Chuck Ford

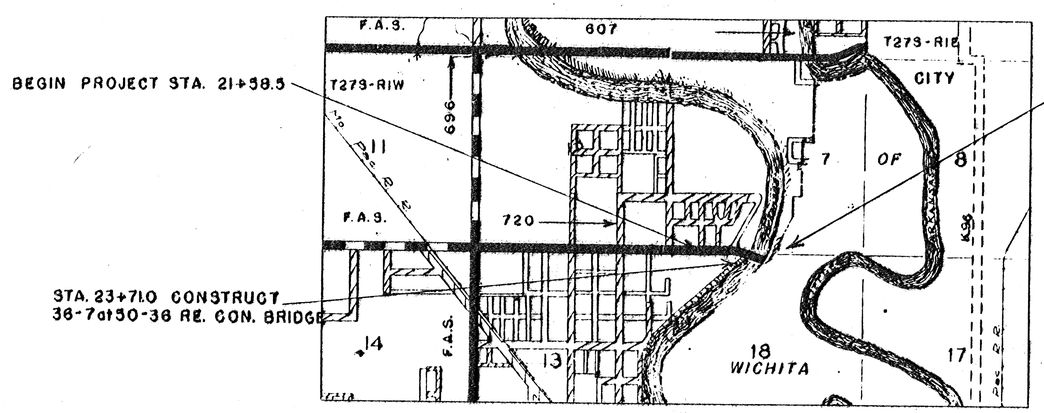
	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS		1950	1	11

INDEX OF SHEETS

SEDGWICK COUNTY HIGHWAY DEPARTMENT

BRIDGE NO. 616-25-2371

6,158 V.P.D. 1950



BEGIN PROJECT STA. 21+58.5

END PROJECT STA. 25+83.5

STA. 23+71.0 CONSTRUCT 36-7 at 30-36 RE. CON. BRIDGE

CONVENTIONAL SIGNS

COUNTY LINE
SECTION LINE
WIRE FENCE
HEDGE ROW
RAILROADS
SURVEY LINE
RIGHT OF WAY
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
ADDITONS		FT.	MILES
GROSS LENGTH OF PROJECT		FT.	MILES

PLANS PREPARED BY

DATE

APPROVED

Rufus S. Kirk
COUNTY ENGINEER

DATE 12-14-50

APPROVED DATE 12-18-50

Walter Johnson cs
ENGINEER OF SECONDARY ROADS

APPROVED 12-18-50 DATE

R C Kerling
STATE HIGHWAY ENGINEER

13th Street
616-25

	State	Fiscal Year	Sheet No.	Total Sheets
	Kansas	1940	8	11

Sec 12-T27S-R1W

Sec 7-T27S-R1E

Sec 13-T27S-R1W

Sec 18-T27S-R1E

MERIDIAN AVE.

+40 Hse Ent. | +94 Hse Ent. | +61 Hse Ent. | +24 Hse Ent. | +00 Hse Ent. | +19 Hse Ent. | +61 Hse Ent. | +23 Hse Ent. | +31 E. St. Clair St. | +43 Hse Ent. | +18 Hse Ent. | +44 Hse Ent. | +37 Hse Ent. | +47 Atherton Ave. | +22 Hse Ent. | +05 Hse Ent. | +60 Hse Ent. | +32 Hse Ent. | +28 Hse Ent. | +12 E. Cherokee Ave.

Sta. 0+00 Sec. Cor.
31.1' N.W. to x on curb
45.4' S.W. " " " "
21.45' S.E. " " " "
Sta. 1+95 N.E. " " " "

Wheat

Farm Yard

Hse

428 Hse Ent.

Pasture

Sta. 15+42.3 P.C.

Sta. 17+44.8 Iron Pin P.I.
42.25' N.W. to S.E. Cor. of Brick Bldg.
37.00' N.E. to 14" Elm
39.00' W. to N. Face of Brick Bldg.
18.00' N. to N. Face of 2 Story Hse

Sta. 13+44.3 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 1 kl. P.

Sta. 19+42.23 Iron Pin P.T.
1.0' S. to Line of N. Bri. Truss

Δ = 17°30'
D = 9°24'
R = 1300.00'
T = 200.00'
L = 397.73'

Sta. 23+71 Construct 36"-7930'-36" R.C.B.

Δ = 17°21'
D = 8°14'
R = 696.04'
T = 109.00'
L = 198.74'

Arkansas River

TH #1

TH #2

TH #3

Bldg

Store Bldg

Sta. 1+00 6" Gas line 2.0' Underground 20' N. of Store Bldg

Sta. 2+00.08 Pl
= 5+62.17 Bk

Sta. 2+08.82 Pl
= 5+28.21 Bk

+30 6" Water line Main tap box

+17 L&N R.R.

465 E. Perry Ave.

+00 Driveway | +20 Driveway | +40 Driveway | +60 Driveway | +80 Driveway | +100 Driveway | 1545 E. Cadillac Ave.

Hse.

449 E. Alley

422 Driveway

BM #1 Elevation 1303.02
Square-cut top curb 15' N. & 31' E. NW cor. Sec 13

BM #2 Elevation 1309.80
60 d Spike in Tel. Pole 24' E. of Sta. 17+61

BM #3 Elevation 1312.13
USC&GS Stdrd. Tablet in E. end of E. con. bridge

SCALE
Horiz. 1" = 100'
Vert. 1" = 10'

100' V.C.

PC Sta. 24+12.2 Elev. 1310.6

PT Sta. 23+37 Elev. 1312.5

PC Sta. 26+36.2 Elev. 1312.8

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

PLAT & PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, R.W. NOTED, STRUCTURE LOCATIONS CHKD., DATE, BY

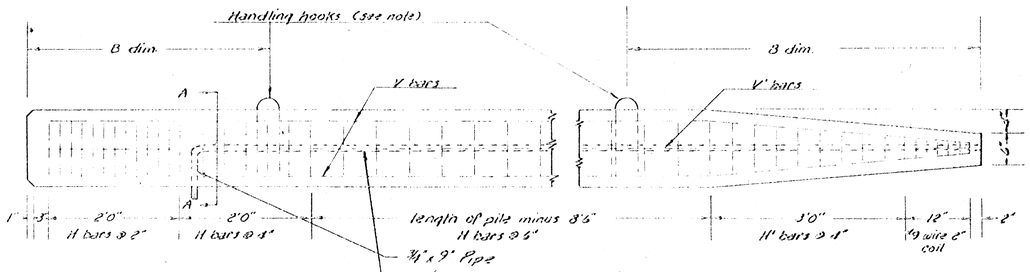
PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK, NO., DATE, BY

PLATE 1 — PLAN-PROFILE O. P. R. & B. R. STANDARD
REGISTER & DIGGS CO., NEW YORK

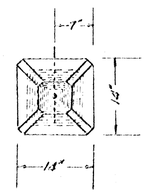
MARCO No. 316-10-1 Lowell Hardware

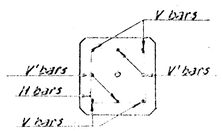
State		Fiscal Year	Sheet No.	Total Sheets
Kansas		1950	11	11

PLAN VIEW



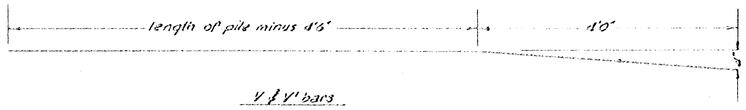
Note: Handling hooks are to be 1"ø 2'3" rebars with loops large enough to accomadate attaching hooks.



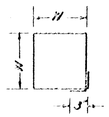


A-A SECTION

BENDING DIAGRAM



V & V' bars



H dim. in H bars - 10" in H' bars decrease by increments of 2½"

Guard 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 obtained 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 4 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

20½" PILE				
Bar	V	V'	H	H'
Number	4		43	9
Size	#3		#3	#3
Length	20'0		4'0"	Var.
B dim.	8'3"			
Total Steel			153#	
Concrete			1.04 Cu Yds.	

24½" PILE				
Bar	V	V'	H	H'
Number	4		51	9
Size	#3		#3	#3
Length	24'0		4'0"	Var.
B dim.	8'7"			
Total Steel			181#	
Concrete			1.28 Cu Yds.	

28½" PILE				
Bar	V	V'	H	H'
Number	4		59	9
Size	#3		#3	#3
Length	28'0		4'0"	Var.
B dim.	8'11"			
Total Steel			211#	
Concrete			1.45 Cu Yds.	

32½" PILE				
Bar	V	V'	H	H'
Number	4		51	9
Size	#3		#3	#3
Length	32'0"		4'0"	Var.
B dim.	4'9"			
Total Steel			203#	
Concrete			1.43 Cu Yds.	

35½" PILE				
Bar	V	V'	H	H'
Number	4		63	9
Size	#4		#3	#3
Length	35'0		4'0"	Var.
B dim.	7'1"			
Total Steel			333#	
Concrete			1.84 Cu Yds.	

39½" PILE				
Bar	V	V'	H	H'
Number	4	4	83	9
Size	#4	#3	#3	#3
Length	40'0"	40'0"	4'0"	Var.
B dim.	6'5"			
Total Steel			418#	
Concrete			2.04 Cu Yds.	

CONCRETE PILING 14" X 14"

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO
	1"=1'0"	Baskell	Manion	H.J.B.	
	DATE	12-27		12-27-49	
	PLANFILE		TOTAL SHEETS		

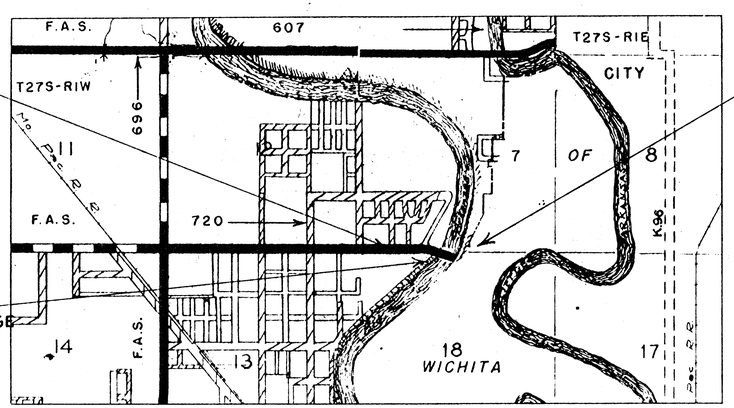
	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS		1950	1	11

SEDGWICK COUNTY HIGHWAY DEPARTMENT

BRIDGE NO. 616-25-2371

INDEX OF SHEETS

6,158 V.P.D. 1950



BEGIN PROJECT STA. 21+58.5

END PROJECT STA. 25+83.5

STA. 23+71.0 CONSTRUCT 36-7 at 50-36 RE. CON. BRIDGE

2687201

2697491

CONVENTIONAL SIGNS

COUNTY LINE
SECTION LINE
WIRE FENCE
HEDGE ROW
RAILROADS
SURVEY LINE
RIGHT OF WAY
TELEPHONE POLE
POWER POLE
TRAVELED WAY

R.B. Smith 1-22-46

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
ADDITONS		FT.	MILES
GROSS LENGTH OF PROJECT		FT.	MILES

PLANS PREPARED BY

DATE

APPROVED

Rufus S. Kirk
COUNTY ENGINEER

DATE 12-14-50

APPROVED DATE 12-18-50

Walter Johnson Co.
ENGINEER OF SECONDARY ROADS

APPROVED 12-18-50 DATE

R C Keeling
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.
+31 ℄ St. Clair St.
+47 Athenien Ave.
+72 ℄ Clarence Ave.
+19 ℄ Charles St.
+65 ℄ Perry Ave.
+34 ℄ Coolidge Ave.
+49 ℄ Alley
Sta. 0+00 Sec. Cor.
31.1' N.W. to x on curb
45.4' S.W.
21.45' S.E.
34.95' N.E.
Wheat
Farm Yard
Pasture
Δ = 17°30'
D = 4°24'
R = 1300.00'
T = 200.00'
L = 397.73'
Sta. 15+44.5 P.C.
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. 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
Sta. 19+42.23 Iron Pin P.T.
1.0' S. to Line of N. Bri. Truss
Sta. 23+71 Construct
36'-7@30'-36' R.C.B.
Arkansas River
Flow
Δ = 17°21'
D = 8°44'
R = 656.04'
T = 100.00'
L = 198.74'
Store Bldg.
Sta. 26+10.08 P.C.
Sta. 27+10.08 P.I. = Sta. 27+21
Sta. 28+08.82 P.T. = Sta. 28+21
BM #1 Elevation 1305.02
Square-cut top curb 16'N & 31'E NW cor Sec 13
BM #2 Elevation 1309.80
60d Spike in Tel. Pole
24' Rt Sta. 17+61
BM #3 Elevation 1312.13
USC&GS Stndrd. Tablet
54' SE of S.E. cor. bridge
SCALE
Horiz. 1" = 100'
Vert. 1" = 10'
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 20 21 22 23 24 25 26 27 28 29 30 31
PLAN. Surveyed / Plotted / Alignment Checked / Rt. of Way Checked / Note Book No.
PROFILE. Surveyed / Plotted / Grades Checked / B.M.s Noted / Structure Notations Ch'k'd. / Note Book No.
PLATE 1—PLAN-PROFILE
KEUFFEL & ESSER CO. NEW YORK.

	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.

P.C.

P.I.

P.T.

River

Big Arkansas River

BENCH MARKS
B.M. #2 - 60d in T.P. 24' rt. Sta. 1746 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'

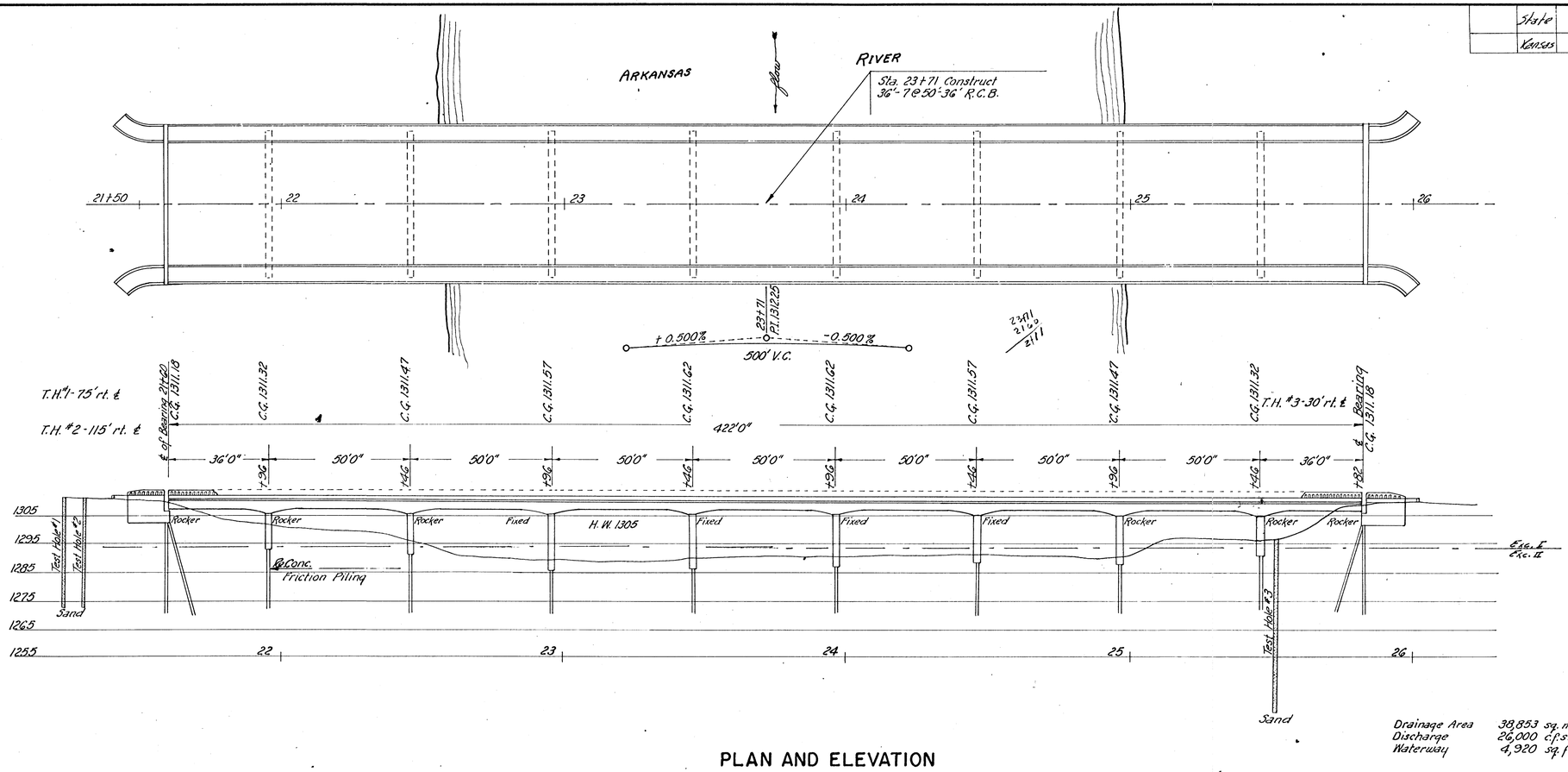
Topographical Map

Vicinity, Bridge No. 614-25-2356 - (13th St.)

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

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

	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	4	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 bri. Elev. 1312.13

SUMMARY OF QUANTITIES

Excavation Class I	407 cu.yds.
Excavation Class II	329 cu.yds.
Concrete Class A (AE)	1707.5 cu.yds.
Reinforcing Steel	270,034 lbs.
Structural Steel	
Bearing Devices	27,612 lbs.
Re. Conc. Piling	7,960 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 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.	R.W.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		

State			Fiscal Year	Sheet No.	Total Sheets
Kansas			1950	3	11

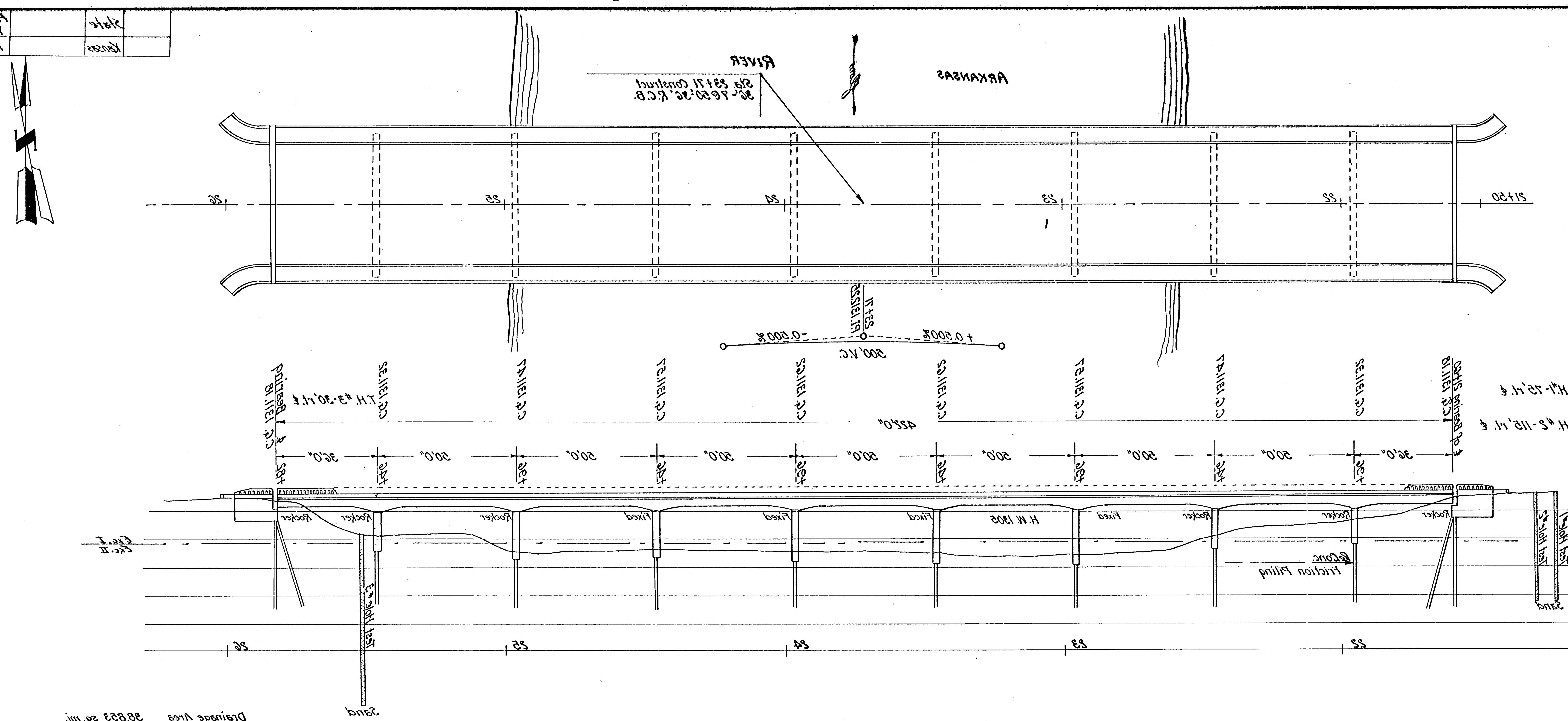
Topographical Map

Vicinity Bridge No. 616-25-2356 - (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	4	11



Drainage Area 38,653 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 34' S.E. of S.E. cor. of bri. Elev. 1312.13

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 construction. Poles, wiring etc. to be installed at a later date, and are not a part of this project.

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	
Bearing Devices	27,615 lbs.
Re. Conc. Piling	1,960 lin. ft.
Cast Iron	1574 lbs.
2" Conduit	926 lin. ft.

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		1950	5	11

HALF ELEVATION
scale 1"=80'

SUMMARY OF QUANTITIES
SPANNING SUPERSTRUCTURE

Concrete Class A (AE)	1062 Cu. Yds.
Reinforcing Steel	241,830 Lbs.
Cast Iron	1574 Lbs.
Rocker Steel	27,612 Lbs.

CAST IRON DRAIN
Computed wt. 19.2 lbs.
82 Required

GENERAL NOTES

<u>LOADING:</u> 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" △ 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.

Note: Rocker to be of Struct. Steel

ROCKER DETAIL
78 Required

STEEL TABLE
TOP OF SLAB & WALK

BAR	SIZE	NO.	LENGTH	WEIGHT
G1	1⅛"⌀	160	27'0"	18,576
G2	"	208	20'0"	17,888
G3	"	144	17'0"	10,526
G4	"	64	14'0"	3,855
*F1	½"⌀	922	26'11"	16,635
*F2	½"⌀	922	13'5½"	8,339
*F3	⅝"⌀	922	19'3"	18,457
S3	½"⌀	32	23'2"	497
S4	"	88	26'8"	926
S5	"	126	48'0"	4,008
S6	"	308	31'0"	6,397
S7	"	112	24'0"	1,800
D1	½"⌀	~~160~~ 240	9'0"	~~1443~~
*D2	½"⌀	~~160~~ 240	3'8"	~~408~~

*See Bending Diagram

PART PLAN RE. STEEL IN TOP OF SLAB & WALK

½"⌀ D2 Bar

DIAPHRAGM DETAIL
Place between girders at all supports

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

Use same rocker detail at abutments

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

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
11-50 M.S.	Noted	M.E.S.	R.W.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		

	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	6	11

STEEL TABLE

BOTTOM OF SLAB AND WALK

BAR	SIZE	NO.	LENGTH	WEIGHT
G5	1⅛"□	40	29'8"	5,104
G6	1⅛"□	24	18'0"	1,858
G7	1⅛"□	48	25'0"	5,160
G8	1⅛"□	12	17'0"	877
G9	1⅛"□	192	16'8"	13,800
G10	1⅛"□	140	36'0"	21,687
G11	1⅛"□	168	30'0"	21,687
G12	1⅛"□	84	27'0"	9,759
G13	1⅛"□	42	20'0"	3,612
G14	1⅛"□	28	15'0"	1807
G15	1"φ		12'11"	
F4	½"φ	1844	7'0"	8,648
F5	⅜"φ	120	4'3"	780
S5	½"φ	216	48'0"	6,925
U1	½"φ	1032	4'7"	3,180
U2	½"φ	1548	6'11"	7,187
U3	½"φ	64	4'11"	211
U4	½"φ	64	5'1"	218
U5	½"φ	64	5'5"	236
U6	½"φ	64	5'8"	243
U7	½"φ	64	5'11"	255
U8	½"φ	96	7'3"	466
U9	½"φ	96	7'5"	482
U10	½"φ	96	7'9"	498
U11	½"φ	96	8'0"	515
U12	½"φ	96	8'3"	531
R1	½"φ	8	7'0"	37
R2	½"φ	922	3'8"	2258
R3	½"φ	40	4'0"	107
R4	½"φ	160	8'11"	990
G16	1⅛"□	12	23'0"	1187
G17	"	84	33'0	11778

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

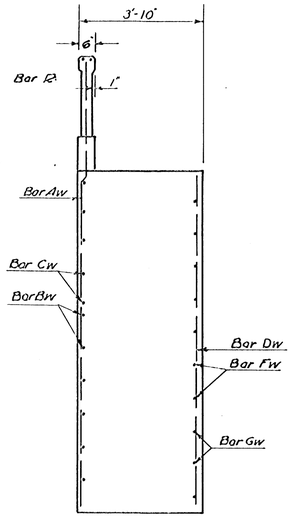
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
11-50 M.S.	1" = 5'0"	M.E.S.	R.W.M.		
	DATE	10-50	10-20-50		
	PLANFILE		TOTAL SHEETS		

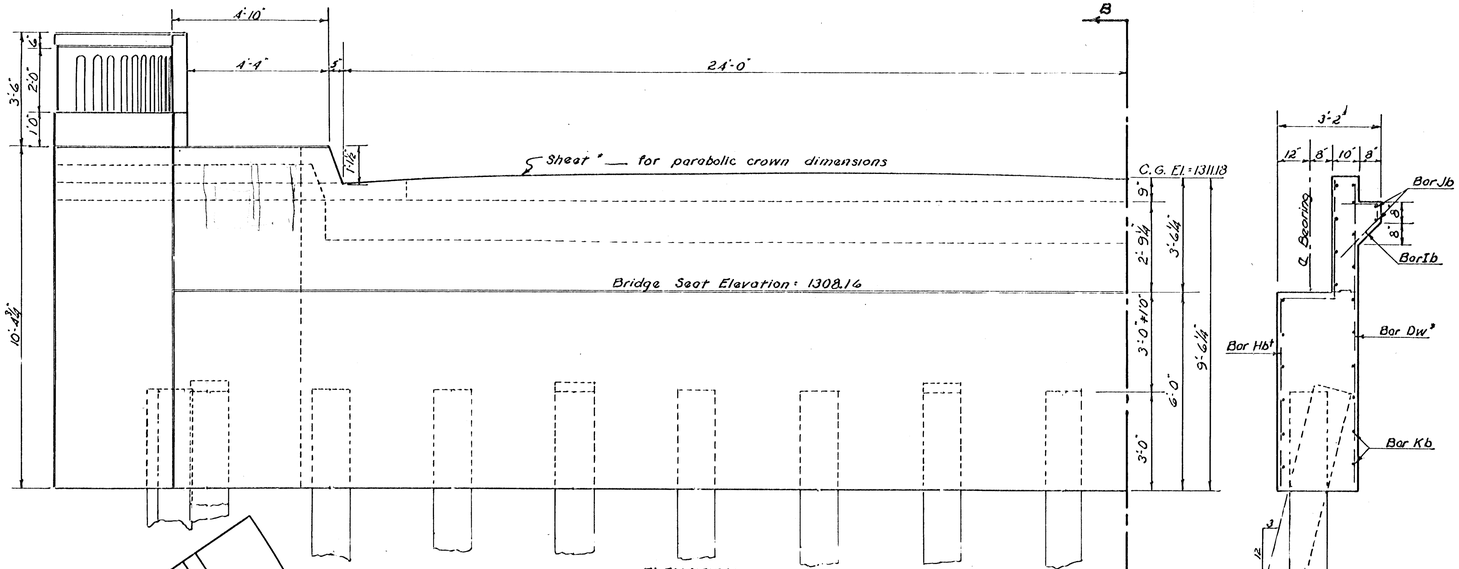
State		Fiscal Year	No.	Sheets
Kansas		1950	7	11

STEEL TABLE
(one abut.)

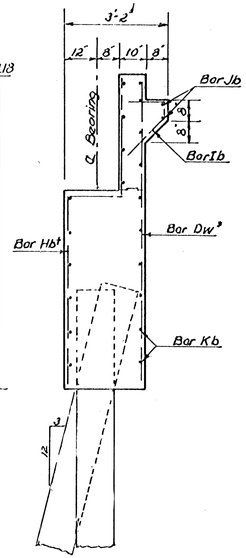
Bar	Space	No.	Size	Length	Wt.	Revised Weight
Aw	11"	36	½"ϕ	12'-4"	297	296.5
Bw	12"	12	"	14'-11"	120	119.6
Cw	12"	10	"	13'-3"	89	88.5
Dw*	12"	76	"	10'-0"	508	475.0
Ew	12"	6	"	6'-10"	27	27.4
Fw	12"	14	"	14'-2"	133	132.7
Gw	12"	6	"	9'-1"	37	36.4
Hb†	12"	58	"	10'-5"	202	406.4
Ib	12"	48	"	2'-10"	91	90.7
Jb	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 lb



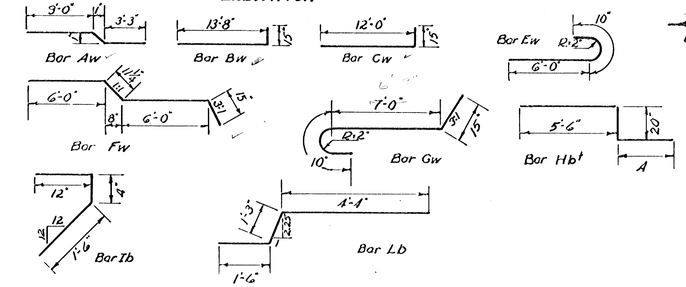
Sec. A-A



ELEVATION



Sec. B-B



BENDING DIAGRAMS

TABLE of Hb † Dw BAR
(for one abutment)

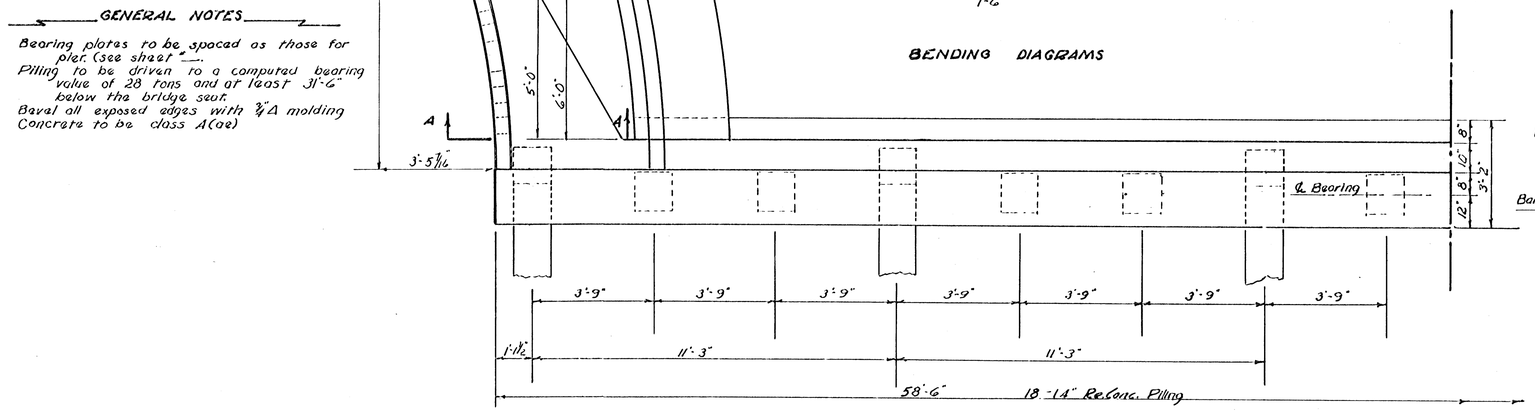
Bar Hb		Bar Dw	
No. Cut	A Dim.	No. Cut	Overall L.
8	3'-3"	28	10'-0"
8	3'-2½"	8	9'-1"
8	3'-2"	8	9'-0½"
8	3'-1½"	8	9'-0"
8	3'-1"	8	8'-11½"
8	3'-½"	8	8'-11"
10	4'-2"	8	8'-10½"

QUANTITIES per ABUTMENT

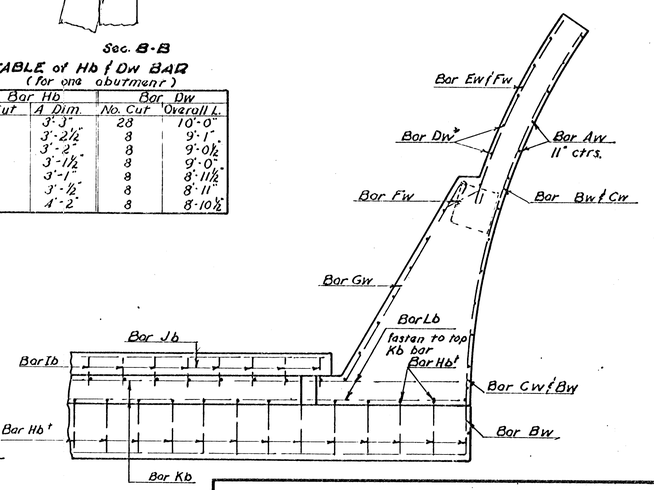
Cu. yd. Concrete	48.0
Bearing Devices	10
L.F. Friction Piling	740

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(ae)



PLAN

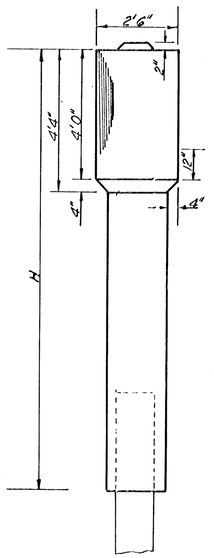


ABUTMENT DETAIL
BRIDGE NO. 616-25-2371

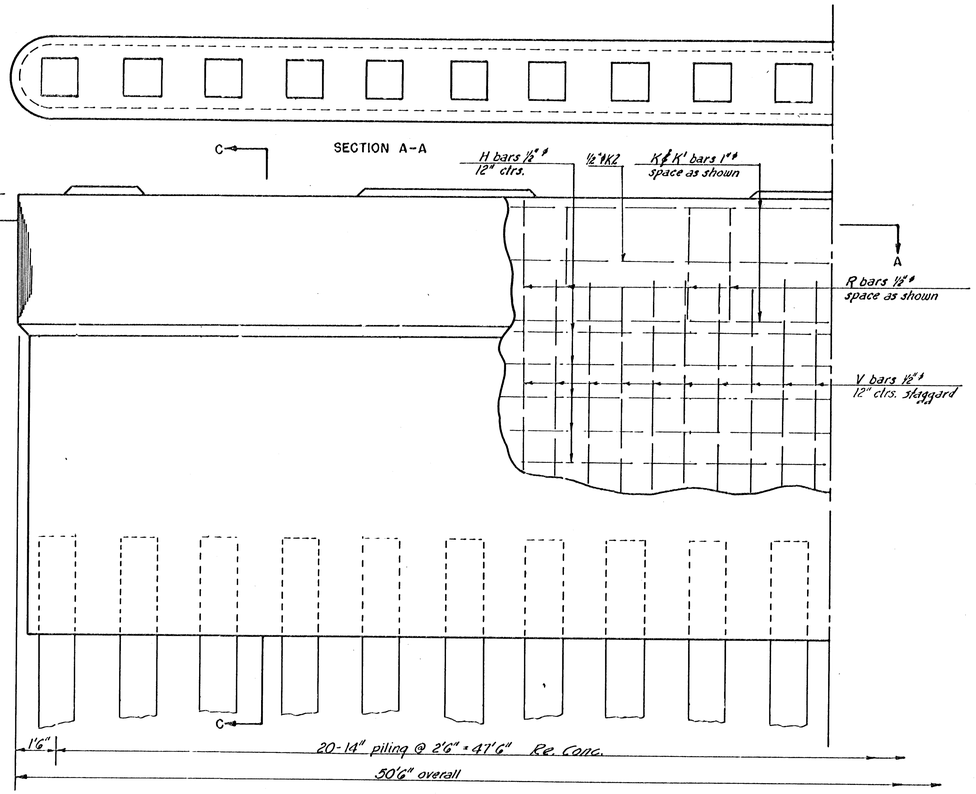
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
Rufus S. Kirk — COUNTY ENGINEER

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

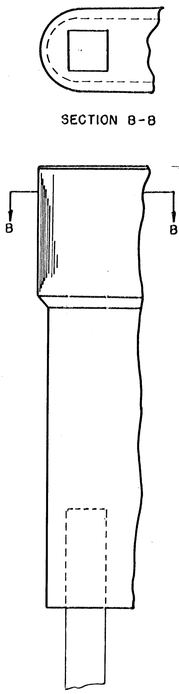
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	8	11



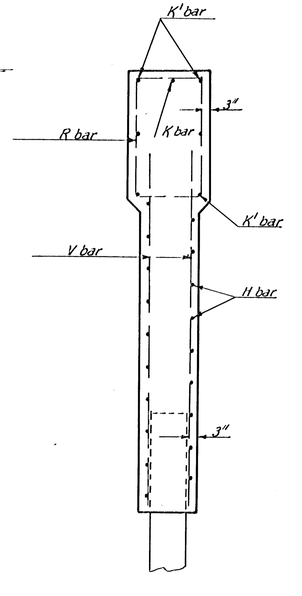
END VIEW



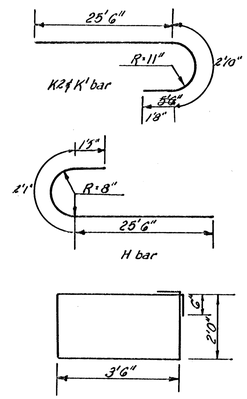
ELEVATION



PILING ELEVATIONS
PIERS 1-2-7&8 only



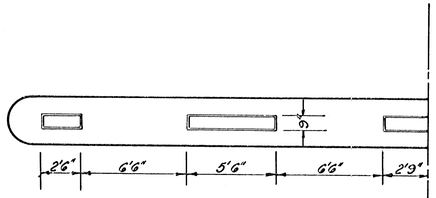
SECTION C-C



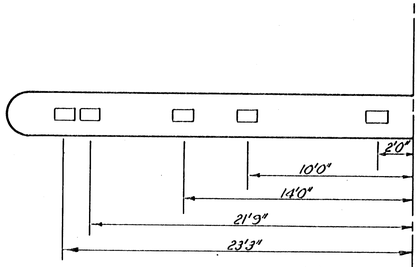
BENDING DIAGRAMS
no scale

PIER	TABLE of ELEVATIONS				TABLE of STEEL												QUANTITIES					H A	GENERAL NOTES
	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	Number ½" ϕ R bars	Length ½" ϕ R bars	Number 1" ϕ K bars	Length 1" ϕ K bars	Number 1" ϕ K' bars	Length 1" ϕ K' bars	Number ½" ϕ V bars	Length ½" ϕ V bars	Number ½" ϕ H bars	Length ½" ϕ H bars	8"x15"x16" Bearing #2	L.F. Test Pile	L.F. Friction Pile	Cu. Yds. Concrete	Lbs. Re-bars	No. ½" ϕ K2 bars	Length	Revised Lb. Rebar	Class A (AE) Concrete shall be used thruout. Bevel all exposed edges with a ¾" triangular molding unless otherwise noted. : All dimensions shown relative to reinforcing steel are to ℄ of bar.
#1	1307.55	1304.55	1297.55	1294.55	40	120'	2	26'6	8	3'9	51	10'6	26	506	10	406	810	43.62	2351	13	4	300	1928.3
#2	1307.70	1304.70	1294.70	1291.70	40	120'	2	26'6	8	3'9	51	13'6	32	506	10	0	"	53.78	2854	16	4	300	2146.7
#3	1308.53	1305.53	1289.53	1286.53	40	120'	2	26'6	8	3'9	51	19'6	44	506	0	0	"	80.13	3259	22	4	"	2583.6
#4	1308.58	1305.58	1290.58	1287.58	40	120'	2	26'6	8	3'9	51	18'6	42	506	0	0	"	76.14	3153	21	4	"	2510.8
#5	1308.58	1305.58	1291.58	1288.58	40	120'	2	26'6	8	3'9	51	17'6	40	506	0	40'6	"	73.35	3060	20	4	"	2437.9
#6	1308.53	1303.53	1291.53	1288.53	40	120'	2	26'6	8	3'9	51	17'6	40	506	0	0	"	73.35	3060	20	4	"	2437.9
#7	1307.70	1304.70	1290.70	1287.70	40	120'	2	26'6	8	3'9	51	17'6	40	506	10	0	"	73.35	3060	20	4	"	2437.9
#8	1307.55	1304.55	1297.55	1294.55	40	120'	2	26'6	8	3'9	51	14'6	34	506	10	40'6	"	63.18	2751	17	4	"	2219.5
			1297.55					30"		TOTALS			29"		40	121'6		543.3	23356				18,702.6

Revision 5-31-51 M.S.



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



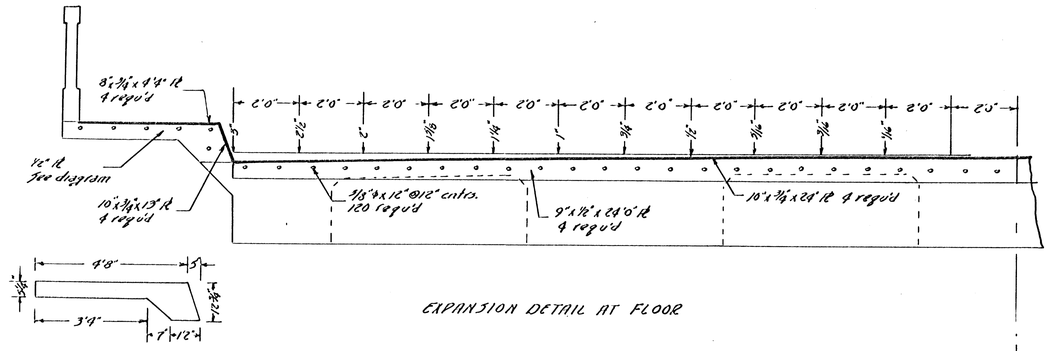
LOCATION OF BEARING PLATES
PIERS 1-2-7&8 only (omit key)
no scale

PIER DETAILS
BRIDGE No. 616-25-2371

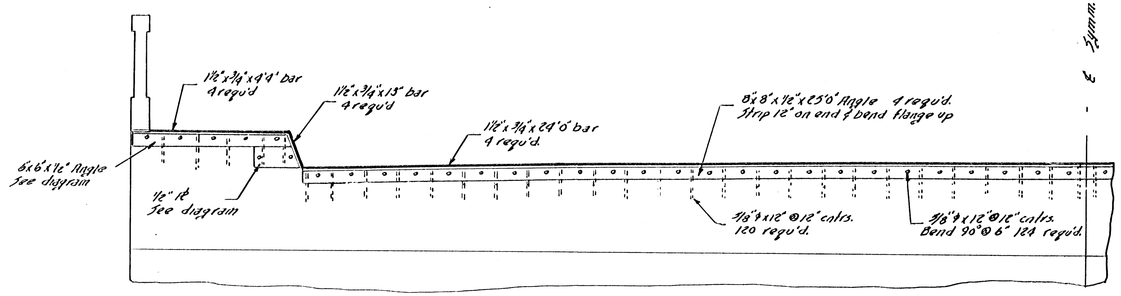
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED 11-10-45.	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1/2" = 1'0"	M.S. & R.J.	R.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		

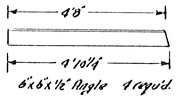
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	9	11



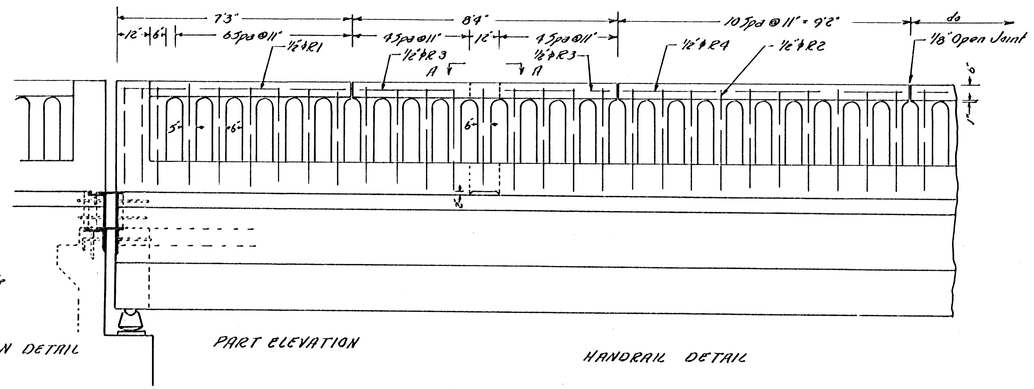
EXPANSION DETAIL AT FLOOR



EXPANSION DETAIL AT BACKWALL



½" lt 4 requ'd.



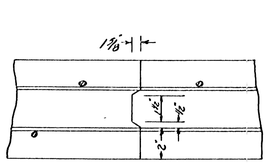
Shop weld all anchor bars to ℄s & ℄'s

Field welds all 5/16" Bolt sides where possible

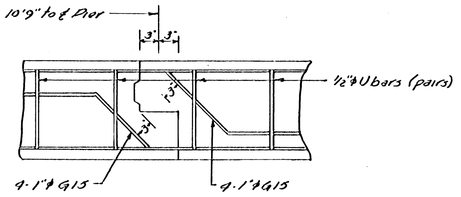
EXPANSION DETAIL

PART ELEVATION

HANDRAIL DETAIL

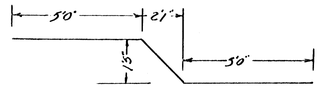


SLAB JOINT



GIRDER JOINT

CONSTRUCTION JOINT DETAILS



1"ϕ Bar G13

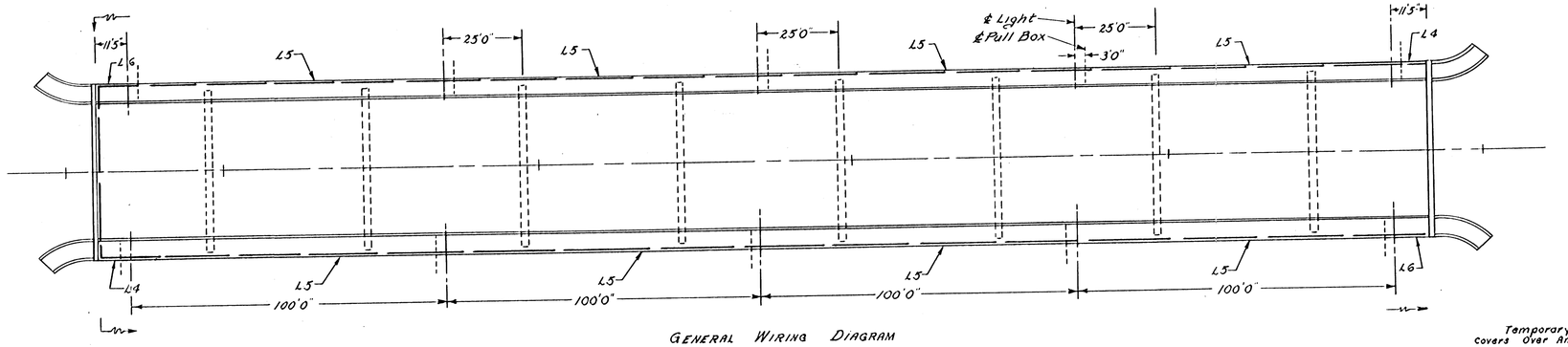
SECTION AA

AUXILIARY DETAILS
BRIDGE NO. 616-25-2371

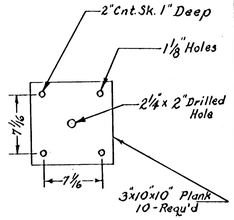
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

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

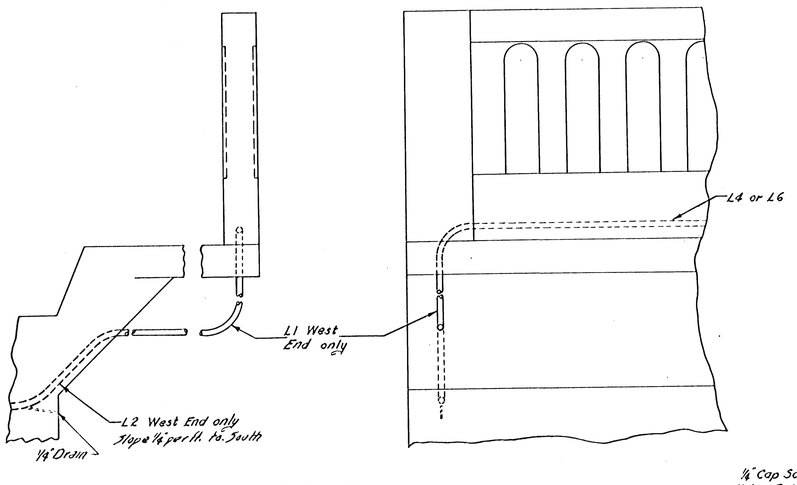
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	10	11



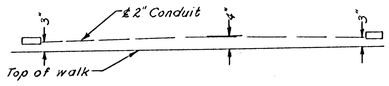
GENERAL WIRING DIAGRAM



Temporary Covers Over Anchor Bolts



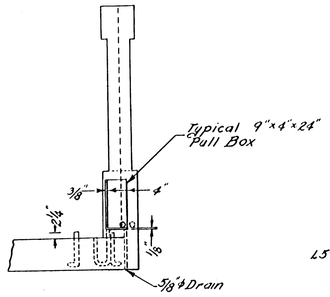
DETAIL AT ENDS OF BRIDGE



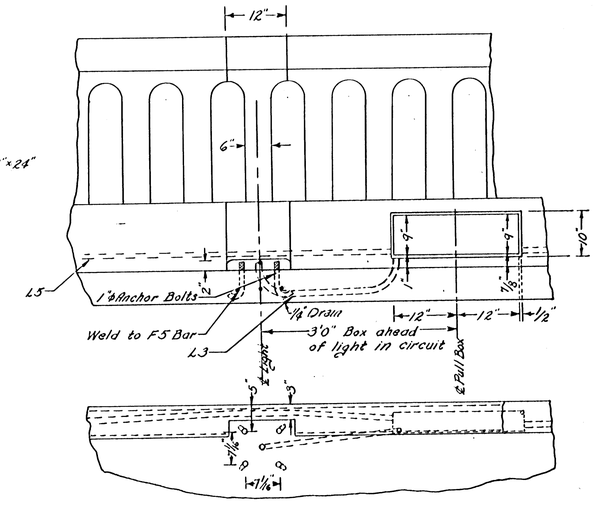
Typical Slope of Conduit between Pull Boxes

CONDUIT TABLE			
Symbol	No.	Length	Tot. Lgth
L1	2	4' 1½"	8'3"
L2	1	53'4½"	53'4½"
L3	10	1'10½"	18'9"
L4	2	3'1½"	6'3"
L5	8	100'2"	801'4"
L6	2	14'1½"	28'3"
		Total	926'2½"

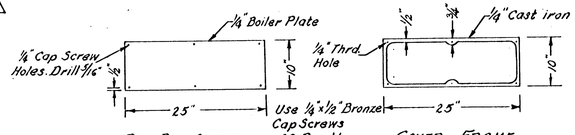
All conduit 2" ø non-metallic

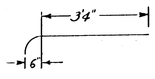


Section through Pull Box

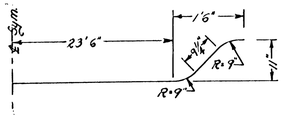


DETAIL AT PULL BOX AND LIGHT

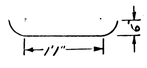




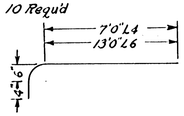
L1

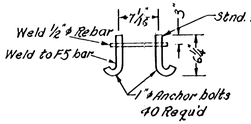


L2



L3



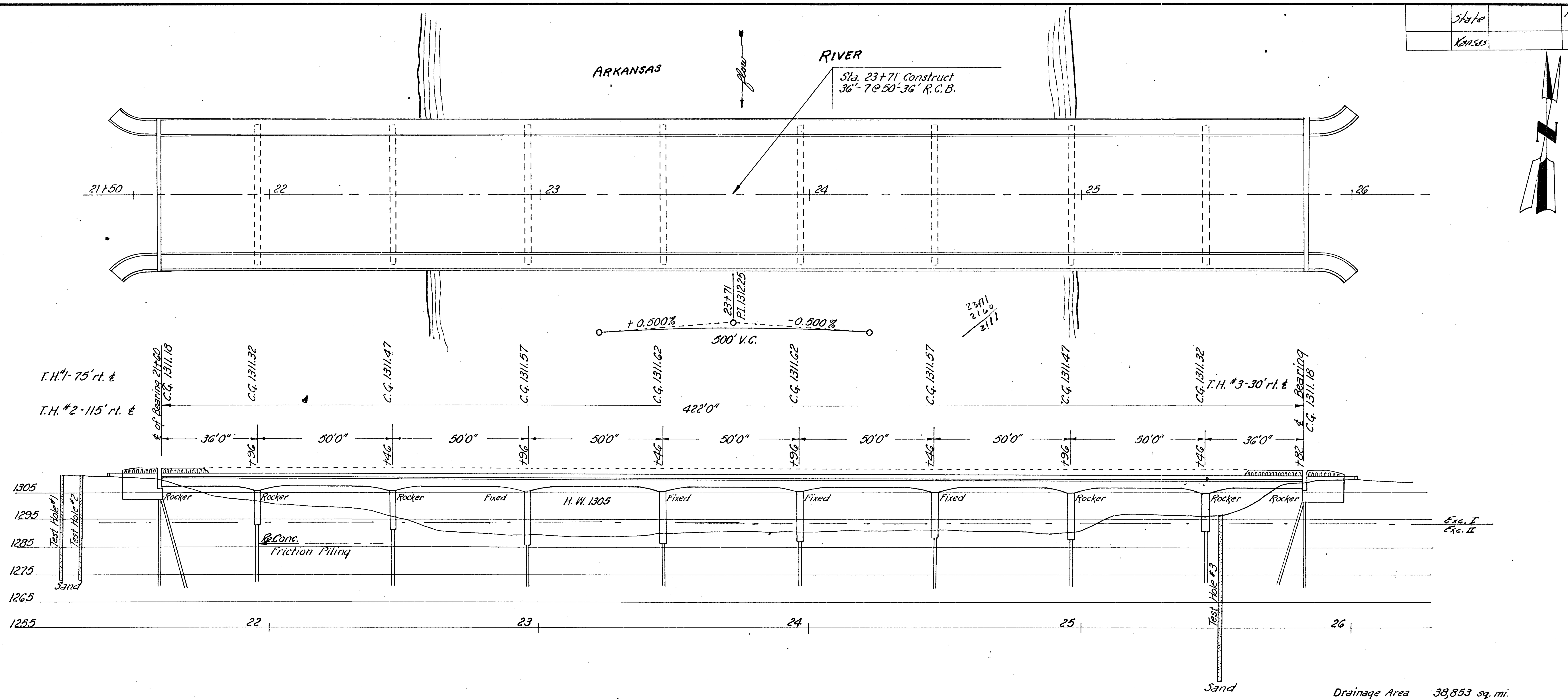


LIGHTING DETAILS
BRIDGE NO. 616-25-2371

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

REVISED 11-30-50	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
		M.E.S.	C.D.H.		
	DATE	10-50	10-25-50		
	PLANFILE		TOTAL SHEETS		

	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	4	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 bri. Elev. 1312.13

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	
Bearing Devices	27,612 lbs.
Re. Conc. Piling	7,960 lin. ft.
Cast Iron	1574 lbs.
2" Conduit	926 lin. ft.

GENERAL NOTES

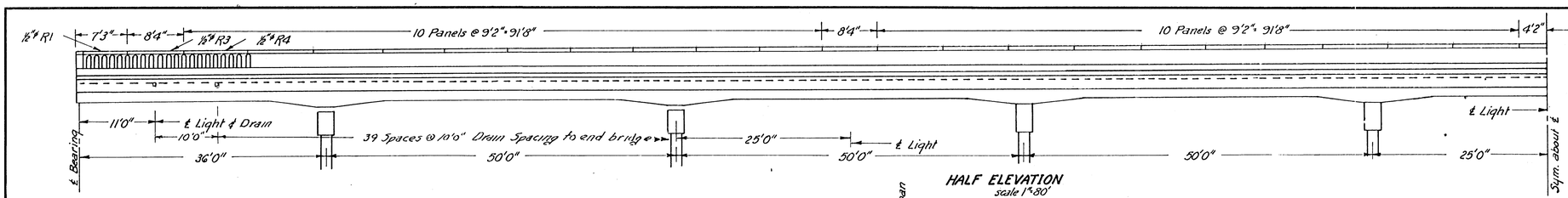
DESIGN: A.A.S.H.O. for H-20-44 Loading
20,000 p.s.i. Reinforcing Steel (int. gr.)
1,000 p.s.i. Concrete.
OLD STRUCTURE: To be removed by SEDGWICK COUNTY.
SOUNDINGS: Taken with 3/4" jet by SEDGWICK COUNTY.
EMBANKMENT: The embankment at the abutments shall be built after completion of the abutments.
PILING: 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, pull boxes and pole anchor bolts 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

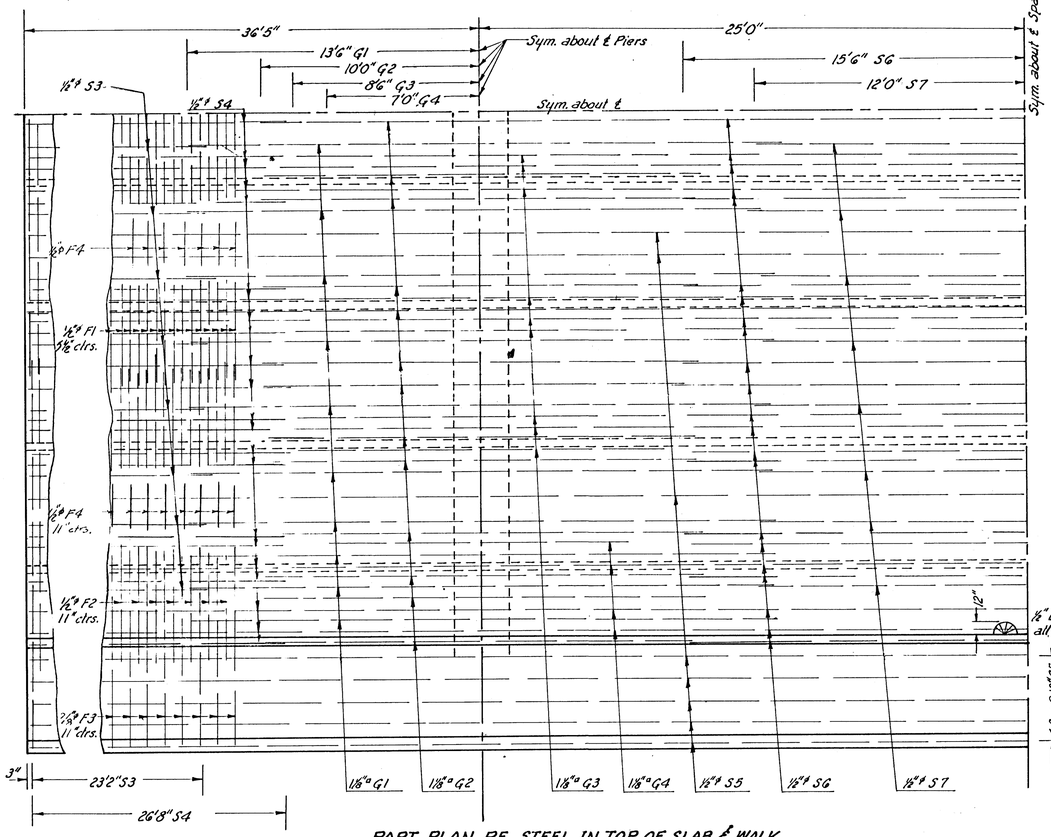
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
—— COUNTY ENGINEER

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

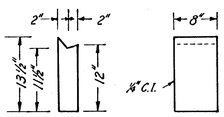
State		Fiscal Year	Sheet No.	Total Sheets
Kansas		1950	5	11



HALF ELEVATION
scale 1"=80'



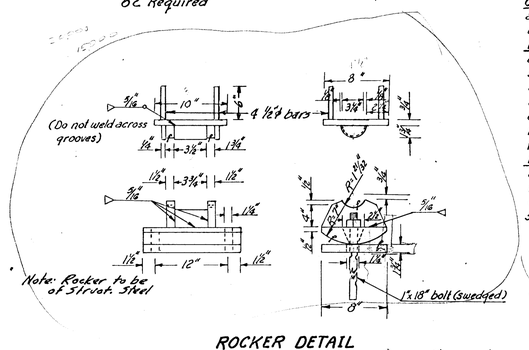
PART PLAN RE. STEEL IN TOP OF SLAB & WALK



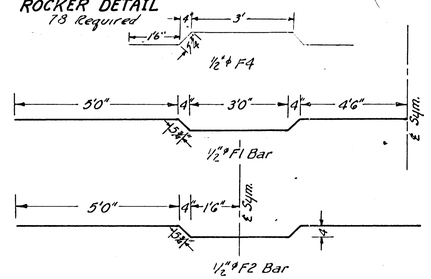
SUMMARY OF QUANTITIES
SPANNING SUPERSTRUCTURE

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

CAST IRON DRAIN
Computed wt. 19.2 lbs.
82 Required



ROCKER DETAIL
78 Required



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.

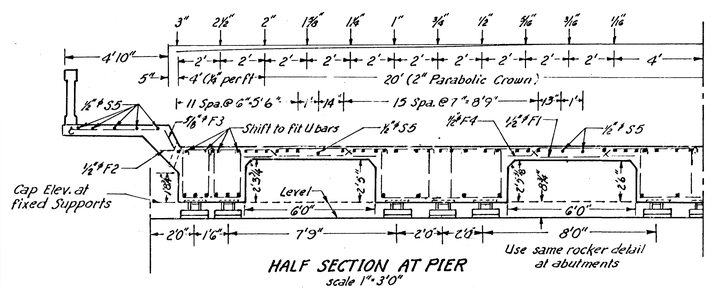
FALSEWORK: Falsework shall be in place for entire unit until all the concrete has attained its design strength. Construction joints shown on sheet No. are optional with the Bridge Contractor but if used shall be made only at the locations shown or as approved by the Engineer. Pouring sequence to be designated 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.

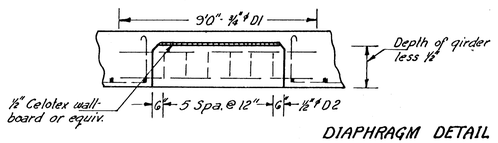
STEEL TABLE
TOP OF SLAB & WALK

BAR	SIZE	NO.	LENGTH	WEIGHT
G1	1 1/8" ø	160	27'0"	18,376
G2	"	208	20'0"	17,888
G3	"	144	17'0"	10,526
G4	"	64	14'0"	3,855
*F1	1/2" ø	922	26'11"	16,635
*F2	1/2" ø	922	13'5½"	8,339
*F3	5/8" ø	922	19'3"	10,957
S3	1/2" ø	32	23'2"	997
S4	"	88	26'8"	926
S5	"	126	48'0"	4008
S6	"	308	31'0"	6,397
S7	"	112	24'0"	1,800
D1	1/2" ø	~~760~~ 240	9'0"	~~5,443~~ 400
*D2	1/2" ø	~~240~~ 160	3'8"	

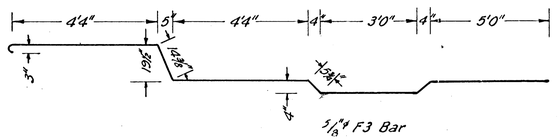
*See Bending Diagram

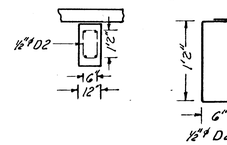


HALF SECTION AT PIER
scale 1"=3'0"



DIAPHRAGM DETAIL
Place between girders at all supports

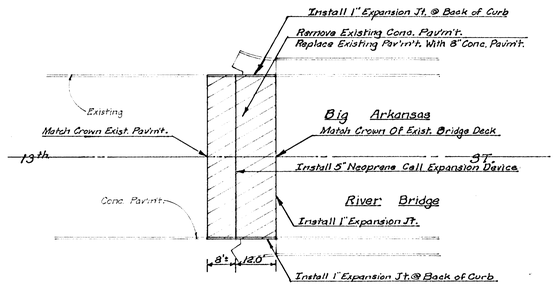


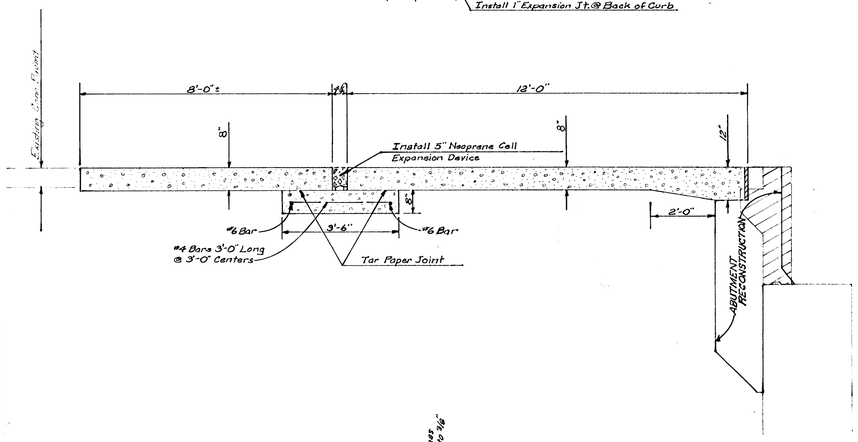


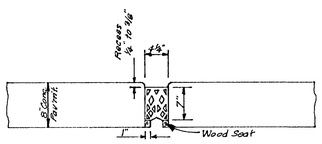
SLAB AND GIRDER DETAILS
BRIDGE NO. 616-25-2371

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED 11-30-1950	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Noted	MES.	R.W.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		



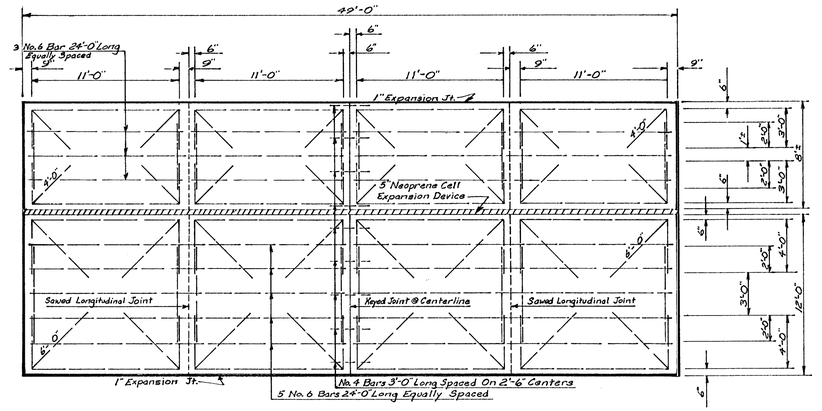




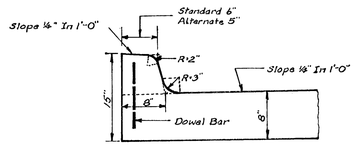
Install 5" Wide Preformed Open Cell Neoprene Joint Seal. Use "H" Series Delastic Bridge Seal Catalog No. H-5000, D. S. Brown Co. Or An Approved Equal.

The Neoprene Joint Material Shall Be Machine Installed With Equipment Capable Of Placing The Strips At The Specified Depth Without Increasing Or Decreasing The Length As Taken From The Roll Or Box By More Than 5%. No Splices Will Be Permitted Across The Roadway. 6" Long Sections Are To Be Installed Vertical In The Curb Section Of The Roadway Pavement. The Seals Shall Be Secured In Place With An Approved Lubricant Adhesive Which Shall Cover Both Sides Of The Seal Over The Full Contact Area.

EXPANSION DEVICE DETAILS

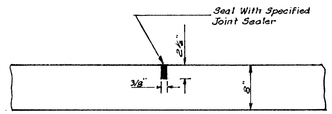


STEEL PATTERN FOR 8" CONCRETE PAVEMENT



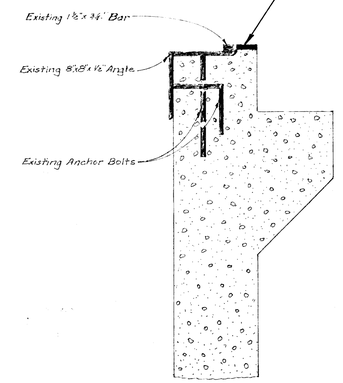
DETAIL OF INTEGRAL CURB

Integral Curb Shall Be Cut Through To The Pavement In Uniform Lengths Of Not More Than Ten Foot Intervals Between Expansion Joints. Expansion Joints Having The Same Thickness As The Expansion Joints In The Pavement Shall Be Constructed In The Integral Curb At The Specified Locations. Number 4 Or Number 6 Dowels Shall Be Installed In The Integral Curb As Shown On Approximately 2'-6" Centers.

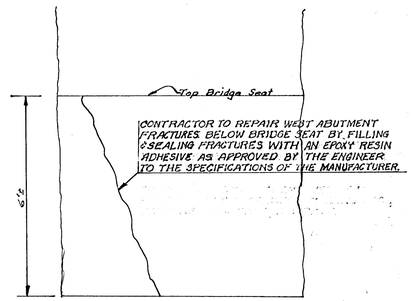


DETAIL OF SAWED LONGITUDINAL JOINT

Contractor To Remove Existing Concrete As Needed To Weld 2½"x⅛"x24" (2 Needed) Structural Steel Bar To Existing 1⅝"x¾" Structural Steel Bar. Pressure Grout Concrete Under New Bar As Needed To Fill Voids. Use 60° Single-Vee Groove Weld (A.I.S.C. Specifications) To Weld Bars. Bars To Be Welded Such That Top Of New Bar Is On The Same Plane As The Existing Bar.



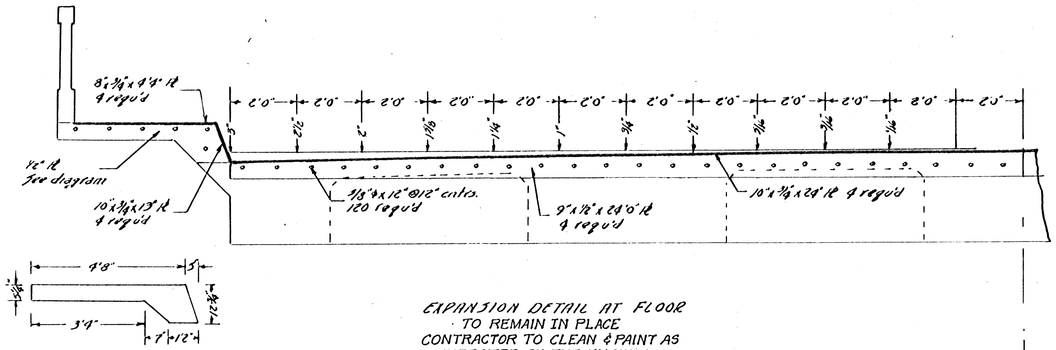
EAST ABUTMENT PARAPET WALL

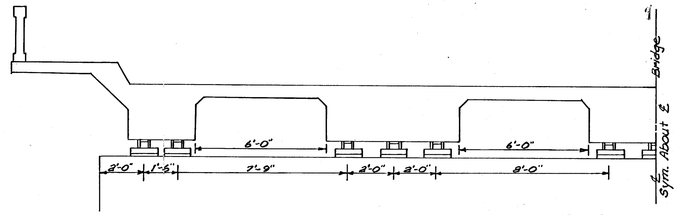


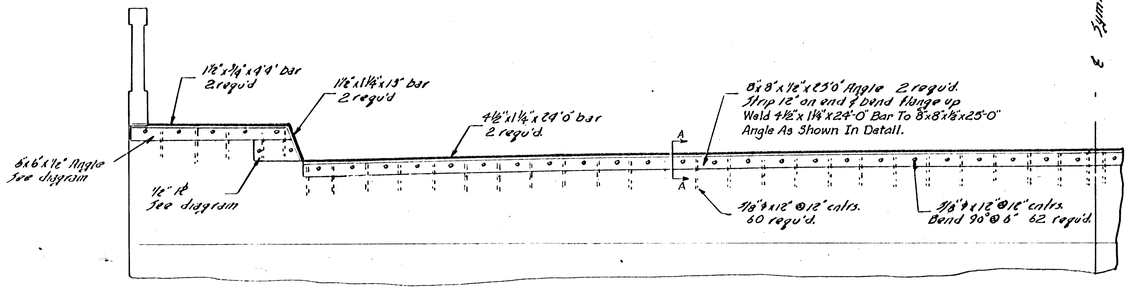
WEST BRIDGE SEAT REPAIR DETAIL

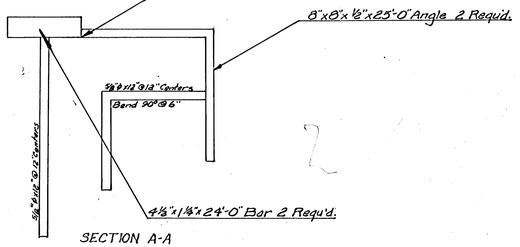
LARRY W. LAURSEN LICENSED 6363 KANSAS PROFESSIONAL ENGINEER

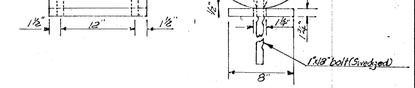
BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 572018











EXPANSION DETAIL AT FLOOR
TO REMAIN IN PLACE
CONTRACTOR TO CLEAN & PAINT AS
DIRECTED BY THE ENGINEER

ROCKER DETAIL AT ABUTMENTS
HALF SECTION AT ABUTMENTS
CONTRACTOR SHALL REPLACE ALL ROCKER AND
ROCKER BEARING PLATES AT BOTH ABUTMENTS
AS DETAILED.

EXPANSION DETAIL AT BACKWALL
CONTRACTOR TO REPLACE EXISTING AS
DETAILED.

6"x6"x½" Angle 2 requ'd.

½" Pl 2 requ'd.

SECTION A-A

EXISTING ROCKER DETAIL:

PROPOSED ROCKER DETAIL

Rocker Number	End	1	2	3	4	5	6	7	8	9	10	11	12	13	End	
Dimension D (inches)	N	1 5/16"	1 9/16"	1 5/16"	1 5/16"	11/16"	11/16"	1 3/16"	15/16"	11/16"	15/16"	13/16"	15/16"	15/16"	S	West Abutment
Dimension D (")	N	2 3/16"	1 15/16"	2 7/16"	2 11/16"	2 7/16"	2 13/16"	2 3/16"	2 11/16"	2 7/16"	2 1/16"	2 3/16"	2 3/16"	1 15/16"	S	East Abutment

← NORTH　　SOUTH →

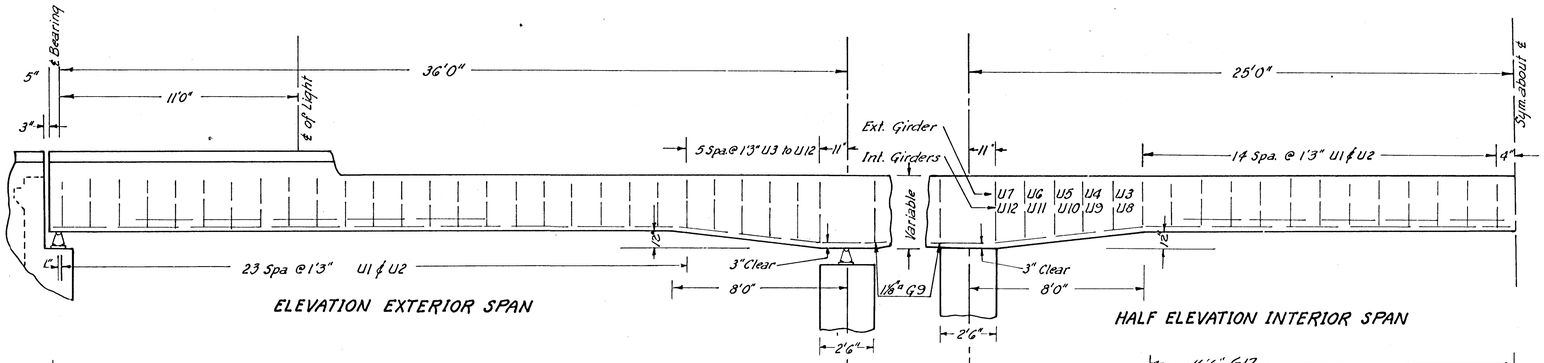
EXPANSION DETAIL　　PART ELEVATION　　HANDRAIL DETAIL

LARRY W. LAURSEN 6363

BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 572018

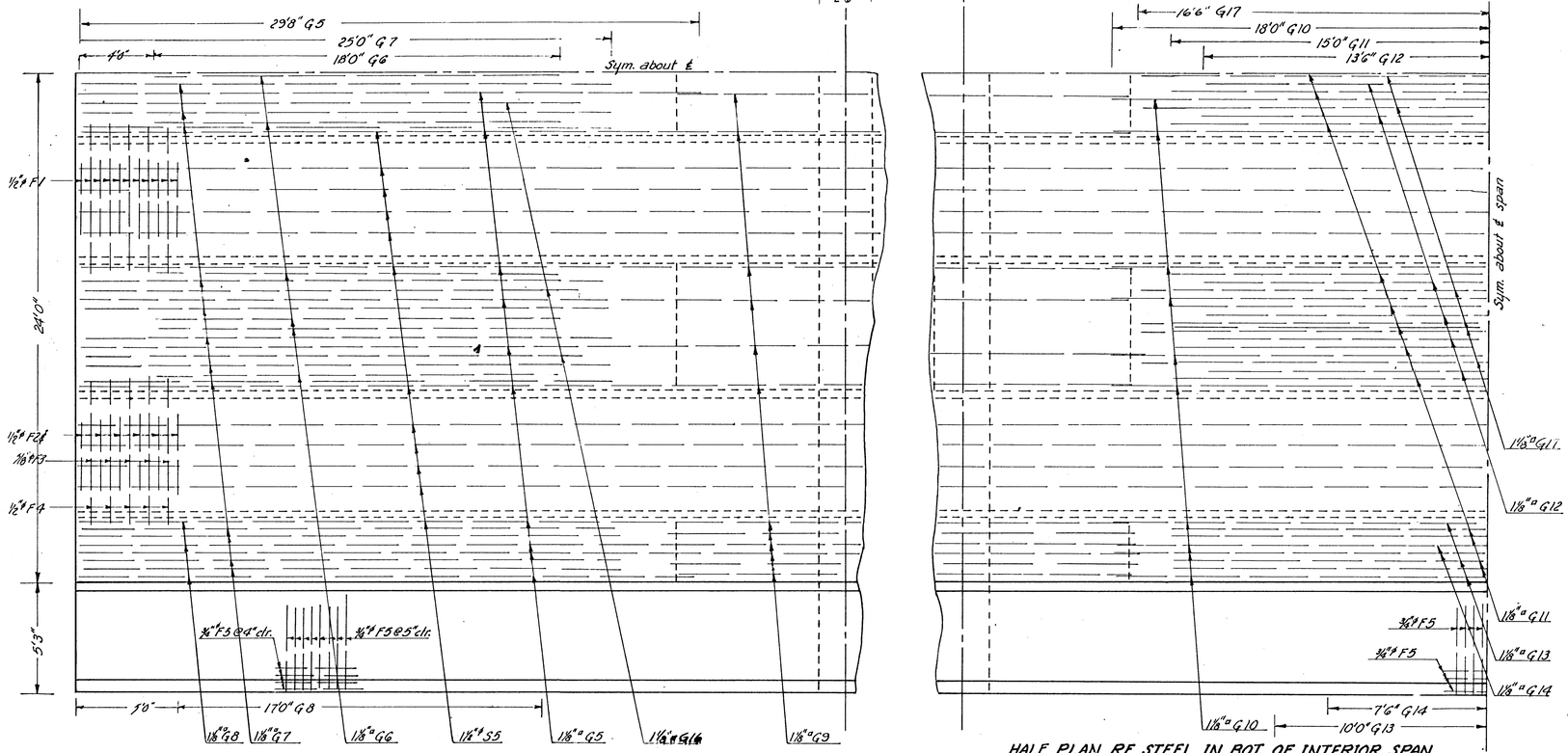
4/4

	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	6	11



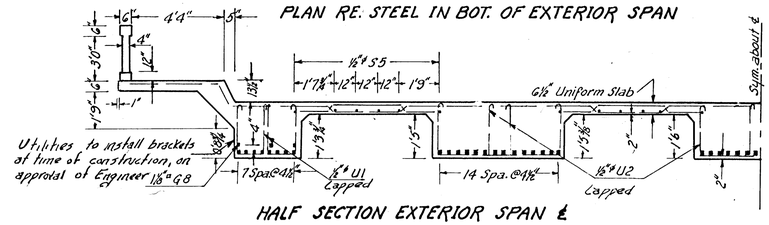
ELEVATION EXTERIOR SPAN

HALF ELEVATION INTERIOR SPAN

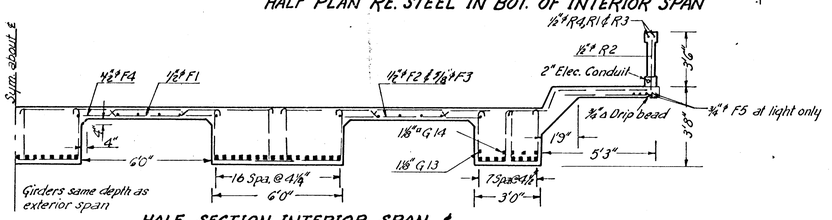


PLAN RE. STEEL IN BOT. OF EXTERIOR SPAN

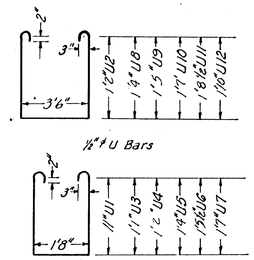
HALF PLAN RE. STEEL IN BOT. OF INTERIOR SPAN

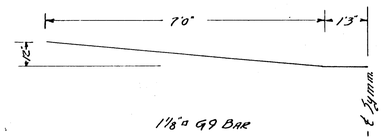


HALF SECTION EXTERIOR SPAN ℄



HALF SECTION INTERIOR SPAN ℄





STEEL TABLE

Bottom of Slab and Walk

Bar	Size	No.	Length	Weight
G5	1⅛" a	90	29'8"	3,104
G6	1⅛" a	24	18'0"	1,893
G7	1⅛" a	98	25'0"	3,160
G8	1⅛" a	12	17'9"	877
G9	1⅛" a	192	16'8"	13,800
G10	1⅛" a	140	36'0"	21,687
G11	1⅛" a	168	30'0"	21,687
G12	1⅛" a	84	27'0"	9,739
G13	1⅛" a	42	20'0"	3,612
G14	1⅛" a	28	15'0"	1807
G15	1" a		12'11"	
F4	½" ℄	1894	7'0"	8,648
F5	¾" ℄	120	4'3"	780
S5	1¼" ℄	216	28'0"	6,925
U1	½" ℄	1032	4'7"	3,180
U2	½" ℄	1518	4'11"	7,187
U3	½" ℄	64	4'11"	211
U4	½" ℄	64	5'1"	218
U5	½" ℄	64	5'3"	236
U6	½" ℄	64	5'8"	243
U7	½" ℄	64	5'11"	255
U8	½" ℄	96	7'3"	466
U9	½" ℄	96	7'5"	482
U10	½" ℄	96	7'9"	498
U11	½" ℄	96	8'0"	515
U12	½" ℄	96	8'3"	531
R1	½" ℄	8	7'0"	37
R2	½" ℄	922	3'8"	2258
R3	½" ℄	40	4'0"	107
R4	½" ℄	160	8'11"	990
G16	1⅛" a	12	23'0"	1187
G17	"	84	33'0"	11778

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

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

REVISED 11-30 1950	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1" = 3'0"	M.E.S.	R.W.M.		
	DATE	10-50	10-20-50		
	PLANFILE	.	TOTAL SHEETS		

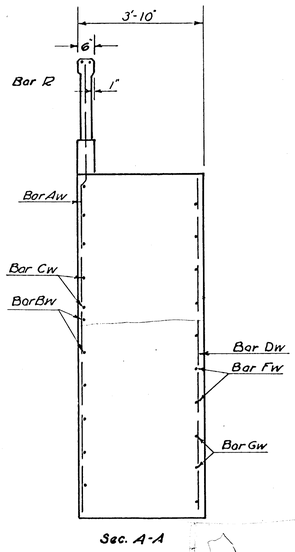
State		Fiscal Year	Sheet No.	Total Sheets
Kansas		1950	7	11

STEEL TABLE
(one abut.)

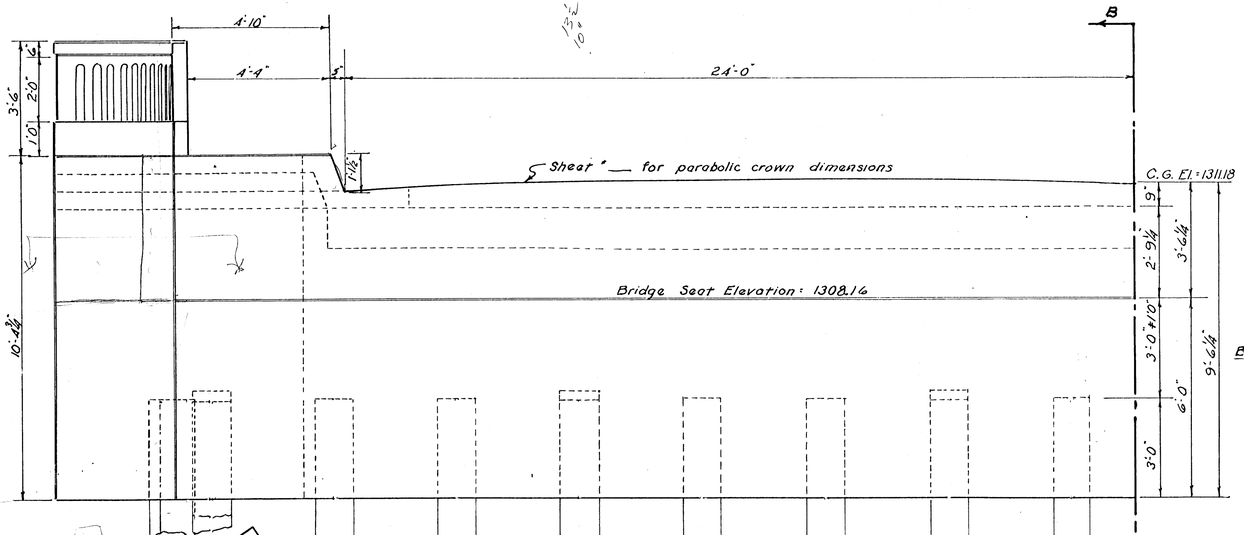
Bar	Space	No.	Size	Length	Wt.	Revised Weight
Aw	11"	36	½" ϕ	12'-4"	297	296.5
Bw	12"	12	"	14'-11"	120	119.6
Cw	12"	10	"	13'-3"	89	88.5
Dw*	12"	76	"	10'-0"	508	475.0
Ew	12"	6	"	6'-10"	27	27.4
Fw	12"	14	"	14'-2"	133	132.7
Gw	12"	6	"	9'-1"	37	36.4
Hb†	12"	58	"	10'-5"	202	406.4
Ib	12"	48	"	2'-10"	91	90.7
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 lb

QUANTITIES per ABUTMENT

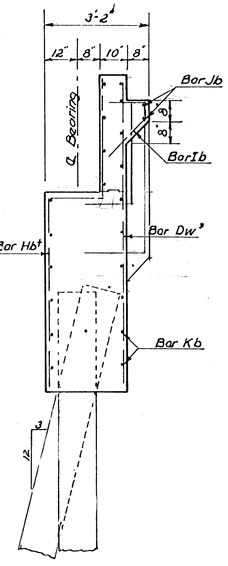
Cu. yd. Concrete	48.0
Bearing Devices	10
L.F. Friction Piling	740



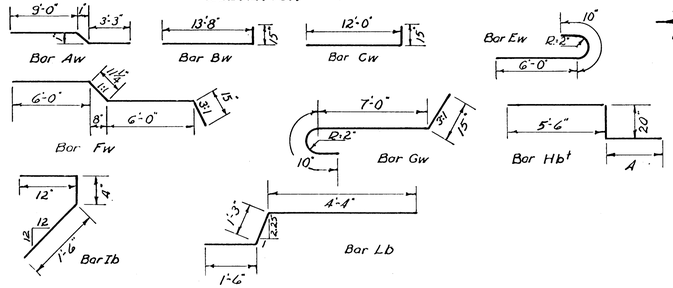
Sec. A-A



ELEVATION



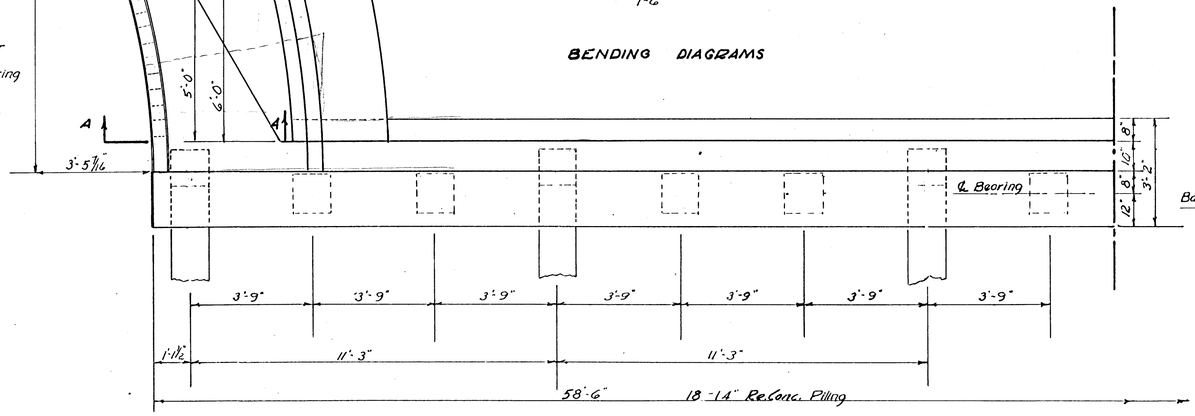
Sec. B-B



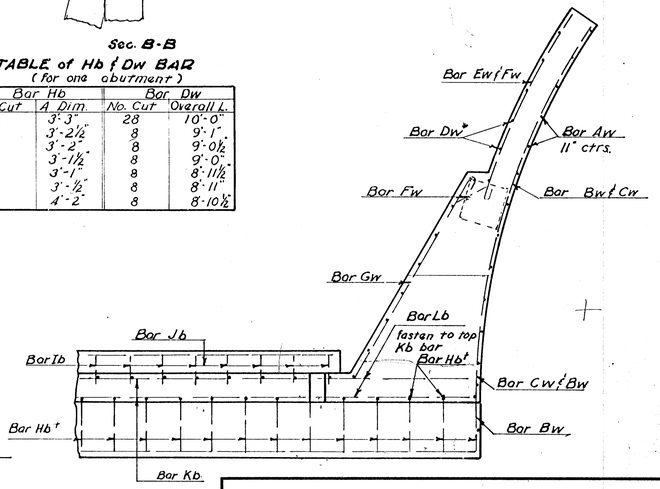
BENDING DIAGRAMS

TABLE of Hb† Dw BAR
(for one abutment)

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



PLAN



GENERAL NOTES

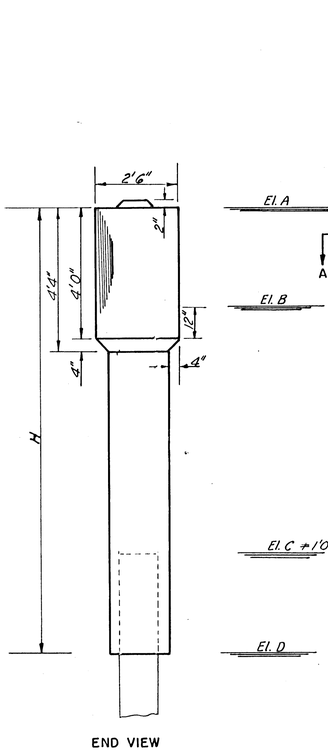
Bearing plates to be spaced as those for pier. (see sheet —.
Piling to be driven to a computed bearing value of 28 tons and at least 31'-6" below the bridge seat.
Bevel all exposed edges with ¾" Δ molding
Concrete to be class A(oe)

ABUTMENT DETAIL
BRIDGE NO. 616-25-2371

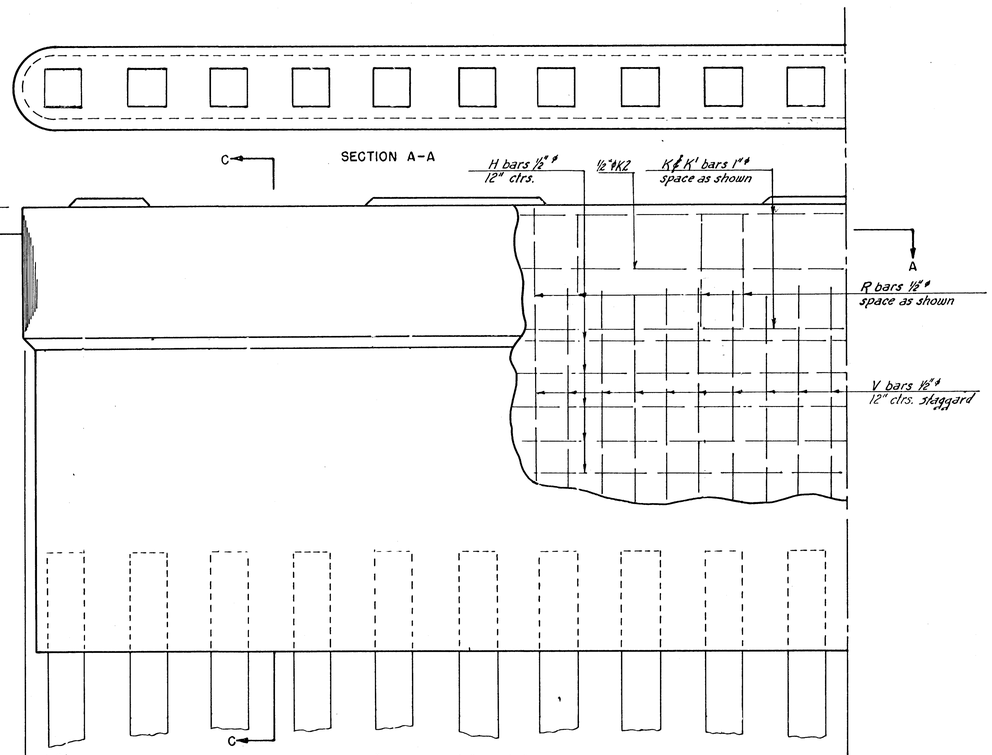
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
Rufus S. Kirk — COUNTY ENGINEER

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

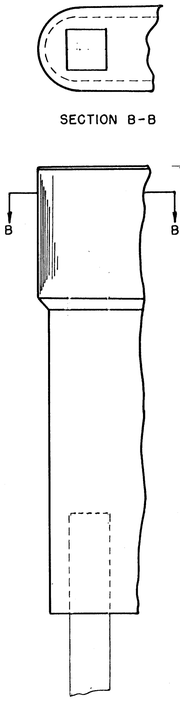
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	8	11



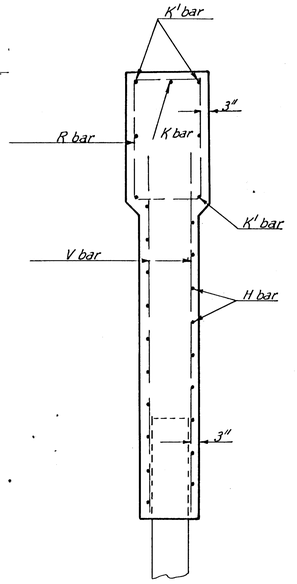
END VIEW



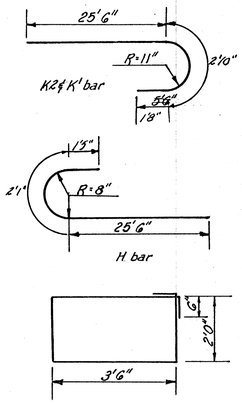
ELEVATION



PILING ELEVATIONS
PIERS 1-2-7 & 8 only



SECTION C-C



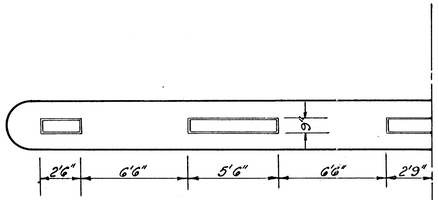
BENDING DIAGRAMS
no scale

PIER	TABLE of ELEVATIONS				TABLE of STEEL								QUANTITIES					H A	GENERAL NOTES
	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	Number ⅝" ϕ R bars	Length ⅝" ϕ R bars	Number 1" ϕ K' bars	Length 1" ϕ K' bars	Number 1" ϕ K bars	Length 1" ϕ K bars	Number ⅝" ϕ V bars	Length ⅝" ϕ V bars	Number 1¼" ϕ H bars	Length 1¼" ϕ H bars	8"x15"x1⅛" Bearing PL	L.F. Test Pile	L.F. Friction Pile	Cu. Yds. Concrete	Lbs. Re-bars	No. ½" ϕ K2 bars Length	Revised I.D. Rebar
#1	1307.55	1304.55	1297.55	1294.55	40	120'	2	26'6	8	~~3'6~~	51	10'6	26	~~50'6~~	10	40'6	810	49.62	~~2351~~	13 4	30' 1928.3
#2	1307.70	1304.70	1294.70	1291.70	40	120'	2	26'6	8	~~3'6~~	51	13'6	32	~~50'6~~	10	0	"	59.78	~~2854~~	16 4	30' 2146.7
#3	1308.53	1305.53	1289.53	1286.53	40	120'	2	26'6	8	~~3'6~~	51	19'6	44	~~50'6~~	0	0	"	80.13	~~3259~~	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	~~50'6~~	0	0	"	76.74	~~3153~~	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	~~50'6~~	0	40'6	"	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	~~50'6~~	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	~~50'6~~	10	0	"	73.35	~~3060~~	20 4	" 2437.9
#8	1307.55	1304.55	1297.55	1294.55	40	120'	2	26'6	8	~~3'6~~	51	14'6	34	~~50'6~~	10	40'6	"	63.18	~~2754~~	17 4	" 2219.5
	1297.55					30'		TOTALS					29'		40	1216		543.3	~~23356~~		18,702.6

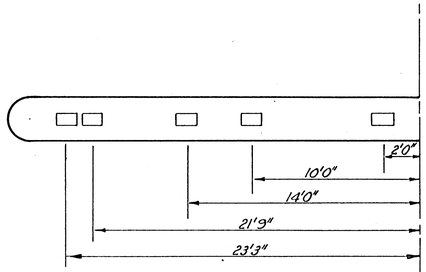
Revision 5-31-51 M.S.

Class A (AE) Concrete shall be used thruout. Bevel all exposed edges with a ¾" 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



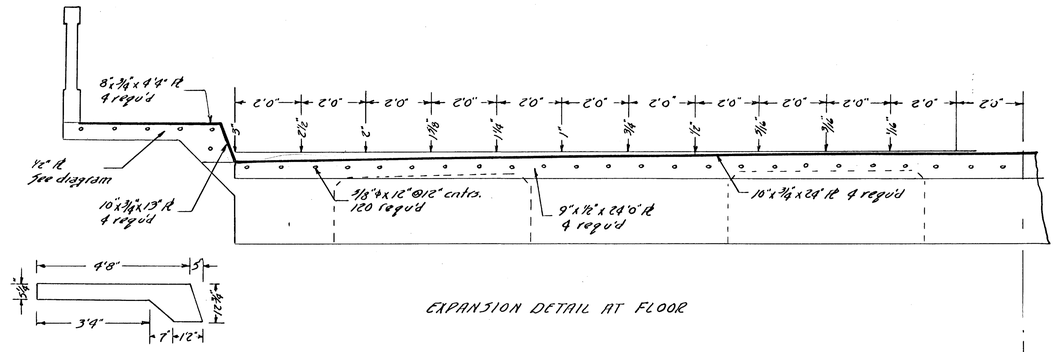
LOCATION OF BEARING PLATES
PIERS 1-2-7&8 only (omit key)
no scale

PIER DETAILS
BRIDGE No. 616-25-2371

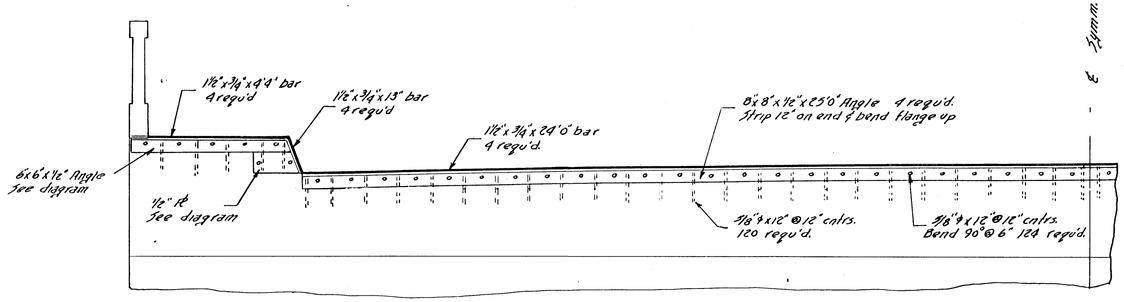
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

REVISED 11-30 M.S.	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1/8" = 1'0"	M.S. & R.J.	R.M.		
	DATE				
	PLANFILE		TOTAL SHEETS		

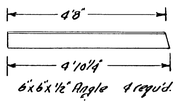
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	9	11

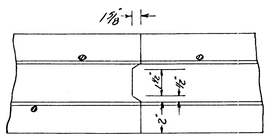


EXPANSION DETAIL AT FLOOR

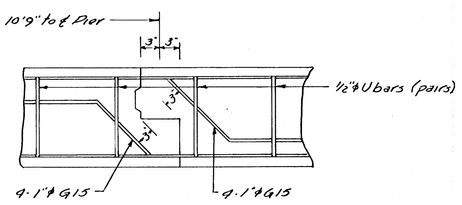


EXPANSION DETAIL AT BACKWALL



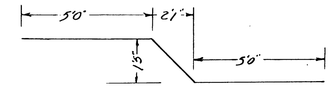


SLAB JOINT

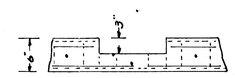


GIRDER JOINT

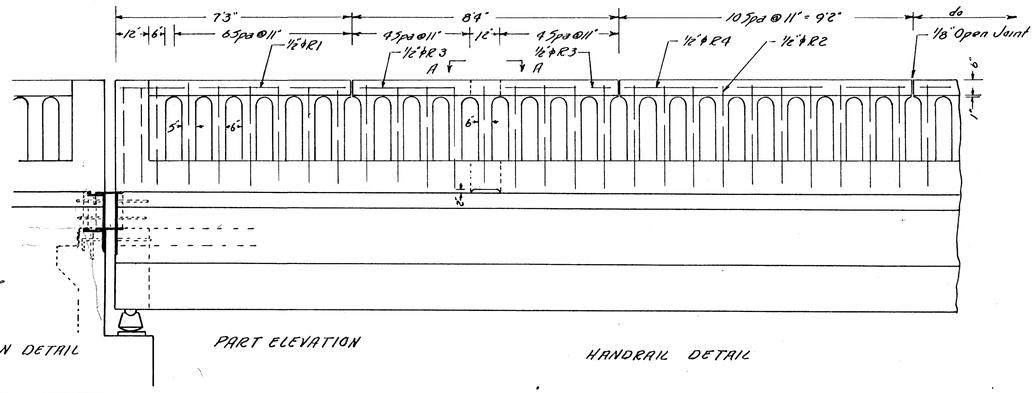
CONSTRUCTION JOINT DETAILS



1"ø Bar GIS



SECTION AA



Shop weld all anchor bars to Pls & Cs

Field welds all 3/16" Both sides where possible

EXPANSION DETAIL

PART ELEVATION

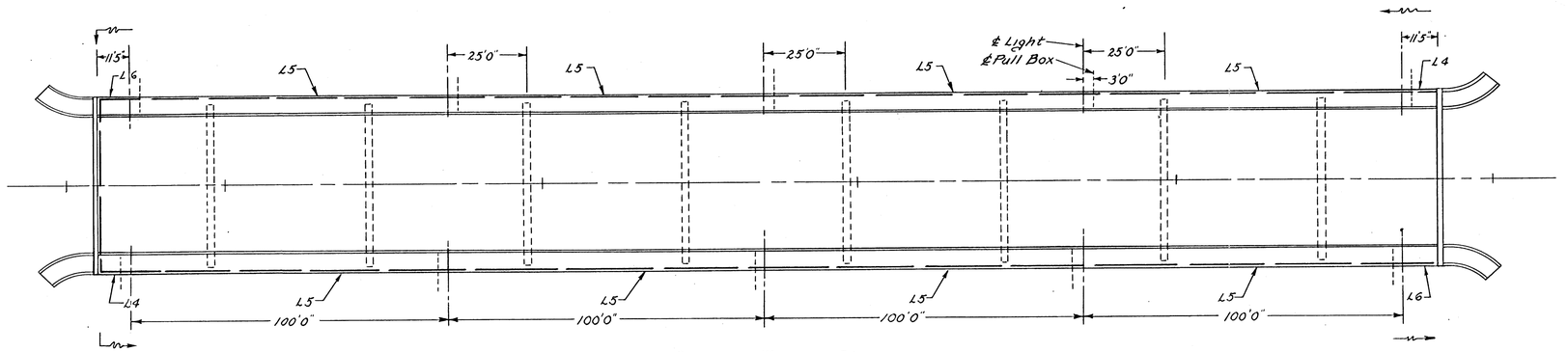
HANDRAIL DETAIL

AUXILIARY DETAILS
BRIDGE NO. 616-25-2371

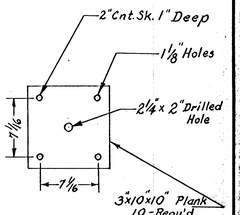
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

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

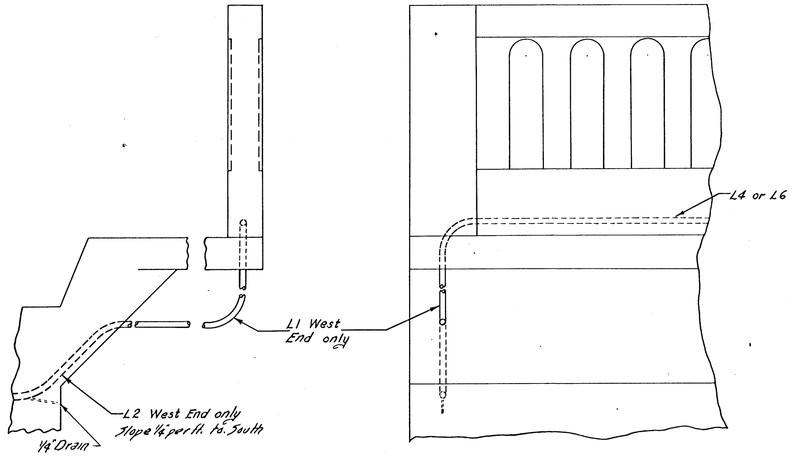
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	10	11



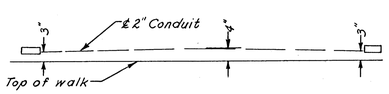
GENERAL WIRING DIAGRAM



Temporary Covers Over Anchor Bolts



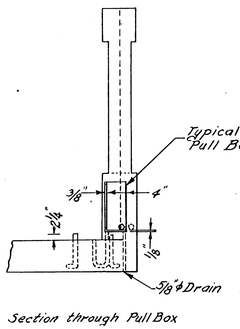
DETAIL AT ENDS OF BRIDGE



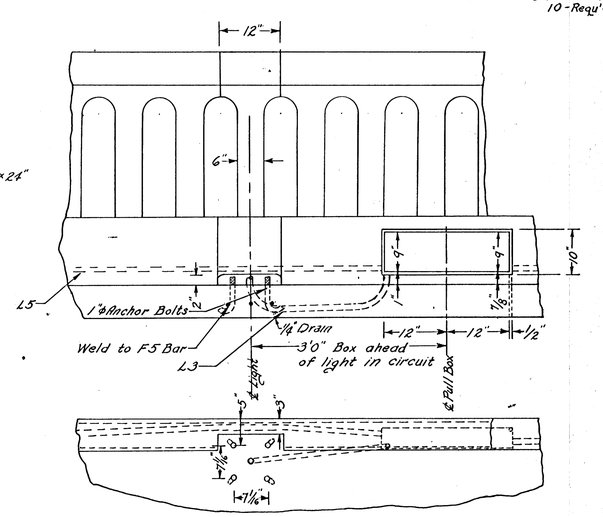
Typical Slope of Conduit between Pull Boxes

CONDUIT TABLE			
Symbol	No.	Length	Tot. Lgth
L1	2	4' 1½"	8' 3"
L2	1	53' 4½"	53' 4½"
L3	10	1' 10½"	18' 9"
L4	2	8' 1½"	16' 3"
L5	8	100' 2"	801' 4"
L6	2	14' 1½"	28' 3"
		Total	926' 2½"

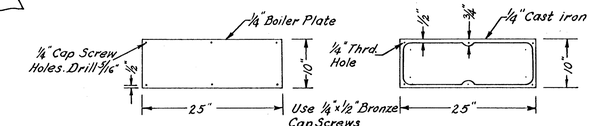
All conduit 2" ϕ non-metallic

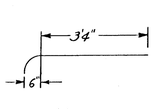


Section through Pull Box

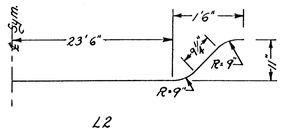


DETAIL AT PULL BOX AND LIGHT

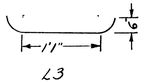




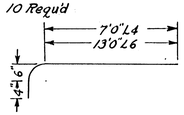
L1

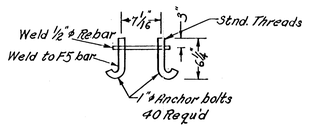


L2



L3





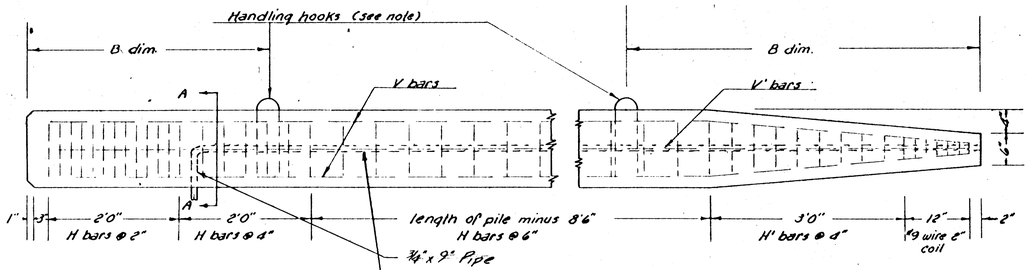
LIGHTING DETAILS
BRIDGE NO. 616-25-2371

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

REVISED 11-50 M.S.	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
		M.E.S.	C.D.H.		
	DATE	10-50	10-25-50		
	PLANFILE		TOTAL SHEETS		

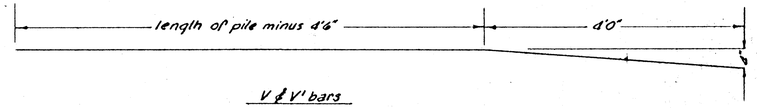
	State		Fiscal Year	Sheet No.	Total Sheets
	Kansas		1950	11	11

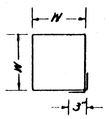
PLAN VIEW



Note: Handling hooks are to be 1'-2'-9" rebars with loops large enough to accomodate attaching hooks.

BENDING DIAGRAM





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	#6		#4	#4
Length	20'0"		4'0"	Var.	Length	32'0"		4'0"	Var.
B dim.	4'3"				B dim.	6'9"			
Total Steel	158#				Total Steel	303#			
Concrete	1.04 Cu. Yds.				Concrete	1.65 Cu. Yds.			

24'6" PILE					36'6" PILE				
Bar	V	V'	H	H'	Bar	V	V'	H	H'
Number	4		51	9	Number	4		73	9
Size	#8		#4	#4	Size	#6		#4	#4
Length	24'0"		4'0"	Var.	Length	36'0"		4'0"	Var.
B dim.	5'1"				B dim.	7'7"			
Total Steel	187#				Total Steel	339#			
Concrete	1.25 Cu. Yds.				Concrete	1.86 Cu. Yds.			

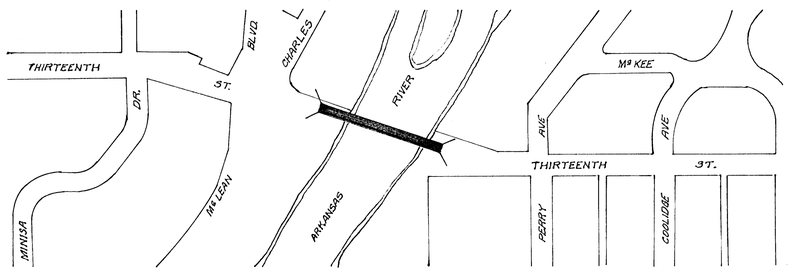
28'6" PILE					40'6" PILE				
Bar	V	V'	H	H'	Bar	V	V'	H	H'
Number	4		59	9	Number	4	4	83	9
Size	#8		#4	#4	Size	#6	#6	#4	#4
Length	28'0"		4'0"	Var.	Length	40'0"	40'0"	4'0"	Var.
B dim.	5'11"				B dim.	8'3"			
Total Steel	217#				Total Steel	413#			
Concrete	1.45 Cu. Yds.				Concrete	2.06 Cu. Yds.			

CONCRETE PILING 14" X 14"

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
-	1" = 10"	Baskett	Manion	[illegible] 12-17-47	
	DATE	12-47			
	PLANFILE		TOTAL SHEETS		

13th STREET BRIDGE OVER BIG ARKANSAS RIVER
BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 572018
CITY OF WICHITA, KANSAS
R. W. LINN, CITY ENGINEER



GENERAL NOTES:

1. THE LUMP SUM BID ITEM OF "ABUTMENT REPAIR" SHALL INCLUDE ALL COSTS OF:
   A. REMOVAL & RECONSTRUCTION OF WEST ABUTMENT & WINGWALLS AS DETAILED.
   B. REMOVAL & REPLACEMENT OF CONCRETE PAVEMENT, CONCRETE CURBS, & CONCRETE SIDEWALK.
   C. REPAIR OF EAST ABUTMENT PARAPET WALL.
   D. EXCAVATION & COMPACTION OF EMBANKMENT AS REQUIRED.
   E. INSTALLATION OF 5" NEOPRENE CELL EXPANSION DEVICE.
   F. REMOVAL & REPLACEMENT OF BRIDGE ROCKERS & ROCKER PLATES AT BOTH ABUTMENTS.
   G. EPOXY REPAIR OF THE FRACTURES IN THE WEST ABUTMENT BELOW THE BRIDGE SEAT.
2. LOADING H-20-44 A.A.S.H.O. DESIGN STRESS F_s=20000 psi., f'_c=3000 psi. n = 9. CLASS A-AE CONCRETE TO BE USED THROUGHOUT. BEVEL ALL EXPOSED EDGES WITH ¾" Δ MOULDING UNLESS OTHERWISE NOTED.
3. ANY DAMAGE TO THE EXISTING STRUCTURE DUE TO NEGLIGENCE ON THE PART OF THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTORS EXPENSE.
4. ALL ACCESSIBLE PARTS OF THE STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF TINTED ALUMINUM PAINT FOLLOWED BY ONE COAT OF ALUMINUM PAINT AFTER ERECTION. (STRUCTURAL STEEL AT ABUTMENTS ONLY.)
5. SHOP PAINTING OF ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTIONS F2-5(c), Q_1 & Q_2 OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION".
6. FIELD PAINTING OF ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTION F2-6(e) OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION."
7. ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTION U5-2 OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION."
8. GROUTING REINFORCING STEEL IN OLD CONCRETE SHALL CONFORM TO PARAGRAPH 66P-17 OF "SUPPLEMENT NUMBER ONE TO THE STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1970 EDITION."
9. THOROUGHLY SWAB THE BRIDGE-SEAT BEARING AREA WITH RED LEAD PAINT AND PLACE UPON IT THREE LAYERS OF TWELVE TO FOURTEEN OUNCE DUCK, EACH LAYER BEING THOROUGHLY SWABBED ON ITS TOP SURFACE WITH RED LEAD PAINT. PLACE THE SUPERSTRUCTURE SHOES OR PEDESTALS IN POSITION WHILE THE PAINT IS PLASTIC.
10. FORMWORK, CONCRETE MATERIALS, & CONCRETE PROPORTIONS SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION."
11. CONTRACTOR TO BLOCK OUT FOR PROPOSED ELECTRICAL CONDUITS AT WEST ABUTMENT. CONTRACTOR TO CONTACT KANSAS GAS & ELECTRIC COMPANY FOR LOCATION OF CONDUITS.

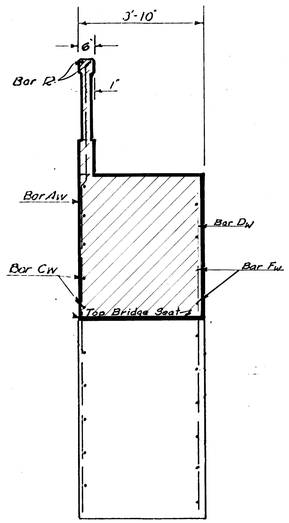
CONRAD E. SCHNEIDER LICENSED 6311 KANSAS PROFESSIONAL ENGINEER

LARRY W. LAURSEN LICENSED 6363 KANSAS PROFESSIONAL ENGINEER

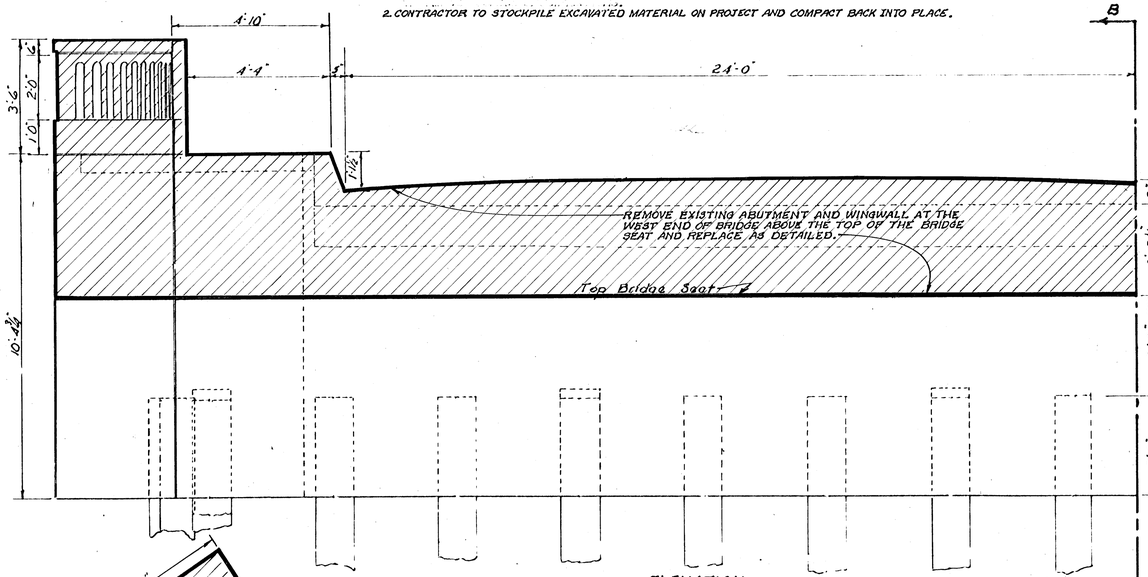
R. W. LINN LICENSED 3691 KANSAS PROFESSIONAL ENGINEER

1. CLASS A-AE CONCRETE SHALL BE USED THROUGHOUT THIS PROJECT.
2. CONTRACTOR TO STOCKPILE EXCAVATED MATERIAL ON PROJECT AND COMPACT BACK INTO PLACE.

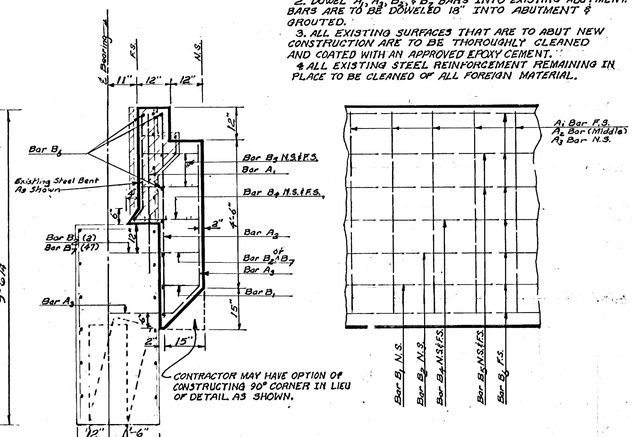
NOTES:
1. ALL VERTICAL REINF. STEEL IN THE WINGWALLS & PARAPET WALL IS TO BE SAVED TO TIE THE REINF. STEEL TOO IN THE NEW CONSTRUCTION.
2. DOWEL A_1, A_2, B_2, & B_4 BARS INTO EXISTING ABUTMENT. BARS ARE TO BE DOWELED 18" INTO ABUTMENT & GROUTED.
3. ALL EXISTING SURFACES THAT ARE TO ABUT NEW CONSTRUCTION ARE TO BE THOROUGHLY CLEANED AND COATED WITH AN APPROVED EPOXY CEMENT.
4. ALL EXISTING STEEL REINFORCEMENT REMAINING IN PLACE TO BE CLEANED OF ALL FOREIGN MATERIAL.



Sec. A-A

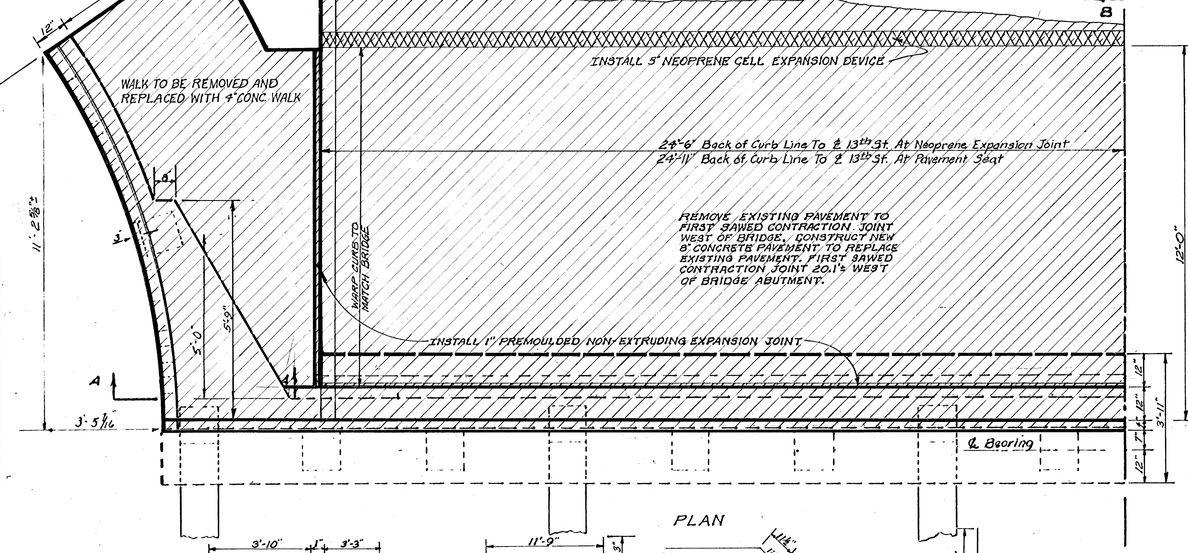


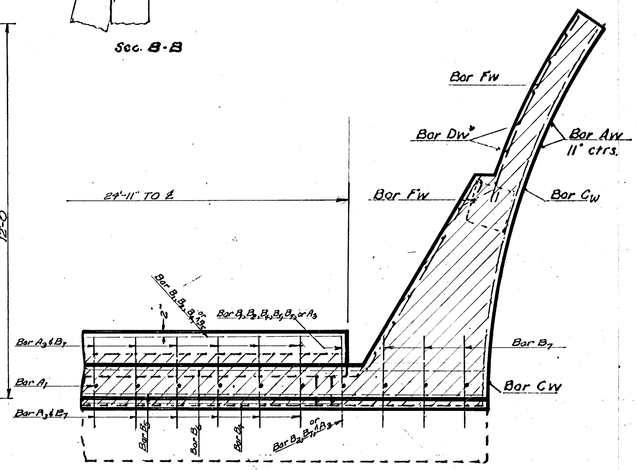
ELEVATION



REINFORCING STEEL IN HALF OF ABUTMENT
(Symmetrical About Centerline)


Sec. B-B

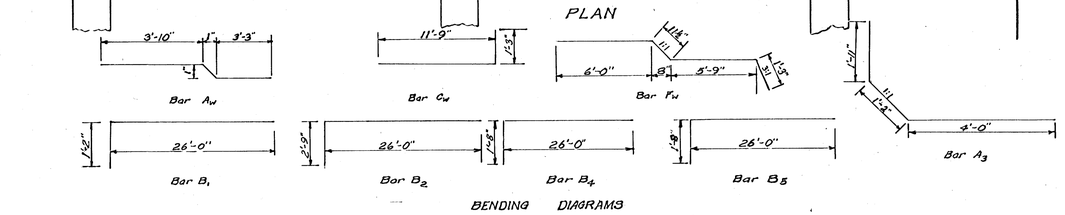




STEEL TABLE
(WEST ABUT.)

Bar	Space	No.	Size	Length	Weight
A_1 *	15"	47	⅜"	4'-8"	329.44#
A_2 *	15"	40	⅜"	6'-2"	370.50#
A_3	15"	40	⅜"	7'-11"	430.57#
B_1		2	⅜"	27'-2"	81.61#
B_2		2	⅜"	28'-9"	86.37#
B_3		4	⅜"	27'-8"	166.22#
B_4	12"	8	⅜"	27'-8"	332.44#
B_6 *	12"	16	⅜"	2'-6"	624.83#
B_7 *	15"	47	⅜"	2'-9"	194.13#
R		4	½"	11'-9"	31.90#
A_W	11"	36	½"	7'-2"	172.34#
C_W	12"	10	½"	13'-0"	86.84#
D_W *	12"	28	½"	4'-0"	74.82#
F_W	12"	8	½"	13'-11½"	74.53#
				Total	3056.19#

* INDICATES STRAIGHT BARS



BENDING DIAGRAMS

LARRY W. LAURSEN
LICENSED
6363
PROFESSIONAL ENGINEER

BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 572018

3/4