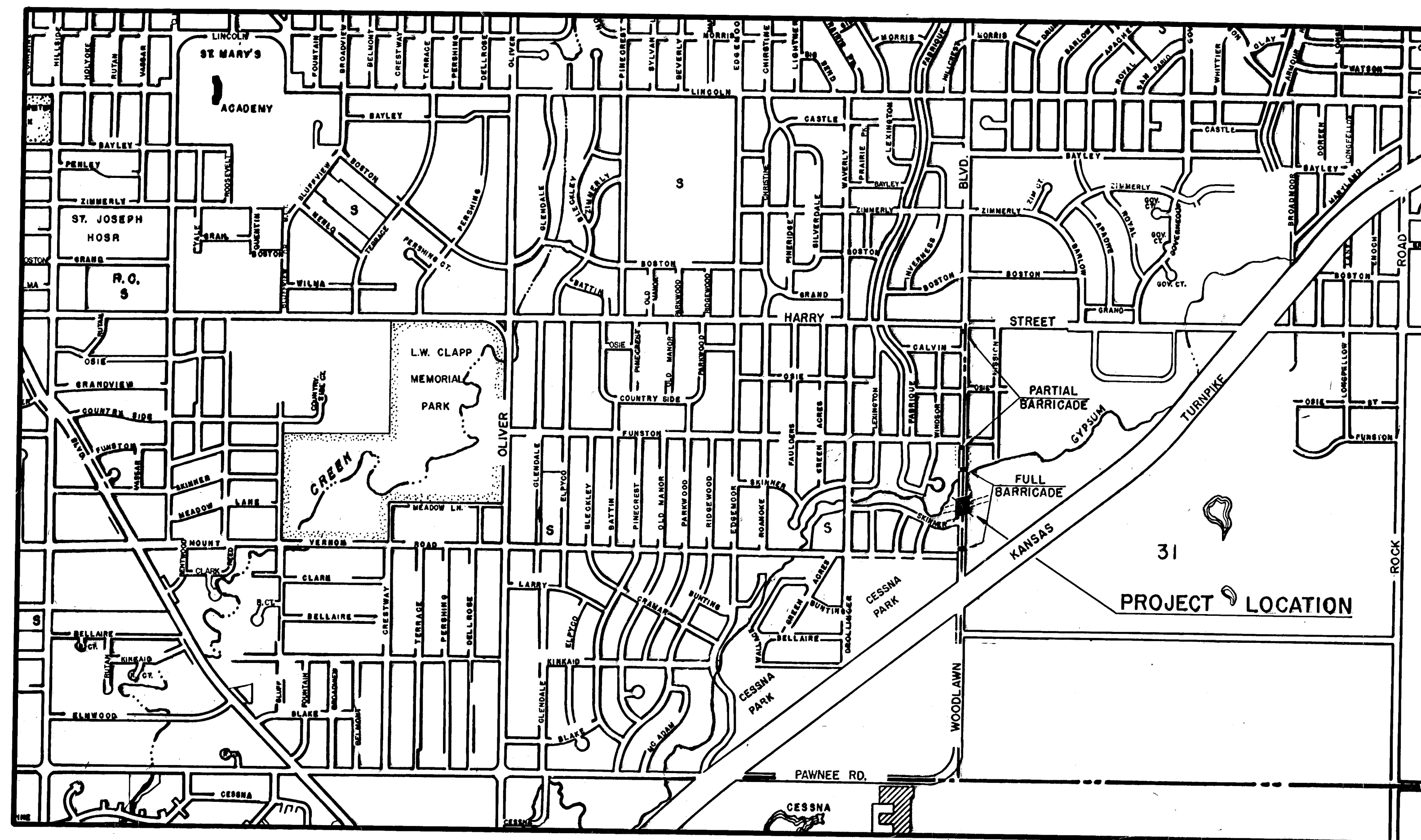


WOODLAWN BRIDGE

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

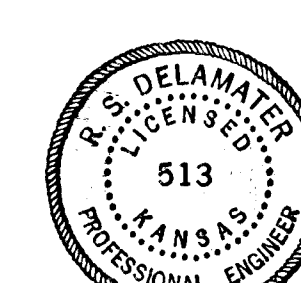
R. S. DELAMATER & ASSOCIATES, WICHITA, CONSULTING ENGINEERS

PROJECT DAKB 571018

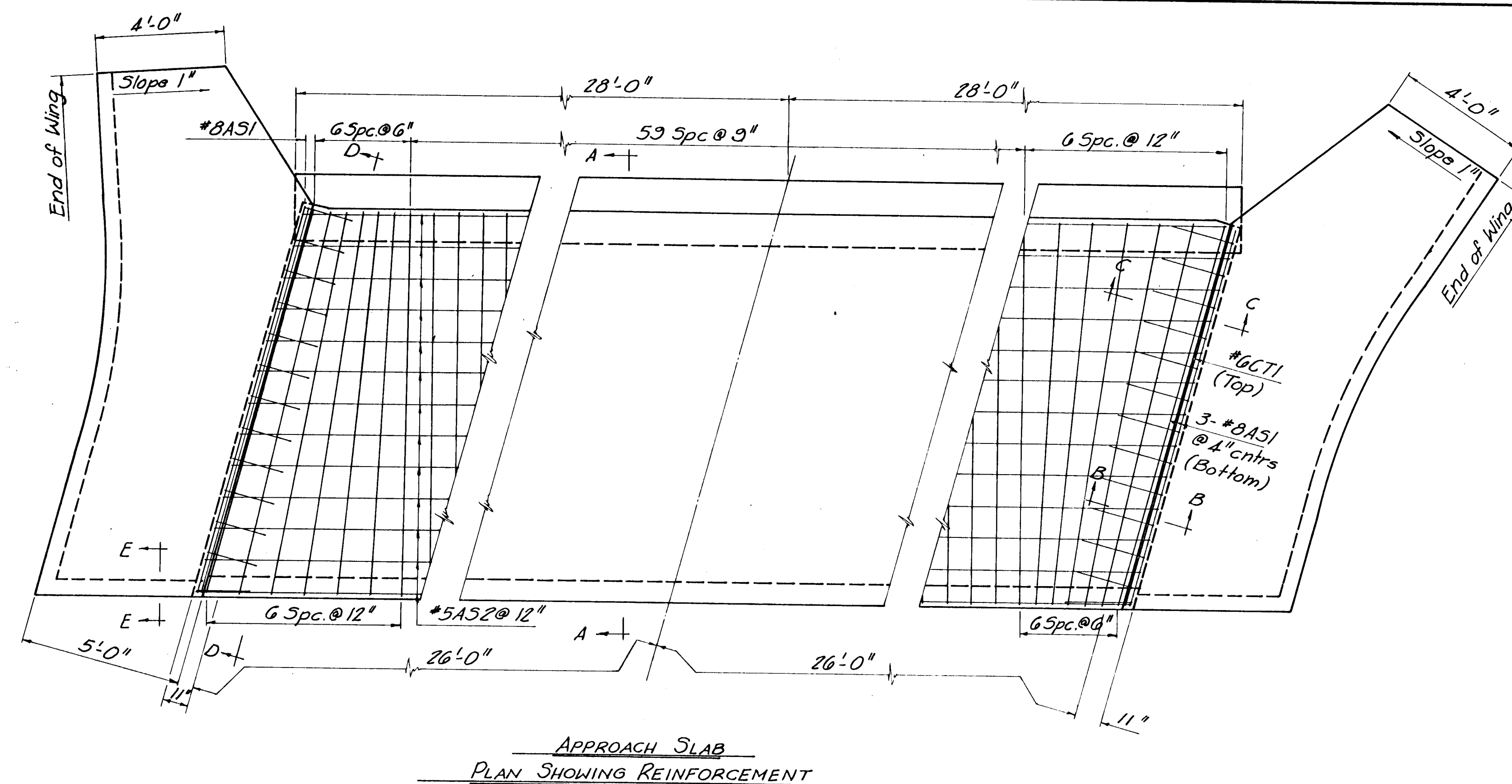
SEPTEMBER, 1971

INDEX OF SHEETS

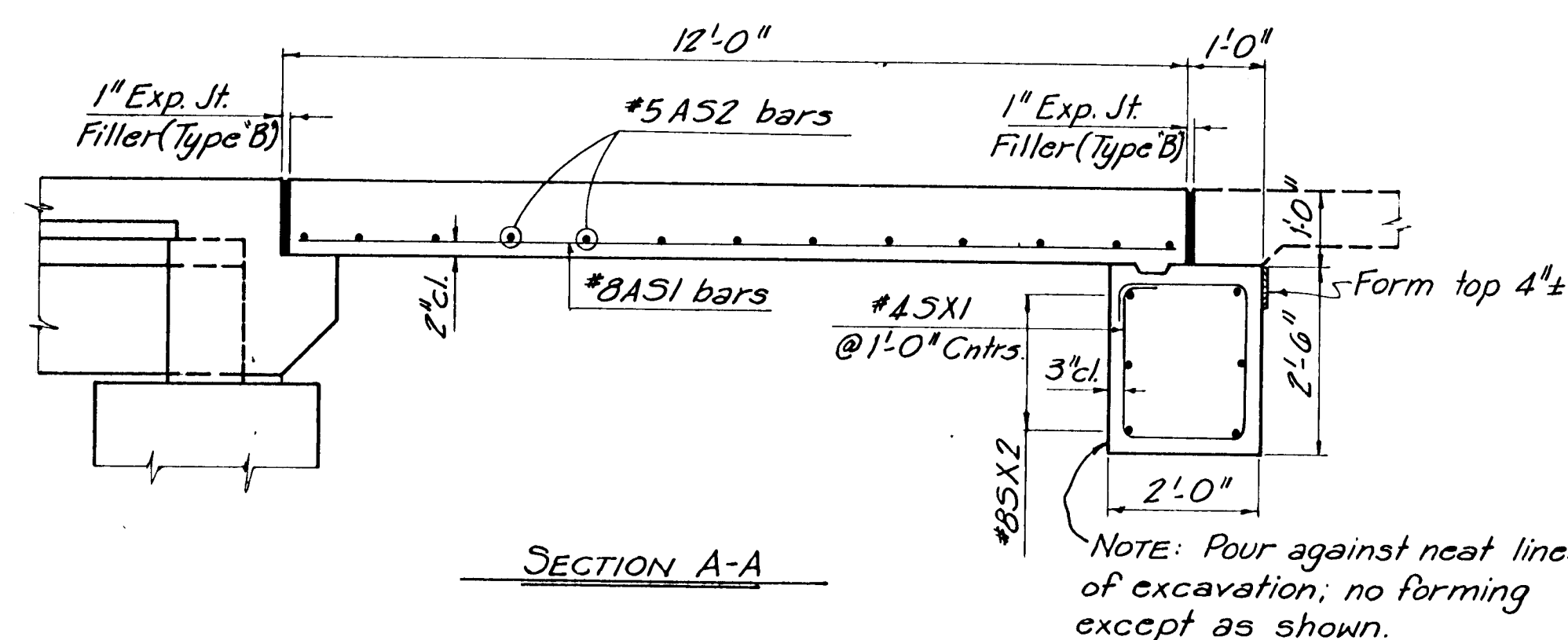
- Sheet No. 1. Title Sheet
2. Contour Map
3. Construction Layout
4. Abutment Details
5. Pier Details
6. Prestressed Beam Details
7. Superstructure Layout
8. Superstructure Details
9. Auxiliary Details
10. Standard Pile Details
11. Approach Slab Details
12. Bar Supports, Bridge Excavation, Handrail Details,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



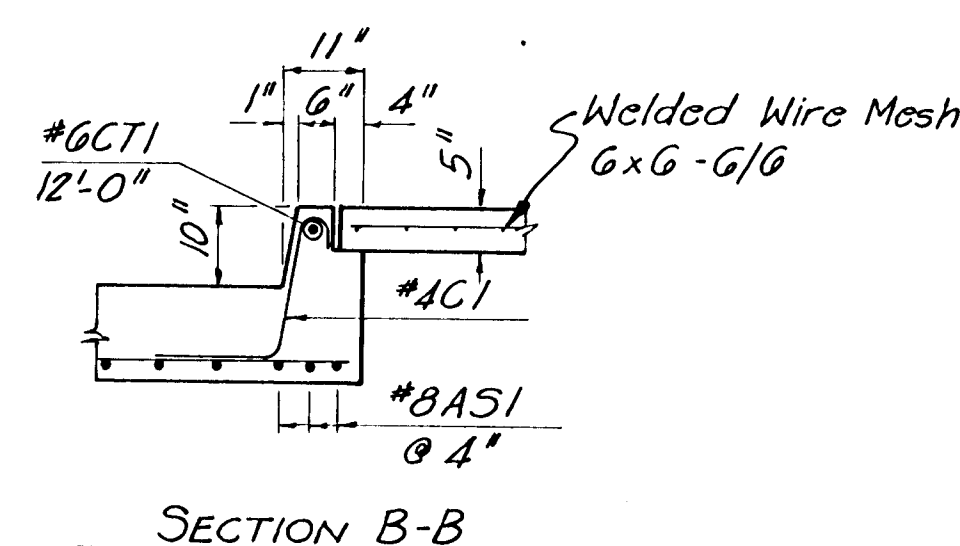
NOTES:
The item "Approach Slab" includes fine grading, and furnishing, forming, placing and finishing all concrete and reinforcing steel required for one approach slab at each end of the bridge, as detailed on this sheet.



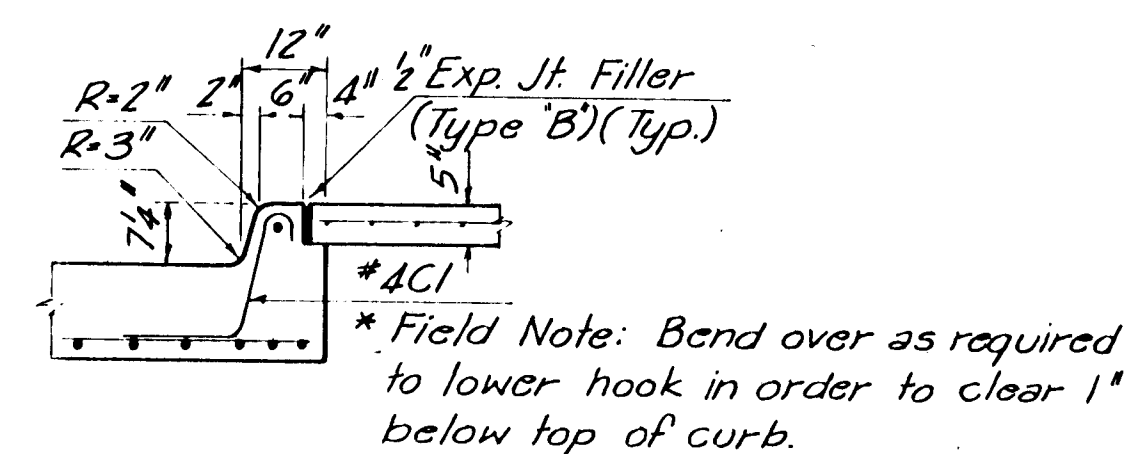
APPROACH SLAB
PLAN SHOWING REINFORCEMENT



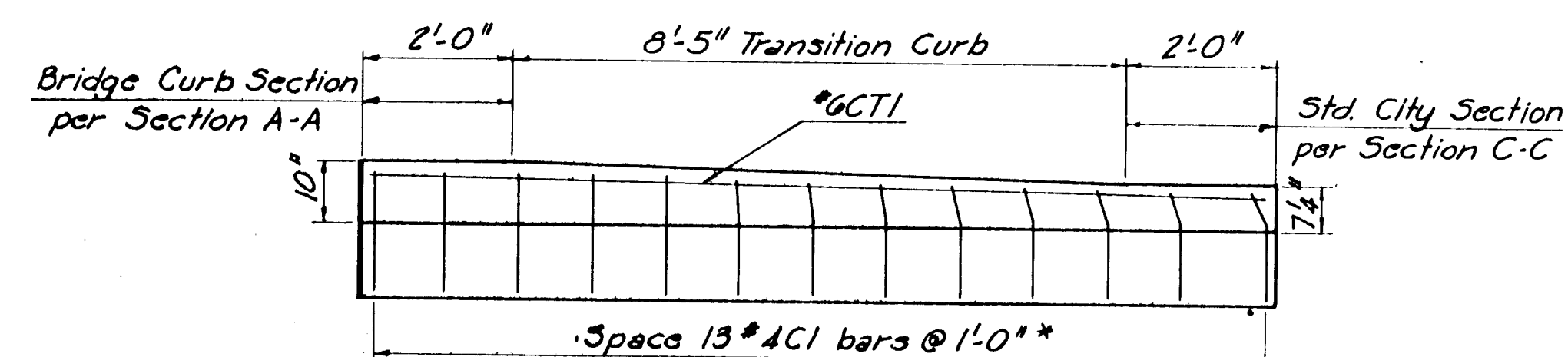
SECTION A-A



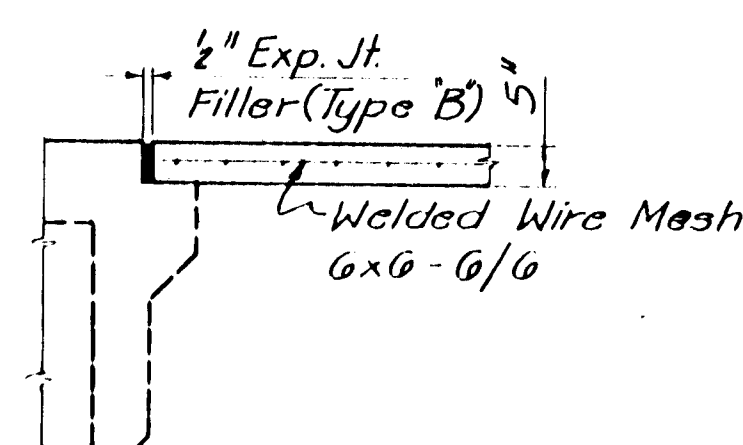
SECTION B-B



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.

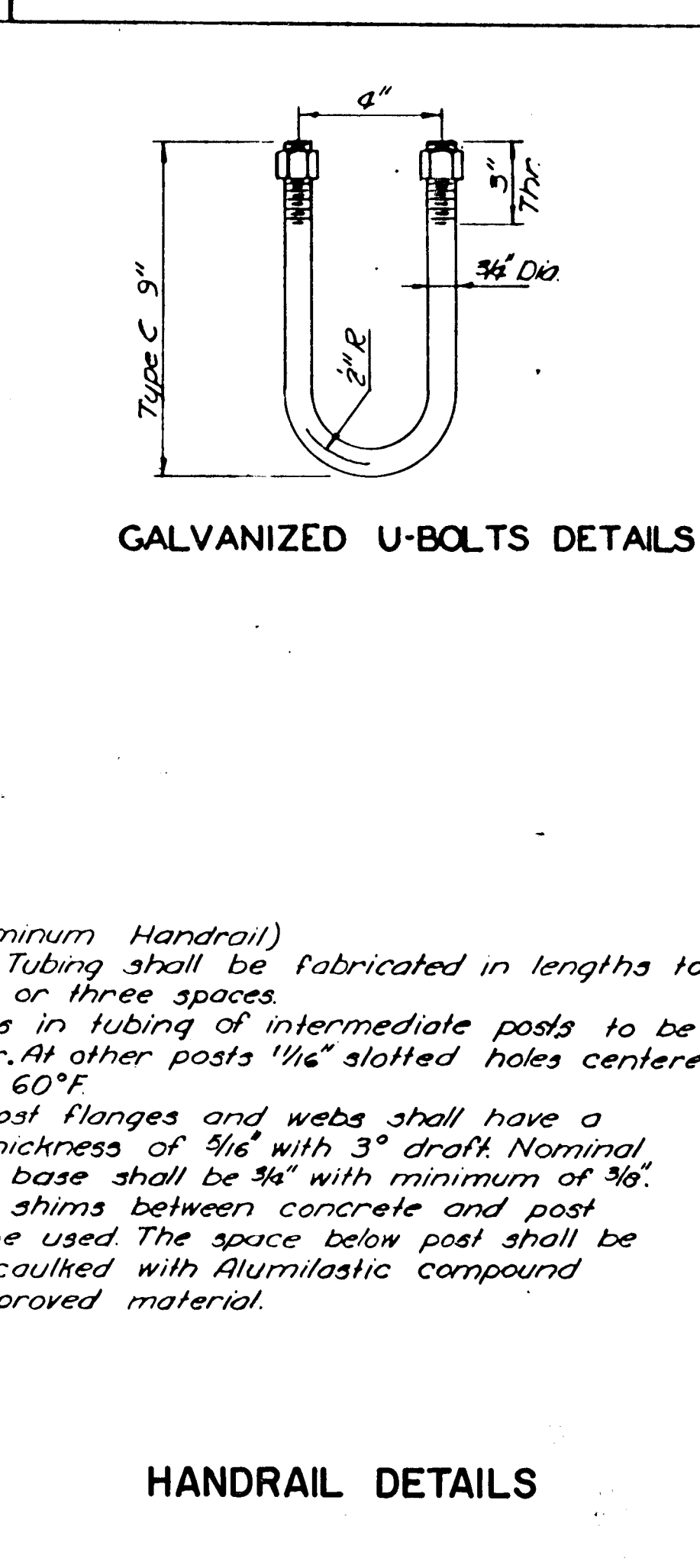
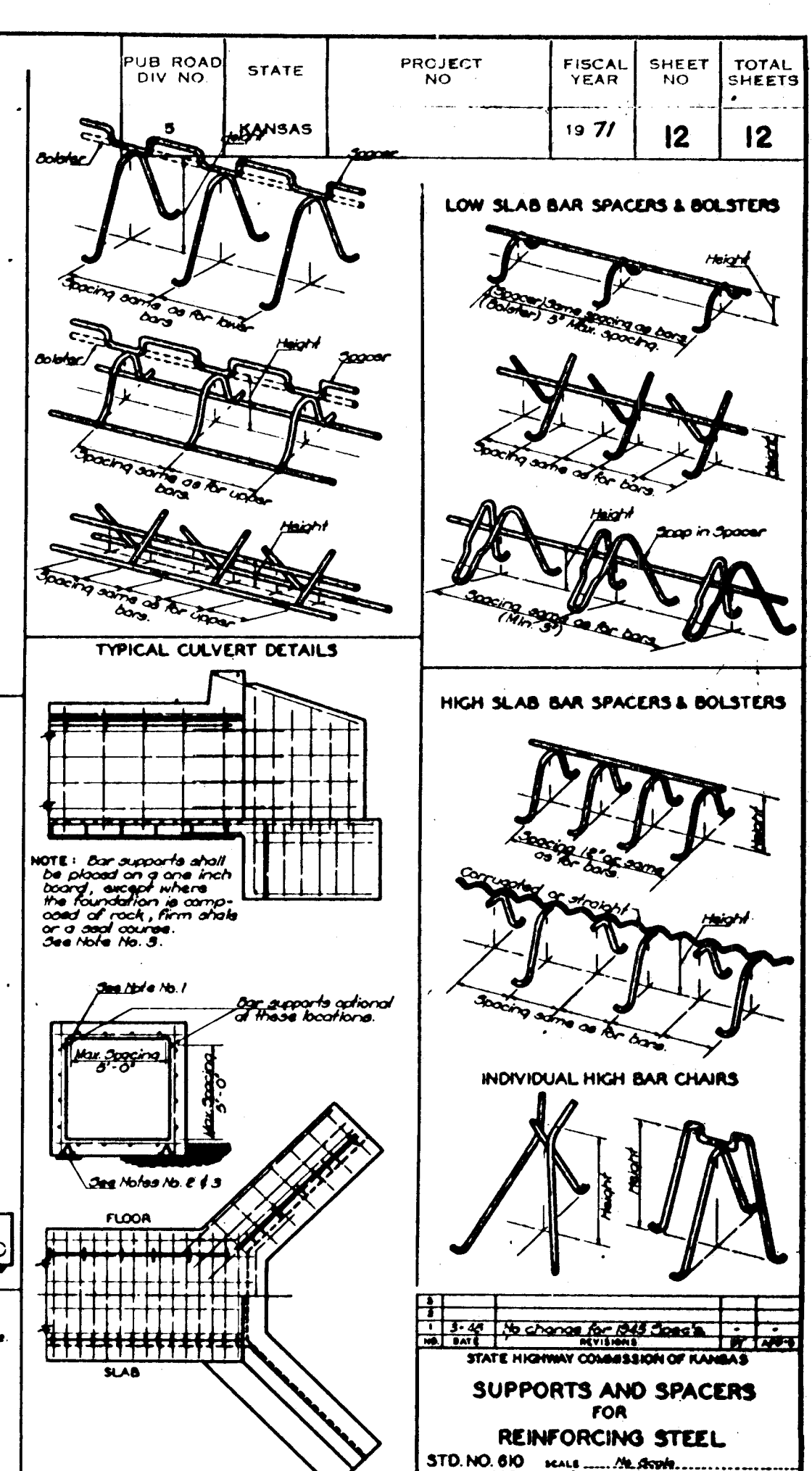
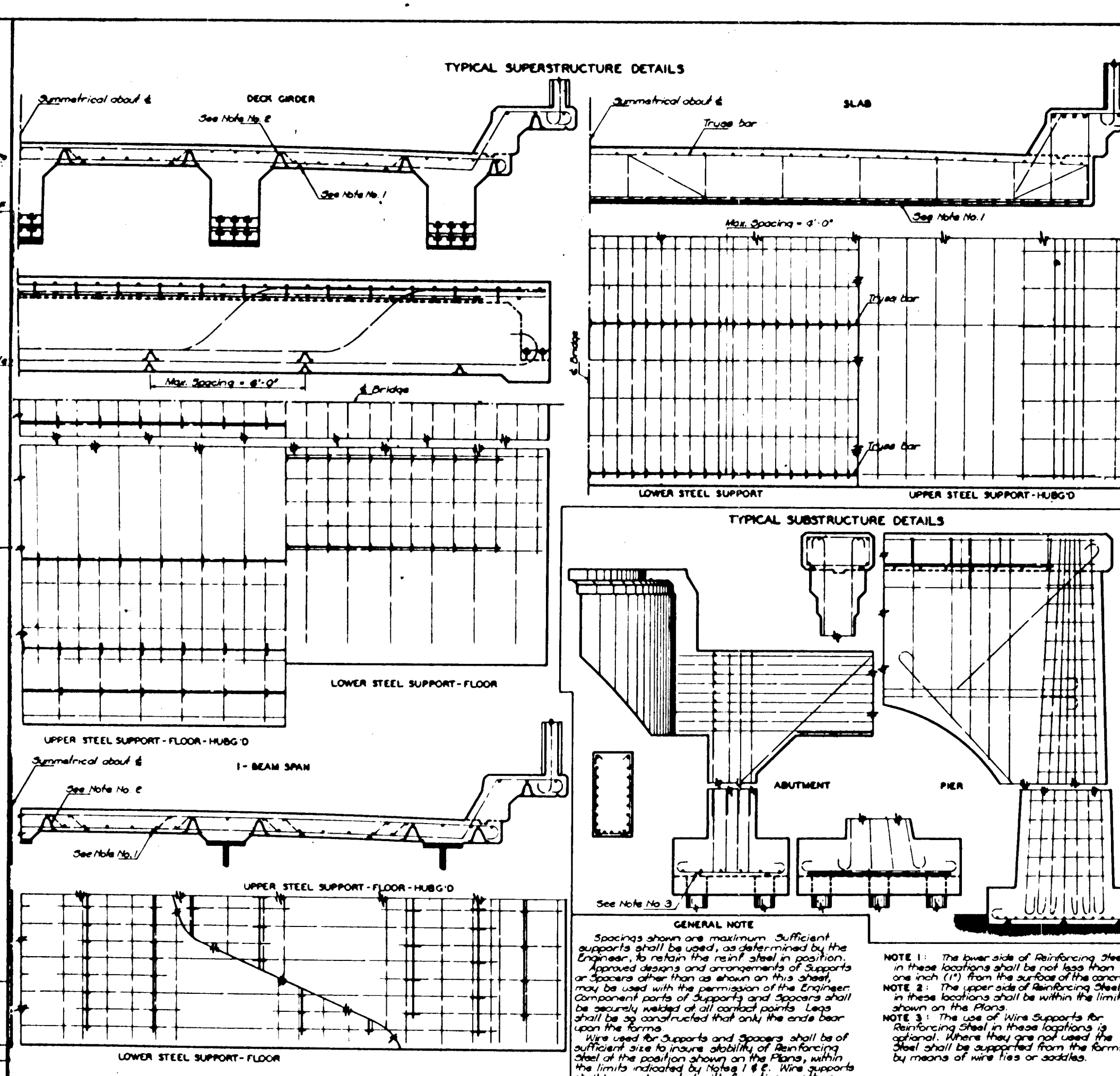
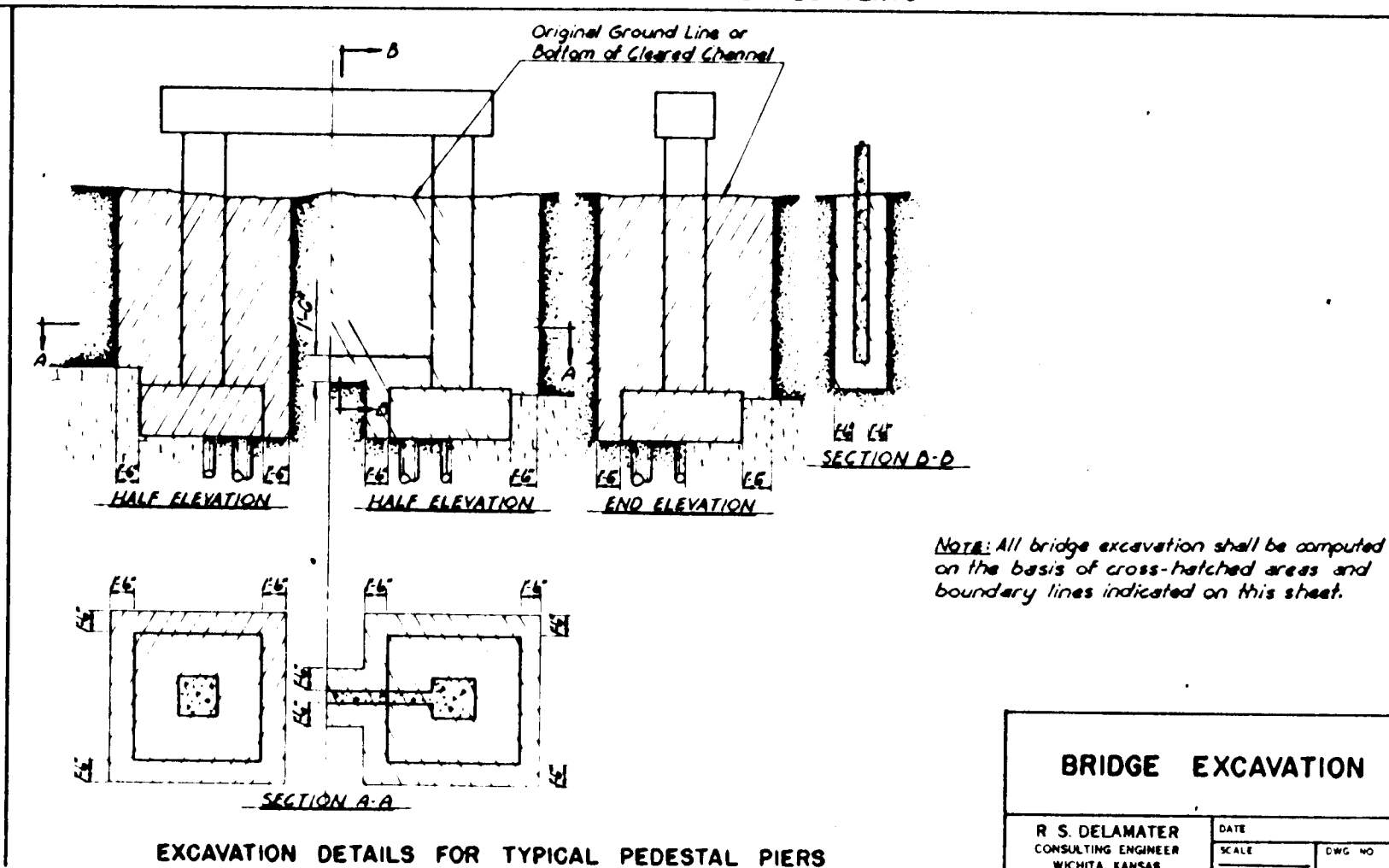
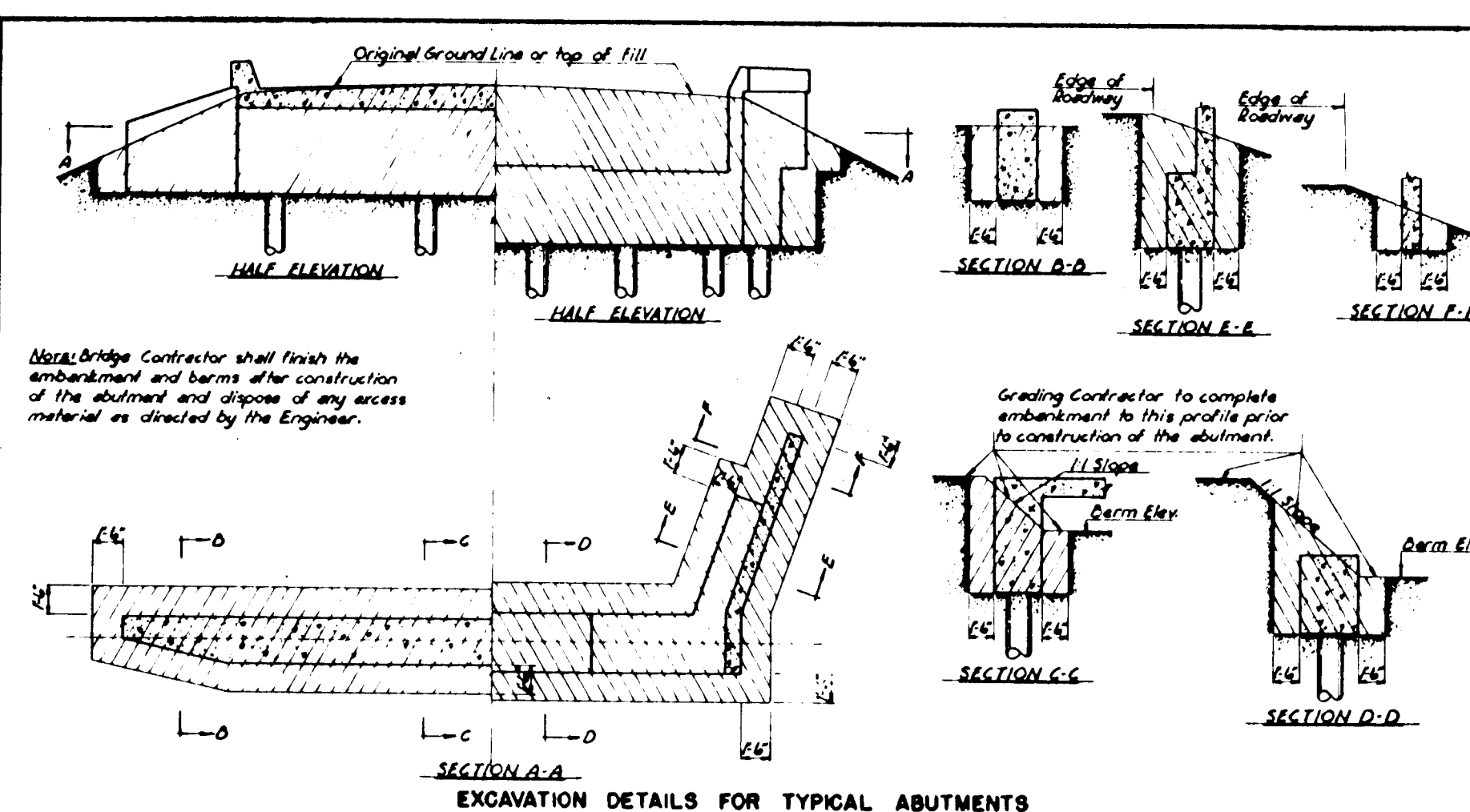
Use Class AAA(AE) Concrete in approach slabs,
including sidewalks.

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

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				
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

SUMMARY OF GRADING QUANTITIES		
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.

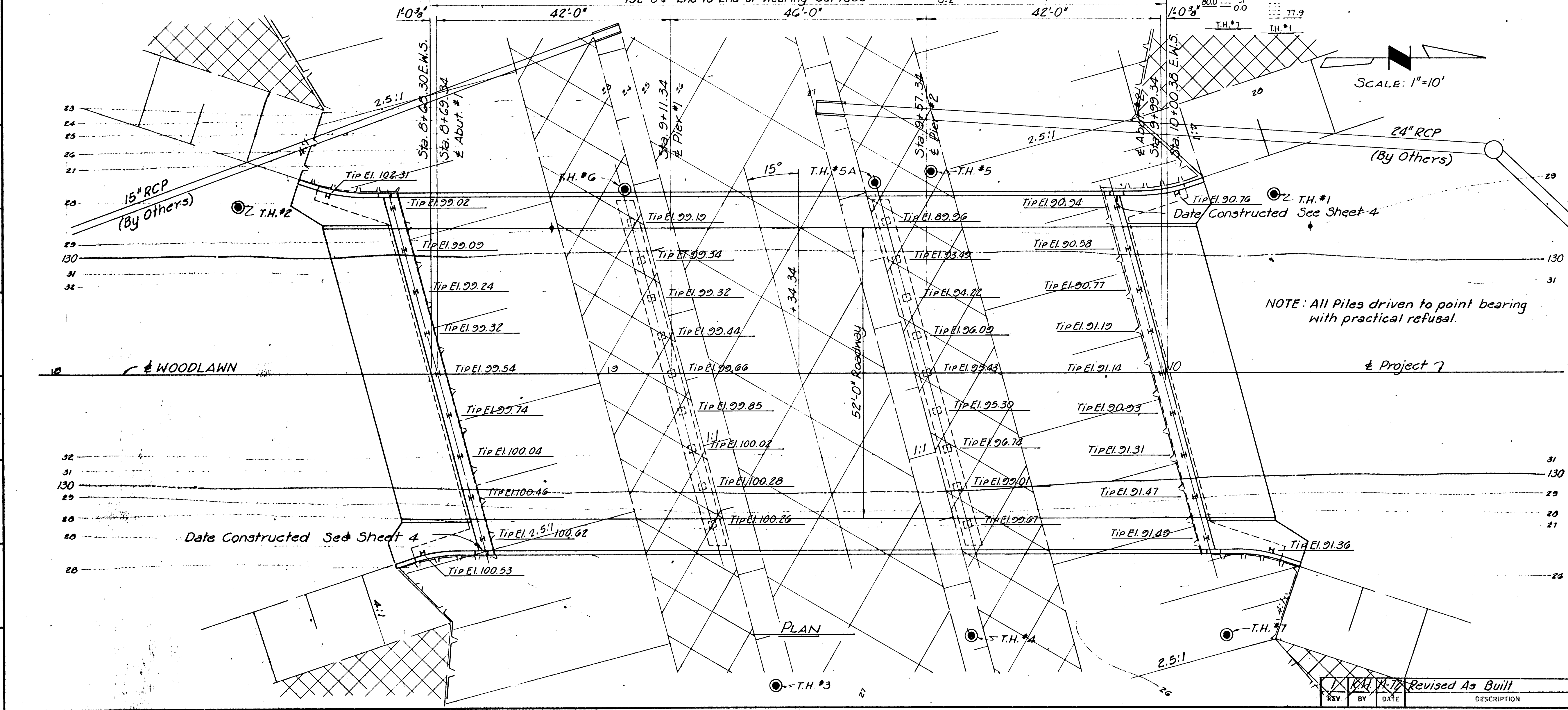
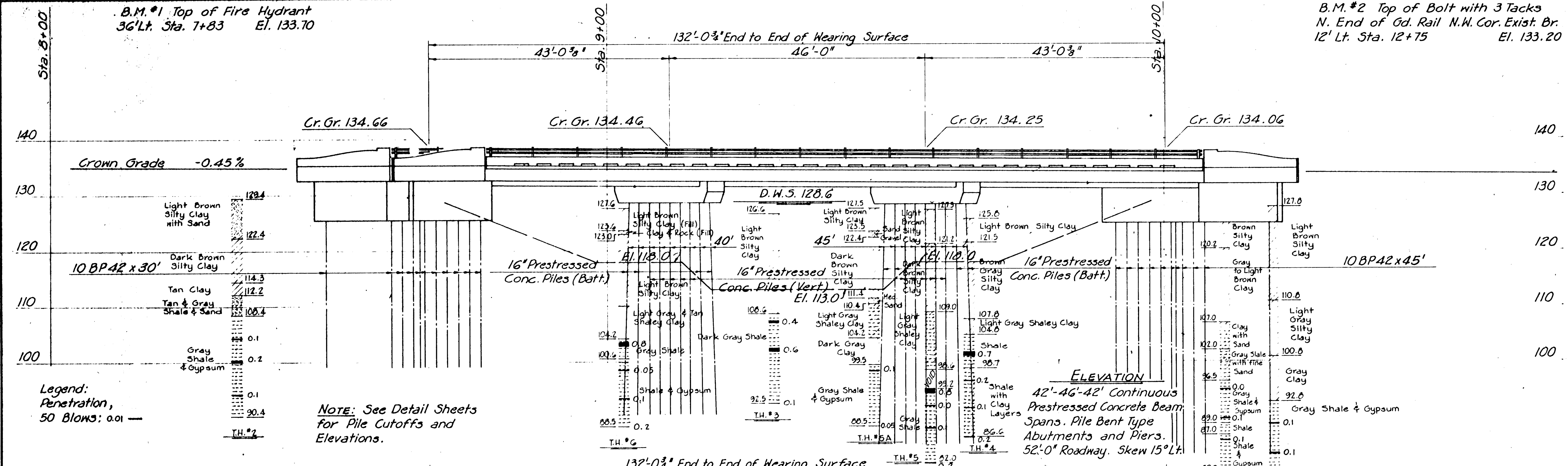
1	K.H.	11-72	Revised As Built	
REV.	BY	DATE	DESCRIPTION	
CITY OF WICHITA, KANSAS				
R. W. LINN, P.E., CITY ENGINEER				
WOODLAWN BRIDGE OVER				
GYPSUM CREEK				
BAR SUPPORTS, BR. EXC., HANDRAIL				
SUMMARY OF QUANTITIES				
R. S. DELAMATER			DATE	SEPTEMBER 1971
CONSULTING ENGINEER			SCALE	DWG. NO.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

REV	1	BY	KH	DATE	11-72	DESCRIPTION	Revised As Built
DATE	SEPTEMBER 1971	SCALE	79-P-4	WICHITA, KANSAS	CONSULTING ENGINEER	R. S. DELAMATER	

ABUTMENT DETAILS

WOODLAWN BRIDGE OVER GYPSUM CREEK

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)

ftc - 3,000 p.s.i., Class A(AE)

fs - 20,000 p.s.i., (Reinf.)

DESIGN LOADING:

HS20-44 A.A.S.H.O.

Spec. (1969 Edition)

See Sheet 9 for Bar List and Bending Diagrams.

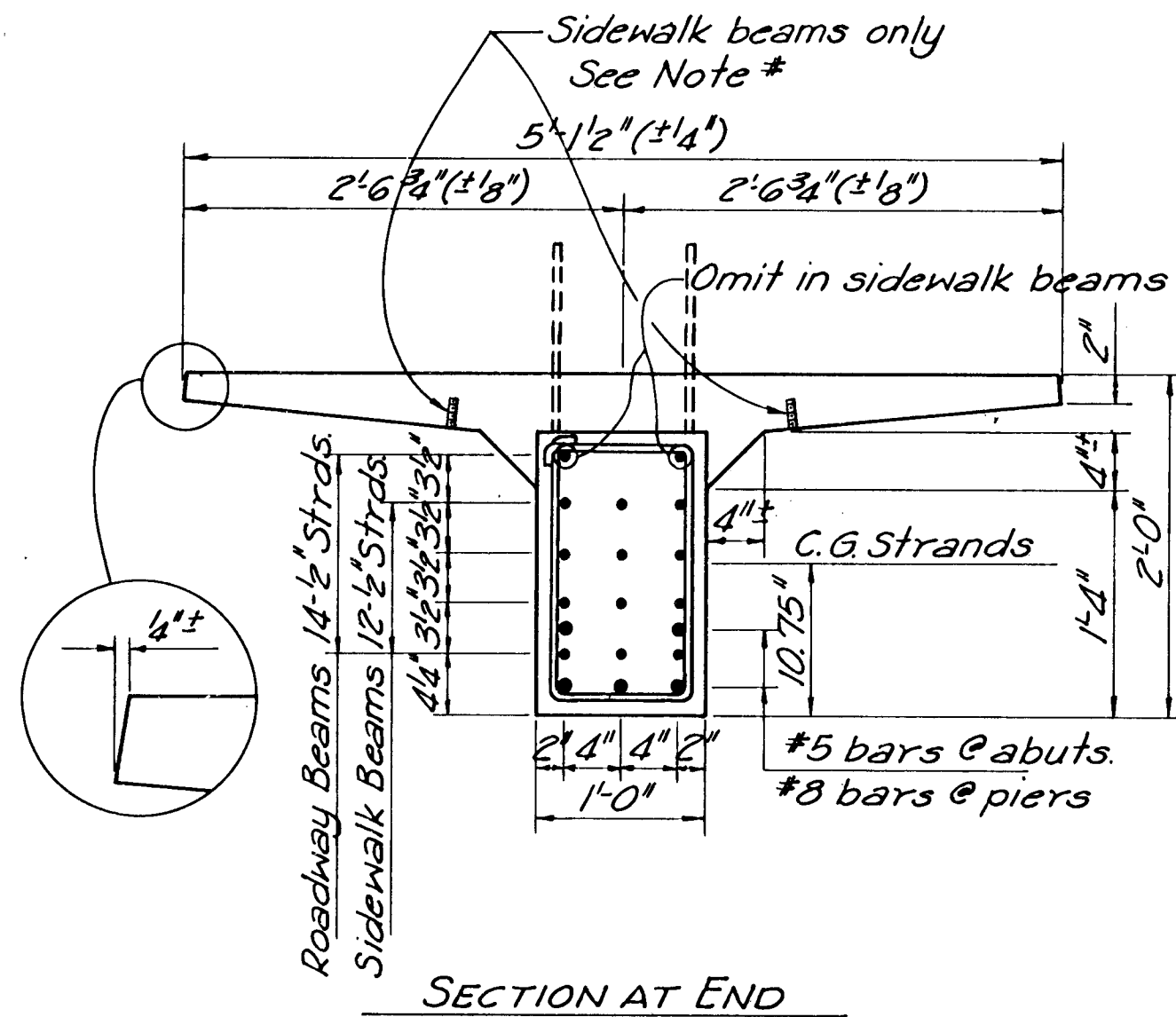
Abutment piles shall be 10 #42 Steel Piles as indicated on Sheet 3 and detailed on Sheet 10.

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

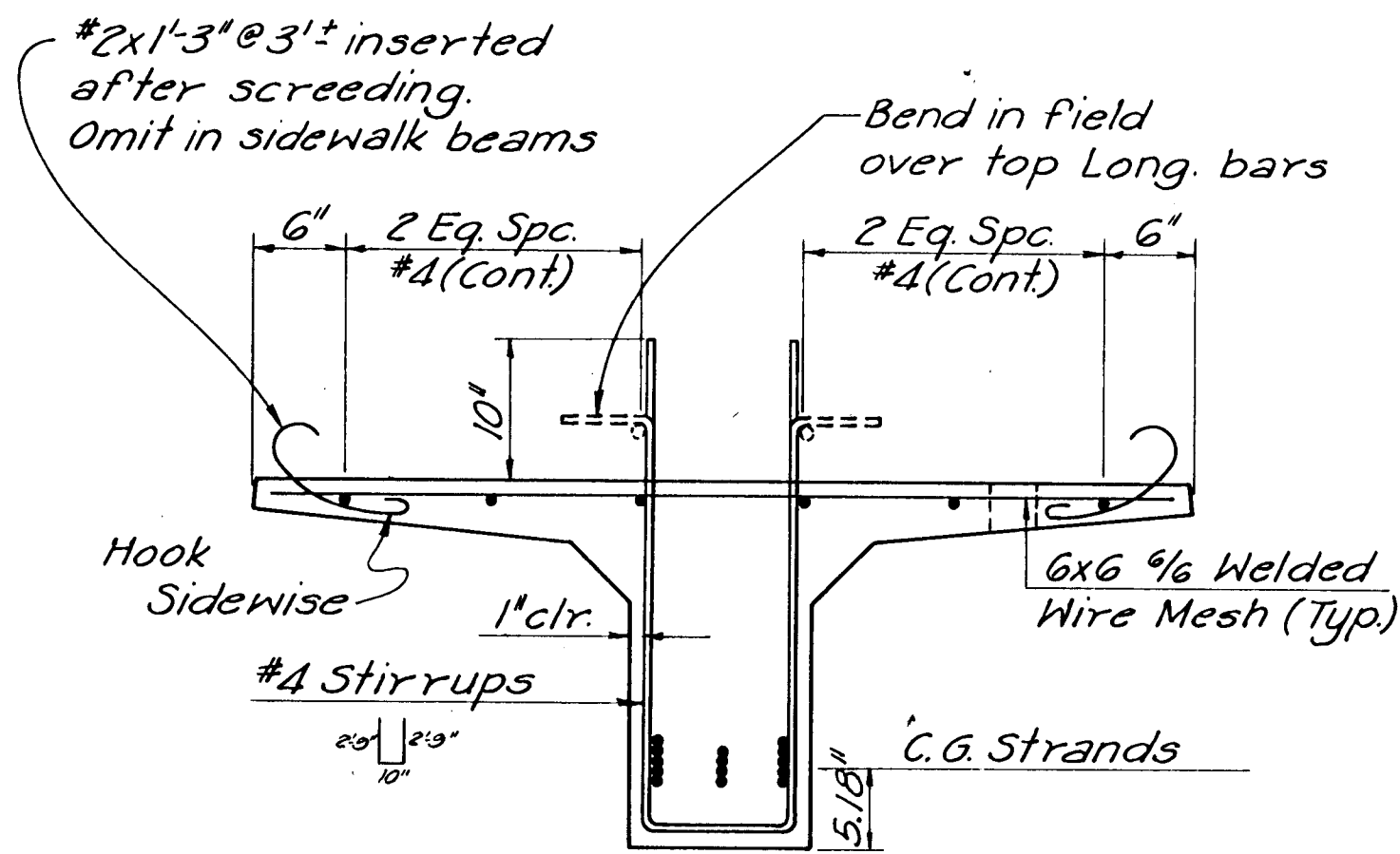
All concrete shall be Class A(AE). Reveal all exposed edges with a 3/4" triangular molding unless otherwise indicated.

NOTES:
 All concrete shall be Class A(AE). Reveal 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.
 Abutment piles shall be 10 #42 Steel 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:
 fc - 1,200 p.s.i., Class A(AE)
 ftc - 3,000 p.s.i., Class A(AE)
 fs - 20,000 p.s.i., (Reinf.)
 DESIGN PILE LOADING: 45 Tons per Pile - Abuts.

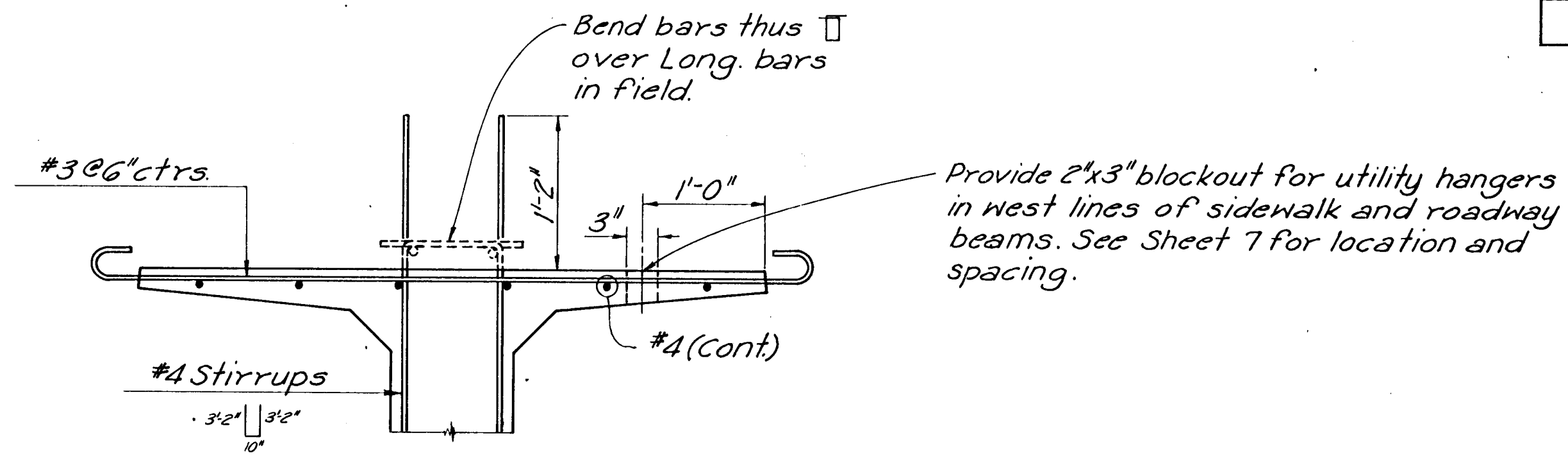
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	KANSAS		1971	6	12



SECTION AT END

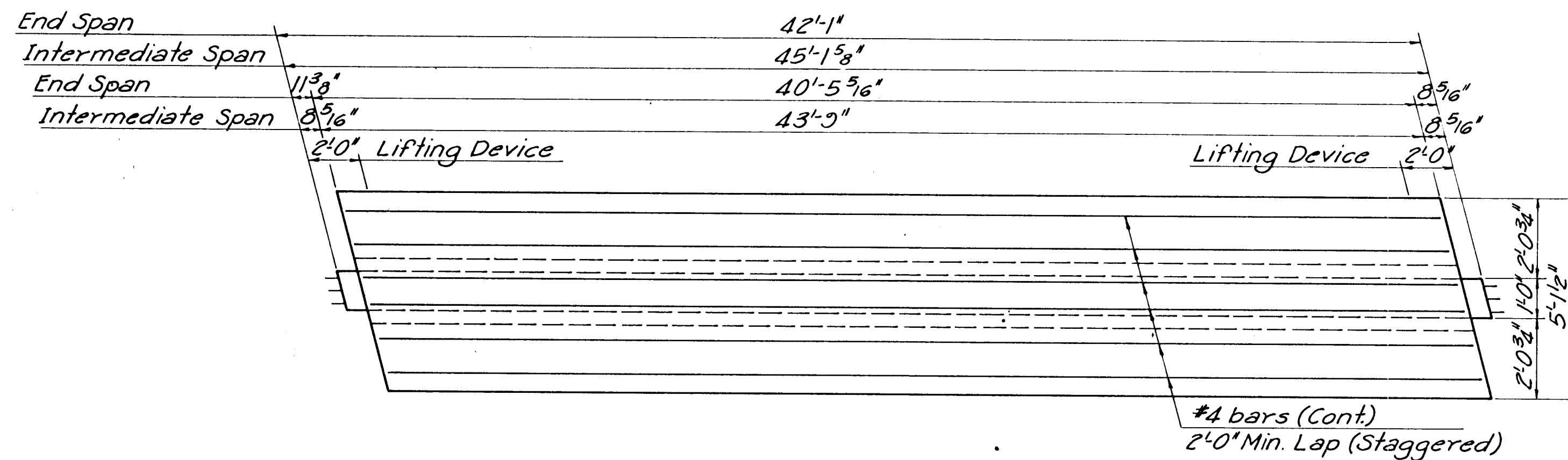


SECTION AT MID-SPAN

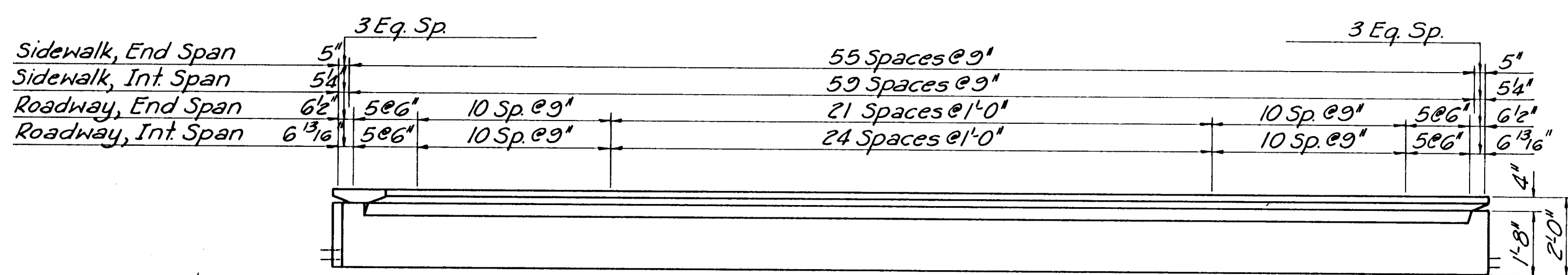


PART SECTION
(Sidewalk Beam Only)

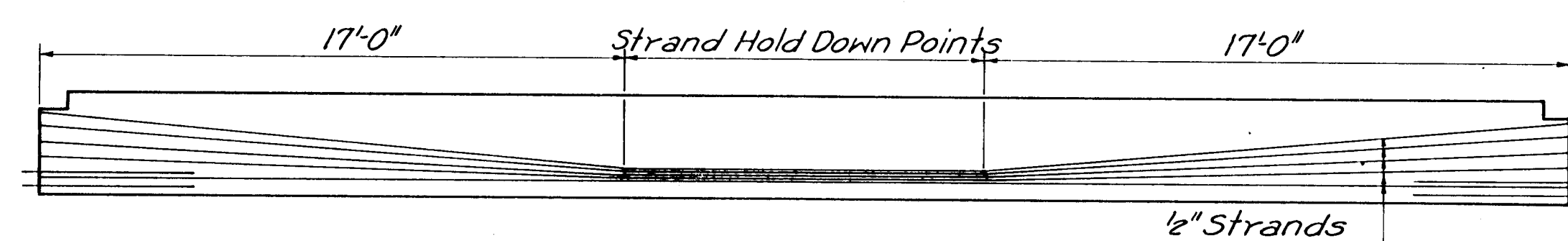
NOTE: At Contractors option,
threaded inserts or drilled
holes for forms, where needed.



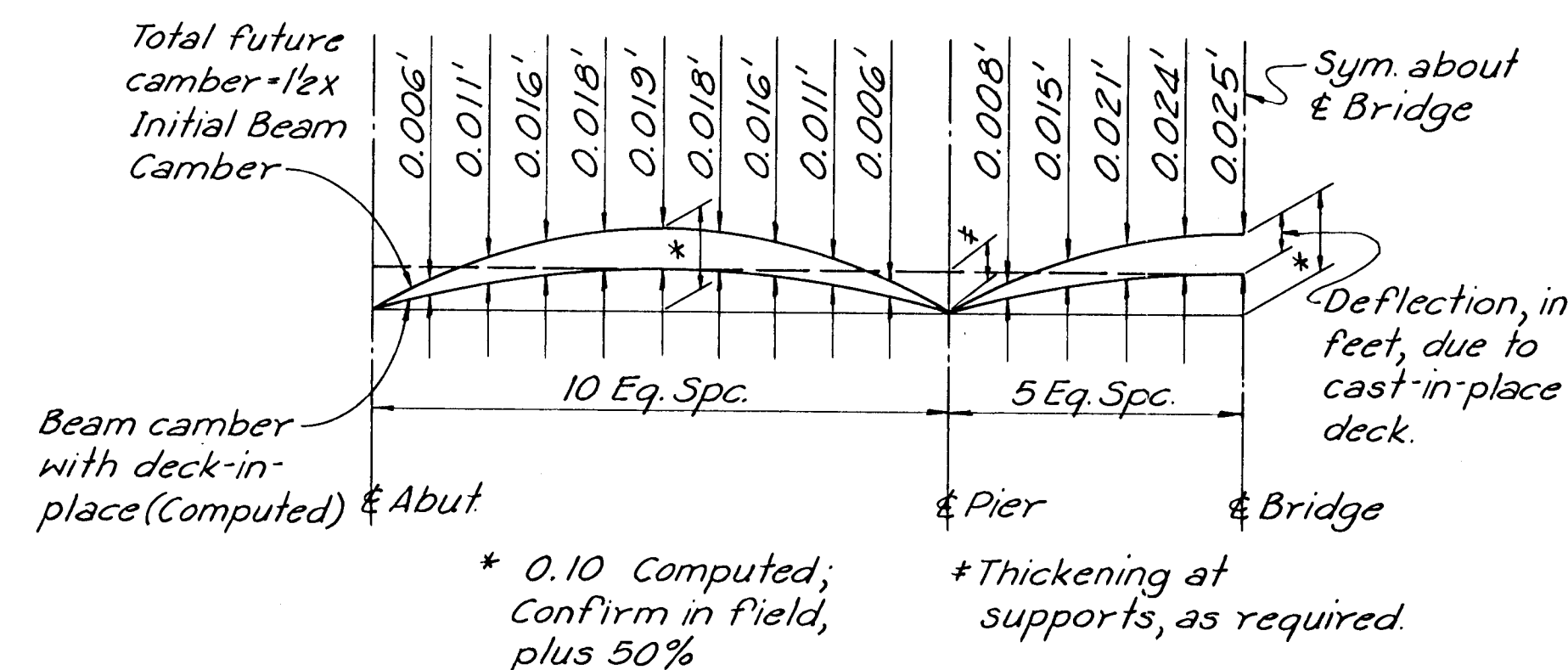
PLAN



ELEVATION

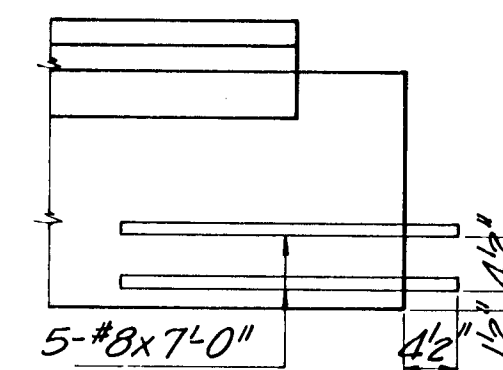


LONGITUDINAL SECTION THRU BEAM

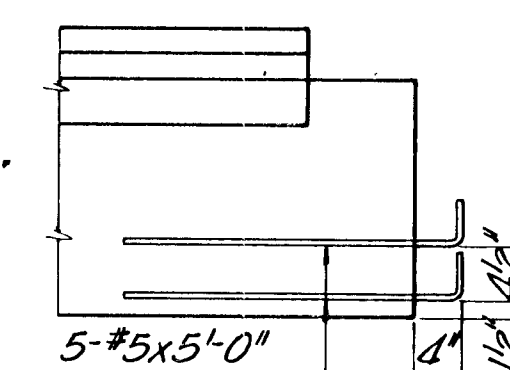


DEADLOAD DEFLECTION DIAGRAM

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:
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	= 29,910 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

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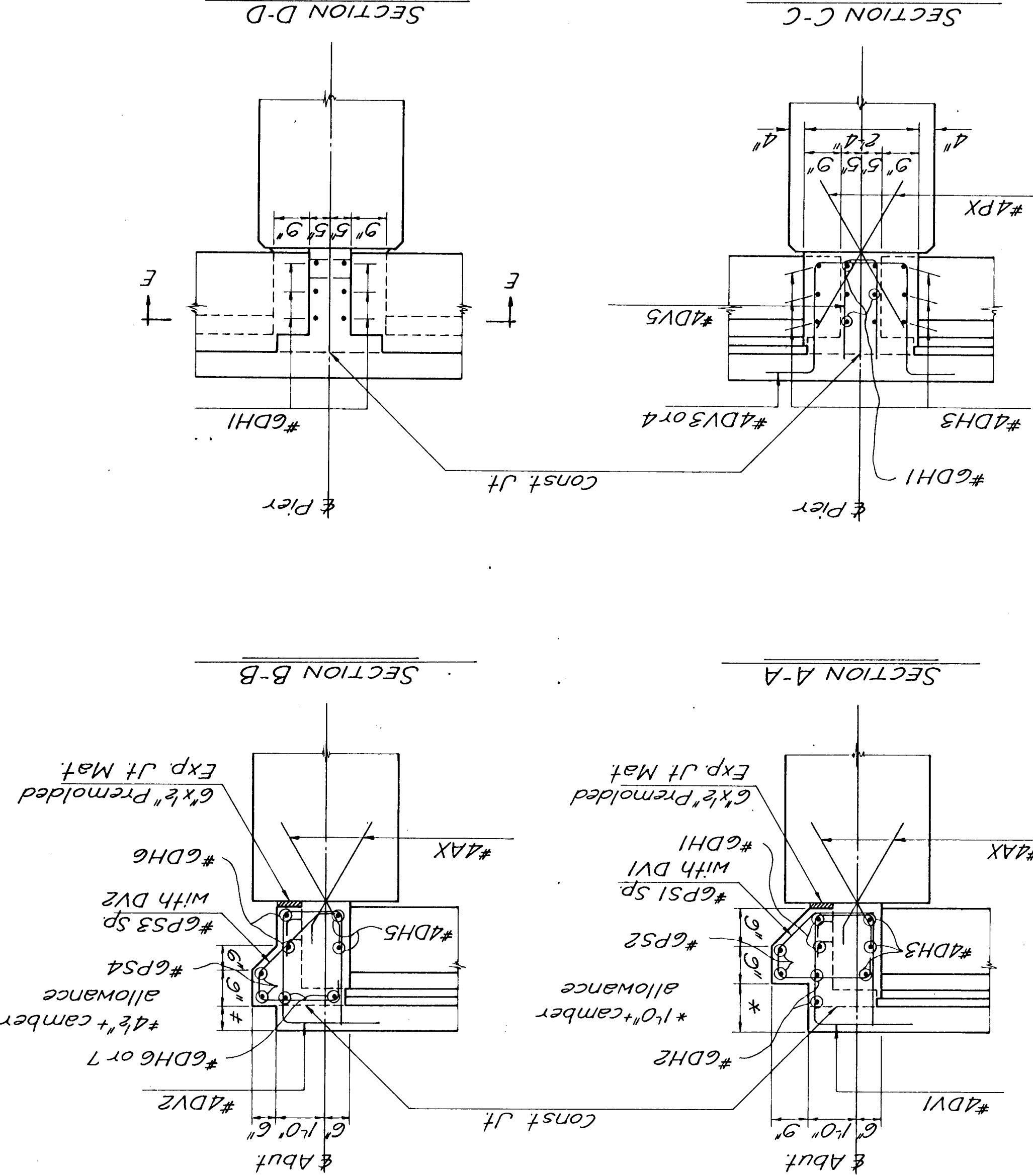
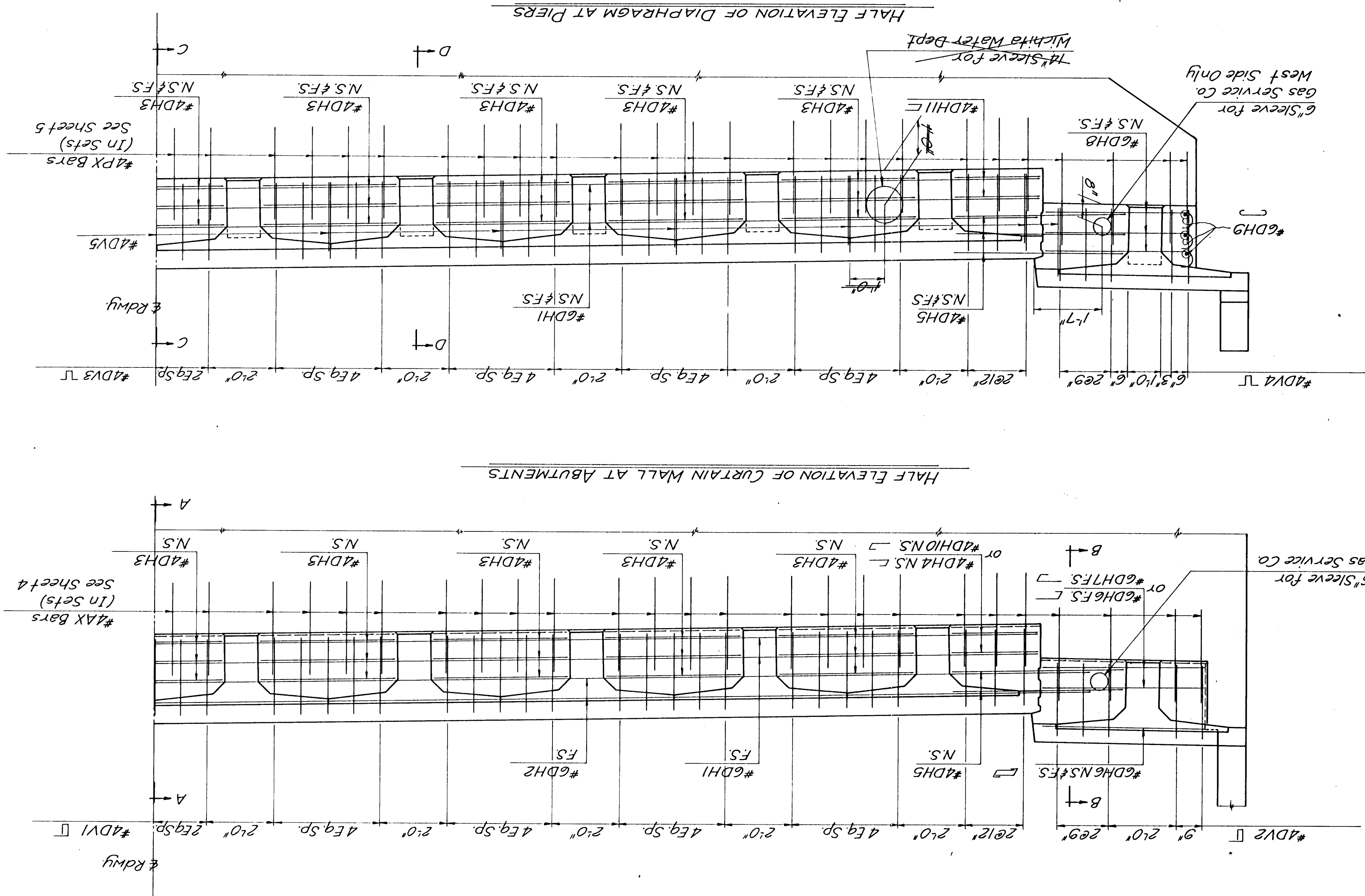
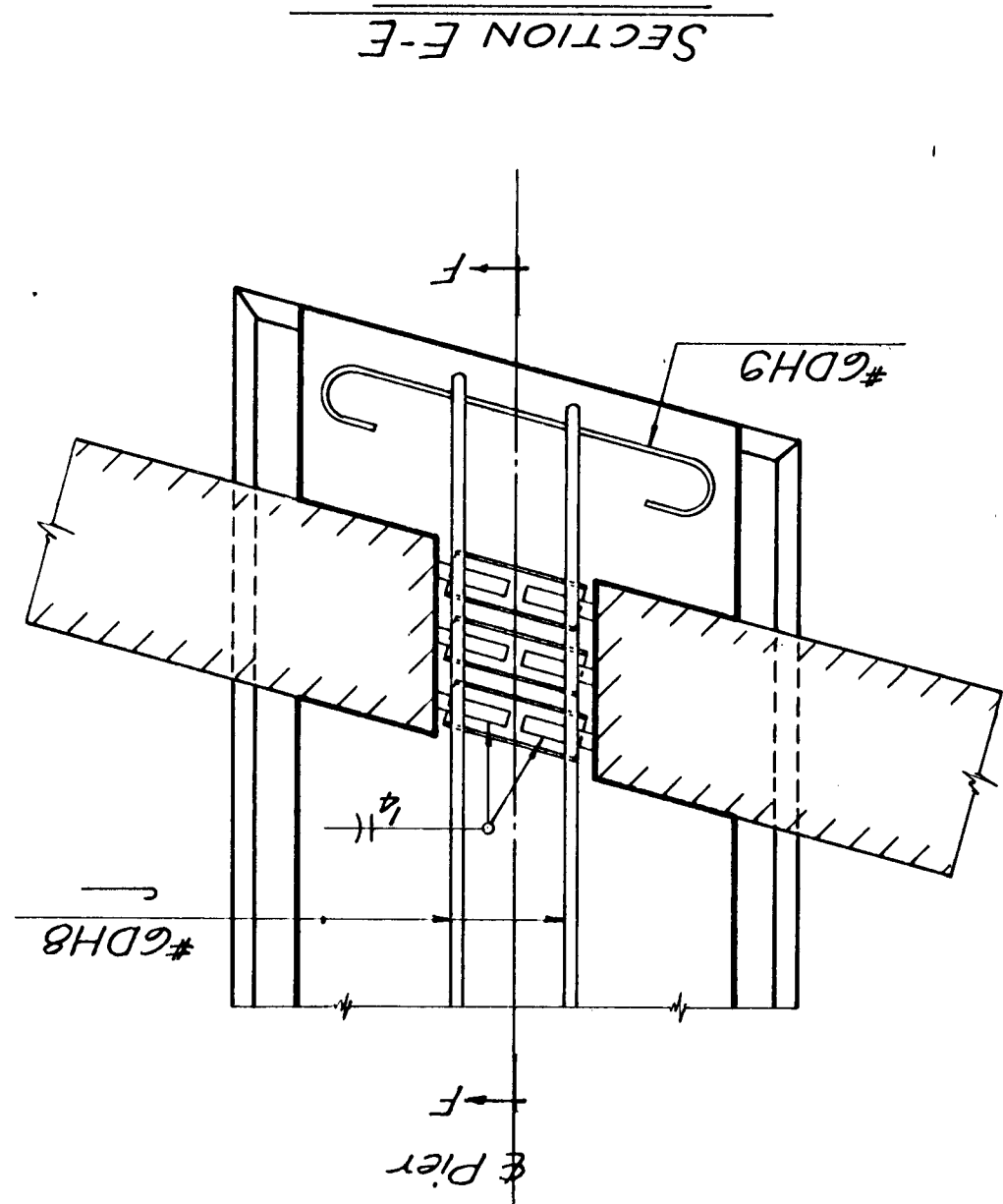
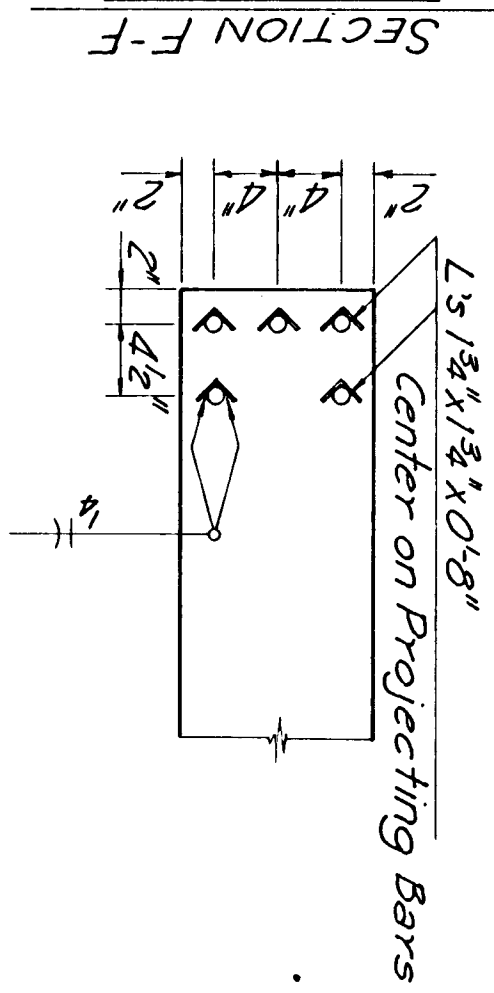
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	KANSAS		19 71	8	12

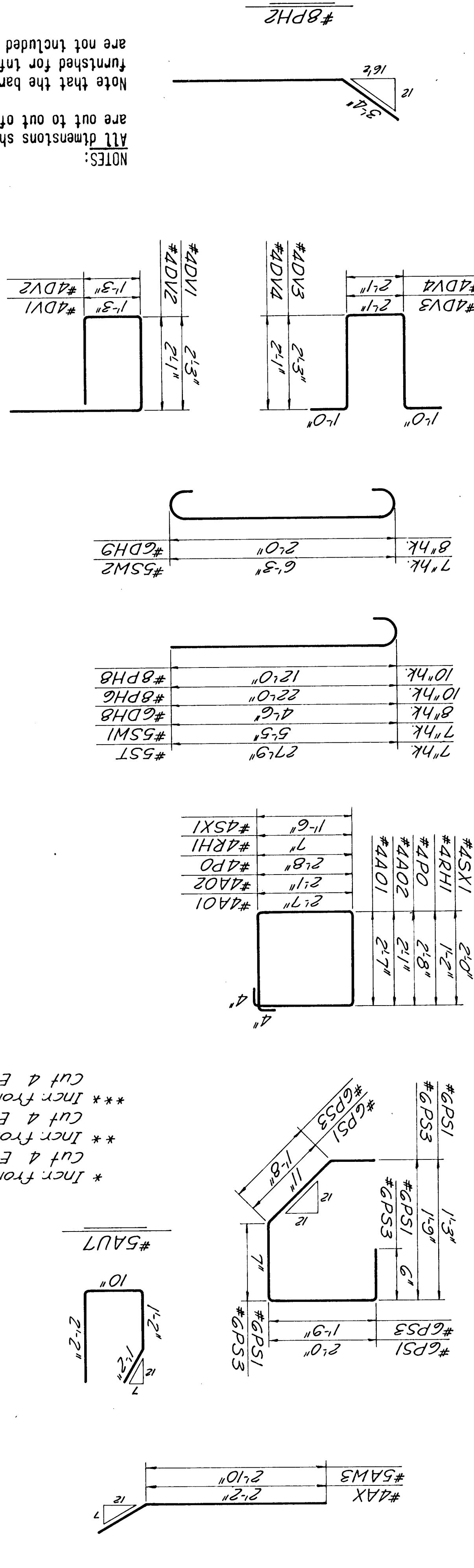
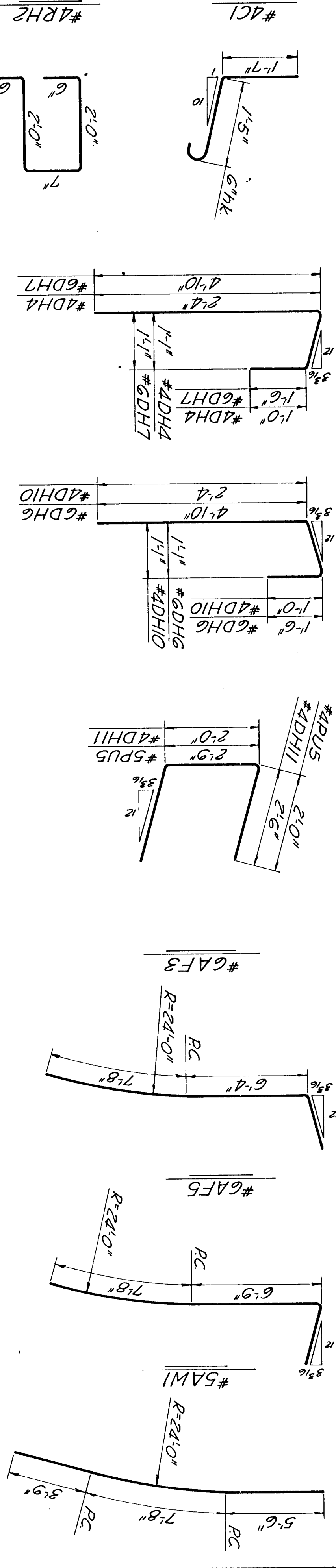
[illegible]

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.



[illegible]

NOTE:
All dimensions shown in the bending diagrams are out to out of bars unless otherwise noted.
Note that the bar list for Approach Slab is furnished for information only; bar quantities are not included in Reinforcing Steel pay item.

THE CONTRACTOR SHALL REMOVE THE EXISTING STRUCTURE, CONSISTING OF THREE SPAN STEEL BEAM BRIDGE, ON EXISTING WOOD PILE ABUTMENTS, WITH LATERAL-TIMBER DECK, SALVAGE TO BECOME THE PROPERTY OF THE CONTRACTOR, TO BE REMOVED FROM THE JOB.

THE CONTRACTOR SHALL CONSTRUCT THE EMBANKMENTS. THE CONTRACTOR SHALL CONSTRUCT THE EMBANKMENTS AND THE ABUTMENTS AS SHOWN ON SHEET NO. 3 AND ON THE CONTOUR MAP PRIOR TO THE CONSTRUCTION OF THE BRIDGE.

BRIDGE EXCAVATION. All bridge excavation shall be Class III. See Sheet 12 for limits of pay excavation.

SOUNDINGS. Sounding information shown on Sheet 3 is as obtained from borings made in the field, by Engineering Testing Company, and represents the best information available to the City of Wichita.

PILES. Piles shall be 16" prestressed concrete in piers and 10" steel piles in abutments, as described and detailed on Sheet 10. Piles shall be driven to the penetration shown unless in the opinion of the Engineer such penetration cannot be assured without injury to the pile. All piles shall be driven to a minimum computed bearing value of 45 tons per pile in abutments. 55 tons per pile in piers.

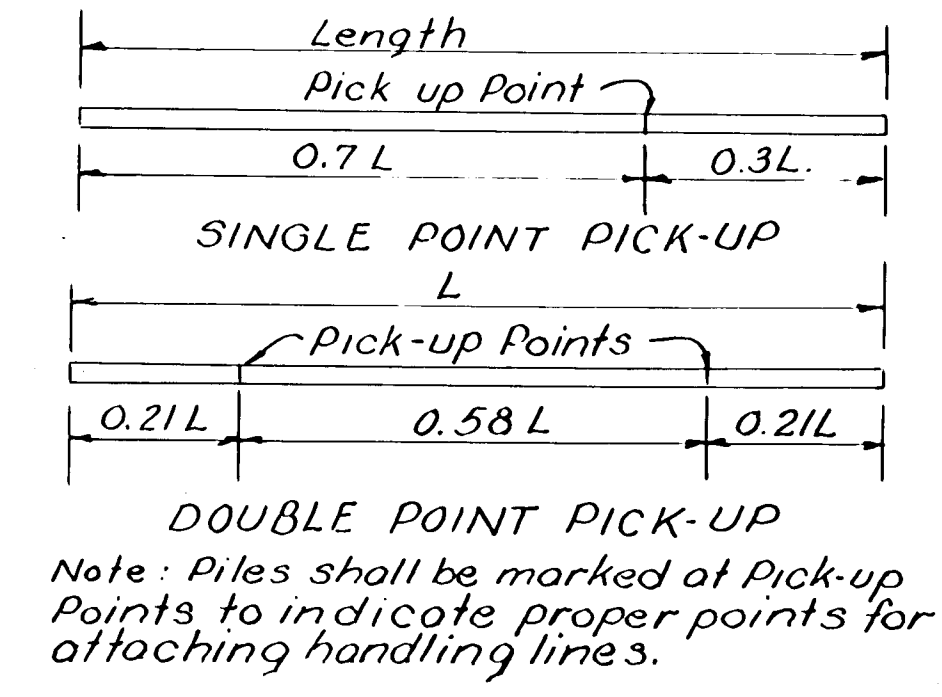
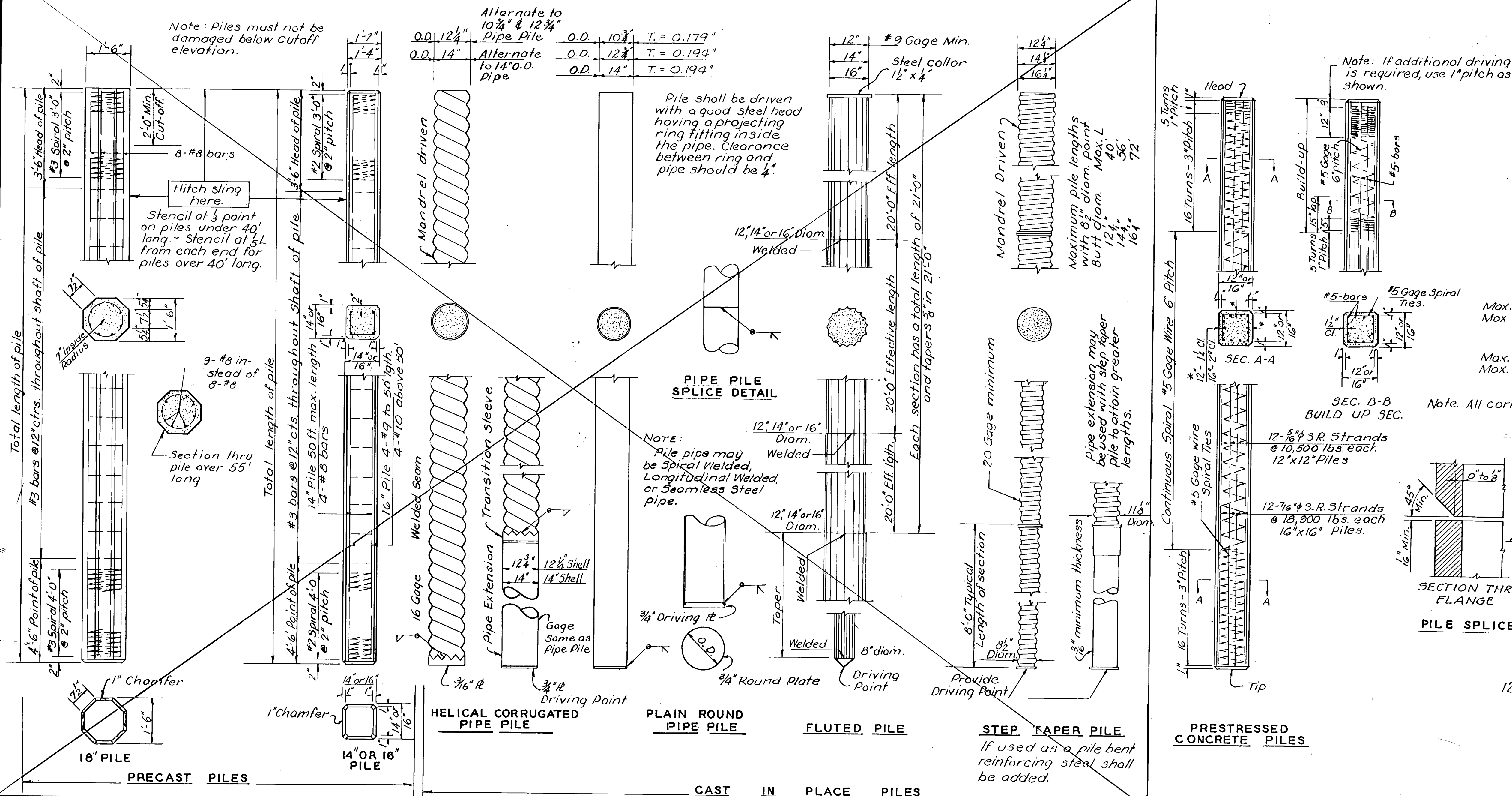
PILE DRIVING. All piles shall be driven with a steam or diesel hammer, if a diesel hammer is used, sufficient hammer data shall be provided to permit rating by the CONCRETE. Class A(FC) concrete shall be used in abutments and piers, except for prestressed piles. Class A(AC) concrete shall be used in diaphragms, except for including curbs and diaphragms, except for precast beams. Bevel all exposed edges with a 3/4" triangular molding unless otherwise noted.

GENERAL NOTES:

2'-0"	#4U5	2'-8"	#4U1
1'-3"	#4PU4	2'-8"	#4U2
***	#4PU3	2'-8"	#4U3
1'-9"	#4PU2	*	#4U4
2'-6"	#4PU1	2'-2"	#4U5
1'-4"	#4U9	2'-2"	#4U6
6'-6"	#4U8	4'-8"	#4U7
1'-4"	#4U6	4'-8"	#4U8
6'-6"	#4U5	4'-8"	#4U9
1'-4"	#4U4	4'-8"	#4PU1
6'-6"	#4U3	2'-9"	#4PU2
2'-4"	#4U2	2'-9"	#4PU3
5'-6"	#4U1	2'-9"	#4PU4
		9"	#4DV5

* Incr from 2.4" to 4.6" by 3.4" Cut 4 Ea. Lgth.
* Incr from 2.4" to 4.6" by 3.4" Cut 4 Ea. Lgth.
* Incr from 2.4" to 4.6" by 3.4" Cut 4 Ea. Lgth.
*** Incr from 1.7 1/2" to 3.6" by 2.6" Cut 4 Ea. Lgth.

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

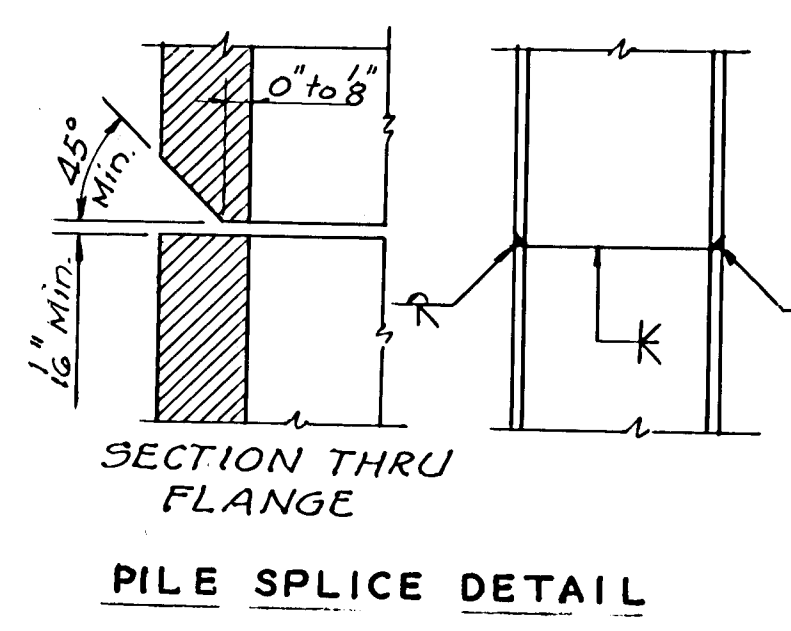
16" x 16" Piles
Max. length - 60' Single Point Pick-up.
Max. length - 85' Double Point Pick-up.

Note: All corners to be chamfered 1".

PILES					
STEEL PILES	EQUIVALENT CONCRETE PILES				
	PRECAST	PIPE	FLUTED	STEPTAPER	PRESTRESSED * STRESSED
10BP42	14"	10 3/4"	12"	12 1/4"	12"
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 PILE	EQUIVALENT CONCRETE PILES				
	PRECAST	FLUTED	STEPTAPER	PRESTRESSED * STRESSED	
10 3/4"	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.
NO.	DATE	REVISIONS	BY	APP'D

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	QUANTITIES	TRACED
DESIGN CK	DETAIL CK	QUAN CK	TRACE CK