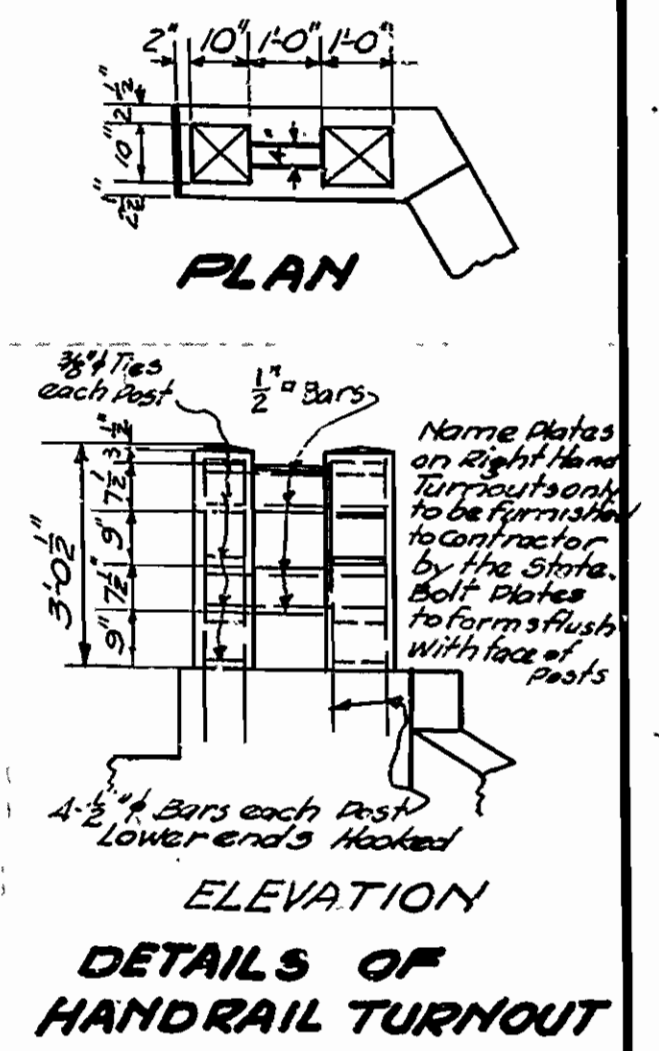
SEC. B-B
Scale 1/4" = 1'-0"



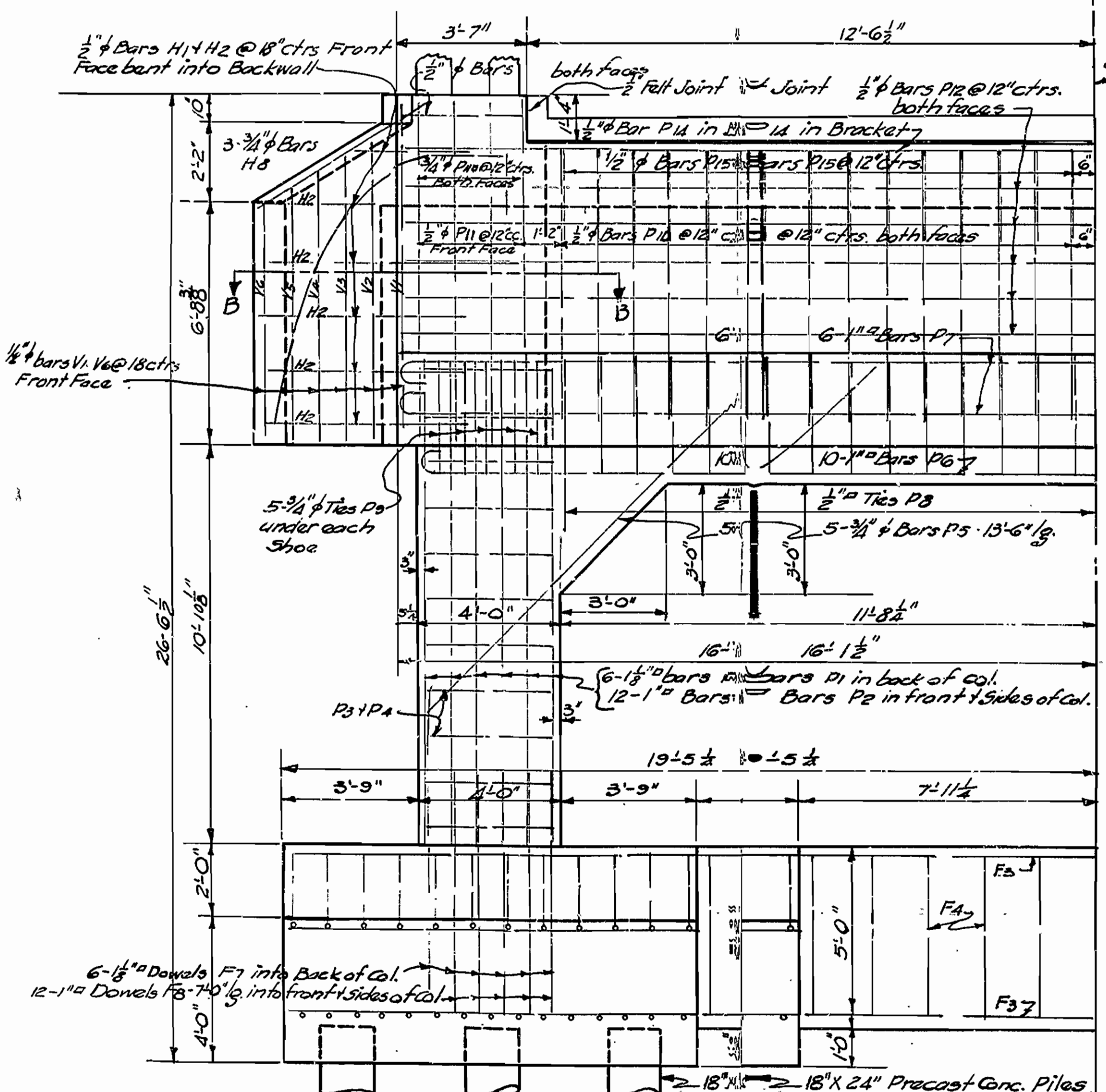
HALF FOOTING PLAN
Showing Steel in Bottom



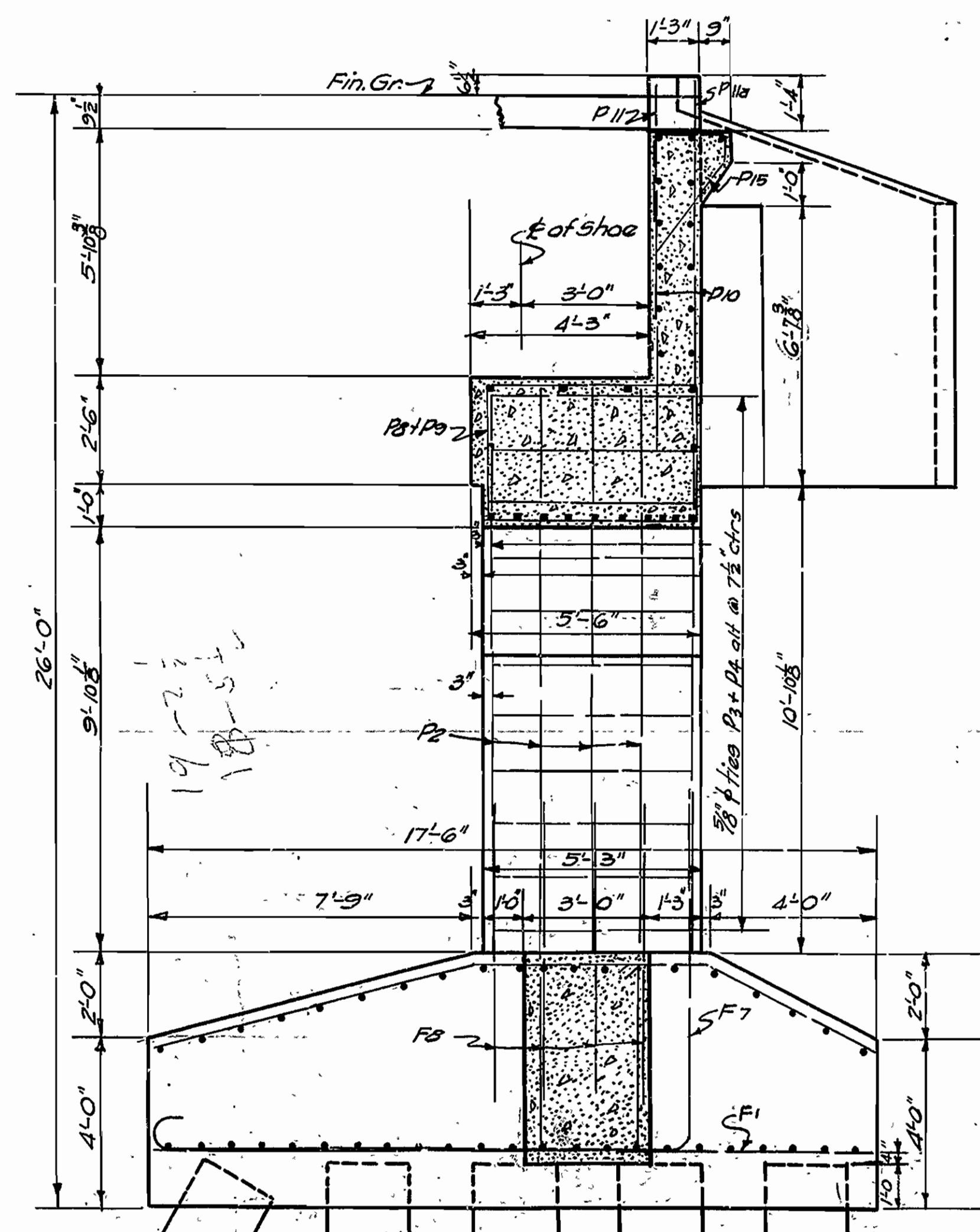
HALF FOOTING PLAN
Showing Steel in top



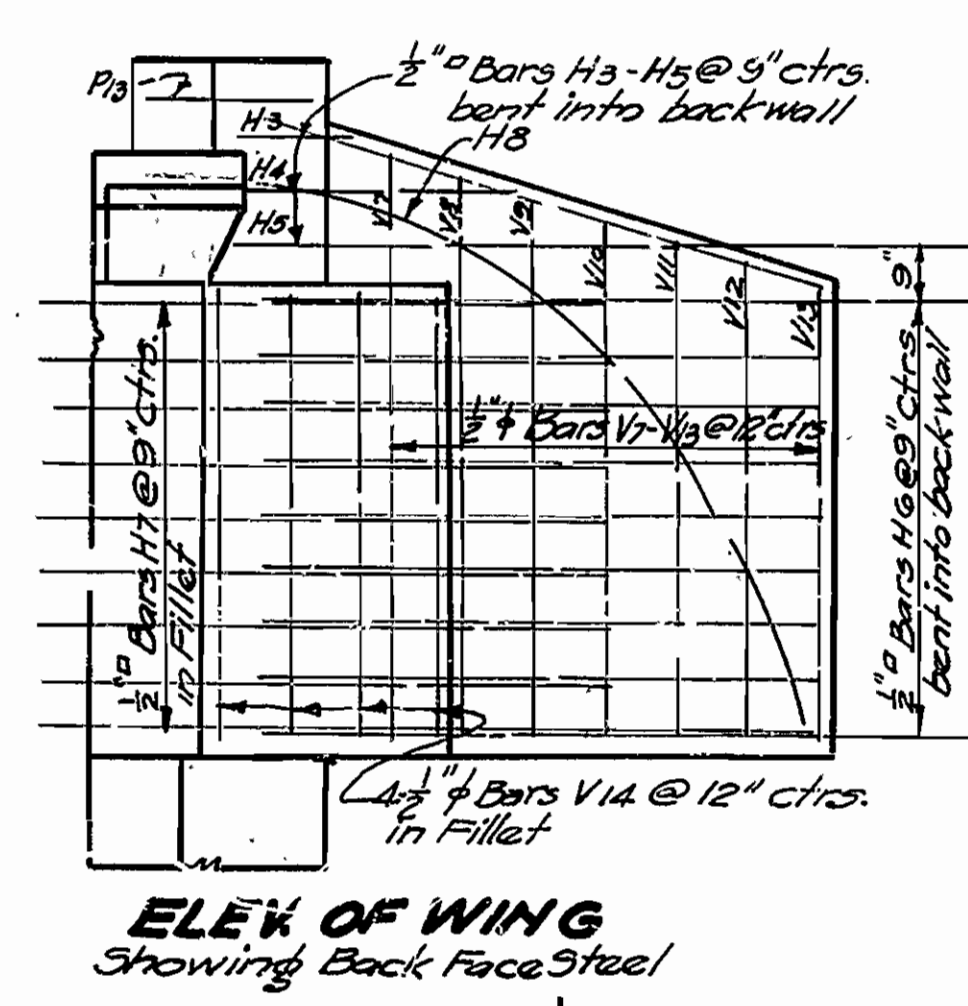
DETAILS OF
HANDRAIL TURNOUT



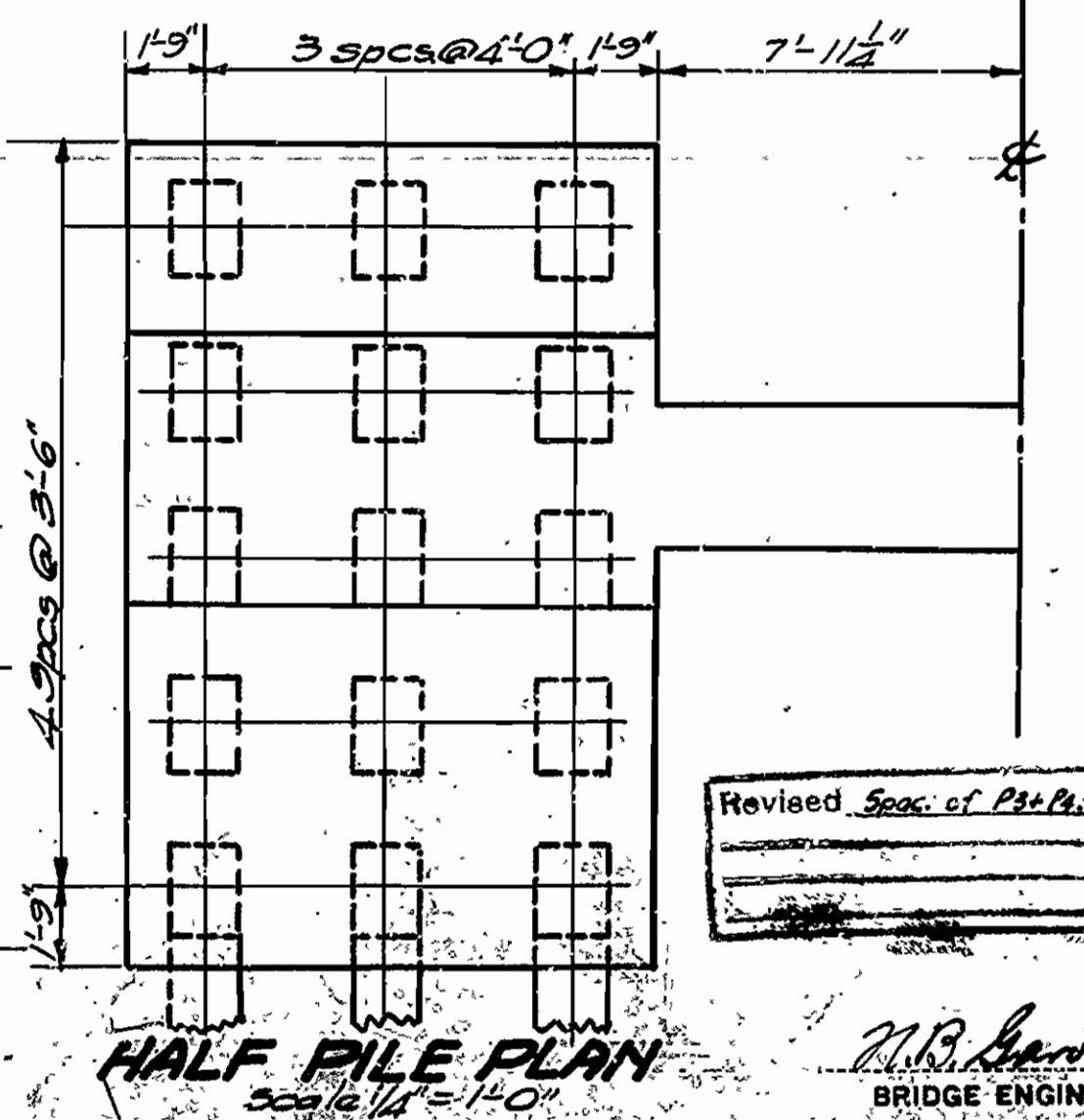
HALF ELEVATION



SECTION A-A



ELEV. OF WING
Showing Back Face Steel



HALF PILE PLAN
Scale 1/4" = 1'-0"

Mark	SIZE	Length	Banding Diagram	
F4	3/8"	14'-9"	A	B
P3	3/8"	17'-9"	A	B
P8	1/2"	16'-10"	A	B
P9	3/4"	16'-10"	A	B
F5	3/4"	17'-8"	[Banding Diagram]	
F7	1/2"	21'-10"	[Banding Diagram]	
P4	5/8"	13'-9"	[Banding Diagram]	
P6	1"	32'-10"	A	B
P7	1"	33'-9"	A	B
P15	1/2"	6'-7"	[Banding Diagram]	
H1	1/2"	4'-6"	A	B
H2	1/2"	2'-6"	A	B
H3	1/2"	2'-7"	A	B
H4	1/2"	4'-5"	A	B
H5	1/2"	7'-5"	A	B
H6	1/2"	9'-0"	A	B
H7	1/2"	10'-0"	A	B
H8	3/4"	15'-0"	[Banding Diagram]	

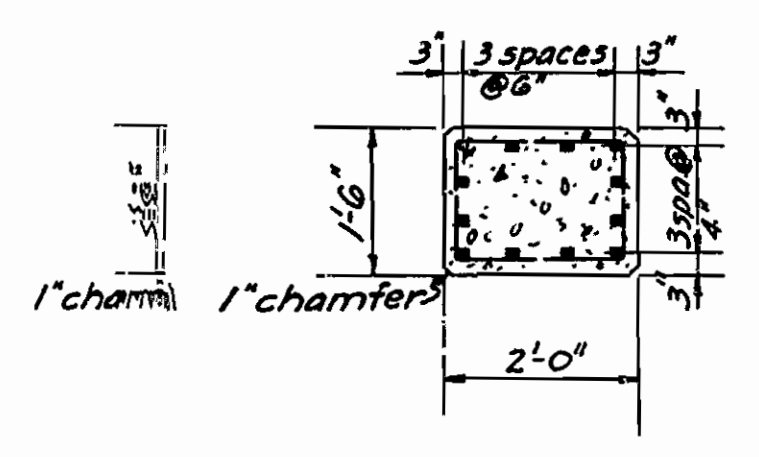
DETAILS OF ABUTMENTS
FOR BRIDGE OVER SULPHUR RIVER
TEXARKANA-ARKL STATE LINE ROAD
MILLER CO.
ROUTE 71 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Scale: 3/8" = 1'-0"
except as noted
Drawn By: [Name] Date: 2-15-30
Traced By: [Name] Date: 2-17-30
Checked By: [Name] Date: []
BRIDGE NO. 1440 DRAWING NO. 2815

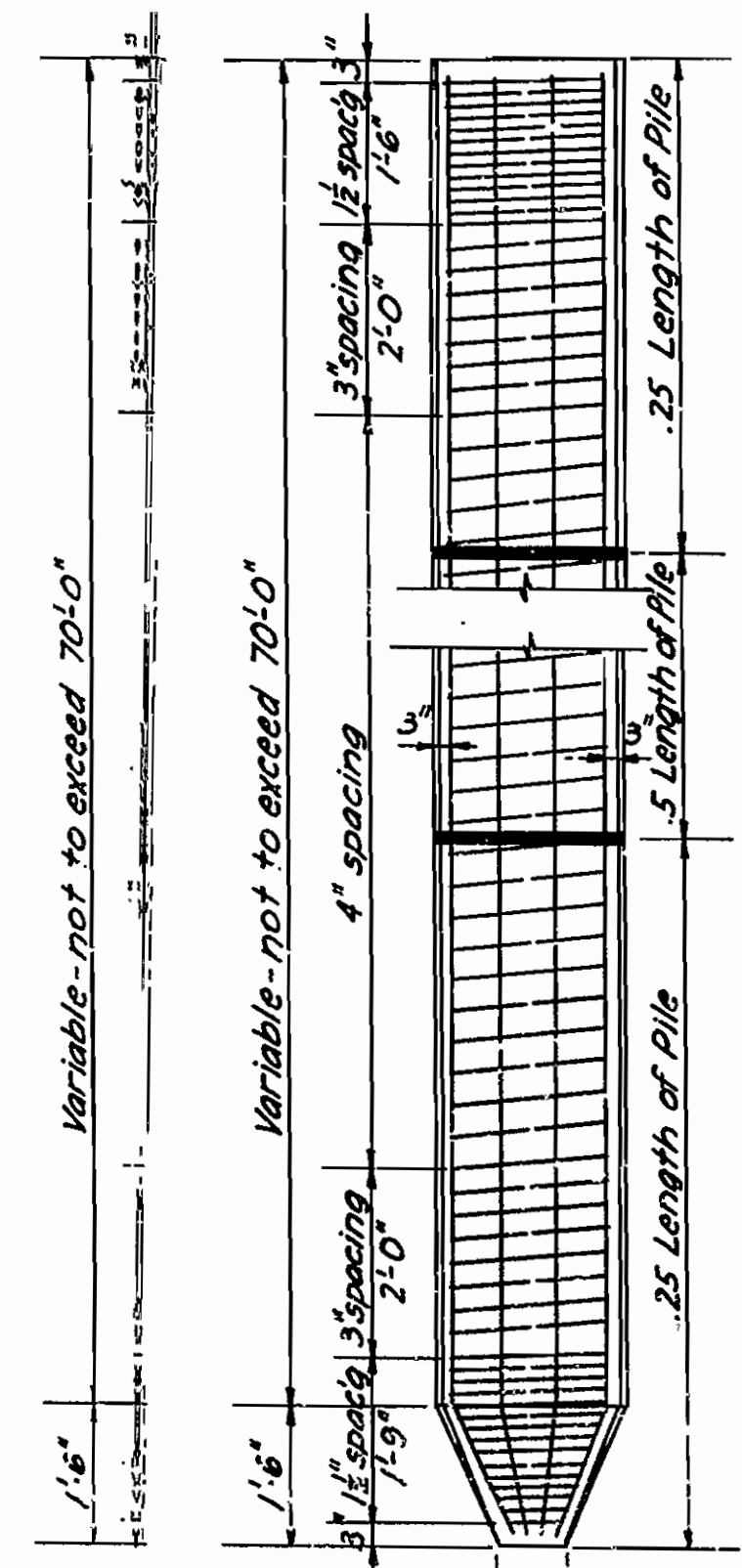
Revised Spec. of P3+P4-B-1-1930

M.B. [Name]
BRIDGE ENGINEER

FISCAL YEAR	Job No	SHEET	TOTAL SHEETS
	3147	5	7
FED. ROAD DIST. No.	STATE	DATE	
		214-D 1930	5 7

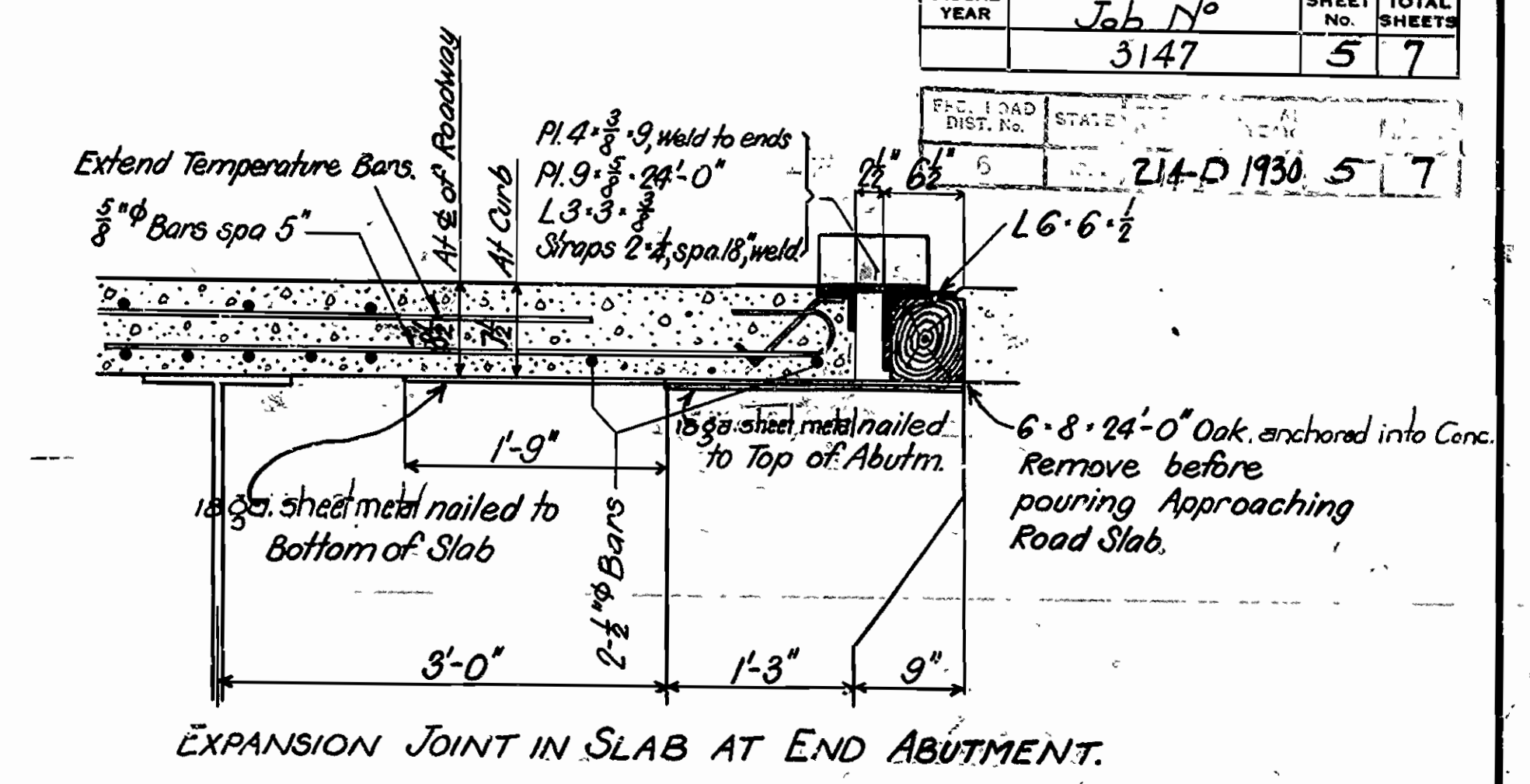


Piling Reinforcing
Vertical - 12-1/2" 50' to 60' in Length;
12-1/8" 60' to 70' in Length;
Spiral - 1/2" spaced as shown.

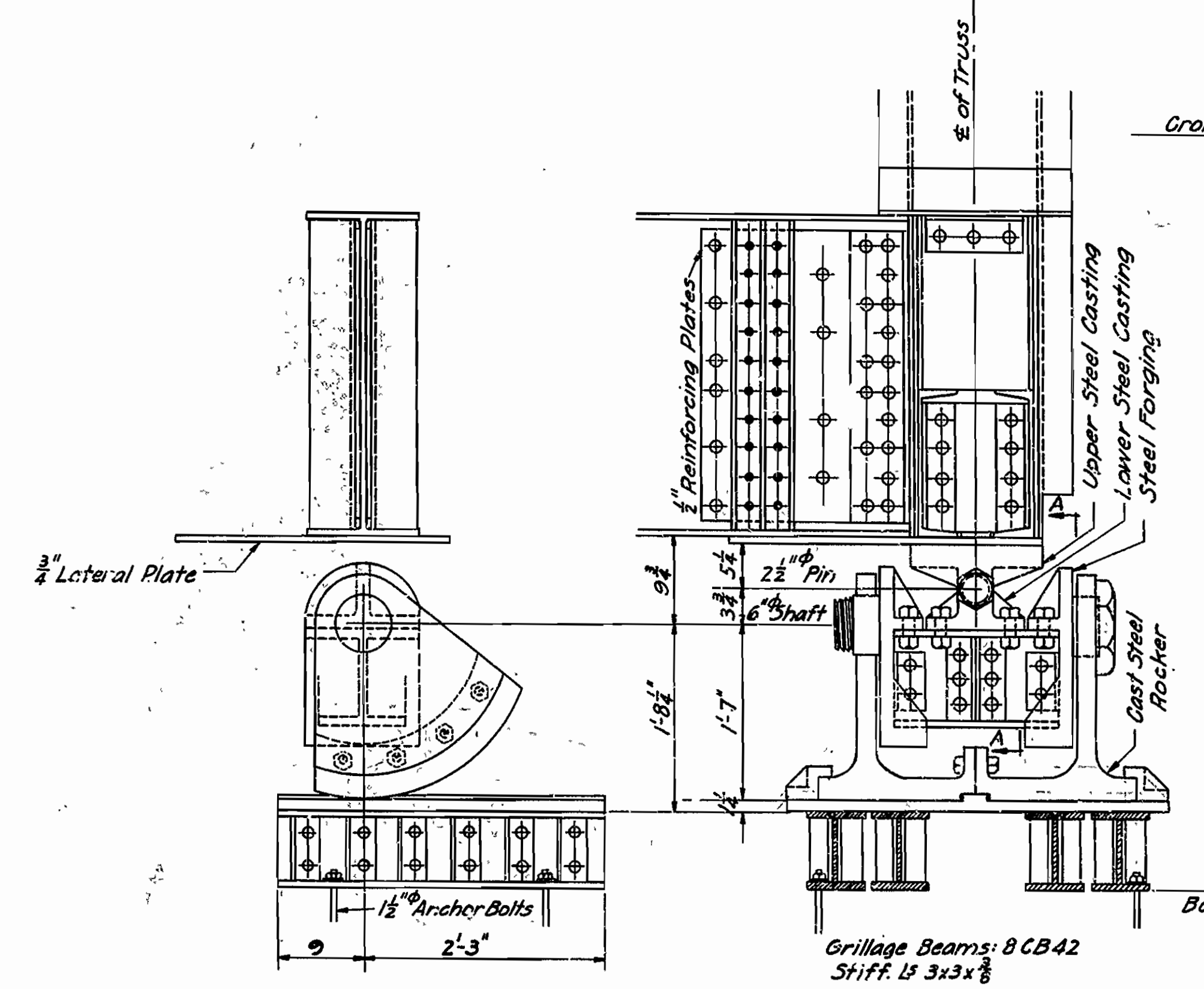


Pile to be painted with black bands at quarter points to indicate proper place for attaching handling line. Piles to be picked up by pulling on both lines uniformly, and keeping 2'-0" depth in a vertical plane.

General Notes:
Concrete piles to be Class "S" and to have a minimum capacity of 30 tons.
Reinforcing steel to be deformed bars of structural or intermediate grade. Shop list and bending diagrams must be submitted by Contractor and approved before fabrication is begun.
Specifications: Arkansas Standard Road & Bridge Specifications, adopted May 30th, 1925 & Revised.

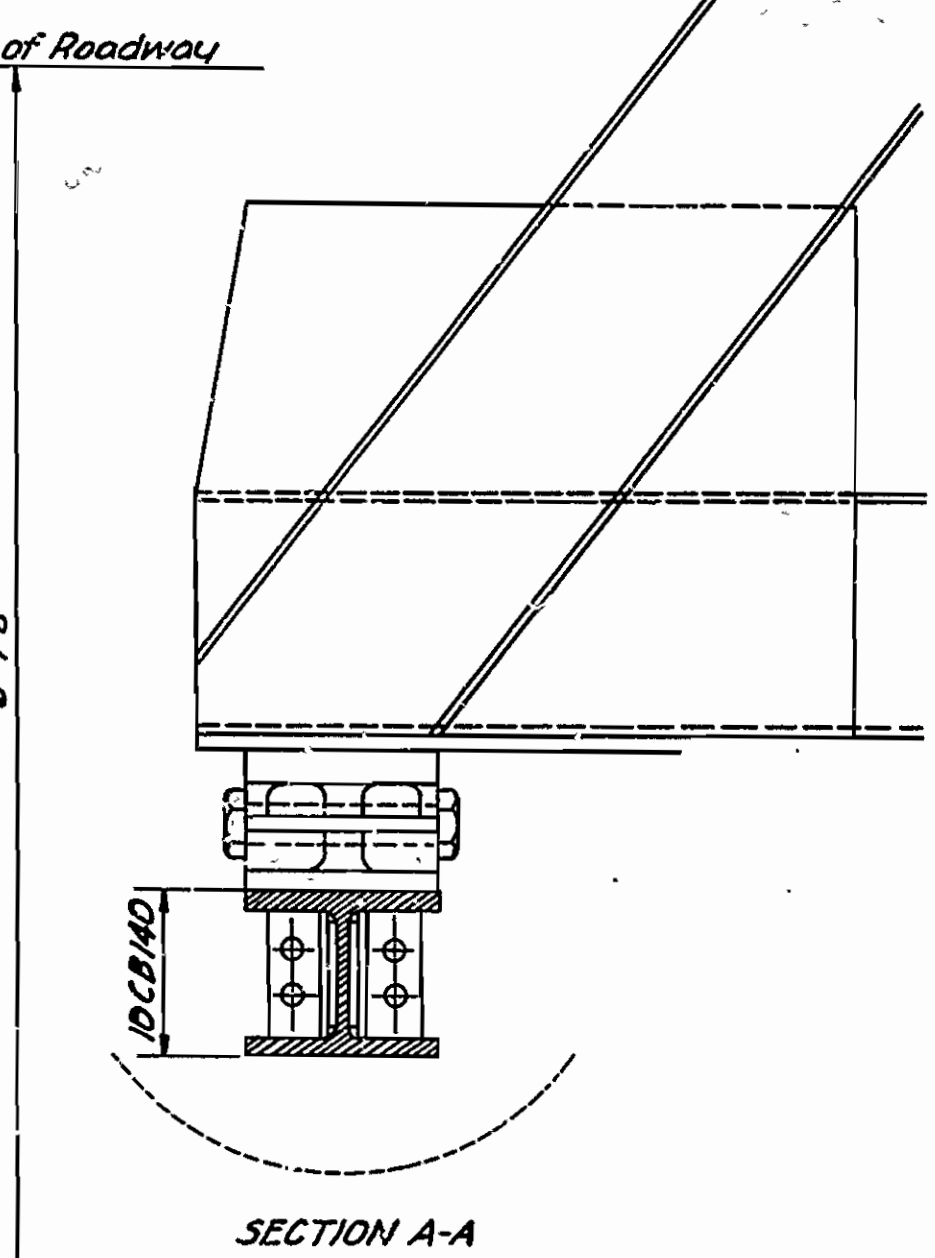


EXPANSION JOINT IN SLAB AT END ABUTMENT.

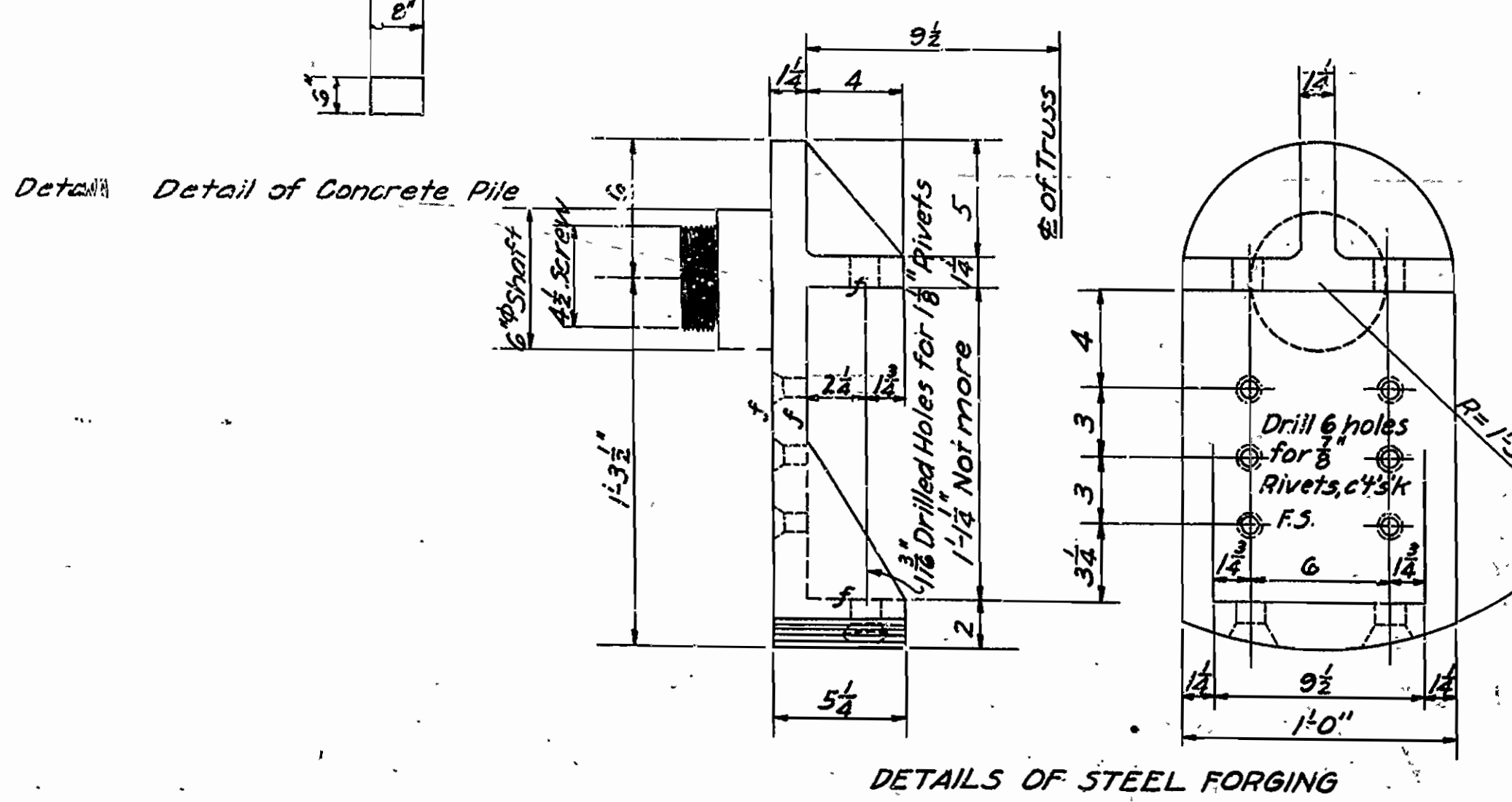


Details of Special Expansion Shoe

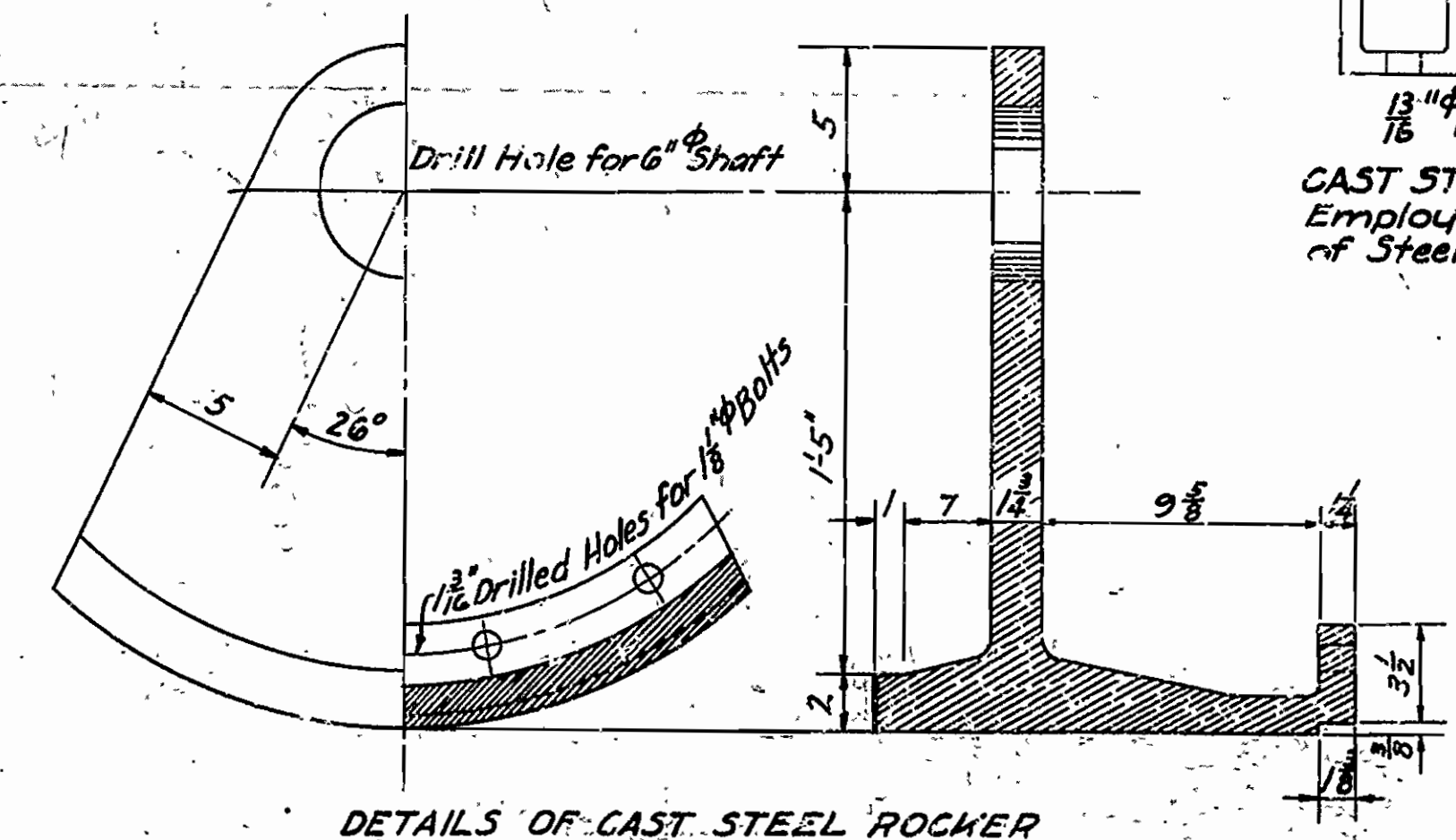
Note:
This expansion shoe to be used on Bridge No. 1440 instead of that shown on Crwg No. 2459.



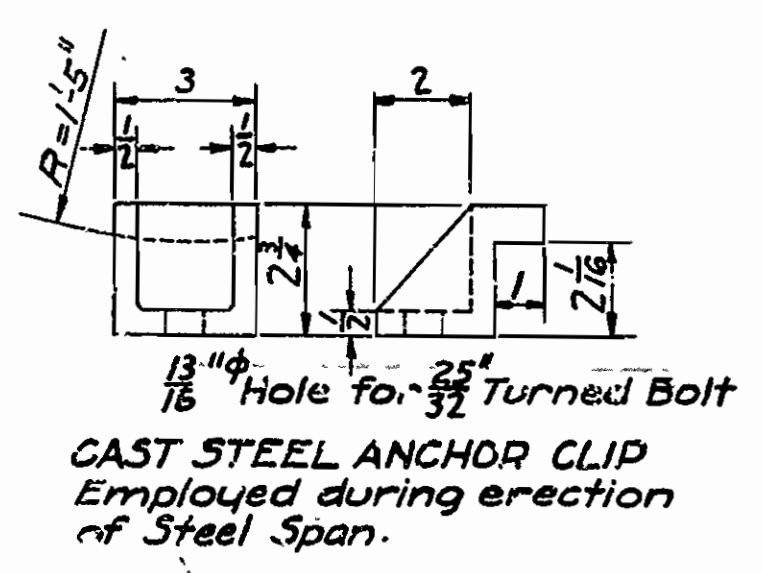
SECTION A-A



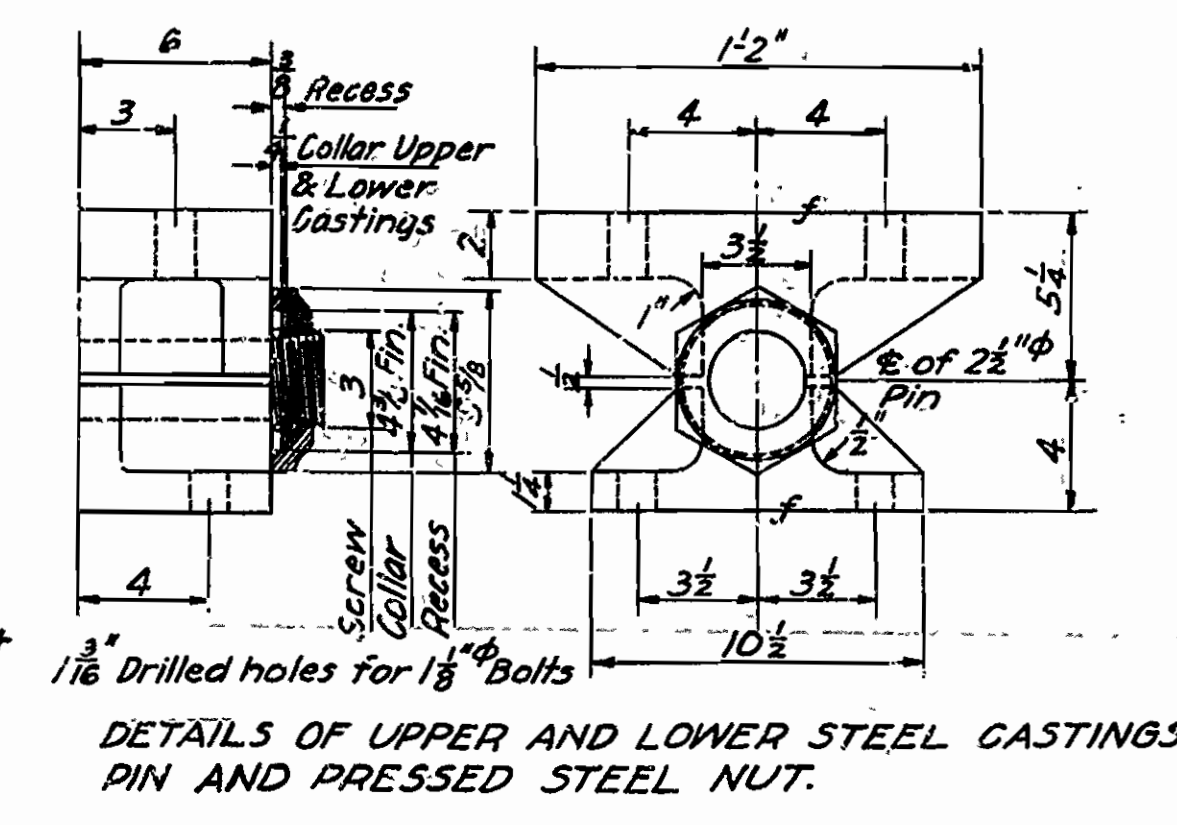
DETAILS OF STEEL FORGING



DETAILS OF CAST STEEL ROCKER



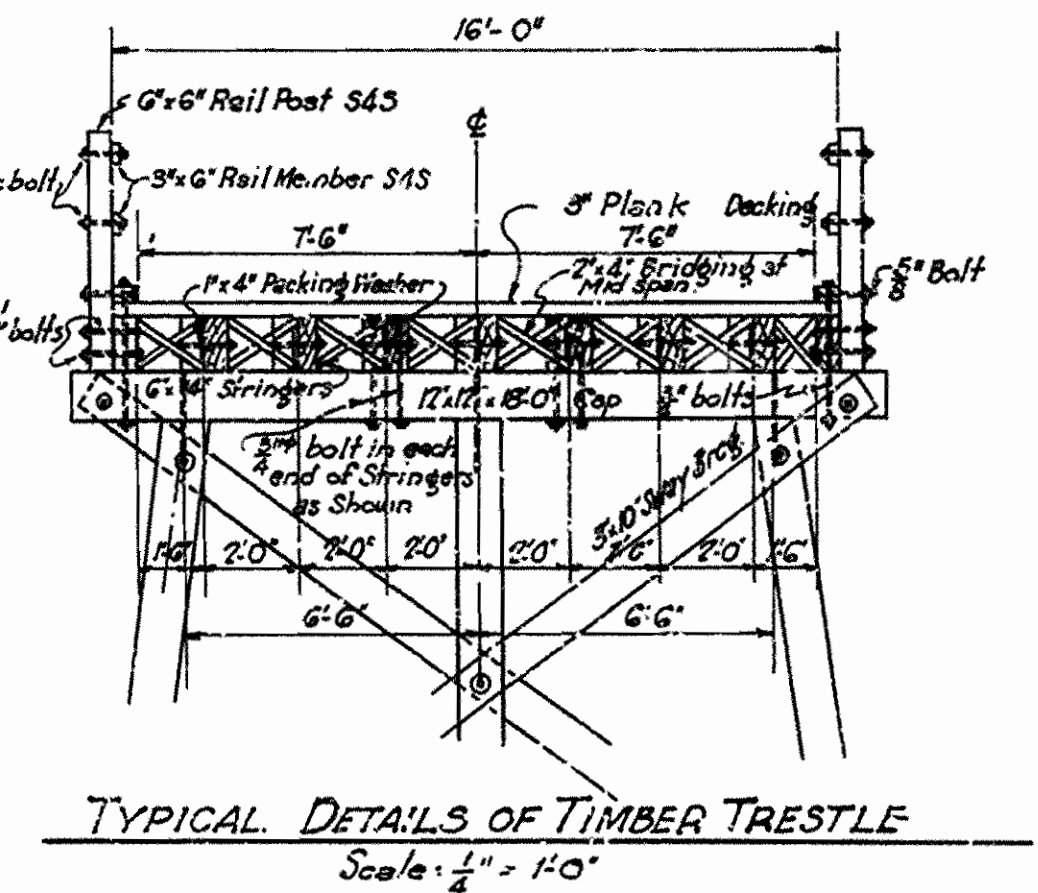
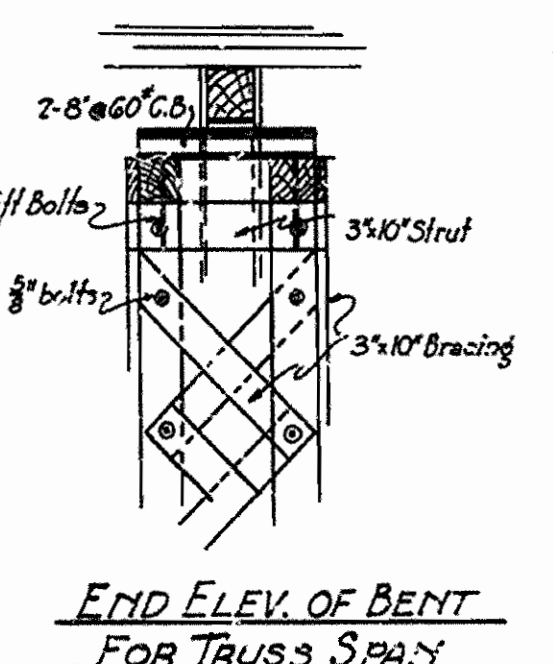
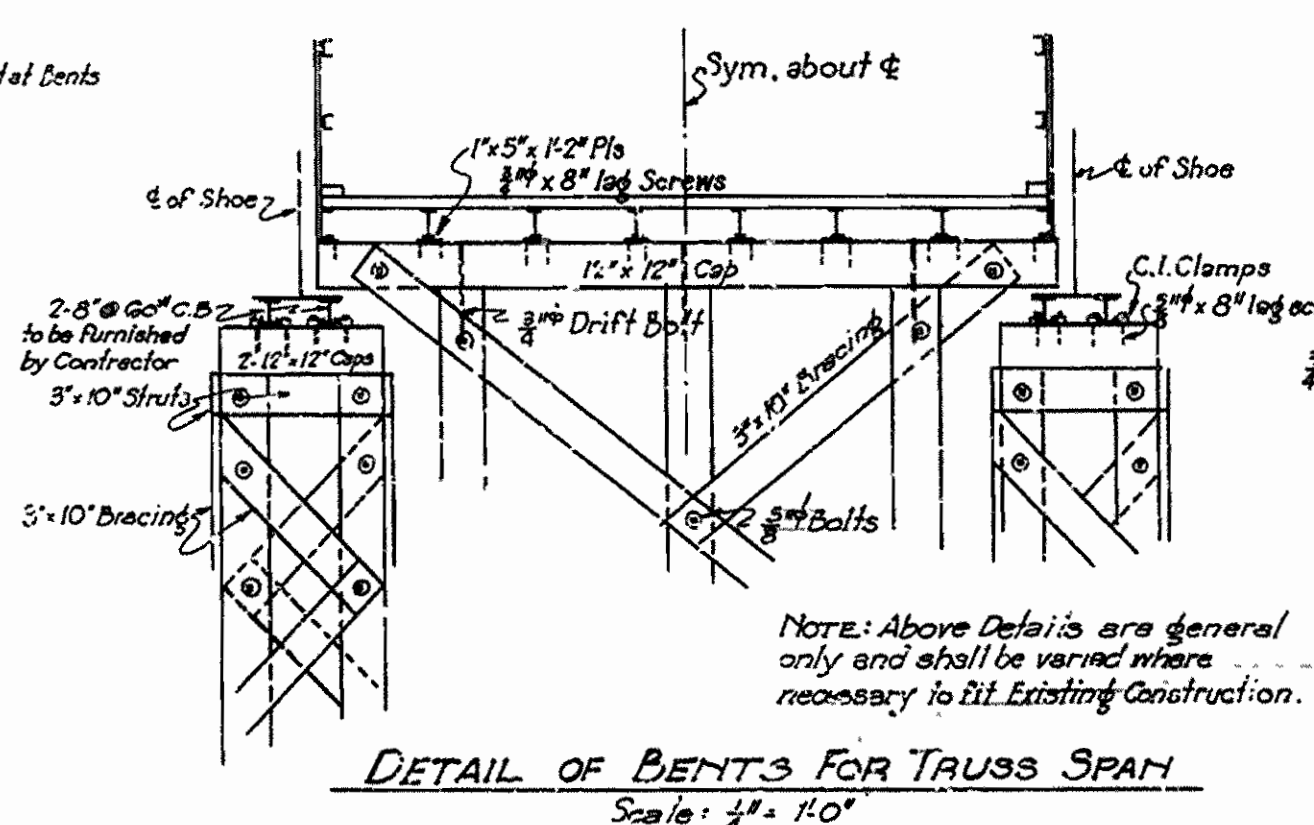
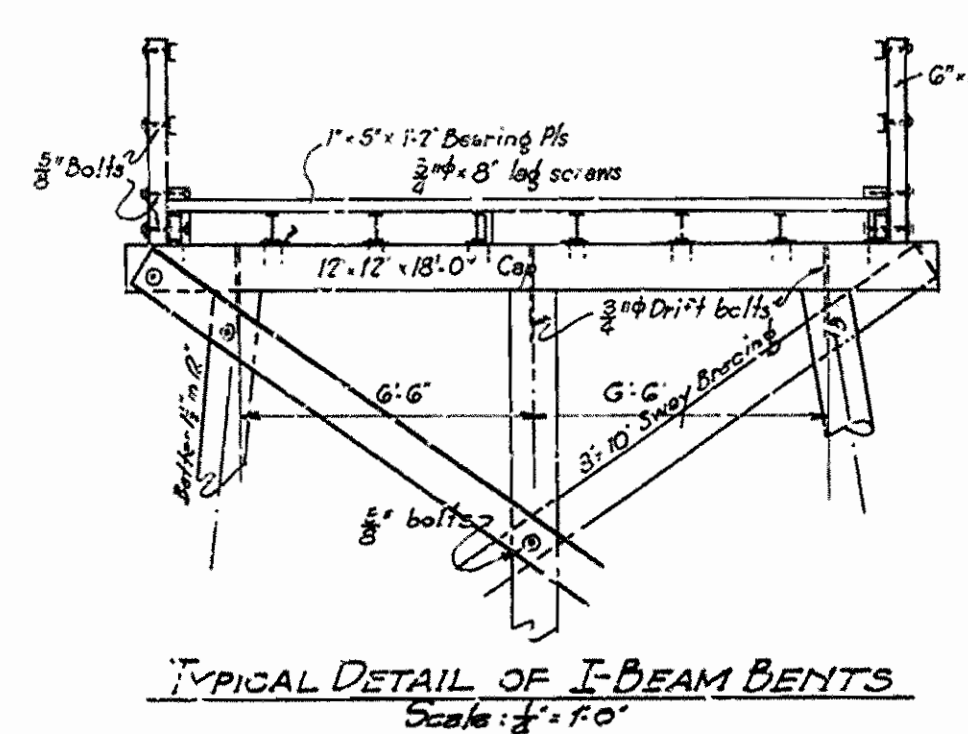
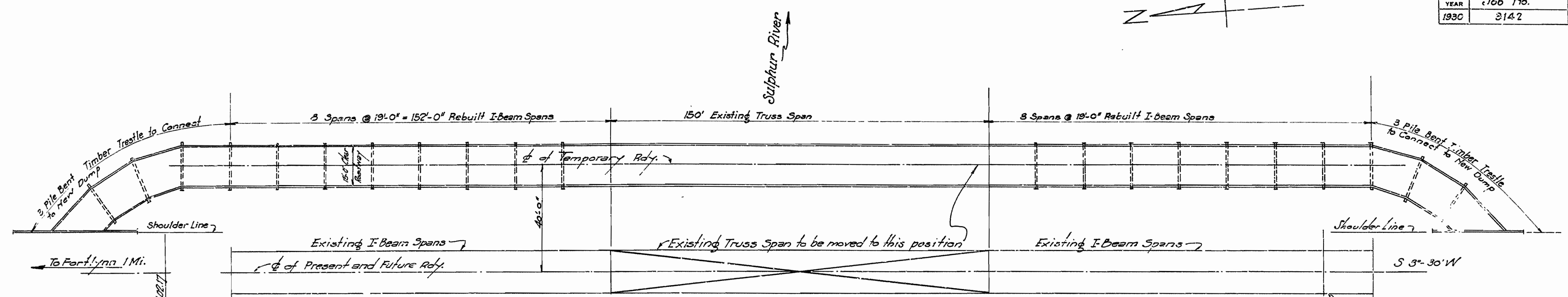
CAST STEEL ANCHOR CLIP
Employed during erection of Steel Span.



DETAILS OF UPPER AND LOWER STEEL CASTINGS, PIN AND PRESSED STEEL NUT.

BRIDGE OVER SULPHUR RIVER
TEXARKANA-LOUISIANA LINE ROAD
MILLER COUNTY
ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Scale: in. = ft.
Drawn By: [Signature] Date: 7-16-30
Traced By: [Signature] Date: 7-17-30
Checked By: [Signature] Date: [Blank]
BRIDGE NO. 1440 DRAWING NO. 2816

FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
1930	3142	?	?



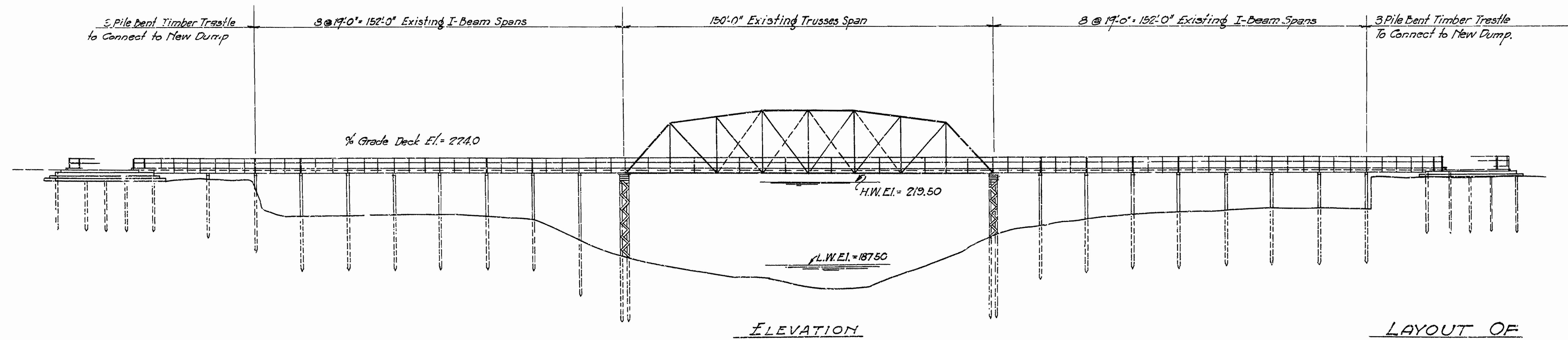
GENERAL NOTES:

Existing Steel Truss Span to be moved to a new line 40 ft. to the left of Present Center Line of Roadway, and to be supported on timber piers as indicated. Existing I-Beam spans to be rebuilt on New Line and supported by timber pile bents. New timber trestle to be constructed from ends of I-Beam spans to dump of Permanent Roadway.

All work to be done in accordance with General Specifications of Arkansas State Highway Department for the construction of Timber Trestles.

All timbers & piling to be untreated.

Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30th, 1925 and Revised together with Special Provisions.



LAYOUT OF
 TEMPORARY BRIDGE OVER SULPHUR RIVER
 TEXARKANA-ARK-LA. STATE LINE ROAD
 MILLER COUNTY
 ROUTE 71 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: *W.B.* Date: *7-8-30*
 Traced By: *W.B.* Date: *7-9-30*
 Checked By: _____ Date: _____

Scale: 1 in. = 20 ft.
 1/2 in. = 1 ft.

BRIDGE NO. 1440 1/2 DRAWING NO. 2771

B.M. El. = 211.40
 Nail in 2" Oak, 200' Ft.
 of Sta. 1305+35

M.B. Garner
 BRIDGE ENGINEER