

STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KANSAS		1950	1	11

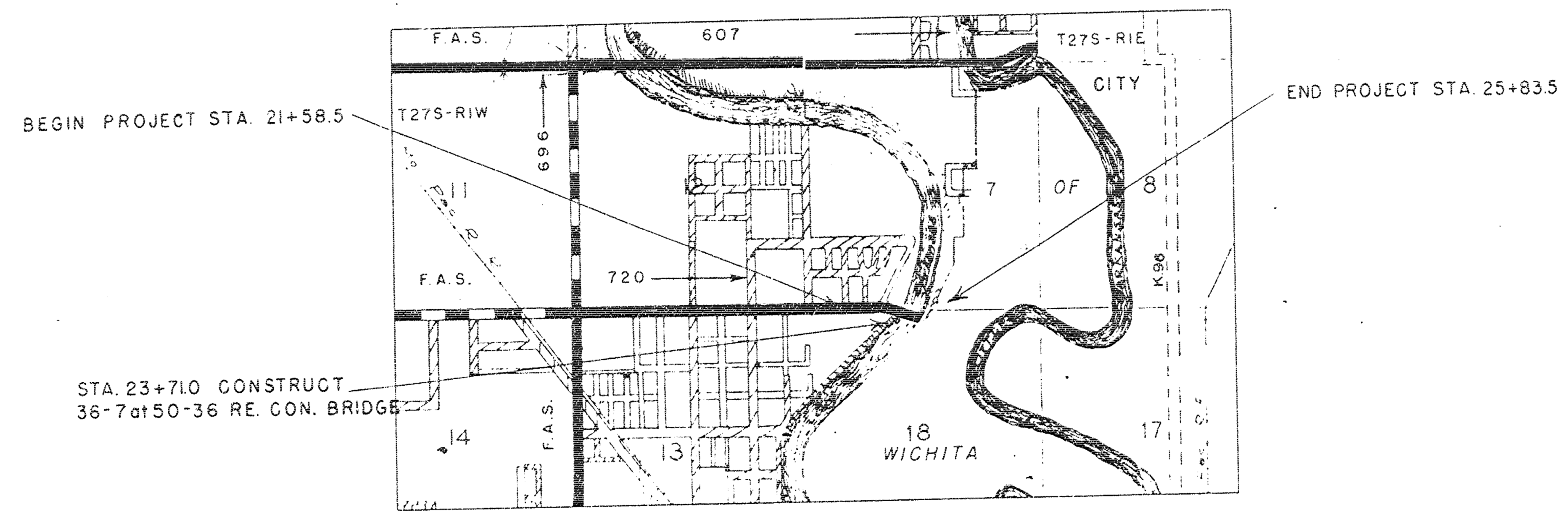


BRIDGE NO. 616-25-2371

6,158 V.P.D. 1950

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN & PROFILE
3	TOPOGRAPHY
4	CONSTRUCTION LAYOUT
5-6	SLAB & GIRDER DETAIL
7	ABUTMENT DETAIL
8	PIER DETAIL
9	AUXILIARY DETAIL
10	LIGHTING DETAIL
11	PILING DETAIL



**CONVENTIONAL SIGNS**

COUNTY LINE	-----
SECTION LINE	-----
WIRE FENCE	-----
HEDGE ROW	-----
RA. ROAD	-----
SURVEY LINE	-----
W. LINE OF DRAIN	-----
TELEPHONE POLE	○
POWER POLE	□
TRAVELED WAY	-----

NET LENGTH OF PROJECT	425.0	FT.	08	MILES
NET LENGTH OF BRIDGES	425.0	FT.	08	MILES
NET LENGTH OF ROAD		FT.		MILES
EXCEPTIONS		FT.		MILES
ADDITIONS		FT.		MILES
GROSS LENGTH OF PROJECT		FT.		MILES

PLANS PREPARED BY

DATE

APPROVED

DATE 12-18-50

ENGINEER OF SECONDARY ROADS

APPROVED

COUNTY ENGINEER

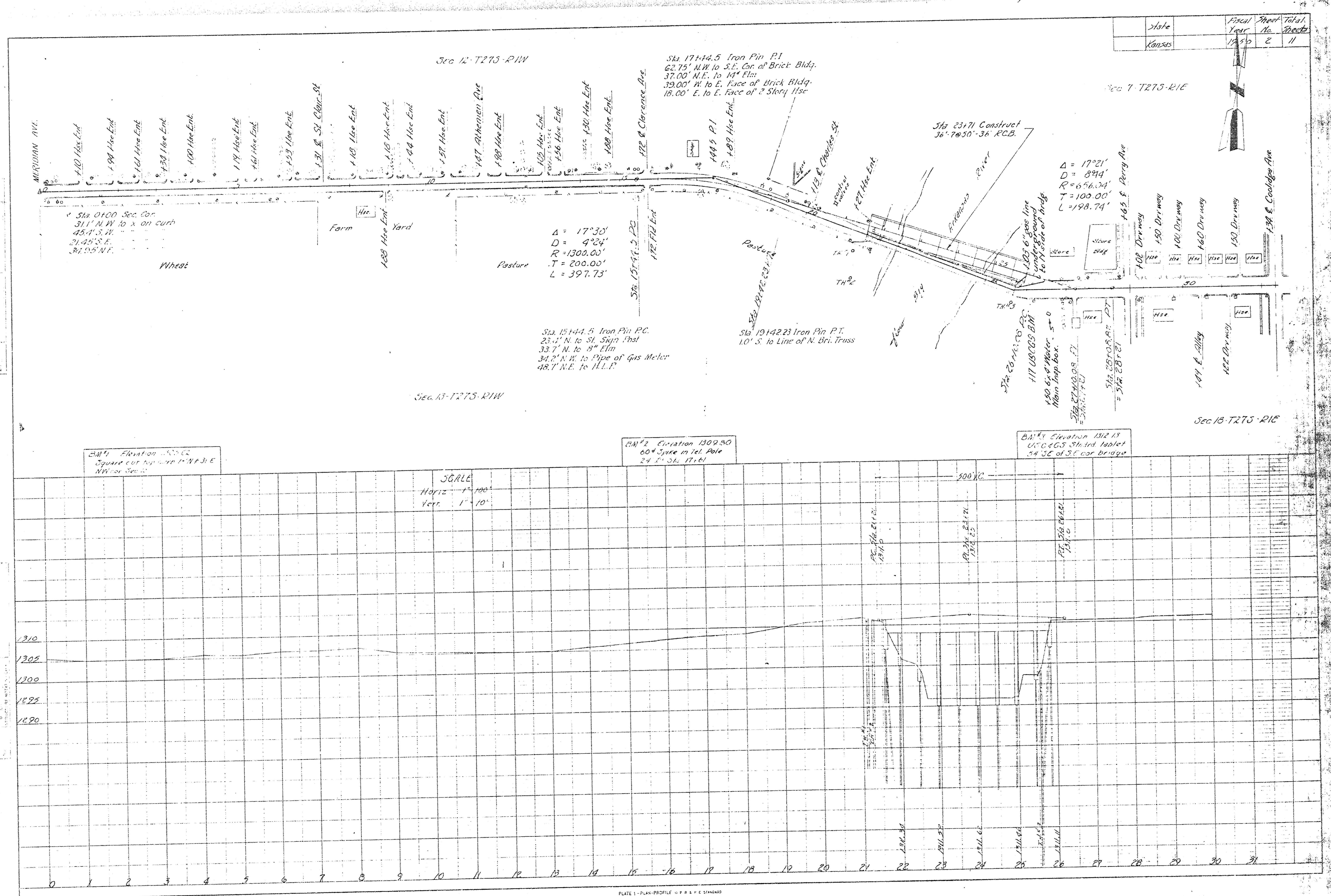
DATE 12-14-50

APPROVED 12-12-50

DATE

STATE HIGHWAY ENGINEER

13th Street  
616-25



State	Fiscal Year	Sheet No.	Total Sheets
Kansas	1952	2	11

PLAN  
 1" = 100'  
 3/16" = 100'

PROFILE  
 1" = 10'

Sta 0+00 Sec. Cor.  
 311' N.W. to x on curb  
 45.1' S.W.  
 21.45' S.E.  
 31.05' N.E.

$\Delta = 17^{\circ}30'$   
 $D = 9^{\circ}24'$   
 $R = 1300.00'$   
 $T = 200.00'$   
 $L = 397.73'$

Sta. 15+44.5 Iron Pin P.C.  
 23.4' N. to St. Sign Post  
 33.7' N. to 4" Elm  
 34.7' N.W. to Pipe of Gas Meter  
 48.1' N.E. to A.L.P.

CA#2 Elevation 1309.50  
 60° Spike in Tel. Pole  
 24' S. St. 17.6'

BA#4 Elevation 1312.13  
 U.C.C.G.S. Shaded Holet  
 24' SE of S.E. cor. bridge

Sta. 17+14.5 Iron Pin P.I.  
 62.75' N.W. to S.E. Cor. of Brick Bldg.  
 37.00' N.E. to 14" Elm  
 39.00' W. to E. Face of Brick Bldg.  
 18.00' E. to E. Face of 2 Story Hse

$\Delta = 17^{\circ}21'$   
 $D = 894'$   
 $R = 656.24'$   
 $T = 100.00'$   
 $L = 198.74'$

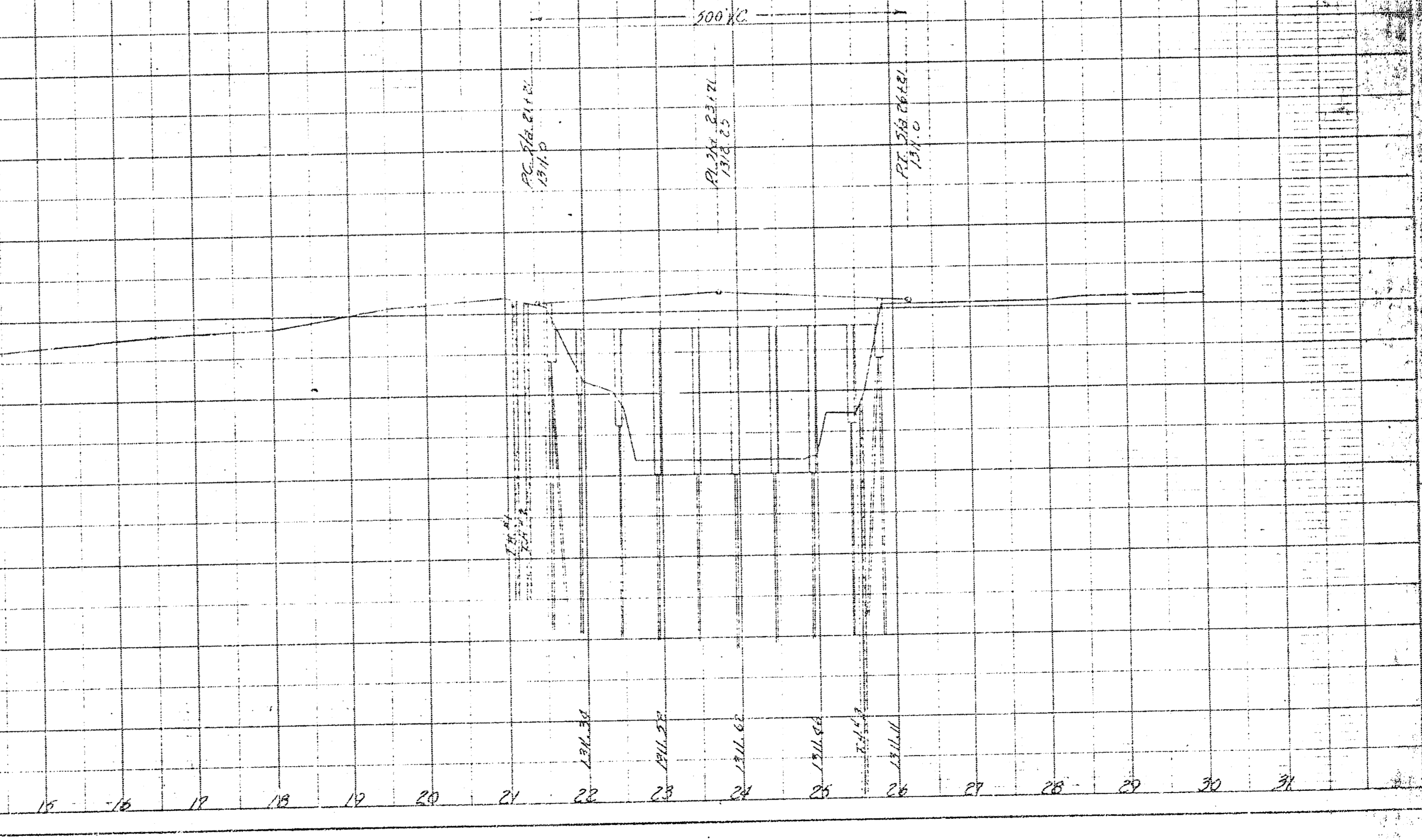
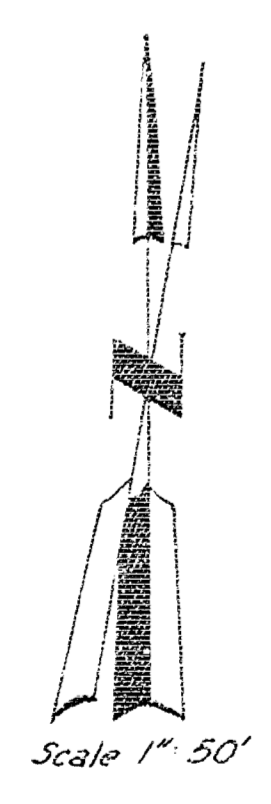


PLATE 1 - PLAN-PROFILE OF P.R.R.E. STANDARD  
 METERS & FEET ON 1:1000

State	Fiscal Year	Sheet No.	Total Sheets
Kansas	1970	3	11



**BENCH MARKS**  
 B.M. #2 - 60' in T.P. 24' pt. Sta. 11161 El. 1309.80  
 B.M. #3 - U.S.C. & G. Spt. label 5d S.E. of  
 cor. of bridge El. 1312.13  
 Note: for traverse details see revised sheet 19  
 (1349) River Improvement Map - Big Arkansas  
 River.

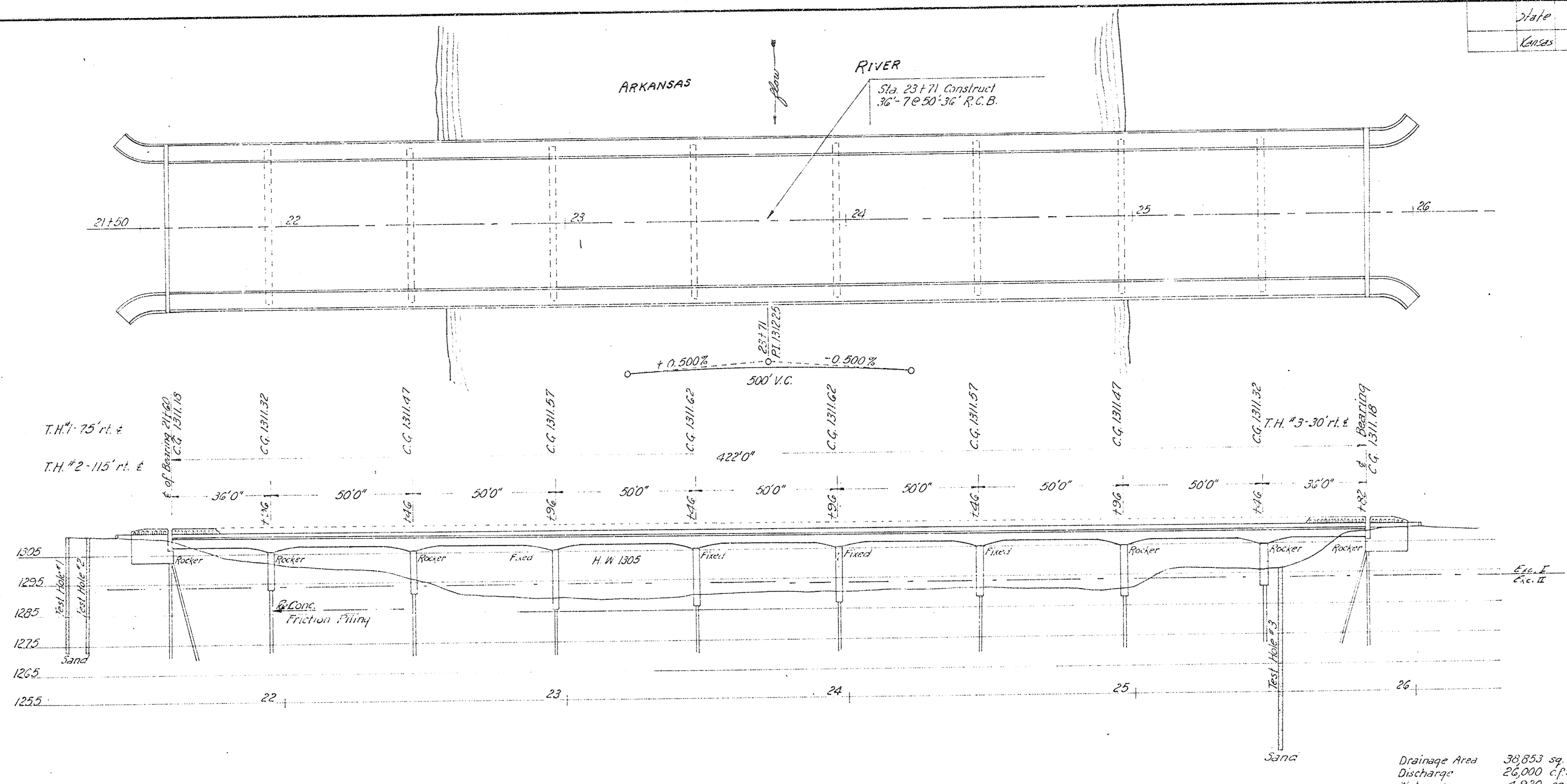


*Topographical Map*  
 Vicinity, Bridge No. 416-25-2326 - (13th St.)

PREPARED BY  
**SEDGWICK COUNTY ENGINEERING DEPT.**  
 COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1" = 50'		Shumate		
	DATE				
	PLANFILE	TOTAL SHEETS			

State	Project No.	Total Sheets
Kansas	1950 4	11



**PLAN AND ELEVATION**  
 36'-7@50'-36' CONTINUOUS CONCRETE SPANS ON CONCRETE ENCASED STEEL TYPE BENT PIERS, 48' ROADWAY OPEN ABUTMENTS, 4' SIDEWALKS.

**BENCH MARKS**  
 B.M. #2 20" in T.P. 24' rt. Sta. 17+61 Elev. 1309.80  
 B.M. #3 U.S.C. & G.S. std. tablet 34' S.E. of S.E. cor. of bri. Elev. 1312.13

Drainage Area 38,853 sq. mi.  
 Discharge 26,000 c.f.s.  
 Waterway 4,920 sq. ft.

**SUMMARY OF QUANTITIES**

Excavation Class I	407 cu. yds.
Excavation Class II	324 cu. yds.
Concrete Class A (AE)	1707.5 cu. yds.
Reinforcing Steel	270,034 lbs.
Structural Steel	27,612 lbs.
Bearing Devices	7,462 lin. ft.
Re. Conc. Piling	1574 lbs.
Cast Iron	96 lin. ft.
2" Conduit	

**GENERAL NOTES**

Design: A.A.S.H.O. for H-20-44 Loading  
 20,000 p.s.f. Reinforcing Steel (int. gr.)  
 1,000 p.s.f. Concrete

Old Structure: To be removed by Sedgwick County

Soundings: Taken with 3/4" jet by Sedgwick County

Embankment: The embankment at the abutments shall be built after completion of the abutments.

Piling: Conc. piling shall be driven to a computed bearing value of twenty eight tons per pile. Piling shall be driven to a minimum depth of thirty feet below the bottom of the encasements.

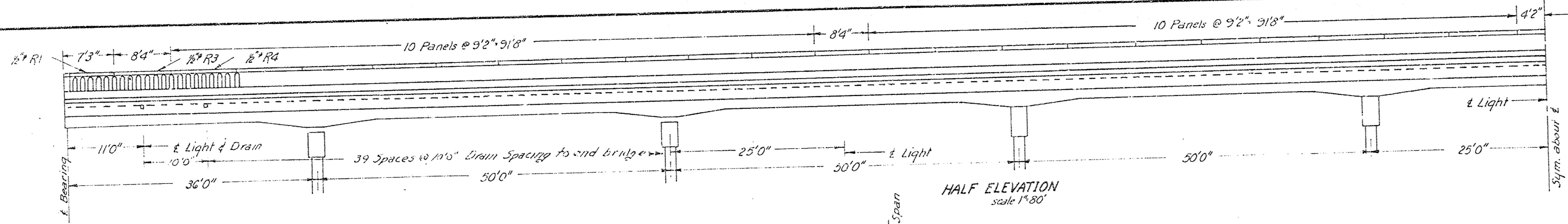
Lighting: Conduit, pole boxes and pole supports to be installed at time of construction. Poles, wiring etc. to be installed at a later date, and are not a part of this project.

**CONSTRUCTION LAYOUT**  
**BRIDGE NO. 616-25-2371**

PREPARED BY  
 SEDGWICK COUNTY ENGINEERING DEPT.  
 COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=20'	M.E.S.	P.W.M.		

Date	Project	Sheet	Total
1920	616-25-2371	9	11

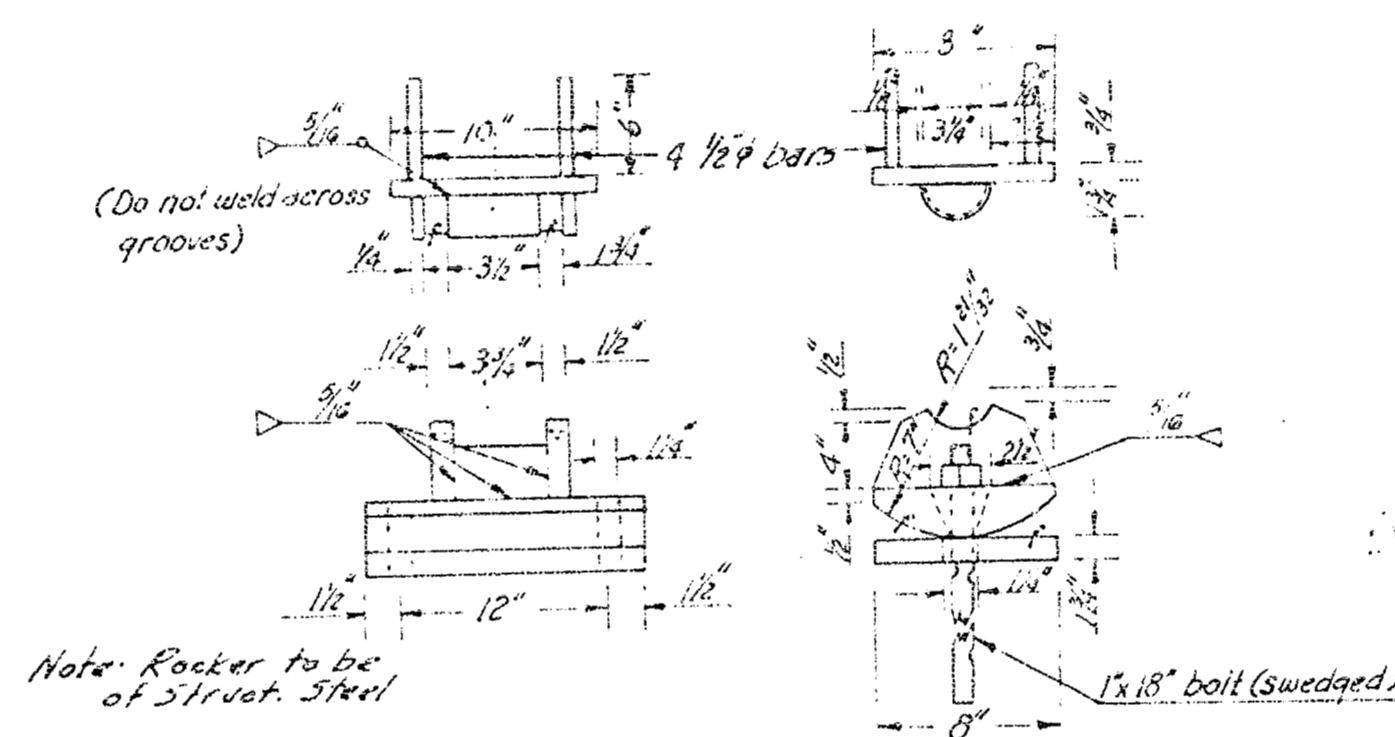
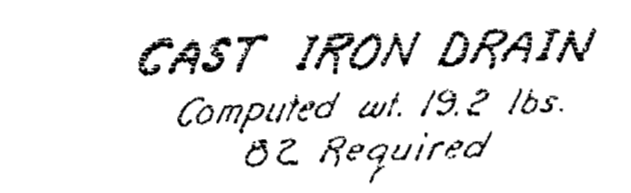


**SUMMARY OF QUANTITIES**  
SPANNING SUPERSTRUCTURE

Concrete Class A (AE)	1062 Cu. Yds.
Reinforcing Steel	241,830 Lbs.
Cast Iron	1374 lbs.
Rocker Steel	27,612 lbs.

**GENERAL NOTES**

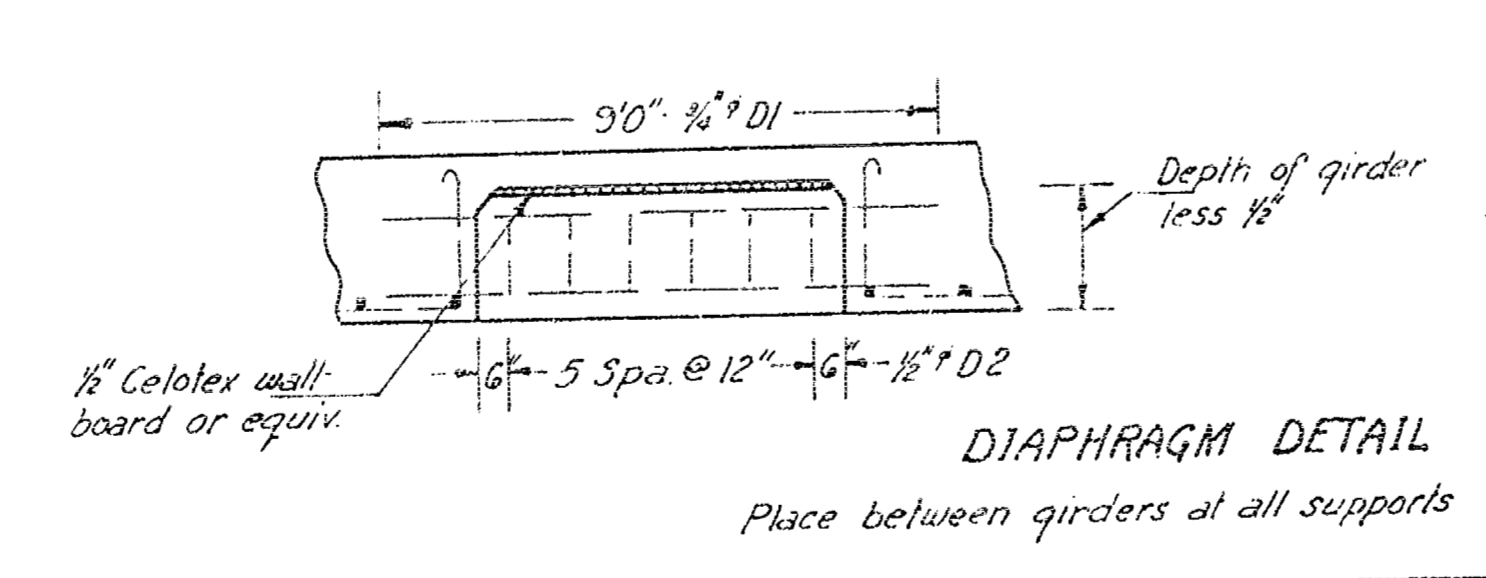
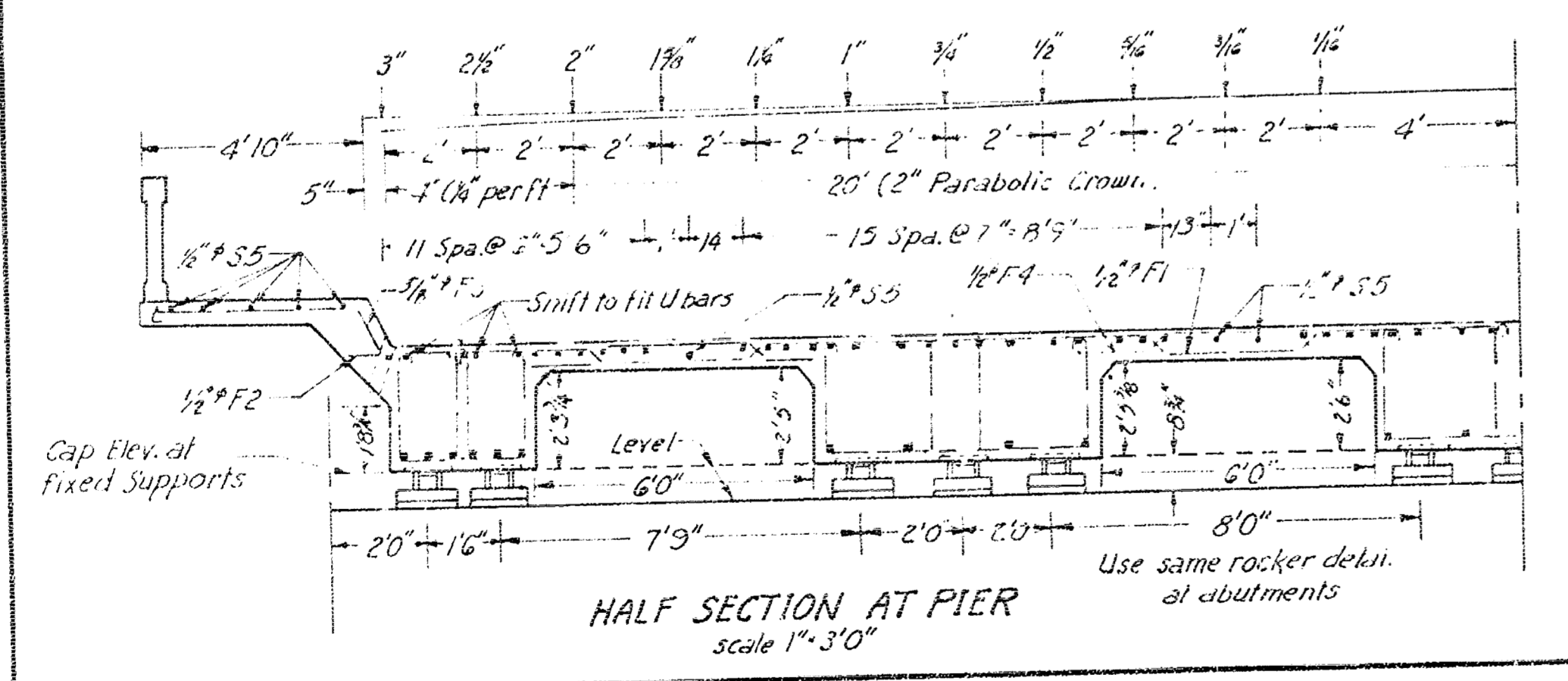
LOADING: H-20-44 A.A.S.H.O.  
DESIGN STRESS: 15,000 p.s.i.; 16,000 p.s.i. n. 10  
CONCRETE, Class A(AE) to be used throughout. Bevel all exposed edges with 3/4" A moulding unless otherwise noted.  
Falsework: Falsework shall be in place for entire until all the concrete has attained its design strength. Construction joints shown on steel No. are optional with the Bridge Contractor but if used shall be made only at the locations shown or as approved by the Engineer. Pouring sequence to be designated by Engineer subject to type of falsework used by Bridge Contractor.  
FIELD PAINT: All accessible parts of cast iron drains and rockers shall receive one coat of thinned aluminum paint followed by one coat of aluminum paint after erection. The same shall apply to light pull boxes.



**STEEL TABLE**  
TOP OF SLAB & WALK

BAR	SIZE	NO.	LENGTH	WEIGHT
G1	1 1/8"	160	27'0"	18,376
G2	"	208	20'0"	17,888
G3	"	148	17'0"	13,526
G4	"	64	14'0"	3,855
F1	1/2"	222	26'11"	10,635
F2	1/2"	222	13'5 1/2"	8,319
F3	3/8"	222	19'3"	13,427
S3	1/2"	32	23'8"	497
S4	"	32	23'8"	497
S5	"	126	23'8"	920
S6	"	308	31'0"	6,397
S7	"	112	24'0"	1,800
D1	1/2"	240,240	5'0"	6,443
D2	1/2"	240,160	3'8"	400

\*See Bending Diagram



**SLAB AND GIRDER DETAILS**  
BRIDGE NO. 616-25-2371

PREPARED BY  
SEDGWICK COUNTY ENGINEERING DEPT.  
COUNTY ENGINEER

REVISION	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
1-30-1920	Noted	MES.	R.W.M.		
DATE					
PLANFILE			TOTAL SHEETS		



State	Fiscal Year	Sheet No.	Total Sheets
COLO.	1930	7	11

STEEL TABLE  
(cont. abut.)

Bar	Spce	No	Size	Length	Wt.	Revised Weight
Aw	11"	36	1/2"	12'-4"	297	296.5
Bw	12"	12	"	14'-11"	120	119.6
Cw	12"	10	"	13'-3"	89	88.5
Dw	12"	76	"	10'-0"	508	478.0
Ew	12"	6	"	6'-10"	27	27.4
Fw	12"	14	"	14'-2"	133	132.7
Gw	12"	6	"	9'-1"	37	36.4
Hw	12"	58	"	10'-5"	202	406.4
Ib	12"	48	"	2'-10"	91	90.7
JB	4"	4	"	25'-0"	67	66.8
Kb	12"	40	"	30'-0"	802	801.60
Lb	"	4	"	7'-1"	19	18.92
R	"	4	"	12'-0"	32	32.1
Total					3425	2424

QUANTITIES per ABUTMENT  
 Cu. yd. Concrete 48.0  
 Bearing Devices 10  
 L.F. Friction Piling 740

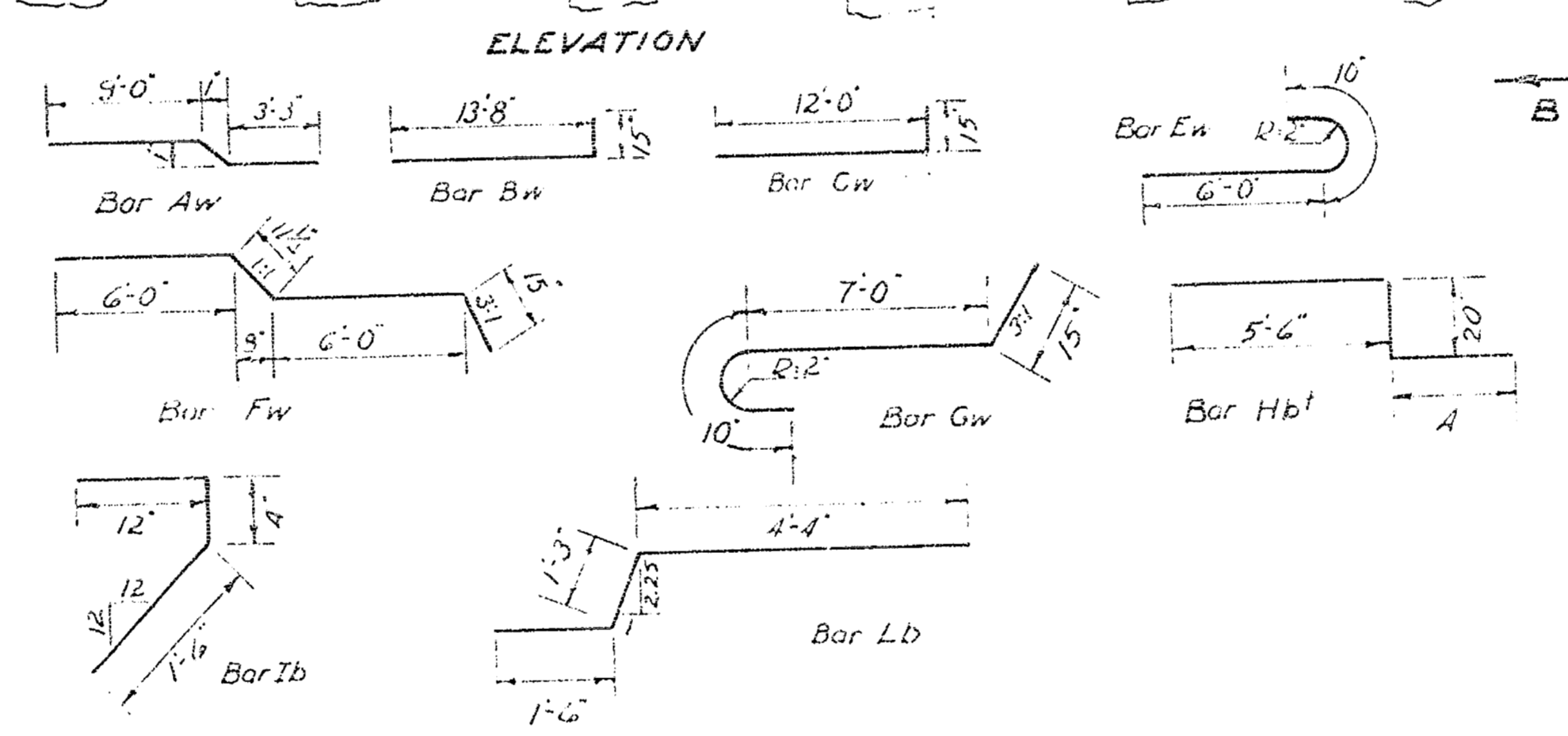
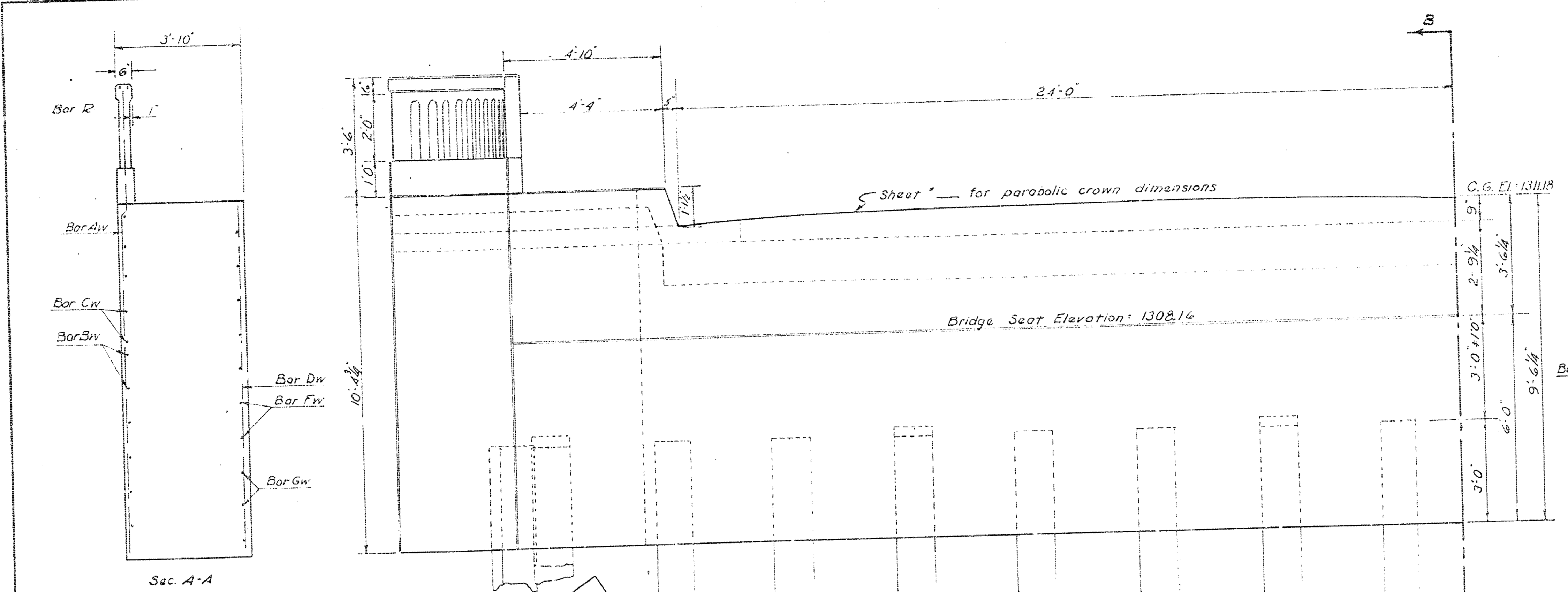
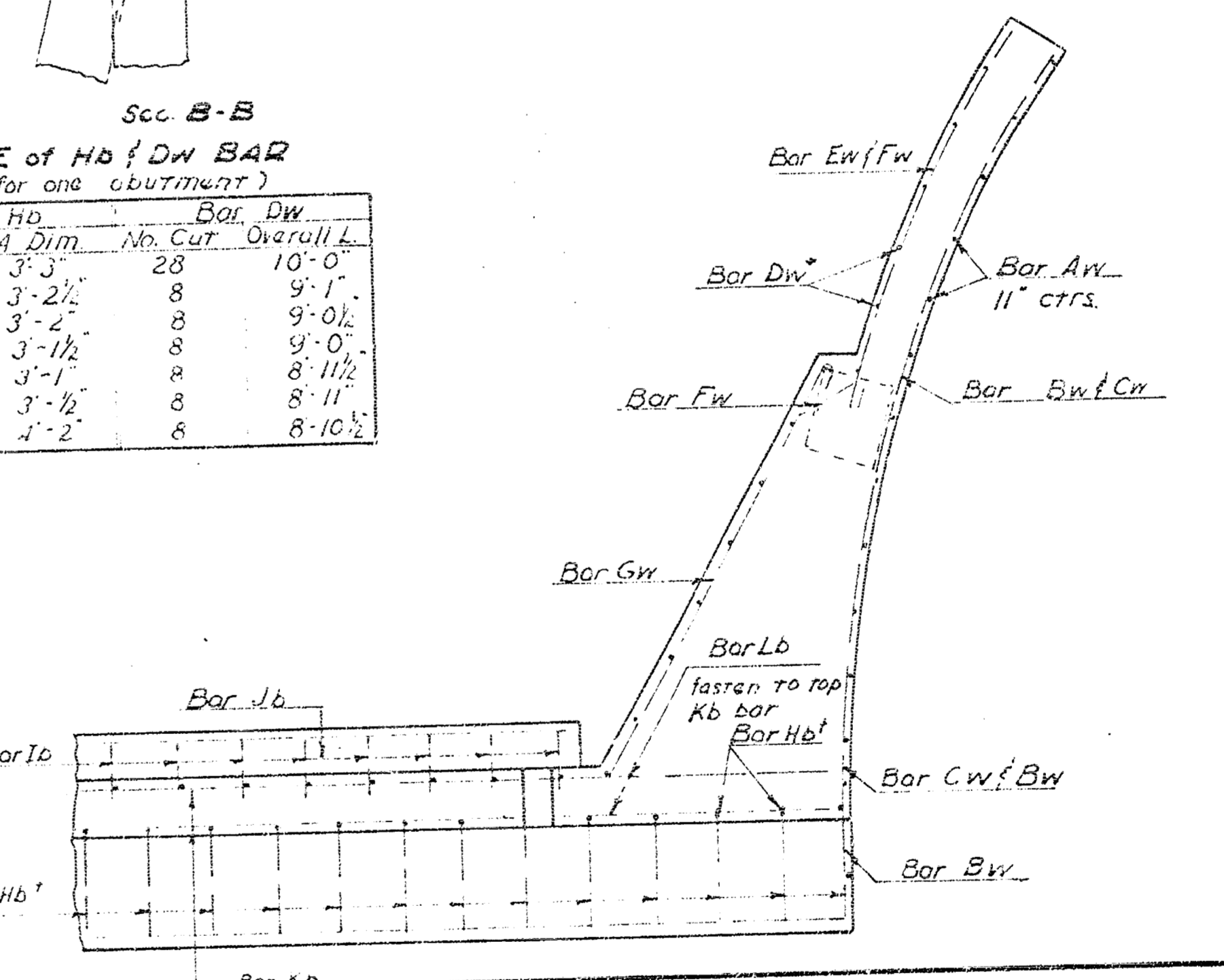
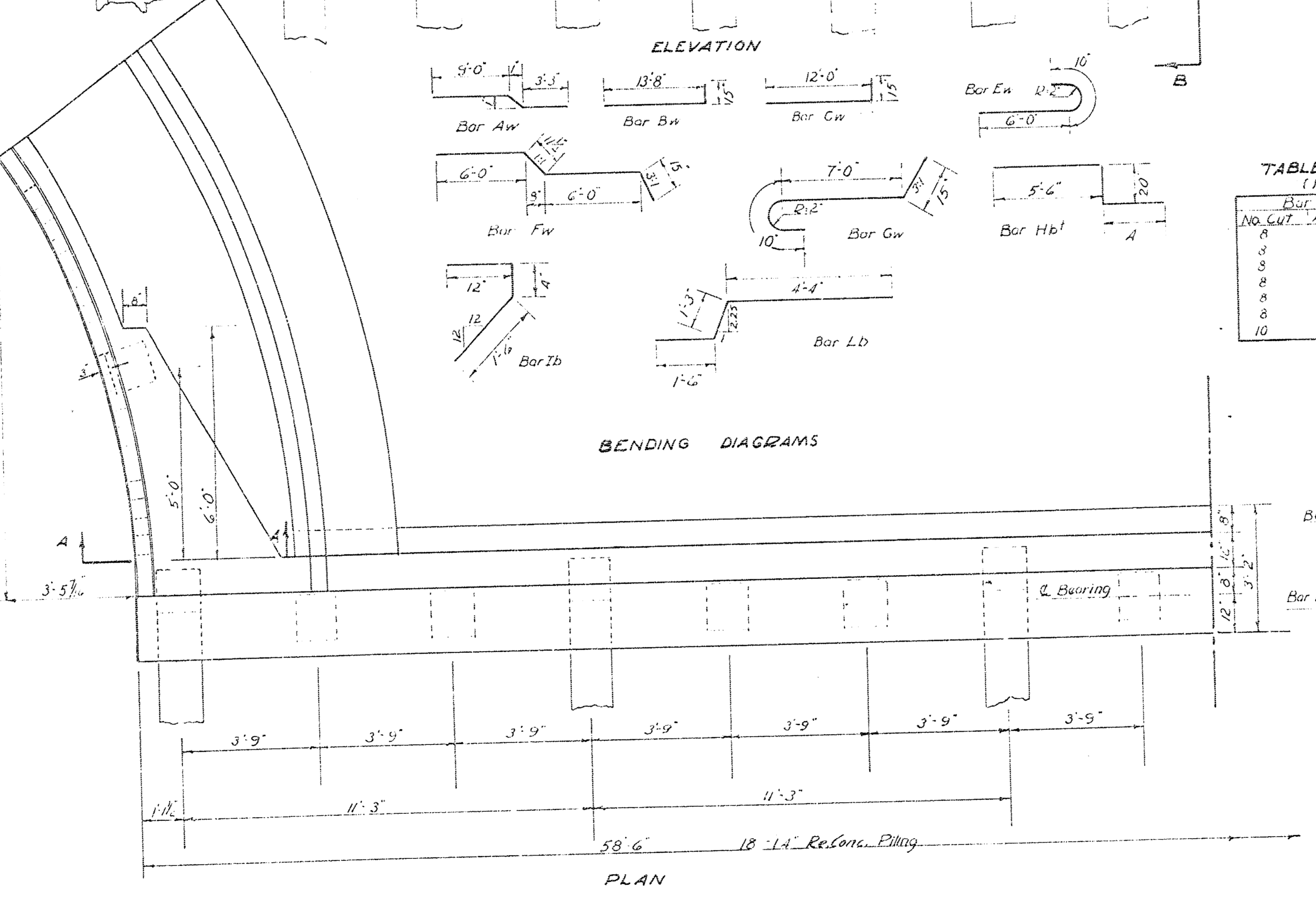


TABLE of Hb of DW BAR  
(for one abutment)

Bar No.	Bar Hb	Bar Dw	Overall L.
1	3'-3"	28	10'-0"
2	3'-2 1/2"	8	9'-1"
3	3'-2"	8	9'-0 1/2"
4	3'-1 1/2"	8	9'-0"
5	3'-1"	8	8'-11 1/2"
6	3'-1/2"	8	8'-11"
7	2'-2"	6	8'-10 1/2"

GENERAL NOTES  
 Bearing plates to be spaced as those for pier (see sheet)  
 Piling to be driven to a computed bearing value of 28 tons and at least 31'-6" below the bridge seat.  
 Bevel all exposed edges with 3/4" mauling. Concrete to be class A (see)



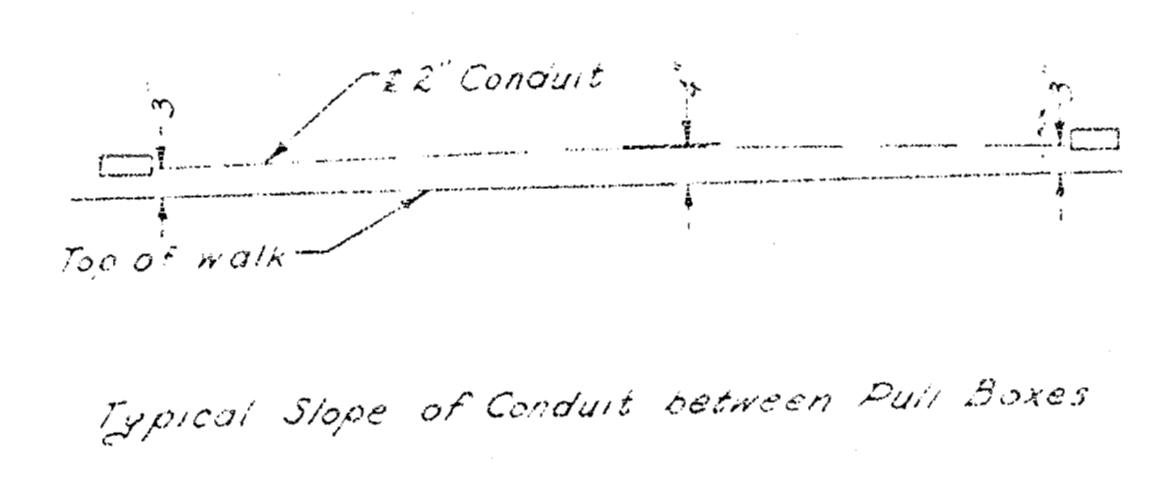
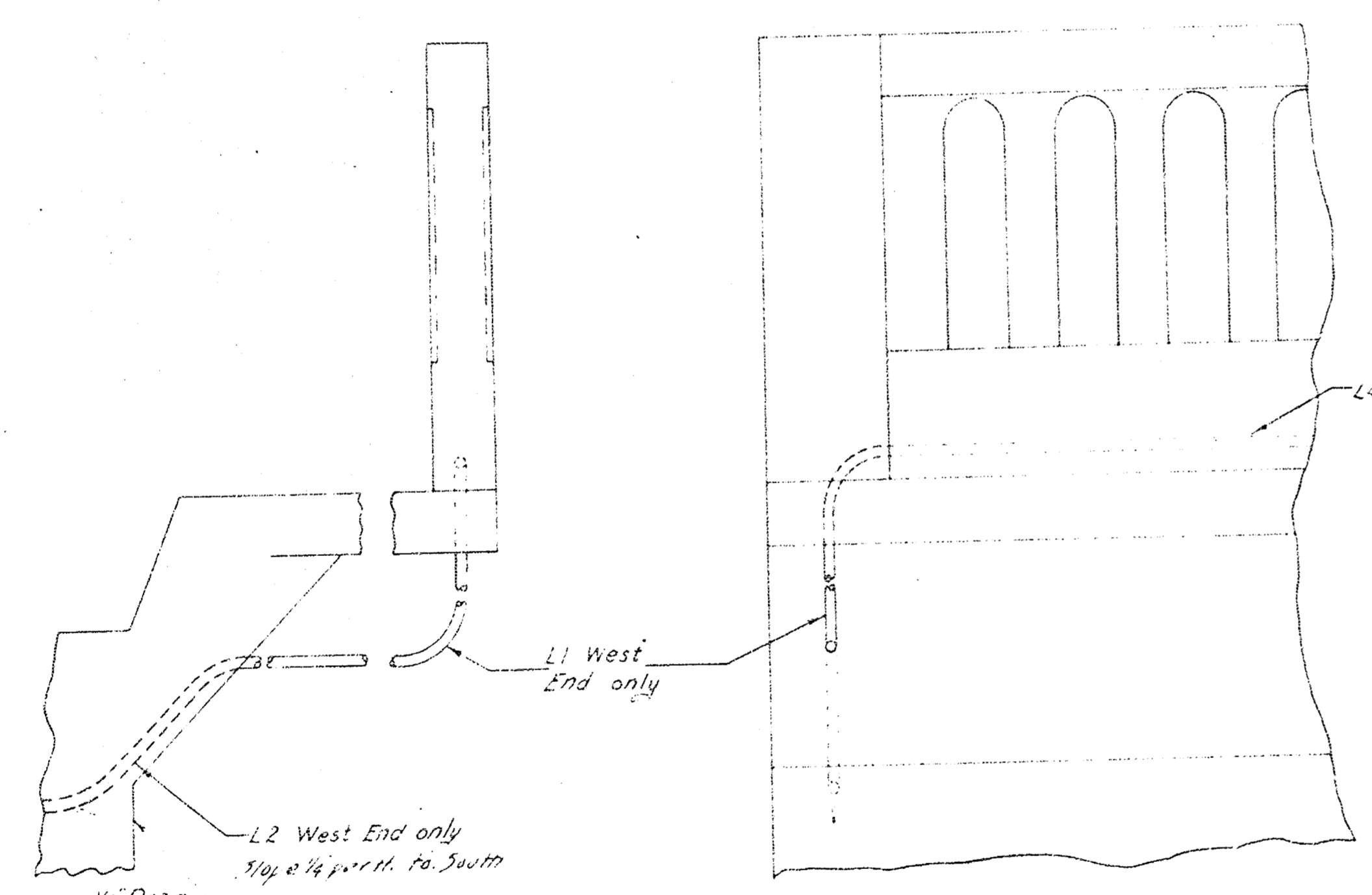
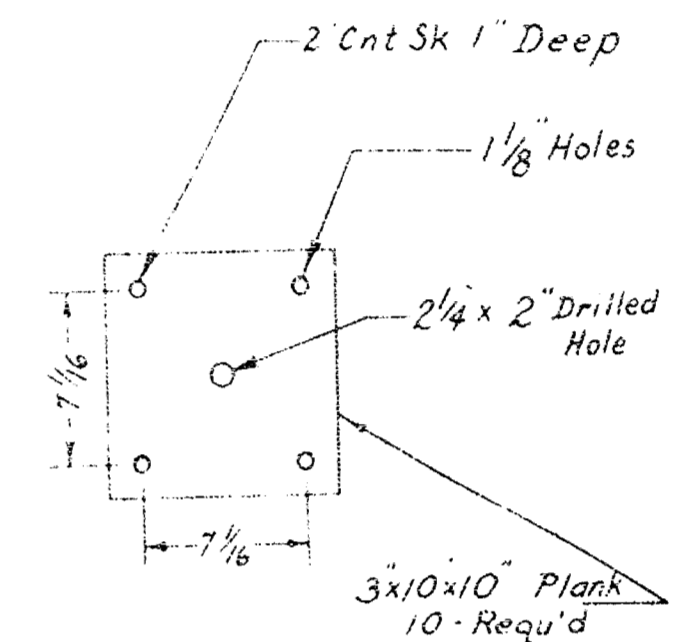
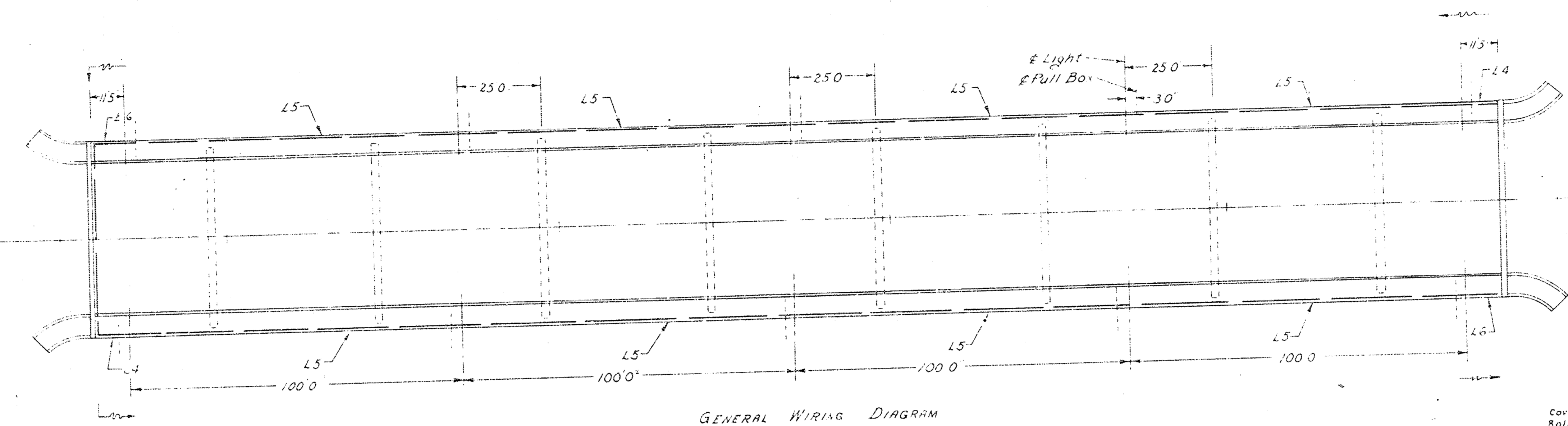
ABUTMENT DETAIL  
 BRIDGE NO. 616-25-2371

PREPARED BY  
 SEDGWICK COUNTY ENGINEERING DEPT.  
 Rufus S. Kirk COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1/8" = 1'-0"	M.S./E.U.	R.S.		
		DATE			
		10-20-30			
		PLANFILE		TOTAL SHEETS	

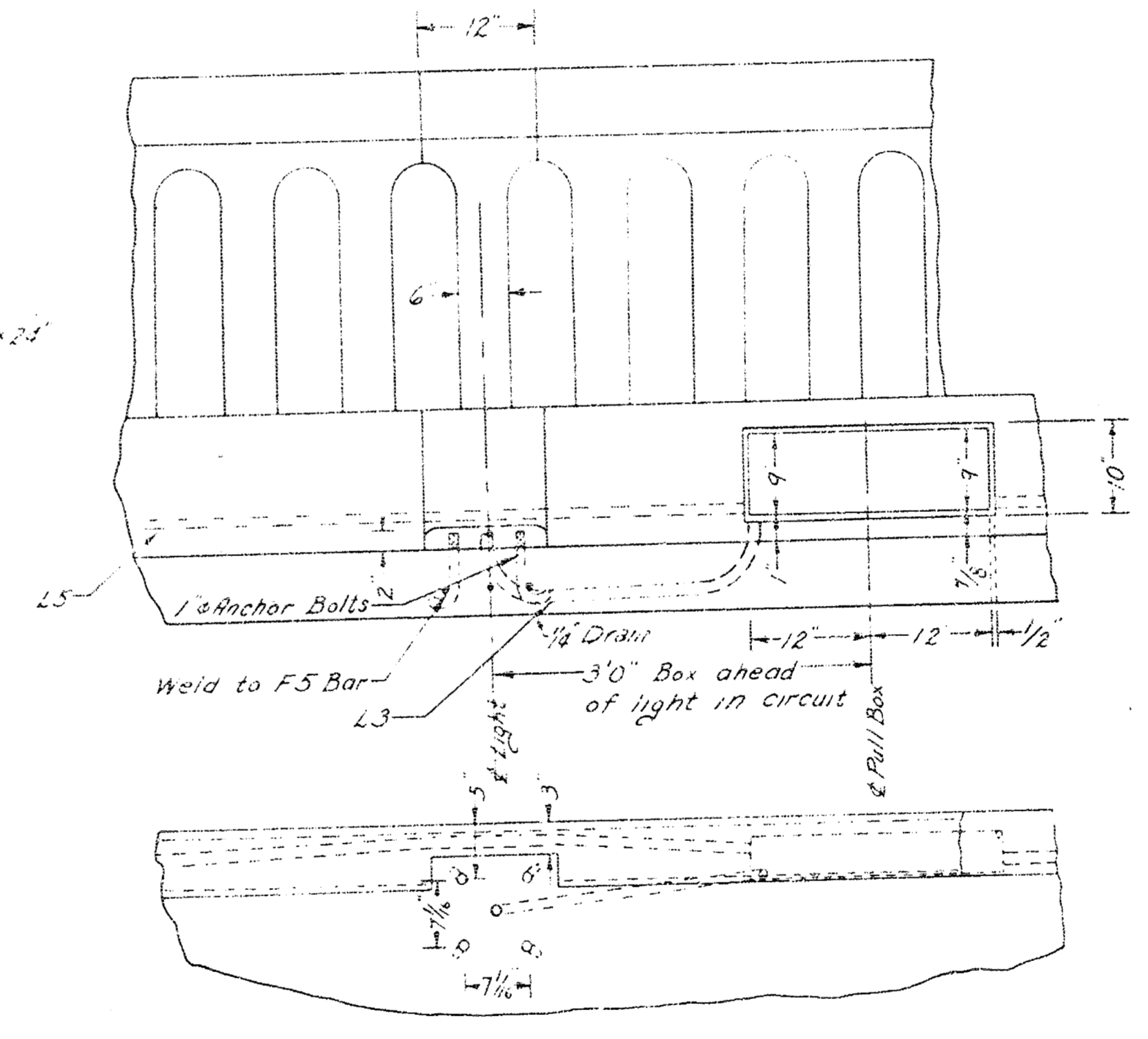
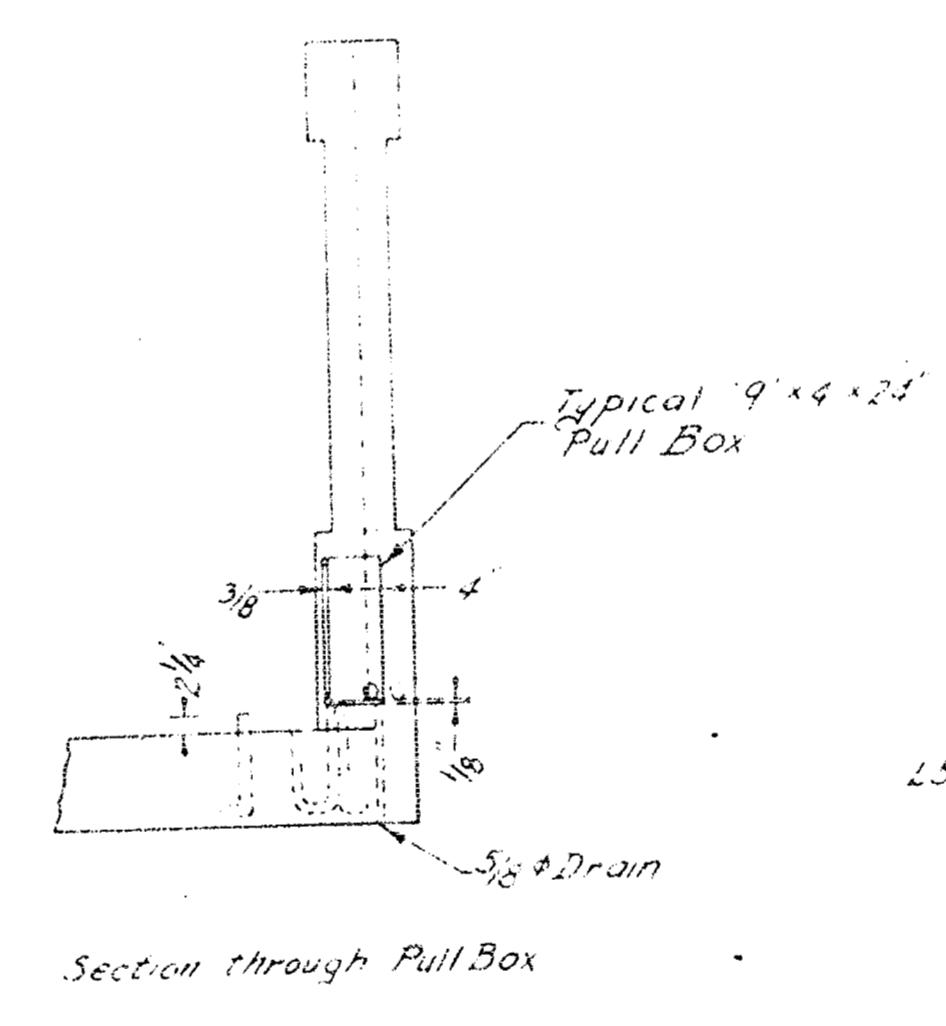






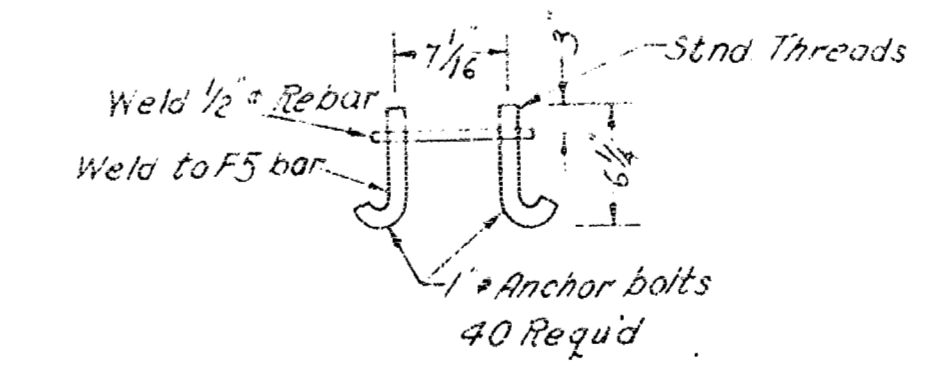
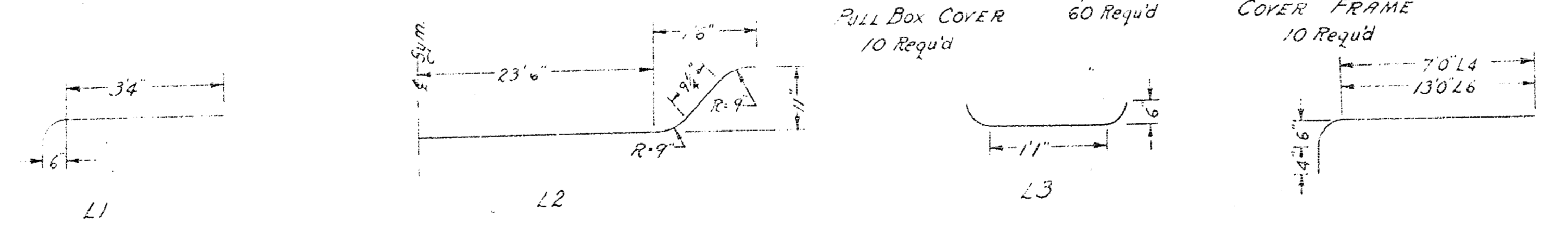
CONDUIT TABLE			
Size	No	Length	Total Length
L1	2	4 1/2	9 0
L2	1	53 9/16	53 9/16
L3	10	1 10/16	10 10/16
L4	2	3 1/2	7 0
L5	8	100 2	801 4
L6	2	16 1/4	32 3/4
Total			928 2 7/8

All conduit 2" dia. IPS



DETAIL AT ENDS OF BRIDGE

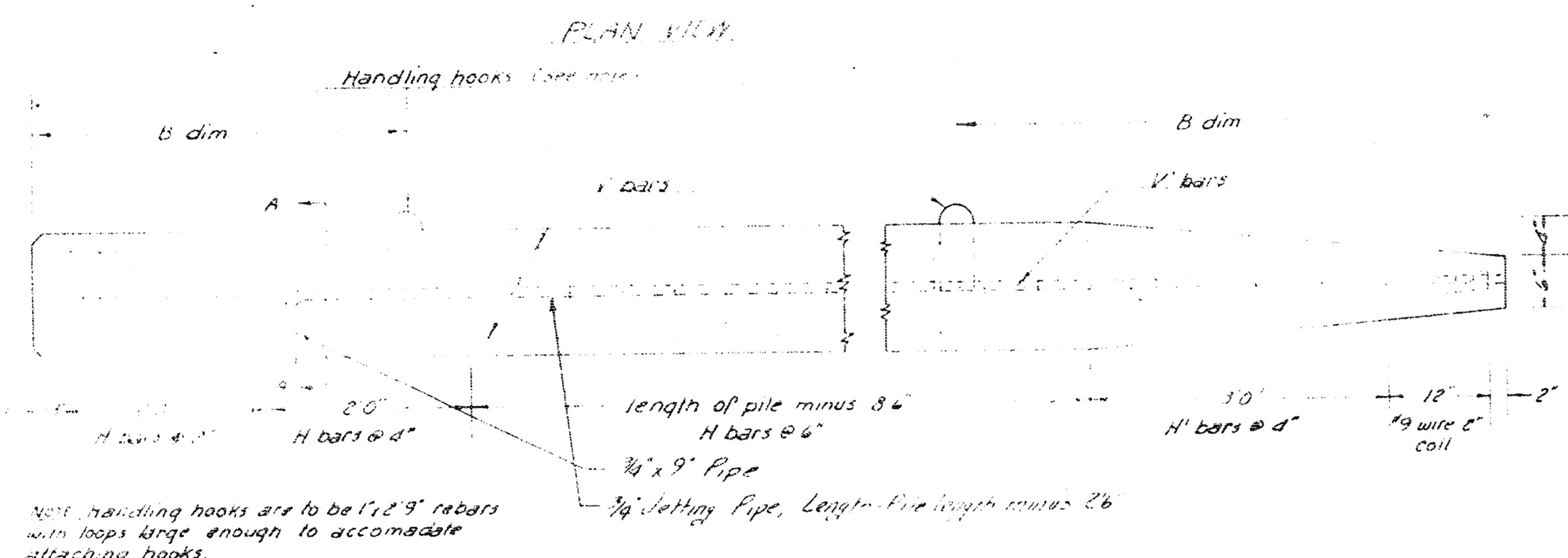
DETAIL AT PULL BOX AND LIGHT



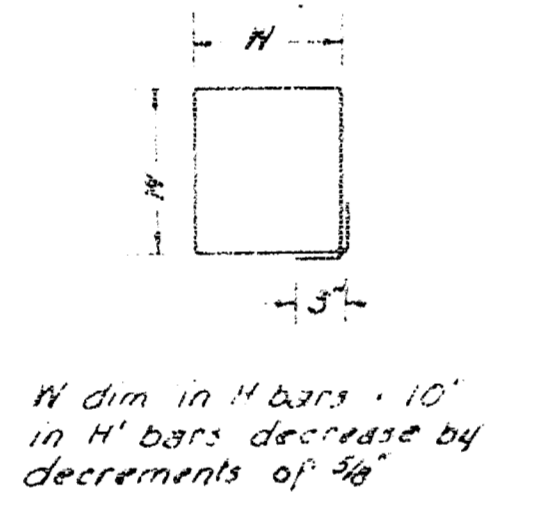
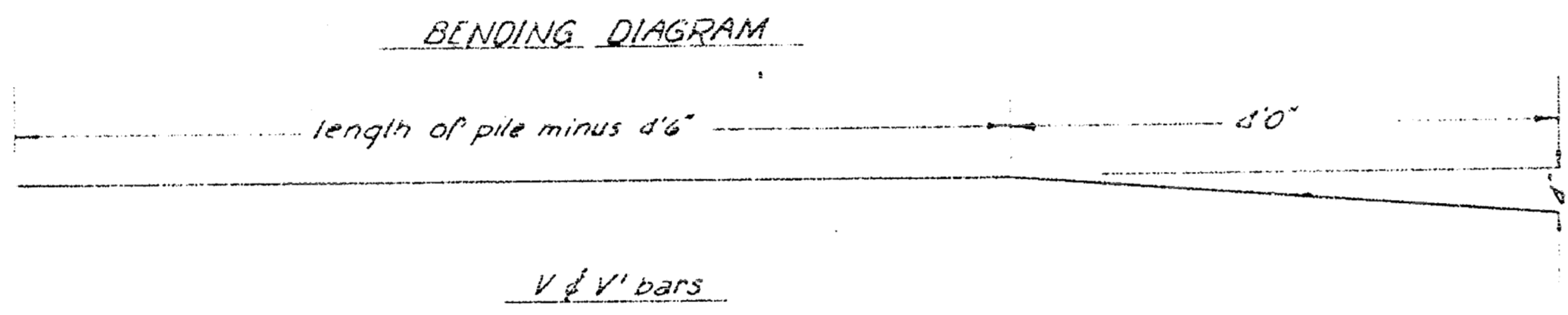
**LIGHTING DETAILS**  
**BRIDGE NO. 616-25-2371**

PREPARED BY  
**SEDGWICK COUNTY ENGINEERING DEPT.**  
**RUFUS S. KIRK — COUNTY ENGINEER**

REVISED	DATE	DESIGNED	TRACED	CHECKED	SHEET NO.
	10-50	MES	CDH		
PLANFILE		TOTAL SHEETS			



NOTE: handling hooks are to be 1,2" rebars with loops large enough to accommodate attaching hooks.



N dim in H bars - 10" in V bars decrease by increments of 10"

**GENERAL NOTES:**  
 Piling are to be constructed of class A concrete mix to be of such consistency that the concrete will be thoroughly compacted by tamping & vibrating. Piling are to be lifted with handling hooks (placed at B dim) only. Top of piling must have smooth and level surface, where not obtained in forming, surface must be treated by grinding or other suitable methods. All exposed edges are to have 1" bevel.  
 Piling should remain in forms for 14 days and cured for a minimum of 6 weeks before being driven.  
 Piling are to be painted with suitable coating 3" above & 3" below normal water line.  
 Each pile shall be stamped or marked with the date of its manufacture.  
 All steel shall have 2" cover unless otherwise noted.

BILL OF MATERIAL							
<b>20' PILE</b>				<b>30' PILE</b>			
Bar	V	V'	H	H'	Bar	V	V'
Number	4	4	4	4	Number	4	4
Size	1/2"	3/8"	3/8"	3/8"	Size	1/2"	3/8"
Length	20'	4'0"	4'0"	4'0"	Length	30'	4'0"
B. dim	4'1"				B. dim	4'9"	
Total Steel	158'				Total Steel	202'	
Concrete	1.04 Cu Yds				Concrete	1.62 Cu Yds	
<b>24' PILE</b>				<b>36' PILE</b>			
Bar	V	V'	H	H'	Bar	V	V'
Number	4	4	4	4	Number	4	4
Size	1/2"	3/8"	3/8"	3/8"	Size	1/2"	3/8"
Length	24'	4'0"	4'0"	4'0"	Length	36'	4'0"
B. dim	4'1"				B. dim	4'9"	
Total Steel	187'				Total Steel	239'	
Concrete	1.21 Cu Yds				Concrete	1.86 Cu Yds	
<b>28' PILE</b>				<b>40' PILE</b>			
Bar	V	V'	H	H'	Bar	V	V'
Number	4	4	4	4	Number	4	4
Size	1/2"	3/8"	3/8"	3/8"	Size	1/2"	3/8"
Length	28'	4'0"	4'0"	4'0"	Length	40'	4'0"
B. dim	4'1"				B. dim	4'9"	
Total Steel	217'				Total Steel	275'	
Concrete	1.45 Cu Yds				Concrete	2.22 Cu Yds	

**CONCRETE PILING**  
14" X 14"

PREPARED BY:  
SEDGWICK COUNTY ENGINEERING DEPT.  
H. J. GREELLY COUNTY ENGINEER

REVISED	DATE	BY	REASON	DATE	BY
	11-10	Baskett	Marion	7-2-66	
				12-07	
PLANNED					