

- BORING LEGEND**
- a - Med Firm Brown Sandy Clay, (moist)
 - b - Firm Gray Sandy Clay, (moist)
 - c - Med Firm Gray Sandy Clay, (wet)
 - d - Comp. Fine Gray Sand Water Bearing
 - e - Comp. Coarse Gray Sand Water Bearing
 - f - Soft Brown Sandy Clay, (wet)

GENERAL NOTES

Bench Mark - Nail in power pole, 36' Lt. Sta. 354+20. Elevation 132.26.

All piling shall be 16" Octagonal Precast Concrete and shall be driven to a minimum bearing capacity of 36 tons per pile, and to a minimum penetration of 20' below the natural ground. Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Drive one 40' test pile in Bent 2, and one 40' test pile in Bent 5

For details of substructure see Dwg. No. 546-1

For details of superstructure see Dwg. No. 546-B

For details of precast concrete piles see Dwg. No. 2382.

Concrete removed from existing Bridge deck shall be placed at the Bridge ends as directed by the Engineer.

Loading: H-15 AASHO 1957

Stresses: Class S Concrete (n=10) 1,200 psi

Reinforcing Steel 20,000 psi

SPECIFICAT: Kansas State Highway Commission Standard

Specifi: Highway Construction, Edition of 1959.

LAYOUT OF BRIDGE OVER
CANAL 43
CANAL 43, BOGGY & LITTLE BOGGY BAYOU
BRIDGES & APPROACHES
DESHA COUNTY
ROUTE 4 SEC. 17
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: F.E. DATE: 12-7-61

TRACED BY: C.E.V. DATE: 12-7-61

CHECKED BY: C.E.V. DATE: 12-7-61

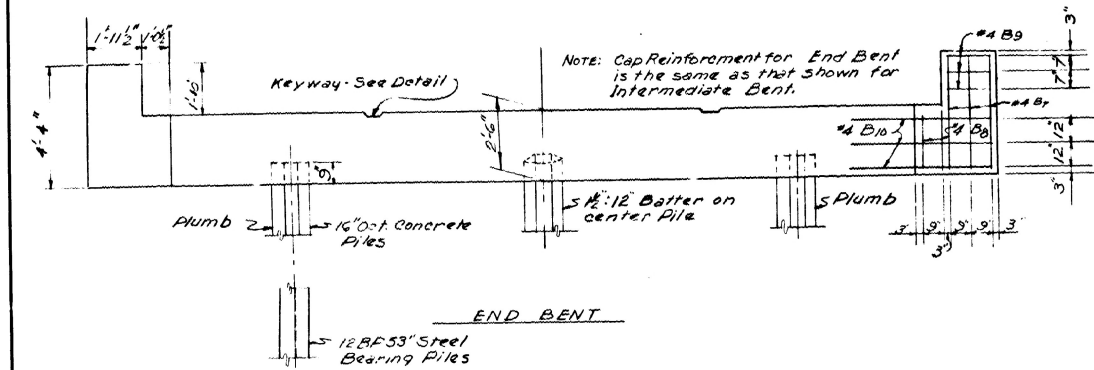
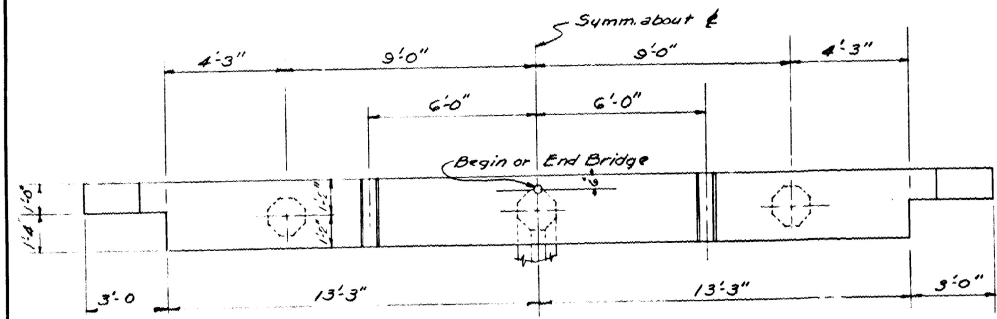
BRIDGE NO. 3592

DRAWING NO. 11714

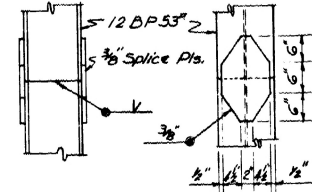
SCALE: 1"=10'

BRIDGE ENGINEER

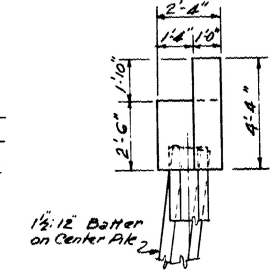
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.				
JOB No.					



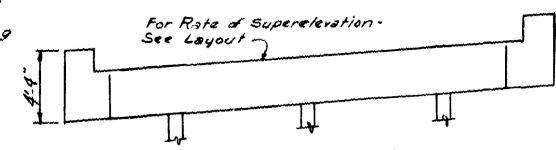
NOTE: The contractor may for his convenience and at his own expense provide as many as three splices per pile for steel bearing piling. Minimum spacing between splices shall be 5 feet.



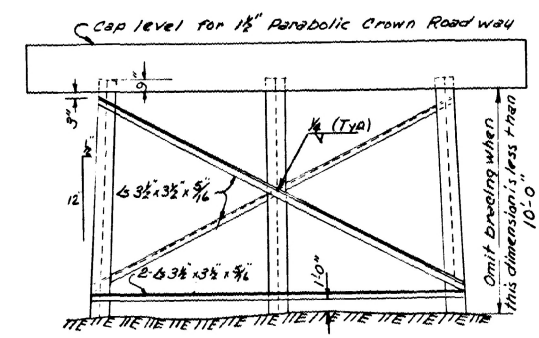
PILE SPLICE DETAIL
Scale: 3/4" = 1'-0"



END VIEW

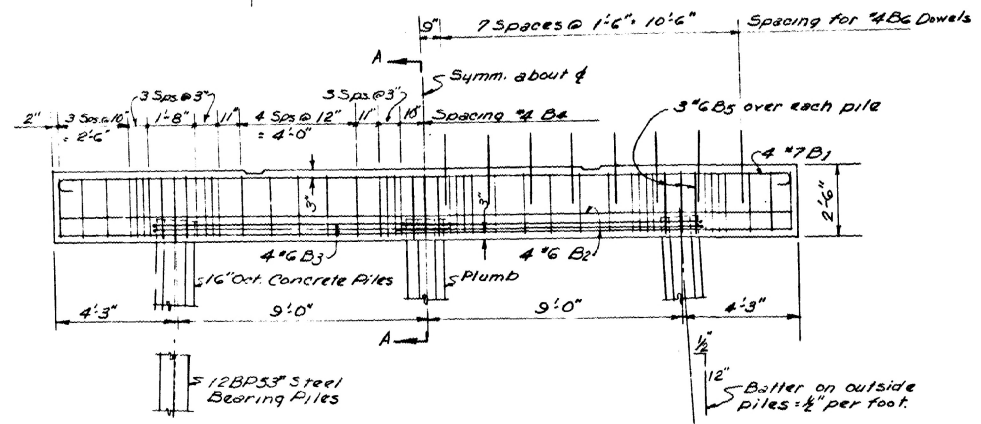
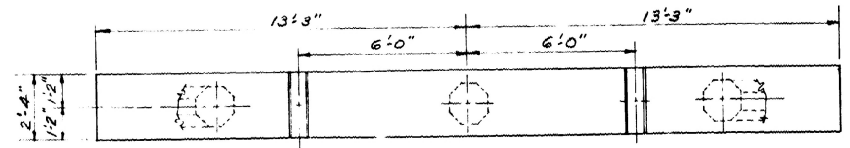


ELEVATION END BENT FOR SUPER-ELEVATED SPANS
Scale: 1" = 5'-0"

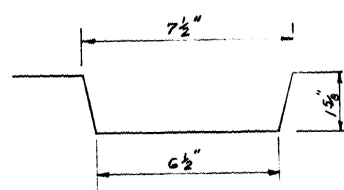


INTERMEDIATE BENT - STEEL PILES
Scale: 1/4" = 1'-0"

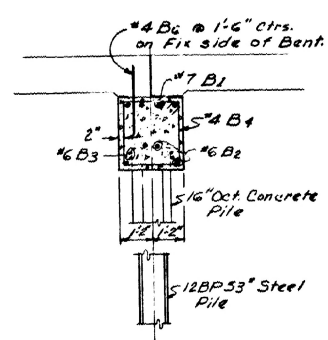
NOTE: The lengths of bracing members shall be determined in the field. Each member shall be one continuous angle and shall be welded to the steel bearing piles as shown. Angle bracing shall be measured and paid for as "Structural Steel in Beam Span".



INTERMEDIATE BENT



DETAIL OF KEYWAY
Scale: 3/8" = 1"



SECTION A-A

BAR LIST

Mark	Size	No. Required	Length	Pin Dia.	Bending Dia.
B1	#7	4	27'-10"	5/8"	
B2	#6	4	26'-2"	5/8"	
B3	#6	4	23'-4"	2 1/2"	
B4	#4	40	8'-9"	1 1/2"	
B5	#6	9	6'-2"	2 1/2"	
B6	#4	*	2'-6"	5/8"	

END BENT ONLY				
B7	#4	12	4'-0"	5/8"
B8	#4	8	2'-0"	5/8"
B9	#4	12	1'-7"	5/8"
B10	#4	12	5'-0"	5/8"

* 1/6 Req'd. for Fix-Exp.
32 Req'd. for Fix-Fix.

GENERAL NOTES
All Concrete to be Class R and to be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.
Reinforcing steel to be deformed bars of intermediate or hard grade. Shop lists and bending diagrams are to be submitted and approval secured before fabrication is begun.
All piling shall be driven to a minimum capacity of 30 tons per pile. Piling shall be either 12BP53 steel bearing piles, or 18" octagonal precast concrete piles as shown on the layout.
For details of Standard 25" R.C. Slab Span see Drawing No. 5463F.
For details of Standard 19" R.C. Slab Span see Drawing No. 5470.

SPECIFICATIONS: Arkansas State Highway Commission
Standard Specifications for Highway Construction, Edition of 1959.

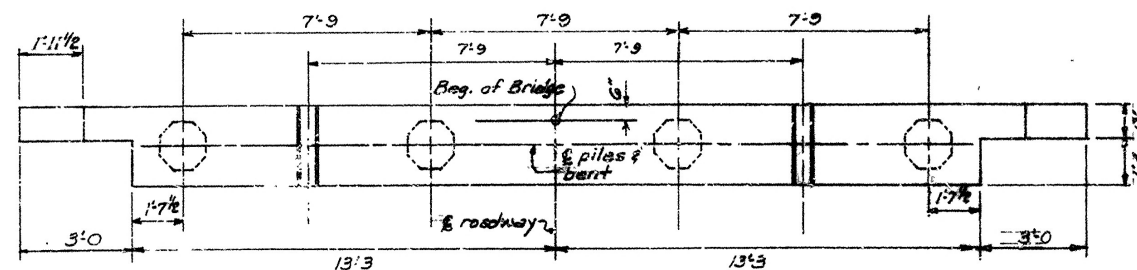
Revised pile splice note 2-23-62 JDB
Revised Title (removed for Void Type Spans) F.E. 7-31-63
Revised to include 19'-0" span 7-24-63 JWG
Revised wing for 9' above gutter 8-2-63 JWG, Ch. DRL

DETAILS OF
STANDARD PILE BENTS
19'-0" TO 25'-0" R.C. SLAB SPAN
24'-0" CLEAR ROADWAY - 1'-0" CURBS

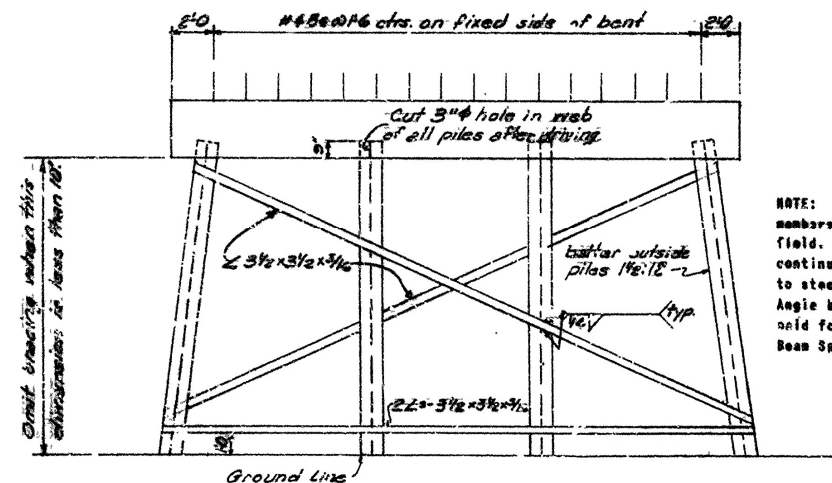
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: M.B. DATE: 9/19/61
TRACED BY: DATE: 9/27/61
CHECKED BY: DATE: 9/27/61
BRIDGE NO. DRAWING NO. 5463-F

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



PLAN

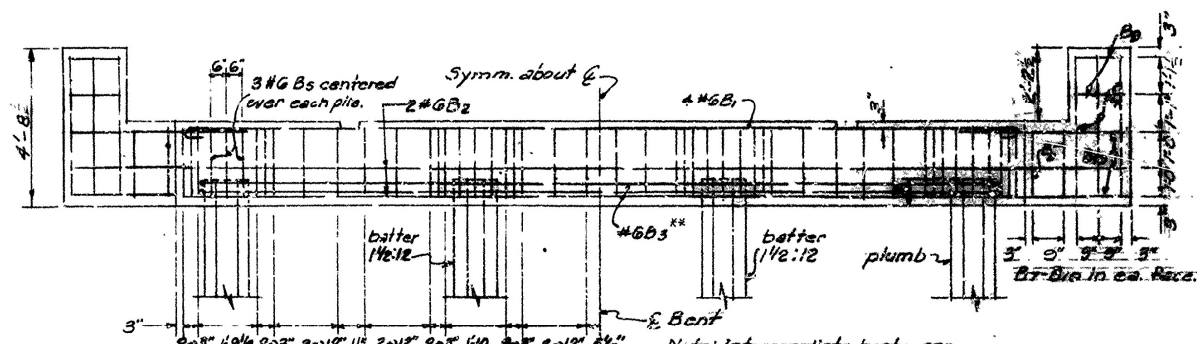


TYPICAL INTERMEDIATE BENT

STEEL PILES

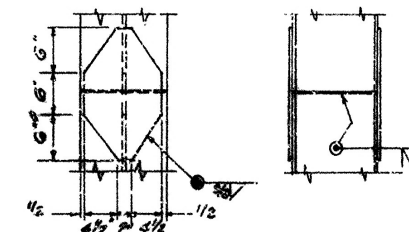
Scale: 1/4" = 1'-0"

NOTE: The lengths of bracing members shall be determined in the field. Each member shall be one continuous angle and shall be welded to steel bearing piles as shown. Angle bracing shall be measured and paid for as "Structural Steel in Beam Spans".



ELEVATION

Note: Intermediate bents are identical to end bents except for the omission of the wings and the batter on piles 2 & 3.



PILE SPICE DETAIL

Scale: 1" = 1'-0"

NOTE: The contractor may for his convenience and at his own expense provide as many as three splices per pile for steel bearing piling. Minimum spacing between splices shall be 5 feet.

GENERAL NOTES

All concrete to be Class 3 and shall be poured in the dry. All exposed concrete to be chamfered 3/4" unless otherwise noted.

Reinforcing steel to be 6" round bars of intermediate or hard grade. Shop drawings and bending diagrams are to be submitted for approval before fabrication.

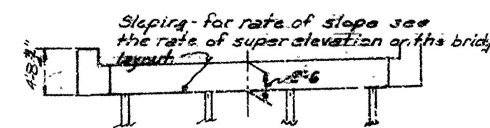
All piling shall be driven to minimum capacity of 36 tons per pile. Piling shall be either 12 D.P. 59 steel bearing piles, or 10" octagonal precast concrete piles as shown on the layout.

For details of Standard 30' R.C. Slab Span see Drawing No. 5496C.

For details of Standard 28' R.C. Slab Span see Dwg. No. 5498C.

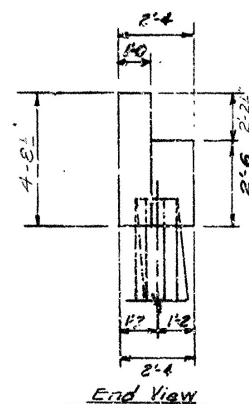
SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, edition of 1959.

For details of Standard 30' R.C. Slab Span on 4°00' curve, see Dwg. No. 5456H.

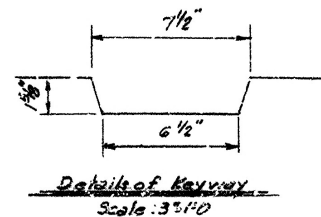


ELEV. END BENT-SUPERELEVATED SPAN

Scale: 1/8" = 1'-0"

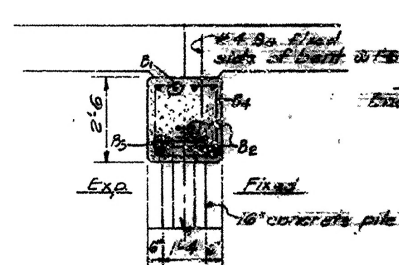


End View



Detail of Keyway

Scale: 3/4" = 1'-0"



Section at C Intermediate Bent

No.	Span	Length	Remarks
1	28'-0"	28'-0"	28'-0"
2	30'-0"	30'-0"	30'-0"
3	28'-0"	28'-0"	28'-0"
4	30'-0"	30'-0"	30'-0"
5	28'-0"	28'-0"	28'-0"
6	30'-0"	30'-0"	30'-0"
7	28'-0"	28'-0"	28'-0"
8	30'-0"	30'-0"	30'-0"
9	28'-0"	28'-0"	28'-0"
10	30'-0"	30'-0"	30'-0"
11	28'-0"	28'-0"	28'-0"
12	30'-0"	30'-0"	30'-0"
13	28'-0"	28'-0"	28'-0"
14	30'-0"	30'-0"	30'-0"
15	28'-0"	28'-0"	28'-0"
16	30'-0"	30'-0"	30'-0"
17	28'-0"	28'-0"	28'-0"
18	30'-0"	30'-0"	30'-0"
19	28'-0"	28'-0"	28'-0"
20	30'-0"	30'-0"	30'-0"
21	28'-0"	28'-0"	28'-0"
22	30'-0"	30'-0"	30'-0"
23	28'-0"	28'-0"	28'-0"
24	30'-0"	30'-0"	30'-0"
25	28'-0"	28'-0"	28'-0"
26	30'-0"	30'-0"	30'-0"
27	28'-0"	28'-0"	28'-0"
28	30'-0"	30'-0"	30'-0"
29	28'-0"	28'-0"	28'-0"
30	30'-0"	30'-0"	30'-0"

Dimensions are C to C of bars.

Revised to show super-elevated on FEB. 8-22-61 Chd. DV 5-22-61

Revised to include 28' I Span REV. 11-12-61

Revision: Added general note to include 30' R.C. Slab Span on 4°00' curve, A.J. 3-14-62, Chd. 9-15-62.

Revised wingwall height, 7-19-62, F.M.H.

Revised Bar 55: R.W.M. 1-13-65

DETAILS OF
STANDARD PILE BENTS
FOR 28'-0" 30'-0" R.C. SLAB SPANS (WITH)
24'-0" CLEAR ROADWAY 1'-0" CURBS
ROUTE SEC.

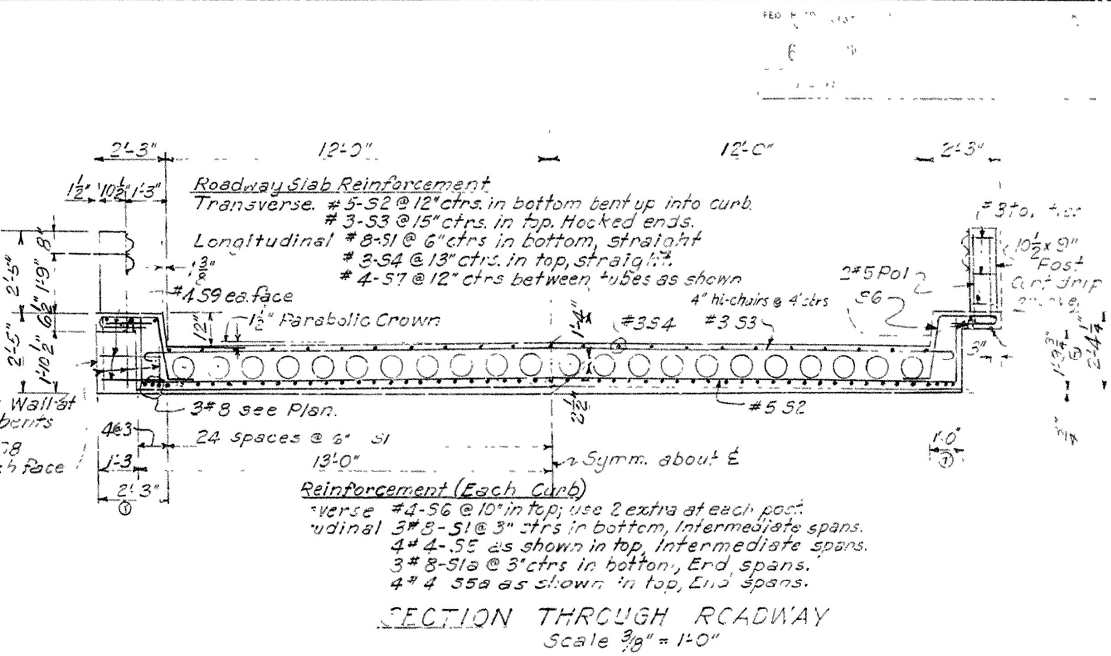
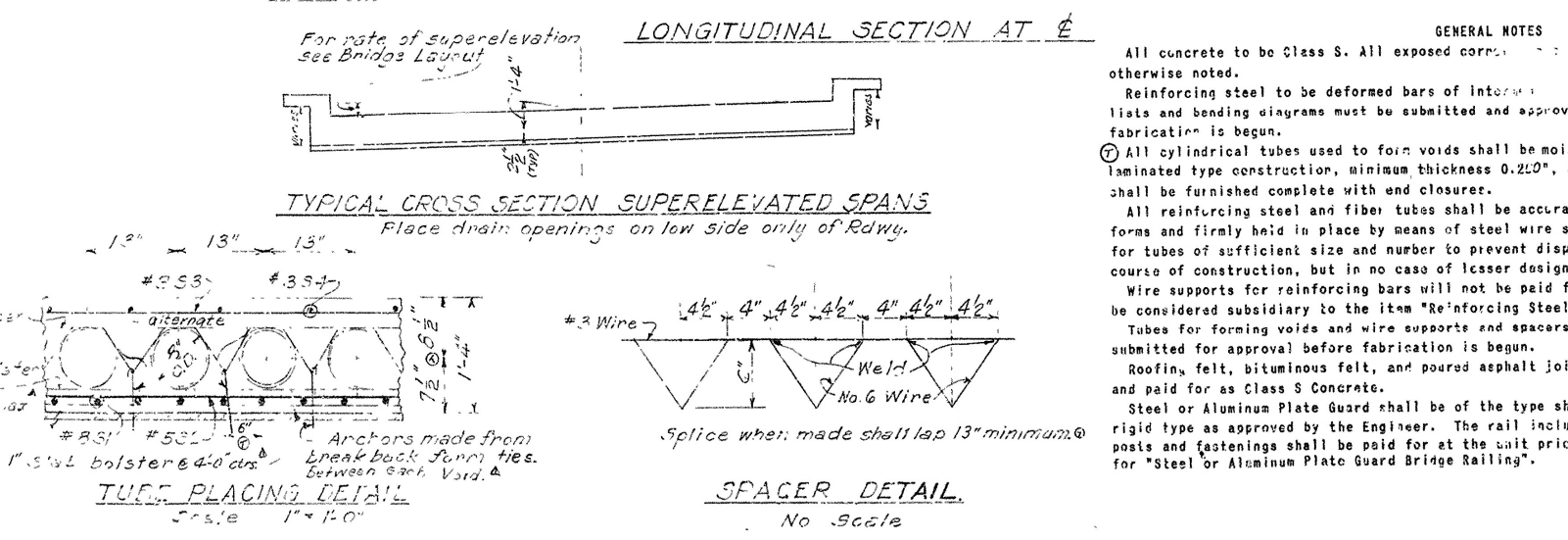
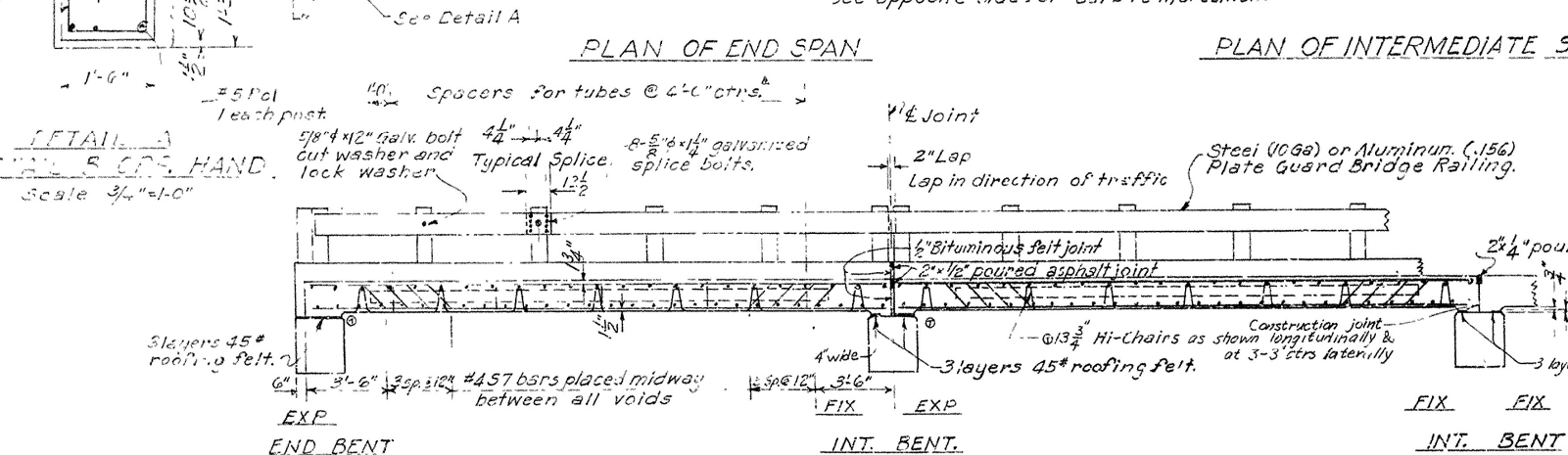
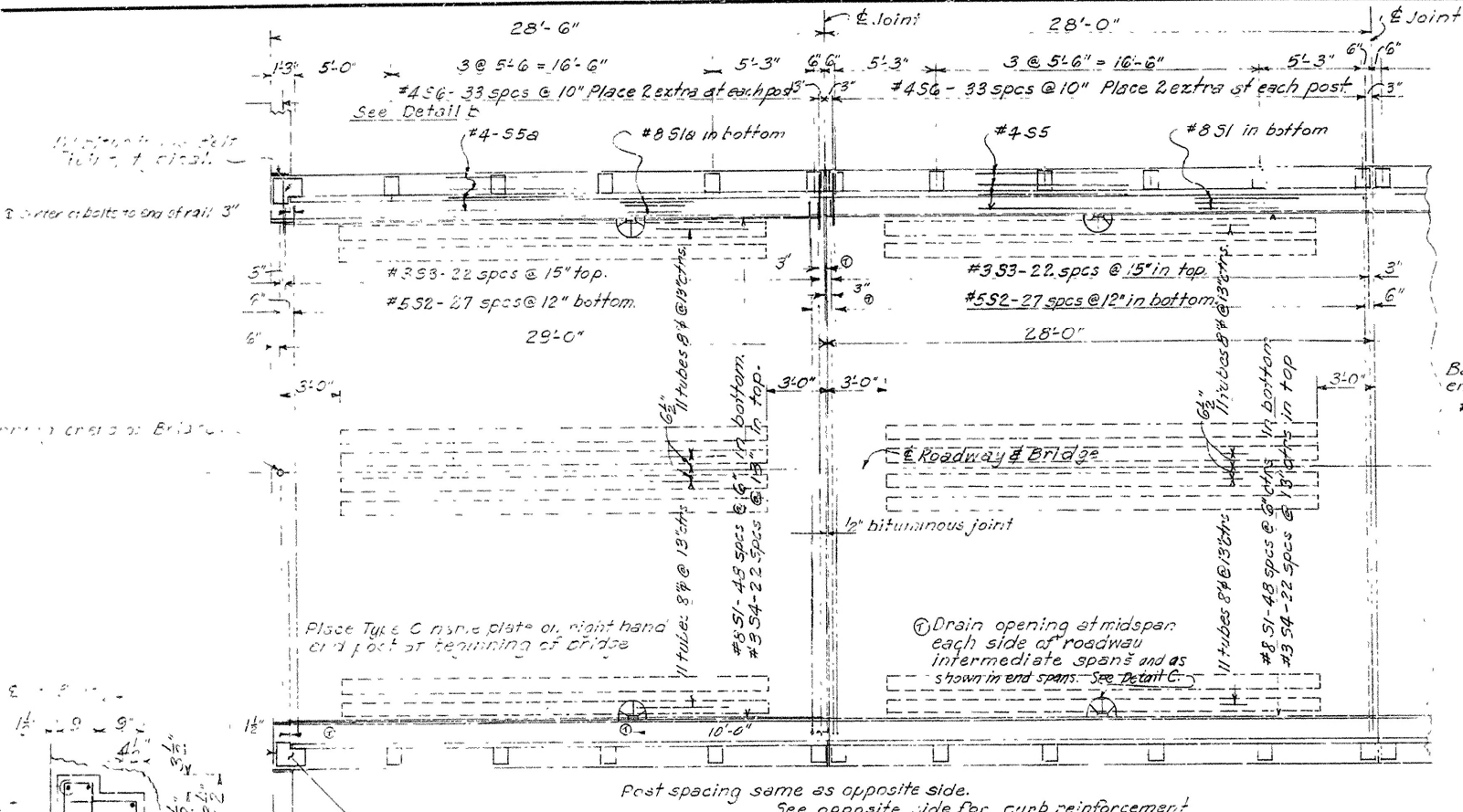
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DESIGNED BY: F.R.B. DATE: 1-15-61

CHECKED BY: DV DATE: 3-1-61

BRIDGE NO. DRAWING NO. 5466D

L.P. Carlson
BRIDGE ENGINEER



BAR LIST						BENDING DIAGRAMS	
MARK	SIZE	No Required	End Span	Int Span	Length	Pin	
S1	#8	49	55		27'-8"	str.	
S1S	#8	8			28'-2"	str.	
S	#5	26	28		29'-3"	1 1/2"	
S2	#	23	23		26'-7"	2 1/4"	
S4	#3	23	23		27'-8"	str.	
S5	#4		8		27'-8"	str.	
S5a	#4	8			28'-2"	str.	
S6	#4	92	92		6'-6"	1 1/2"	
S7	#4	168	168		24'-9"	1 1/2"	
S8	#4	12			2'-2"	str.	
S9	#4	12			1'-0"	str.	
FC1	#5	22	24		5'-8"	1 3/4"	
PO2	#5	4			6'-0"	1 3/4"	
tol	#3	30	36		2'-8"	1 1/4"	
to2	#3	6			4'-7"	1 1/4"	

GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered 3/4" unless otherwise noted.

Reinforcing steel to be deformed bars of intermediate or hard grade. Shop lists and bending diagrams must be submitted and approved secured before fabrication is begun.

⑦ All cylindrical tubes used to form voids shall be moisture protected, laminated type construction, minimum thickness 0.210", and shall be furnished complete with end closure.

All reinforcing steel and fiber tubes shall be accurately located in the forms and firmly held in place by means of steel wire supports and spacers for tubes of sufficient size and number to prevent displacement during the course of construction, but in no case of lesser design than that shown.

Wire supports for reinforcing bars will not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel".

Tubes for forming voids and wire supports and spacers for tubes shall be submitted for approval before fabrication is begun.

Roofing felt, bituminous felt, and poured asphalt joints shall be measured and paid for as Class S Concrete.

Steel or Aluminum Plate Guard shall be of the type shown or an equivalent rigid type as approved by the Engineer. The rail including all concrete posts and fastenings shall be paid for at the unit price bid per linear foot for "Steel or Aluminum Plate Guard Bridge Railing".

SPECIFICATIONS: Arkansas State Highway Commission, Standard Specifications for Highway Construction, edition of 1959.

DESIGN SPECIFICATIONS: AASHO 1961

Design Live Loading: H-15

Load Distribution to Slab: Dead Load: 169 #/ft

Live Load: 2.174 wheels per foot of width plus 30% impact.

Unit Stresses:

Class 5 Concrete ($n=10$)	1,200 psi
Reinforcing Steel	20,000 psi

DETAILS OF
STANDARD 28'-0" R.C. SLAB SPANS
WITH VOIDS

DETAILS OF
STANDARD 28'-0" R.C. SLAB SPANS
WITH VOIDS
24'-0" CLEAR RDWY 1'-0" CURBS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: W.E.W. DATE: 11-21-61
CHECKED BY: DATE: SCALE: 4" or noted
CHECKED BY: C.E.V. DATE: 11-27-61
BRIDGE NO. DRAWING NO. 54680