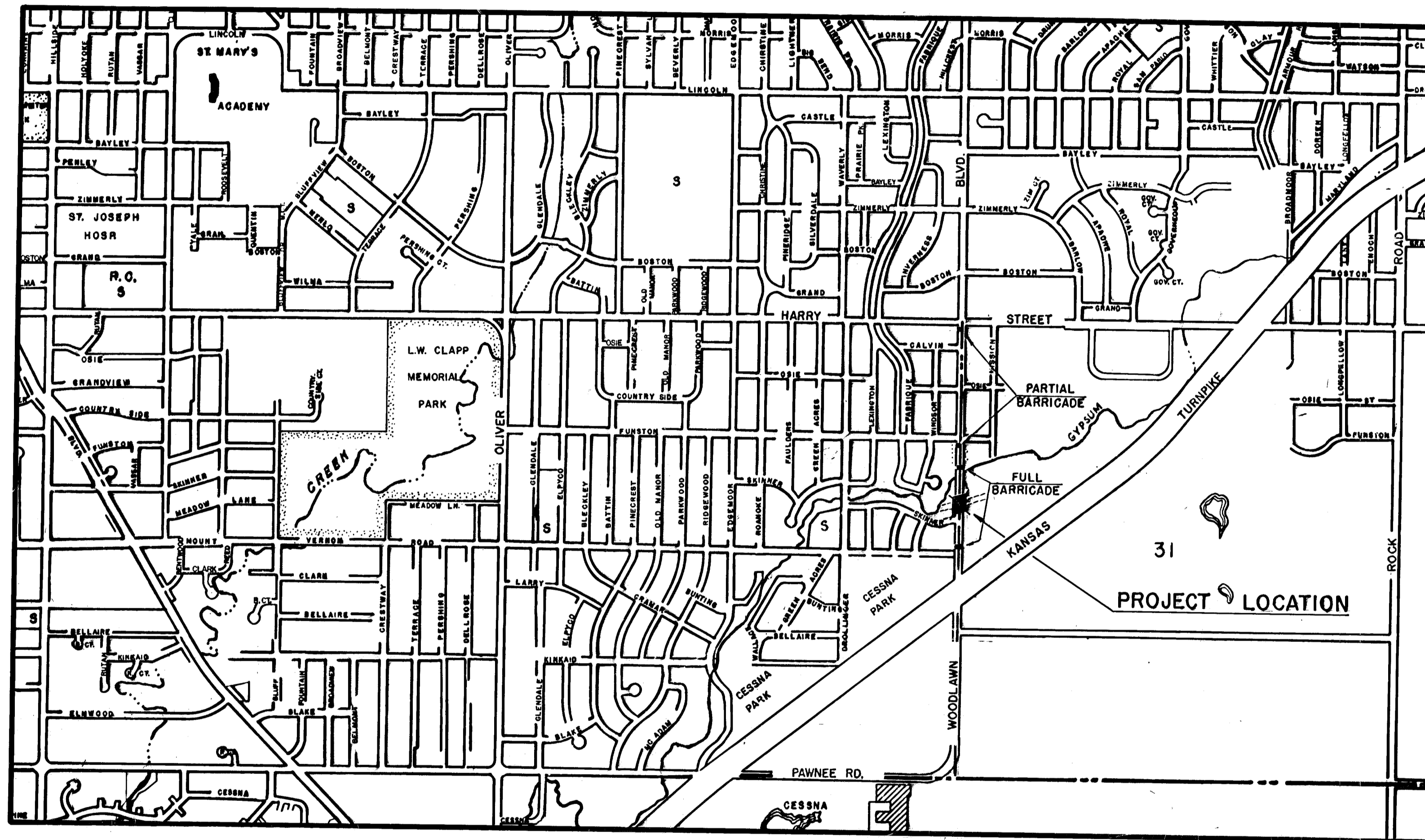


# WOODLAWN BRIDGE

## OVER

# GYPSUM CREEK



## CITY OF WICHITA

### DEPARTMENT OF PUBLIC WORKS

R. W. BRUGGEMAN, P.E. DIRECTOR OF PUBLIC WORKS  
 R. W. LINN, P.E. CITY ENGINEER

R. S. DELAMATER & ASSOCIATES, WICHITA, CONSULTING ENGINEERS

PROJECT DAKB 571018

SEPTEMBER, 1971

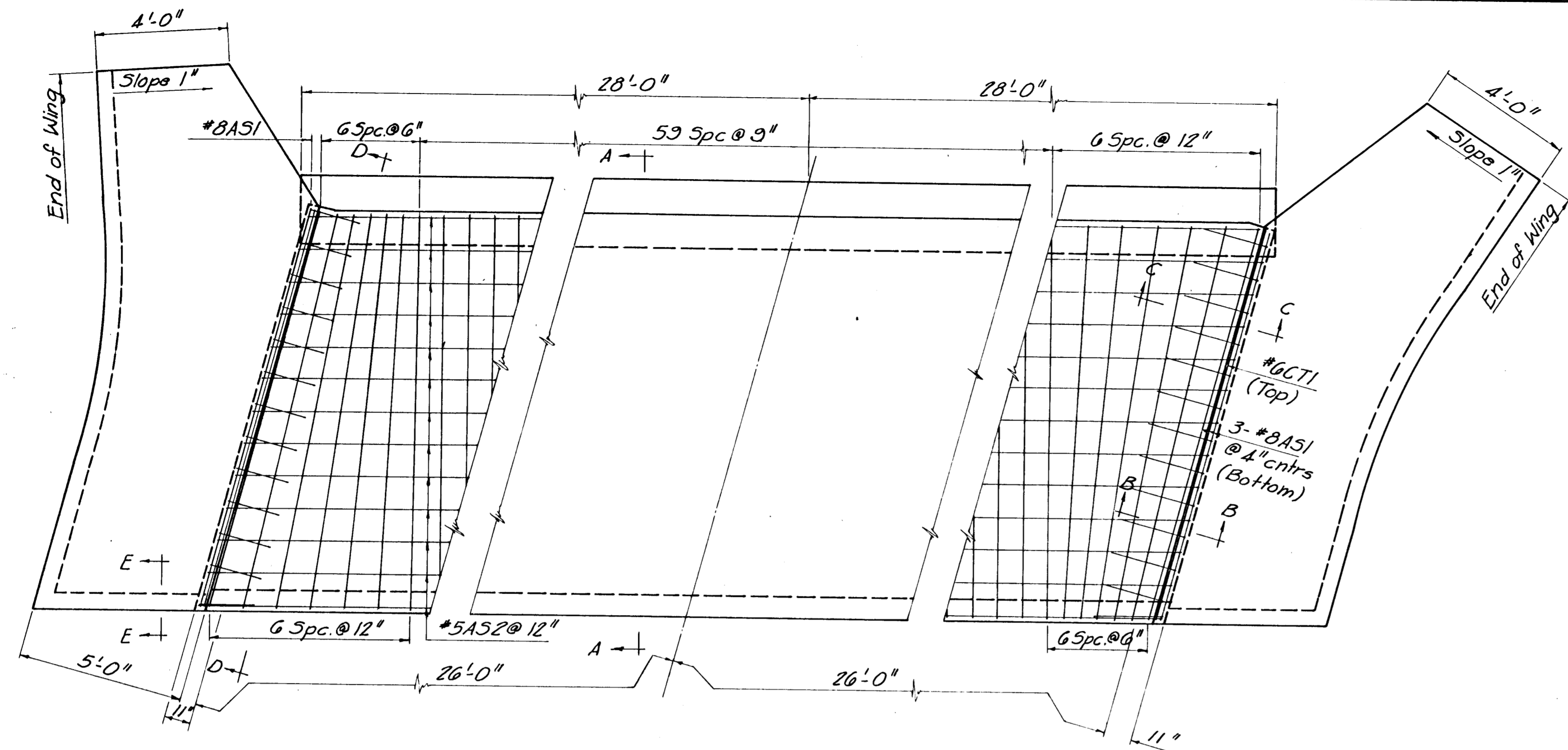
#### INDEX OF SHEETS

- Sheet No. 1. Title Sheet  
 2. Contour Map  
 3. Construction Layout  
 4. Abutment Details  
 5. Pier Details  
 6. Prestressed Beam Details  
 7. Superstructure Layout  
 8. Superstructure Details  
 9. Auxiliary Details  
 10. Standard Pile Details  
 11. Approach Slab Details  
 12. Bar Supports, Bridge Excavation, Handrail Details, and Summary of Quantities

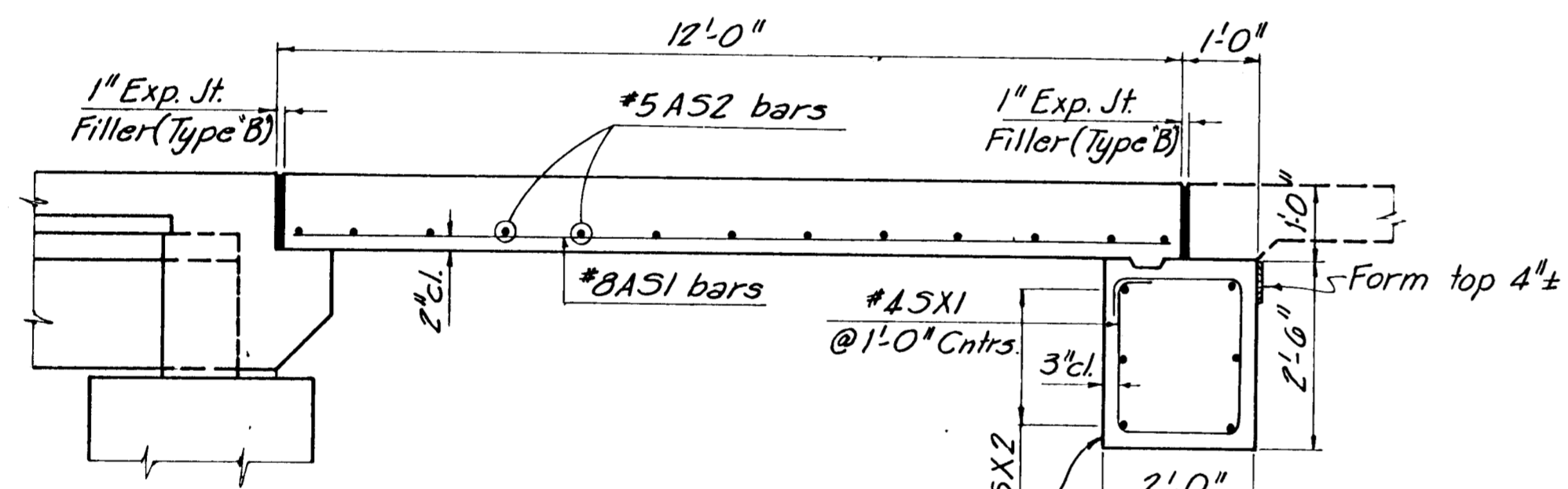




PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		1971	11	12

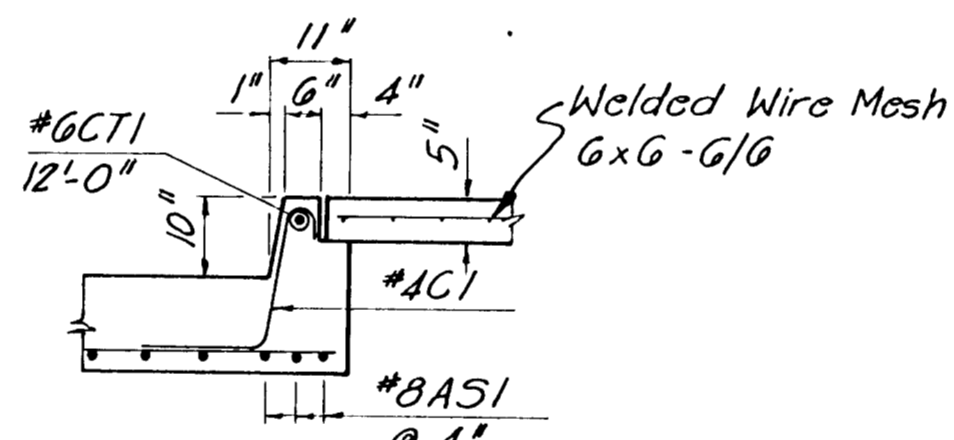


APPROACH SLAB  
PLAN SHOWING REINFORCEMENT

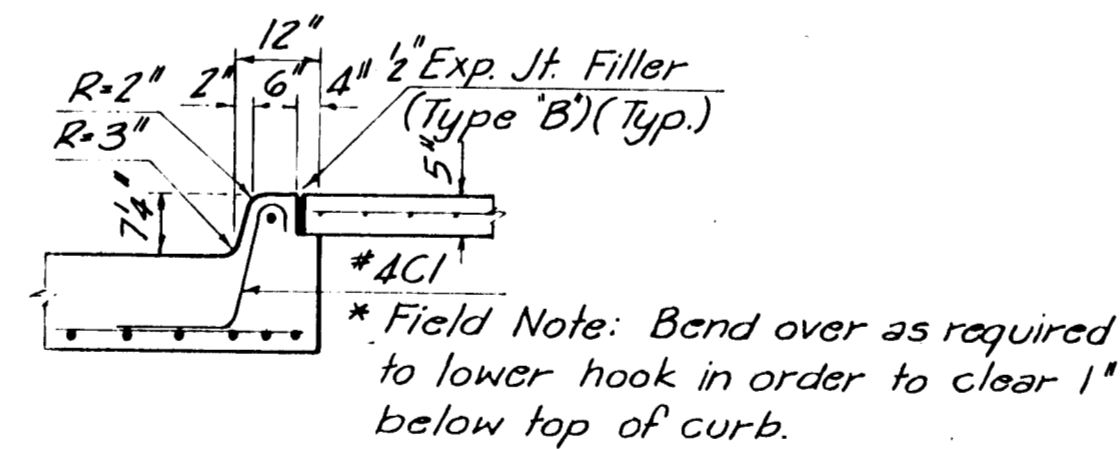


SECTION A-A

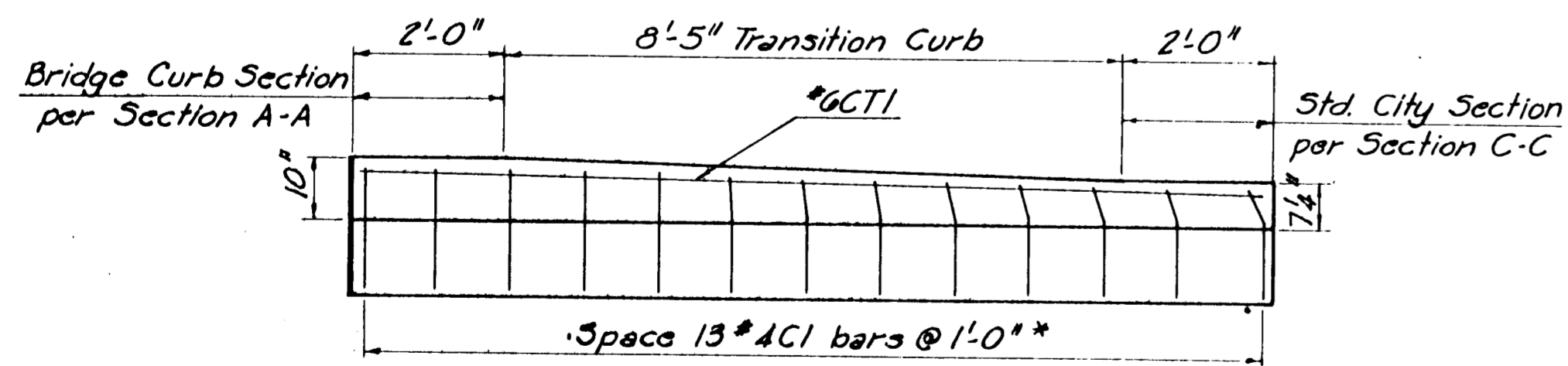
NOTE: Pour against neat lines of excavation; no forming except as shown.



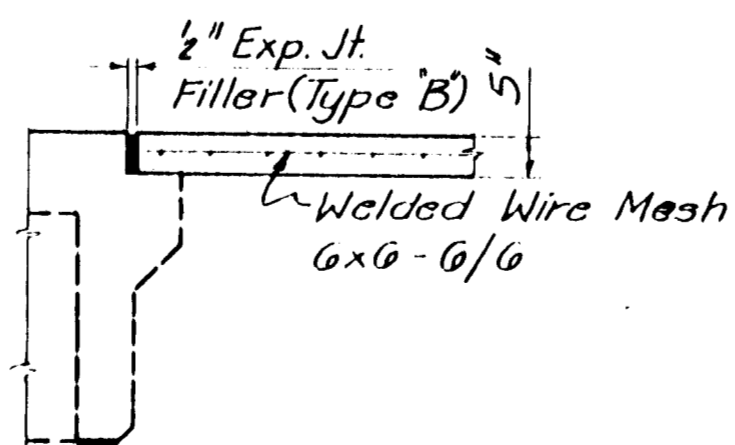
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

NOTES:  
The item "Approach Slab" includes fine grading, and furnishing, forming, placing and finishing all concrete and reinforcing steel required for one approach slab at each end of the bridge, as detailed on this sheet.

Cure the concrete as provided for bridge deck.

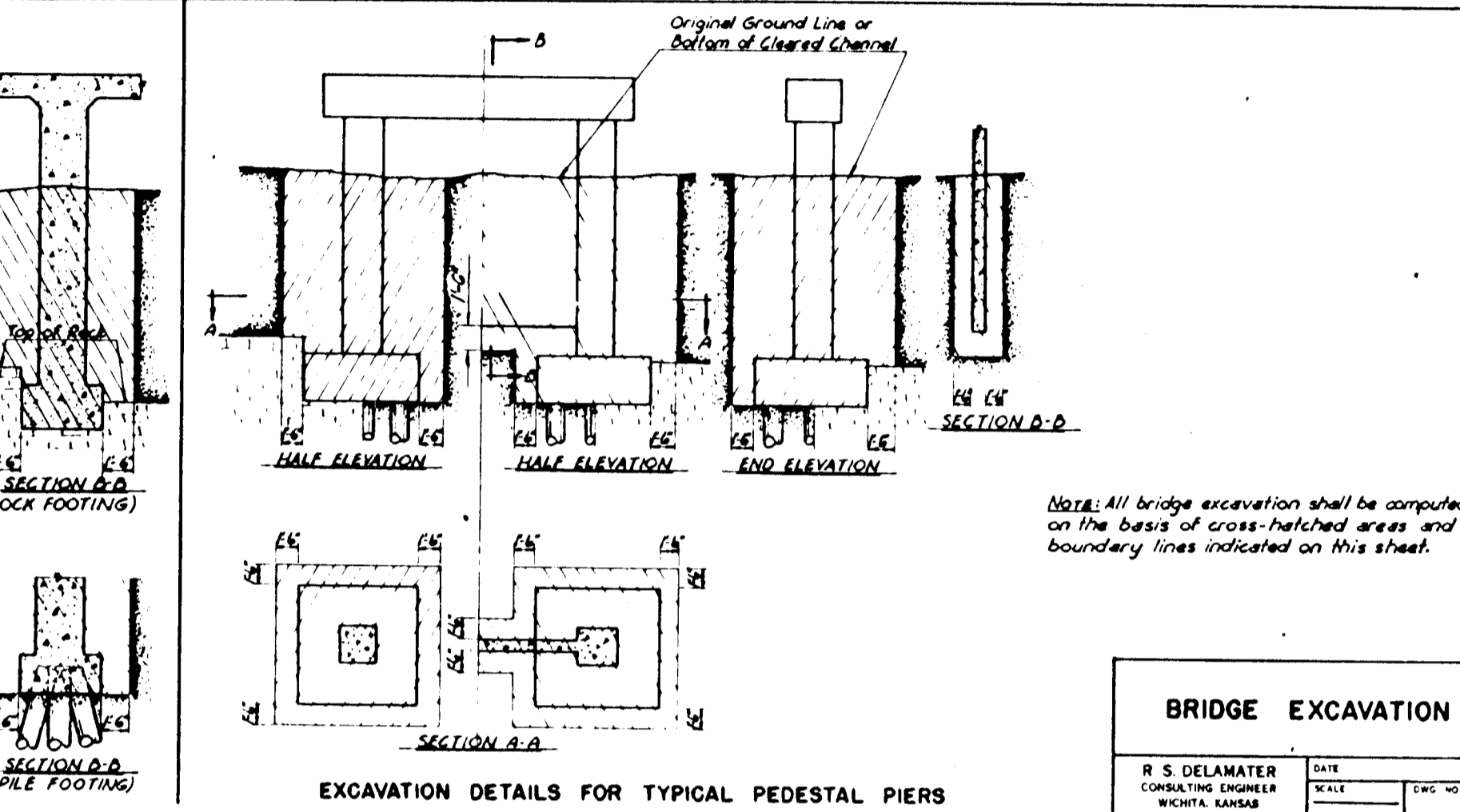
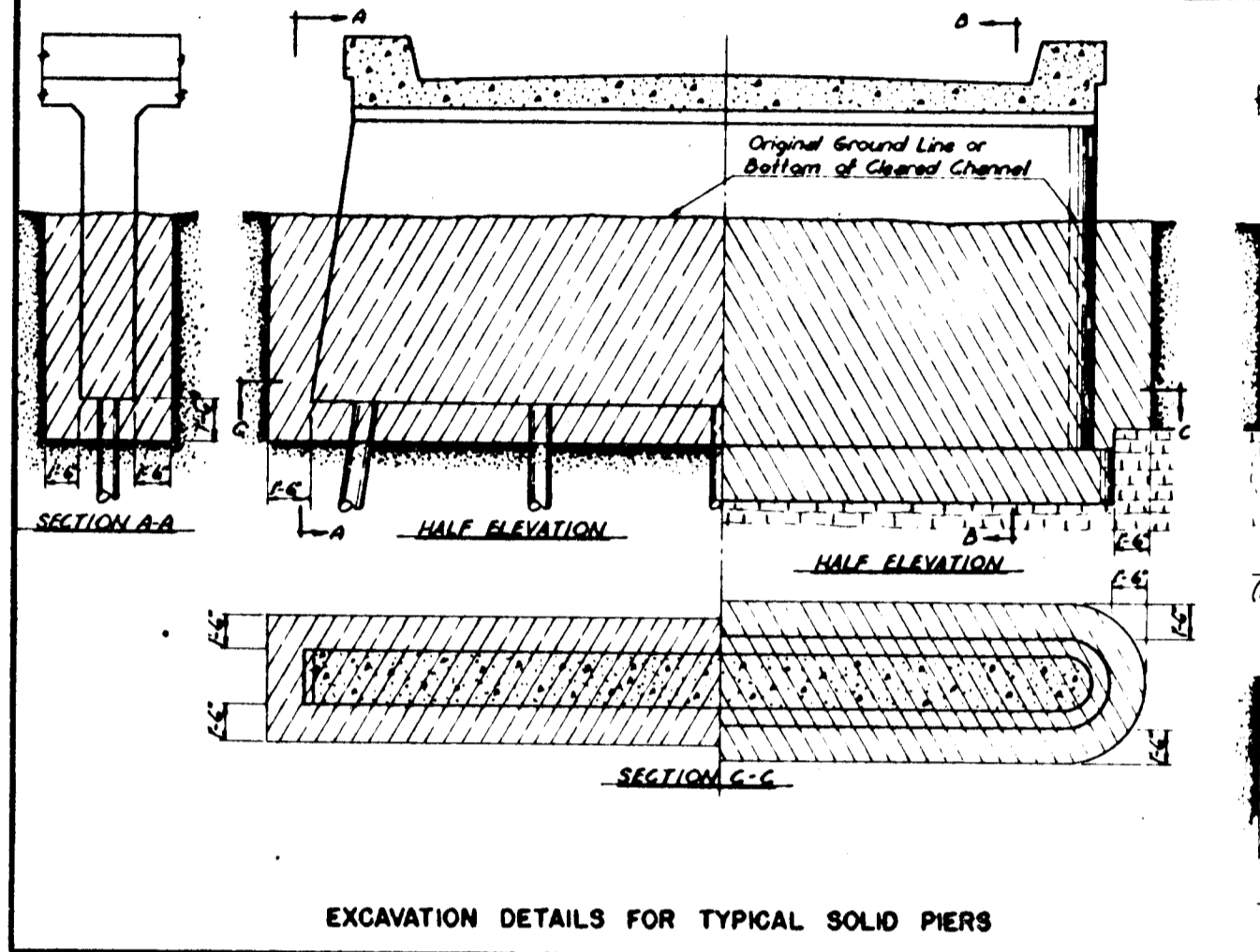
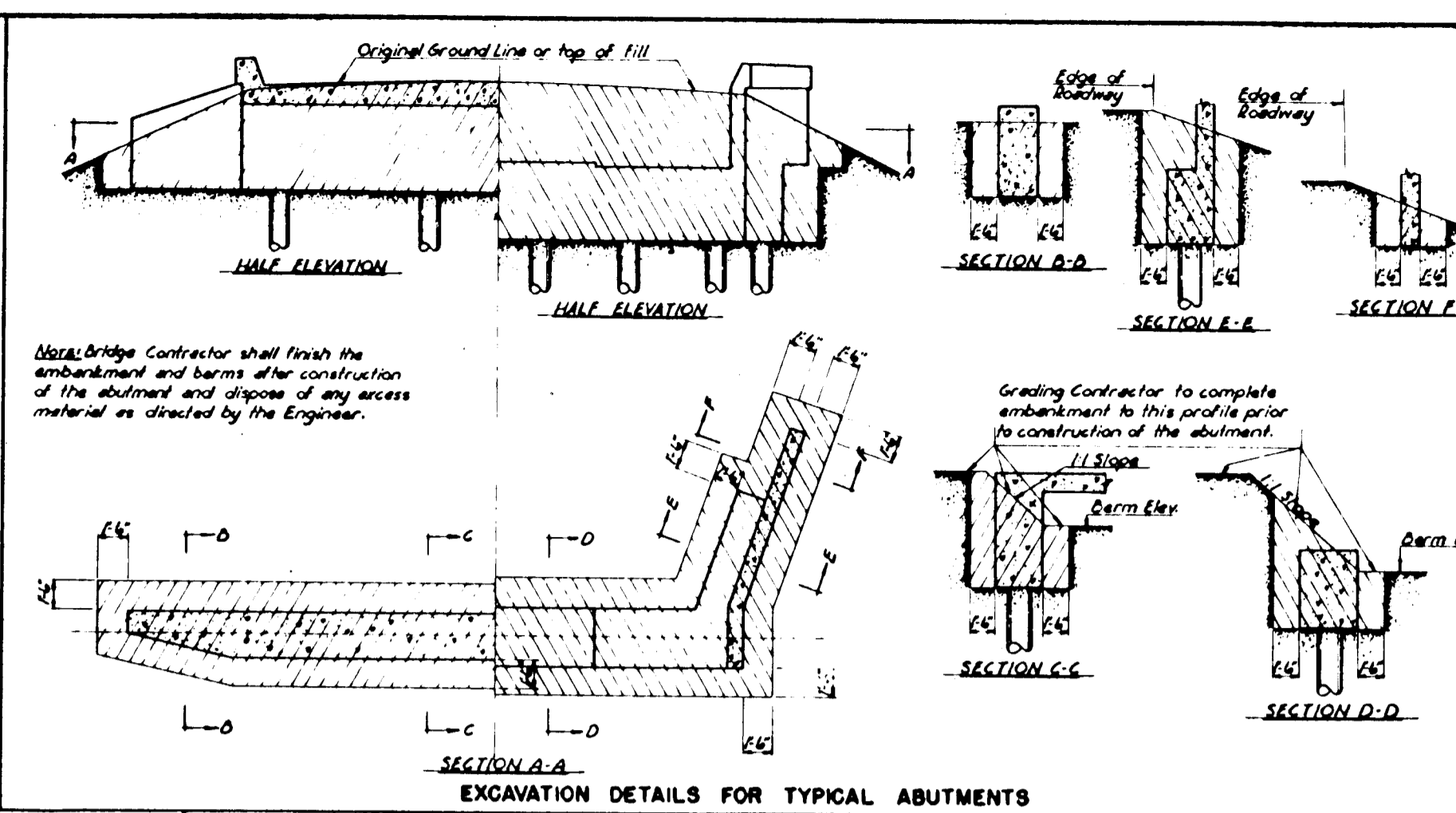
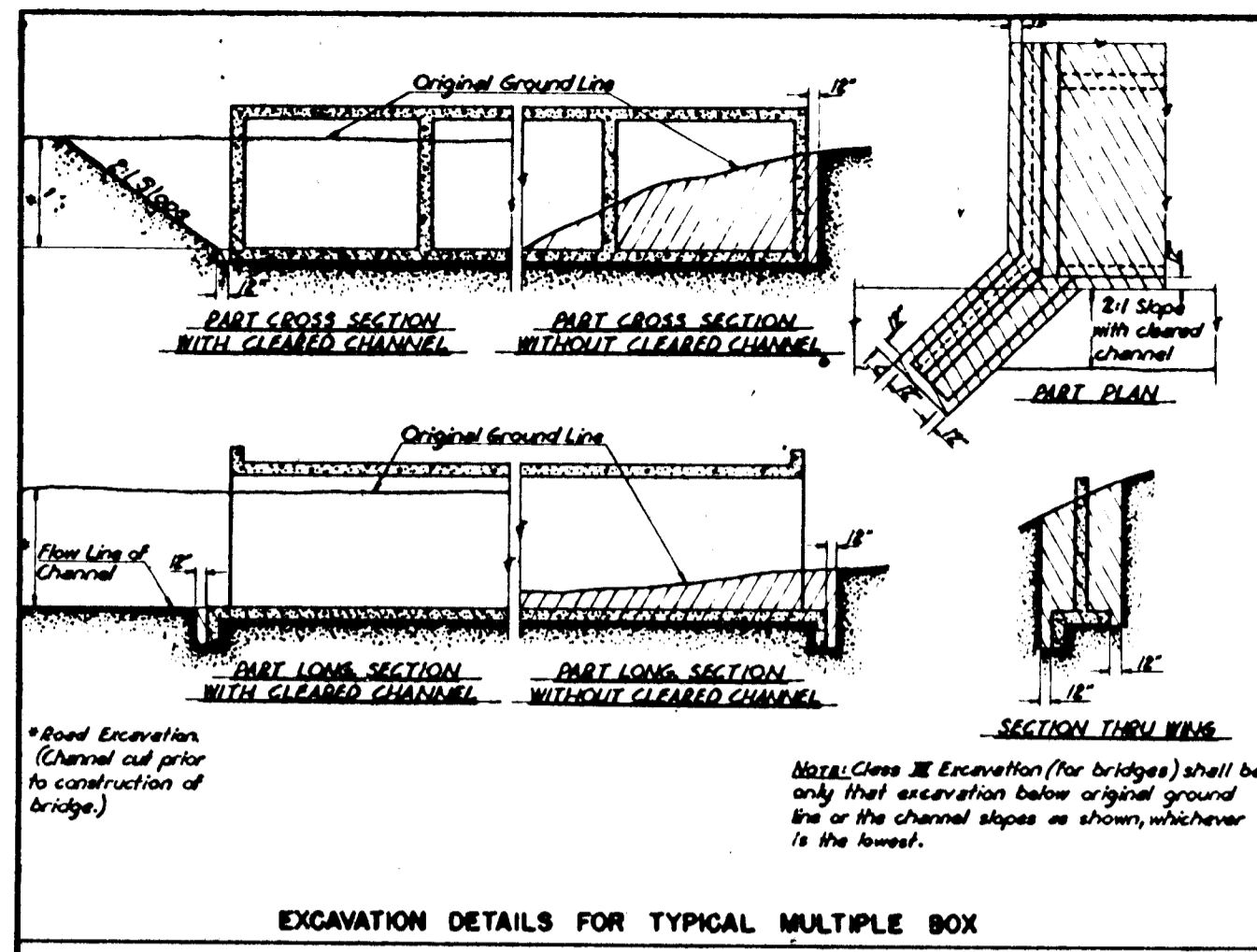
Use Class AAA(AE) Concrete in approach slabs, including sidewalks.

See Sheet 9 for General Notes.

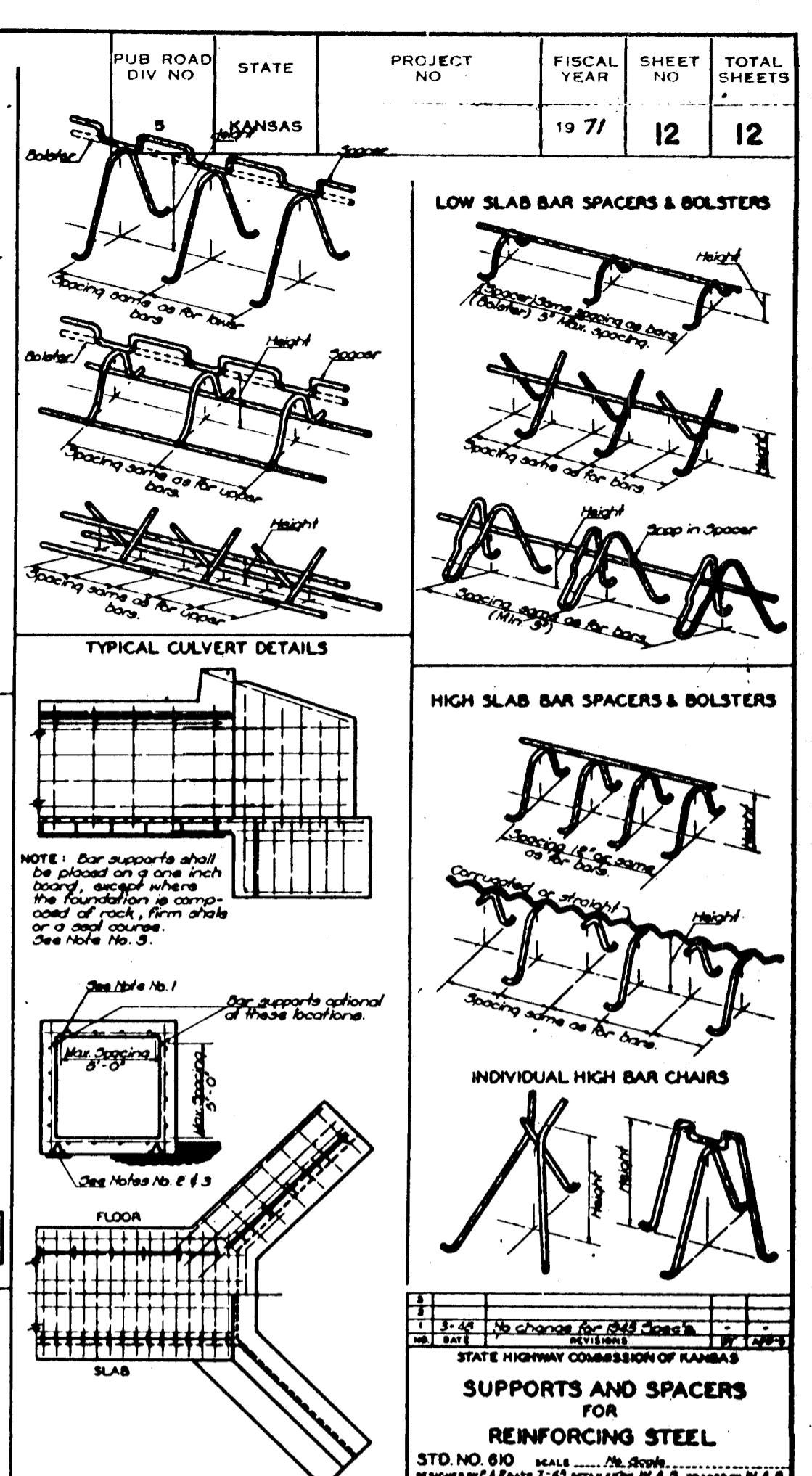
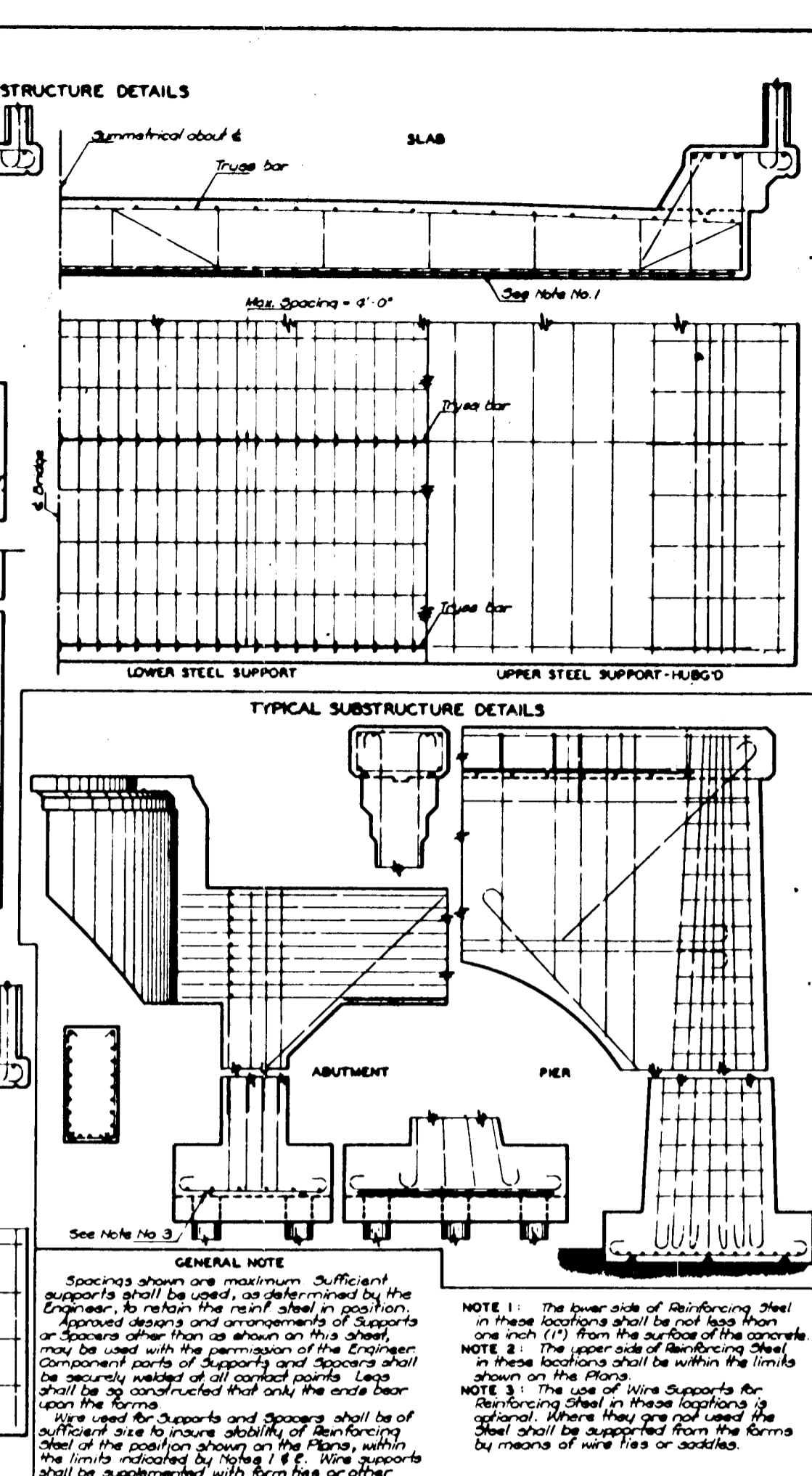
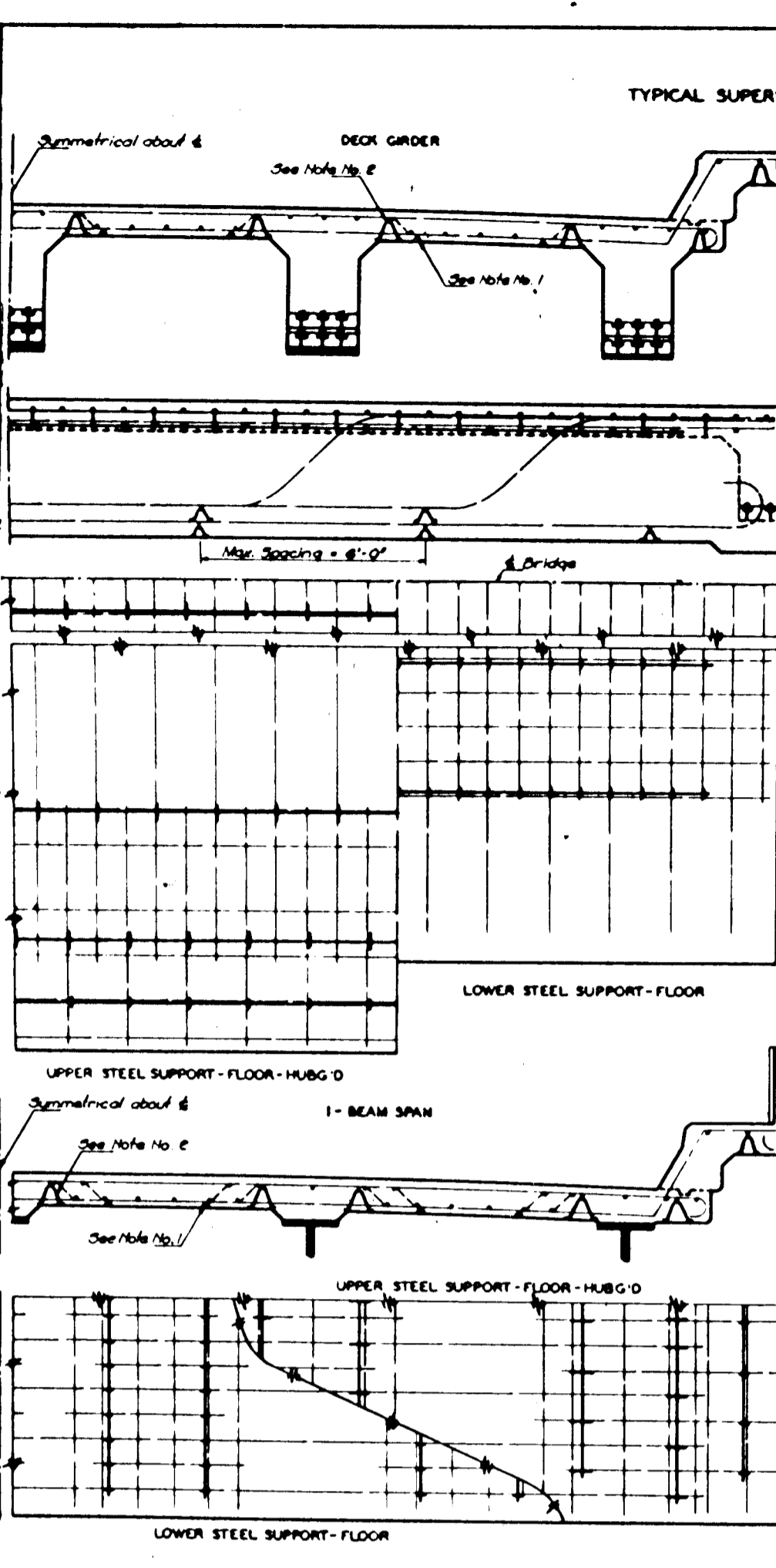
See Sheet 9 for Bar List and Bending Diagrams, (for information only).

Approximate Quantities, Each Slab (Two thus)  
Concrete, Class AAA(AE) 38.5 Cu. Yds.  
Reinforcing Steel 4,580 Lbs.\*  
\*Includes 80 Lbs. wire mesh

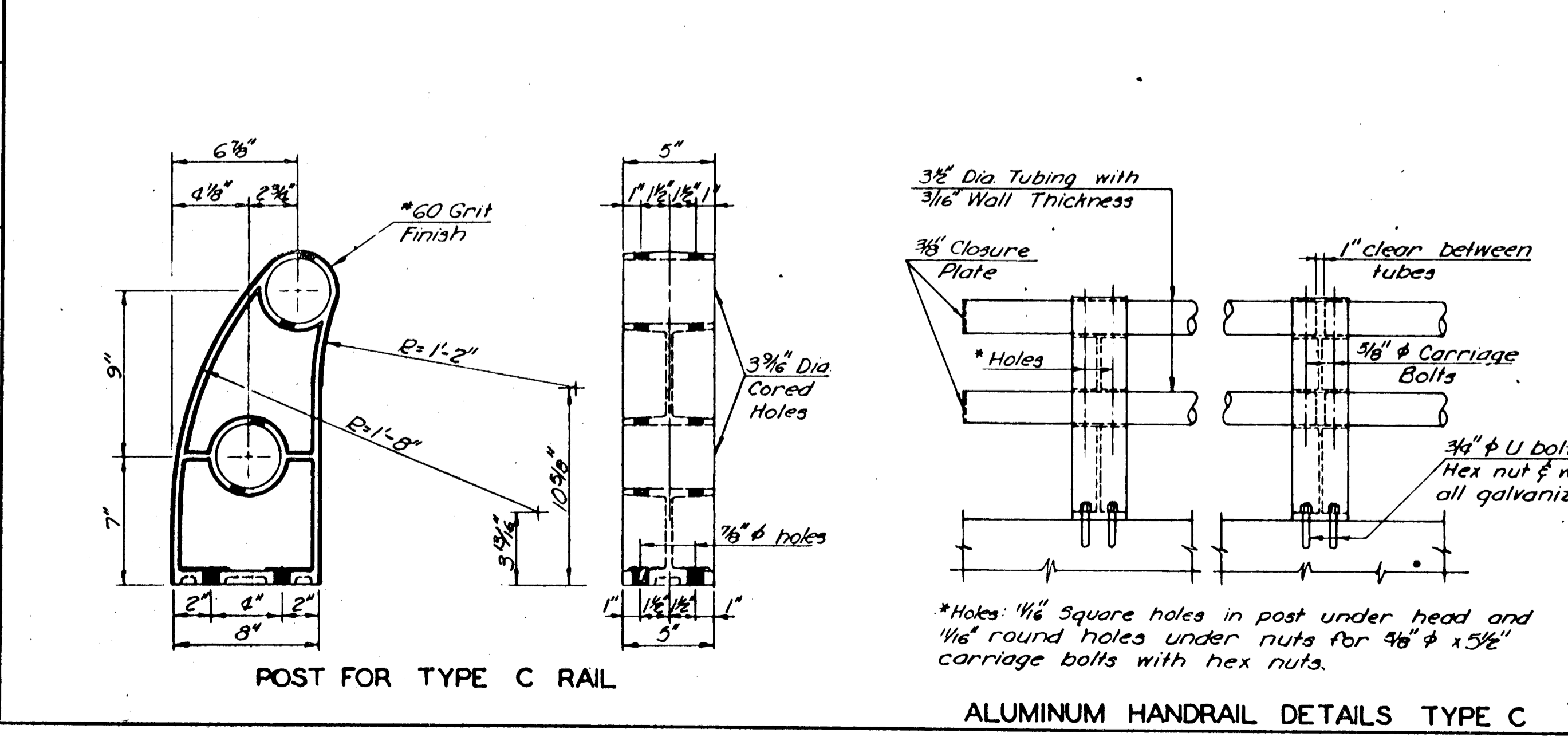
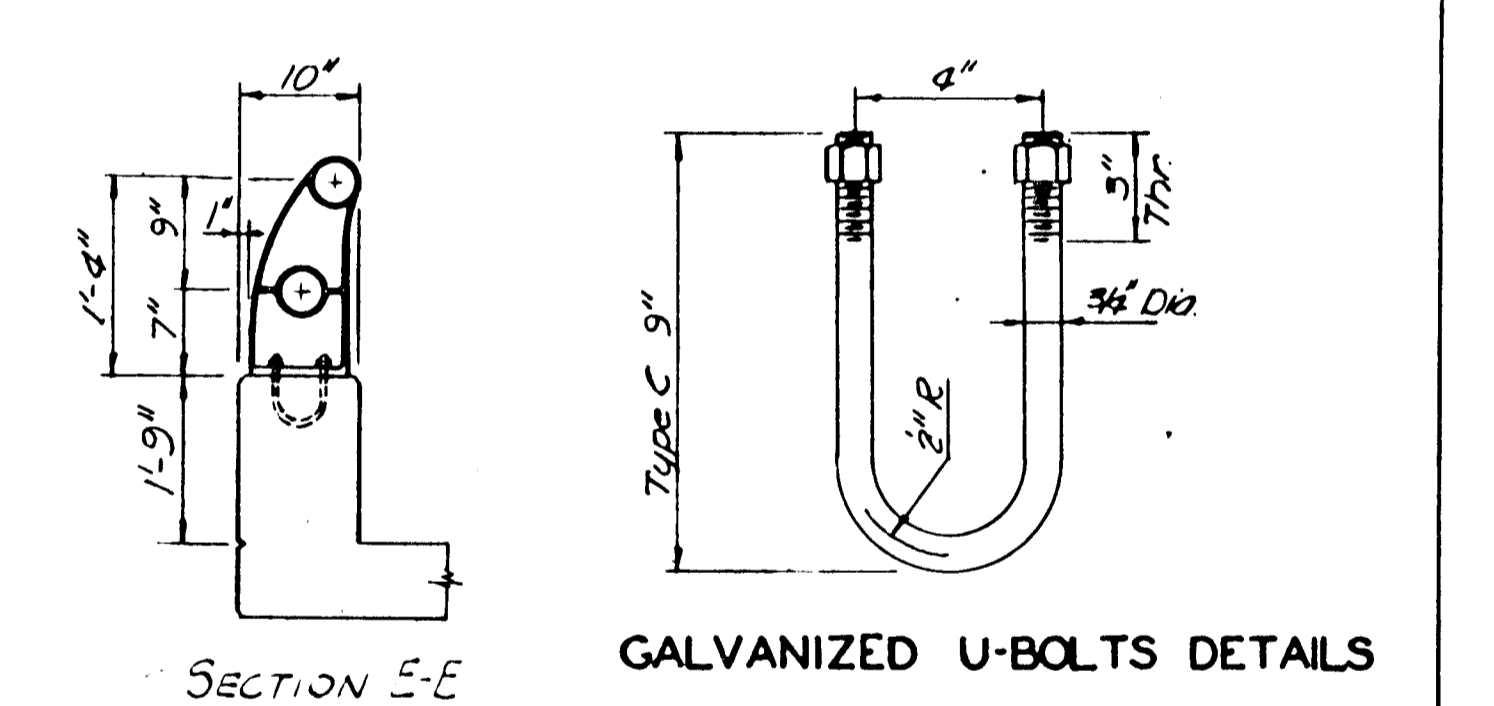
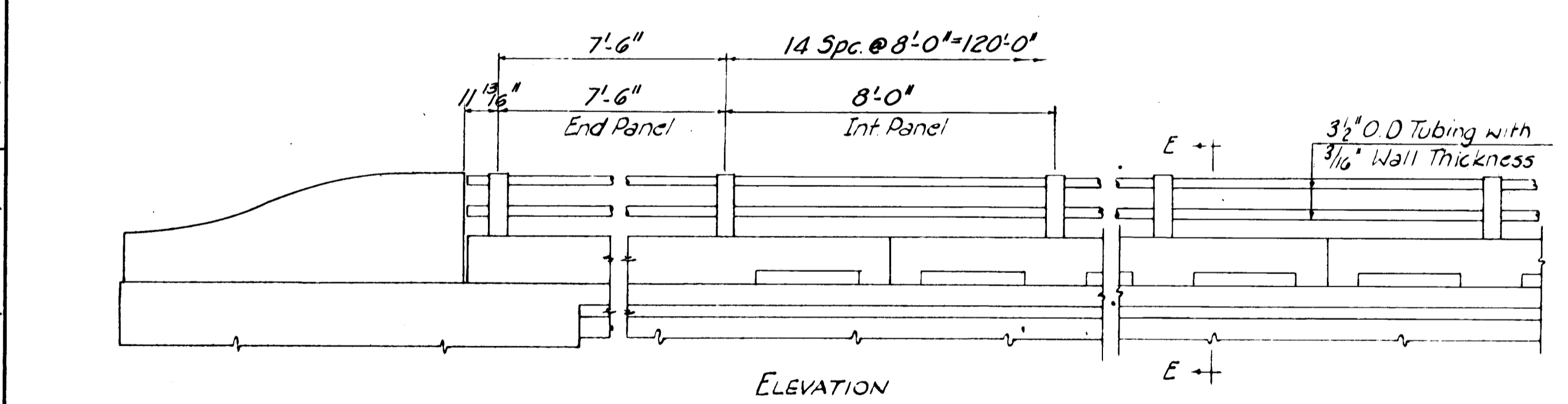
REV.	BY	DATE	DESCRIPTION
1	K.H.	11-72	Revised As Built
CITY OF WICHITA, KANSAS R. W. LINN, P.E., CITY ENGINEER			
WOODLAWN BRIDGE OVER GYPSUM CREEK			
<b>APPROACH SLAB DETAILS</b>			
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS		DATE SEPTEMBER 1971	DWG. NO. 79-P-11



**BRIDGE EXCAVATION**  
 R. S. DELAMATER  
 CONSULTING ENGINEER  
 WICHITA, KANSAS



PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS		1971	12	12



**HANDRAIL DETAILS**

Notes: (Aluminum Handrail)  
 Handrail Tubing shall be fabricated in lengths to include two or three spaces.  
 Bolt holes in tubing of intermediate posts to be 1/16" diameter. At other posts 1/16" slotted holes centered on bolts @ 60° F.  
 All rail post flanges and webs shall have a minimum thickness of 3/16" with 3° draft. Nominal thickness of base shall be 3/16" with minimum of 3/8". Aluminum shims between concrete and post base may be used. The space below post shall be thoroughly caulked with Alumilastic compound or other approved material.

**SUMMARY OF BRIDGE QUANTITIES**

Item	Abut. #1	Pier #1	Pier #2	Abut. #2	Superst.	Total	Unit
Excavation, Class III	100			100		200	Cu. Yds.
Class AAA(AE) Conc.					209.4	* 209.4	Cu. Yds.
Class A(AE) Conc.	74.7	23.0	23.0	74.7		195.4	Cu. Yds.
Reinforcing Steel	6,680	3,350	3,350	6,680	71,900	91,960	Lbs.
Prestress'd. Conc. Beams					36	36	Each
Aluminum Handrail					254	254	Lin. Ft.
Steel Piles (10")	330			495		825	Lin. Ft.
Prestress'd. Conc. Piles(16")		360	405			765	Lin. Ft.
Approach Slabs						2	Each

**SUMMARY OF GRADING QUANTITIES**

Item	Quan.	Unit
Large Trees	10	Each
Common Excavation	34,380	Cu. Yds.
Compaction of Earthwork	18,940	Cu. Yds.
Removal of Exist Structure	L. S.	L. S.
Dumped Rock Rip Rap	2,150	Cu. Yds.

\*NOTE: Superstructure concrete quantity includes allowance for concrete required to level up prestressed beam camber.

**REVISIONS**

REV.	BY	DATE	DESCRIPTION
1	K.H.	11-72	Revised As Built

**DESCRIPTION**

CITY OF WICHITA, KANSAS  
 R. W. LINN, P.E., CITY ENGINEER

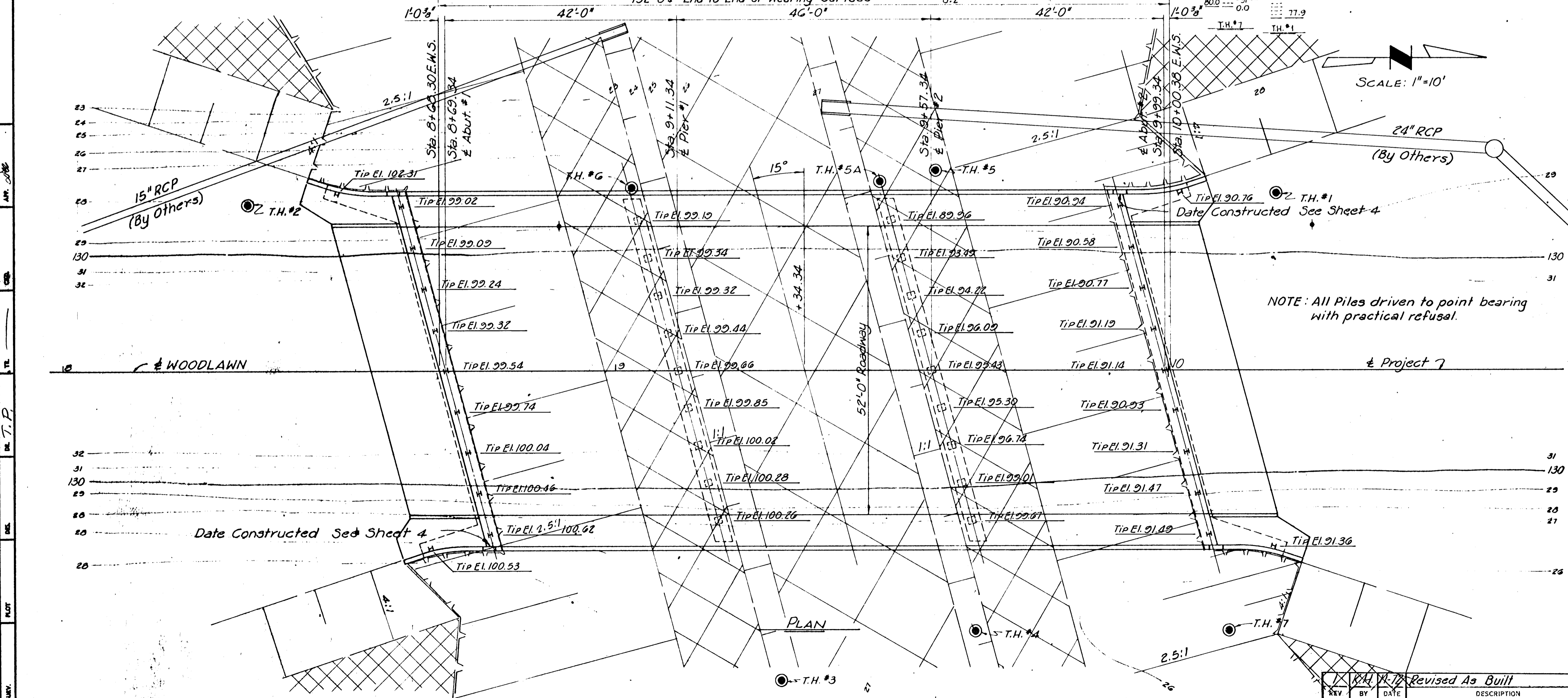
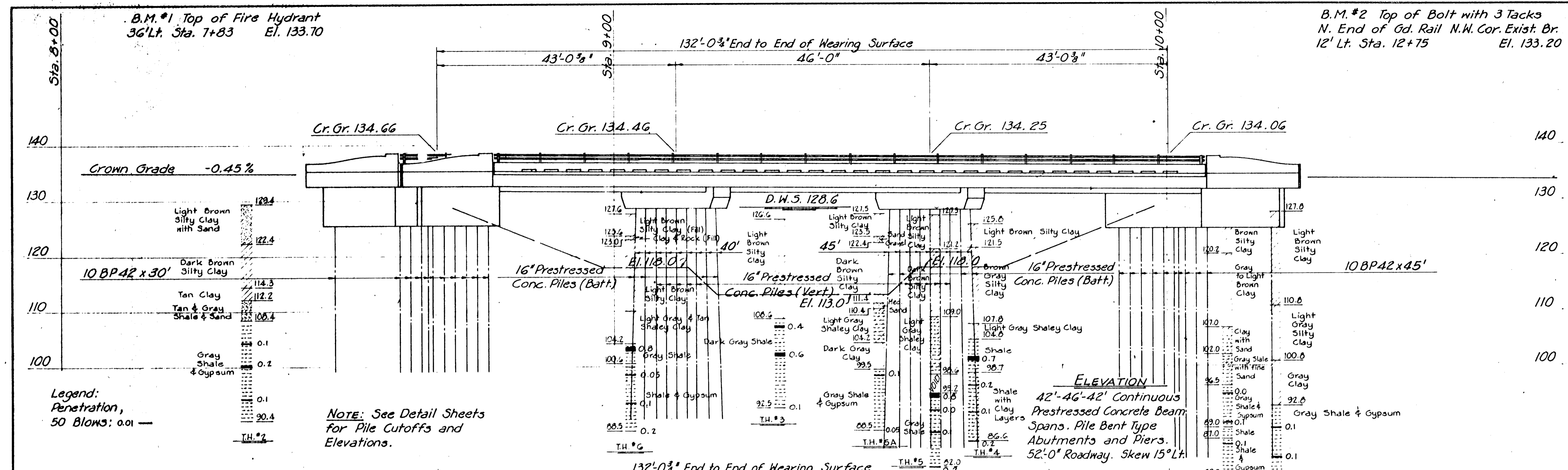
WOODLAWN BRIDGE OVER  
 GYPSUM CREEK

**SUMMARY OF QUANTITIES**

R. S. DELAMATER  
 CONSULTING ENGINEER  
 WICHITA, KANSAS

DATE: SEPTEMBER 1971  
 SCALE: \_\_\_\_\_  
 DWG. NO.: 79-P-12

PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		1971	3	12



SCALE: 1"=10'

NOTE: All Piles driven to point bearing with practical refusal.

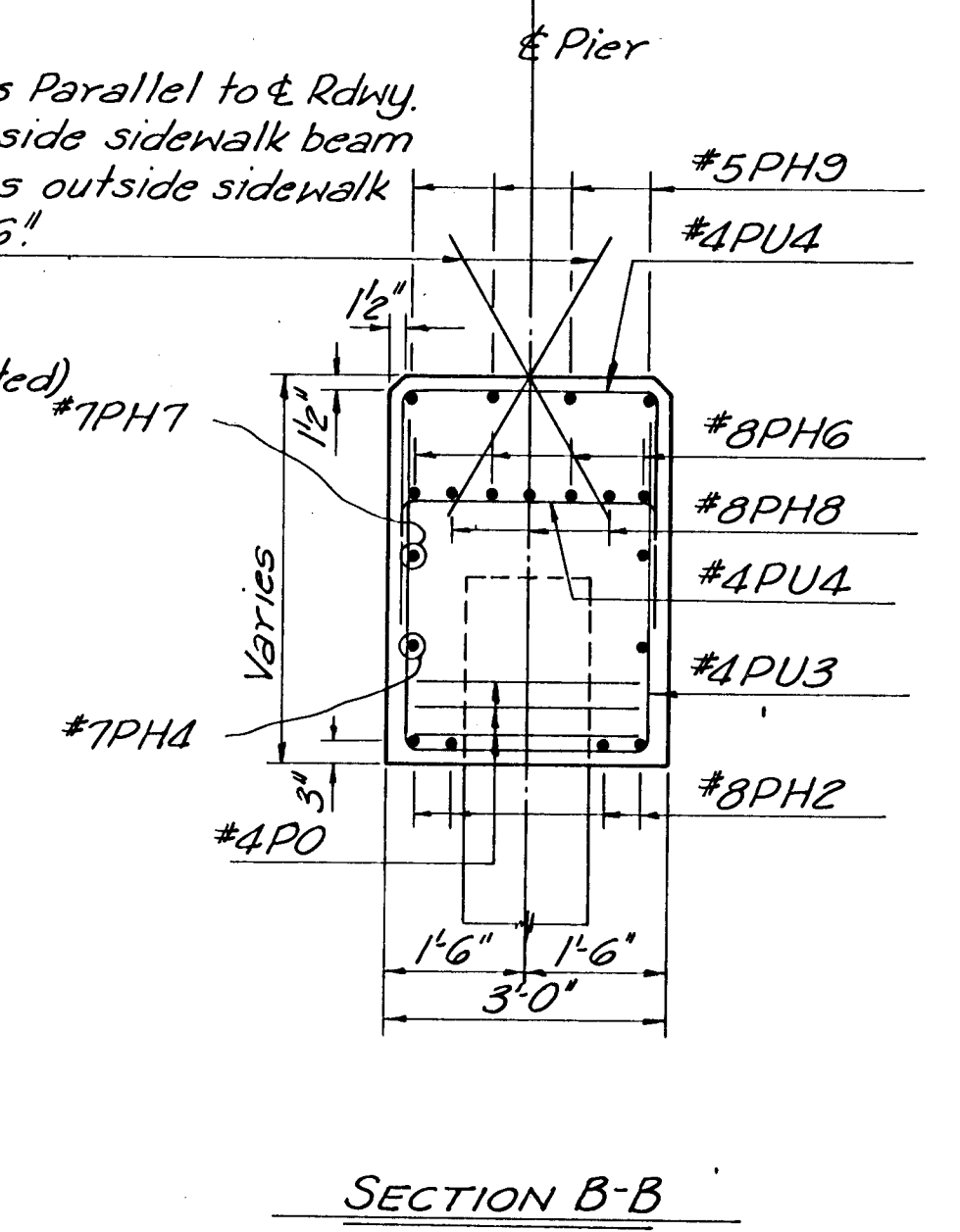
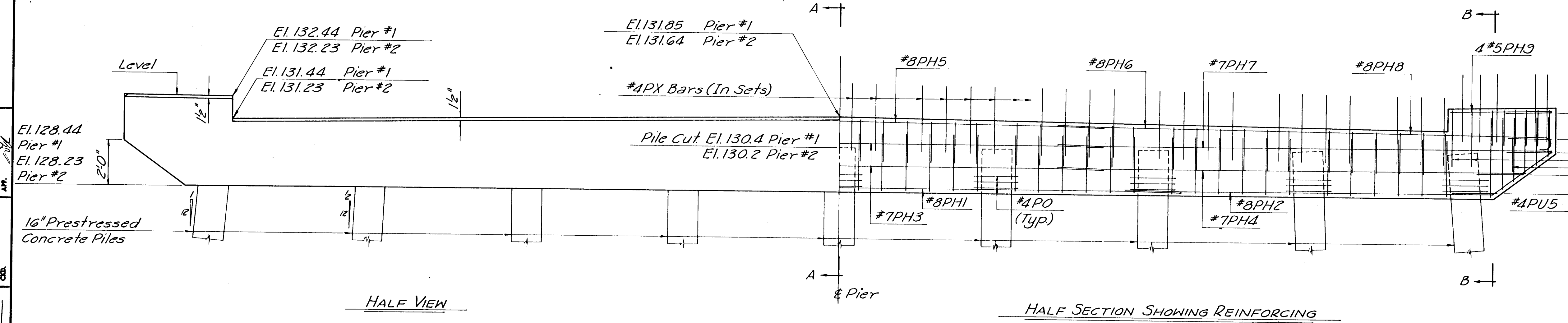
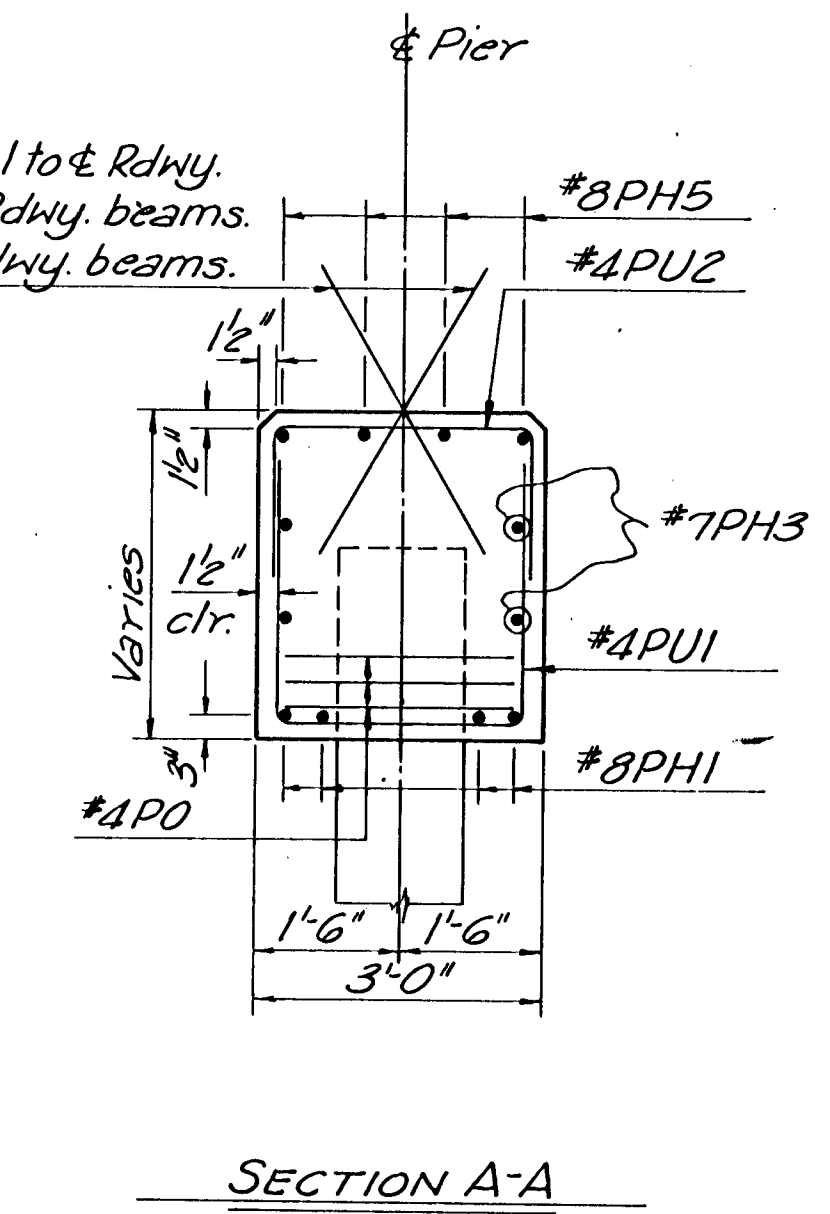
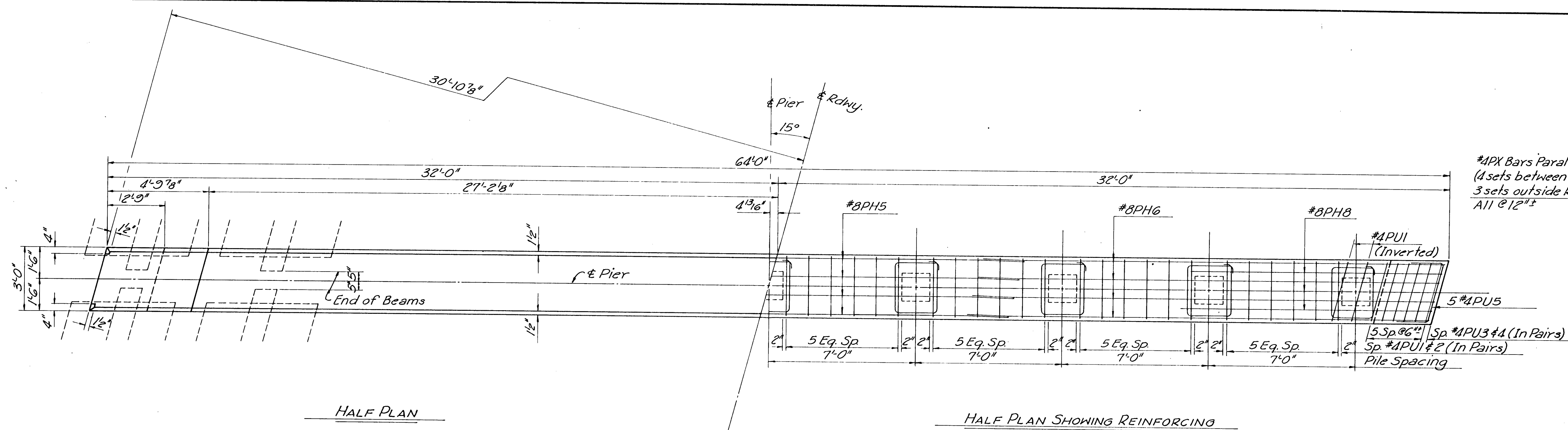
NOTE:  
See Sheet 9 for General Notes for bridge construction.  
Construction of the storm sewers as shown, to be built by others, will be coordinated with construction of this project to cause minimum interference with grading operations.

CITY OF WICHITA, KANSAS R. W. LINN, P.E., CITY ENGINEER	
WOODLAWN BRIDGE OVER GYPSUM CREEK	
<b>CONSTRUCTION LAYOUT</b>	
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE SEPTEMBER 1971 SCALE 1"=10' DWA. NO. 79-P-3

SURV. DES. T.P. CON. CIV. ENG.



PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		1971	5	12



NOTES:  
 All concrete shall be Class A(AE). Bevel all exposed edges with a 3/4" triangular molding unless otherwise indicated.

All dimensions relative to placement of reinforcing are to centerline of bars unless otherwise noted.

Pier piles shall be 16" prestressed concrete piles as indicated on Sheet 3 and detailed on Sheet 10.

See Sheet 9 for Bar List and Bending Diagrams.

DESIGN LOADING: HS20-44 A.A.S.H.O. Spec. (1969 Edition)

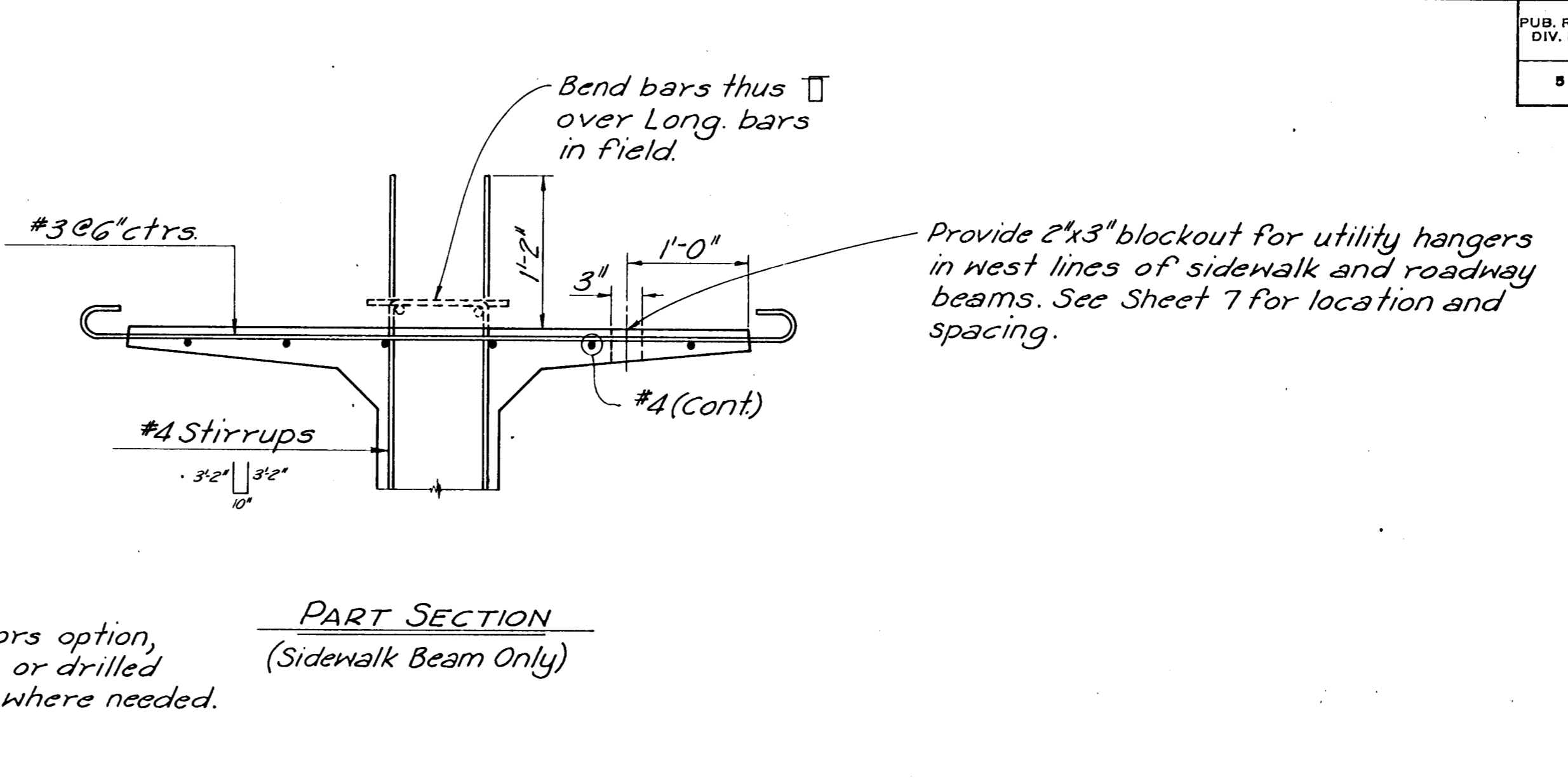
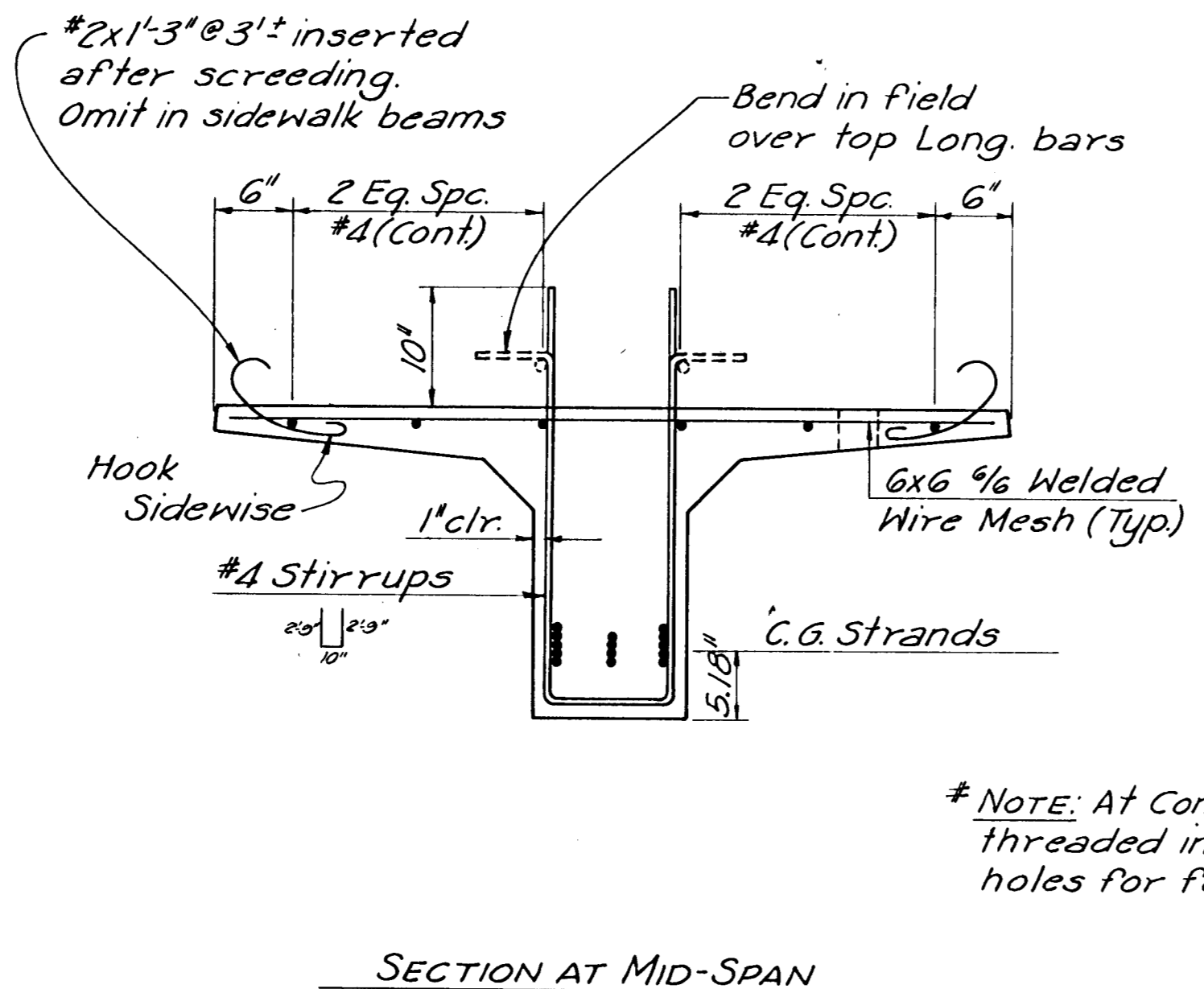
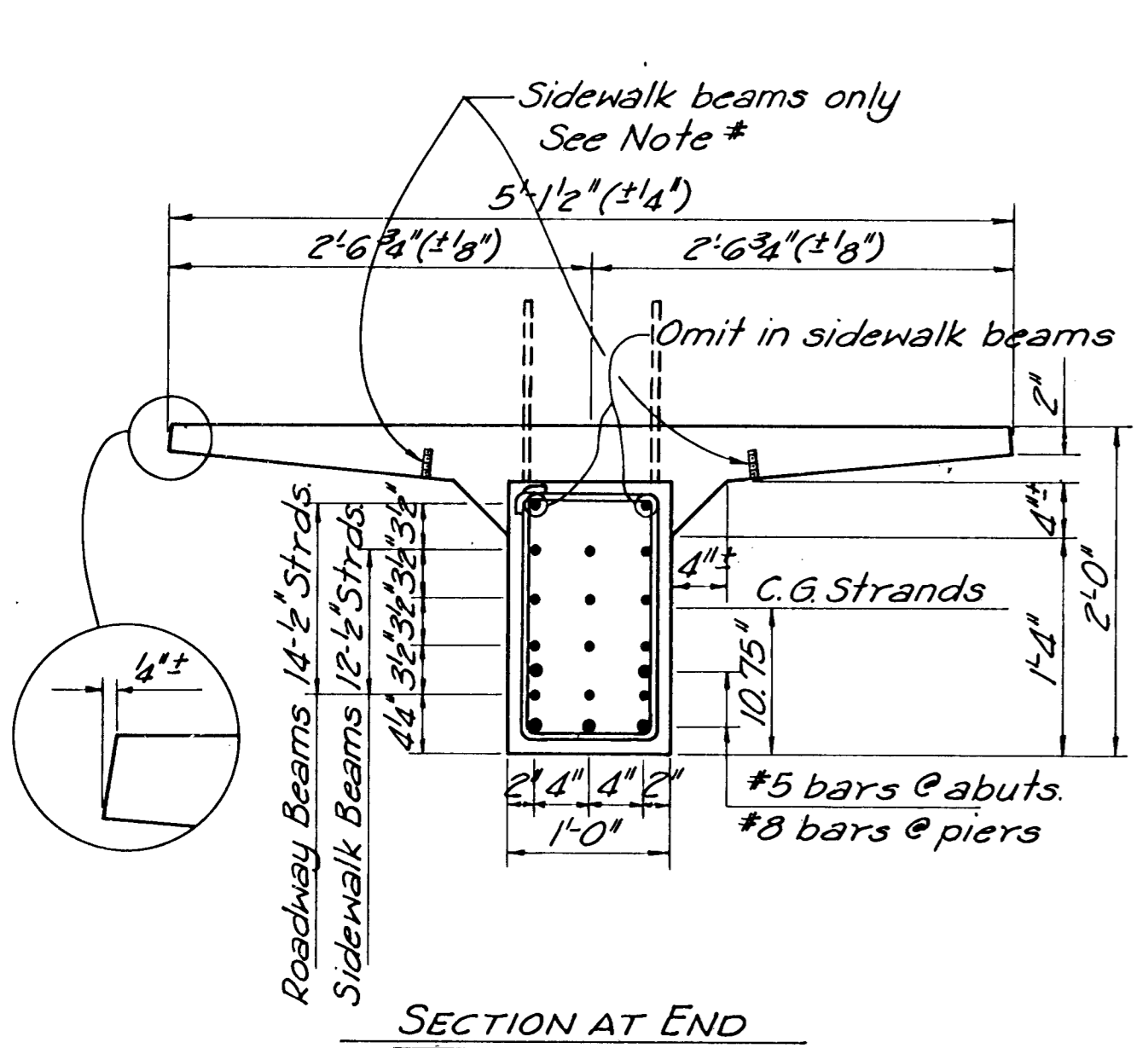
UNIT STRESSES:  $f_c$  - 1,200 p.s.i. Class A(AE)  
 $f'_c$  - 3,000 p.s.i. Class A(AE)  
 $f_s$  - 20,000 p.s.i. (Reinf.)

DESIGN PILE LOADING: 55 Tons per Pile

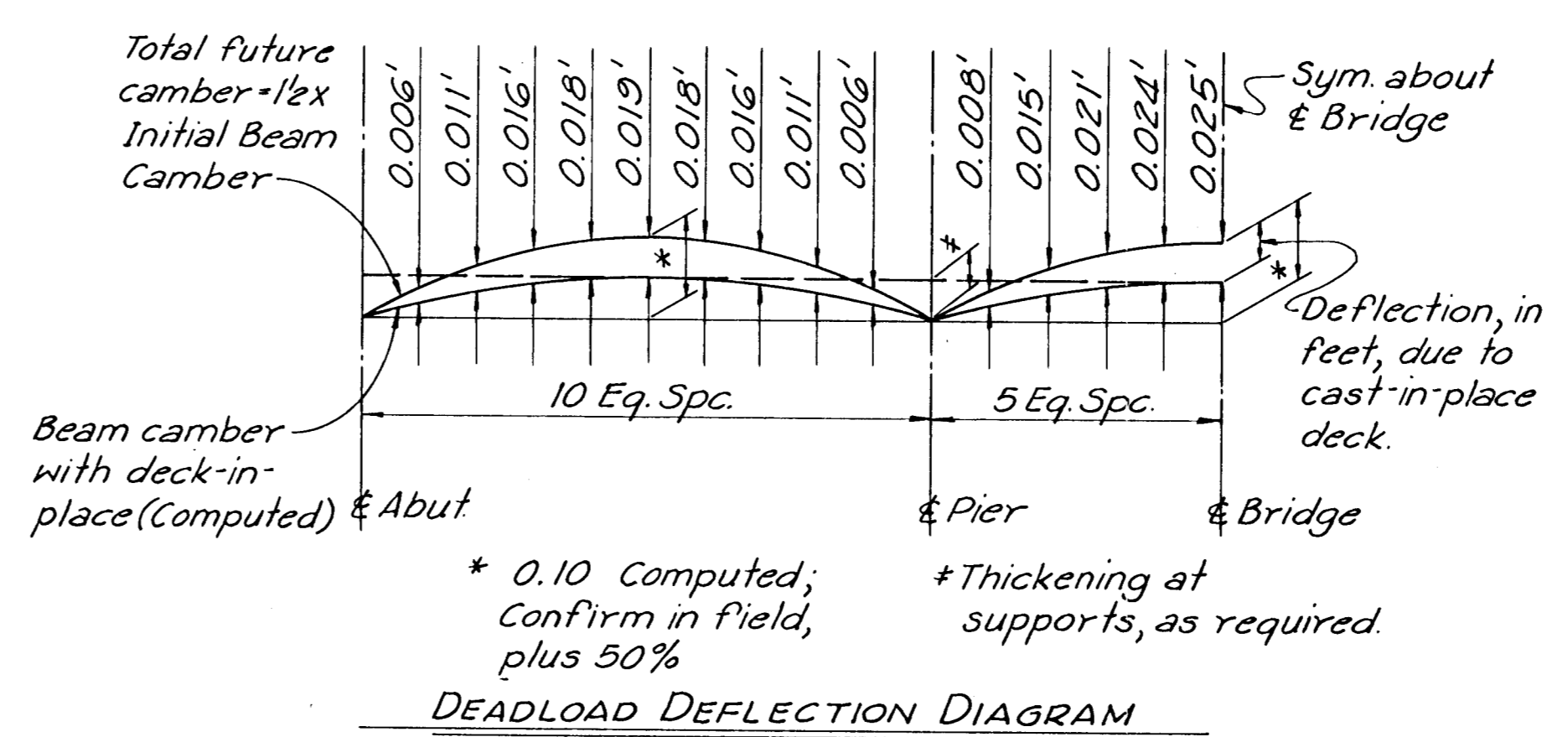
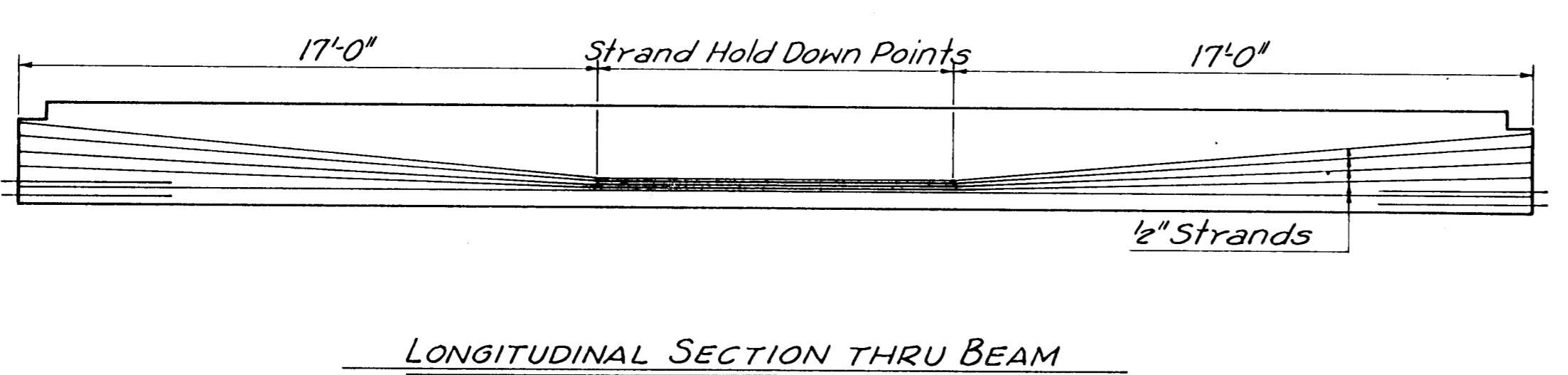
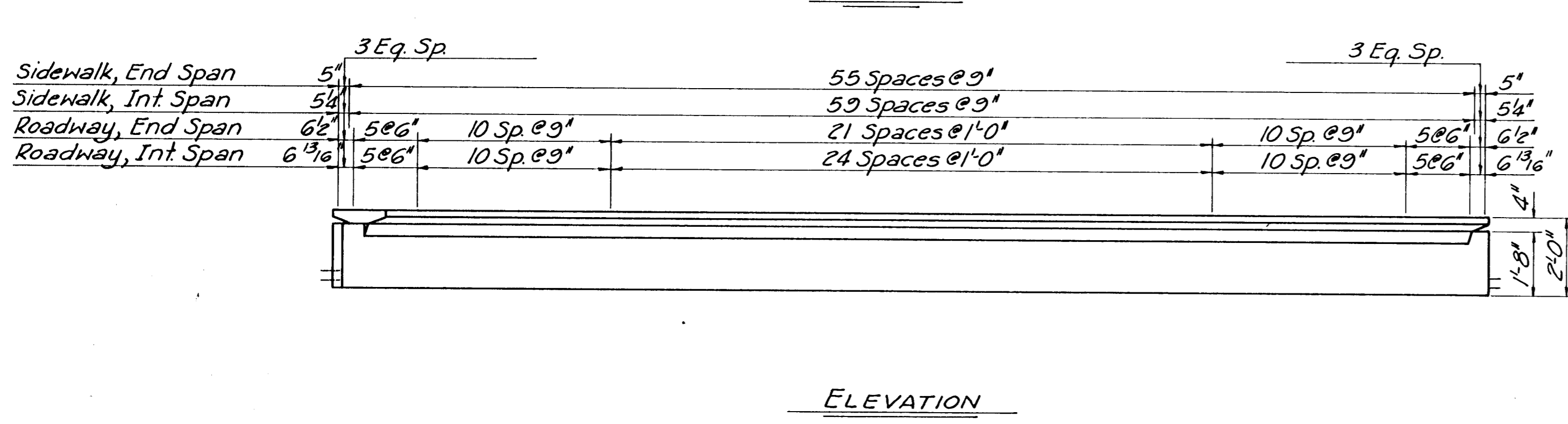
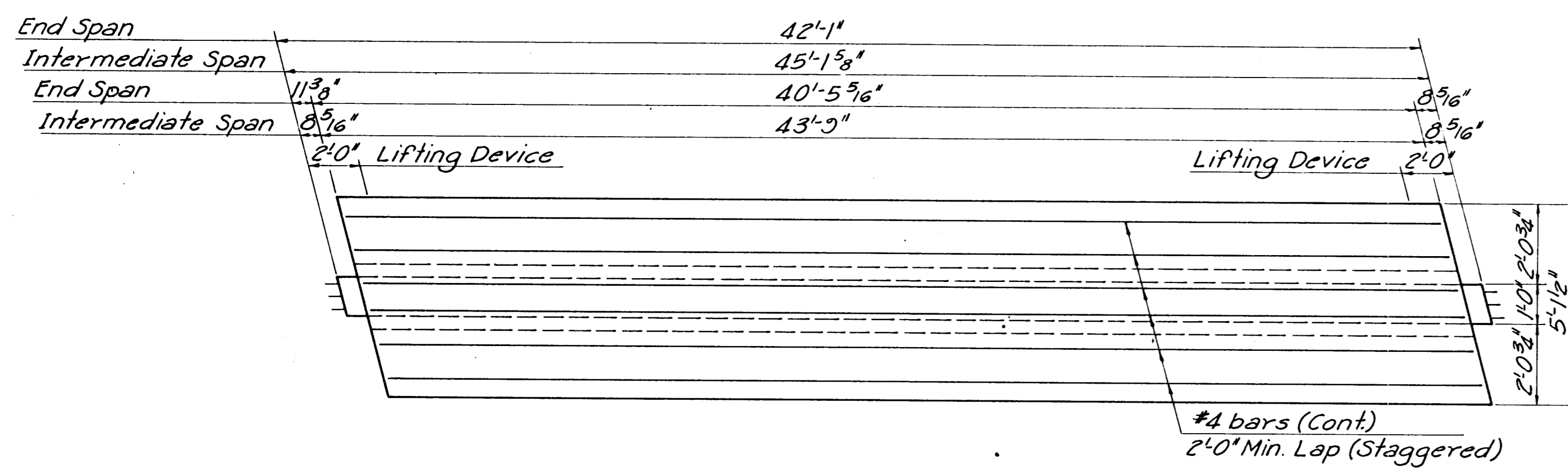
1		K.H. 11-72		Revised As Built	
REV.	BY	DATE	DESCRIPTION		
CITY OF WICHITA, KANSAS R. W. LINN, P.E., CITY ENGINEER					
WOODLAWN BRIDGE OVER GYPSUM CREEK					
PIER DETAILS					
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS			DATE SEPTEMBER 1971 SCALE _____ DWG. NO. 79-P-5		

SURV. PLANT D.E.C. CD. TL.

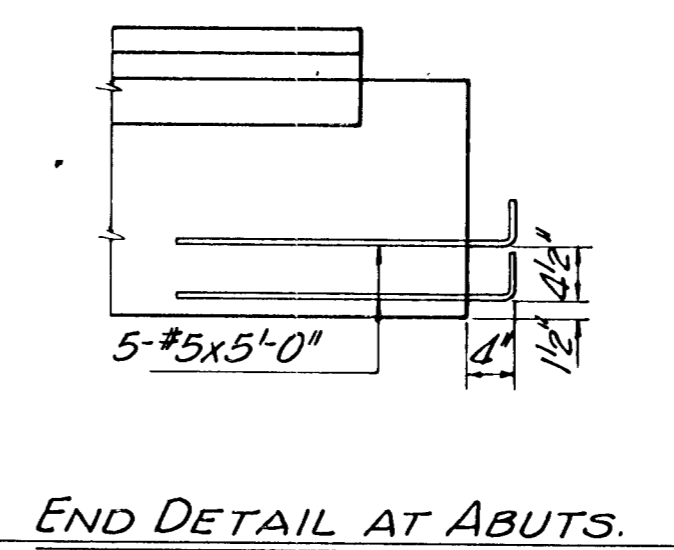
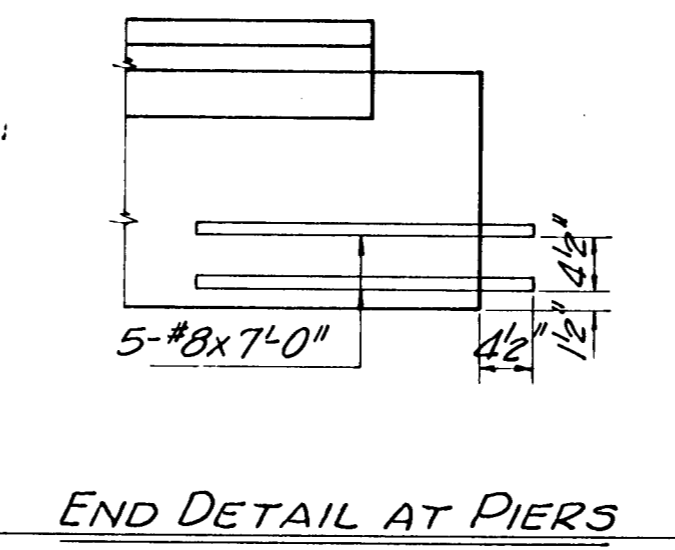
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	KANSAS		1971	6	12



\* NOTE: At Contractors option, threaded inserts or drilled holes for forms, where needed.



NOTE: Set final crown grade at minimum thickness over high point of beams, and adjust back to supports as required.



DESIGN: HS20-44 A.A.S.H.O. Spec. (1969 Edition)

LOADING: HS20-44 A.A.S.H.O. Spec. (1969 Edition)

CONCRETE: f'c - 6,000 p.s.i. at 28 days  
f'ci - 4,800 p.s.i. (Minimum Release Strength)

PRESTRESSING STEEL: 1/2" nominal diameter 7-wire high tensile type, uncoated, stress relieved strands having the following properties:  
Minimum Ultimate Strength = 268,000 p.s.i.  
Initial Stress - 70% Ult. = 187,600 p.s.i.  
Initial Tension per strand = 28,910 lbs.

STEEL PLACEMENT: All dimensions shown relative to placement of reinforcing steel are to centerline of bars or strands unless otherwise noted.

HANDLING: Precast beams shall at all times be handled and transported in an upright position and points of support shall be approximately the same during transportation and storage as when the beam is in its final position.

See Sheet 7 for Beam Erection Notes.

1	K.H.	11-72	Revised As Built
REV.	BY	DATE	DESCRIPTION
CITY OF WICHITA, KANSAS R. W. LINN, P.E., CITY ENGINEER			
WOODLAWN BRIDGE OVER GYPSUM CREEK			
PRESTRESSED BEAM DETAILS			
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS		DATE SEPTEMBER 1971	DWG. NO. 79-P-6

APP. \_\_\_\_\_  
 DES. K. A. G.  
 TEL. \_\_\_\_\_  
 DATE \_\_\_\_\_  
 SURV. \_\_\_\_\_



DATE	DESCRIPTION	BY	CHKD
SEPTEMBER 1971	K.H. V-172 Revised As Built		
CITY OF WICHITA, KANSAS R. W. LINN, P. E., CITY ENGINEER			
WOODLAWN BRIDGE OVER GYPSUM CREEK			
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS			
DWG. NO.	SCALE		
79-P-8			

UNIT STRESSES:  $f_c$  - 1,600 p.s.i., Class AAA(AE)  
 $f'_c$  - 4,000 p.s.i., Class AAA(AE)  
 $f_s$  - 20,000 p.s.i. (Refn.)

See Sheet 12 for Handrail Details  
 See Sheet 7 for Beam Erection Notes.

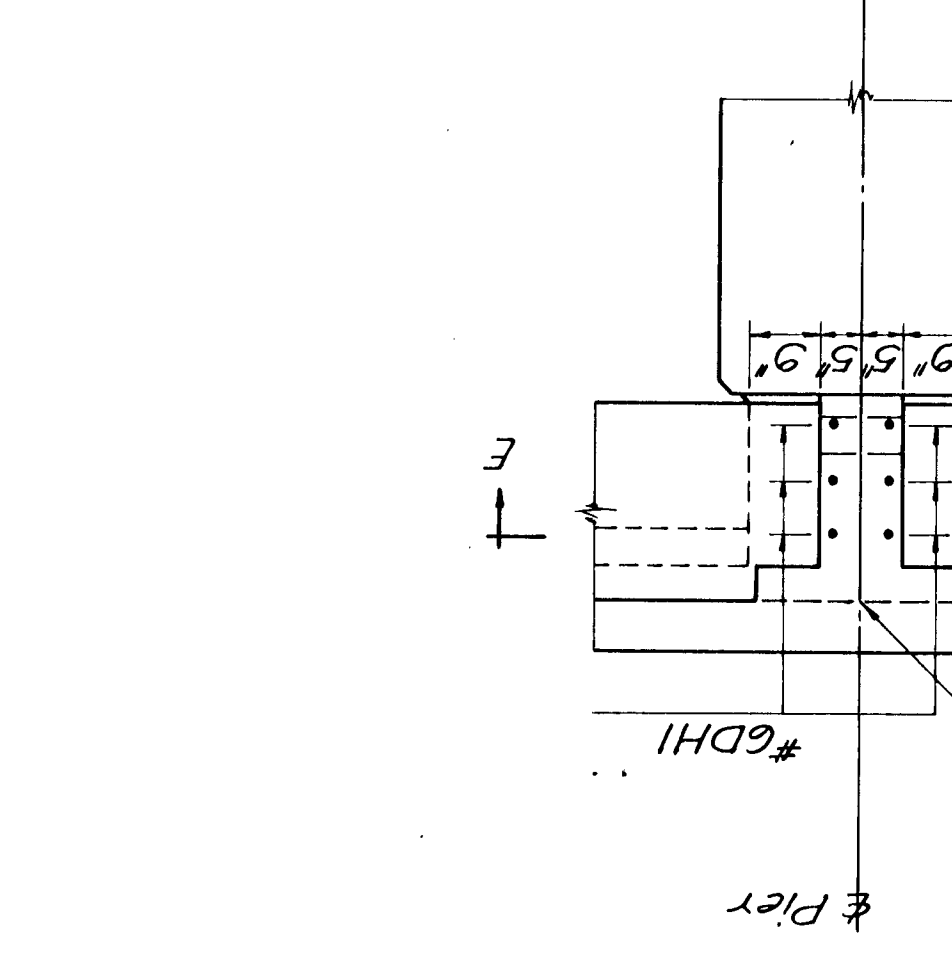
Diagrams.  
 All dimensions relative to placement of reinforcement steel are to centerline of bars unless otherwise noted.  
 Class AAA(AE) Concrete shall be used in the Superstructure, including Curbs and Diaphragms, except for Prestressed Beams. Bevel all exposed edges with a 3/4" triangular molding unless otherwise noted.  
 Welding, Angles shall be subsidiary to bid item of Prestressed Concrete Beams.  
 NOTE: Angles may be rotated for center on Projecting Bars

PUB. ROAD	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		1971	8	12

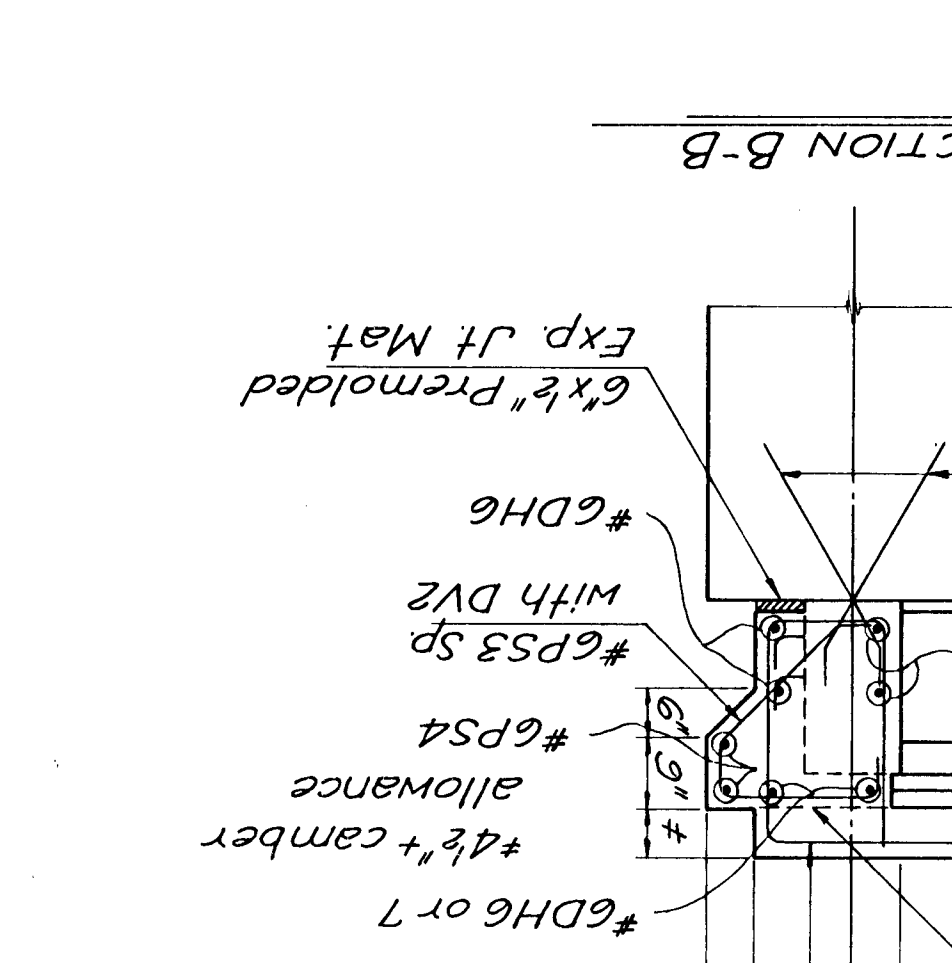
Diaphragms shall not be placed until all beams have cured a minimum of three days after pier and abutment diaphragms are placed and shall preferably be placed continuously the full length of the bridge; if a joint is used it shall be at the quarter point short of the pier.

Diaphragms shall not be placed until all beams have cured a minimum of three days after pier and abutment diaphragms are placed and shall preferably be placed continuously the full length of the bridge; if a joint is used it shall be at the quarter point short of the pier.

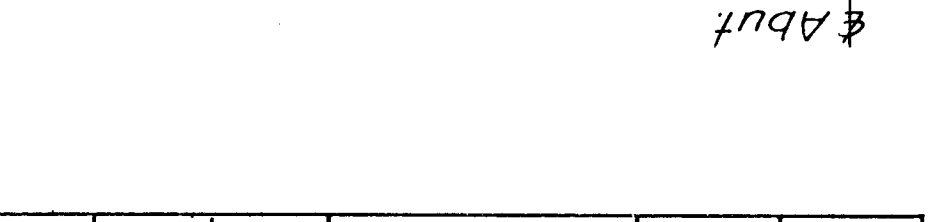
SECTION D-D



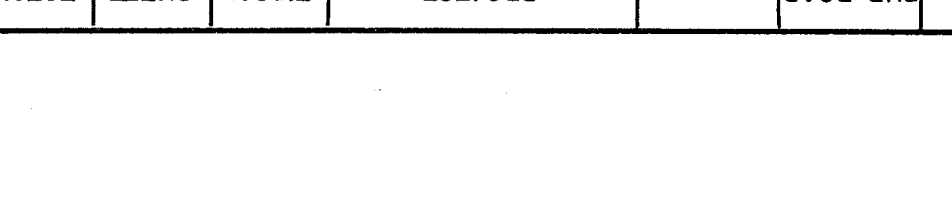
SECTION C-C



SECTION B-B



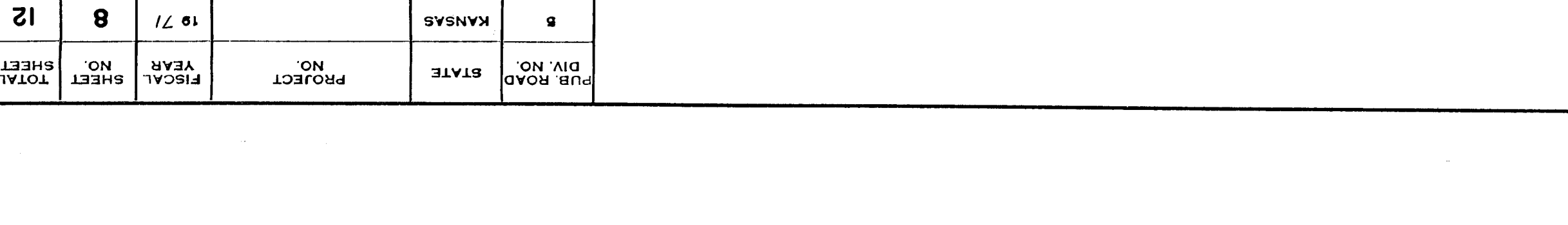
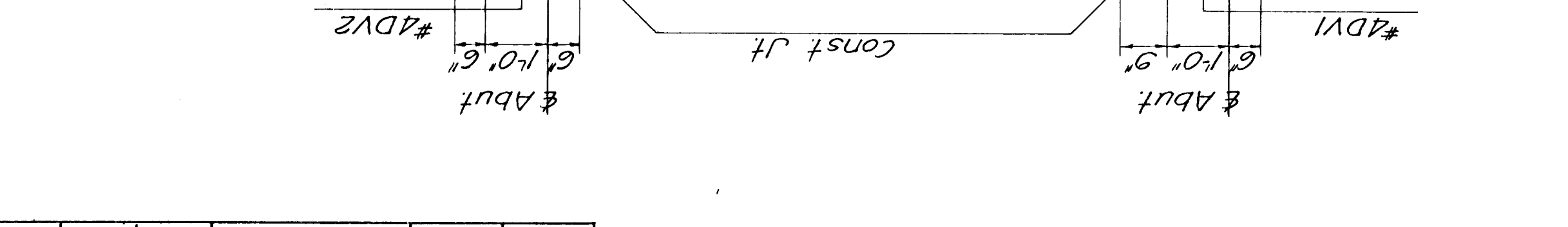
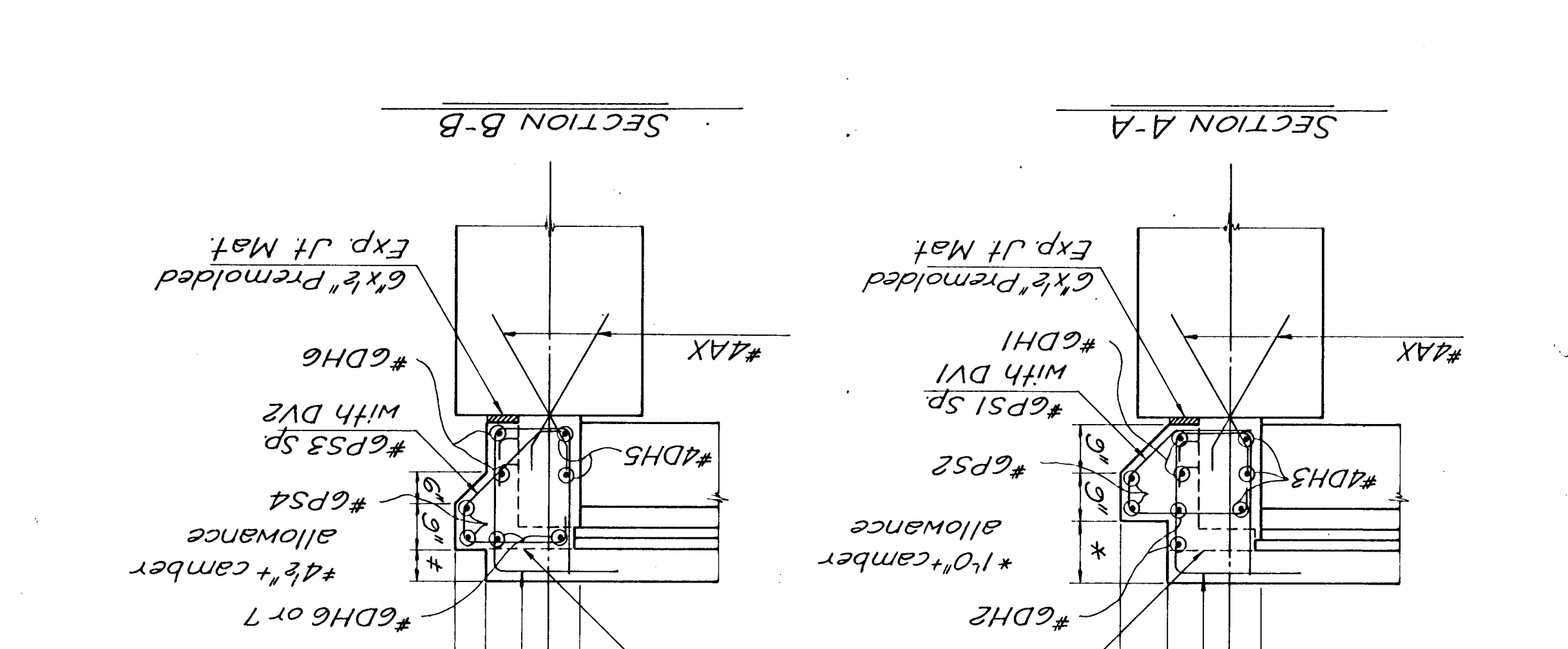
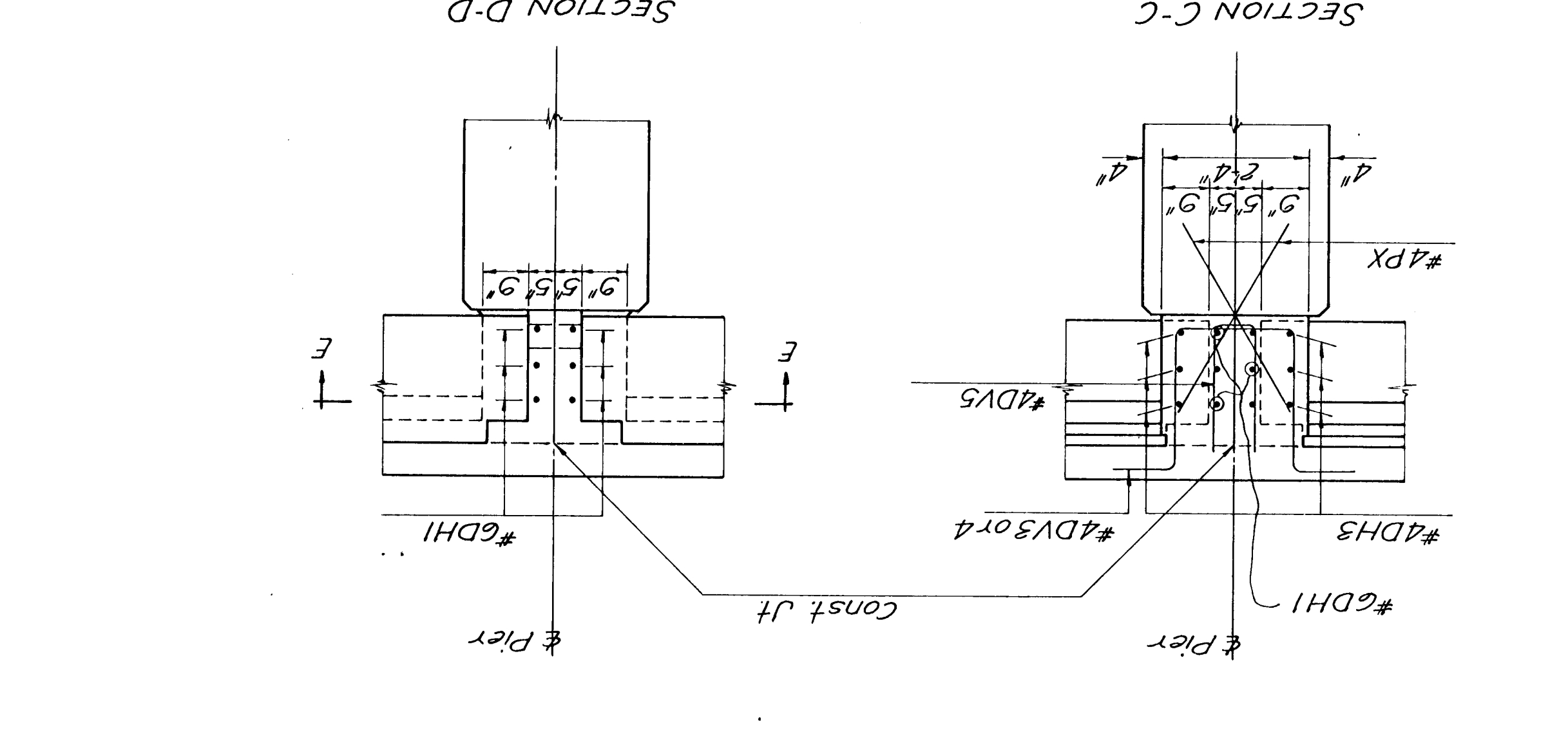
SECTION A-A



SECTION E-E



SECTION F-F



BAR LIST		ONE ABUTMENT		BENT BARS		STRAIGHT BARS		MARK NO REQ SIZE		MARK NO REQ SIZE	
		ONE PIER		SUPERSTRUCTURE		ONE APPROACH SLAB					
MARK	QTY	MARK	QTY	MARK	QTY	MARK	QTY	MARK	QTY	MARK	QTY
AF1	54	B	24'-0"	AF3	8	6	16'-0"	CT1	2	6	12'-0"
AF2	7	6	15'-6"	AF5	8	6	16'-0"	ASI	76	8	11'-8"
AF3	7	6	15'-0"	A01	27	4	11'-0"	ASZ	26	5	29'-0"
AF4	7	6	15'-0"	A02	6	4	9'-0"	SX1	57	4	1'-8"
AF5	8	6	16'-0"	A01	27	4	11'-4"				
AF6	7	6	15'-0"	P0	27	4	11'-4"				
AF7	7	6	15'-0"	P1	52	4	7'-9"				
AF8	8	5	6'-0"	P2	48	4	6'-3"				
AR1	72	4	4'-0"	P3	12	4	*				
AR2	12	4	17'-0"	P4	14	4	5'-3"				
AU1	60	4	13'-8"	P5	10	4	6'-9"				
AU2	60	4	7'-4"	P6	14	4	5'-3"				
AU3	18	4	*	P7	48	4	6'-3"				
AU4	18	4	*	P8	48	4	6'-3"				
AU5	2	4	13'-2"	P9	8	5	4'-6"				
AU6	2	4	17'-0"	P10	104	4	3'-6"				
AU7	8	5	5'-4"	P11	52	4	7'-9"				
AU8	1	4	17'-8"	P12	48	4	6'-3"				
AU9	1	4	10'-0"	P13	12	4	*				
AM1	12	5	16'-11"	P14	14	4	5'-3"				
AM2	28	5	4'-0"	P15	10	4	6'-9"				
AM3	28	5	4'-0"	P16	14	4	5'-3"				
AX	100	4	3'-0"	P17	4	7	22'-10"				
				PH1	4	8	19'-6"				
				PH2	8	8	19'-6"				
				PH3	4	7	24'-0"				
				PH4	4	7	24'-0"				
				PH5	4	8	24'-0"				
				PH6	8	8	22'-10"				
				PH7	4	7	22'-10"				
				PH8	6	8	12'-10"				
				PH9	8	5	4'-6"				
				PX	104	4	3'-6"				
				PY							
				EG							
				EC							
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				ES							
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