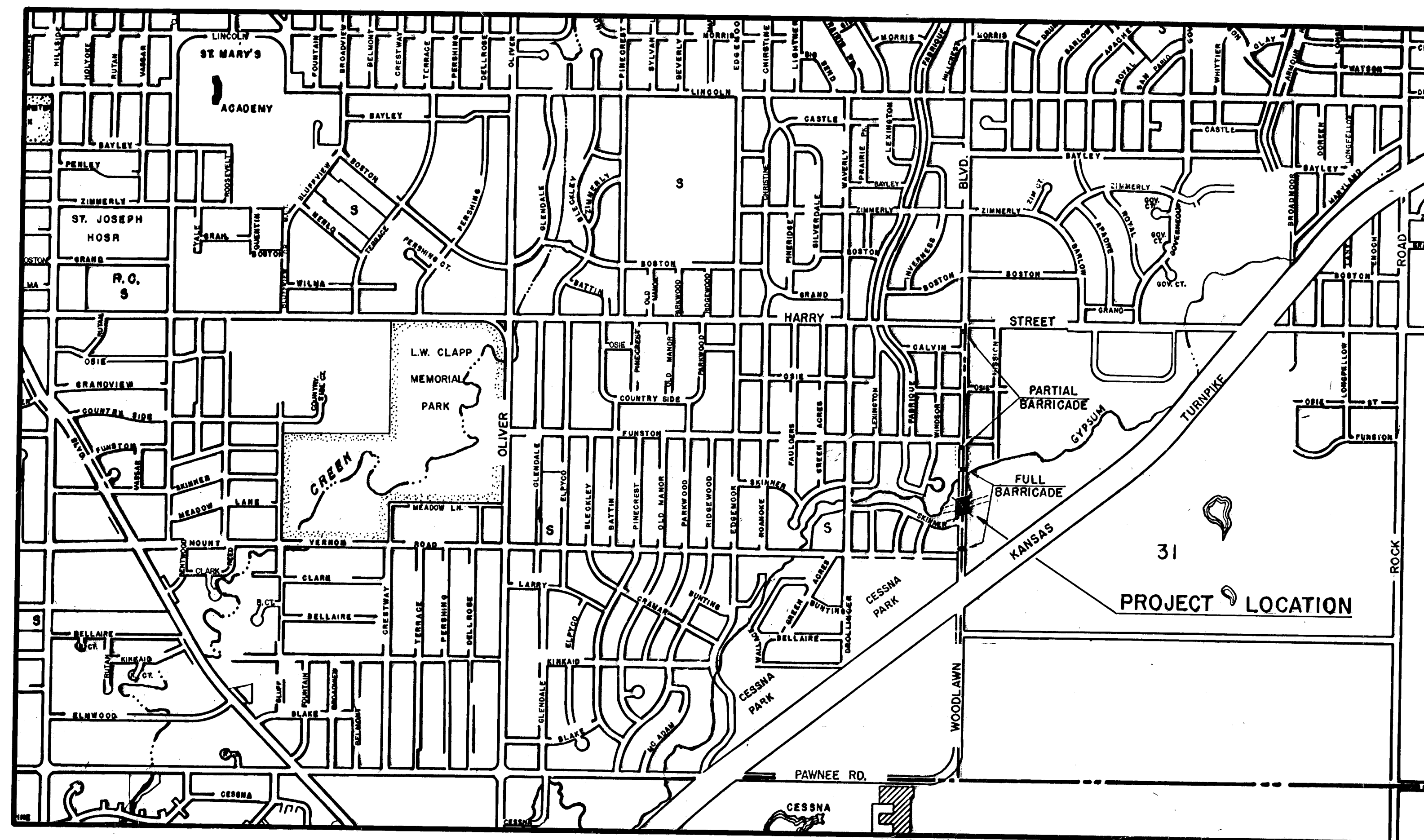


WOODLAWN BRIDGE

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

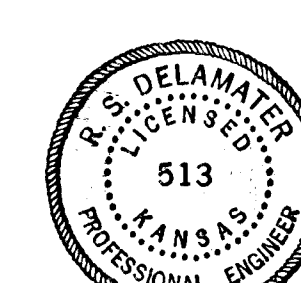
R. S. DELAMATER & ASSOCIATES, WICHITA, CONSULTING ENGINEERS

PROJECT DAKB 571018

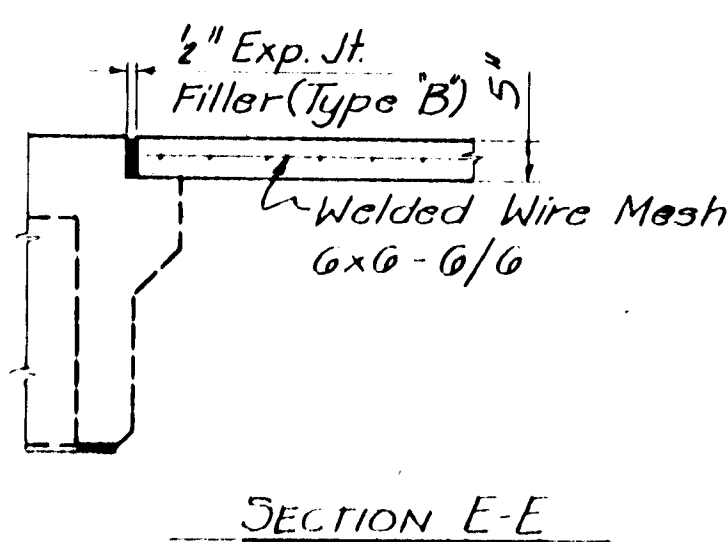
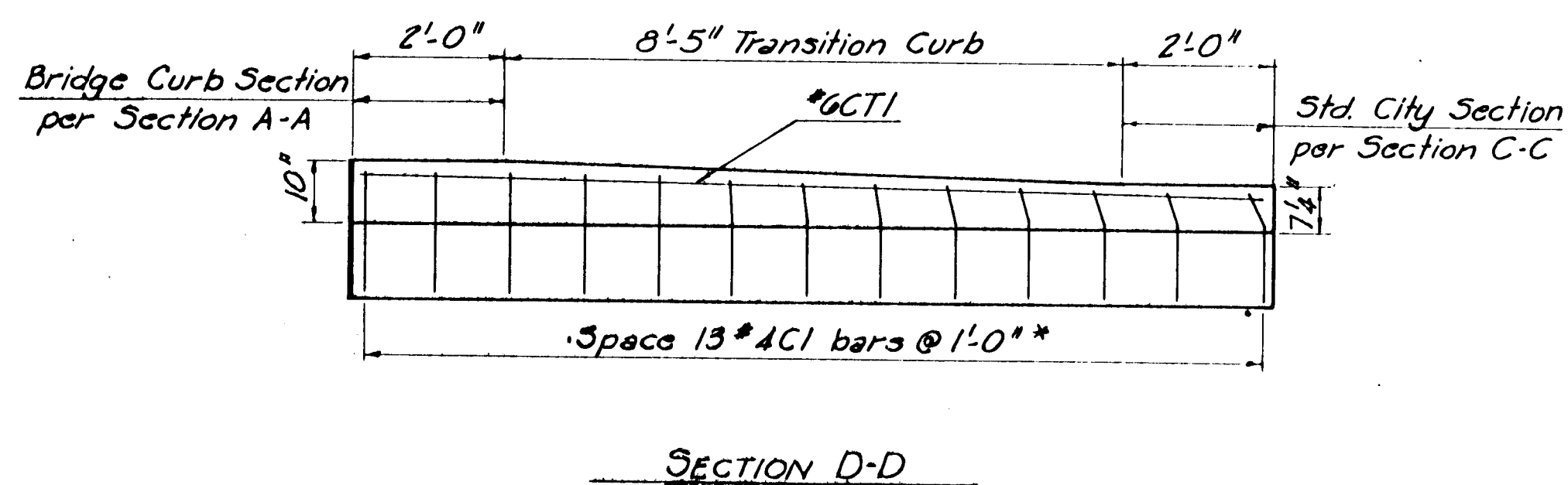
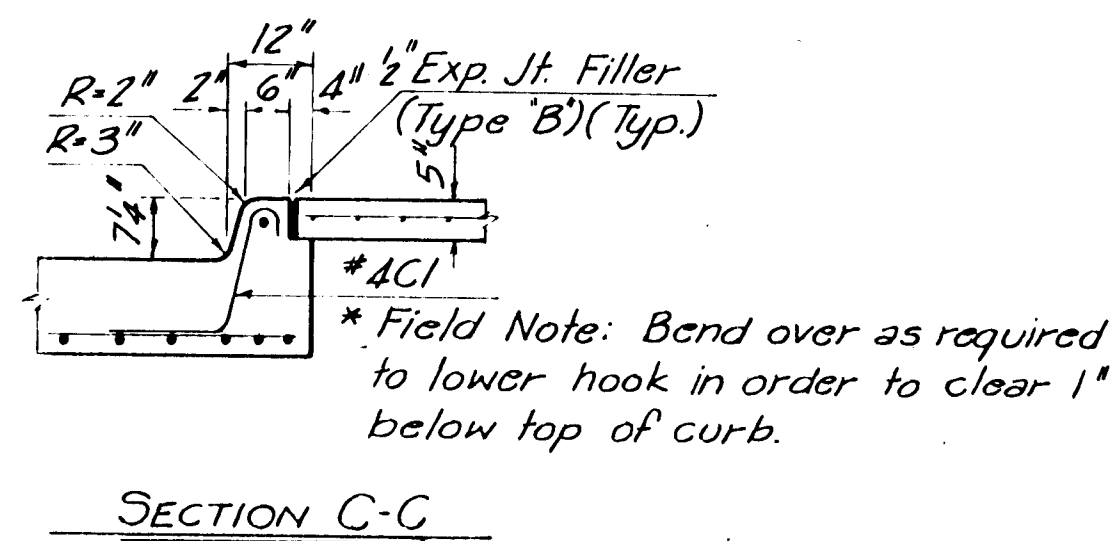
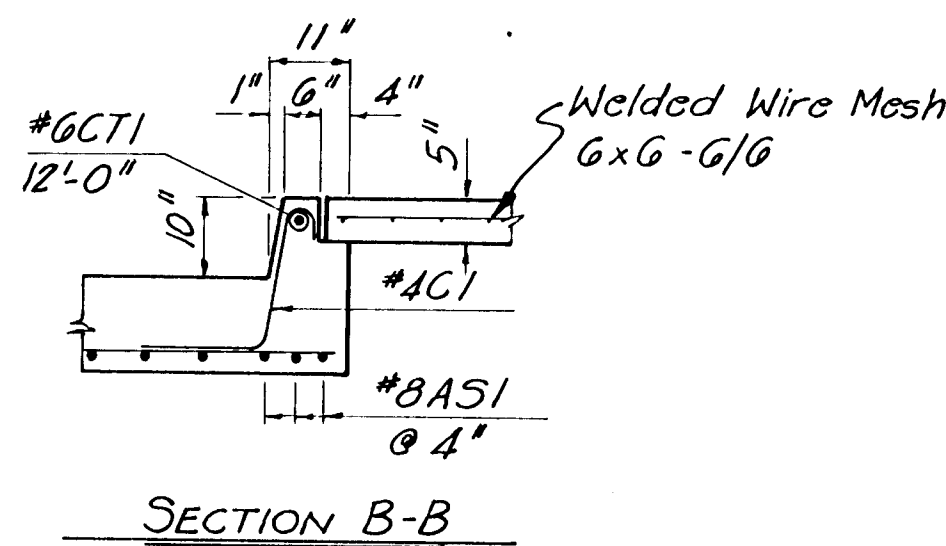
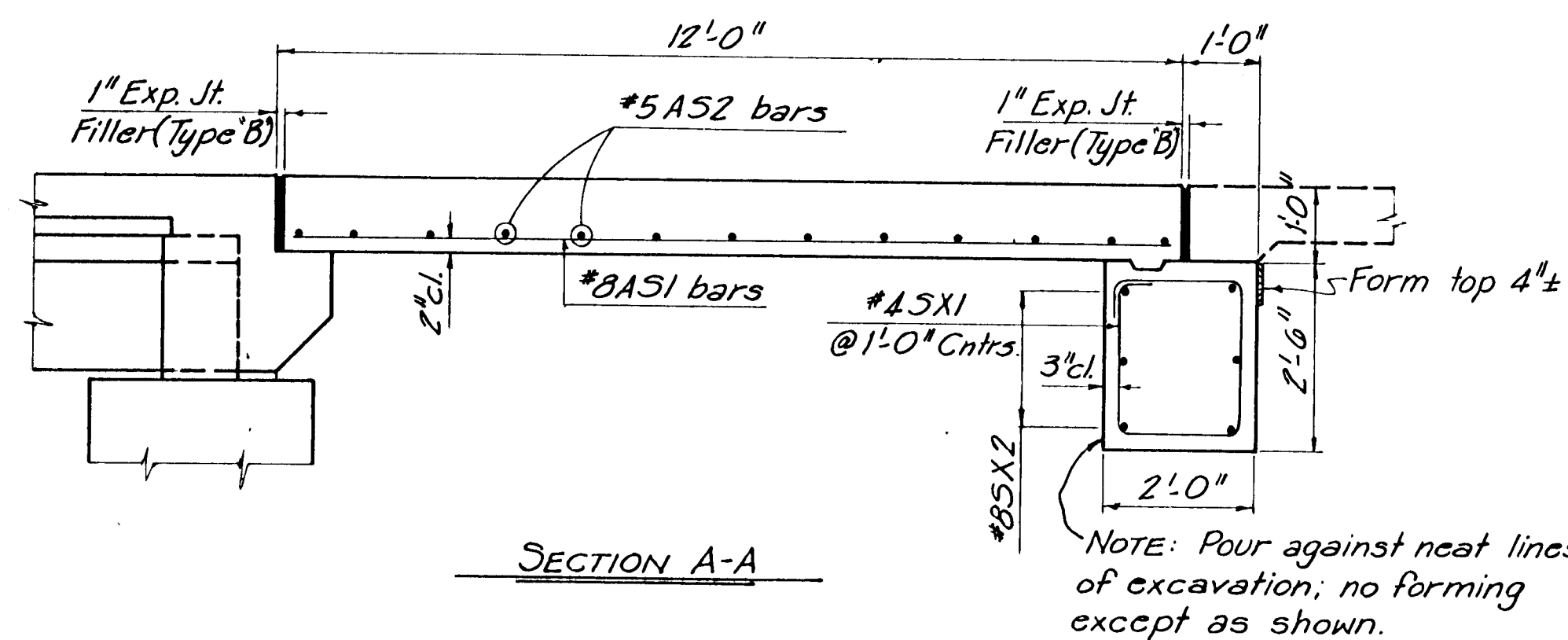
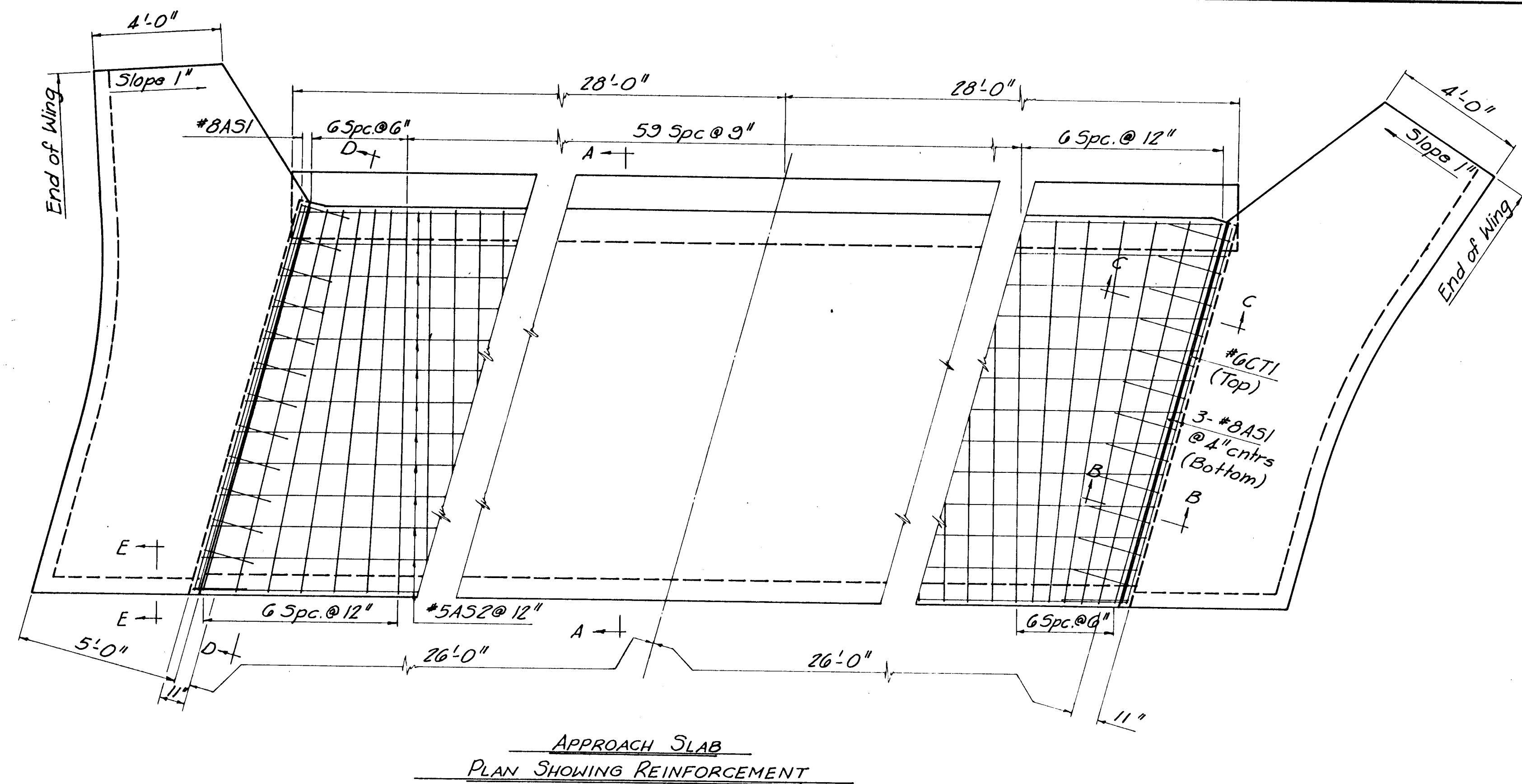
SEPTEMBER, 1971

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



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.

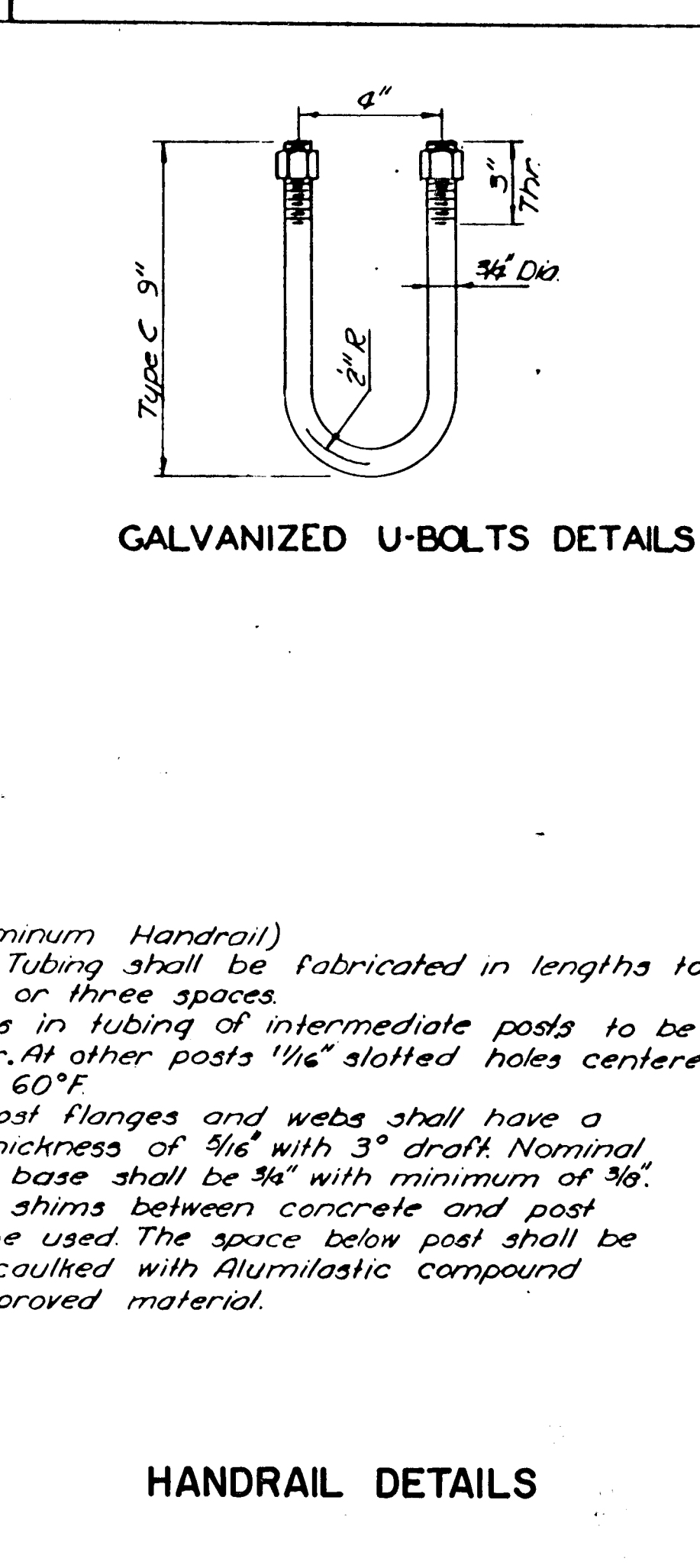
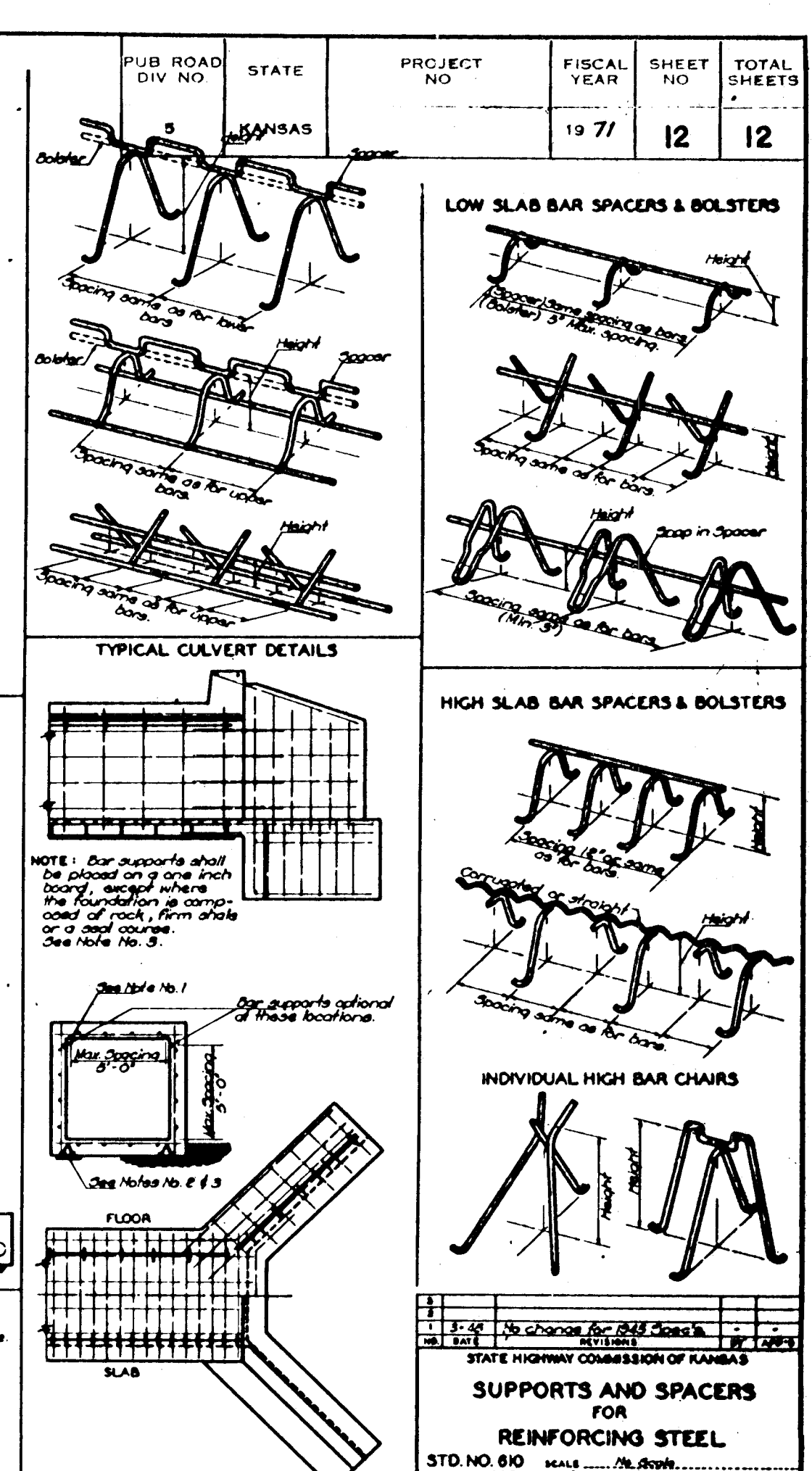
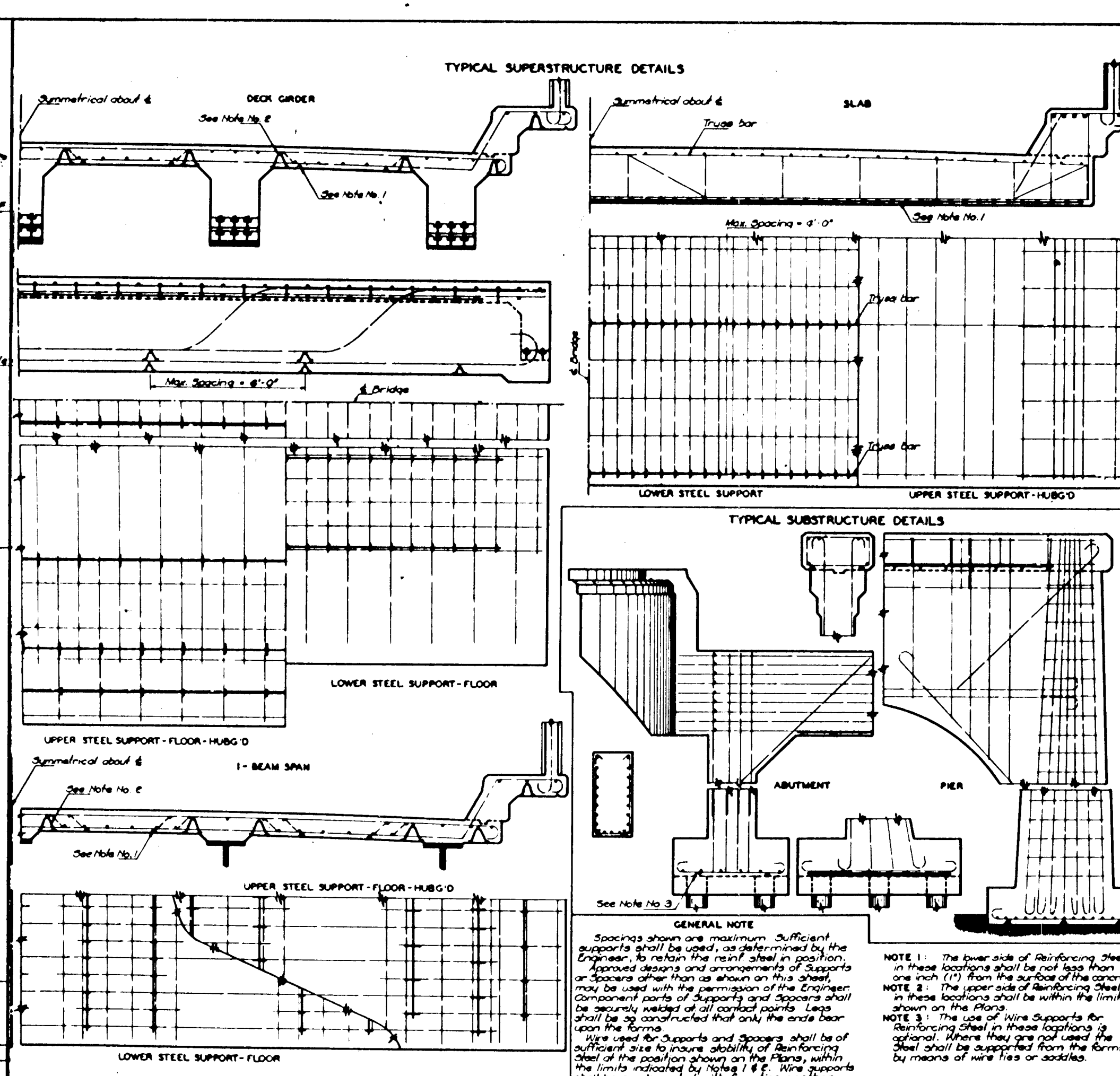
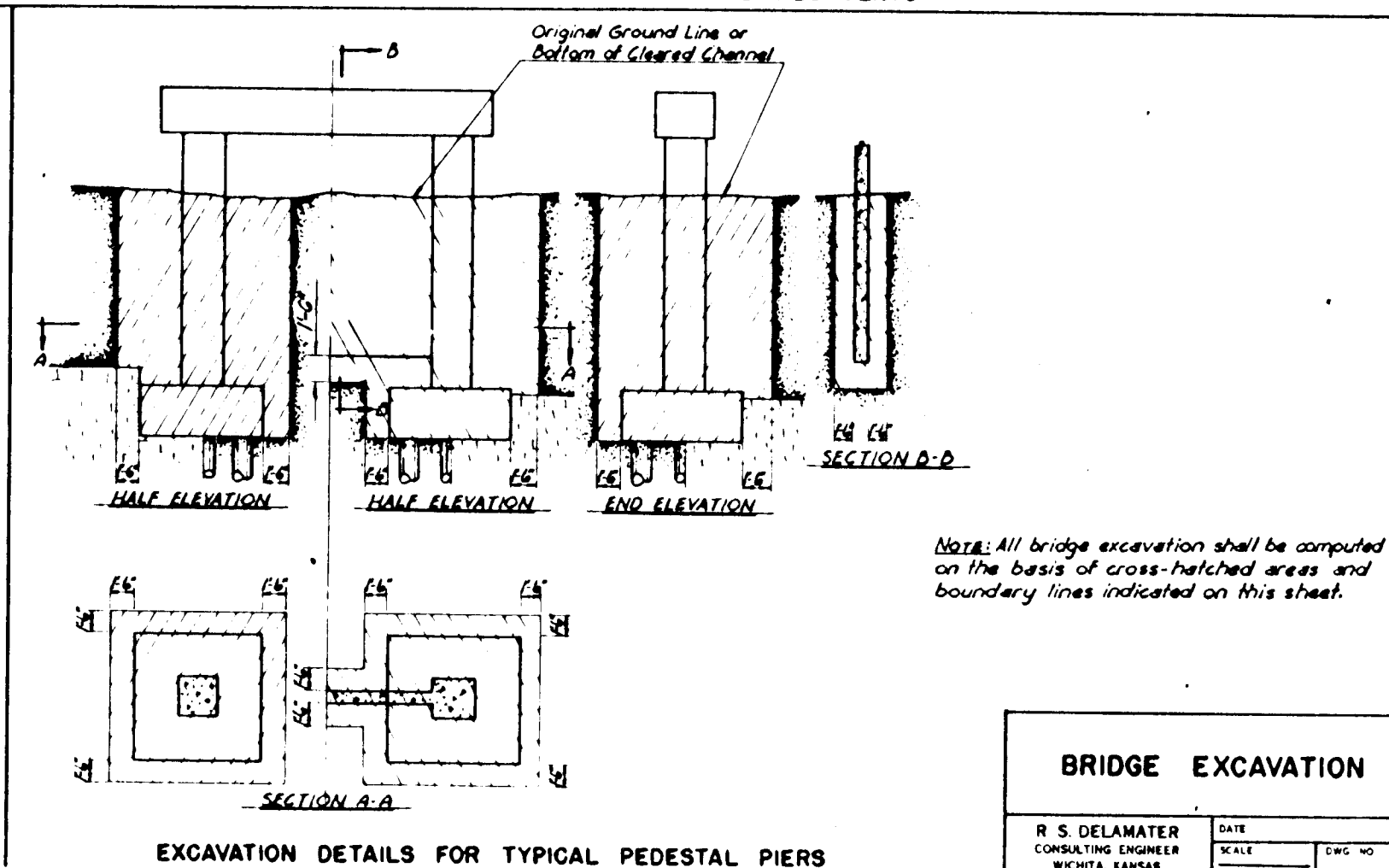
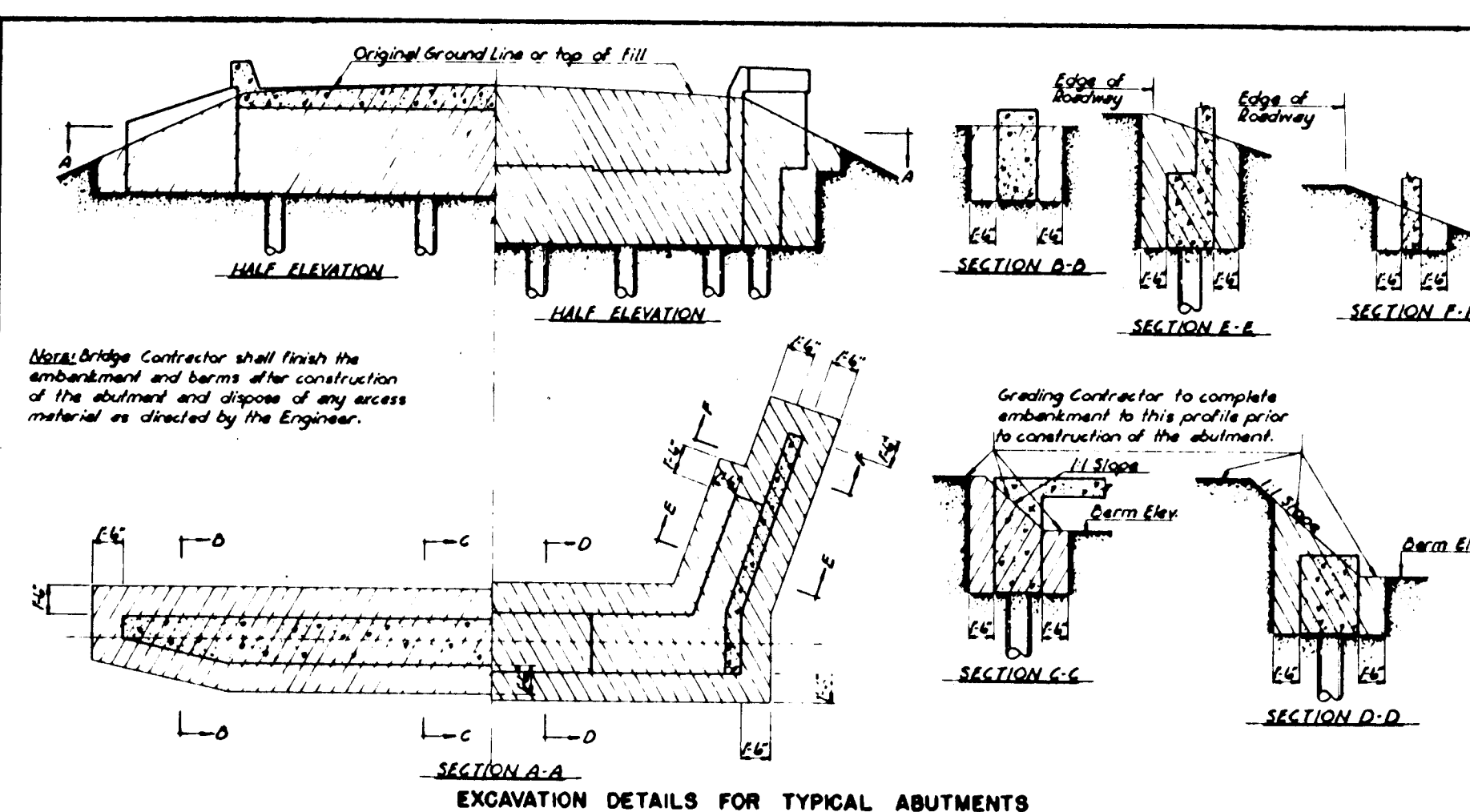
Use Class AAA(AE) Concrete in approach slabs, including sidewalks.

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			
APPROACH SLAB DETAILS			
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS			DATE SEPTEMBER 1971 SCALE DWG. NO. 79-P-11



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.					2034	* 203.4	Cu. Yds.
Class A (AE) Conc.	747	230	230	747		195.4	Cu. Yds.
Reinforcing Steel	6,680	3,350	3,350	6,680	71,900	91,960	Lbs.
Prestr'd. Conc. Beams					36	36	Each
Aluminum Handrail					254	254	Lin. Ft.
Steel Piles (10")	330			495		825	Lin. Ft.
Prestr'd. Conc. Piles (16")		360	405			765	Lin. Ft.
Approach Slabs						2	Each

Item	Quan.	Unit
Large Trees	10	Each
Common Excavation	34,380	Cu. Yd.
Compaction of Earthwork	18,940	Cu. Yd.
Removal of Exist Structure	L. 5.	L. 5.
Dumped Rock Rip Rap	2,150	Cu. Yd.

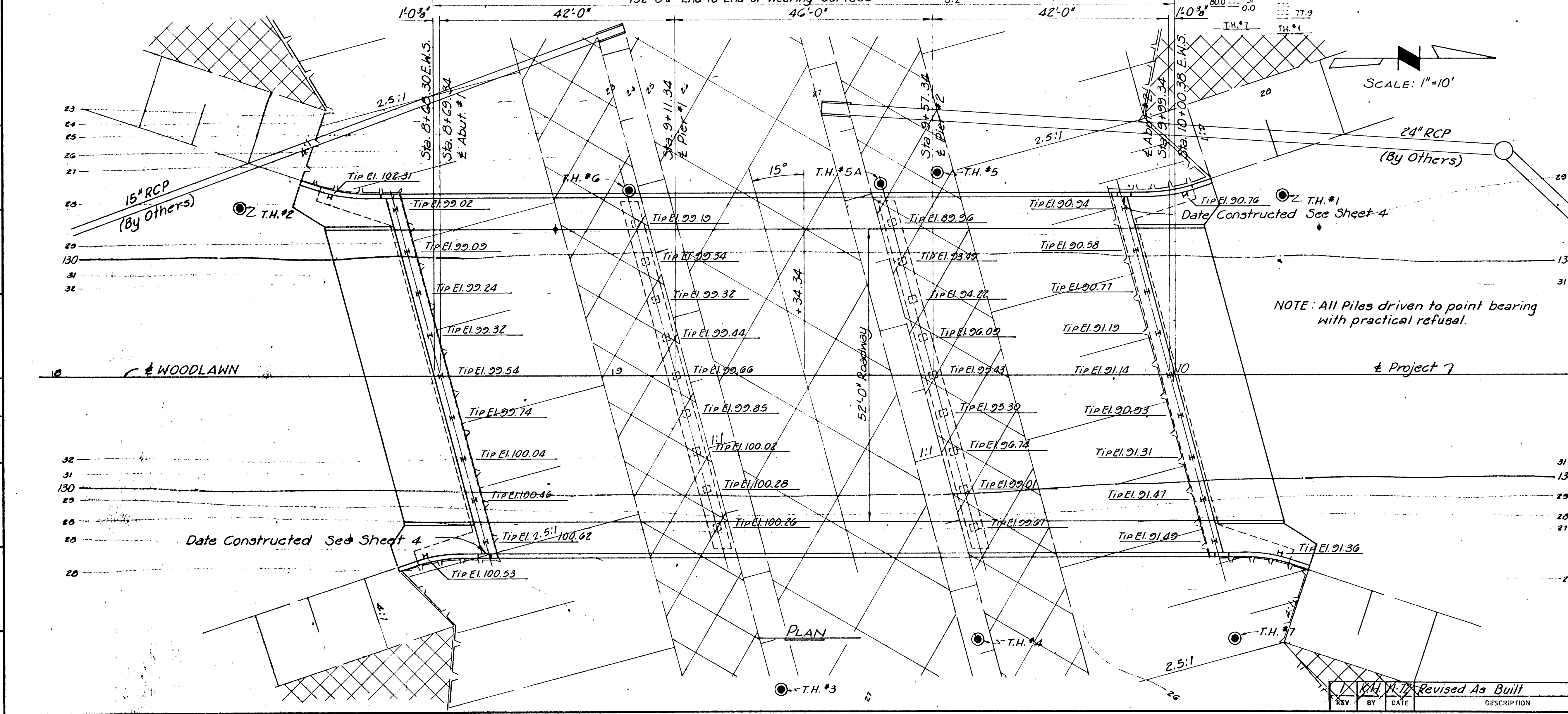
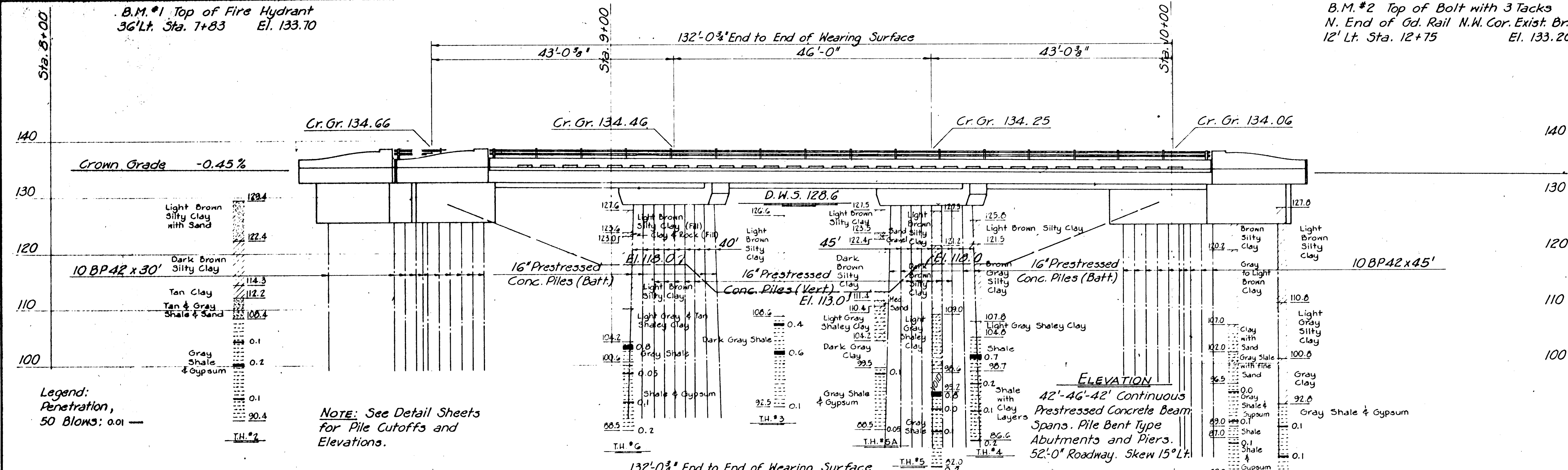
1	K.H.	11-72	Revised As Built	
REV.	BY	DATE	DESCRIPTION	
CITY OF WICHITA, KANSAS				
R. W. LINN, P.E., CITY ENGINEER				
WOODLAWN BRIDGE OVER				
GYPSUM CREEK				
BAR SUPPORTS, BR. EXC., HANDRAIL				
SUMMARY OF QUANTITIES				
R. S. DELAMATER			DATE	SEPTEMBER 1971
CONSULTING ENGINEER			SCALE	DWG. NO.
WICHITA, KANSAS			_____	79-P-12

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

B.M. #1 Top of Fire Hydrant
36' Lt. Sta. 7+83 El. 133.70

B.M. #2 Top of Bolt with 3 Tacks
N. End of Gd. Rail N.W. Cor. Exist. Br.
12' Lt. Sta. 12+75 El. 133.20

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



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 construc-
tion 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	
CONSTRUCTION LAYOUT	
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE SEPTEMBER 1971 SCALE 1"=10' DWG. NO. 79-P-3

5	PUB. ROAD	DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	KANSAS				19 71	4	12

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

DATE	SCALE	DWG. NO.	79-P-4
SEPTEMBER 1971			

R. S. DELAMATER	CONSULTING ENGINEER	WICHITA, KANSAS
-----------------	---------------------	-----------------

ABUTMENT DETAILS

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

DESIGN PILE LOADING: 45 Tons per Pile - Abuts.

UNIT STRESSES:

fc	-	1,200	p.s.i.	Class A(AE)
fc	-	3,000	p.s.i.	Class A(AE)
fs	-	20,000	p.s.i.	(Reinf.)

Spec. (1969 Edition)

DESIGN LOADING: HS20-44 A.A.S.H.O.

See Sheet 9 for Bar List and Bending Diagrams.

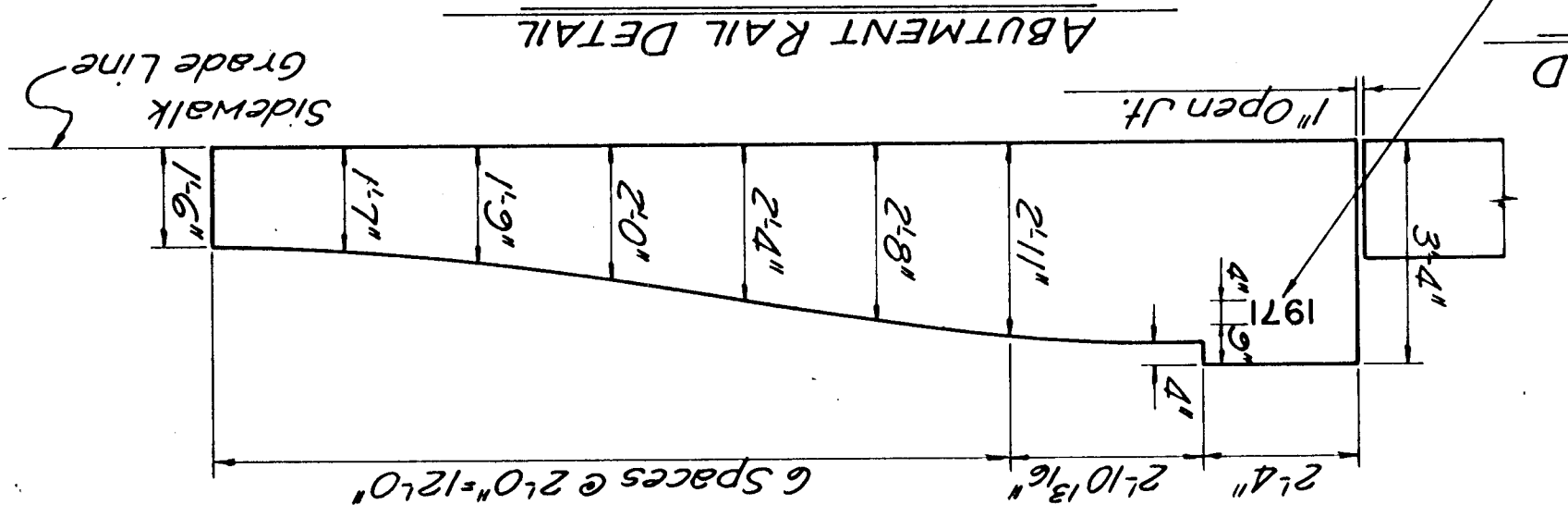
Abutment piles shall be 10 BP 42 Steel Piles as indicated on Sheet 3 and detailed on Sheet 10.

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

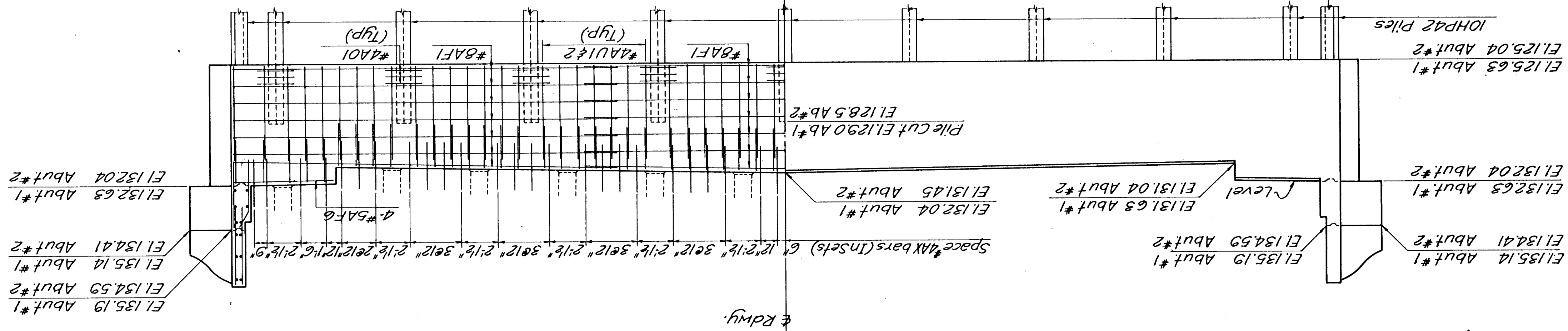
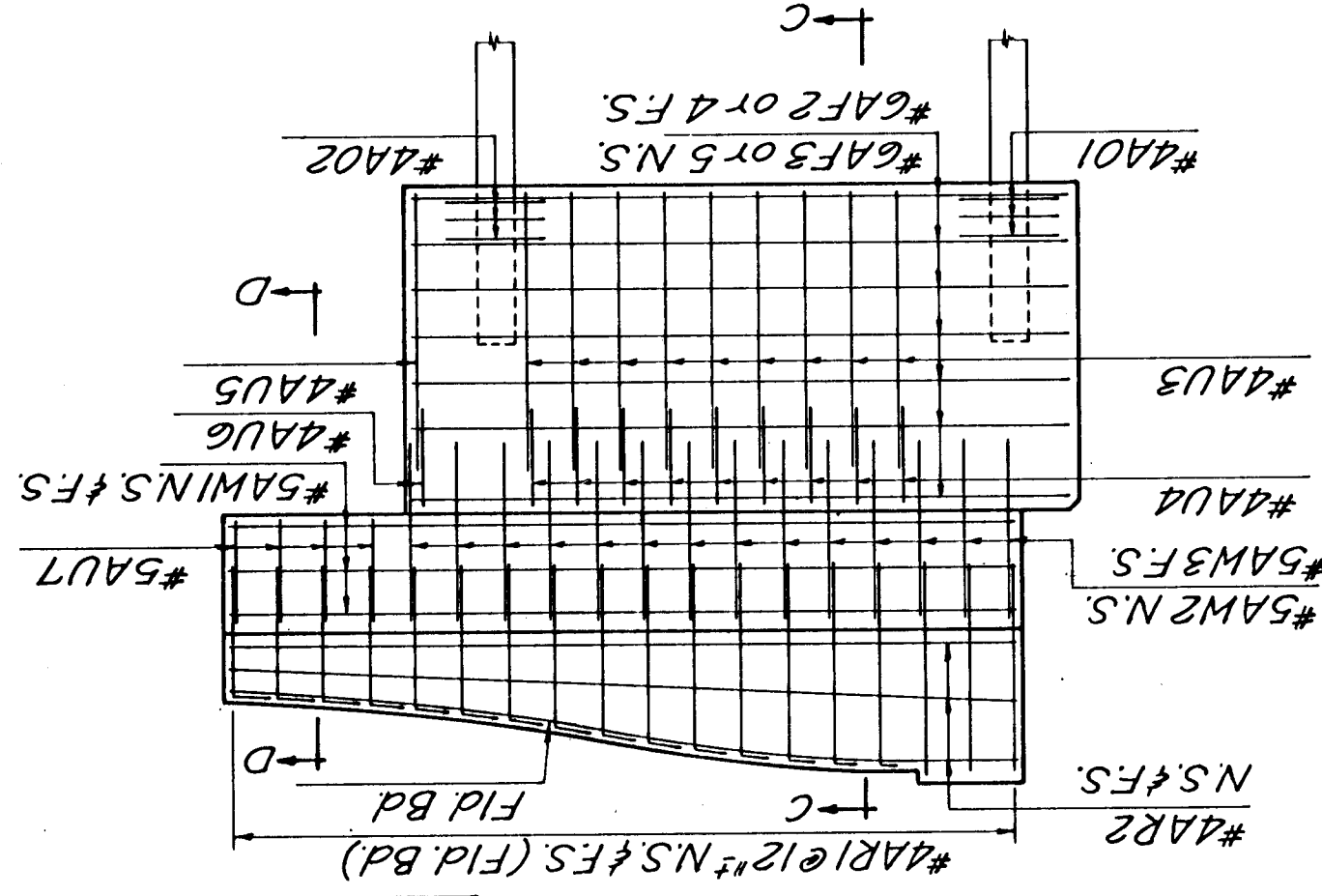
All concrete shall be Class A(AE). Bevel all exposed edges with a 3/4" triangular molding unless otherwise indicated.

NOTES:

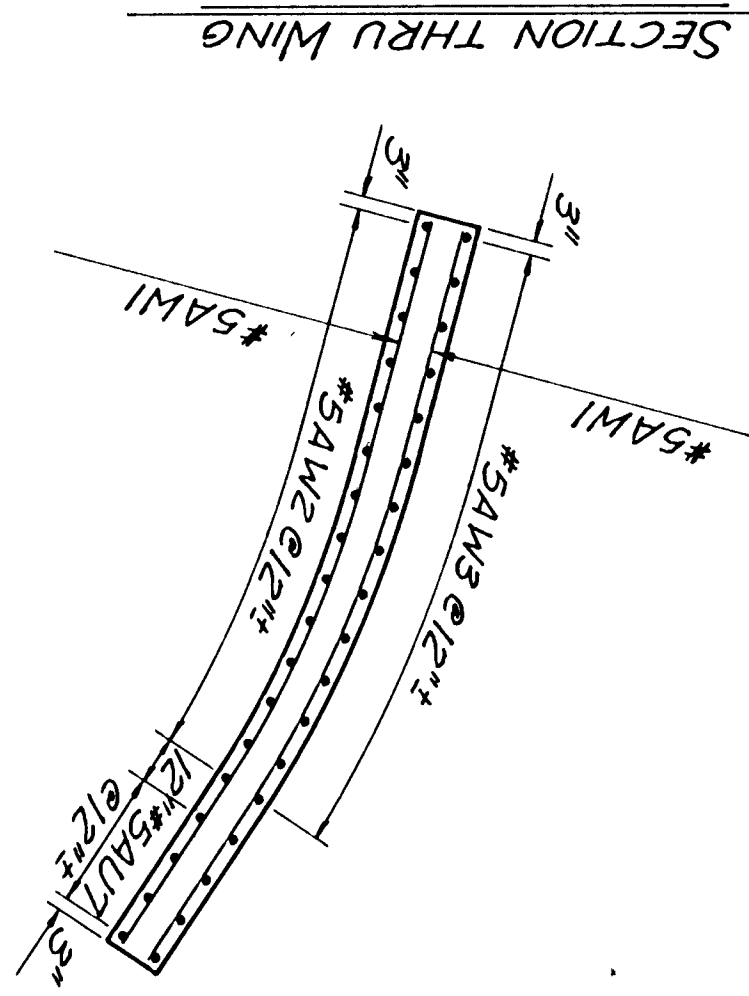
Date constructed, cast
in rail as indicated on
Sheet 3; numerals with
stems about 1/2" wide and
1/4" deep.



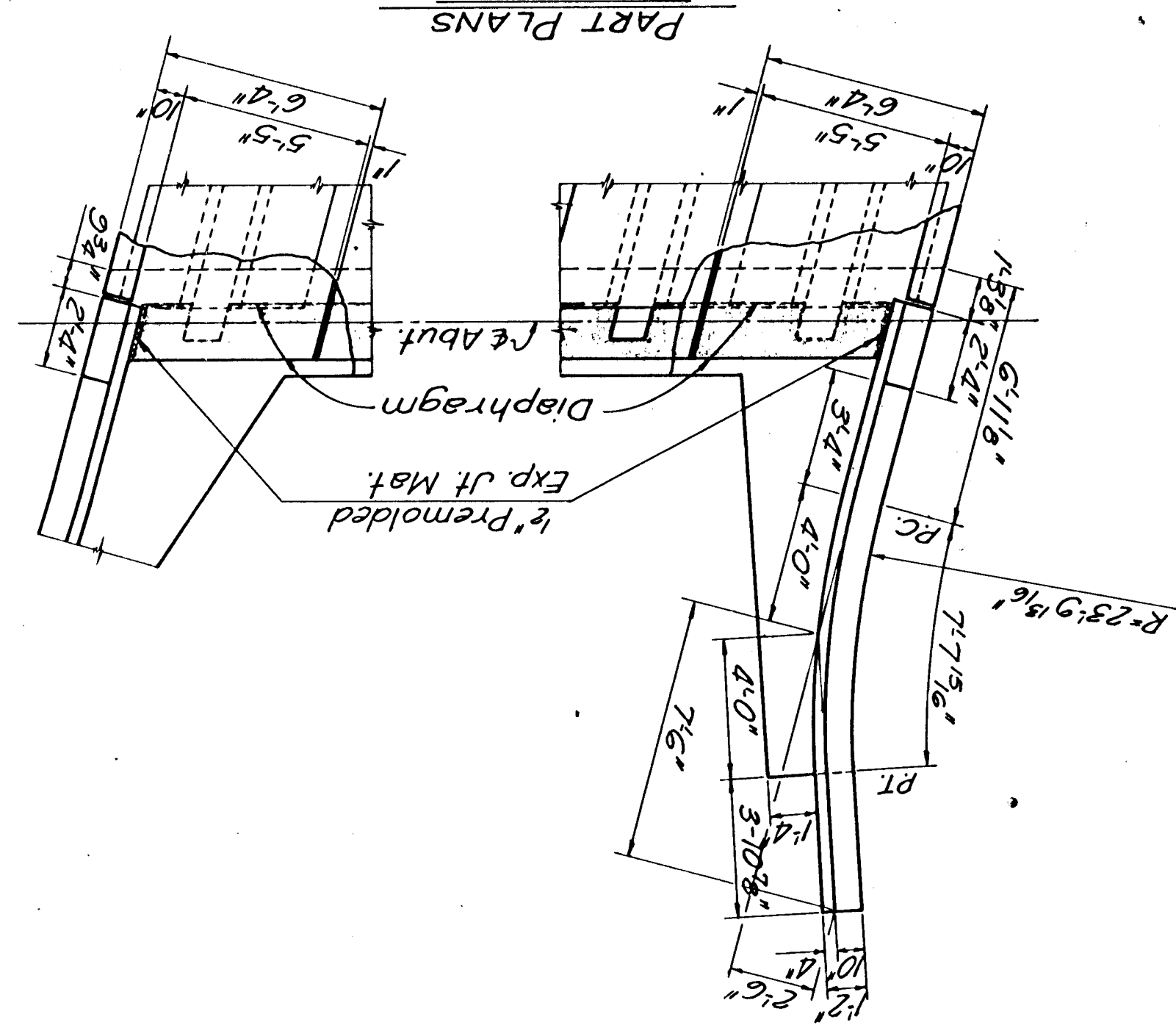
DEVELOPED VIEW OF WING



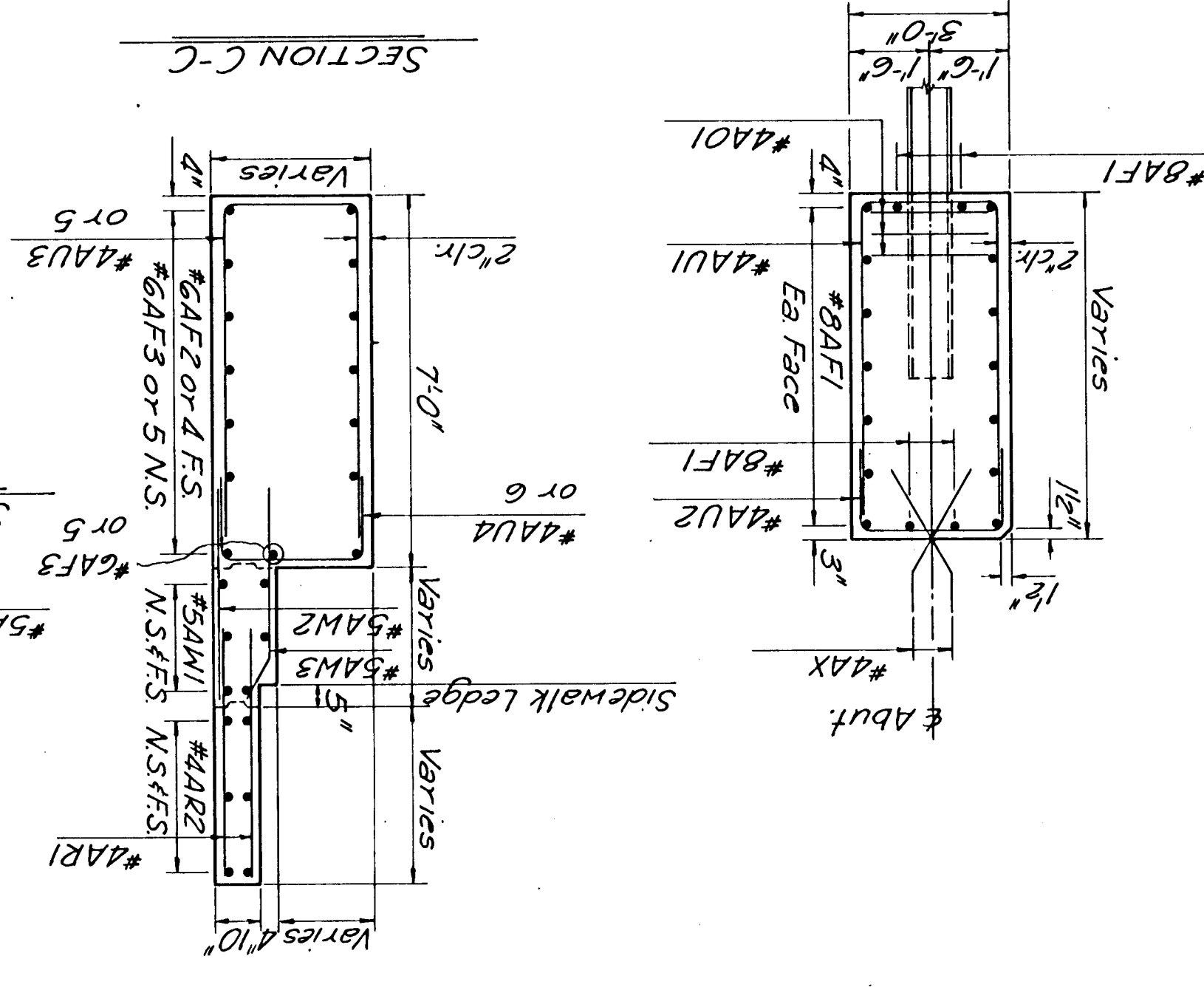
ELEVATION A-A



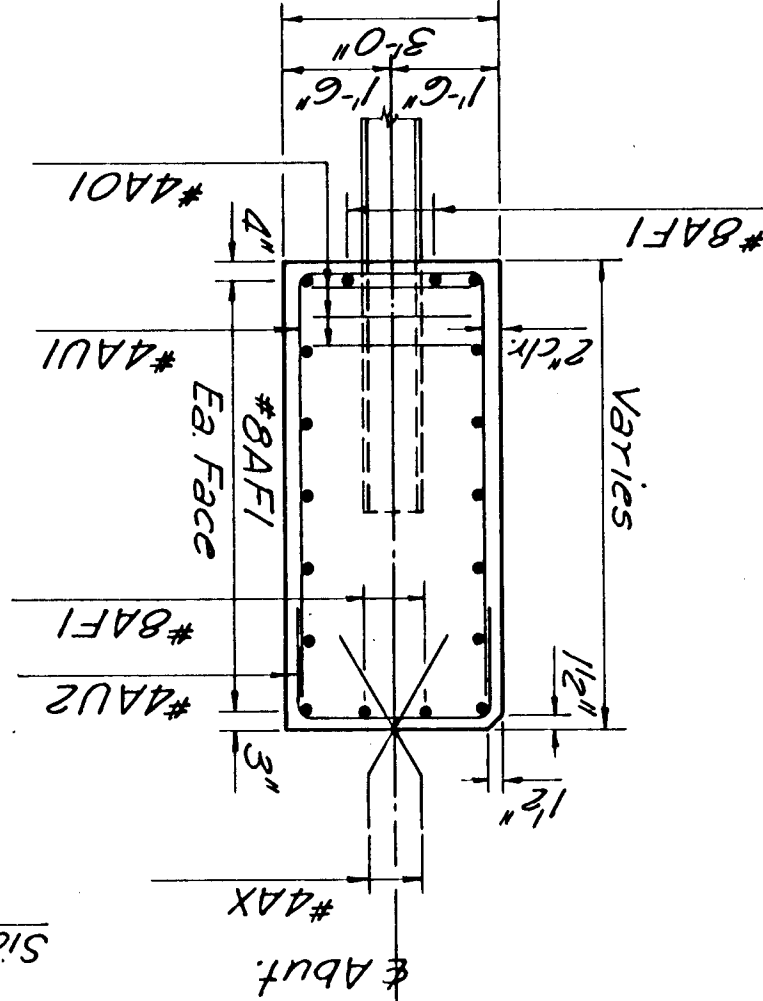
SECTION THRU WING



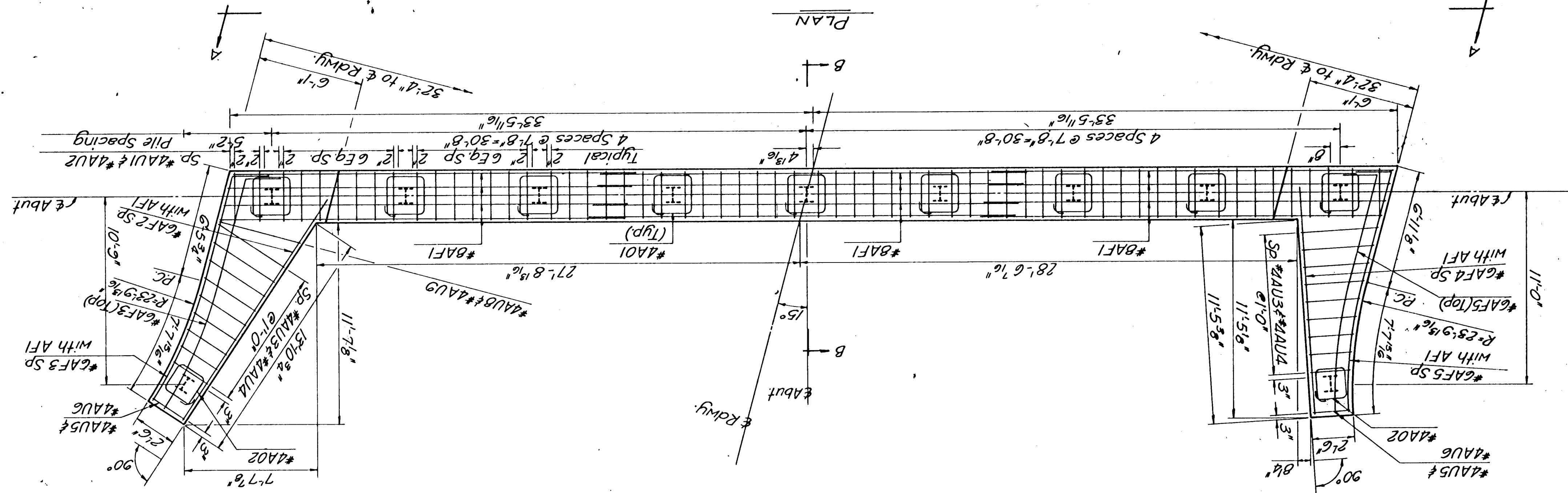
PART PLANS



SECTION C-C

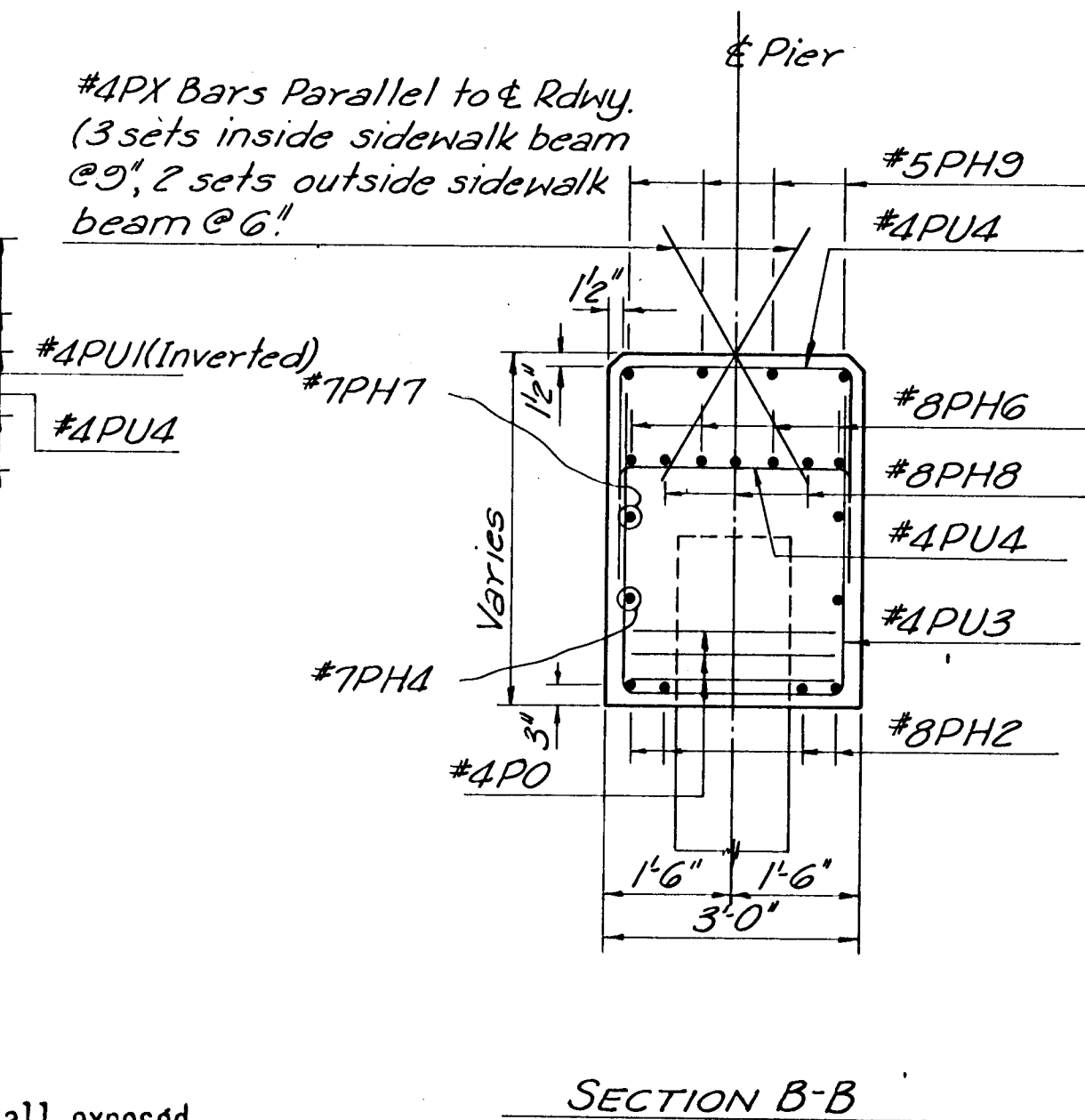
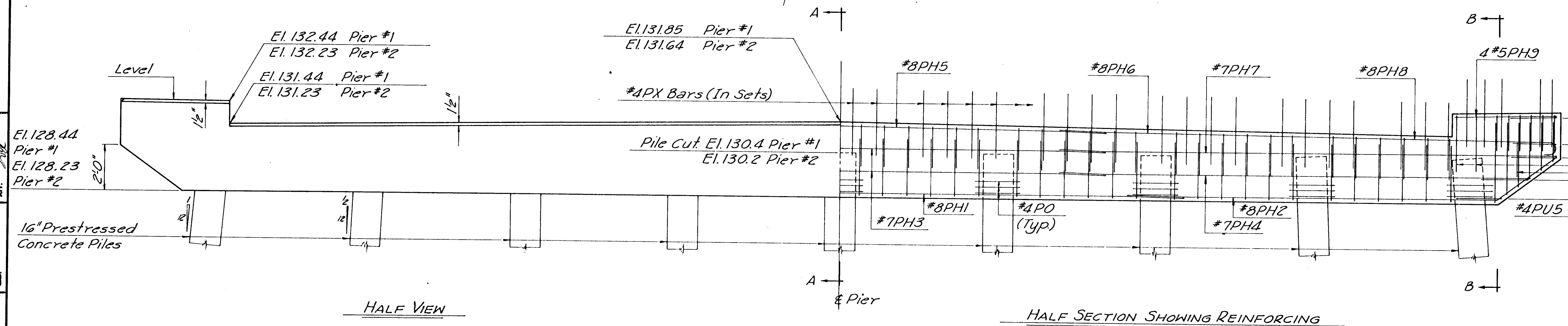
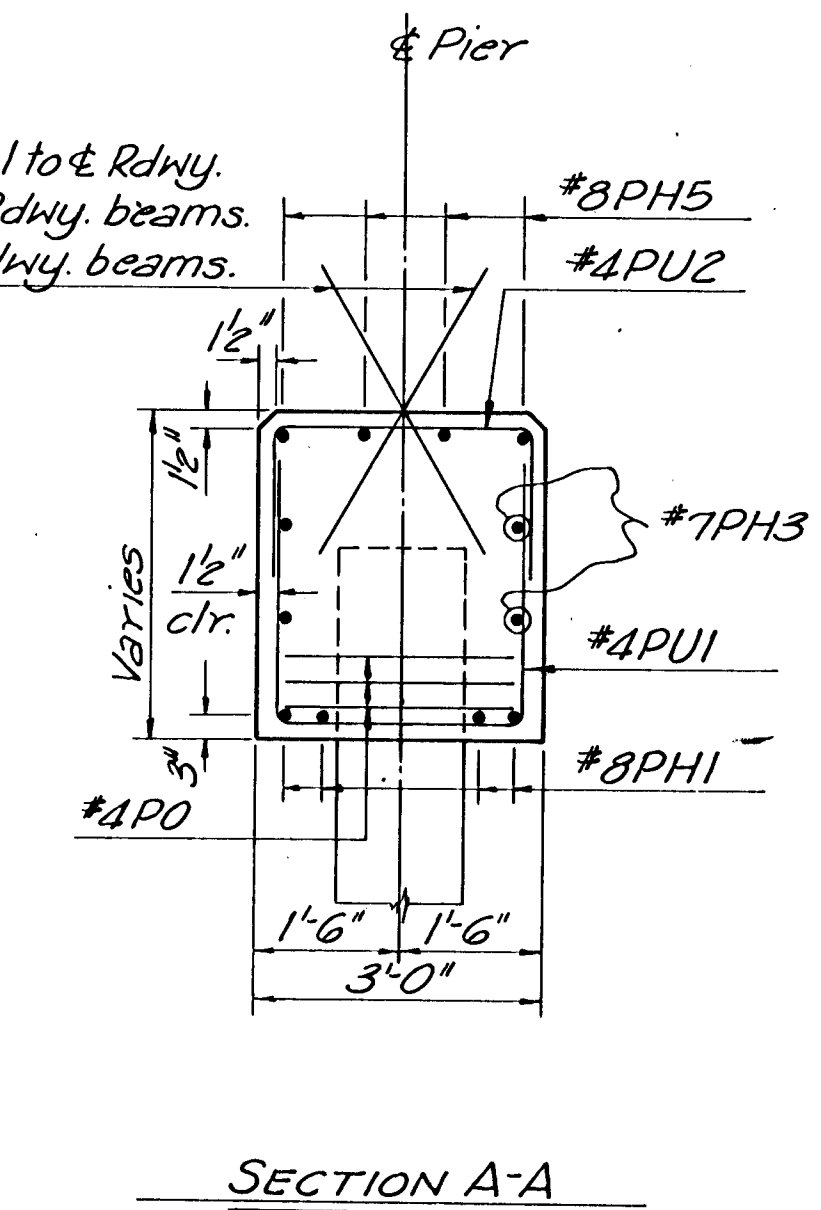
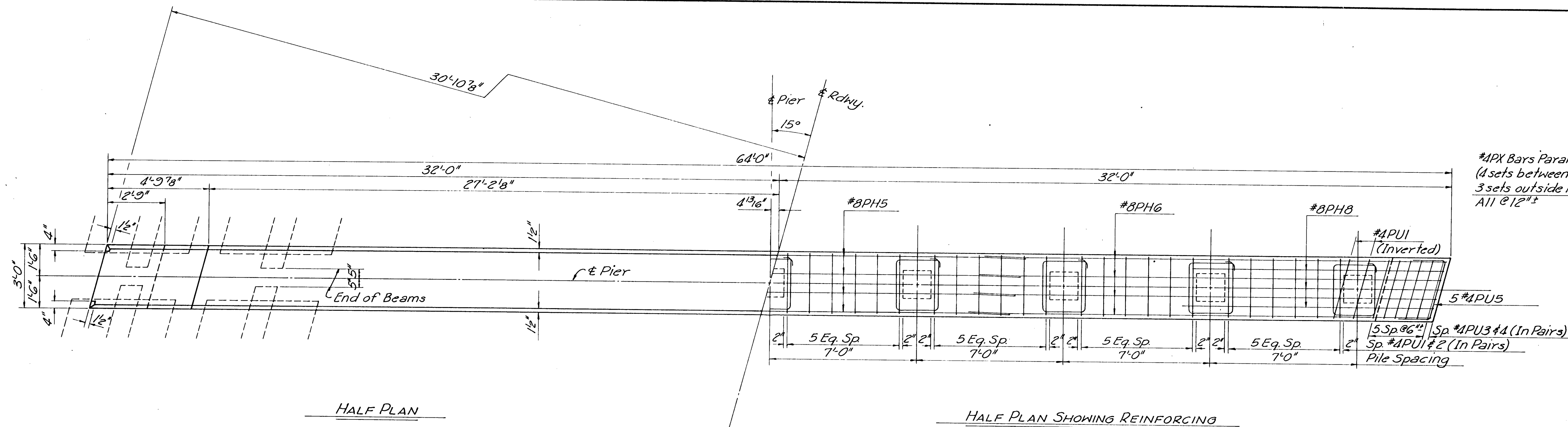


SECTION B-B



PLAN

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



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.

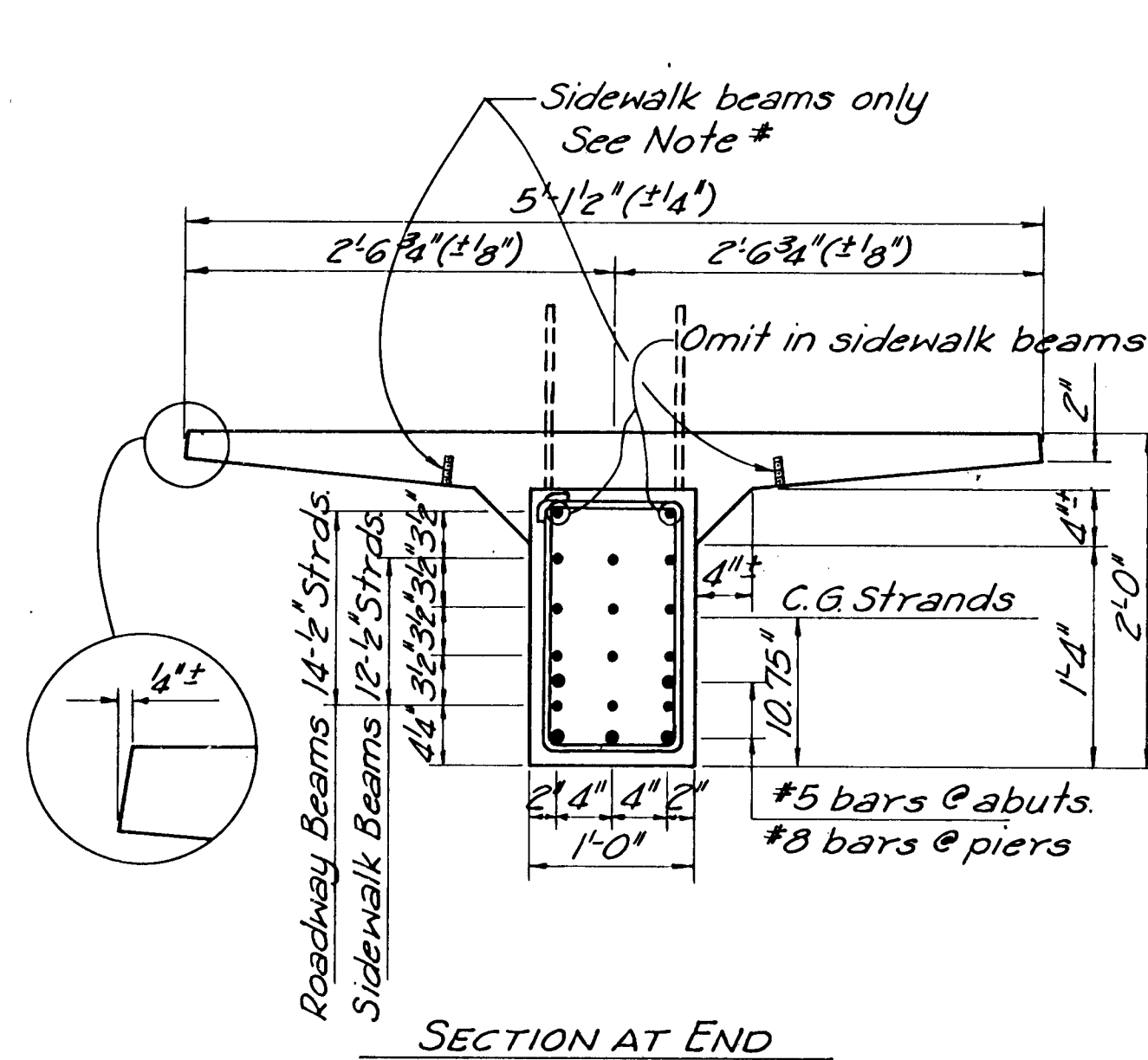
DESIGN LOADING: HS20-44 A.A.S.H.O.
Spec. (1969 Edition)

UNIT STRESSES:

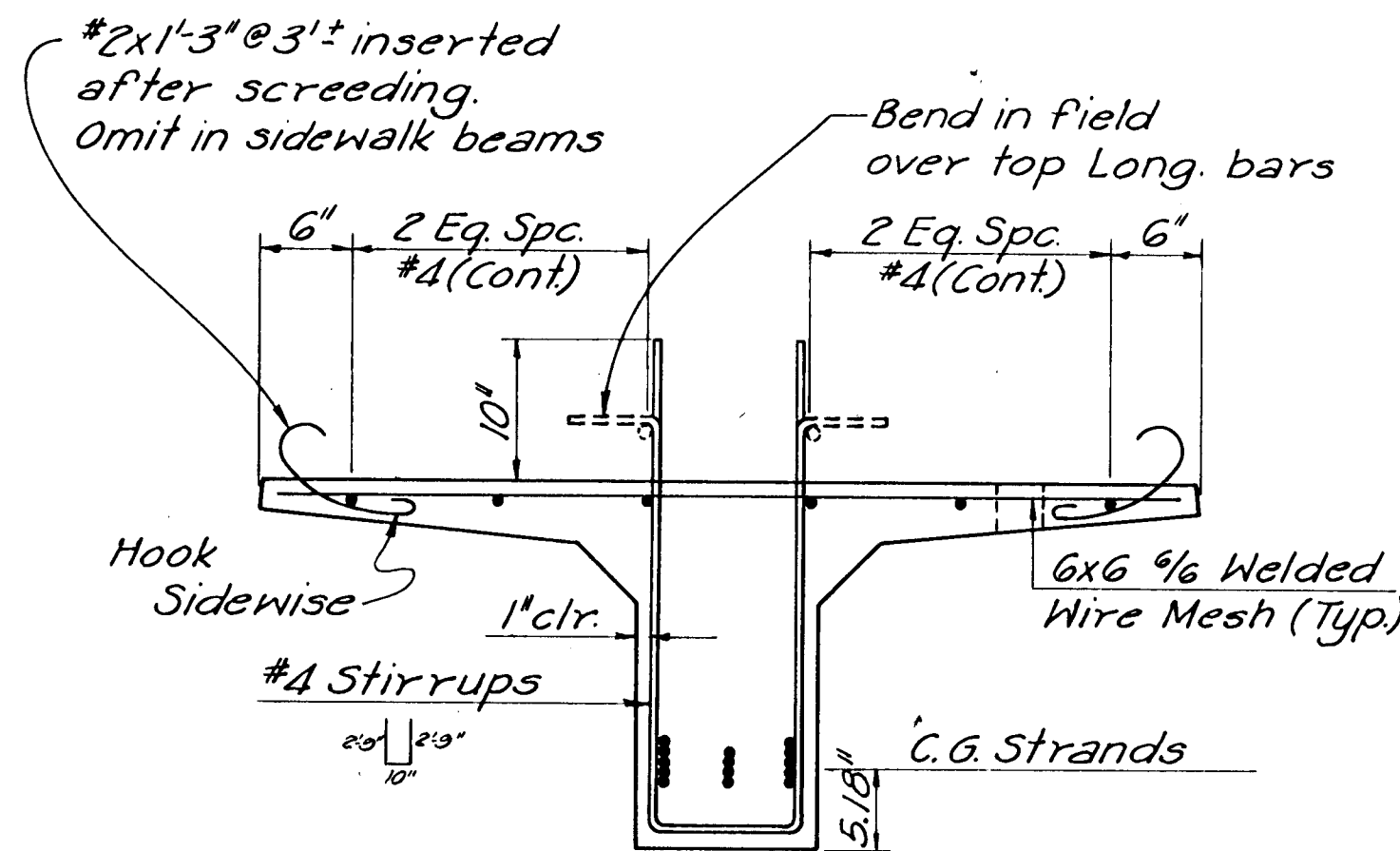
f _c	-	1,200	p.s.i.	Class A(AE)
f' _c	-	3,000	p.s.i.	Class A(AE)
f _s	-	20,000	p.s.i.	(Reinf.)

DESIGN PILE LOADING: 55 Tons per Pile

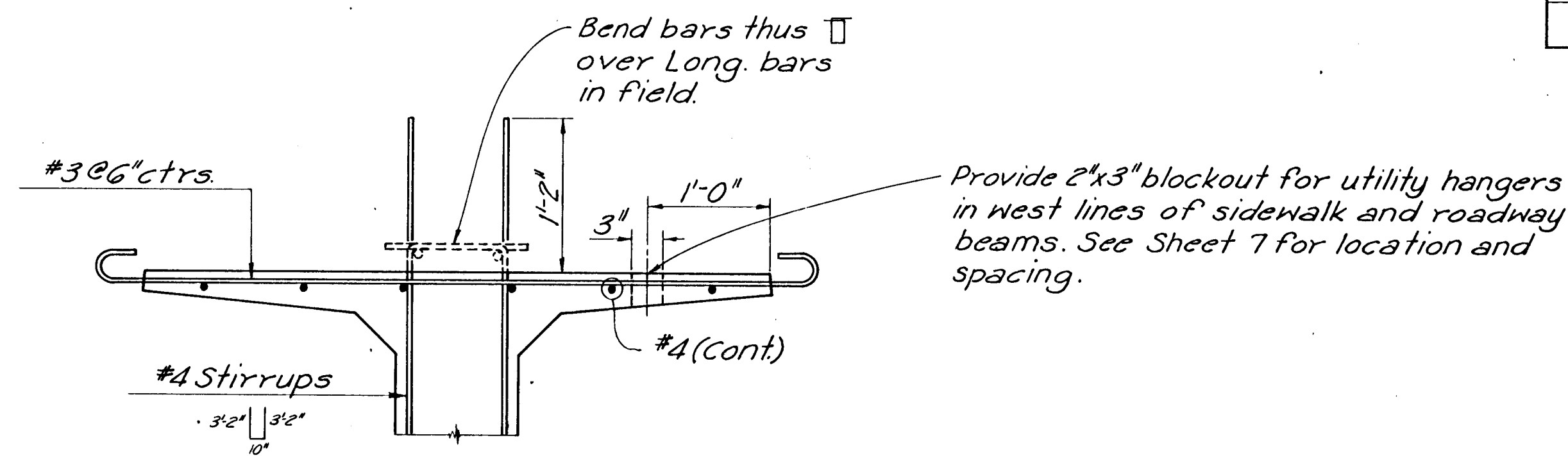
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	KANSAS		1971	6	12



SECTION AT END

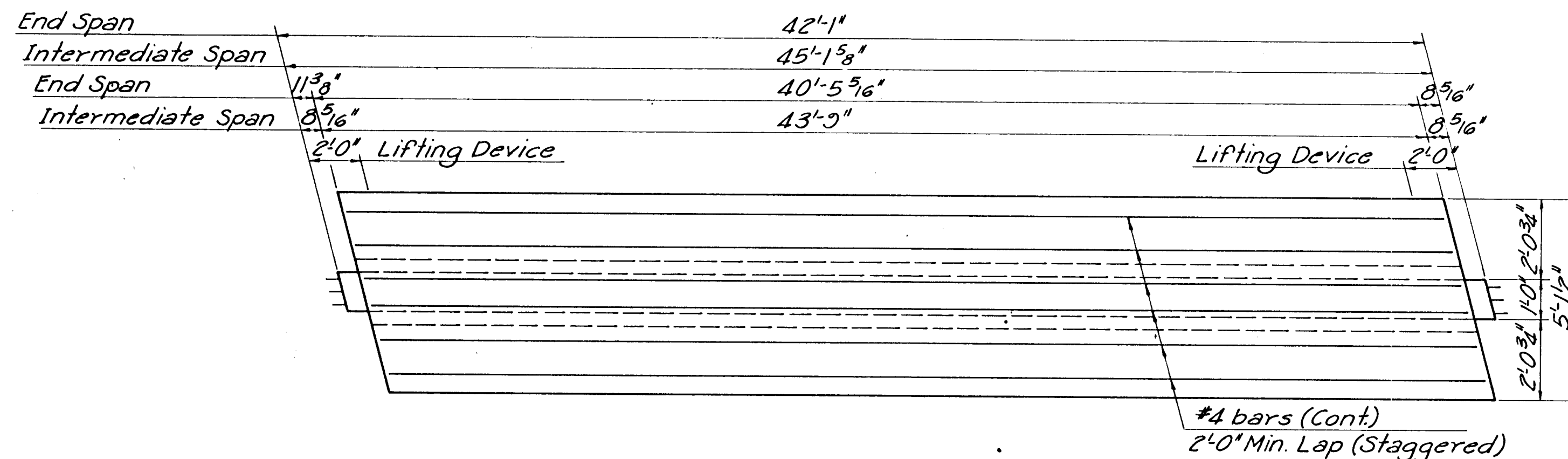


SECTION AT MID-SPAN

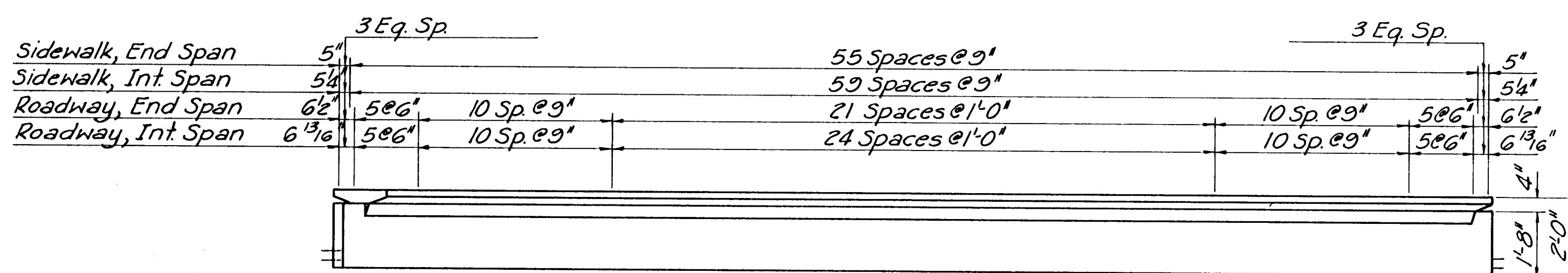


PART SECTION
(Sidewalk Beam Only)

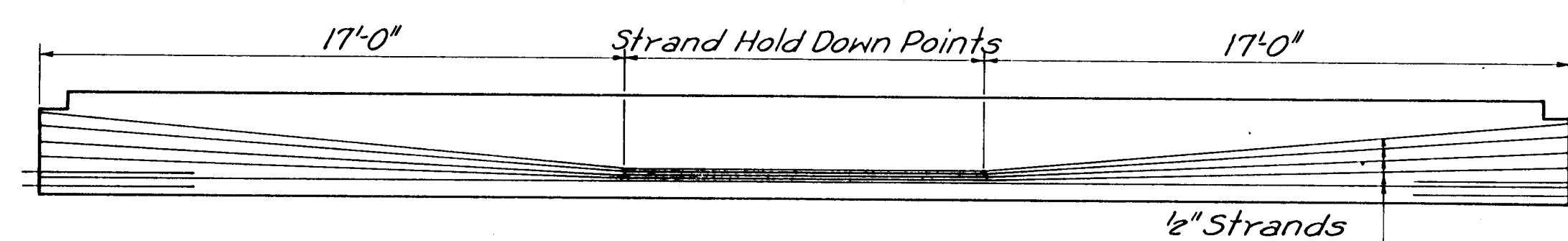
* NOTE: At Contractors option,
threaded inserts or drilled
holes for forms, where needed.



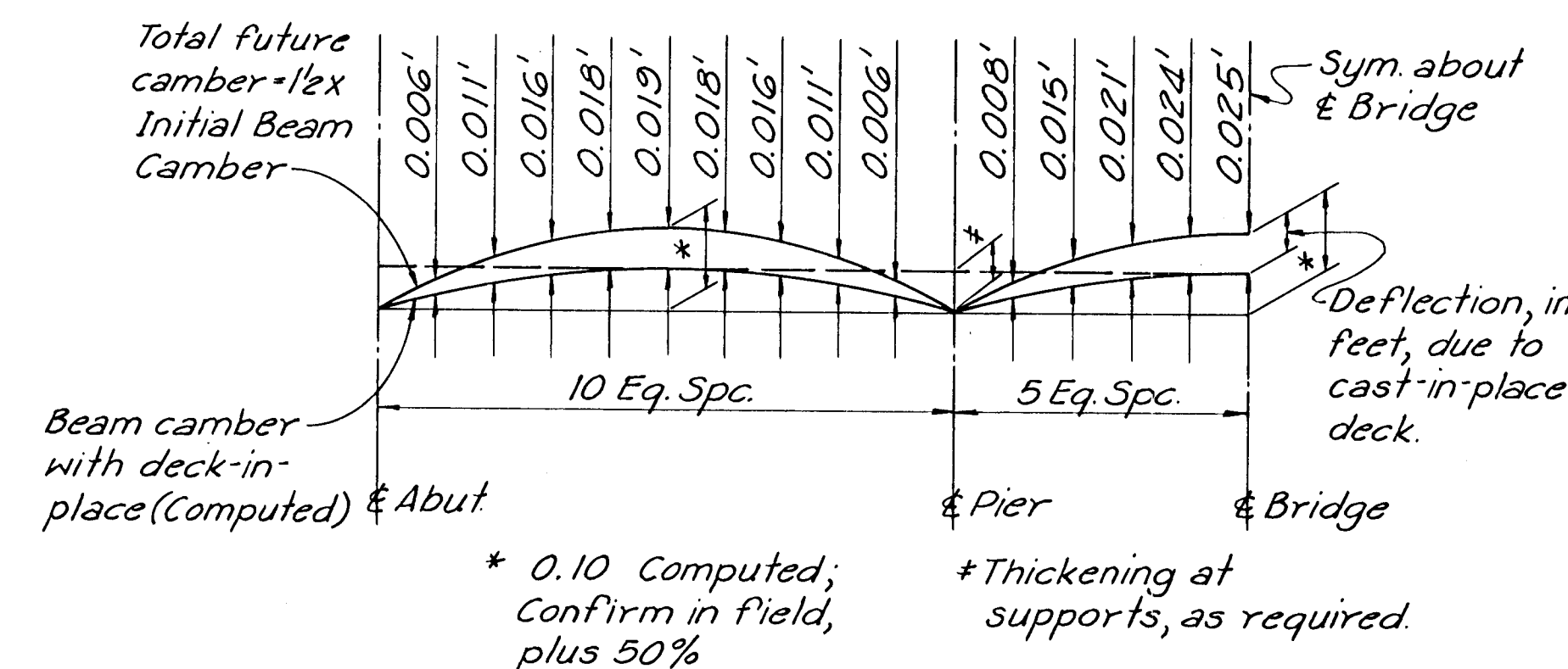
PLAN



ELEVATION

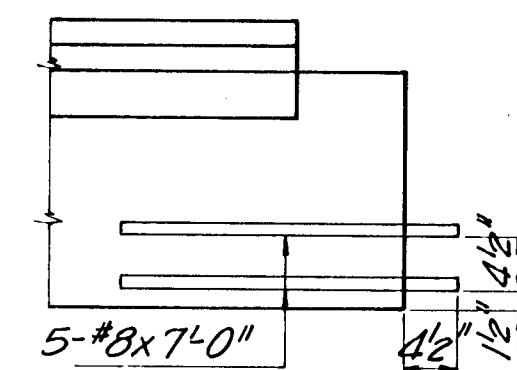


LONGITUDINAL SECTION THRU BEAM

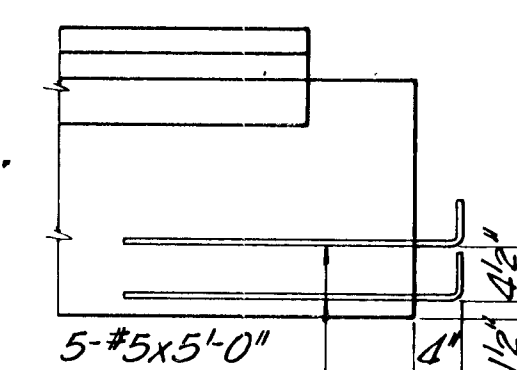


DEADLOAD DEFLECTION DIAGRAM

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



END DETAIL AT PIERS



END DETAIL AT ABUTS.

DESIGN: HS20-44 A.A.S.H.O.
LOADING: 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 SCALE DWG. NO. 79-P-6

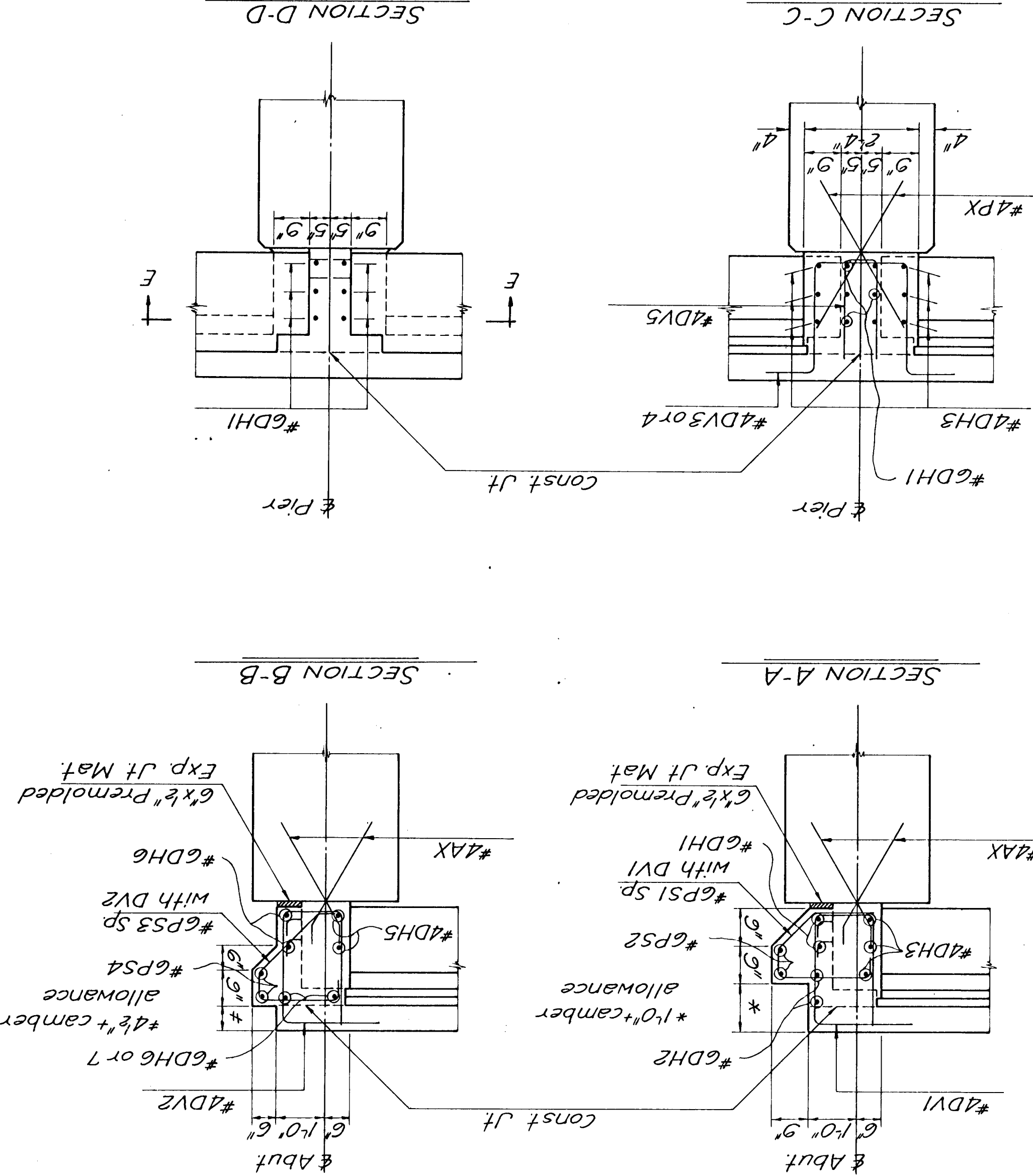
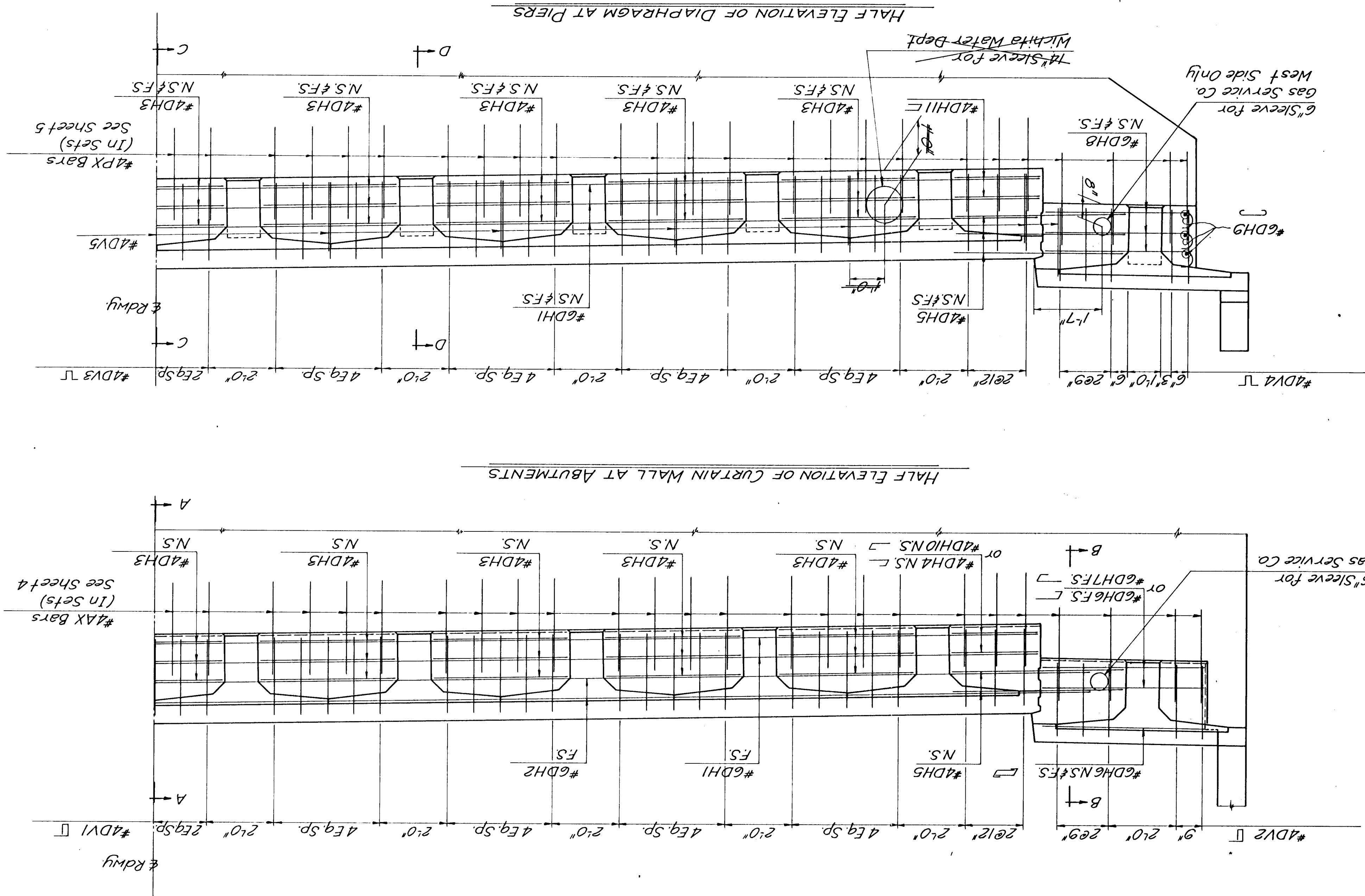
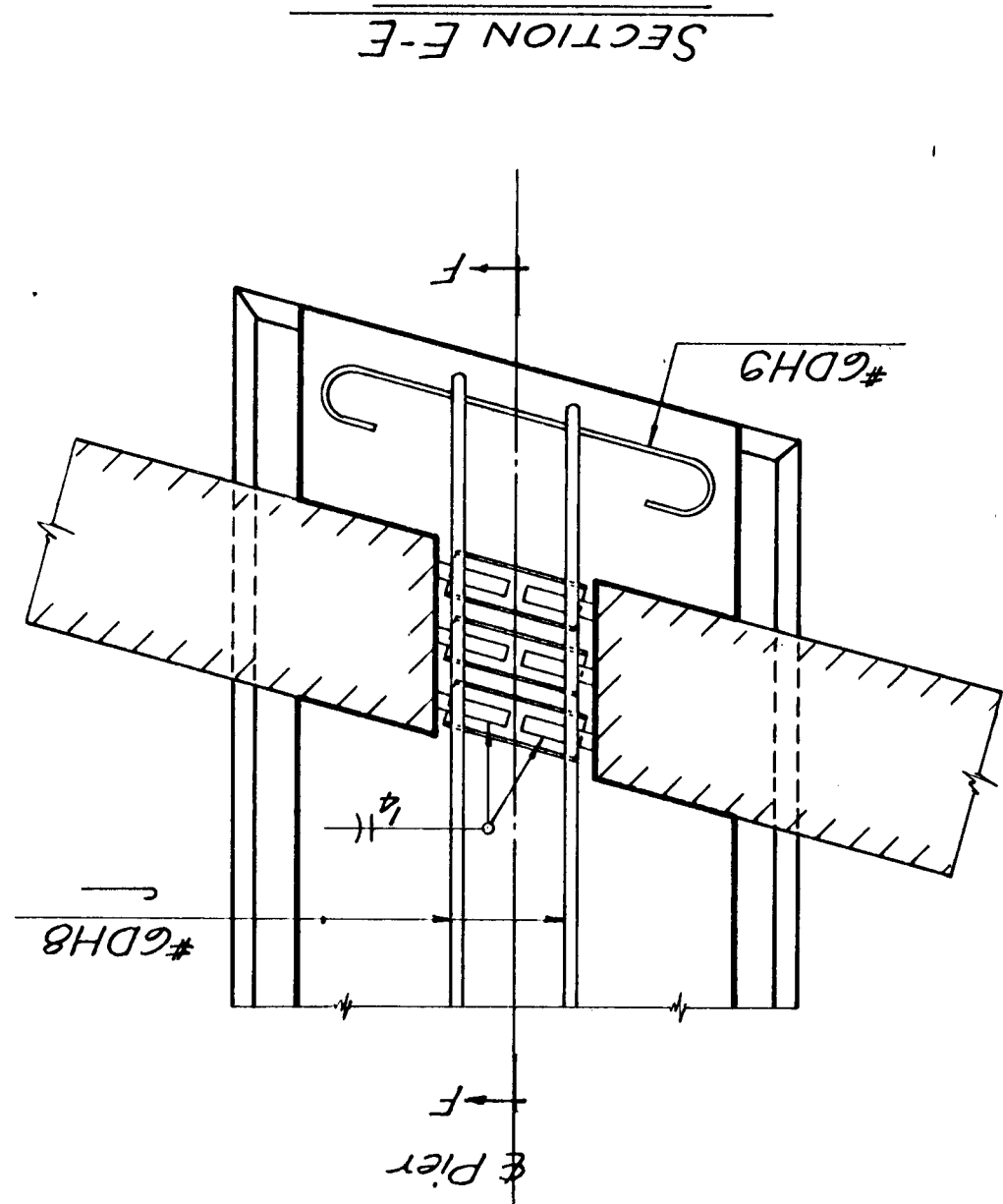
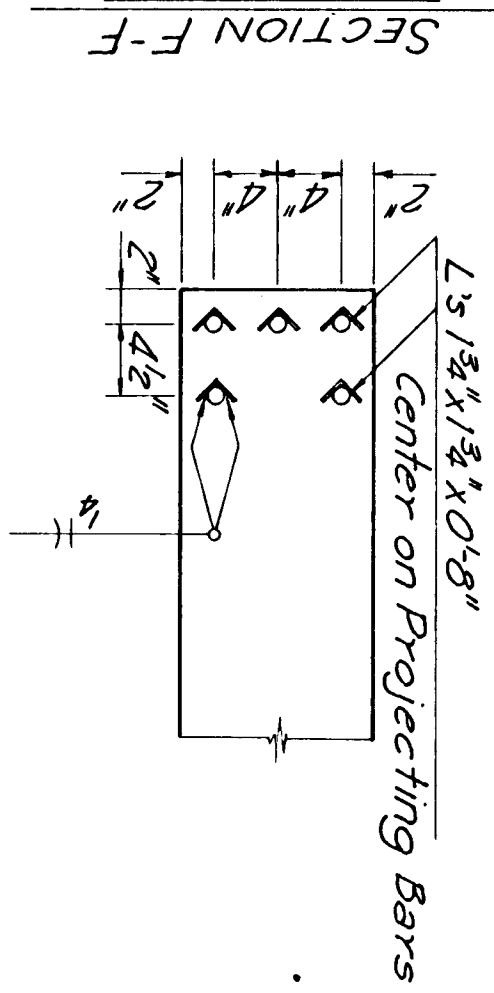
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	KANSAS		19 71	8	12

REV	BY	DATE	CITY OF WICHITA, KANSAS
1	K.H.	VI-12	Revised As Built
			R.W. LINN, P.E., CITY ENGINEER
			WOODLAWN BRIDGE OVER GYPSUM CREEK
			SUPERSTRUCTURE DETAILS
		DATE	R.S. DELAMATER
		SCALE	CONSULTING ENGINEER
		DWG. NO.	WICHITA, KANSAS
		7-P-8	

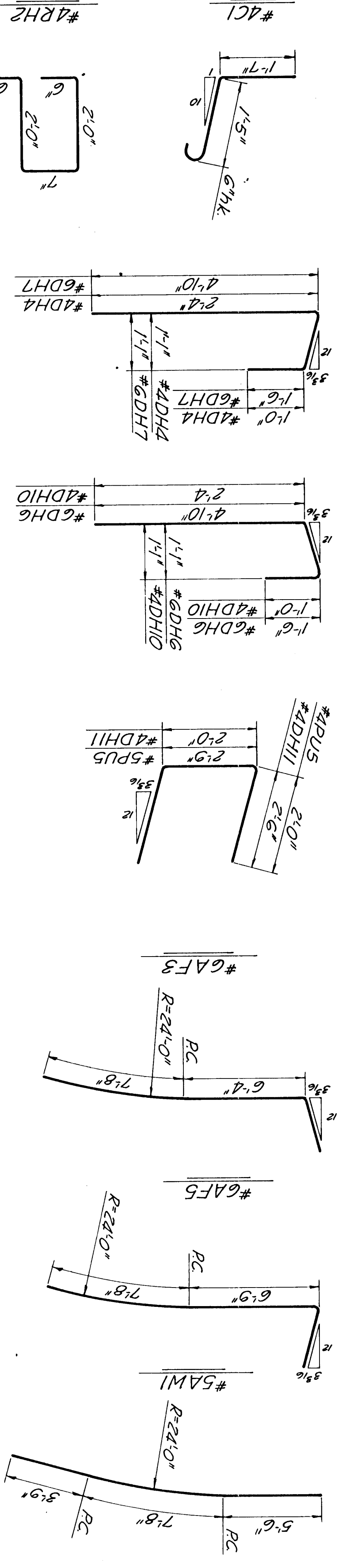
Diaphragms shall not be placed until all beams have cured a minimum of 28 days. Toppling shall be placed a minimum of three days after pier and abutment diaphragms are placed and shall preferably be placed continuously the full length of the bridge; if a joint is used it shall be at the quarter point short of the pier.

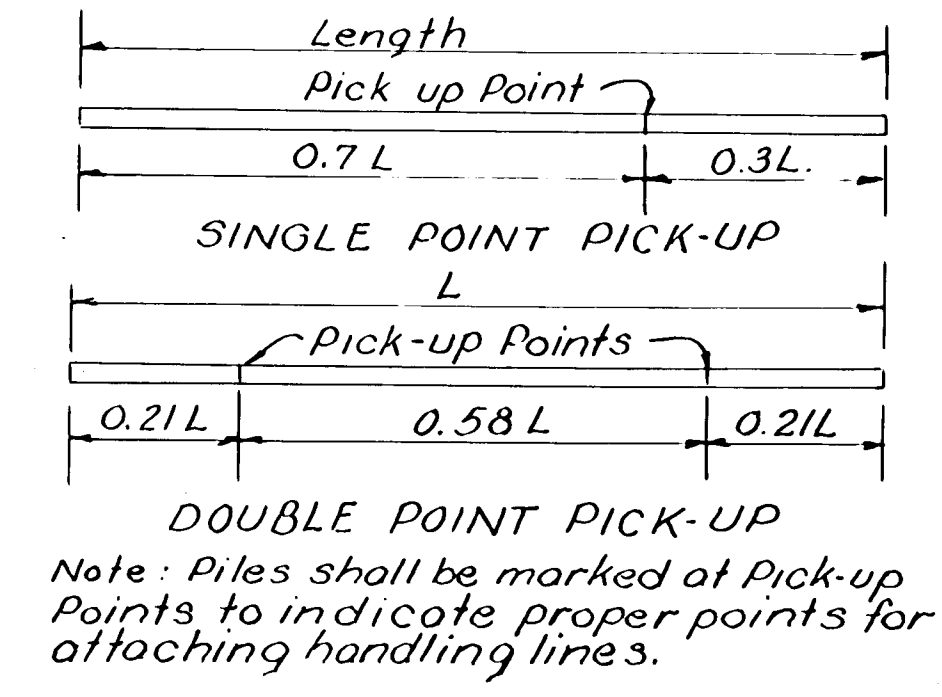
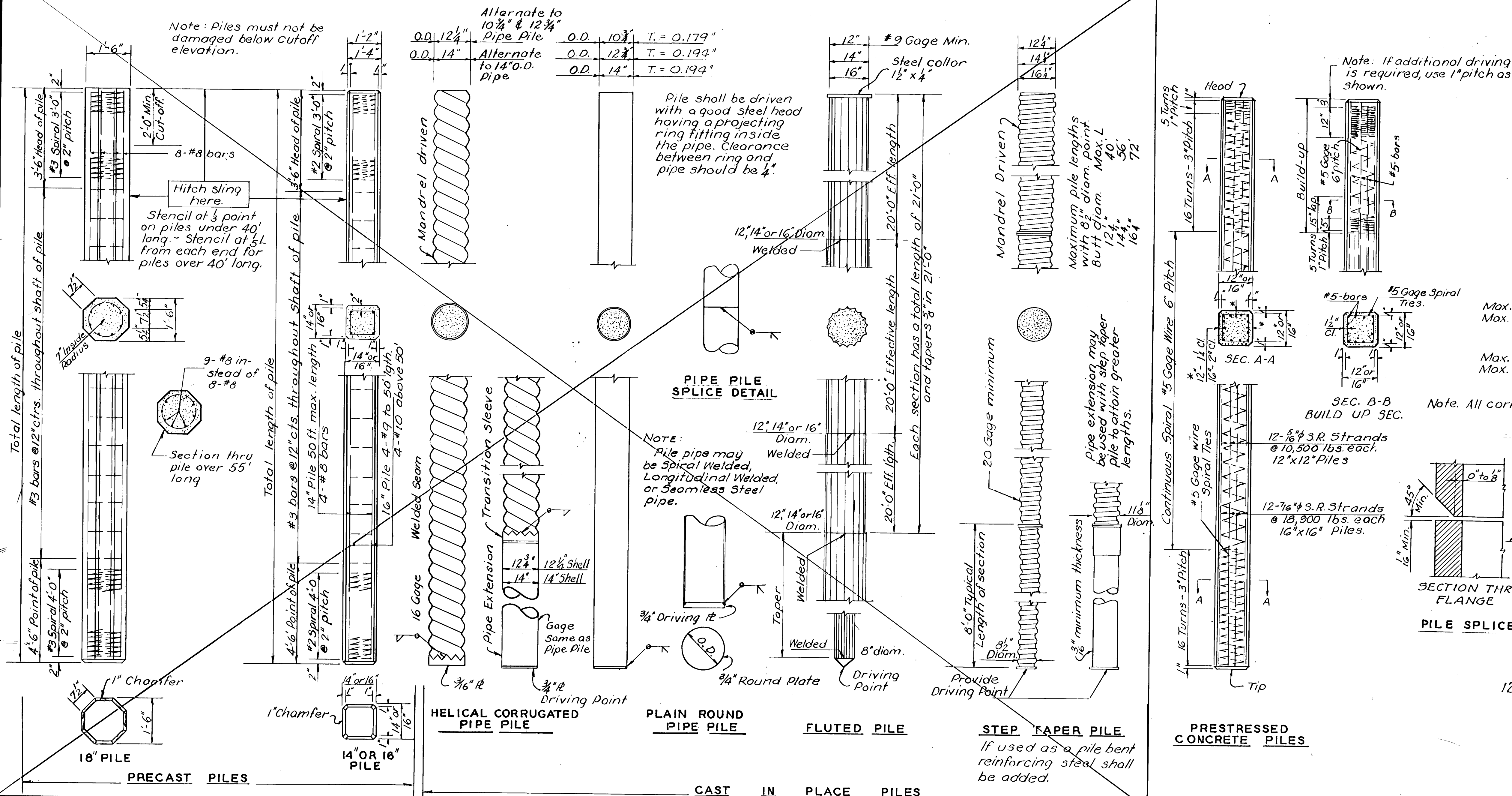
NOTES:
Class AA(AC) Concrete shall be used in the Super-structure, including curbs and Diaphragms, except for Prestressed Beams. Bevel all exposed edges with a 3/4" triangular molding unless otherwise noted.
All dimensions relative to placement of reinforcement steel are to centerline of bars unless otherwise noted. See Sheet 9 for Bar List and Bending Diagrams.
See Sheet 7 for Beam Erection Notes.

NOTE: Angles may be rotated for welding. Angles shall be subsidiary to bid item of Prestressed Concrete Beams.



BAR LIST									
ONE ABUTMENT									
STRAIGHT BARS					BENT BARS				
Mark	No	Req	Size	Length	Mark	No	Req	Size	Length
AF1	54	8	24'-6"		AF3	8	6	16'-0"	
AF2	7	6	15'-6"		AF5	8	6	16'-6"	
AF4	7	6	15'-0"		AO1	27	4	11'-0"	
AF6	8	5	6'-0"		AO2	6	4	9'-0"	
					AU1	60	4	13'-8"	
					AU2	60	4	7'-4"	
					AU3	18	4	#	
AR1	72	4	4'-0"		AU4	18	4	#	
AR2	12	4	17'-0"		AU5	2	4	13'-2"	
					AU6	2	4	4'-10"	
					AU7	8	5	5'-4"	
					AU8	1	4	17'-8"	
					AU9	1	4	10'-0"	
AM2	28	5	4'-0"		AM1	12	5	16'-11"	
					AM3	28	5	4'-0"	
					AX	100	4	3'-0"	
					#See Bending Diagrams				
ONE PIER									
					PH2	8	8	19'-6"	
PH1	4	8	30'-0"						
PH3	4	7	24'-0"						
PH4	4	7	21'-0"		PH6	8	8	22'-10"	
PH5	4	8	24'-0"		PH8	6	8	12'-10"	
PH7	4	7	22'-0"						
PH9	8	5	4'-6"		PO	27	4	11'-4"	
PX	104	4	3'-6"		PJ1	52	4	7'-9"	
					PJ2	48	4	6'-3"	
					PJ3	12	4	#	
					PJ4	14	4	5'-3"	
					PJ5	10	4	6'-9"	
					#See Bending Diagrams				
SUPERSTRUCTURE									
SL1	456	4	23'-0"		DV1	102	4	7'-9"	
SL2	132	4	27'-6"		DV2	20	4	7'-5"	
SL3	213	5	40'-0"		DV3	102	4	8'-7"	
SL4	152	7	35'-0"		DV4	20	4	8'-3"	
SL5	142	8	11'-0"		DV5	26	4	4'-9"	
SL6	66	4	15'-6"		ST	528	5	28'-4"	
SB	522	4	27'-9"		SM1	12	5	6'-0"	
					SM2	620	5	7'-5"	
DH1	48	6	19'-6"		DH4	4	4	4'-6"	
DH2	12	6	21'-0"		DH6	12	6	7'-5"	
DH3	162	4	3'-9"		DH7	4	6	7'-5"	
DH5	32	4	5'-0"		DH8	24	6	5'-2"	
					DH9	12	6	3'-4"	
R1	16	4	4'-2"		DH10	4	4	4'-6"	
R2	120	4	7'-9"		DH11	8	4	7'-0"	
PS2	12	6	19'-6"		RH1	180	4	4'-2"	
PS4	8	6	4'-6"		PS1	102	6	5'-4"	
					PS3	20	6	5'-1"	
ONE APPROACH SLAB									
CT1	2	6	12'-0"		CI	26	4	3'-6"	
AS1	76	8	11'-8"						
AS2	26	5	29'-0"		SX1	57	4	7'-8"	
SX2	12	8	30'-0"						





12" x 12" Piles
Max. length - 50' Single Point Pick-up.
Max. length - 75' Double Point Pick-up.

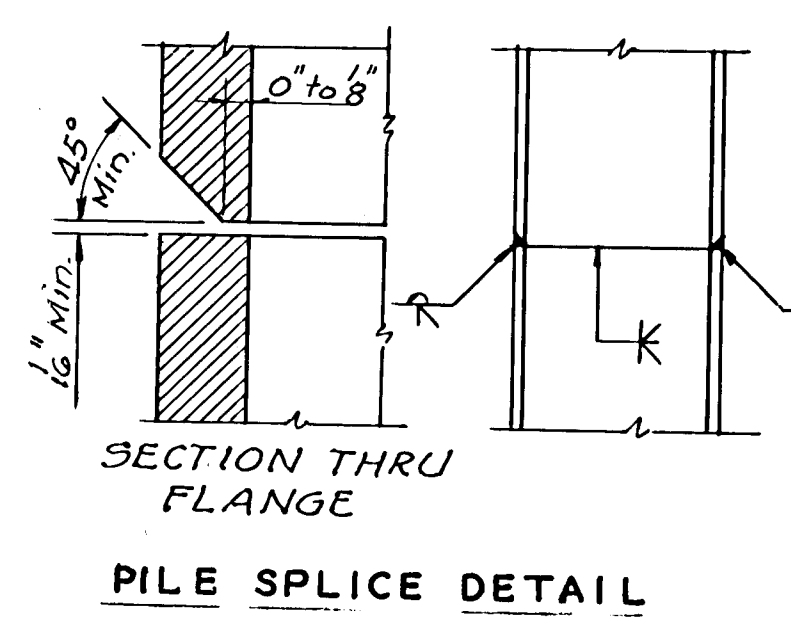
16" x 16" Piles
Max. length - 60' Single Point Pick-up.
Max. length - 85' Double Point Pick-up.

Note: All corners to be chamfered 1".

PILES					
STEEL PILES	EQUIVALENT CONCRETE PILES				
PRECAST	PIPE	FLUTED	STEPTAPER	PRESTRESSED	*
10BP42	14"	10 1/4"	12"	12 1/4"	12 1/4"
12BP53	16"	12 1/4"	14"	14 1/4"	12 1/4"
14BP73	18"	14"	16"	16 1/4"	14"

* Helical Corrugated Pipe shell.

CONCRETE PILES					
PIPE	EQUIVALENT CONCRETE PILES				
PILE	PRECAST	FLUTED	STEPTAPER	PRESTRESSED	*
10 1/4"	14"	12"	12 1/4"	12"	12 1/4"
12 1/4"	16"	14"	14 1/4"	14"	12 1/4"
14"	18"	16"	16 1/4"	16"	14"



- Splices.** Splices for Steel Piles and Shell Piling shall be in accordance with details shown on this sheet and shall comply with Subsection G1-6 Std. Specs. Precast Concrete Pile splices shall comply with Subarticle G1-7(d)(1). Std. Specifications. Prestressed Concrete Pile splices shall be made in accordance with the manufacturers recommendations, subject to the approval of the Engineer.
- Driving Formula.** Driving Formula shall conform to Subarticle G1-4(d)(3).
- Mill Test Reports.** Steel Piles test reports shall comply with Art. U5-8(c) Standard Specifications. Steel Shells test reports for cast-in-place piles shall comply with Subsection U7-4 Std. Specs.
- Payment.** Payment for all piles shall comply with Subsec. G1-9. Std. Specifications.

5	8-26-64	Revise Entire Gen. Note	J.C.L.	B.E.W.
4	4-8-64	Add Longitudinal Welded Pipe pile	J.C.L.	T.W.O.
3	7-1-61	Revise Choice of Pile note, Sub.	J.C.L.	T.W.O.
2	3-27-61	Revise Pipe Pile General Note	J.C.L.	T.W.O.
1	1-24-61	Remove hole in Prestressed Conc. Pile	J.C.L.	T.W.O.

STATE HIGHWAY COMMISSION OF KANSAS

STANDARD PILE DETAILS

STD. NO. 102

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

SHEET NO.	OF	SCALE	APP'D
DESIGNED		DETAILED	
DESIGN CK		DETAIL CK	