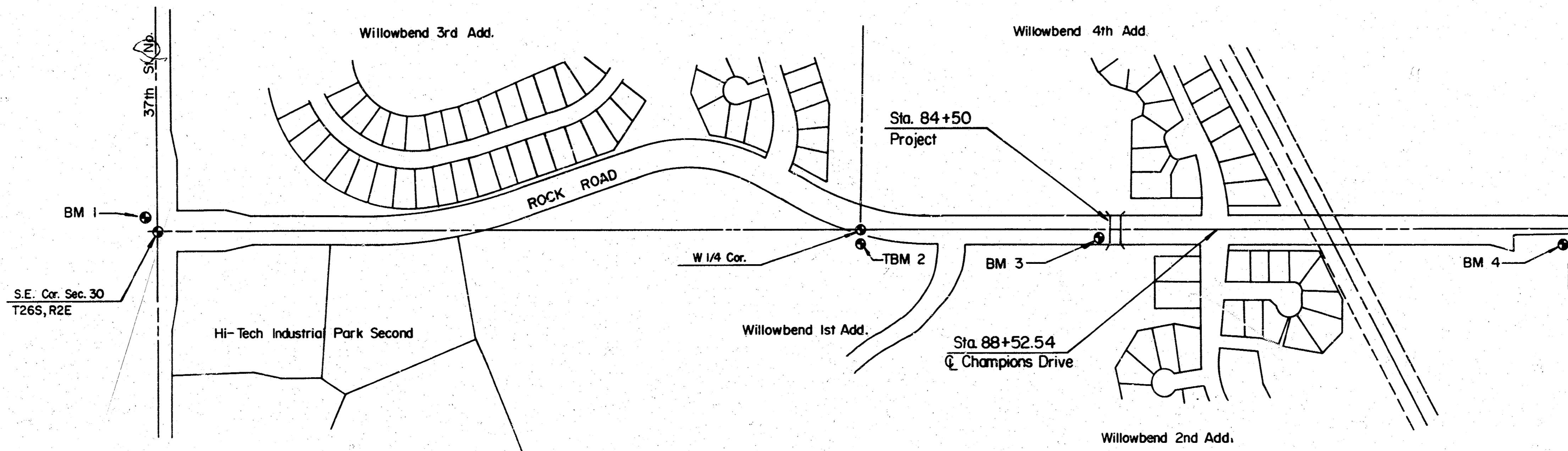


REINFORCED CONCRETE BOX CULVERT ON ROCK ROAD PROJECT NO. 472-76-248-80001-000-000-025

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER
JANUARY, 1986

BENCH MARKS

- B.M. #1 CITY STANDARD 44' S & 48' W OF CENTERLINE OF 37TH & ROCK ROAD.
ELEV. = 204.11
- B.M. #2 TBM RR - SPK IN S FACE OF CORNER FENCE POST + 50' E OF W QUARTER CORNER SECTION 29 -26-2E.
ELEV. = 169.79
- B.M. #3 " " CUT ON NE CORNER OF RCB + 900' N OF W QUARTER CORNER SECTION 29-26-2E.
ELEV. = 185.36
- B.M. #4 RR SPK IN W FACE POWER POLE SE CORNER 45TH ST. NORTH & ROCK ROAD.
ELEV. = 197.93



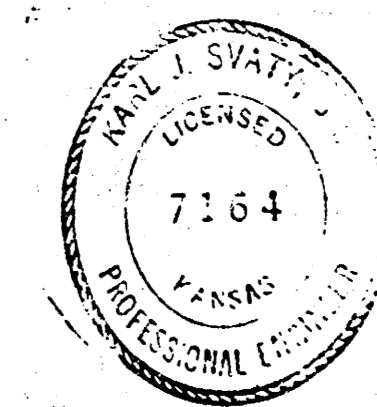
INDEX TO DRAWINGS

Sheet No.	Description
1	Title Sheet
2	Soil Saver
3	Std. Multiple Concrete Box
4	Bridge Railing

By CITY ENGINEER OF WICHITA

- Sanitary Sewers _____
- Storm Sewers _____
- Driveway Approaches _____
- Water Mains _____
- Drainage * RCBC CSD 2-2-87

* Handrail Design to be provided at a later date.



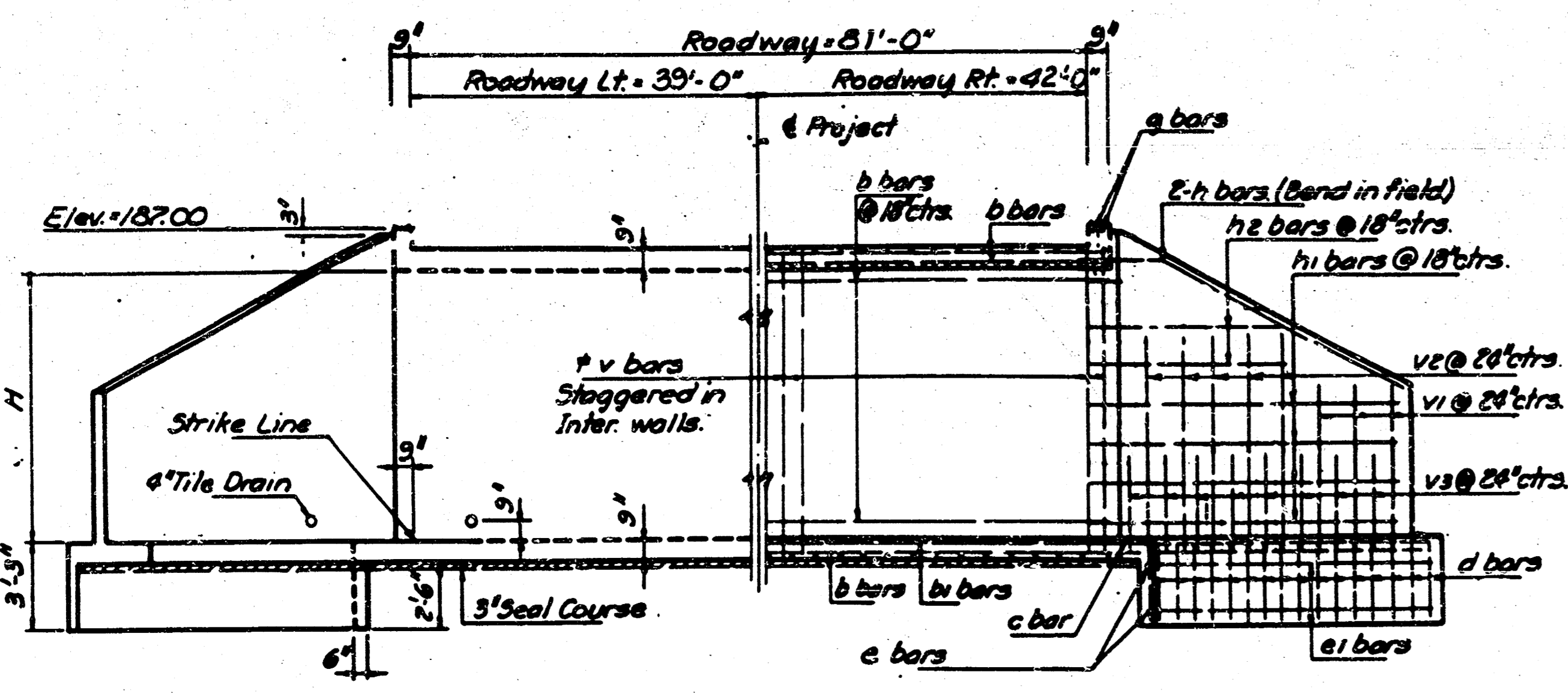
	ROCK ROAD	Design KJS
	RCBC	Drawn by
		Checked by DSS
		Date Jan. 1987
		Sheet 1
MID-KANSAS ENGINEERING CONSULTANTS PA 3500 NORTH ROCK ROAD BUILDING #800 WICHITA, KANSAS 67226		682-6561 of 4

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AVAILABLE COPY

FHWA REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS				

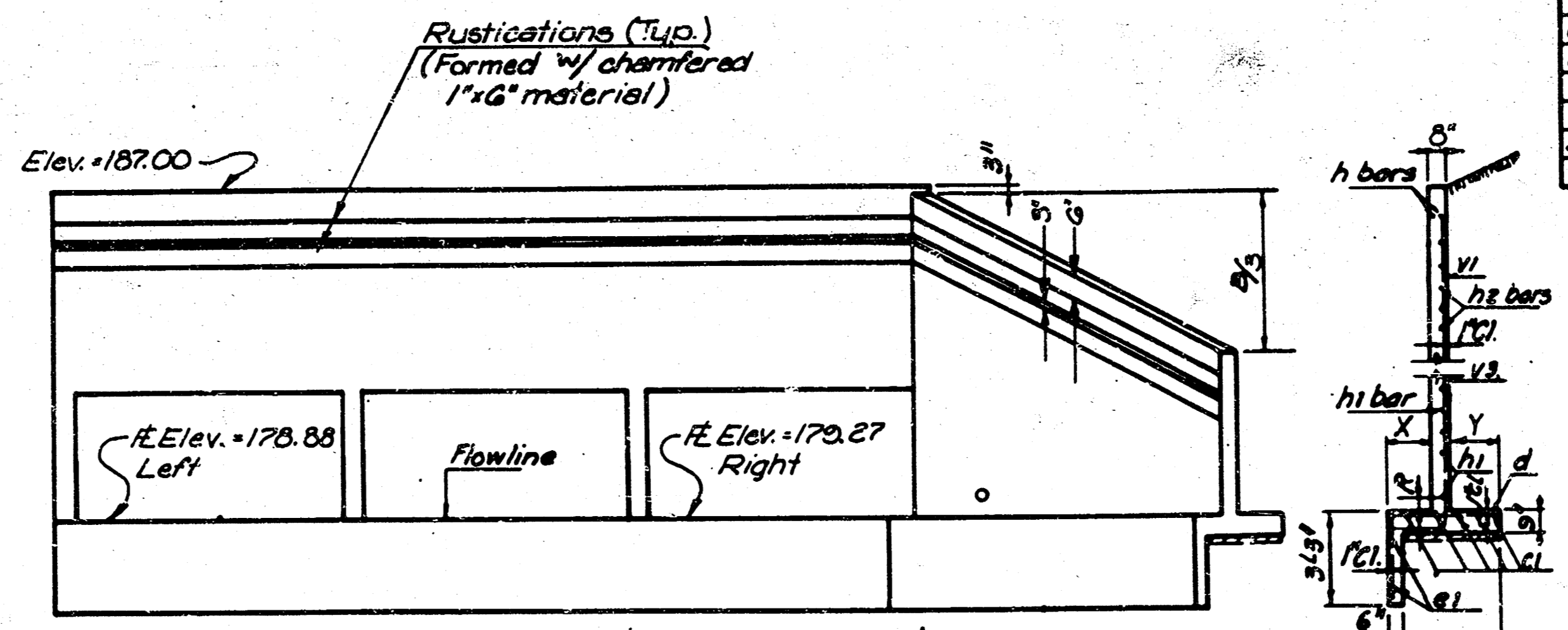
LIST OF BARS AND DIMENSIONS

Letter	A	B	C	H	R	TW	W	X	Y	Bar	a	a1	v
Dimension	16'-0"	12'-0"	3'-0"	3'-0"	0'	0'	4'-0"	10'-0"	2'-0"	Space	12"	12"	12"
Number	124	122	224	224	4	20	68	8	12		440	12	36
Size	#3	#3	#3	#3	#4	#4	#4	#4	#4		#4	#4	#4
Length	31'-9"	32'-3"	22'-0"	22'-0"	45'-0"	32'-0"	19'-0"	2'-0"	10'-0"		43'	6'-0"	3'-9"



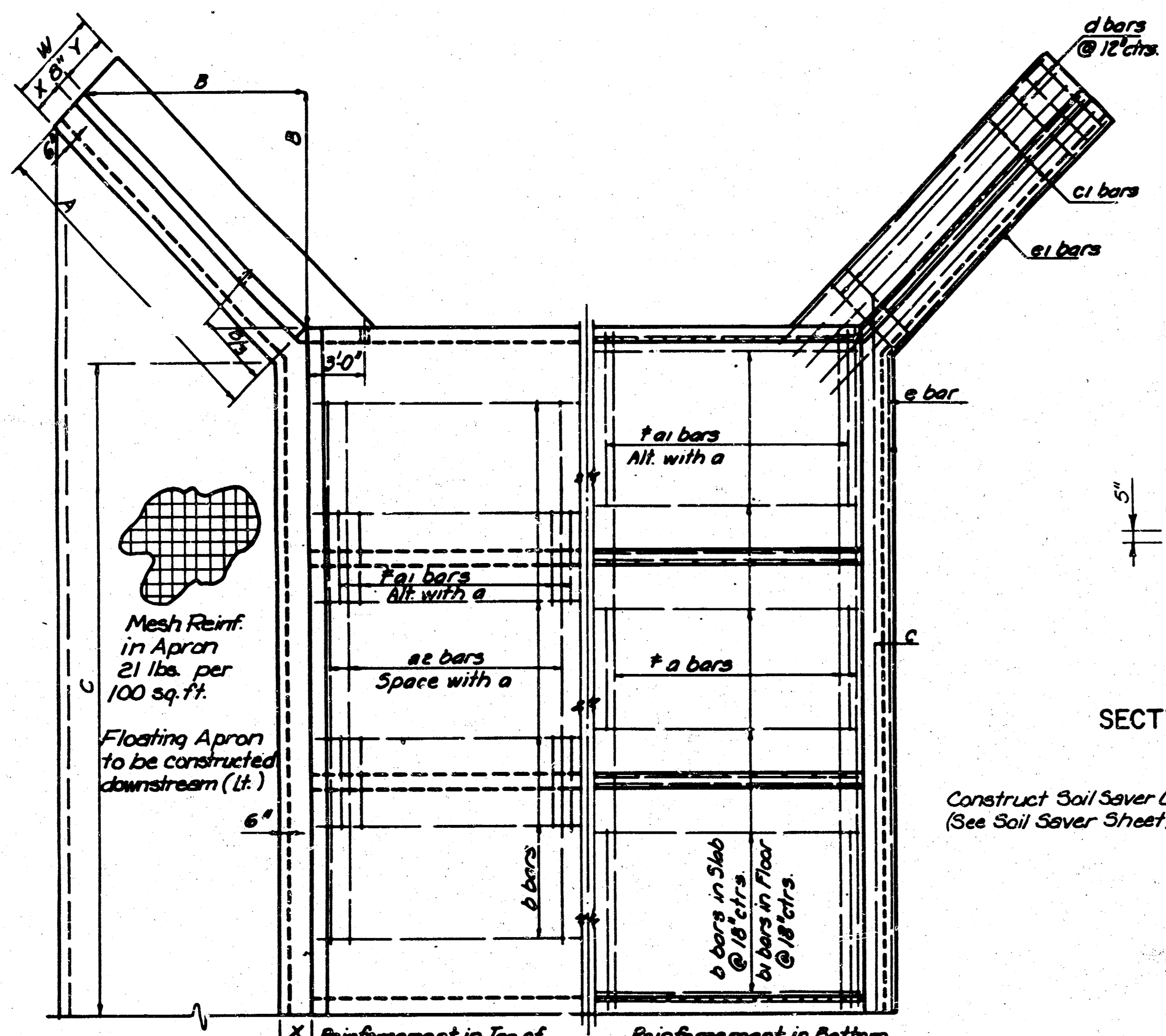
ELEVATION AND SECTION

* See Bar List for size & spacing

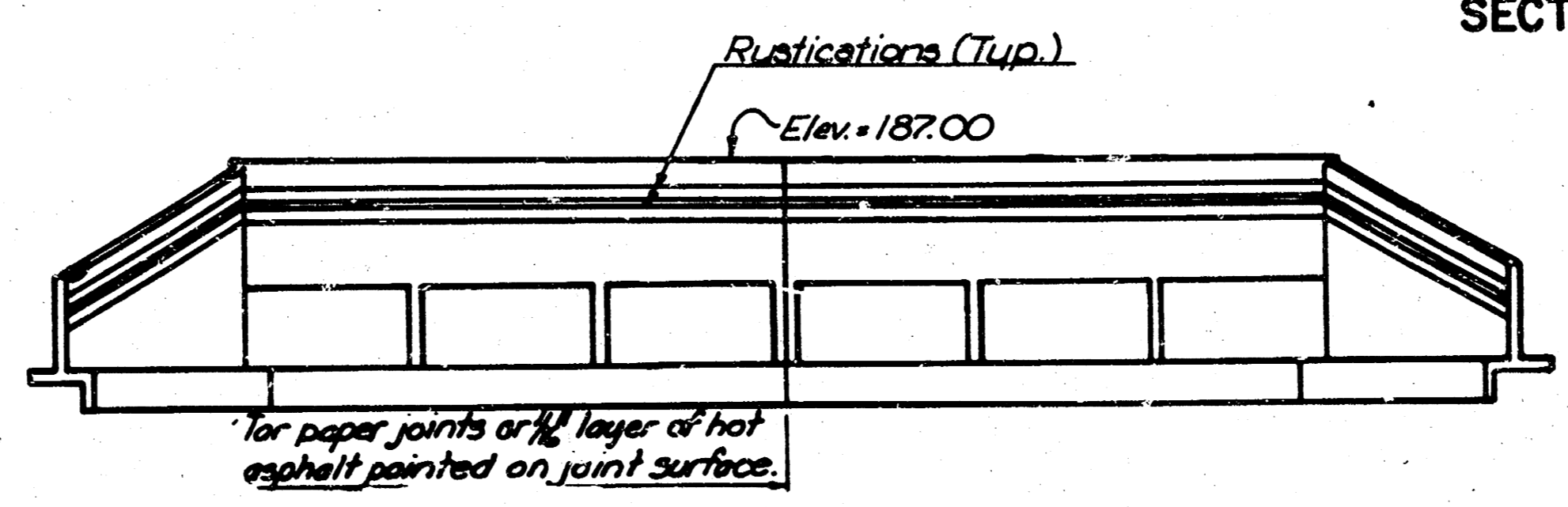


HALF END ELEVATION

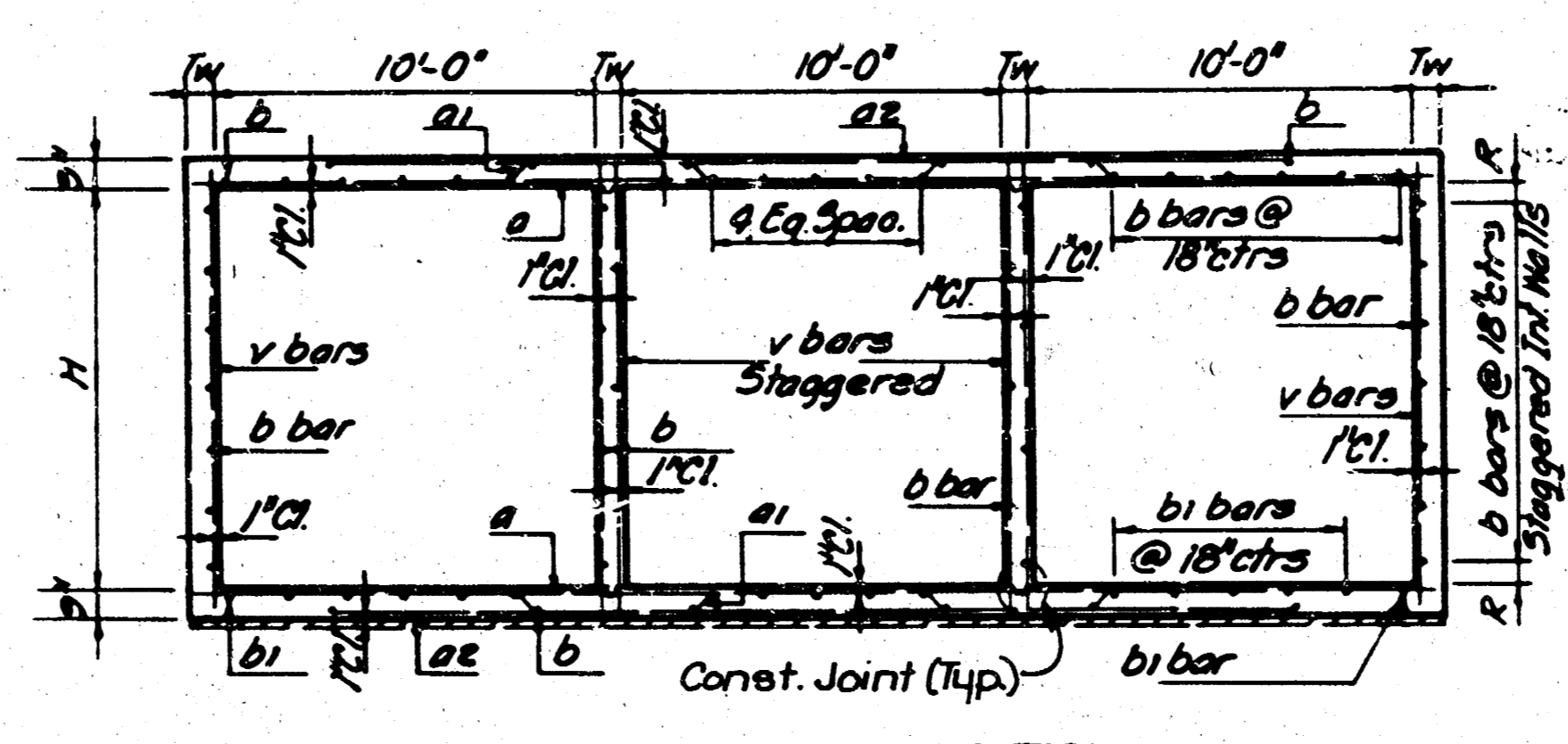
TYPICAL WING SECTION



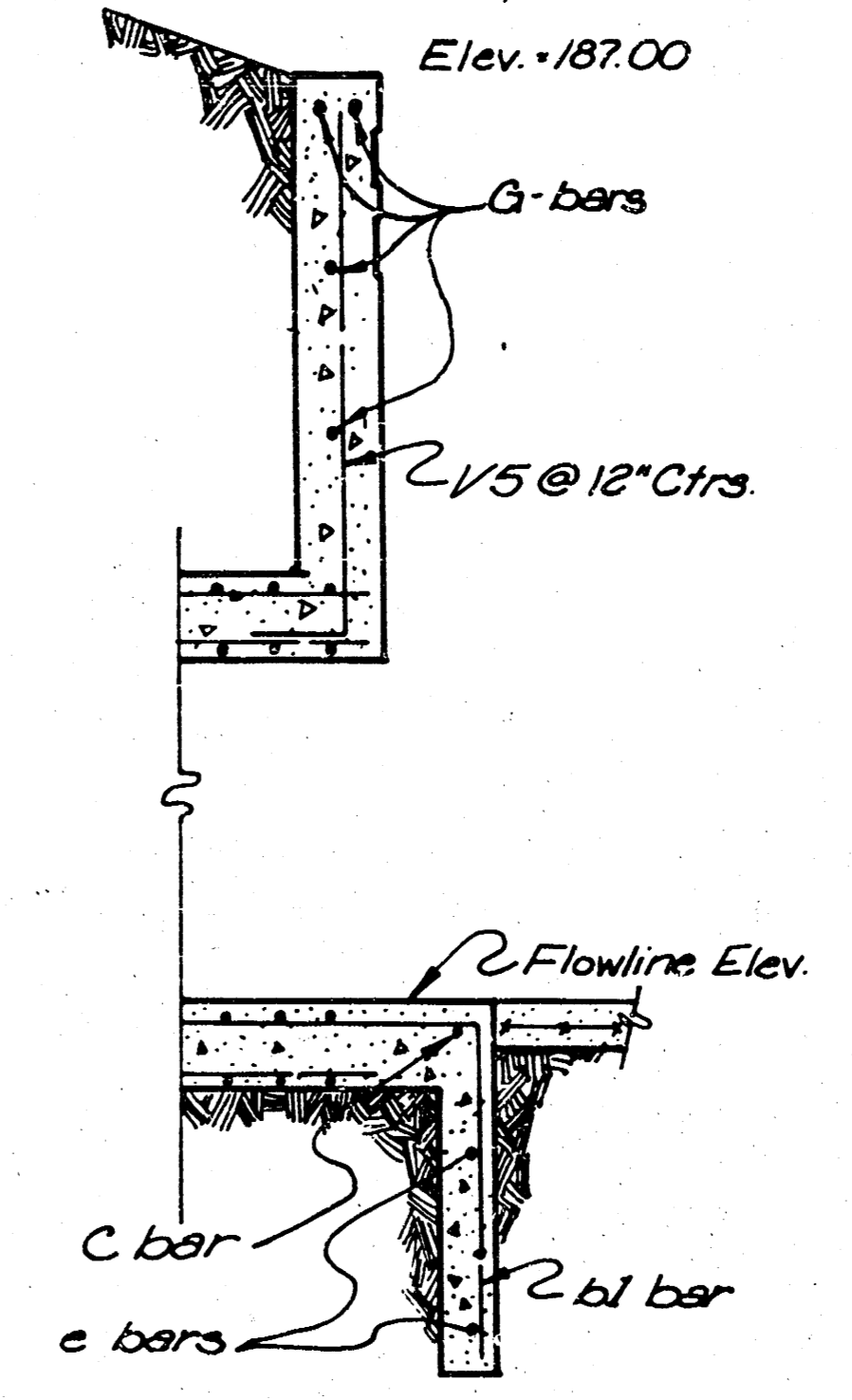
HALF PLAN AND SECTION



END ELEVATION



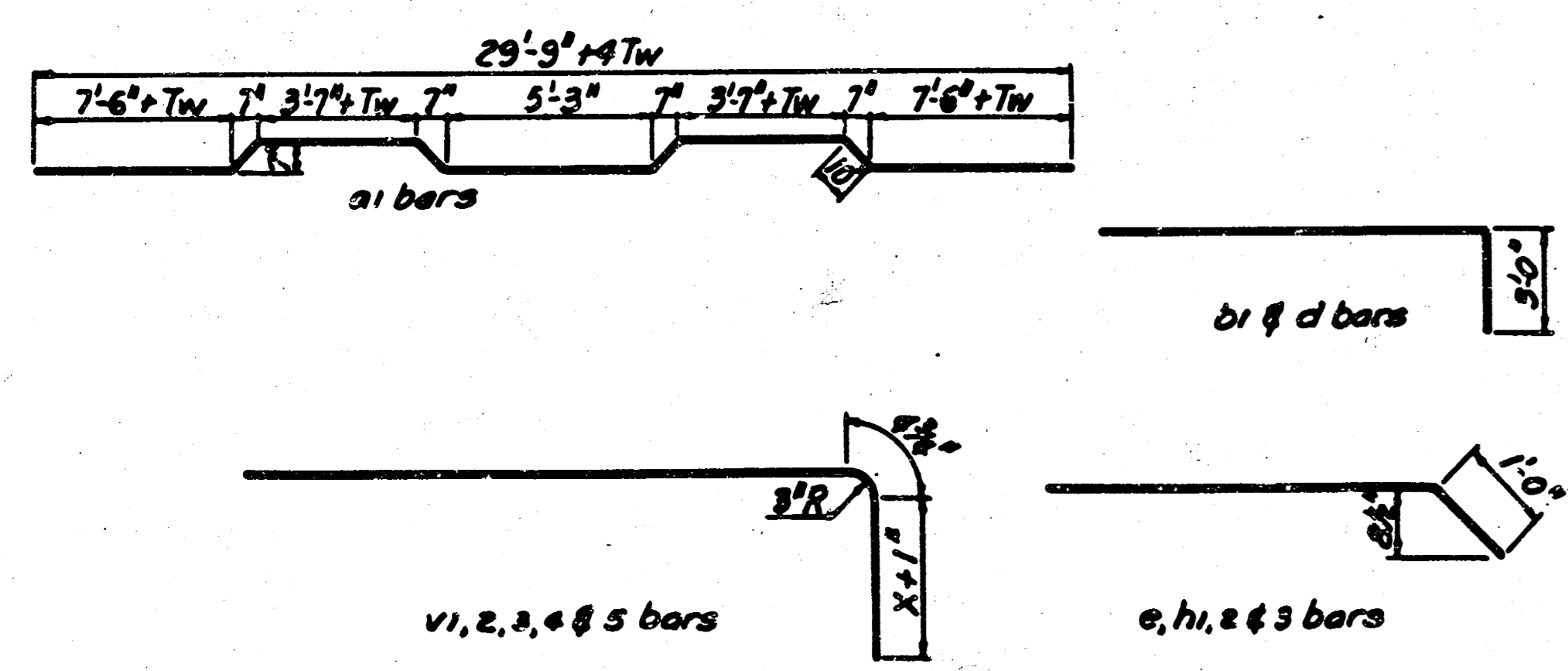
HALF BARREL SECTION



TYPICAL HEADWALL SECTION

SECTION THROUGH APRON

GENERAL NOTE
LOADING: H20-44 AASHTO Specifications 1984 Edition.
UNIT STRESSES: $f_c = 4,000$ psi; $f_s = 1,200$ psi; $f_t = 24,000$ psi.
Class A Concrete shall be used throughout. Bevel all exposed edges with a 3/4" triangular mounding unless otherwise noted.
A Seal Course consisting of 3" of Class A Concrete, shall be constructed. ~~It shall be placed on the place on by the Engineer. No reinforcing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.~~
~~Reinforcement for additional quantities resulting from including Seal Course as a change in the original plans, shall be made at the University and for the various items involved.~~
Coarse aggregate shall be deposited behind each weep hole to occupy a space extending 15" in all directions above weep hole flowline. This work shall not be paid for directly, but shall be considered part of the excavation work.
Metal guard rail and hardware is not a part of the bridge.



BENDING DIAGRAMS
All dimensions are out to out of bars.

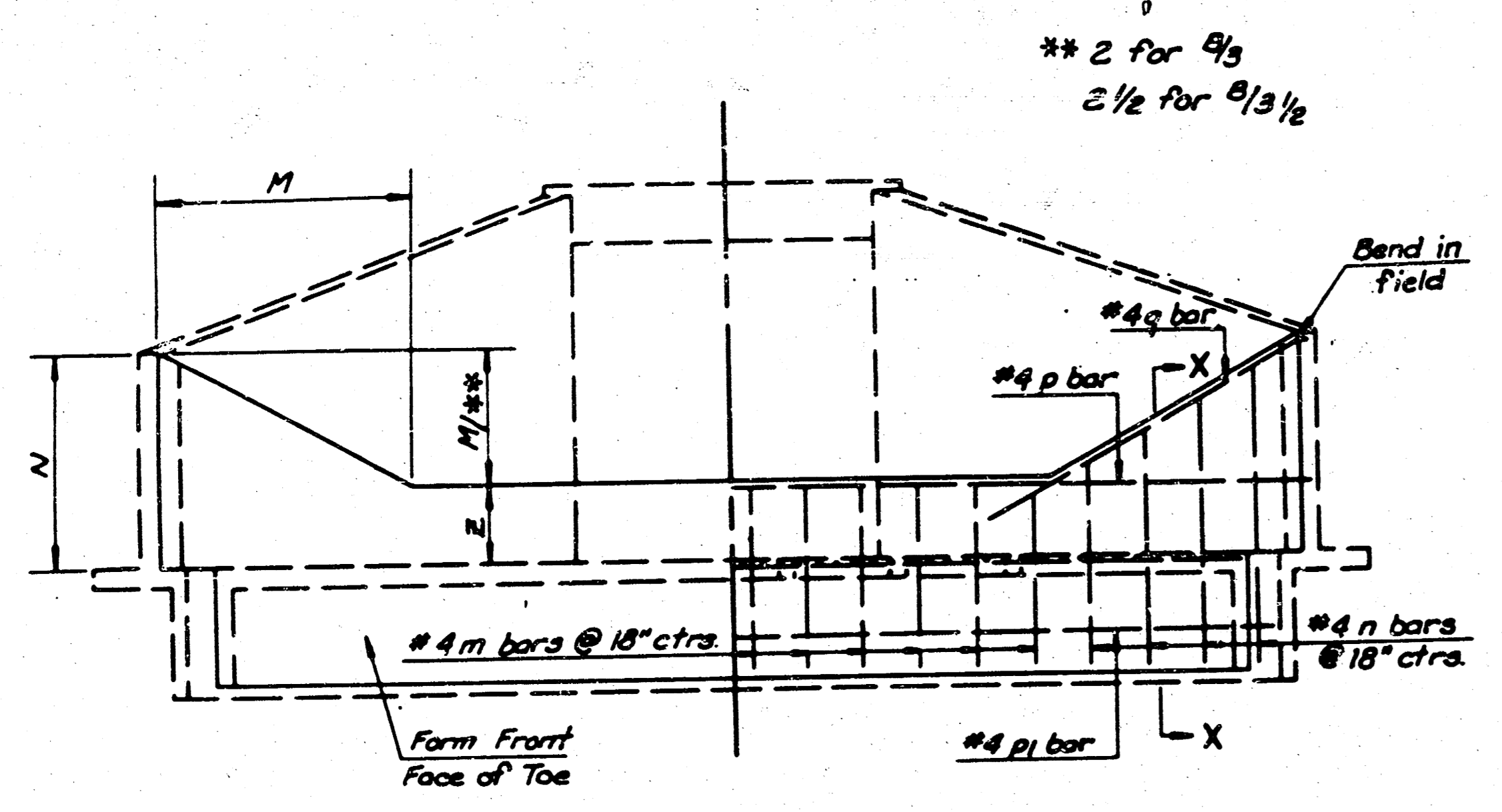
3-63 Corrected Length a bar Sec. 10.9 C.L.M. R.L.A.
KANSAS DEPARTMENT OF TRANSPORTATION
BRIDGE NO. STA
STD. MULTIPLE 10' SPAN CONCRETE BOX
STA. 84+50
DESIGNED BY J.M.B. CHECKED BY C.E.W. QUANTITIES BY C.E.C. TRACED BY P.E.L.
APP'D. F.S. EICOCK
SCALE 1" = 10'-0"

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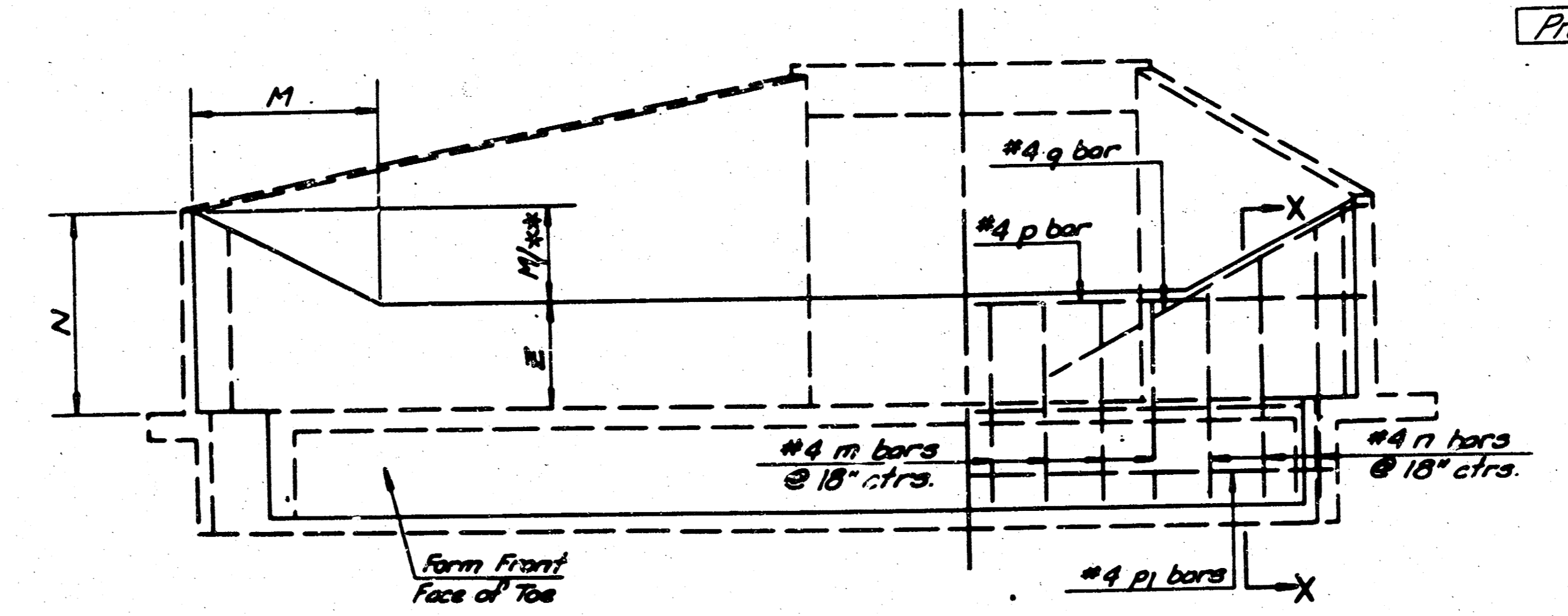
DISTRICT	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS		18		

STATION 84+50 Ft. (Cast-in-Place)		B ₁	Skew		Z = 1'-10 1/4"
Letter	M	N	P	Q ₁	Q ₂ K ₁ K ₂ L ₁ L ₂
Dimension	5'-0"	3'-5 3/4"	85'-13 1/2"	11'-0"	11'-0" 0'-6" 0'-6" 1'-5" 1'-5"

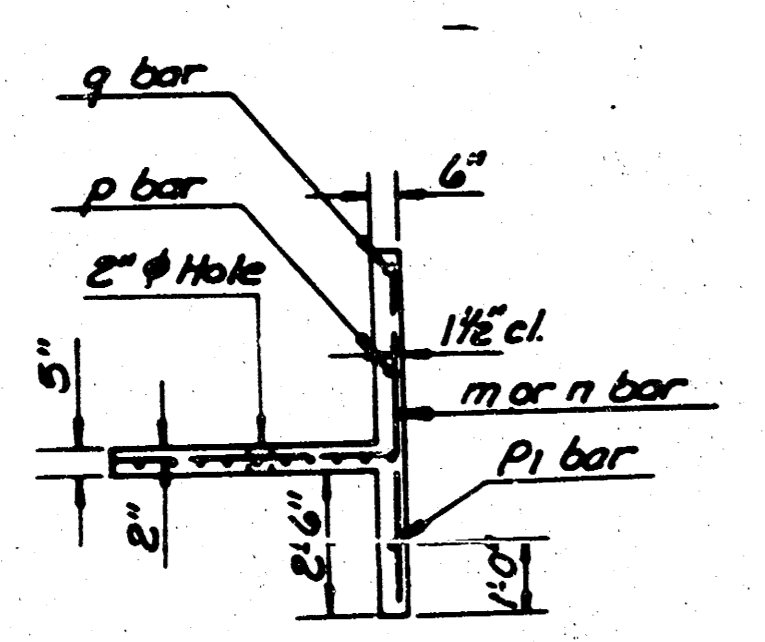
STATION 84+50 Ft. (Precast)		B ₁	Skew		Z = 2'-10 1/4"
Letter	M	N	P	Q ₁	Q ₂ K ₁ K ₂ L ₁ L ₂
Dimension	5'-0"	5'-0"	85'-5 3/4"	11'-0"	11'-0" 0'-6" 0'-6" 1'-5" 1'-5"



ELEVATION AND SECTION



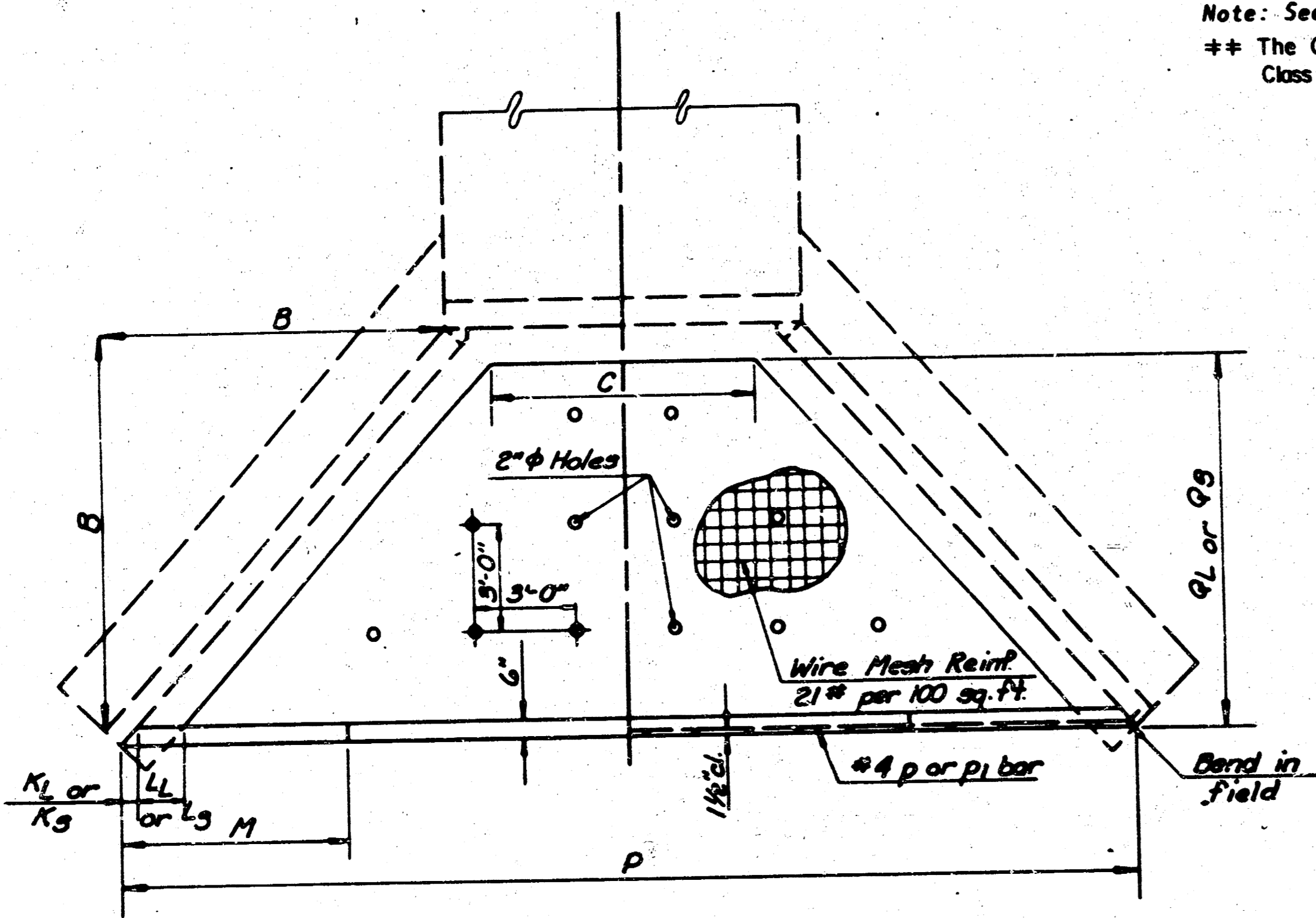
ELEVATION AND SECTION



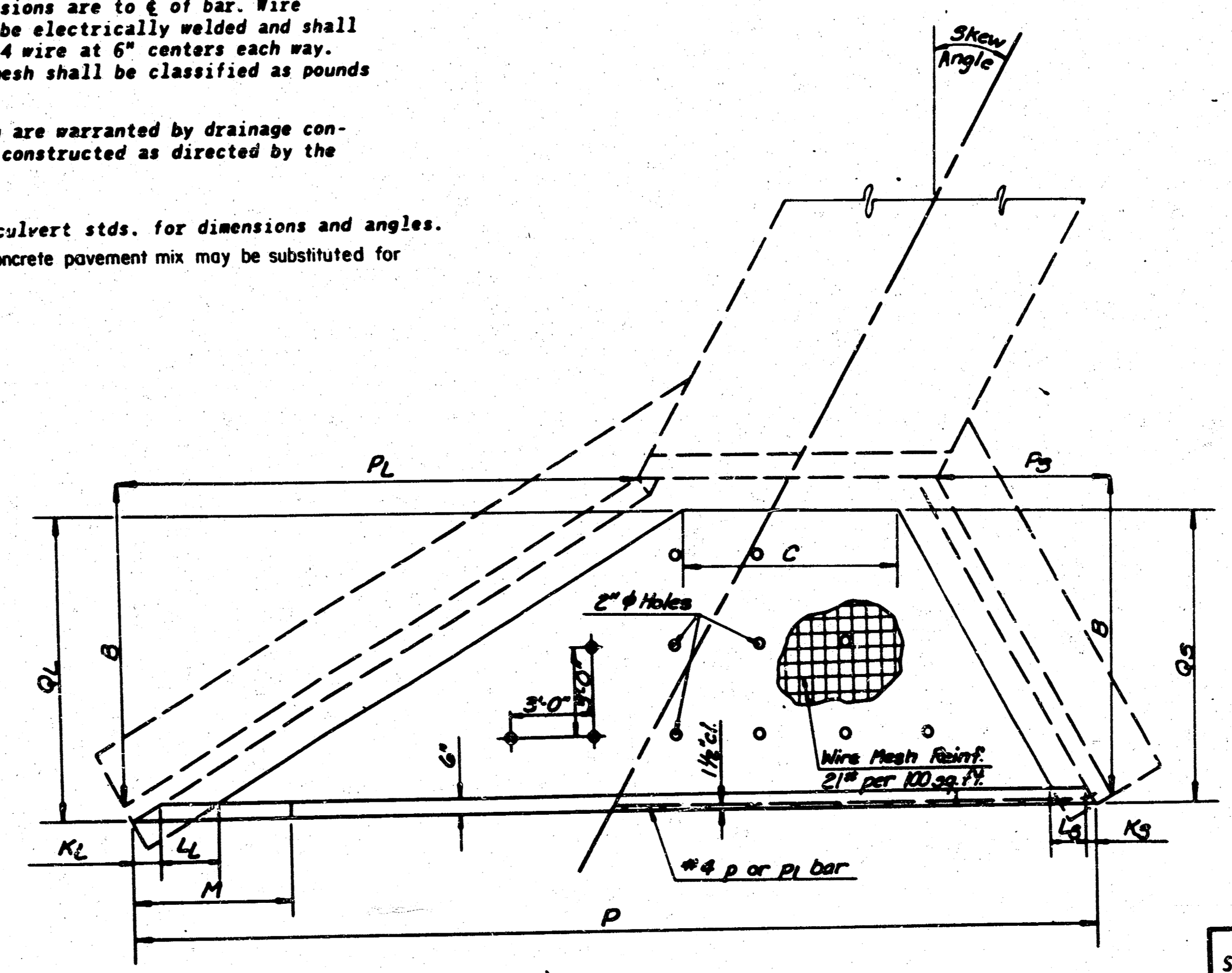
SECTION X-X

GENERAL NOTES
 CONCRETE: Class A Concrete shall be used throughout. ** All exposed edges shall be finished with an edging tool.
 REINFORCING: All dimensions are to center of bar. Wire reinforcing mesh shall be electrically welded and shall be composed of No. W 1.4 wire at 6" centers each way. Weight of reinforcing mesh shall be classified as pounds of reinforcing steel.
 When holes in the apron are warranted by drainage conditions, they shall be constructed as directed by the Engineer.

Note: See appropriate culvert stds. for dimensions and angles.
 ** The City of Wichita concrete pavement mix may be substituted for Class A Concrete.



PLAN



PLAN - SKEW

STATION	Letter	M	N	P	Q ₁	Q ₂	K ₁	K ₂	L ₁	L ₂	Z
Dimension											
Bar		m	n*	p	q						
Number											
Length											

Quantities include apron and soil saver quantities.
 * n bars are variable, increase by increments of 7" for B₁ 3.5 and 9" for B₁ 3. Cut 2 each length.

LIST OF SOIL SAVERS

Station	Culvert Size	Side	Z	Skew
Cast-in-Place 84+50	6'-10"x3'	Rt.	1'-10 1/4"	
Precast 84+50	6'-10"x4'	Rt.	2'-10 1/4"	

DEPARTMENT OF TRANSPORTATION - KANSAS

SOIL SAVER FOR R.C. CULVERTS

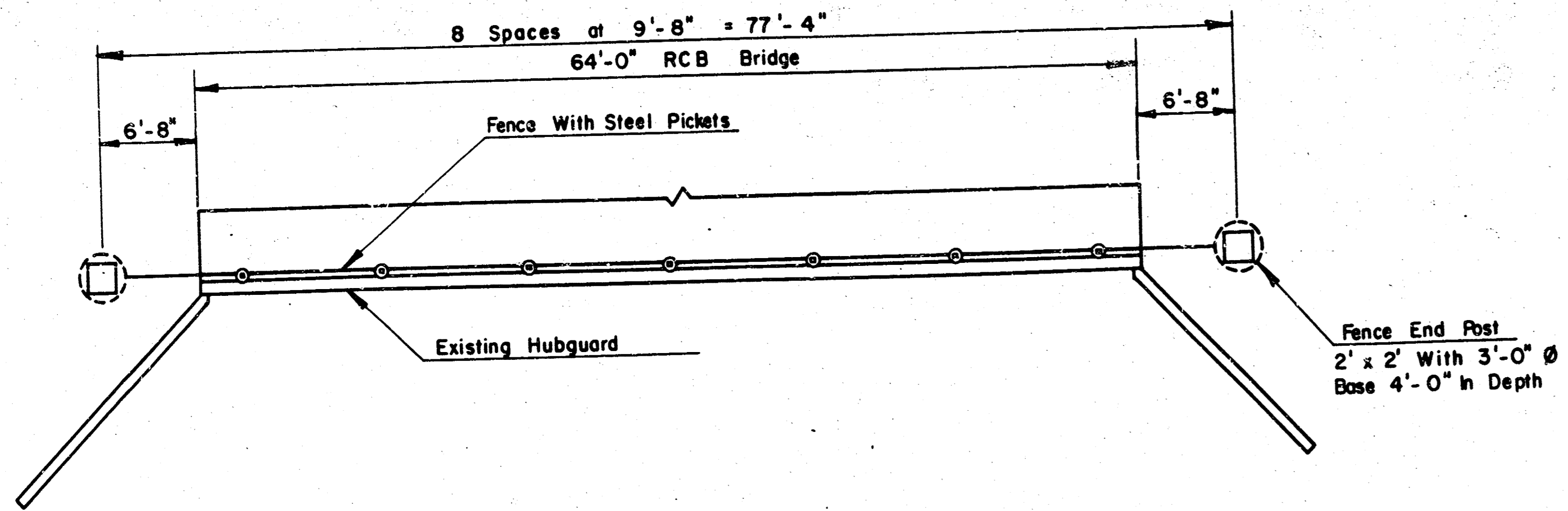
STD. NO. 520.1

DATE: 12/16/76

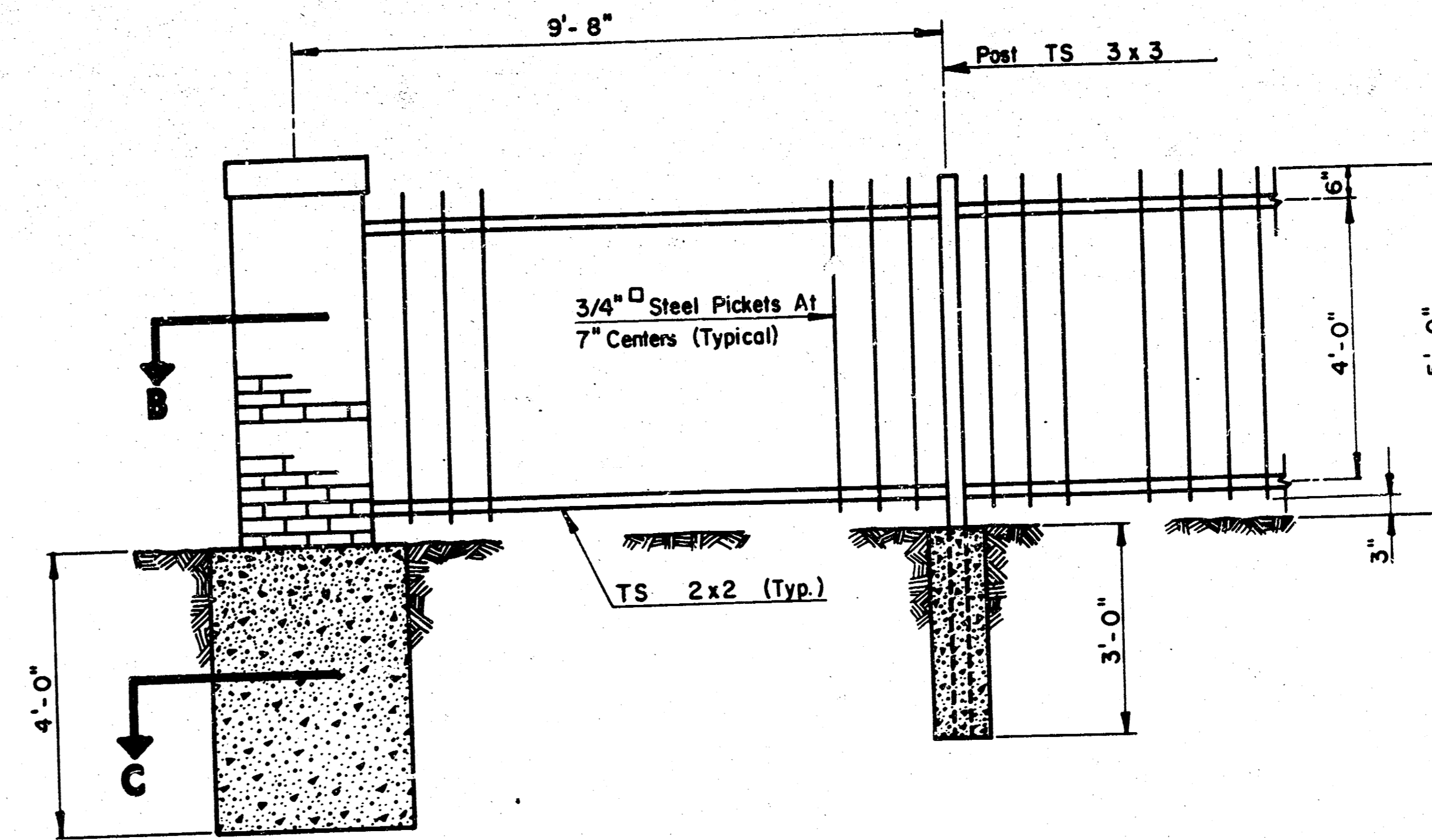
DESIGNED BY: [Signature] CHECKED BY: [Signature] QUANTITIES BY: [Signature] TRACED BY: [Signature]

NOTE: ALL REINFORCING BARS ARE NO. 4 BARS

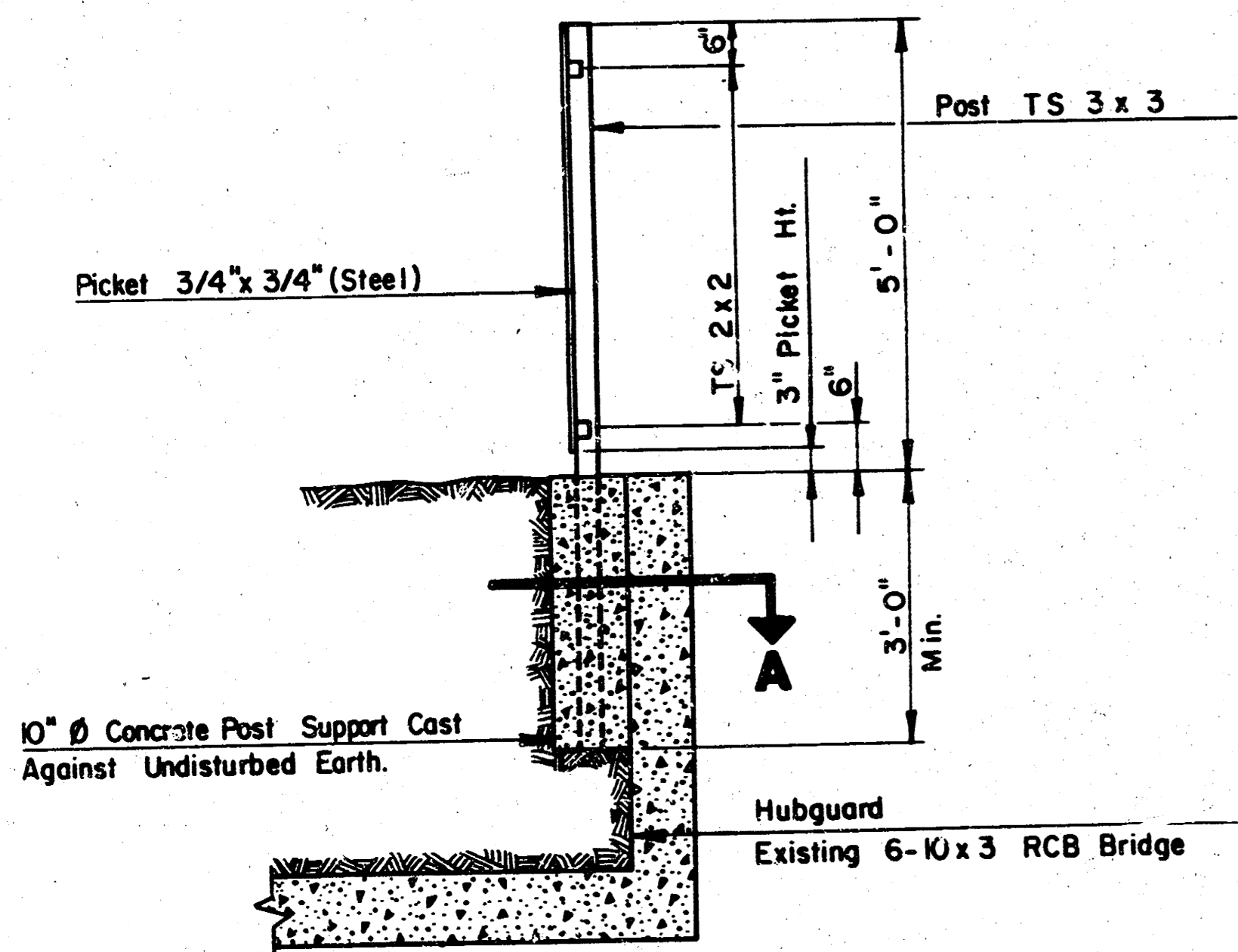
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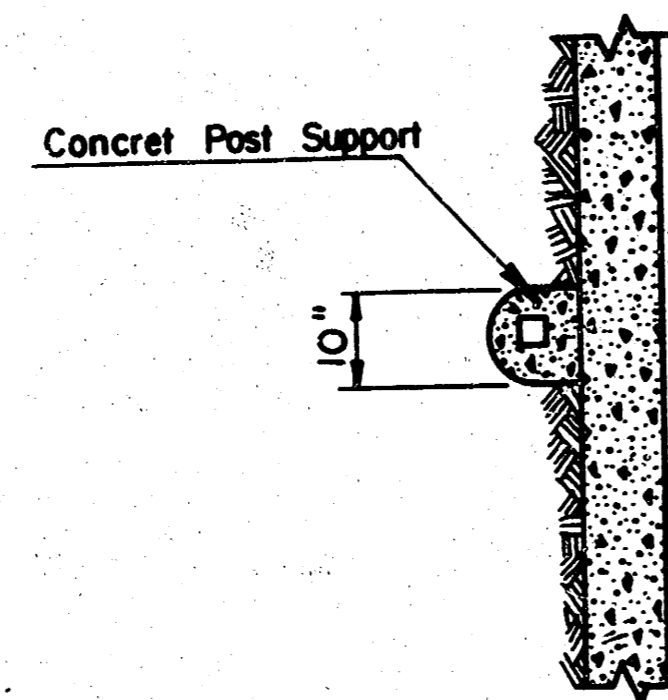
TYPICAL FENCE LAYOUT AT BRIDGE HUBGUARD



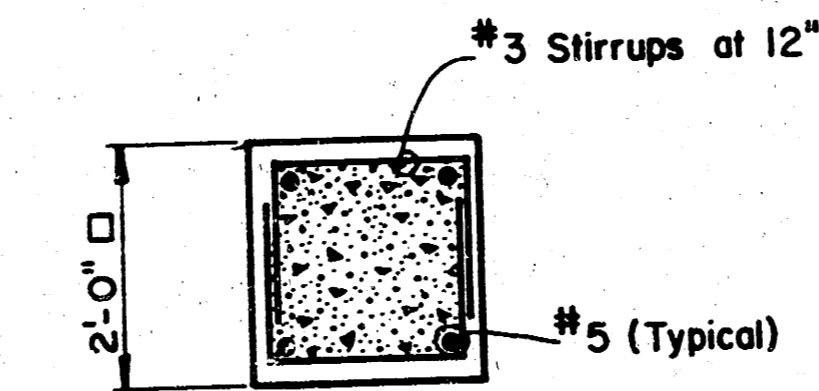
TYPICAL RAILING ELEVATION



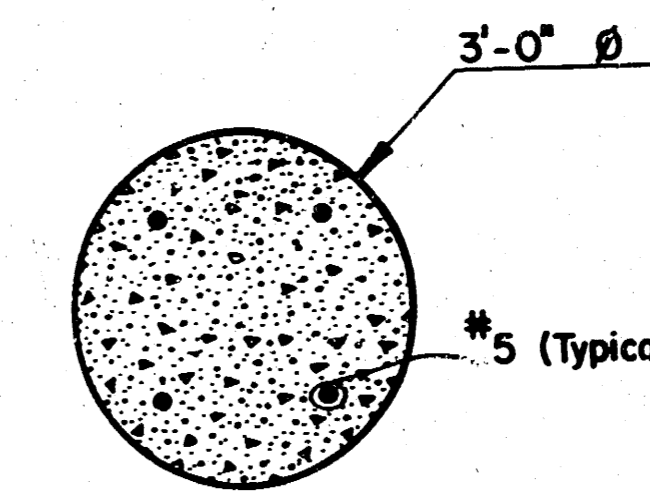
TYPICAL SECTION AT R.C.B. BRIDGE HUBGUARD



SECTION A



SECTION B



SECTION C



BRIDGE RAILING
6-10X3 R.C.B. BRIDGE
NORTH ROCK ROAD
WILLOWBEND

Design	
Drawn by	
Checked by	
Date	
Job no.	

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226

682-6561

Sheet	4
of	4

4 1 2 3 4