	STATE	PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
	KANSAS		1957	1	6

SEDGWICK COUNTY HIGHWAY DEPARTMENT

BRIDGE ONLY

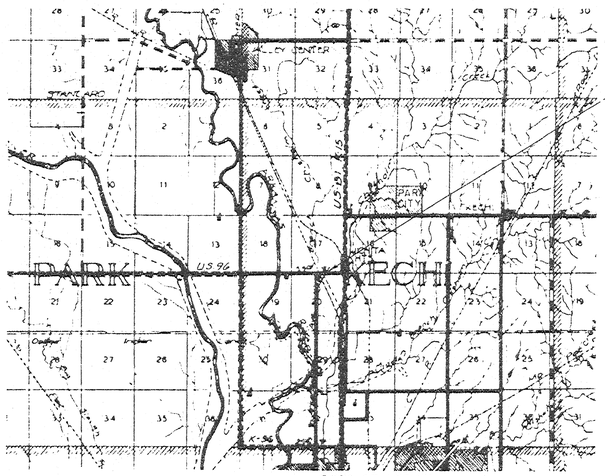
COUNTY BRIDGE NO. 606-26-3061

INDEX OF SHEETS

SHEET NO 1 TITLE SHEET
2 CONSTRUCTION LAYOUT
3 REINFORCING DETAIL
4 ABUTMENT & PIER DETAIL
5 AUXILIARY DETAIL
6 PILING DETAIL

N

Scale 1" = 1 MILE



CITY OF WICHITA

CONSTRUCT BRIDGE NO. 606-26-3061
CONTINUOUS CONCRETE GIRDER
32' - 3@ 40' - 32'

TRAFFIC COUNT - 2950 CARS PER DAY.

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	186	FT.	.035	MILES
NET LENGTH OF BRIDGES	186	FT		MILES
NET LENGTH OF ROAD		FT		MILES
EXCEPTIONS		FT		MILES
ADDITONS		FT.		MILES
GROSS LENGTH OF PROJECT		FT.		MILES

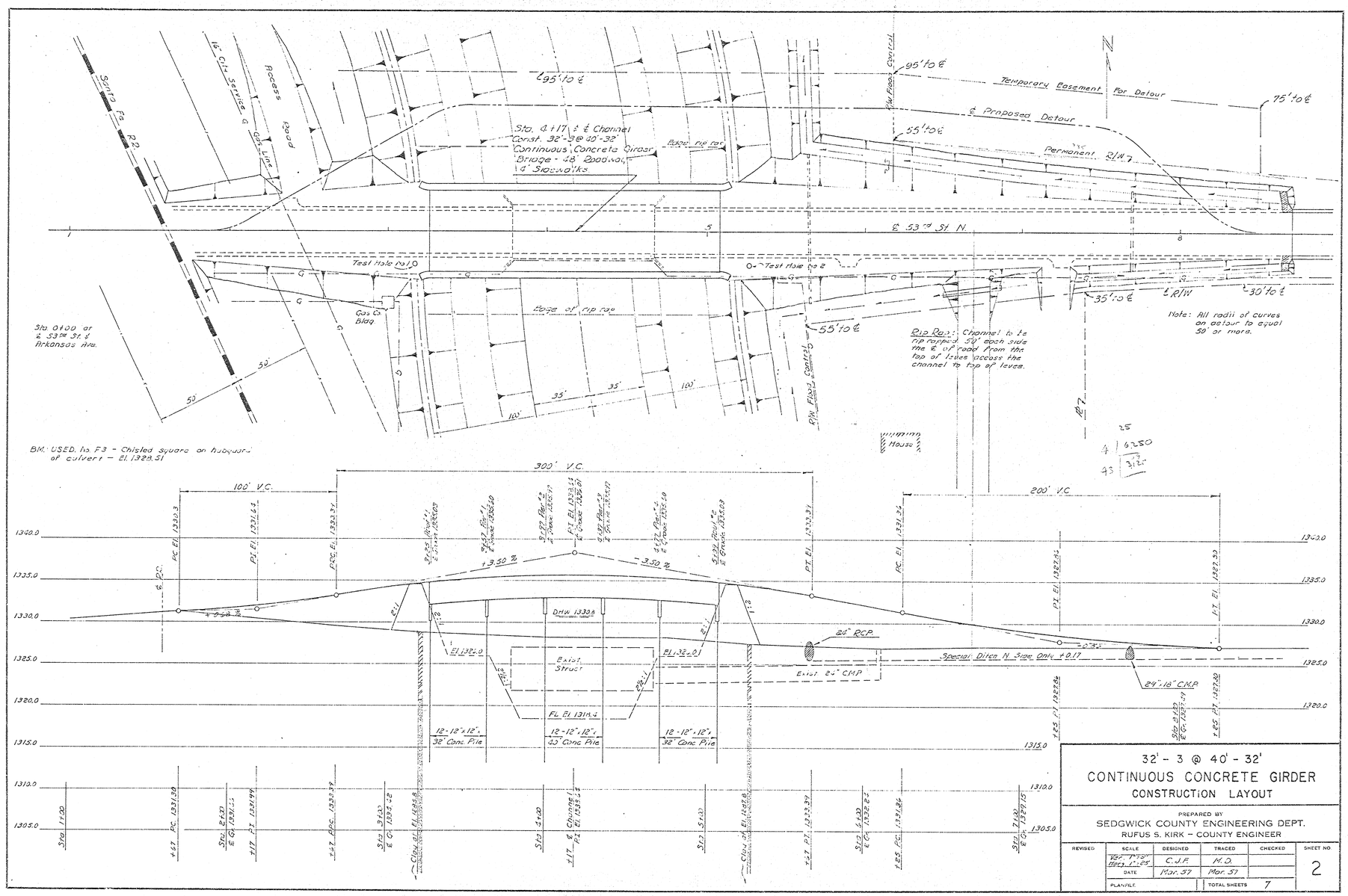
PLANS PREPARED BY
SEDGWICK COUNTY ENGR'G. DEPT.
DATE MARCH 1957

APPROVED
Richard S. Keck
COUNTY ENGINEER
DATE MARCH 1957

APPROVED DATE
MARCH 57
Vernon E. Reed
CHAIRMAN - (Acting in absence of Chairman)
BOARD OF COUNTY COMMISSIONERS

APPROVED DATE

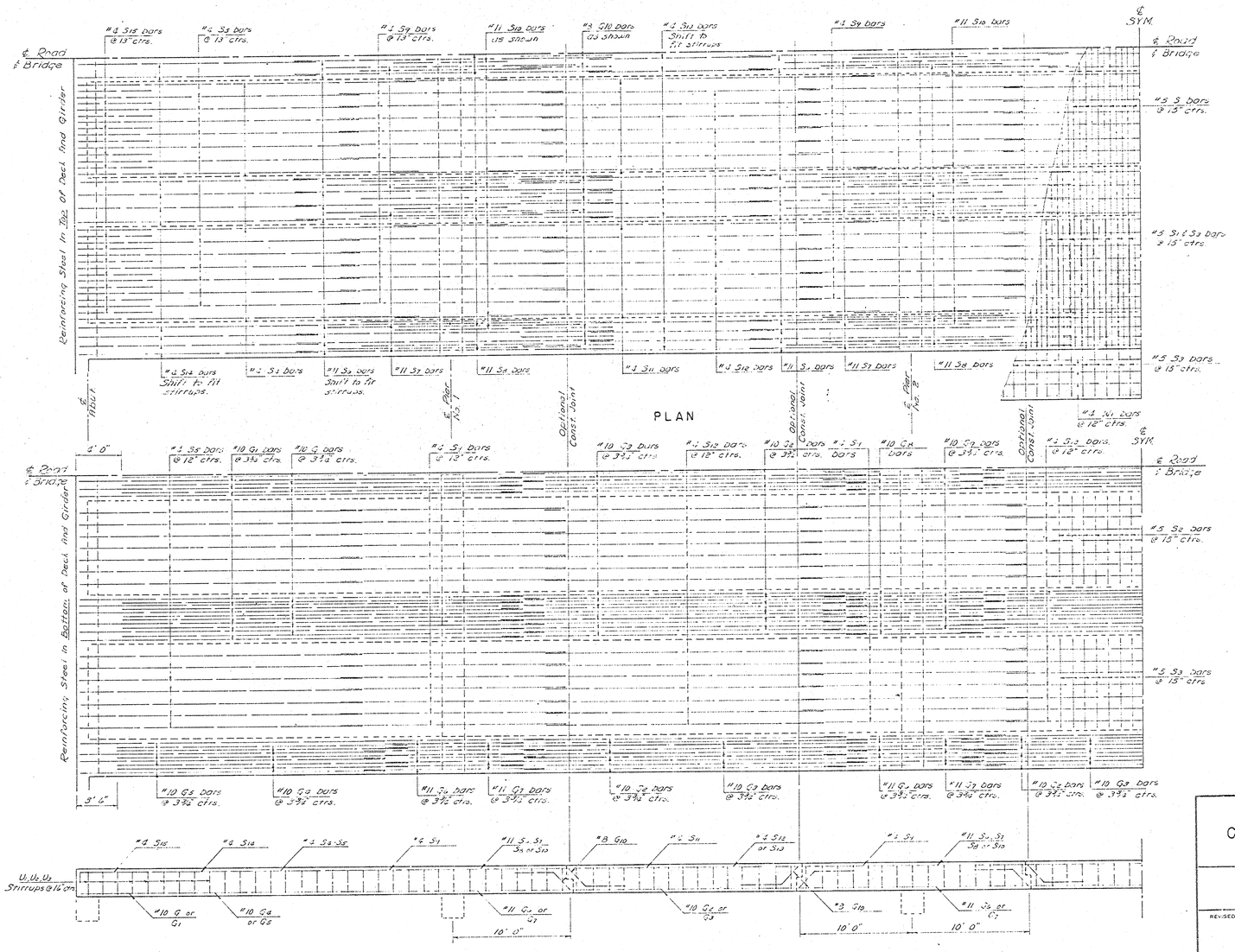
Received 3/19/57



32' - 3 @ 40' - 32'
CONTINUOUS CONCRETE GIRDER
CONSTRUCTION LAYOUT

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	Ver. 1"=5' Hor. 1"=20'	C.J.F.	M.D.		2
	DATE	Mar. 57	Mar. 57		
	PLAN/LE.		TOTAL SHEETS 7		



GENERAL NOTES

DESIGN: AASHO. Spec h-20-44 Loading.

CONCRETE: Class A concrete fc-1200 psi. Bevel all exposed edges with a ¾" Δ moulding unless otherwise noted.

REINFORCING STEEL: All dimensions shown relative to placing reinforcing steel are to ℄ of bars unless otherwise noted. Reinforcing Stee. fs-20,000 psi.

CONSTRUCTION JOINTS: Construction Joints shown are optional with the contractor, but if used shall be made only at locations shown or as approved by the engineer. See Pouring Sequence.

FALSEWORK: Falsework shall be left in place in any span until that span and the next adjacent span constructed latest span, have attained its designed strength.

PILING: 12"x12" Prestressed piling as per State Highway Specifications. Piling shall be driven to a minimum computed bearing value of 24 ton per piling.

POURING SEQUENCE: Floor and girder sections shall be poured continuous to the quarter point short of on, pier or as an alternate the span on each side of any pier must be poured between quarter points before the concrete is poured over that pier.

SOUNDINGS: Test holes no 1 & 2 drilled with a 4" jet by Sedgwick County.

OLD STRUCTURE: To be removed by Sedgwick County. Excavation of the channel at the bridge site, and the construction of the embankment of abutment sections shall be completed by Sedgwick Count, prior to the bridge construction.

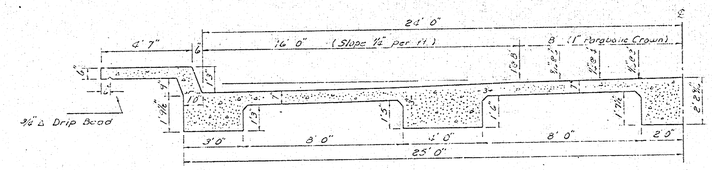
RIGHT OF WAY: To be cleared by Sedg. Co. or owners. In the interest of public safety, all gas and oil lines shall be moved beyond the limits of roadbed unless special provisions for their retention has been made.

DETOUR: To be constructed and maintained by Sedgwick County.

32' - 3 @ 40' - 32'
CONTINUOUS CONCRETE GIRDER
REINFORCING DETAIL

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

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO
	1/2" = 1'	G. J. F.	M. D.		3
	DATE	Feb. 57	Feb. 57		
	PLANFILE		TOTAL SHEETS	7	

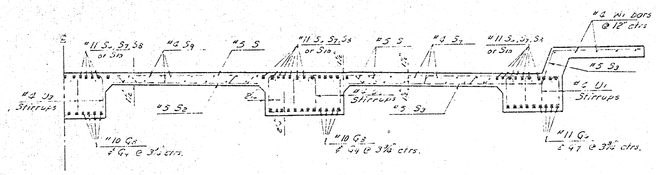


TYPICAL HALF SECTION

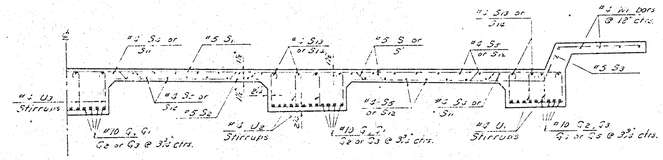
CONTRACTION JOINT: To be constructed up curb and across sidewalk at each pier.

SPLICES: All splices in bottom of girders are to be made with one bar on top of the other.

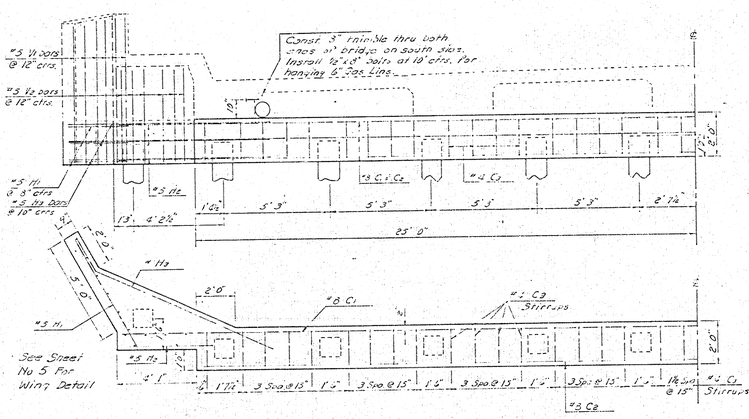
PIPE LINE: The Gas Service Co. will furnish two 6" thimbles and the necessary bolts for the pipe line. Pipe to be installed later by Gas Co.



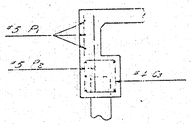
HALF SECTION AT PIER



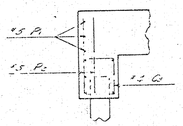
HALF SECTION AT MID-SPAN



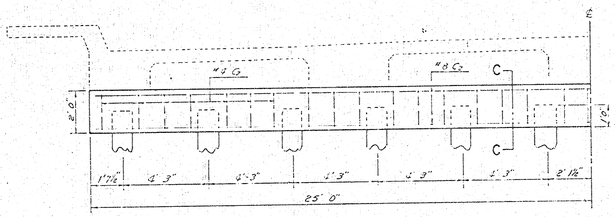
HALF ABUTMENT SECTION

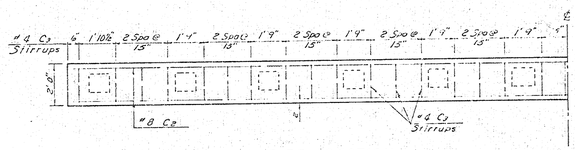


SECTION AA

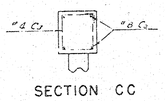


SECTION BB

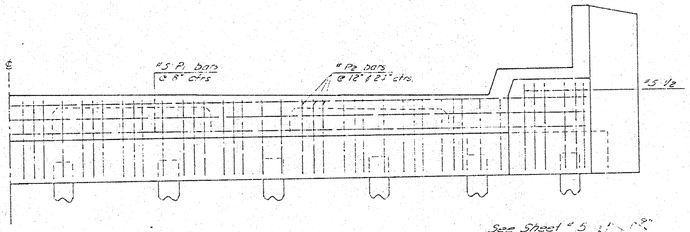


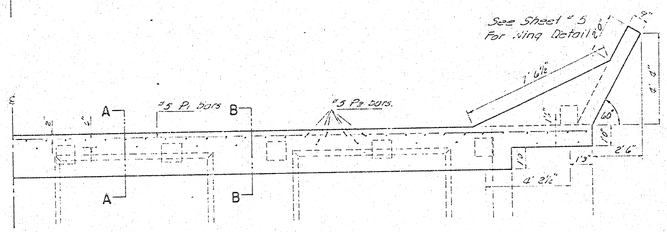


HALF PIER SECTION

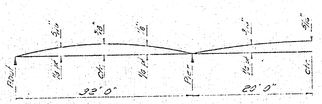


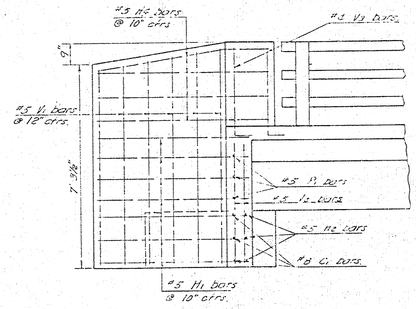
SECTION CC



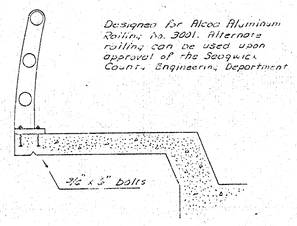


END SECTION


.2'
.2'
.2'

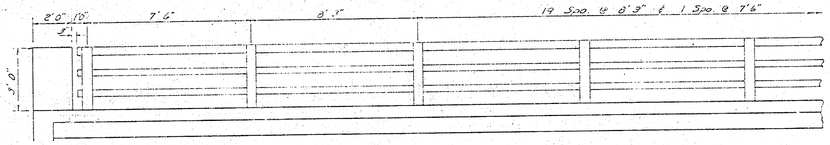


WING PLAN
Scale ½"=1'

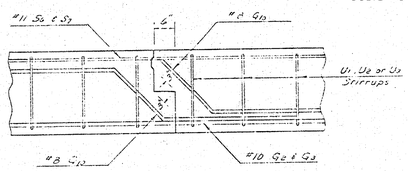


HAND RAILING

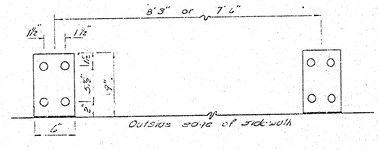
PLAQUES - Contractor to provide and install two 12"x 12" Cast bronze alloy plaques on end handrail post. Thickness and finish of plaques shall conform to Section 118.19 of Standard Specifications. Sedgwick County to furnish full size detail drawing. Plaques shall not be paid for directly, but shall be considered as subsidiary to other items in the bridge contract.



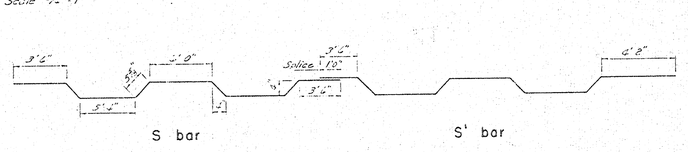
HANDRAIL DETAIL
Scale ⅜"=1'



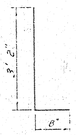
CONSTRUCTION JOINT
Scale 1½"=1'



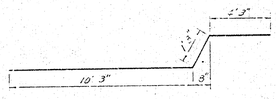
HANDRAIL LAYOUT
Scale 1½"=1'



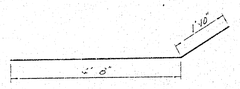
S bar — S' bar



V_3 bar



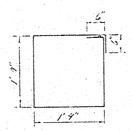
S_3 bar



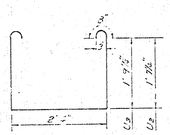
H_4 bar



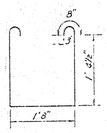
G_{10} bar



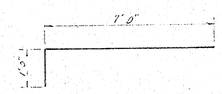
C_3 stirrup



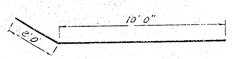
U_2 & U_3 stirrup



U_1 stirrup



S_{15} bar



H_3 bar

SUMMARY OF QUANTITIES

Concrete Class A	615.3	Cu. Yds.
Reinforcing Steel	112,300	Lbs.
12"x12" Prestressed Pile	2,574	Lin. Ft.
Aluminum Railing	313	Lin. Ft.
Railing, Posts	42	Ea.
Railing, Hardware (bolts)	143	Lbs.

REINFORCING STEEL

BAR	DECK																		
	S	S'	S_1	S_2	S_3	S_4	S_5	S_6	S_7	S_8	S_9	S_{10}	S_{11}	S_{12}	S_{13}	S_{14}	S_{15}	W_1	W_2
NO.	149	149	300	300	300	116	104	80	40	52	208	44	24	156	60	40	56	20	10
SIZE	5	5	5	5	5	4	4	11	11	11	4	11	4	4	4	4	4	4	4
LENGTH	25'7"	25'9"	25'6"	8'6"	16'2"	29'9"	24'0"	28'0"	22'0"	14'0"	19'4"	10'0"	32'0"	22'6"	16'0"	21'0"	8'0"	10'0"	36'0"

BAR	CAP			GIRDER												ABUT.		WING						
	C_1	C_2	C_3	G	G_1	G_2	G_3	G_4	G_5	G_6	G_7	G_8	G_9	G_{10}	U_1	U_2	U_3	P_1	P_2	11	H_2	11_3	H_4	V_1	V_2	V_3
NO.	12	40	216	36	36	54	54	20	16	32	40	36	36	90	360	360	280	12	136	28	12	12	20	24	24	16
SIZE	8	8	4	10	10	10	10	10	10	11	11	10	10	8	4	4	4	5	5	5	5	5	5	5	5	4
LENGTH	29'10"	25'9"	8'0"	37'0"	39'0"	28'0"	32'0"	25'6"	27'0"	14'0"	12'0"	12'0"	16'0"	8'9"	5'9"	6'10½"	7'2½"	29'6"	3'5"	5'1"	2'9"	18'0"	6'2"	*	2'1"	3'10"

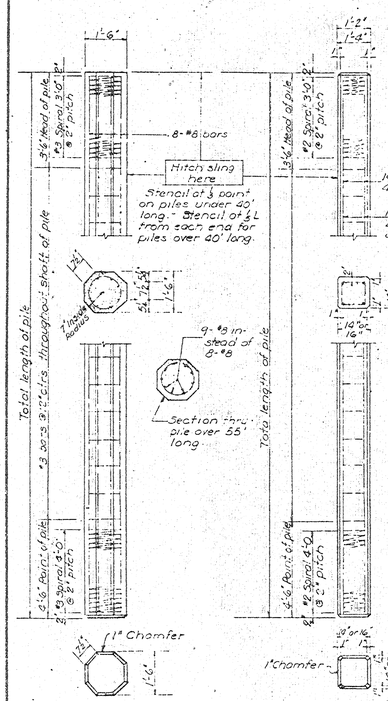
* Decrease from 7'0" to 6'11", 54 required, cut 4 off each.

32' - 3 @ 40' - 32'
CONTINUOUS CONCRETE GIRDER
AUXILIARY DETAIL

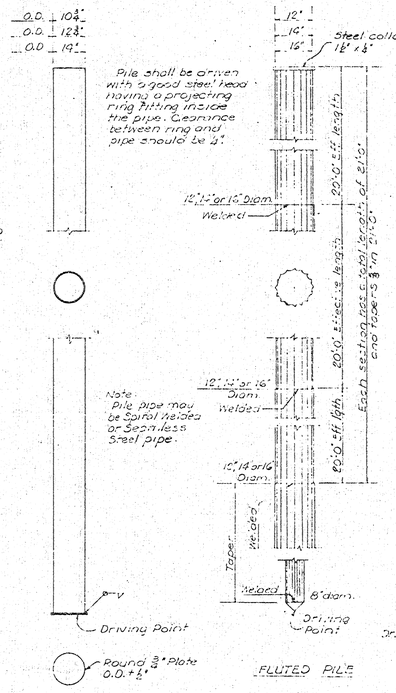
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK - COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
	As Shown	C.J.F.	M.D.		5
	DATE	Feb. 57	Feb. 57		
	PLANFILE		TOTAL SHEETS 7		

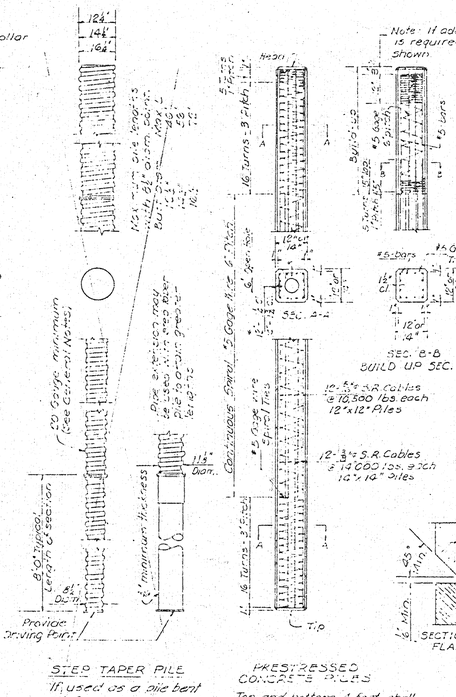
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		195		



PRECAST PILES

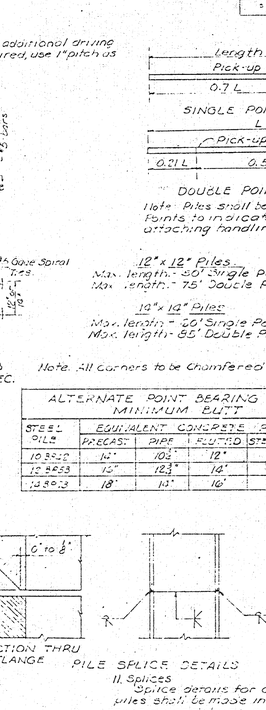


PIPE PILE FLUTED PILE



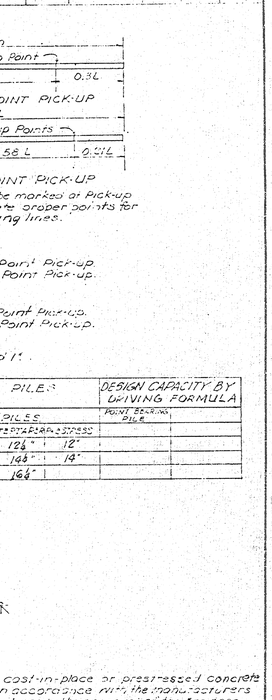
STEP TAPER PILE

If used as a pile bent reinforcing steel stub should be added.



PRESTRESSED CONCRETE PILES

Top and bottom 4 feet shall be cast solid. The entire pile may be cast solid at the option of the Contractor.



Note: Piles shall be marked at Pick-up Points to indicate proper points for attaching handling lines.

12" x 12" Piles
Max. length - 60' Single Point Pick-up
Max. length - 75' Double Point Pick-up.

10" x 10" Piles
Max. length - 50' Single Point Pick-up.
Max. length - 60' Double Point Pick-up.

Note: All corners to be Chamfered 1".

ALTERNATE POINT BEARING PILES MINIMUM BUTT						DESIGN CAPACITY BY DRIVING FORMULA
STEEL PILE	EQUIVALENT CONCRETE PILES					POINT BEARING PILE
	PRECAST	PIPE	FLUTED	STEP TAPER	BATTER	
10 3942	14"	10¾"	12"	12½"	12"	
12 4853	15"	12¾"	14"	14½"	14"	
12 5073	18"	14"	16"	16½"		

General Notes.

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

2. Choice of Piles
As indicated in the plans, piles will be considered as point bearing piles 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
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 59.310 of the specifications.

6. Cast-in-place Shells
A. Pile shells shall have a minimum thickness as follows:
1. Piles driven without mandrel - 8 gage except fluted pile use 9 gage minimum.
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. Pile shells shall meet the following material requirements:
1. Fluted steel shells and steel collar - SAE 1010 classification for cast hearth 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 1020.

C. The contractor shall maintain on the job at all times prior to and during the filling 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. A7-33T.

8. Pile Points
All cast-in-place piles shall be equipped with a steel driving point of ¼ minimum thickness. Driving points shall be mill welded to the pile shell. Driving point shall be either hot pressed steel meeting the requirements of SAE 1035 for forged steel, or cast steel meeting the requirements of A.S.T.M. Serial No. A-67-42, Grade 2, or structural steel meeting the requirements of A.S.T.M. A7-33T.
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 51.34 of the specifications.

10. Paint
Shall comply with the Kansas Standard Specifications. (1955 Edition)

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.

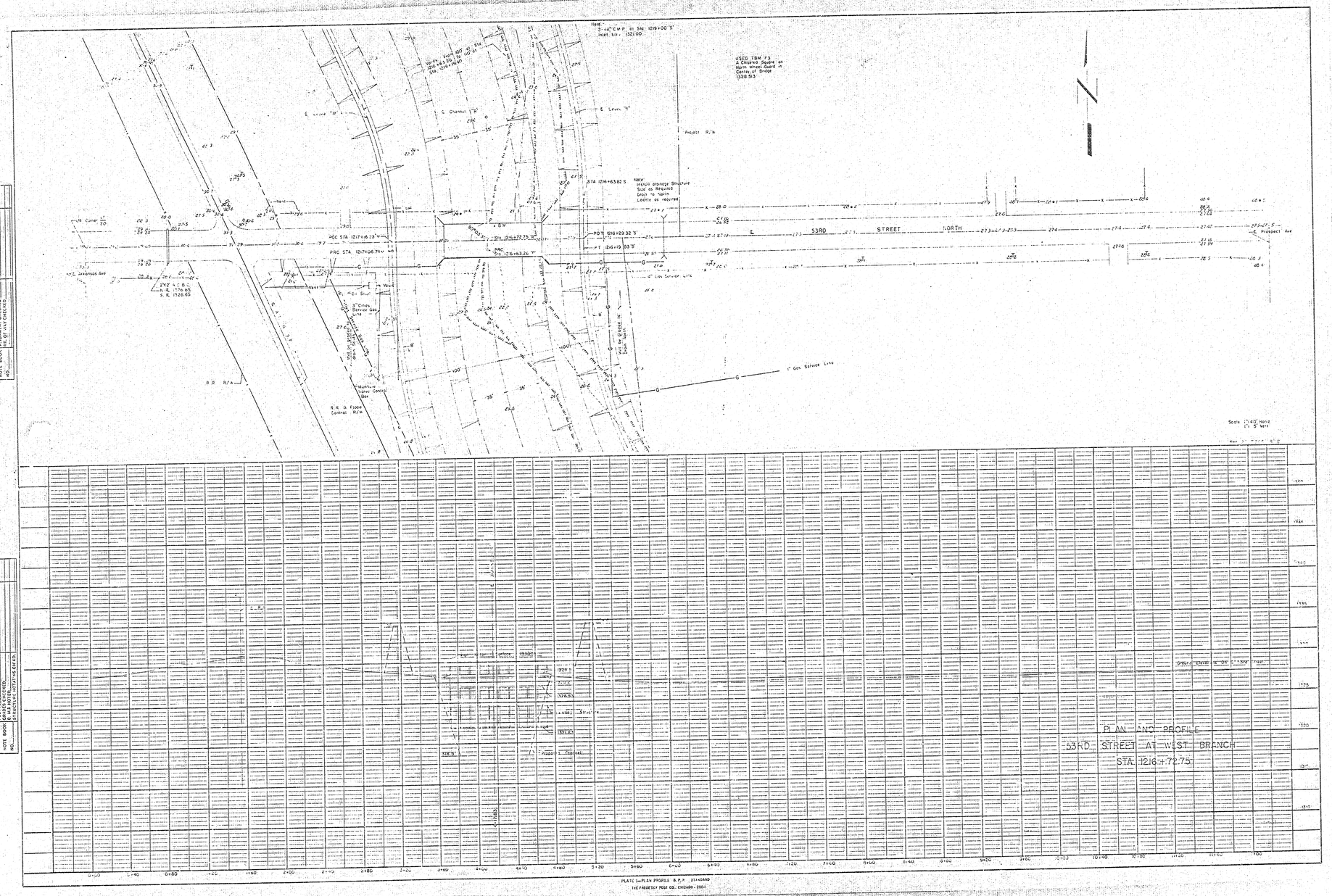
NO	DATE	REVISIONS	BY	APP'D
3				
2				
1				

STATE HIGHWAY COMMISSION OF KANSAS

STANDARD PILE DETAILS

Sheet No. 6

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED	QUANTITIES	TRACED
DRAWN CK.	DETAIL CK.	QUAN. CK.	SPACE CK.



PLAN AND PROFILE
53RD STREET AT WEST BRANCH
STA. 1216+72.75
53RD STREET NORTH
PLATE 5—PLAN PROFILE B.P.P. 27A-GRAND
THE FREDERICK POST CO. CHICAGO - 28614