

ARKANSAS STATE HIGHWAY COMMISSION

DWIGHT H. BLACKWOOD

CHAIRMAN

JUSTIN MATTHEWS

J. LAN WILLIAMS

J. S. PARKS

SAM J. WILSON

COMMISSIONERS

HIGHWAY BRIDGE OVER OUACHITA RIVER

GLENWOOD CROSSING

HIGHWAY NO. 70

HOT SPRINGS, ARKANSAS

C. S. CHRISTIAN

HIGHWAY ENGINEER

N. B. GARVER

BRIDGE ENGINEER

IRA G. HEDRICK, INC.
CONSULTING ENGINEERS
SHREVEPORT, LOUISIANA

INDEX

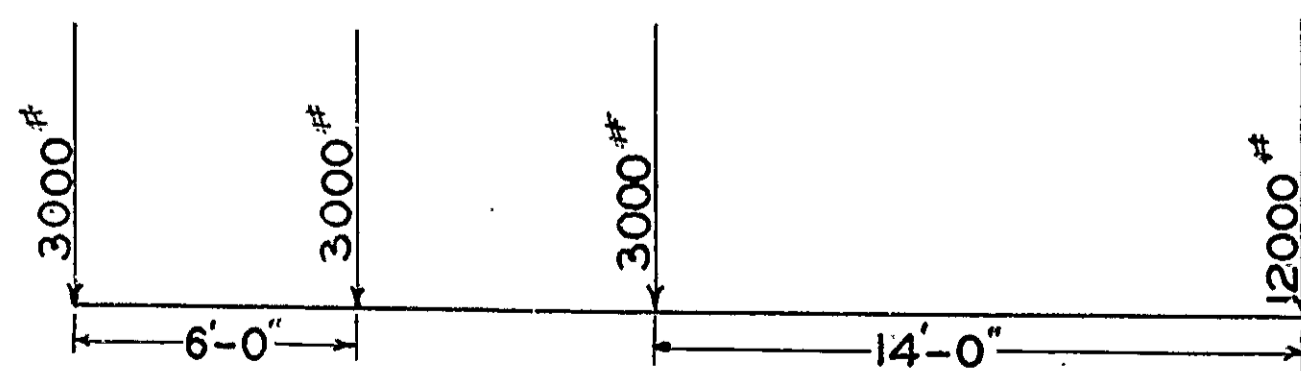
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PLAN AND ELEVATION OF BRIDGE	1
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DETAILS OF ABUTMENTS AND PIERS	3A & 3B
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REVISED Oct. 16, 1928
by K.F.

CONSTANTS

	CONCRETE 1-1-2 MIX	STEEL
FLOORSLABS, CROSS GIRDERS, GIRDERS, ETC.	975 [#] PER SQ. IN.	
BEAMS CONTINUOUS OVER SUPPORTS: AT CENTER OF BEAMS	975 [#]	
OVER SUPPORTS	1125 [#]	
BOND FOR STEEL IN CONCRETE	150 [#]	
STRESS IN ARCH RINGS NOT INCL. WIND & TEMP.	900 [#]	
" " " INCLUDING " " "	1200 [#]	
COLUMNS DIRECT COMPRESSION	900 - $\frac{22.5L}{D}$	
NOTE FOR 1-2-4 CONCRETE DECREASE ABOVE STRESSES 33 $\frac{1}{3}$ %		
TENSION NET SECTION		16000 [#] PER
COMP IN COLS & OTHER COMP MEMBERS FIXED ENDS	900 - $\frac{22.5L}{D}$	
MODULUS OF ELASTICITY, STEEL		30000000 [#]
" " " CONCRETE 1-2-4	2000000 [#]	
" " " " 1-1-2	3000000 [#]	
VARIATION IN TEMPERATURE FOR ARCH RINGS	±40 [#]	
COEFFICIENT OF EXPANSION	.0000055	.0000067

WHEEL CONCENTRATIONS, CLASS A LOADING.



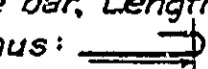
2-15 TON TRUCKS

EQUIVALENT UNIFORM LIVE LOADS

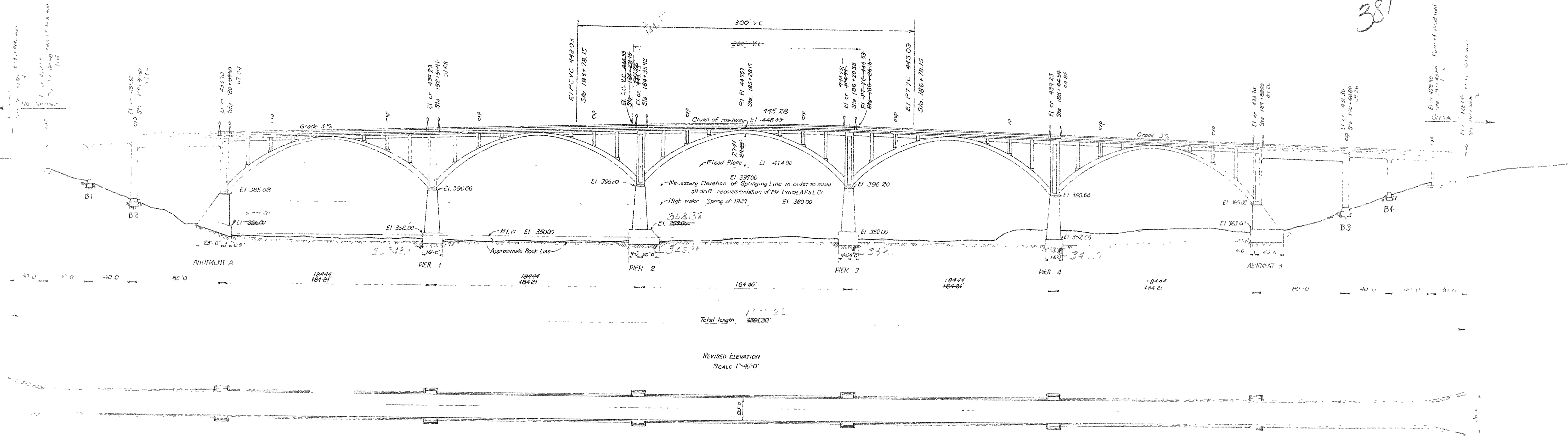
25% IMPACT

SPAN LENGTH	LOAD PER SQ. FT.
50' TO 100'	130 [#]
100' TO 200'	80 [#]
200' AND OVER	64 [#]

GENERAL NOTES

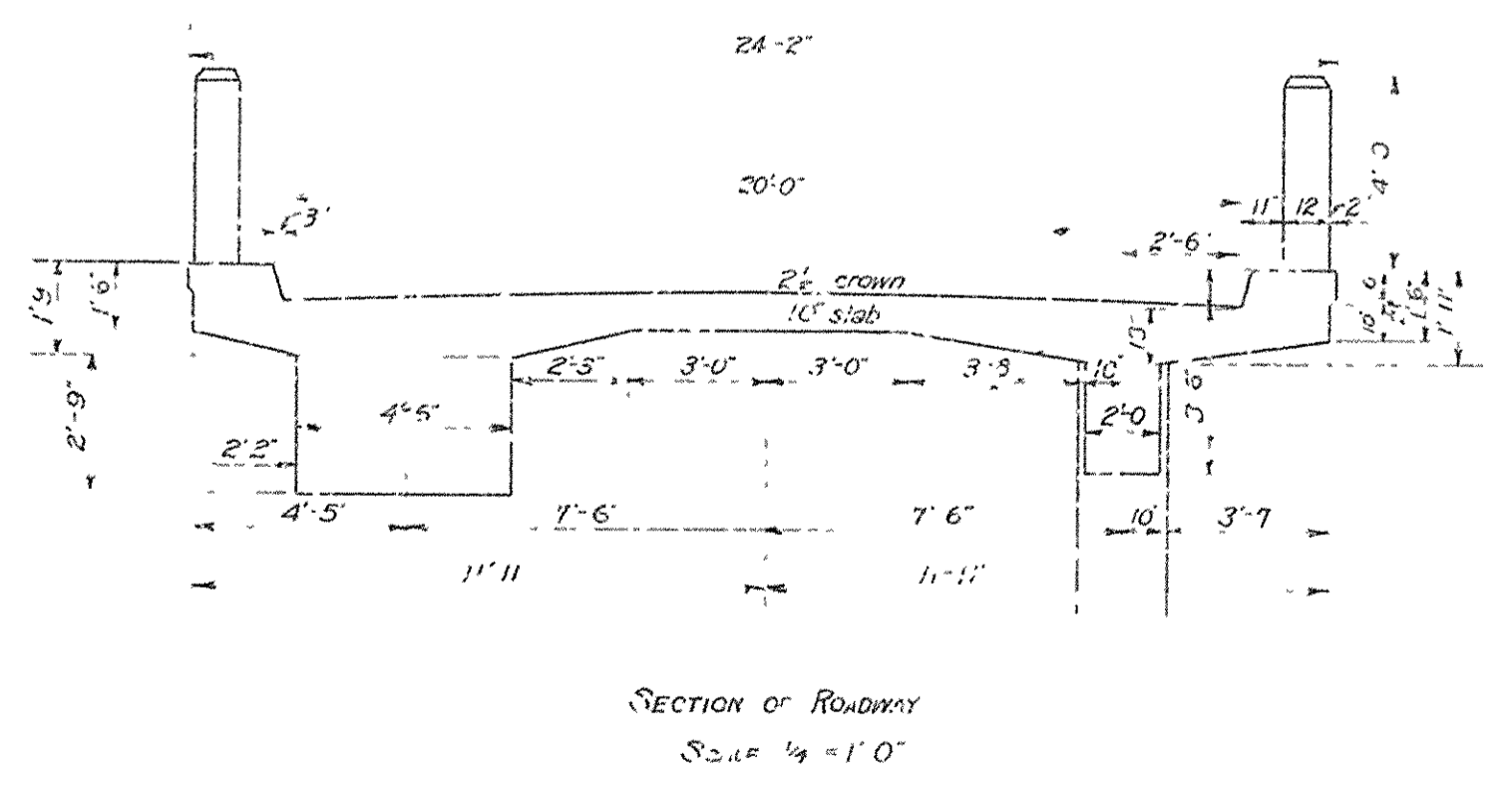
All hooks on reinforcing bars to have a radius of 4d and a return of 12d where d = diameter of round bar, or side of square bar. Lengths of hooked bars are given to starting point of hook, thus: 
All bends such as on girder bars must have a radius of not less than 12d.
Centers of bars in floor slab to be not less than 1 $\frac{1}{2}$ from face of concrete.
Centers of bars to be 4" from face of concrete on piers, abutment shafts, and arch rings, and 3" on girders and columns unless otherwise noted.
Chamfers to be 2" throughout unless otherwise noted.

387



PLAN
 SCALE 1"=40'-0"

Note: Profile of structure is shown in elevation between bearings made at Piers and Abutments.
 All foundations for columns, piers, and abutments were cut and at least 3 feet into shale or 26 inches into bedrock.



REVISED

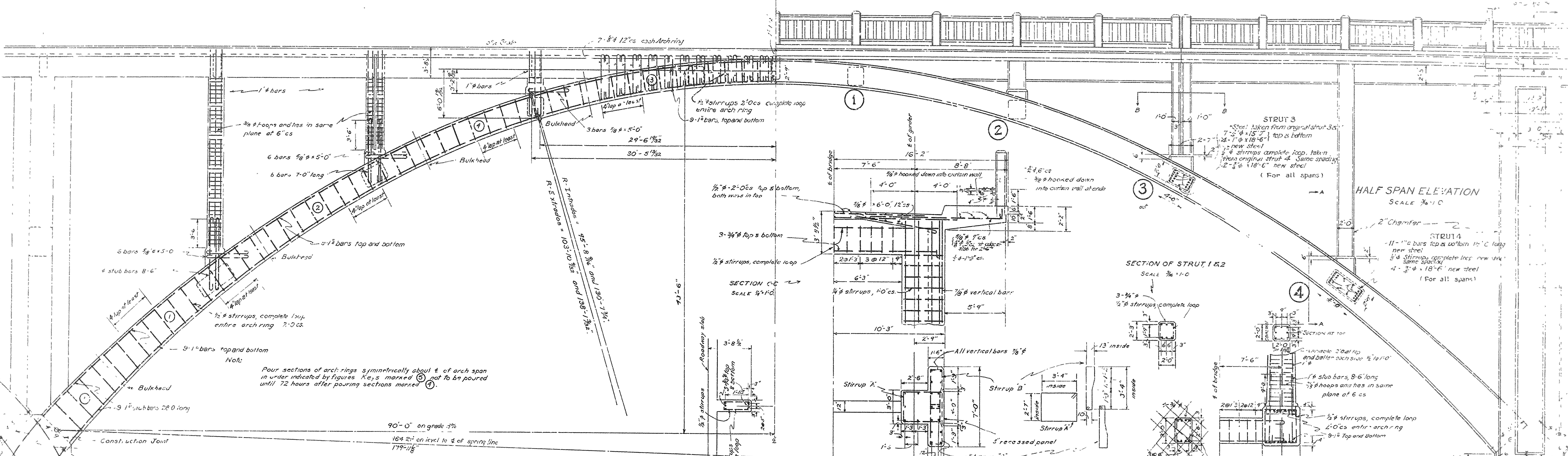
ARKANSAS STATE HIGHWAY COMMISSION
 HIGHWAY BRIDGE OVER OUACHITA RIVER
 GLENWOOD CROSSING NEAR HIGHWAY NC 70
 HOT SPRINGS, ARKANSAS
 REVISED PLAN AND ELEVATION OF BRIDGE
 SCALE AS SHOWN

Made by JSW
 Checked by
 Traced by
 Checked by
 Date May 1928

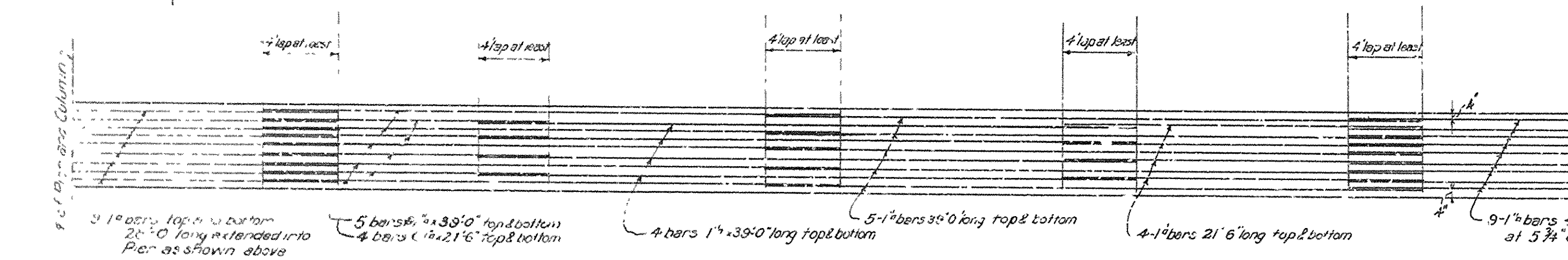
HWA H. HENNING
 Consulting Engineer
 St. Louis, Mo.
 File No.
 Sheet No. 12

BR. No. 611 DRAWG No. 596

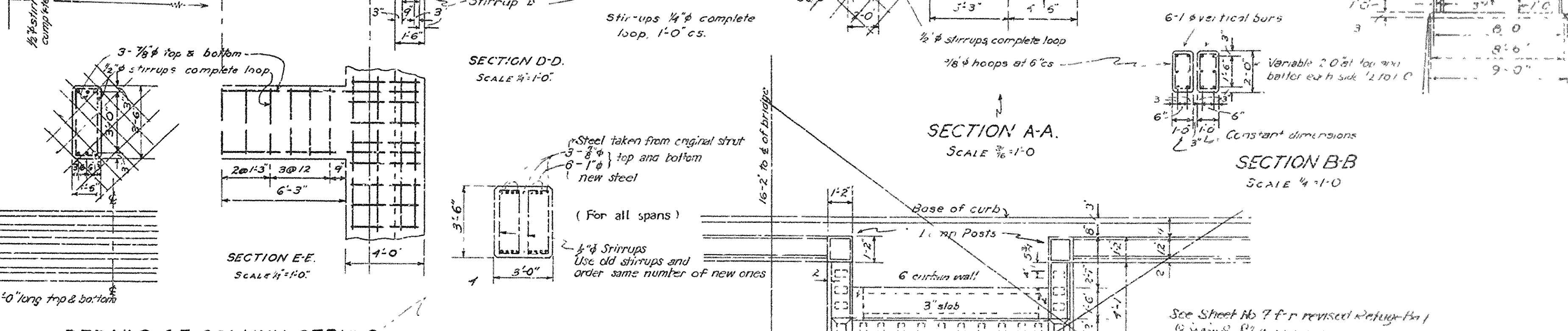
18' 5 1/2" for 2 1/2" ben, others 18' 4 1/2" 18' 4 1/2"
9 panels @ 20'-5 3/8" center span - 20'-5 3/8" side spans



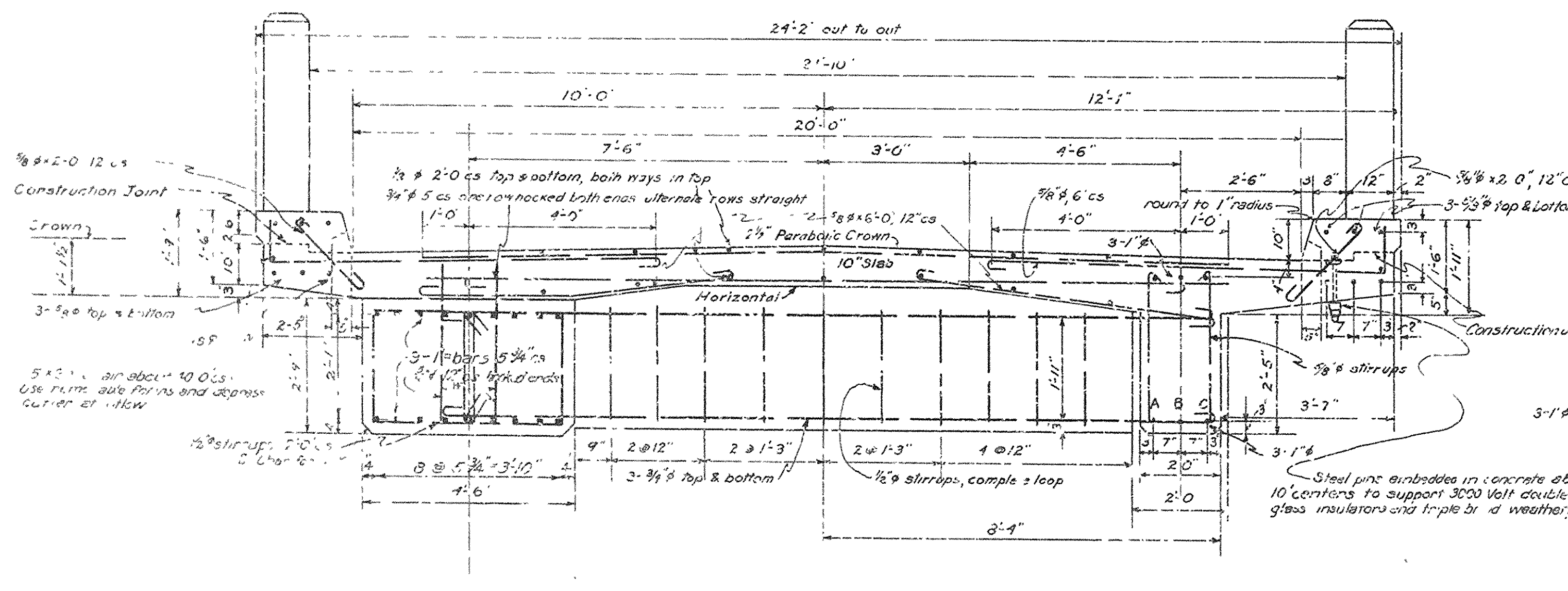
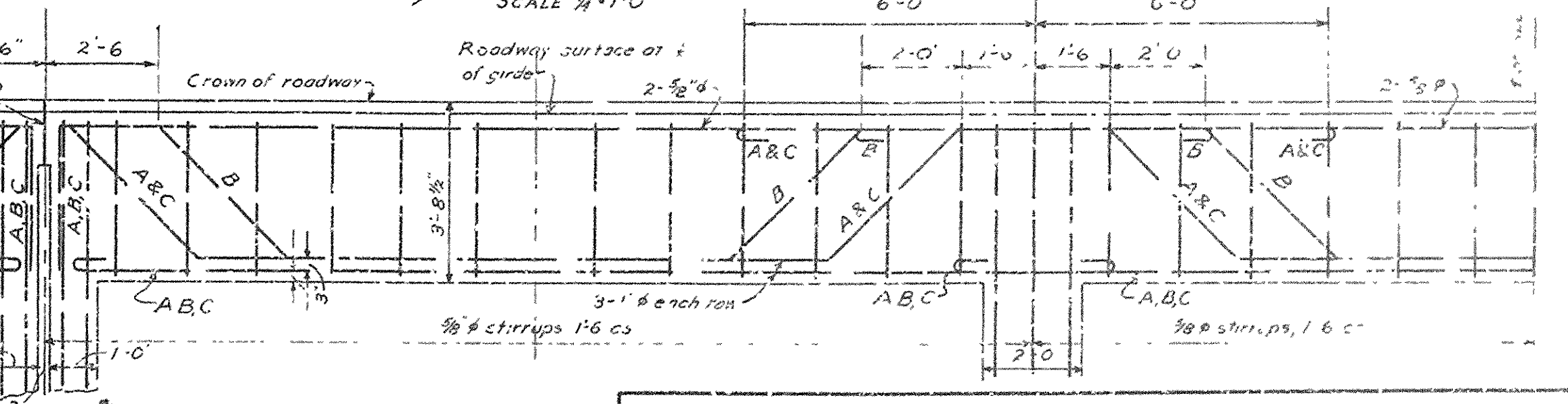
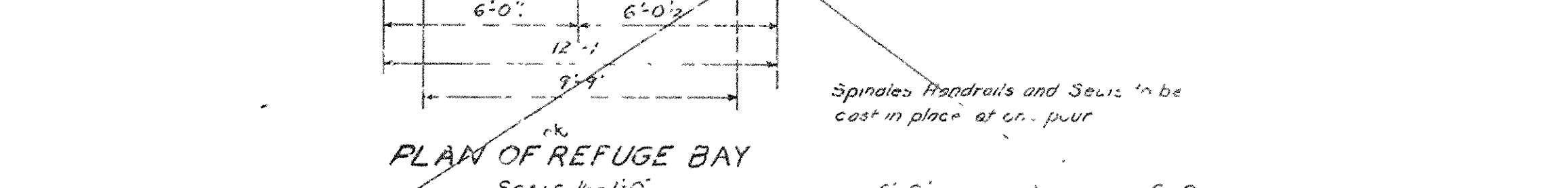
HALF SPAN SECTION OF ARCH RING AND COLUMNS.
SCALE 3/16"=1'-0"



HALF PLAN OF ARCH REINFORCEMENT.
SCALE 3/16"=1'-0"

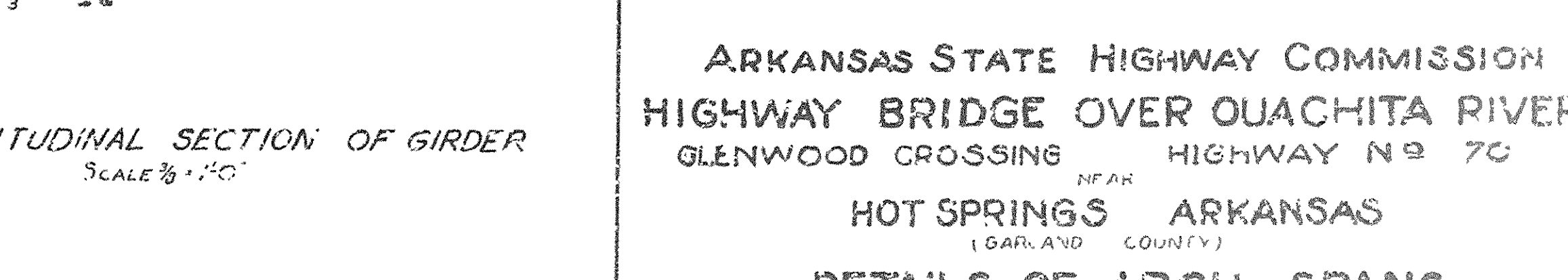


DETAILS OF COLUMN, STRUTS, AND REFUGE BAY SLAB.
SCALE 3/4"=1'-0"

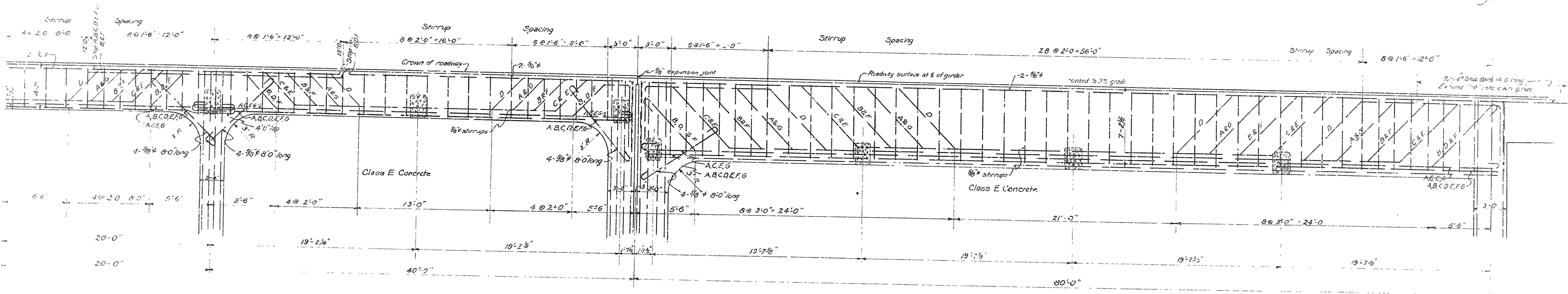


ROADWAY AND GIRDER SECTION AT COLUMN.
SCALE 3/4"=1'-0"

GIRDER AT 1/4 OF SPAN.
SCALE 3/4"=1'-0"

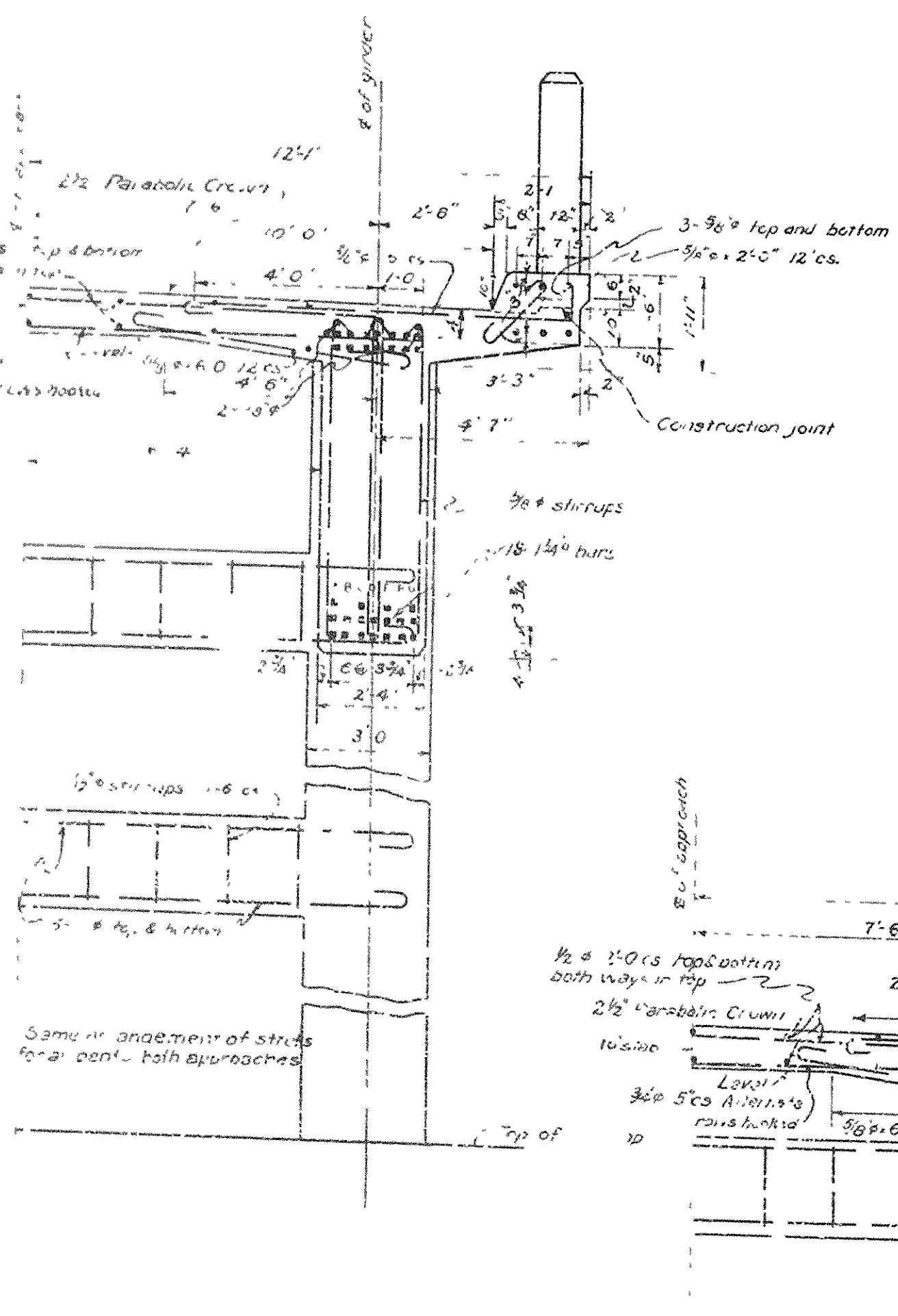


Note: All work shall be done in accordance with the specifications for Highway Bridges, Arkansas State Highway Commission, 1927. Class 2 concrete except for spans which are of Class 1 concrete.

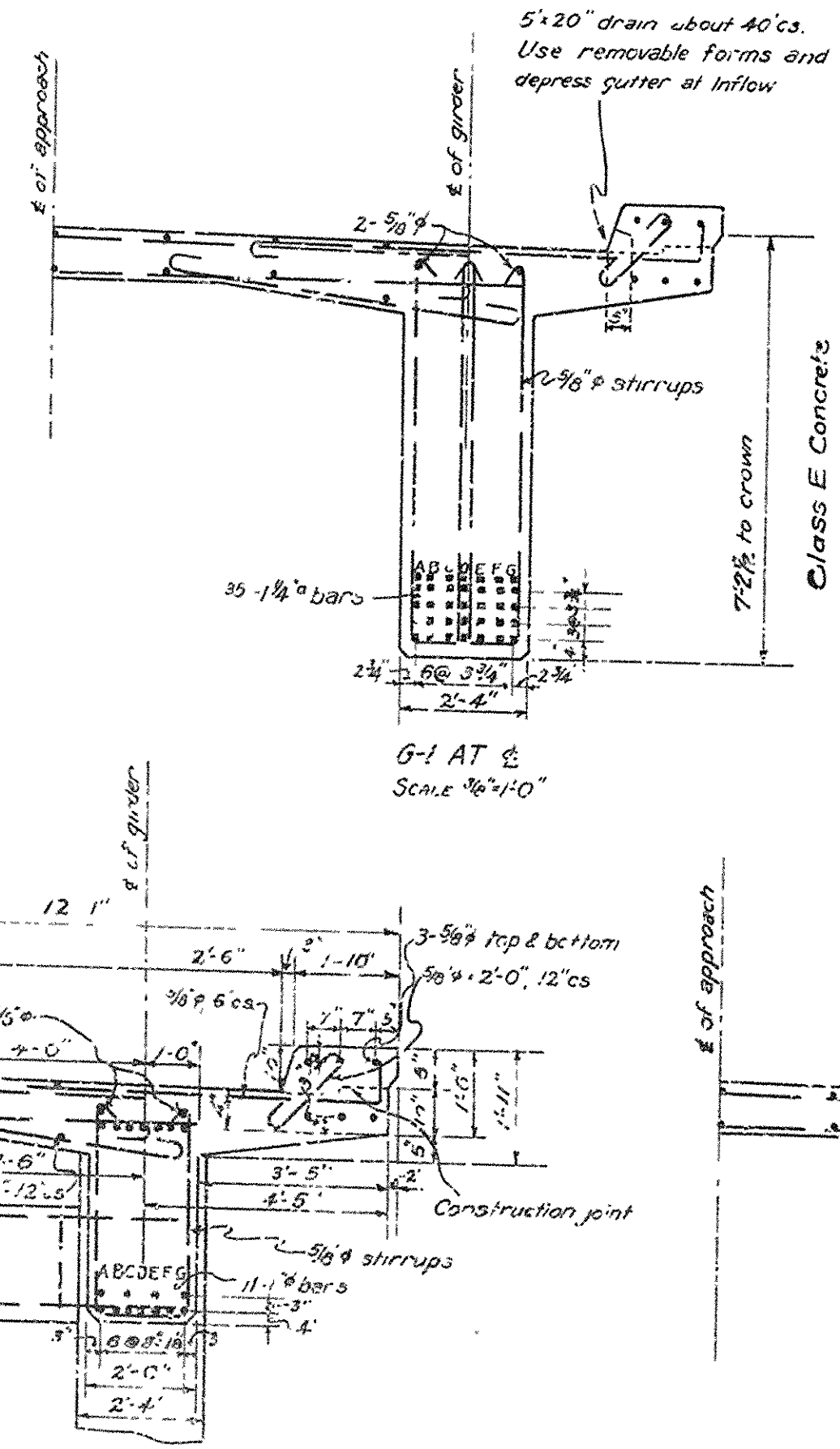


6-2
SCALE - 1/4" = 1'-0"

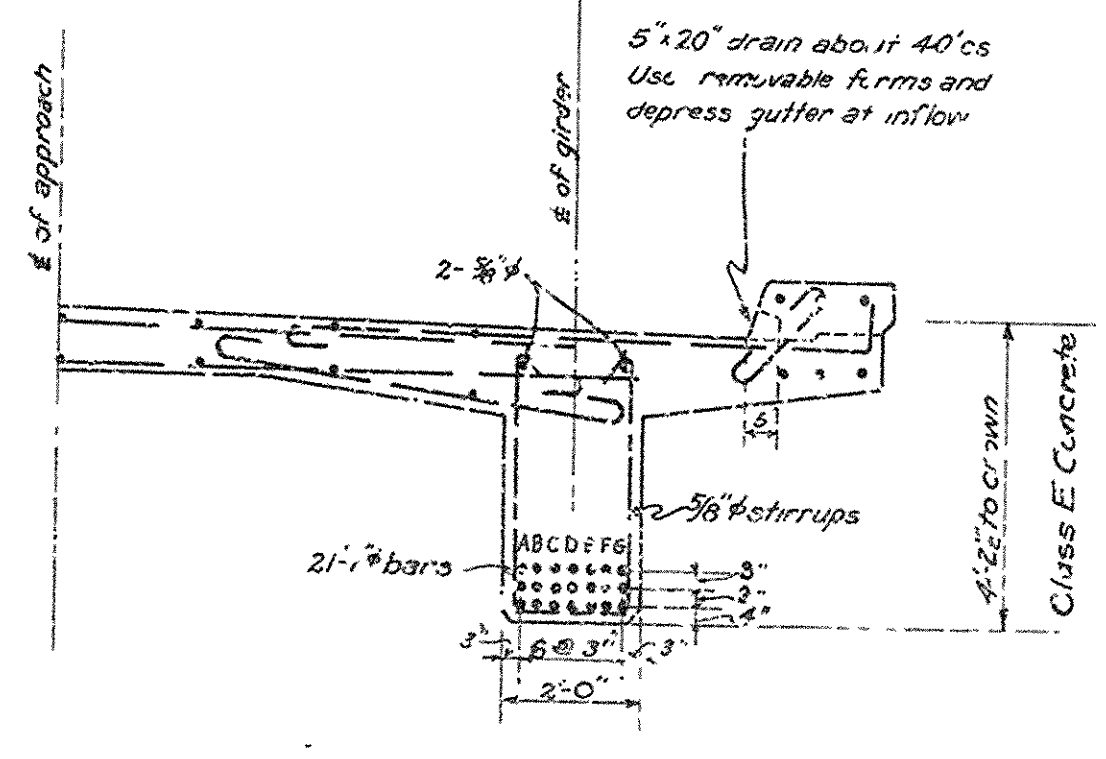
5-1
SCALE - 1/4" = 1'-0"



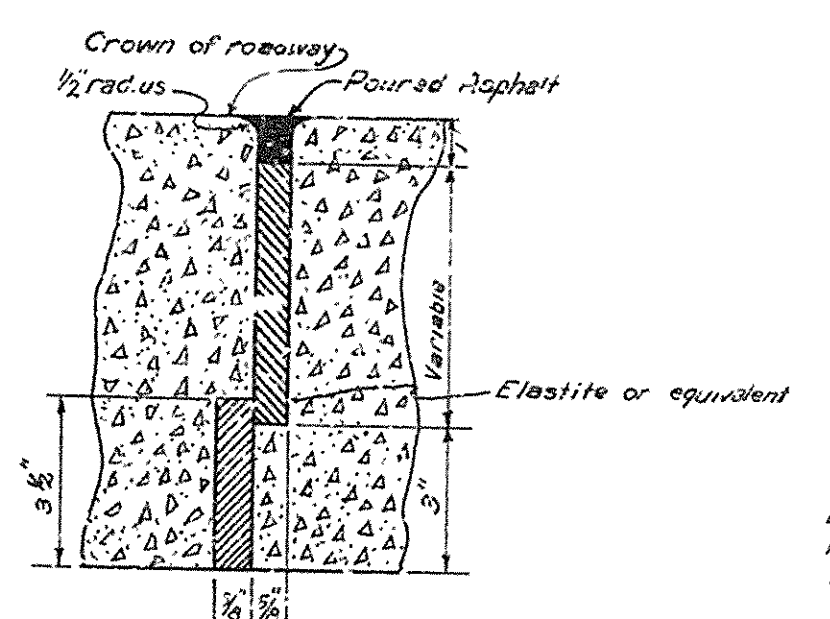
SECTION OF ROADWAY SLAB
SHOWING G-1 AT SUPPORT
SCALE - 3/8" = 1'-0"



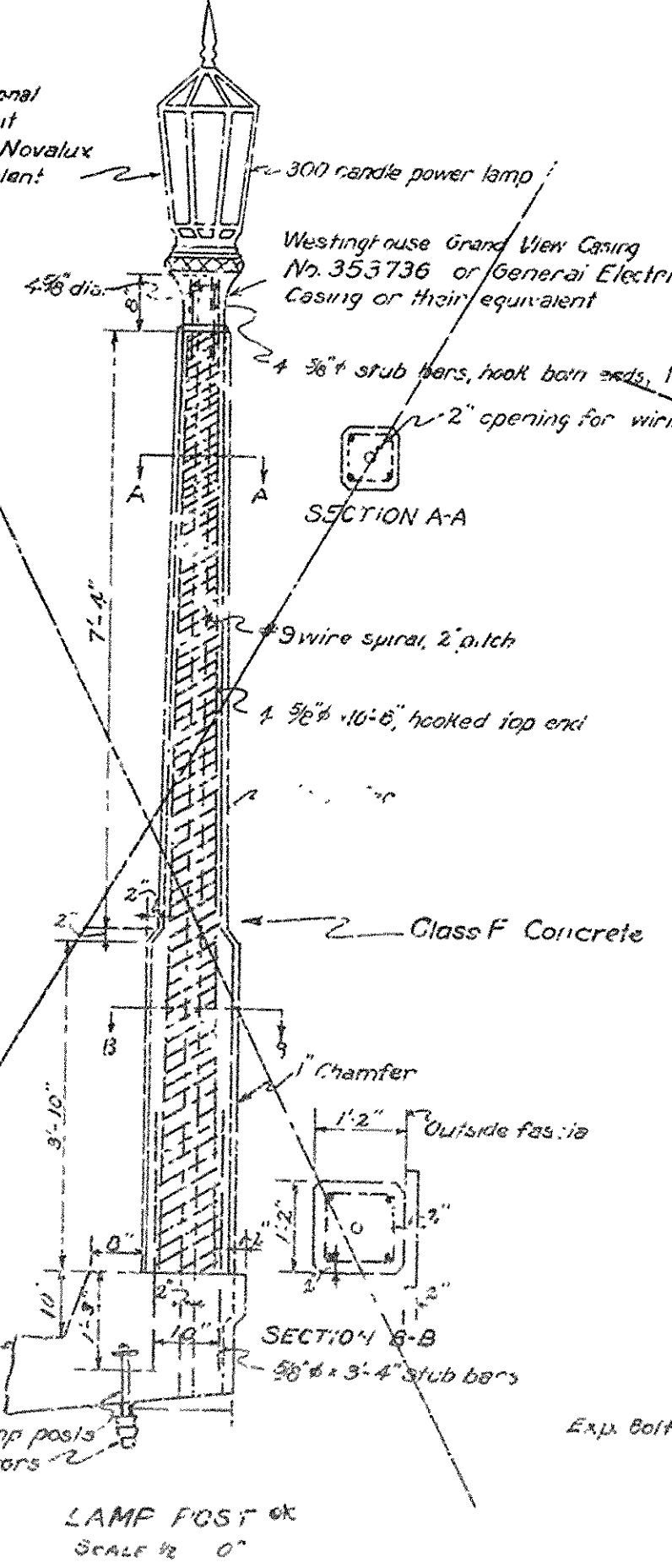
SECTION OF ROADWAY SLAB
SHOWING G-2 AT SUPPORT
SCALE - 3/8" = 1'-0"



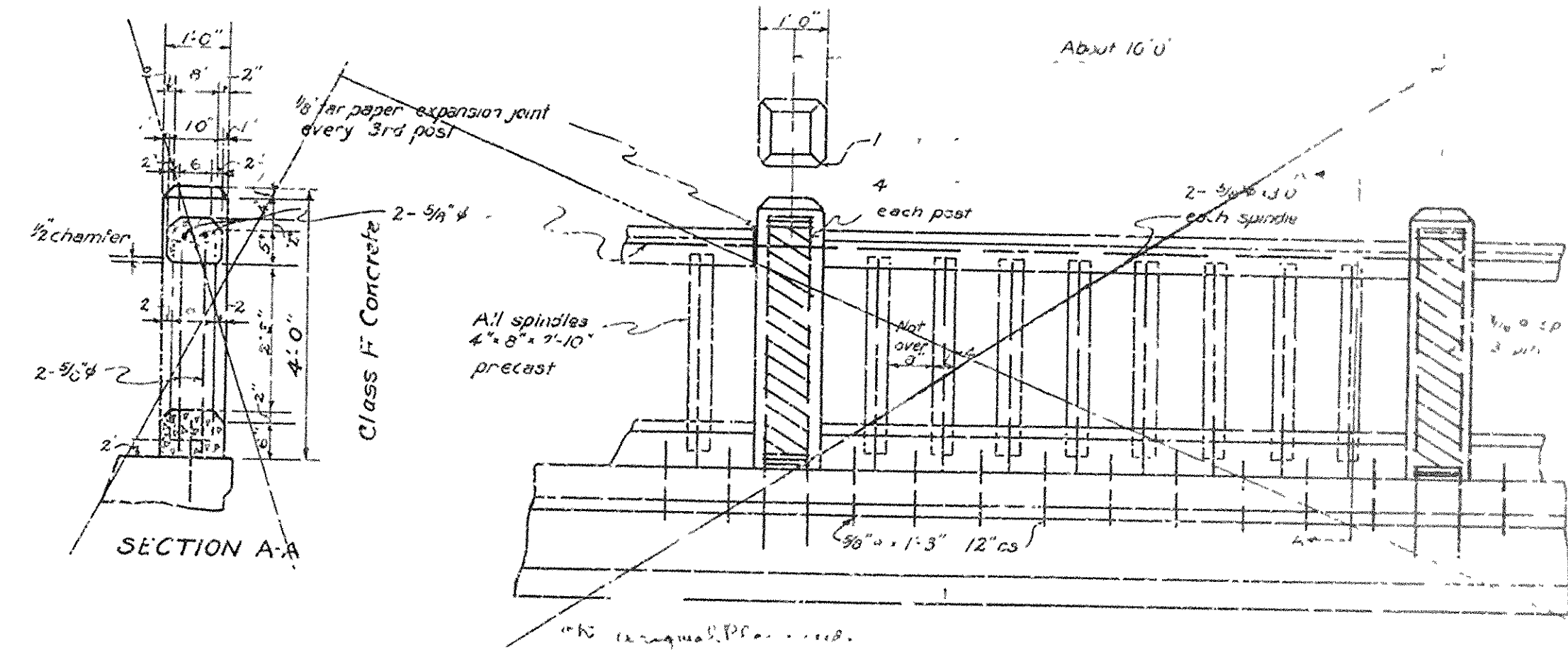
SECTION OF STRUT
SCALE - 3/8" = 1'-0"
This applies to all struts on
all girders and columns.



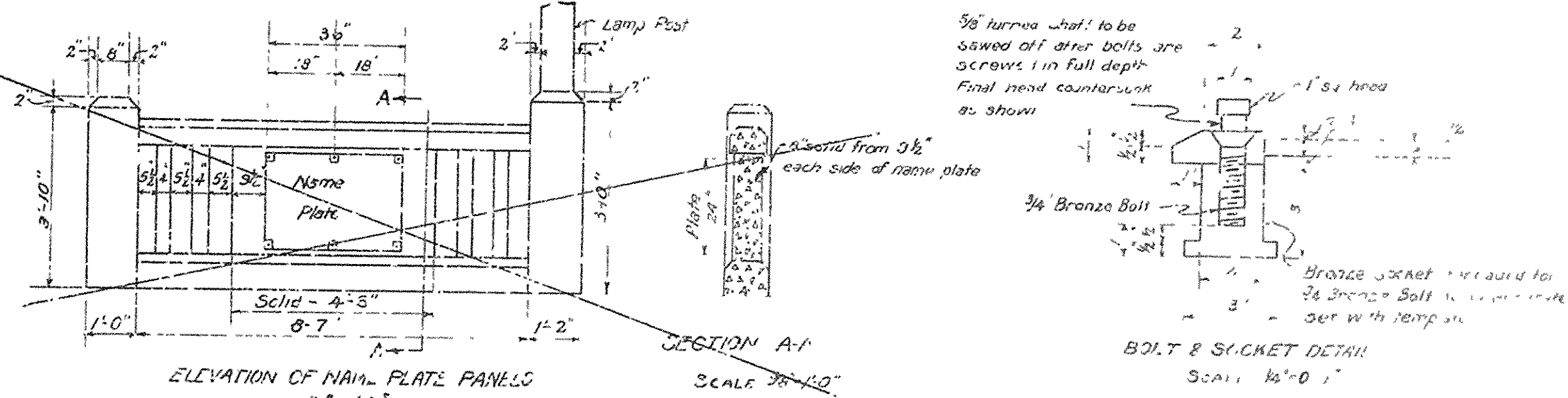
DETAIL OF EXPANSION JOINT
IN SLAB AND CURB
SCALE - 3" = 1'-0"



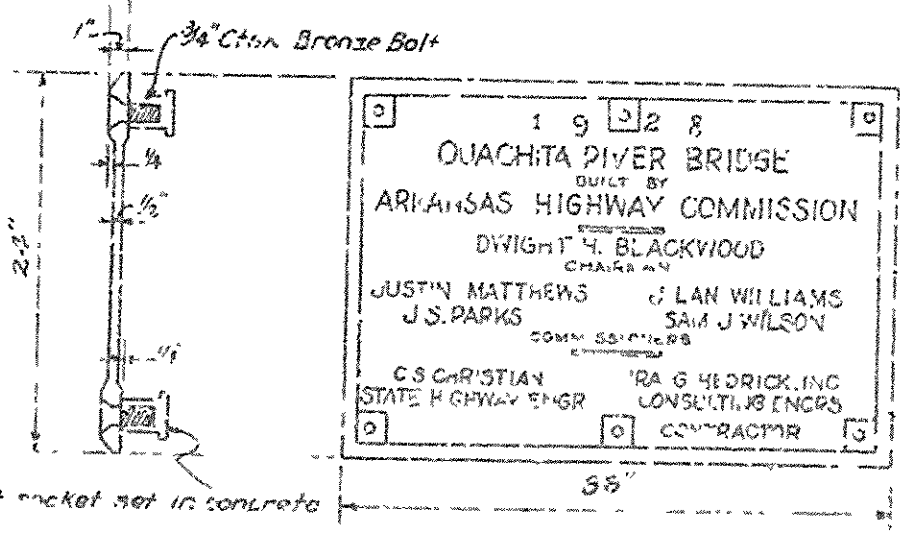
LAMP POST
SCALE 1/2" = 0"



DETAILS OF HANDRAIL
SCALE - 3/8" = 1'-0"



ELEVATION OF NAME PLATE PANELS
SCALE - 3/8" = 1'-0"



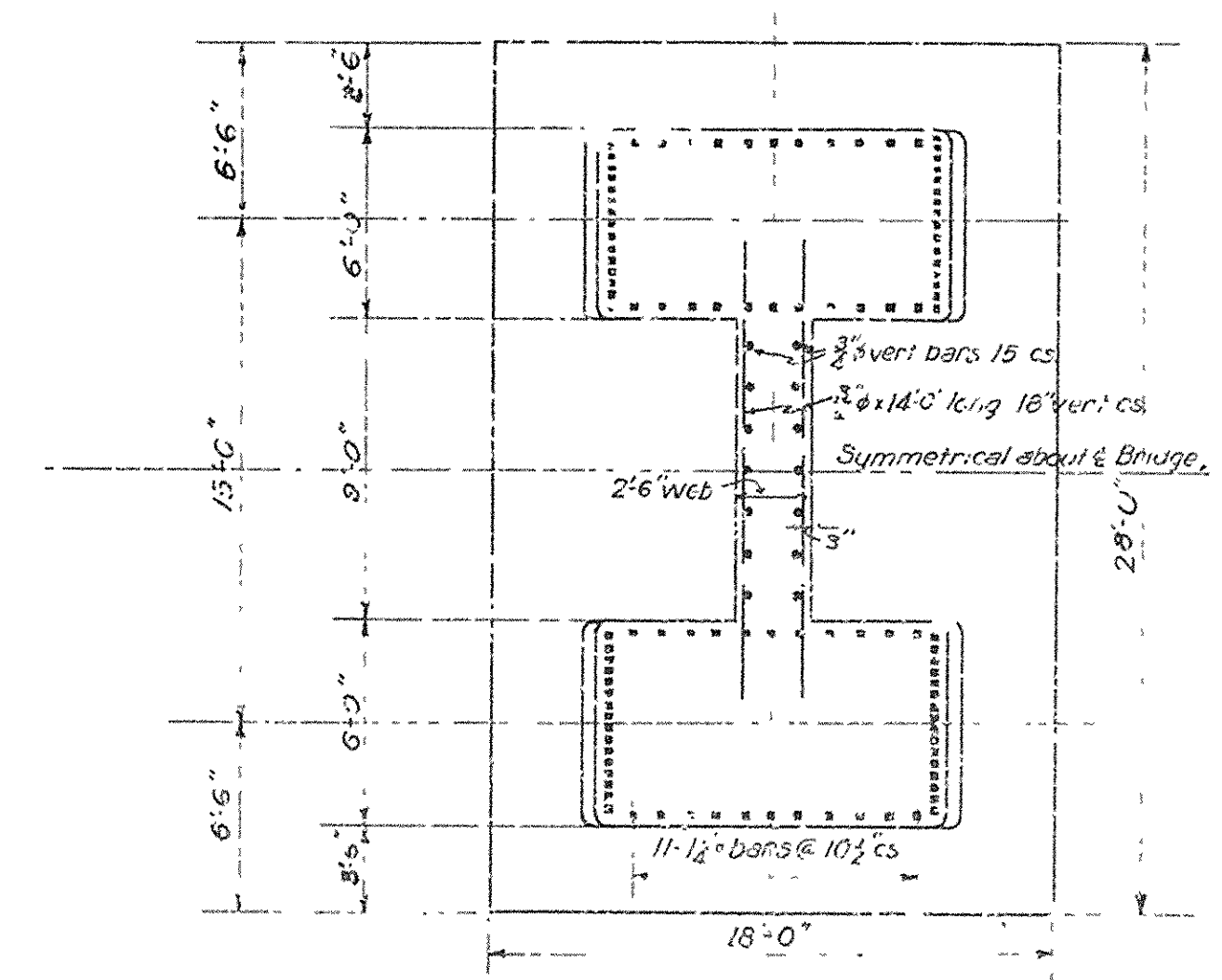
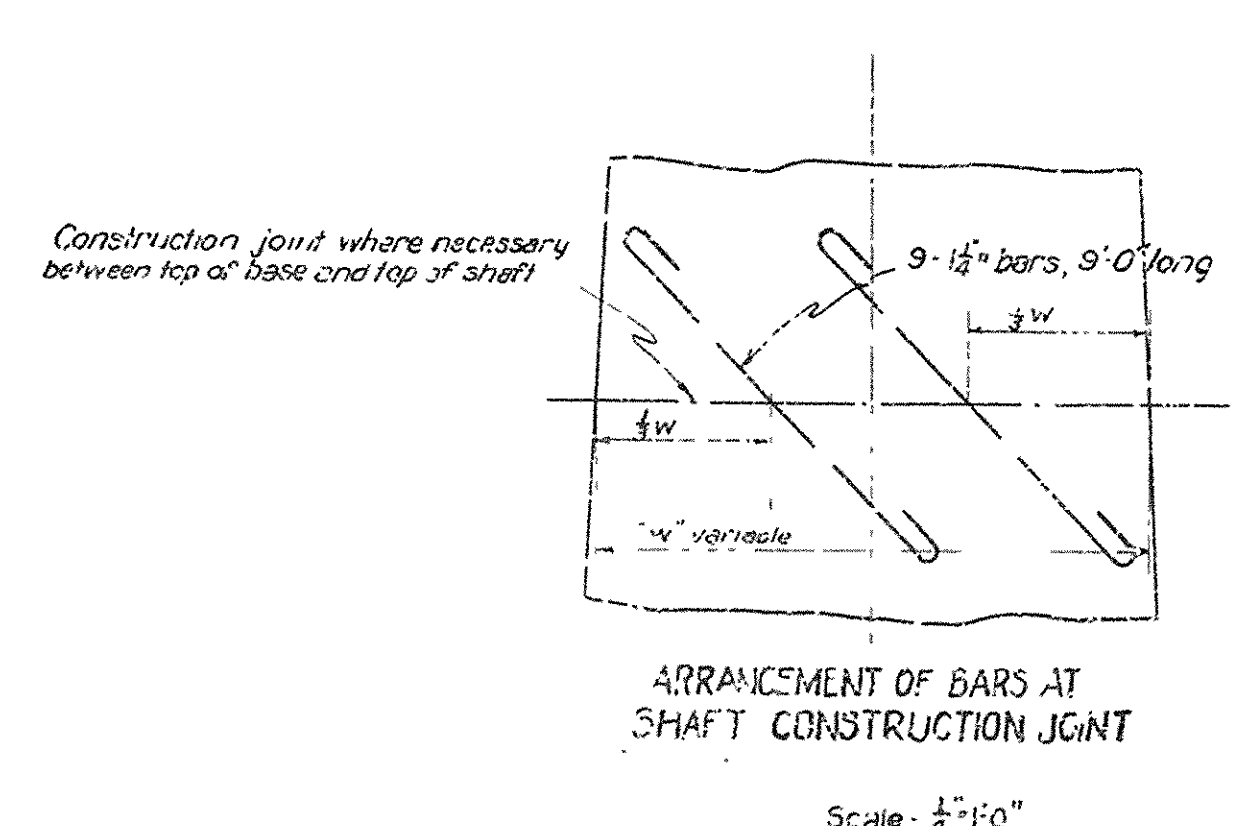
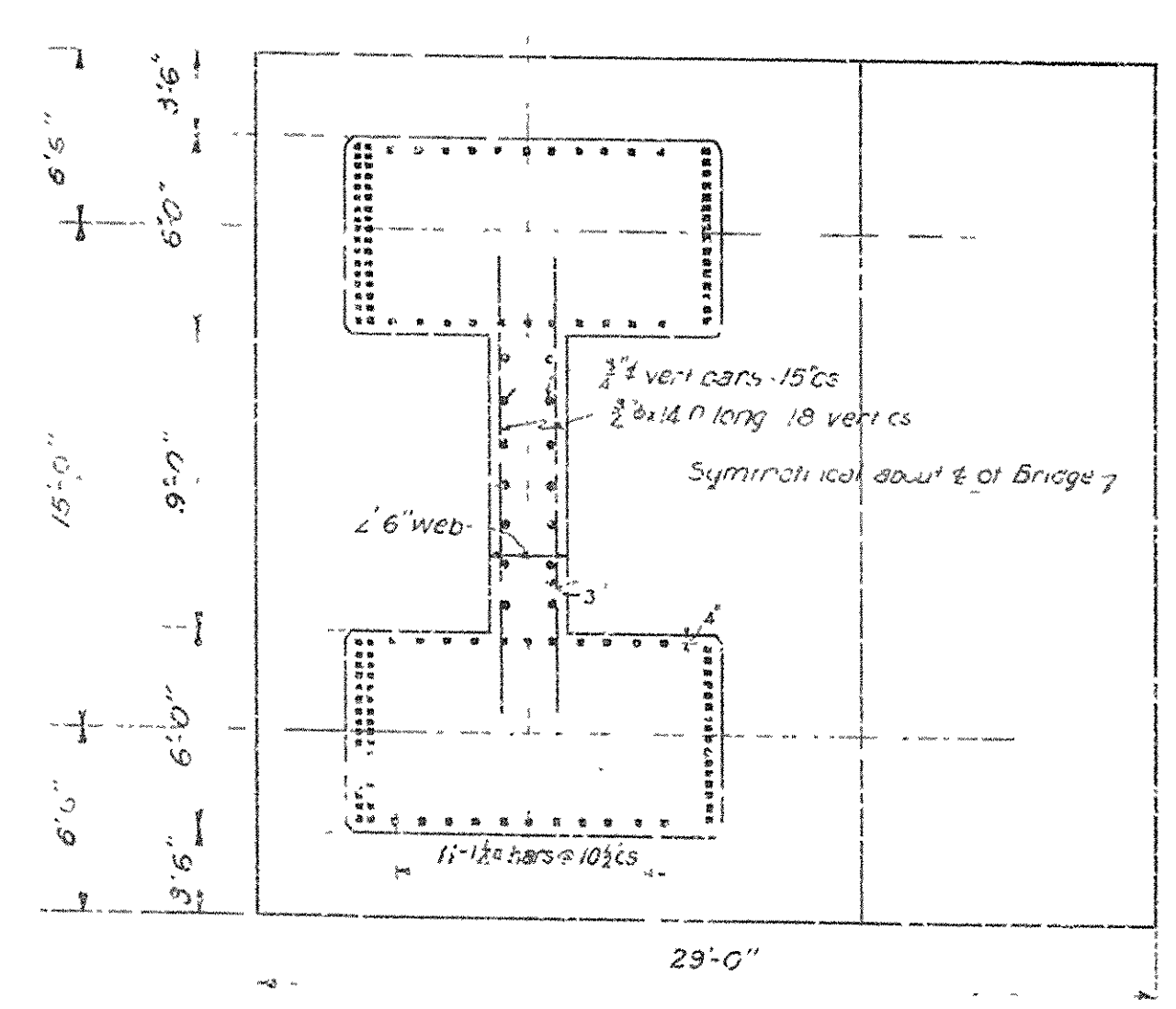
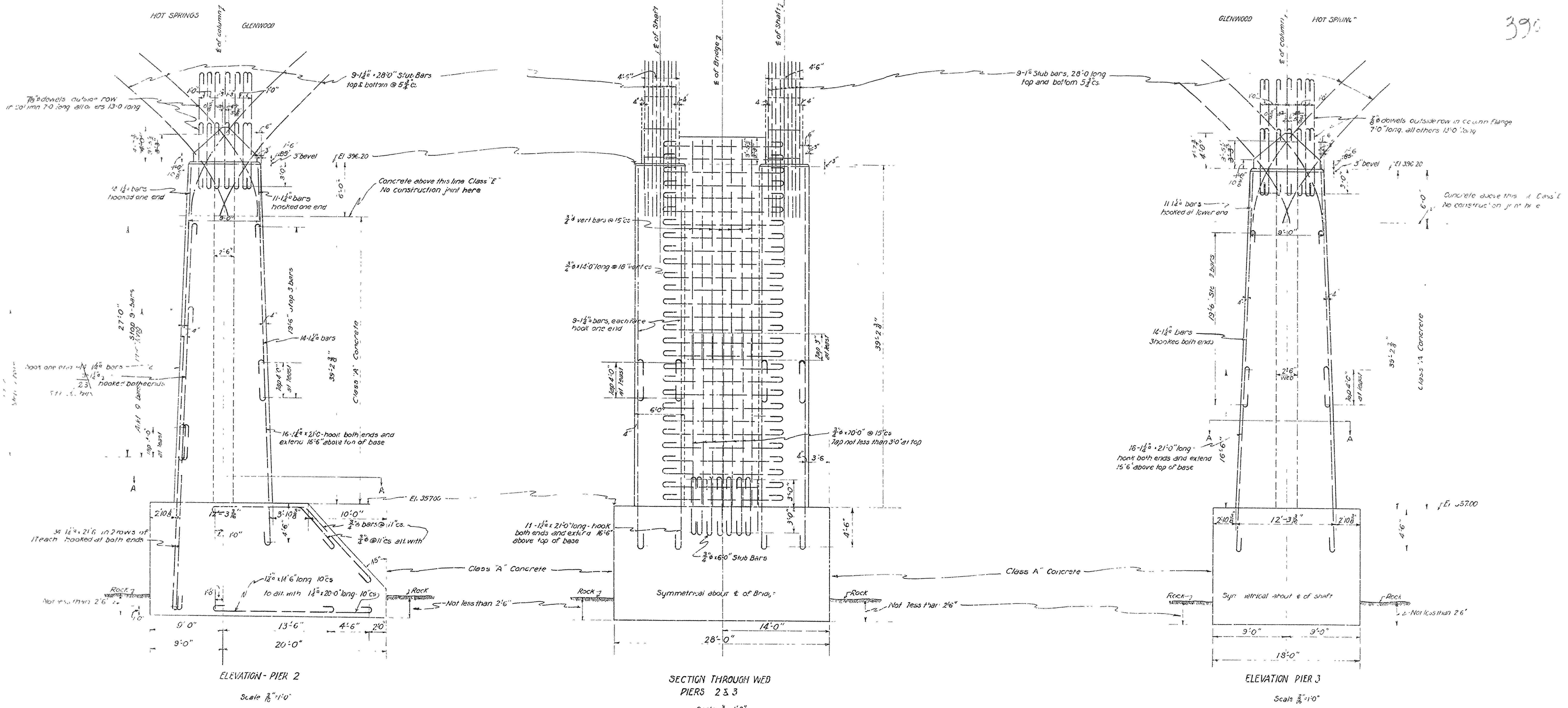
NAME PLATE
4 Like this required
SCALE - 1" = 6"

REVISED Oct 16, 1928
by KF

ARKANSAS STATE HIGHWAY COMMISSION
HIGHWAY BRIDGE OVER QUACHITA RIVER
GLENWOOD CROSSING, HIGHWAY NO 70
NEAR
HOT SPRINGS, ARKANSAS
(CARLSON POINT)
DETAILS OF APPROACH GIRDER SPANS

Made by J.S.
Checked by J.S.
Traced by J.S.
Date 2-7-28

IRA G. HEDRICK, INC.
Consulting Engineers
Shreveport, La.
Job No.
Sheet No. 4

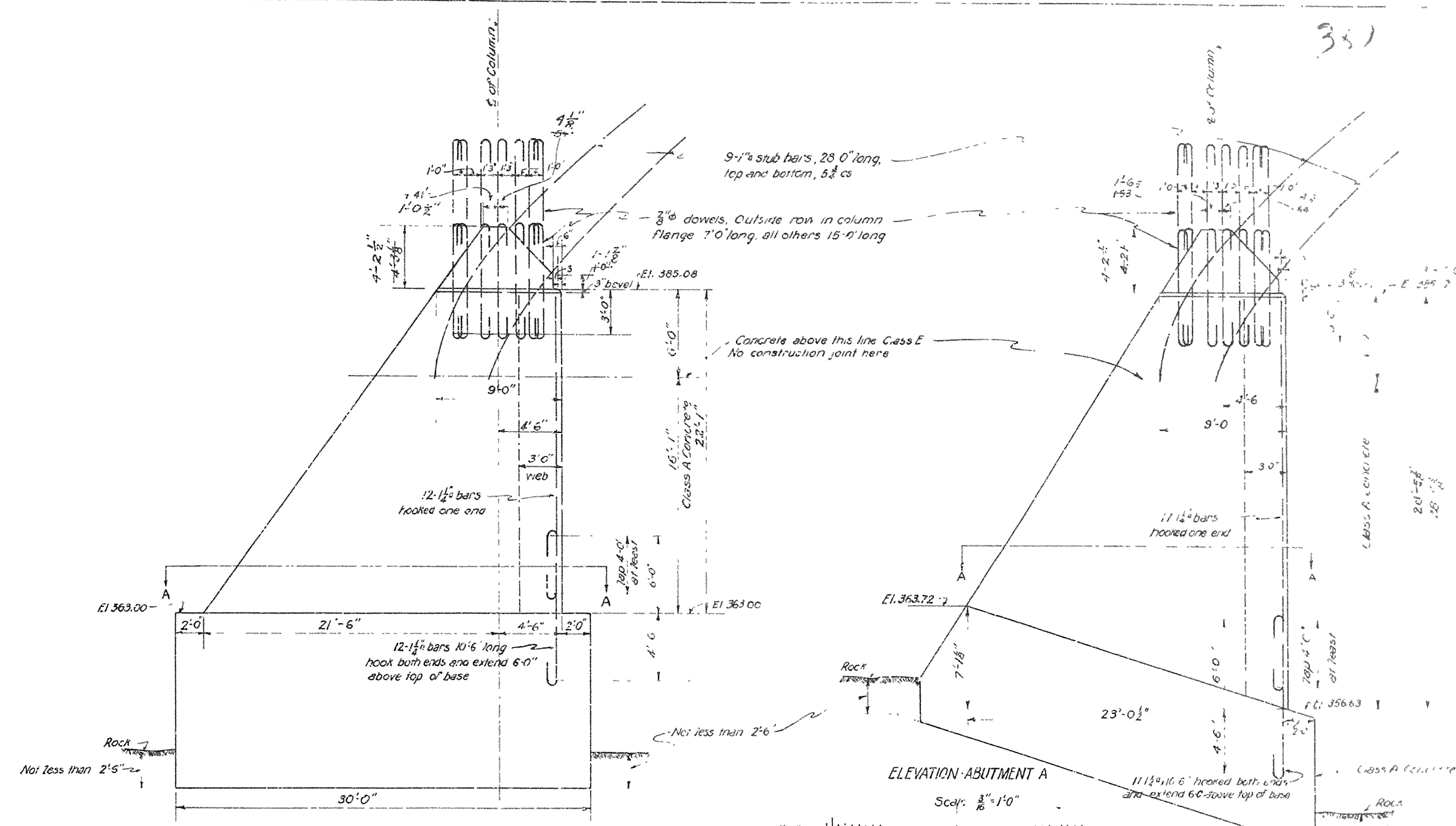
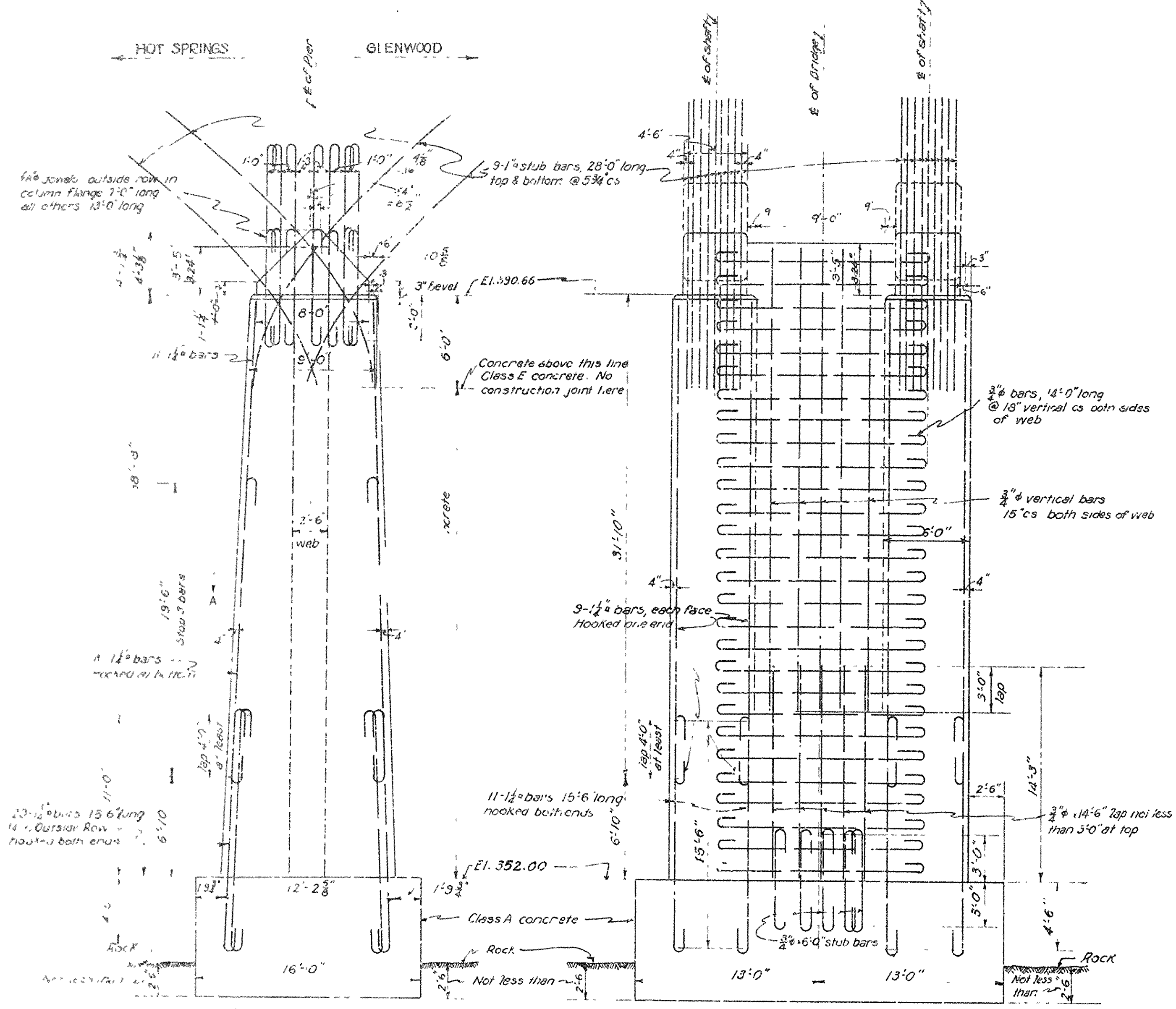


ARIZONA STATE HIGHWAY COMMISSION
HIGHWAY BRIDGE OVER OUACHITA RIVER
GLENWOOD CROSSING NEAR HIGHWAY 130 70
HOT SPRINGS, ARKANSAS

DETAILS OF PIERS NOS. 2 & 3

Revised

Drawn by J.S.W.
Checked by J.S.W.
Traced by J.S.W.
Checked by J.S.W.

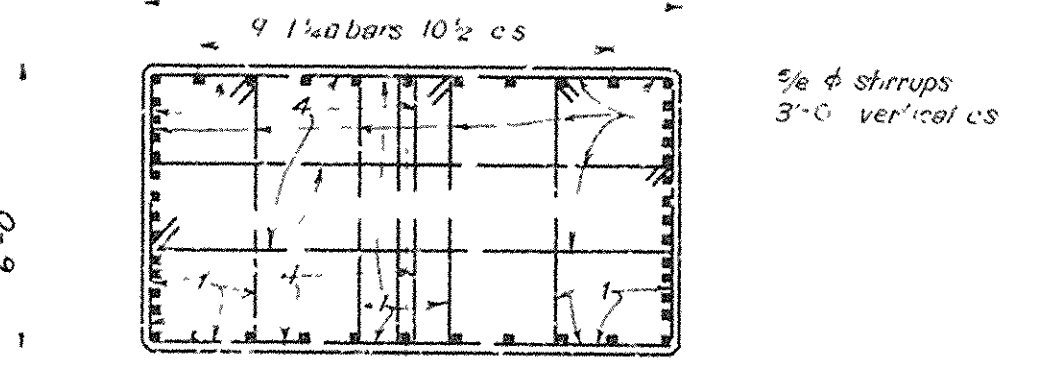
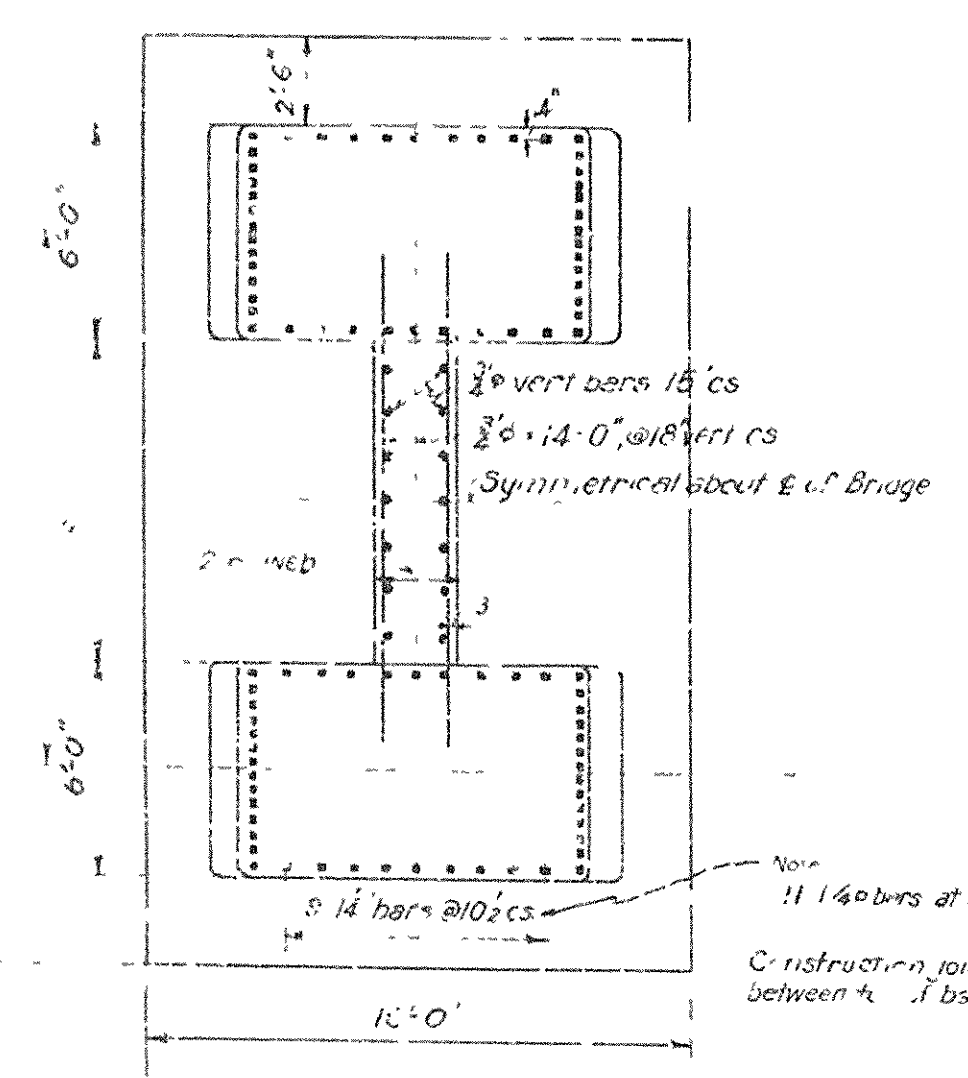


SECTION THROUGH WEB PIER 1 & 2 Scale 3/8" = 1'-0"

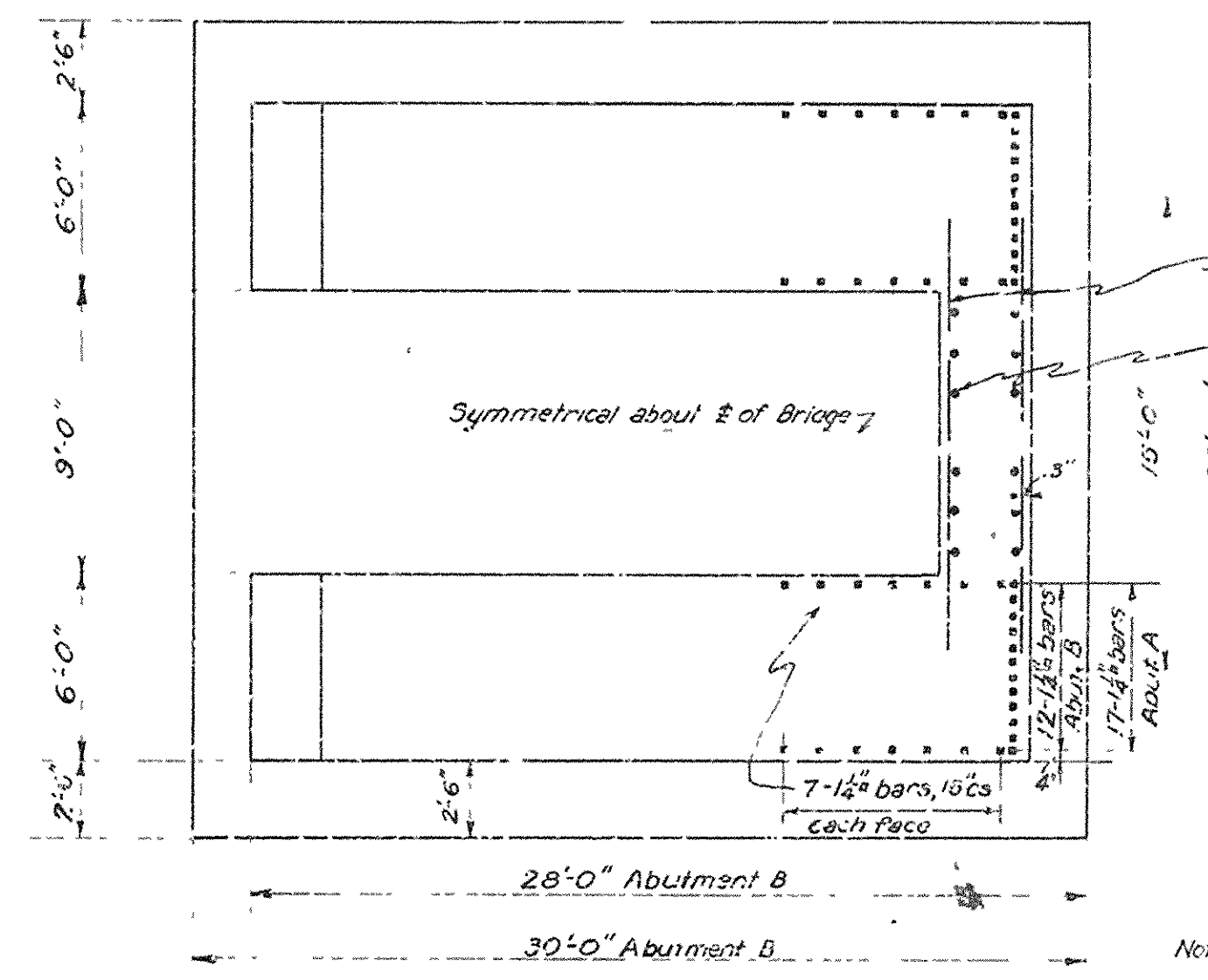
SECTION THROUGH WEB PIERS 1 & 2 Scale 1/2" = 1'-0"

ELEVATION - ABUTMENT B Scale - 3/8" = 1'-0"

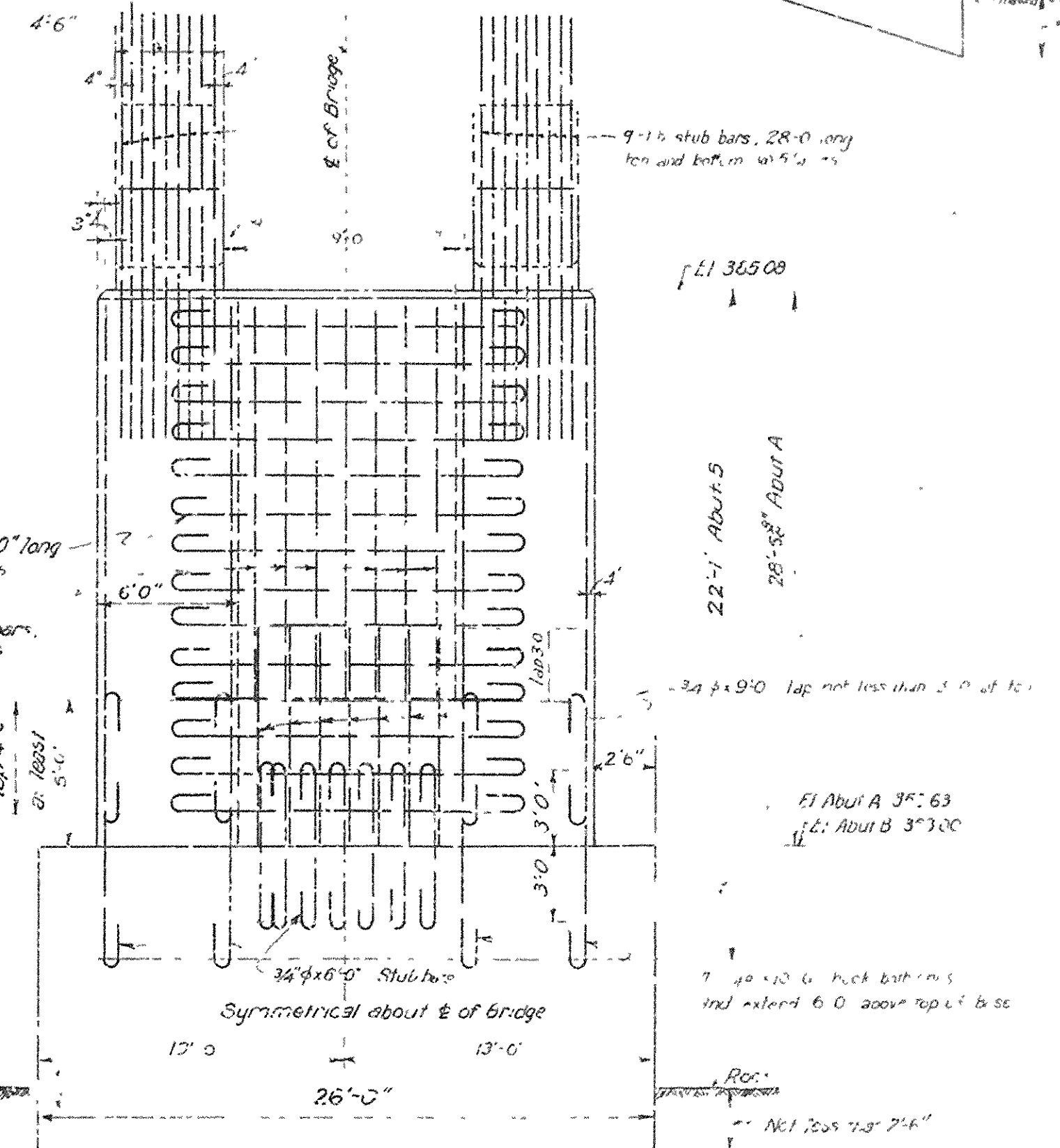
ELEVATION - ABUTMENT A Scale - 3/8" = 1'-0"



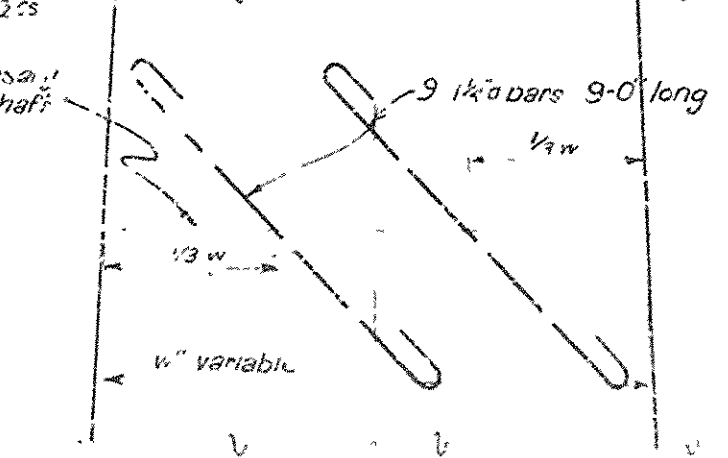
PIER SHAFT CROSS-SECTION SHOWING STIRRUP ARRANGEMENT. SAME FOR ALL PIERS. Scale 1/2" = 1'-0"



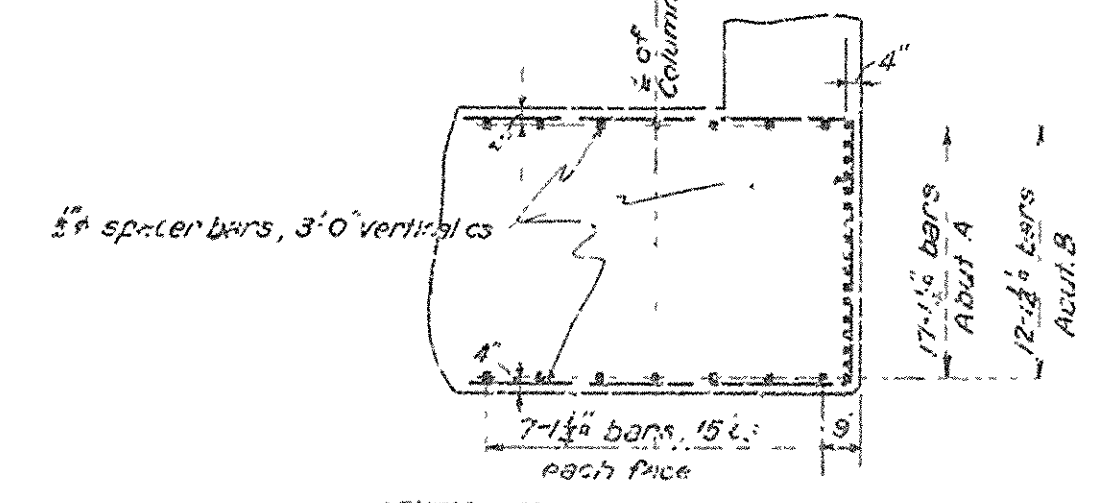
SECTION A-A, ABUTMENTS A & B Scale 3/8" = 1'-0"



SECTION THROUGH WEB, ABUTMENTS A & B Scale 3/8" = 1'-0"



ARRANGEMENT OF BARS AT SHAFT CONSTRUCTION JOINT PIER 2 ONLY. Scale 1/2" = 1'-0"



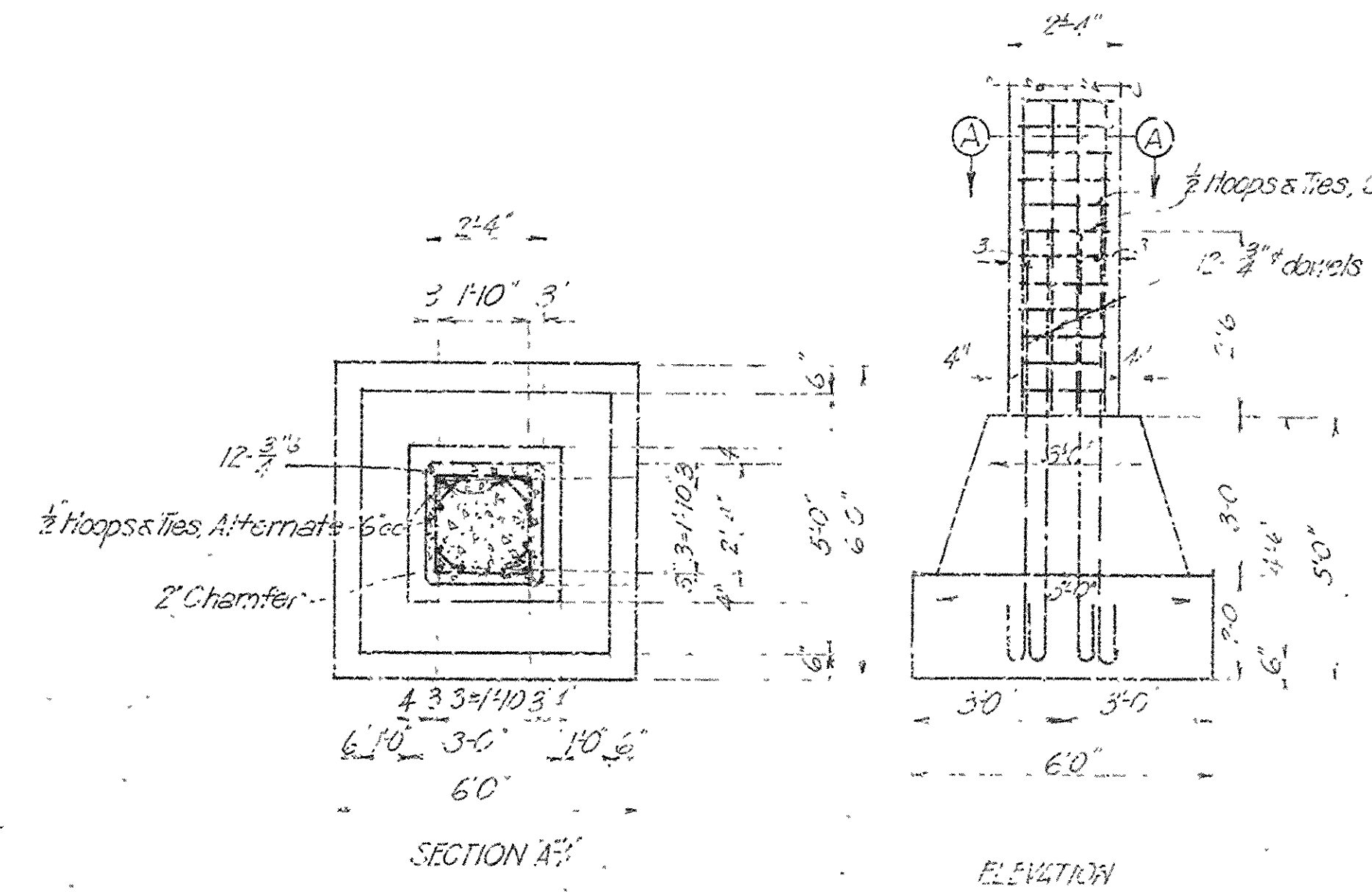
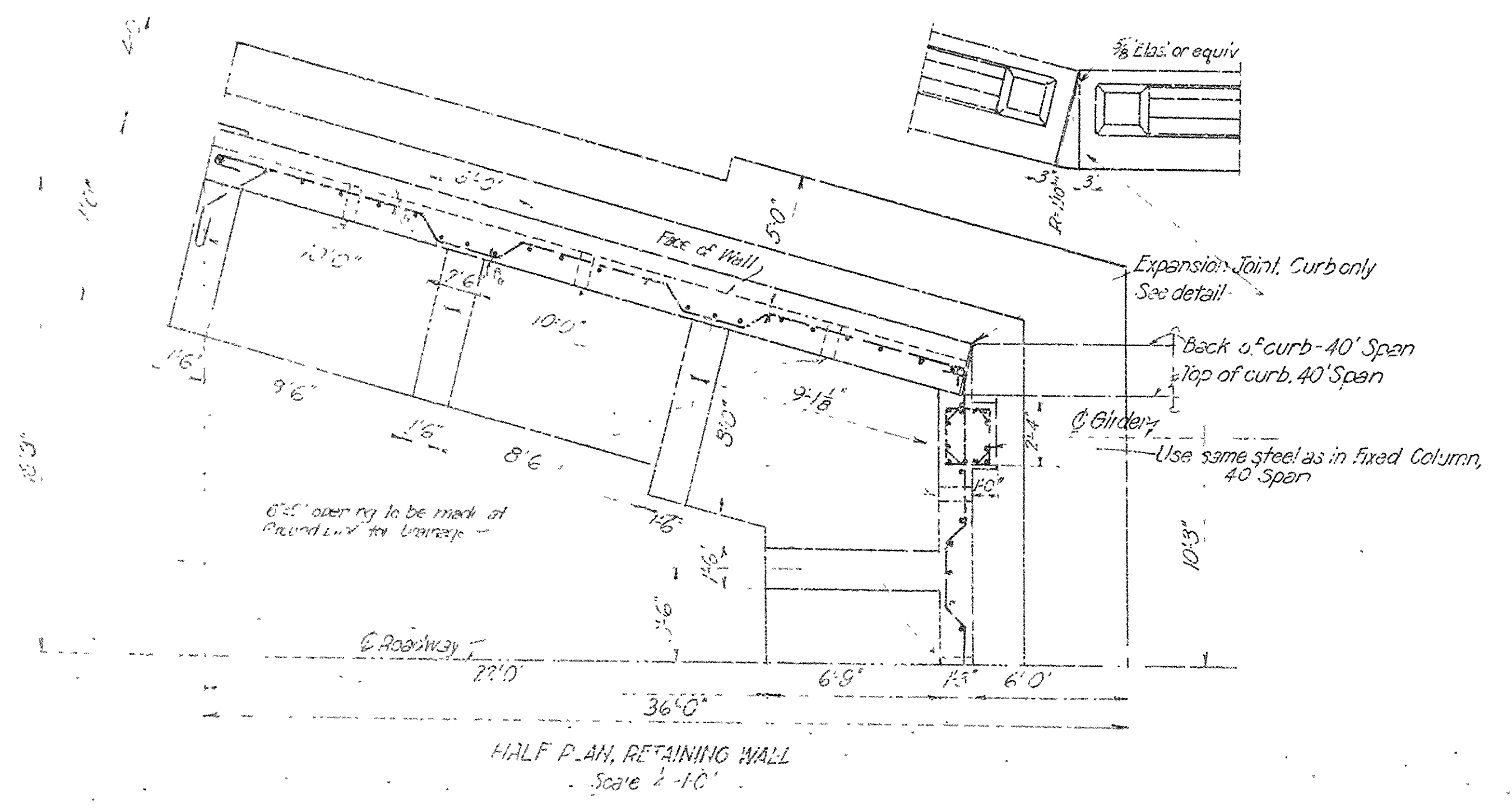
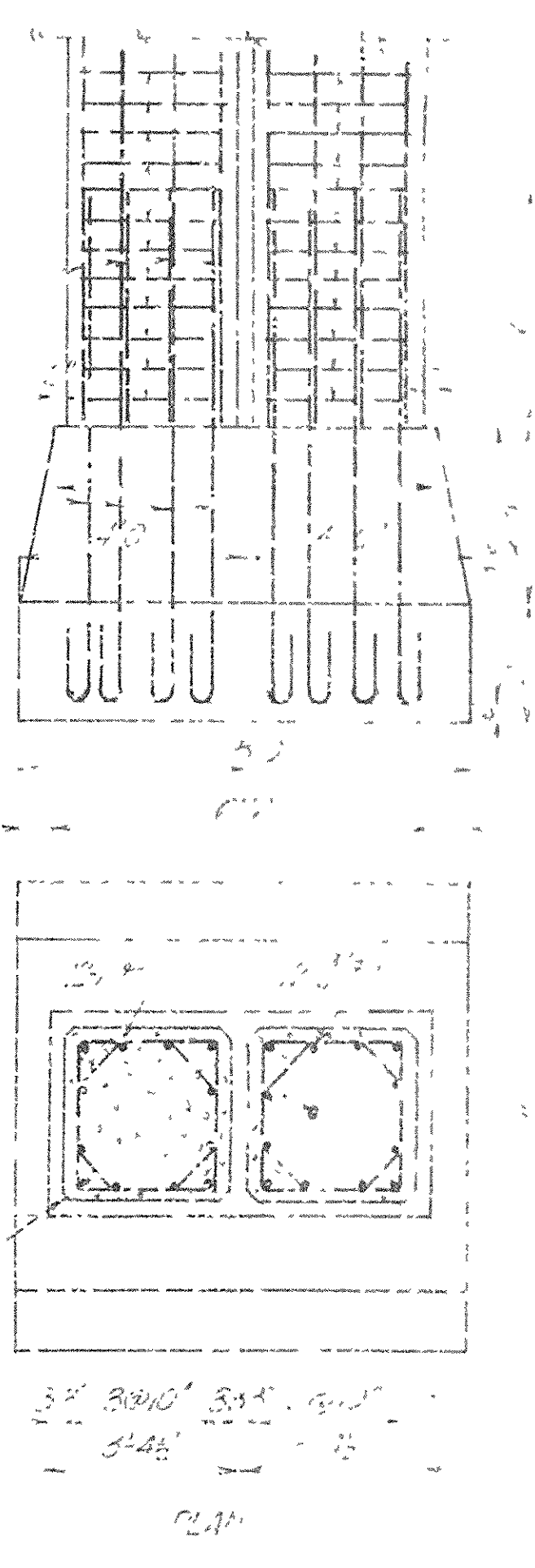
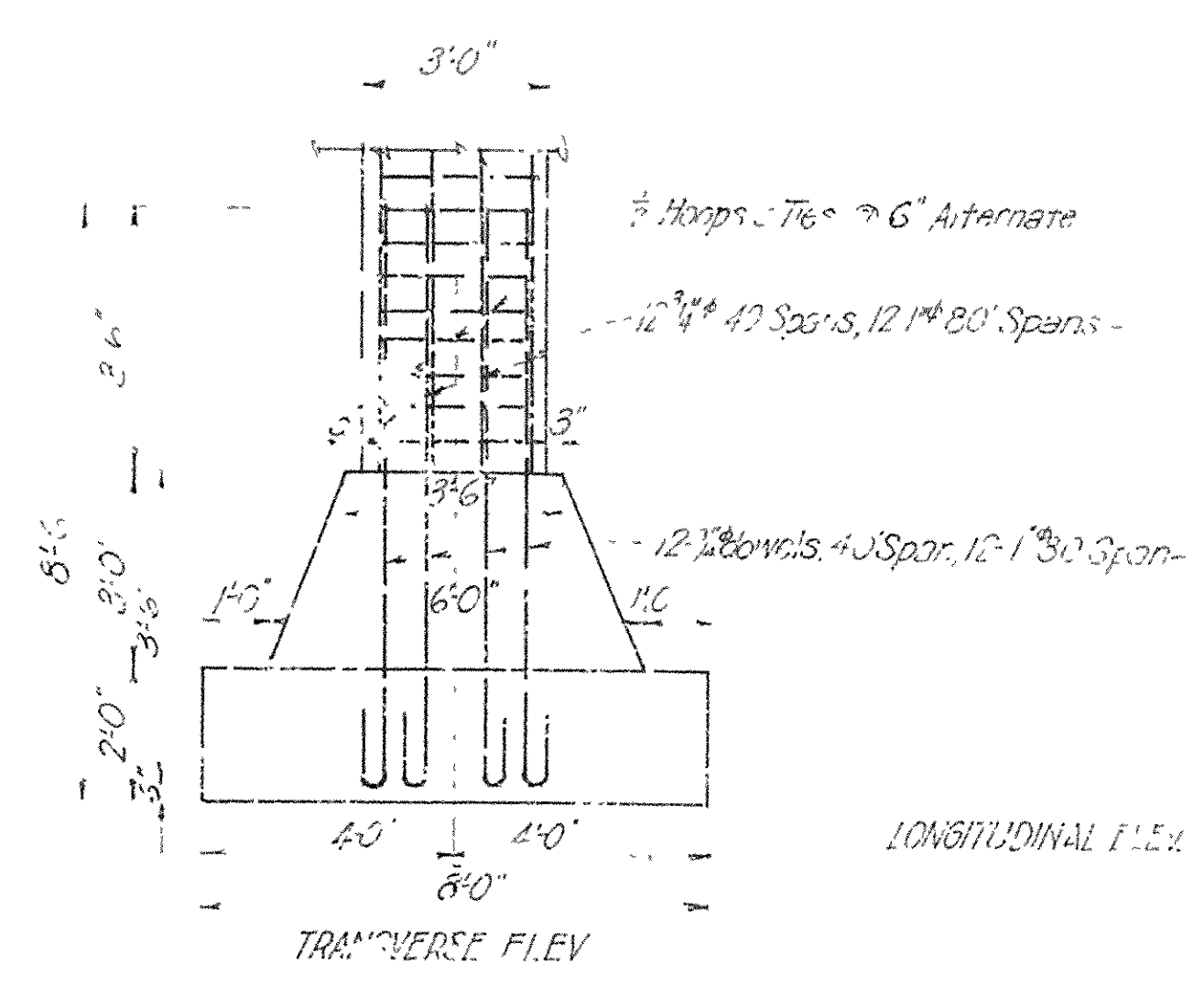
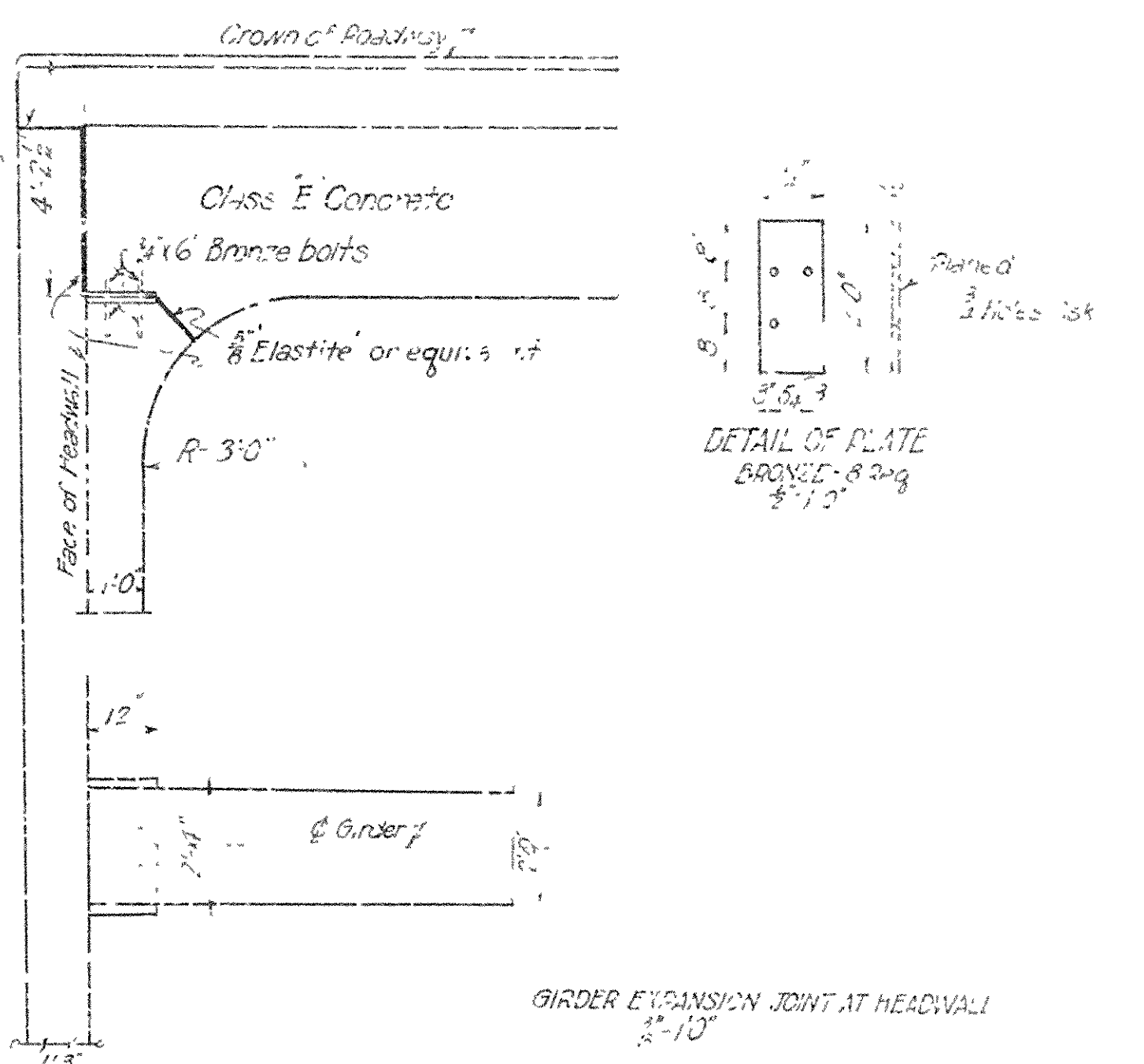
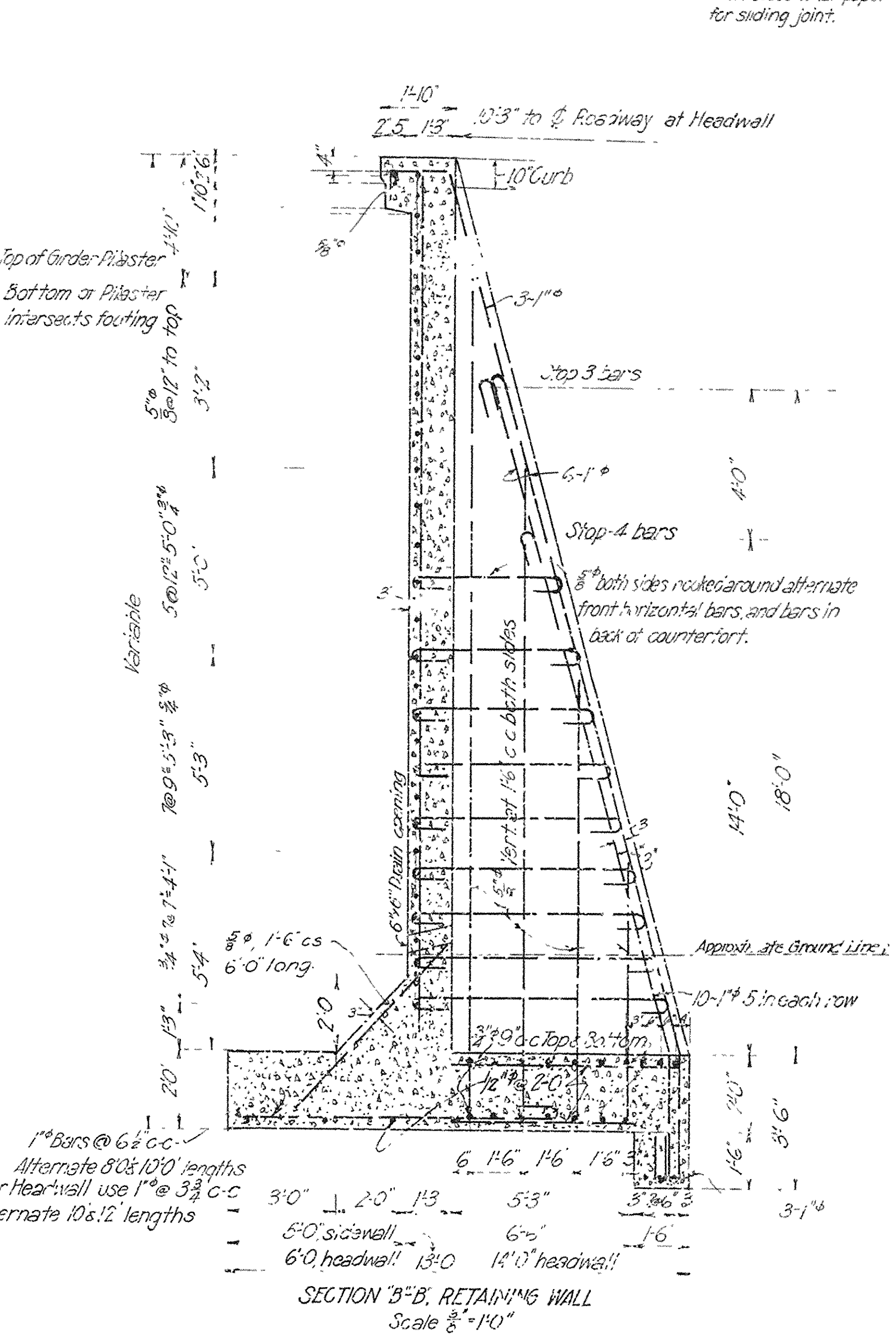
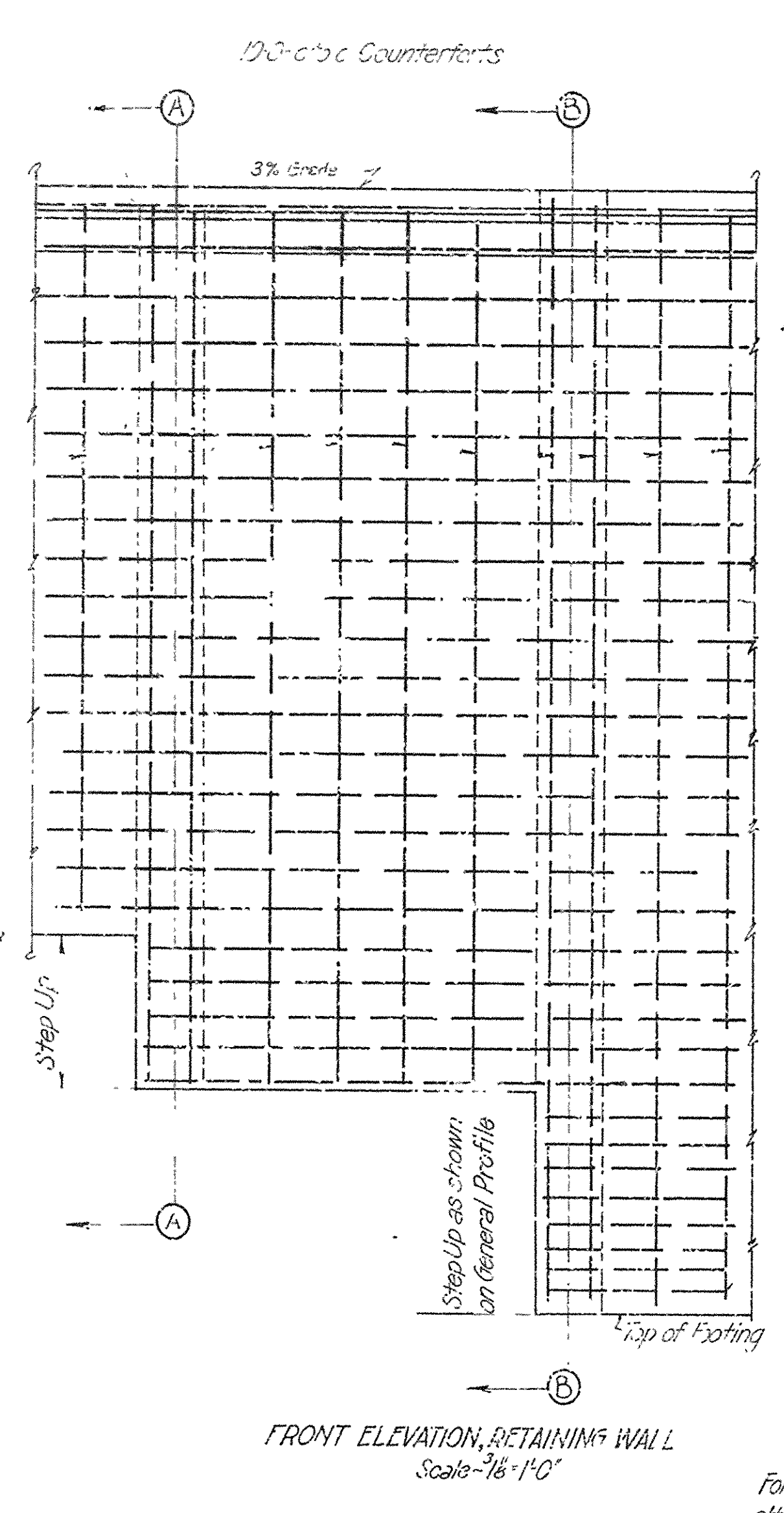
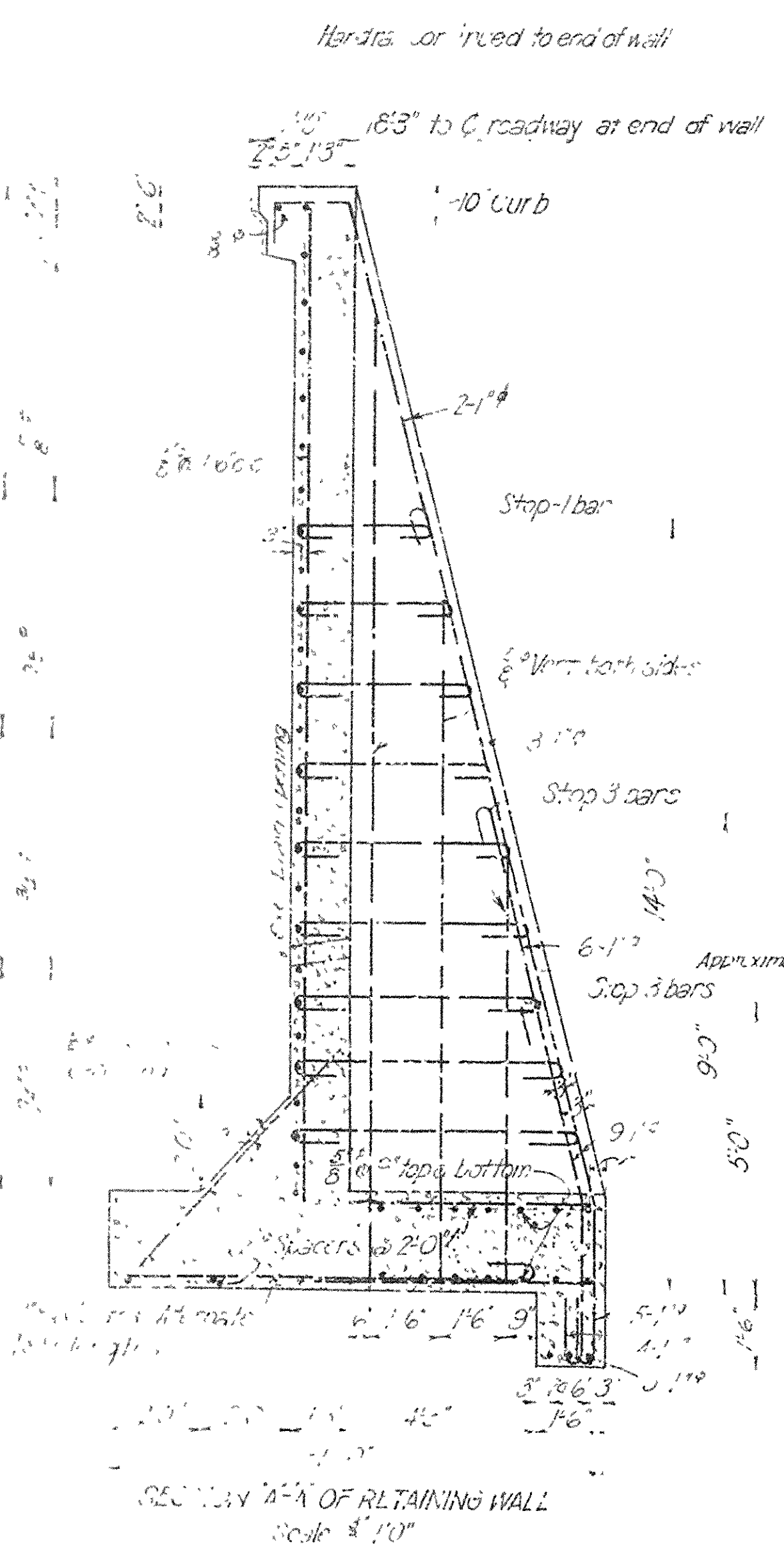
ABUTMENTS A & B SHAFT SECTION SHOWING SPACER BAR ARRANGEMENT

ARKANSAS STATE HIGHWAY COMMISSION
 HIGHWAY BRIDGE OVER OUACHITA RIVER
 GLENWOOD CROSSING NEAR HIGHWAY NO. 70
 HOT SPRINGS, ARKANSAS
 (GARLAND COUNTY)
 DETAILS OF ABUTMENTS & PIERS
 SCALES AS SHOWN

REVISED

Made by JSW
Checked by
Traced by JSW

ERA G. H. WICK, INC.
Consulting Engineers
Shreveport, La.



COLUMNS & FOOTINGS, FIXED BENTS
Scale 3/8" = 1'-0"

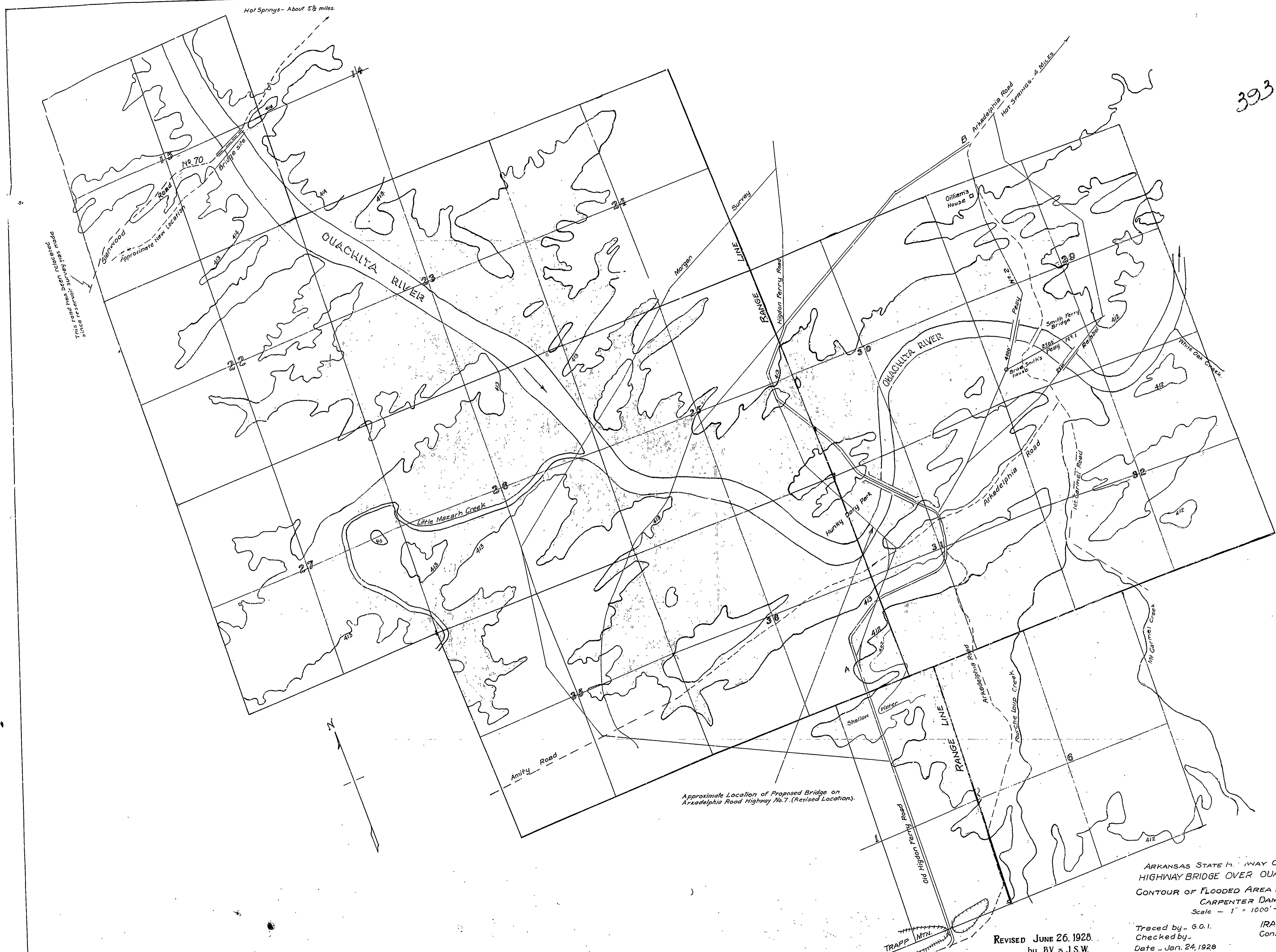
Revised Oct. 16, 1923
by K.F.

NOTE - CONCRETE IN RETAINING WALLS, FOOTINGS, COLUMNS & BASES OF...

ARKANSAS STATE HIGHWAY COMMISSION
HIGHWAY BRIDGE OVER QUACHITA RIVER
GLENWOOD CROSSING NEAR HIGHWAY NO. 70
HOT SPRINGS ARKANSAS
DETAIL OF RETAINING WALLS,
COLUMNS, AND FOOTINGS
Scale 1/4" = 1'-0"

Made by J.S.A.
Checked by J.H.C.
Traced by J.H.C.
Checked by J.H.C.

H.R. & L.R.C. INC.
Consulting Engineers
Hot Springs, Ark.



This road has been relocated since reservoir survey pits made

Hot Springs - About 5 1/2 miles.

Approximate Location of Proposed Bridge on Arkadelphia Road Highway No. 7 (Revised Location).

ARKANSAS STATE HIGHWAY COMMISSION
 HIGHWAY BRIDGE OVER OUACHITA RIVER
 CONTOUR OF FLOODED AREA FROM PROPOSED
 CARPENTER DAM.
 Scale - 1" = 1000'-0"

REVISED JUNE 26, 1928.
 by B.V. & J.S.W.

Traced by - G.O.I.
 Checked by -
 Date - Jan. 24, 1928

IRA G. HEDRICK, INC.
 Consulting Engineers
 Shreveport, La.
 FILE NO.