

320

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	F-01-2(20)		1	
STATE JOB NO. 7525					

STATE OF ARKANSAS  
STATE HIGHWAY COMMISSION

PLAN OF PROPOSED BRIDGES  
ARKADELPHIA-HOT SPRING CO. LINE  
BRIDGE WIDENING  
CLARK COUNTY  
FED. AID PROJECT NO. F-01-2(20)  
ROUTE 67 SEC. 6  
JOB NO 7525

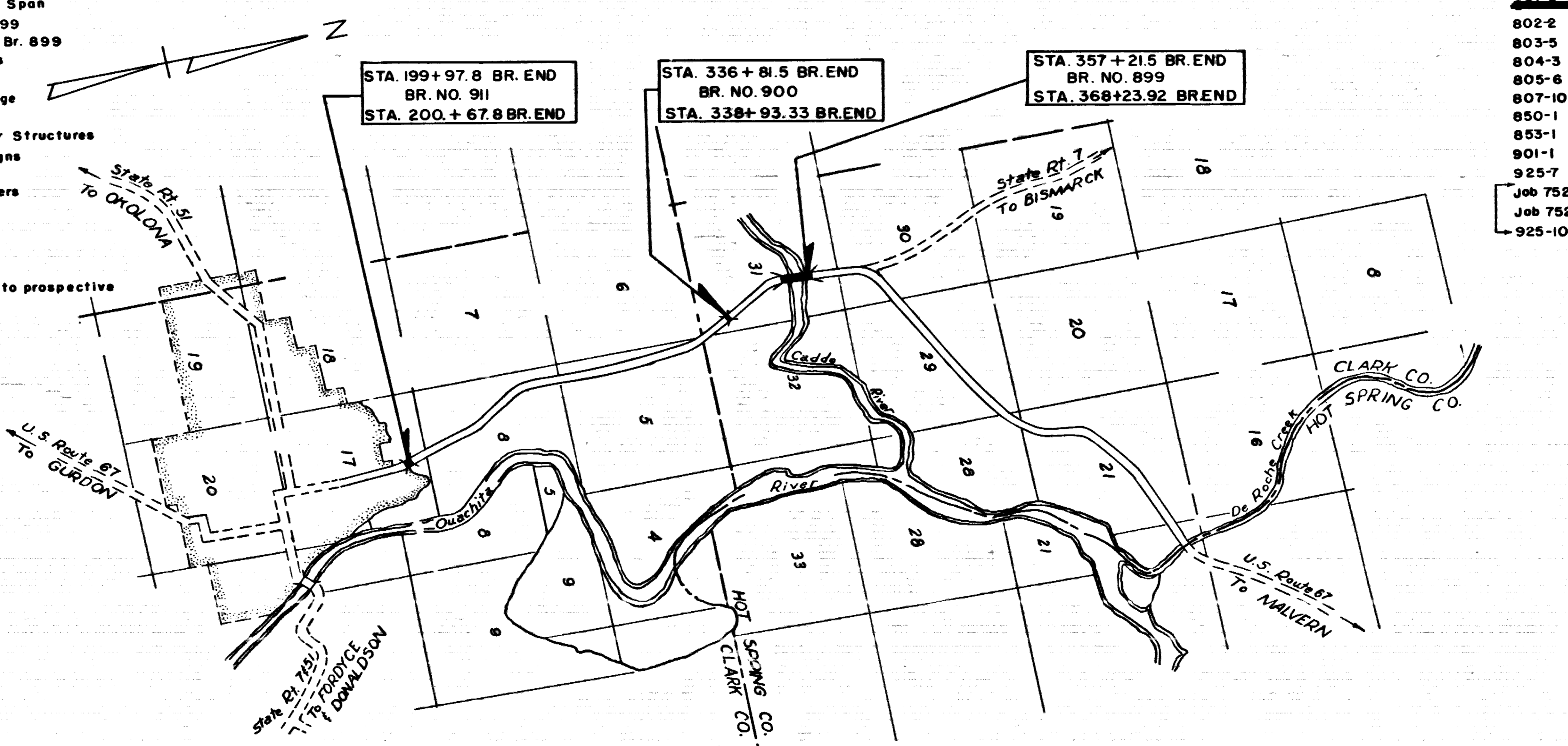
SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION  
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION  
ADOPTED MARCH 1, 1940 WITH THE SPECIAL PROVISIONS LISTED BELOW

PAMPHLETS	PART
I	
II	7, 8A, 8B, 8C & 9
IX	

No.	SPECIAL PROVISIONS
7-9	Required Contract Provisions for Federal-Aid Projects
2-1	Competency of Bidders
2-2	Equipment List Required
2-4	State License for Contractors
3-9	Award of Contract
8-2	Employment of Labor
8-7	Liquidated Damages
9-5	Partial Payments
9-7	Common Carrier Rates
9-9	Federal Excise Tax on Freight Shipments
802-2	Precast Concrete Products
803-5	Bar Reinforcement (20,000 p.s.i. design)
804-3	Concrete Piling
805-6	Steel Plate Guard
807-10	Assembly of Structural Joints Using High Strength Steel Bolts
850-1	Engineers Field Office
853-1	Machine Mixing
901-1	Concrete for Structures
925-7	Revision Article 925.2(a)
Job 7525	Remodeling Existing Bridges and Maintenance of Traffic
Job 7525	Coordination of Work
925-10	Guard Fences

SHEET NO.	DRWG. NO.	TITLE
1	9359	Title Sheet
2	9360	Summary of Bridge Quantities
3	9361	Layout of Bridge Over Mill Creek Br. 911
4	9362	Layout of Bridge Over Caddo River Relief Br. 900
5	9363 & 9364	Layout of Bridge Over Caddo River Br. 899
6	9365	Details of Widening Substructure Br. 911
7	9366	Details of Widening Superstructure Br. 911
8	9367	Details of New Pier No. 3, Br. 899
9	9368	Details of Composite I-Beam Spans, Br. 899
10	9369	Details of Widening Substructure, 30' R.C.D.G. Spans (3 Girder Type) Br. 899
11	9370	Details of Widening Superstructure, 30' R.C.D.G. Spans (3 Girder Type) Br. 899
12	9371 & 9372	Details of Detour Bridge Over Caddo River
13	2273-A	Details of Existing Std. 30' R.C.D.G. Spans & Concrete Pile Bents (4 Girder Type)
14	1866	Details of Existing Substructure Br. 911
15	1042	Details of Existing 35' R.C.D.G. Spans 30' Skew
16	2272	Details of Existing 30' R.C.D.G. Spans (3 Girder Type)
17	2273	Details of Existing 30' R.C.D.G. Spans (4 Girder Type)
18	3536 & 3537	Details of Existing 200'-3" Truss Span
19	1881	Details of Existing Abut. No. 1 Br. 899
20	1882	Details of Existing Piers 1, 2, 3, & 4 Br. 899
21	2382	Details of Precast Concrete Piles
22	GR-7	Steel Plate Guard
23	* 1888	Embankment Construction at Bridge Ends and Backfill for Structures
24	* 1891	Basis for Computing Excavation for Structures
25	* 1896	Standard Barricades Warning and Signs
26	1897	Installation of Warning Signs
27	2389	Bridge Name Plates & R/W Markers
28		Details of Detour Bridge I-Beams as Originally Fabricated

\* This Standard not normally included in Plans sold to prospective bidders but may be had upon request.



LAYOUT  
Scale: 1" = 3000'  
FINAL LENGTH  
LENGTH OF PROJECT- 1384.25' or 0.262 Miles  
LENGTH OF BRIDGES- 1384.25' or 0.262 Miles  
LENGTH OF EMBANKMENT-  
LENGTH OF JOB- 1384.25' or 0.262 Miles

ARKANSAS STATE HIGHWAY DEPT.
RECOMMENDED FOR APPROVAL
BRIDGE DESIGN ENGINEER
RECOMMENDED FOR APPROVAL
ROADWAY DESIGN ENGINEER
RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER
APPROVED
CHIEF ENGINEER
DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS
APPROVED
DISTRICT ENGINEER
DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJECT YEAR	FINANCIAL YEAR	SHEET NO.	TOTAL SHEETS
5	ARK.	701-200		2	
JOB NO.		7525			

SUMMARY OF BRIDGE QUANTITIES - JOB 7525

CODE NO.	BRIDGE NO.	ITEM NO.	ITEM		103	103	103	SP & B02	SP & B02	SP & B02	SP & B03	SP & B04	SP & B05-G	SP & B07	B10	909	SP125-10	929	SP Job 7525	
			UNIT OF BRIDGE	UNIT	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	LBS.	LIN. FT.	LIN. FT.	LBS.	LIN. FT.	C.Y.	LIN. FT.	EACH	REMODELING EXISTING BRIDGES & MAINT. OF TRAFFIC COMPLETION	
X031	899	Bent No. 1			12				1038		700	68	775			34	57	1	Re-grade steel in place to provide subgrade	
		Bents No. 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 25							54.60		7038	925							Sho wire so fabric	
		Bents No. 3, 5, 7, 9, 11, 13, 15, 17, 20, 22, 24 & 26							48.48		6298	875							Har	
		Abut. No. 1			3				078		76							57	apula	
		Pier No. 1							430		691	80							posts	
		Pier No. 2							1.03		220									linear
		Pier No. 3				308		125.38		77.79	9396				1,325					ends
		Pier No. 4							0.94		160									All
		Pier No. 5							430		691	80								Brk
		Span No. 1							16.24		3261		5800							5 con
		Spans No. 2-26							420.00		84,121		1500.00							
		Span No. 27							17.10		4,609		60.00							
		Spans No. 28 & 31							35.36		9427		120.00		142					
		Spans No. 29 & 30							195.57		24,254		400.00		312,537					
		Span No. 32							18.16		4772		6750		142					
		Bent No. 27							4.20		602	85								
Totals Bridge 899					15		125.38	781.24	77.79	156,396	2113	2213.25	313,173	1,325	34	114	1	85%		
X021	900	Bents No. 1 & 8			24				20.76		1,400	110	15.50			121	114	1		
		Bents No. 2, 4 & 6							12.12		2,311	185								
		Bents No. 3, 5 & 7							12.60		1,624	185								
		Spans No. 1 & 7							32.48		4,522		120.80							
		Spans No. 2-6							84.00		16,235		300.00							
Totals Bridge No. 900					24			161.96		28,092	480	436.30			121	114	1	10%		
X021	911	Abut. No. 1 & 2			13	35	7				125					52		1		
		Bent No. 1			7				14.67		2,860									
		Span No. 1							43		13,241		91							
		Span No. 2							43		12,427		91							
Totals Bridge 911					20	35	7	100.67		28,518	125	182			52		1	5%		
Totals Job No. 7525					59	343	7	125.38	1043.87	77.79	213,006	2718.00	2,831.55	313,173	1,325	207	228	3	100%	

GENERAL NOTES

Reinforcing steel to be deformed bars of Intermediate grade unless modified by Special Provisions. The reinforcing steel is to be accurately located in the forms and firmly held in place by means of steel wire supports, sufficient in number to prevent displacement during the course of construction. The wire supports will not be paid directly but will be considered subsidiary to the item of "Reinforcing Steel."

Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approved secured before fabrication is begun.

Handrail to be steel plate guard of the type shown or an equivalent rigid type as approved by the Engineer. The rail including posts and fastenings shall be paid for at the unit price \$11.1 per linear foot for "Steel Plate Guard (10Ga)". Guard fence at bridge ends to be type A, 12Ga, as shown on Dwg. No. GR7.

All exposed corners to have 3/8" chamfer unless otherwise noted.

Bituminous felt joints of roofing felt are not to be paid for directly but are to be considered as subsidiary to the item "Class 3 Concrete for Bridges."

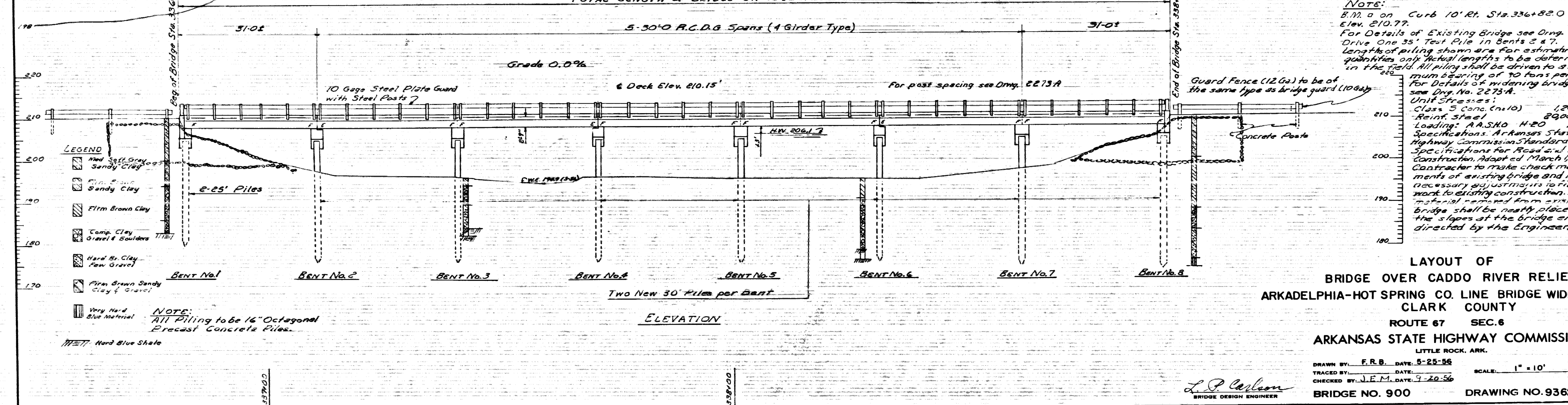
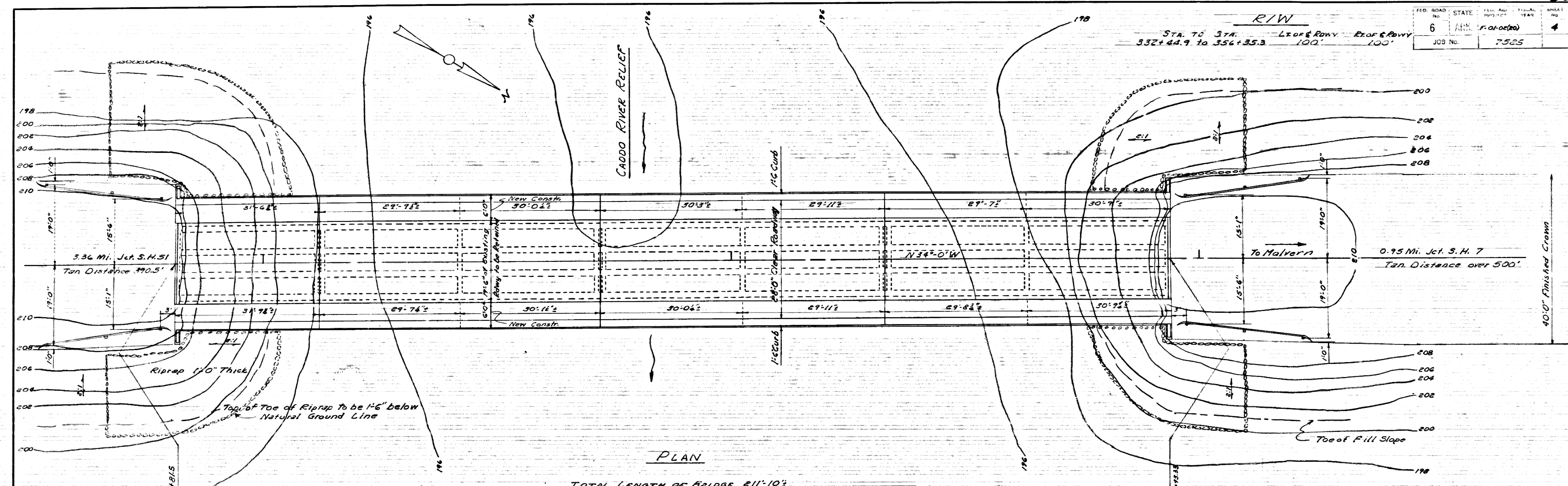
SUMMARY OF BRIDGE QUANTITIES  
ARKADELPHIA-HOT SPRING CO. LINE  
BRIDGE WIDENING  
CLARK COUNTY  
ROUTE 67 SEC. 6  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: K.E.C. DATE: 7-7-58  
CHECKED BY: J.E.M. DATE: 2-27-59  
BRIDGE NO. 899,900 & 911 DRAWING NO. 9360

L.P. Carlson  
BRIDGE DESIGN ENGINEER

8/11/58 J.P.

8/11/58 J.P.



LAYOUT OF  
BRIDGE OVER CADDO RIVER RELIEF  
ARKADELPHIA-HOT SPRING CO. LINE BRIDGE WIDENING  
CLARK COUNTY  
ROUTE 67 SEC. 6  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: F.R.B. DATE: 5-25-56  
TRACED BY: DATE: 9-20-56  
CHECKED BY: J.E.M. DATE: 9-20-56  
BRIDGE NO. 900  
DRAWING NO. 9362

SCALE: 1" = 10'

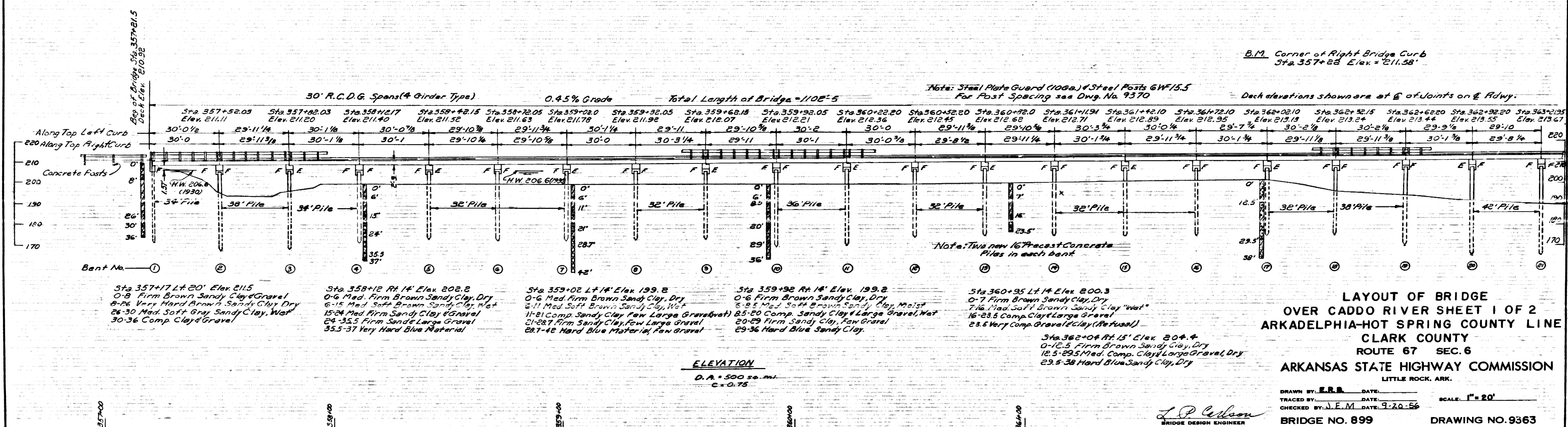
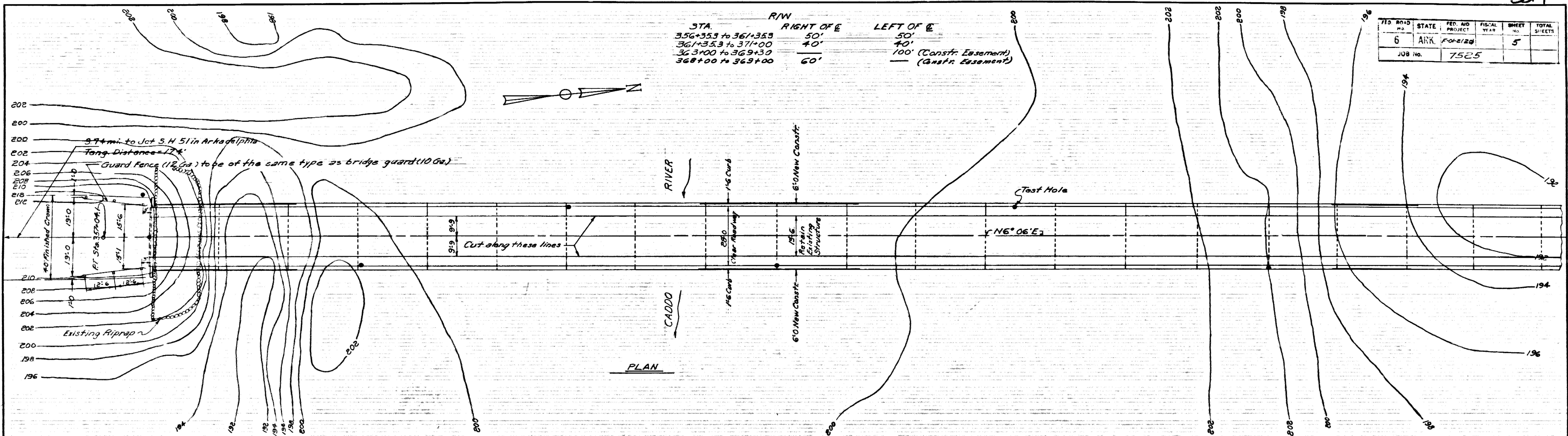
323

9362

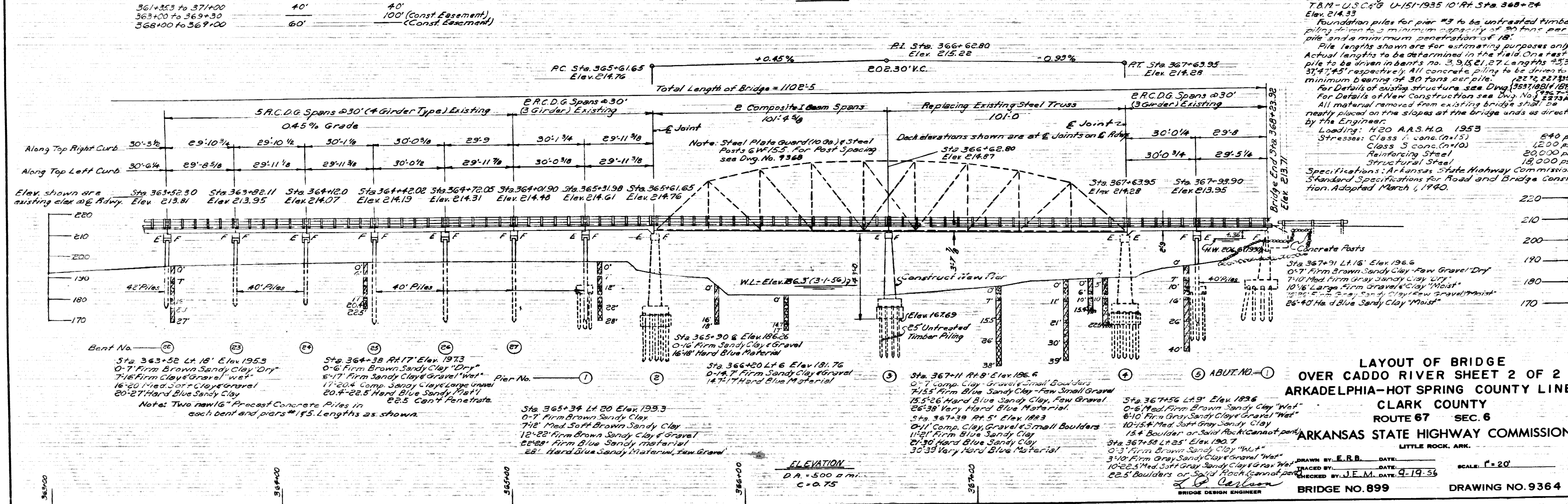
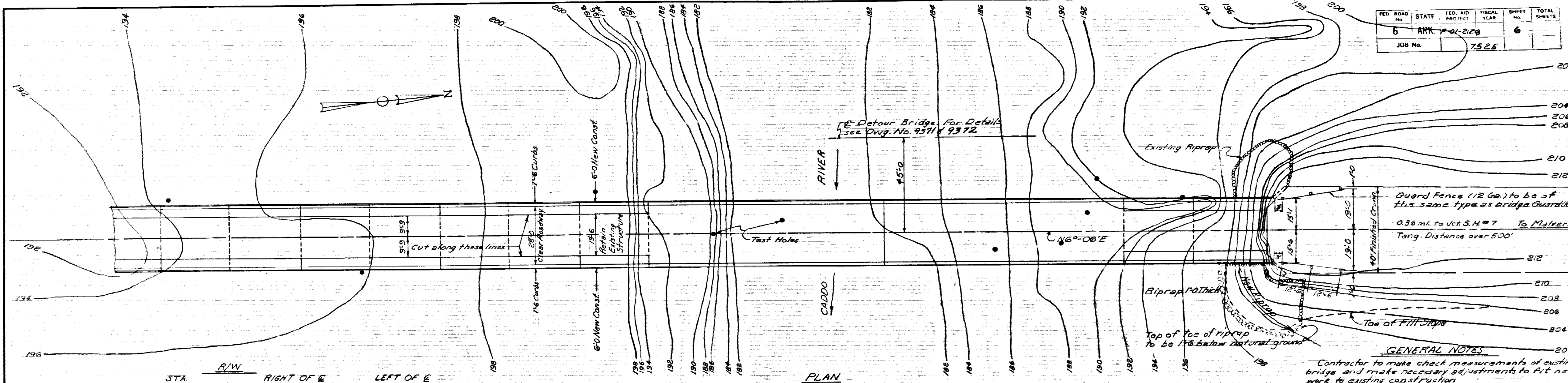
324

FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	FOA-2128	75-25	5	
JOB NO.					

STA.	R/W	RIGHT OF E	LEFT OF E
356+353 to 361+353		50'	50'
361+353 to 371+00		40'	40'
363+00 to 369+30			100' (Constr. Easement)
368+00 to 369+00		60'	100' (Constr. Easement)



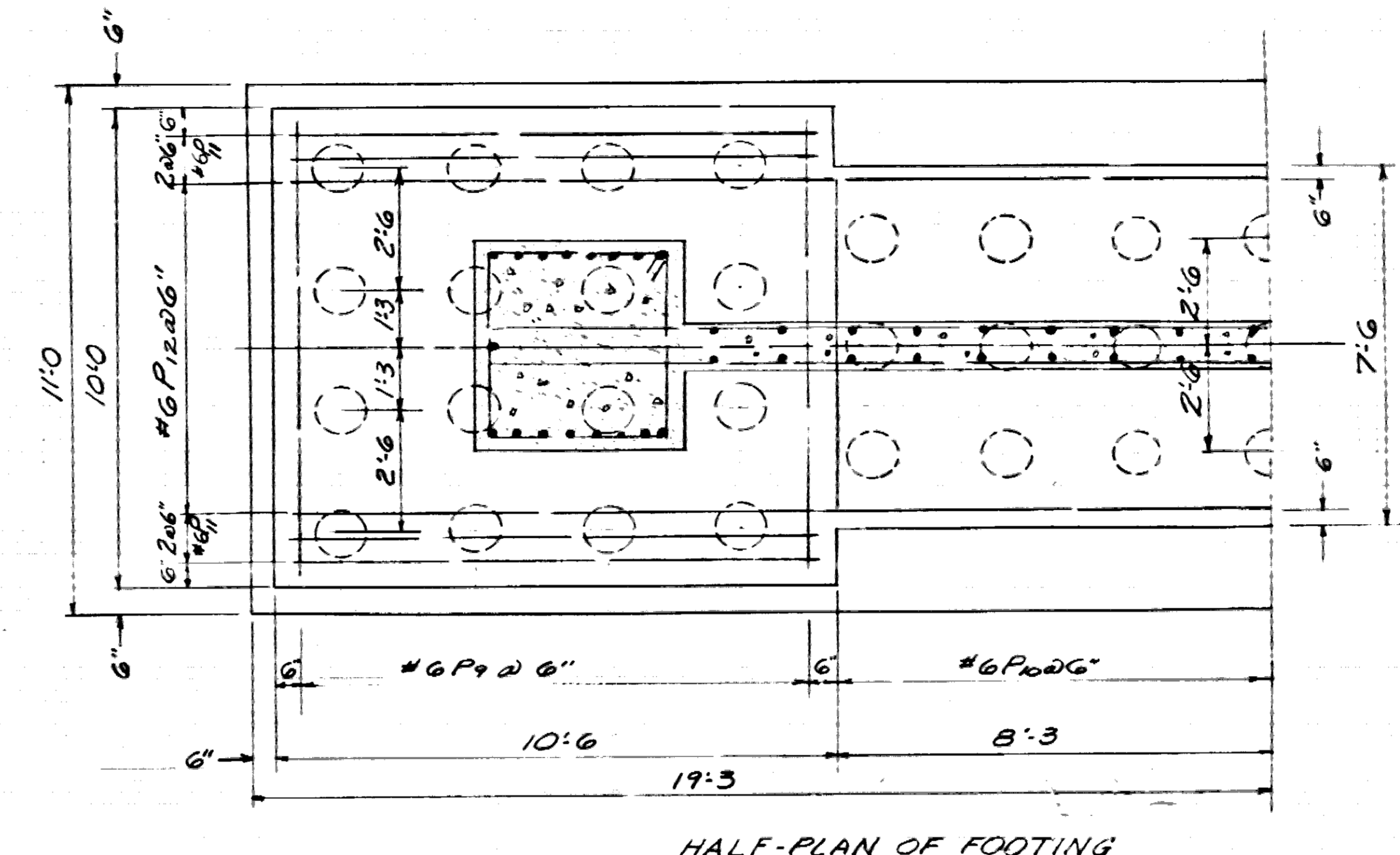
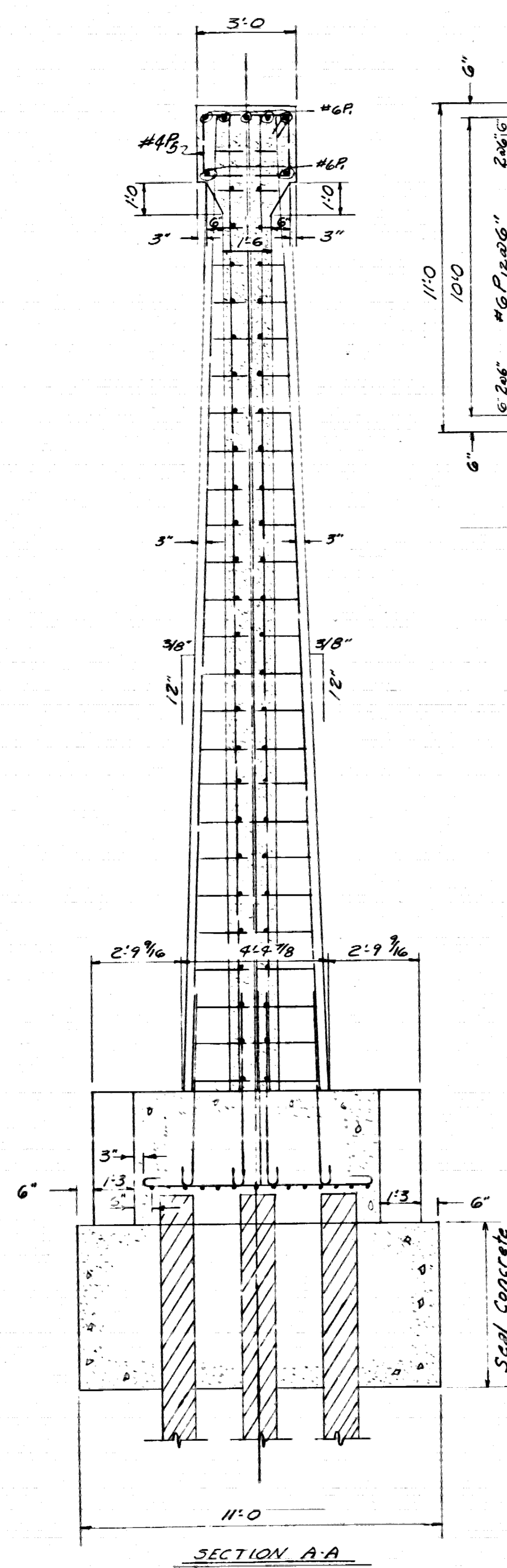
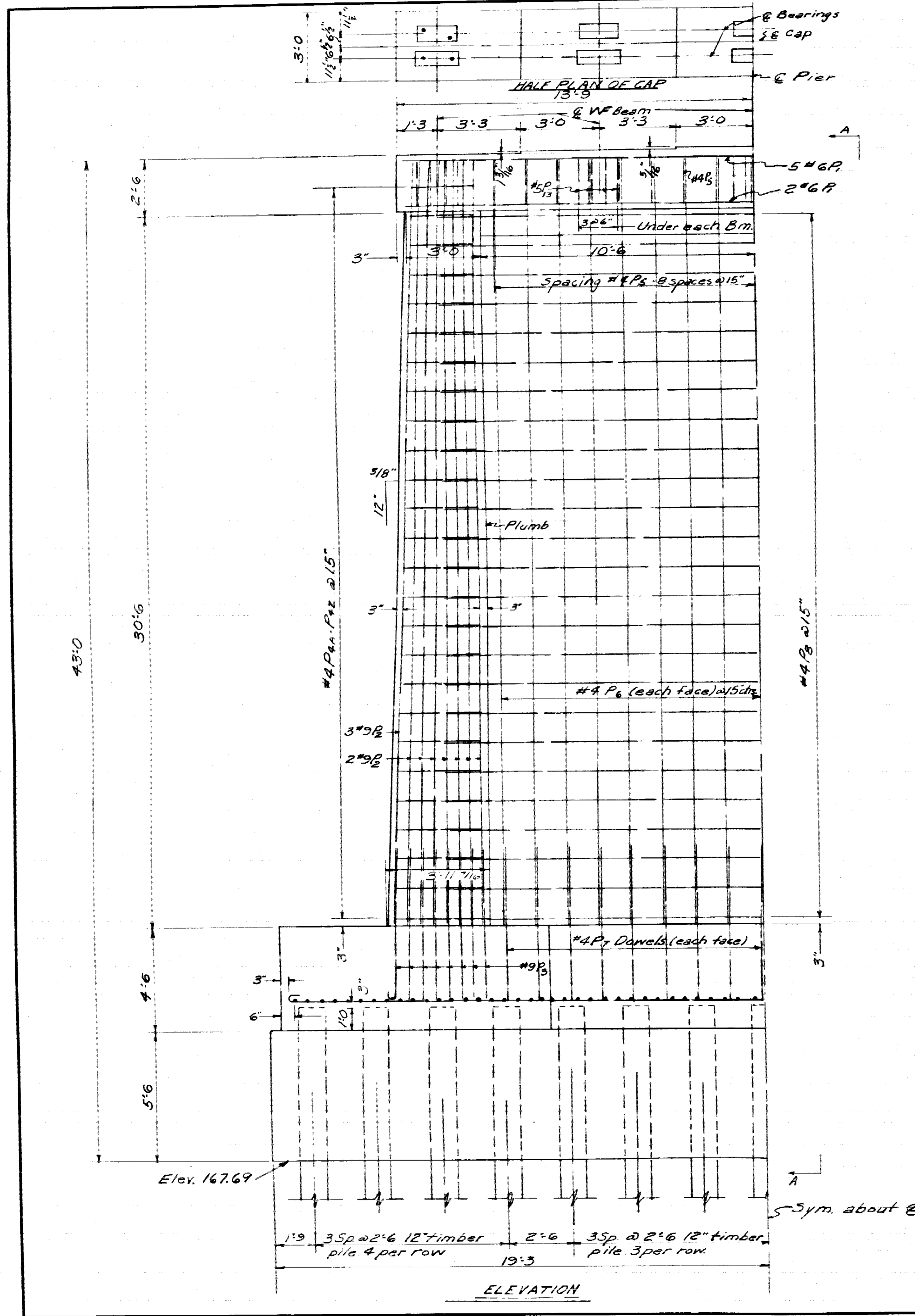
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	7-01-2129		6	
JOB NO.				7525	



**LAYOUT OF BRIDGE OVER CADDO RIVER SHEET 2 OF 2**  
**ARKADELPHIA-HOT SPRING COUNTY LINE**  
**CLARK COUNTY**  
**ROUTE 67 SEC. 6**  
**ARKANSAS STATE HIGHWAY COMMISSION**  
**LITTLE ROCK, ARK.**

DRAWN BY: E.R.B. DATE: 9-19-53  
 CHECKED BY: J.E.M. DATE: 9-19-53  
 BRIDGE NO. 899 DRAWING NO. 9364

FED. ROAD DIST. NO.	STATE	1/4" = 1' SCALE	SHEET	TOTAL SHEETS
	ARK.		9	
PROJECT NO.	7525			



BAR LIST

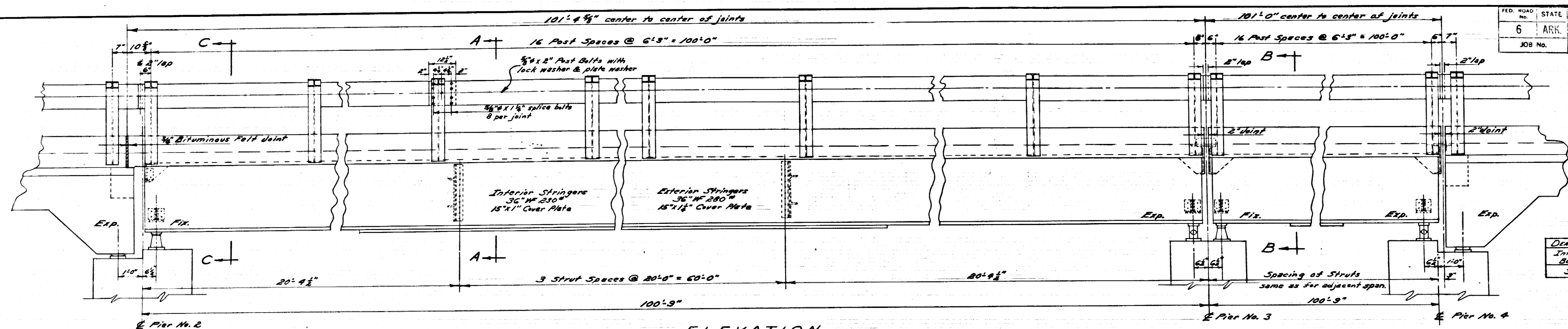
MARK	SIZE	NO	LENGTH	BENDING DIAGRAM
P1	6	7	27'-0	
P2	9	34	32'-9	
P3	9	34	8'-2	
P4+P5	4	52	12'-10 1/2 Avg	
P6		17	9'-11	
P7		34	32'-9	
P8		34	5'-4	
P9	4	50	24'-4	
P10	6	40	10'-11	
P11		34	7'-11	
P12		8	11'-5	
P13	6	14	38'-5	
P14	5	20	6'-8	

All dimensions are C. to C. of bars.

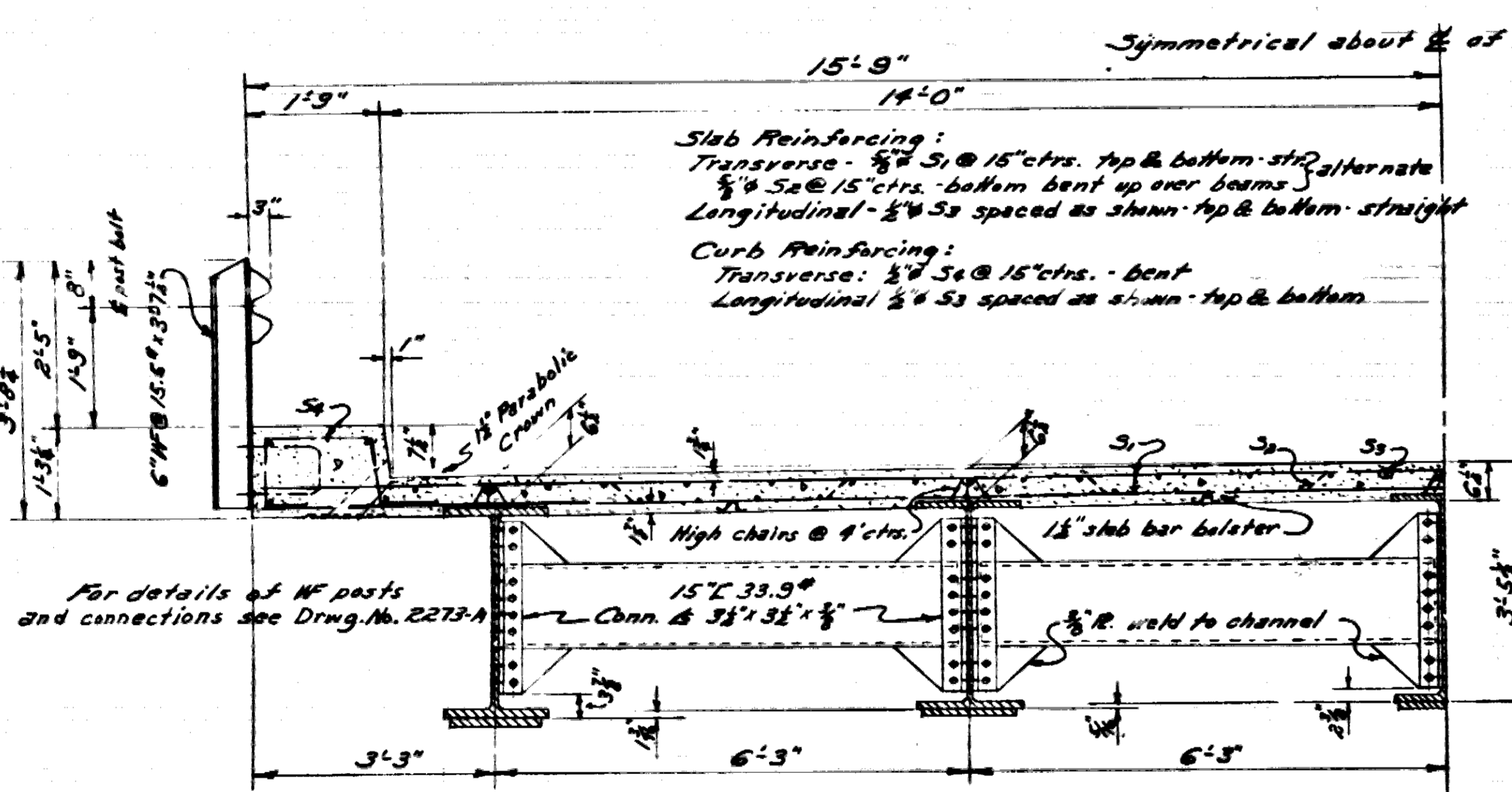
NOTES  
 All concrete to be Class A unless noted.  
 All corners to be chamfered 3/4" unless other-  
 wise noted.  
 For Superstructure Details see Div. No. 9368  
 For general notes see Div. No. 9360

DETAILS OF NEW PIER NO. 3  
 BRIDGE OVER CADDO RIVER  
 ARKADELPHIA-HOT SPRING COUNTY LINE  
 CLARK COUNTY  
 ROUTE 67 SEC. 6  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 DRAWN BY: E. R. B. DATE: 2-5-57  
 CHECKED BY: J. E. M. DATE: 2-20-57  
 BRIDGE NO. 899 DRAWING NO. 9367

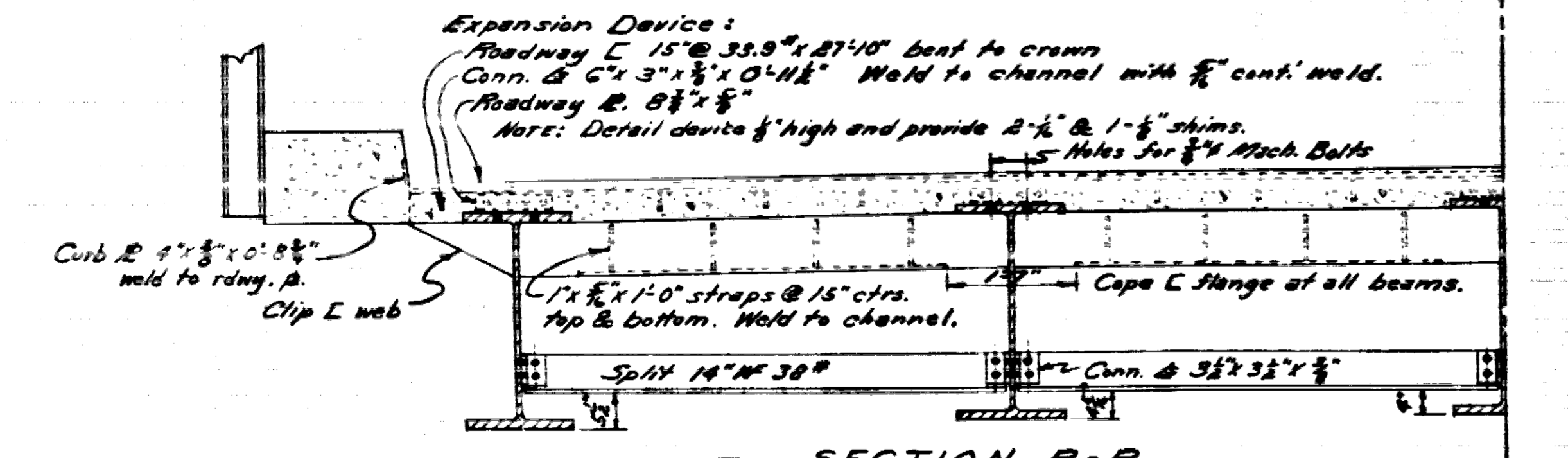
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FINANCIAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	F-01-2(20)		10	
JOB NO. 75-25					



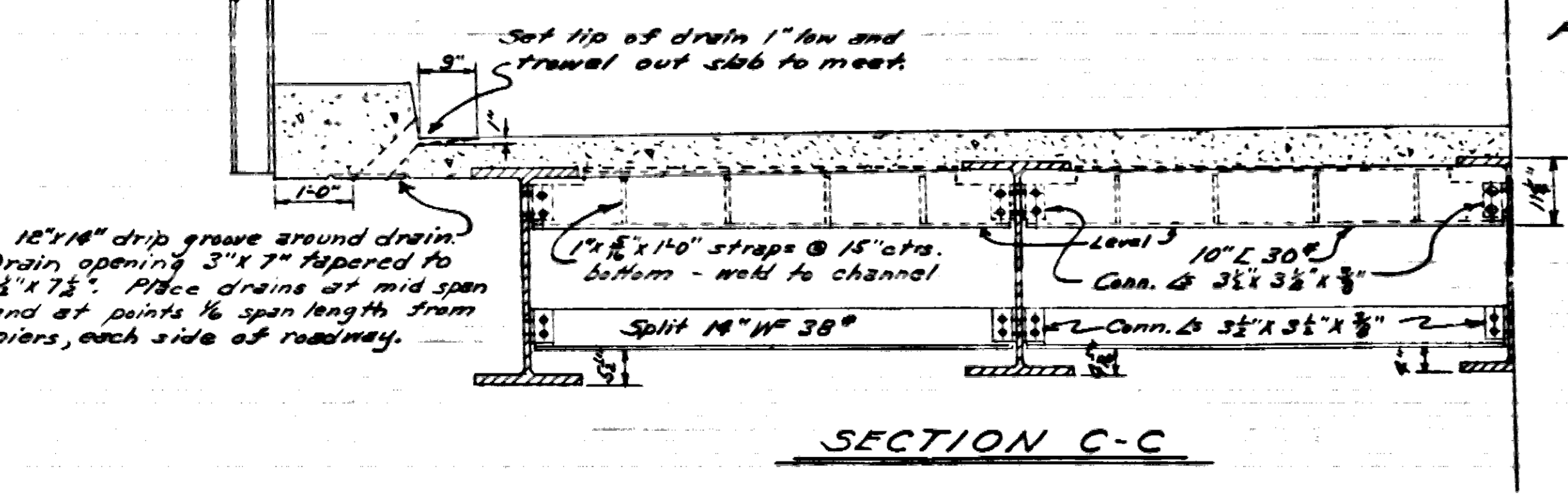
ELEVATION



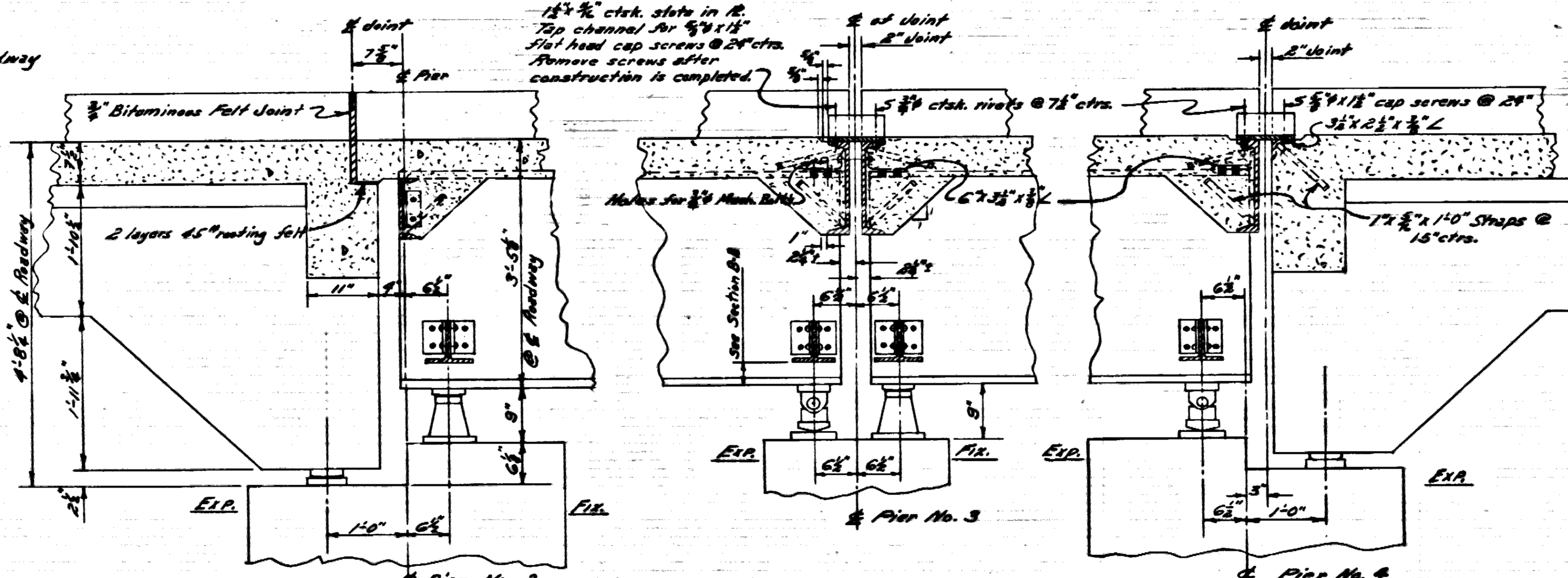
SECTION A-A



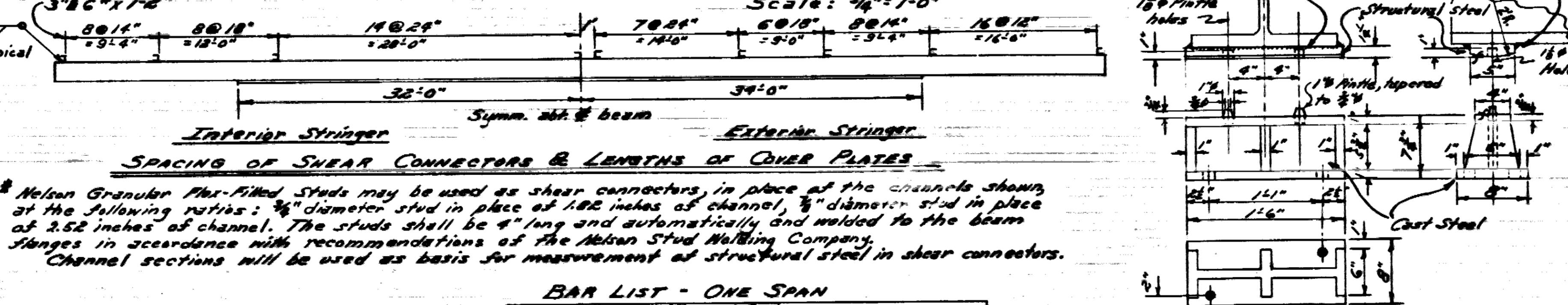
SECTION B-B



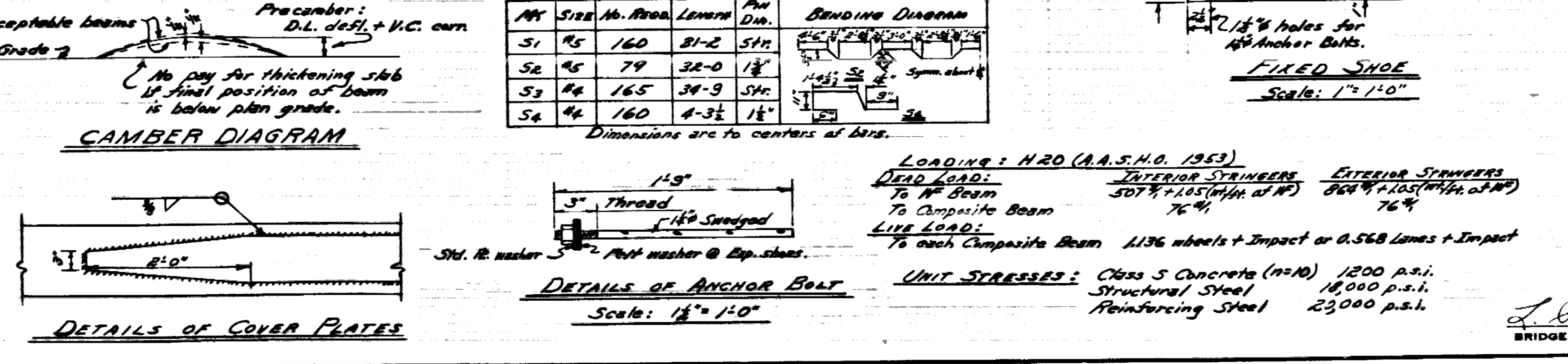
SECTION C-C



DETAILS OF JOINTS AT PIERS No. 2-4



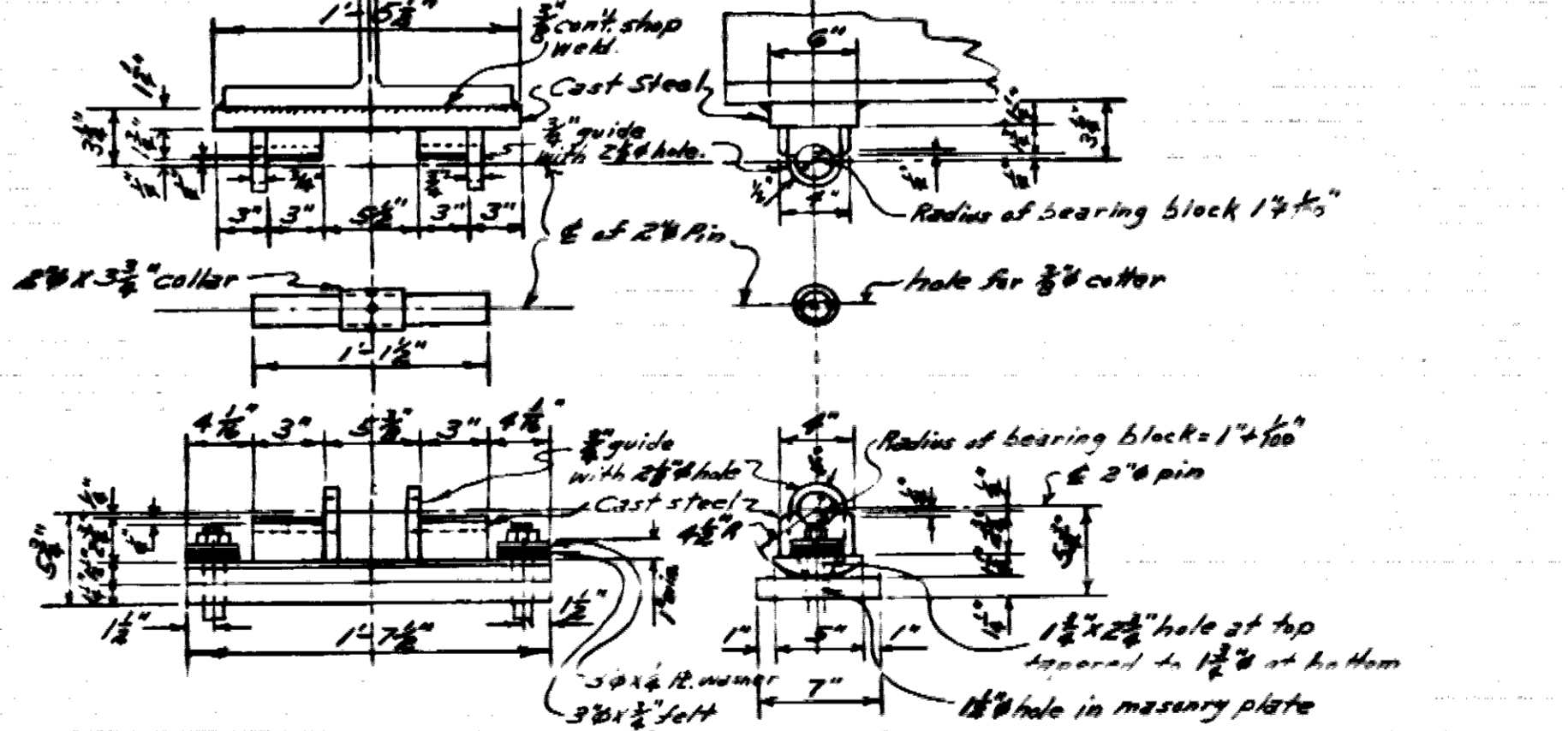
SPACING OF SHEAR CONNECTORS & LENGTHS OF COVER PLATES



BAR LIST - ONE SPAN

**GENERAL NOTES**

All concrete to be Class S. All exposed corners to be chamfered 3/4". Field connections for diaphragms to be riveted or bolted with high strength bolts. Rivets: 3/4". Open holes 3/4" except where noted otherwise. Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on basis of the least weight. All welded connections to be 3/8" fillet shop welds except as noted. All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, 5th Edition, 1956. Shop Paint: One coat of red lead and red linseed oil - All structural steel except surfaces in contact with concrete. Field Paint: 1st Coat White Lead Painted with Lamp Black, 2nd Coat Alum. Paint. All bearing plates and roadway expansion devices to be paid for as Structural Steel in Beam Spans. Bearings shall be finally selected in three layers of sand, compacted with red lead. The work and material are to be considered as subsidiary to the item "Structural Steel in Beam Spans" and will not be paid for directly. This drawing shows general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approved before fabrication is begun. In order to secure a good riding surface it will be required that the floor slab be struck off from curb to curb with approximately one third span length longitudinal strike-off. The strike-off shall be sufficiently stiff so as to have no appreciable vertical deflection. For other general notes see drawing No. 9360.



EXPANSION SHOE

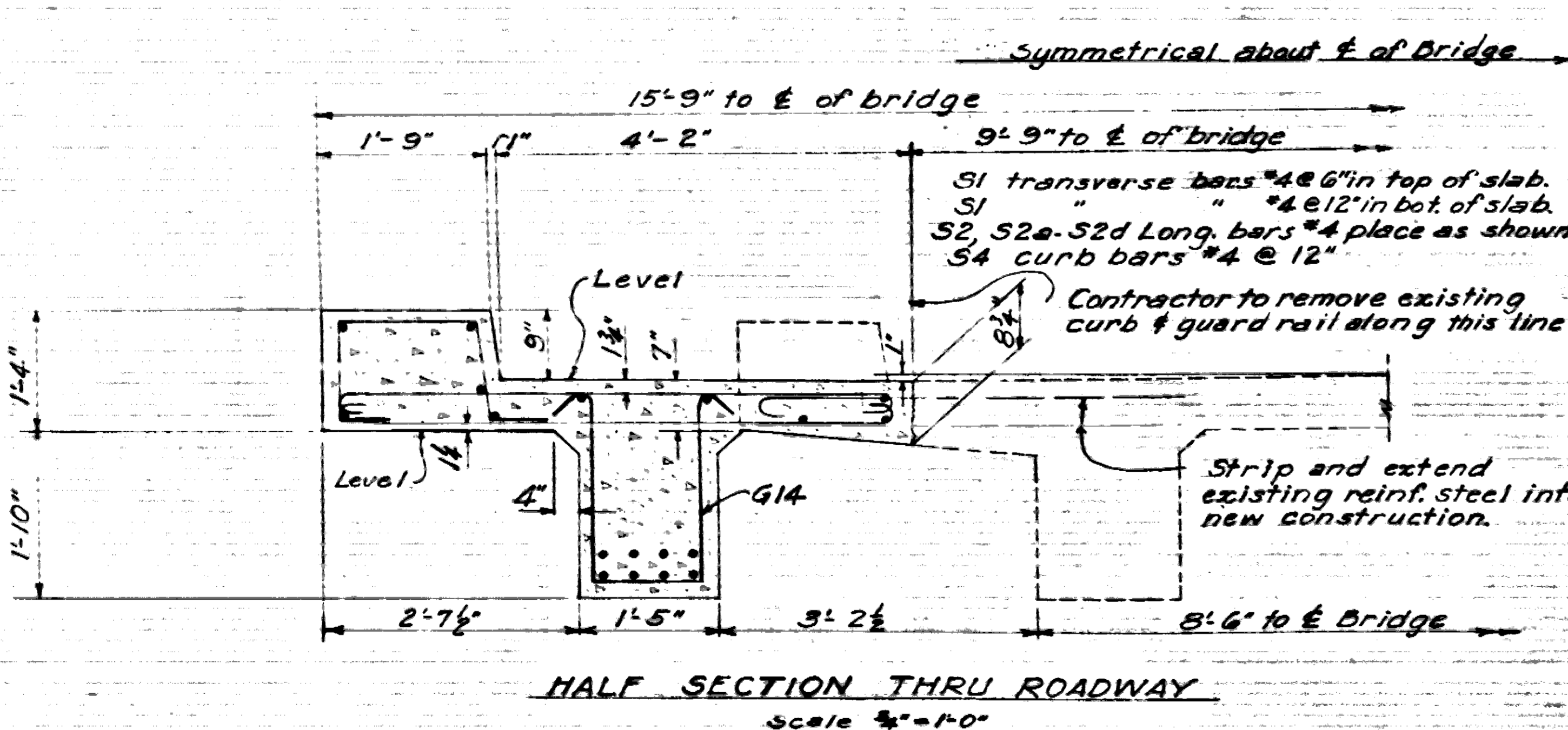
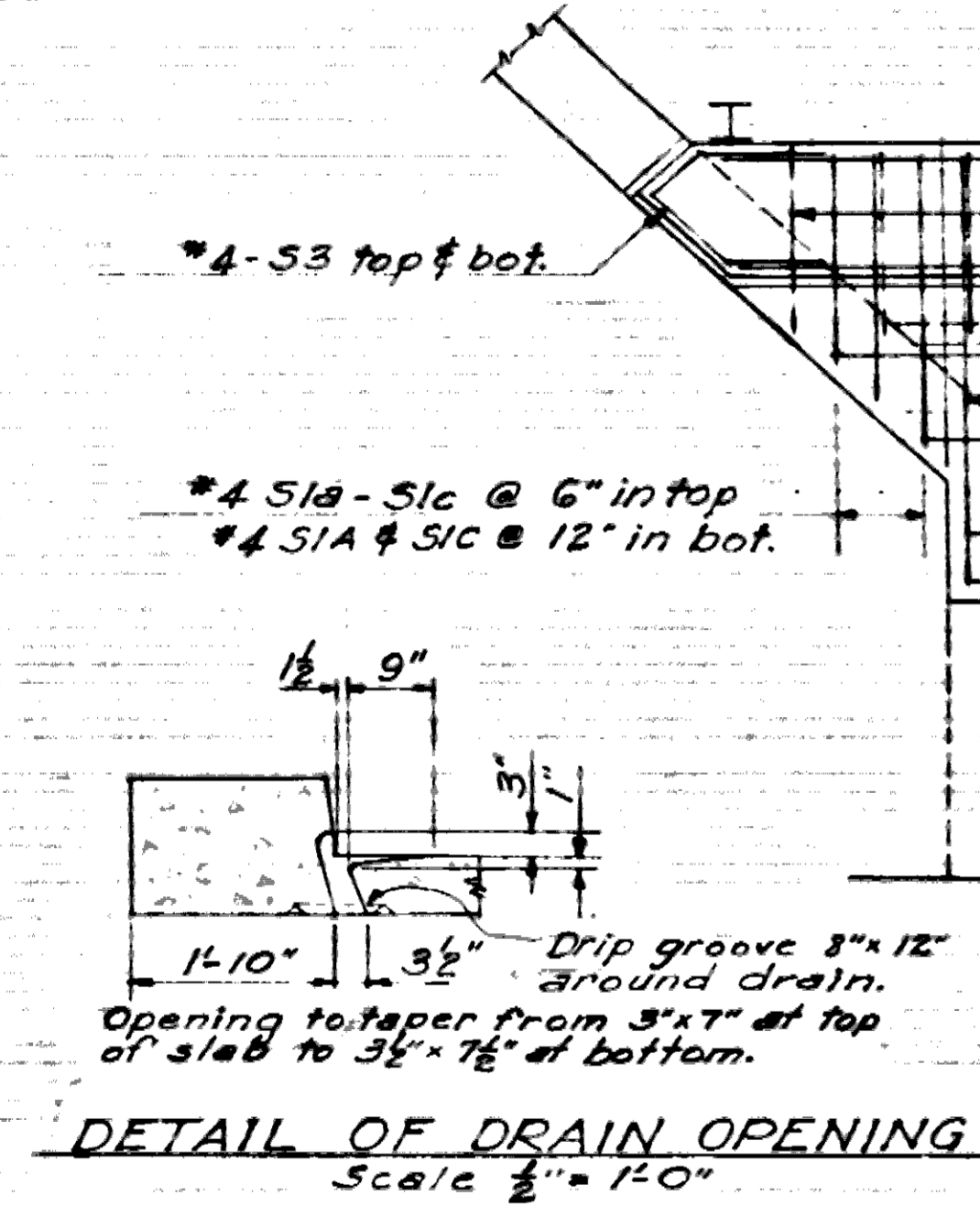
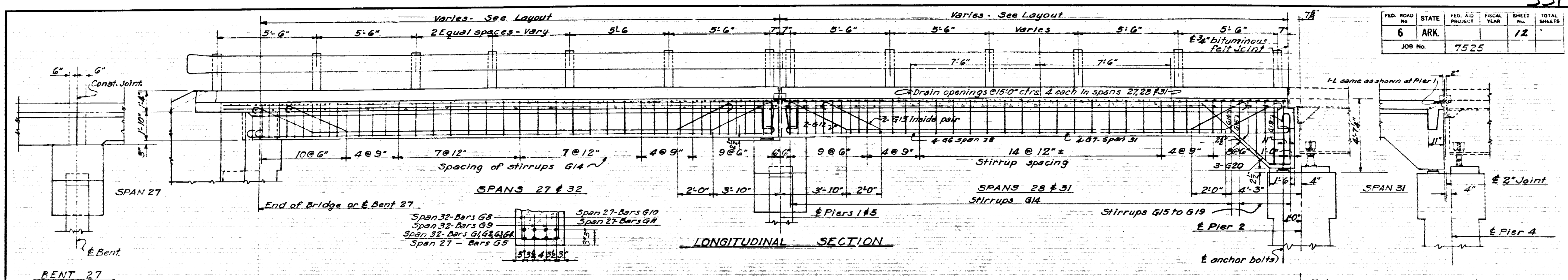
**DETAILS OF COMPOSITE I-BEAM SPANS BRIDGE OVER CADDO RIVER ARKADELPHIA - HOT SPRINGS CO. LINE CLARK COUNTY ROUTE 67 SEC. 6 ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARK.**

BRIDGE NO. 899

DRAWN BY: R.M. DATE: 10-9-56  
 TRACED BY: J.E.M. DATE: 11-2-56  
 CHECKED BY: J.E.M. DATE: 11-2-56  
 SCALE: 1/2" = 1'-0" except as noted  
 DRAWING NO. 9368



FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			12	
JOB No.	7525				



# BAR LIST - TOTALS FOR EACH SPAN

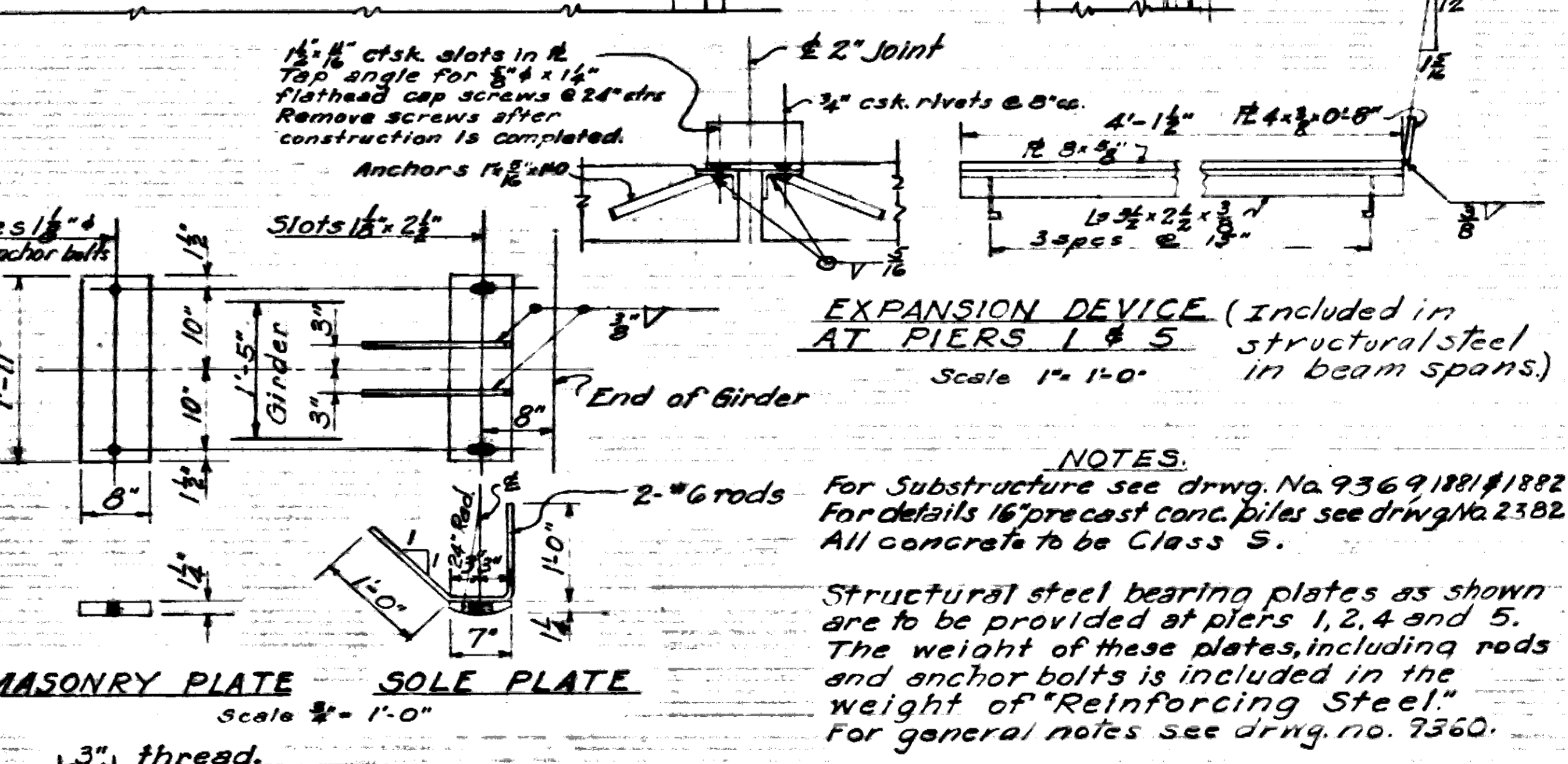
Ar 10

MARK	SIZE	NUMBER REQUIRED	LENGTH	A
S1	#4	102	170	6'-8"
S1a	#4	4	4'-9"	3'-9"
S1b	#4	2	4'-3"	3'-5"
S1c	#4	4	3'-9"	2'-9"
S2a	#4	6	29'-0"	
S2b	#4	2	29'-7"	
S2c	#4	2	30'-6"	
S2d	#4	10	31'-9"	
S2e	#4	20	29'-8"	
S3	#4	20	29'-8"	
S3a	#4	4	5'-0"	
S3b	#4	60	60	64
G1	#11	2	32'-7"	29'-7"
G2	#11	2	32'-10"	29'-10"
G3	#11	2	33'-2"	30'-2"
G4	#11	2	33'-6"	30'-6"
G5	#11	8	31'-5"	29'-5"
G6	#11	8	32'-1"	29'-1"
G7	#11	8	32'-1"	29'-1"
G8	#11	4	33'-2"	22'-7"
G9	#11	4	29'-2"	18'-7"

## BENDING DIAGRAM DIMENSIONS C/C OF BARS

MARK	SIZE	NUMBER REQUIRED	LENGTH	A
G10	#11	4	33'-0"	22'-5"
G11	#11	4	29'-0"	18'-5"
G12	#4	4	33'-2"	22'-7"
G13	#4	4	29'-2"	18'-7"
G14	#4	84	68	64
G15	#4	2	6'-0"	2'-1 1/2"
G16	#4	2	6'-0"	2'-5 1/2"
G17	#4	2	7'-8"	2'-11 1/2"
G18	#4	2	8'-8"	3'-5 1/2"
G19	#4	2	9'-8"	3'-11 1/2"
G20	#4	4	10'-0"	4'-1 1/2"
G20	#4	6	6	10'-10"
		*		

\* See Sect. E-E for additional bars G4 & G6 in girders of span 28 listed with pier 2 bars



**DETAILS OF WIDENING SUPERSTRUCTURE**  
30" RCD GIRDER SPANS - 3 GIRDER TYPE  
BRIDGE OVER CADDO RIVER  
ARKADELPHIA - HOT SPRING CO. LINE  
CLARK COUNTY  
ROUTE 67 SEC. 6  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

NOTES:  
For Substructure see drwg. No. 9369/188/1882.  
For details of precast conc. piles see drwg. No. 2382.  
All concrete to be Class S.  
Structural steel bearing plates as shown are to be provided at piers 1, 2, 4 and 5.  
The weight of these plates, including rods and anchor bolts is included in the weight of "Reinforcing Steel".  
For general notes see drwg. no. 7360.

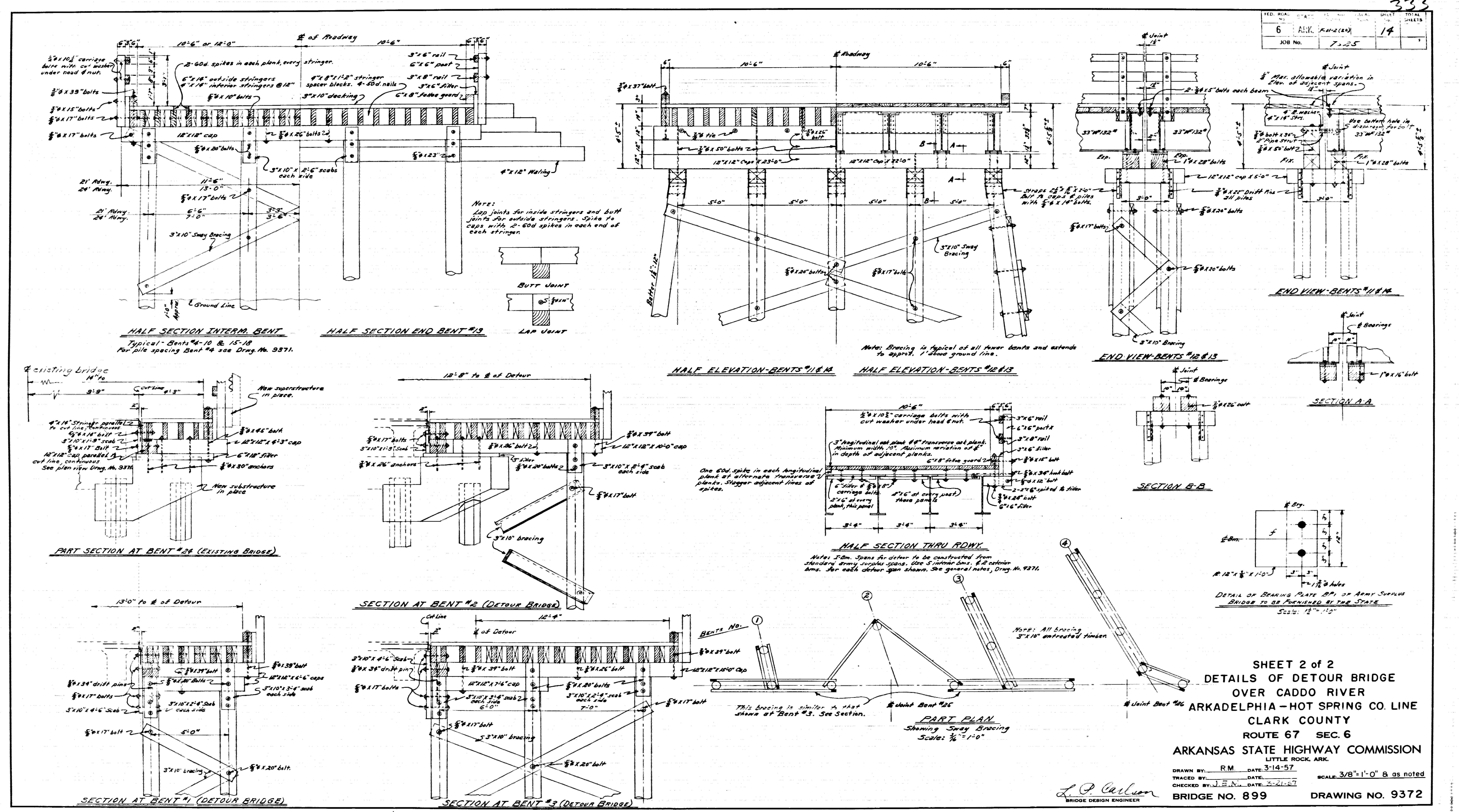
DRAWN BY: W.E.W. DATE: 8-14-88  
TRACED BY: DATE: 11-1-88  
CHECKED BY: F.P.P. DATE: 11-1-88  
BRIDGE NO. 899  
DRAWING NO. 9370

L.P. Carlson  
BRIDGE DESIGN ENGINEER

SCALE: 3/8" = 1'-0" OVER NOTED

1370





SHEET 2 of 2

DETAILS OF DETOUR BRIDGE  
OVER CADDO RIVER  
ARKADELPHIA - HOT SPRING CO. LINE  
CLARK COUNTY  
ROUTE 67 SEC. 6  
ANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

BY: RM DATE: 3-14-57  
BY:            DATE:             
BY: J.B.N.W. DATE: 2-22-57

SCALE: 3/8" = 1'-0" & as noted

GE NO. 899 DRAWING NO. 9372