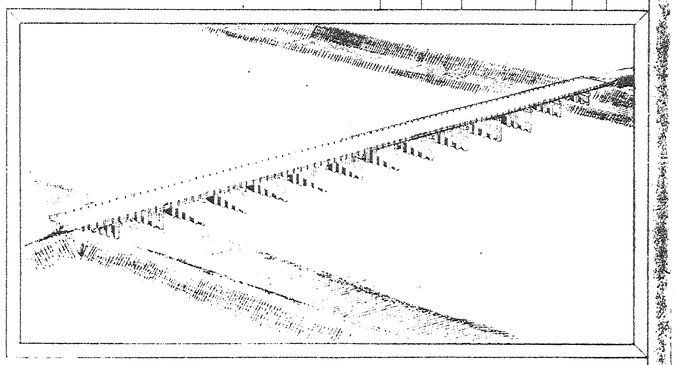
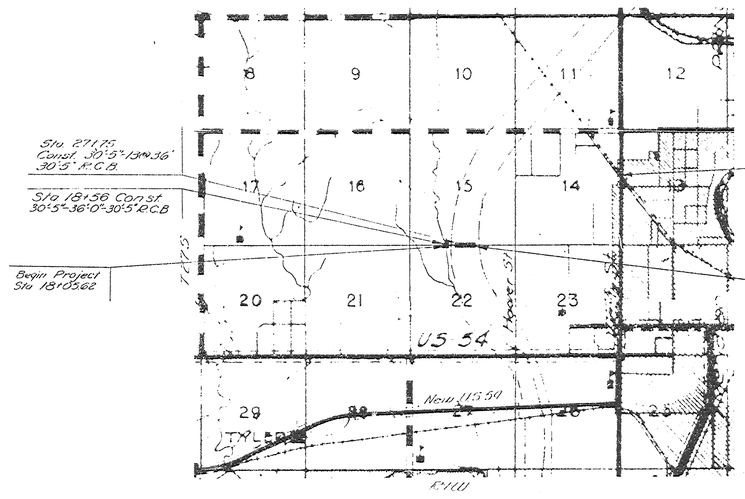
STATE OF KANSAS
STATE HIGHWAY COMMISSION
SEDGWICK COUNTY

PLAN AND PROFILE



INDEX OF SHEETS

1 - Title Sheet
2 - Topography
3&4 - Plan & Profile
5 - Construction Layout (618-22-2775)
6 - Piling Location in Levees "
7 - General Details "
8 - Auxiliary " "
9 - Reinforcing " "
10 - Piling " " & (618-22-1856)
11 - Construction Layout (618-22-1856)
12 - General Details "
13 - Auxiliary " "
14 - Reinforcing " "
15 - Piling " "



BRIDGES ONLY

Scale 2"=1 mile

SUMMARY OF QUATITIES (COMBINED)	
Concrete Class A (AE)	794 C.Y.
Reinforcing Steel	169,100 Lb.
14"x14" Conc. Piling	4,070 L.F.
Bearing Devices	7,570 Lb.
Metal Handrail	1,291.5 L.F.
Structural Steel	22,150 Lb.

CONVENTIONAL SIGNS

COUNTY LINE
SECTION LINE
WIRE FENCE
HEDGE ROW
RAILROAD
SURVEY LINE
RIGHT OF WAY
TELEPHONE
POWER POLE
TRAVELED WAY
CITY LIMITS
TOWNSHIP BOUNDRY

GROSS LENGTH OF PROJECT	1235.76 FT.	0.234	MILES
EXCEPTIONS	602.26 FT.	0.114	"
ADDITIONS			
NET LENGTH OF PROJECT	633.50 FT	0.120	MILES
NET LENGTH OF BRIDGES	633.50 FT.	0.120	MILES
NET LENGTH OF ROAD	FT.		MILES

PLANS PREPARED BY.

COUNTY ENGINEER

DATE

APPROVED.

COUNTY COMMISSIONER

DATE.

RECOMMENDED FOR APPROVAL DATE

ENGINEER OF SECONDARY ROADS
STATE HIGHWAY COMMISSION OF KANSAS

RECOMMENDED FOR APPROVAL DATE

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE

STATE HIGHWAY ENGINEER
STATE HIGHWAY COMMISSION OF KANSAS

APPROVED DATE

DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

To Tr/Lo 12/2/53

(618-22-1856) AND 618-22-2775

BIG SLOUGH CREEK

16'x55' wood steel bridge

Existing 6 Cable power line

Limits of waste fill see dwg. C121-197

Texas Empire 6" gasoline line

Drain ditch 5' bottom width with 1 on 2.5 side slopes.

Temporary drain 48" C.M.P. or equal, to be furnished and installed by SEDG. Co. if necessary.

Channel bottom width 121.42' @ Sta. 774+00B

Sta. 783+85B

Central Ave. relocation & channel plug excav. to be done by SEDG. CO.

Levee alignment control line "D"

Approx. limit of R/W

Lv. Gap closures and dressing & mulching of channel slopes to be done by others after completion of CENTRAL AVE. relocation.

15'x15' C.I.P.

24"x24" C.I.D

Levee alignment control line "C"

Approximate limit of R/W

Drain ditch 5' bottom Width 1 on 2.5 side slopes see profile.

Channel bottom width 151.52' @ Sta. 795+50'B'

℄ CHANNEL B

℄ L.B. LEVEE 'D'

Approximate ℄ Co. Road Detour

Flow

1 on 2.5

1 on 100

B-61

B-62

B-63

B-24

B-25

Δ = 74°44'25"
D = 1°00'
R = 5729.58'
T = 4375.86'
L = 7474.03'

REPRODUCTION FROM U.S. ARMY, CORPS OF ENGINEERS, DWG. NO. C 121-193.2 SHOWING LOCATION OF COUNTY BRIDGE AT STA. 784+70.23 "B"

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO
	1"=100'	U.S. Army	W. Freund		2
	DATE		Oct. 1953		Sec. revised
	PLANFILE		TOTAL SHEETS		

To Tw 38 11/23/53

618-22-2775

S.W. Cor. of Sec. 15 Delano
Stone, 18" Deep
49.5' N.W. to 4 nails in Fe. cor. post
39.9' S.W. " 60ft in H.L.P.
737.3 S.W. " N.W. cor of R.C.B.C.
737.5 S.E. " N.E. cor of R.C.B.C.
90.4' N.E. " X nails in T.P.

Road #811-P

R.W. 35'E (with Slope)

Alfalfa

Pasture

R.W. 50'E. (with Slope)

H.B.O. House Encr. 2.2'20'

R.W. 35'E (with Slope)

Sta. 26+71.25
S 1/4 Cor. of Sec 15
Stone 15" Deep
28.0' S. to H.L. Fe. W.
56.5' S.W. to H.L.P.

SEC. 15-27S-1W

Texas Empire Pipe Line

Temporary drain 48" C.M.P. to be furnished & installed by Sedgwick County.

R/W 55'E Both Sides

Approximate E County Road Detour

E Channel

Reserved for Government Contractor

Elig 47

0+00

Delano Twp. Hall

Sta. 3+16 Break in top & fill R.C.E. & remove B.A.F.

Sta. 18+56 Construct 30'5"-36'0"-30'5" R.C.B. Old S.T.B. to be removed by SED. Co. forces and funds. County to [illegible] to any pvt. driveway.

Sta. 27+75 Const. 30'5"-139.36'-30'5" R.C.B.

H.B.O. House Encr. 2.3'40' B.P.M.C. Rel. Lvt. 3.5' Fill

Plowed Ground

Pasture

R/W Fence

6" Grouted Rock 12' Heavy Rip-rap to be installed by Sedgwick County

Limits of Borrow to channel by County Sedgwick

SCALES
Plan Long. 1"=100' Lat. 1"=100'
Profile Horiz. 1"=100' Vert. 1"=10'
0 50 100 200 300 400

SEC. 22-27S-1W

B.M. #2 "O" on E. headwall of R.C.B.C. 753' of intersection of Central & Rd. #811 El. 1318.02

B.M. #3 Bolt in Flood Control R/W fence Cor. Post 30' N. Sta. 211+74 El. 1311.31

PLAN
SURVEYED
DRAWN
NOTE BOOK
NO.
DATE
BY
DETAILS CHECKED
ALIGNMENT CHECKED
FIELD BOOK NOTATIONS

PROFILE
SURVEYED
DRAWN
NOTE BOOK
NO.
DETAILS CHECKED
ALIGNMENT CHECKED
STRUCTURE NOTATIONS

GENERAL NOTES

All easements, channel changes, borrow-pit locations and R/W for construction of this project to be furnished by SEDGWICK COUNTY.
All encroachments, such as fences, telegraph, telephone and power lines, shall be moved beyond the limits of construction by owners or SEDGWICK COUNTY.
In the interest of public safety, all gas, gasoline, oil and water lines shall be moved beyond the limits of the roadbed unless special provision for their retention has been noted.
Operational devices for any and all lines, which are permitted to remain in place, shall be adjusted to conform with lines and grade of proposed improvement.
Grading and surfacing is to be done by others and is not to be considered a part of the Contract.

1320
1310
1300

Sp. Ditch Fl. E. (-) -0.10%

5' Bottom

0.0%

+3.0%

-3.0%

+1.0%

1307.50

1303.50

Design - Lin. 11+11.4

3' Bottom

Sta. 25+12.5 E Beg. Head #1
Low Chord = 1318.63

Sta. 30+12.5 E End
Low Chord = 1318.03

Sta. 27+75 Const. 30'5"-139.36'-30'5" R.C.B.

75' L.S. Ditch & Control Fence. To be done by Sedgwick County.

5:1

Varies

52'-0"

Varies

0+00 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

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
HEUFELD & ESSER CO., NEW YORK.

To 70/30 12/3/53

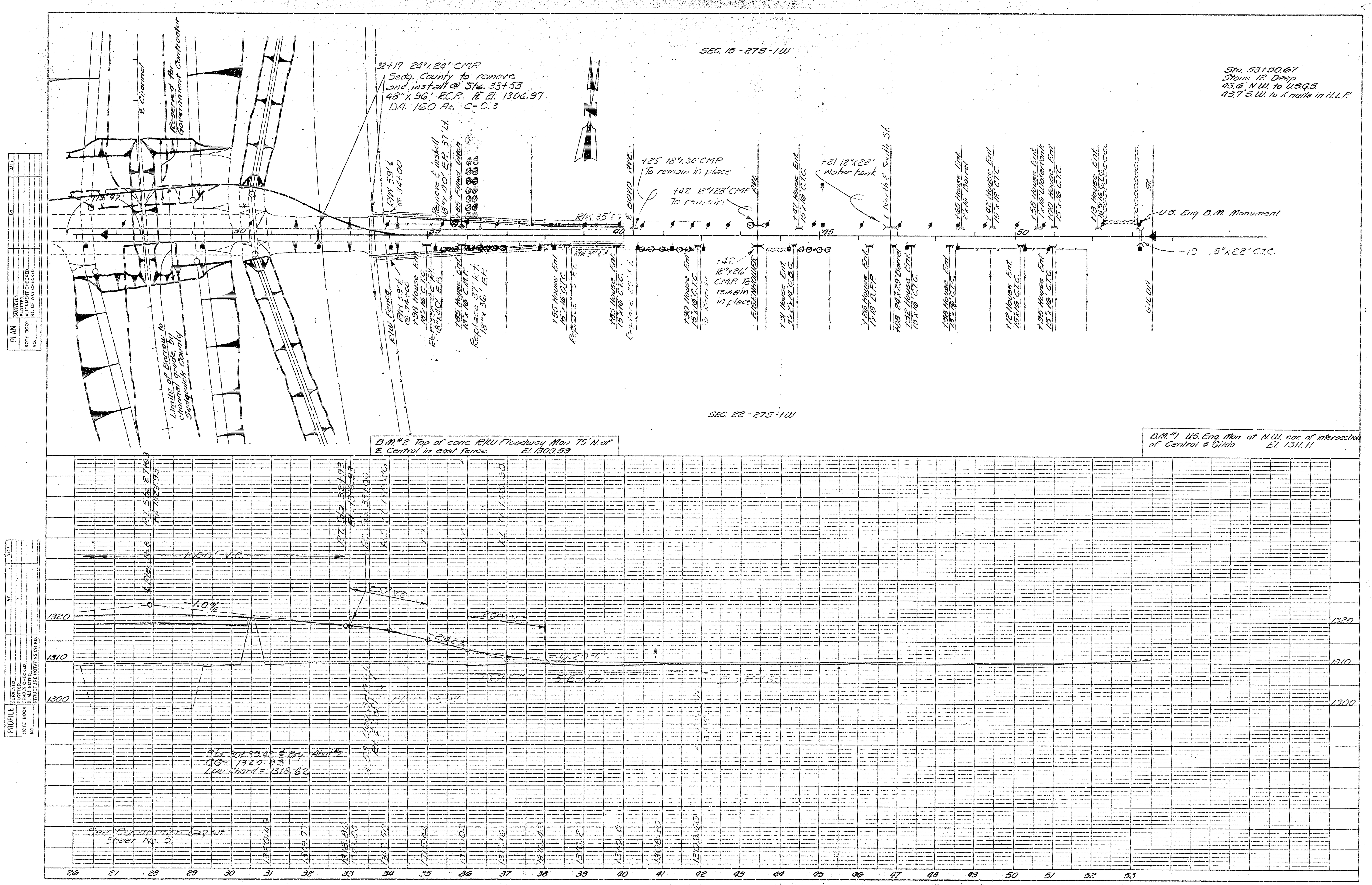
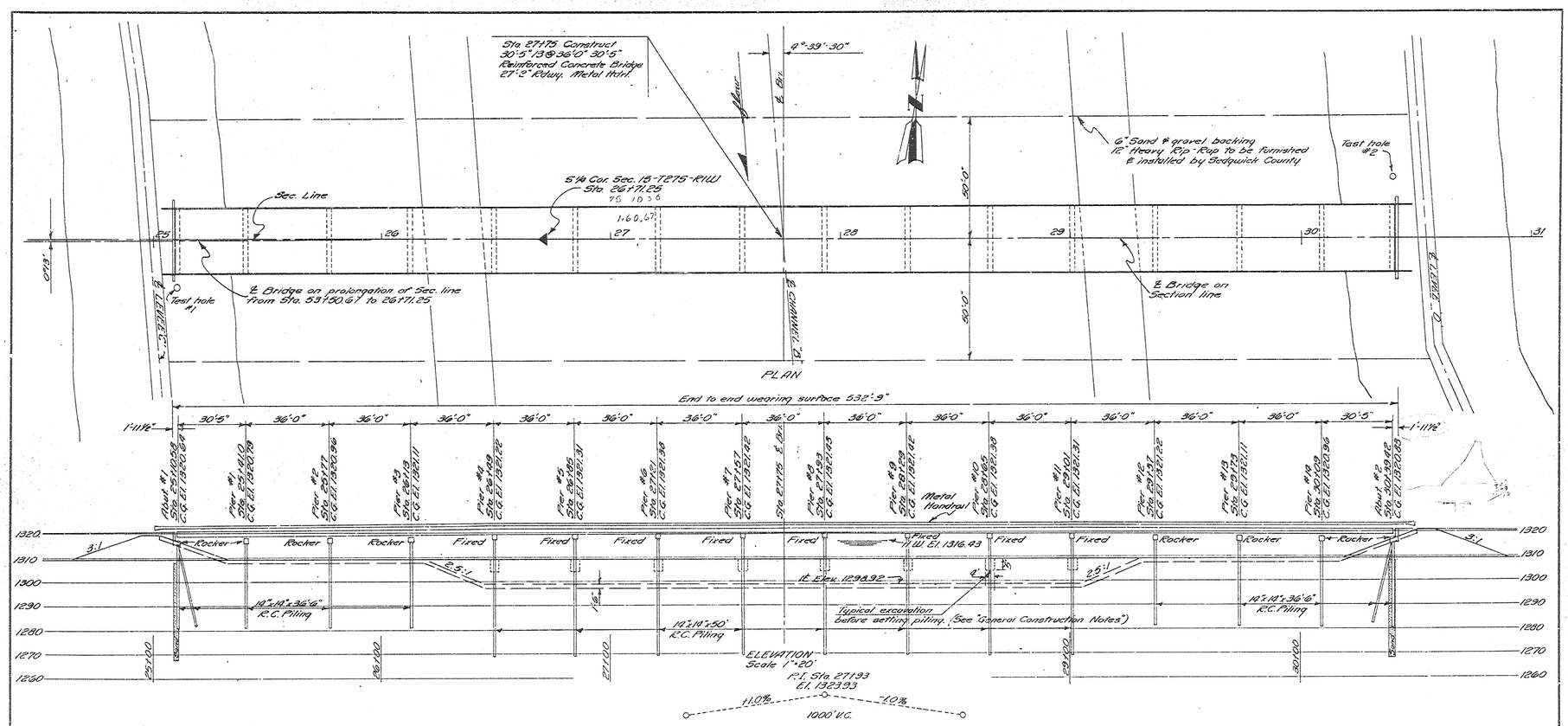


PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

618-22-2775 Sheet No. 4



FLOODWAY DATA

Top of Levee "C" El. 1319.46
Top of Levee "D" El. 1320.01
Bottom of channel El. 1298.92
Highwater El. 1316.93
Width of channel @ bottom 260'
Side slopes of channel 1 on 2.5
Side slopes of Levees 1 on 3
Width of floodway, ctr to ctr of levees 554'
Estimated flow 46,500
Estimated Velocity 8.08'/Sec.

GENERAL NOTES

Design: According to A.A.S.H.O. Specifications, Edition of 1949 H20-44 Loading; f_s = 20,000 psi; f_c = 1,000 psi.

Soundings: Taken by SEDGWICK COUNTY with ¾" jet.

Piling: Concrete piling to be driven to a computed resistance of 128 tons per pile.

Concrete: Use class A(AE) concrete throuout. Bevel all exposed edges with a ¾" triangular molding.

Forms: Contractor shall use preformed metal forms owned by SEDGWICK COUNTY.

Embankment: To be constructed by SEDGWICK COUNTY or others. No earthwork is to be considered a part of this project except at pier locations in channelway.

GENERAL CONSTRUCTION NOTES

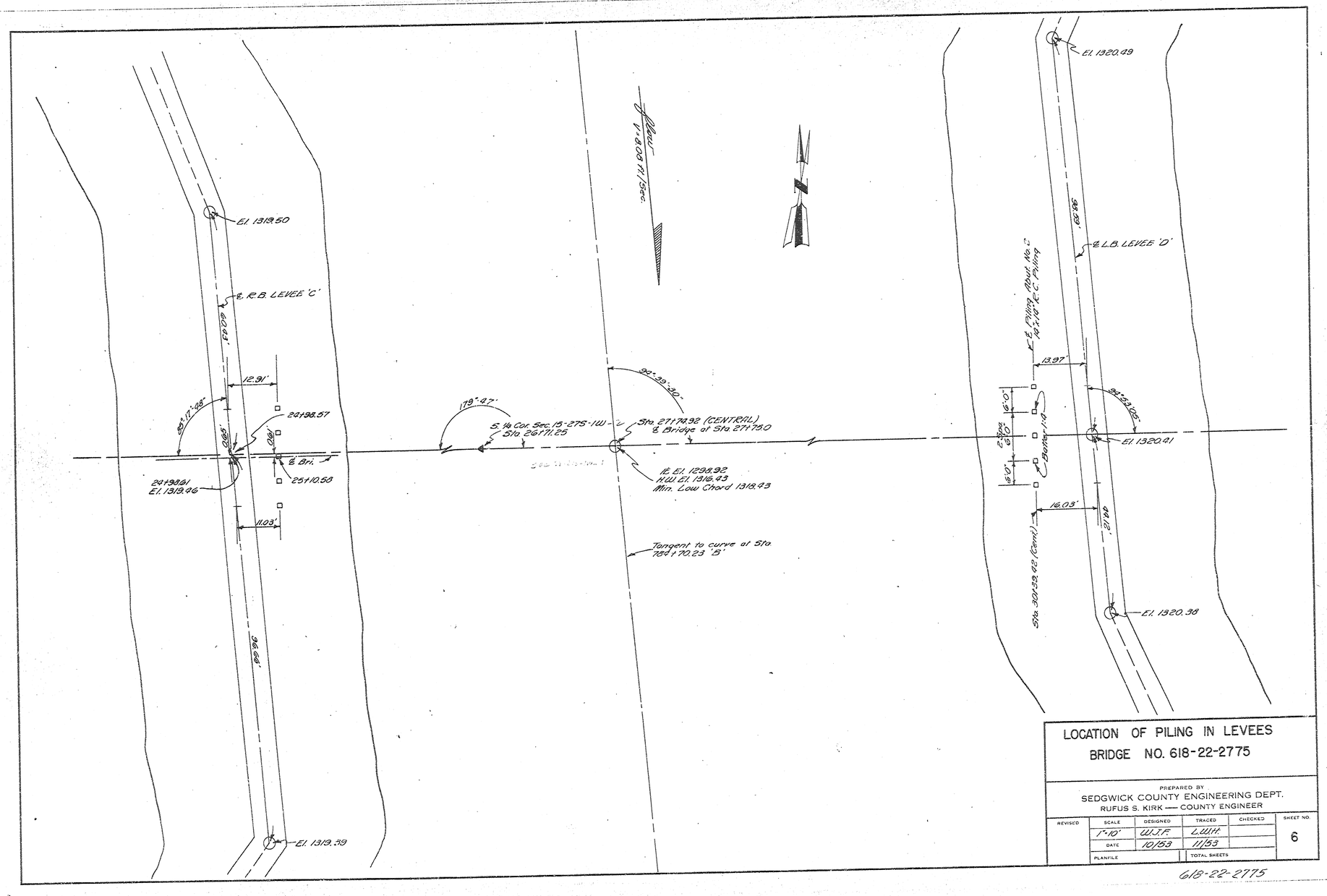
Timber cribbing at centerline of each span on this project will be required.
One set of short forms and four sets of long forms are available for this project. Since the concrete in a full span ahead of any forms to be removed must have attained its design strength before removal of these forms, it is suggested that high early strength cement be used.
Forms for this project shall be picked up by Contractor at the SEDGWICK COUNTY YARDS, 1015 Stillwell, Wichita, and returned to this location unless otherwise instructed by the Engineer. (See "Special Provisions" in Specifications for Proposal Booklet.)
The wearing surface and all other exposed surfaces of wings, caps, abutments and piling shall be cured and protected in accordance with Section 5048 of the Standard Specifications for State Road & Bridge Construction, Edition of 1951. As an alternate, a paraffin base curing compound applied immediately after finishing of concrete, and covered with dry burlap, or any suitable material satisfactory to the Engineer in charge, for a minimum of 72 hours may be used.

Since the speed and simplicity of this project will be greatly increased if construction is well underway before the waterway and levees are constructed, work on forming of piling must start within two weeks and pile driving must start within three weeks after the contract is let. A trench 5'x8'x28' to be excavated before setting piling and backfilled before any form work for caps proceeds at each pier location in channelway. Excavation and back filling not to be paid for directly, but shall be included in the unit price bid for concrete piling.

CONSTRUCTION LAYOUT
BRIDGE NO. 618-22-2775

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=20'	W.J.F.	L.W.H.		5
	DATE	11/53	11/53		
	PLANFILE		TOTAL SHEETS		



LOCATION OF PILING IN LEVEES
BRIDGE NO. 618-22-2775

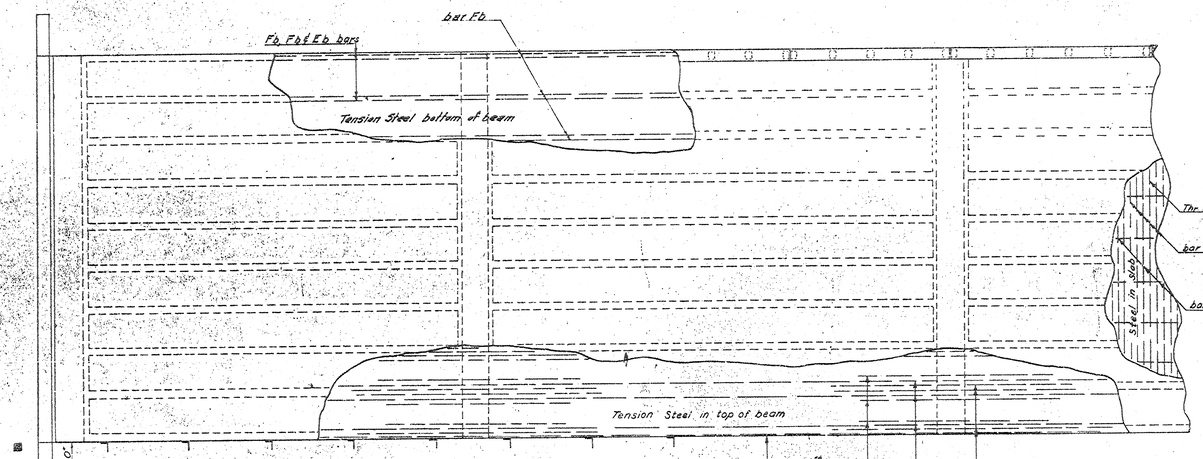
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=10'	W.J.F.	L.W.H.		6
	DATE	10/53	11/53		
	PLANFILE		TOTAL SHEETS		

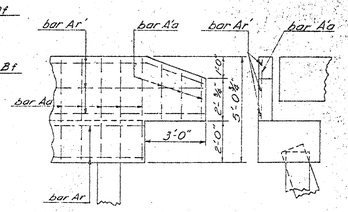
618-22-2775

GENERAL NOTES

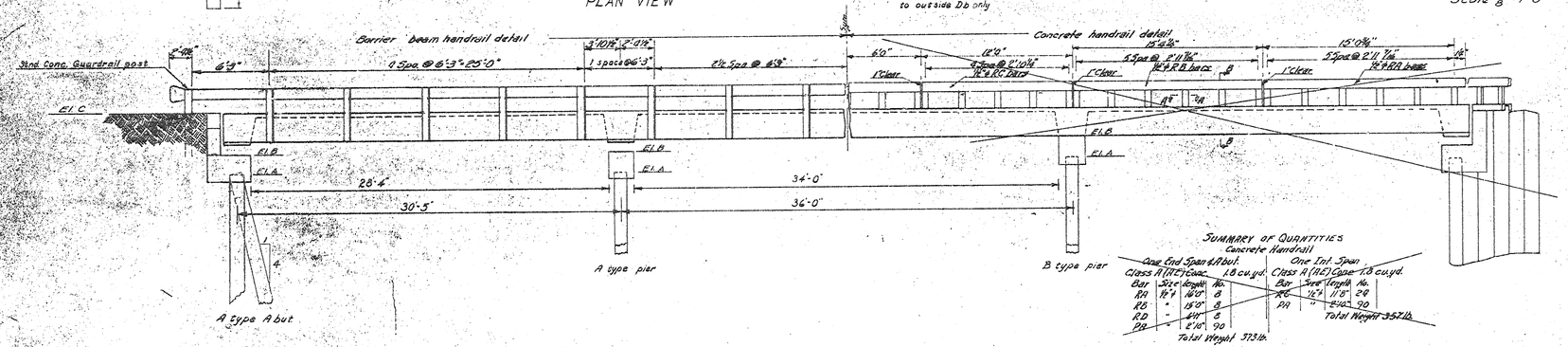
Design: Designed for H-20-44 loading AASHO specifications. f_s=20,000 psi, f_c=1,000 psi.
Soundings: To be taken by Sedgwick County.
Piling: Concrete piling to be driven to a Calculated resistance of 28 ton.
~~Old Struct: To be removed by Sedgwick County.~~
Concrete: Class A (AE) concrete used throughout Bevel all exposed edges with a ¾" Δ molding unless otherwise noted. Forms shall be preformed steel "pans" used as directed by the Engineer in charge.
Guardrail: To be of standard barrier beam or concrete as shown on Construction Layout. Concrete rail to be constructed after the removal of deck forms.



PLAN VIEW



Details of Cantilevered Wing
Scale ⅜" = 1'-0"



SUMMARY OF QUANTITIES
Concrete Handrail
One End Span & Abut. 1.8 cu.yd.
One Int. Span Class A (AE) Conc. 1.3 cu.yd.

Bar	Size	Length	No.
RA	16"ϕ	16'0"	8
RB	"	15'0"	8
RD	"	6'0"	6
PA	"	2'10"	90

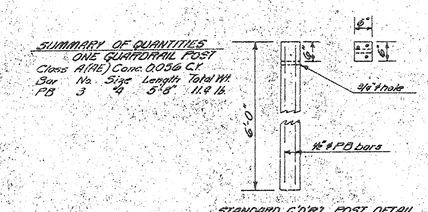
Total Weight 373 lb.

Bar	Size	Length	No.
RC	16"ϕ	11'8"	24
PA	"	2'10"	90

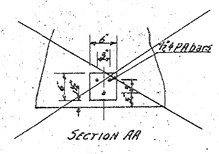
Total Weight 357 lb.

SUMMARY OF QUANTITIES
ONE GUARDRAIL POST
Class A (AE) Conc. 0.03 cu. Cr.

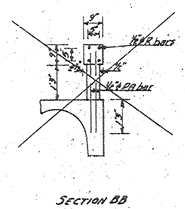
Bar	No.	Size	Length	Total Wt.
PB	3	4	5'-8"	11.8 lb.



STANDARD G'D'RL. POST DETAIL
4 Required



Section AA



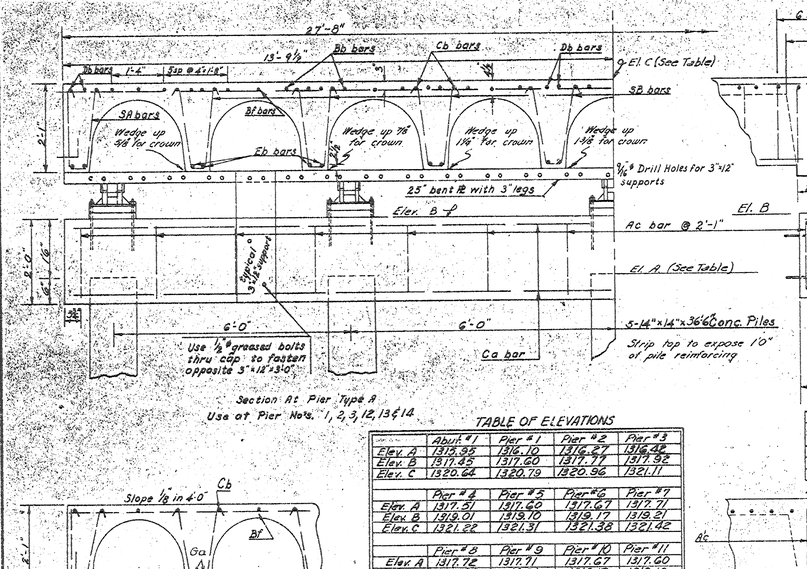
Section BB

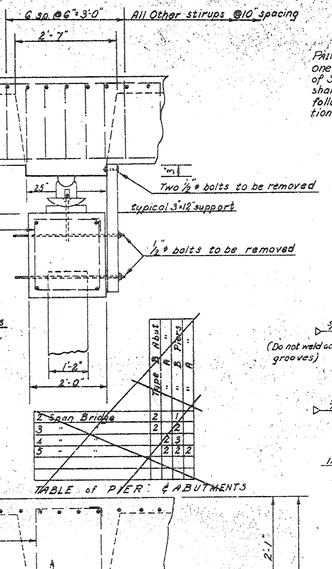
~~Note - PA bars to be placed immediately after slab screeding~~

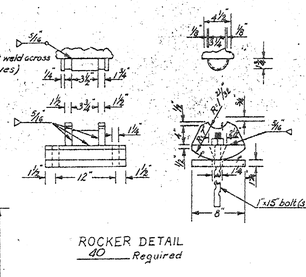
RE. CONC. MODIFIED T-BEAM BRIDGE
BRIDGE NO. 618-22-2775

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

REVISED 1-15-58 11-53 C.L.F.	SCALE 1"	DESIGNED	TRACED	CHECKED	SHEET NO.
	1/4" = 1'	R.R.J.	C.D.H.		7
	DATE	9-50	9-18-50		
	PLANFILE		TOTAL SHEETS		







ROCKER DETAIL
40 Required

GENERAL NOTES

Bevel all exposed edges with ¾" molding.

PAINT - All parts of the Metal Handrail shall receive one shop coat of red lead paint. All exposed surfaces of Structural Steel, Bearing Devices, and Metal Handrail shall receive one coat of tinted aluminum paint followed by one coat of aluminum paint after erection.

Reinforcing Steel

Note: Quantities shown on this sheet are for computation only. Actual structure quantities are shown on following sheet.

27'-7" Rdwy ABUTMENT QUANTITIES

A TYPE				B TYPE			
backwall boards				backwall boards			
Five bearing piling				Five bearing piling			
Eight sheet piling				Eight sheet piling			
6.3 cu yd concrete				7.8 cu yd concrete			
539 lbs reinforcing				579 lbs reinforcing steel			
Five bearing devices				Five bearing plates			
One bent plate				One bent plate			
Bar	No	Length	Size	Bar	No	Length	Size
Aa	41	4'-8"	½" ϕ	A'a	41	4'-0"	½" ϕ
Ar	5	27'-0"	"	Ar	5	27'-0"	"
Ba	14	9'-9"	"	Ba	14	9'-8"	"
Ca	4	27'-6"	1" ϕ	Ca	4	27'-6"	1" ϕ

27'-7" Rdwy PIER QUANTITIES

A TYPE				B TYPE			
Five bearing piling				Five bearing piling			
4.1 cu yd concrete				4.1 cu yd concrete			
360 lbs reinforcing steel				397 lbs reinforcing steel			
5 bearing devices							
One bent plate							
Bar	No.	Length	Size	Bar	No.	Length	Size
Ac	14	7'-8"	½" ϕ	AE	14	11'-0"	½" ϕ
Ca	4	27'-0"	1" ϕ	Ca	4	27'-0"	1" ϕ

27'-7" Rdwy SPAN QUANTITIES*

ONE END SPAN				ONE INT SPAN			
36.4 cu yd Conc.				39.6 cu yd conc.			
8,990 lbs reinforcing steel				8,868 lbs reinforcing steel			
10 I Bgr I posts (steel)				12 I Bgr I posts			
72" Barrier Beam				72" Barrier Beam			
1-expansion device							
2 Concrete Posts							
Bar	No	Length	Size	Bar	No	Length	Size
SA	63	5'-2"	½" ϕ	SA	92	5'-2"	½" ϕ
SB	332	5'-2"	"	SB	368	5'-2"	"
Fb	20	28'-6"	1" ϕ	Bb	20	29'-6"	⅞" ϕ
				Eb	20	38'-4"	1" ϕ
Eb	20	33'-4"	1" ϕ	Ab	2	22'-0"	½" ϕ
Ab	2	25'-0"	½" ϕ	Ka	12	0'-11"	⅜" ϕ
Af	58	27'-0"	"	Af	66	27'-0"	½" ϕ
Df	9	33'-0"	"	Df	9	38'-0"	"
Ka	10	0'-11"	¾" ϕ	Cb	18	38'-0"	¾" ϕ
Cb	18	33'-0"	¾" ϕ	Bb	18	14'-0"	"
Bb	9	14'-0"	"	thr rd	6	28'-0"	½" ϕ
thr rd	5	28'-0"	¾" ϕ	Ga	20	18'-0"	⅞ ϕ

* Due to overlapping & duplication quantities shown are not necessarily actual bar numbers, but are factors to be multiplied by the number of each span involved to give total structure quantities & multiply by number of piers.

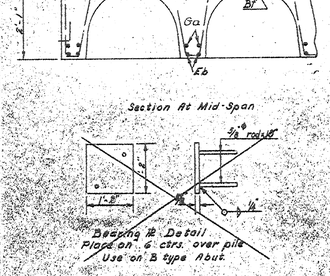
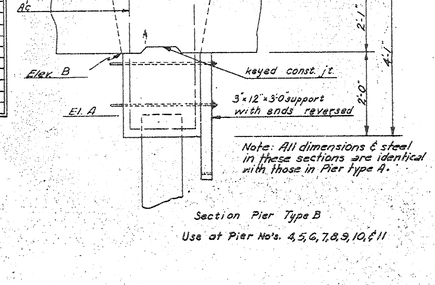
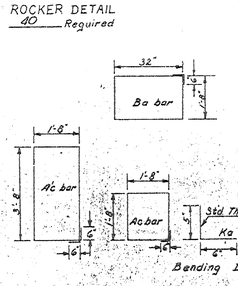


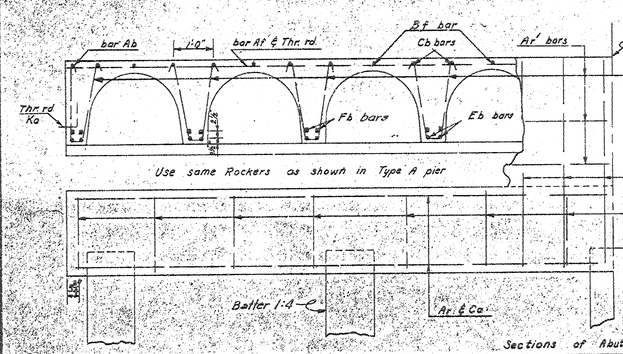
TABLE OF ELEVATIONS

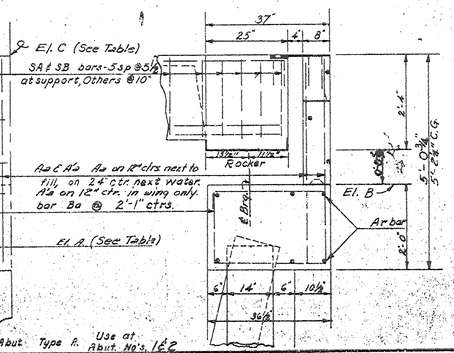
	Abut #1	Pier #1	Pier #2	Pier #3
Elev. A	1315.95	1316.10	1316.27	1316.42
Elev. B	1317.85	1317.60	1317.77	1317.92
Elev. C	1320.64	1320.79	1320.96	1321.11
	Pier # 4	Pier # 5	Pier # 6	Pier # 7
Elev. A	1317.51	1317.60	1317.67	1317.71
Elev. B	1319.01	1319.10	1319.17	1319.21
Elev. C	1321.22	1321.31	1321.38	1321.42
	Pier # 8	Pier # 9	Pier # K	Pier # 11
Elev. A	1317.72	1317.71	1317.67	1317.60
Elev. B	1319.22	1319.21	1319.17	1319.10
Elev. C	1321.43	1321.42	1321.38	1321.31
	Pier # 12	Pier # 13	Pier # 14	Abut #2
Elev. A	1316.53	1316.42	1316.27	1316.18
Elev. B	1318.03	1317.92	1317.77	1317.68
Elev. C	1321.22	1321.11	1320.96	1320.83

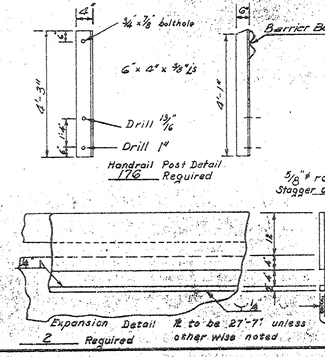


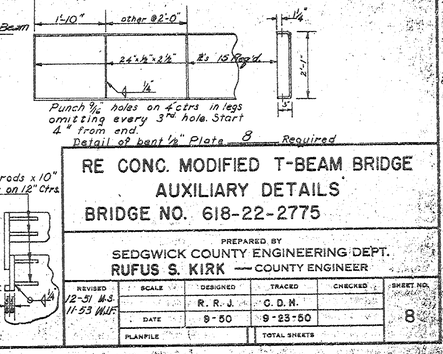
Note: All dimensions & steel in these sections are identical with those in Pier Type A.

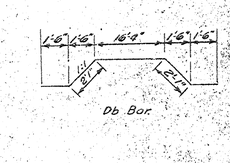








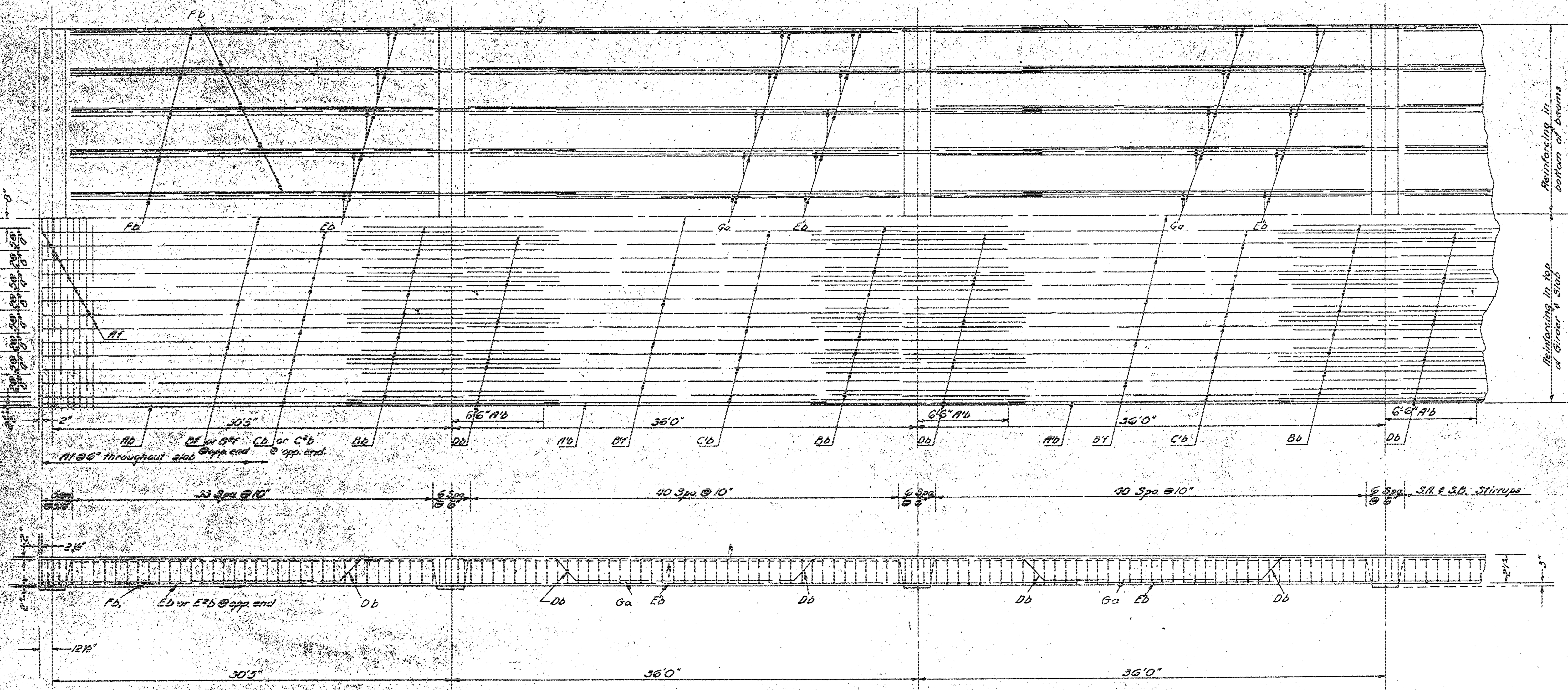


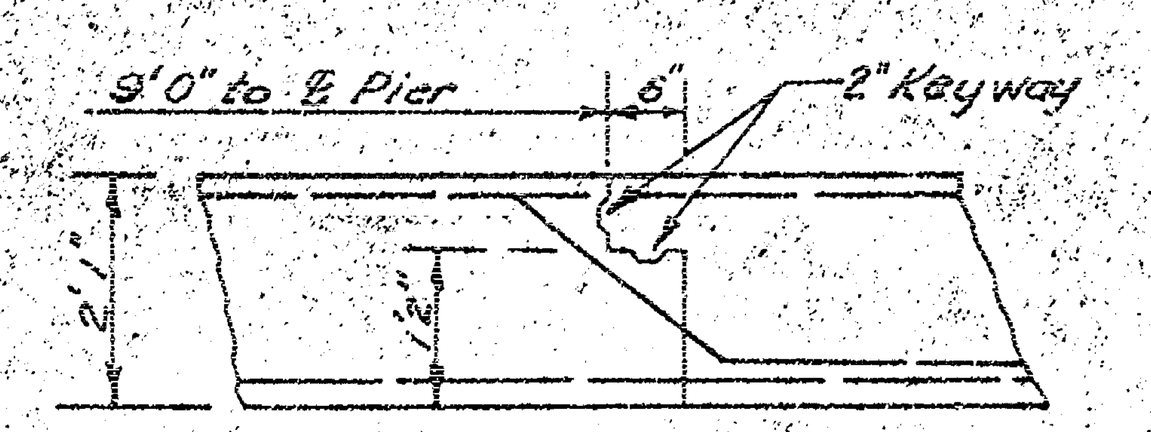


RE CONC. MODIFIED T-BEAM BRIDGE AUXILIARY DETAILS BRIDGE NO. 618-22-2775

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
12-31 M.S. 11-53 M.F.		R. R. J.	C. D. M.		8
	DATE	9-50	9-23-50		
	PLANFILE		TOTAL SHEETS		





TYPICAL CONSTRUCTION JOINT

SUMMARY OF QUANTITIES

30'5" - 13 @ 36' - 30'5" Continuous Spans; 27'-2" Roadway; Metal Handrail

Bar	Aa	A'a	Ar	Ba	Ca	Ac	A'c	Ab	A'b	Af	Bb	Bf	B'f	Cb	C'b	Db	Eb	E'b	Fb	Ga	SA	SB	Ka	Thr. Rod	RA	RB	RC	RD	PA	Ca'	E²b	B²f	C²b	Ar'
No.	82	12	4	28	64	84	112	4	26	1063	252	9	117	18	234	280	20	260	40	260	1362	5446	176	88	16	16		16			20	9	18	6
Size	#4	#4	#4	#4	#8	#4	#4	#4	#4	#4	#7	#4	#4	#7	#7	#7	#8	#8	#9	#7	#4	#4	3/4"	3/4"	#4	#4	#4	#4	#4	#8	#8	#4	#7	#4
Length	4'8"	*	27'0	9'8"	21'0	7'8"	11'8"	25'0	23'0	27'0	17'0	42'6	38'5	42'6	38'0	23'6	42'6	38'0	21'7	16'6	5'2"	5'2"	0'11	28'0	15'8"	15'0	11'8"	6'11"	2'10		21'7	21'7	21'7	33'2

Concrete Class A	657.5 Cu. Yd.	Metal Handrail	1,079 Lin. Ft.
Reinforcing Steel	141,510 Lb.	Structural Steel 15,690	~~16,493~~ Lb.
14"x14" Conc. Piles	3460 Lin. Ft.		Lin. Ft.
Bearing Devices	7,200 Lb.		Lin. Ft.

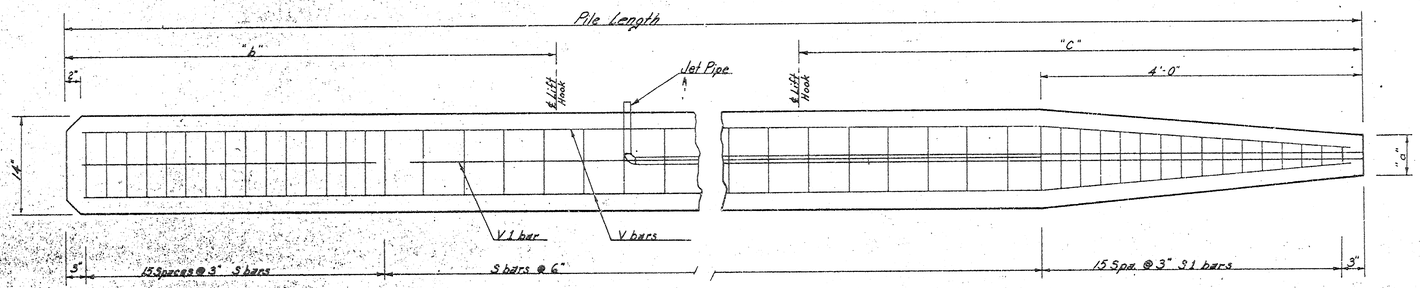
*Cut 4 bars @ 1'-9"
4 " " 2'-1"
4 " " 2'-5"

REINFORCING DETAIL
BRIDGE NO. 618-22-2775

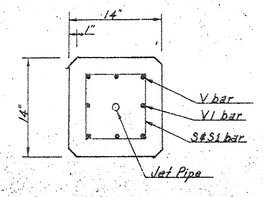
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
11-18-53	1/4" = 1'0"	M.E.S.			9
	DATE				
	PLANFILE		TOTAL SHEETS		

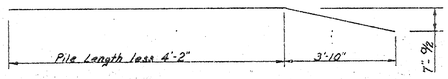
Pub. Rd. Div. No.	State	Project No.	Fiscal Year	Sheet No.	Total Sheets
5	Kansas		1951		



ELEVATION.



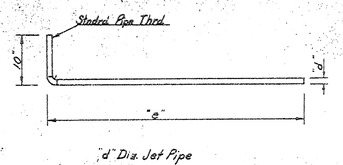
END VIEW



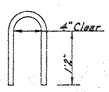
V bar

40 req'd.

Pile Length	20'6"			24'-6"			28'6"			32'-6"			36'6"			40'-6"		
Bar	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.
V	#7	20'6"	4	#7	24'-2"	4	#7	28'-2"	4	#7	32'-2"	4	#6	36'-2"	4	#6	40'-2"	4
V1													#6	32'-6"	4	#6	36'-0"	4
S	#2	3'-4"	41	#2	3'-4"	49	#2	3'-4	57	#2	3'-4"	65	#2	3'-4"	73	#2	3'-4"	81
S1	#2	Var.	15	#2	Var.	15	#2	Var	15	#2	Var.	15	#2	Var.	15	#2	Var.	15
Lift Hook	#8	3'-0"	2	#8	3'-0"	2	#8	3'-0"	2	#8	3'-0"	2	#8	3'-0"	2	#8	3'-0"	2
Jet Pipe																		
"a"	6"			6"			6"			6"			6"			6"		
"b"	6'-0"			7'-2"			8'-4"			9'-6"			10'-8"			11'-10"		
"c"	8'-0"			9'-2"			10'-4"			11'-6"			12'-8"			13'-10"		
"d"													1½"					
"e"													29'-0"					
"x" "y" "z"	3/4 to 8 3/4 by 1/4			3/4 to 8 3/4 by 1/4			3/4 to 8 3/4 by 1/4			3/4 to 8 3/4 by 1/4			3/4 to 8 3/4 by 1/4			3/4 to 8 3/4 by 1/4		
Concrete	.94 Cu. Yds.			1.14 Cu. Yds.			1.34 Cu. Yds.			1.55 Cu. Yds.			1.75 Cu. Yds.			1.95 Cu. Yds.		
Rebar	209 Lbs.			247 Lbs.			284 Lbs.			321 Lbs.			472 Lbs.			524 Lbs.		



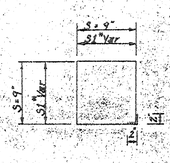
"d" Dia. Jet Pipe



#8 Lift Hook

40 req'd

Pile Length	37'0"			50'-0"														
Bar	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.
V	#6	36'8"	4	#7	49'8"	4												
V1	#6	33'0"	4	#8	45'0"	4												
S	#2	3'4"	74	#2	3'-4"	100												
S1	#2	Var.	15	#2	Var.	15												
Lift Hook	#8	3'0"	2	#8	3'-0"	2												
Jet Pipe						1												
"a"	10"			6"														
"b"	10' 10"			14'-0"														
"c"	11' 11"			16'-0"														
"d"	1½"			1½"														
"e"	35'-6"			41'-0"														
"x" "y" "z"	5/8 to 8 5/8" by 1/4			5/8 to 8 5/8 by 1/4														
Concrete	1.82 Cu. Yds.			2.43 Cu. Yds.														
Rebar	482 Lbs.			956 lb.														



"S1 - 15 bars; increase from "x" to "y" by "z" increments

S & S1 bar

General Notes

Design: According to AASHO Specifications. 1949 Edition. Fs=12,000 psi. fc=1,000 psi.
Concrete: Use class A throughout if Piling are to be encased or otherwise protected. Use class A (AE) if piling are to form open bent, unless otherwise noted.
Reinforcing: All dimensions are to center of bars unless otherwise noted.
Jet Pipe: Standard pipe of Dimensions shown unless otherwise approved by Engineer.
Curing: Piling shall be left in forms or otherwise properly cured for at least 7 days. Piling shall not be moved until concrete has attained its design Strength or a minimum of 4 weeks after casting.
Payment: The cost of material and labor used for casting and driving of piles shall be included in the unit bid for concrete piles.
Handling: Piling shall only be lifted by handling hooks or by rigging within 18" of hook location.

Note: Concrete at end of piles shall be removed to expose reinforcing as stated elsewhere on plans. The length for payment of piles shall be as stated in sect 59-40 of the Standard specifications of Kansas, 1951 Edition

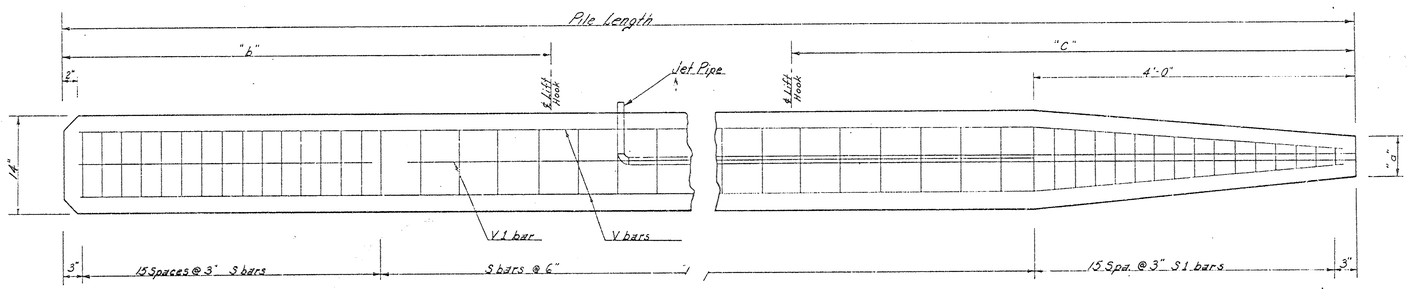
TO TU 52 11/27/52

14"x 14"x Re. Conc. Piling
BRIDGE NO. 618-22-2775

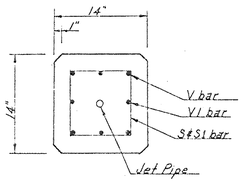
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
		Schwab	Houseman		10
	DATE	12-51	1-52		
	PLANFILE		TOTAL SHEETS		

Pub. Rd. Div. No.	State	Project No.	Fiscal Year	Sheet No.	Total Sheets
5	Kansas		1951		



ELEVATION



END VIEW



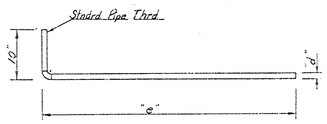
V bar

10 req'd. ~~40~~ req'd. | 10 req'd. ~~40~~ req'd. | 10 req'd. | 40 req'd.

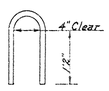
Pile Length	20'6"		24'6"		28'6"		32'6"		36'6"		40'6"	
Bar	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.
V	#7	20'6"	4	#7	24'2"	4	#7	28'2"	4	#7	32'2"	4	#6	36'2"	4	#6	40'2"	4			
V1													#6	32'6"	4	#6	36'0"	4			
S	#2	3'4"	41	#2	3'4"	49	#2	3'4"	57	#2	3'4"	65	#2	3'4"	73	#2	3'4"	81			
S1	#2	*Var.	15	#2	*Var.	15	#2	*Var.	15	#2	*Var.	15	#2	*Var.	15	#2	*Var.	15			
Lift Hook	#8	3'0"	2	#8	3'0"	2	#8	3'0"	2	#8	3'0"	2	#8	3'0"	2	#8	3'0"	2			
Jet Pipe			1			1			1			1			1			1			
"a"		6"			6"			6"			6"			6"			6"				
"b"		6'0"			7'2"			8'-4"			9'-6"			10'-8"			11'-10"			
"c"		8'-0"			9'-2"			10'-4"			11'-6"			12'-8"			13'-10"			
"d"														1¼							
"e"														29'0"							
"x" "y" "z"	3/4 to 0	8	by 2	3/4 to 0	8	by 2	3/4 to 0	8	by 2	3/4 to 0	8	by 2	3/4 to 0	8	by 2	3/4 to 0	8	by 2			
Concrete	.94 Cu. Yds.			1.14 Cu. Yds.			1.34 Cu. Yds.			1.55 Cu. Yds.			1.75 Cu. Yds.			1.95 Cu. Yds.				
Rebar	209 Lbs.			247 Lbs.			284 Lbs.			321 Lbs.			472 Lbs.			524 Lbs.				

40 req'd

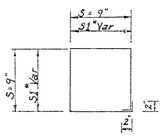
Pile Length	37'0"		50'-0"																		
Bar	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.	Size	Length	No.
V	#6	36'8"	4	#7	49'8"	4															
V1	#6	33'0"	4	#8	45'10"	4															
S	#2	3'4"	74	#2	3'4"	100															
S1	#2	*Var.	15	#2	*Var.	15															
Lift Hook	#8	3'0"	2	#8	3'0"	2															
Jet Pipe			1			1															
"a"		10"			6"																
"b"		10'10"			14'-0"																
"c"		11'-11"			16'-0"																
"d"					1¼																
"e"					41'-0"																
"x" "y" "z"	3/4 to 0	8	by 2	3/4 to 0	8	by 2															
Concrete	1.82 Cu. Yds.			2.43 Cu. Yds.																	
Rebar	482 Lbs.			956 Lbs.																	



"d" Dia. Jet Pipe



#8 Lift Hook



S & S1 bar

*S1 - 15 bars, increase from "x" to "y" by "z" increments

General Notes

Design: According to AASHO Specifications, 1949 Edition. Fs: 12,000 psi fc: 1,000 psi.
Concrete: Use class A throughout if Piling are to be encased or otherwise protected. Use class A (AE) if piling are to form open bent, unless otherwise noted.
Reinforcing: All dimensions are to center of bars unless otherwise noted.
Jet Pipe: Standard pipe of Dimensions shown unless otherwise approved by Engineer.
Curing: Piling shall be left in forms or otherwise properly cured for at least 7 days. Piling shall not be moved until concrete has attained its design Strength or a minimum of 4 weeks after casting.
Payment: The cost of material and labor used for casting and driving of piles shall be included in the unit bid for concrete piles.
Handling: Piling shall only be lifted by handling hooks or by rigging within 18" of hook location.

Note: Concrete at end of piles shall be removed to expose reinforcing as stated elsewhere on plans. The length for payment of piles shall be as stated in Sect. 58.40 of the Standard Specifications of Kansas, 1951 Edition

TO T.L.B. 12/3/52

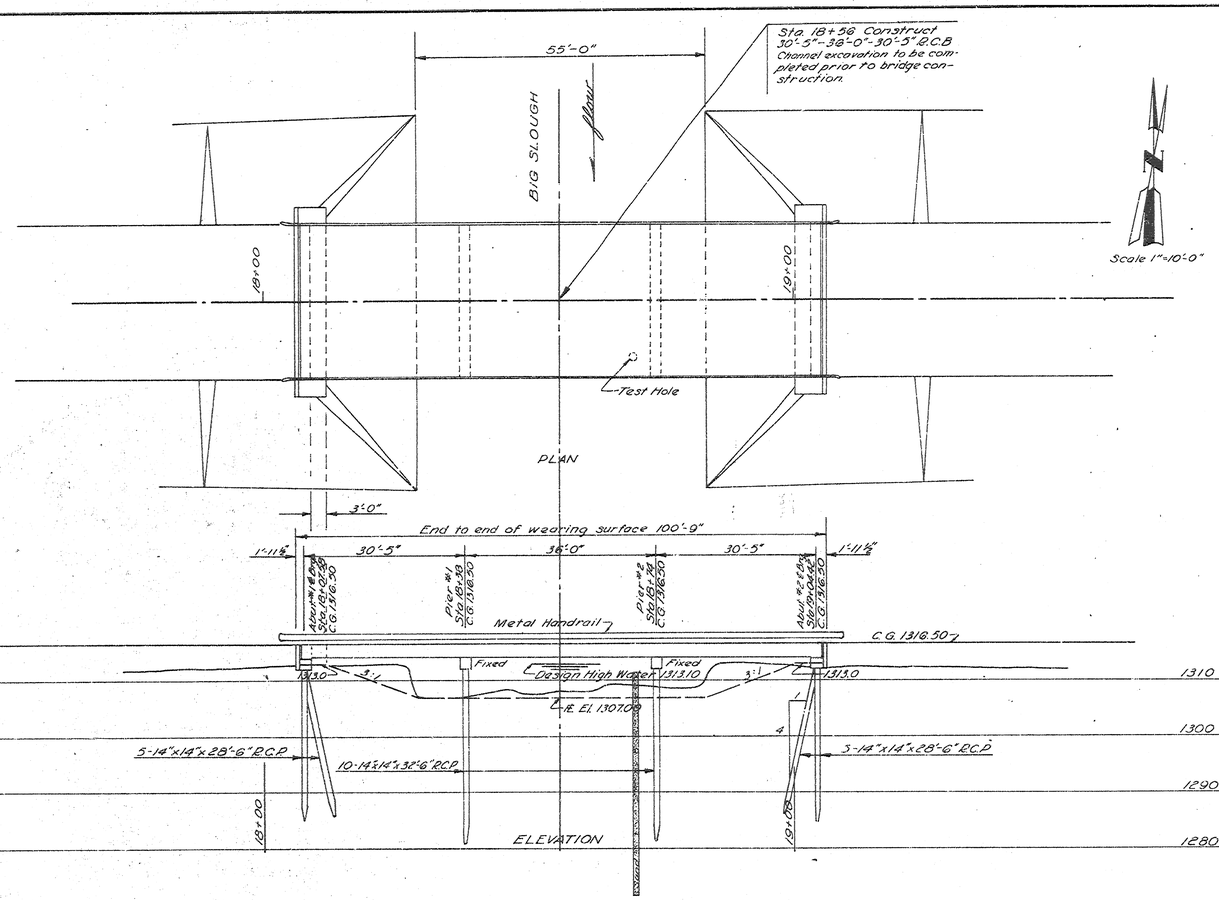
14" x 14" x Re. Conc. Piling

BRIDGE NO. 618-22-2775 & 618-22-1856

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
		Schwab	Hausman		10
	DATE	12-51	1-52		
	PLANFILE		TOTAL SHEETS		

C.18-22-1.15 FAP 12-



GENERAL NOTES

Design: According to A.A.S.H.O. Specifications, Edition of 1949. H20-44 Loading; fs=20,000 psi; fc=1,000 psi.
Soundings: Taken by Sedgwick County with ¾" jet.
Piling: Concrete Piling to be driven to a computed resistance of 22 tons per pile.
Concrete: Use Class A(AE) concrete throughout. Bevel all exposed edges with a ¾" triangular moulding.
Forms: Contractor shall use preformed metal forms owned by SEDGWICK COUNTY.
Embankment: To be constructed by SEDGWICK COUNTY or others. No earthwork is to be considered a part of this project except at pier and abutment locations-the cost of which is to be included in the unit price bid for piling.

GENERAL CONSTRUCTION NOTES

Timber cribbing at the centerline of each span on this project will be required.
Two sets of short forms and four sets of long forms are available for these projects. Since the concrete in a full span ahead of any forms to be removed must have attained its design strength before removal of these forms it is suggested that high-early strength concrete be used.
Forms for this project shall be picked up by the contractor at the SEDGWICK COUNTY YARDS, 815 Stillwell, Wichita, and returned to this location unless otherwise instructed by the Engineer. (See "Special Provisions" in Specifications and Proposals Booklet.)
The wearing surface and all other exposed surfaces of wings, caps, abutments, and piling shall be cured and protected in accordance with Sec. 704.5 of the Standard Specifications for State Road & Bridge Construction, Edition of 1951. As an alternate, a paraffin base curing compound applied immediately after finishing of concrete, and covered with dry burlap, or any suitable material satisfactory to the Engineer in charge, for a minimum of 72 hours may be used.

TO TU 130 14/4/53

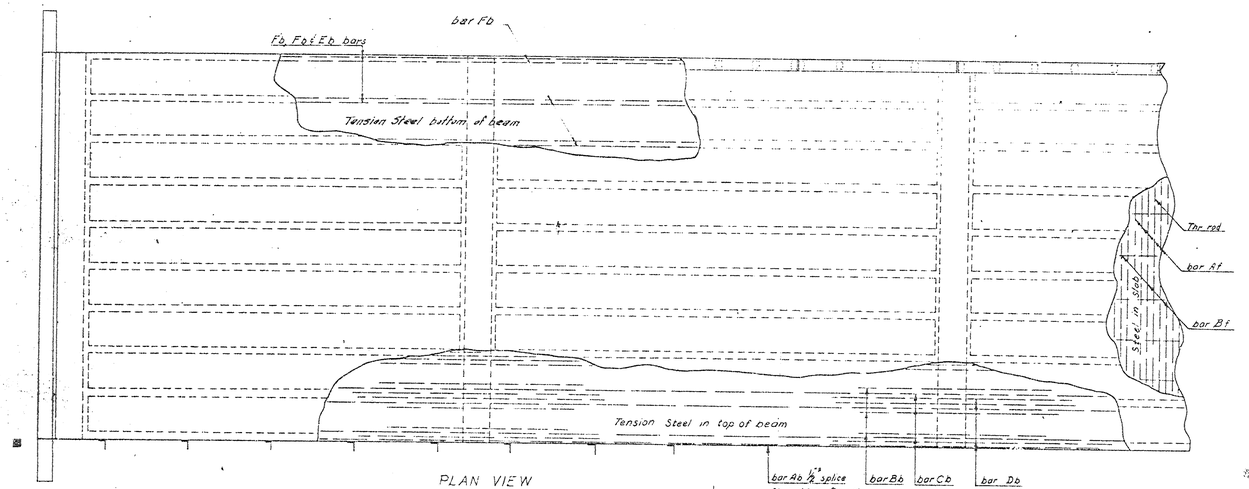
D.A. = 30 square miles C. 1.025
Waterway provided 414 sq. ft.

CONSTRUCTION LAYOUT
BRIDGE NO. 618-22-1856

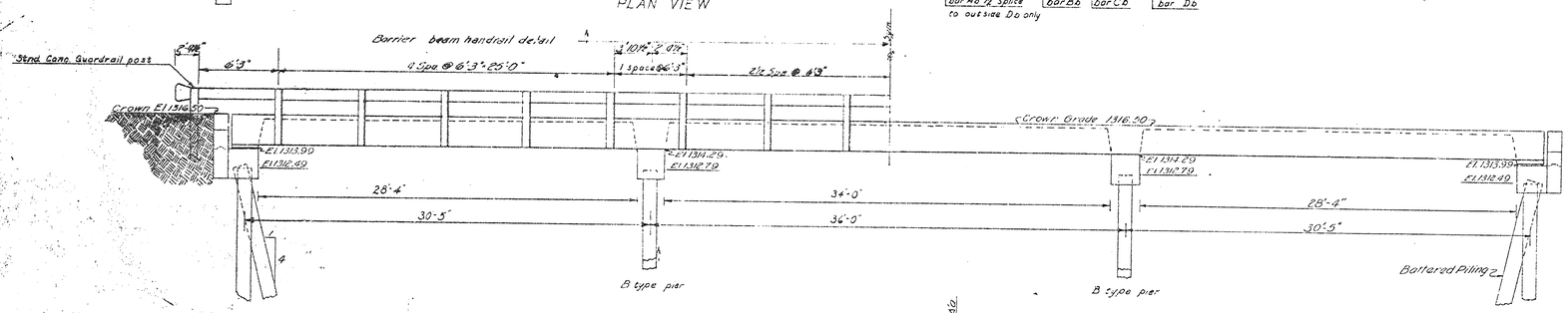
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

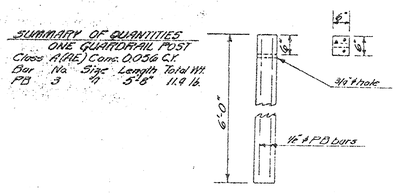
REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=10'	W.J.F.	C.J.F.		11
	DATE	11-53	11-53		
	PLANFILE		TOTAL SHEETS		

618-22-1856 Sh. # 11 of 14



PLAN VIEW



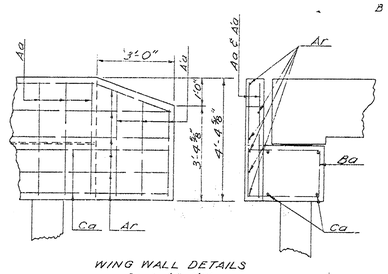


STANDARD G'DAL. POST DETAIL
4 Required

SUMMARY OF QUANTITIES
ONE GUARDRAIL POST

Class A(RE) Conc. 0.03 C.Y.

Bar	No.	Size	Length	Total Wt.
PB	3	¾"	5'-8"	11.9 lb.



WING WALL DETAILS
Scale ½"=1'-0"

GENERAL NOTES

Design: Designed for H-20-44 loading AASHO specifications f_s = 20,000 psi, f_c = 1,000 psi.
Soundings: To be taken by Sedgwick County.
Piling: Concrete piling to be driven to a Calculated resistance of 28 ton.
Old Struct: To be removed by Sedgwick County.
Concrete: Class A(AE) concrete used throughout Bevel all exposed edges with a ¾" "A" molding unless otherwise noted. Forms shall be preformed steel "pans" used as directed by the Engineer in charge.
Guardrail: To be of standard barrier beam or concrete as shown on Construction Layout. Concrete rail to be constructed after the removal of deck forms

To Tulsa 12/4/50

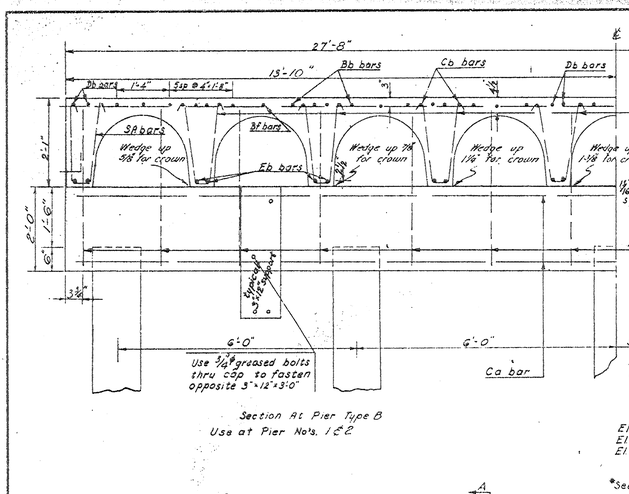
RE. CONC. MODIFIED T-BEAM BRIDGE

BRIDGE NO. 618-22-1856

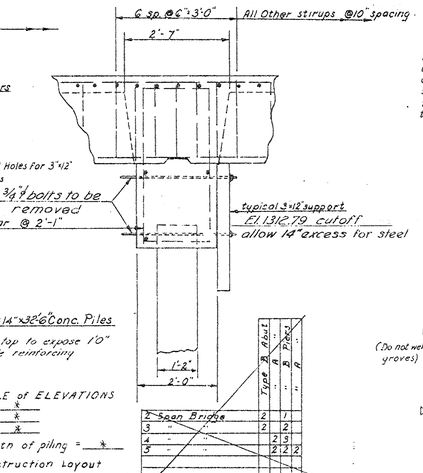
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1/4" = 1'	R.R.J.	C.D.H.		12
	DATE	9-50	9-18-50		
	PLANTILE		TOTAL SHEETS		

C-17 23-1-56 Sh. #12 of 14



Section At Pier Type B
Use at Pier No's. 1 & 2



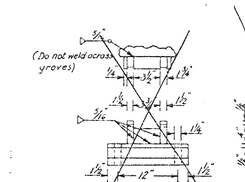


TABLE of PIERS & ABUTMENTS

TABLE of ELEVATIONS
El A = *
El B = *
El C = *
Length of piling = *
*See Construction Layout

GENERAL NOTES

Bevel all exposed edges with 3/4" molding

PAINT:- All parts of the Metal Handrail shall receive one shop coat of red lead paint. All exposed surfaces of Structural Steel Bearing Devices and Metal Handrail shall receive one coat of tinted aluminum paint followed by one coat of aluminum paint after erection.

Reinforcing Steel

Note: Quantities shown on this sheet are for computation only. Actual structure quantities are shown on following sheet.

ROCKER DETAIL
None Required

27'-7" Rdwy ABUTMENT QUANTITIES

A TYPE				B TYPE			
backwall beares.				backwall boards			
Five bearing piling				Five bearing piling			
Eight sheet piling				Eight sheet piling			
83 cu yd concrete				78 cu yd concrete			
599 lbs reinforcing				579 lbs reinforcing steel			
Five bearing devices				Five bearing plates			
One bent plate				One bent plate			
Bar	No	Length	Size	Bar	No	Length	Size
Ao	41	4'-8"	1/2"	A'o	41	4'-0"	1/2"
Ar	5	27'-0"	"	Ar	5	27'-0"	"
Ba	14	9'-8"	"	Ba	14	9'-8"	"
Ca	4	27'-0"	1"	Ca	4	27'-0"	1"

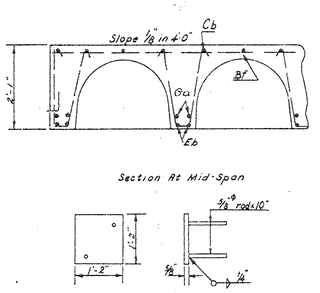
27'-7" Rdwy PIER QUANTITIES

A TYPE				B TYPE			
Five bearing piling				Five bearing piling			
41 cu yd concrete				41 cu yd concrete			
3601bs reinforcing steel				397 lbs reinforcing steel			
5 bearing devices							
One bent plate							
Bar	No	Length	Size	Bar	No	Length	Size
Ac	14	7'-8"	1/2"	A'c	14	11'-8"	1/2"
Ca	4	27'-0"	1"	Ca	4	27'-0"	1"

27'-7" Rdwy SPAN QUANITITIES*

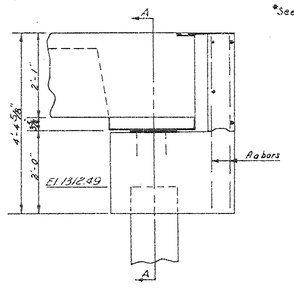
ONE END SPAN				ONE INT SPAN			
36.4 cu yd conc.				39.6 cu yd conc.			
8590 lbs. reinforcing steel				8865 lbs reinforcing steel			
10 hndrl posts (steel)				12 hndrl posts			
76" Barrier Beam				72" Barrier Beam			
1 expansion device							
2 Concrete Posts							
Bar	No	Length	Size	Bar	No	Length	Size
Sa	83	5'-2"	1/2"	Sa	92	5'-2"	1/2"
Sb	332	5'-2"	"	Sb	368	5'-2"	"
Fo	20	23'-6"	1'-0"	Da	20	23'-6"	1'-0"
				Eb	20	38'-4"	1'-9"
Eo	20	33'-4"	1'-9"	Ab	2	22'-0"	1/2"
Ao	2	25'-0"	1/2"	Ka	12	0'-11"	1/2"
Ar	59	27'-0"	"	Ar	66	27'-0"	1/2"
Br	9	23'-0"	"	Br	9	38'-0"	"
Ko	10	0'-11"	1/2"	Cb	18	38'-0"	1/2"
Cb	18	33'-0"	1/2"	Bb	18	14'-0"	
Bb	9	14'-0"	"	thnrd	6	28'-0"	1/2"
thnrd	5	28'-0"	1/2"	Ga	20	18'-0"	1/2"

* Due to overlapping & duplication quantities shown are not necessarily actual bar numbers, but are factors to be multiplied by the number of each span involved to give total structure quantities
† multiply by number of piers.

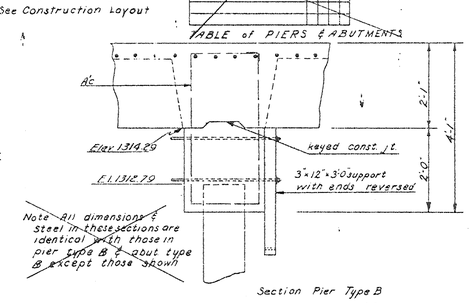


Section At Mid-Span

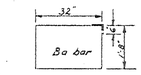
Bearing Rt Detail
Place on 6' ctrs. over pile
Use on B type Abut.
10 Required

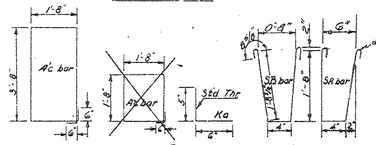


Section At Abut. Type B
Use at Abut. No's. 1 & 2

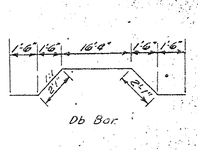


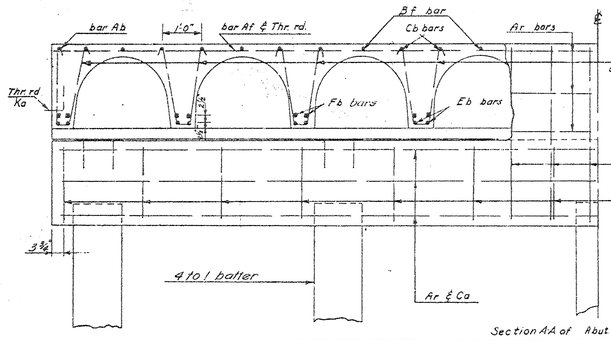
Section Pier Type B
Use at Pier No's. 1 & 2



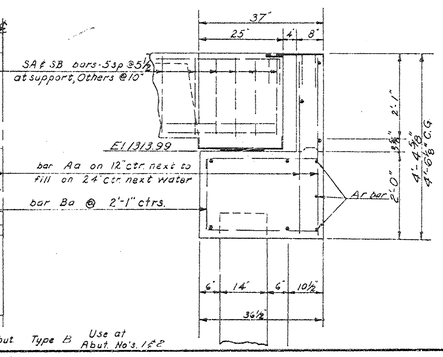


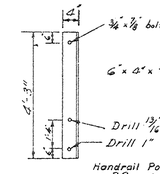
Bending Diagrams



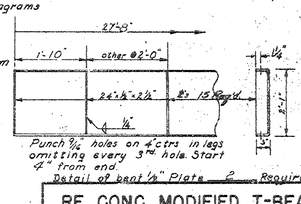


Section AA of Abut Type B Use at Abut. No's. 1 & 2

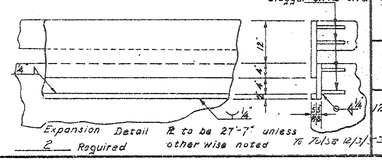




Handrail Post Detail
32 Required



Punch 9/16 holes on 4" ctrs in legs omitting every 3rd hole. Start 4" from end.
Detail of bent 1/2" Plate 2 Required



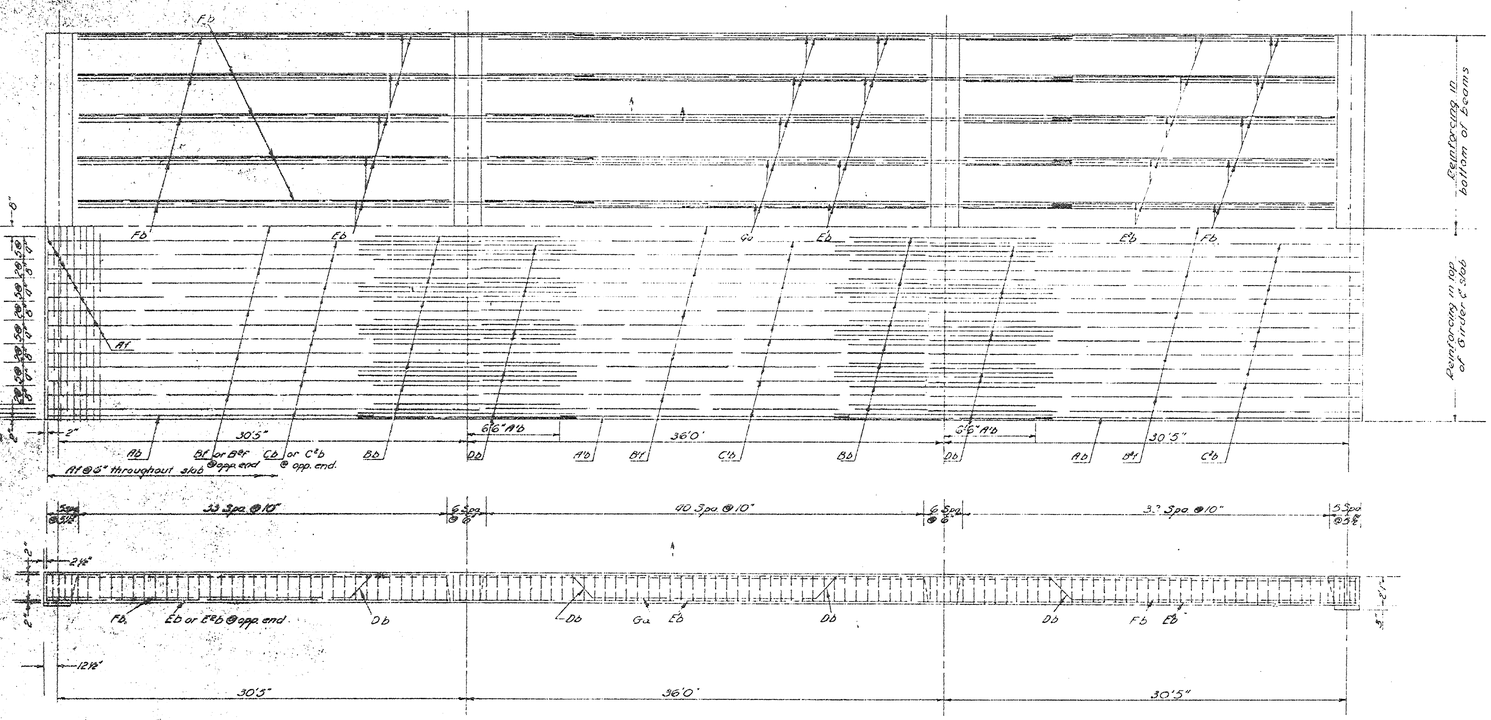
Rt to be 27'-7" unless other wise noted

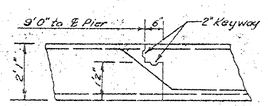
RE CONC. MODIFIED T-BEAM BRIDGE
AUXILIARY DETAILS
BRIDGE NO. 618-22-1856

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

REVISED	SCALE	DESIGNED	TRACKED	CHECKED	SHEET NO.
12-51 M-S		R. R. J.	C. D. H.		13
	DATE	9-50	9-23-50		
	PLANFILE		TOTAL SHEETS		

618-22-1856 Sh. # 13 of 14





TYPICAL CONSTRUCTION JOINT

SUMMARY OF QUANTITIES

30'5"- 1 @ 36'-30'5" Continuous Spans; 27'-2" Roadway; Metal Handrail

Bar	Aa	Ag	Ai	Ba	Cu	Ac	Af	Ab	Ag	Ai	Bb	Bf	By	Cb	Cb	Db	Eb	Fb	Fb	Ga	Sa	Sb	Ka	Am	Am	Ab	Ac	Ag	Ab	Ccb
No.	84	24	12	28	16		28	4	2	198	36	9	9	18	18	40	20	20	40	20	250	102	32	16	16	16			20	9	18
Size	#9	#7	#9	#9	#8	#8	#9	#8	#9	#9	#7	#9	#9	#7	#7	#7	#8	#8	#9	#7	#9	#9	#7	#9	#9	#9	#9	#9	#9	#9	#7
Length	40'	8	33'4"	33'4"	27'0"	3'0"	11'3"	25'10"	25'10"	27'0"	11'6"	28'0"	28'0"	11'6"	38'6"	11'6"	38'6"	11'6"	38'6"	11'6"	44'6"	32'5"	32'5"	6'0"	28'0"	44'6"	30'0"	6'0"	6'0"	2'0"	11'6"	11'6"	2'0"

Concrete Class A	1366 Cu. Yd.	Metal Handrail	212.5 Lin. Ft.
Reinforcing Steel	27,590 Lb.	Structural Steel	6,460 Lb.
10"x10" Conc. Piles	610 Lin. Ft.		Lin. Ft.
Bearing Devices	370 Lb.		Lin. Ft.

*Cut B @ 3'-0"
B @ 3'-4"
B @ 3'-8"

To Tulsa 12/1/52

B

SEDG

REVISED