

FED. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	282-A	1	1	15

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

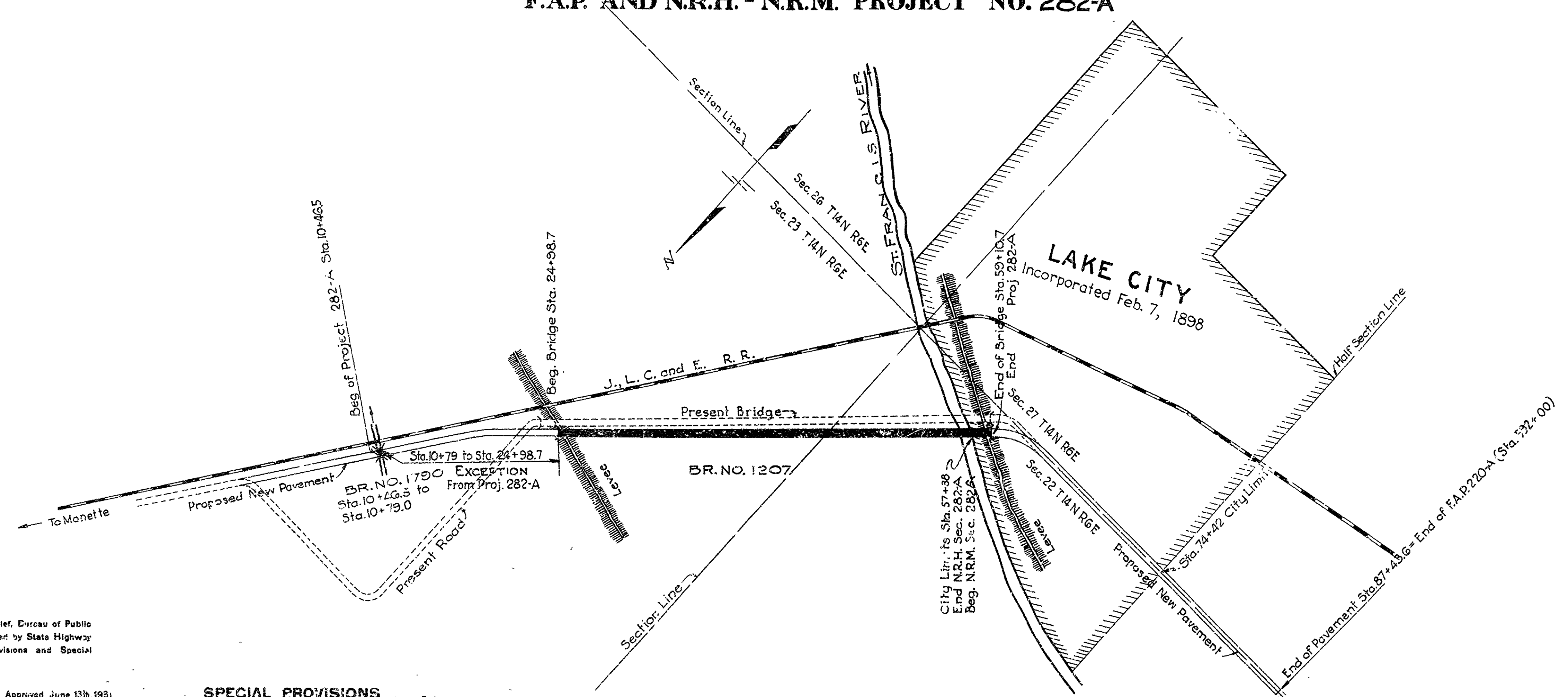
PLAN OF PROPOSED BRIDGES
OVER ST. FRANCIS RIVER & RELIEF
AT LAKE CITY, ARKANSAS
CRAIGHEAD COUNTY
ROUTE 18 SEC. 4
JOB No 10-120
F.A.P. AND N.R.H. - N.R.M. PROJECT NO. 282-A

QUANTITIES

Item No.	Item	Quantity	Unit
SR&H	Clearing	14.463	Acres
13	Dry Excavation for Structures	60	Cu.Yds.
13	Wet " " " "	370	Cu.Yds.
91	Class 'A' Concrete for Bridges	140.28	Cu.Yds.
91	Class 'S' " " " "	2,741.97	Cu.Yds.
91	Seal " " " "	95.84	Cu.Yds.
SP & 92	Reinforcing Steel " " "	567,568	Lbs.
93	Concrete Piling	14,595	Lin.Ft.
93	Loading Test Piles	2	Each
94	Concrete Rolling for Bridges	6,172	Lin.Ft.
95	Structural Steel	1,457,708	Lbs.
98	Untreated Timber Piling	1,092	Lin.Ft.
SP	Bronze Project Marker Plates	4	Each
SP	Bronze State Bridge Name Plates	4	Each
SP	Removal of Old Structure	Lump Sum	
SP	Machinery	13,000	Lbs.

INDEX OF SHEETS

Sheet No.	Drawing No.	Title
1.	3450	Title Sheet
2.	3451	Layout Bridge No. 1207
3.	3452	" " " 1207
4.	3453	" " " 1207
5.	2160	Details of Std. 31'-0" I-Beam Span, 24' Cl. Roadway, 4 Pile Bent.
6.	3454	" of 31' I-Beams adjoining Vert. Lift Span & Super-elevation Details.
7.	3455	" of 31'-6" Vertical Lift Span
8.	3456	" of Towers " " "
9.	3457	" of " " " "
10.	3458	" of Counter weights and Traffic gates
11.	3459	" of Operating Machinery
12.	3460	" of Piers
13.	3461	Layout of Bridge No. 1790
14.	2161	Details of Std. 31' I-Beam Span, 27' Cl. Roadway, 5 Pile Bent
15.	"	" of Bronze Project Marker Plates & Bronze State Bridge Name Plates.



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	Mar. 1st, 1931	Approved June 13th, 1931
L	Revised	Feb. 10th, 1933	
M	Revised	Mar. 1st, 1931	Approved June 13th, 1931
N	Revised	Sept. 1st, 1932	
O	Revised	Sept. 1st, 1932	
P	Revised	Nov. 1st, 1932	

SPECIAL PROVISIONS

Item	No. of Sheets	Date
Prosecution of Work		9-26-33
Clearing	1	9-15-33 & Revised 9-26-33
Reinforcing Steel	1	12-30-32
Bronze Proj. Marker Plates and Bronze State Bridge Name Plates	1	8-10-33
Removal of Old Structure	1	9-15-33
Requirements of Lift Span	17	9-15-33
Engineer's Field Office	1	8-23-33
Labor	12	8-2-33
Arkansas Labor & Materials	1	7-22-33
Lamp Black	1	9-15-33

LAYOUT
Scale: 1 in. = 500 ft.

LENGTH OF PROJECT	=	3444.5 Ft. or 0.652 MILES
LENGTH OF BRIDGES	=	3444.5 Ft. or 0.652 MILES
LENGTH OF EMBANKMENT	=	0
LENGTH OF JOB	=	3444.5 Ft. or 0.652 MILES
LENGTH OF N.R.H. PROJECT	=	3271.8 Ft. or 0.619 MILES
LENGTH OF N.R.M. PROJECT	=	172.7 Ft. or 0.032 MILES

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

N.B. Laver
BRIDGE ENGINEER

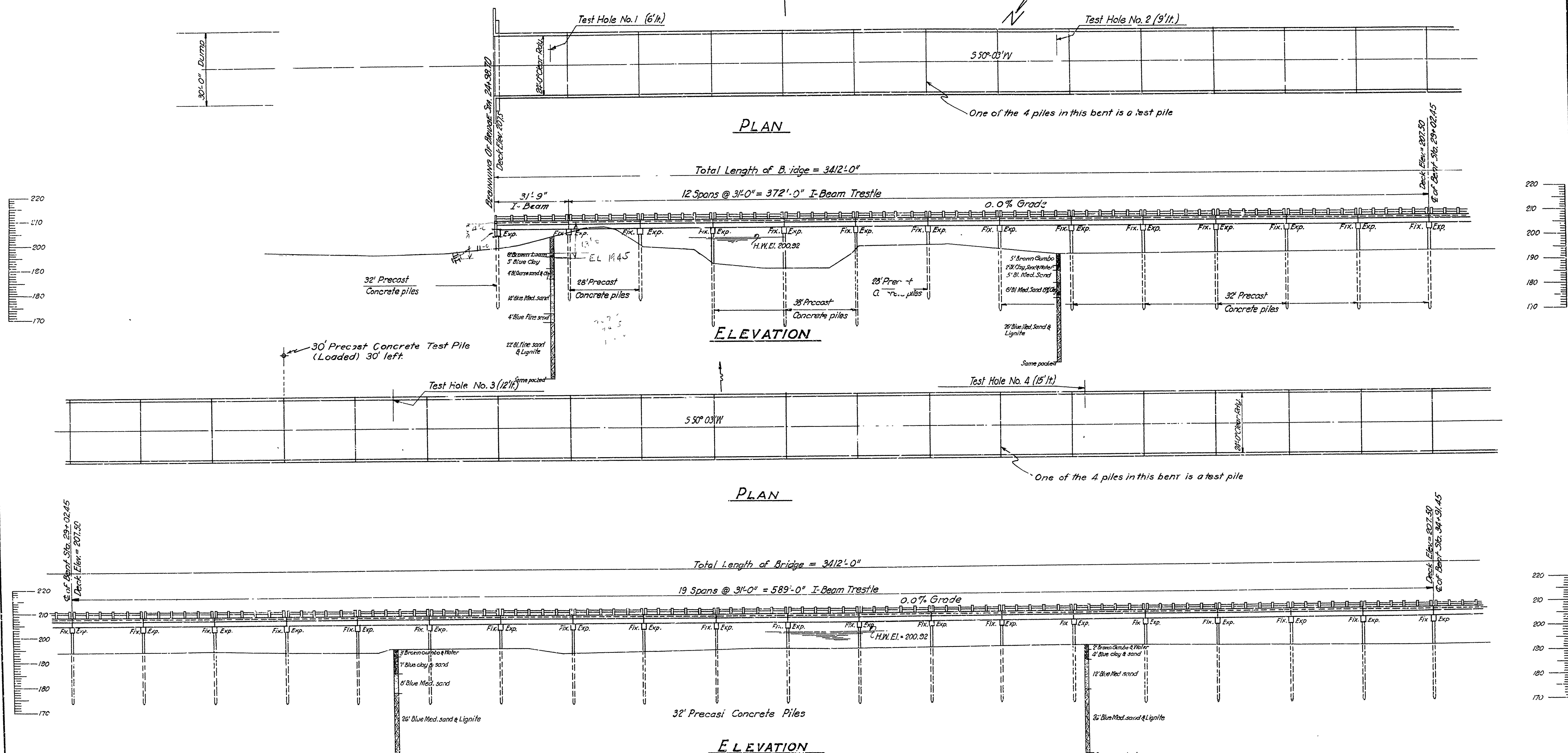
BRIDGES NO. 1207 & 1790

DRAWING NO. 3450

RIGHT OF WAY DATA				
From Sta.	To Sta.	Rt. of C.	Lt. of C.	Total Width
24+98.7	59+10.7	100'	100'	200'

TANGENT DISTANCE DATA	
From Beg. of Bridge	From End of Bridge
482.5'	30'

FISCAL YEAR	State Job No.	SHEET NO.	TOTAL SHEETS
	10-120		
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.
6	ARK.	1934	2
N.R.M. PROJ. NO.		FISCAL YEAR	TOTAL SHEETS
282-A		1934	15



NOTE:
 Lengths of piling shown are for estimated quantities only. Actual lengths are to be determined in the field.
 Minimum Pile Capacity:
 concrete piles 30 tons
 untreated timber piles 15 tons
 Maximum Design Load:
 concrete piles 27 tons
 Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30, 1925 and revised.
 Maximum Design Load:
 Untreated Timber Piles 13 Tons

LIST OF QUANTITIES BR. NO. 1207

Item No.	Item	Quantity	Unit
S.P. & 11	Clearing	14,463	Acres
13	Dry Excavation for Structures	50	Cu. Yds.
13	Wet Excavation for Structures	370	Cu. Yds.
91	Class 'A' Concrete for Bridges	140.28	Cu. Yds.
91	Class '3' Concrete for Bridges	2694.95	Cu. Yds.
91	Seal Concrete for Bridges	95.84	Cu. Yds.
S.P. 92	Reinforcing Steel for Bridges	558,657	Lbs.
93	Concrete Piling	14,232	Lin. Ft.
93	Loading Test Piles	2	Each
94	Concrete Railing for Bridges	6,699	Lin. Ft.
95	Structural Steel	1,443,308	Lbs.
98	Untreated Timber Piling	1,092	Lin. Ft.
S.P.	Bronze Project Marker Plates	2	Each
S.P.	Bronze State Bridge Name Plates	2	Each
S.P.	Removal of Old Structure		Lump Sum
S.P.	Machinery	13,000	Lbs.

LAYOUT OF EAST SECTION OF BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY, ARKANSAS CRAIGHEAD CO. ROUTE 18 SEG. 4

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: *[Signature]* Date: 8-1-32
 Traced By: *[Signature]* Date: 8-4-32
 Checked By: *[Signature]* Date: _____

Scale: 1 in. = 20 ft.

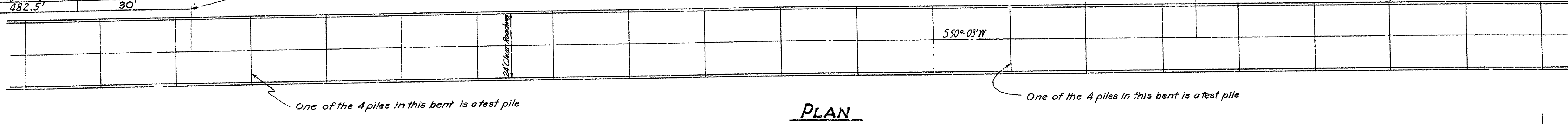
BRIDGE No. 1207 DRAWING No. 3451

[Signature]
 BRIDGE ENGINEER

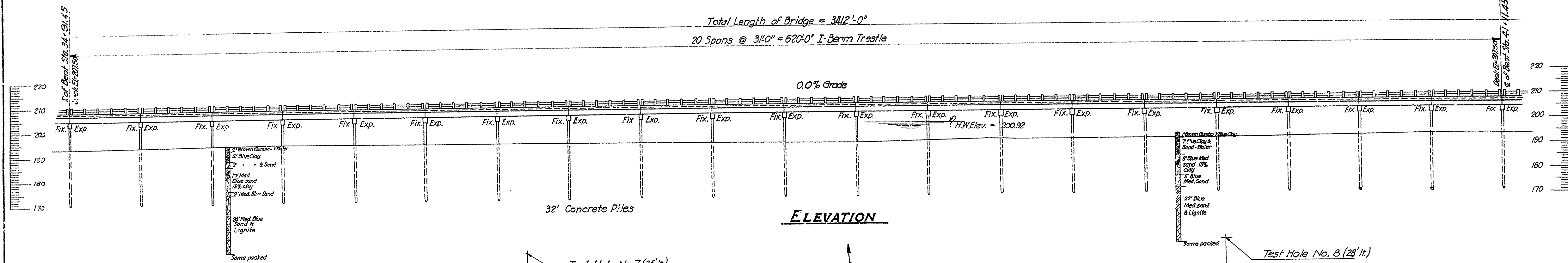
RIGHT OF WAY DATA				
From Sta.	To Sta.	Rt. of C.	Lt. of C.	Total Width
24+98.7	59+10.7	100'	100'	200'

TANGENT DISTANCE DATA	
From Beginning of Bridge	From End of Bridge
482.5'	30'

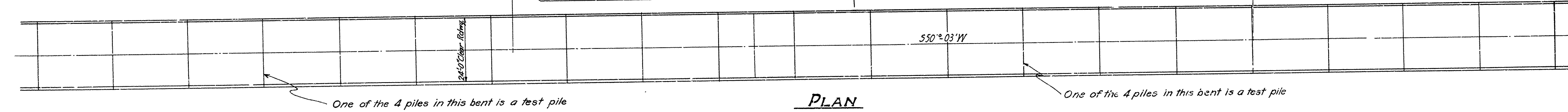
FISCAL YEAR	State Job No.	SHEET NO.	TOTAL SHEETS
	10-120		
N.R.M.			
FED. ROAD DIST. NO.	STATE	L.N. R.R. PROJ. NO.	FISCAL YEAR
6	ARK.	282-A	1934
		SHEET NO.	TOTAL SHEETS
		3	15



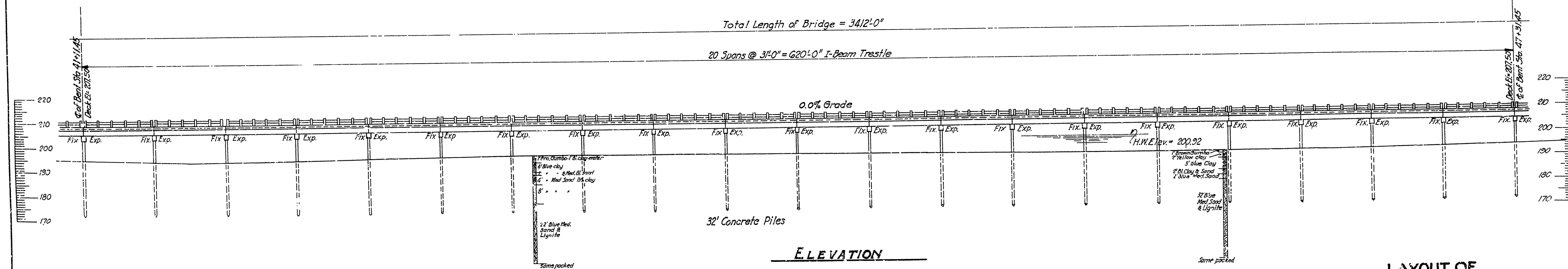
PLAN



ELEVATION



PLAN



ELEVATION

LAYOUT OF
MIDDLE SECTION OF BRIDGE
OVER ST. FRANCIS RIVER
AT LAKE CITY, ARK.
CRAIGHEAD CO.
ROUTE 18 SEC. 4
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Scale: 1 in. = 20 ft.
DRAWING NO. 3452

N.B. Lauer
BRIDGE ENGINEER

Drawn By: *W. J. ...* Date: 8-2-33
Traced By: *W. J. ...* Date: 8-2-32
Checked By: *W. J. ...* Date: *...*

RIGHT OF WAY DATA

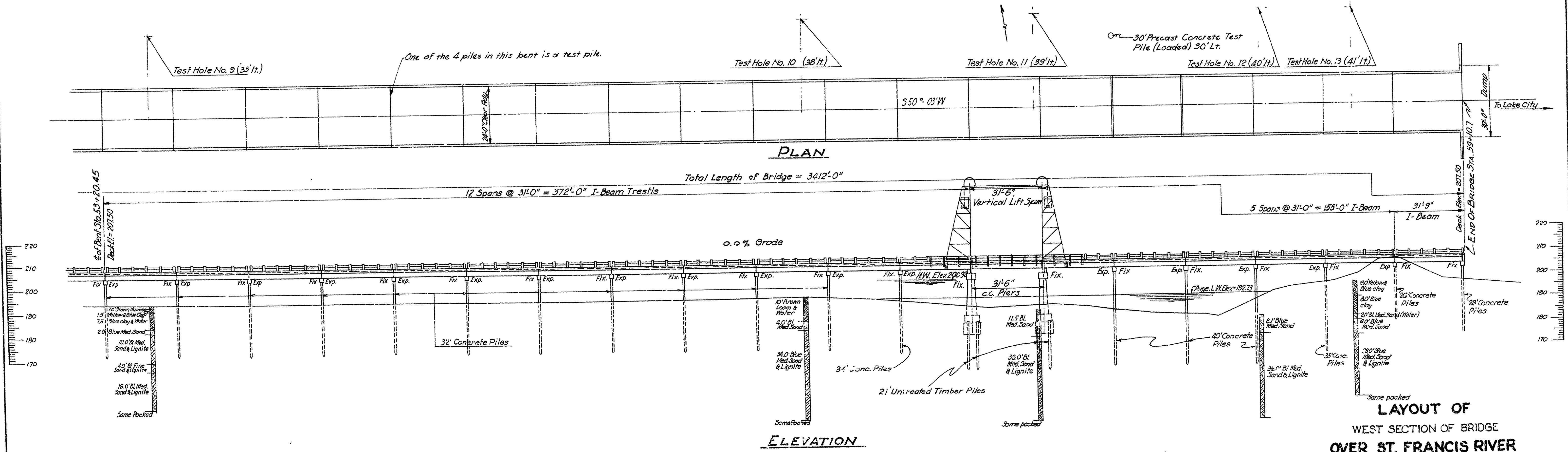
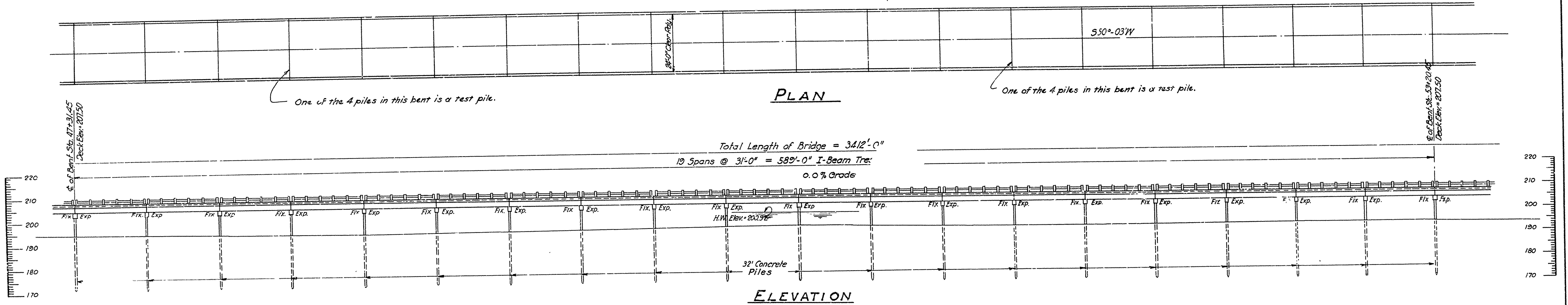
From Sta.	To Sta.	Rt. of C.	Lt. of C.	Total Width
24+98.7	59+10.7	100'	100'	200'

TANGENT DISTANCE DATA

From Beginning of Bridge	From End of Bridge
482.5'	30'

FISCAL YEAR	State Job No.	SHEET NO.	TOTAL SHEETS
	10-120		

N.R.M.					
FED. ROAD DIST. NO.	STATE	L.N.R.K. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	282-A	1934	4	15



LAYOUT OF WEST SECTION OF BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY, ARKANSAS CRAIGHEAD CO. ROUTE 18 SEC. 4

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: [Signature] Date: 8-2-33
 Traced By: [Signature] Date: 8-2-33
 Checked By: [Signature] Date: []

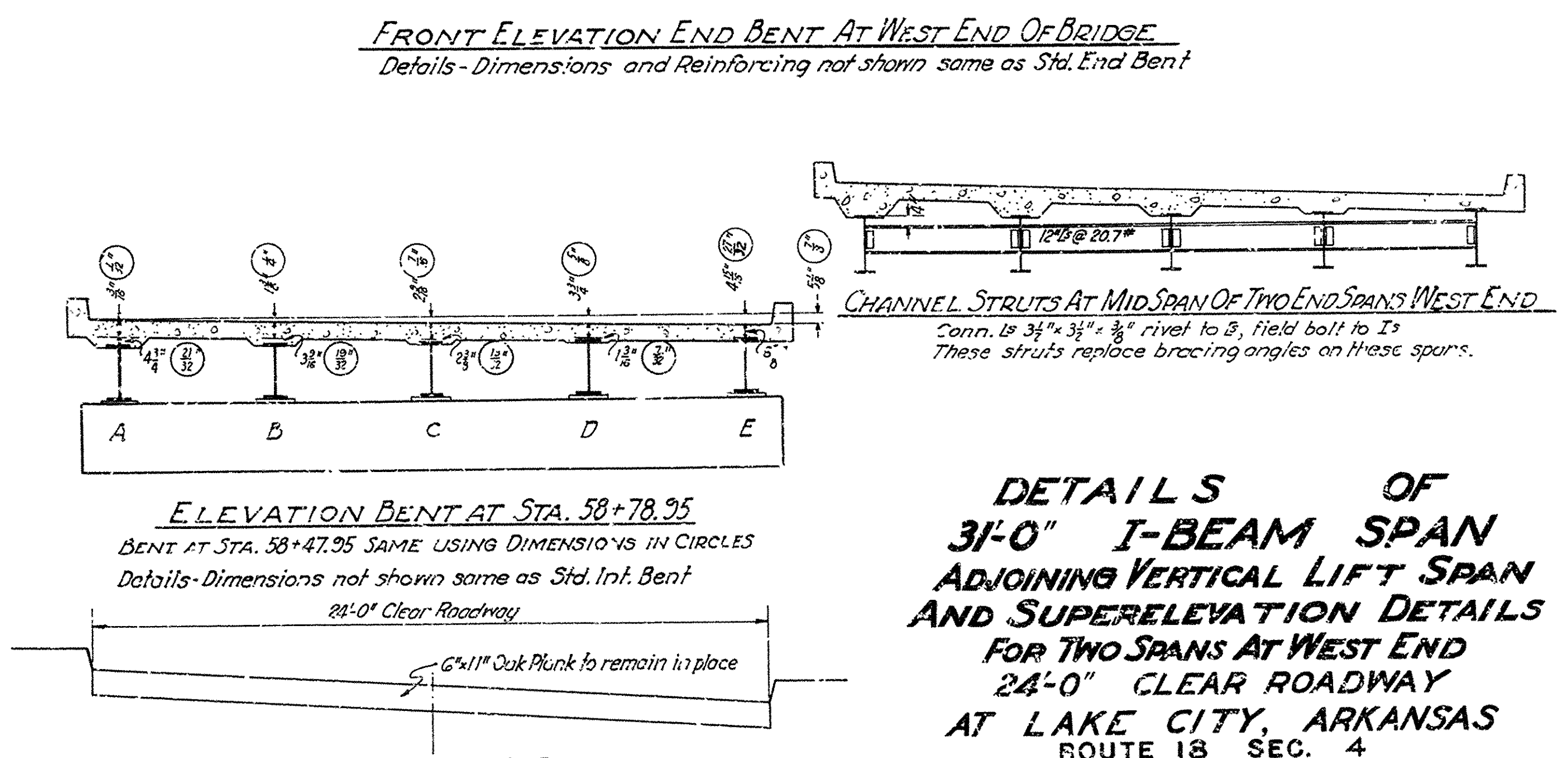
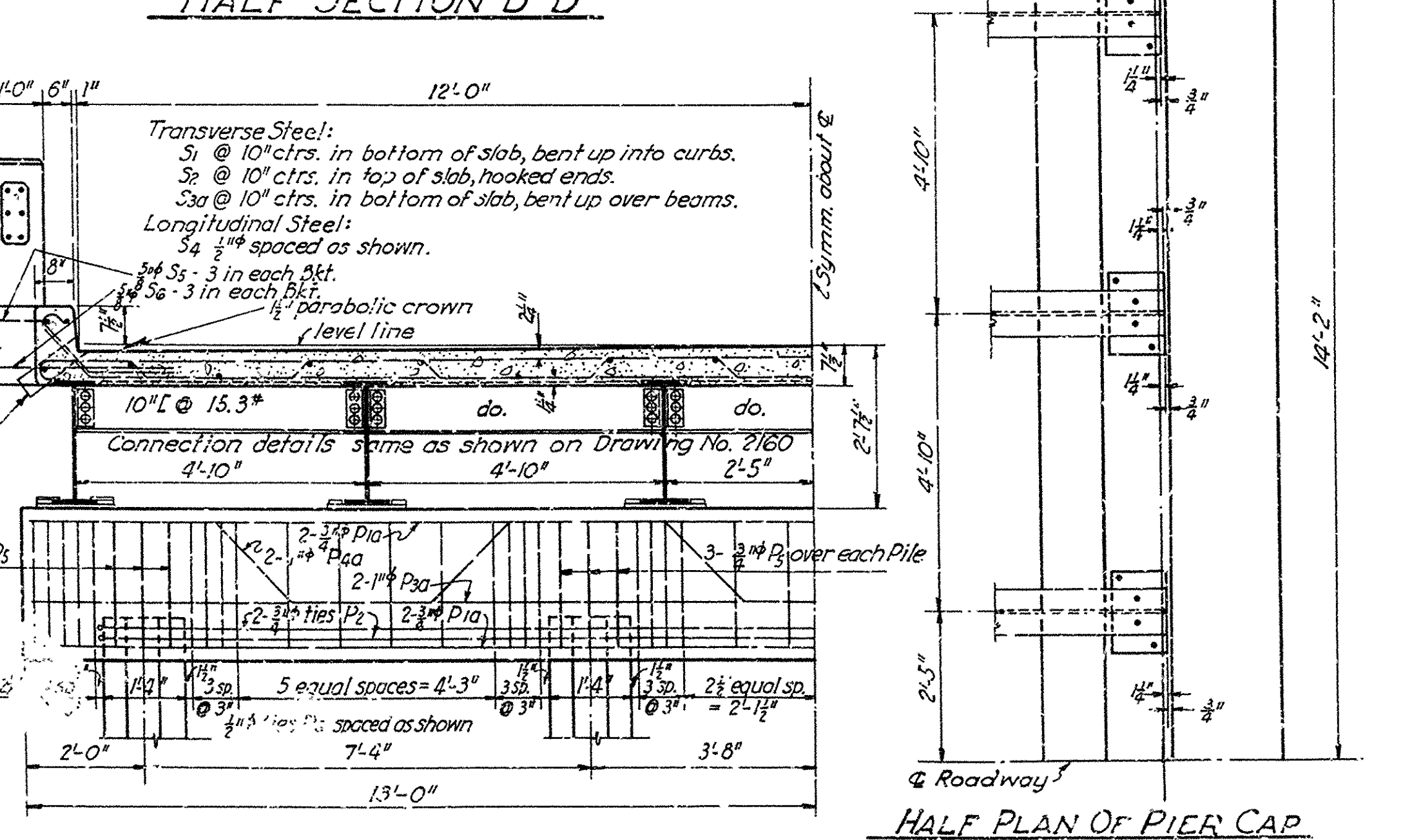
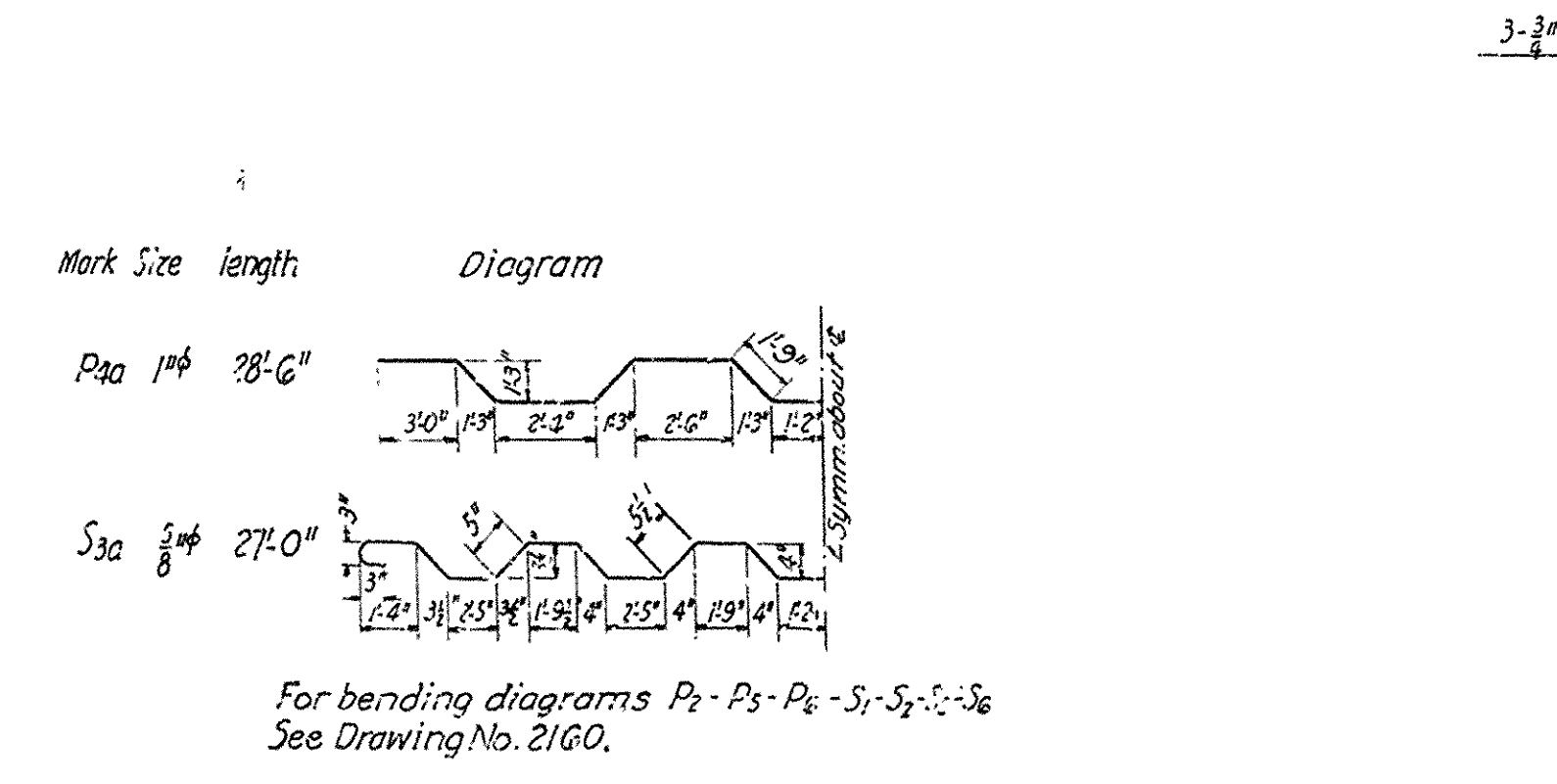
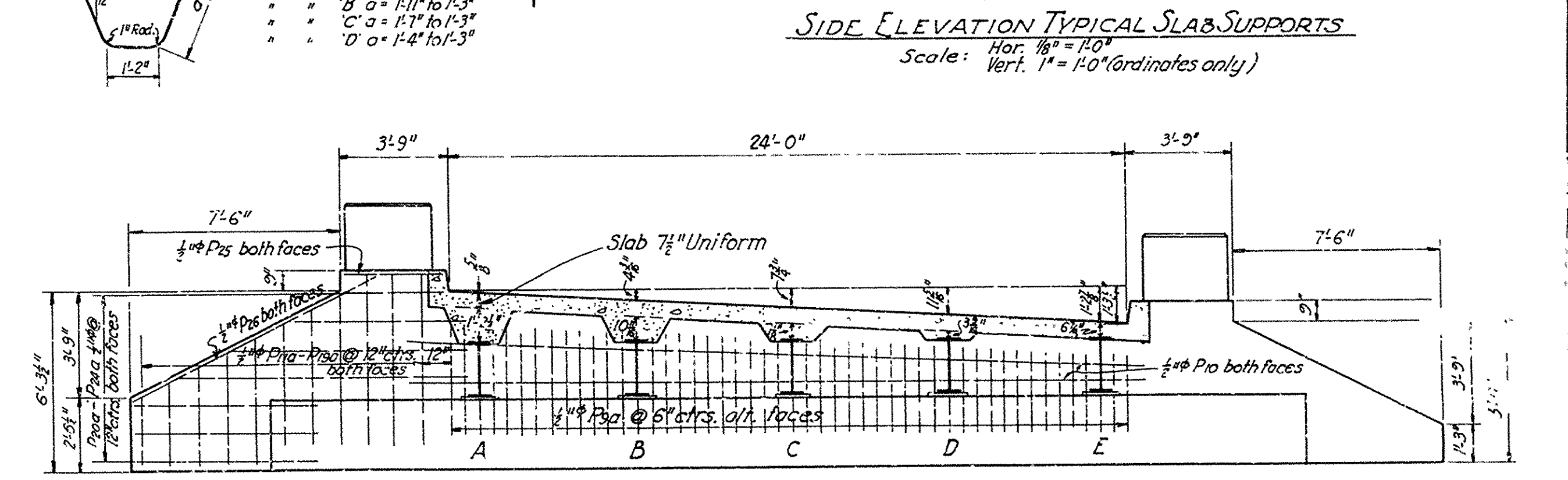
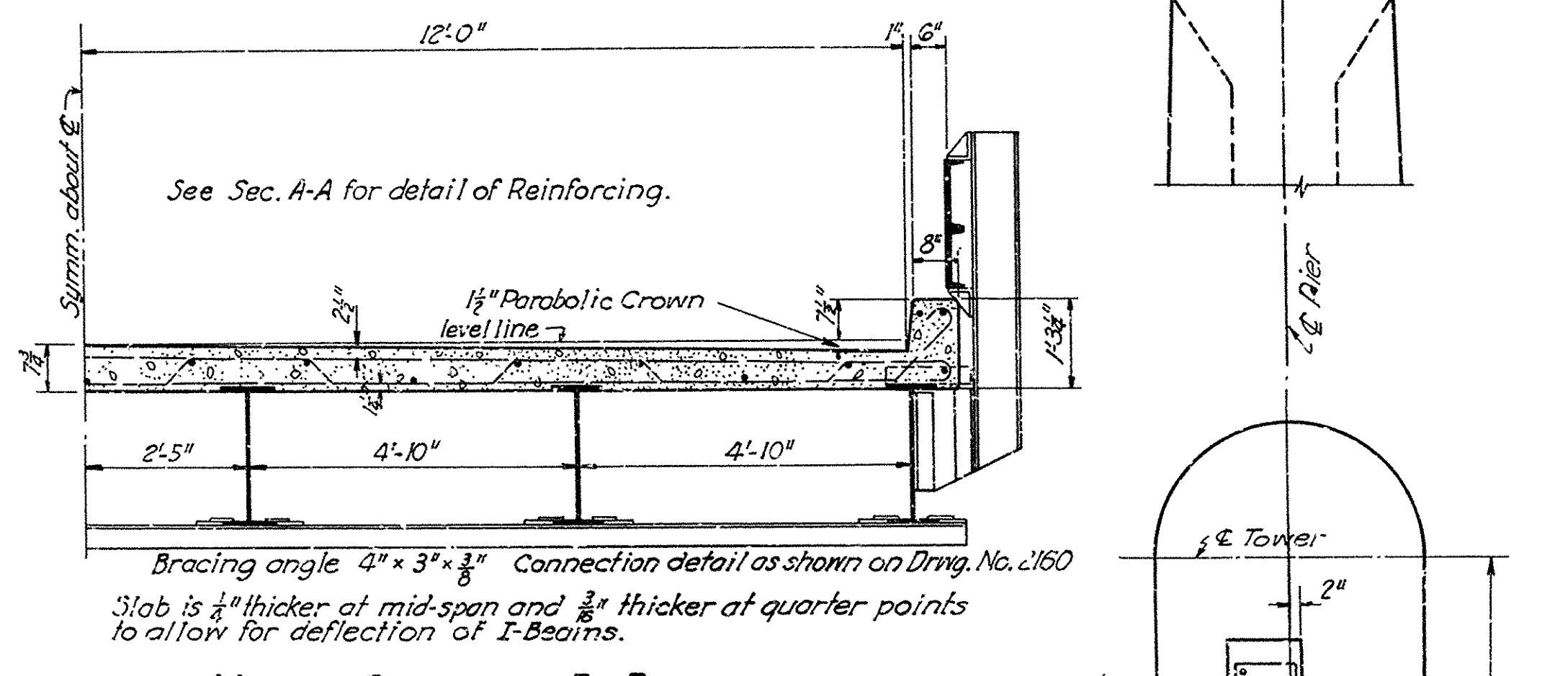
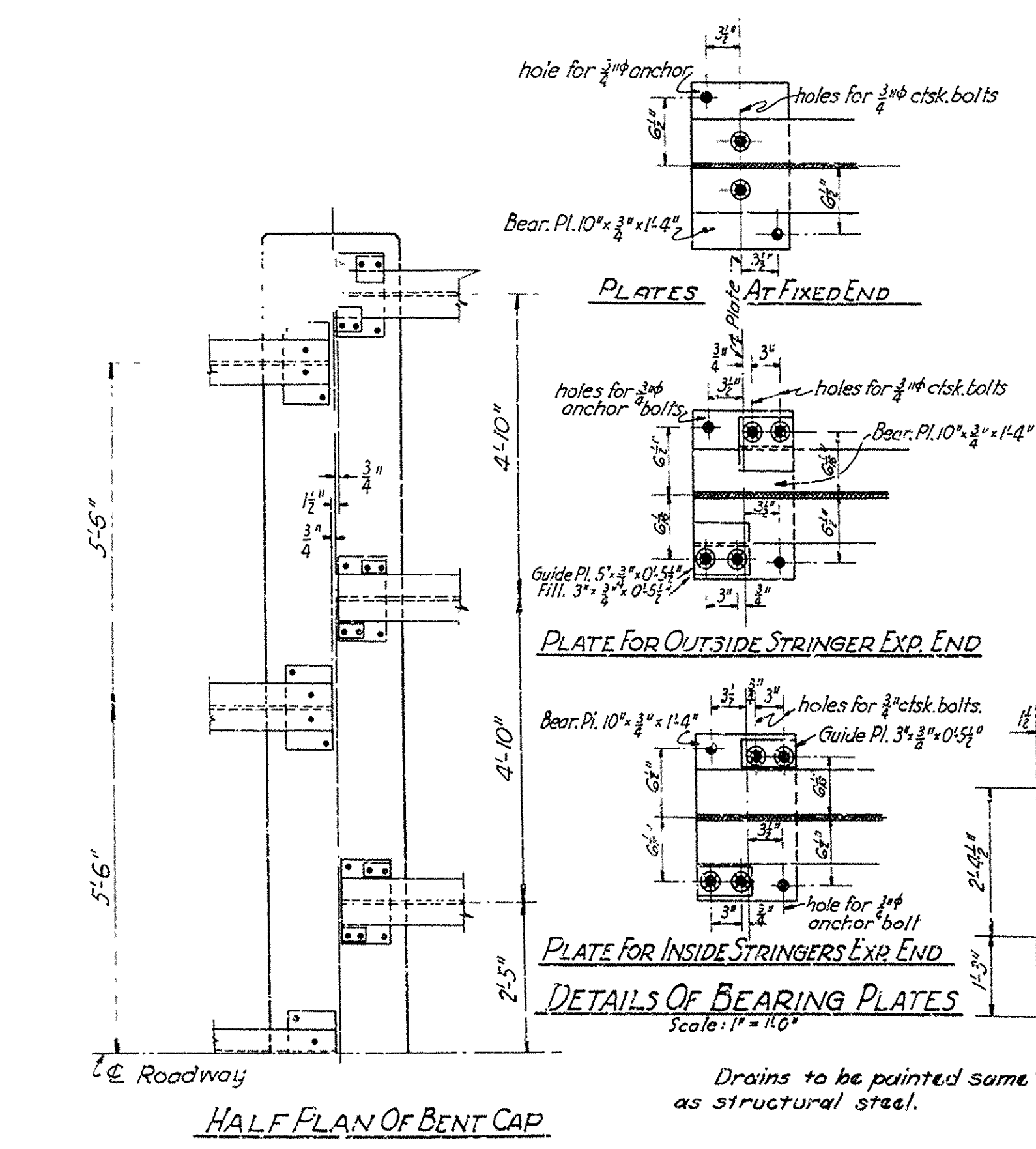
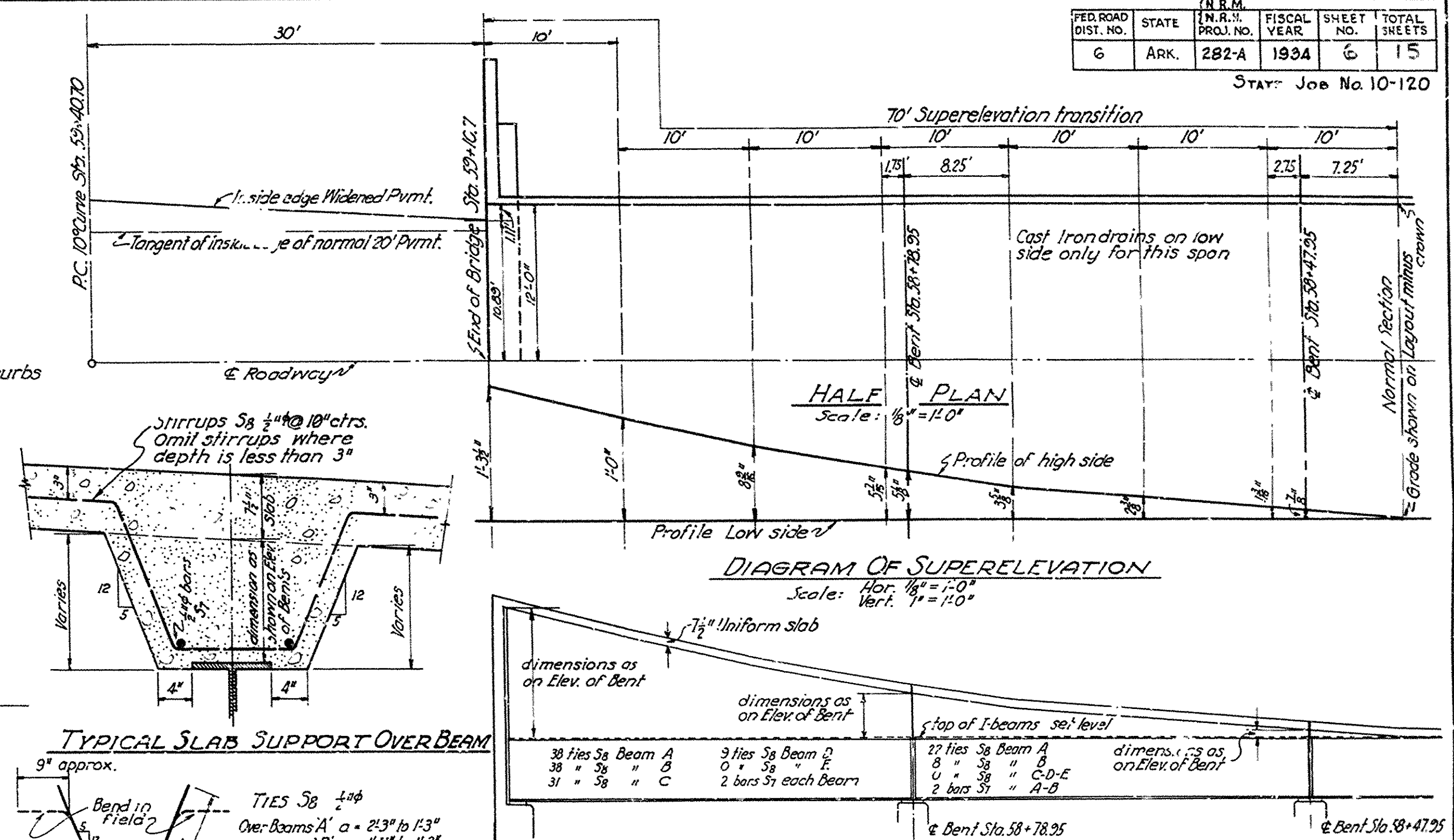
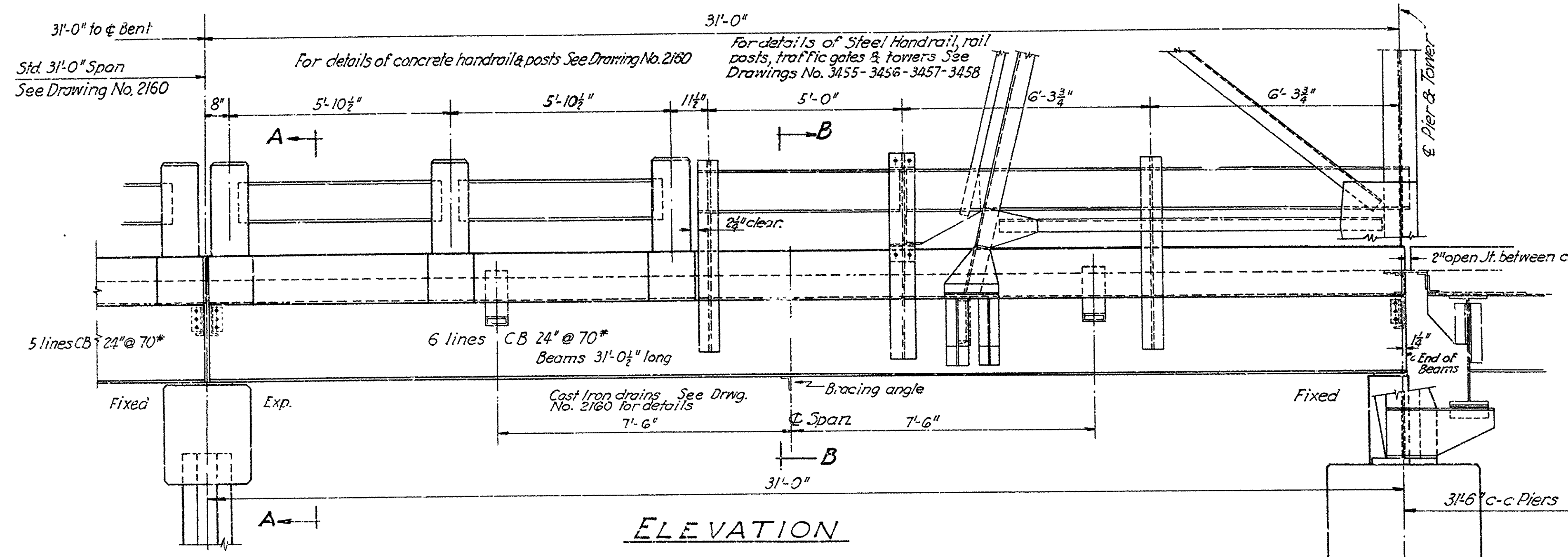
Scale: 1 in. = 20 ft.

BRIDGE No. 1207 DRAWING No. 3453

N.B. Lambert
BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	F.R.M. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	282-A	1934	6	15

STAY: Joe No. 10-120



NOTE:
For General Notes, dimensions and details not shown on this sheet See Drawing No. 2160.

DETAILS OF 31'-0" I-BEAM SPAN ADJOINING VERTICAL LIFT SPAN AND SUPERELEVATION DETAILS FOR TWO SPANS AT WEST END AT LAKE CITY, ARKANSAS ROUTE 18 SEC. 4

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: *Law* Date: 8-31-33
Traced By: *L.H.K.* Date: 9-12-33
Checked By: _____ Date: _____

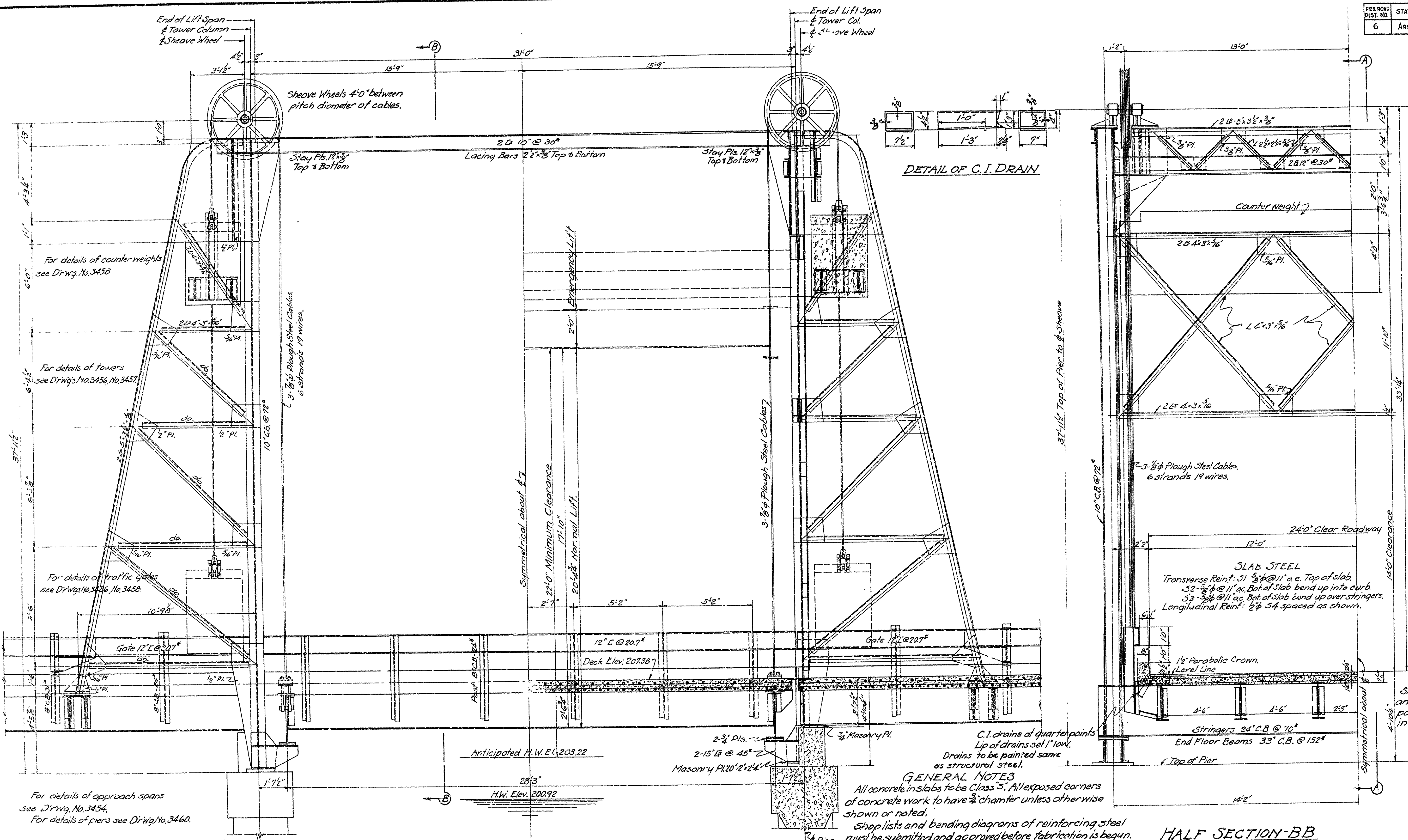
Scale: 1/2" = 1'-0" and as noted

BRIDGE NO. 1207 DRAWING NO. 345

N.B. Sawyer
Bridge Engineer

PERIOD	STATE	FISCAL	SHEET	TOTAL
DIST. NO.	ARK.	YEAR	NO.	SHEETS
6	282-A	1934	15	15

STATE JOB No. 10-120



DETAIL OF C. I. DRAIN

HALF SECTION-BB

HALF ELEVATION

HALF SECTION-AA

DETAILS OF 3'-0" LIFT SPAN
BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY
CRAIGHEAD, COUNTY
ROUTE 18. SEC. 4.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

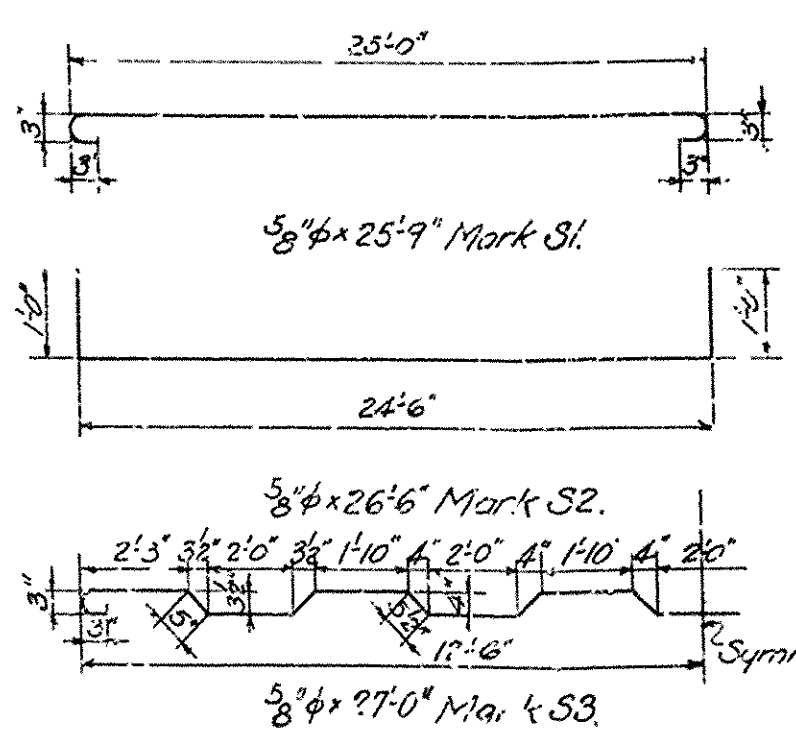
Drawn By: _____ Date: _____
Traced By: _____ Date: _____
Checked By: _____ Date: _____
BRIDGE No. 1207 DRAWING No. 3-455

GENERAL NOTES
All concrete in slabs to be Class 5. All exposed corners of concrete work to have 1/4" chamfer unless otherwise shown or noted.
Shop lists and bending diagrams of reinforcing steel must be submitted and approved before fabrication is begun.
Roadway drains are to be paid for at the unit price bid for reinforcing steel.
3/8" rivets 1/8" open holes. All field connections to be riveted.
Shop paint: All structural steel shall be given one coat of red lead and raw linseed oil before shipment.
Field paint: 1st coat white lead tinted with lamp black. 2nd coat aluminum paint.
This drawing shows general features of design only. Shop drawings shall be made in compliance with Specifications and be approved before fabrication is begun.
Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30, 1925 and revised.

UNIT STRESSES
Structural Steel 16,000 lbs. per sq. in.
Reinforcing Steel 16,000 lbs. per sq. in.
Concrete 750 lbs. per sq. in.

LIVE LOAD H-15 LOADING

For details of approach spans see Drwg. No. 3454.
For details of piers see Drwg. No. 3460.

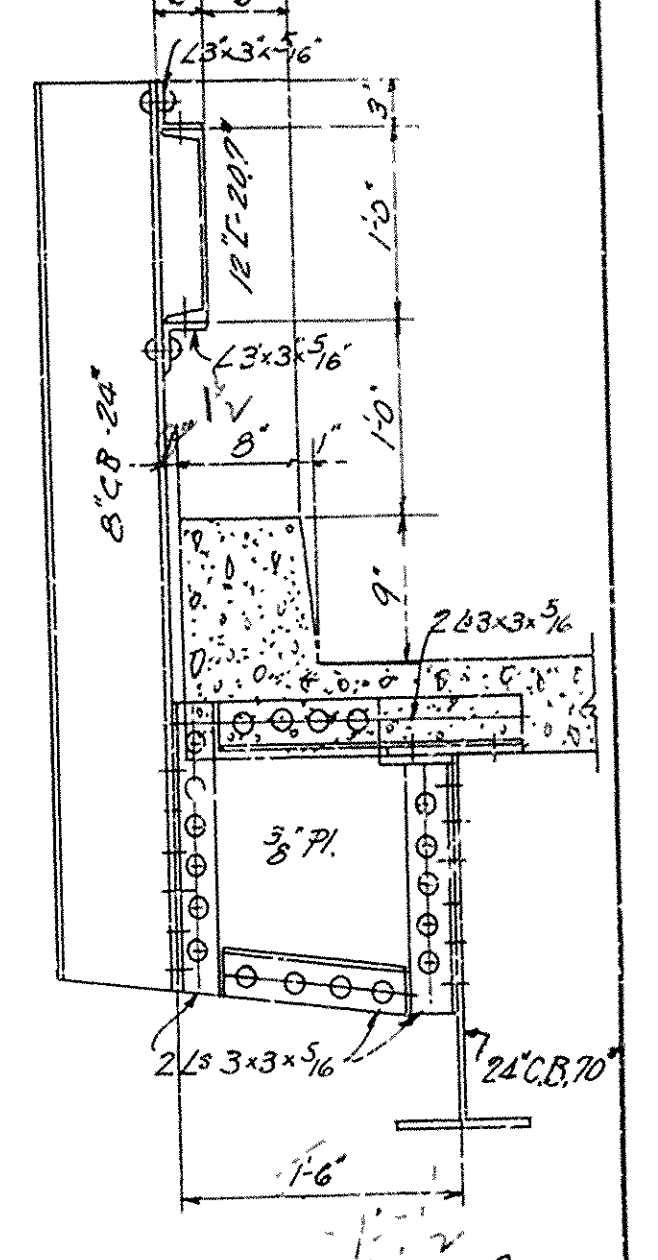
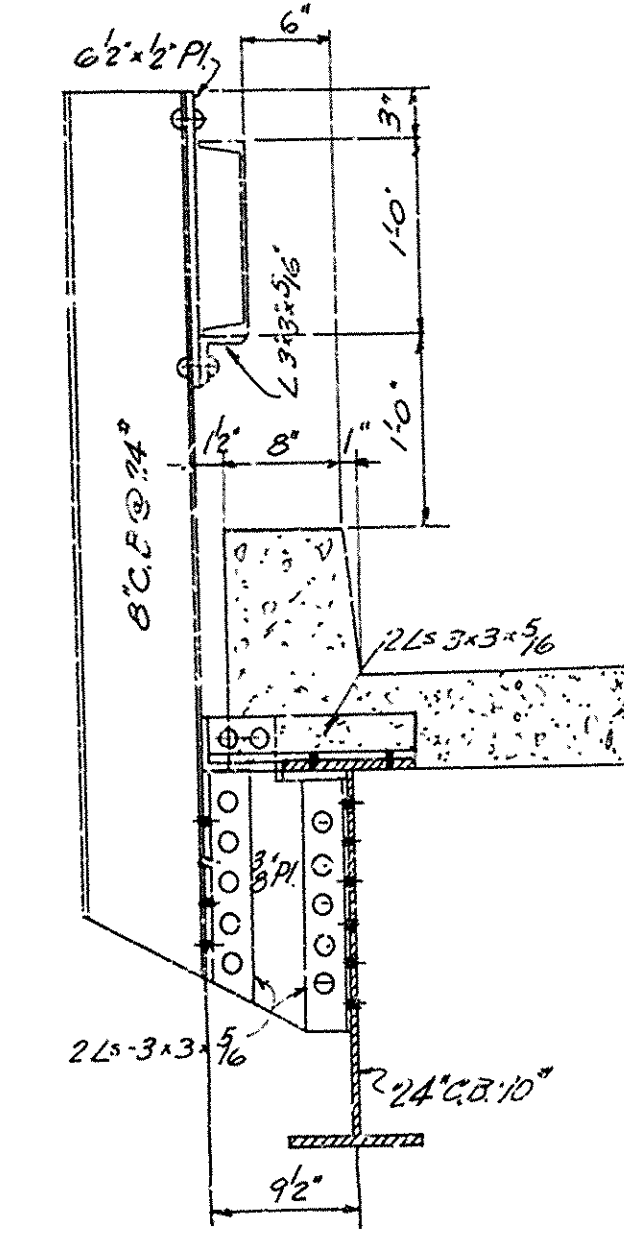
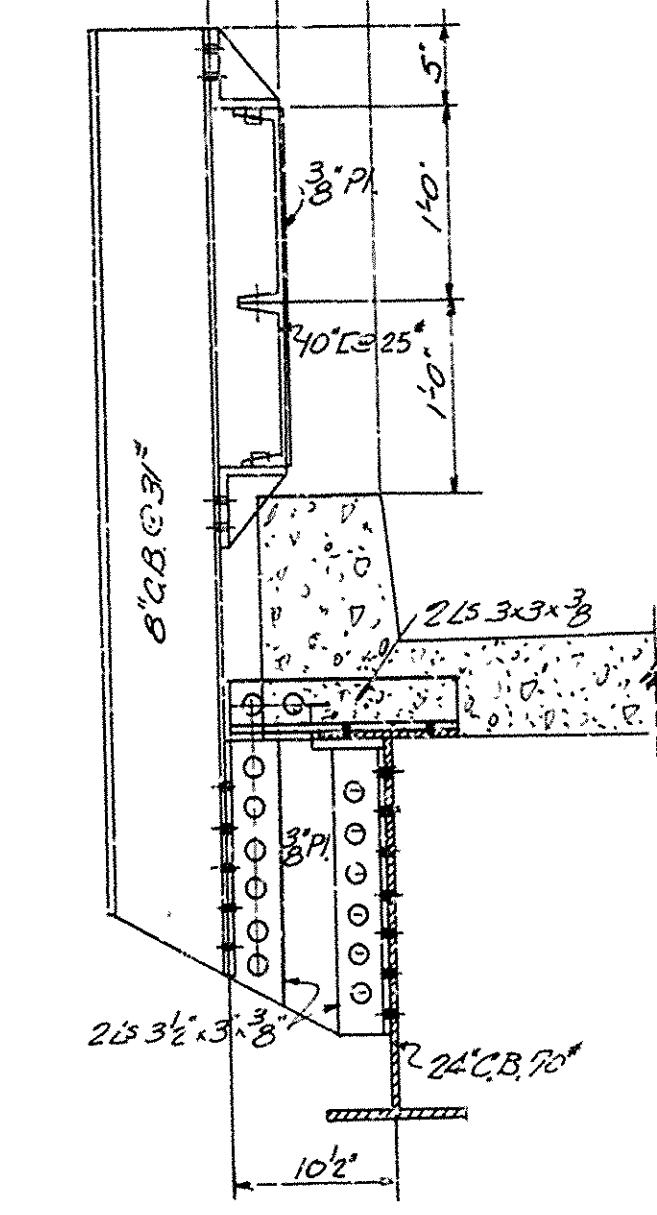
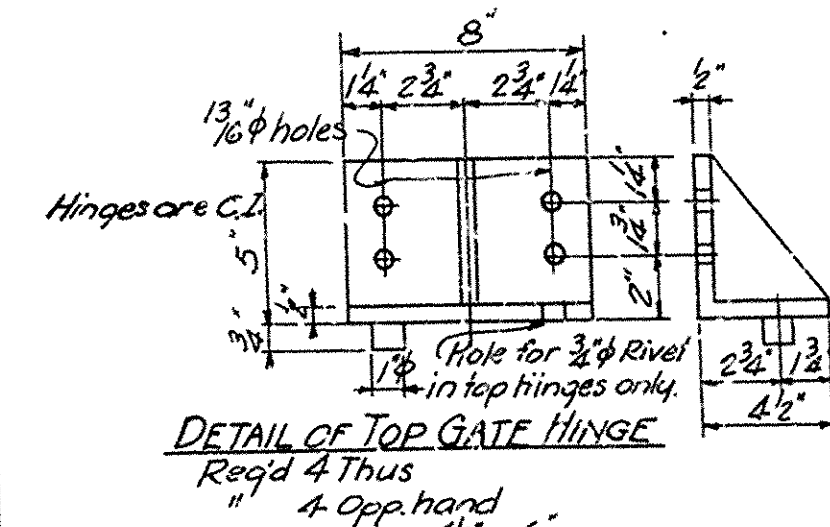
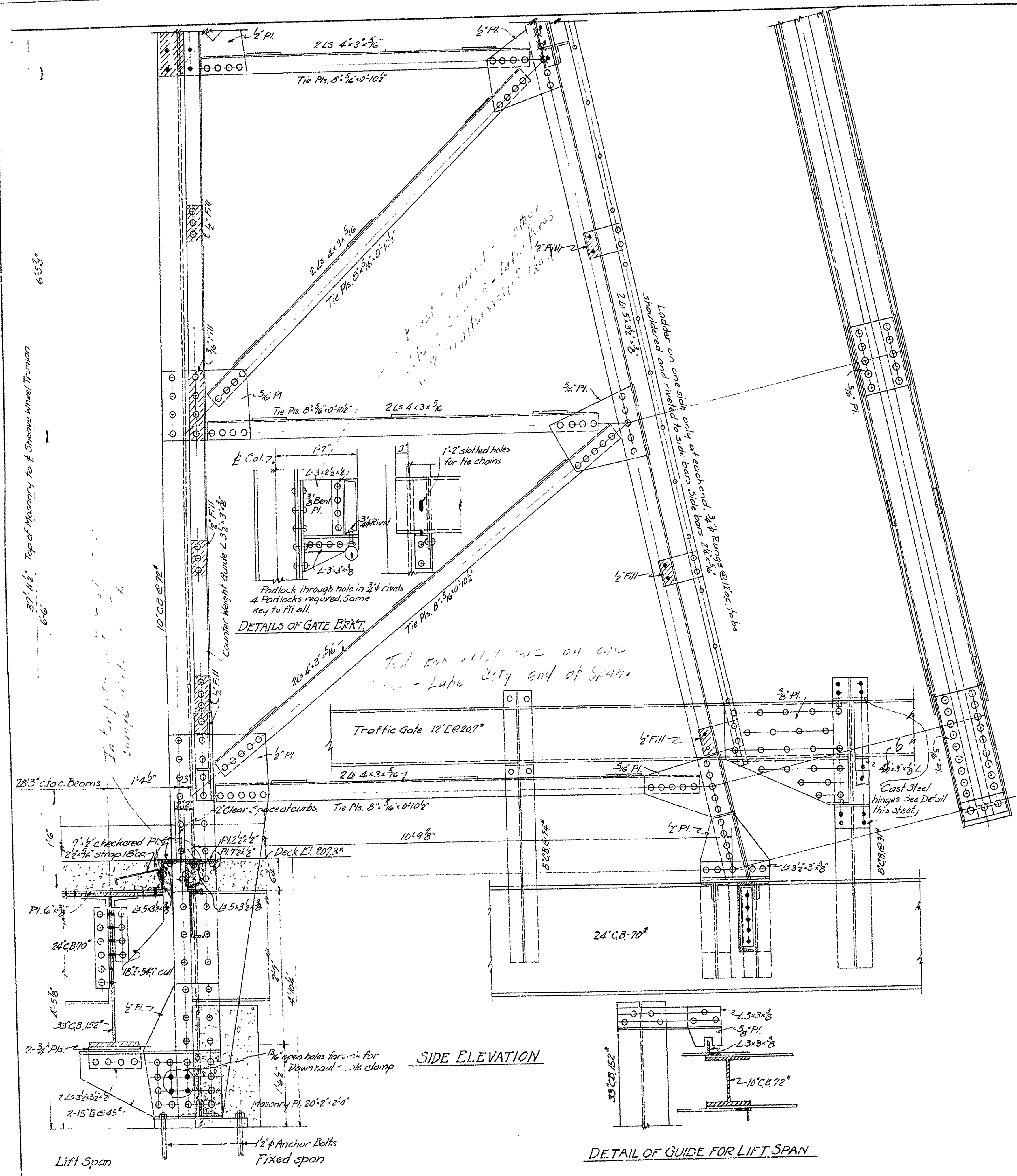


For details of counter-weights see Drwg. No. 3458
For details of Towers see Drwg. No. 3456, No. 3457
For details of traffic gates see Drwg. No. 3456, No. 3458

Symmetrical about center line

FED. ROAD DIST. NO.	STATE	N.R.M. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	282-A	1934	6	12

STATE Job No. 10-120

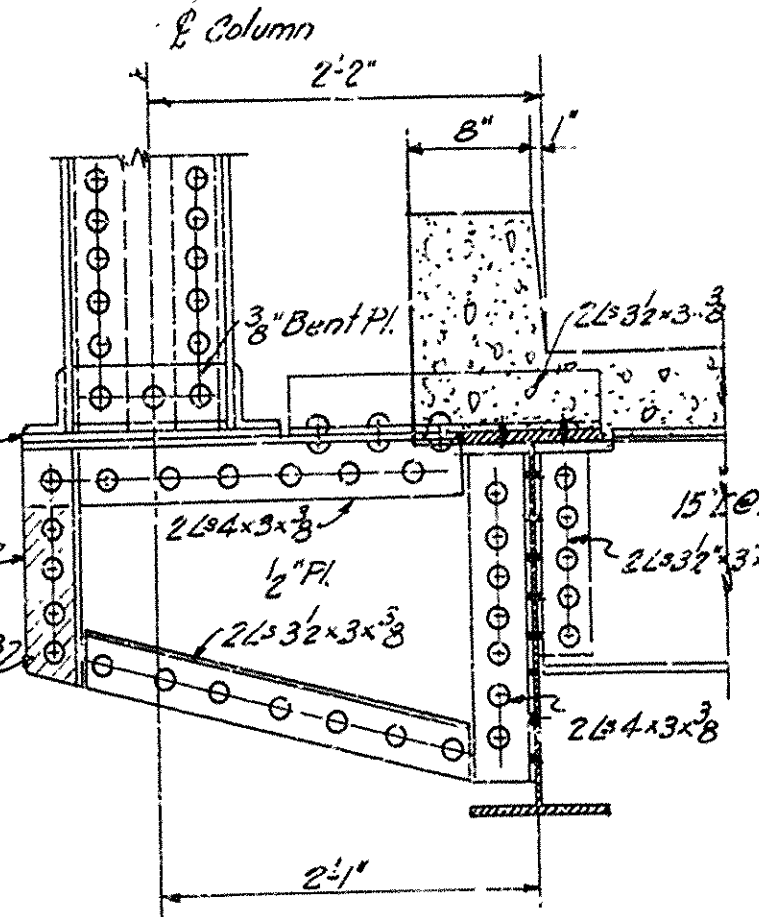


DETAILS OF TRAFFIC GATE POST

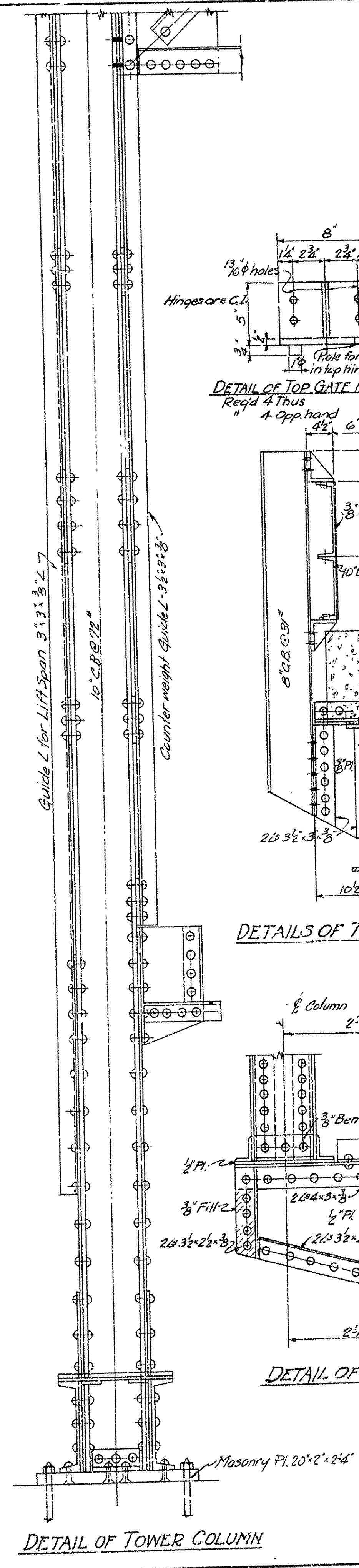
DETAILS OF INT. GATE POST

POST FOR LIFT SPAN

GENERAL NOTES-
 3/4" φ rivets, 13/16" open holes.
 All field connections shall be riveted.
 Shop Paint: After being completely assembled and shop work finished, all pieces shall be given one coat of red lead and raw linseed oil.
 Field Paint: 1st coat white lead tinted with lamp black.
 2nd coat aluminum paint.
 This drawing shows general features of the design only. Shop drawings shall be made in compliance with the specifications, and shall be submitted and approved before fabrication is begun.
 Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30, 1925 and revised.



DETAIL OF TOWER BRACKET



DETAIL OF TOWER COLUMN

SIDE ELEVATION

DETAIL OF GUIDE FOR LIFT SPAN

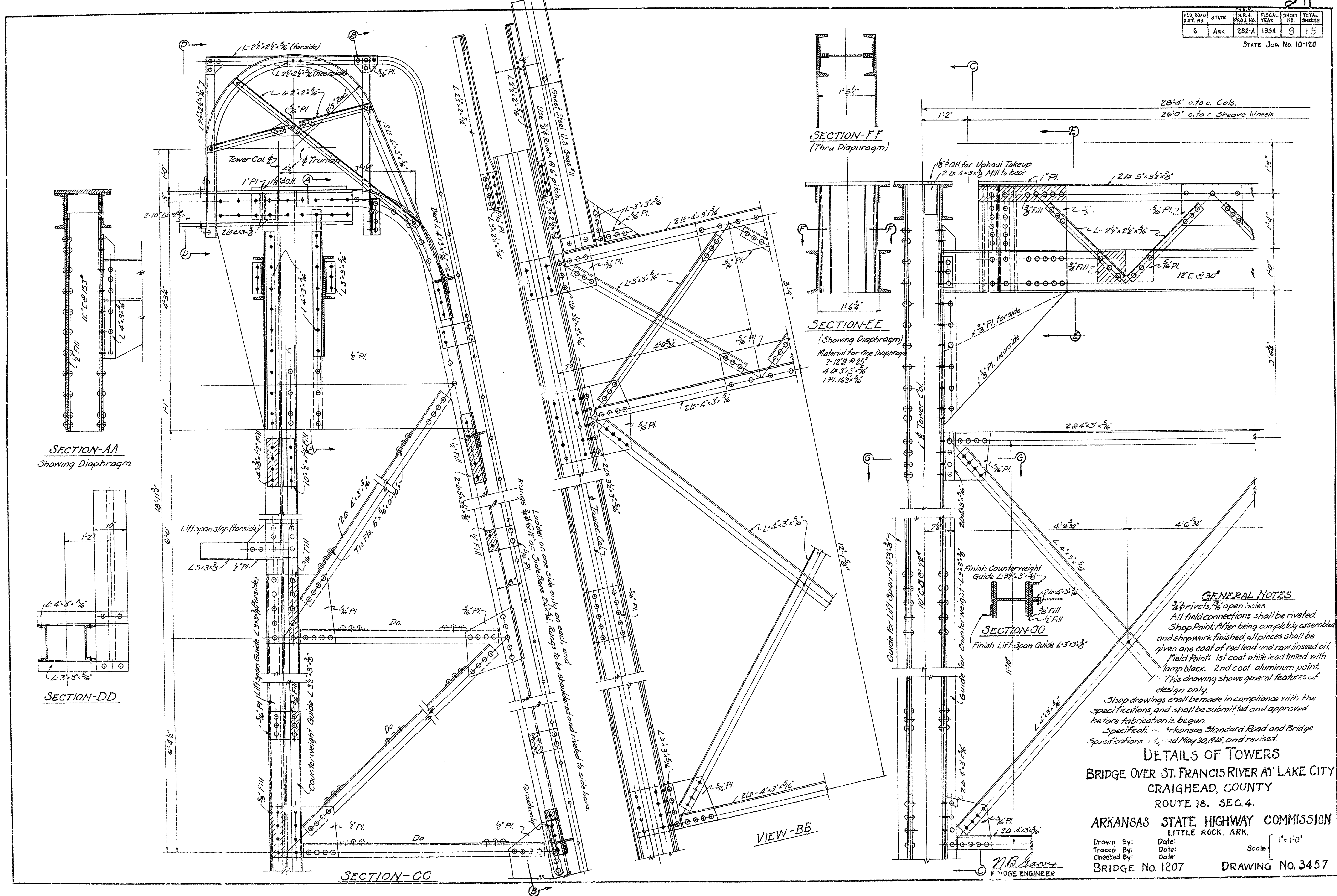
DETAILS OF TOWERS
 BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY
 CRAIGHEAD, COUNTY
 ROUTE 18. SEC. 4.

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: _____ Date: _____
 Traced By: _____ Date: _____
 Checked By: _____ Date: _____
 BRIDGE No. 1207
 Scale 1" = 1'-0"
 DRAWING No. 3456

N.B. Garner
 BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	M.R.H. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	282-A	1934	9	15

STATE JOB No. 10-120



GENERAL NOTES
 3/8" rivets, 1/8" open holes.
 All field connections shall be riveted.
 Shop Paint: After being completely assembled and shop work finished, all pieces shall be given one coat of red lead and raw linseed oil.
 Field Paint: 1st coat white lead tinted with lamp black. 2nd coat aluminum paint.
 This drawing shows general features of design only.
 Shop drawings shall be made in compliance with the specifications and shall be submitted and approved before fabrication is begun.
 Specifications Arkansas Standard Road and Bridge Specifications adopted May 30, 1925, and revised.

DETAILS OF TOWERS
 BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY
 CRAIGHEAD, COUNTY
 ROUTE 18. SEC. 4.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: _____ Date: _____
 Traced By: _____ Date: _____
 Checked By: _____ Date: _____

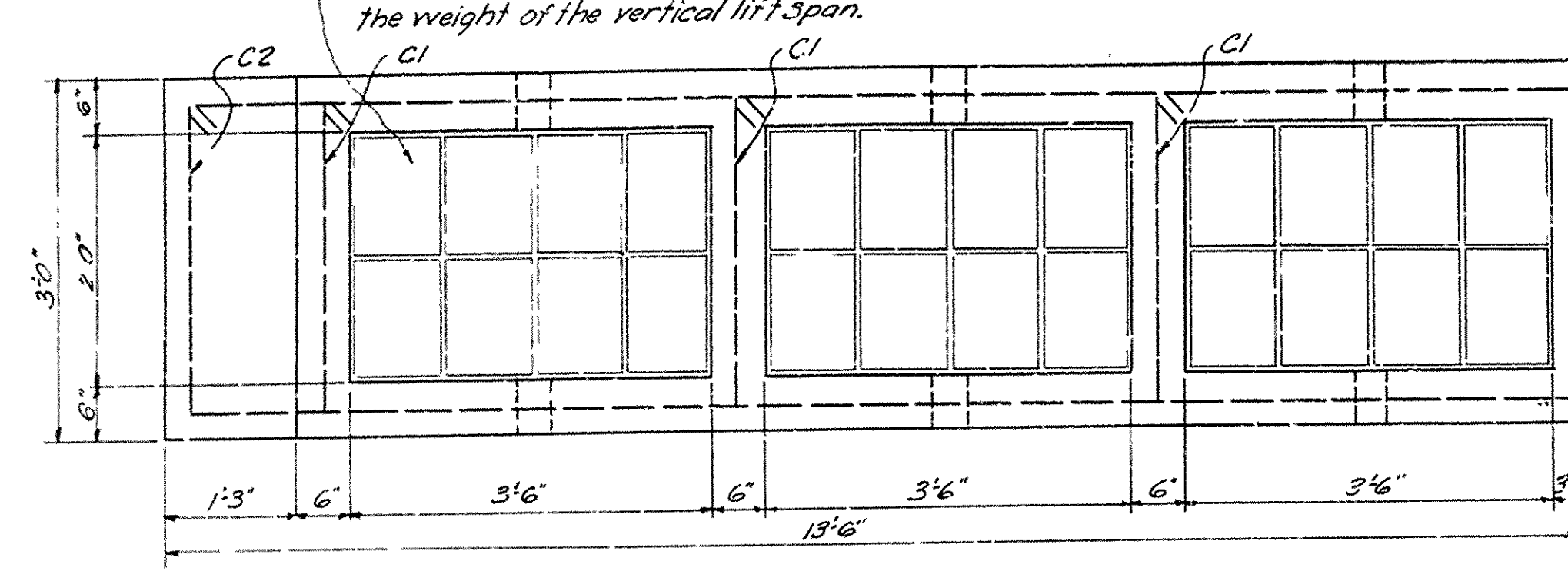
Scale 1" = 1'-0"
 BRIDGE No. 1207 DRAWING No. 3457

N.B. Hann
 BRIDGE ENGINEER

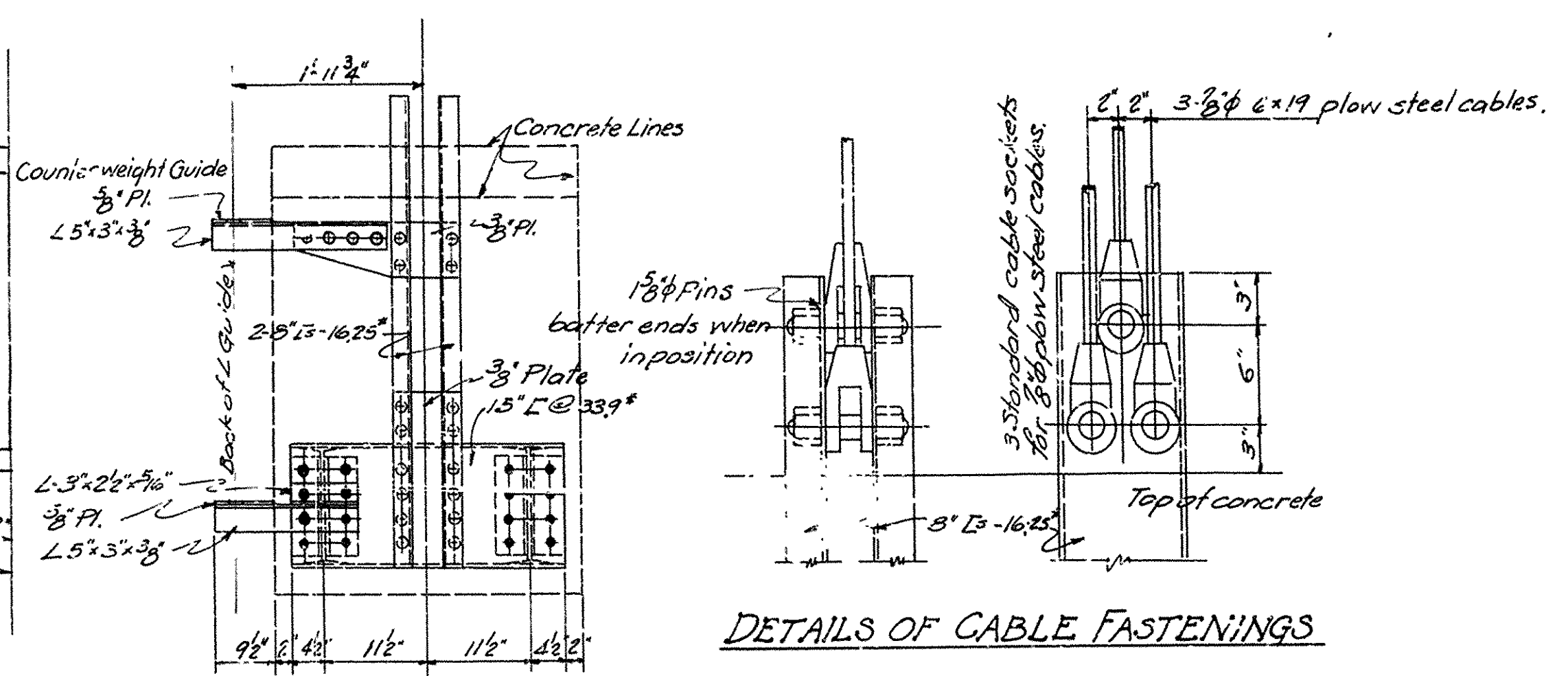
FED. ROAD DIST. NO.	STATE	U.S.M. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	262-A	1934	10	15

STATE Job No. 10-120

Concrete Blocks 10 1/4 x 4 x 11 3/4" Blocks are to be precast and placed in counter weight pockets symmetrically about the center line in sufficient number so that the total weight of counter weights will exactly balance the weight of the vertical lift span.

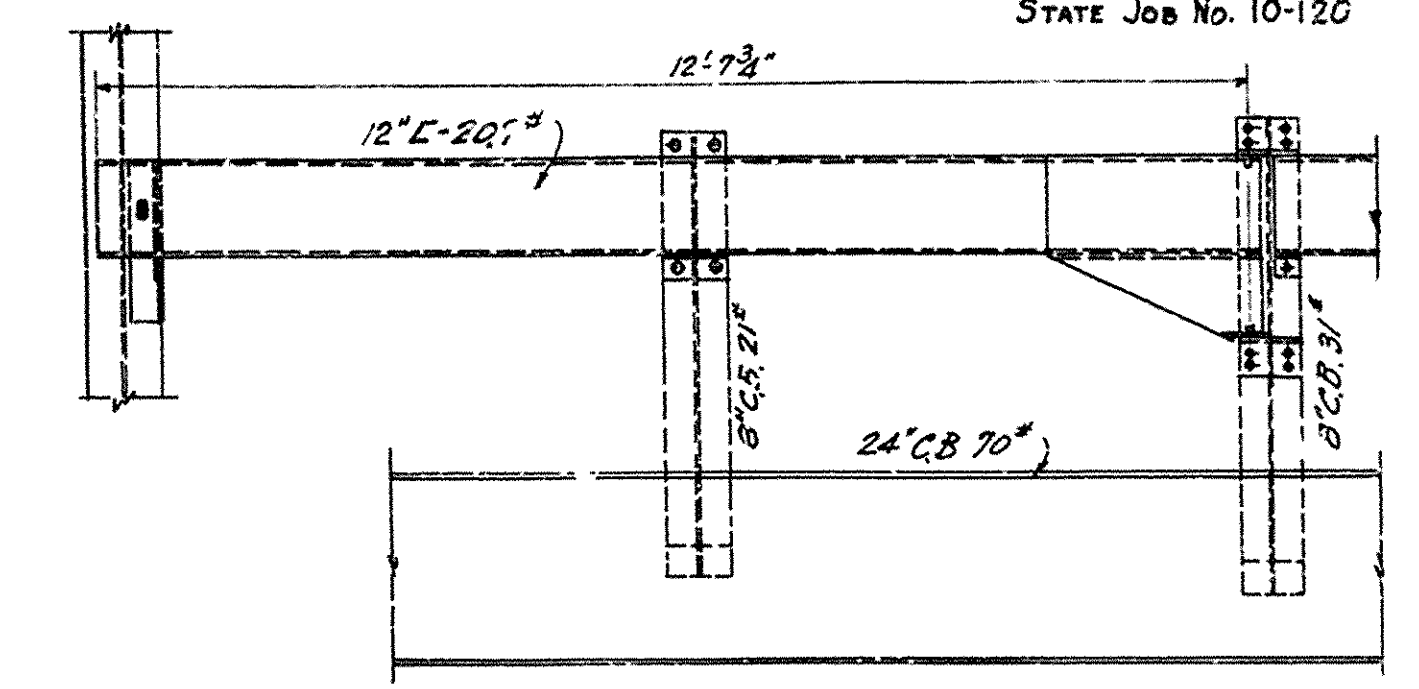


TOP PLAN OF CONCRETE

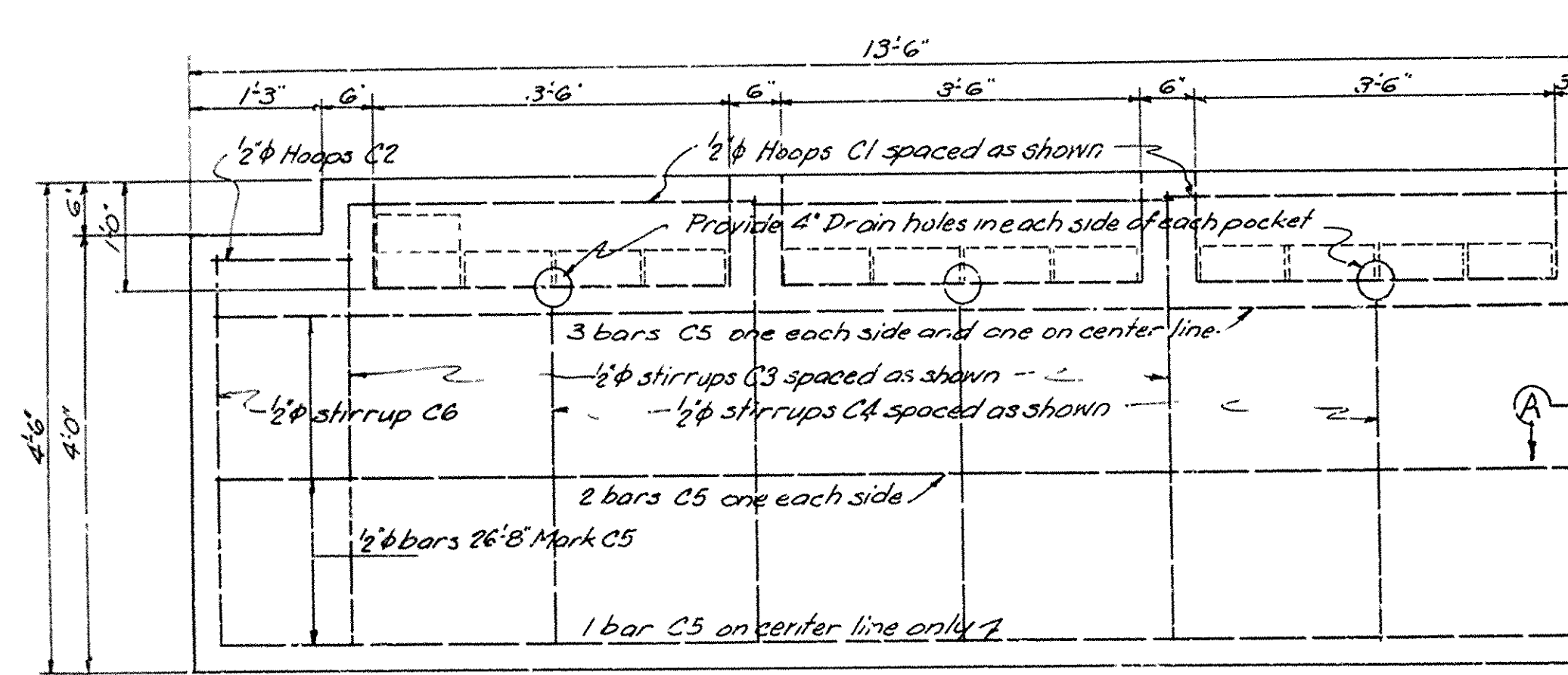


END ELEVATION-STEEL

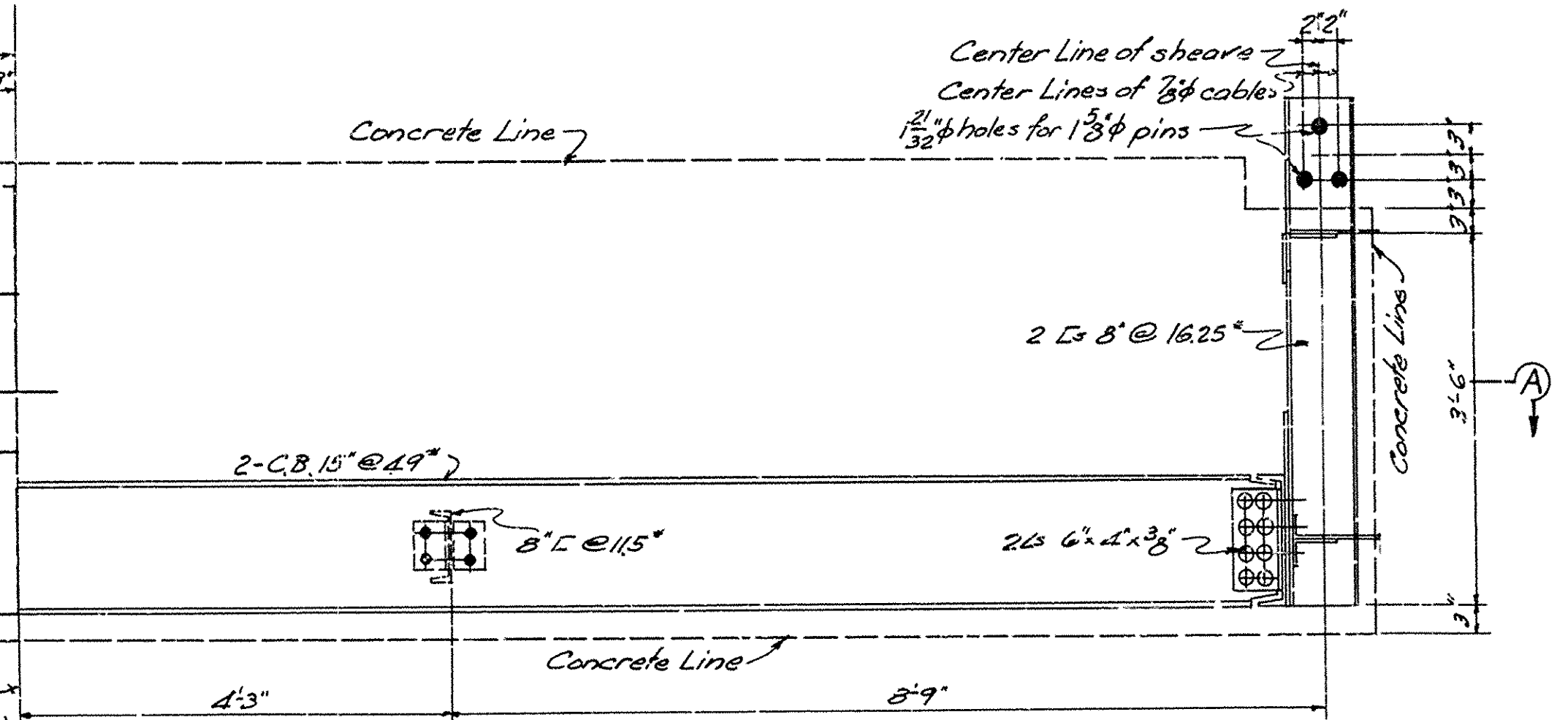
DETAILS OF CABLE FASTENINGS



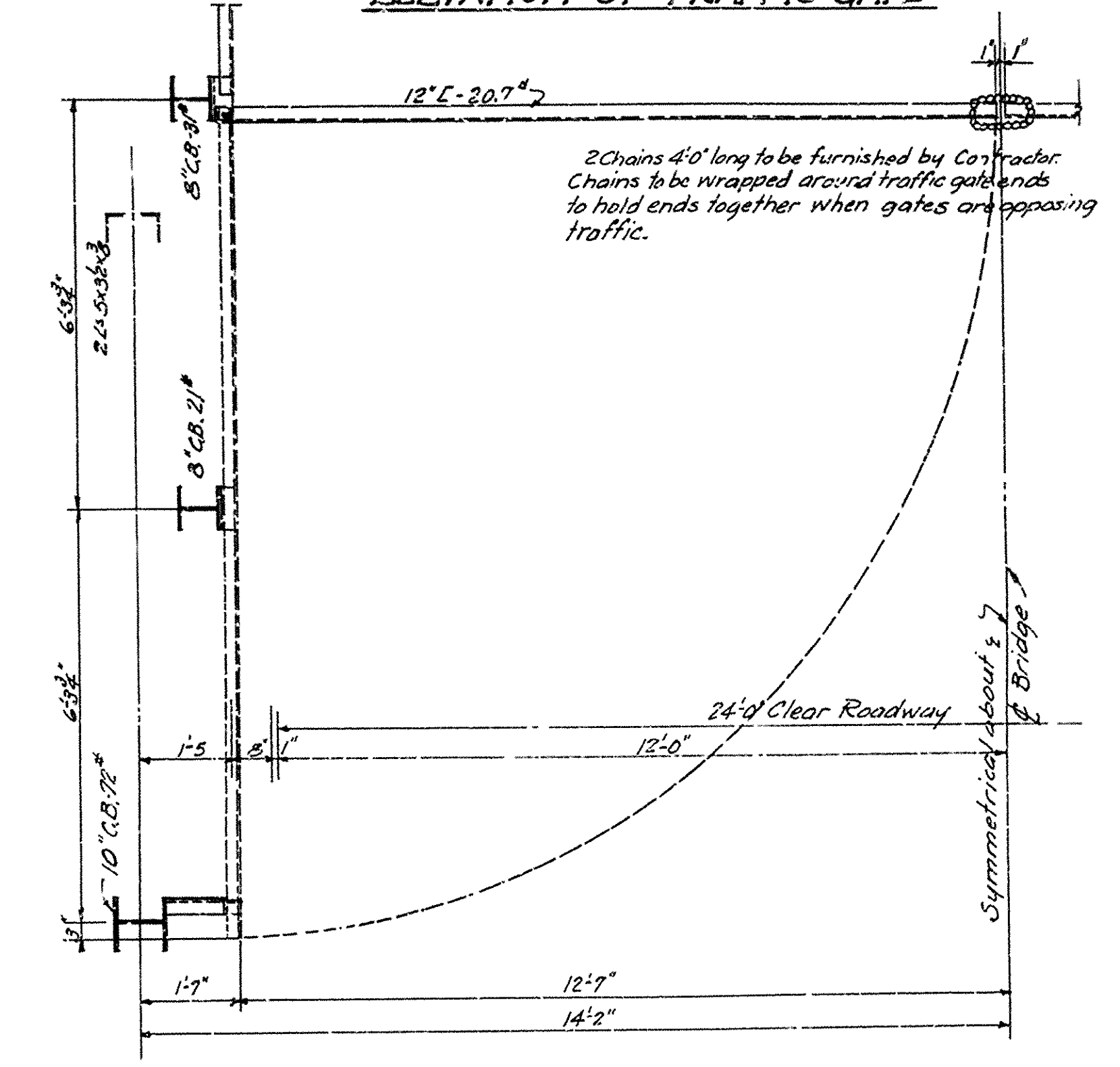
ELEVATION OF TRAFFIC GATE



ELEVATION-CONCRETE

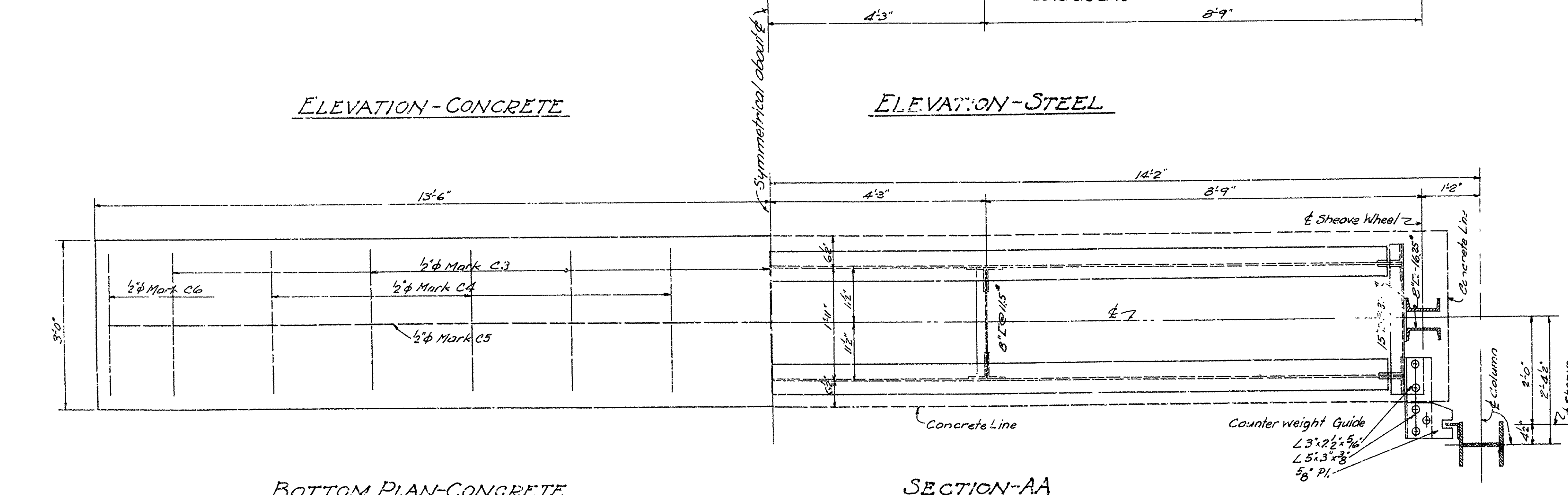


ELEVATION-STEEL



PLAN OF TRAFFIC GATE

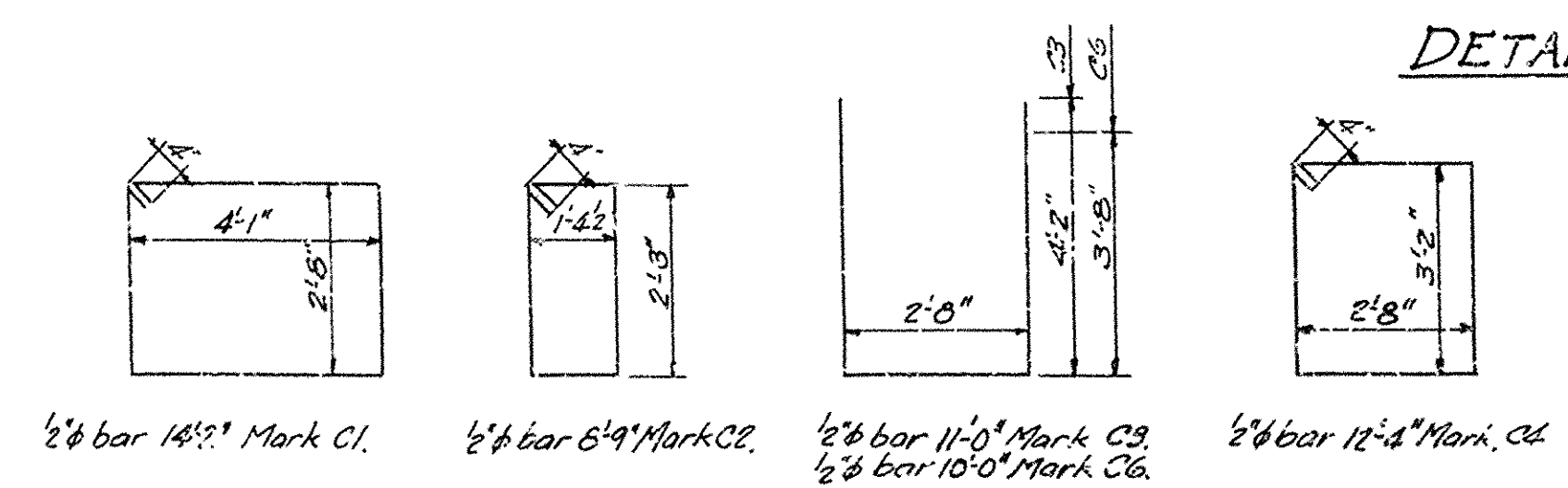
GENERAL NOTES: All rivets 3/8".
 Concrete Class "5", weighing approximately 147 lbs per cu. ft.
 No oil or paint shall be used on steel embedded in concrete. All other steel to be painted according to Arkansas Standard Road and Bridge Specifications, adopted May 30, 1925 and revised.
 Concrete in counter weights can be poured into forms supported from steel frames.
 Weight to be balanced shall be checked against the scaled weights of the steel and test weights of other materials before the counter weights are constructed.



BOTTOM PLAN-CONCRETE

SECTION-AA

DETAILS OF COUNTERWEIGHTS



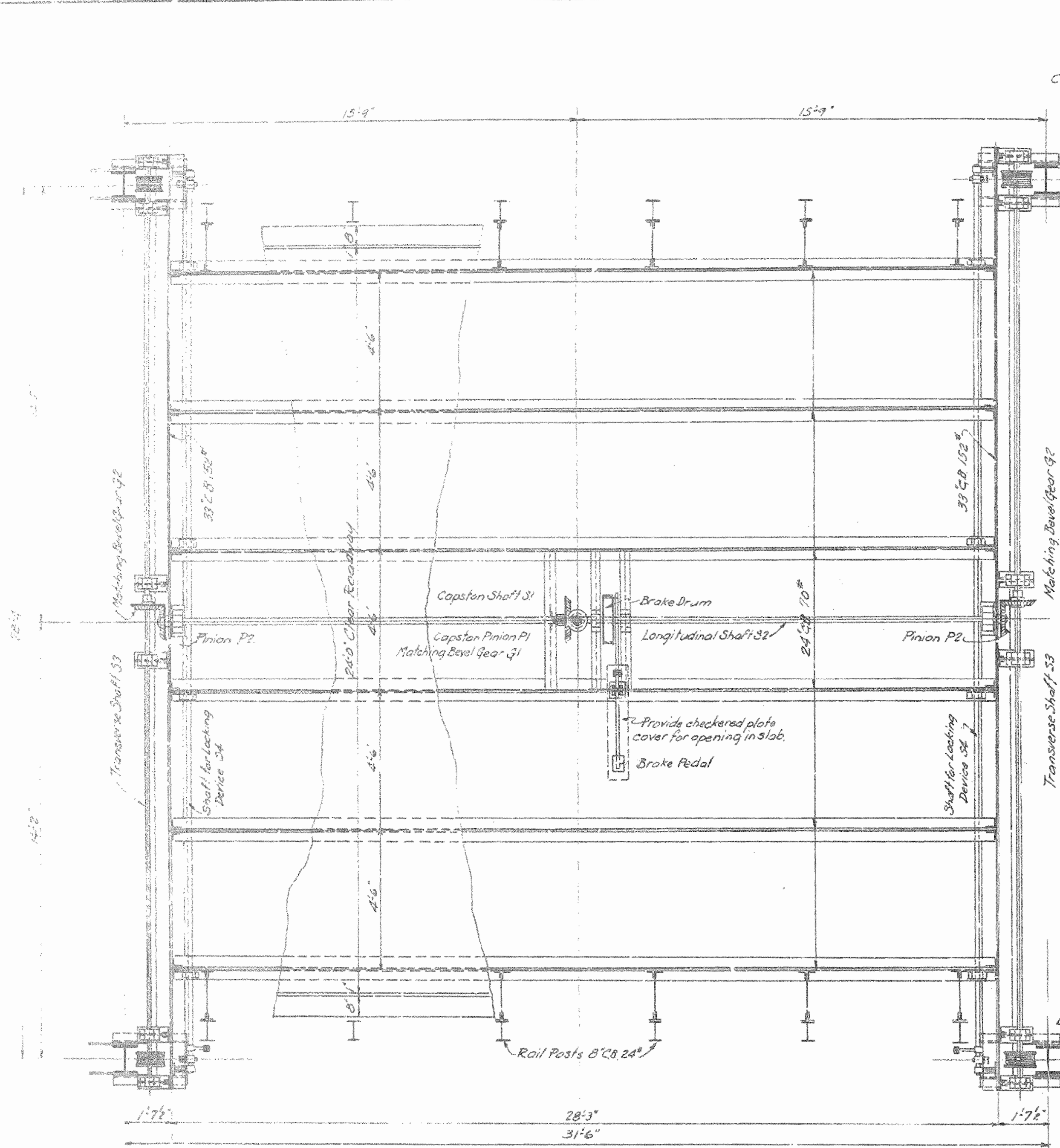
DETAILS OF COUNTERWEIGHTS & TRAFFIC GATES
 BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY
 CRAWHEAD, COUNTY.
 ROUTE 18. SEC. 4.

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: Date: Scale: 3/4" = 1'-0"
 Traced By: Date: 1/2" = 1'-0"
 Checked By: Date:
 BRIDGE No. 1207 DRAWING No. 3458

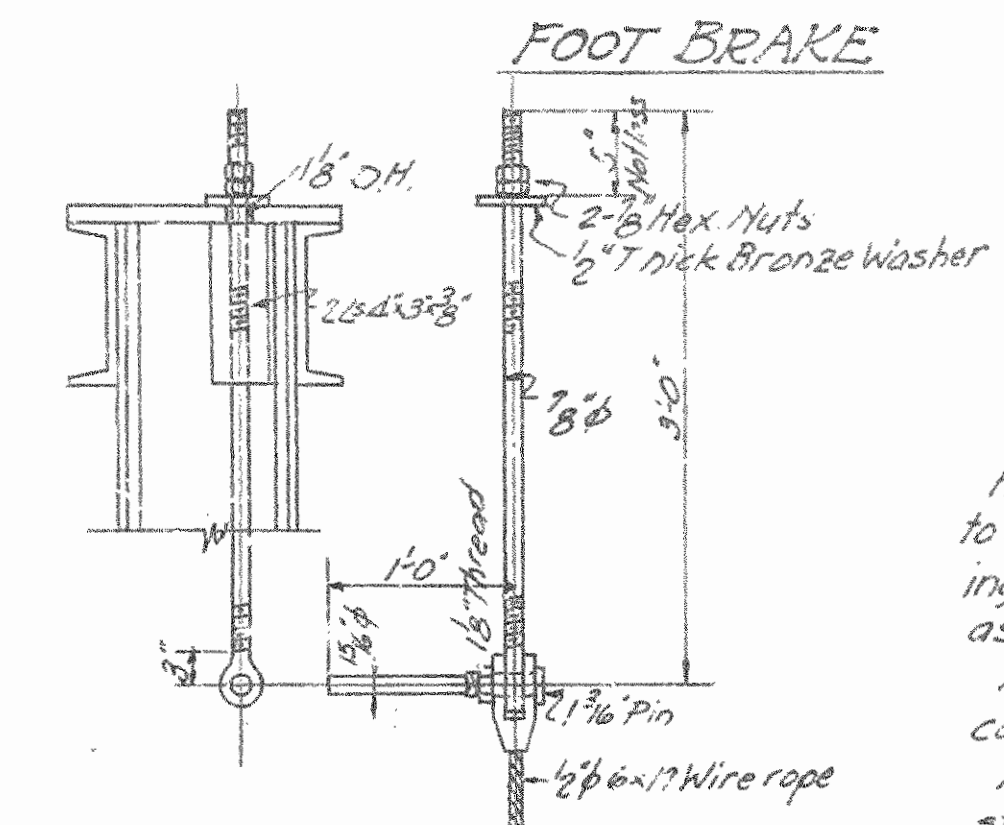
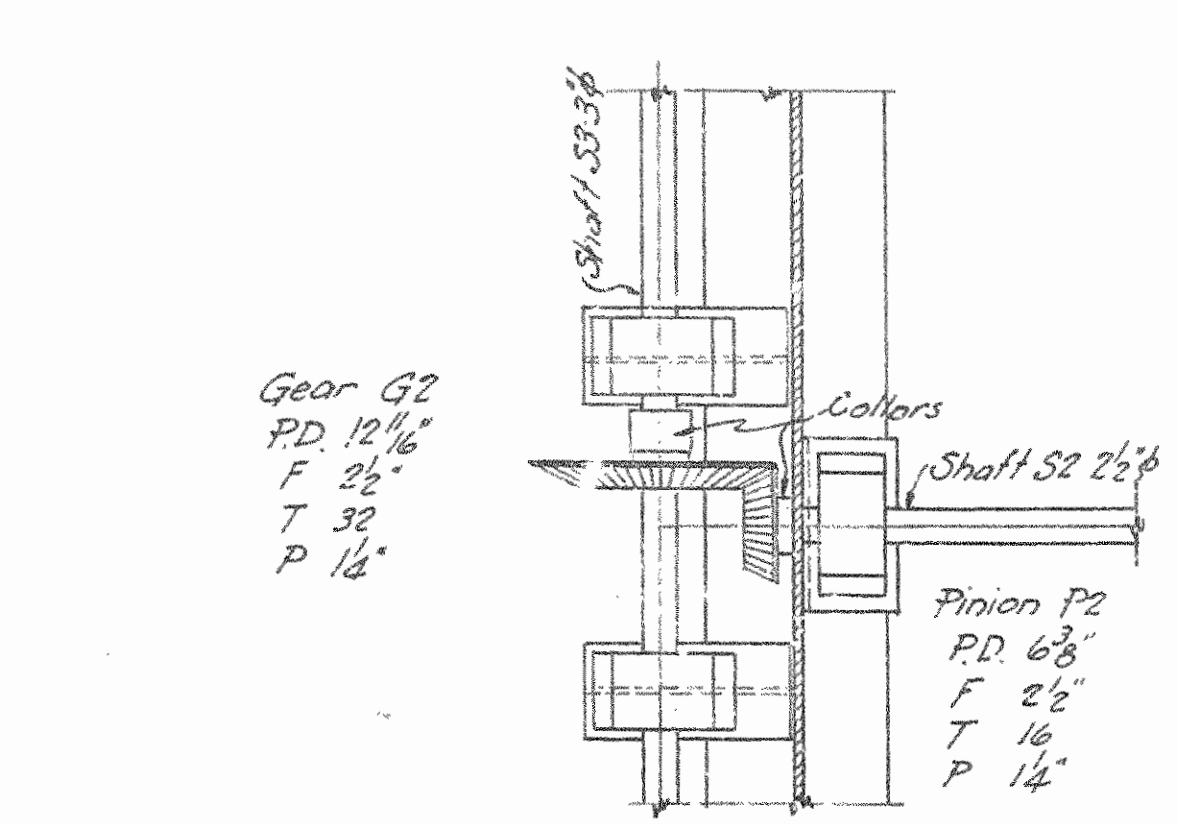
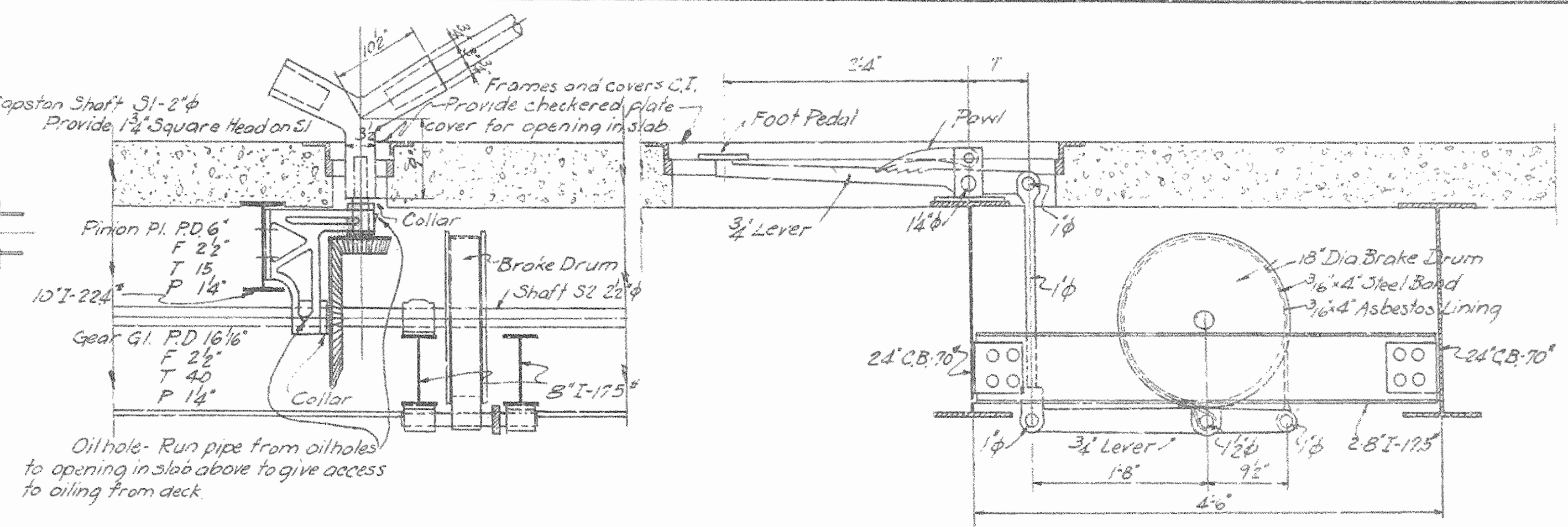
M.B. Harris
 BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	N.E.M. PROJ. NO.	FISCAL YEAR	SHEET NO.
6	ARK.	282-A	1934	11

State Job No. 10-120



LAYOUT OF OPERATING MACHINERY



GENERAL NOTES

Holes for bolts connecting machinery to steel framework to be drilled for turned bolts, driving fit, the holes in supporting steel being drilled while machinery is temporarily assembled in shop.

All castings unless otherwise noted are steel castings. All castings to be thoroughly annealed.

All bolts to have finished hexagonal nuts. All keys are straight. Keys and keyways not to extend past hubs.

Gears and couplings to have recessed set screws for all keys. Furnish 2 socket wrench for each size of set screw.

All shafts are rolled steel. All gears to have 20° involute machine cut teeth with pitch circles scribed on both sides of teeth.

All contact surfaces finished, all journals polished, and all bushings scrapped to fit journals.

All bearings to be provided with grease cups and grooves where not otherwise accessible they are to be connected with oil pipes.

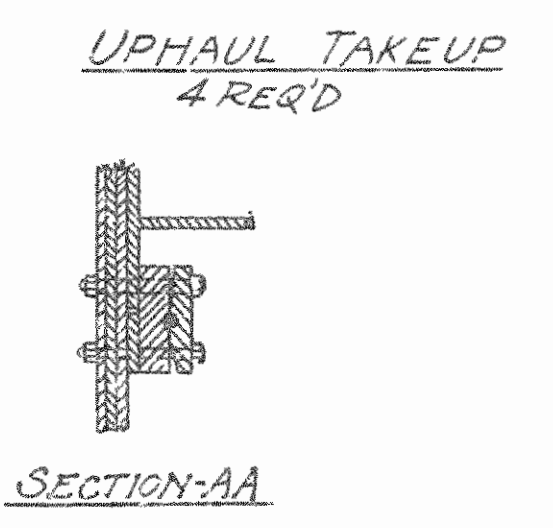
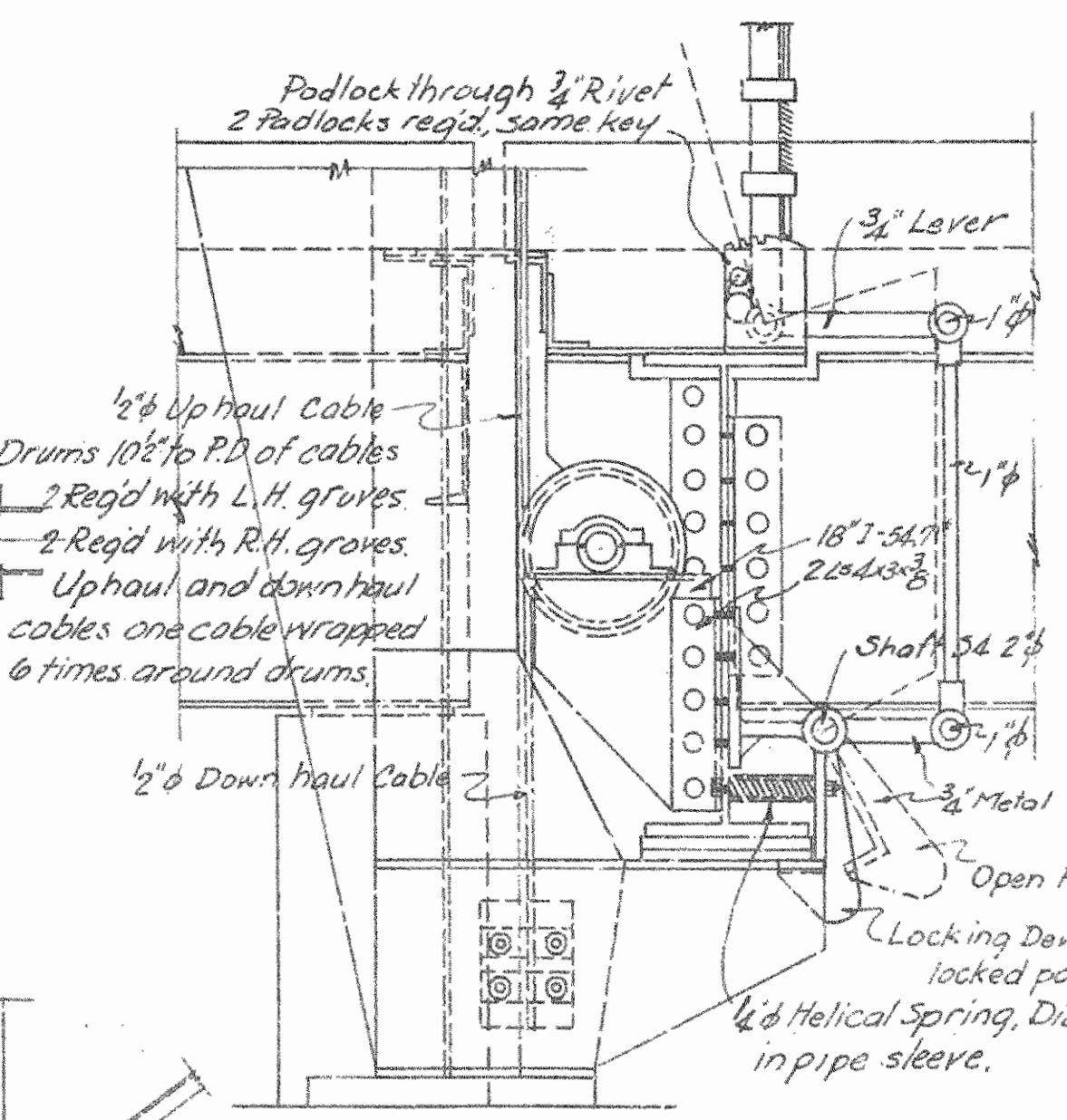
All bushings are phosphor bronze.

Gears and couplings to have driving fit on shafts.

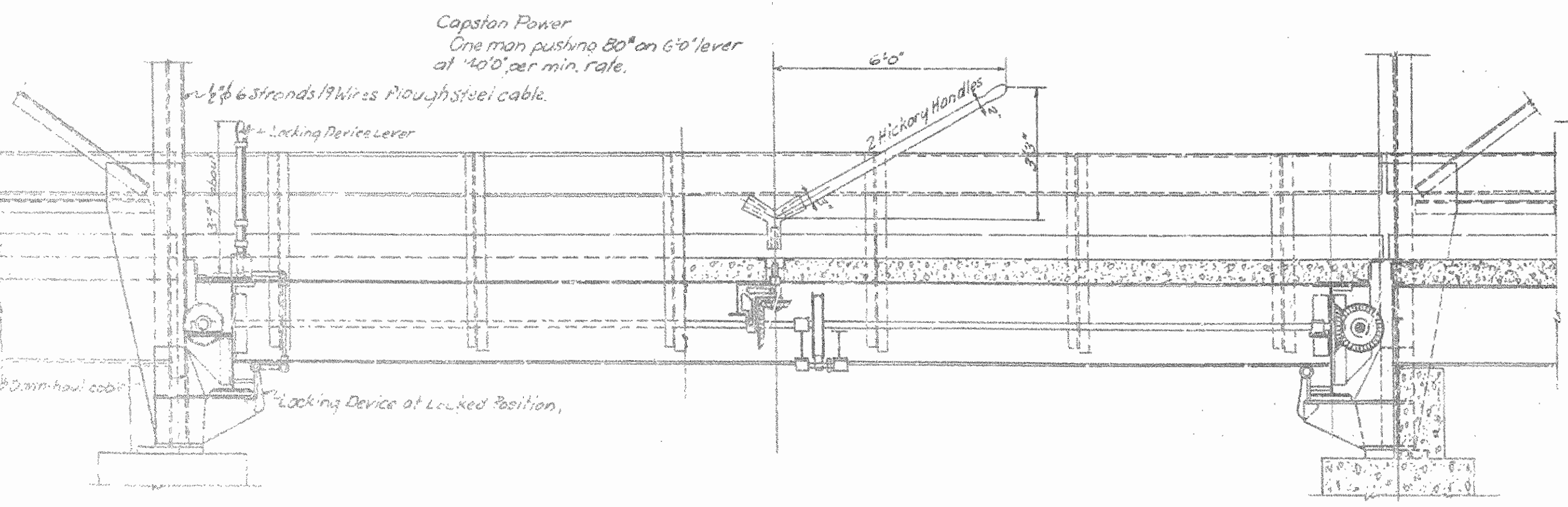
All bevel gears to have suitable bronze thrust collars.

All material to be allowed as machinery, as noted in Special Provisions, is on or for movable span only, unless otherwise noted, and does not include shoes and bed plates of fixed spans.

These drawings are general only. Contractor shall check same and submit shop drawings, made in compliance with the specifications, which are to be approved before fabrication begins.



DOWNHAUL CABLE CLAMP



HALF ELEVATION

HALF LONGITUDINAL SECTION

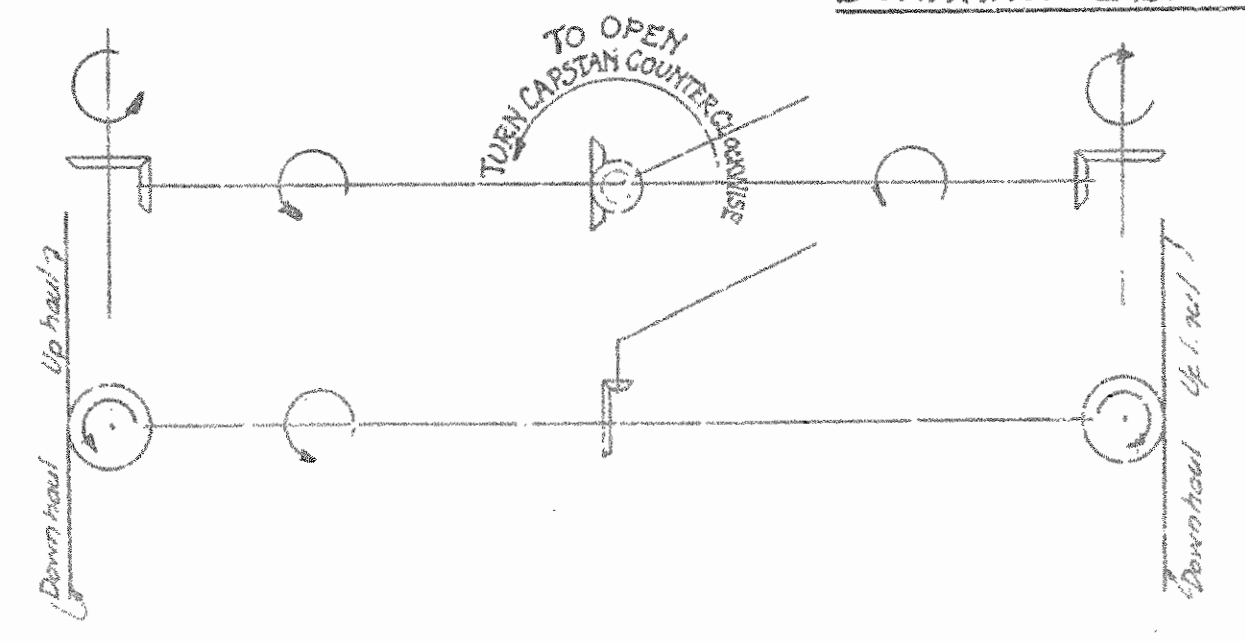


DIAGRAM OF OPERATION

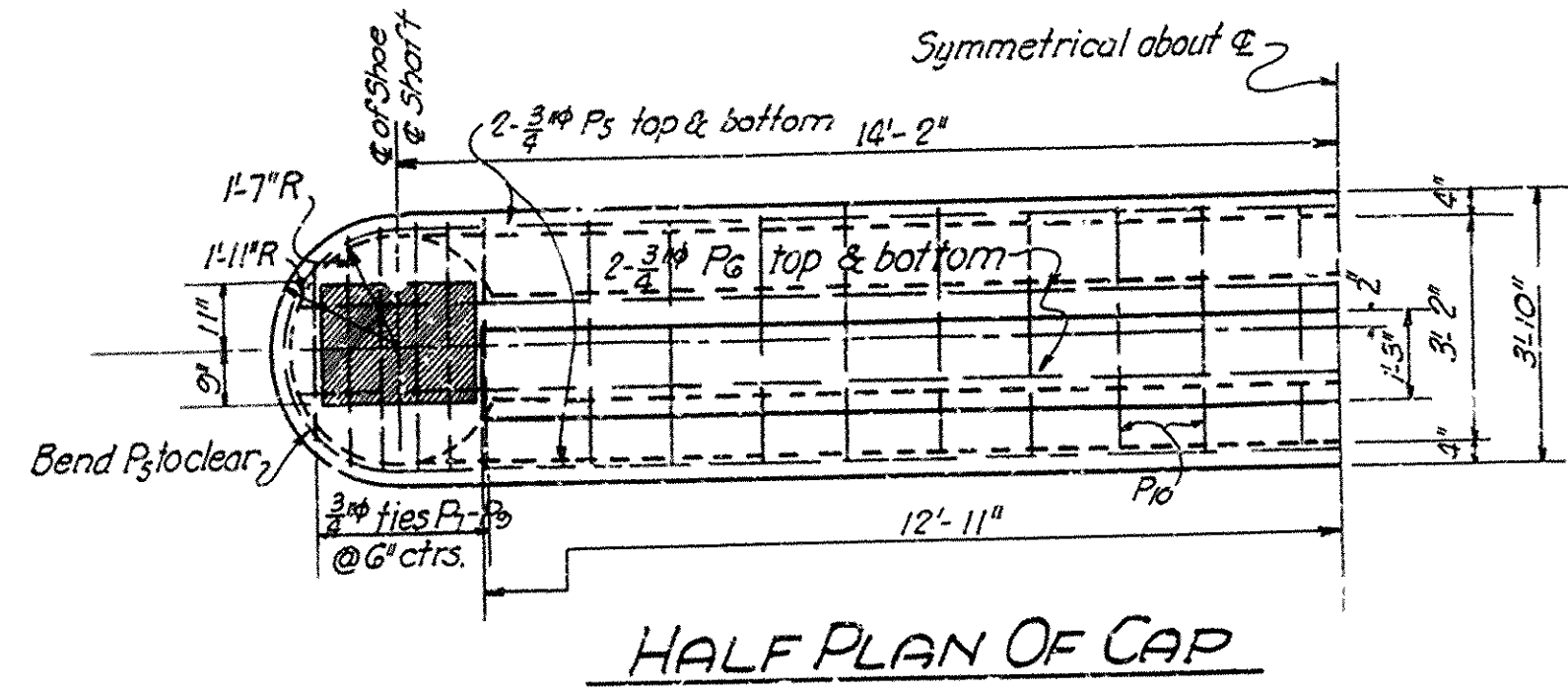
OPERATING MACHINERY
 BRIDGE OVER ST. FRANCIS RIVER AT LAKE CITY
 CRAIGHEAD, COUNTY
 ROUTE 18. SEC. 4.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: _____ Date: _____
 Traced By: _____ Date: _____
 Checked By: _____ Date: _____

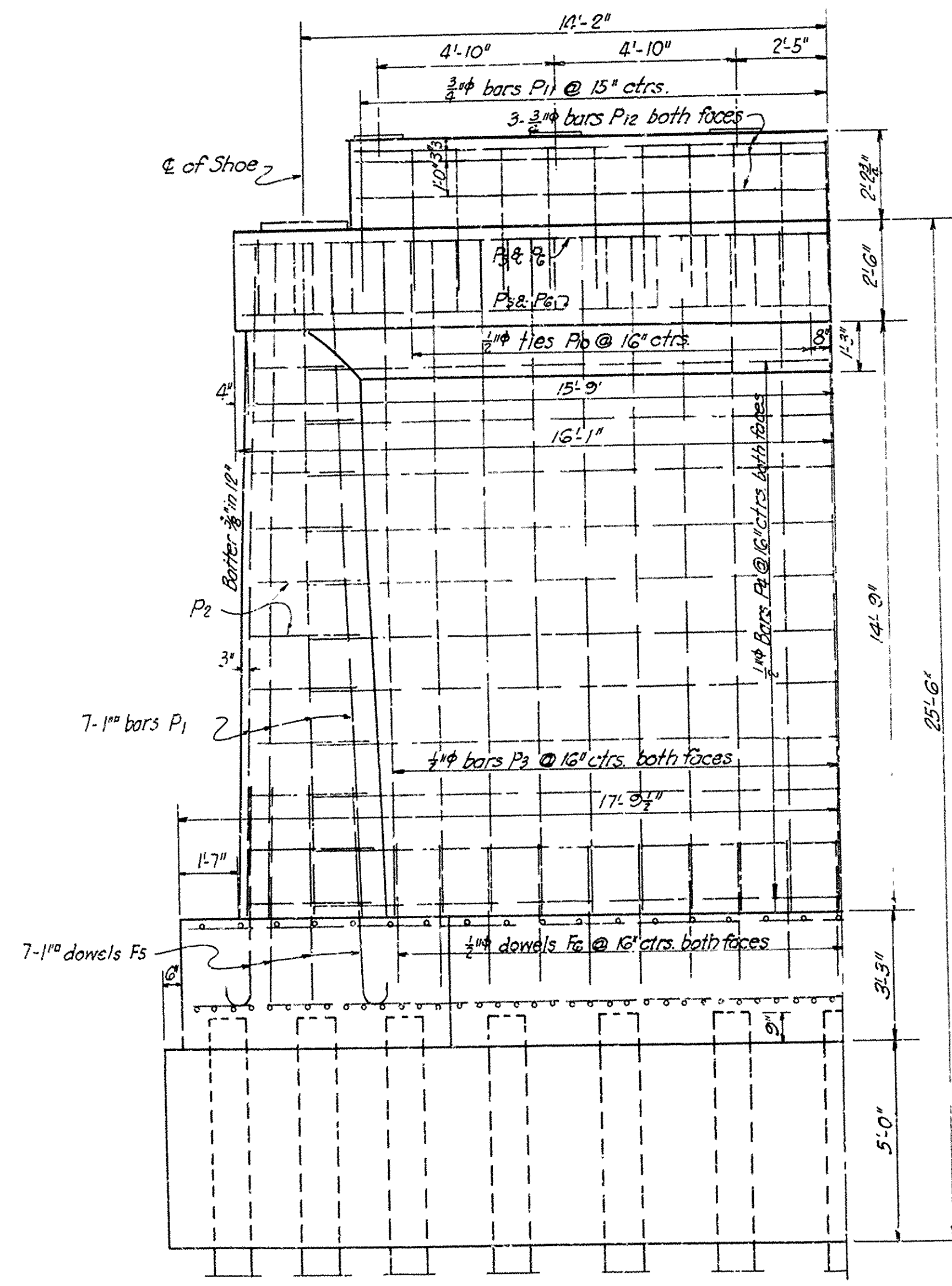
BRIDGE No. 1207 DRAWING No. 3459

N.B. Garrow
 BRIDGE ENGINEER

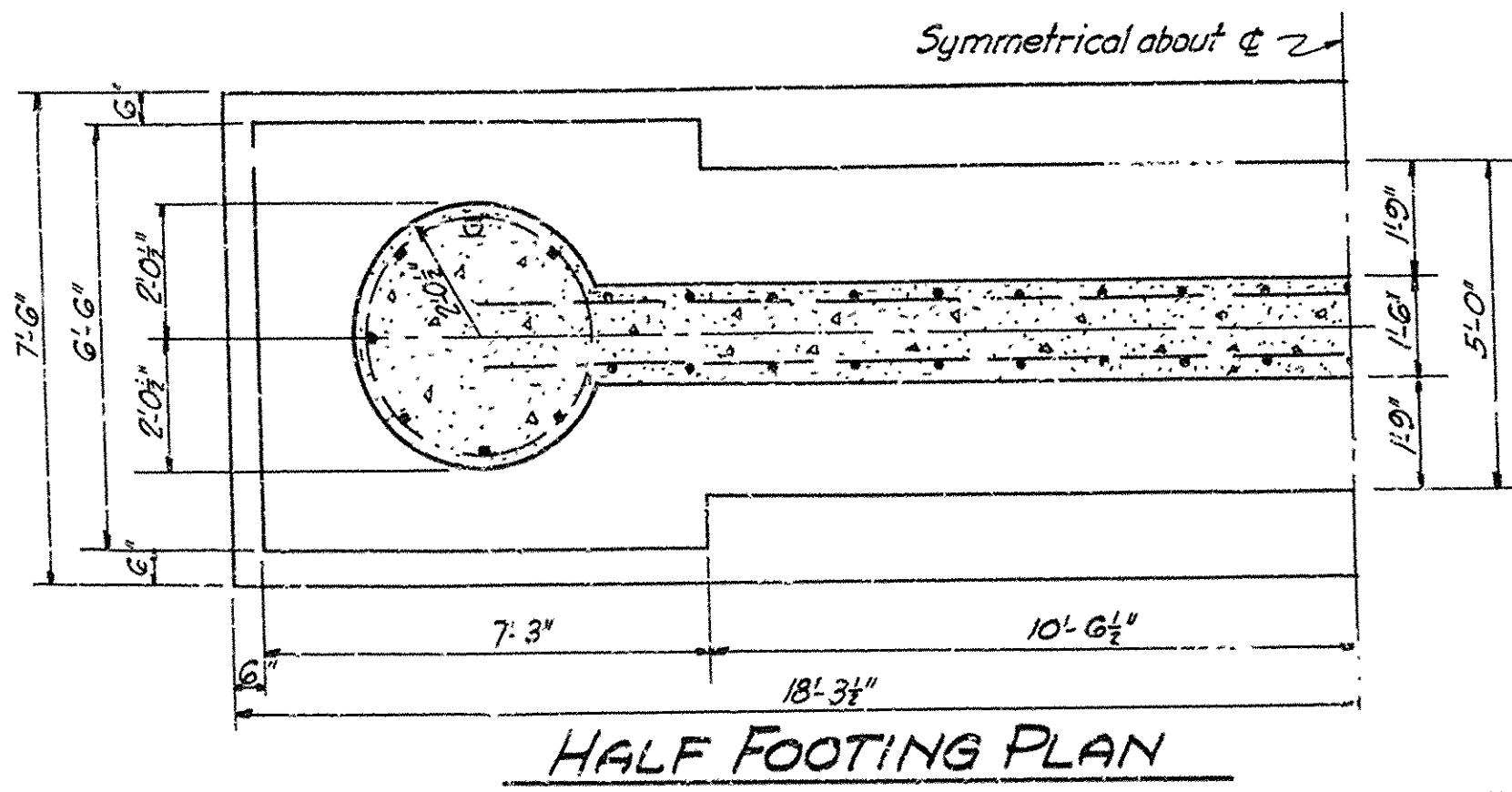
FISCAL YEAR	State Job No.	SHEET NO.	TOTAL SHEETS
10-120			
(A.R.M.)			
FED. ROAD DIST. NO.	STATE	N.R.M. PROJ. NO.	FISCAL YEAR
6	ARK.	282-A	1934
		SHEET NO.	TOTAL SHEETS
		12	15



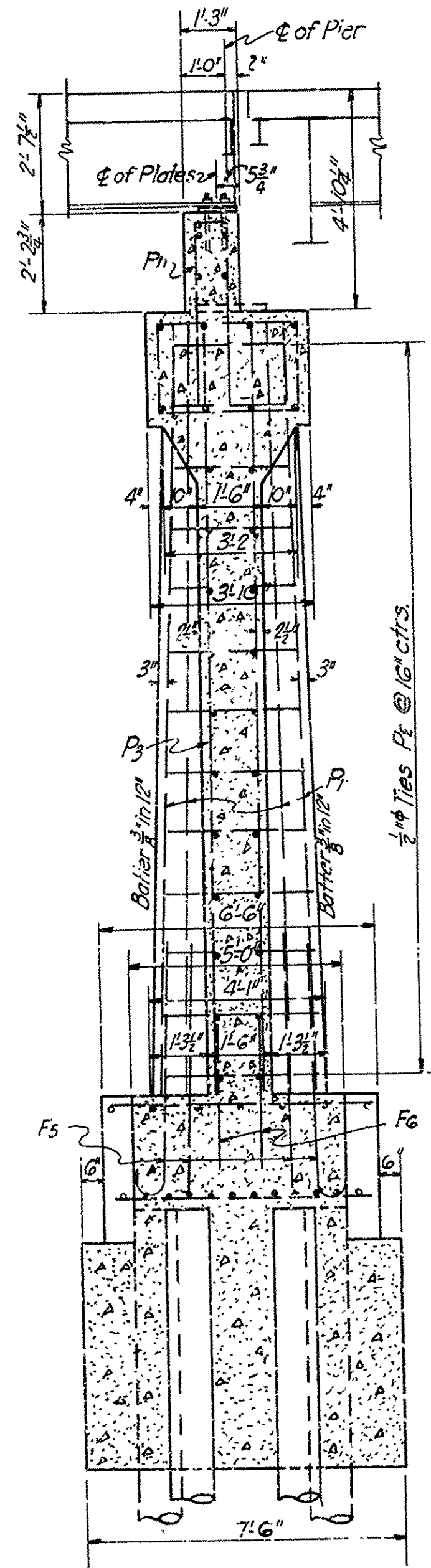
HALF PLAN OF CAP



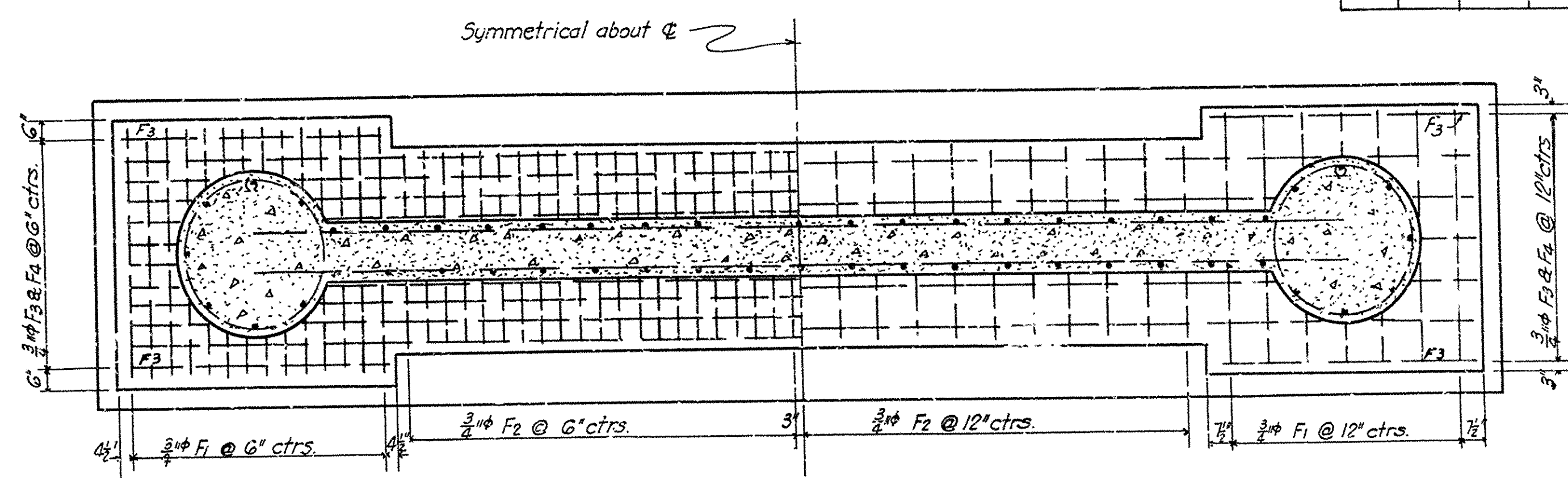
HALF ELEVATION



HALF FOOTING PLAN



SECTION ON C

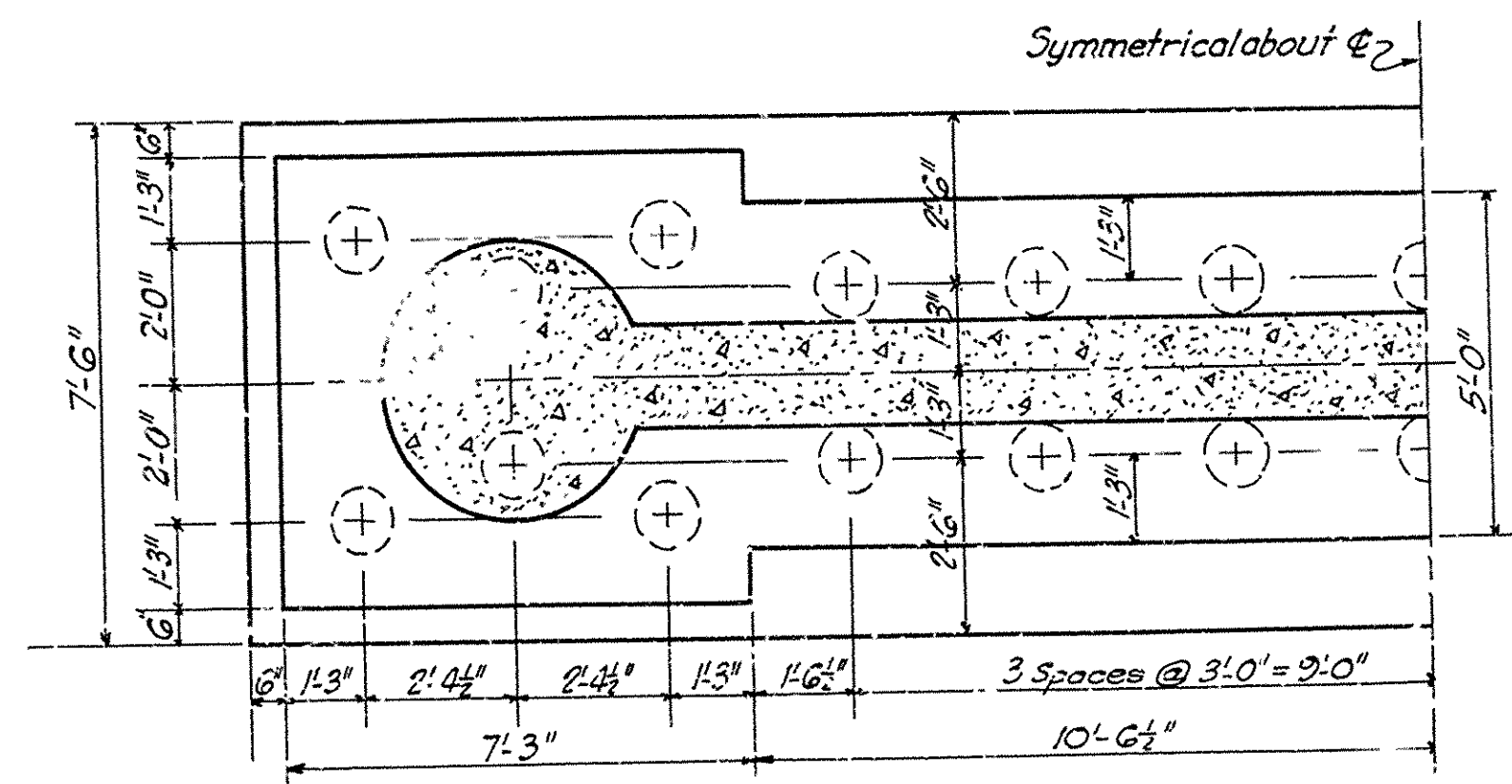


HALF FOOTING PLAN

Showing Reinforcing Steel in bottom

HALF FOOTING PLAN

Showing Reinforcing Steel in top



HALF PILING PLAN

Maximum Load on Piling 12 Tons

Mark	Size	Length	Bending Diagrams	
F5	1" dia	6'-7"		
P2	1/2 inch	Varies Ave 11'-3 1/2"	A	
P7	3/4 inch	12'-11"	A	
P8	3/4 inch	11'-5"	B	
P9	3/4 inch	10'-1"	A	
P10	1/2 inch	12'-1"	B	
P11	3/4 inch	9'-5"		

REVISED E.A.W. 9-15-33
Riser & Pile Loading

DETAILS OF PIERS
FOR BRIDGE OVER ST. FRANCIS R.
AT LAKE CITY, ARKANSAS
CRAIGHEAD COUNTY
ROUTE 18 SEC. 4

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Drawn By: H.B. Date: 12-11-32
Traced By: P.J.S. Date: 12-14-32
Checked By: _____ Date: _____
BRIDGE NO. 1207
Scale: 3/8 in. = 1 ft.
DRAWING NO. 3460

N.B. Davis
BRIDGE ENGINEER