

FED. DIST. NO.	STATE	U.S.W.P.H. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	W.P.H. 87 Part 2	1935	1	10

Ark. Job No. 8177

**QUANTITIES**

ITEM No.	ITEM	QUANTITY	
11	Clearing	1.60	Acres
11	Grubbing	1.00	Acres
12	Common Excavation	19,630	Cu yds
13	Dry Exca. for Structures	649	Cu yds
13	Wet Exca. for Structures	348	Cu yds
13	Rock Exca. for Structures	150	Cu yds
91	Class A Concrete for Bridges	4,451	Cu yds
91	Class S Concrete for Bridges	6,686	Cu yds
92	Reinf. Steel for Bridges	193,010	Lbs.
93	Concrete Piling	2,029	Lin. ft.
94	Concrete Rolling for Bridges	710	Lin. ft.
95	Rip Rap	1,309	Cu. yds
96	Struct. Steel in Truss Spans	342,460	Lbs.
96 & SP	Metal Bearing Devices	16,220	Lbs.
SP	Bronze State Br. Name Pls (Type B)	4	Each
SP	Traffic Service Gravel	113	Cu yds

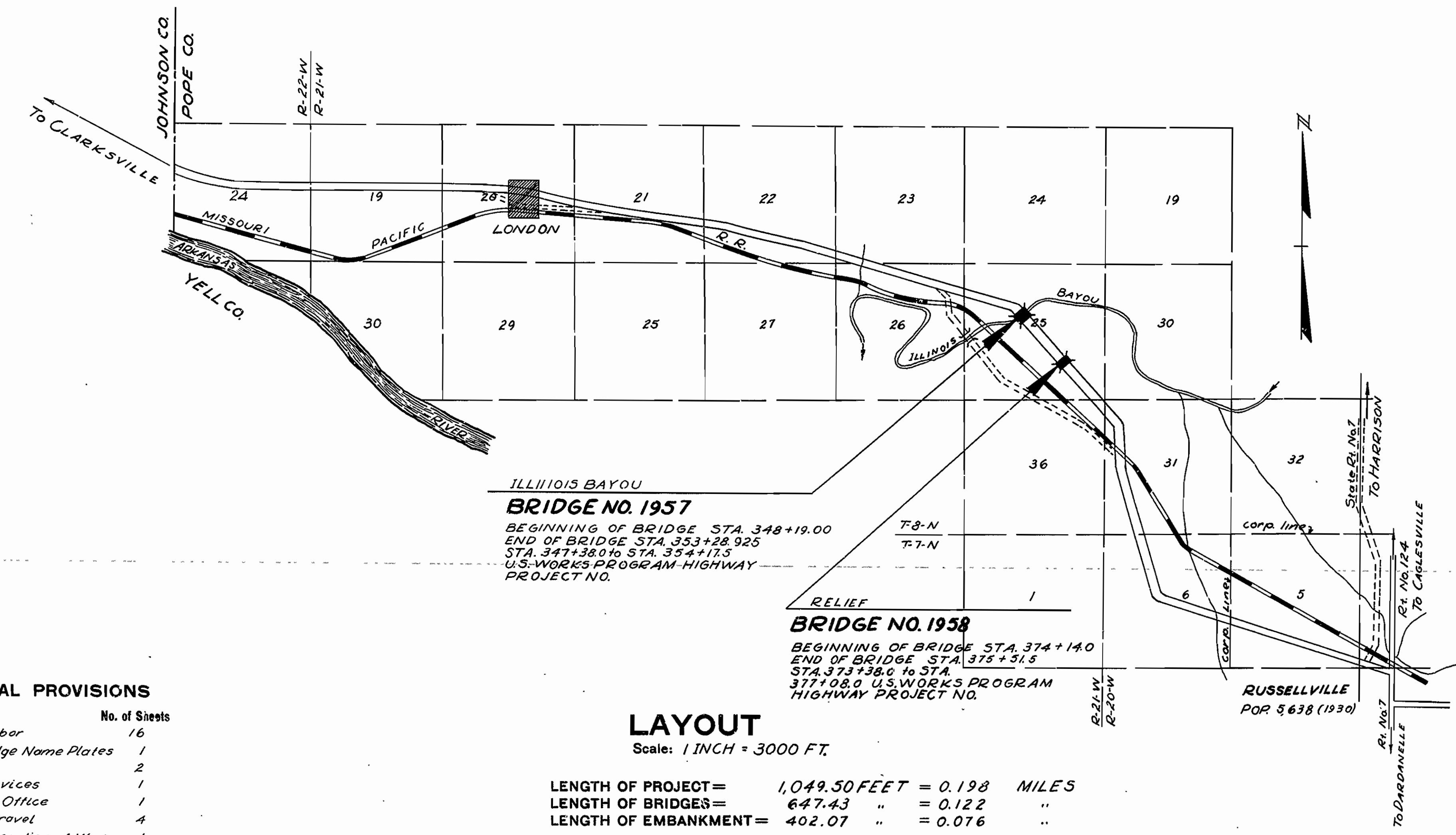
**INDEX OF SHEETS**

SHEET NO.	DRAWING NO.	TITLE
1	4094	Title Sheet
2	4095	Schedule of Quantities
3	4096	Layout of Bridge No. 1957
4	2448	Details of Standard 100' Pony Truss Span
5	2330	Details of Standard 34' R.C.D. Girder Span
6	2330-A	Details of Standard Batter Pile End Bents.
7	4097	Details of Piers 1, 2, 3 & 4
8	4098	Layout of Bridge No. 1958
9	2387	Details of Standard Bridge Name Plates
10	1885	Details of Embankment Construction for Bridge Ends

**STATE OF ARKANSAS**  
**STATE HIGHWAY COMMISSION**  


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**PLAN OF PROPOSED BRIDGES**  
**OVER ILLINOIS BAYOU**  
**RUSSELLVILLE-WEST ROAD**  
**POPE COUNTY**  
**ROUTE 64 SEC. 6**  
**JOB NO. 8177**  
**U.S. WORKS PROGRAM HIGHWAY**  
**PROJECT NO. W.P.H. 87 Part 2**



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
"	M	Revised	Mar. 1st, 1931
"	N	Revised	Oct. 1st, 1933
"	O	Revised	Oct. 1st, 1933
"	L	Revised	July 8th, 1935

**SPECIAL PROVISIONS**

Item	No. of Sheets
Subletting and Labor	16
Bronze State Bridge Name Plates	1
Fusion Welding	2
Metal Bearing Devices	1
Engineers' Field Office	1
Traffic Service Gravel	4
Beginning and Prosecution of Work	1
Extra and Force Account Work	1
Employment Centers for Labor	1

**LAYOUT**

Scale: 1 INCH = 3000 FT.

LENGTH OF PROJECT = 1,049.50 FEET = 0.198 MILES  
 LENGTH OF BRIDGES = 647.43 " = 0.122 "  
 LENGTH OF EMBANKMENT = 402.07 " = 0.076 "

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

*M.B. Lavin*  
BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	U.S. W.P.H. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	W.P.H. 87 Part 2	1935	2	10

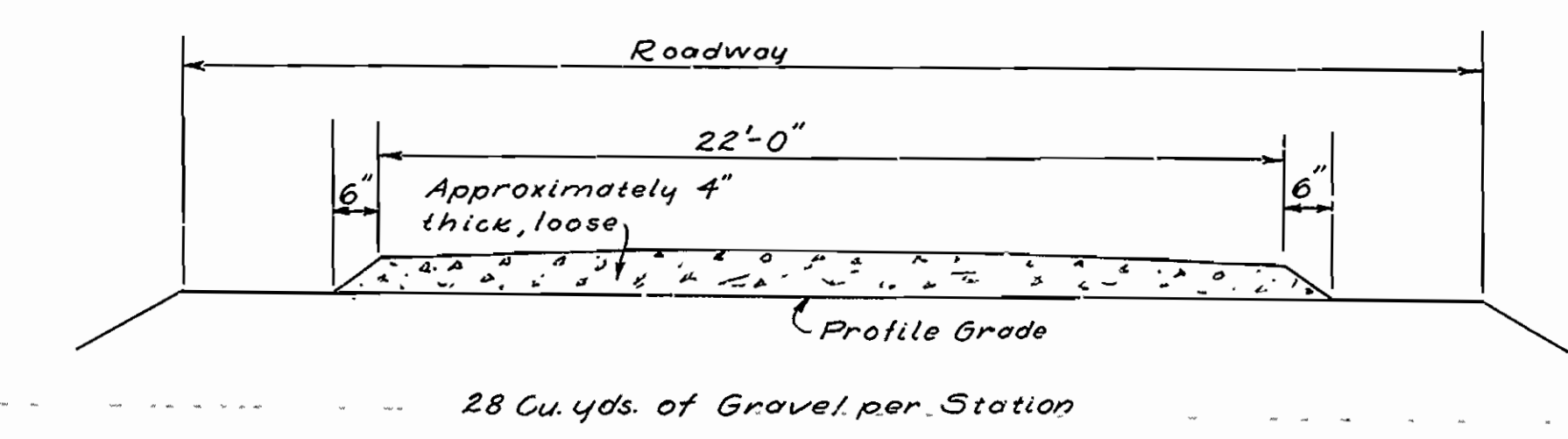
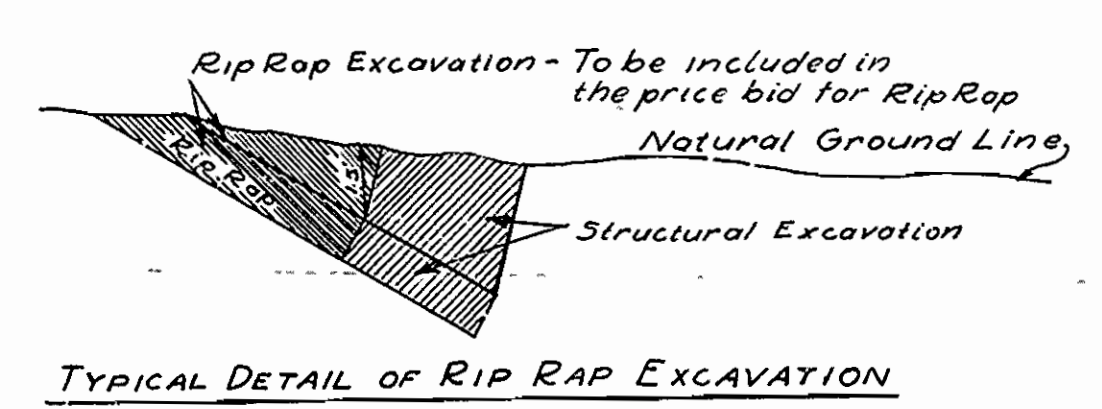
Ark. Job No 8177

## SCHEDULE OF QUANTITIES

UNIT OF BRIDGE	ITEM	ITEM No. 13 Dry Exc. for Structures Cu. Yds.	ITEM No. 13 Wet Exc. for Structures Cu. Yds.	ITEM No. 13 Rock Exc. for Structures Cu. Yds.	ITEM No. 91 Cl. "A" Conc. for Bridges Cu. Yds.	ITEM No. 91 Cl. "S" Conc. for Bridges Cu. Yds.	ITEM No. 92 Reint. Steel for Bridges Lbs.	ITEM No. 93 Concrete Piling Lin. Ft.	ITEM No. 94 Conc. Railing for Bridges Lin. Ft.	ITEM No. 95 Rip Rap Cu. Yds.	ITEM No. 96 Str. Steel in Truss Spans Lbs.	ITEM No. 96 & SP Metal Bearing Devices Lbs.	ITEM No. S.P. Bronze State Br. Name Pl. Type "B" Each.
BRIDGE NO. 1957	SUPERSTRUCTURE 6-34'0" R.C.D. Girder Spans					223.10	62,098		407.0		4,780	5,880	
	SUPERSTRUCTURE 3-100'0" Low Truss Spans					221.00	44,250				333,700	6,420	
	END BENT No. 1	87				10.12	1,431	266.0	8.0	360			1
	INT. BENTS No. 2, 3, 4 & 5					20.16	3,092	608.0					
	PIER No. 1	142	62	26	89.67		8,830						
	PIER No. 2		79	49	124.02		8,356						
	PIER No. 3	39	118	49	130.57		8,729						
	PIER No. 4	124	89	26	100.84		8,213						
END BENT No. 6	94					10.12	1,431	266.0	8.0	432			1
TOTALS		486	348	150	445.10	484.50	146,430	1140.0	423.0	792	338,480	12,300	2
BR. NO. 1958	SUPERSTRUCTURE 4-34'0" R.C.D. Girder Spans					148.74	41,399		271.0		3,980	3,920	
	END BENT No. 1	82				10.12	1,431	238.0	8.0	277			1
	INT. BENTS No. 2, 3 & 4					15.12	2,319	413.0					
	END BENT No. 5	81				10.12	1,431	238.0	8.0	240			1
TOTALS		163				184.10	46,580	889.0	287.0	517	3,980	3,920	2
GRAND TOTALS		649	348	150	445.10	668.60	193,010	2,029.0	710.0	1,309	342,460	16,220	4

### ROADWAY QUANTITIES

- ITEM No. 11 - CLEARING**  
 BRIDGE No. 1957 0.90 Acres  
 BRIDGE No. 1958 0.70 Acres  
**TOTAL 1.60 Acres**
- ITEM No. 11 - GRUBBING**  
 BRIDGE No. 1957 0.50 Acres  
 BRIDGE No. 1958 0.50 Acres  
**TOTAL 1.00 Acres**
- ITEM No. 12 COMMON EXCAVATION**  
 BRIDGE No. 1957 11,520 Cu. Yds.  
 BRIDGE No. 1958 8,110 Cu. Yds.  
**TOTAL 19,630 Cu. Yds.**
- ITEM No. S.P. - TRAFFIC SERVICE GRAVEL**  
 BRIDGE No. 1957 48 Cu. Yds.  
 BRIDGE No. 1958 65 Cu. Yds.  
**TOTAL 113 Cu. Yds.**



**SCHEDULE OF QUANTITIES  
 BRIDGES OVER ILLINOIS BAYOU  
 ILLINOIS BAYOU RELIEF  
 RUSSELLVILLE - WEST ROAD  
 ROUTE 64 SEC. 6 POPE COUNTY  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.**

Drawn by: B.W.D. Date: 10-5-35  
 Traced by: B.W.D. Date: 10-5-35  
 Checked by: Date:

*B.W.D.*  
 BRIDGE ENGINEER

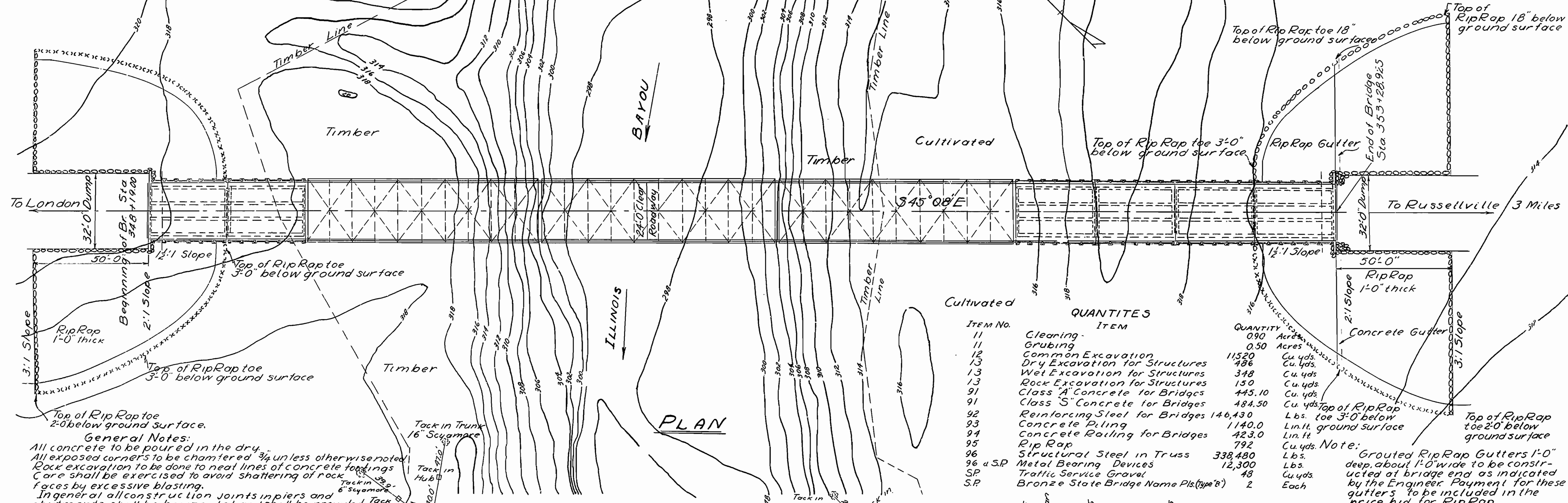
**BRIDGE No. 1957-58 DRAWING No. 4095**

RIGHT OF WAY DATA				
From Sta	To Sta	Rt. of E	Lt. of E	Total Width
335+00	485+00	100'	100'	200'

PROJ. ROAD DIST. NO.	STATE	U.S. HIGHWAY NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	W. R. 27 Part 2	1935	3	10

ARKANSAS JOB No. 8177

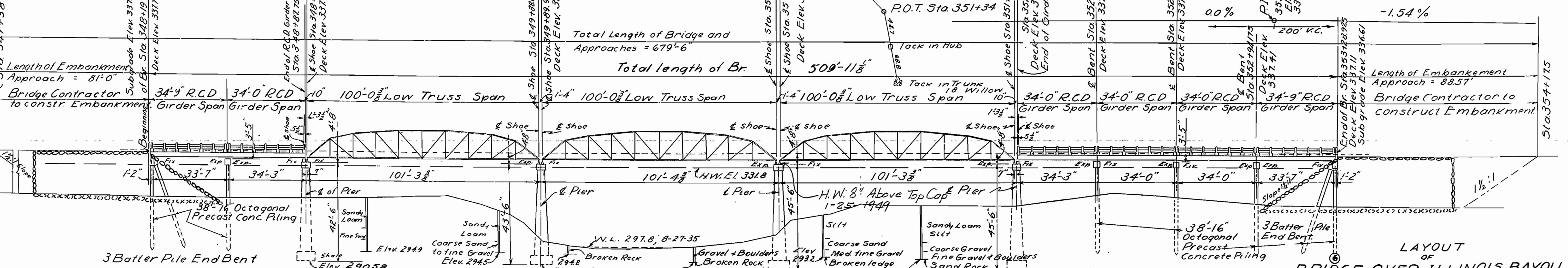
TANGENT DISTANCE DATA  
From Beginning of Br. 69'  
From End of Br. over 500'



**General Notes:**  
All concrete to be poured in the dry.  
All exposed corners to be chamfered 3/4" unless otherwise noted.  
Rock excavation to be done to neat lines of concrete footings.  
Care shall be exercised to avoid shattering of rock faces by excessive blasting.  
In general all construction joints in piers and abutments shall be horizontal and shall be provided with keys not less than 3' deep covering the third of both dimensions unless otherwise shown.

ITEM NO.	ITEM	QUANTITY	UNIT
11	Cleaning	0.90	Acres
12	Grubbing	0.50	Acres
13	Common Excavation	11520	Cu. yds.
13	Dry Excavation for Structures	486	Cu. yds.
13	Wet Excavation for Structures	348	Cu. yds.
91	Rock Excavation for Structures	150	Cu. yds.
91	Class A Concrete for Bridges	445.10	Cu. yds.
91	Class S Concrete for Bridges	484.50	Cu. yds.
92	Reinforcing Steel for Bridges	146,430	Lbs.
93	Concrete Piling	1140.0	Lin. ft.
94	Concrete Railing for Bridges	423.0	Lin. ft.
95	Rip Rap	792	Cu. yds.
96	Structural Steel in Truss	338,480	Lbs.
SP	Metal Bearing Devices	12,300	Lbs.
SP	Traffic Service Gravel	48	Cu. yds.
SP	Bronze State Bridge Name Pls. (Type B)	2	Each

**QUANTITIES**



**General Notes (cont.)**  
Excavation for Rip Rap toe below the natural ground surface shall be paid for as Dry Excavation for structures except only that portion in excess of that required for an 18" depth of toe shall be included in the quantity for payment.  
Bridge Contractor to construct embankment at bridge ends.  
For Details of R.C.D. Girder Spans, See Dwg. No. 2330  
For Details of Batter Pile Bents, See Dwg. No. 2330-A  
For Details of 100' Low Truss Spans, See Dwg. No. 2448  
For Details of Piers, See Dwg. No. 4097  
Specifications: Arkansas Standard Road and Bridge Specifications. Adopted, May 30, 1925 and revised.

**ELEVATION**

**LAYOUT OF BRIDGE OVER ILLINOIS BAYOU**  
RUSSELLVILLE - WEST ROAD  
POPE COUNTY  
ROUTE 64 SEC. 6  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARKANSAS  
Drawn By: R.E.H. Date: 9-6-35  
Traced By: B.W.D. Date: 9-19-35  
Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
Scale: 1" = 20'

Drainage Area - Illinois Bayou  
375 Sq. Miles - Mountainous  
B.M. Elev. 319.58  
Top of Elm Stump 15' left of Sta. 349+22

*M.B. Gann*  
BRIDGE ENGINEER

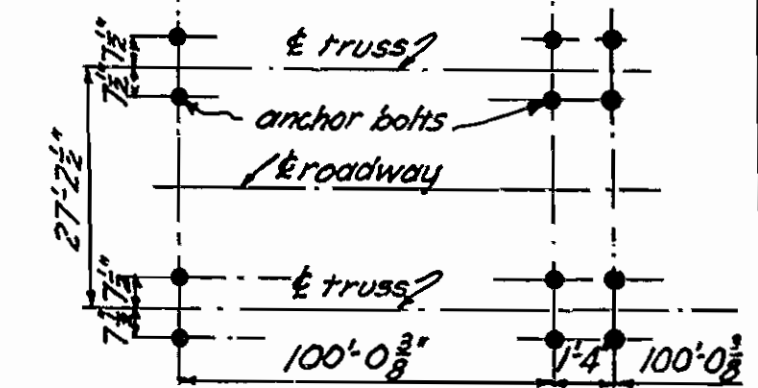
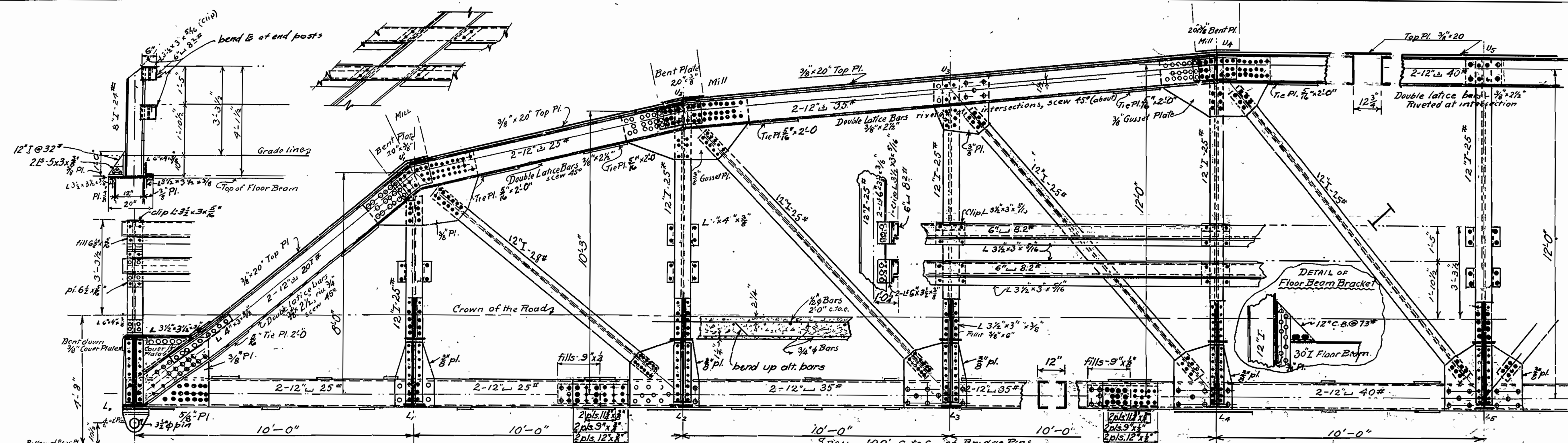
BRIDGE No. 1957 DRAWING No. 4096

FED. DIST. NO.	STATE	U.S. W.P.N. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	577-2	1935	4	10

ARK. JOB No. 8177

STRUCTURAL STEEL 109,400 #  
 REINFORCING " 14,750 #  
 SHOES 2140 #  
 EXP. JOINT ST. TO ST. 1412 #  
 " " CONCR. TO ST. 1340 #  
 CONCRETE "S" 73.5 cu. yds.

UNIT STRESSES  
 Concrete 750 lb/sq ft  
 Reinforcing Steel 16000  
 Structural " 16000  
 Live Load = H15 Loading



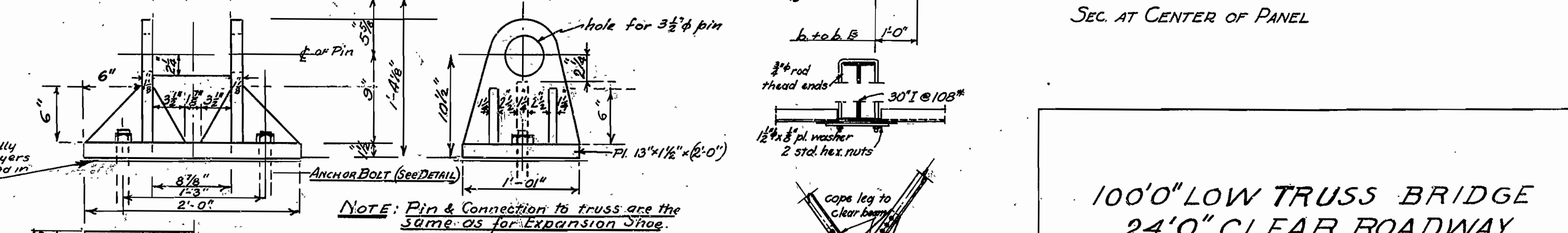
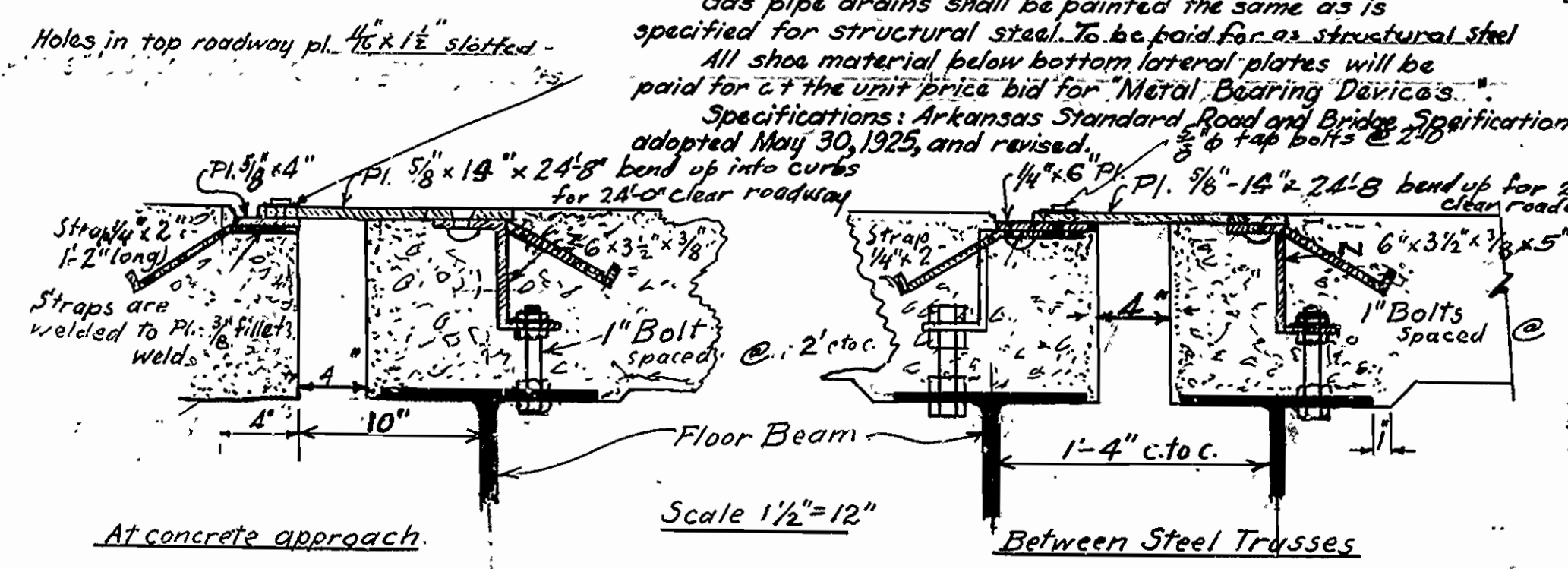
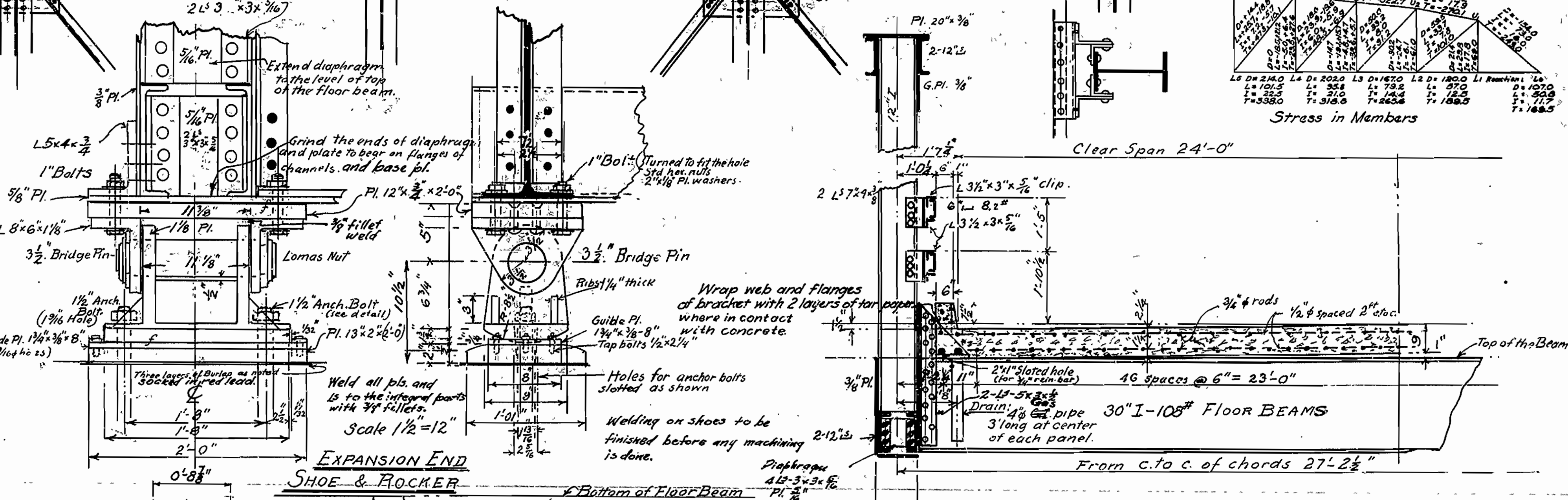
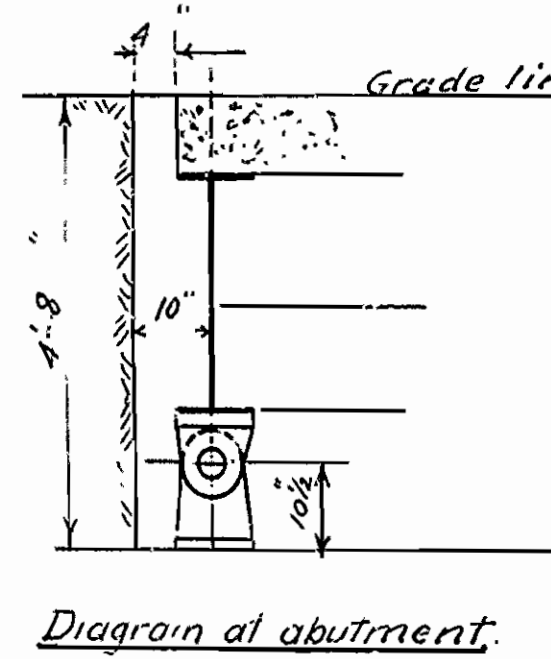
ANCHOR BOLT PLAN  
 Note: 3/8" has been added for elongation due to dead load stress

Member	Size	Quantity	Location
1	2-24.0	1	U-1
2	2-24.0	1	U-2
3	2-24.0	1	U-3
4	2-24.0	1	U-4
5	2-24.0	1	U-5
6	2-24.0	1	U-6
7	2-24.0	1	U-7
8	2-24.0	1	U-8
9	2-24.0	1	U-9
10	2-24.0	1	U-10
11	2-24.0	1	U-11
12	2-24.0	1	U-12
13	2-24.0	1	U-13
14	2-24.0	1	U-14
15	2-24.0	1	U-15
16	2-24.0	1	U-16
17	2-24.0	1	U-17
18	2-24.0	1	U-18
19	2-24.0	1	U-19
20	2-24.0	1	U-20
21	2-24.0	1	U-21
22	2-24.0	1	U-22
23	2-24.0	1	U-23
24	2-24.0	1	U-24
25	2-24.0	1	U-25
26	2-24.0	1	U-26
27	2-24.0	1	U-27
28	2-24.0	1	U-28
29	2-24.0	1	U-29
30	2-24.0	1	U-30
31	2-24.0	1	U-31
32	2-24.0	1	U-32
33	2-24.0	1	U-33
34	2-24.0	1	U-34
35	2-24.0	1	U-35
36	2-24.0	1	U-36
37	2-24.0	1	U-37
38	2-24.0	1	U-38
39	2-24.0	1	U-39
40	2-24.0	1	U-40
41	2-24.0	1	U-41
42	2-24.0	1	U-42
43	2-24.0	1	U-43
44	2-24.0	1	U-44
45	2-24.0	1	U-45
46	2-24.0	1	U-46
47	2-24.0	1	U-47
48	2-24.0	1	U-48
49	2-24.0	1	U-49
50	2-24.0	1	U-50

Stress in Members

GENERAL NOTES

Rivets 3/4", open holes 1 1/8", except flanges of 6" B. Riv. 1/2" holes.  
 All holes in truss connections to be sub-punched 3/8" and reamed to size while truss is assembled; this applies to field as well as shop rivets.  
 Floor beam connections to be sub-punched 3/8" and reamed to a metal template.  
 Shop paint: After being completely assembled and shop work finished, all pieces except anchor straps on roadway expansion devices 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. (See Spec. 96.36, 96.29)  
 Floor beams shall be milled to exact length after framing angles have been riveted.  
 Floor slab concrete to be Class "S". One inch has been added for wear.  
 Approved shapes of equal or greater strength may be substituted for shapes shown, but payment will be made in accordance with sizes shown on this plan.  
 This drawing shows general features of design only. Shop drawings shall be made in compliance with specifications, submitted and approved before fabrication 1/2" ANCHOR BOLT is begun.  
 Gas pipe drains shall be painted the same as is specified for structural steel, to be paid for as structural steel.  
 All shoes material below bottom lateral plates will be paid for at the unit price bid for "Metal Bearing Devices".  
 Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30, 1925, and revised.



DETAIL OF TRUSS CONNECTIONS

100'0" LOW TRUSS BRIDGE  
 24'0" CLEAR ROADWAY

ARKANSAS STATE HIGHWAY DEPARTMENT  
 LITTLE ROCK, ARK.

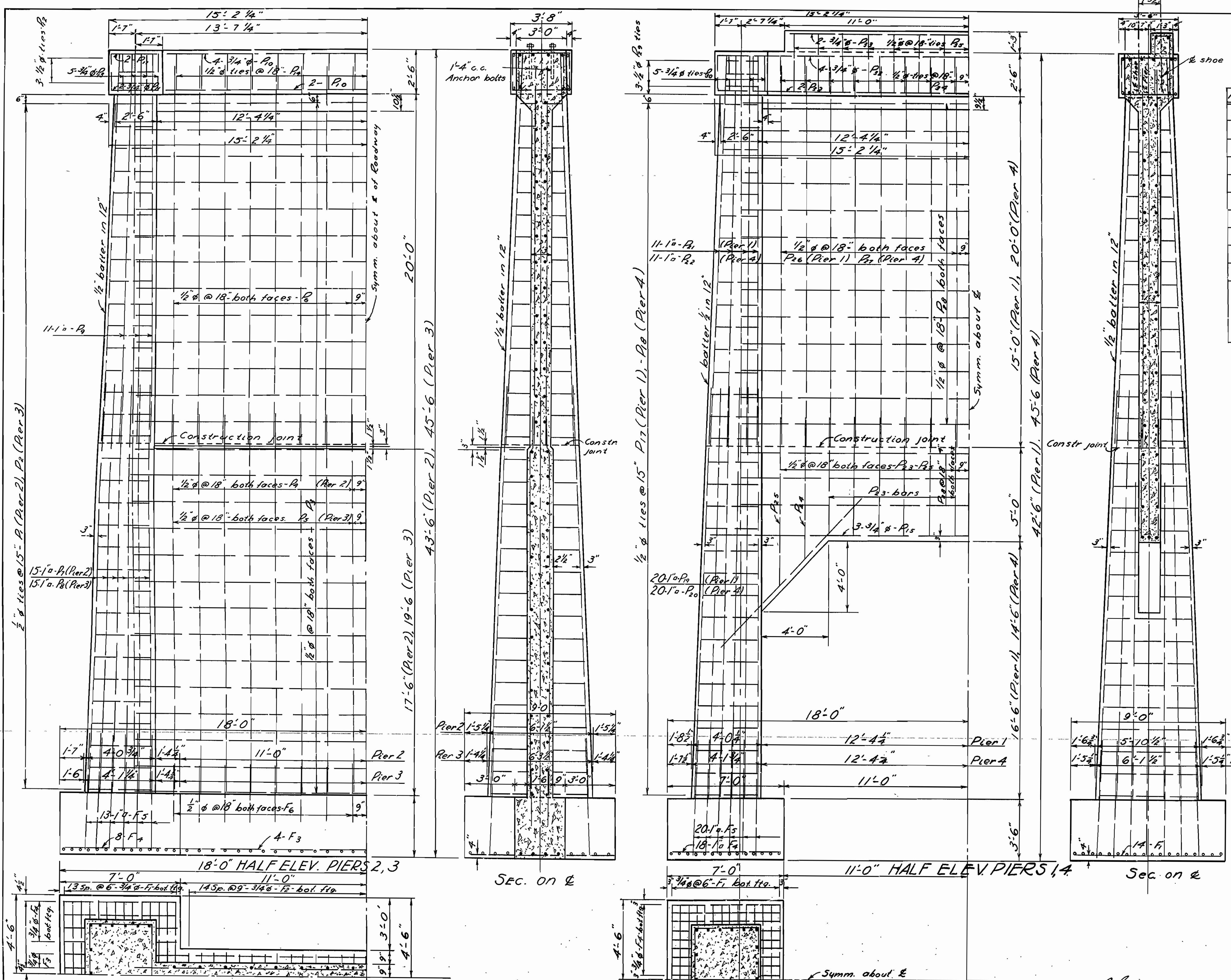
Drawn by: J.A.P. Date: Oct 3, 1935 Scale 1/8" = 1 ft.  
 Checked: " " 10/3/35 Unless stated otherwise.  
 BRIDGE No. 1957 DRAWING No. 2448

REVISED: Roadway Expansion Devices & Floor-Beam Field Rivet Connections. 5-20-34

Note: all integral parts to be welded with 3/8" fillers at the intersection of all surfaces.

FED. DIST. NO.	STATE	U.S. W.P.H. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1012	1935	7	10

ARK. JOB No. 8177



MARK	SIZE	AVE. LENGTH	A	B
P <sub>1</sub>	1/2" Ø	14'-9"	2'-8" to 3'-7"	2'-1 1/2" to 3'-7"
P <sub>2</sub>	1/2" Ø	15'-1"	2'-8" to 3'-7"	2'-1 1/2" to 3'-9 1/2"
P <sub>3</sub>	3/4" Ø	11'-5"	3'-3 1/2"	2'-1 1/2"
P <sub>4</sub>	1/2" Ø	10'-1"	2'-7 1/2"	2'-1 1/2"
P <sub>5</sub>	1/2" Ø	14'-3"	2'-6" to 3'-5"	2'-1 1/4" to 3'-7 1/2"
P <sub>6</sub>	1/2" Ø	14'-9"	2'-6" to 3'-5"	2'-1 1/4" to 3'-9 1/2"
P <sub>7</sub>	1/2" Ø	9'-8"	2'-5"	2'-1 1/2"
P <sub>8</sub>	3/4" Ø	11'-1"	3'-1 1/2"	2'-1 1/2"
P <sub>9</sub>	1/2" Ø	9'-9"	2'-5 1/2"	2'-1 1/2"
P <sub>10</sub>	1/2" Ø	7'-9"	3'-5"	0'-10 1/2"

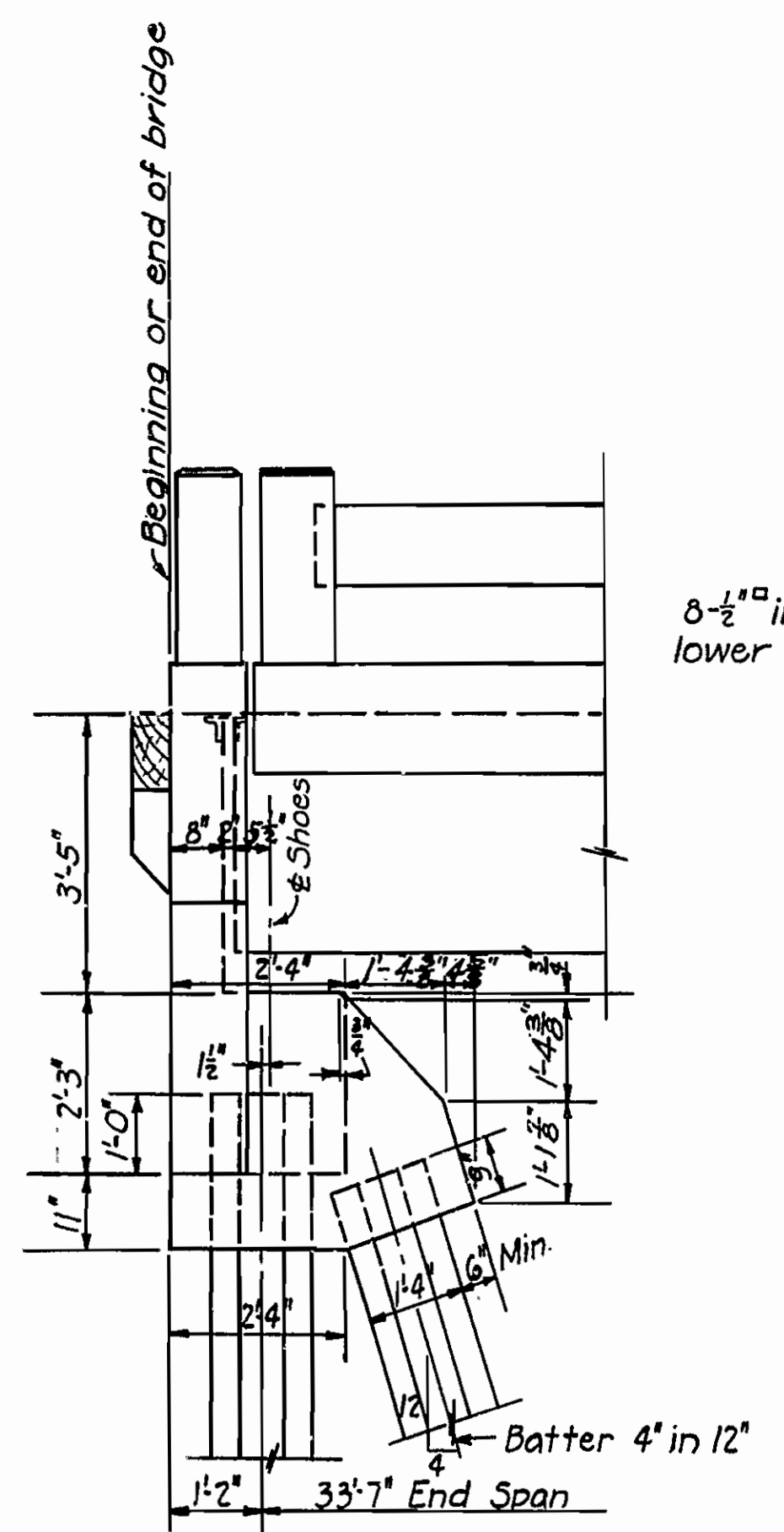
varies by 1/4" for bars, P<sub>1</sub>, P<sub>2</sub>

DETAILS OF PIERS 1, 2, 3, 4  
 BRIDGE OVER ILLINOIS BAYOU  
 RUSSELLVILLE-WEST ROAD  
 POPE COUNTY  
 Route 64 Sec. 6  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

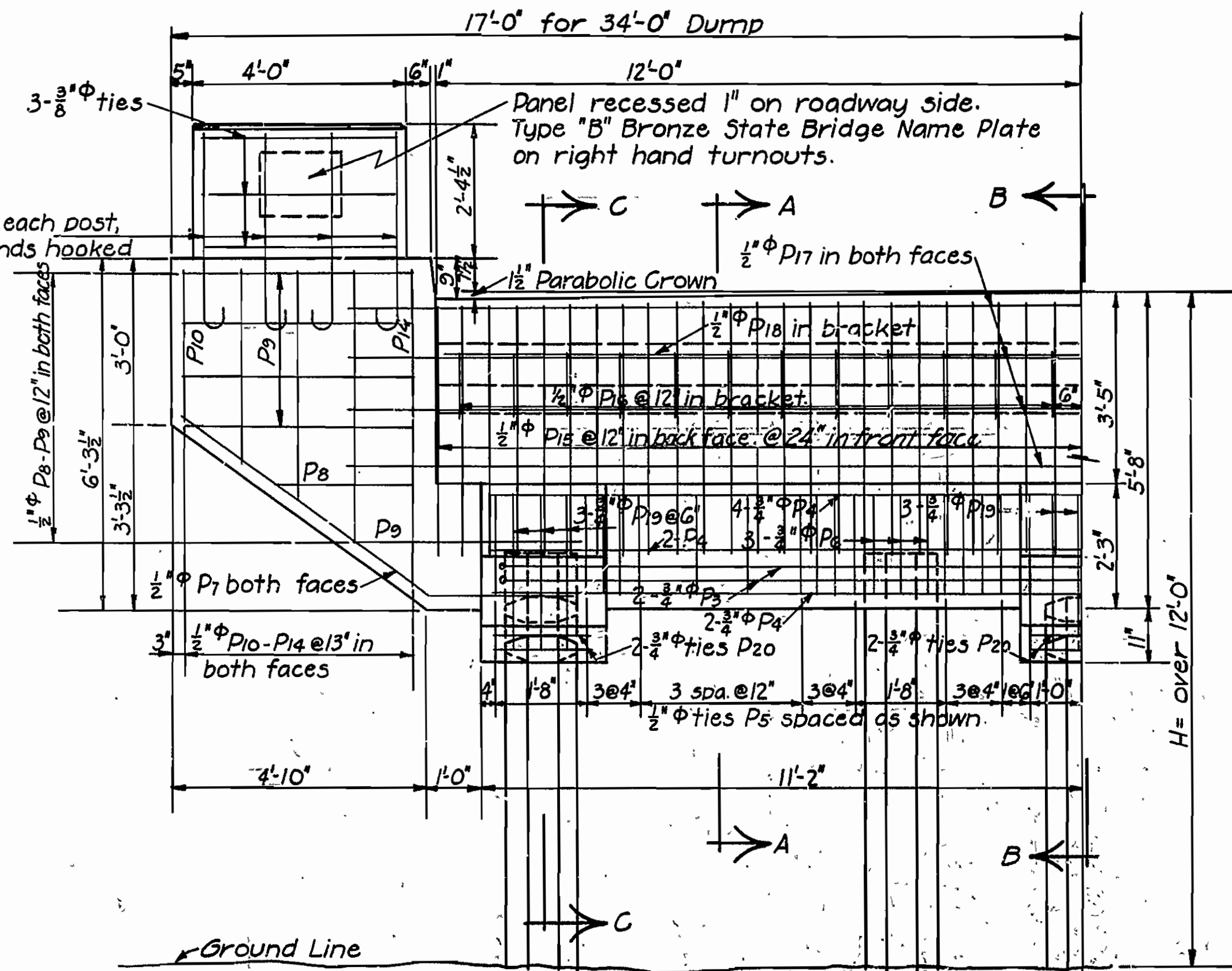
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 Traced By: B.D. Date: 9-23-35  
 Checked By: Date: Scale: 3/4"=1'-0"

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G	ARK.	1937-G	1936	12	83

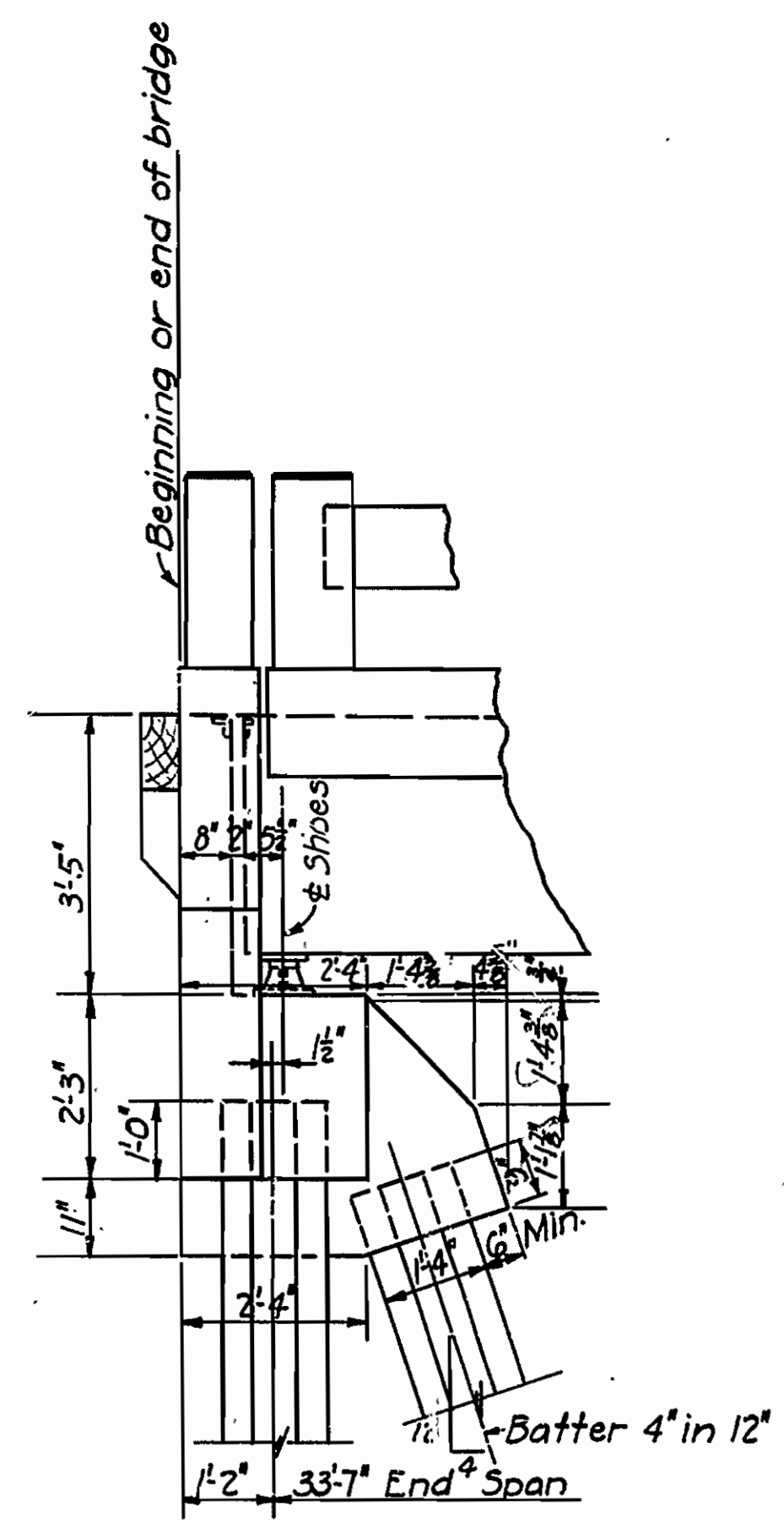
ARKANSAS JOB NO. 10211-Street B of 9



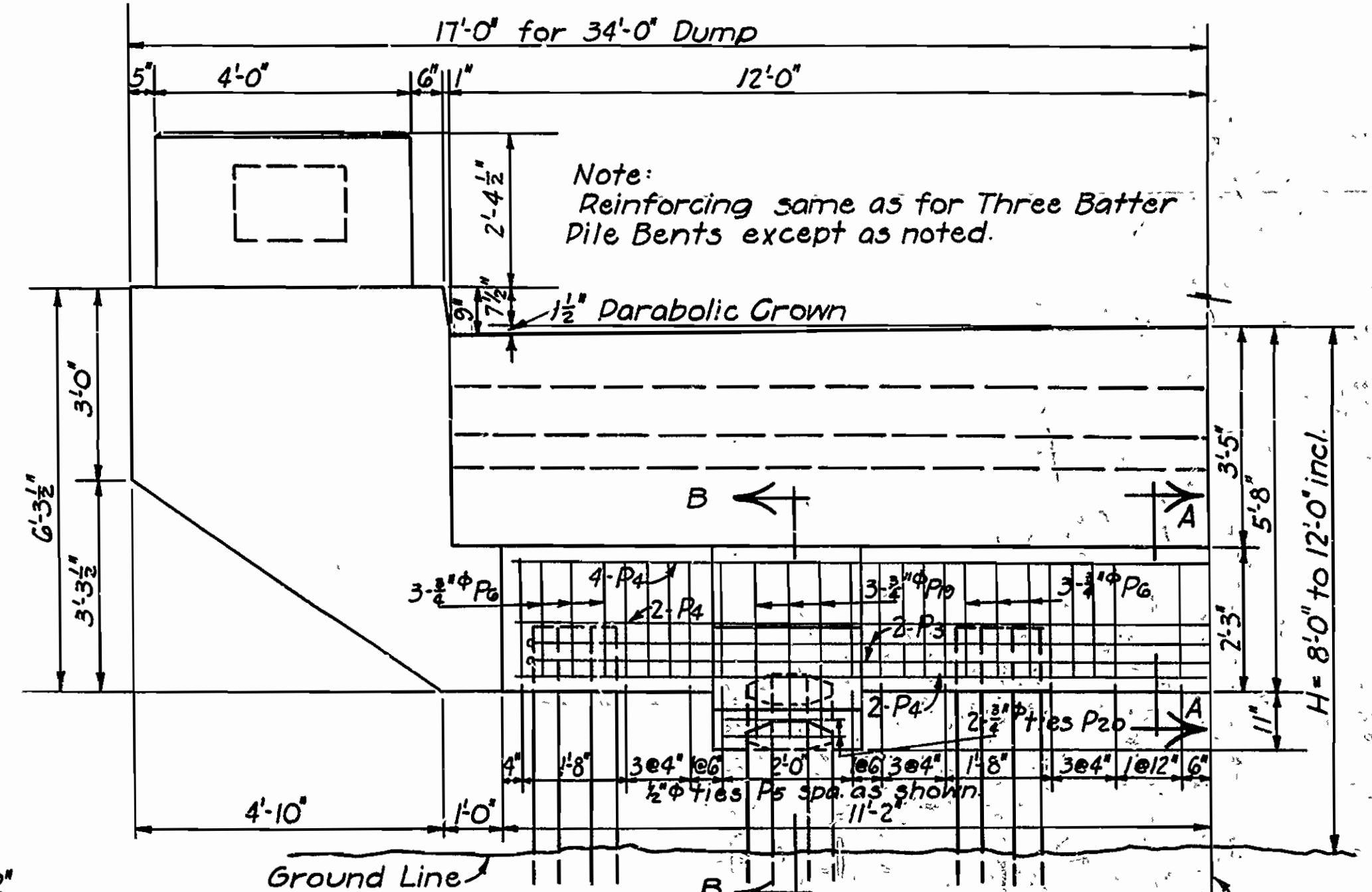
END ELEV. END BENT THREE BATTER PILE



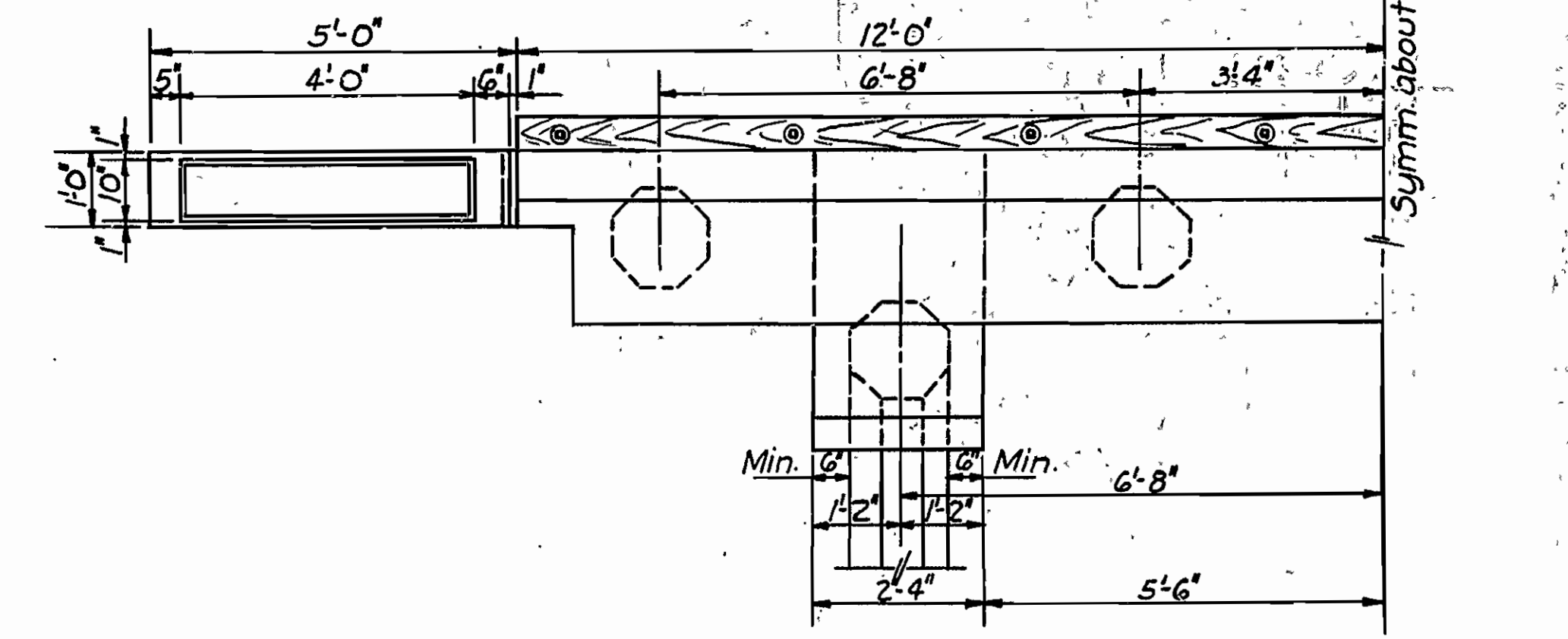
HALF FRONT ELEV. END BENT-THREE BATTER PILE



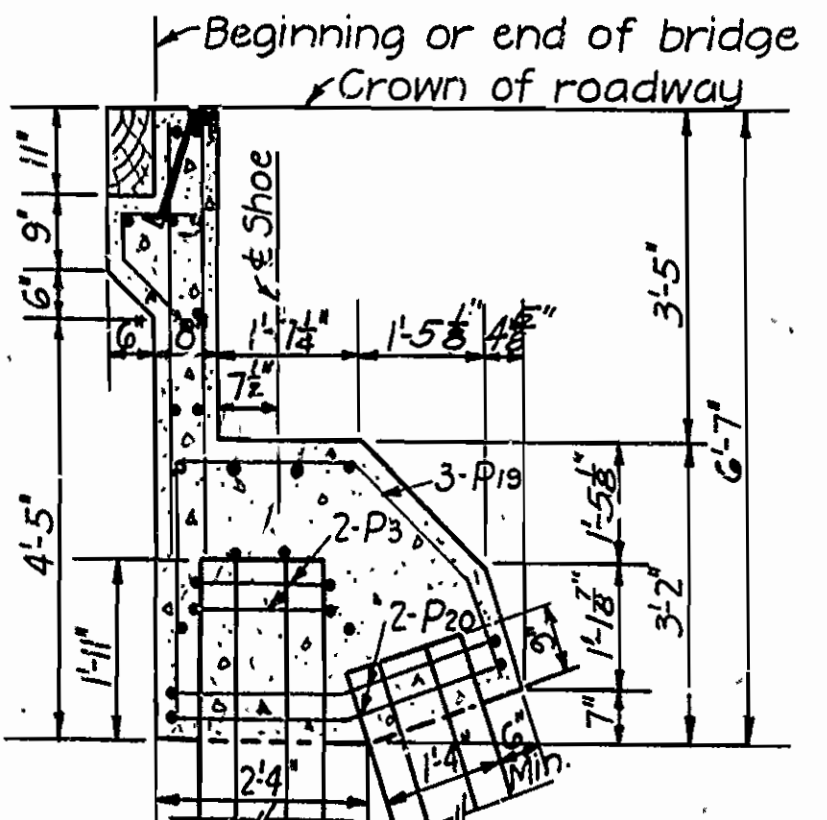
END ELEV. END BENT TWO BATTER PILE



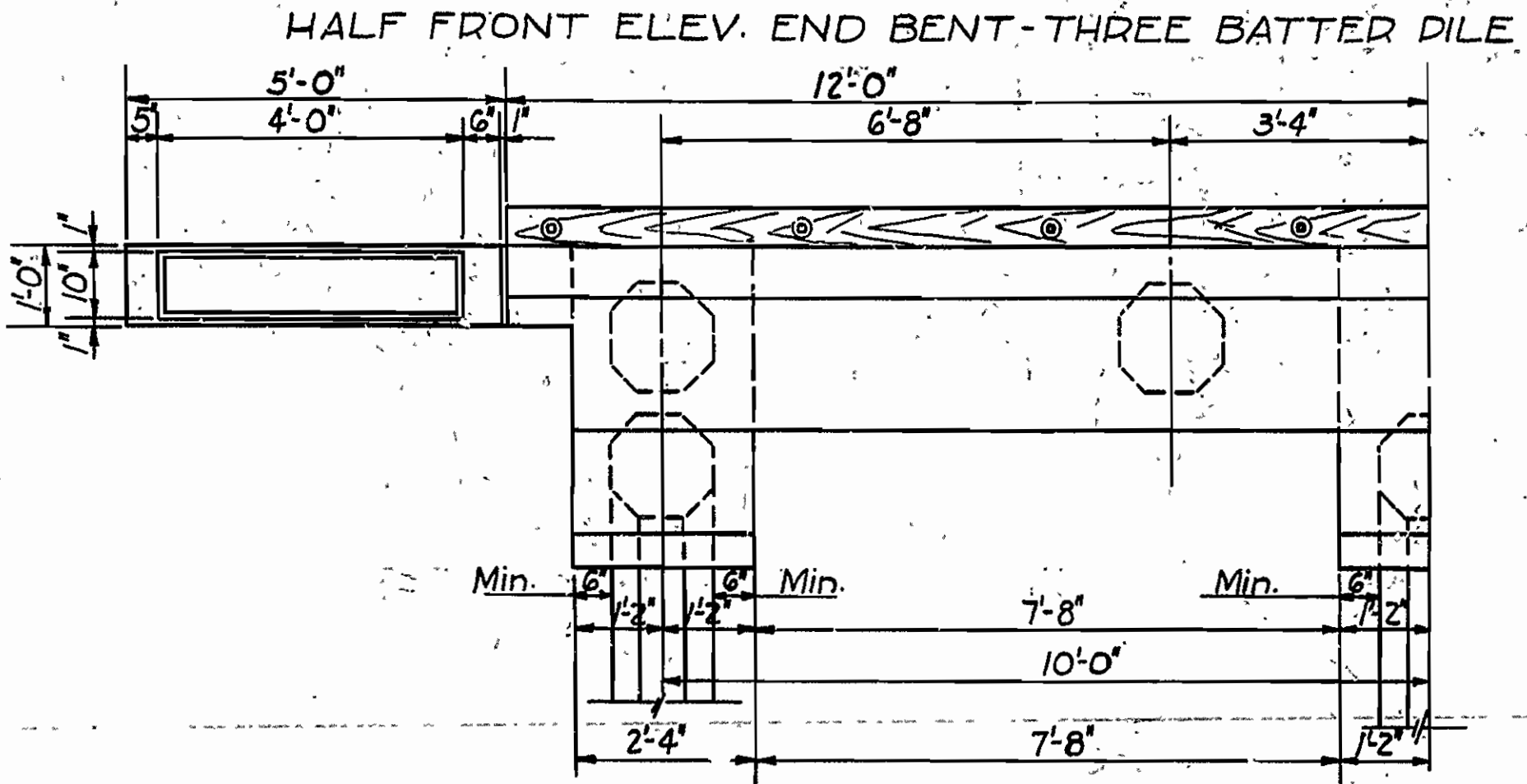
HALF FRONT ELEV. END BENT-TWO BATTER PILE



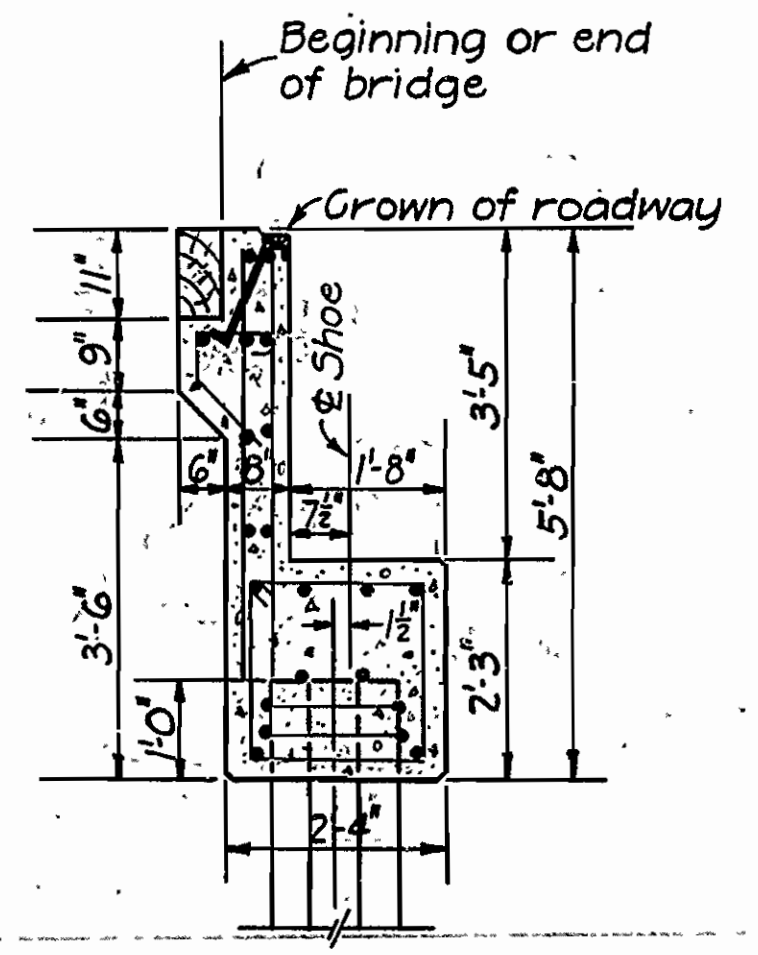
HALF PLAN END BENT-TWO BATTER PILE



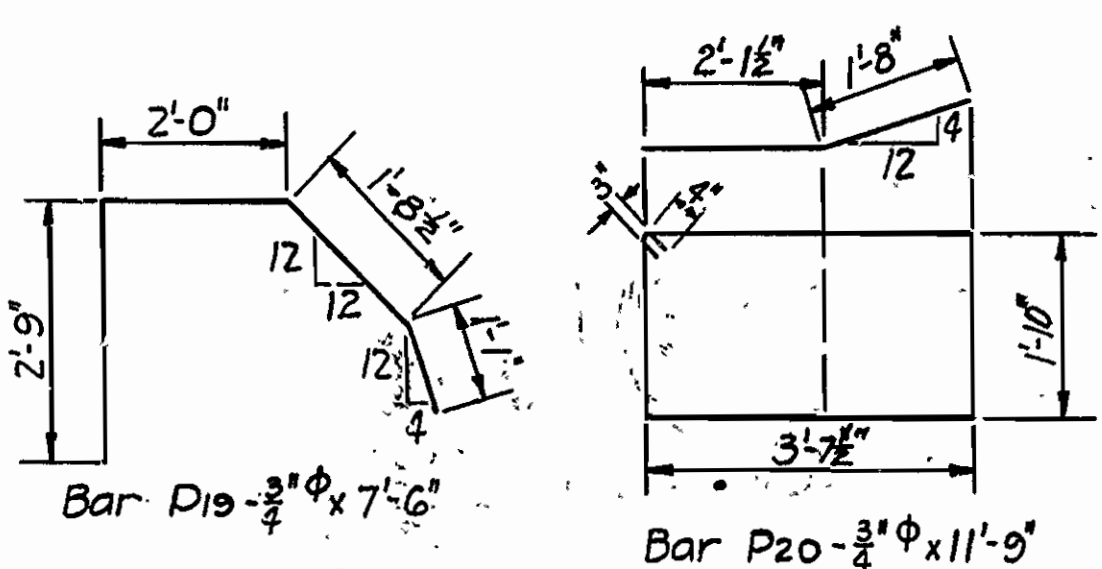
SECTION C-C



HALF PLAN END BENT-THREE BATTER PILE



SECTION A-A



Note:  
 For details not shown on this drawing see Drwg No. 2330  
 See Layout for type of end bents to use.

Revised 11-8-35 AB

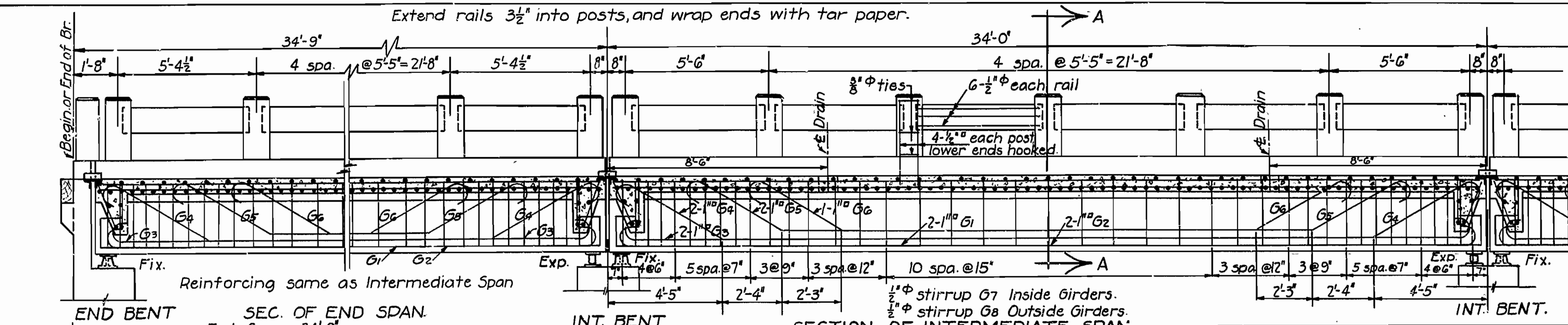
DETAILS OF  
 BATTER PILE END BENTS  
 FOR 34'-0" D. C. DECK GIRDERS  
 24'-0" CLEAR ROADWAY  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

Drawn by: W.C.H. Date: 7-31-35  
 Traced by: A Date: 8-6-35 Scale: 1/2" = 1'-0"  
 Checked by: Date:

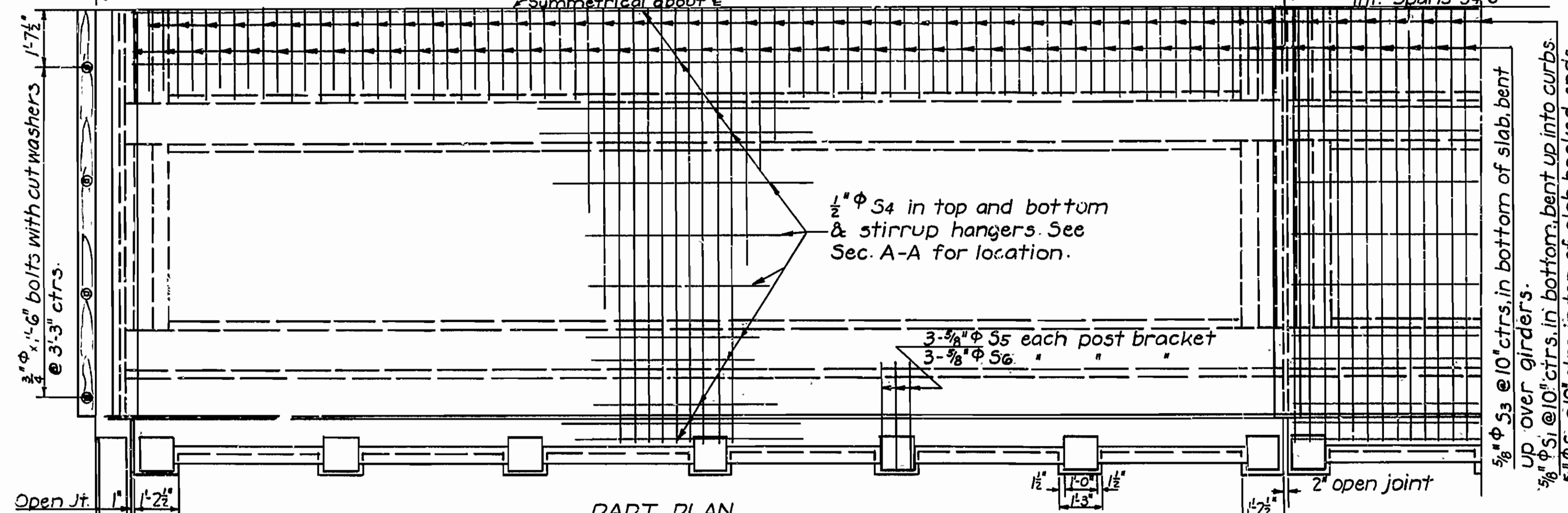
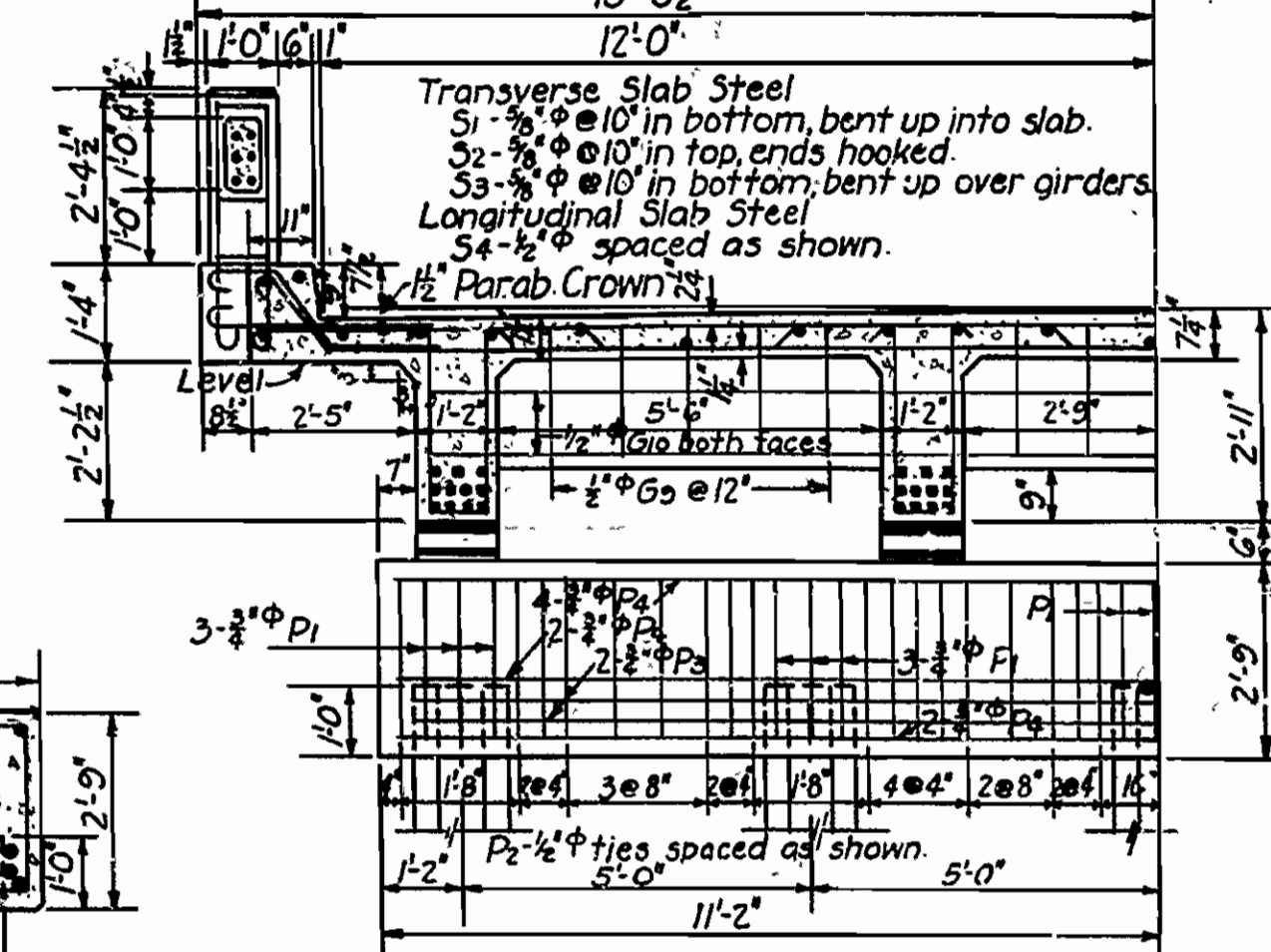
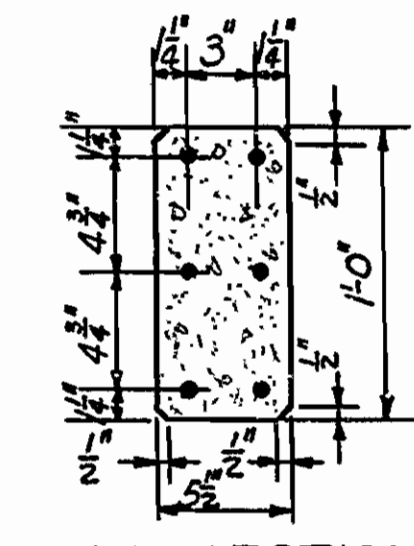
N.B. Langer  
 Bridge Eng.

BRIDGE NO. 1875-1878 Inc. DRWG NO. 2330-A

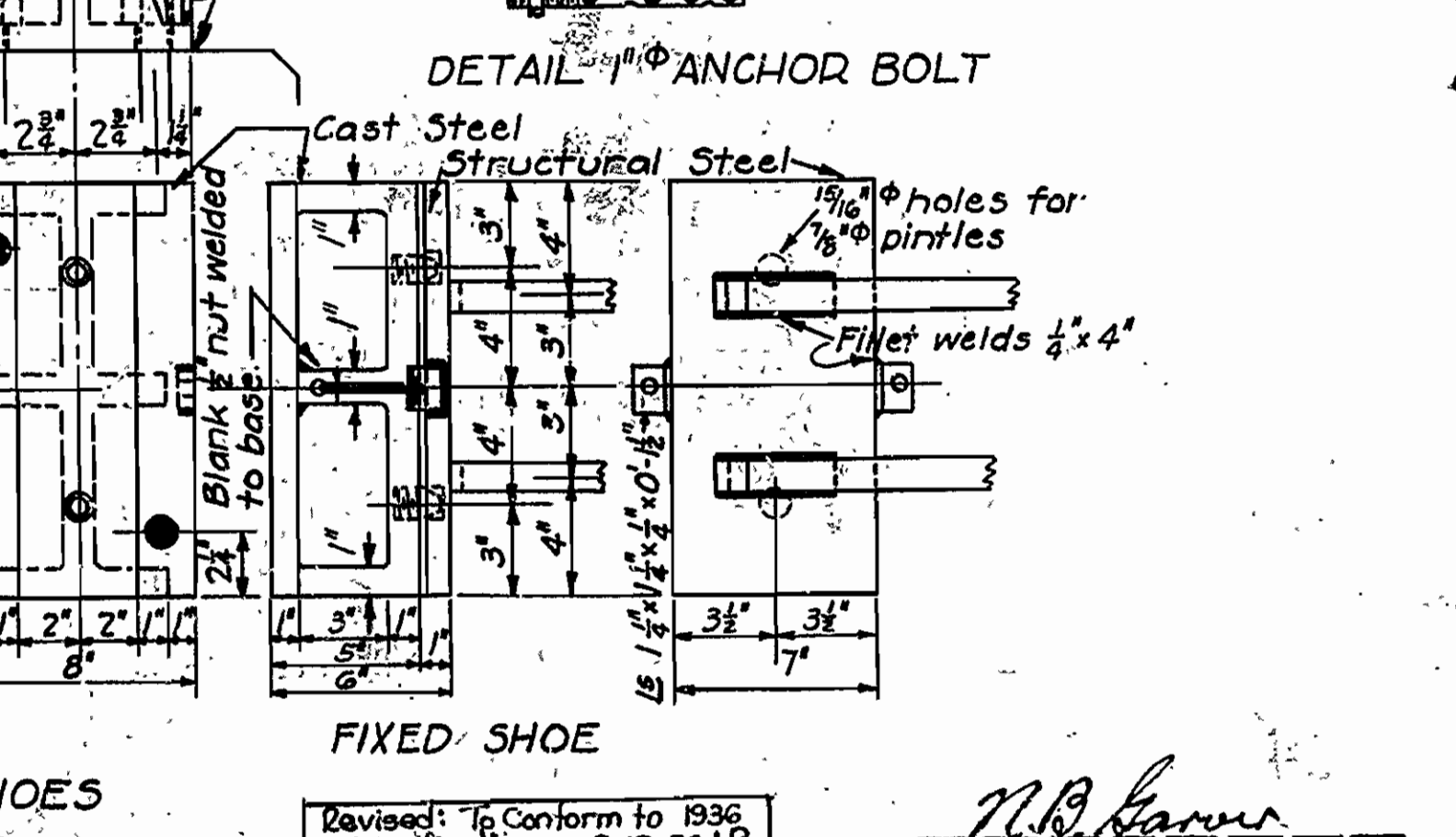
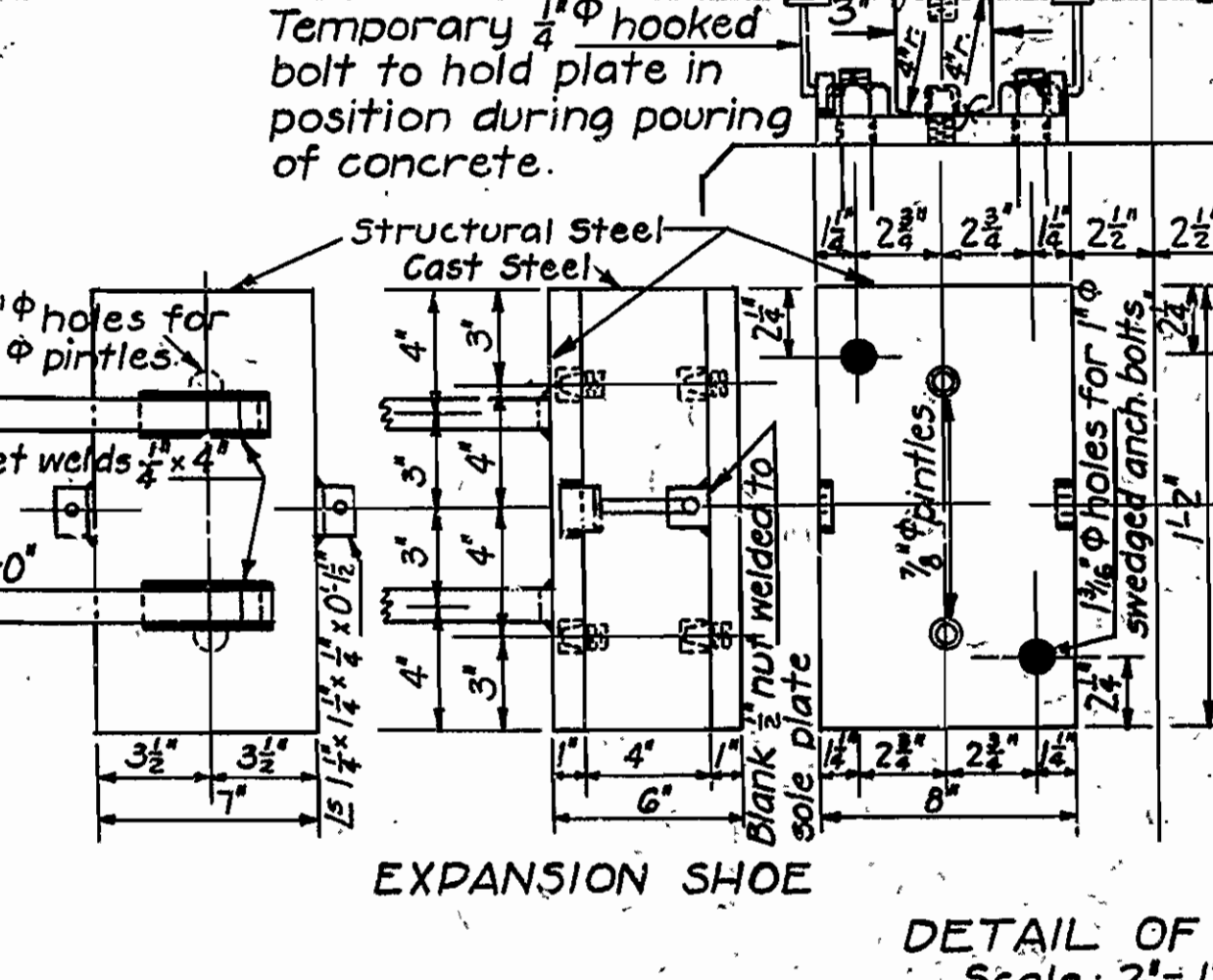
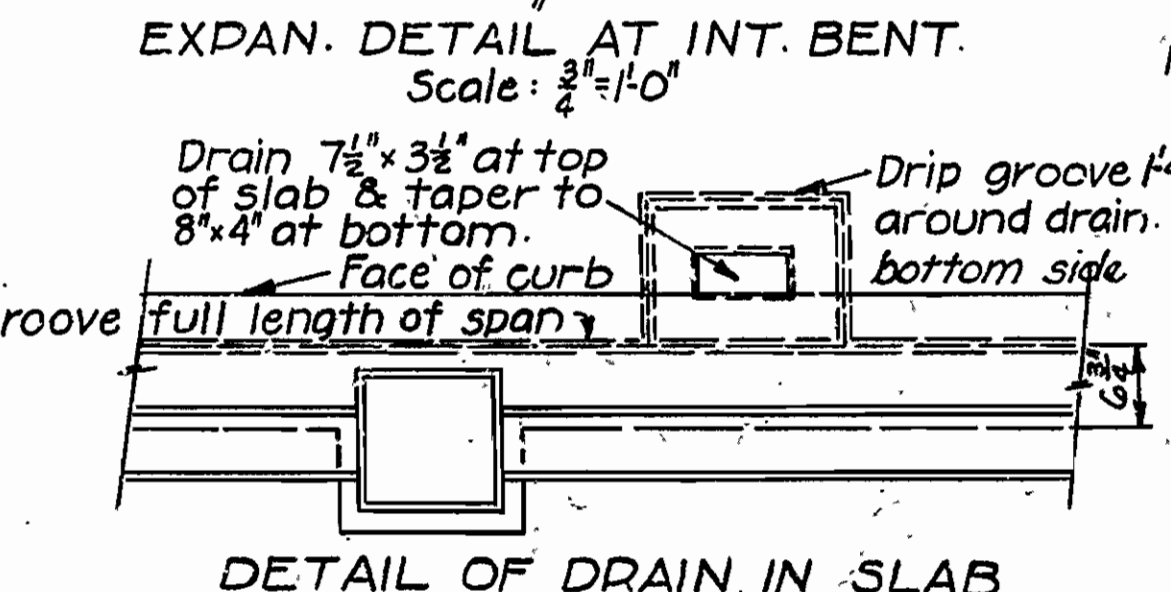
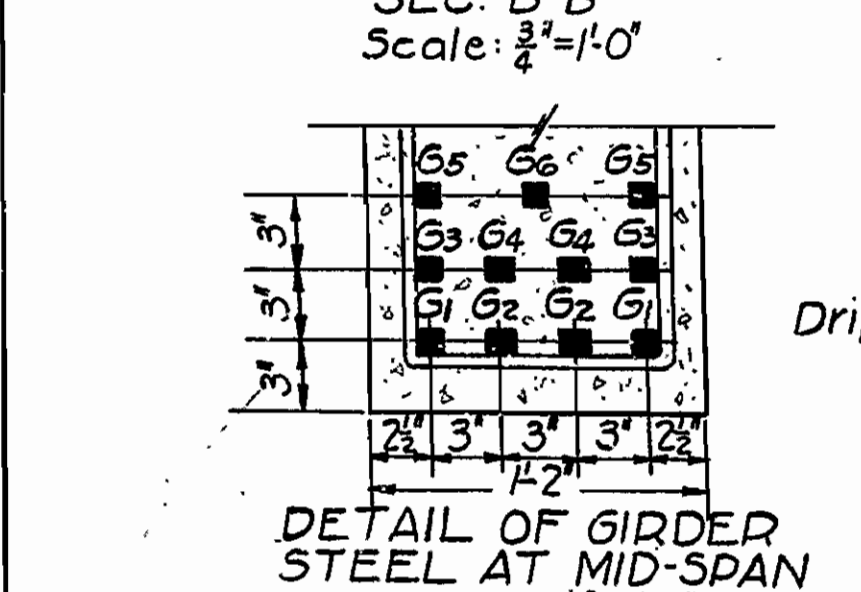
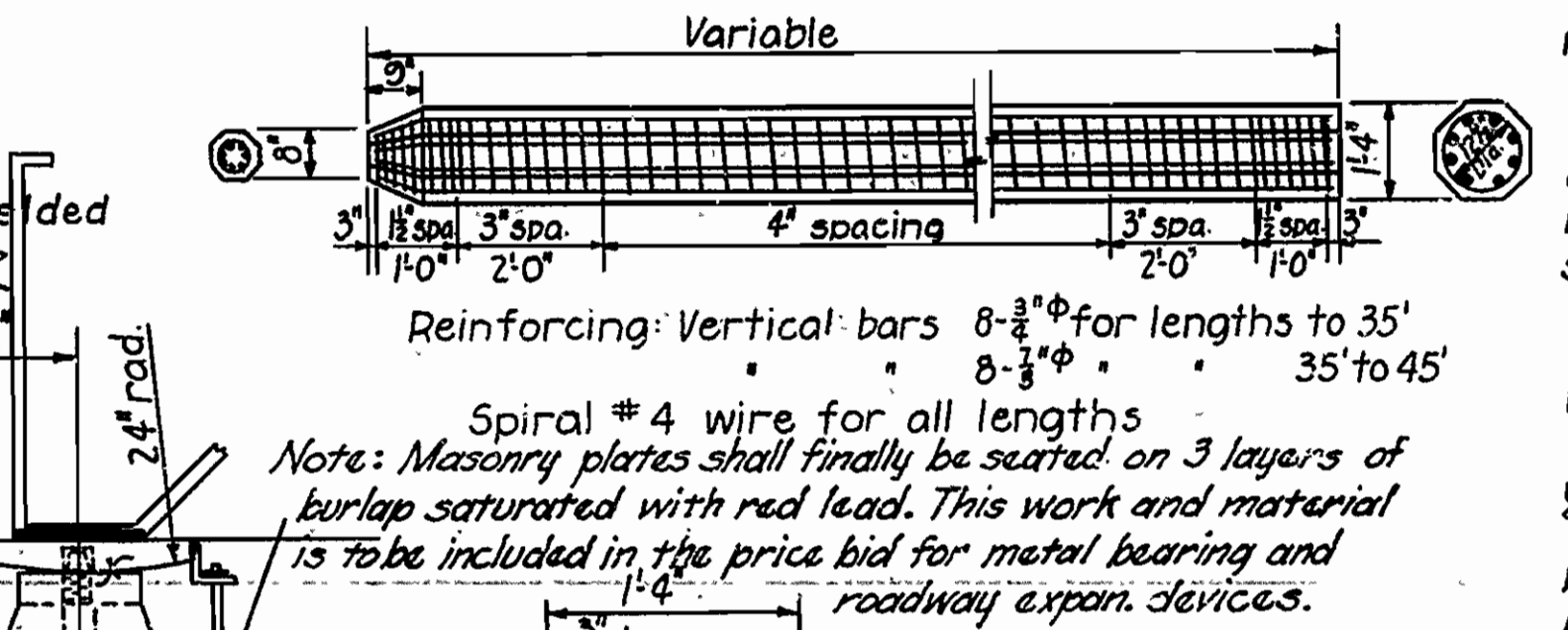
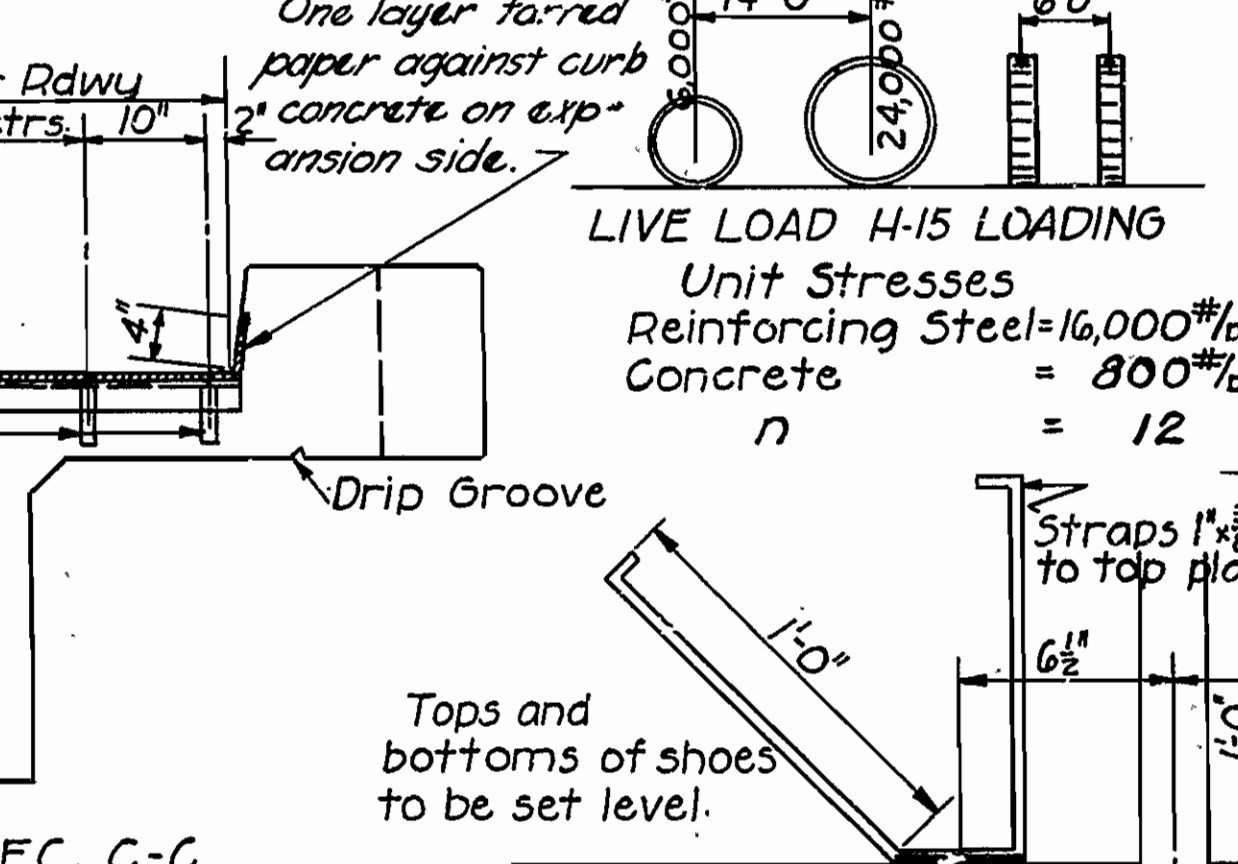
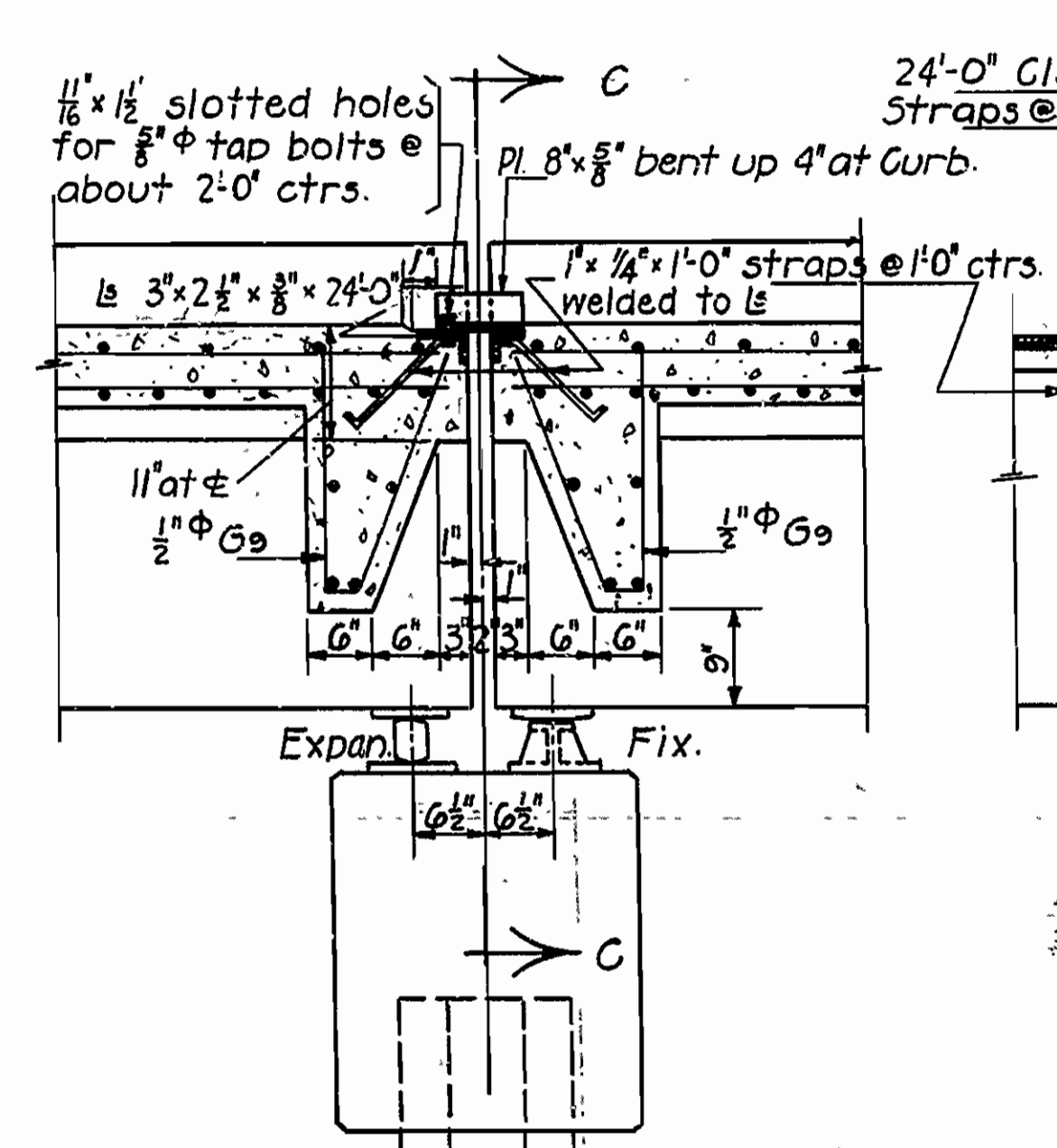
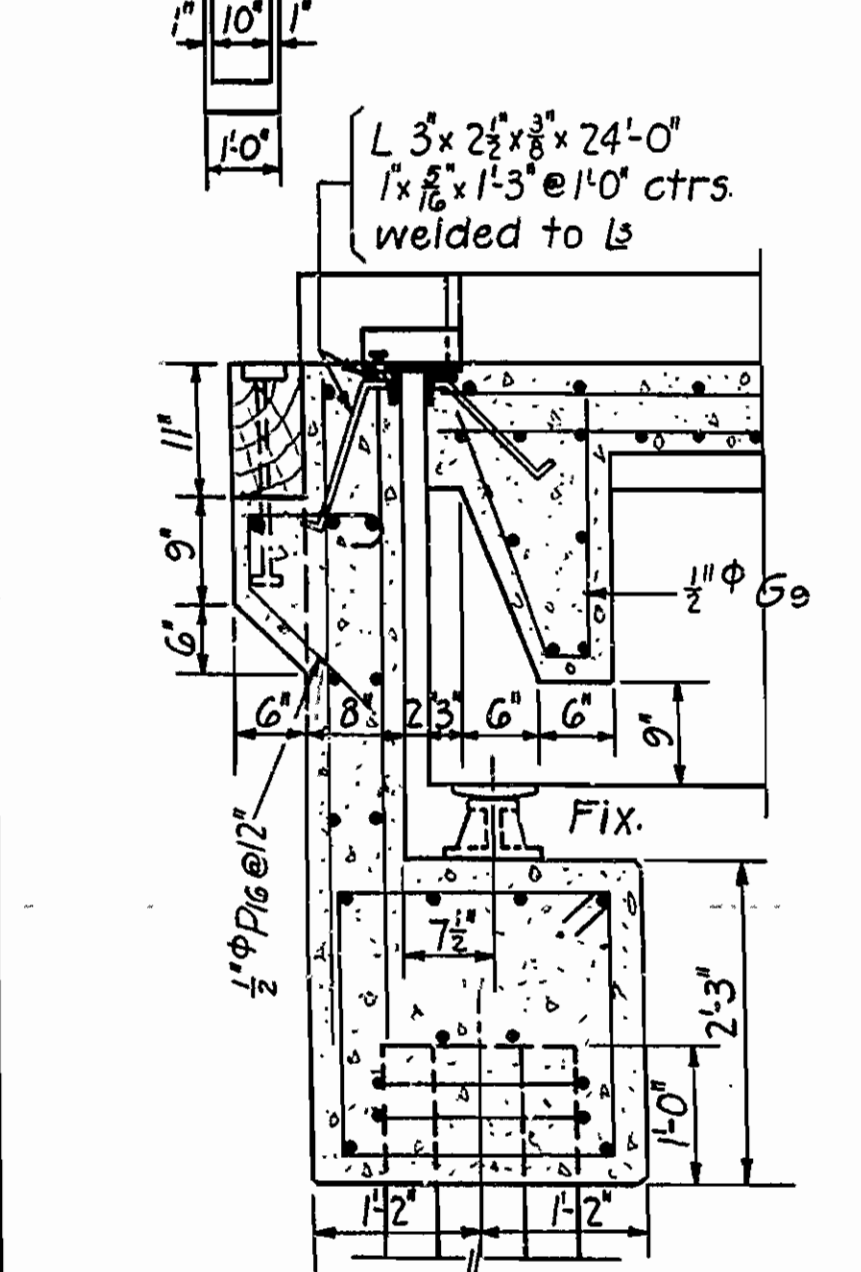
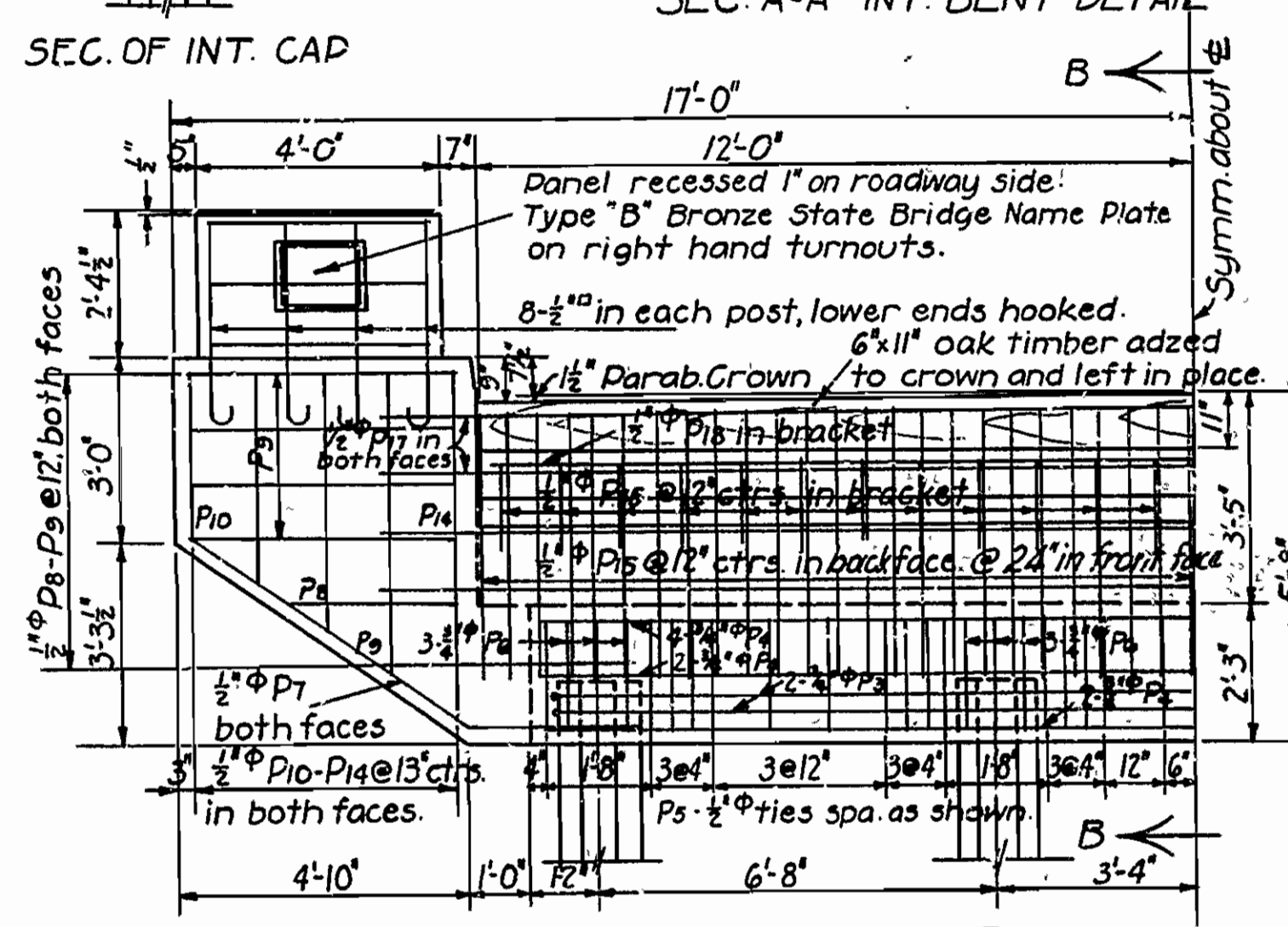
Extend rails 3 1/2" into posts, and wrap ends with tar paper.



FED. ROAD DIST. NO.	STATE	Fed. Aid PROJ. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NO. 10211 - Sheet 7 of 9	ARK.	127-G	1936	11	23



Mark	Size	Length	Bending Diagram
S1	5/8"	27'-5"	[Diagram]
S2	do.	26'-4"	[Diagram]
S3	do.	27'-1"	[Diagram]
S5	do.	4'-1"	[Diagram]
S6	5/8"	3'-6"	[Diagram]
S4	1/2"	33'-4"	Straight (33'-1" in curb of end spans only)
G1	1"	37'-2"	[Diagram]
G2	do.	35'-0"	[Diagram]
G3	do.	34'-8"	[Diagram]
G4	do.	36'-0"	[Diagram]
G5	do.	30'-4"	[Diagram]
G6	do.	25'-10"	[Diagram]
G7	1 1/2"	6'-7"	[Diagram]
G8	do.	6'-5"	[Diagram]
G9	do.	3'-10"	[Diagram]
G10	1/2"	20'-9"	Straight
P1	3/4"	6'-7"	[Diagram]
P2	1/2"	9'-2"	[Diagram]
P3	3/4"	47'-9"	[Diagram]
P4	1/2"	21'-6"	[Diagram]
P5	1/2"	8'-7"	[Diagram]
P6	3/4"	5'-7"	[Diagram]
P7	1/2"	8'-4"	[Diagram]
P8	1/2"	2'-11"	[Diagram]
P9	3/4"	21'-10"	Straight



**General Notes**

All exposed corners to have 3/4" chamfers unless otherwise noted.

All concrete to be Class "S".

Reinforcing steel to be deformed bars of structural or intermediate grade. Shop lists and bending diagrams must be submitted by the Contractor and approval secured before fabrication is begun.

Oak headers to be included in volume of Glass "S" Concrete.

Oak header bolts to be paid for at the unit price bid for reinforcing steel.

Expansion devices and shoes are to be paid for at the unit price bid for metal bearing & roadway expan. devices, unless otherwise specified.

Field Paint: All exposed parts of structural steel shall be given one priming coat of red lead and raw linseed oil. First top coat shall be white lead tinted with lamp black. Second top coat shall be aluminum paint.

Concrete piling to be Glass "S", and to have a minimum capacity of 30 tons each.

Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted June 30, 1936.

**DETAILS OF STANDARD 34'-0" R. C. DECK GIRDER AND CONCRETE DILE BENTS 4 GIRDER TYPE, 4-5 DILE BENTS 24'-0" CLEAR ROADWAY**

**ARKANSAS STATE HIGHWAY COMMISSION**

**LITTLE ROCK, ARK.**

Drawn by: W.C.H. Date: 7-26-35  
 Traced by: A Date: 8-13-35 Scale: 3/8" = 1'-0" (except as noted)  
 Checked by: Date:  
 BRIDGE NO. 10211-10212 Tr. 11 DDWG NO. 2330