

SUMMARY OF QUANTITIES - JOB NUMBER 6721

BRIDGE NAME PLATE TITLE	BRIDGE No.	CODE NO.	ITEM No.	801	801	SP # 802	SP # 802	803	804	SP # 805	SP # 806	SP # 806	SP # 806	812
				Common Excavation for Structures	Rock Excavation for Structures	Class A Concrete	Class S Concrete	Reinforcing Steel	Steel Bearing Piling 12 BPS3	Aluminum Bridge Railing	Structural Steel in Bear. Spans	Structural Steel in Plate Girder Spans (Carbon Steel)	Structural Steel in Plate Girder Spans (Low Alloy)	Bridge Nails Plates (Type C)
			UNIT	Cu. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Lb.	Lin. Ft.	Lin. Ft.	Lb.	Lb.	Lb.	Plate
QUACHITA RIVER	3424A	X031	End Bents 1 & 4	66			26.02	3,550	550		1,464			1
			Bents 2 & 3				12.28	2,050	390					
			Piers 1 & 6	598	34	160.70		11,718						
			Piers 2, 3, 4, & 5	145	85	414.70		27,636						
			Spans 1, 2, 8, & 9				129.20	26,132		320	91,906			
			Spans 3, 4, 5, 6, & 7				459.90	97,454		1,100		79,880	395,160	
			Total Bridge No. 3424A	809	119	575.40	627.40	168,540	940	1,420	93,370	79,880	395,160	1
	3424B	X031	End Bents 1 & 4	66			26.02	3,550	550		1,464			
			Bents 2 & 3				12.28	2,050	390					
			Piers 1 & 6	598	34	160.70		11,718						
			Piers 2, 3, 4, & 5	145	85	414.70		27,636						
			Spans 1, 2, 8, & 9				129.20	26,132		320	91,906			
			Spans 3, 4, 5, 6, & 7				459.90	97,454		1,100		79,880	395,160	
			Total Bridge No. 3424B	809	119	575.40	627.40	168,540	940	1,420	93,370	79,880	395,160	1
Total - Job 6721				1,618	238	1,150.80	1,254.80	337,080	1,880	2,840	186,740	159,780	790,320	2

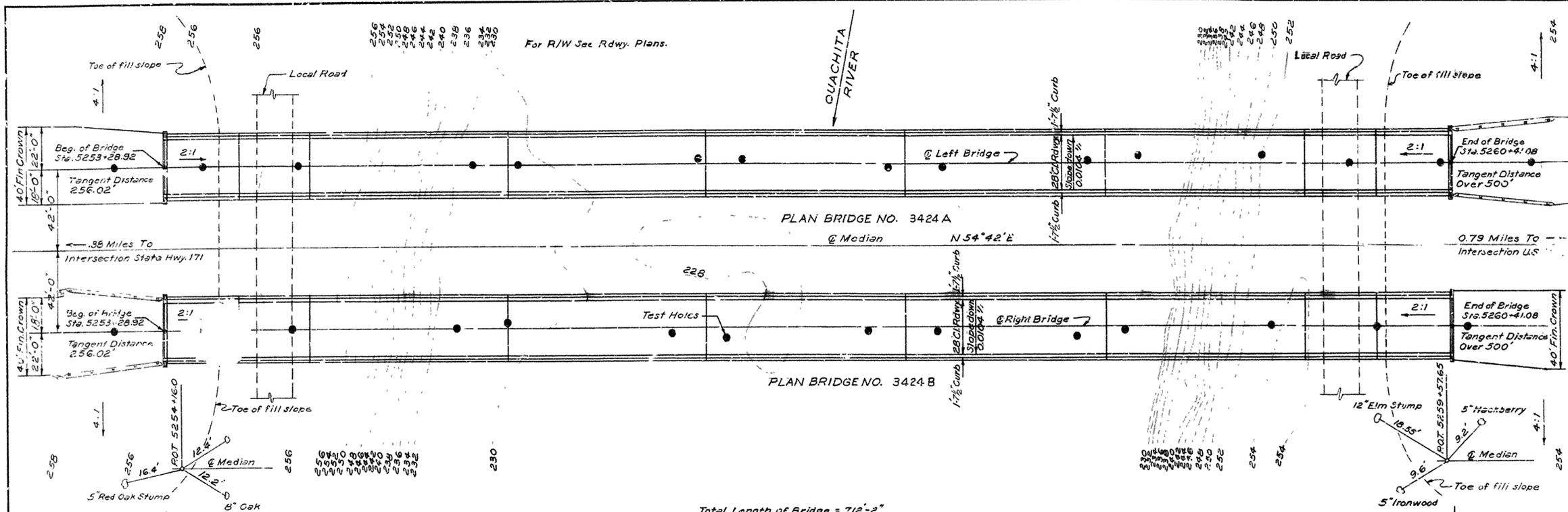
Revised due to change in pier height.
11-17-61. FAH. Chk. gmk

SUMMARY OF BRIDGE QUANTITIES
QUACHITA RIVER BRIDGE AND APPROACHES
HOT SPRING COUNTY

INT. ROUTE 30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: C.E.V. DATE: 6-5-61
TRACED BY: DATE: SCALE:
CHECKED BY: E.R.P. DATE: 2-2-61
BRIDGE NO. 3424 A & B DRAWING NO. 11203A

[Signature]
BRIDGE ENGINEER



GENERAL NOTES

8M-RR Spike in 8" Stump 30' Lt. Sta. 5254+00 Elev. 238.67.

For Details of Superstructure See Drwg. Nos. 5462, 5477, & 11215.

For Details of Substructure See Drwg. Nos. 54, 1A & 11214.

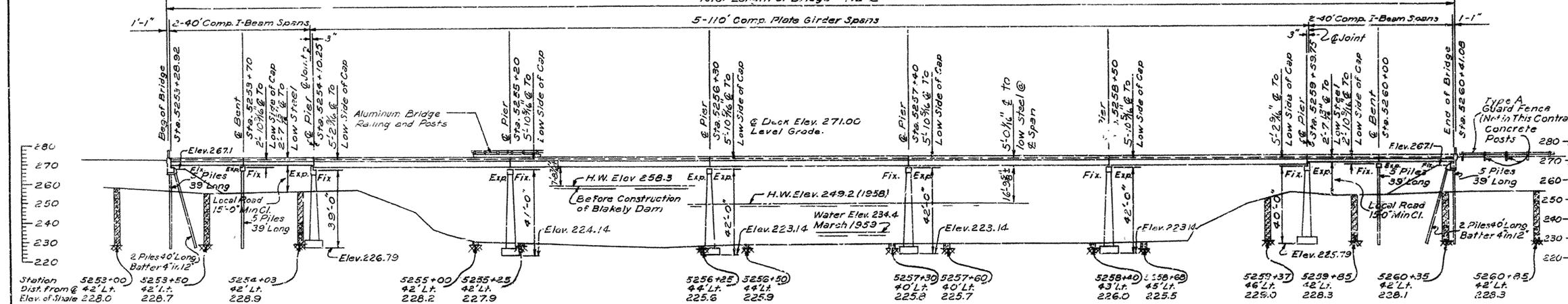
All piling shall be 12 B.P. 53 steel bearing pile, driven to refusal or to a minimum depth of two feet into the material designated as hard shale on the boring logs with a minimum bearing capacity of 36 tons per pile.

Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Order lengths shown. Cut-off or build-up, if necessary, to be paid for in accordance with Sect. 204 of the Specifications. All piling to be driven with a steam hammer after embankment is in place.

Loading: H20-S16 AASHO. 1951 and Special Interstate Loading of 2-24,000* Axles 4' on Centers.

Stresses: Class A Concrete (n=15) 840 psi
Class B Concrete (n=10) 1200 psi
Reinforcing Steel 20,000 psi
Structural Steel (ASTM-A7) 18,000 psi
(ASTM-A242) 3/8" & under 27,000 psi
over 3/8" to 1/2" incl. 24,000 psi
over 1/2" to 1" incl. 22,000 psi

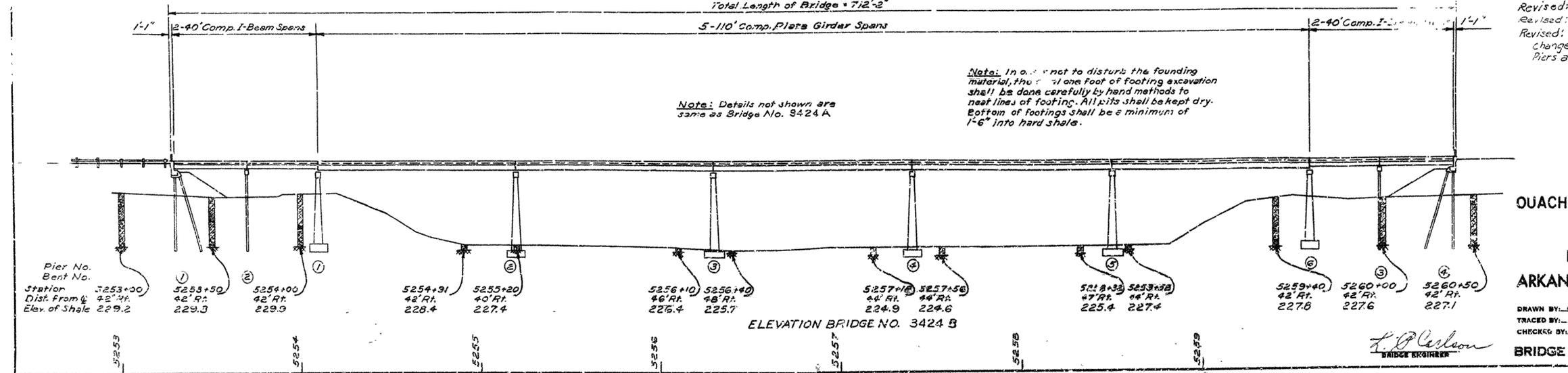
Foundation Pressure: 6500 p.s.f. D.L. + L.L.
Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Adopted Dec. 9, 1959.



ELEVATION BRIDGE NO. 3424 A
Drainage Area 1560 a.Mi. C=0.8
Total Length of Bridge = 712'-2"

SOIL LEGEND

- Sandy Clay and Gravel with Boulders or Thin Layers of Rock
- Gravel and Boulders
- Sandy Clay
- Hard Shale



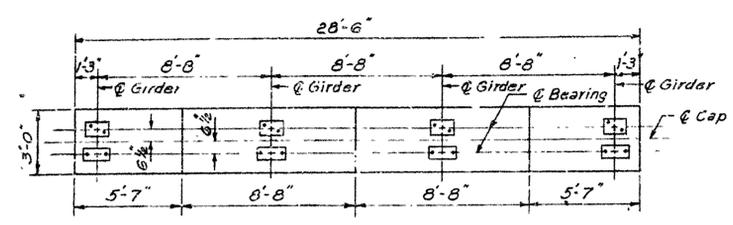
ELEVATION BRIDGE NO. 3424 B

Revised: Guard Fence. W.E.W. 4-20-60
Revised: Bridge Railing C.S.V. 10-18-60
Revised: Dimension E to low side of cap changed to agree with details. Height of Piers and elevation of footing altered. F.M.H. 11-16-61. J.M.C. 11-16-61

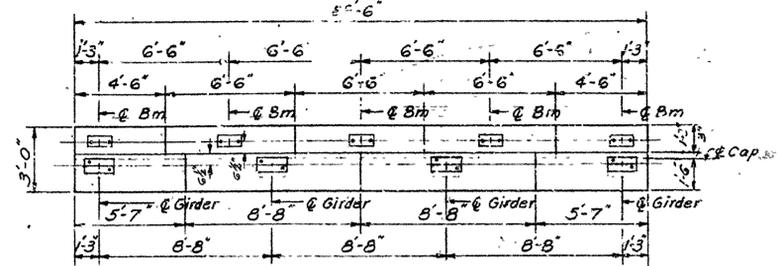
LAYOUT OF BRIDGE OVER OUACHITA RIVER
OUACHITA RIVER BRIDGE & APPROACHES
HOT SPRING COUNTY
INT. ROUTE 30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: L.H.T. DATE: 4-30-59
CHECKED BY: J.M. DATE: 6 MAY 59
BRIDGE NO. 3424 A&B DRAWING NO. 11205

L.P. Carlson
BRIDGE ENGINEER

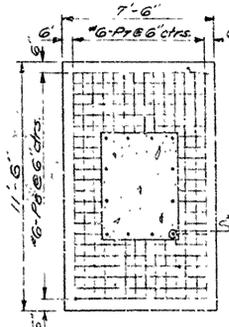
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	300-2(36)B6	5	44
JOB NO.		DATE		
6721		7-24-59		



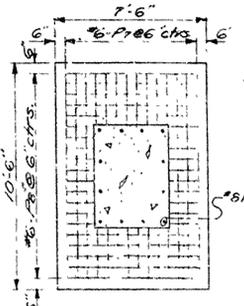
PLAN OF CAP-PIERS 2-5



PLAN OF CAP-PIERS 1&6



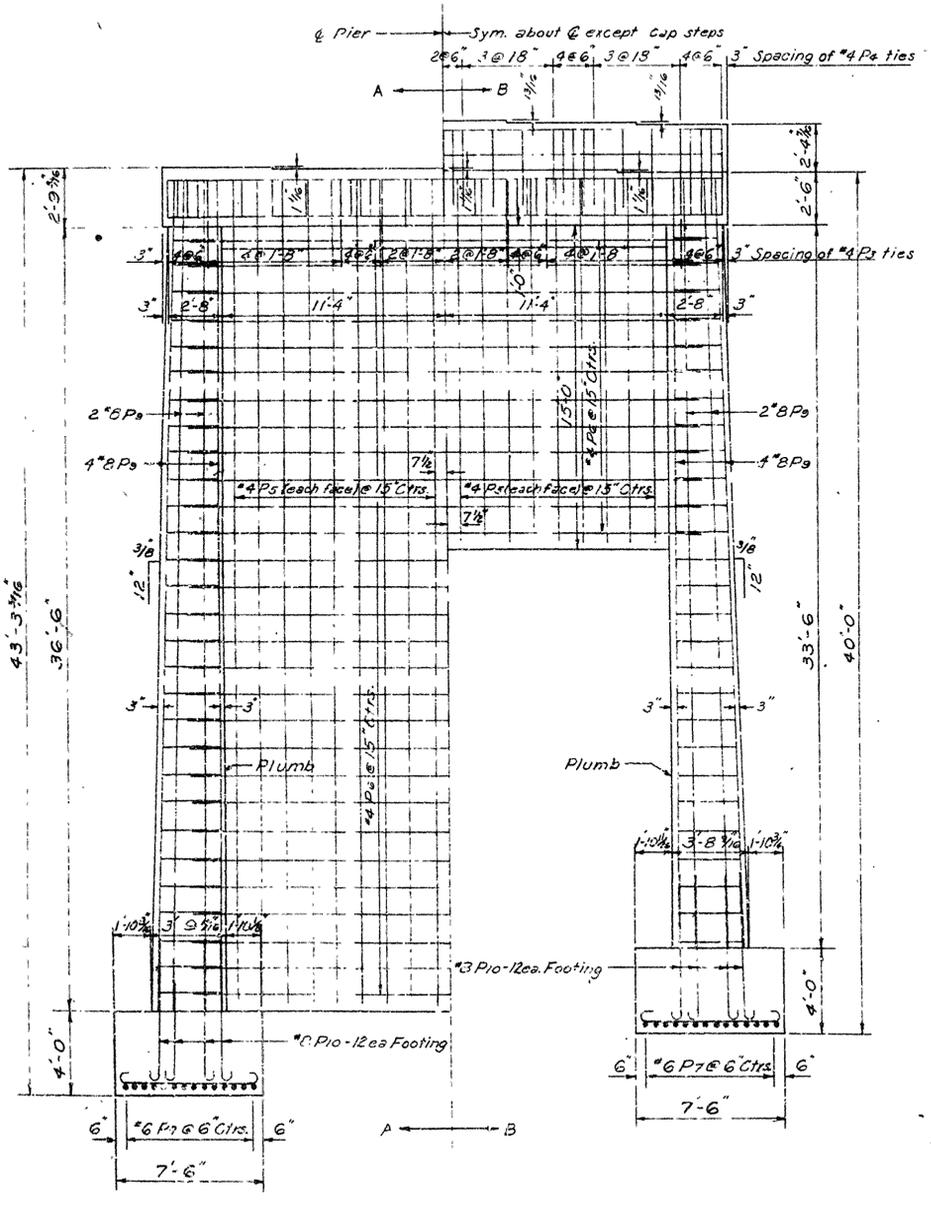
PIERS NO. 2-5



PIERS No. 1&6

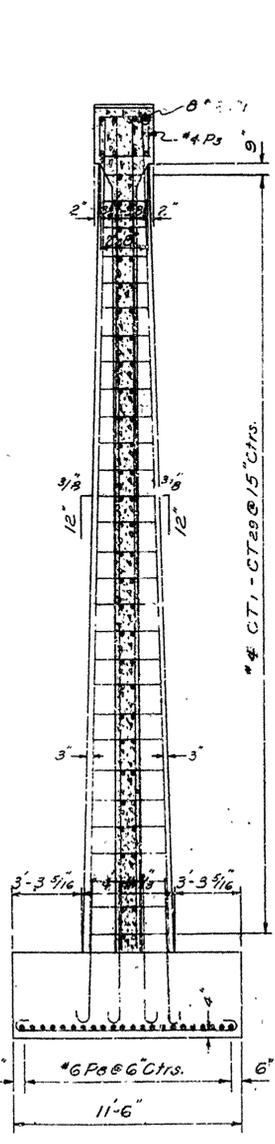
NOTES
 All concrete to be Class 4. All exposed corners to be chamfered 3/8".
 For details of Superstructure see Drwg. 11215.
 For Layout see dwg 11203.

PLAN OF FOOTINGS

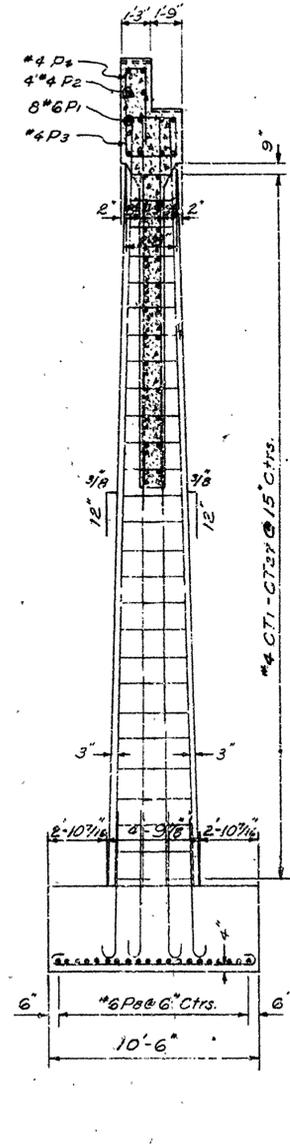


HALF ELEVATION PIERS 2-5

HALF ELEVATION PIERS 1&6



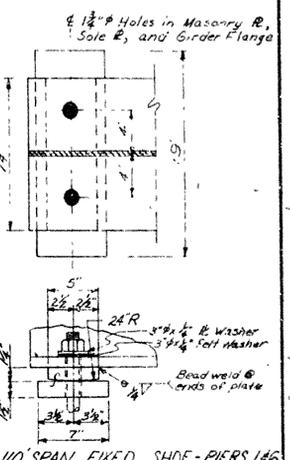
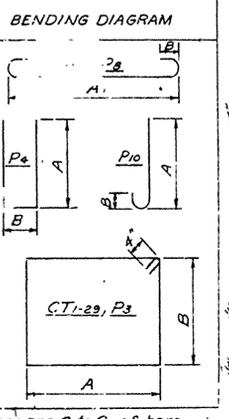
SECTION A-A



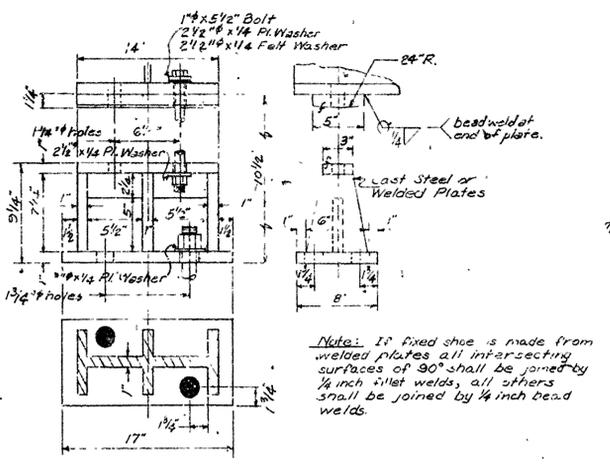
SECTION B-B

BAR LIST-ONE PIER

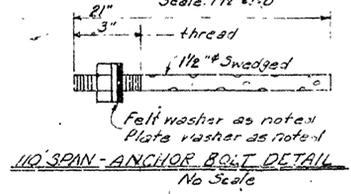
MARK	SIZE	NUMBER	LENGTH	A	B	PIN DIA
CT-21	#4	2ea	12'-11"	11'-0"	6"	4 1/2"
CT-22	#4	2ea	16'-2"	10'-0"	6"	4 1/2"
CT-23	#4	2ea	16'-5"	10'-0"	6"	4 1/2"
P1	#6	8	28'-2"	-	-	Str.
P2	#4	4	28'-2"	-	-	Str.
P3	#4	29	10'-1"	2'-7 1/2"	2'-1 1/2"	1 1/2"
P4	#4	33	8'-6"	3'-10"	10 1/2"	1 1/2"
P5	#4	36	38'-7"	-	-	Str.
P6	#4	36	17'-1"	-	-	Str.
P7	#4	24	26'-0"	-	-	Str.
P8	#6	28	12'-5"	11'-0"	6"	4 1/2"
P9	#6	28	11'-5"	10'-0"	6"	4 1/2"
P10	#6	44	8'-5"	7'-0"	6"	4 1/2"
P11	#6	40	8'-5"	7'-0"	6"	4 1/2"
P12	#8	24	38'-9"	-	-	Str.
P13	#8	24	35'-9"	-	-	Str.
P14	#8	24	8'-1"	6'-1 1/4"	9"	8"



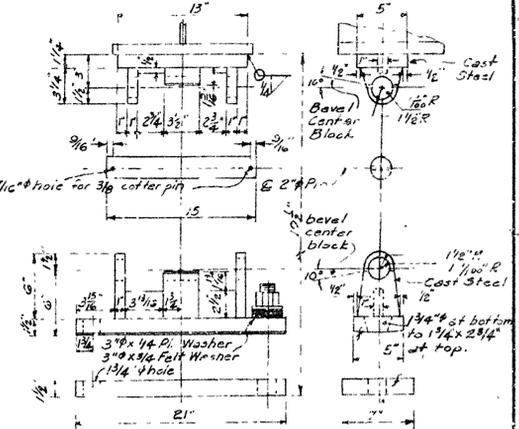
All dimensions are C-to-C of bars. **110' SPAN FIXED SHOE-PIERS 1&6**
 Scale: 1/2"=1'-0"



110' SPAN - FIXED SHOE-PIERS 2-5



110' SPAN - ANCHOR BOLT DETAIL
 No Scale



110' SPAN - EXPANSION SHOE

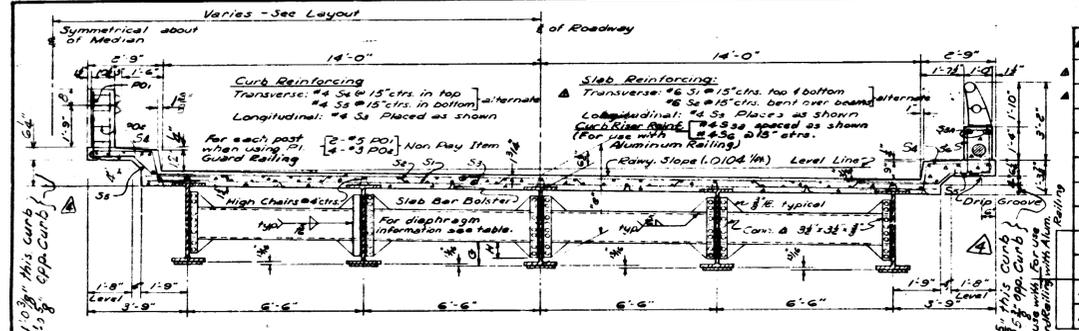
DETAILS OF PIERS
 BRIDGE OVER OUACHITA RIVER
 OUACHITA RIVER BRIDGE & APPROACHES

HOT SPRING COUNTY
 INT. ROUTE 30 SEC. 2
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: L.H.T. DATE: 7-6-59
 TRACED BY: DATE: SCALE: 1/4"=1'-0"
 CHECKED BY: E.R.B. DATE: 7-24-59
 BRIDGE NO. 3424 A&B DRAWING NO. 11214

L.P. Carlson
 BRIDGE DESIGN ENGINEER

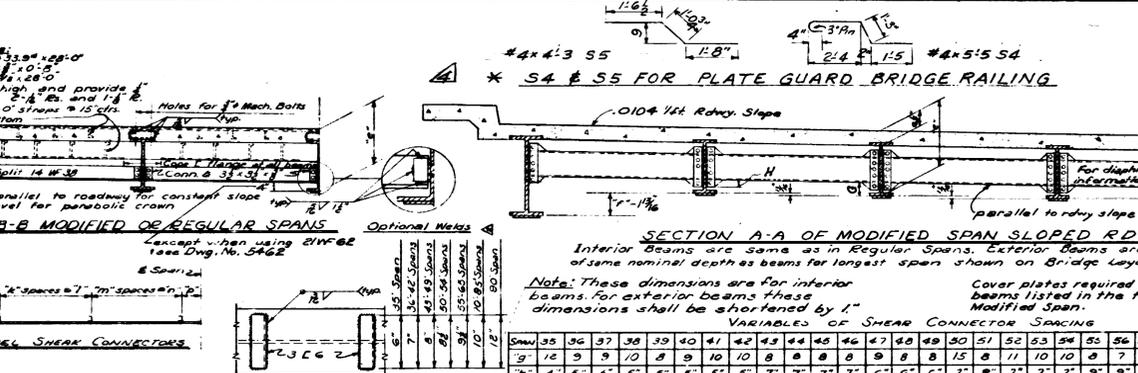
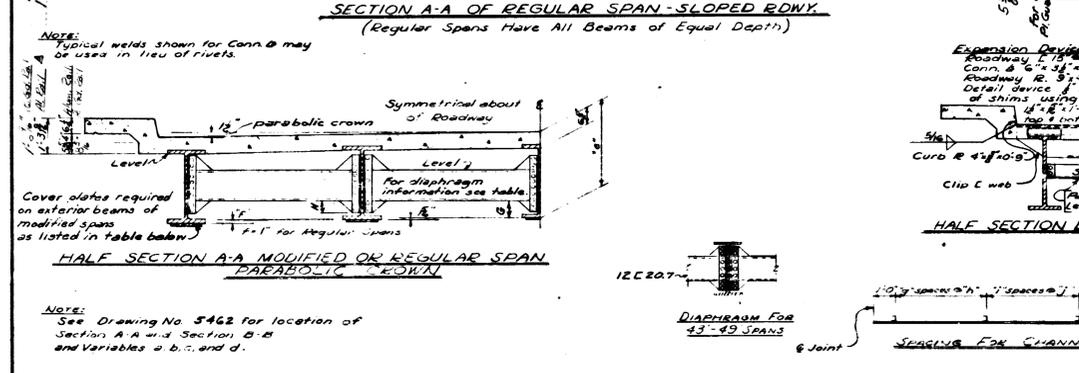
Do NOT DESTROY



BAE LIST - ONE SPAN

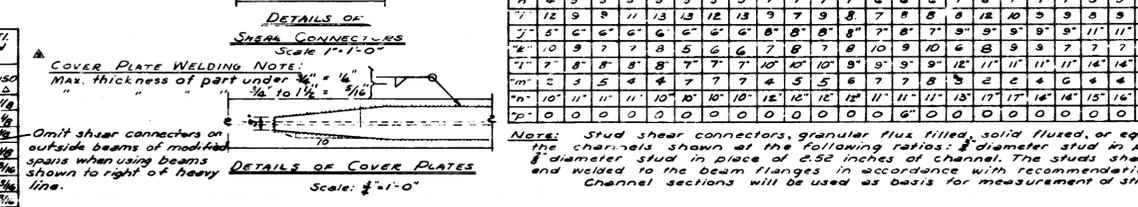
Mark	Size	Length	Pin Dia.	Number Required Each Span																															
S1	6	29'-10"	2 1/2	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	65	70	75	80	85	90
S2	4	3'-6"	3/8	106																															
S3	4	3'-7"	3/8	159																															
S4	4	5'-3"	1/2	58	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	104	112	120	128	136	144			
S5	4	4'-3"	1/2	56	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	100	112	120	128	136	144				
S6	4	5'-4"	1/2	58	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	114	122	130	138	146				
S7	4	5'-0"	3/8	12																															
PO1	5	5'-10"	1/2	28																															
PO2	3	2'-8"	1/2	36																															

BENDING DIAGRAM



DEFLECTION OF EXTERIOR BEAM FOR REGULAR SPANS ONLY.

Span	REGULAR SPAN		POST SPACING FOR ALUM. RAILING		MODIFIED SPANS, EXTERIOR BEAMS REQUIRING COVER PLATE		POST SPACING FOR GUARD RAILING			DUAL LOAD DEFLECTION		VALUES OF "d" AND DEAD LOAD DEF. FOR OUTSIDE BEAMS OF MODIFIED SPANS																											
	Beam	Cover Plate	a	b	c	Beam	Cover Pl.	a	b	c	Int.	Ext.	24WF76	24WF94	30WF108	30WF130	36WF150	36WF170	42WF188	42WF210	48WF230	48WF250	54WF270	54WF290	60WF300	60WF330	66WF350	66WF390	72WF420	72WF450	78WF480	78WF510	84WF540	84WF570	90WF600	90WF630			
35	24WF76	7'-4" x 21'-0"	8'-4"	8'-4"	2	24WF76	4'-2" x 12'-0"	5'-7"	5'-8"	4	2'-2"	2'-2"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"	2'-17"



DETAILS OF STANDARD 35'-90' COMPOSITE I-BEAM SPANS

SPAN LENGTHS	Channel Size	Regular Span	Modified Span	G	H
35-42	12C207	5	5	5	3 1/2
43-49	12C207	7	7	7	5
50-75	15C33.9	8	8	8	7
80-90	15C33.9	8	8	8	8

*Steel for these beams and cover plates shall conform to the specifications for Structural Steel for Welding, A.S.T.M. Designation A373.

LOADING: H20-S16 (A.A.S.H.O. 1957) and Special Intermediate Loading
 INTERIOR BEAM: 2-24,000# unless spaced @ 4'-0" centers
 EXTERIOR BEAM: 75% + 11 (w/11' d/W)

UNIT STRESSES:
 Class S Concrete (n=10): 1,200 psi
 Structural Steel: 18,000 psi
 Reinforcing Steel: 20,000 psi

DIAPHRAGM TABLE:

Span	Channel Size	Regular Span	Modified Span	G	H
35-42	12C207	5	5	5	3 1/2
43-49	12C207	7	7	7	5
50-75	15C33.9	8	8	8	7
80-90	15C33.9	8	8	8	8

NOTE:
 This drawing is to be used with drawing no. 5462. For general notes see drawing no. 5462.
 Changed reinforcing bars S168 from 3/8" to 1/2" - 3-40-60
 Changed Shear Connector for 85' Span from 12" to 10" - 4-23-60
 Revised Cover Plate Welding Note & Cover Pl. sizes 7-6-10-6-8
 Changed curb for Plate Guard Bridge Railing - 5-29-61. CKD CEV 5-29-61

DETAILS OF STANDARD 35'-90' COMPOSITE I-BEAM SPANS
 28' CLEAR ROADWAY 1'-6" & 1'-7" CURBS
 ROADWAY: 1/4" Parabolic Crown 0.0104 X SLOPE
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: E.R.N. DATE: 5-22-57
 CHECKED BY: F.E.B. DATE: 6-11-57
 BRIDGE NO. DRAWING NO. 5472

J.P. Carlson

