

FED. DIST. NO.	STATE	U.S.P.W. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	NRS 330A	1935	1	20

Job 4178

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

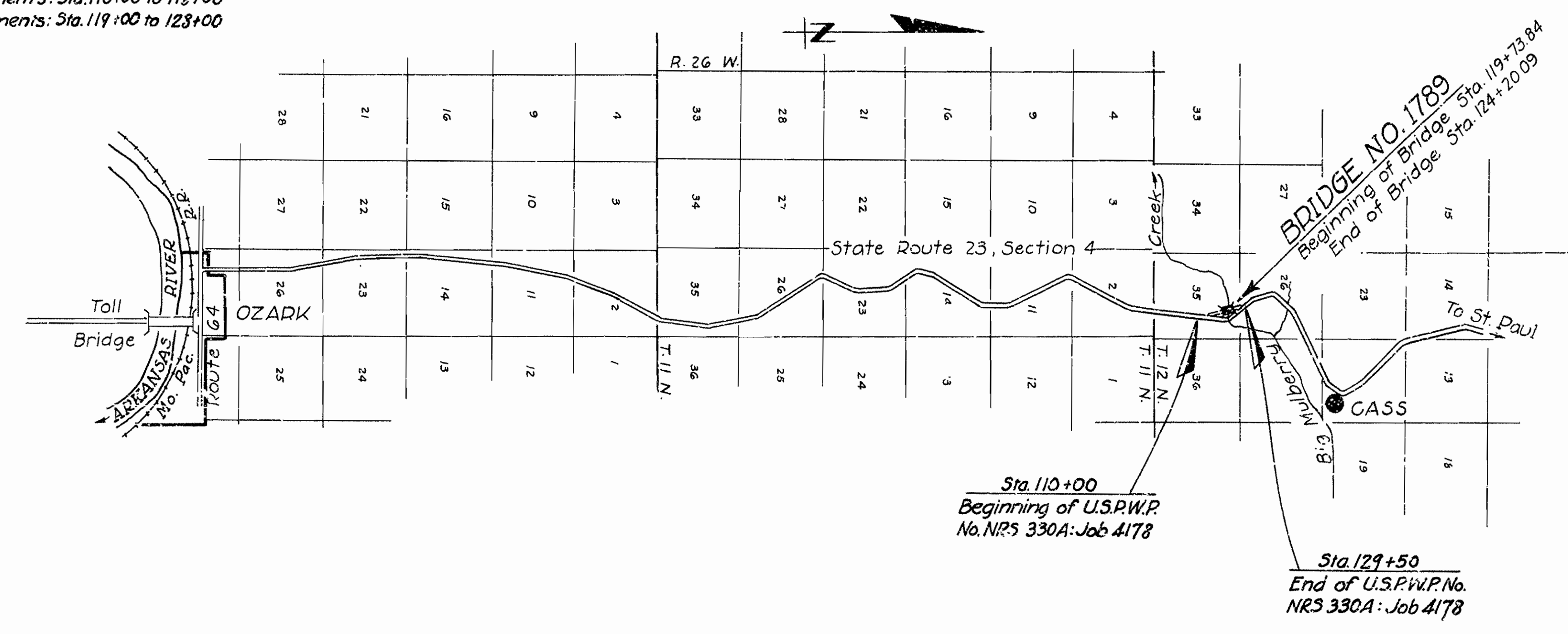
INDEX OF SHEETS

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19	3888	Cross-Sections of Earth Embankments: Sta. 110+00 to 118+00
20	3889	Cross-Sections of Earth Embankments: Sta. 119+00 to 123+00

QUANTITIES

Item No.	Description	Quantity
" 11	Clearing	3.0 acres
" 11	Grubbing	3.0 acres
" 12	Unclassified excavation	17,536 cu.yd.
" 13	Dry excavation for structures	377 cu.yd.
" 13	Wet excavation for structures	608 cu.yd.
" 13	Solid rock excavation for structures	96 cu.yd.
" 54	Class A concrete	0.64 cu.yd.
" 54	Class B concrete	2.56 cu.yd.
" 55	Reinforcing steel	187 lb.
" 60	30-in. Corrugated metal pipe	10 lin.ft.
" 65	Sodding	415 sq.
" 91	Class A concrete for bridges	3723 cu.yd.
" 91	Class B concrete for bridges	263.8 cu.yd.
" 92	Reinforcing steel for bridges	91064 lb.
" 94	Concrete railing for bridges	233 lin.ft.
" 95	Riprap	80 cu.yd.
" 96	Structural steel in beam spans	64,620 lb.
" 96	Structural steel in truss spans	337,390 lb.
" S.P.	Bronze State bridge name plates	2 each
" S.P.	Bronze project marker plates	2 each
" S.P.	Traffic service gravel	335 cu.yd.
" S.P.	Fence moved and replaced	114 rods
" S.P.	Removal of existing bridge structures	Complete. \$(Lump sum)

PLAN OF PROPOSED BRIDGE
OVER
BIG MULBERRY CREEK
OZARK-CASS ROAD
FRANKLIN COUNTY
ROUTE 23 SEC. 4
JOB No 4178
U. S. PUBLIC WORKS PROJECT NO. NRS 330-A



Sta. 110+00
Beginning of U.S.P.W.P.
No. NRS 330A: Job 4178

Sta. 129+50
End of U.S.P.W.P. No.
NRS 330A: Job 4178

LAYOUT
Scale: 1" = 1 Mile

LENGTH OF PROJECT	= 1950.00 FT., OR 0.368 MI.
LENGTH OF BRIDGES	= 446.25 FT., OR 0.084 MI.
LENGTH OF EMBANKMENT	= 1503.75 FT., OR 0.284 MI.
LENGTH OF JOB	= 1950.00 FT., OR 0.368 MI.

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:

Revised	By	Date	Approved	Date
A	Revised	Mar. 1st, 1931	Approved	June 13th, 1931
J	Revised	Nov. 1st, 1931	"	Nov. 21st, 1932
K	Revised	Dec. 1st, 1931	"	Nov. 21st, 1932
L	Revised	Feb. 10th, 1933	"	"
M	Revised	Mar. 1st, 1931	"	June 13, 1931
N	Revised	Oct. 1st, 1933	"	"
O	Revised	Oct. 1st, 1933	"	"

Item	No. of Sheets
Subletting Labor and N.R.A. Code Compliance (Aug. 9, 1934)	12
Beginning and Prosecution of Work	1
Engineer's Field Office	1
Bronze Project Marker Plates and State Bridge Name Plates	1
Fusion Welding	2
Traffic Service Gravel	3
Fence Moved and Replaced	1
Removal of Existing Bridge Structures	1

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. Lewis
BRIDGE ENGINEER

BRIDGE No. 1789

DRAWING No. 3878

FED. ROAD DIST. NO.	STATE	U.S. R.W. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	N.R.S. 330-A	1935	2	20

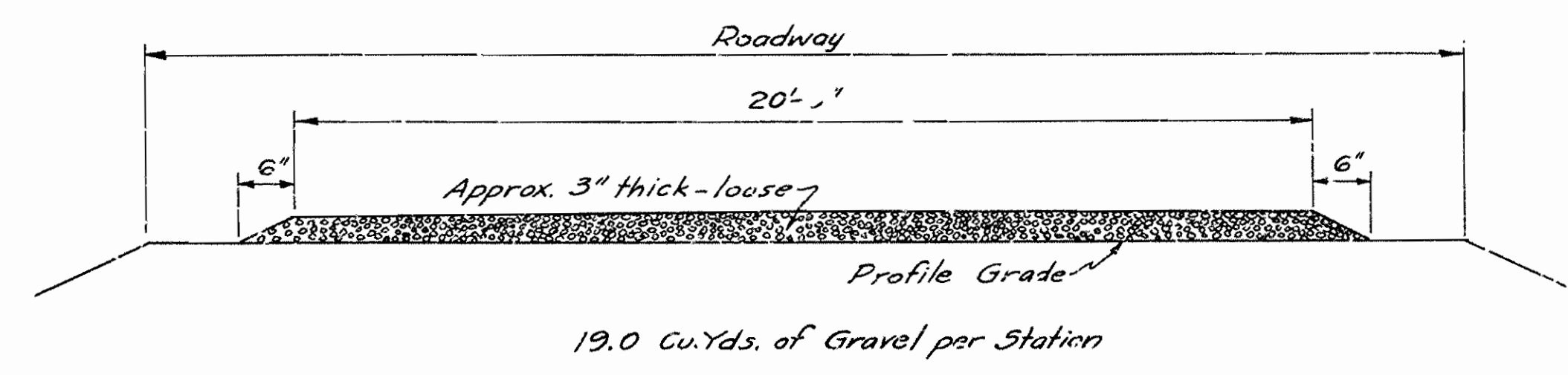
ARKANSAS JOB NO. 4178

ROADWAY QUANTITIES

ITEM No. 11 CLEARING		
From Sta. 110+00 to Sta. 120+00	1.3 Acres	
From Sta. 123+00 to Sta. 129+50	1.7 "	
TOTAL	3.0 Acres	
ITEM No. 11 GRUBBING		
From Sta. 110+00 to Sta. 120+00	1.3 Acres	
From Sta. 123+00 to Sta. 129+50	1.7 "	
TOTAL	3.0 Acres	
ITEM No. 12 UNCLASSIFIED EXCAVATION		
From Sta. 110+00 to Sta. 119+73.8	11698 Cu. Yds.	
From Sta. 124+20.1 to Sta. 129+50	5838 " "	
TOTAL	17536 Cu. Yds.	
ITEM No. 54 CLASS "A" CONCRETE		
2- F.A.P. Markers	0.26 Cu. Yds.	
14- R/W Markers	0.38 " "	
TOTAL	0.64 Cu. Yds.	
ITEM No. 54 CLASS "B" CONCRETE		
2- Culvert Headwalls	2.56 Cu. Yds.	
TOTAL	2.56 Cu. Yds.	
ITEM No. 55 REINFORCING STEEL		
2- F.A.P. Markers	30 Lbs.	
14- R/W Markers	83 Lbs.	
2- Culvert Headwalls	74 Lbs.	
TOTAL	187 Lbs.	
ITEM No. 60 CORRUGATED METAL PIPE		
At Sta. 112+80	30" 10 Lin. Ft.	
TOTAL	10 Lin. Ft.	
ITEM No. 55 SODDING		
Sta. 110+00 to Sta. 119+56	285 Squares	
Sta. 124+39 to Sta. 129+50	130 "	
TOTAL	415 Squares	
ITEM No. S.P. BRONZE PROJECT MARKER PLATES		
At Sta. 110+00 RIGHT	1 Each	
At Sta. 129+50 LEFT	1 Each	
TOTAL	2 Each	
ITEM No. S.P. TRAFFIC SERVICE GRAVEL		
Sta. 110+00 to Sta. 119+73.8	210 Cu. Yds.	
Sta. 124+20.1 to Sta. 129+50	125 Cu. Yds.	
TOTAL	335 Cu. Yds.	
ITEM No. S.P. FENCE MOVED & REPLACED		
Sta. 110+00 to Sta. 120+00	48 Rods	
Sta. 123+90 to Sta. 129+50	66 Rods	
TOTAL	114 Rods	

SCHEDULE OF BRIDGE QUANTITIES

ITEM UNIT OF BRIDGE	Item No. 13	Item No. 13	Item No. 13	Item No. 91	Item No. 91	Item No. 92	Item No. 94	Item No. 95	Item No. 96	Item No. 96	Item No. S.P.	Item No. S.P.
	Dry Excav. for Structs. Cu. Yds.	Wet Excav. for Structs. Cu. Yds.	Solid Rock Excavation for Structs. Cu. Yds.	Class "A" Conc. for Bridges Cu. Yds.	Class "S" Conc. for Bridges Cu. Yds.	Reinf. Steel for Bridges Lbs.	Conc. Railing for Bridges Lin. Ft.	Rip Rep. Cu. Yds.	Struct. Steel in I-Beam Spans Lbs.	Struct. Steel in Truss Spans Lbs.	Bronze Plate Br. Name Pls. Each	Removal of Existing Bridge Structures Lump Sum
ABUTMENT No. 1	155	113	26	67.4		7995	5.0	36			1	
PIERS No. 1 & 2	0	222	32	141.8		12528						
PIER No. 3	57	102	14	65.0		6144						
PIER No. 4	53	62	7	34.3		3580						
ABUTMENT No. 2	112	109	17	63.8		7530	8.0	44			1	
3-110'-0" LOW TRUSS SPANS					206.5	41633				337390		
2-55'-0" I-BEAM SPANS					57.3	11654	220.0		64620			
TOTALS	377	608	96	372.3	263.8	91064	233.0	80	64620	337390	2	Complete



TYPICAL SECTION OF TRAFFIC SERVICE GRAVEL

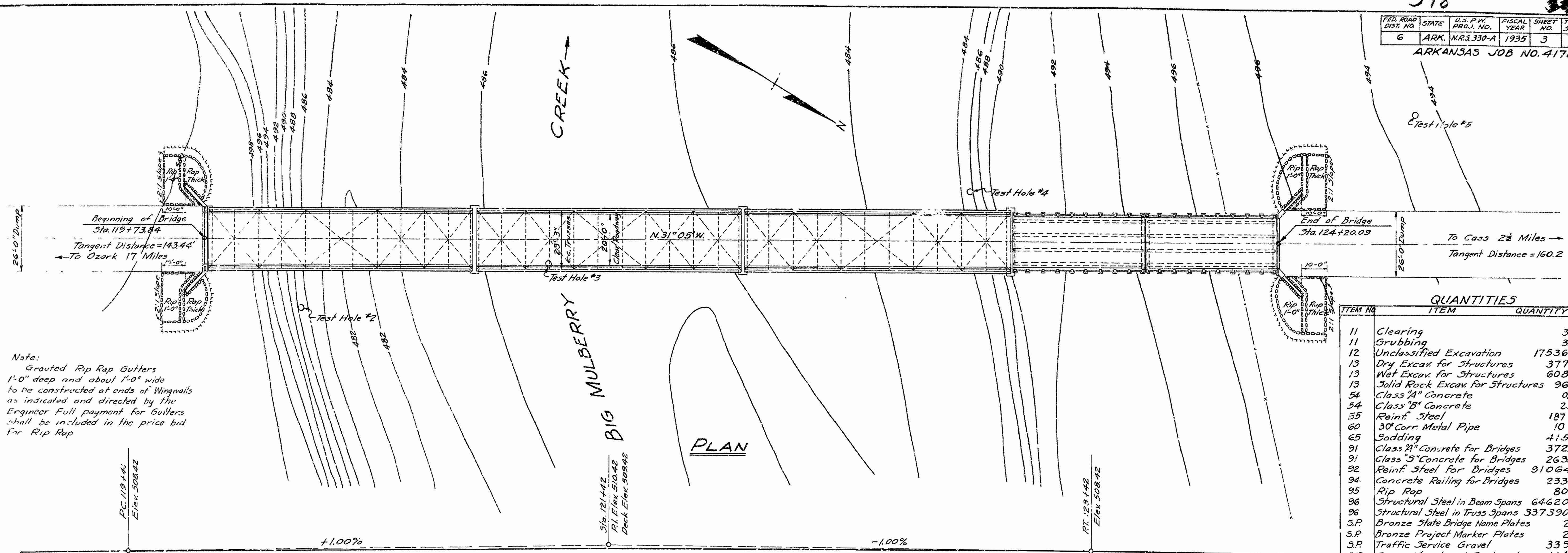
From Sta.	To Sta.	Soil Group
110+00	129+50	A-4

SCHEDULE OF QUANTITIES
BRIDGE OVER BIG MULBERRY CREEK
 OZARK - CASS ROAD
 Route 23 Section 4
 FRANKLIN COUNTY
 ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARKANSAS
 Drawn By: W.C.H. Date: 8-29-34
 Traced By: [Signature] Date: 8-29-34 Scale:
 Checked By: [Signature] Date: 9/10/34
 M.B. Lewis
 BRIDGE ENGINEER
 BRIDGE NO. 1789 DRAWING NO. 3879

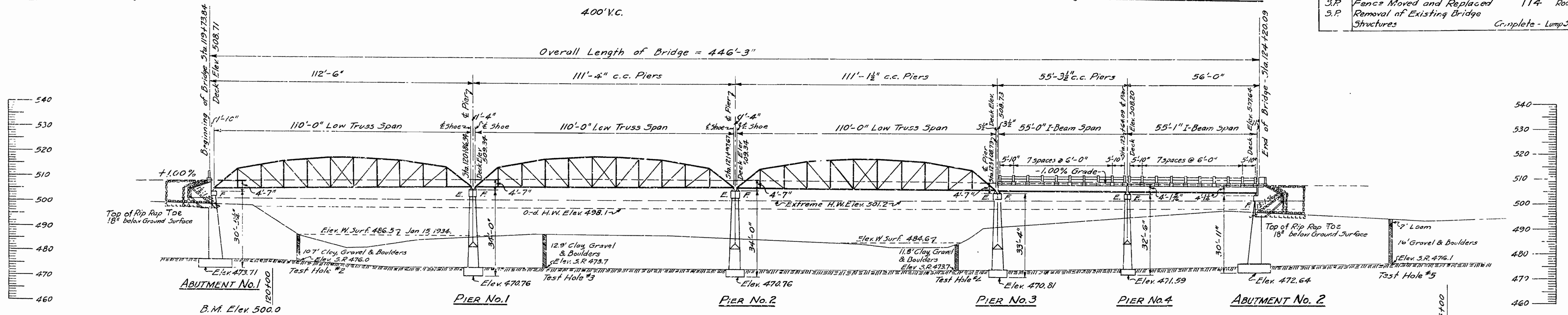
FED. ROAD DIST. NO.	STATE	U.S. P.W. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	N.R.3.330-A	1935	3	20

ARKANSAS JOB NO. 4178



Note:
Grouted Rip Rap Gutters 1'-0" deep and about 1'-0" wide to be constructed at ends of Wingwalls as indicated and directed by the Engineer. Full payment for Gutters shall be included in the price bid for Rip Rap.

ITEM NO.	ITEM	QUANTITY	UNIT
11	Clearing	3.0	Acre
11	Grubbing	3.0	Acre
12	Unclassified Excavation	17536	C.Y.
13	Dry Excav. for Structures	377	C.Y.
13	Wet Excav. for Structures	608	C.Y.
13	Solid Rock Excav. for Structures	96	C.Y.
54	Class 'A' Concrete	064	C.Y.
54	Class 'B' Concrete	256	C.Y.
55	Reinf. Steel	187	Lbs.
60	30" Corr. Metal Pipe	10	Lin. Ft.
65	Sodding	4.5	Sq.
91	Class 'A' Concrete for Bridges	372.3	C.Y.
91	Class 'S' Concrete for Bridges	263.8	C.Y.
92	Reinf. Steel for Bridges	91064	Lbs.
94	Concrete Railing for Bridges	233	Lin. Ft.
95	Rip Rap	80	C.Y.
96	Structural Steel in Beam Spans	64620	Lbs.
96	Structural Steel in Truss Spans	337390	Lbs.
S.P.	Bronze State Bridge Name Plates	2	Each
S.P.	Bronze Project Marker Plates	2	Each
S.P.	Traffic Service Gravel	335	C.Y.
S.P.	Fence Moved and Replaced	114	Rods
S.P.	Removal of Existing Bridge Structures	Complete	Lump Sum



ELEVATION

GENERAL NOTES
All concrete to be poured in the dry.
All exposed corners to be chamfered 3/8" unless otherwise noted.
Rock Excavation to be true 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 middle third of both dimensions unless otherwise shown.
Excavation for Rip Rap toe below the natural ground surfaces shall be to neat lines. Full compensation for this excavation shall be included in the unit price bid for Rip Rap.

GENERAL NOTES (Continued)
For Details of 110'-0" low Truss Span see Drwg. No. 3521
For Details of 55'-0" I-Beam Span see Drwg. No. 2178
For Details of Abutments see Drwg. Nos. 3581 & 3585
For Details of Piers No. 1 & 2 see Drwg. No. 3582
For Details of Pier No. 3 see Drwg. No. 3583
For Details of Pier No. 4 see Drwg. No. 3584
Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30, 1925 and revised.

Drainage Area = 299 Sq. Miles
Mountainous - Wooded

LAYOUT OF BRIDGE OVER BIG MULBERRY CREEK
OZARK-CASS ROAD
Route 23 Section 4
FRANKLIN COUNTY
ARKANSAS STATE HIGHWAY COMMISSION

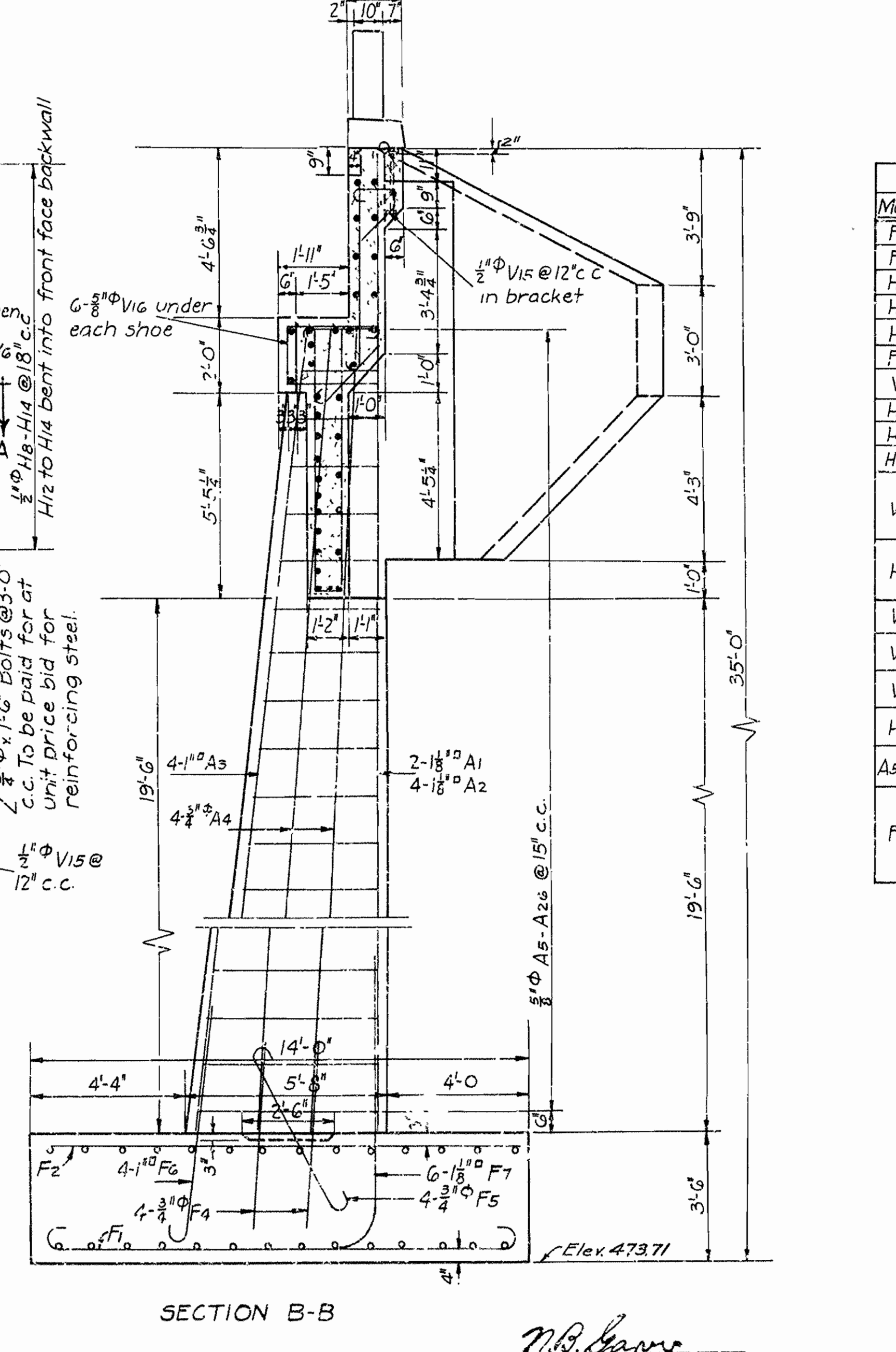
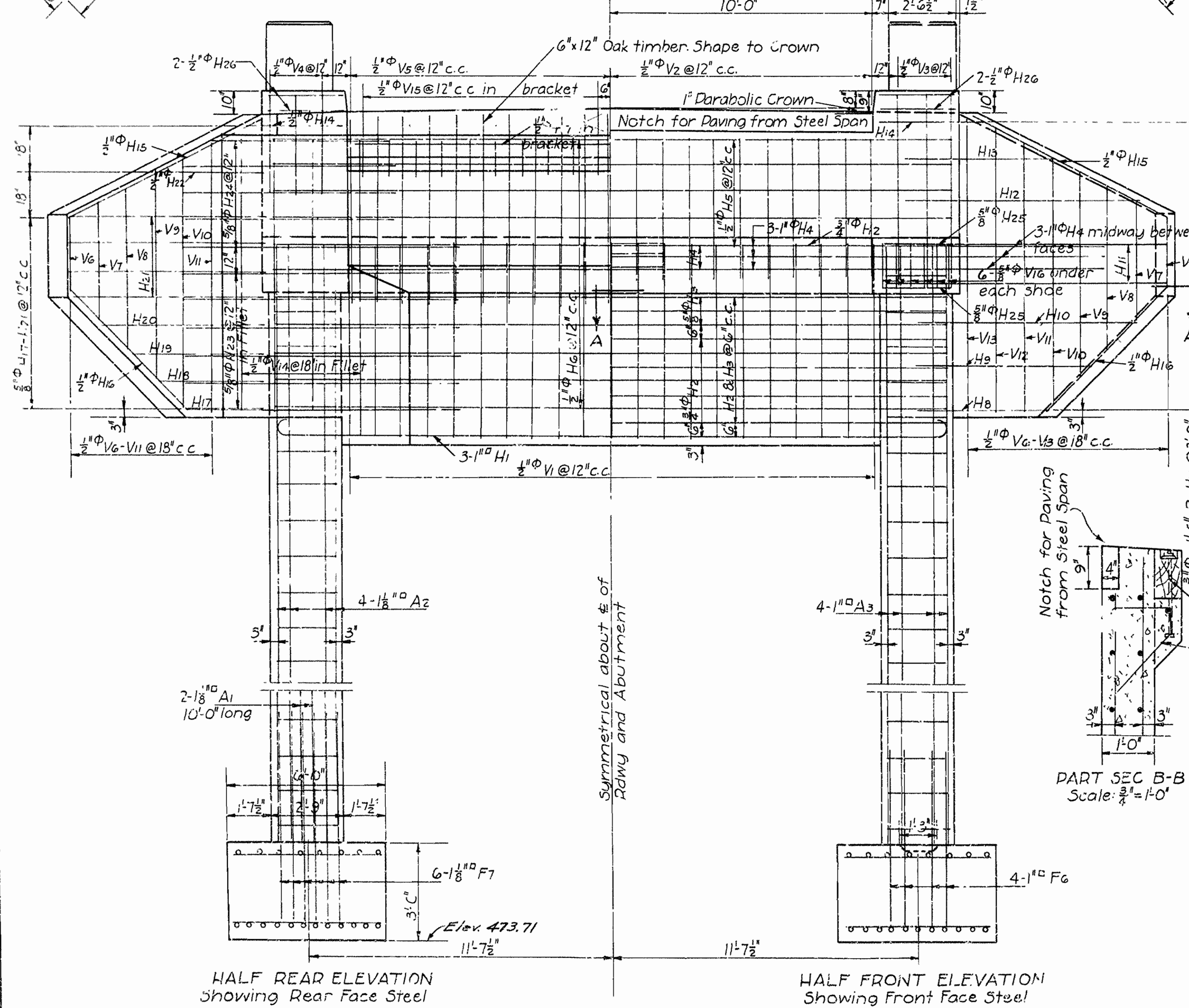
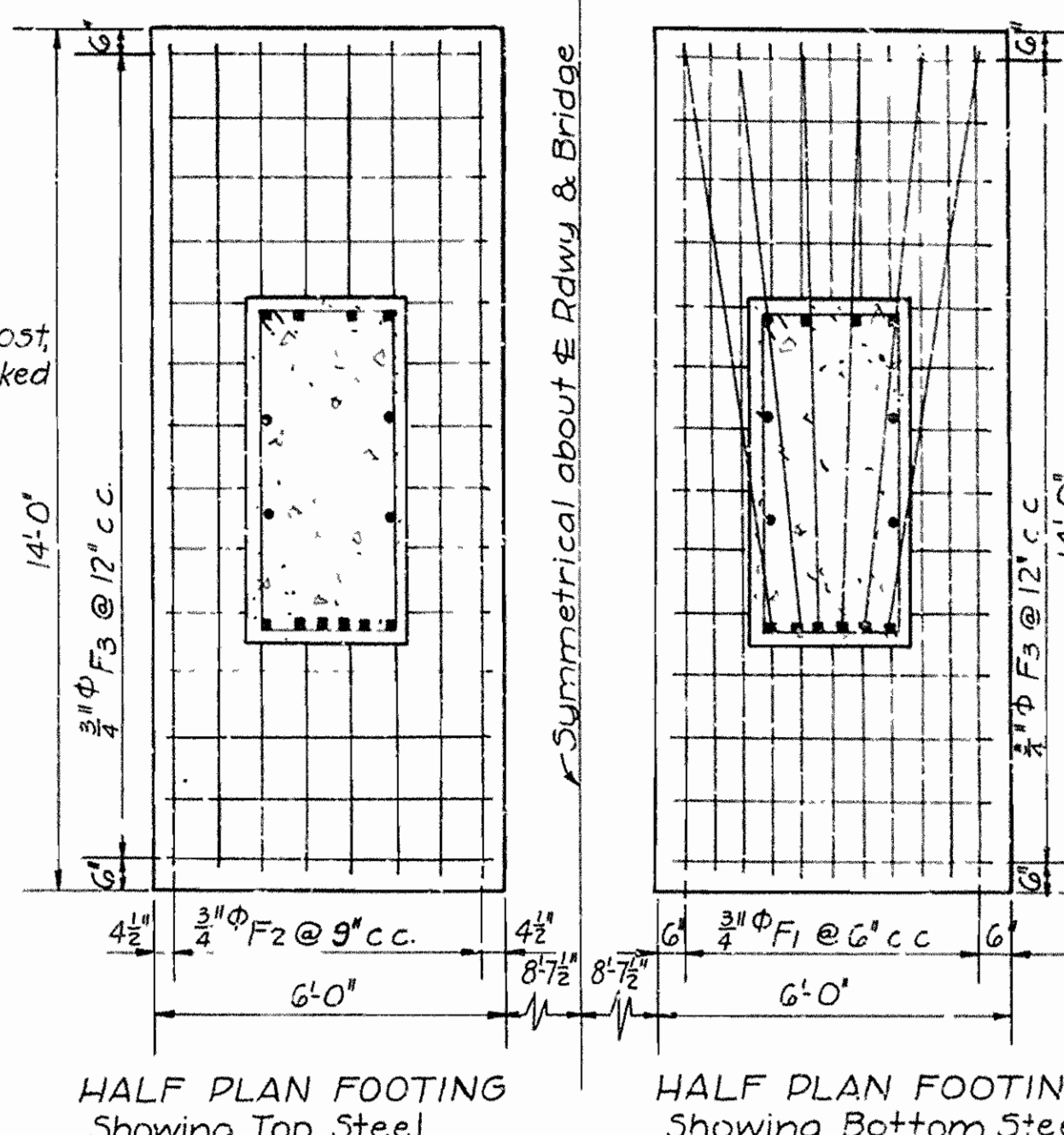
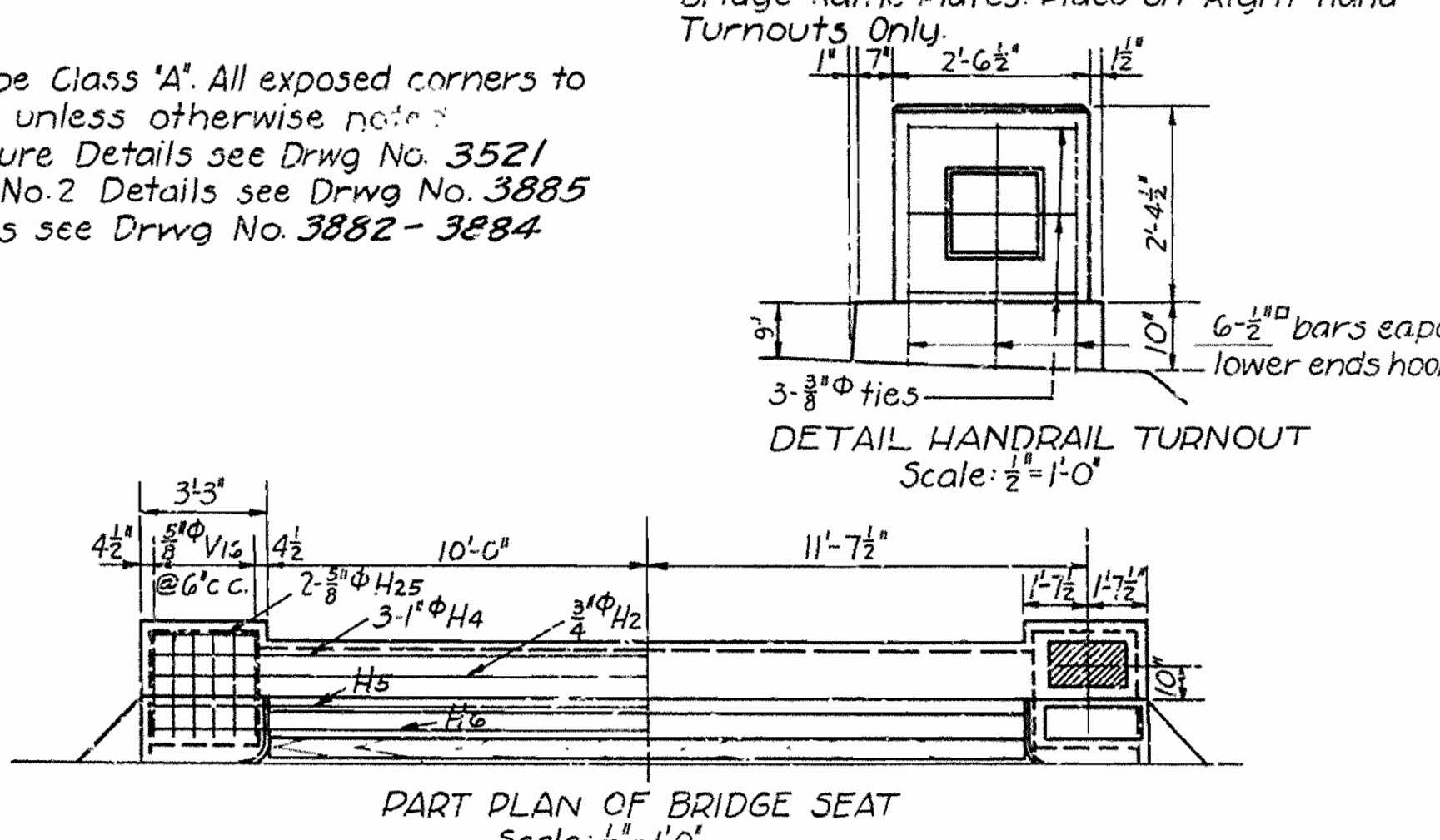
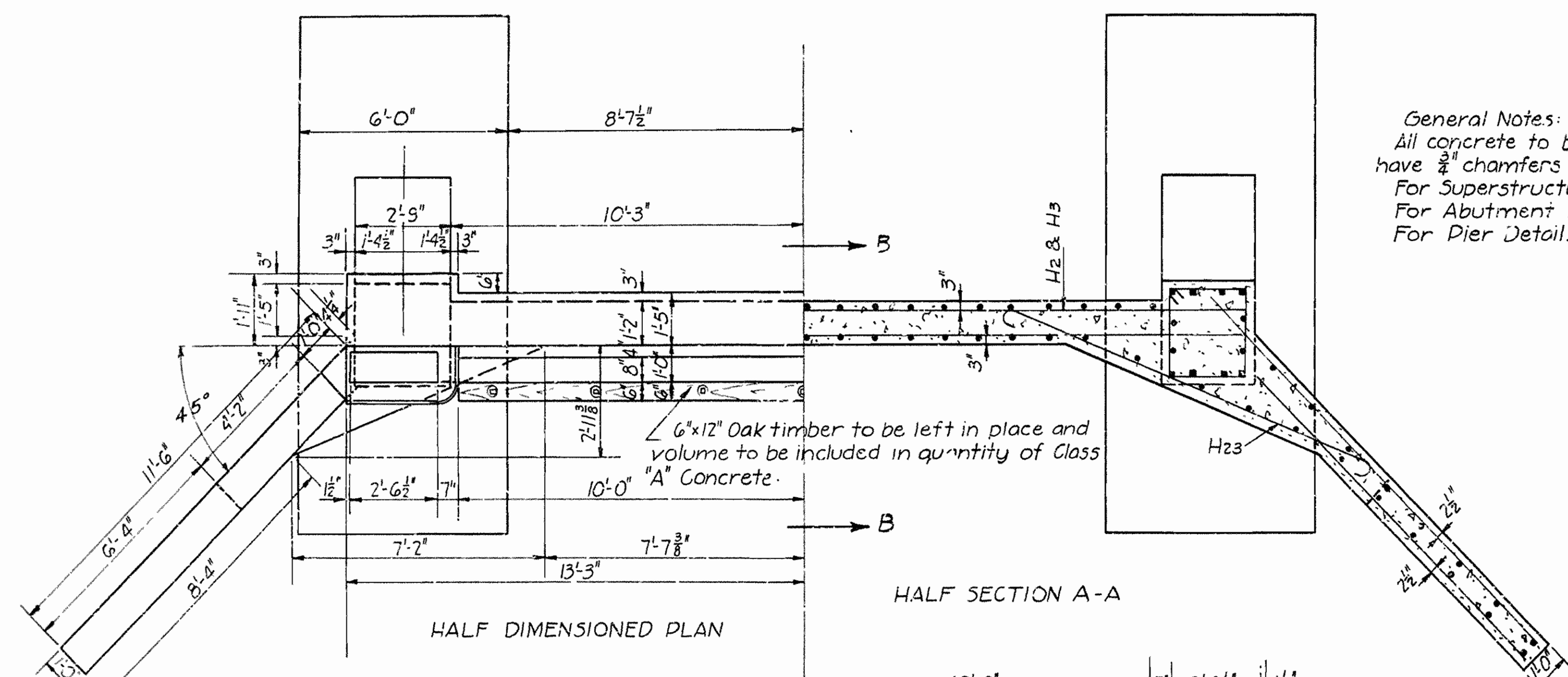
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Drawn By: [Signature] Date: 8-16-34
Traced By: [Signature] Date: 8-17-34
Checked By: [Signature] Date: [Blank]

W.R. [Signature] BRIDGE ENGINEER

BRIDGE NO. 1789 DRAWING NO. 3880

General Notes:
 All concrete to be Class 'A'. All exposed corners to have $\frac{3}{8}$ " chamfers unless otherwise noted.
 For Superstructure Details see Drwg No. 3521
 For Abutment No. 2 Details see Drwg No. 3885
 For Pier Details see Drwg No. 3882-3884

Recessed Panels $\frac{1}{2}$ " deep for Bronze State Bridge Name Plates. Place on Right Hand Turnouts Only.



LIST OF BENT BARS				Bending Diagram	
Mark	Size	Length	A	B	
F1	3/4" Φ	14'-0"	13'-4"	6"	[Bending Diagram for F1, F5, H23, H24]
F5	3/4" Φ	6'-6"	5'-0"	6"	
H23	5/8" Φ	12'-6"	11'-3"	5"	[Bending Diagram for H1, F6, V2]
H24	5/8" Φ	9'-6"	8'-3"	5"	
H1	1" Φ	27'-6"	25'-6"	8"	[Bending Diagram for H12, H13, H14]
F6	1" Φ	7'-6"	6'-6"	8"	
V2	1/2" Φ	5'-6"	5'-0"	4"	[Bending Diagram for V5, H4]
H12	1/2" Φ	11'-6"	9'-6"	2'-0"	
H13	1/2" Φ	7'-3"	5'-3"	2'-0"	[Bending Diagram for V1, V15, V16]
H14	1/2" Φ	3'-9"	2'-9"	1'-0"	
V5	1/2" Φ	8'-0"	5'-3"	2'-3"	[Bending Diagram for H26, A5-A26]
H4	1" Φ	23'-6"	—	—	
V1	1/2" Φ	15'-9"	—	—	[Bending Diagram for V6, V7, V8, V9, V10, V11, V12, V13, V14, V17, V18, V19, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100]
V15	1/2" Φ	3'-7"	—	—	
V16	5/8" Φ	7'-2"	—	—	
H26	1/2" Φ	8'-5"	2'-9"	1'-1"	[Bending Diagram for A5-A26]
A5-A26	5/8" Φ	4'-0"	2'-2"	2'-5"	
F7	1/8" Φ	17'-9"	—	—	[Bending Diagram for F7]

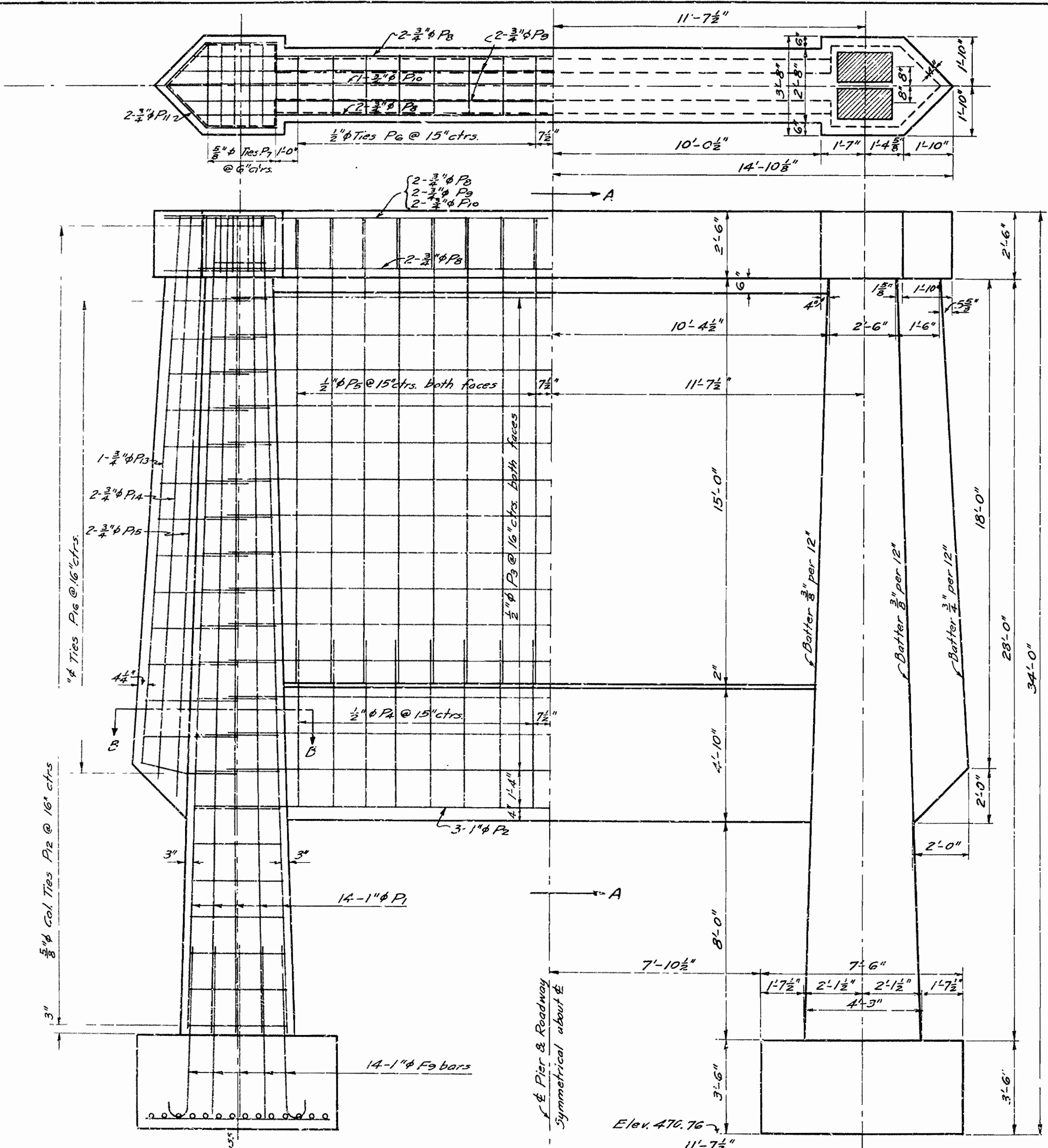
DETAILS OF
 ABUTMENT NO. 1
 BRIDGE OVER BIG MULBERRY CREEK
 OZARK-CASS ROAD
 FRANKLIN COUNTY
 ROUTE 23, SEC. 4
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn by: W.C.H. Date: 8-15-34
 Traced by: A. Date: 8-20-34
 Checked by: J.M.K. Date: _____
 BRIDGE NO. 1789
 Scale: 3/8" = 1'-0"
 Exceptions Noted.
 DRWG NO. 3881

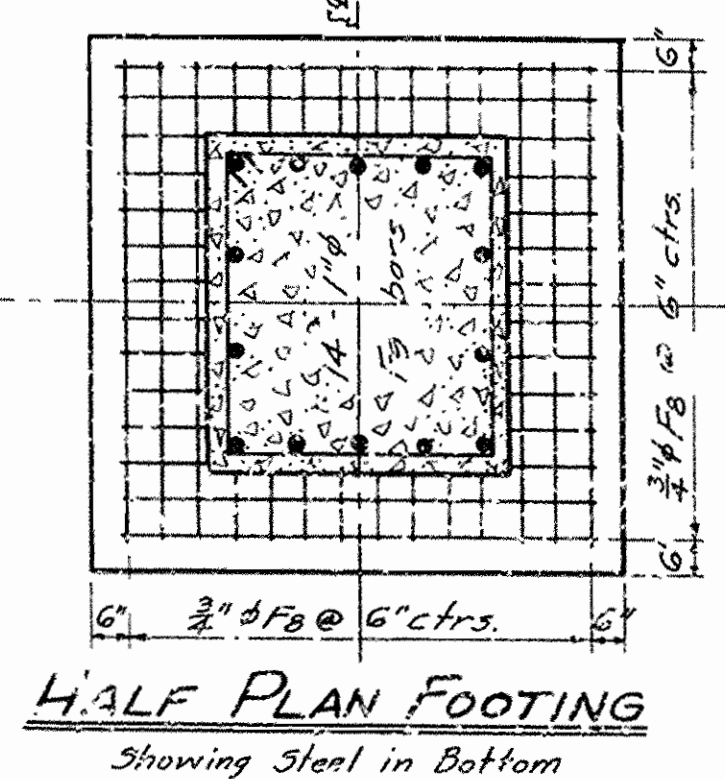
BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	U.S. R.M. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	N.R.S. 330-A	1935	5	20

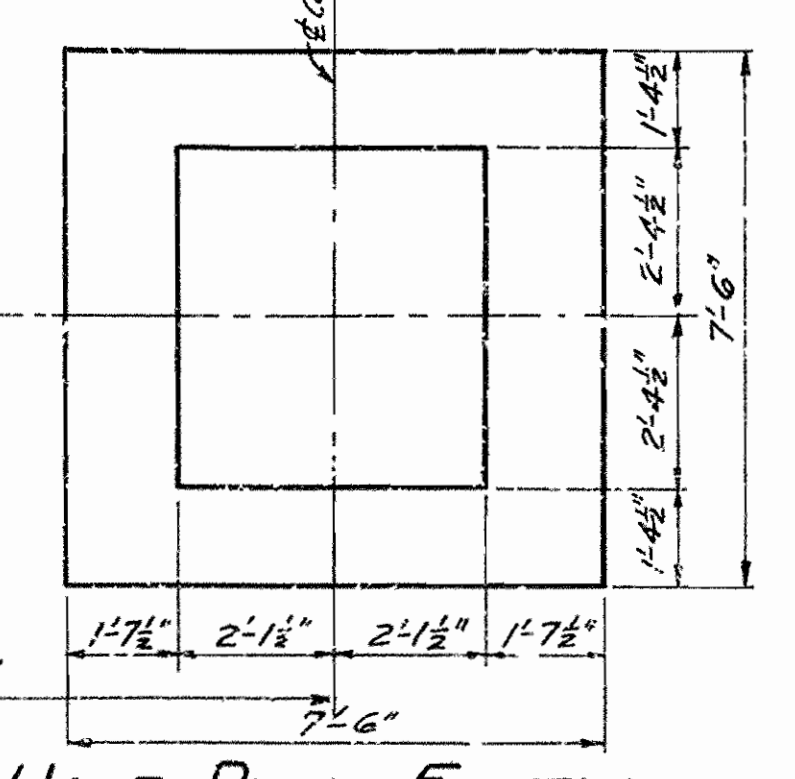
ARKANSAS JOB NO. 4178



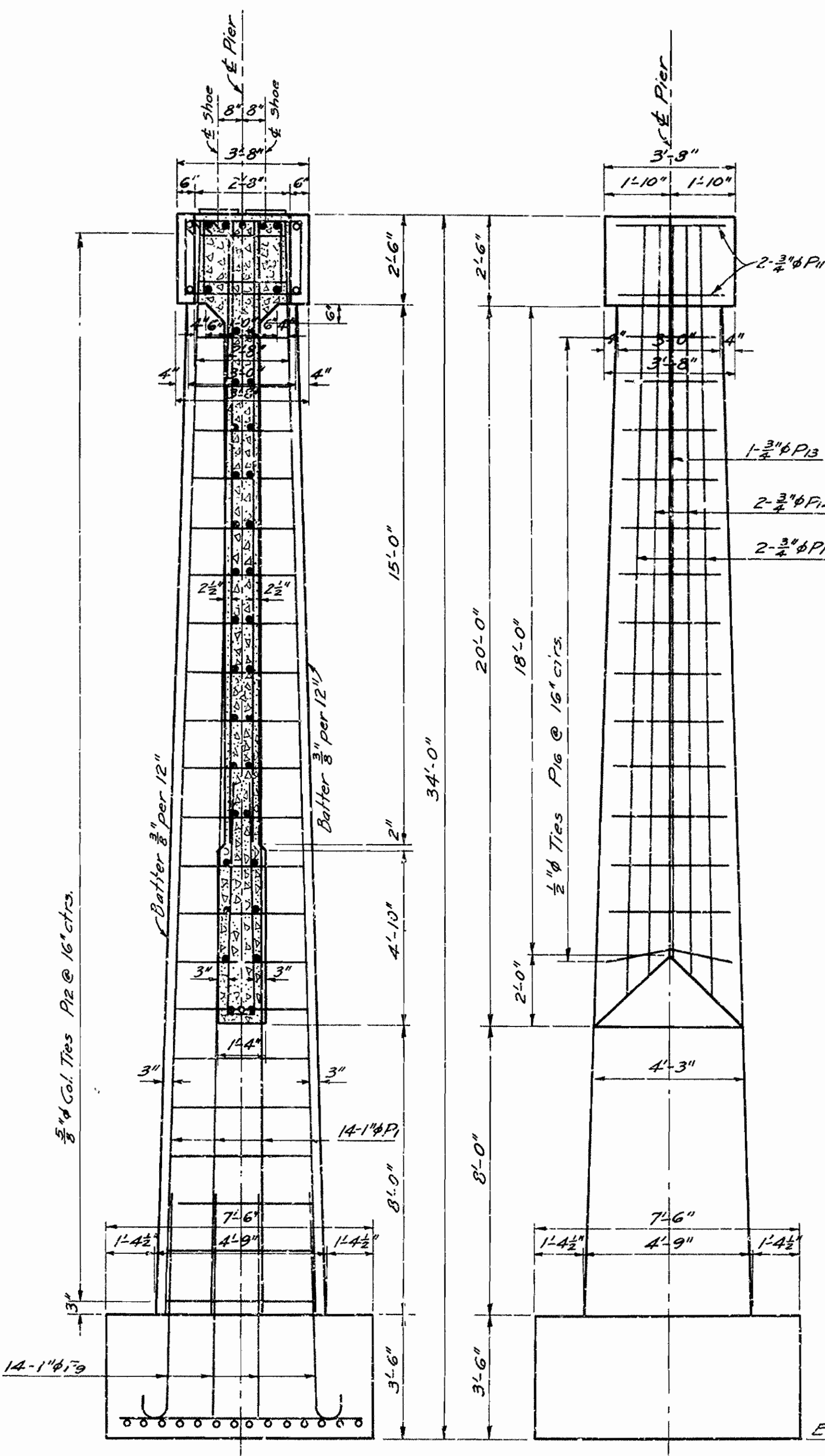
ELEVATION OF PIER



HALF PLAN FOOTING
Showing Steel in Bottom

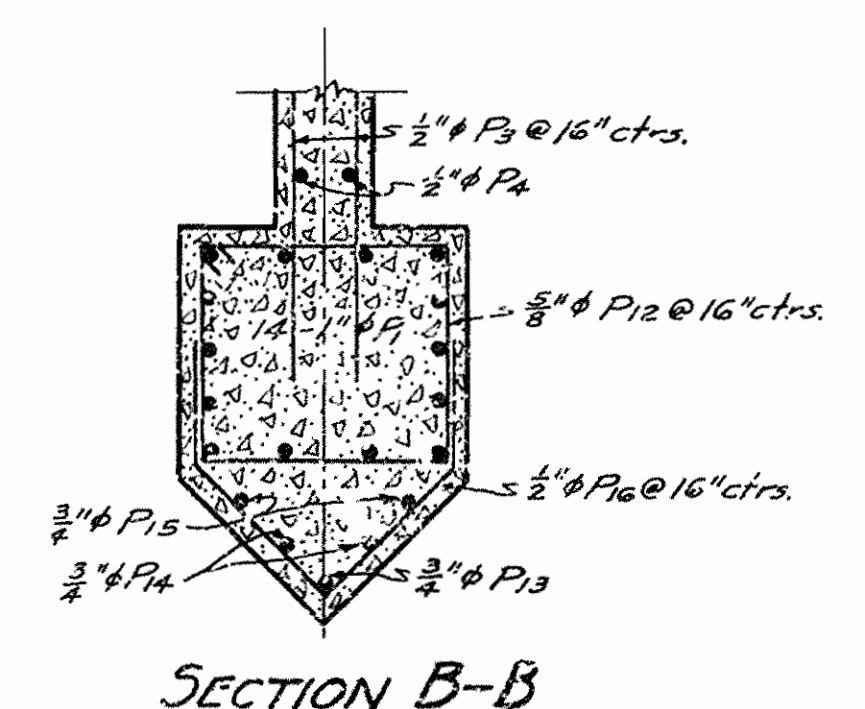


HALF PLAN FOOTING



SECTION A-A

END ELEVATION
Showing steel in Pier Nose



SECTION B-B

LIST OF BARS FOR EACH PIER					
MARK	SIZE	% Reqd	LENGTH	A	B
P1	1"φ	28	30'-2"	-	-
P2	1"φ	3	26'-6"	-	-
F3	3/4"φ	56	6'-10"	-	-
F4	3/4"φ	4	26'-6"	-	-
F5	3/4"φ	2	27'-6"	-	-
P10	3/4"φ	1	28'-9"	-	-
P13	3/4"φ	2	20'-3"	-	-
P14	3/4"φ	4	20'-9"	-	-
P15	3/4"φ	4	21'-3"	-	-
P3	3/4"φ	28	24'-0"	-	-
P5	3/4"φ	32	17'-0"	-	-
F3	1"φ	28	7'-6"	-	-
P11	3/4"φ	4	9'-9"	-	-
P7	3/4"φ	12	11'-7"	2'-1 1/2"	3'-3 1/2"
P12	3/4"φ	46	Ave. 13'-7"	Varies 2'-0 1/2" to 3'-10 1/2"	Varies 2'-6 1/2" to 4'-4 1/2"
P6	3/4"φ	16	9'-9"	2'-1 1/2"	2'-3 1/2"
P4	3/4"φ	16	13'-6"	-	-
P12	3/4"φ	28	7'-11"	Varies 1'-11" to 2'-8"	Varies 1'-8" to 3'-9"

GENERAL NOTES
 All concrete to be Class "A". All corners to have 3/8" chamfer unless otherwise noted.
 For Details of Superstructure see Drawgs. No. 3521

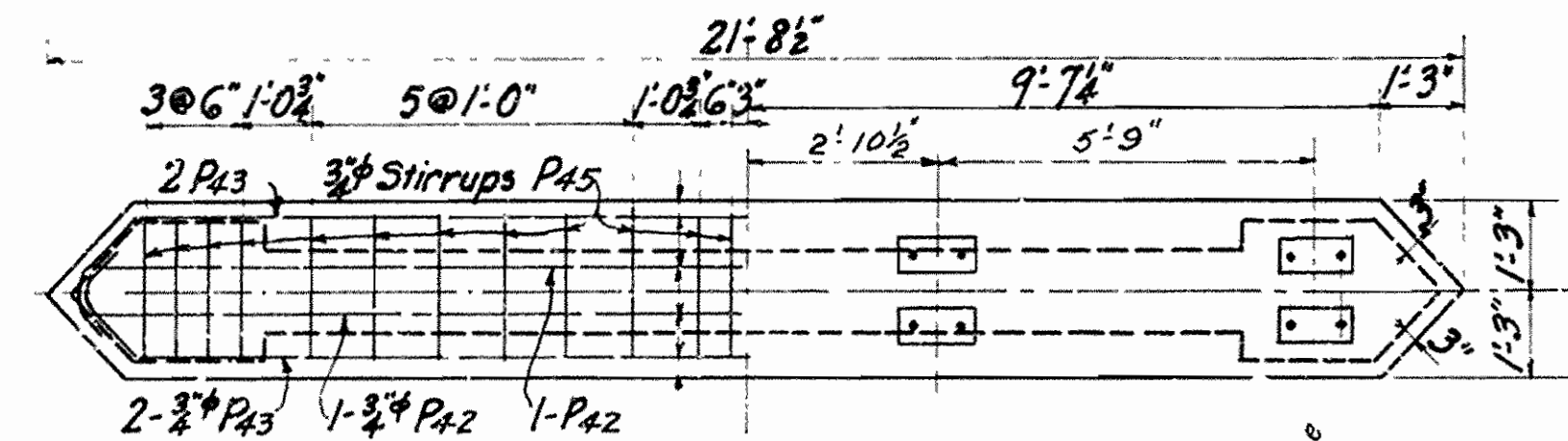
DETAILS OF PIERS NO. 1 & 2
 BRIDGE OVER BIG MULBERRY CREEK
 OZARK-CASS ROAD
 Route 23 Section 4
 FRANKLIN COUNTY
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARKANSAS
 Drawn By: W.C.H. Date: 8-16-34
 Traced By: J.P.A. Date: 8-20-34 Scale: 3/8" = 1'-0"
 Checked By: A Date: 8-24-34 exceptions noted.

M.R. Sawyer
 BRIDGE ENGINEER

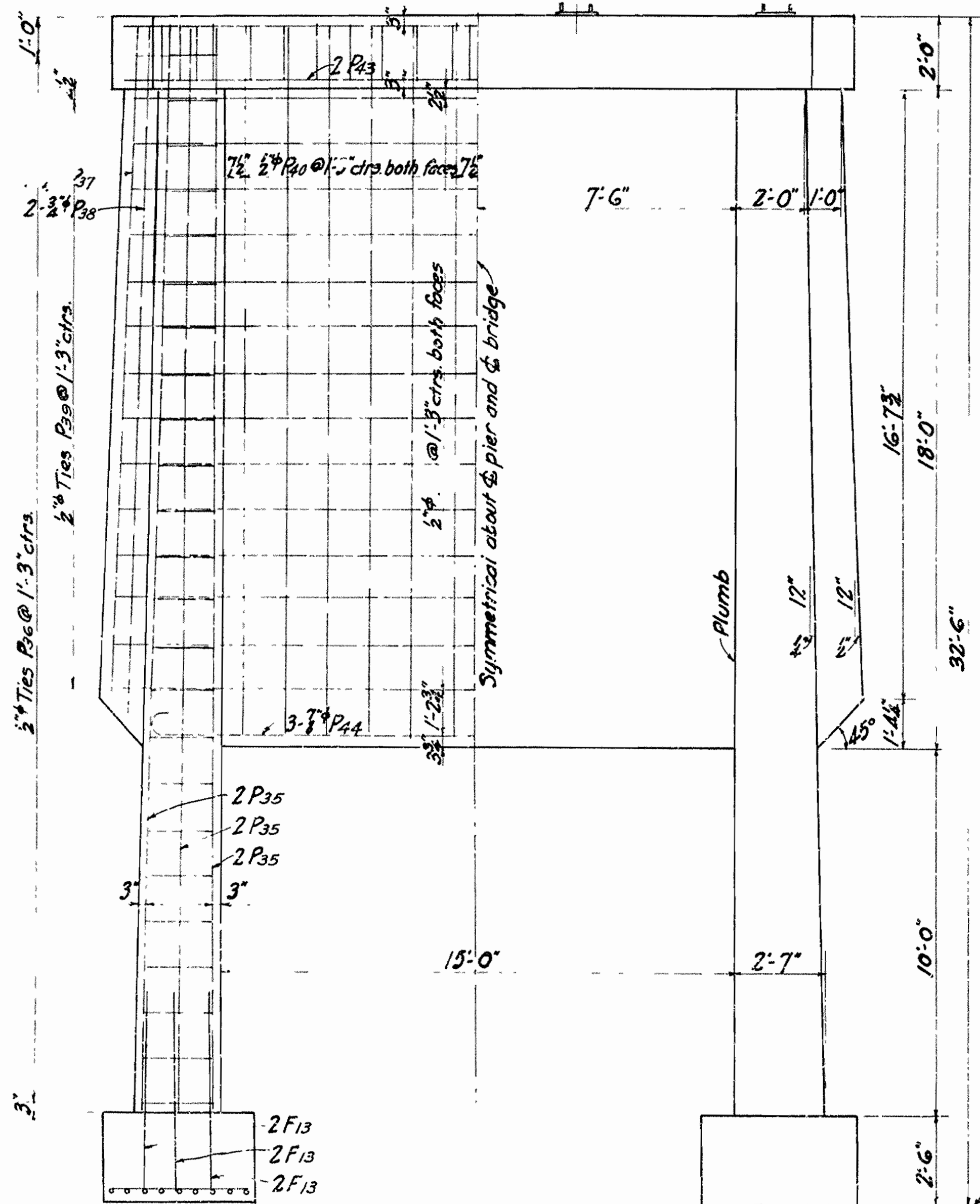
BRIDGE NO. 1789 DRAWING NO. 3882

FED. ROAD DIST. NO.	STATE	U.S. PUBLIC WORKS PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	Ark.	NRS 330A	1935	7	20

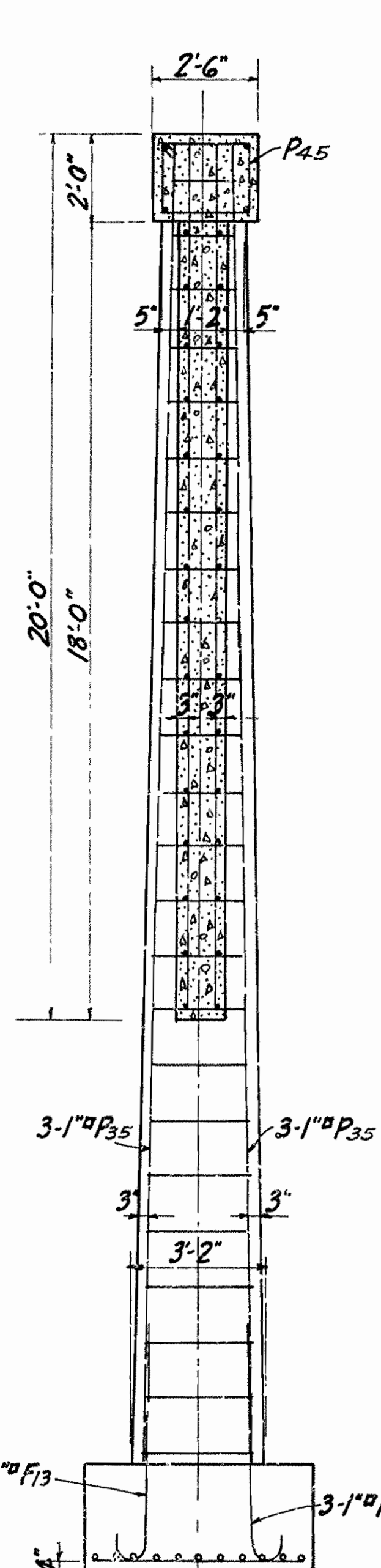
Job 4178



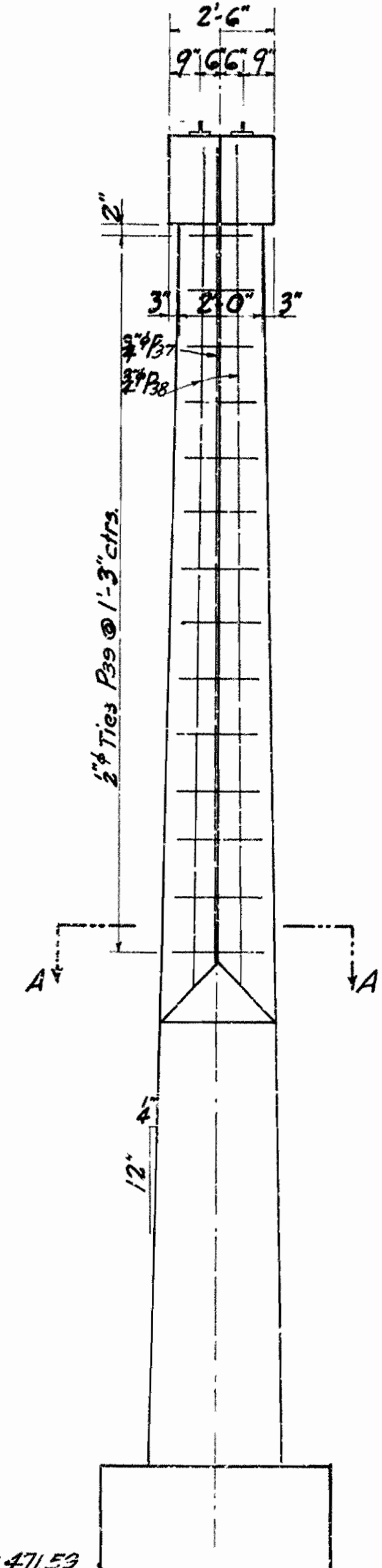
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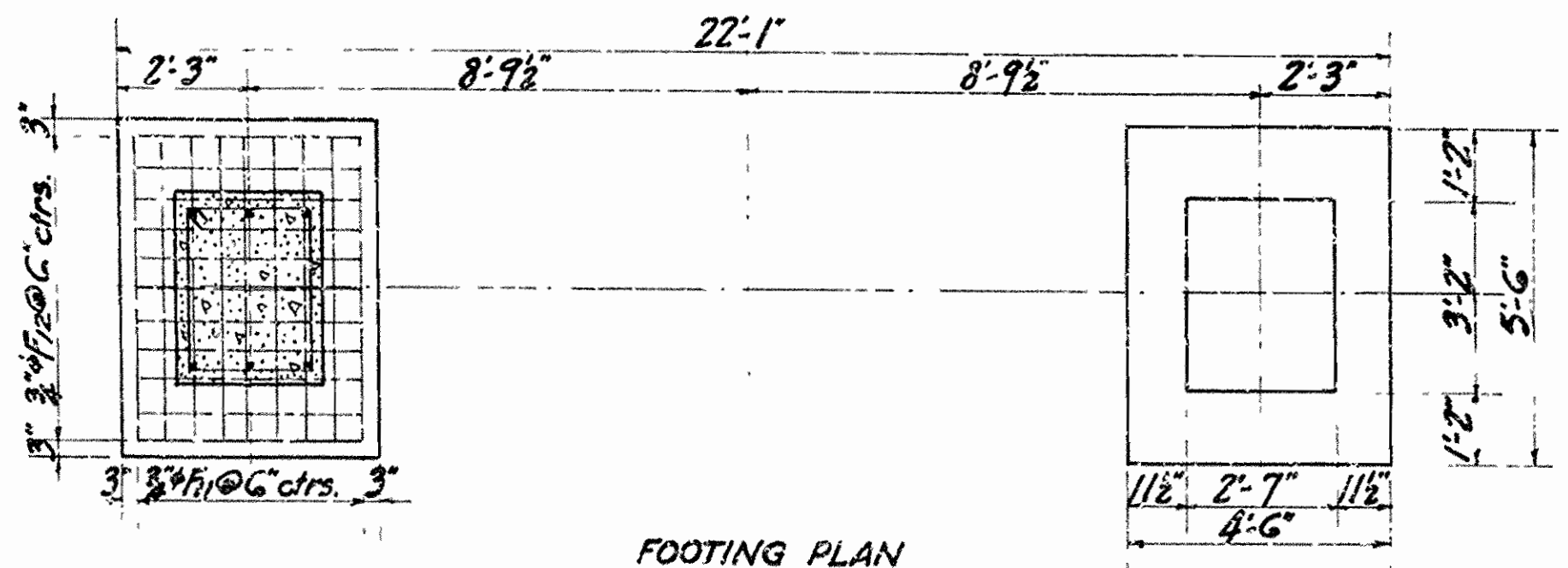
SIDE ELEVATION



VERTICAL SECTION ON C



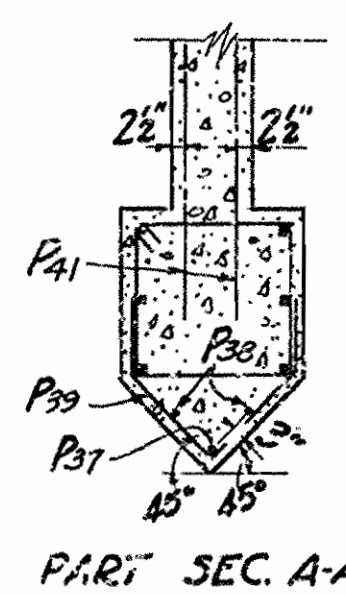
END ELEVATION: Showing reinforcing in nose



FOOTING PLAN

BAR LIST						
MARK	SIZE	NO. BARS	LENGTH	BENDING DIAGRAM	TOTAL LENGTH FT.-IN.	WEIGHT LBS.
P35	1/2"	2	29'-9"	Straight	357-0	
F13	1/2"	12	6'-7"		79-0	
Total 1" bars					436-0	182.4
P44	3/8"	3	21'-1"		63-3	
Total 3/8" bars					63-3	129.3
F11	3/4"	18	5'-0"	Straight	90-0	
F12	3/4"	22	4'-0"	do.	88-0	
P37	3/4"	2	18'-3"	do.	36-6	
P38	3/4"	4	18'-10"	do.	75-4	
P42	3/4"	2	20'-4"	do.	40-8	
P45	3/4"	24	8'-3"		198-0	
P43	3/4"	4	23'-8"		94-8	
Total 3/4" bars					623-2	936.0
P40	1/2"	24	19'-6"	Straight	468-0	
P41	1/2"	28	18'-8"	do.	513-4	
P36	1/2"	48	8'-11"		428-0	
P39	1/2"	28	4'-9 1/2"		134-2	
Total 1/2" bars					1543-6	1031.0
Total reinforcing steel for Pier No. 4						3578.7

QUANTITIES					
Item No.	13	15	13	91	92
Item:	Dry Excav. for Structures	Wet Excav. for Structures	Solid Exc. for Structures	Class "C" Conc. for Bridges	Reinf. Steel for Bridges
Pier No. 4	52.7 cuyd.	62.1 cuyd.	6.6 cuyd.	34.3 cuyd.	3580 lb.



PART SEC. A-A

NOTES
 All concrete for Pier No. 4 shall be Class "A".
 For anchor bolt piers see Drawing No. 2178.
 All dimensions relating to reinforcing bars are to the centers of such bars.

DETAILS OF PIER NO. 4
 BRIDGE OVER BIG MULBERRY CREEK
 OZARK-CASS ROAD
 FRANKLIN COUNTY
 ROUTE 23 SECTION 4
 ARKANSAS STATE HIGHWAY COMMISSION
 Little Rock

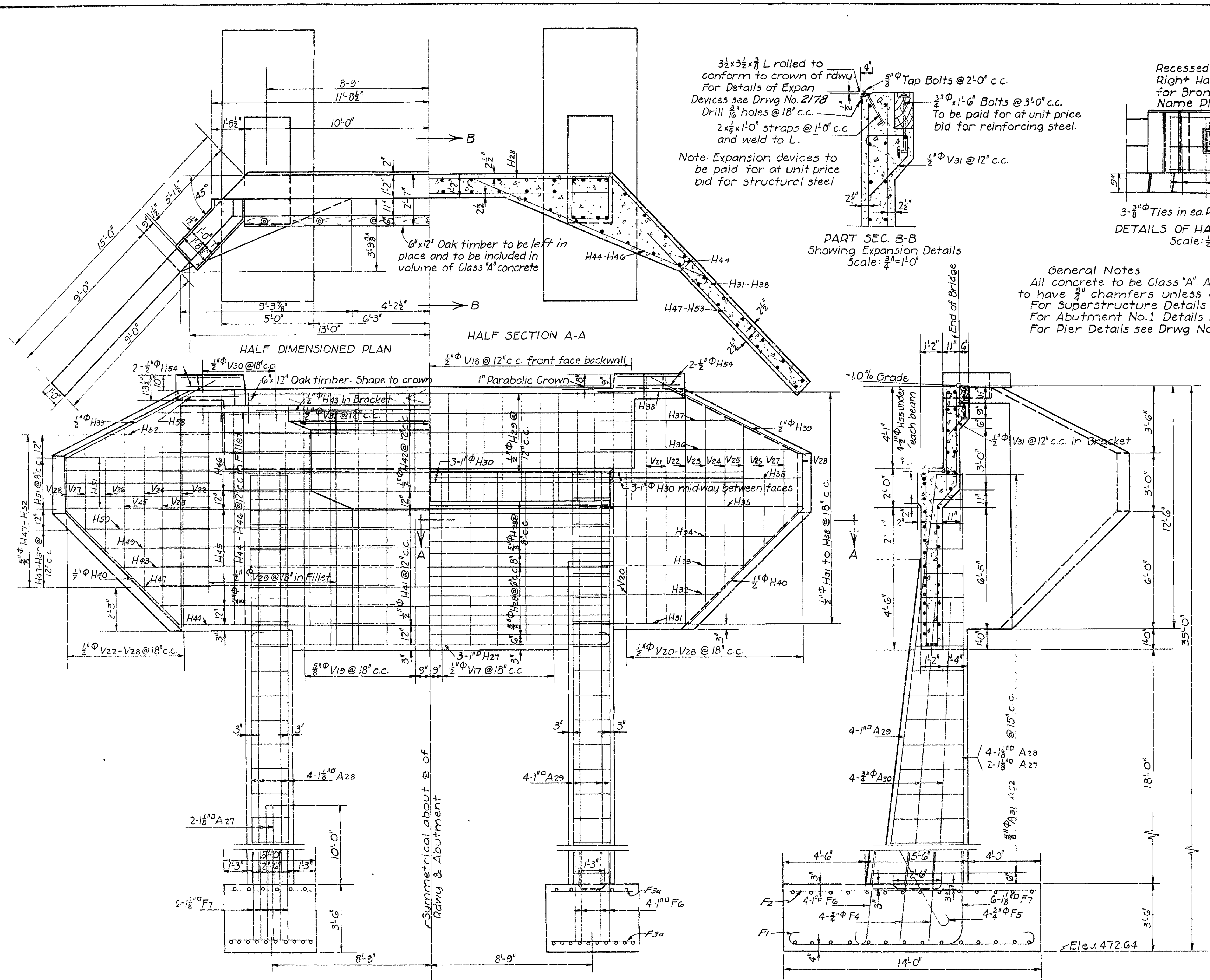
Drawn by *[Signature]* Date 8/1/34
 Traced by *[Signature]* Date 8/1/34 Scale: 3/8"=1'-0"
 Checked by H.J. E. Date

[Signature]
 BRIDGE ENGINEER

BRIDGE No. 1739 DRAWING No. 3584

FED. ROAD DIST. NO.	STATE	U.S. P. W. PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK	NR 330-A	1935	8	20

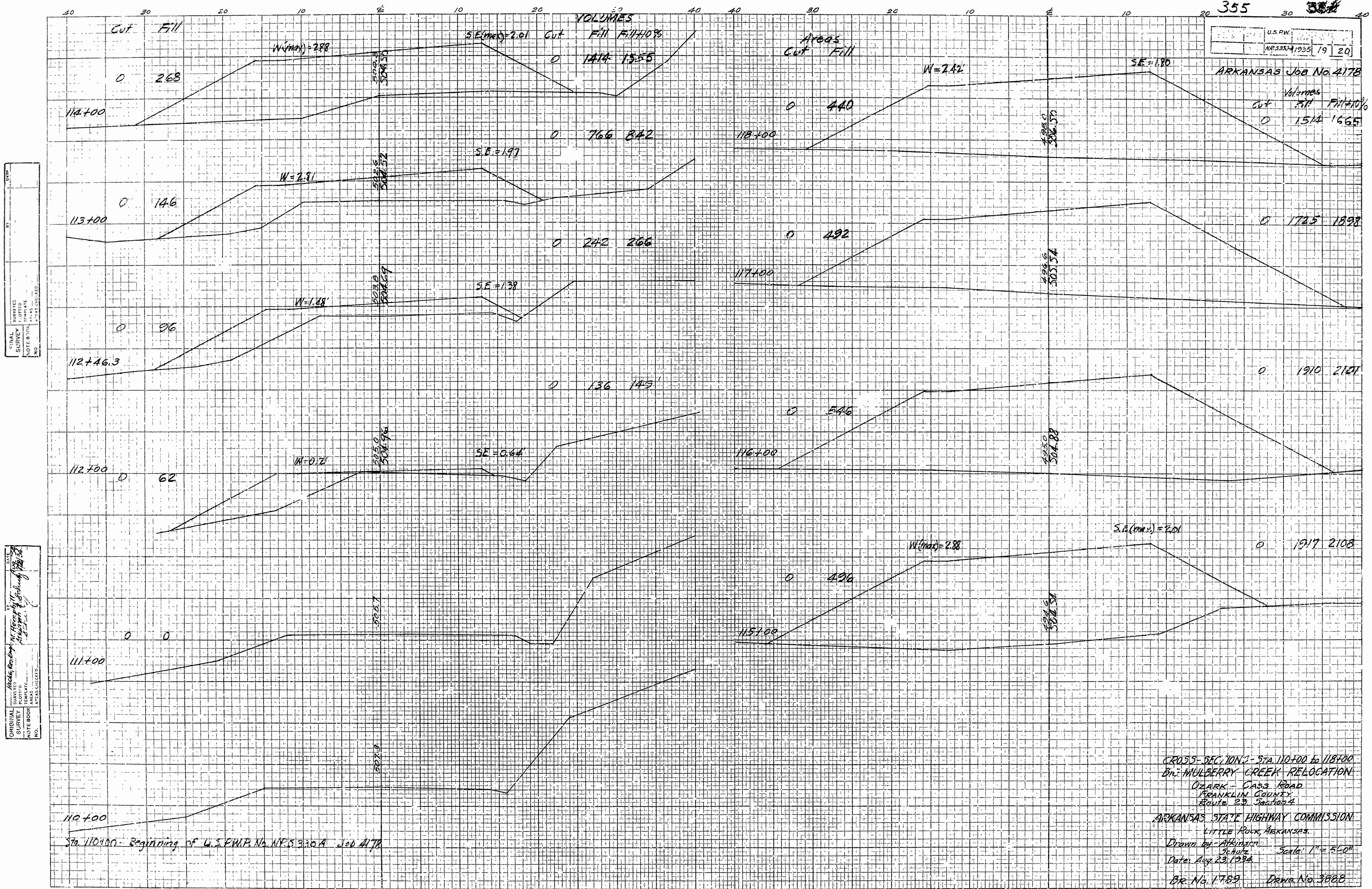
JOB NO. 4178



U.S.P.W.
 No. 333A 1935 19 20

ARKANSAS Job No. 4178

VOLUMES		
Cut	Fill	Fill+10%
0	1514	1665



ORIGINAL SURVEYED
 SURVEYED
 PORTED
 NOTE BOOK
 NO.

DATE
 ORIGINAL SURVEYED
 SURVEYED
 PORTED
 NOTE BOOK
 NO.

Sta 110+00 - Beginning of U.S.P.W.P. No. N.P.S. 330A Job 4178

CROSS-SECTION 3 - STA 110+00 to 118+00
 Dn: MULBERRY CREEK RELOCATION
 Ozark - Cass Road
 FRANKLIN COUNTY
 Route 23, Section 4

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARKANSAS

Drawn by - Atkinson
 Date: Aug 23, 1934

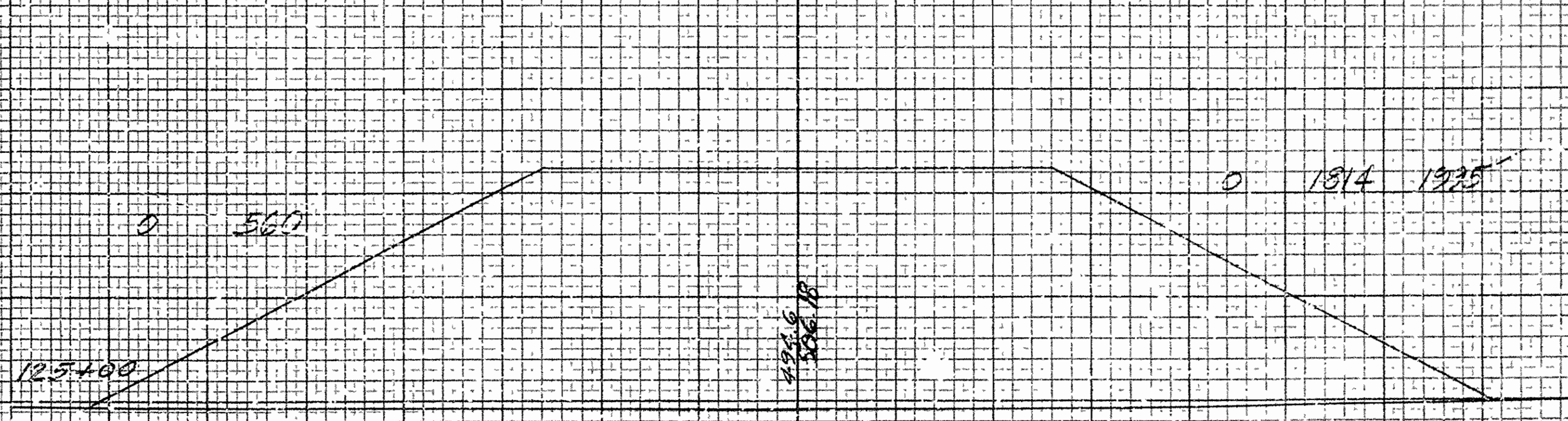
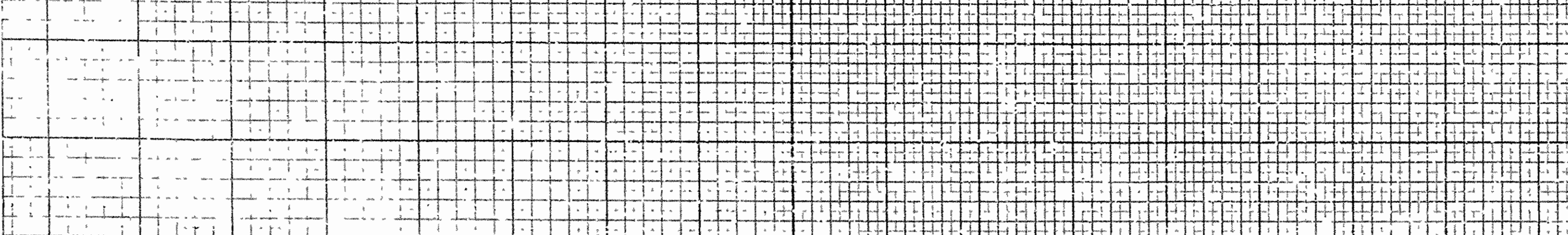
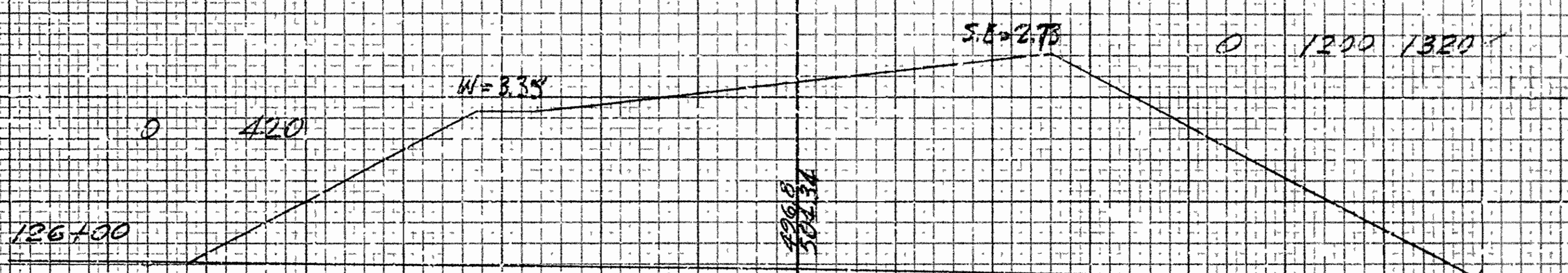
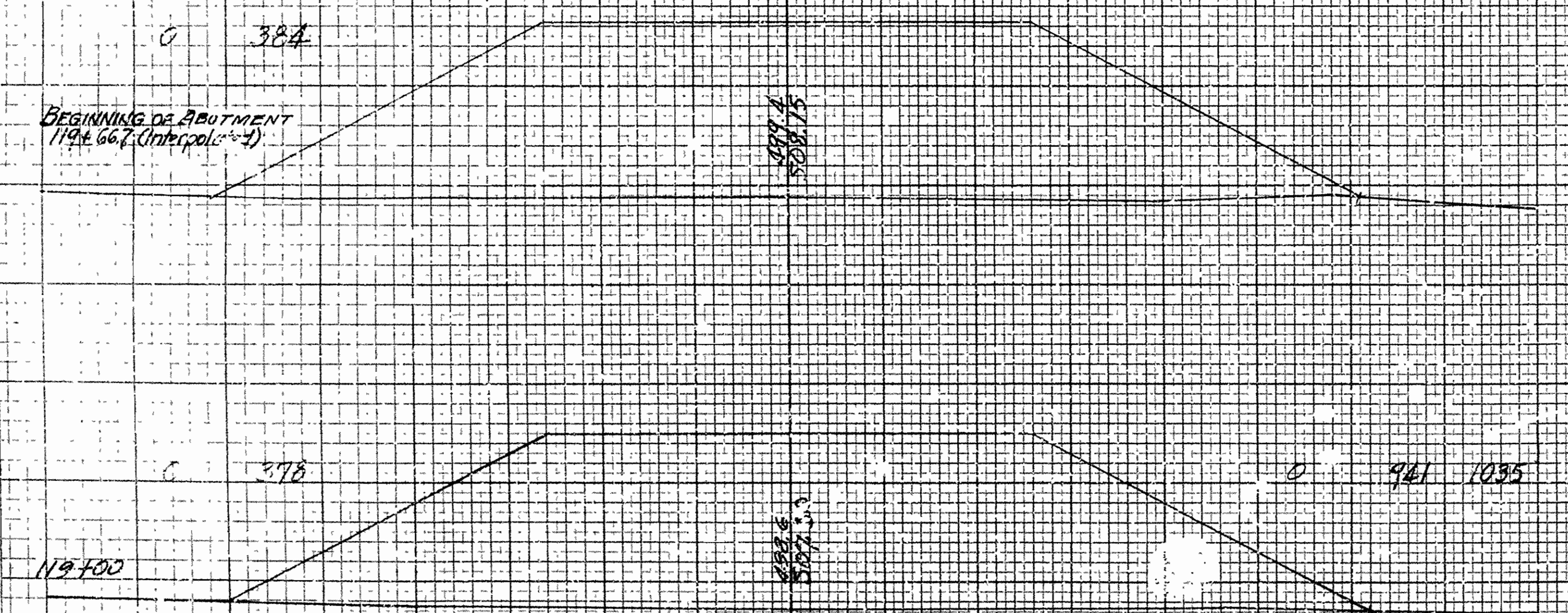
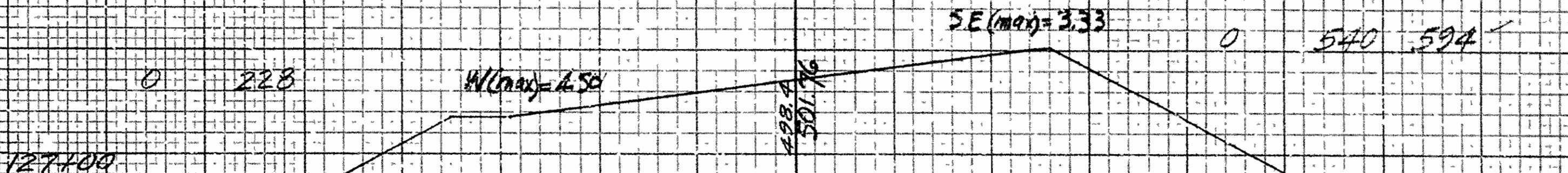
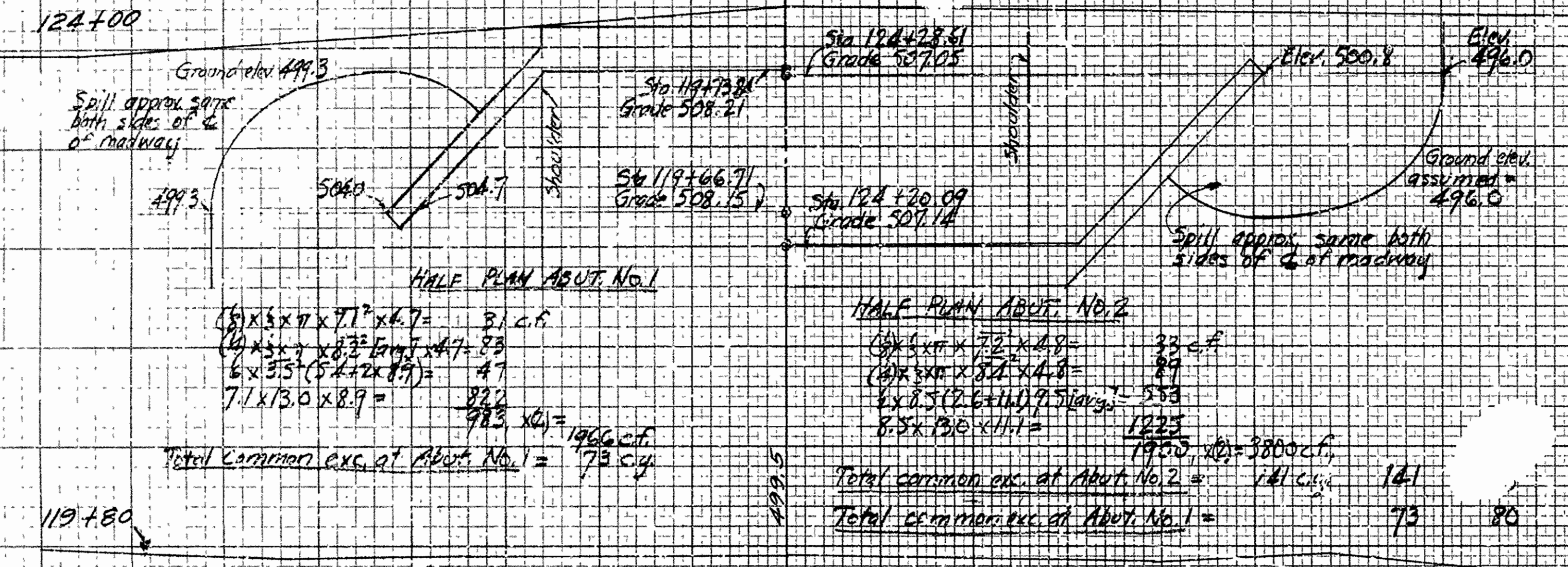
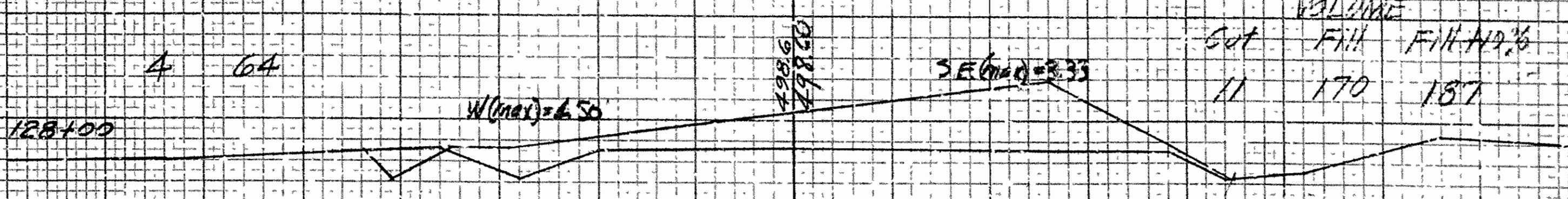
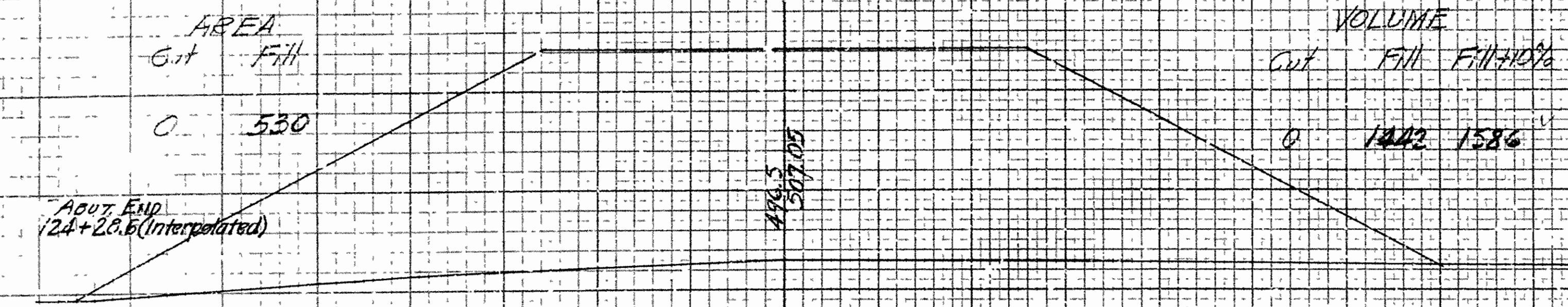
Scale: 1" = 5'-0"
 DR. No. 1789 Draw. No. 3888

PROJECT NO.	STATE	U.S. ROAD DIST. NO.	SECTION
0	ARK.	NR330A	20

ARKANSAS JOB NO. 417B

Sta. 127+50 - End of U.S. R.W.P. No. NRS 330A Job #17B
 AREA
 Cut Fill
 129+442 0.00 section

VOLUME		
Cut	Fill	Fill+10%
11	170	187



CROSS SECTIONS STA. 119+00 to 128+00
 BIG MULBERRY CREEK RELOCATION
 OLARK-CASS ROAD
 POLK COUNTY
 REVISION 29 Section 4
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARKANSAS
 Drawn by Atkinson
 Schurr
 Date: Aug. 23, 1934
 Scale: 1"=5'-0"
 BR. No. 1789 Drawn No. 3889

FINAL SURVEY NOTE BOOK NO. 4745 CHECKED

ORIGINAL SURVEY NOTE BOOK NO. 4745 CHECKED

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
118	Ark.	1789	1935	7	20

FLOOR BEAM DATA

Dead Load Moment = 74,600'*

Live " " = 156,000'*

Impact @ 30% = 46,800'*

Total Moment = 277,400'*

Req'd Section Modulus = 208 in³

Sec. Modulus of 27" I-B @ 91" = 233.2 in³

Design Unit Stresses

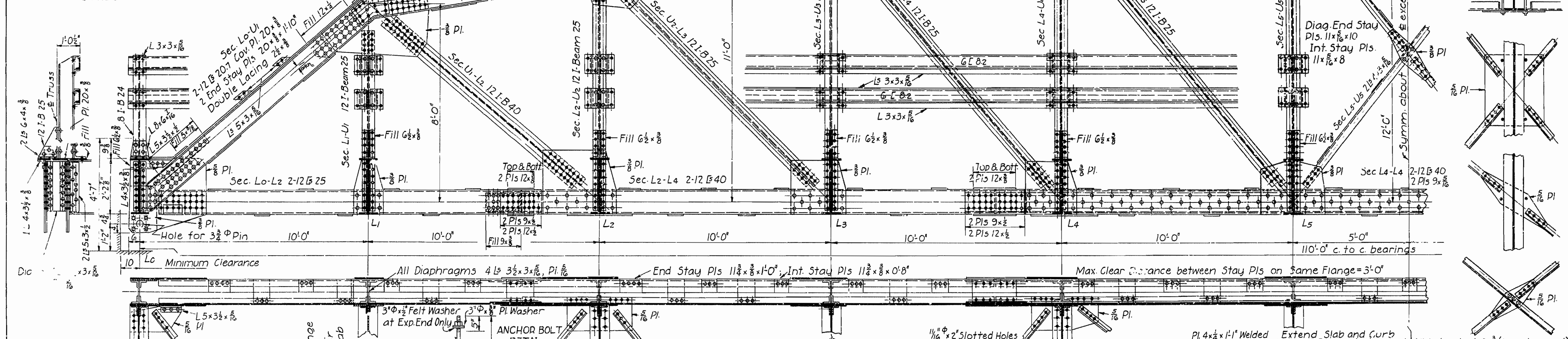
Reinforcing Steel = 16,000#/in²

Structural Steel = 16,000#/in²

Concrete = 750#/in²

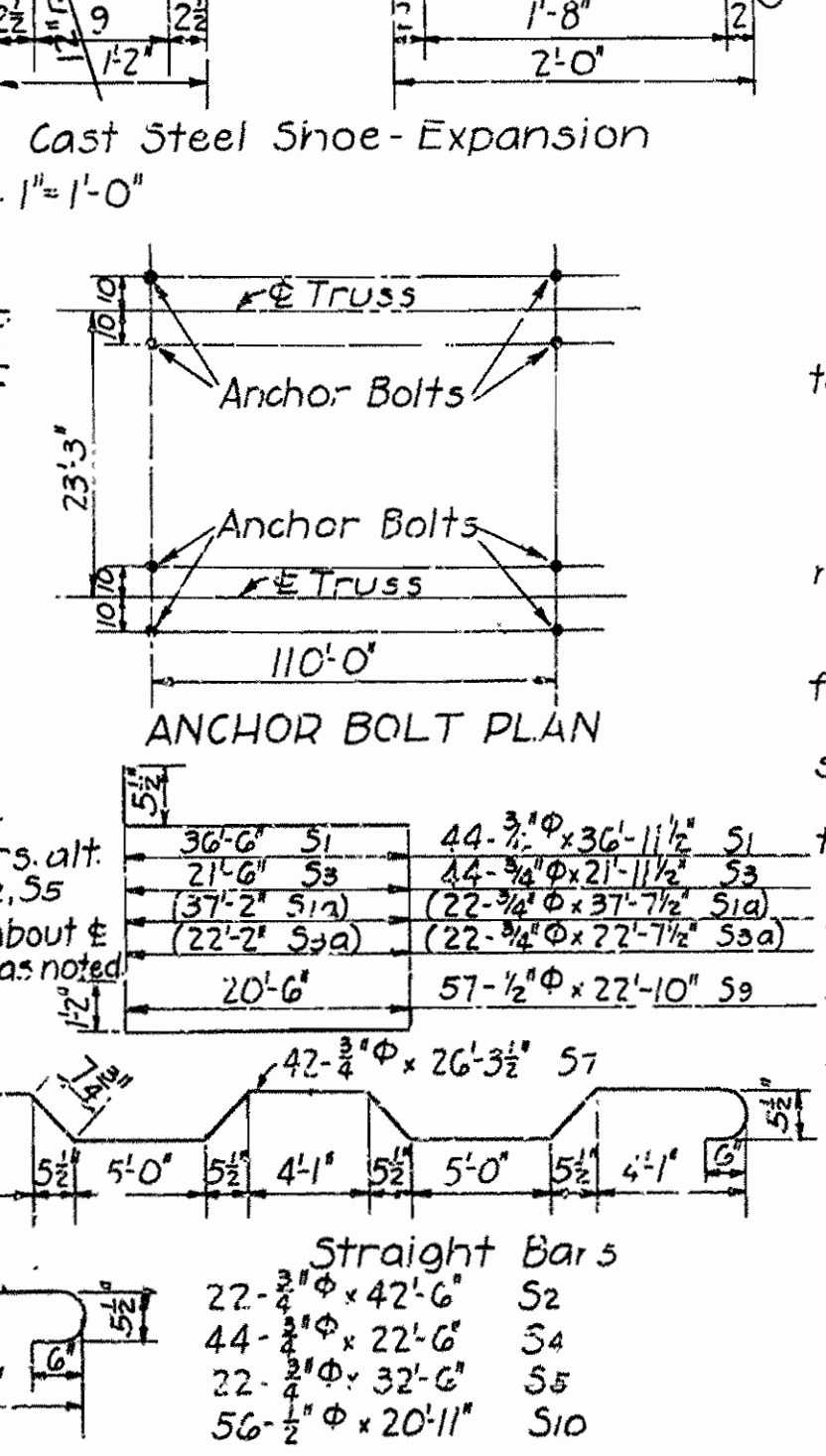
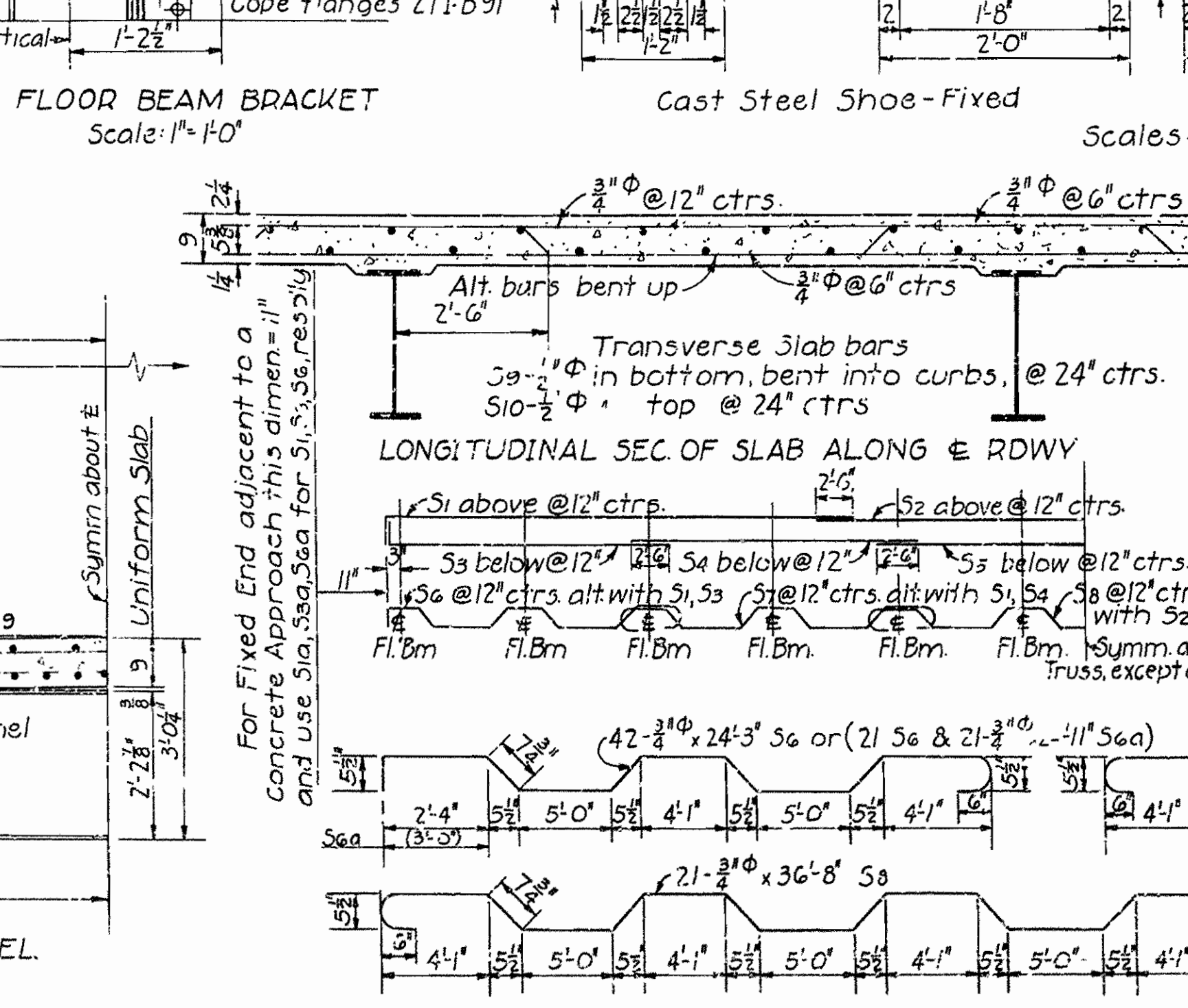
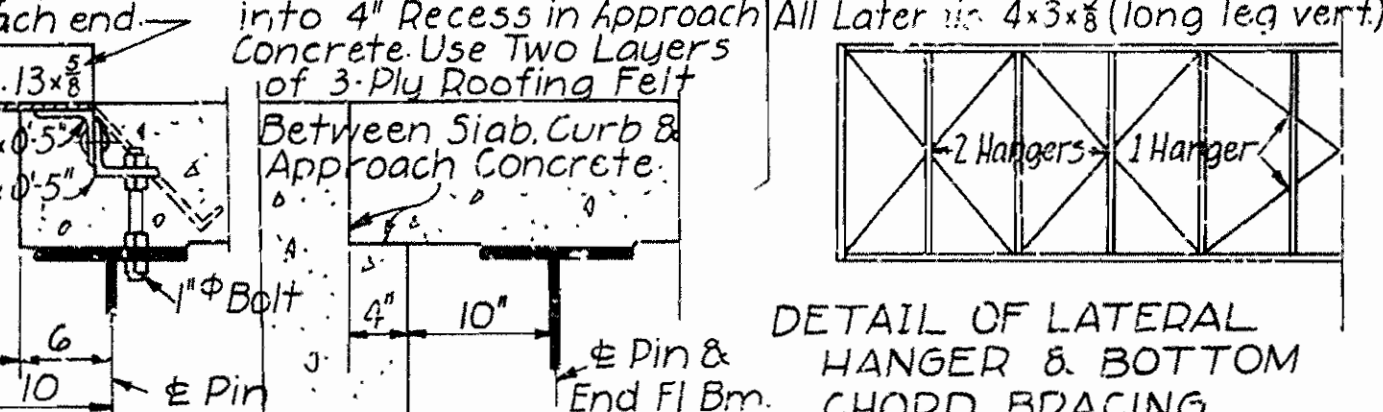
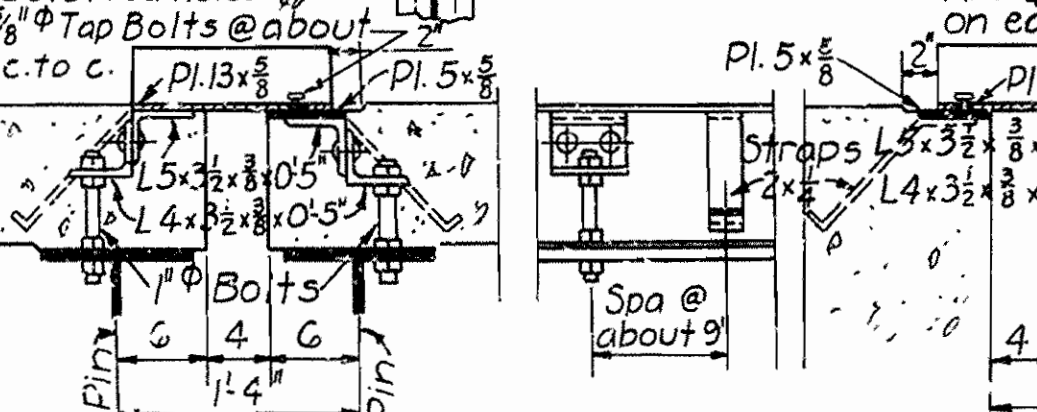
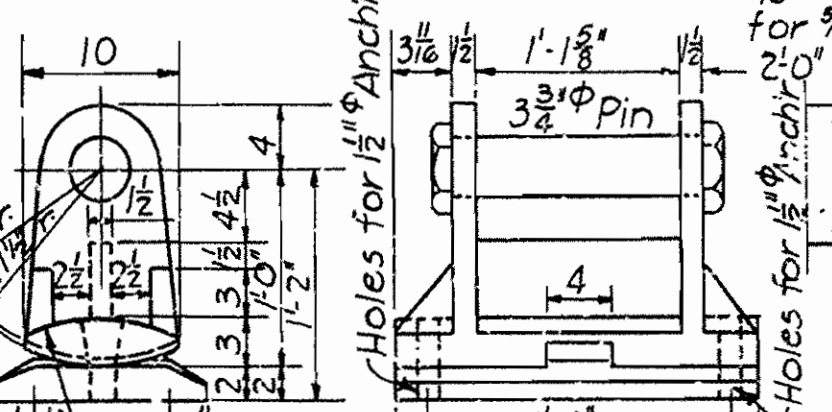
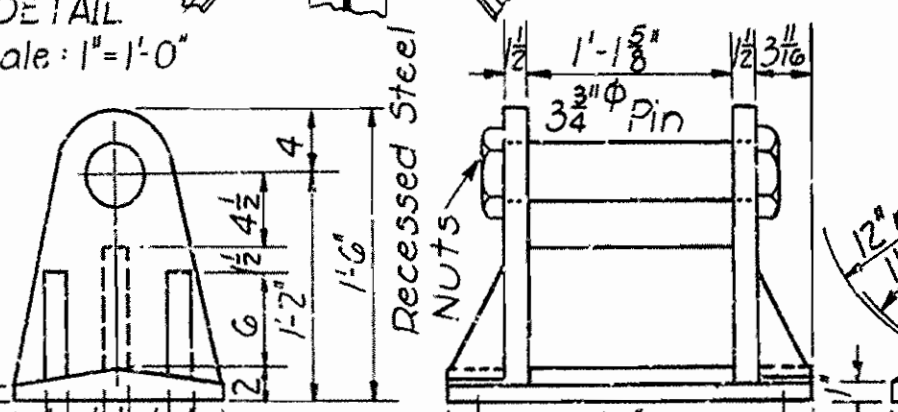
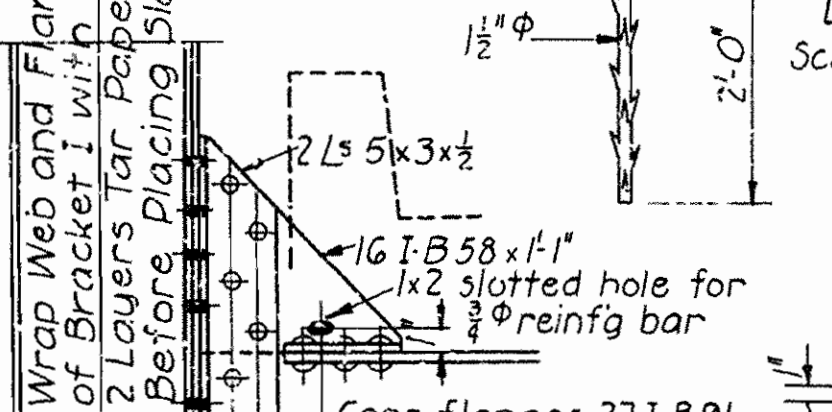
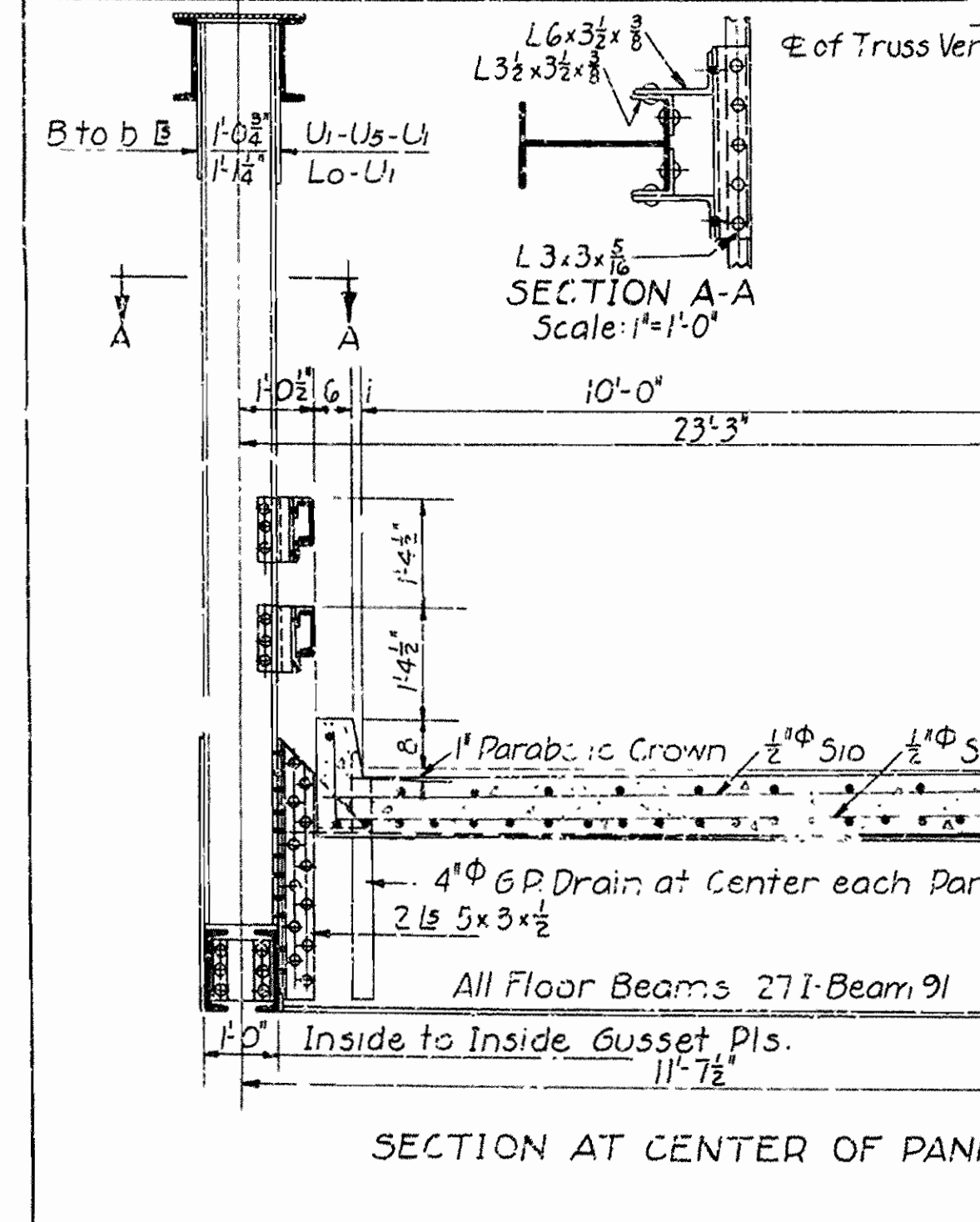
STRESS DIAGRAM

D=230.0	D=229.0	D=224.0	D=202.0	D=176.0
L=111.4	L=110.0	L=106.1	L=96.7	L=84.3
I=23.6	I=23.1	I=22.4	I=17.5	I=17.7
T=365.0	T=362.1	T=352.3	T=274.9	T=278.0



QUANTITIES

ITEM	110'-0" Span Used in General	110'-0" Span, Expan. End, Adjacent to Steel Span to 5/8" Concrete Approach	110'-0" Span, Fixed End, Adjacent to Concrete Approach
Glass 5" Concrete	687 C.Y.	687 C.Y.	691 C.Y.
Reinforcing Steel	13,856 Lbs.	13,856 Lbs.	13,921 Lbs.
Structural Steel	112,706 Lbs.	113,225 Lbs.	111,978 Lbs.



General Notes:

Rivets 3/4"; open holes 13/16"; in flanges of G's, 5/8" rivets, 1/16" open holes

All holes in truss connections to be sub-punched to 1/16" and reamed to size while truss is assembled. This applies to field as well as shop rivets. All field connections shall be riveted.

Floor beam connections shall be sub-punched 1/16" and reamed to a metal template

All floor beams to 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.

Shop paint: After being completely assembled and shop work is finished, all pieces shall be given one coat of red lead and raw linseed oil before shipment.

Field paint: First coat, white lead tinted with lamp black. Second coat, aluminum paint.

Camber: Trusses shall be cambered to fit the vertical curve shown on layout sheet as well as camber required for dead load only

Gas pipe drains shall be paid for at unit price bid for structural steel, and shall be painted same as structural steel.

Masonry plates shall be finally seated on three layers of burlap saturated with red lead. This work and material to be included in price bid for structural steel

Shapes of equal or greater strength may be substituted for structural shapes shown, payment, however, will be based on the weight of shapes shown or actually used, whichever is the lesser.

This drawing shows general features of design only.

Shop drawings shall be made in compliance with Specifications, and be submitted and approved before fabrication is begun.

Specifications: Arkansas Standard Road & Bridge Specifications, adopted May 30th, 1925 and revised.

STANDARD 110'-0" LOW TRUSS SPAN SPECIAL CLEARANCE 20'-0" CLEAR ROADWAY

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn by: W.C.H. Date: 8-24-34
Traced by: A Date: 8-31-34 Scale: 1/2"=1'-0"
Checked by: — Date: — Exceptions noted.
BRIDGE NO. 1789 DRWG NO. 3521

W.C.H. LAWLER
BRIDGE ENGINEER