

GENERAL NOTES:

CAMBER/GRADIENT EXCAVATIONS: All common excavation shall be UNCLASSIFIED. The Contractor shall remove all substances encountered in excavating to the required elevation and grade. No separate payment will be made for material classification regardless of the nature or condition of the material.

EMPALEMENTS: The Contractor shall construct the embankments and abutments at the abutments as shown on Sheet No. 3 and on the Contract and Profile prior to construction of the bridge.

EXCAVATION: All bridge excavation shall be CLASS III. See Section 101.04 for limits of excavation.

NOTES: All information shown on Sheet No. 3 is as obtained from the field by Engineering Testing Company, and represents the best information available to the City of Wichita.

PILE PILES: Shall be 12" prestressed concrete piles in piers and 10" piles in abutments as described and detailed on Sheet No. 8. Piles shall be driven to the penetration shown unless in the opinion of the Engineer such penetration cannot be secured without injury to the pile. All piles shall be driven to a minimum computed bearing of 10 tons per pile in abutments, 40 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 the Engineer before driving starts.

CONCRETE: (CLASS AAA(AE)) Concrete shall be used in the bridge and approach slabs. (CLASS A(AE)) Concrete shall be used in retaining walls, bridge walls and concrete riprap. Bevel all exposed edges with a 3/4" triangular molding unless otherwise noted.

REINFORCING STEEL: All dimensions relative to reinforcing steel placement are to centerline of bars unless otherwise noted. All dimensions shown in bending diagrams are out to out of bars.

DECK TREATMENT: Sidewalks, riprap and approach slabs shall be cured with Linseed Oil Emulsion, in accordance with the Supplemental Specifications. Bridge deck shall receive a wearing course consisting of latex modified concrete. Thickness to be 1 1/4 inches. (See Supplemental Specifications.)

FALSEWORK AND FORMING: Falsework under superstructure, including the sidewalk slabs, shall be left in place until the concrete shall have attained its design strength; but in no case shall the falsework be removed before 14 days after placing concrete. Traffic rails may be placed after falsework is removed. Camber shall be provided in the amounts shown on the Dead-Load Camber Diagram.

APPROACH SLABS: 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 Sheet No. 6.

STEEL HANDRAIL: Steel for handrail shall conform to ASTM A-501, structural steel tubing; base plates and clip angles to be ASTM A-36 steel. Pay length for handrail is center to center of end posts. Posts shall set vertically in the transverse direction, and perpendicular to the grade longitudinally. Steel handrail shall be painted in accordance with the Standard Specifications (Lead Silico-Chromate System).

SPECIAL CONCRETE FINISH: See the Supplemental Specifications for details and limits of the special concrete finish.

QUANTITIES: All quantities shown on these plans shall be used as final pay quantities except that measurement of piling, common excavation and compaction of earthwork shall be in accordance with the Specifications.

GENERAL REQUIREMENTS: It is the intention of these plans and specifications that construction of the bridge shall be in accordance with applicable standard specifications and requirements of the Kansas Department of Transportation and that materials shall conform to the specifications unless otherwise noted.

DESIGN LOADING: HS20-44 A.A.S.H.T.O. Spec. (1973 Edition)

UNIT STRESSES
 f'_c - 4,000 P.S.I., CLASS AAA(AE)
 f'_c - 3,000 P.S.I., CLASS A(AE)
 f_c - 1,600 P.S.I., CLASS AAA(AE)
 f_c - 1,200 P.S.I., CLASS A(AE)
 f_s - 20,000 P.S.I. (REINFORCING)

DESIGN PILE LOADING: 35 TONS PER PILE (ABUT.)
 40 TONS PER PILE (PIER)

SUMMARY OF PROJECT QUANTITIES

BRIDGE QUANTITIES

ITEM	QUANTITY	UNIT
CLASS III EXCAVATION	105	CU. YDS.
CLASS AAA(AE) CONCRETE	198.2	CU. YDS.
REINFORCING STEEL	43,820	LBS.
STEEL PILING (10")	220 296.9	LIN. FT.
PRESTRESSED CONCRETE PILING (12")	300 311.8	LIN. FT.
STEEL HANDRAIL	114	LIN. FT.
APPROACH SLABS	2	EACH
ELECTRIC LIGHTING	LUMP SUM	L.S.
SPECIAL CONCRETE FINISH	111 121.6	SQ. YDS.
LATEX SURFACE COURSE (1 1/4")	325.1	SQ. YDS.

GRADING QUANTITIES

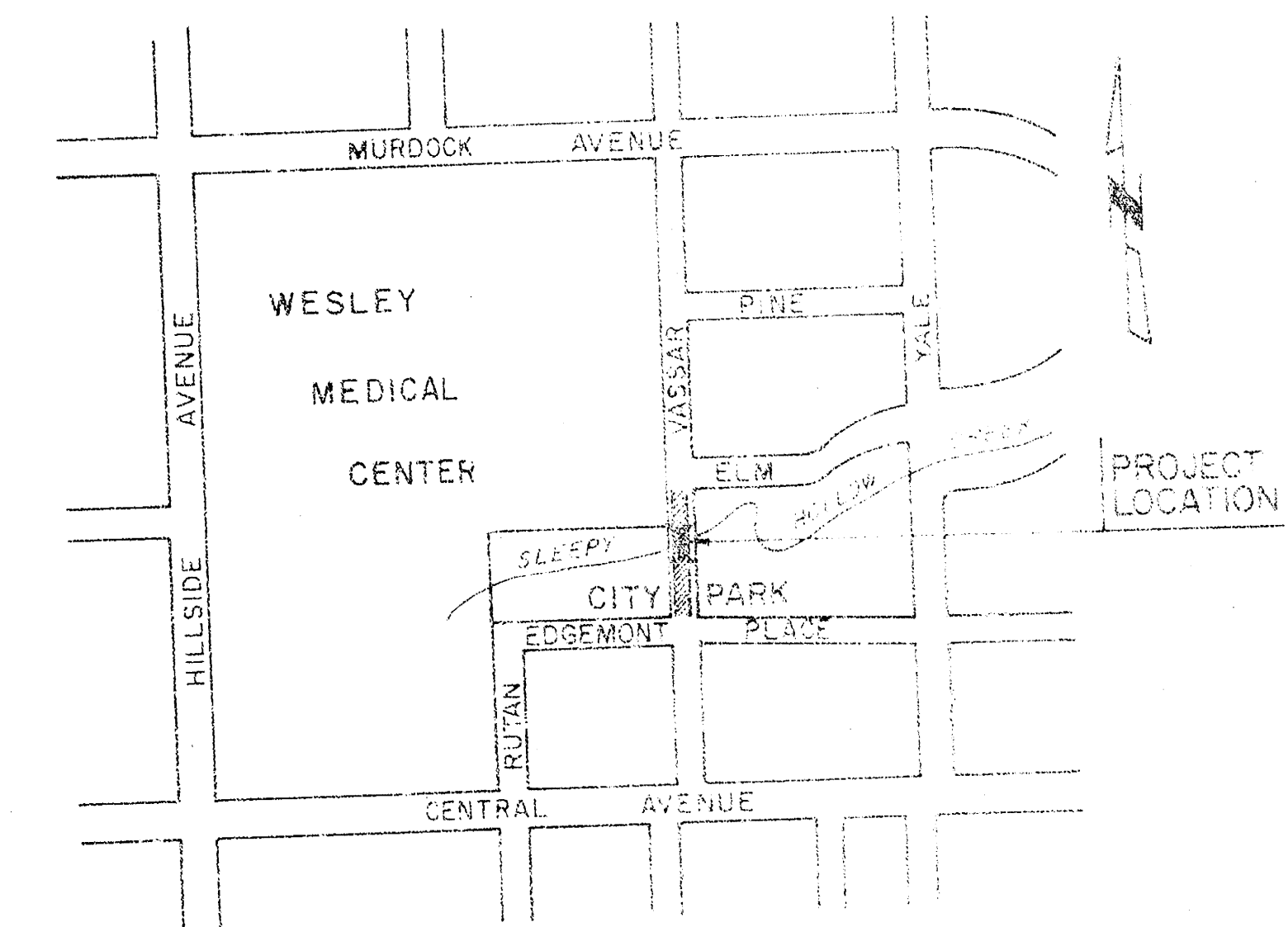
ITEM	QUANTITY	UNIT
REMOVAL OF EXISTING STRUCTURES	LUMP SUM	L.S.
LARGE TREES	20	EACH
COMMON EXCAVATION (CH.CH.)	1,040	CU. YDS.
COMMON EXCAV. (CONTR. FURN.)	1,520	CU. YDS.
COMPACTION OF EARTHWORK	2,020	CU. YDS.
CLASS A(AE) CONCRETE	9.9	CU. YDS.
REINFORCING STEEL	720	LBS.
CHAIN LINK FENCE	60	LIN. FT.
CONCRETE RIPRAP (5")	557 577.8	SQ. YDS.
GROUTED STONE DITCH LINING	61	SQ. YDS.
12" STORM SEWER (B.C.C.M.P.)	22	LIN. FT.

VASSAR STREET BRIDGE

OVER

SLEEPY HOLLOW CREEK

PROJECT NO. DAKS 574105



VICINITY MAP

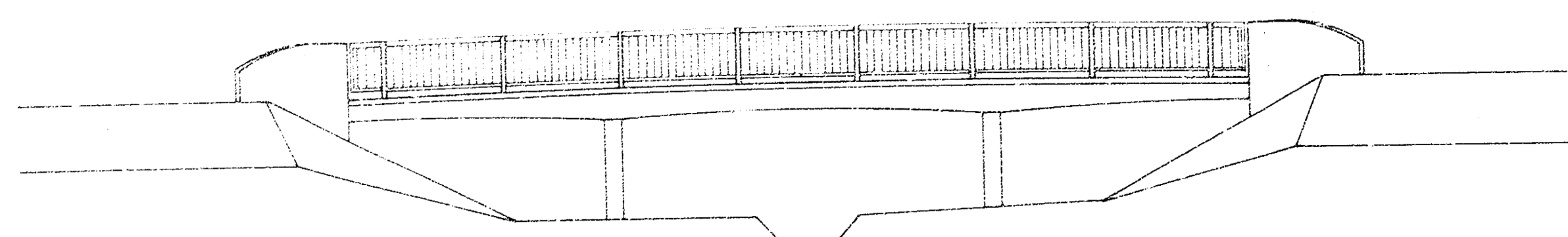
CITY OF WICHITA
 DEPARTMENT OF PUBLIC WORKS

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

DELAMATER, FREUND & SCHERER, P.A.
 ENGINEERS & ARCHITECTS
 WICHITA, KANSAS
 DECEMBER, 1975

INDEX OF SHEETS

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6. APPROACH SLAB, RAILS AND RETAINING WALL
7. BAR LIST AND BENDING DIAGRAMS
8. PILE DETAILS
9. BAR SUPPORTS, BRIDGE EXCAVATION AND ELECTRIC LIGHTING



19'-26'-19' R.C. SLAB SPANS

P.O.T. Sta. 2+97.93
2" Iron Pipe @ P.O.T.
North Property Line, Edgermont Place

P.O.T. Sta. 6+60.88
2" Iron Pipe @ P.O.T.
Iron on E

Sta. 5+23.60 Construct 61.5 Lin Ft
Concrete Retaining Wall & Chain Link
Fence, Left. See Sheet No. 6

SUMMARY OF GRADING QUANTITIES

Channel Excavation (Chas. Change) 1,040 Cu. Yds.
Channel Excavation (Contn. Furnish) 1,520 Cu. Yds.
Total Excavation 2,560 Cu. Yds.

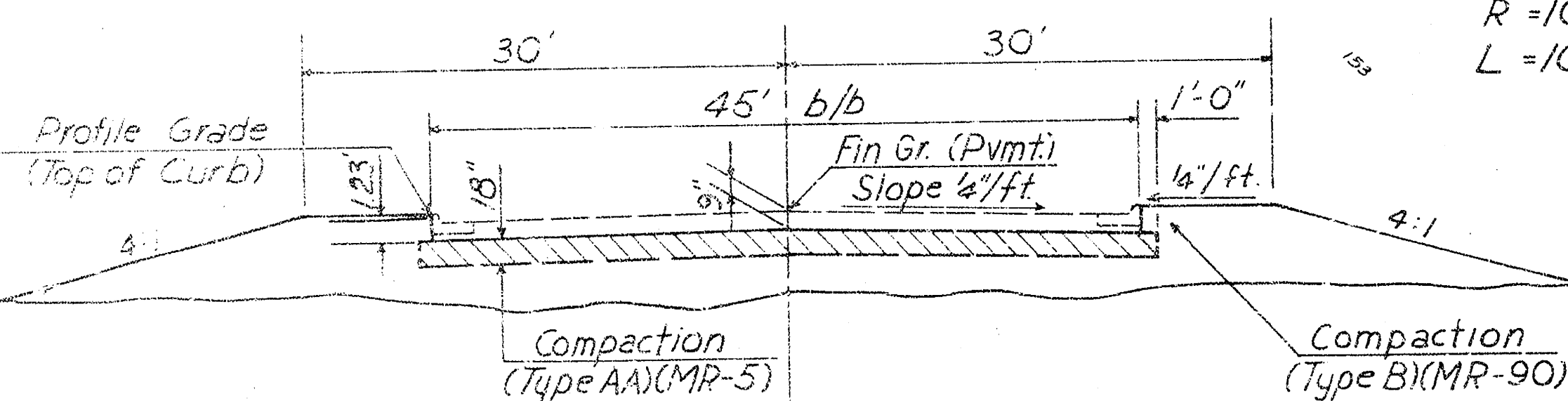
Connected Fill Required:
South Property 1,370 Cu. Yds.
North Property 930 Cu. Yds.
Total 2,300 Cu. Yds.

Disconnected Fill Required:
Channel Fill, Sta. 3+55: 30 Cu. Yds.

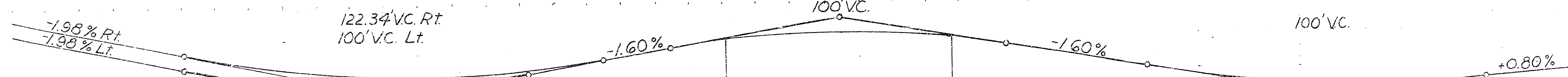
The free and compacted fill includes all compaction
of whatever type within limits indicated. Approximate
quantities are as follows:
Type A (MR-90) 1540 Cu. Yds.
Type B (MR-90) 480 Cu. Yds.
(Shrinkage allowance of 2% provided)

Sta. 4+84, Construct 19'-26'-19"
Continuous RC Slab Span Bridge
Pile Bent Type Abutments & Piers.
43'-8" Roadway & 4'-4" Sidewalks.

CURVE DATA
(Channel Change)
 $\Delta = 60^\circ$
 $D = 57'17"-45"$
 $R = 100.00'$
 $L = 104.72'$

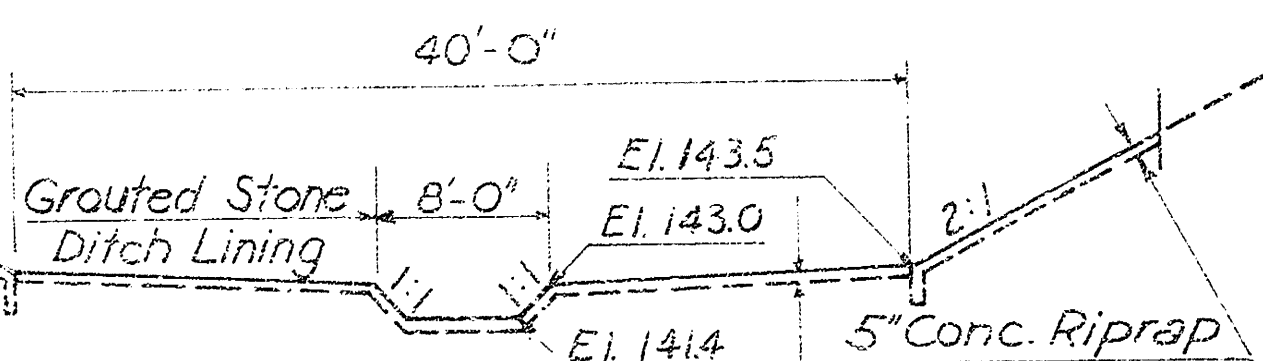


TYPICAL ROADWAY SECTION
(Fill)



NOTE: Top of Curb Profile
= Crown Gr. on Bridge.

CHANNEL SECTION AT BRIDGE



+92.80 PVI Lt. EL 150.21
150.66
+53.97 PVI Rt. EL 150.39
150.94

+92.80 PVI Lt. EL 150.21
150.66

+53.97 PVI Rt. EL 150.39
150.94

+34 PVI EL 151.67

+84 PVI EL 152.47
152.07

+34 PVI EL 151.67

+74.72 PVI EL 151.02

+24.72 PVI EL 150.22
150.52

+74.72 PVI EL 151.02

+150.69

+150.82

+150.82

+150.82

+150.82

+150.82

+150.82

+150.82

+150.82

+150.82

+150.82

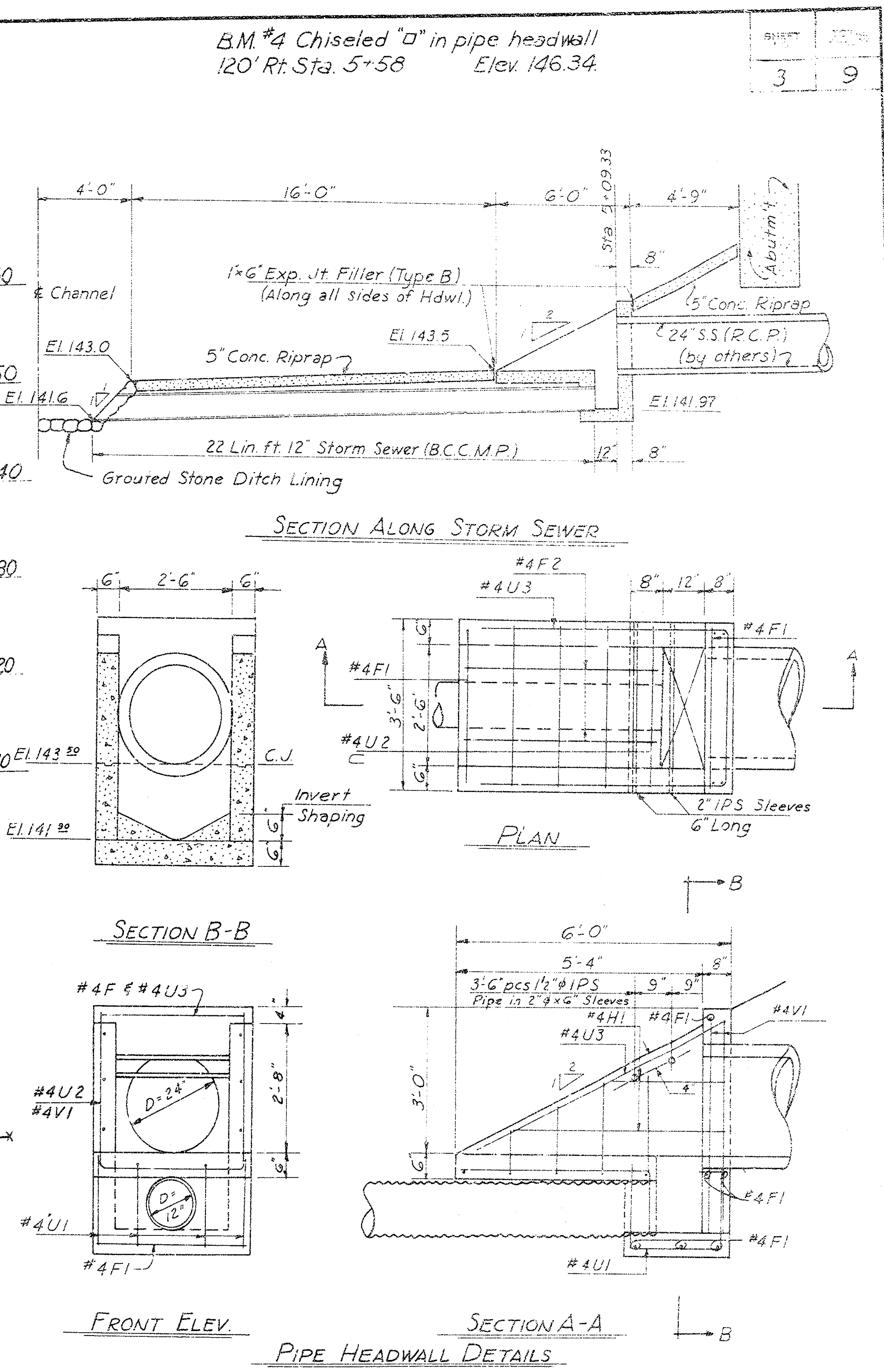
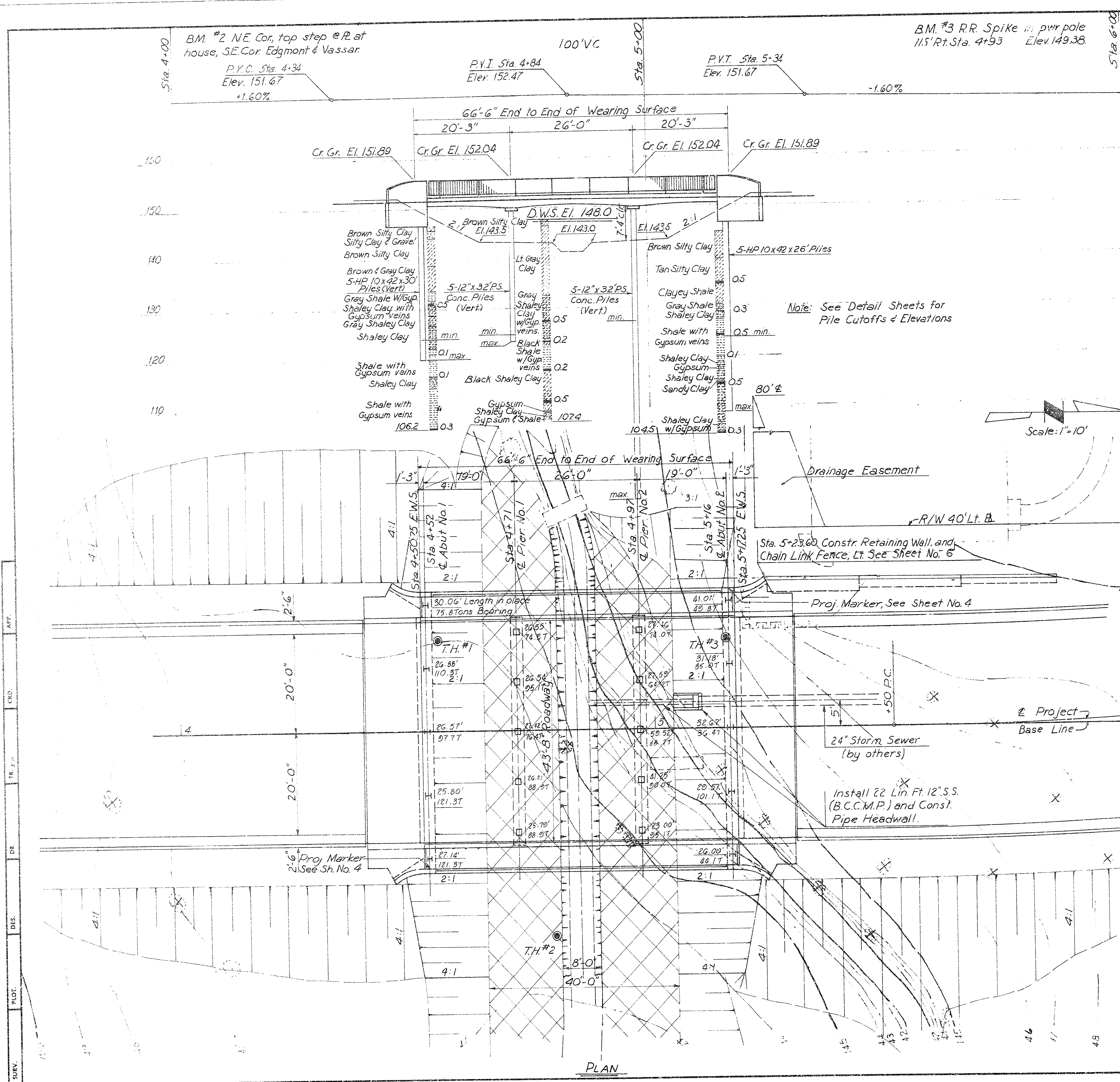
+150.82

+150.82

+150.82

NOTE:
RIPRAP: REINFORCED CONCRETE RIPRAP SHALL BE OF
CLASS "A" CONCRETE. WIRE REINFORCING MESH SHALL
BE COMPOSED OF NO. 3/4 STEEL WIRE SPACED AT 8"
CENTERS EACH WAY. REINFORCEMENT AS SHOWN IS IN-
CLUDED IN UNIT PRICE BID FOR "REINFORCED CON-
CRETE RIPRAP (5")". MEASUREMENT OF CONCRETE
SHALL BE IN SQ. YDS. AND SHALL BE THE OUTSIDE
SURFACE AREA, INCLUDING THE TOE WALL, REGARD-
LESS OF THE THICKENING SHOWN ON THE PLANS.

REV.	DATE	DESCRIPTION
CS	1-11-77	As Built
CITY OF WICHITA, KANSAS R.W. LINN, P.E., CITY ENGINEER		
VASSAR STREET BRIDGE OVER SLEEPY HOLLOW CREEK		
CONTOUR MAP & PROFILE		
DELAMATER, FREUND & SCHERER, P.A. ENGINEERS & ARCHITECTS WICHITA, KANSAS		
SCALE	DATE December, 1975	DWG. NO. 79-R-2



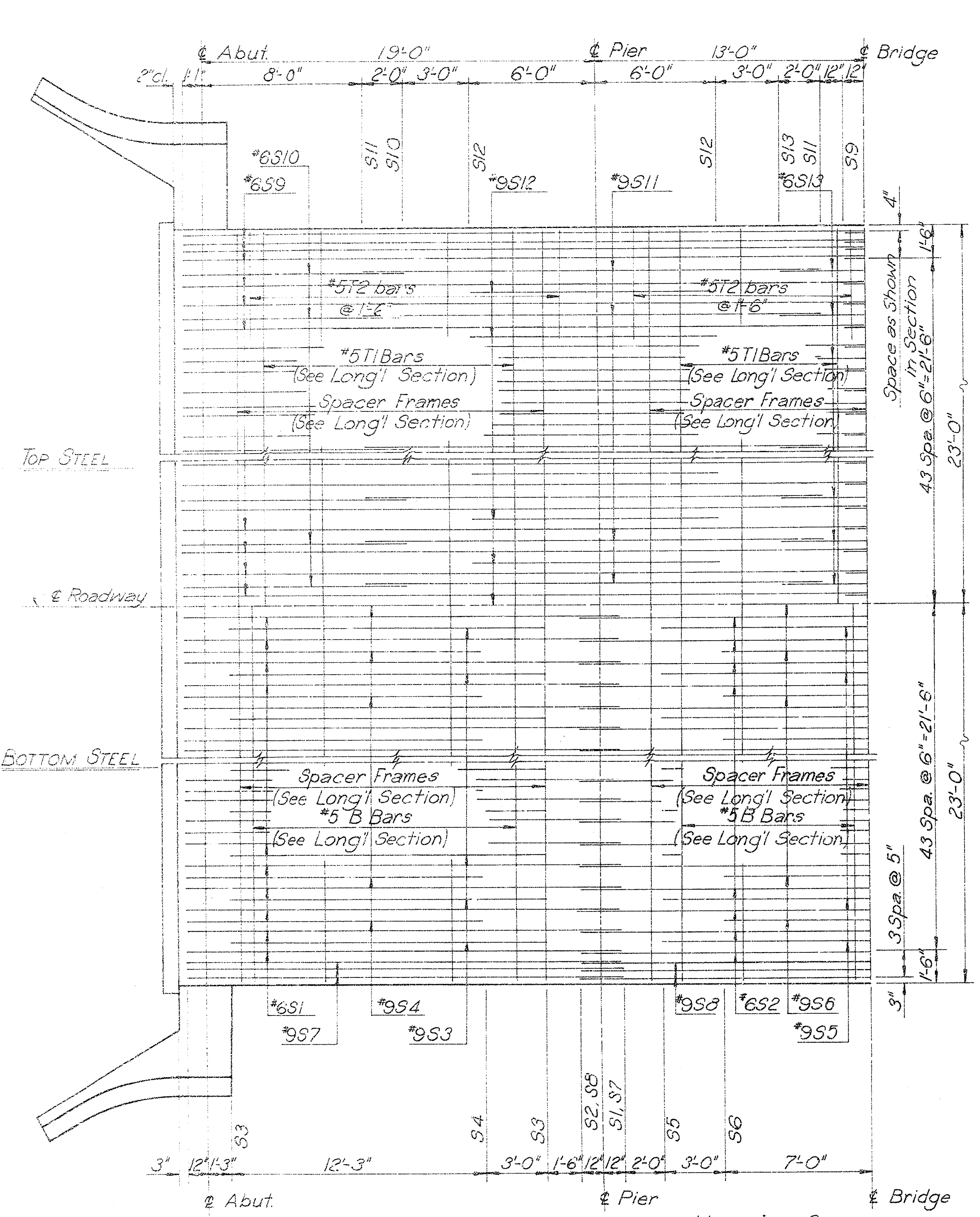
NOTE:
CLASS A (AE) CONCRETE SHALL BE USED IN CONSTRUCTING PIPE HEADWALL. CONCRETE AND REINFORCING STEEL FOR PIPE HEADWALL ARE INCLUDED IN THE RESPECTIVE ITEMS UNDER "GRADING QUANTITIES". EXCAVATION FOR 12" STORM SEWER AND PIPE HEADWALL SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO 12" STORM SEWER (B.C.C.M.P.) AND CLASS A (AE) CONCRETE.

DESIGN LOADING: HG20-44 A.A.S.H.T.O. - SPEC. (1973 EDITION)

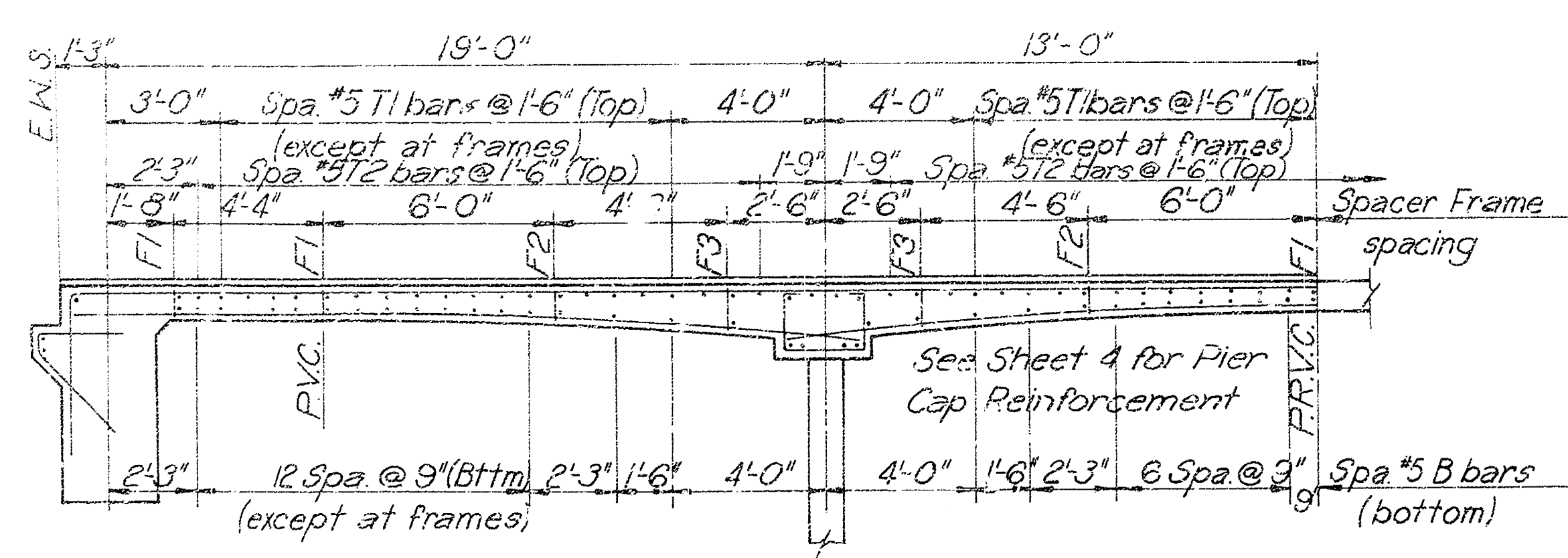
DRAINAGE DATA		
DRAINAGE AREA	510	Acres
DESIGN DISCHARGE	1,000	C.F.S.
AVERAGE FLOW:	Less Than 5	C.F.S.
WATERWAY PROVIDED:		
BELOW D.W.S.	242	Sq.Ft.
TOTAL	348	Sq.Ft.

SEE SHEET NO. 1 FOR GENERAL NOTES AND SUMMARY OF QUANTITIES.

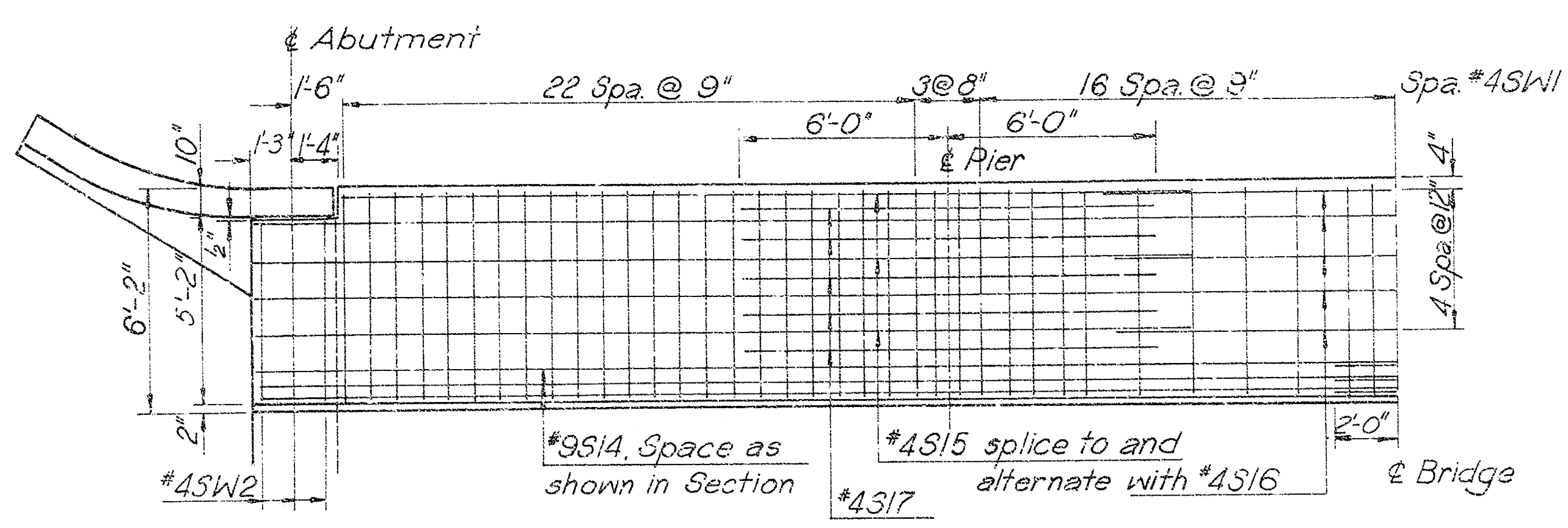
C.S.	1-11-77	As Built
DATE		
CITY OF WICHITA, KANSAS		
R.W. LINN, P.E., CITY ENGINEER		
VASSAR STREET BRIDGE		
OVER SLEEPY HOLLOW CREEK		
CONSTRUCTION LAYOUT		
DELAMATER, FREUND & SCHERER, P.A.		
ENGINEERS & ARCHITECTS		
WICHITA, KANSAS		
SCALE	DATE	NO.
	December, 1975	79-R-3



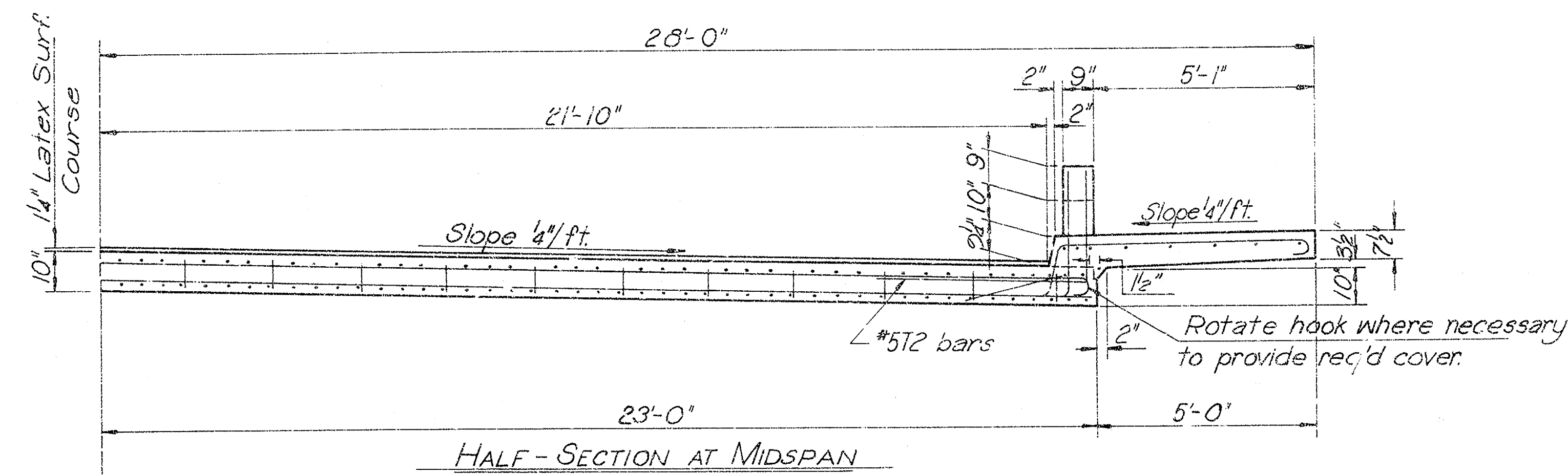
END SPAN HALF INT. SPAN
HALF PLAN SHOWING REINFORCEMENT



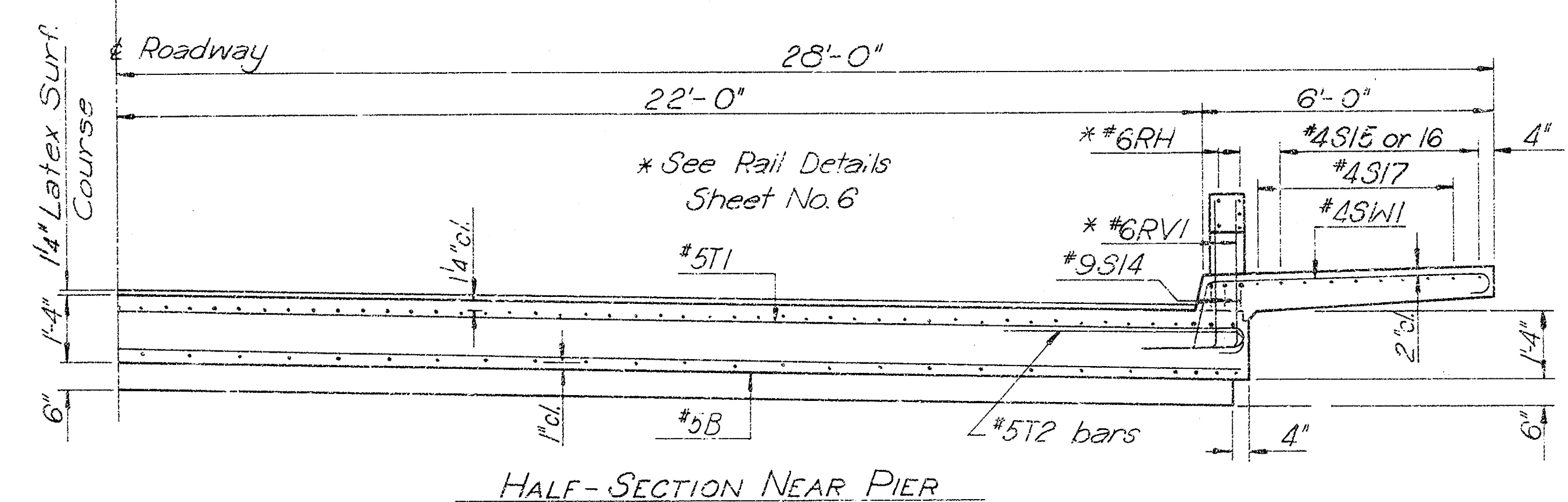
HALF LONGITUDINAL SECTION



PART PLAN OF SIDEWALK
NOTE: See Sheet No. 6 for Rail Details

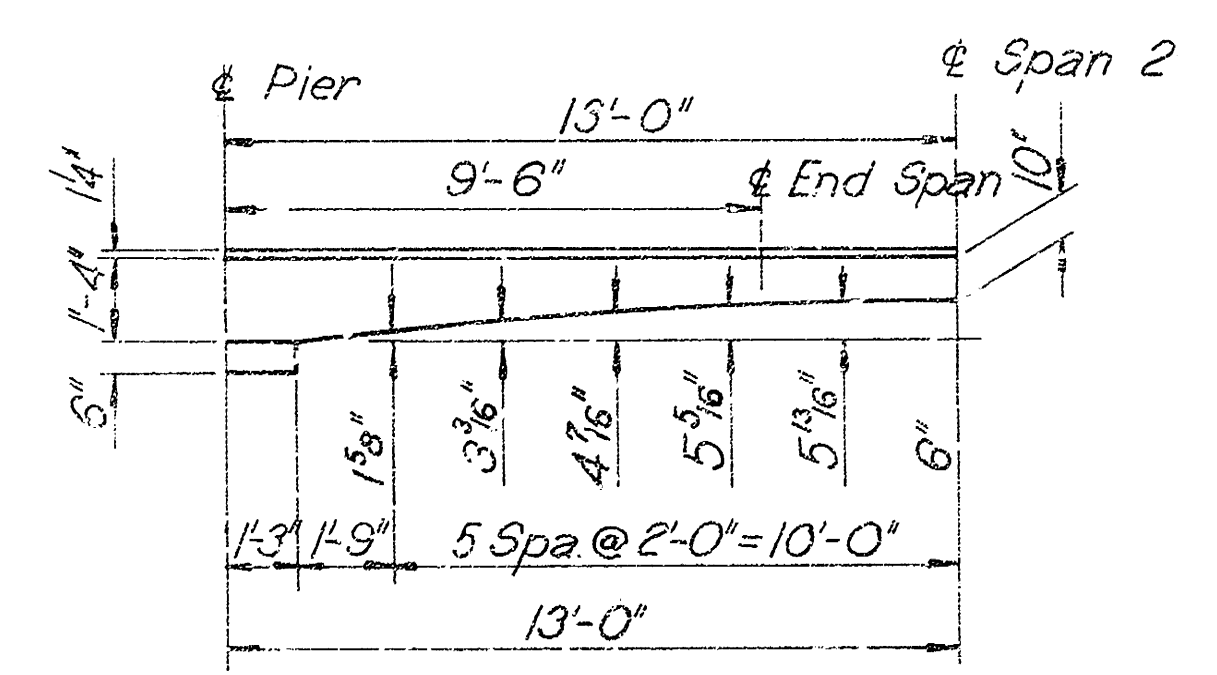


HALF-SECTION AT MIDSPAN

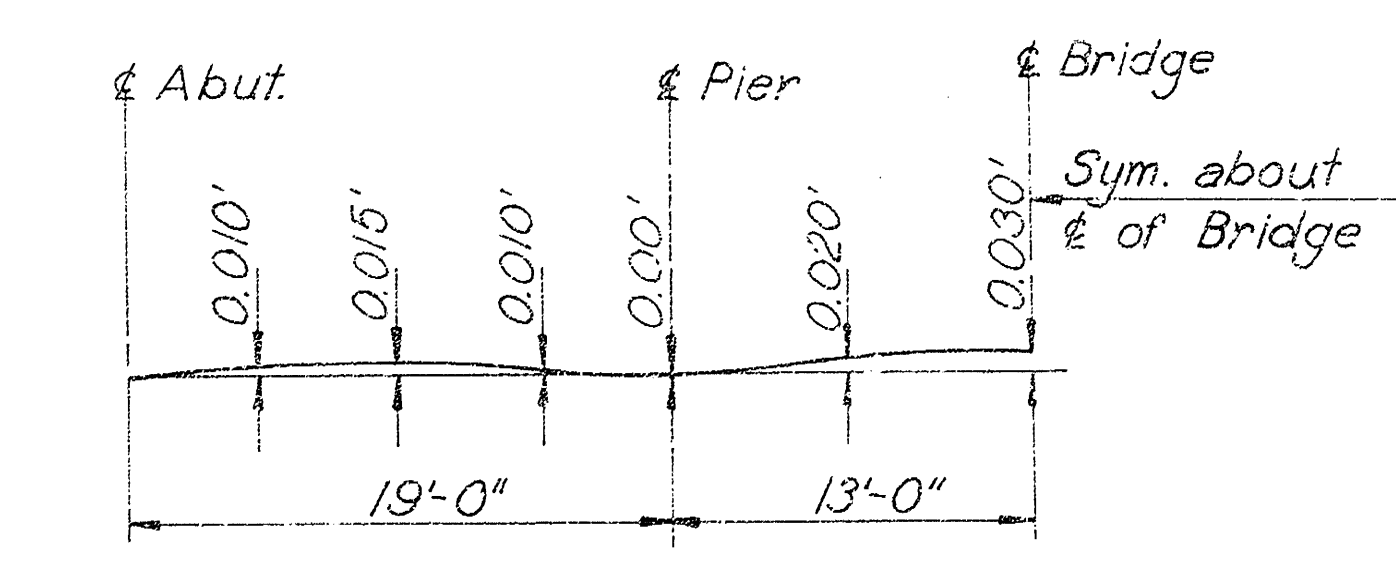


HALF-SECTION NEAR PIER

NOTES:
All concrete shall be Class AAA(AE).
Bevel all exposed edges with 3/4" triangular molding unless otherwise noted.
Dimensions relative to placement of reinforcing are to centerline of bars unless otherwise noted.
See Sheet No. 1 for General Notes.
See Sheet No. 7 for Bar List and Bending Diagrams.
DESIGN LOADING: HS20-44 A.S.H.T.O. Spec. (1973 Edition)
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. (Reinf.)

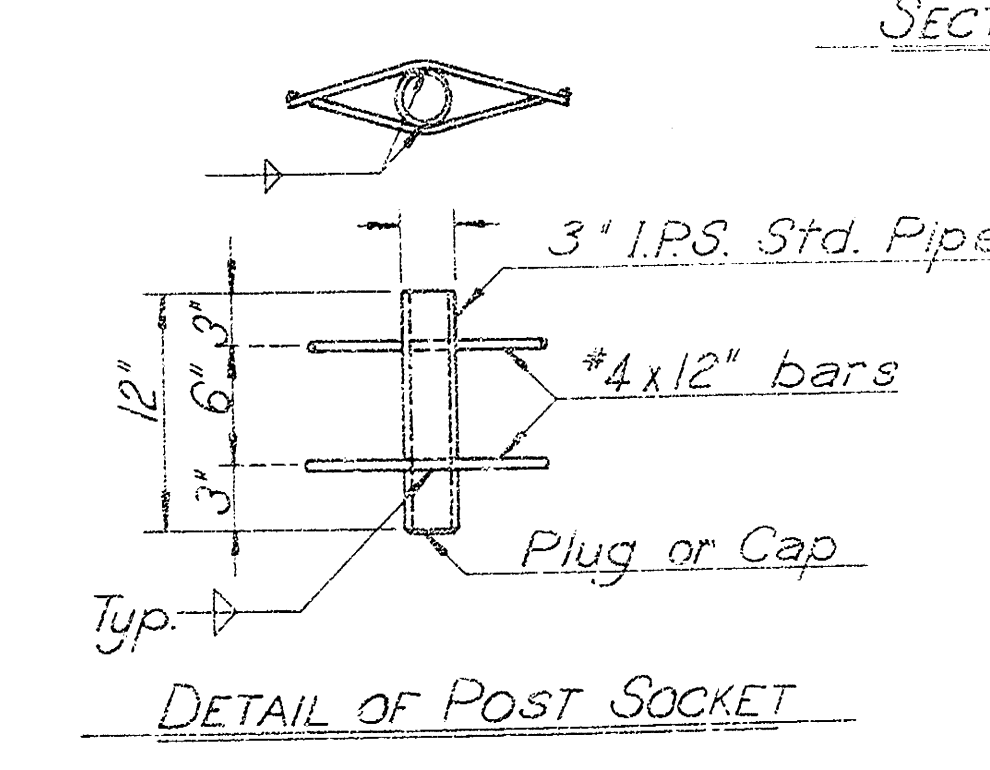
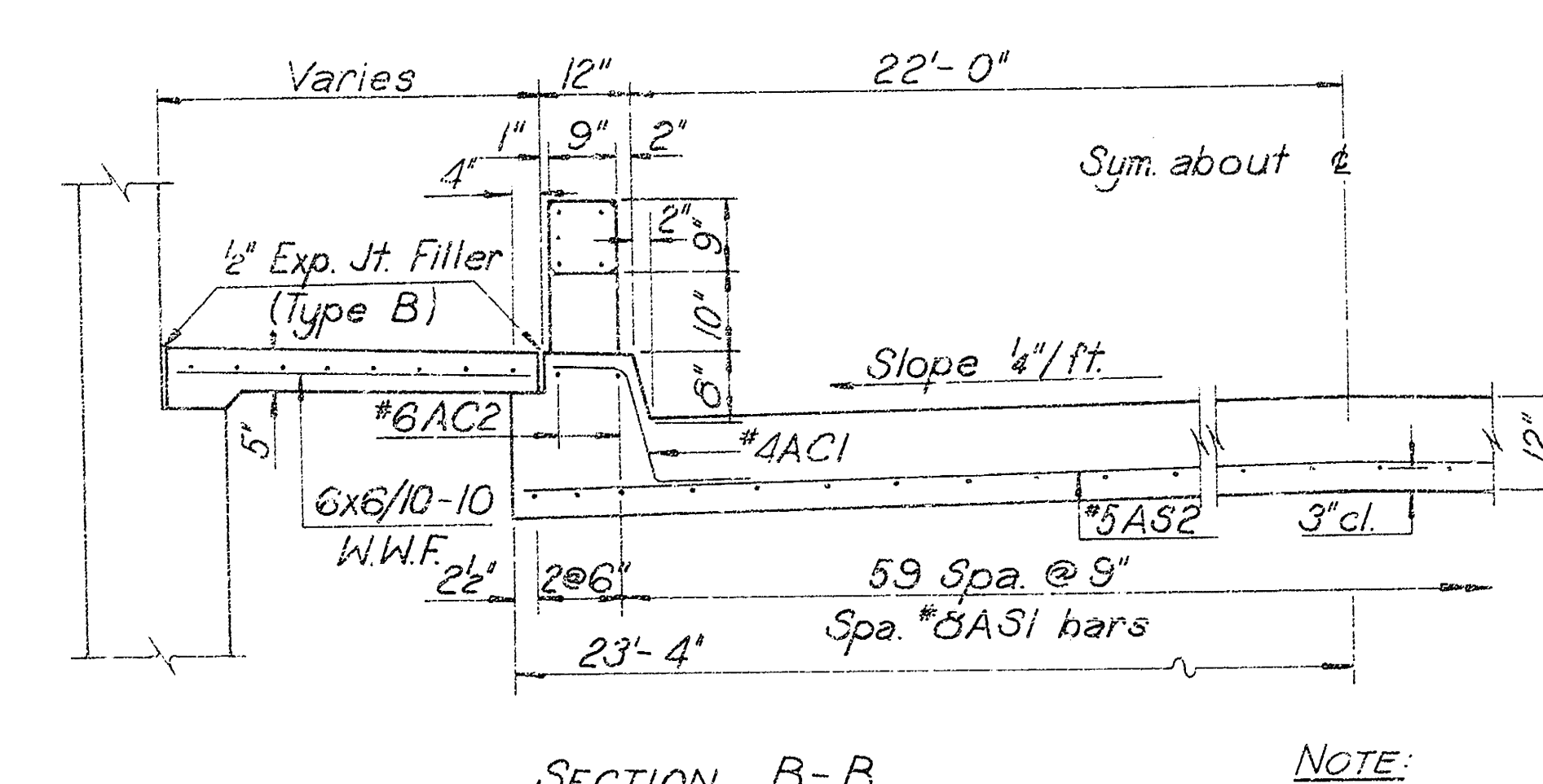
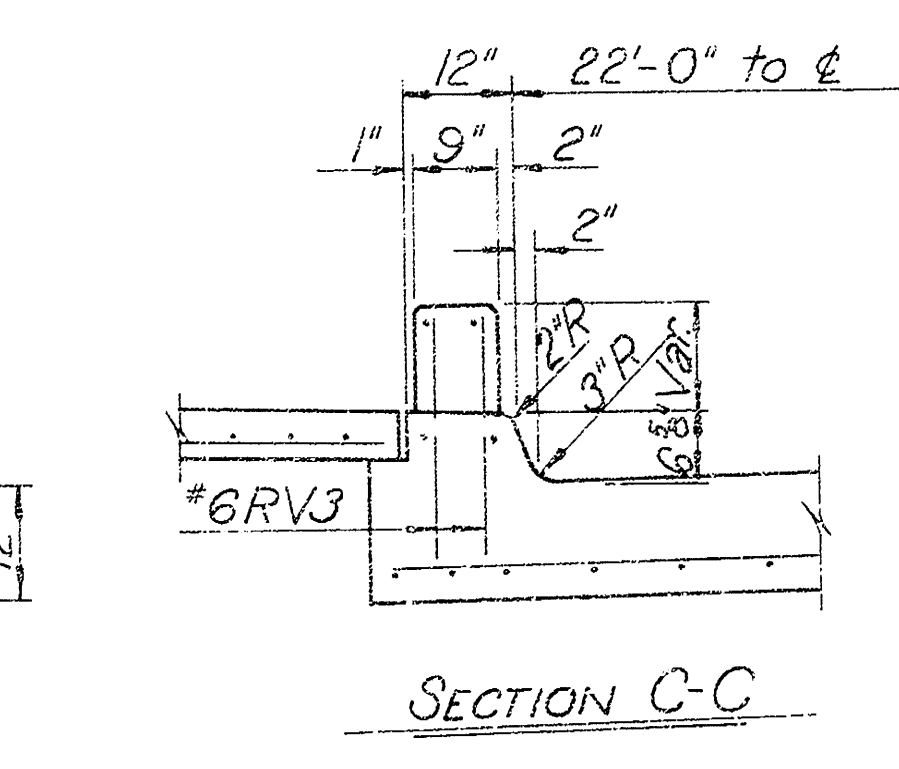
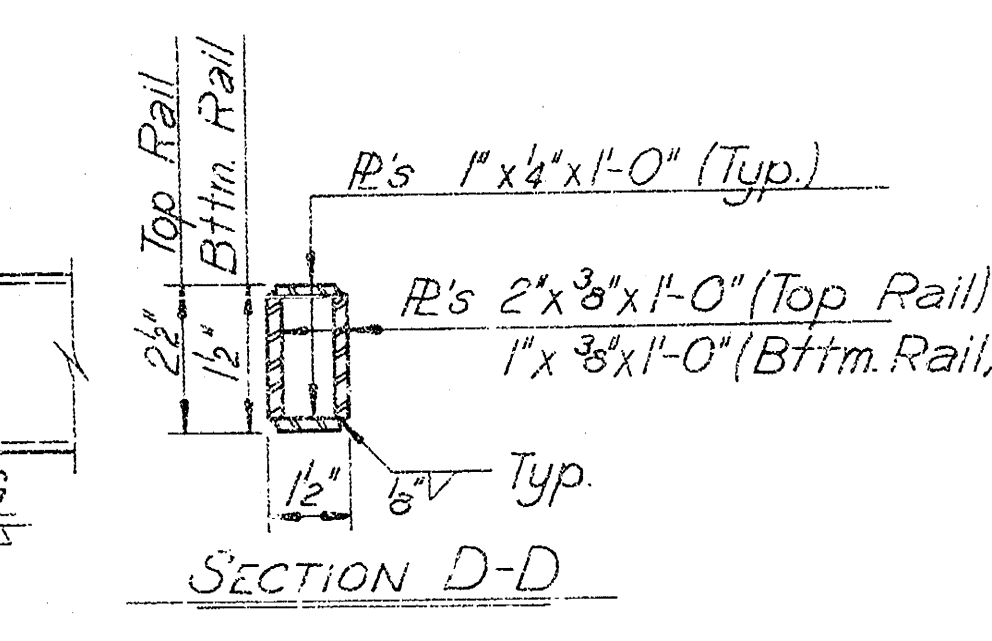
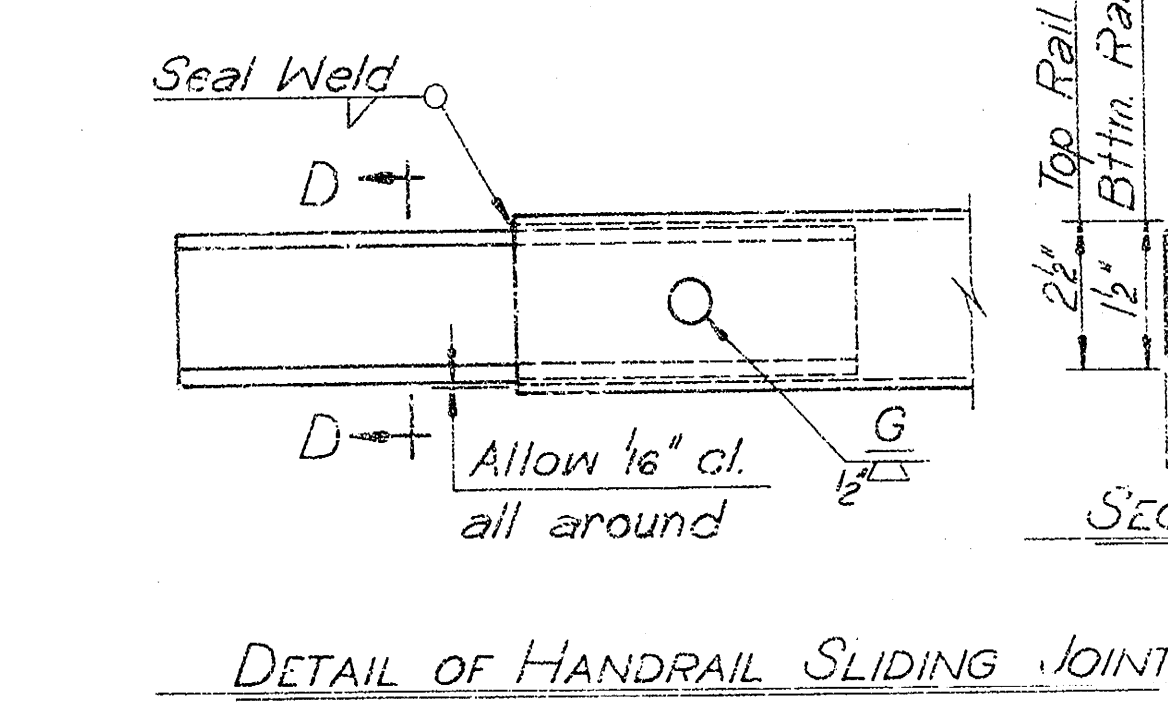
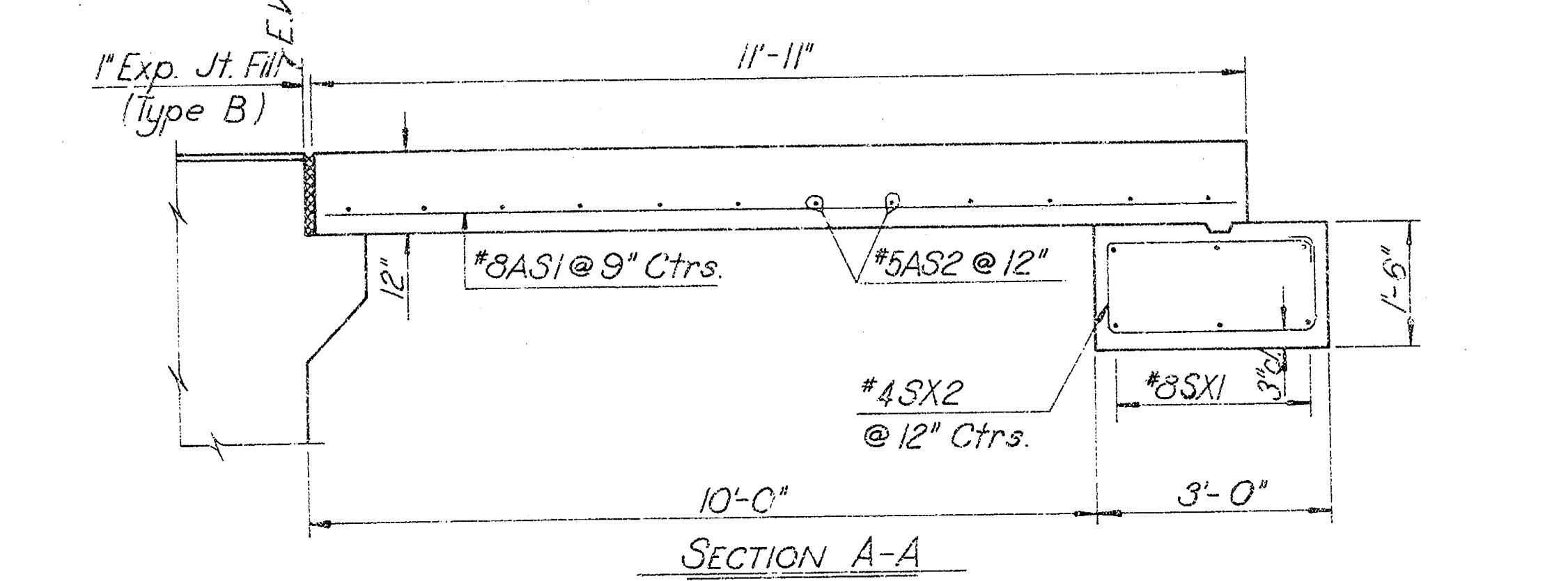
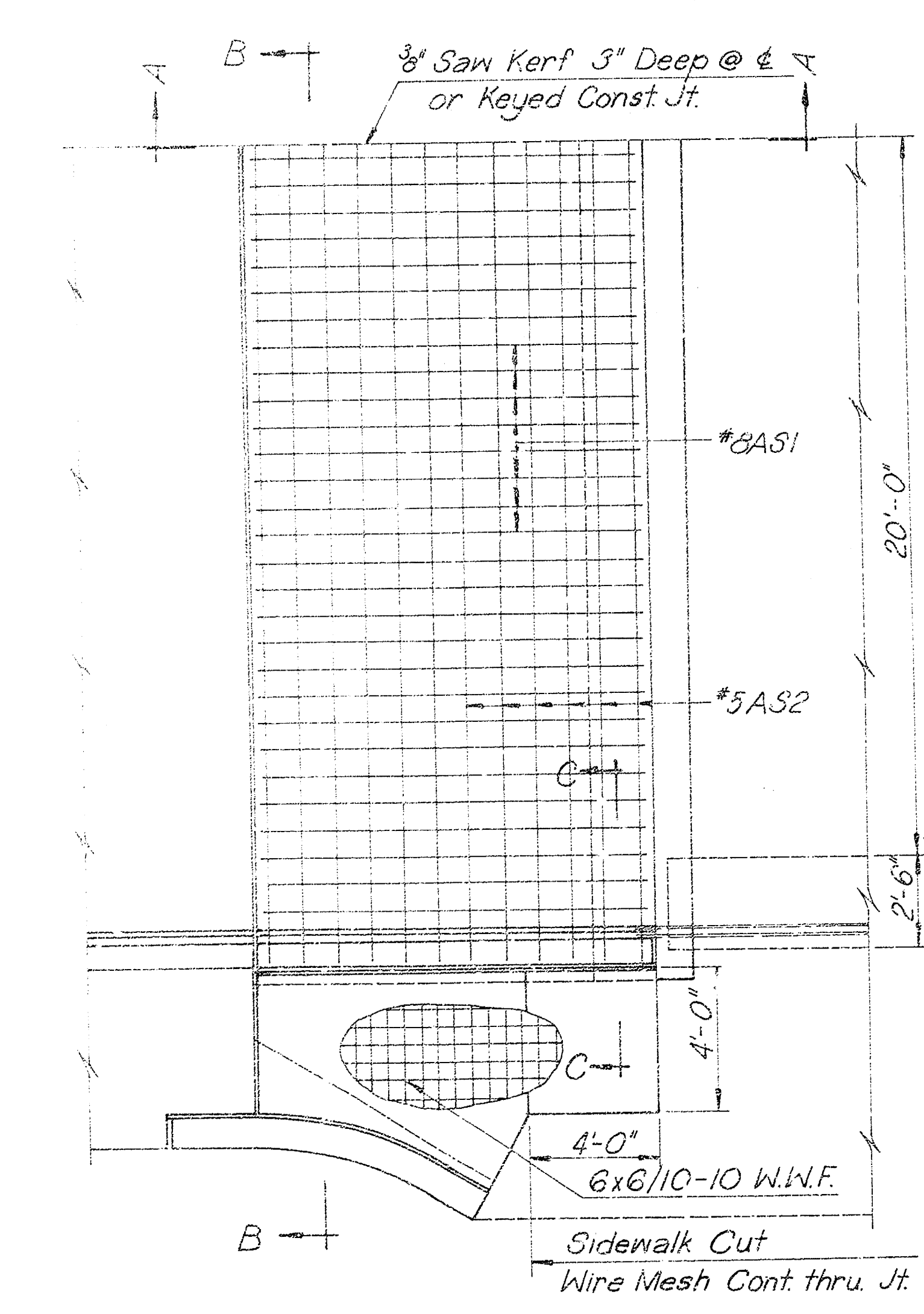
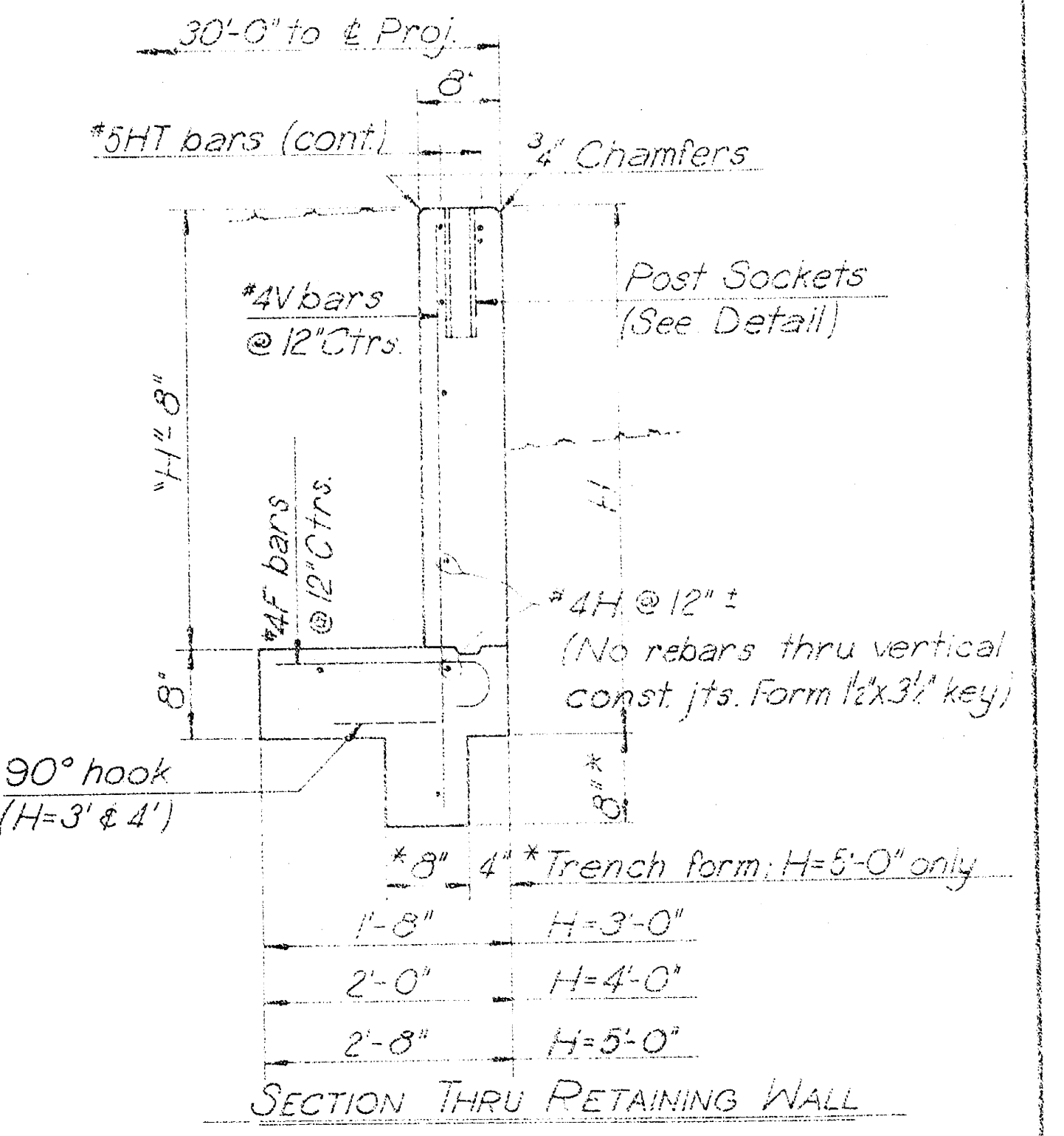
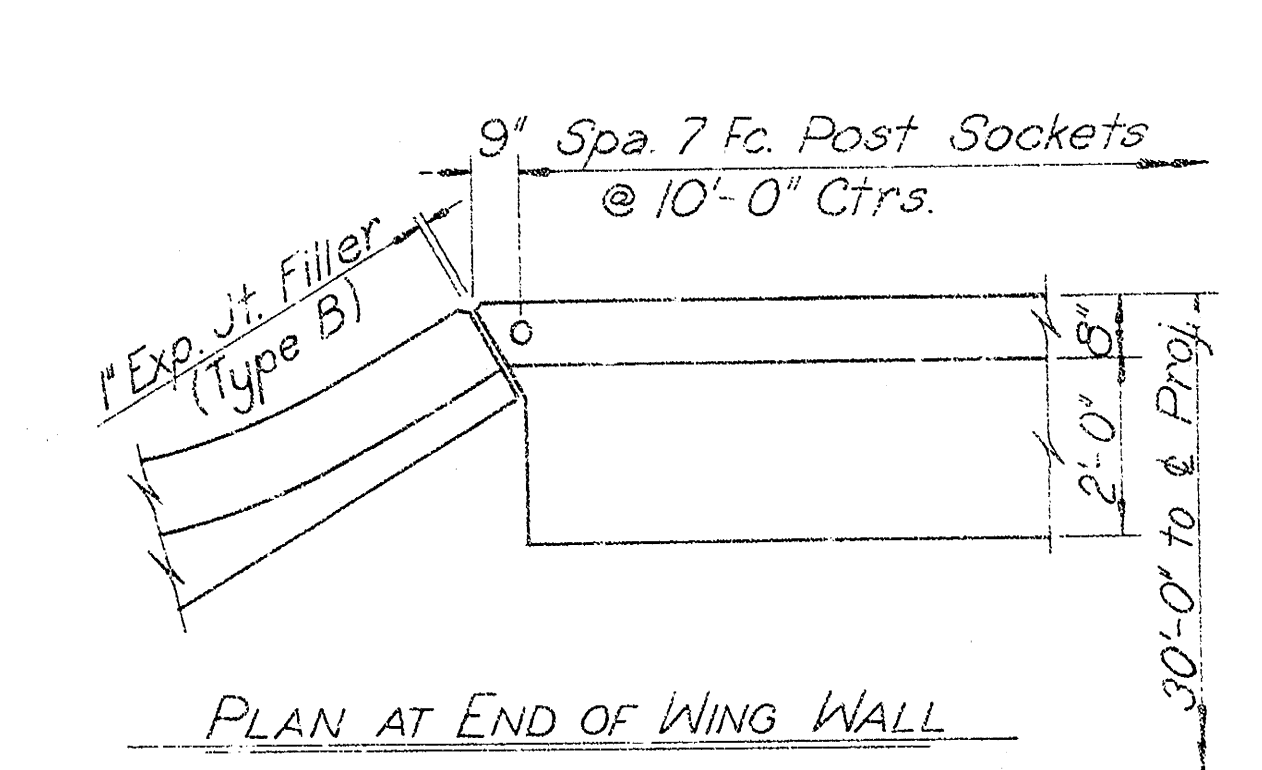
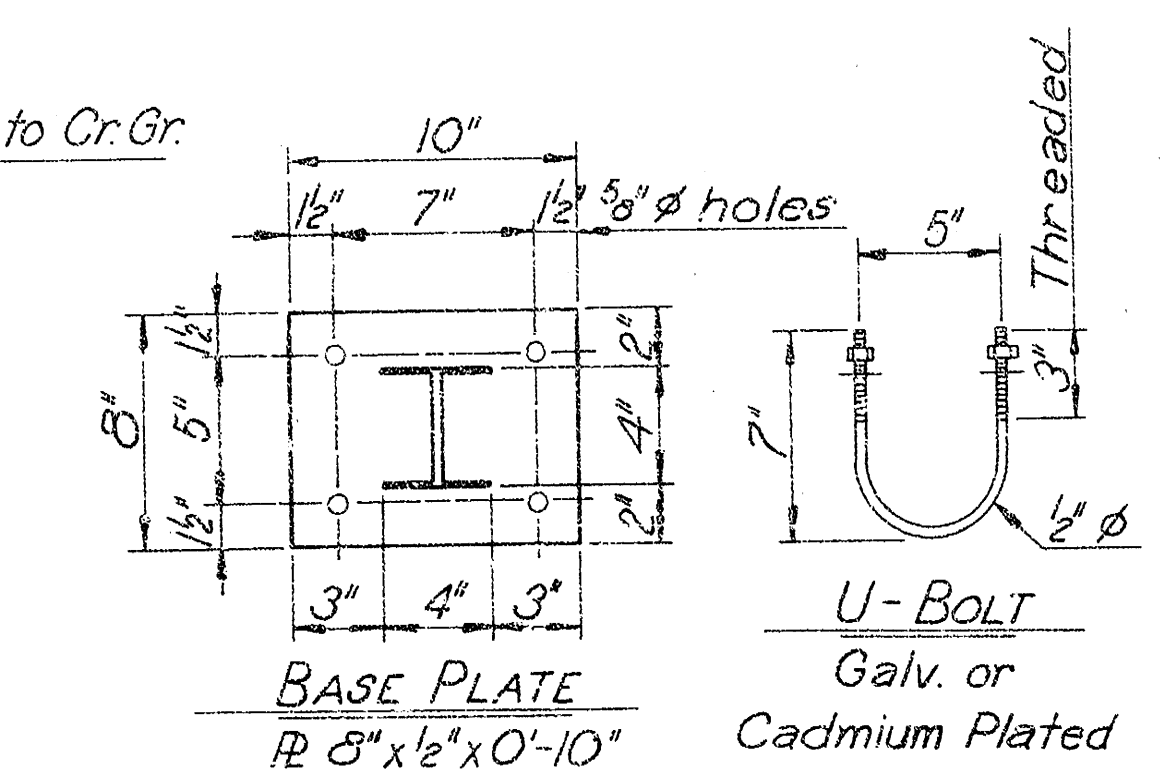
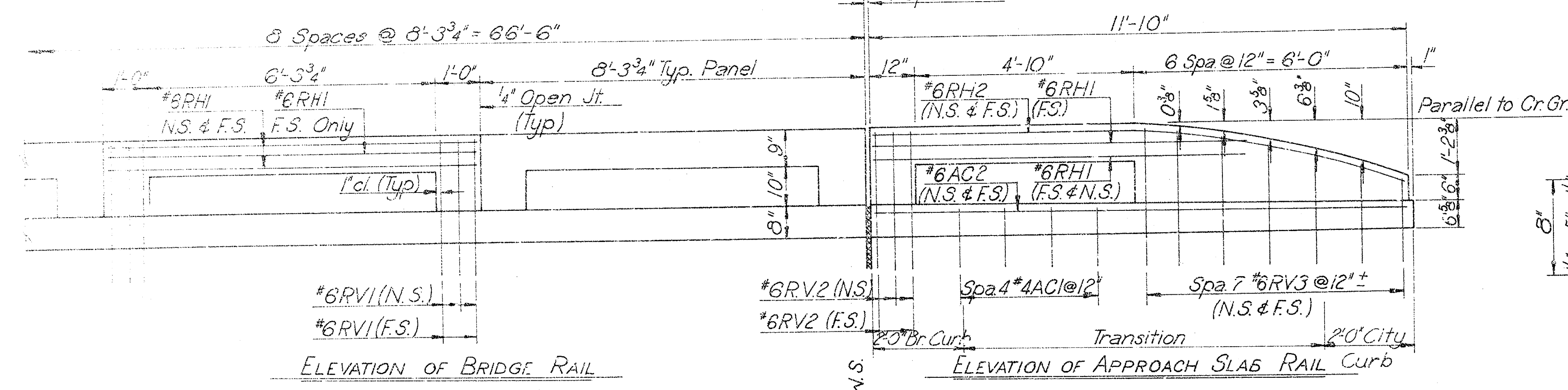
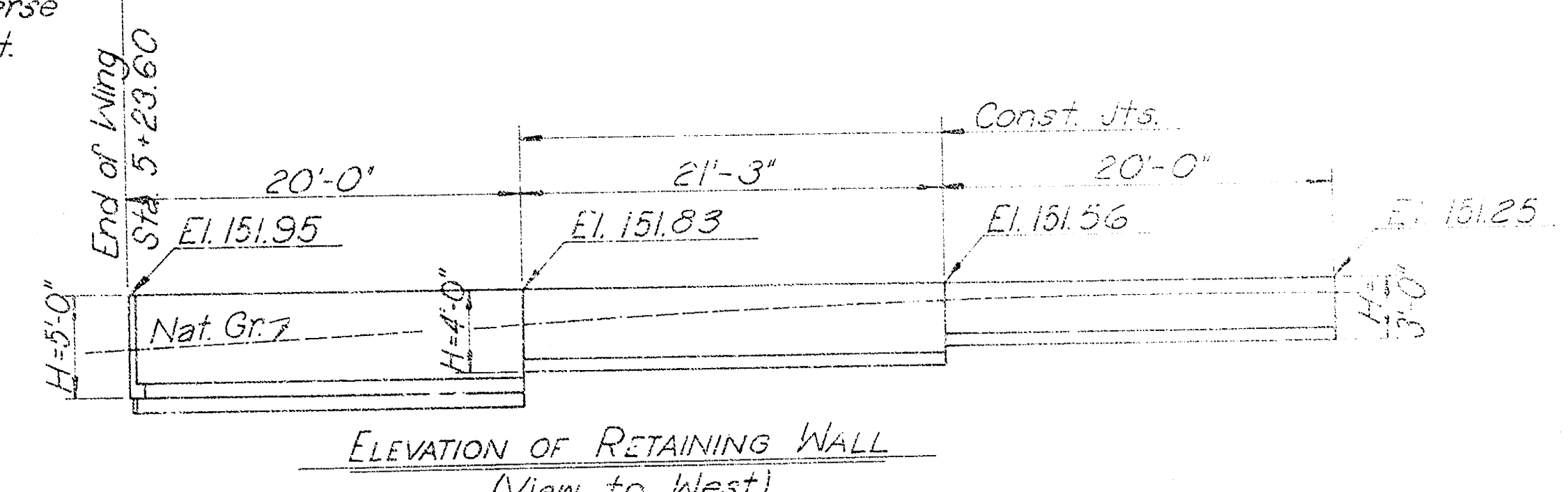
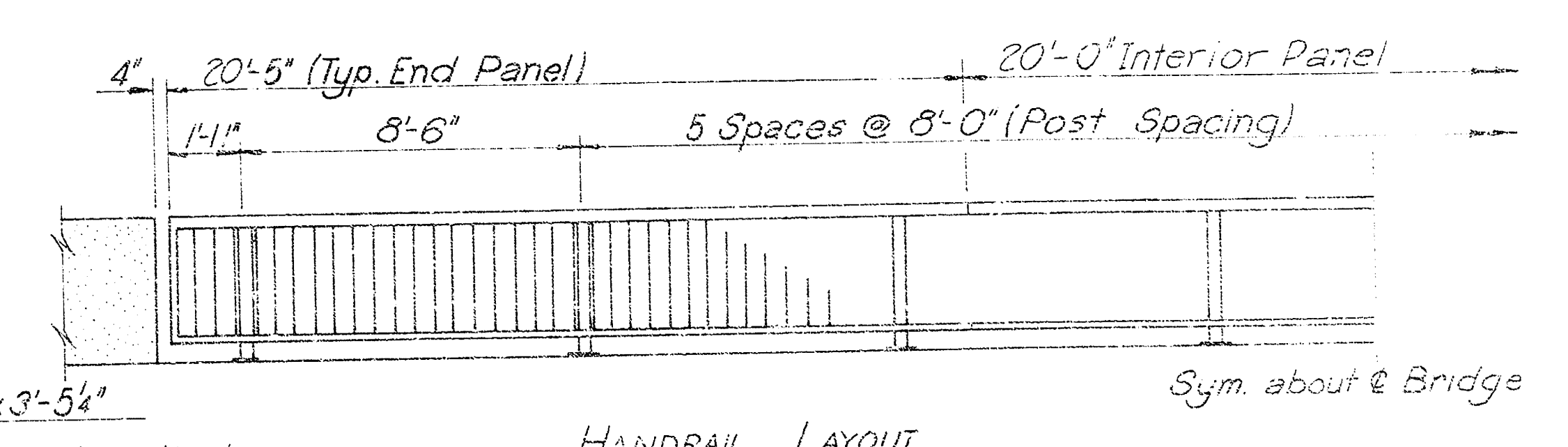
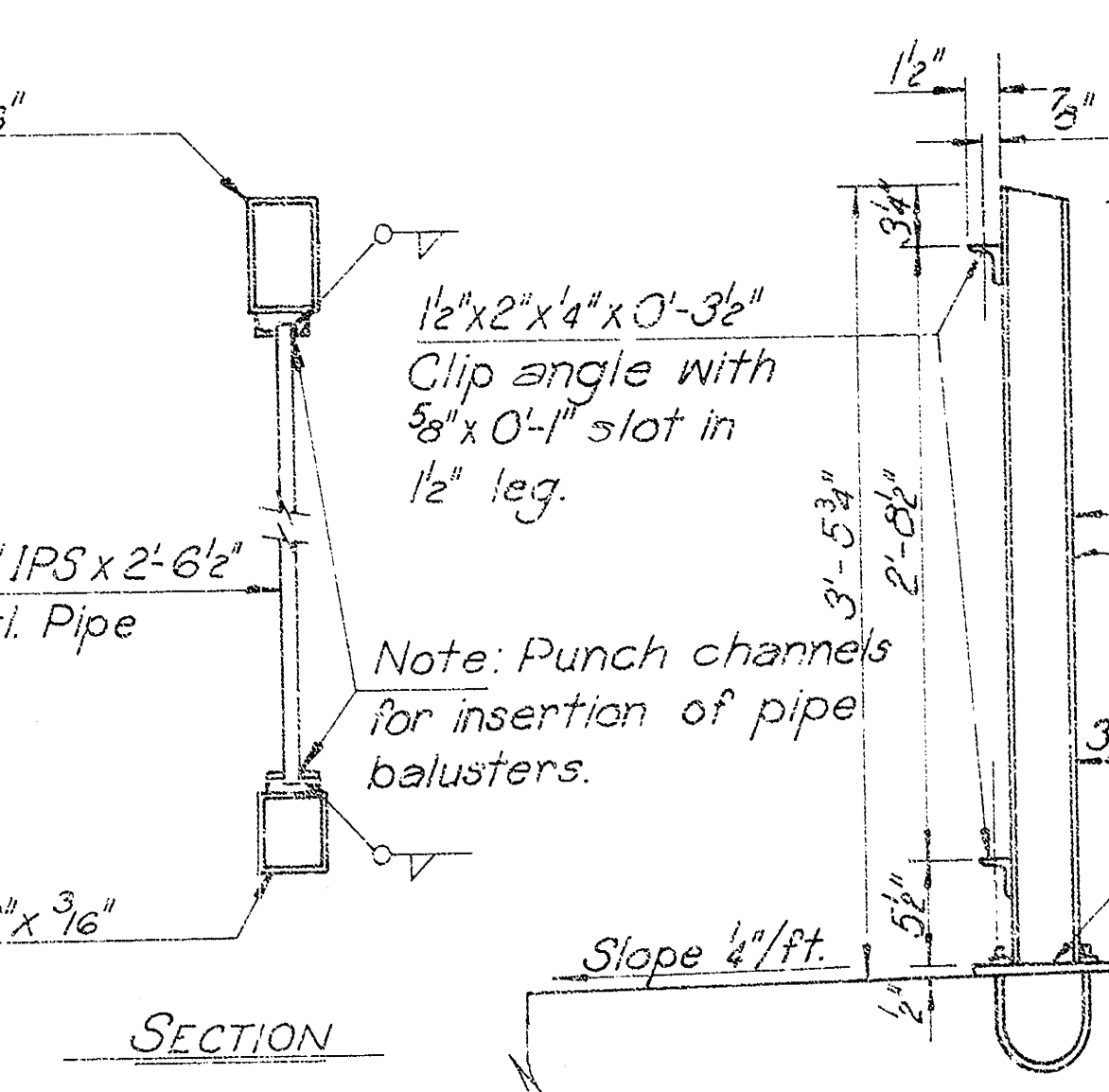
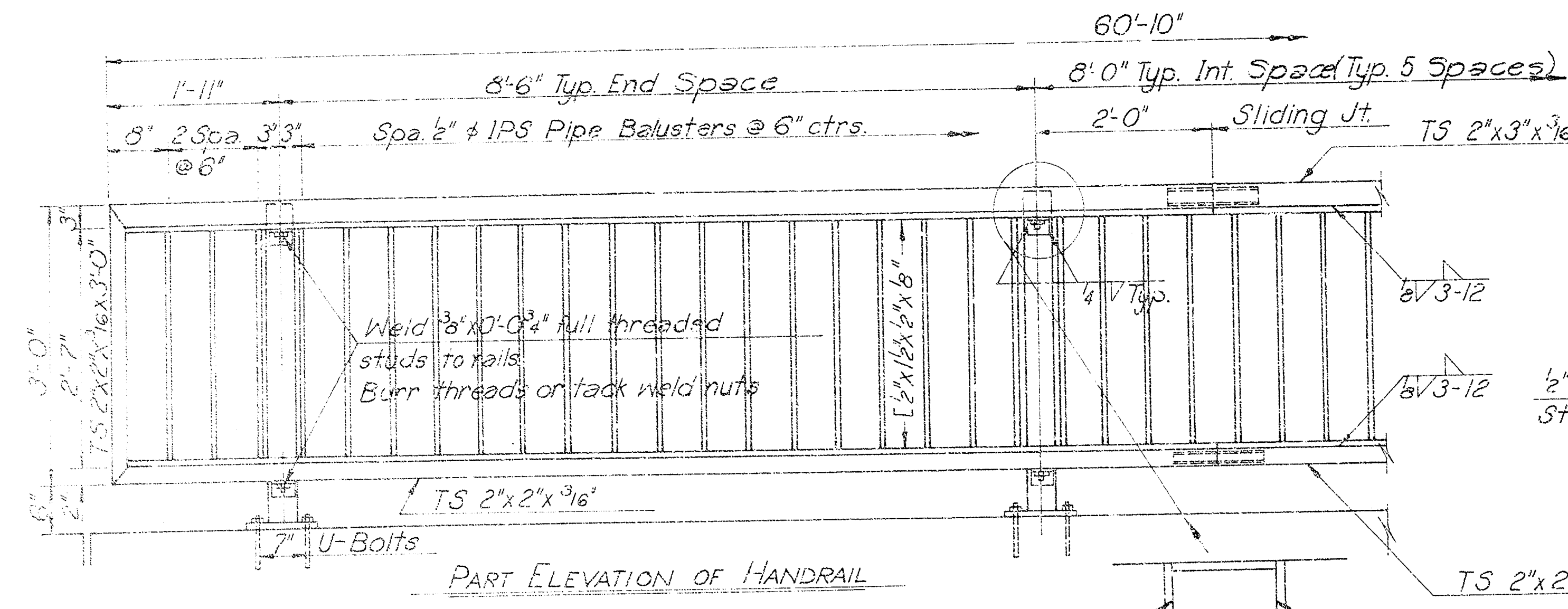


HAUNCH ORDINATES



DEAD LOAD DEFLECTIONS AT QUARTER POINTS

REV	BY	DATE	DESCRIPTION
1	C.S.	1-11-77	As Built
CITY OF WICHITA, KANSAS R.W. LINN, P.E., CITY ENGINEER			
VASSAR STREET BRIDGE OVER SLEEPY HOLLOW CREEK SUPER STRUCTURE LAYOUT & DETAILS			
DELAMATER, FREUND & SCHERER, P.A. ENGINEERS & ARCHITECTS WICHITA, KANSAS			
SCALE	DATE	DWO. 79-R-5	
	December, 1975		



NOTE:
Class AAA (AE) Concrete shall be used in approach slabs, including sidewalks and rails. Cure the concrete as provided for bridge deck.
Approximate quantities, each slab (two thus):
Class AAA (AE) Concrete: 31.5 Cu. Yds.
Reinforcing Steel: 3,960 Lbs.*
*Includes 25 Lbs. welded wire mesh.

Class A (AE) Concrete shall be used in retaining walls. Post sockets will not be paid for directly, but shall be subsidiary to the item "Chain Link Fence." Excavation for retaining wall shall not be paid for directly, but shall be considered subsidiary to the item "Class A (AE) Concrete." See Sheet No. 1 for General Notes. See Sheet No. 7 for Bar List and Bending Diagrams.

C.S. 1-11-74 As Built		DESCRIPTION
REV.	BY	DATE
CITY OF WICHITA, KANSAS R.W. LINN, P.E., CITY ENGINEER		
VASSAR STREET BRIDGE OVER SLEEPY HOLLOW CREEK APPROACH SLAB, RAILS, RETAINING WALL		
DELAMATER, FRUEND & SCHERER, P.A. ENGINEERS & ARCHITECTS WICHITA, KANSAS		DATE December, 1975
SCALE	NO. 79-R-6	

Hand-drawn site plan showing building footprints, setbacks, and dimensions. The plan includes a central building footprint with setbacks of 3'-2", 2'-2", and 1'-6". To the left is another building footprint with setbacks of 4'-3" and 1'-0". Dimensions for setbacks are labeled: 3'-2", 2'-2", 1'-6", 4'-3", 1'-0", 1'-3 1/2", 1'-10 1/2", and 2'-3". Building footprints are labeled AU1, AU2, AU3, AU4, AU5, AU6, AU7, AU8, AU13, AU14, AU15, AU16, AU17, AU18, AU19, AU20, AU21, AU22, AU23, AU24, AU25, AU26, AU27, AU28, AU29, AU30, AU31, AU32, AU33, AU34, AU35, AU36, AU37, AU38, AU39, AU40, AU41, AU42, AU43, AU44, AU45, AU46, AU47, AU48, AU49, AU50, AU51, AU52, AU53, AU54, AU55, AU56, AU57, AU58, AU59, AU60, AU61, AU62, AU63, AU64, AU65, AU66, AU67, AU68, AU69, AU70, AU71, AU72, AU73, AU74, AU75, AU76, AU77, AU78, AU79, AU80, AU81, AU82, AU83, AU84, AU85, AU86, AU87, AU88, AU89, AU90, AU91, AU92, AU93, AU94, AU95, AU96, AU97, AU98, AU99, AU100. A note indicates an increase from 3'-10" to 5'-4" by 3'-inc. and a cut of 4' each length. A scale bar is provided at the bottom.

Scale: 1" = 10'

Hand-drawn technical sketches of mechanical parts, including a vertical assembly of four tubes (AU4, AU5, AU6, AU7, AU8) with dimensions, a bent pipe section (PS1), a square flange (AO*PO), and two curved pipe sections (AWI, AW2) with various radii and dimensions.

Vertical Assembly (Left): A vertical stack of four tubes labeled AU4, AU5, AU6, AU7, and AU8. Dimensions for each tube are: AU4 (7'-6"), AU5 (7'-9"), AU6 (8'-0"), AU7 (8'-3"), and AU8 (8'-4").

Bent Pipe Section (Bottom Left): A bent pipe section labeled PS1. The horizontal segment is 2'-6" and the vertical segment is 6". The bend radius is 2'-0".

Square Flange (Bottom Center): A square flange labeled AO*PO. The side length is 2'-1" and the central hole diameter is 2'-1".

Curved Pipe Section (Top Right): A curved pipe section labeled AWI. The horizontal segment is 2'-6" and the vertical segment is 6". The bend radius is 2'-0".

Curved Pipe Section (Bottom Right): A curved pipe section labeled AW2. The horizontal segment is 2'-4" and the vertical segment is 5'-7". The bend radius is 11'-0". The section is labeled PS1.

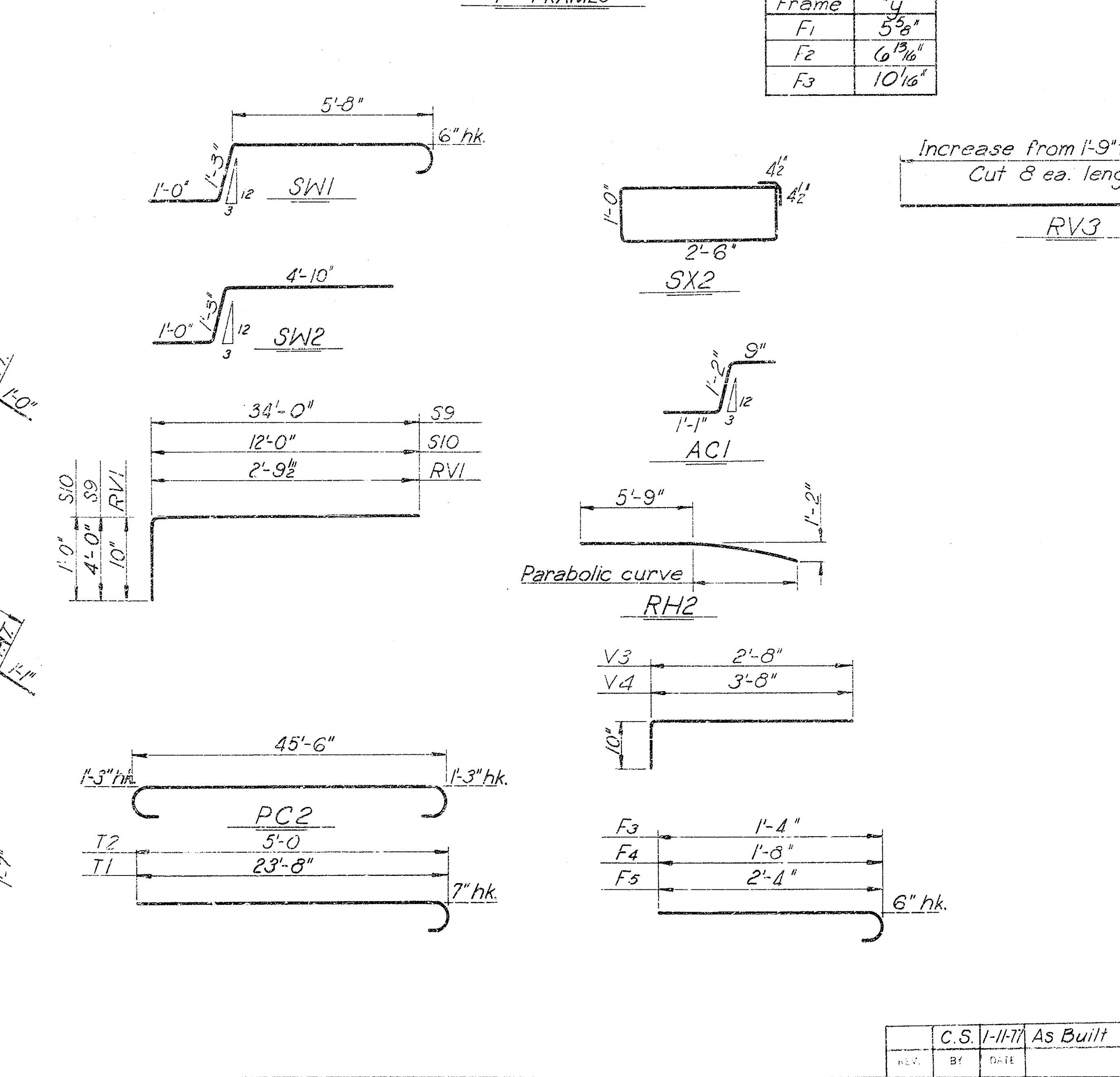
Hand-drawn sketch of a reinforced concrete beam cross-section. The beam has a total width of 14 inches and a total height of 34 inches. The top reinforcement consists of #5 bars. The bottom reinforcement consists of #4 smooth or deformed bars welded to #5 bars. A diagonal crack is shown, extending from the bottom left corner towards the top right. The crack is labeled with a dimension of 10 inches. The top reinforcement is labeled with a dimension of 10 inches. The bottom reinforcement is labeled with a dimension of 10 inches. The crack is labeled with a dimension of 10 inches.

22'-10"

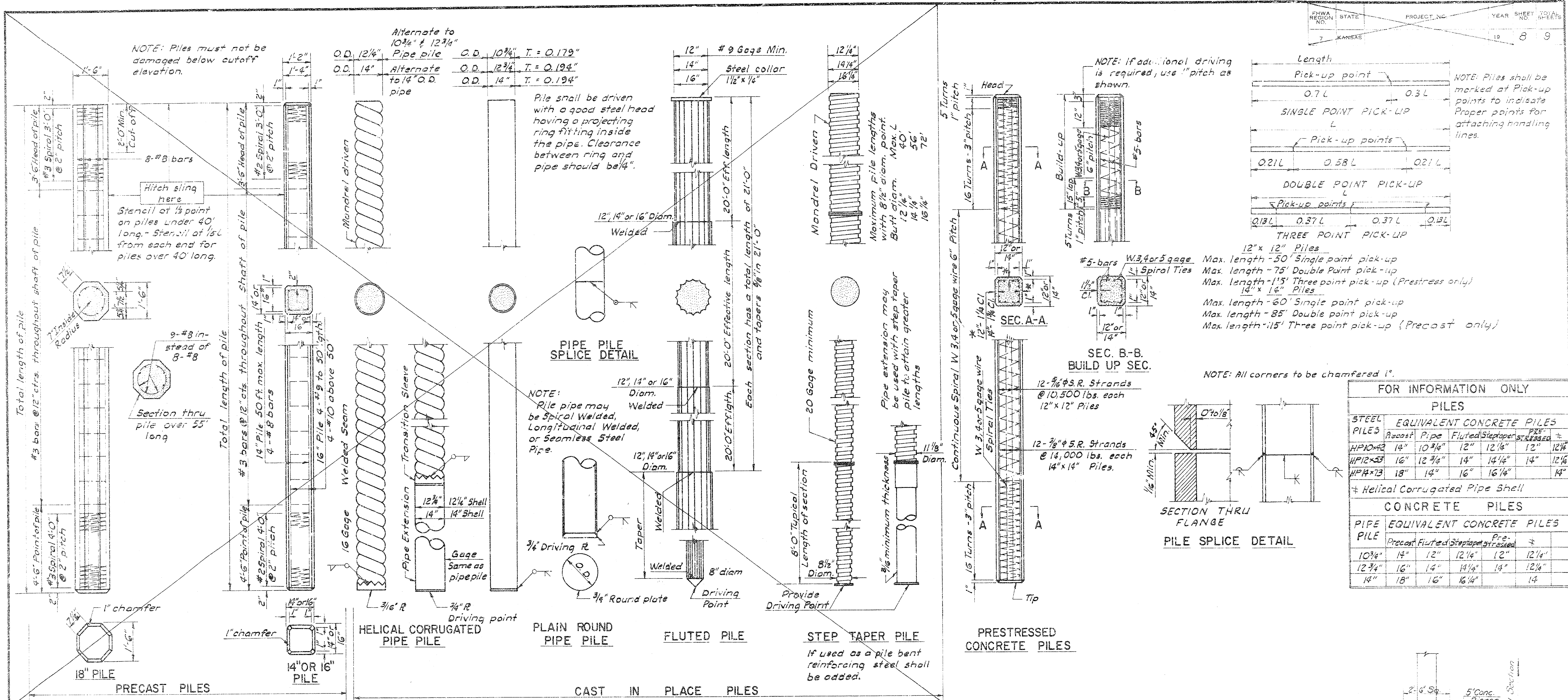
Sym. abt. $\bar{x}$

spaces @ 2'-0"

Diagram description: A horizontal line representing a structural member of length 22'-10". It is divided into 8 equal segments by 7 vertical lines. The segments are labeled "spaces @ 2'-0"". A vertical dashed line is drawn at the center, labeled "Sym. abt. $\bar{x}$ ".



CITY OF WICHITA, KANSAS R.W. LINN, P.E., CITY ENGINEER		
VASSAR STREET BRIDGE OVER SLEEPY HOLLOW CREEK BAR LIST & BENDING DIAGRAMS		
	DELAMATER, FREUND & SCHERER, P. ENGINEERS & ARCHITECTS WICHITA, KANSAS	
	SCALE	DATE <i>December, 1975</i>
		DWG. NO. <i>79-R-7</i>



GENERAL NOTES

- Specifications:**
Standard Specifications for State Road and Bridge Construction as currently used by the State Highway Commission of Kansas. (Ed. 1973).
- Concrete:**
Concrete for cast-in-place shall be Class A concrete, $f'_c = 3,000$ p.s.i. See Sub-Article 703.07 (f)(2) Standard Specifications.
Concrete for Precast and for Prestressed shall be Class AAA concrete $f'_c = 4,000$ p.s.i. See Article 703.07 (a) Standard Specifications.
- Reinforcement:**
Reinforcing bars shall be new billet steel A.S.T.M. Designation A-615 grade 40 without exception. Hooks and spirals may be either plain or deformed bars. See Sub-Section 1006.01 Standard Specifications.
- Precast Piles:**
Precast piles shall conform to the requirements of Article 703.07 (a)(1)(c)(d) Standard Specifications.
- Cast-in-Place Shells:**
Steel shells for Cast-in-Place Concrete Piles shall conform to the requirements of Sub-Section 1006.06 Standard Specifications.
All piles driven without mandrel shall be of the minimum gages or thicknesses shown above, except Fluted pile use No. 9 gage minimum. Piles driven with mandrel shall be of sufficient strength and thickness to withstand driving without injury and to resist harmful distortion and/or buckling due to soil pressure after the mandrel is removed.
Improperly driven, broken or otherwise defective shells shall be removed and replaced or otherwise corrected to the satisfaction of the Engineer, or the driving of an additional pile at no extra cost.

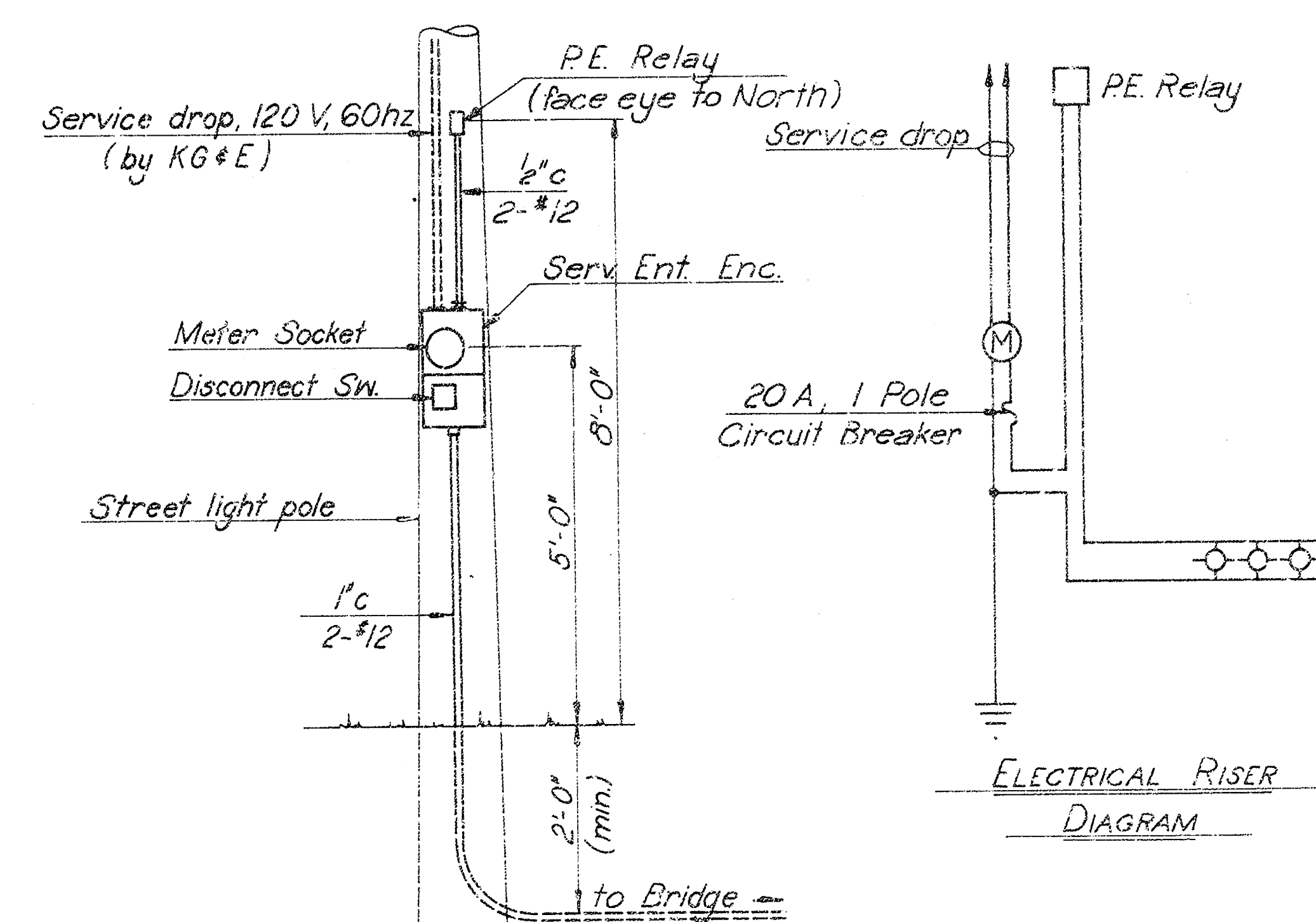
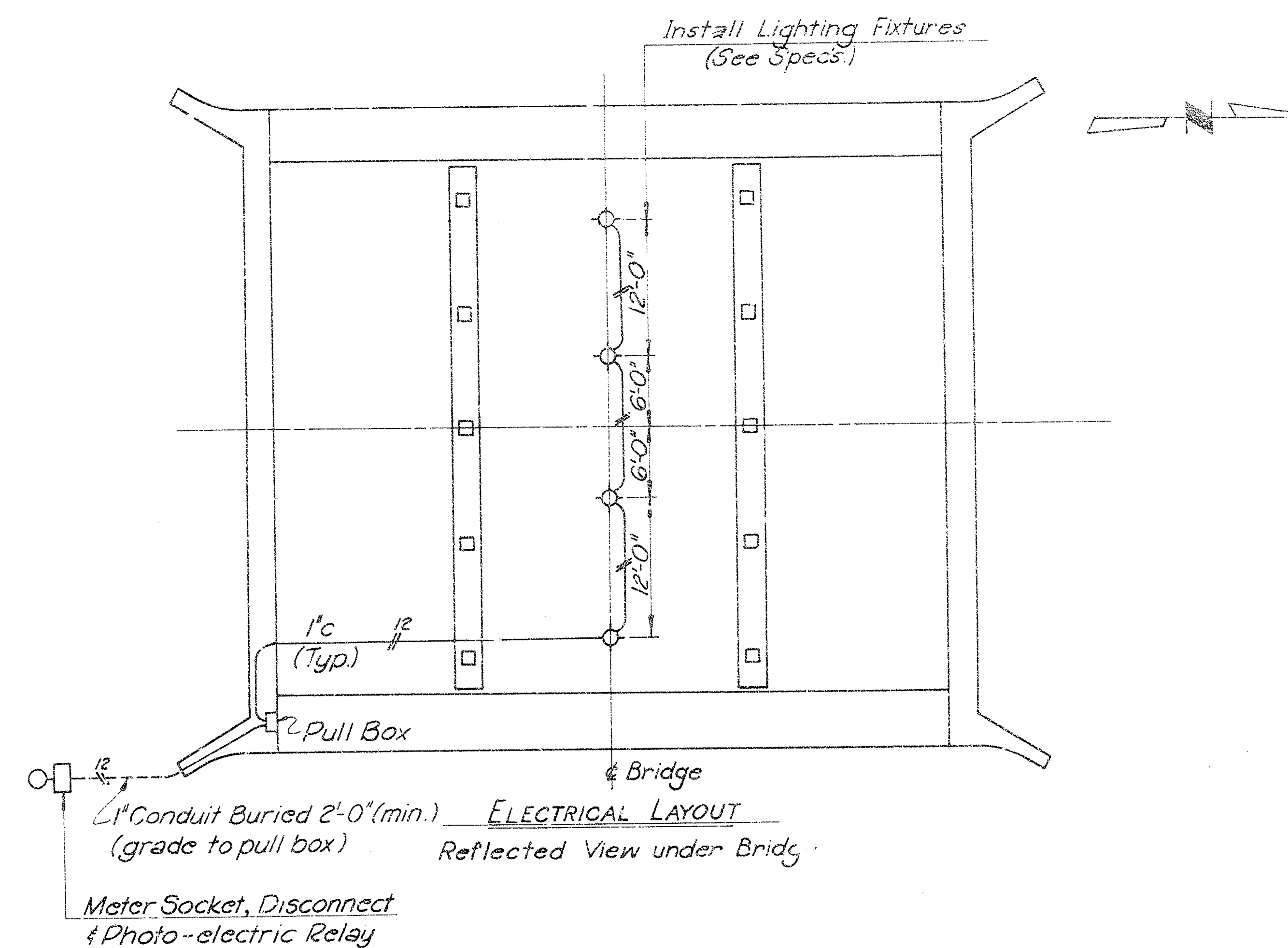
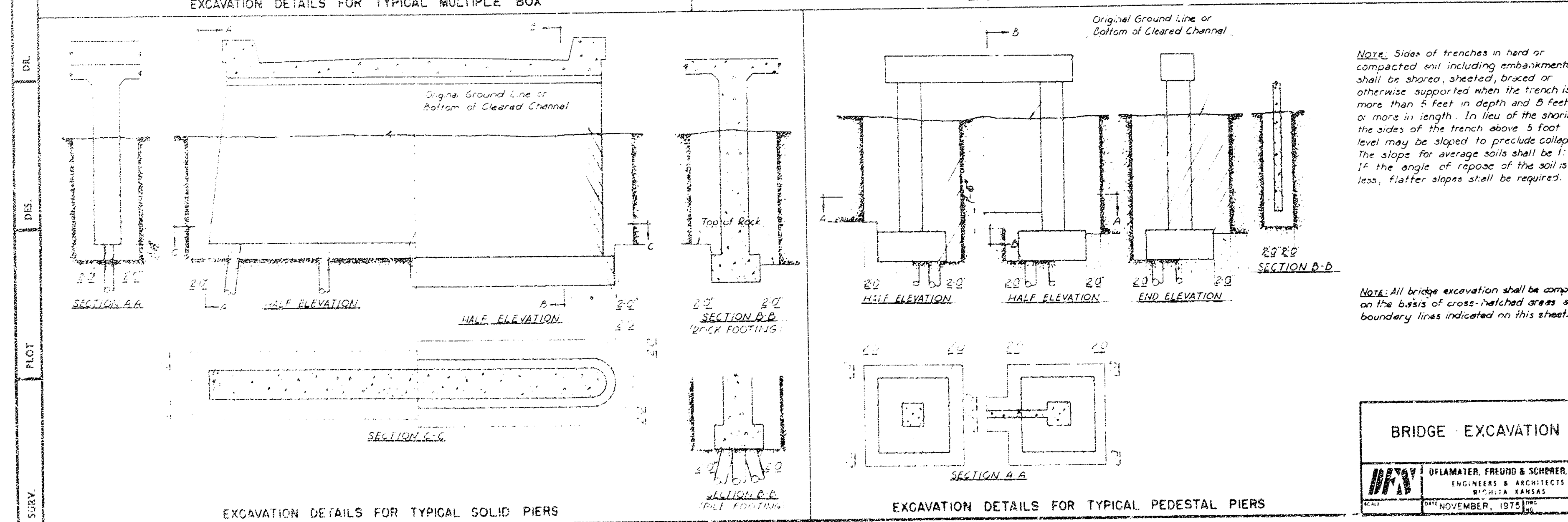
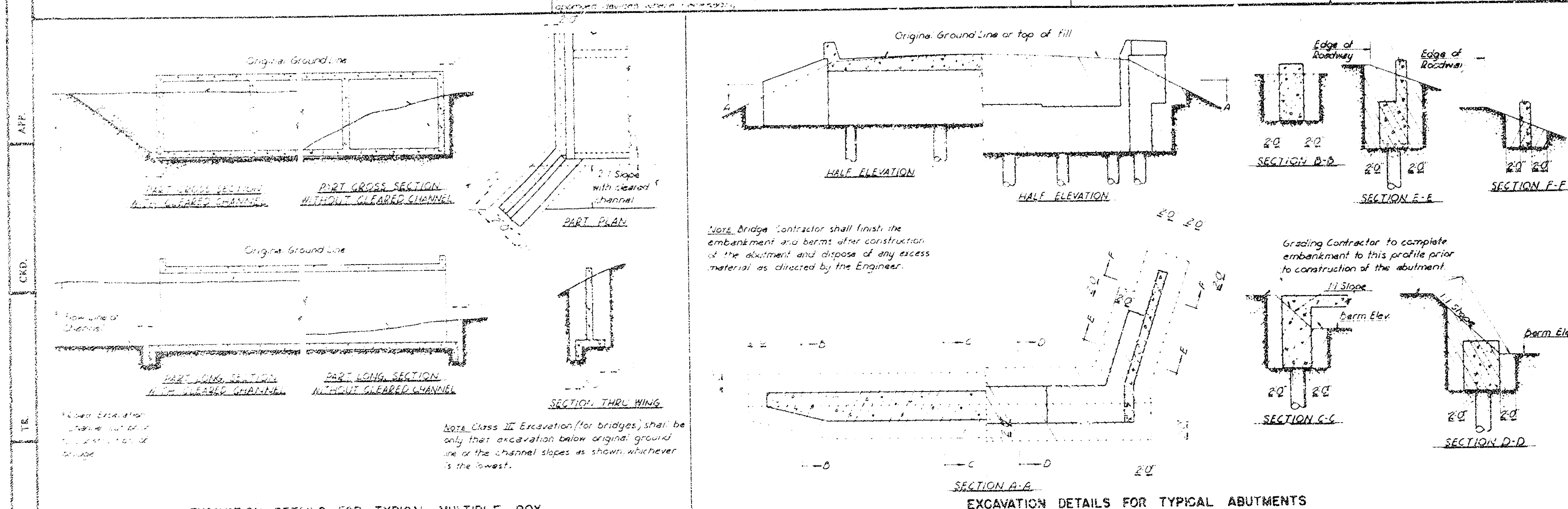
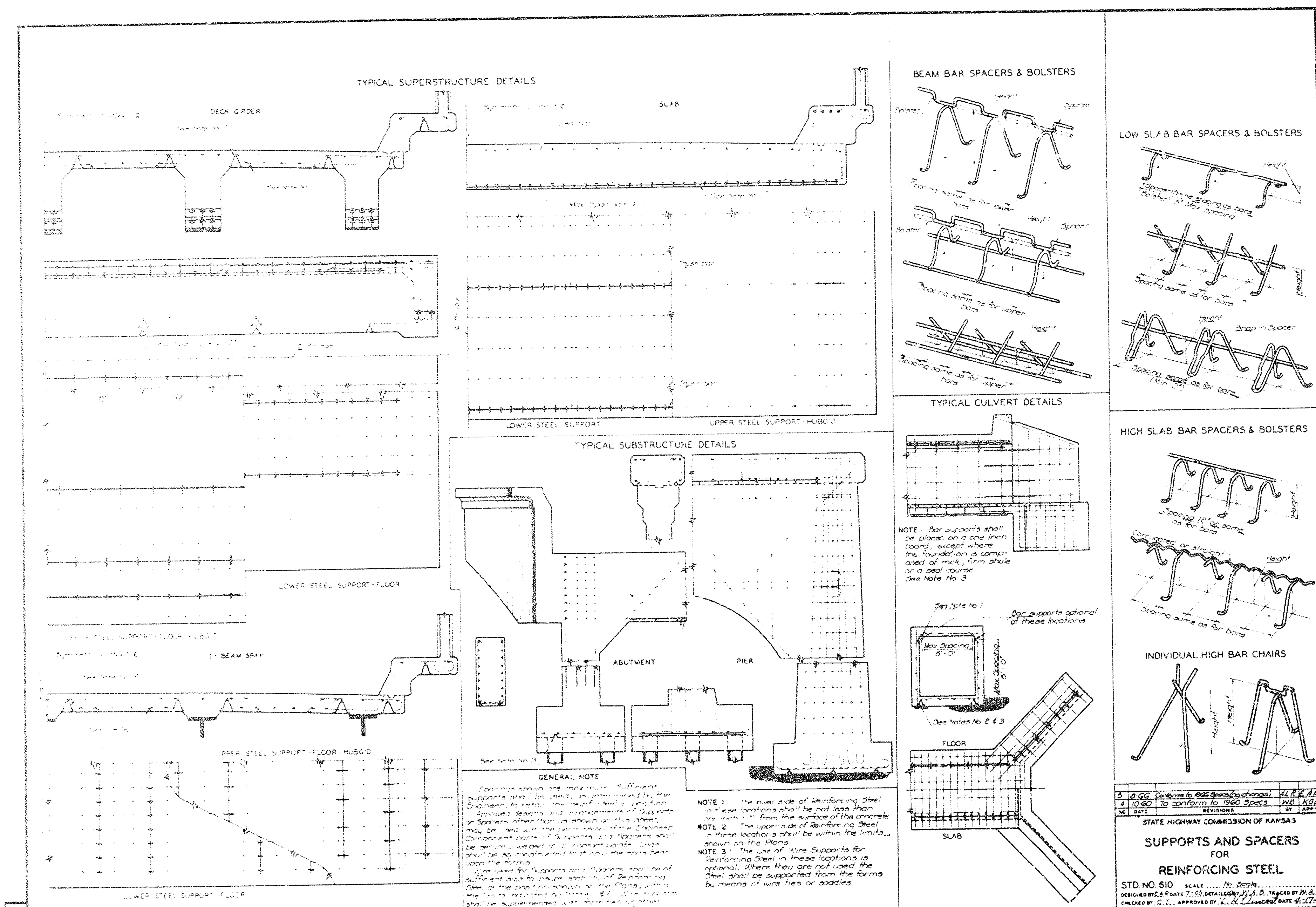
- The contractor shall maintain on the job at all times prior to and during the filling of the shells, a light suitable for visual inspection of the pile.
- Steel Pile:**
Steel pile shall conform to requirements of Article 1006.04 (e) Standard Specifications.
- Pile Points:**
Pile points shall conform to the dimensions shown and requirements of Sub-Article 1006.06 (b)(3) Standard Specification. Pile points shall be mill welded to pile.
- Welding:**
All field welding shall meet the requirements of Sub-Section 703.06 Standard Specifications.
- Point:**
All point shall comply with Sub-Section 1008.06 Standard Specifications, or as specified on the plans.
- Test Piles:**
Test Piles shall be driven where called for on the Bridge plans. The test piles located within the limits of the substructure will become a part of the Bridge Pile System.
- Splices:**
Splices for Steel Piles and Shell Piling shall be in accordance with details shown on this sheet and shall comply with Sub-Section 703.06 Standard Specifications.
Precast Concrete Pile splices shall comply with Sub-Article 703.07 (g)(1) Standard 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 Sub-Article 703.04 (d)(3) Standard Specifications.
- Mill Test Reports:**
Steel Piles test reports shall comply with Sub-Article 1006.04 (e)(3) Standard Specifications.
Steel Shells test reports for cast-in-place piles shall comply with Article 1006.06 (d) Standard Specifications.
- Measurement and Payment:**
Measurement for all piles shall comply with Sub-Section 703.08 Standard Specifications.
Payment for all piles shall comply with Sub-Section 703.09 Standard Specifications.

DETAIL OF P.S. CONC. PILE SPLICE

NO.	DATE	REVISIONS	BY	APP'D.
1	1-11-77	79-2 As Built	C.S.	
2	3-4-73	Revised for 1973 Const. Spec.	G.F.K.	E.E.W.
3	8-26-66	Revise Entire Gen. Note	J.C.L.	E.E.W.
4	4-8-64	Add Longitudinal Welded Pipe Pile	J.C.L.	T.W.O.
5	4-4-61	Revise Choice of Pile Note Above	J.C.L.	T.W.O.
6	3-27-61	Revise Pile General Note	J.C.L.	T.W.O.
7	1-24-61	Remove hole in Prestressed Conc. Pile	J.C.L.	T.W.O.

STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KANSAS		16	9	9



SKETCH OF SERVICE POLICY
See Spec's for Equipment

REV.	BY	DATE	DESCRIPTION
	CS	1-11-77	As Built
CITY OF WICHITA, KANSAS R.W. LINN, P.E., CITY ENGINEER			
VASSAR STREET BRIDGE OVER SLEEPY HOLLOW CREEK BAR SUPPORTS, BRIDGE EXCAVATION & ELECTRIC LIGHTING			
		DELAMATER, FREUND & SCHERER, P. ENGINEERS & ARCHITECTS WICHITA, KANSAS	
SCALE	DATE December, 1975		DWG. 79-R-9