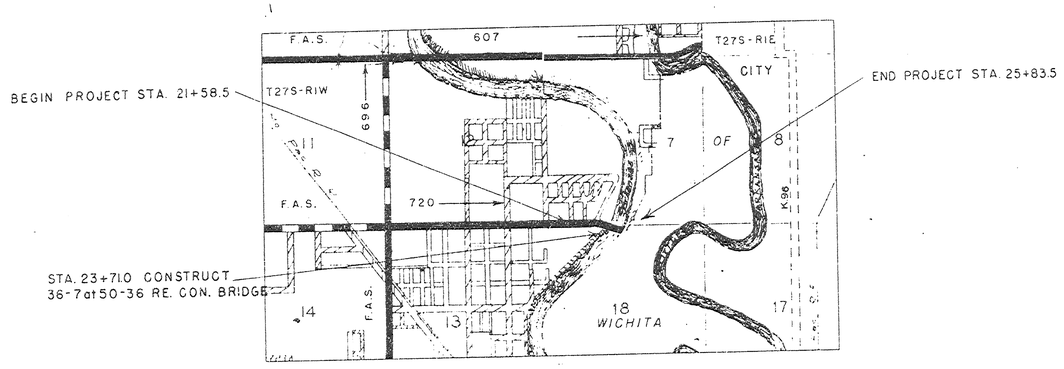
STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KANSAS		1950	1	11

SEDGWICK COUNTY HIGHWAY DEPARTMENT

BRIDGE NO. 616-25-2371

INDEX OF SHEETS

6,158 V.P.D. 1950



CONVENTIONAL SIGNS

COUNTY LINE
SECTION LINE
WIRE FENCE
HEDGE ROW
R.R. ROADS
SURVEY LINE
HIGHWAY
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

Walter Johnson CE

ENGINEER OF SECONDARY ROADS

APPROVED

Rufus L Teach

COUNTY ENGINEER

DATE 12-14-50

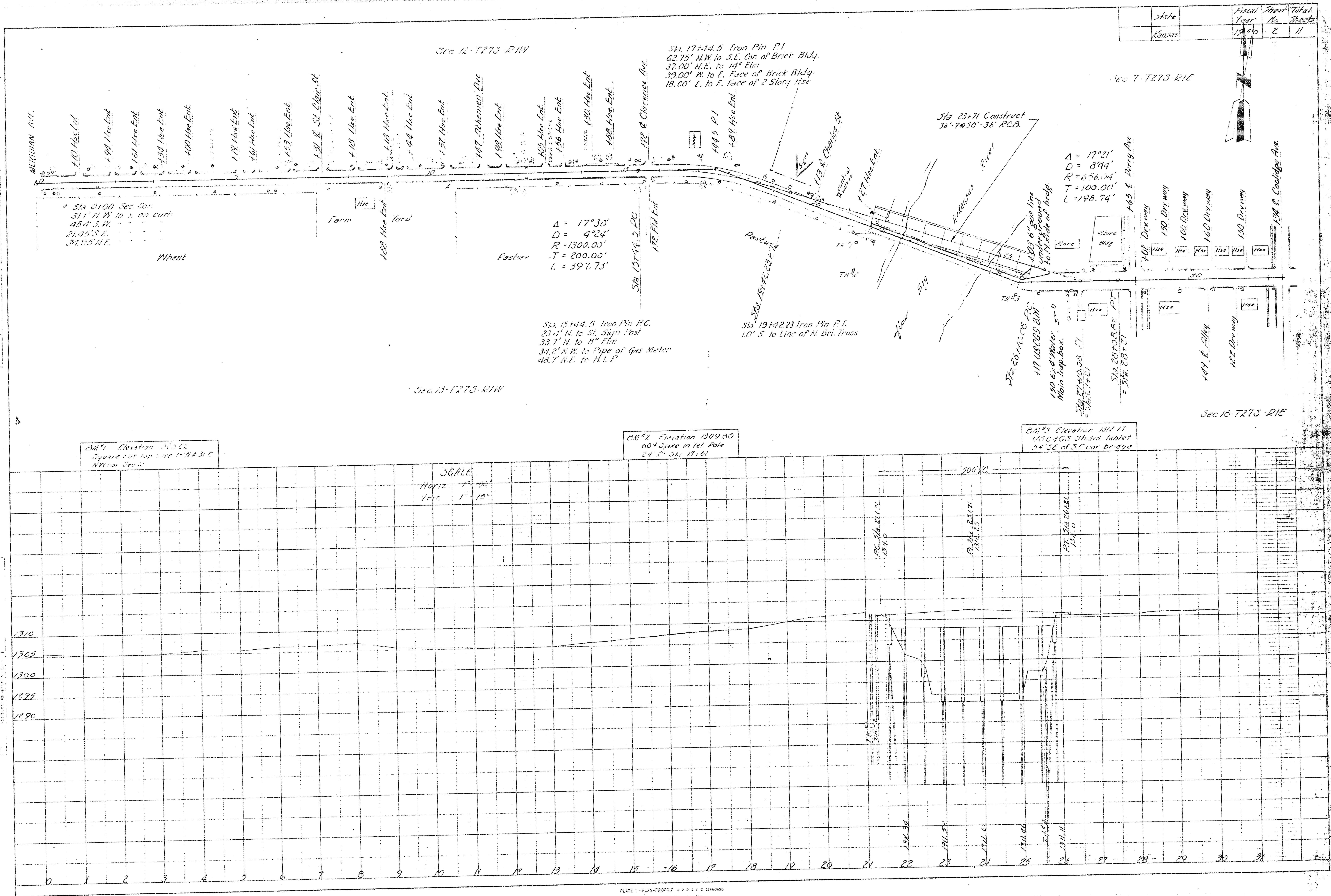
APPROVED 1-2-51 DATE

R C Kuehny

STATE HIGHWAY ENGINEER

13th Street

616-25


State | Kansas
Fiscal Year | 1950
Sheet No. | 2
Total Sheets | 11
Sec 12 - T27S - R1W
Sec 7 - T27S - R1E
Sec 13 - T27S - R1W
Sec 18 - T27S - R1E
MERIDIAN AVE.
Sta. 17+44.5 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
+72 ℄ Clarence Ave
+45 P.I
+89 Hse Ent.
Charles St.
Sta 23+71 Construct 36'-7@50'-36' R.C.B.
Δ = 17°21'
D = 8°44'
R = 656.04'
T = 100.00'
L = 198.74'
+65 ℄ Derby Ave
+34 ℄ Coolidge Ave
Sta 0+00 Sec. Cor.
Wheat
Farm
Yard
Pasture
Δ = 17°30'
D = 4°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 8" Elm
34.2' N.W. to Pipe of Gas Meter
48.7' N.E. to H.L.P.
Sta. 19+42.23 Iron Pin P.T.
1.0' S. to Line of N. Bri. Truss
River
Store
Store Bldg
Alley
BM#1 Elevation
Square cut top
BM#2 Elevation 1309.80
60d Spike in Tel. Pole
24' Rt. Sta. 17+61
BM#3 Elevation 1312.13
U.S.C.&G.S. Std. Tablet
54' SE of S.E. cor bridge
SCALE
Horiz. 1" = 100'
Vert. 1" = 10'
500' V.C.
1310
1305
1300
1295
1290
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

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

Sec. 12-T27S-R1W

Sec. 7-T27S-R1E

Sec. 13-T27S-R1W

Sec. 18-T27S-R1E

P.C.

P.I.

P.T.

Big Arkansas River

BENCH MARKS
B.M. #2 - 60" in T.P. 24' rt. Sta. 1+16+1 El. 1309.80
B.M. #3 - U.S.C. & G. Std. tablet 54' S.E. of cor. of bridge El. 1312.13

Note: For traverse details see revised sheet 19 (1949) River Improvement Map - Big Arkansas River.

Scale 1" 50'

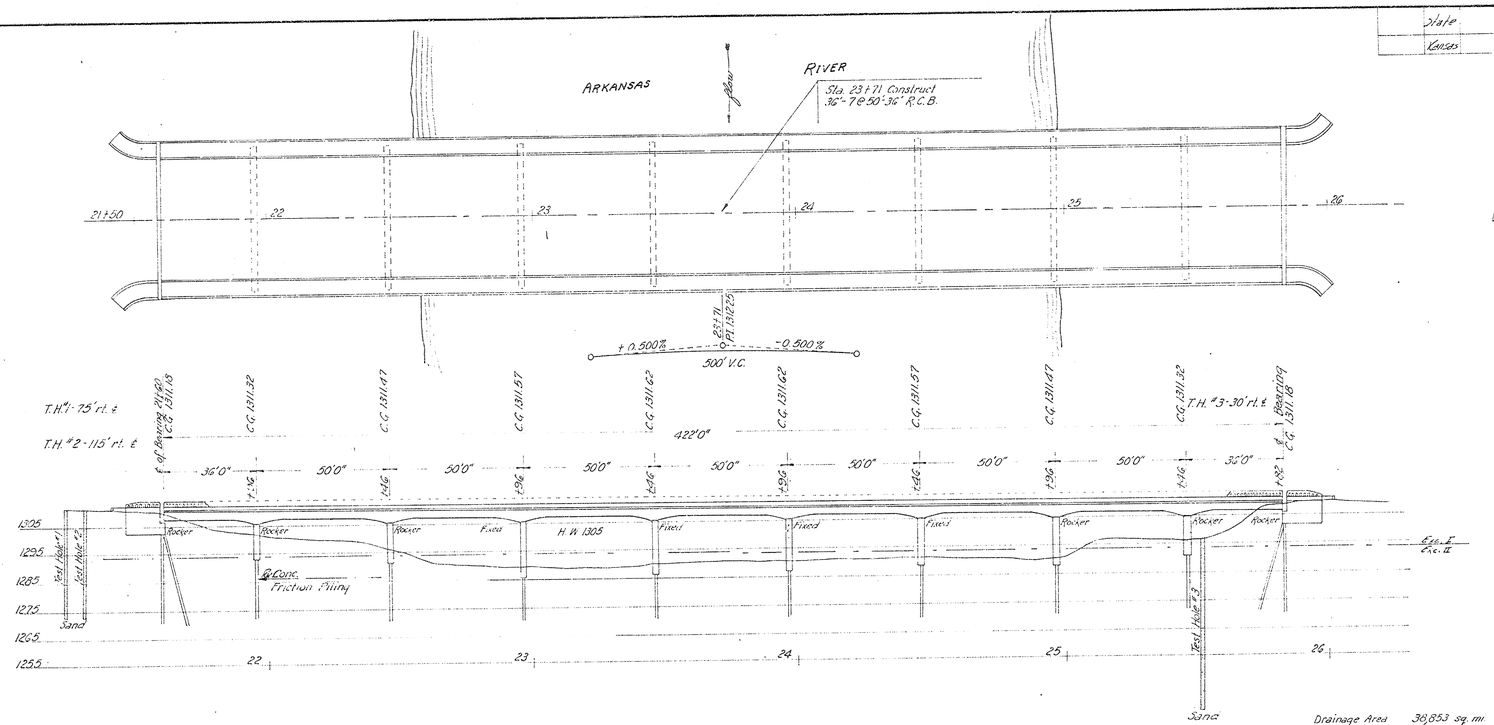
Topographical Map

Vicinity Bridge No. 61C-E5-2536-(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	Fiscal Year	Sheet No.	Total Sheets
Kansas	1950	9	11



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

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 60d in T.P. 24' rt. Sta. 17+61
Elev. 1309.80

B.M. #3 U.S.C.&G.S. std. tablet
54' S.E. of S.E. cor. of brs. Elev. 1312.13

SUMMARY OF QUANTITIES

Excavation Class I	907 cu. yds.
Excavation Class II	324 cu. yds.
Concrete Class A (AE)	1707.3 cu. yds.
Reinforcing Steel	270 034 lbs.
Structural Steel	
Bearing Devices	27,612 lbs.
Re. Conc. Piling	7,965 lin ft.
Cast Iron	1574 lbs.
2" Conduit	926 lin. ft.

GENERAL NOTES

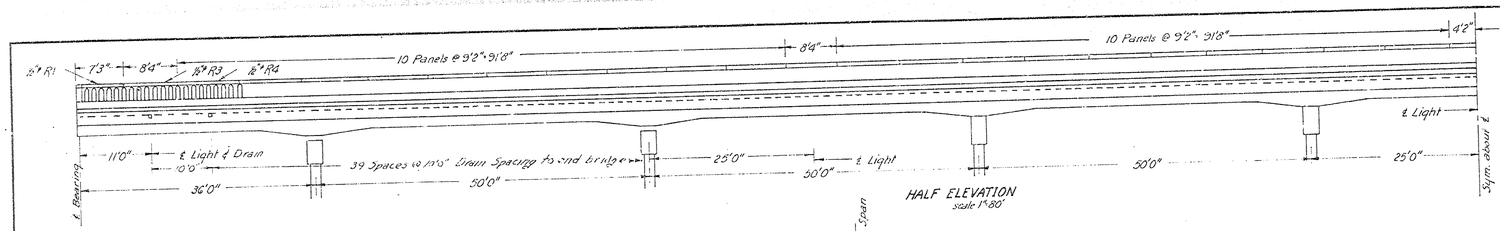
DESIGN: A.A.S.H.O. for H-20-44 Loading
20,000 p.s.i. Reinforcing Steel (int. gr.)
1,000 p.s.i. Concrete.
OLD STRUCTURE: To be removed by Sedgwick County.
SOUNDINGS: Taken with ¾" jet by Sedgwick County.
EMBANKMENT: The embankment at the abutments shall be built after completion of the abutments.
PILING: 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, pull boxes and pole anchor bolts to be installed at time of const. riction. 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

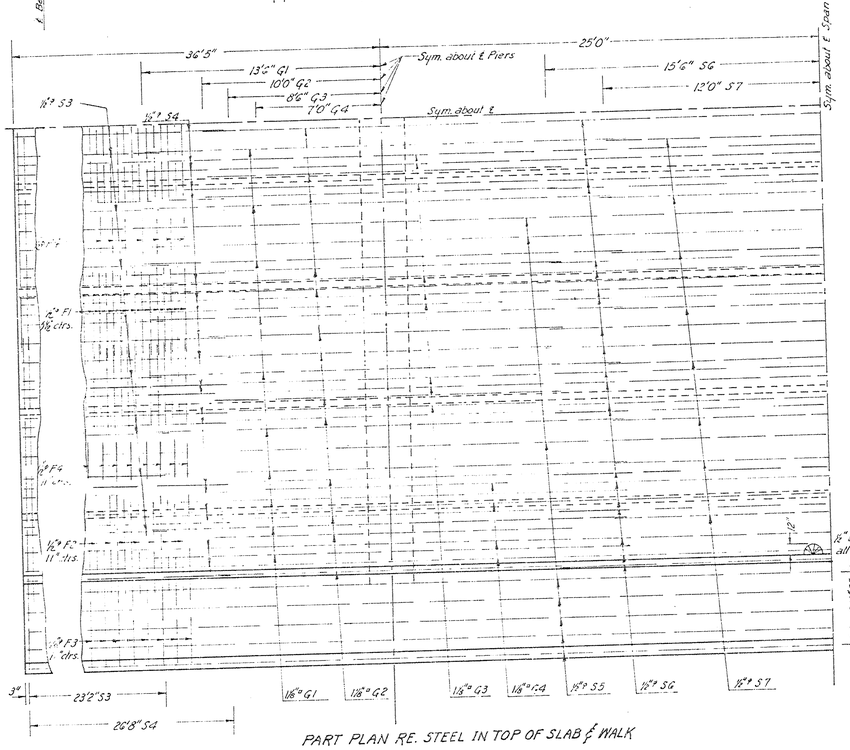
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=20'	M.E.S.	R.W.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		

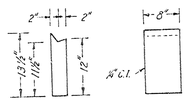
State	Fiscal Year	Sheet No.	Total Sheets
Kansas	1970	3	11



HALF ELEVATION
scale 1"=80'



PART PLAN RE. STEEL IN TOP OF SLAB & WALK



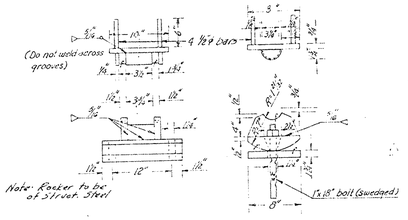
CAST IRON DRAIN
Computed wt. 19.2 lbs.
82 Required

SUMMARY OF QUANTITIES
SPANNING SUPERSTRUCTURE

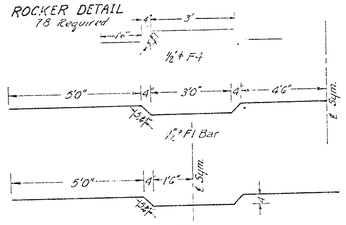
Concrete Class A (AE)	1062 Cu. Yds.
Reinforcing Steel	241 830 Lbs.
Cast Iron	1374 Lbs.
Rocker Steel	27,612 Lbs.

GENERAL NOTES

LOADING: H-20-44 A.A.S.H.O.
DESIGN STRESS: fs = 18,000 p.s.i.; fc = 1000 p.s.i. n=10
CONCRETE: Class A (AE) to be used throughout. Bevel all exposed edges with ¾" Δ moulding unless otherwise noted.
FALSEWORK: Falsework shall be in place for entire unit until all the concrete has attained its design strength. Construction joints shown on sheet 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 recieve one coat of tinted aluminum paint followed by one coat of aluminum paint after erection. The same shall apply to light pull boxes.



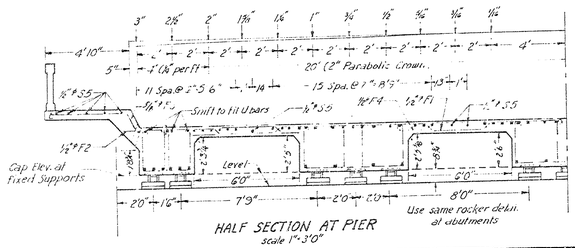
ROCKER DETAIL
18 Required



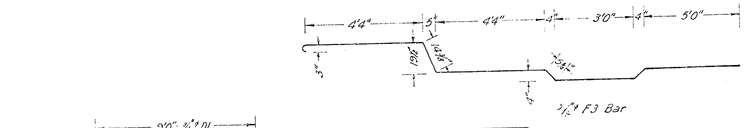
STEEL TABLE
TOP OF SLAB & WALK

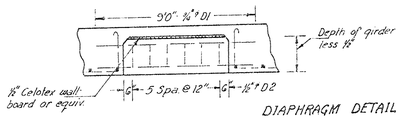
BAR	SIZE	NO.	LENGTH	WEIGHT
G1	18ϕ	160	27'0"	18,376
G2	"	208	20'0"	17,888
G3	"	144	17'0"	10,326
G4	"	64	14'0"	3,855
*F1	½ϕ	922	26'11"	16 639
*F2	½ϕ	922	13'5½"	8,319
*F3	½ϕ	922	19'3"	13,451
S3	11ϕ	32	23'2"	697
S4	"	88	26'8"	926
S5	"	126	48'0"	4,008
S6	"	308	31'0"	6,397
S7	"	112	24'0"	1,800
D1	15ϕ	760 ~~332~~	9'0"	~~1,443~~
D2	15ϕ	240 ~~160~~	3'8"	~~600~~

*See Bending Diagram



HALF SECTION AT PIER
scale 1"=3'0"





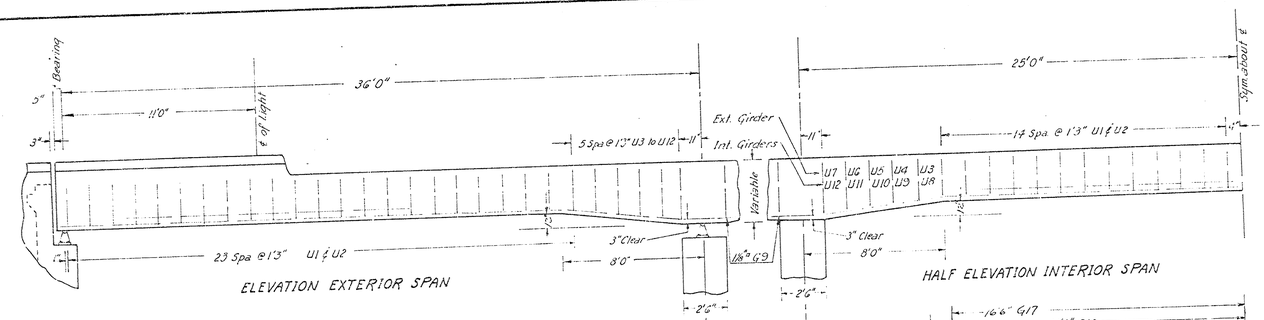
DIAPHRAGM DETAIL
Place between girders at all supports

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

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED 4-30-70	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Noted	MES.	R.W.H.		
	DATE				
	PLANFILE		TOTAL SHEETS		

State		Fiscal Year	Sheet No.	Total Sheets
Kansas		1970	6	11

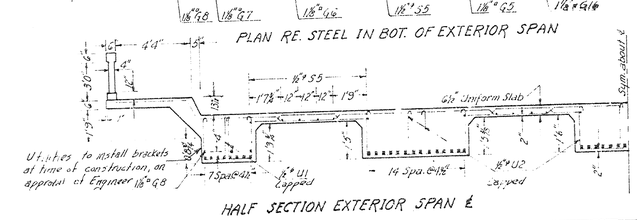


ELEVATION EXTERIOR SPAN

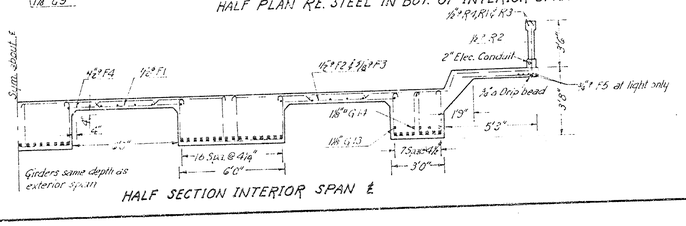
HALF ELEVATION INTERIOR SPAN

PLAN RE. STEEL IN BOT. OF EXTERIOR SPAN

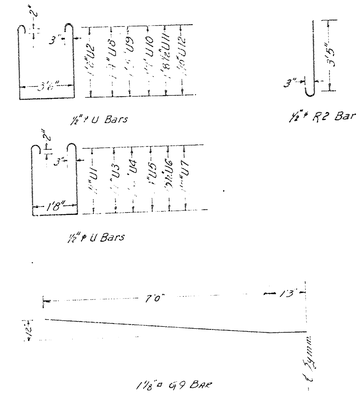
HALF PLAN RE. STEEL IN BOT. OF INTERIOR SPAN



HALF SECTION EXTERIOR SPAN ℄



HALF SECTION INTERIOR SPAN ℄



STEEL TABLE

Bottom of Slab and Walk

Bar	Size	No.	Length	Weight
G3	1⅛" ▫	90	6'9"	2,104
G4	1⅛" ▫	24	18'3"	1,838
G7	1⅛" ▫	98	23'0"	7,160
G8	1⅛" ▫	15	17'0"	817
G9	1⅛" ▫	192	16'8"	13800
G10	1⅛" ▫	140	36'0"	21,687
G11	1⅛" ▫	168	30'0"	21 687
G12	1⅛" ▫	84	27'0"	9759
G13	1⅛" ▫	42	20'0"	3,612
G14	1⅛" ▫	28	15'0"	1807
G15	1" ▫		12'11"	
F2	½" ▫	1894	7'0"	8,640
F3	⅜" ▫	120	4'3"	780
S5	½" ▫	216	48'0"	6963
U1	½" ▫	1252	4'7"	3,180
U2	½" ▫	1748	5'11"	7,187
U3	½" ▫	64	4'4"	211
U4	½" ▫	64	5'1"	248
U5	½" ▫	64	5'5"	236
U6	½" ▫	64	5'8"	243
U7	½" ▫	64	5'11"	252
U8	½" ▫	96	7'3"	466
U9	½" ▫	96	7'5"	482
U10	½" ▫	96	7'9"	498
U11	½" ▫	96	8'0"	513
U12	½" ▫	96	8'3"	531
R1	½" ▫	8	7'9"	37
R2	½" ▫	922	3'8"	2258
R3	½" ▫	90	1'0"	197
R4	½" ▫	160	8'11"	990
G16	1⅛" ▫	12	23'0"	1187
G17	"	84	330	11778

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

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

REVISED M.E.S. 10-20-70	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1" = 3'0"	M.E.S.	R.W.M.		
	DATE	10-50	10-20-50		
	PLANFILE		TOTAL SHEETS		

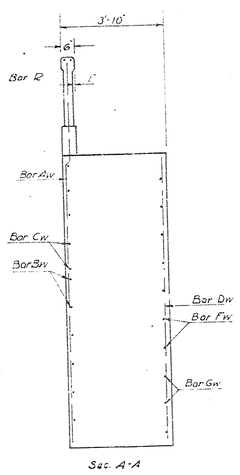
State		Fiscal Year	Sheet No.	Total Sheets
Kansas		1950	7	11

STEEL TABLE
(one abut.)

Bar	Space	No.	Size	Length	Wt.	Revised Weight
Aw	11"	36	½" ϕ	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	36.9
Hb†	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	3625'	2424	2592.3 #

QUANTITIES per ABUTMENT

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



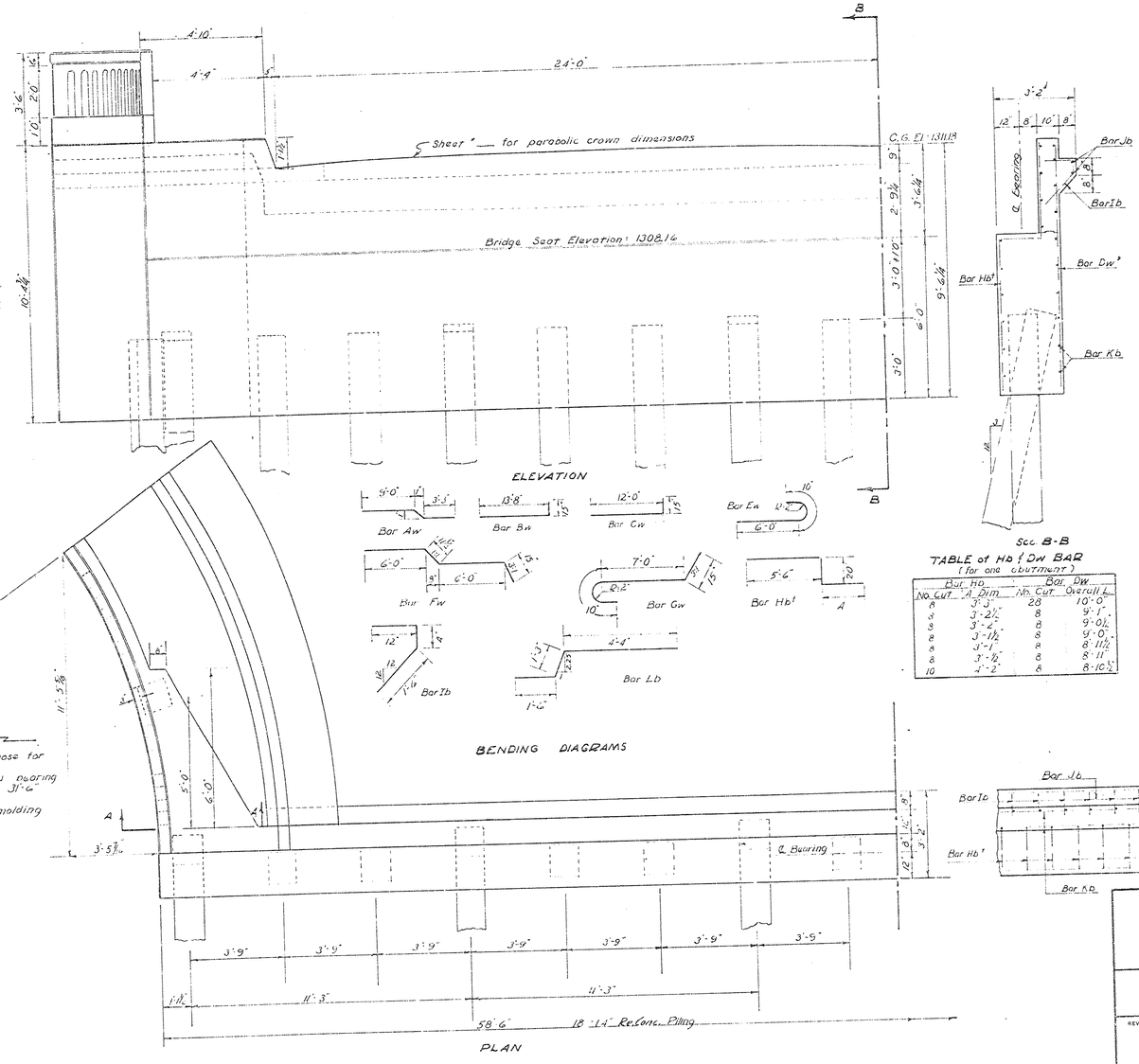
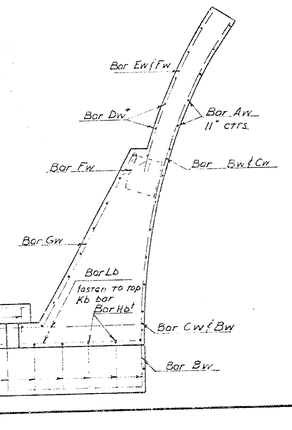


TABLE of Hb† Dw BAR
(for one abutment)

Bar Hb		Bar Dw	
No. Cut	A Dim.	No. Cut	Overall L.
1	3'-3"	28	10'-0"
2	3'-2½"	8	9'-1"
3	3'-2"	8	9'-0½"
4	3'-1½"	8	9'-0"
5	3'-1"	8	8'-11½"
6	3'-½"	8	8'-11"
10	4'-2"	8	8'-10½"



GENERAL NOTES

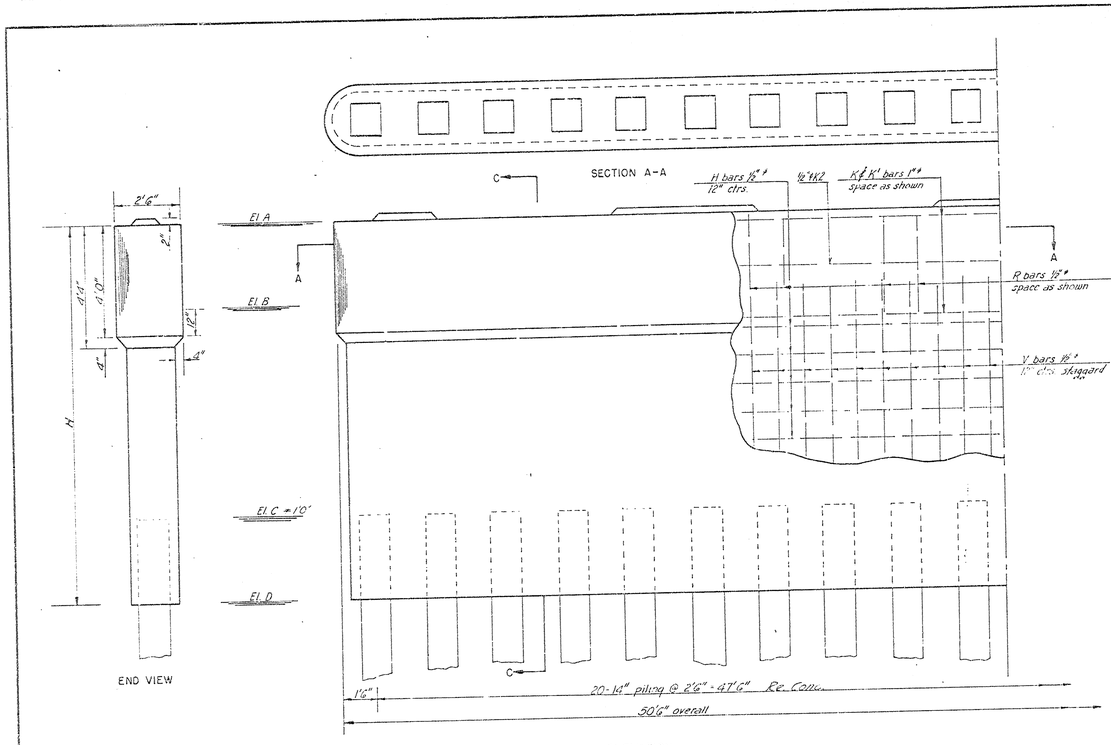
Bearing plates to be spaced as those for pier (see sheet "—")
Piling to be driven to a computed bearing value of 28 tons and at least 31'-6" below the bridge seat.
Bevel all exposed edges with ¾" Δ molding
Concrete to be class A(os)

ABUTMENT DETAIL
BRIDGE NO. 616-25-2371

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

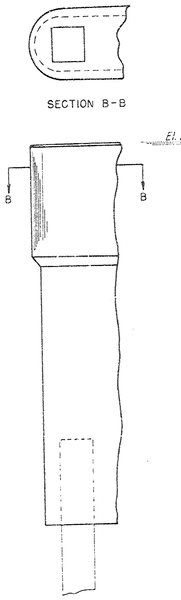
REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	½" = 1'-0"	M.J. & R.J.	R.J.		
	DATE	10-20-50			
	PLANFILE		TOTAL SHEETS		

State		Fiscal Year	Sheet No.	Total Sheets
Kansas		1950	8	11

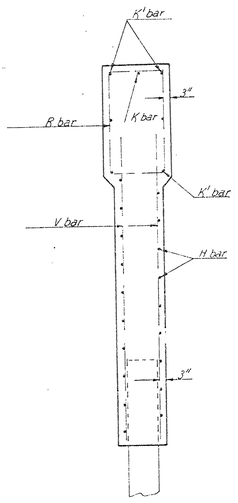


ELEVATION

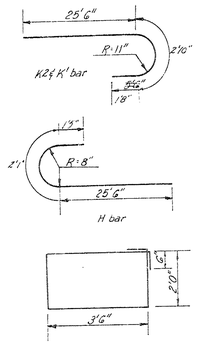
END VIEW



PILING ELEVATIONS
PIERS 1-2-7&8 only



SECTION C-C



BENDING DIAGRAMS
no scale

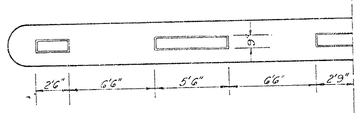
PIER	TABLE of ELEVATIONS				TABLE of STEEL													QUANTITIES							A
	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	Number 1/2" R bars	Length 1/2" R bars	Number 1" K bars	Length 1" K bars	Number 1" K' bars	Length 1" K' bars	Number 1/2" V bars	Length 1/2" V bars	Number 1/2" H bars	Length 1/2" H bars	3/4" Bearing Pl.	L.F. Test Pile	L.F. Friction Pile	Cu. Yds. Concrete	Lbs. Re-bars	No. 1/2" R2 Bolts	Length	Reused Lb. Rebar	
#1	1307.55	1304.55	1297.55	1294.55	40	120'	2	26'6"	8	3'4"	51	10'6"	26	500'	10	406	810	49.02	2351	13	4	300	1928.3	
#2	1307.70	1304.70	1294.70	1291.70	40	120'	2	26'6"	8	3'6"	51	13'6"	32	600'	10	0	--	59.73	2854	16	4	300	2146.7	
#3	1308.53	1305.53	1289.53	1286.53	40	120'	2	26'6"	8	3'6"	51	17'6"	44	500'	0	0	--	80.13	3855	22	4	"	2583.6	
#4	1308.58	1305.58	1290.58	1287.58	40	120'	2	26'6"	8	3'6"	51	18'6"	42	500'	0	0	--	76.71	3704	21	4	"	2510.8	
#5	1308.58	1305.58	1291.58	1288.58	40	120'	2	26'6"	8	3'6"	51	17'6"	40	500'	0	406	--	73.35	3060	20	4	"	2437.9	
#6	1308.53	1303.53	1291.53	1288.53	40	120'	2	26'6"	8	3'6"	51	17'6"	40	500'	0	0	--	73.35	3060	20	4	"	2437.9	
#7	1307.70	1304.70	1290.70	1287.70	40	120'	2	26'6"	8	3'6"	51	17'6"	40	500'	10	0	--	73.35	3060	20	4	"	2437.9	
#8	1307.55	1304.55	1293.55	1290.55	40	120'	2	26'6"	6	3'6"	51	14'6"	34	500'	10	406	--	63.18	2754	17	4	"	2219.5	
					30					TOTALS				297	40	1216		509.52	23356				18,702.6	

Revision 5-31-51 R.S.

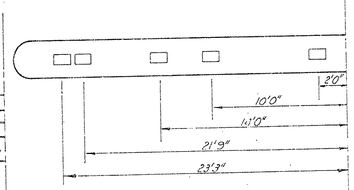
GENERAL NOTES

Class A (RE) Concrete shall be used thruout. Bevel all exposed edges with a 3/4" triangular molding unless otherwise noted.

: All dimensions shown relative to reinforcing steel are to ℄ of bar.



LOCATION OF KEYS
PIERS 3-4-5&6 only
no scale



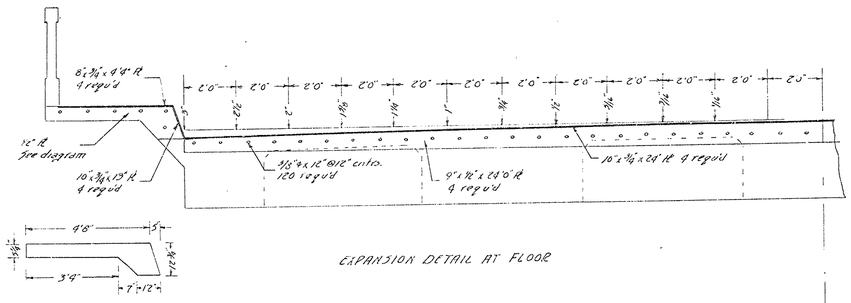
LOCATION OF BEARING PLATES
PIERS 1-2-7&8 only (omit key)
no scale

PIER DETAILS
BRIDGE No. 616-25-2371

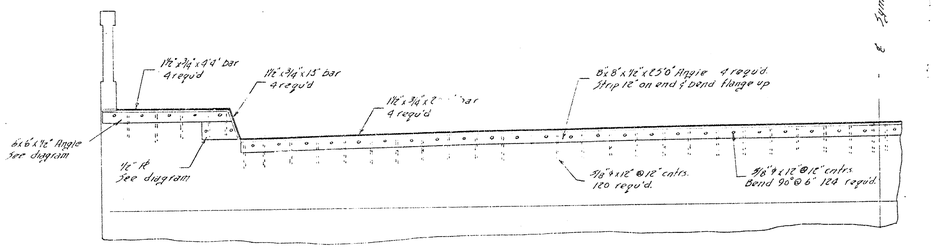
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1/2" = 1'0"	M.S. & R.J.	R.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		

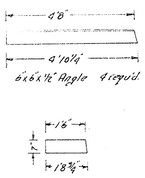
State	Fiscal Year	Sheet No.	Total Sheets
Kansas	1950	9	11

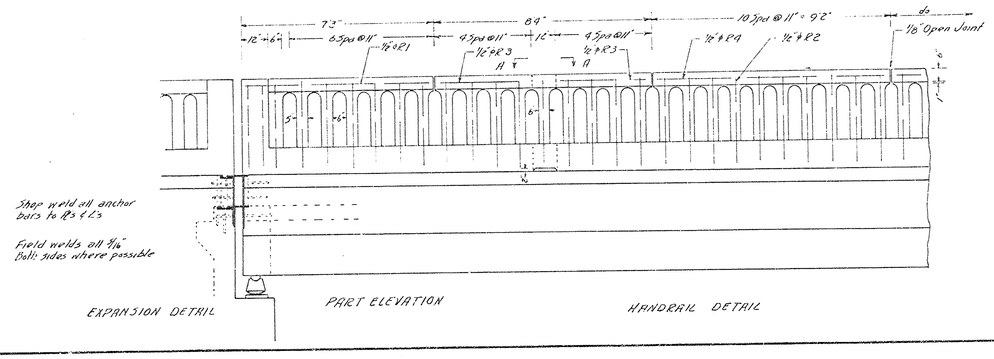


EXPANSION DETAIL AT FLOOR



EXPANSION DETAIL AT BACKWALL

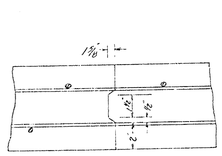




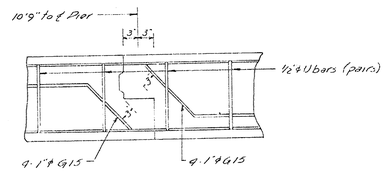
EXPANSION DETAIL

PART ELEVATION

HANDRAIL DETAIL

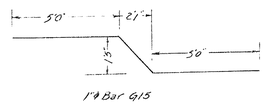


SLAB JOINT



GIRDER JOINT

CONSTRUCTION JOINT DETAILS



1"ø Bar G15

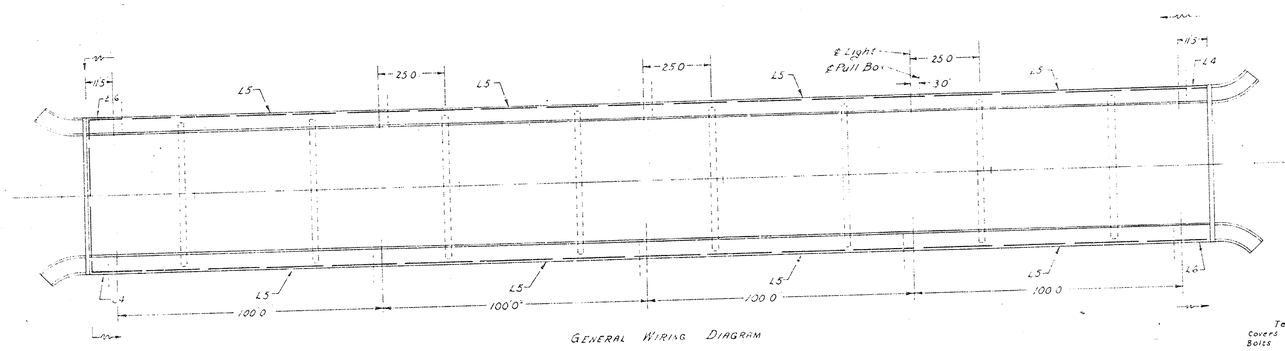
SECTION AA

AUXILIARY DETAILS
BRIDGE NO. 616-25-2371

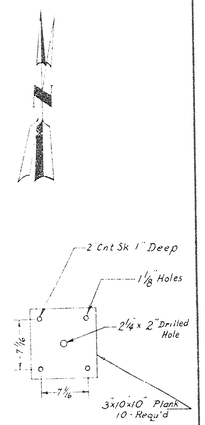
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

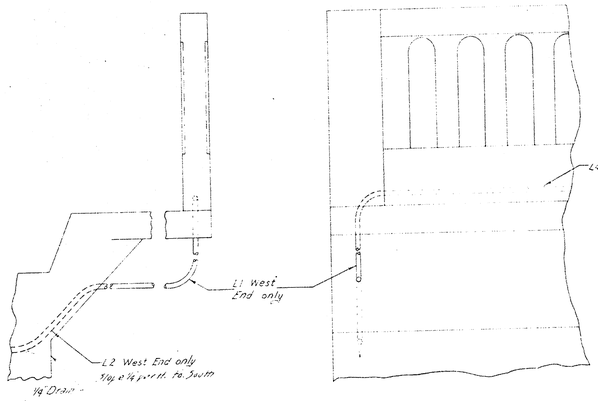
REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=2'-0"	M.E.S.	M.E.S.		
	DATE				
	PLANFILE		TOTAL SHEETS		

State	Fiscal Year	Sheet No.	Total Sheets
Kansas	1950	10	11



GENERAL WIRING DIAGRAM



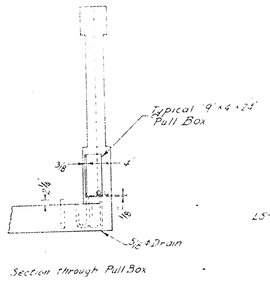


DETAIL AT ENDS OF BRIDGE

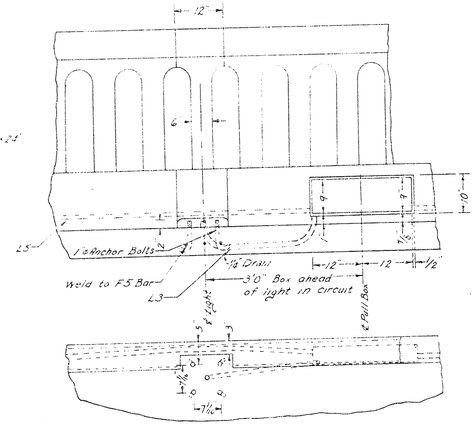
Typical Slope of Conduit between Pull Boxes

CONDUIT TABLE			
Symbo.	No	Length	Tot. Lgth.
L1	2	41'	8'3
L2	1	53'4"	53' 4"
L3	10	1' 10½"	18' 9"
L4	2	8' 1"	16' 3"
L5	8	100' 2"	801' 4"
L6	2	14' 1¼"	28' 3"
		Total	922' 2½"

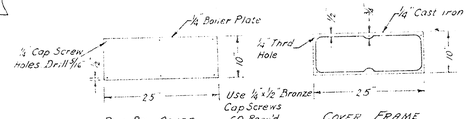
All conduit 2" Galv. Rigid



Section through Pull Box

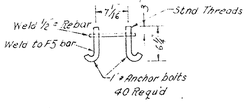


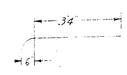
DETAIL AT PULL BOX AND LIGHT



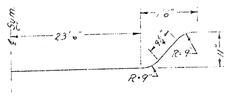
PULL BOX COVER 10 Req'd

COVER FRAME 10 Req'd





L1



L2

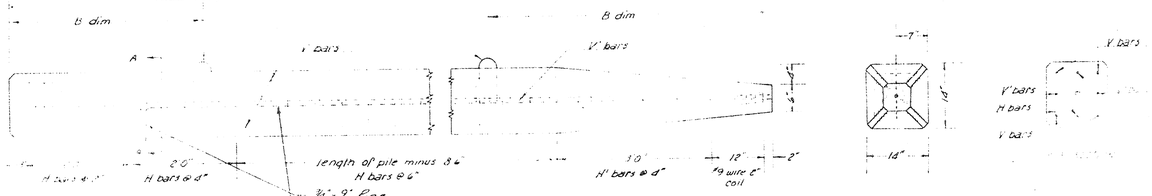
L3

LIGHTING DETAILS
BRIDGE NO. 616-25-2371

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO
		M.E.S.	C.D.H.		
	DATE	10-50	10-25-50		
	PLANFILE		TOTAL SHEETS		

PLAN VIEW



Note: Handling hooks are to be 1'-2 3/4" rebars with loops large enough to accomodate attaching hooks.

BENDING DIAGRAM

V & V' bars

W dim in H bars - 10"
in H' bars decrease by
decrements of 3/8"

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 a smooth and level surface, where not attained in forming, surface must be leveled by grinding or other suitable methods. All exposed edges are to have a 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 5' above & 5' 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

20'6" PILE					32'6" PILE				
Bar	V	V'	H	H'	Bar	V	V'	H	H'
Number	4		43	9	Number	4		67	9
Size	#8		#4	#4	Size	#8		#4	#4
Length	20'0"		4'0" Var.		Length	32'0"		4'0" Var.	
B dim.	11'3"				B dim.	4'9"			
Total Steel	158#				Total Steel	302#			
Concrete	1.04 Cu Yds.				Concrete	1.62 Cu Yds.			

24'6" PILE					36'6" PILE				
Bar	V	V'	H	H'	Bar	V	V'	H	H'
Number	4		51	9	Number	4		75	9
Size	#8		#4	#4	Size	#8		#4	#4
Length	24'0"		4'0" Var.		Length	36'0"		4'0" Var.	
B dim.	5'1"				B dim.	1'2"			
Total Steel	187#				Total Steel	339#			
Concrete	1.23 Cu Yds.				Concrete	1.76 Cu Yds.			

28'6" PILE					40'6" PILE				
Bar	V	V'	H	H'	Bar	V	V'	H	H'
Number	4		59	9	Number	4	4	83	9
Size	#8		#4	#4	Size	#8	#8	#4	#4
Length	28'0"		4'0" Var.		Length	40'0"	40'0"	4'0" Var.	
B dim.	5'11"				B dim.	6'3"			
Total Steel	217#				Total Steel	415#			
Concrete	1.45 Cu Yds.				Concrete	1.95 Cu Yds.			

CONCRETE PILING
14" X 14"

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=10"	Baskett	Marion	T. L. C.	
	DATE	12-27		2-27-28	
	PLANNED				