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

BRIDGE ONLY

INDEX OF SHEETS

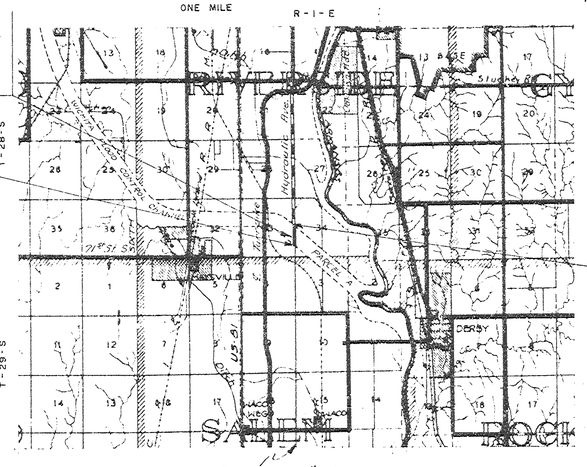
SHEET NO 1	TITLE SHEET
Sheet #2	Topographic Map
Sheet # 3	Plan Profile
Sheet #4	Construction Layout
Sheet #5	Pier & Abutment Details
Sheet #6	Steel Details
Sheet #7	Deck Details
Sheet #8	Auxiliary Details
Sheet #9	Pile Details
Sheet #10	Bar Supports & Spacers

SEDGWICK COUNTY HIGHWAY DEPARTMENT



Scale 1" = 1 Mile

WICHITA CITY LIMITS
ONE MILE



County Road #823

Sta 181+69.84 Construct 32'-2 @ 45'-32' Continuous Steel Beam Spans on Pile Bent Piers. Open Type Abutments - 28' Roadway Aluminum Handrail

Sta. 13+18.81 Begin Project No. 823-X-1870

Sta. 24+20.81 End Project No. 823-X-1870

NET LENGTH OF PROJECT	1102.33	FT.	0.209 MILES
NET LENGTH OF BRIDGES	1102.33	FT.	0.209 MILES
NET LENGTH OF ROAD	None	FT	None MILES
EXCEPTIONS	"	FT	" MILES
ADDITIONS	"	FT.	" MILES
GROSS LENGTH OF PROJECT	1102.33	FT.	0.209 MILES

CONVENTIONAL SIGNS

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

APPROVED BY CHAIRMAN
Board of County Commissioners
DATE Aug. 3-1958

PLANS PREPARED BY
SEDGWICK COUNTY ENGR'G. DEPT.
WICHITA, KANSAS
DATE 7/58

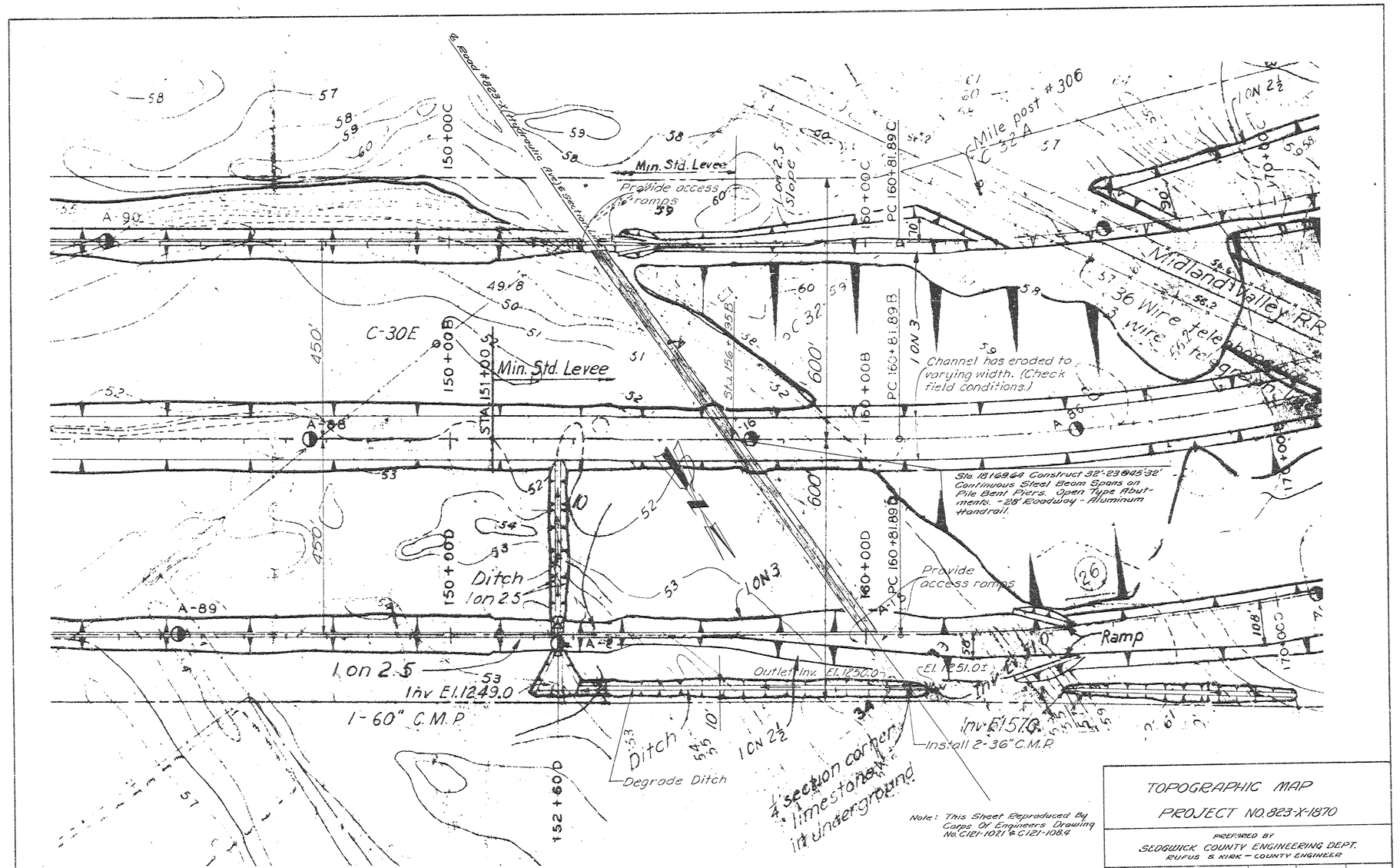
APPROVED
CORPS OF ENGINEERS
DATE Aug. 27-1958

FILED IN COUNTY CLERK'S OFFICE
Otis Schmutz
COUNTY CLERK
DATE Sept 3rd 1958

APPROVED
County Engineer
DATE Sept. 2-1958

APPROVED
KANSAS STATE HIGHWAY COMMISSION
DATE Aug. 13-1958

SENT Tulsa C. of E. SEP 30 1958 Received County Hwy. SEP 5 1958



TOPOGRAPHIC MAP

PROJECT NO. 823-X-1870

PREPARED BY

SEDGWICK COUNTY ENGINEERING DEPT.

RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	1"=100'	C.J.F.	L.W.H.		2 of 10
	DATE		7/58		
	PLAN/FILE		TOTAL SHEETS		

SENT Tulsa C. of E. SEP 30 1958 Received County Hwy. SEP 5 1958

THIS SHEET FOR INFORMATION ONLY

N

Sta 9+00 Install 24"x64' C.R.P.

Sta 11+60 Install S.R.P. Area & Length to be determined by field engr.

Provide access ramps.

℄ Levee "C"

Sec. 33 - T28S - R1E (Riverside)

6" sand and gravel backing - 12" heavy rip-rap to be furnished & installed by Sedg. Co. (50' upstream & downstream from ℄ Bridge.)

37°09' Rt. Skew

Plow

Sta 25+95 Install 2 - 36"x164' C.M.P. on 37°03' Rt. Skew

6" gravel backing & 1'-6" heavy rip rap to be furnished & installed by Sedg. Co. (50' upstream & downstream from ℄ of Bridge.)

12'x12' Drain Basin 18"x56' C.M.P.

Provide access ramps

℄ Levee "D"

Pasture

Note: Obtain borrow from Ponding Area to maintain approximately present storage. Ponding Area Max. El. = 1254.7

Remove Sta 29+34 2'x33' C.T.C.

Overhead power line

70' to ℄

Power Line

50' to ℄

Rod "Gage"

Test Hole #1

Test Hole #2

Test Hole #3

Test Hole #4

Test Hole #5

Proposed R/W 50' to Sec. Line

R/W 30' Sec. Line (Existing)

℄ Hydraulic (Sec. Line)

R/W 30' Sec. Line (Existing)

Proposed R/W 50' to Sec. Line

50' to ℄

65' to ℄

60' to ℄

71st St. So.

0 5 10 15 20 25 30

12'x12' Drain Basin 18"x56' C.M.P.

Channel Widths Varies

110.2'-0" (End to end)

Sta 26+25 2'x2'x26' W.B.C. Remove

Sta 26+30.5 E ¼ Cor. Sec. 33 Stone 75' E. to Iron Pin 120.5' E. to Iron Pin 100.0' S.E. " " " 200.0' S.E. " " " 100.0' W. " " "

Sta 29+75 Fence

Sta 0+00 S.E. Cor. Sec. 33 - Riverside Stone 50.0' N.W. to Conc. Witness 50.0' S.W. " " " 50.0' S.E. " " " 50.0' N.E. " " "

SCALES

Plan Long. 1"=100' Lat. 1"=100'

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

0 50' 100' 200' 300' 400'

Sec. 34 - T28S - R1E (Riverside)

℄ Channel "B"

F.W.V.C. F.C. R/w Limit

6' Flat Bottom Ditch to be constructed by Sedgwick Co.

Degrade drainage ditch

Corn Stubble

B.M. #1 - U.S.G.S. - Spike and washer in root of tree 46' S.W. of Sec. Cor. Sec. 33 - Riverside - Elev. 1258.64

B.M. #2 - R.R. spike in F.C. fc. cor. post E. of Rd. #823 in Sa. F.C. Fe. - Elev. 1259.29

B.M. #3 - 60d spike in N. pole of H - Frame 125' N.W. of ¼ Cor. E ½ Sec. 33 - Riverside - El. 1253.01

GENERAL NOTES

Encroachments such as fences, buildings, telephone, telegraph and power lines shall be moved by the owners.

All water lines less than three feet below the surface of the proposed grade, or lines not constructed of lead, copper, cast iron or wrought iron, or lines not of good condition shall be inspected, replaced or moved beyond the limits of the roadbed by the owners.

In the interest of public safety, all gas, gasoline and oil 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 of proposed improvement.

All additional right-of-way shall be furnished by Sedgwick County except that which shall be furnished by the Wichita Valley Center Flood Control Project.

Grading, culverts, paving and rip-rap to be furnished by Sedgwick County and is not to be considered a part of this project.

369.66' V.C. Unsymmetrical

400' V.C.

400' V.C.

800' V.C.

400' V.C.

500' V.C. Unsymmetrical

P.V.C. Sta 0+00.00 El. 1263.15

P.V.I. Sta 2+69.60 El. 1258.60

P.V.C. Sta 1+69.20 El. 1263.15

P.V.I. Sta 4+69.60 El. 1258.15

P.V.C. Sta 3+69.60 El. 1269.65

P.V.I. Sta 7+69.60 El. 1272.65

P.V.C. Sta 6+69.60 El. 1269.65

P.V.I. Sta 9+69.60 El. 1268.15

P.V.C. Sta 8+69.60 El. 1268.15

P.V.I. Sta 11+69.60 El. 1263.15

P.V.C. Sta 10+69.60 El. 1263.15

P.V.I. Sta 13+69.60 El. 1258.15

P.V.C. Sta 12+69.60 El. 1258.15

P.V.I. Sta 15+69.60 El. 1253.15

P.V.C. Sta 14+69.60 El. 1253.15

P.V.I. Sta 17+69.60 El. 1248.15

P.V.C. Sta 16+69.60 El. 1248.15

P.V.I. Sta 19+69.60 El. 1243.15

P.V.C. Sta 18+69.60 El. 1243.15

P.V.I. Sta 21+69.60 El. 1238.15

P.V.C. Sta 20+69.60 El. 1238.15

P.V.I. Sta 23+69.60 El. 1233.15

P.V.C. Sta 22+69.60 El. 1233.15

P.V.I. Sta 25+69.60 El. 1228.15

P.V.C. Sta 24+69.60 El. 1228.15

P.V.I. Sta 27+69.60 El. 1223.15

P.V.C. Sta 26+69.60 El. 1223.15

P.V.I. Sta 29+76.27 El. 1218.01

P.V.C. Sta 28+81.50 El. 1218.64

P.V.I. Sta 32+43.98 El. 1253.01 (Back to ℄ Levee "D")

+0.75%

-0.73%

+2.50%

-2.50%

0.09%

-0.10%

D.H.W. 1262.48

D.H.W. 1262.45

D.H.W. 1262.47

Levee "C"

Levee "D"

Sta 18+70.14 ℄ Channel "B"

Sand to El. 1217.58 Clay from 1214.58 to 1207.98

Sand to El. 1221.71 Clay from 1221.71 to 1211.71

℄ 1245.16

Sand to El. 1222.54 Clay from 1222.54 to 1213.54

2-36"x164' C.M.P. See Sh. #2 for ℄.

See Former Grade Plans

See Construction Layout Sheet No. 4

1275 1270 1265 1260 1255 1250 1245

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 32

PLAT 1 PLAN-PROFILE © P. & W. K. STAMPING THE PRESSWICK MFG. CO., CHICAGO

SENT Tulsa C. of E. SEP 30 1958

823-X Received County Hwy. SEP 30 1958

Sheet No. 3 of 10

PLAN SURVEYED DRAWN NOTE BOOK ALIGNMENT CHECKED No. BY OF M.M. OTOOLE DATE

PROFILE SURVEYED DRAWN NOTE BOOK GRADES CHECKED No. S.M. OTOOLE - M.M. OTOOLE DATE

Sec. 33-T28S-R1E

Note:
All disturbed levee areas not covered by Rip-Rap will be mulched, fertilized and seeded by Sedgwick County.

℄ Bridge

37°23' Rt. Skew

Stn 18+69.64 Construct 32'-23@45'-32' Continuous Steel Beam Spans on Pile Bent Piers. Open Type Abutments 28' Roadway. Aluminum Handrail.

℄ Channel 'B'

LEFTER FLOOD CONTROL

Rock Toe 'A'

6"Gravel Backing & 1'-6" Heavy Rip-Rap to be furnished & installed by Sedgwick County. (50' Upstream & Downstream from ℄ of Bridge.)

6"Sand & Gravel Backing 12"Heavy Rip-Rap to be furnished and installed by Sedgwick County. (50' Upstream and Downstream from ℄ of Bridge.)

Test Hole #2

℄ Rd. #823-X (Hydraulic Axis & Sec Line)

Rock Toe 'C'

Rock Toe 'B'

Rock Toe 'A'

Rock Toe 'A'

Rock Toe 'A'

WICHITA VALLEY

Flow

℄ Levee 'C'

℄ Levee 'D'

PLAN
Scale 1"=40'

Sec 34-T28S-R1E

+2.50% +0.75% 400' VC

+0.75% -0.75% 900' VC

-0.75% -2.50% 400' VC

End to end wearing surface 1102'-9"

32' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 45' 32'

1'-8"

Sta 18+69.64 El 1262.48

Sta 19+14.64 El 1262.48

Sta 23+82.10 El 1262.48

1280 1270 Berm 1260 1250 1240 1230

El 1263.50

DHW 1262.48

DHW 1262.45

DHW 1262.41

Rocker Fixed Rocker Rocker Rocker Fixed Rocker Rocker Fixed Rocker

5-14"x14"@50' Concrete Piles per bent Except one pile for test pile 'F'

5-14"x14"@45' Concrete Piles Per Bent (Except two piles for test pile)

5-14"x14"@46' Conc. Piles Per Bent

Ft. 126.16

4-14"x14"@50' Conc. Piles

Top of Clay Grade

4-14"x14"@46' Conc. Piles Per Bent

Top of Clay Grade

ELEVATION
Scale 1"=40' Horiz.
Scale 1"=20' Vert.

GENERAL NOTES

Design: A.A.S.H.O. Specs. 11-20-44 Loading 32'-23@45'-32' Continuous Steel Beam Spans on 1 Pile Bent Piers. 18000 p.s.i. Structural Steel 20000 p.s.i. Reinforcing Steel (Int Gr) Open Type Abutments 28' Rdwy. 4000 p.s.i. Concrete = f'c' Aluminum Handrail

Soundings: Soundings to be taken by Sedgwick County (Soil Sampling & Foundation Drill with 3" Auger)

Piling: Piling to be driven to a computed min. resistance of 42 tons and clay penetration.

Test Pile: Two 14"x14" Concrete pile @ 50' and one 14"x14" Concrete pile @ 32' shall be driven in place by the Contractor in a location suitable to the Engineer prior to approval of the necessary Pile lengths for order.

Embankment: The excavation of Levee 'D' to grade and the approach embankments to crown grade shall be built by Sedgwick County prior to construction of the abutments.

Excavation: All excavation to neat line required for the abutments shall be subsidiary to other items in the contract

SUMMARY OF QUANTITIES

ITEM	QUANTITY
Concrete Class A(AE)	162.7 C.Y.
Concrete Class AAA(AE)	812.0 C.Y.
14x14 Conc. Test Pile	152 L.F.
14x14 Concrete Pile	6,048 L.F.
Reinforcing Steel	182,210 Lbs.
Structural Steel	400,625 Lbs.
Bearing Devices	12,220 Lbs.
Aluminum Highway Railing	2,193 L.F.

0'-1" 6'-0" Rock Toe 'B' 6"Gravel Backing Bot of Channel 3'-0" Rock Toe 'C'

SECTION X-X

Top of Berm or Levee Slope 3:1 0'-1" 1:1 6"Gravel Backing 3'-0" Rock Toe 'A'

BENCH MARKS

B.M.#2 R.R. Spike in E.C. Tie cor. post E. of Rd. #823 in S.F.C. Tie. El. 1259.29

B.M.#3 60d spike in N. pole of H-frame 126' N.W. of Tie cor. E.℄ Sec. 33 Riverside El. 1253.01

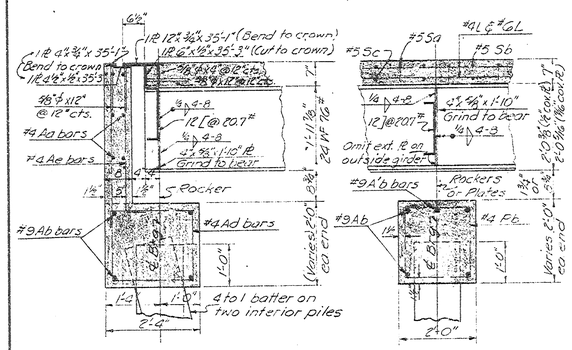
CONSTRUCTION LAYOUT
BRIDGE NO. 823-X-1870

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

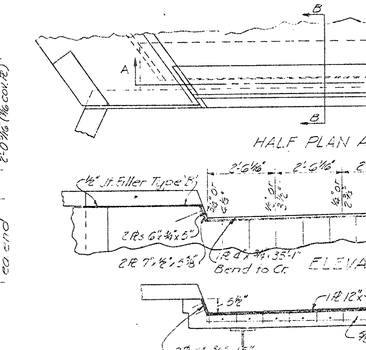
REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO
	Noted	C.J.F.	L.W.H.		4
	DATE	5/58	7/58		of 10
	PLANFILE		TOTAL SHEETS		

SENT Tulsa C. of E. SEP 30 1958

Received County Hwy. SEP 5 1958



ABUTMENT SECTION B-B
Scale 3/4"=1'-0"



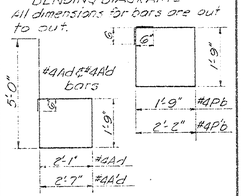
PIER SECTION
Scale 3/4"=1'-0"

Note: All dimensions indicating distances between concrete surface and reinforcing are clear distances.

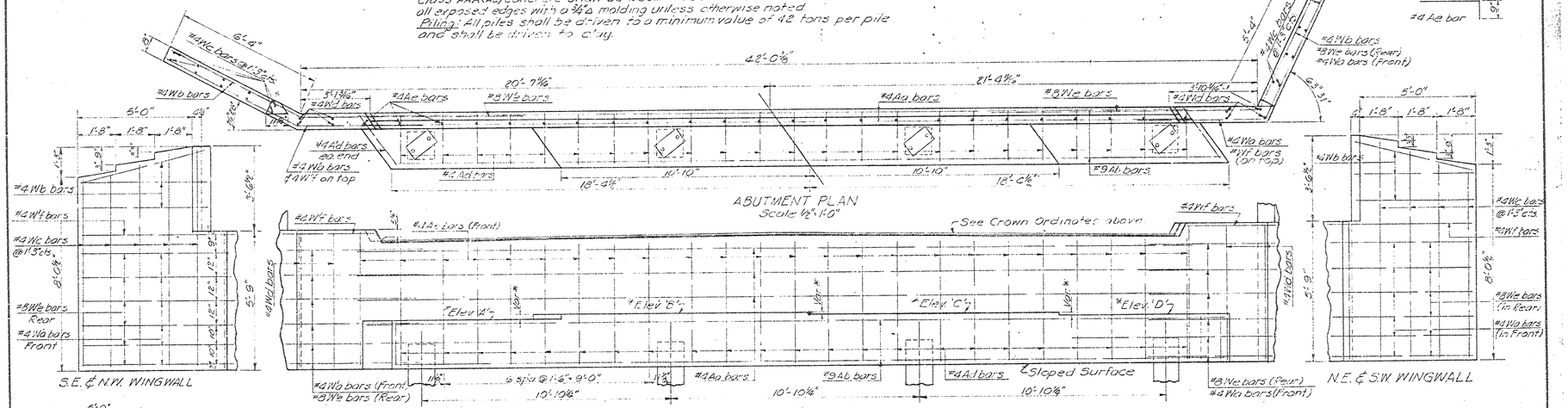
BAR	NO	SIZE	LENGTH	REMARKS
Aa	12	#4	36'-6"	Abut & Wall
Ab	104	#9	36'-6"	Abut & Piers
Ad	66	#4	11'-5"	Abut Stirrup
A'd	4	#4	12'-5"	" "
Ae	48	#4	4'-0"	" Swall
Pb	624	#4	8'-0"	Pier Stirrup
P'b	48	#4	6'-10"	" "
Wa	12	#4	10'-0"	Wingwall
Wa	12	#4	10'-0"	"
Wb	24	#4	4'-10"	"
Wc	36	#4	①	"
Wd	16	#4	5'-6"	"
We	12	#8	13'-0"	"
We	12	#3	13'-3"	"
WF	4	#4	5'-9"	"
W'F	4	#4	9'-0"	"
A'b	24	#9	23'-0"	Piers

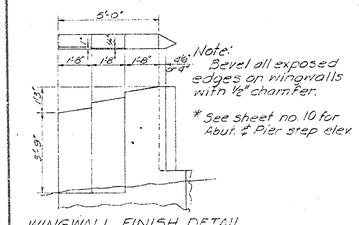
① Increase by 4" incr. from 7'-8" to 8'-8" (Beg. lg. req.) @ 4 @ 9'-0" req.

BENDING DIAGRAMS
All dimensions for bars are out to out.

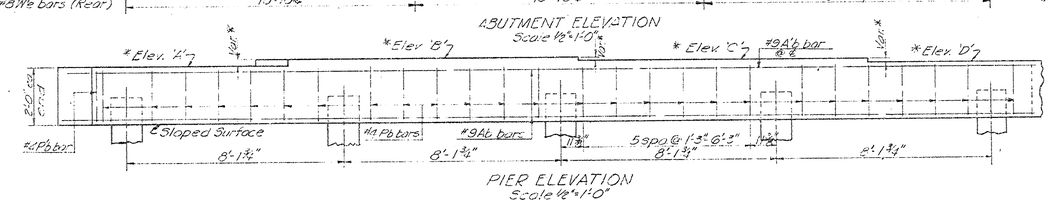


Design: H20-S4 AASHO Spec., Concrete f'c=3,000 psi in Abut. & Pier, and f'c=4,000 psi in the deck, Reinforcing Steel=20,000 psi. Int. Grade.
Concrete: Class A(AE) concrete shall be used in abutments and piers. Class AAA(AE) concrete shall be used thruout the deck and curb. Bevel all exposed edges with a 3/4" Δ molding unless otherwise noted.
Piling: All piles shall be driven to a minimum value of 42 tons per pile and shall be driven to clay.





WINGWALL FINISH DETAIL

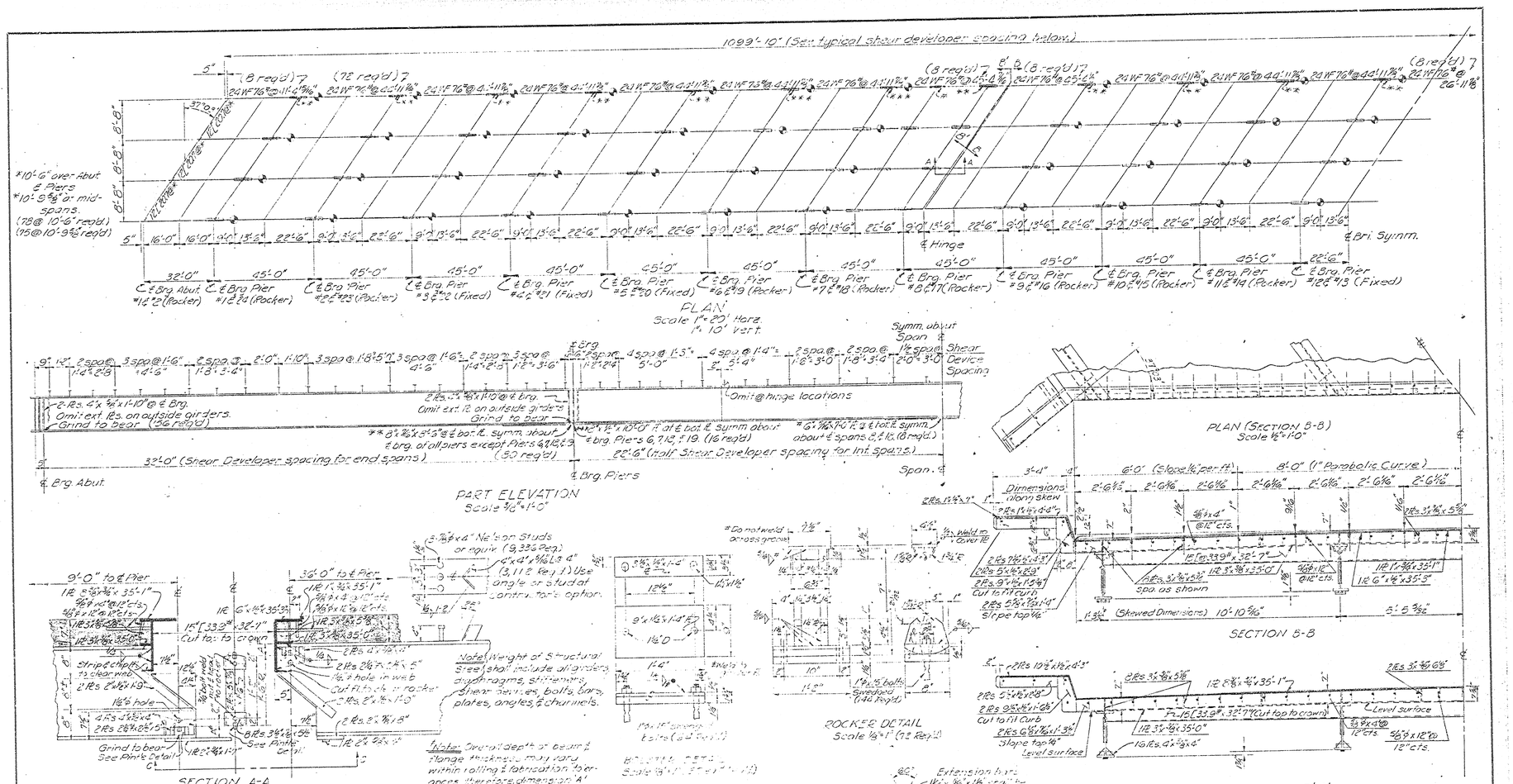


PIER & ABUTMENT DETAILS
BRIDGE NO. 823-X-1870

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Noted	C.J.F.	C.J.F.		5 of 10
	DATE	7-58			
	PLANFILE		TOTAL SHEETS		

SENT Tulsa C. of E. SEP 30 1958 Received County Hwy. SEP 5 1958



GENERAL NOTES

Design: Bridge shall conform to A.A.S.H.O. Specs. 1953 Ed. Structural Steel 18,000 psi.

Painting: All structural steel, except top of top flange and shear devices, shall receive one shop coat of red lead paint. All structural steel and bearing devices which are accessible after erection shall receive one coat of tinted aluminum paint followed by one coat of aluminum paint.

Erection: Girders shall be erected two spans ahead of any welding of splices or diaphragms.

Structural Steel: All structural steel shall conform to A.S.T.M.-A7-56T

Bearing Devices: Bearing devices shall include weight of sole plates, bearing plates, anchor bolts, nuts, and all parts of rockers. All parts of "Bearing Devices" shall be structural steel.

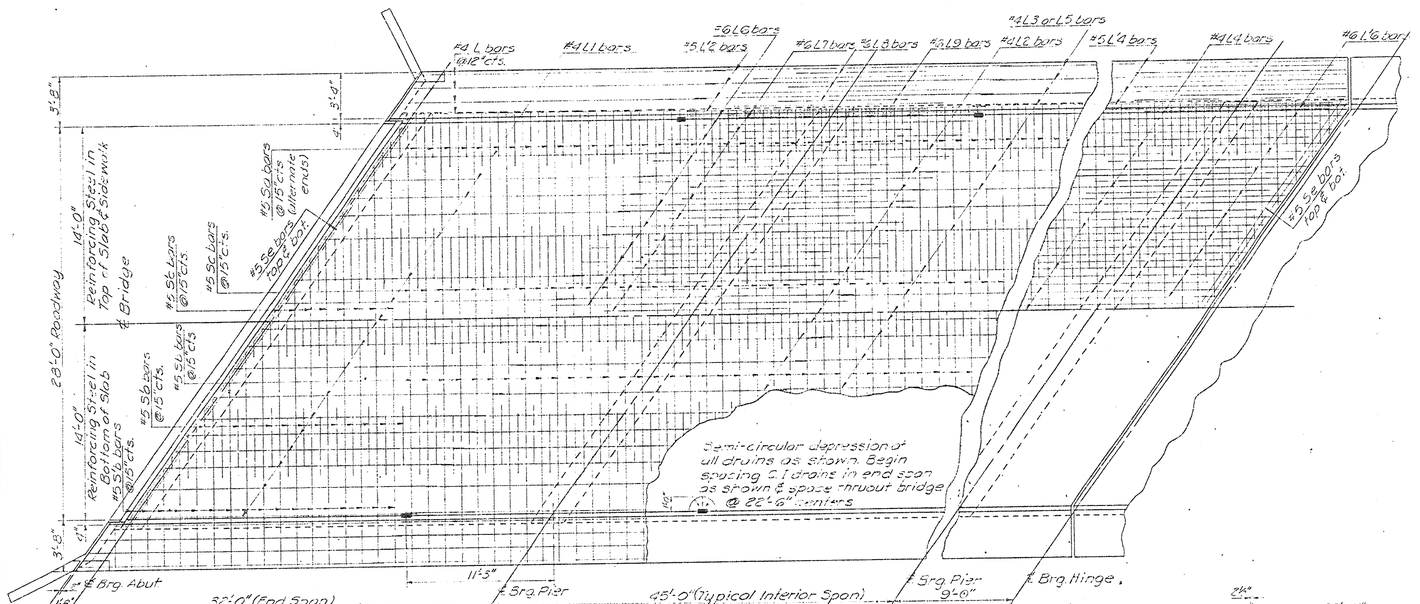
STEEL DETAILS

BRIDGE NO. 623-X-1870

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Noted	C.J.F.	C.J.F.		6 of 10
	DATE		5-58		
	PLANFILE		TOTAL SHEETS		

SENT Tulsa C. of E. SEP 30 1958
Received County Hwy. SEP 5 1958



BAR	NO	SIZE	LENGTH	REMARKS
Sa	829	#5	30'-0"	In Slab #
Sb	96	#5	①	" " #
Sb	838	#5	37'-0"	" " #
Sb	102	#5	②	" " #
Sc	838	#5	30'-0"	" " #
Sc	96	#5	③	" " #
Se	24	#5	36'-6"	Slab ends
L	176	#4	23'-6"	Sidewalk
L1	70	#4	22'-3"	Slab #
L2	770	#4	22'-0"	" #
L2	176	#5	22'-6"	Sidewalk #
L3	903	#4	24'-8"	Slab #
L4	70	#4	19'-2"	" #
L4	16	#5	④	Sidewalk #
L5	86	#4	26'-3"	Slab #
L6	484	#6	22'-4"	Over Piers
L6	44	#6	19'-5"	Over Pier @ Hinge
L7	682	#6	14'-0"	Over Piers
L8	142	#6	10'-0"	Sidewalk Rail
L9	144	#6	17'-6"	" "
Ea	12	#4	9'-6"	H'd'l Post #
Eb	12	#4	8'-6"	" " #
Ec	32	#4	2'-0"	" "
Ed	56	#4	5'-4"	Light Stand #
Ee	34	#4	4'-0"	" "
Ef	56	#4	5'-7"	" " #

① Increase by 1'-8⅛" from 3'-6" to 29'-2" (6 ea. lg. req)
② " " 1'-8" " 4'-6" to 31'-2" (" " " ")
③ " " " " 3'-0" to 28'-0" (" " " ")
④ " " 0'-3" " 16'-9" to 22'-0" (2 " " ")
See Bending Diagrams
See Pouring Sequence

GENERAL NOTES

Concrete: Concrete Class AAA (AE) shall be used thruout the deck. Bevel all exposed edges with a ¾" triangular molding unless otherwise noted. *Dimensions between top of beam and top of deck shall vary by the amounts shown in the Dead Load Deflection Diagram.

Floor sections shall be poured in the sequence shown except that with the approval of the engineer consecutive pours may be combined to pour continuously from end to end of a unit, the end of the pour shall be at the construction joint short of a pier.

Reinforcing Steel: 20,000 psi. Intermediate Grade.

See sheet no. 8 for end post, light standard, cast iron drain, & railing details.

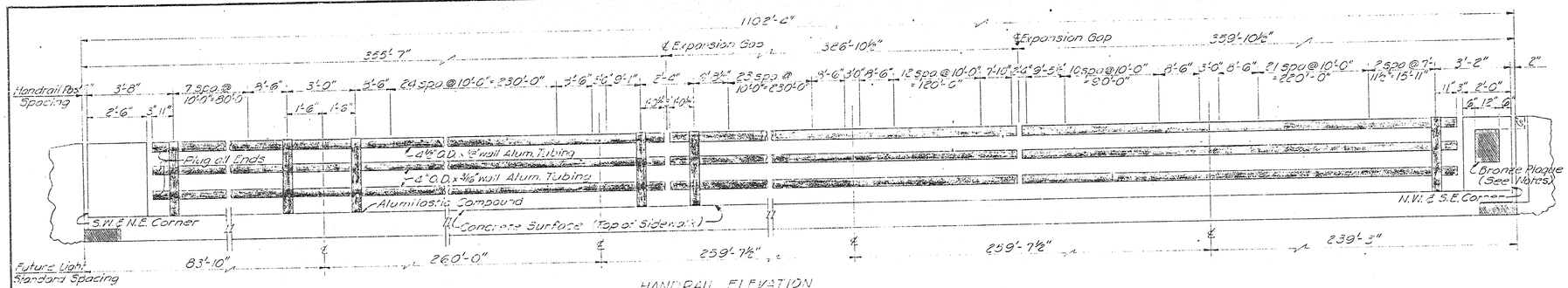
DECK DETAILS

BRIDGE NO. 823-X-1870

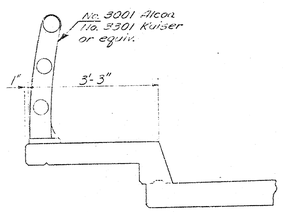
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK – COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Noted	C.J.F.	C.J.F.		7 of 10
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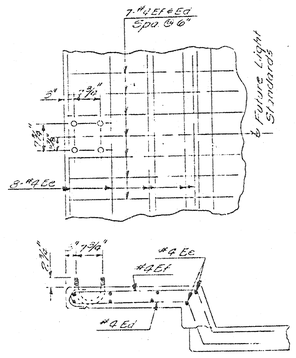
SENT Tulsa C. of E. SEP 30 1958 Received County Hwy. SEP 5 1958



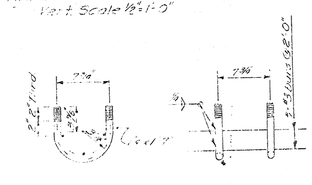
HANDRAIL ELEVATION
Vert. Scale ½"=1'-0"



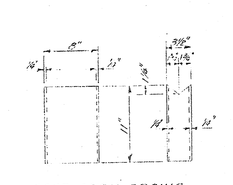
ALUMINUM POST DETAIL
Scale 3/4"=1'-0"
(2.34 Req'd)



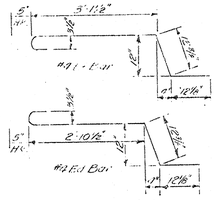
LIGHT STANDARD
Anchor Bolt Installation
And Reinforcing Detail
Scale 3/4"=1'-0"

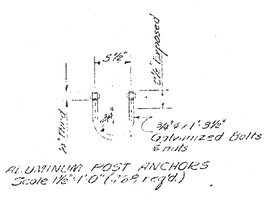


LIGHT STANDARD ANCHOR BOLTS
Scale 1½"=1'-0" (3 with reqd.)



CAST IRON DRAINS
As Reqd.
Scale 1½"=1'-0"





ALUMINUM POST ANCHORS
Scale 1½"=1'-0" (1.68 Req'd.)

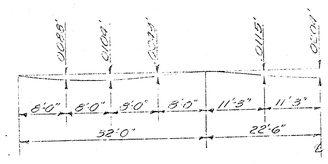
GENERAL NOTES

Left Standard Fusses shall be furnished and installed at the locations shown by the Contractor. All materials and work not otherwise specifically mentioned or indicated as furnished and installed by the Contractor shall be considered as included in the general items of this bridge contract.

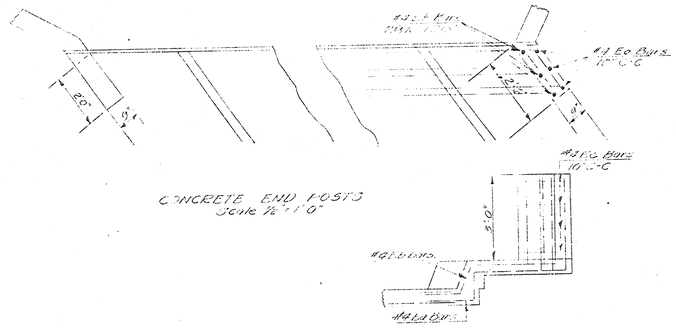
Inlet Drains shall be furnished and installed by the Contractor, and shall not be paid for directly, but shall be considered as a subsidiary item to other items in the bridge contract.

Expansion Joint shall furnish and install two (2) ¾" diameter dowel pins in the concrete curb posts, sixty-six (66) inches on centers, where required. The pins shall conform to the requirements of Section 1130, Subsection 1132, State Highway Commission of Kansas, 1956 Edition Specifications. The pins shall not be paid for directly, but shall be considered as subsidiary to other items in the bridge contract.

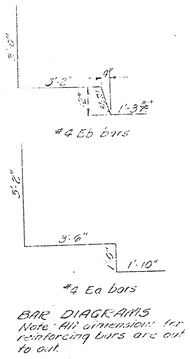
Aluminum Handrail: Aluminum highway railing shall be Alcan 3001 Riser 3301 or equivalent. Posts shall be sandblasted and degreased. The contacting surface between the anchors and posts shall be thoroughly coated with an aluminum impregnated caulking compound, or a synthetic rubber gasket shall be used. Caps shall have a rattling fit and every fourth post shall be allowed for expansion or movement of the railing. Basis of payment shall be on the actual lineal measurement of the finished handrail in place. The unit price bid for lineal feet of aluminum handrail shall include posts and rails, railing caps, and all other items of labor and work necessary for complete installation of the handrail.



DEAD LOAD DEFLECTION
AT QUARTER POINTS
No Scale



CONCRETE END POSTS
Scale ½"=1'-0"



BAR DIAGRAMS
Note: All dimensions for reinforcing bars are out to out.

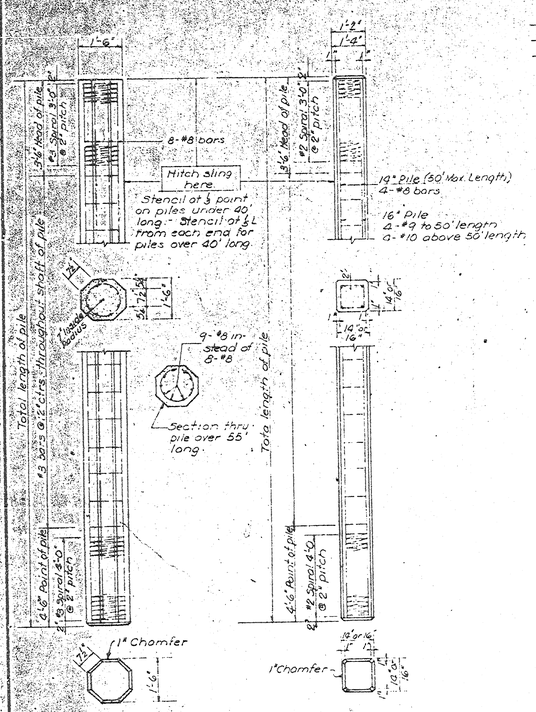
AUXILIARY DETAILS
BRIDGE NO. 823-X-1870

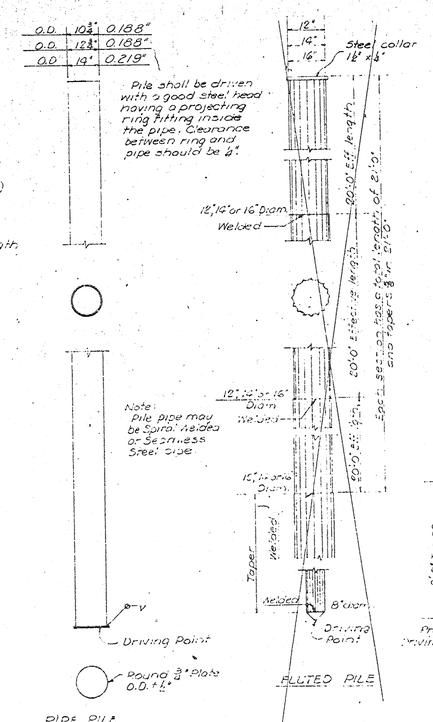
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

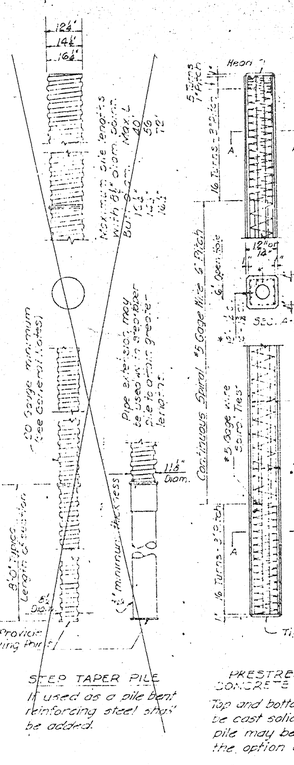
REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Noted	C.J.F.	C.J.F. & L.W.H.		8 of 10
	DATE				
	PLANFILE		TOTAL SHEETS		

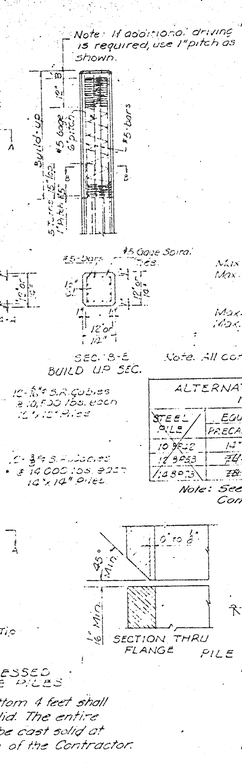
SENT Tulsa C. of E. SEP 30 1958 Received County Hwy. SEP 5 1958.

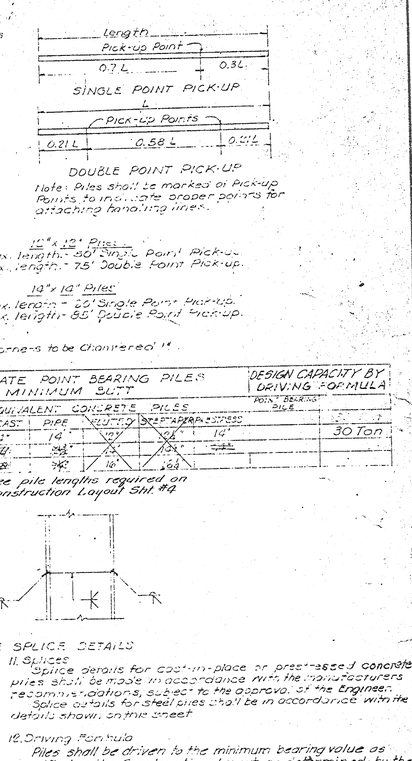
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		195		











ALTERNATE POINT BEARING PILES
MINIMUM BUTT

DESIGN CAPACITY BY DRIVING FORMULA

STEEL PILE	EQUIVALENT CONCRETE PILES					POINT BEARING PILE
	PRECAST	PIPE	FLUTED	STEEL TAPER	PRESTRESSED	
10 WF 42	13"	14"	14"			30 Ton
12 WF 53	14"	14"	14"			
14 WF 73	16"	16"	16"	16"	16"	

Note: See pile lengths required on Construction Layout Shl. #4

General Notes.

1. Specifications
All Standard Specifications for State Road and Bridge Construction as currently used by State Highway Commission of Kansas.

2. Choice of Piles
A. As indicated in the plans, piles will be considered as point bearing or as friction piles. Where point bearing piles are specified, the contractor may elect to use either the steel pile specified on the footing plans or the equivalent precast concrete, cast-in-place concrete or prestressed concrete pile shown in the table on this sheet. Where friction piles are specified the Contractor may elect to use either the size and type concrete pile specified on the footing plans or the equivalent precast concrete, cast-in-place concrete or prestressed concrete pile shown in the table on this sheet. Steel piles are not included as an alternate where friction piles are specified. Other types of concrete piles not shown here are subject to the approval of the Engineer.

3. Concrete
All concrete for precast and cast-in-place shall be Class 'A' f'c = 3000 p.s.i., Concrete for prestressed piles shall be Class AAA, f'c = 4000 p.s.i.

4. Reinforcement
All reinforcing bars shall be new billet steel of intermediate grade without exception. Hoops and spirals may be either plain or deformed bars.

5. Precast Piles.
Precast piles shall conform to the requirements of Section 519.310 of the specifications.

6. Cast-in-place Shells
A. Pile shells shall have a minimum thickness as follows:
1. Piles driven without mandrel - see min. shell thickness above.
2. Piles driven with mandrel. Shell shall be of sufficient strength and thickness to withstand driving without injury and to resist harmful distortion, and/or buckling due to soil pressure after being driven and the mandrel removed.
B. Pipe shells shall meet the following material requirements:
1. Fluted steel shells and steel collar - SAE 1010 classification for cast in place steel.
2. Spiral welded steel - A.S.T.M. Designation A252, Grade 2 Electric Fusion-Welded Spiral Seam Steel Pipe.
3. Seamless Steel pipe - A.S.T.M. A252, Welded and Seamless Steel Pipe Piles.
4. Corrugated steel shell - SAE 1010.
C. The contractor shall maintain on the job at all times prior to and during the fitting of the shells, a light suitable for their inspection.

D. Improperly driven, broken or otherwise defective shells shall be removed and replaced or otherwise corrected to the satisfaction of the Engineer by removal and replacement, or the driving of an additional pile at no extra cost.

7. Steel Piles
Steel pile material shall meet the requirements of A.S.T.M. A7-53T.

8. Pile Points
All cast-in-place piles shall be equipped with a steel driving point of ¼" minimum thickness. Driving points shall be either hot pressed steel meeting the requirements of SAE 1050 for forged steel, or cast steel meeting the requirements of A.S.T.M. Serial No. A27-47 Grade 2, or structural steel meeting the requirements of A.S.T.M. A7-53T.
Steel piles shall have a square cut end only. No driving point is required.

9. Welding
All field welding shall meet the requirements of Section 511.34 of the Specifications.

10. Paint
Shall comply with the Kansas Standard Specifications. (1955 Edition.) Expose 3' (three feet) of cast in place Piles below grade and paint entire exposed surface with one coat red lead paint, followed by two coats of aluminum paint.

11. Splices
Splice details for cast-in-place or prestressed concrete piles shall be made in accordance with the manufacturers recommendations, subject to the approval of the Engineer.
Splice details for steel piles shall be in accordance with the details shown on this sheet.

12. Driving Formula
Piles shall be driven to the minimum bearing value as specified on the Construction Layout as determined by the driving formulas stipulated in the specifications.

13. Mill Test Reports
Notarized mill test reports, in triplicate, shall be furnished by the contractor for all steel pile and cast-in-place pile shells.

14. Payment
Payment for all piles will be made as set forth in the specifications.

15. Test Piles
Test piles shall be driven where called for on the Bridge plans. All test piles shall be located so that they will become part of the Bridge pile system.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

STATE HIGHWAY COMMISSION OF KANSAS

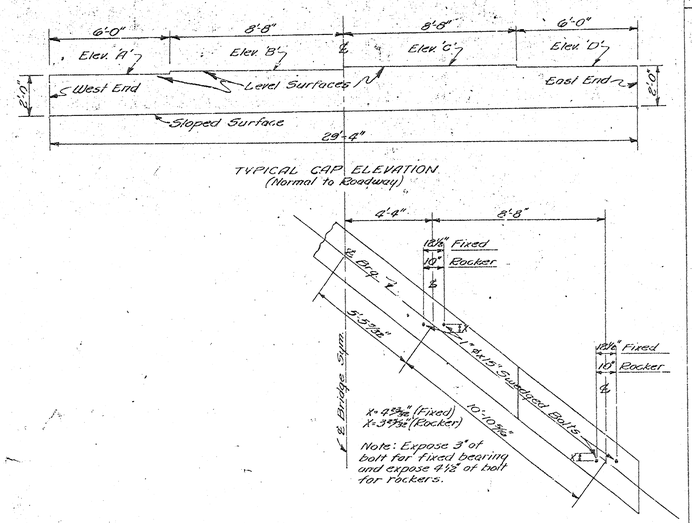
STANDARD PILE DETAILS
BRIDGE NO. 823-X-1870

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CA.	DETAIL CK.	QUAN. CK.	TRACE CK.

SENT Tulsa C. of E. SEP 30 1958 Received County Hwy. SEP 5 1958

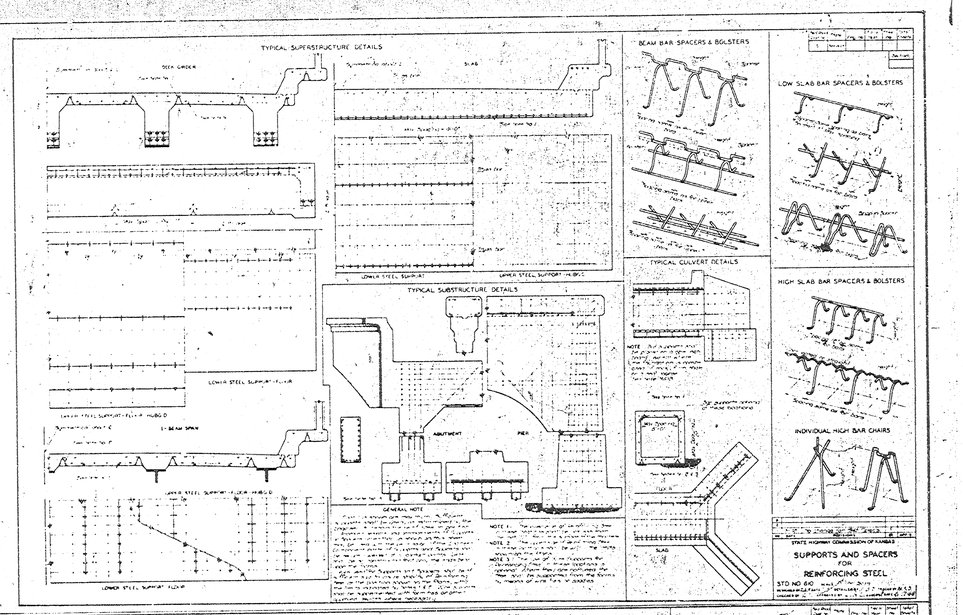
ABUTMENT & PIER ELEVATIONS

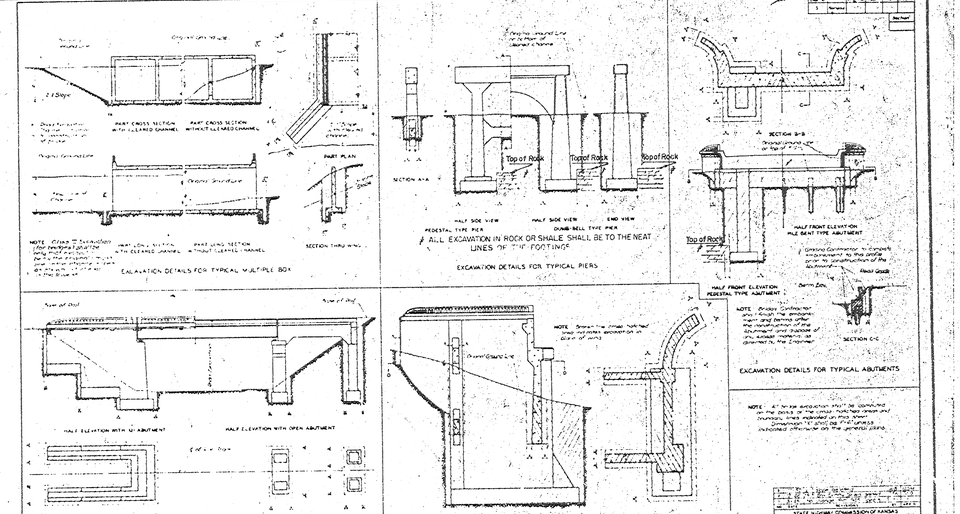
ABUTMENT Or PIER No.	WEST ELEV. 'A'	ELEV 'B'	ELEV 'C'	EAST ELEV 'D'
Abut. #1 R	1264.69	1264.76	1264.67	1264.41
Pier #1 R	1265.06	1265.14	1265.06	1264.81
Pier #2 R	1265.51	1265.60	1265.59	1265.36
Pier #3 F	1266.57	1266.68	1266.62	1266.40
Pier #4 F	1266.91	1267.02	1266.93	1266.76
Pier #5 F	1267.20	1267.32	1267.28	1267.08
Pier #6 R	1266.81	1267.00	1266.96	1266.76
Pier #7 R	1267.09	1267.22	1267.19	1267.00
Pier #8 R	1267.28	1267.41	1267.39	1267.20
Pier #9 R	1267.42	1267.54	1267.54	1267.36
Pier #10 R	1267.53	1267.68	1267.66	1267.48
Pier #11 R	1267.69	1267.75	1267.74	1267.57
Pier #12 F	1268.21	1268.31	1268.36	1268.20
Pier #13 F	1268.20	1268.36	1268.37	1268.21
Pier #14 R	1267.57	1267.74	1267.75	1267.59
Pier #15 R	1267.98	1267.66	1267.68	1267.53
Pier #16 R	1267.36	1267.54	1267.56	1267.42
Pier #17 R	1267.20	1267.39	1267.41	1267.28
Pier #18 R	1267.00	1267.19	1267.22	1267.09
Pier #19 R	1266.76	1266.96	1267.00	1266.87
Pier #20 F	1267.08	1267.28	1267.32	1267.20
Pier #21 F	1266.76	1266.98	1267.02	1266.91
Pier #22 F	1266.40	1266.62	1266.68	1266.57
Pier #23 R	1265.36	1265.59	1265.60	1265.57
Pier #24 R	1264.81	1265.06	1265.14	1265.06
Abut. #2 R	1264.41	1264.67	1264.76	1264.69
R= Rockers	F= Fixed			



TYPICAL CAP ELEVATION
(Normal to Roadway)

PART PLAN OF PILE CAPS
Scale 3/8"=1'0"





SENT Topeka, Kans. SEP 15 1958 Received County Hwy. SEP 15 1958