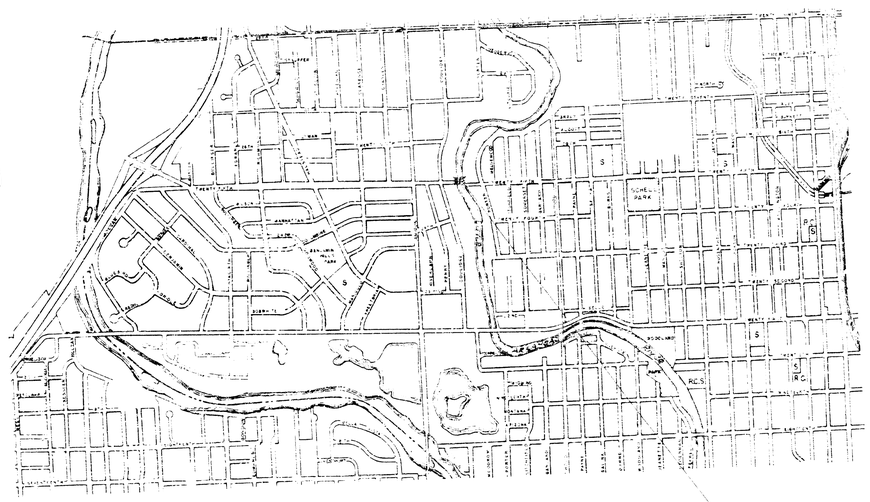
TWENTY-FIFTH STREET BRIDGE

OVER THE

LITTLE ARKANSAS RIVER

= NORTH WICHITA THRUWAY =

WICHITA, KANSAS



PROJECT LOCATION

INDEX OF SHEETS

Sheet No. 1. Title Sheet
" " 2. Contour Map
" " 3. Construction Layout
" " 4. Abutment Details
" " 5. Pier Details
" " 6. Superstructure Details
" " 7. Deck Section & Sidewalk Details
" " 8. Handrail Details
" " 9. Bar List
" " 10. Standard Pile Details
" " 11. Bar Supports, Bridge Excavation, Notes & Summary of Quantities

DEPARTMENT OF PUBLIC WORKS

CITY OF WICHITA

B. E. SMITH, CITY ENGINEER

PROJECT 016-37

PLANS PREPARED BY

R. S. DELAMATER, CONSULTING ENGINEER

WICHITA, KANSAS

APRIL, 1967

Revised As Built, January, 1968

AB T S VWXY TUVW

C 16-37	67	2	11

49'
Relay & set 44± of 48" R.C.P. & Const. Conc. Hdwl. See details this sheet

As Built Note:
Reset 6 joints x 93"
Added 1-4' joint.

Const 45± Chain Link fence from end exist. fence to bridge wing.

Sta. 69+55 Construct 35'-3@45'-35' Continuous R.C. Slab Spans. Pile Bent "Tyke Abutments and Piers. 54'-0" Roadway with 4'-0" Median. Skew 18° Lt.

SCALE: 1"=50'

PLAN

9'-9" to ℄ Pier

PLAN SHOWING REINFORCING

#4 x 11'-0" @ 6"
#4 x 11'-4" @ 10"
#4 x 7'-0"
9"#4 @ 12" 7'-0" Avg.
7"#4 8'-0" Avg.
Top Steel
Bottom Steel
#4 x 8'-10"
#4 x 8'-6"

ELEVATION

#4 x 4'-6"
#4 x 7'-6"
#4 x 8'-4"
#4 x 5'-3"
#4 x 3'-4"
4"#4 5'-6" Avg.
Pile Cut Elev. 107.75
20' Treated Timber Piles
#4 @ 9" & 8'-10"
#4 x 3'-6"
#4 x 5'-6"
9"

48" HEADWALL DETAILS
(West Bank)

#4 @ 9" 6'-0" Avg.
#4 with wing bars @ 6" 6'-6" Avg.
#4 with wing bars @ 12" 2'-3" Avg.
#4 x 21'-0"
36" RCP
℄ Pipe
Break exist. slab as shown
#4 with wing bars @ 9" 1'-9" Avg.
#4 @ 9" 6'-0" Avg.
Toe of berm slope
15'-0"
8'-0"
4'-9"

PLAN SHOWING REINFORCING

ELEVATION A-A

#4 x 4'-6"
#4 x 15'-6"
#4 @ 5" 5'-5" Avg.
#4 @ 9" 10'-6" Avg.
See As Built Note

Note: Tie to exist steel as directed by the Engineer.

ELEVATION B-B

12'-9½"
#4 x 3'-0"
#4 x 18'-5"
#4 x 5'-3"
#4 @ 5" 3'-5" Avg.
#4 @ 9" 7'-3" Avg.
El. 112.0
#4 x 16'-3"
18" ℄ 18"

Note: Views for 36" hdwl. are schematic for bars only, to show required spacing etc., and are not to scale.

As Built Note:
Existing headwall consists of 18"± slab set on timber piles. 36" storm sewer plans indicated 9" slab as shown.

36" HEADWALL DETAILS
("West Bank)

Reference B.M.
City Standard B.M. 6'W. of W.L. of Amidon, 2'N. of N. curb & 25th Street. El. 126.34

B.M. #2 RR Spk. in tele. pole 63' Rt. Sta. 67+26 El. 127.08

Remove exist. pipe and cut ditch to drain (Subsidiary)

Relocate fence to exist. easement if in way of construction.

As Built Note:
Not necessary to move fence during construction.

Relocate or extend swimming pool drain if necessary

As Built Note:
Set pipe casing with lid over drain via e.

B.M. #1 "+" cut in top of hdwl. 65' Rt. Sta. 70+65 El. 118.95

As Built Note:
Removed in Const.
See Notes Sheet 3

B.M. #3 RR Spk. in pwr. pole 60' Rt. Sta. 73+30 El. 126.77

ROCK TOE 'B' DETAIL

8'-6"
18" Riprap
4'-0"
2'-0"

TYPICAL EMBANKMENT SECTION

E. Roadway
48'±
Profile Grade
3/4" /Ft
3:1
Compaction Type 'B' (MP-30)

TYPICAL CHANNEL SECTION

0.00%
Des. H.W. El. 119.6
12" C.I. Water
125.25
125.25
125.25
125
120
115
110
105
100
95
2 7 8 9 70 1 2 3

Top Riprap El. 121.0
As shown
18" Riprap
El. 110.6
90'
El. 105.6
Berm El. 121.0
3:1 Abut.
5' 15'
Note: Do not place rock riprap within 5' of 12" water line in the toe section; do place the berm section over and 8' past the pipe.

APPROX. HEADWALL QUANTITIES

Item	Un.	E. Bank	A. Bank
Class A Conc.	Cu. Yds.	45	85
Reinf. Steel	Lbs.	300	350
T. Timber Piles	Lin. Ft.	-	90
Relay and set 48" R.C.P.	Lin. Ft.	-	44±

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER
25th. STREET BRIDGE OVER LITTLE ARKANSAS RIVER
CONTOUR MAP
NORTH WICHITA THRUWAY

R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	Apr. 1968	1"=50'	89-0-2

1	KJV	7-68	As Built

PROJECT NO.	KANSAS	SHEET NO.	TOTAL SHEETS
C/G-37	37	3	11

B.M.#2 R.R. Spk. in 18.8 pole
63' Rt. Sta. 67+26 El. 127.05

B.M.#1 "X" cut top of hdwl.
65' Rt. Sta. 70+65 El. 118.93

B.M.#3 R.R. Spk. in pwr. pole
60' Rt. Sta. 73+30 El. 126.77

Sta 69+00

Sta 70+00

Sta 71+00

207'-7½" End to End of Wearing Surface

56'-3¾" | 45'-0" | 45'-0" | 45'-0" | 36'-3¾"

Gr. El. 125.25

Fine Silty Sandy Clay

Fine Silty Sand

Tan Clay

Fine Sand

Fine & Course Sand with Gravel

Fine & Course Silty Sand

Gray Soft Shale

Gray Firm Shale

Des. H.W. El. 119.6

El. 110.6

El. 105.6

Excavation Boundary Plane

Class 1

Class 2

0.60%

Fine Silty Sand

Fine & Course Sand

Course Sand and Gravel

Gray Clay

Fine & Course Sand

Gray Soft Shale

Hard Gray Shale

Location shown in Plan.

37'
39'
41'
43'
Typ. each pier

Note: All Piers shall be ~~HBP93~~ steel piles.
Used 12¾" C.I.P.

~~HBP42~~ x 49'
Steel Piles Typ.

Used 10¾" C.I.P.

As Built Note:
Piles driven to mark shown.
See pile logs for bearing and cutoffs.

Note: See Detail Sheets for all elevations.

ELEVATION
35'-3@45'-55' Const. 2C
Slab Spans Pile Bent
Type Abutments Piers
34'-0" Roadway with
4'-0" Median, Skew 18° Lt.

207'-7½" End to End of Wearing Surface

35'-0" | 45'-0" | 45'-0" | 45'-0" | 35'-0"

Sta 68+51.19 ℄ Abut #1

Sta 68+52.50

Sta 69+07.50 ℄ Pier #1

Sta 69+32.50 ℄ Pier #2

Sta 69+77.50 ℄ Pier #3

Sta 70+22.50 ℄ Pier #4

Sta 70+35.81 ℄ Abut #2

Sta 70+36.81 ℄ N.S.

Name Plate

Little Arkansas

Project ℄ (Office Location)

TH #2

48" Storm Sewer

Name Plate

TH #1

Const. Note:
Set brass disk for Flood Control B.M.

℄ Section Line ℄

Note: See Sheet 11 for General Notes and Summary of Quantities.

PLAN

SCALE: 1"=10'

Const Note:
To provide extra elevation for drainage on temporary pavement connections, the bridge was built 0.25' higher than plan elevation.
Piers 1 and 4 were shortened 0.25'
Piers 2 and 3 were extended 0.25'

1	K-U	1/1968 As Built

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER

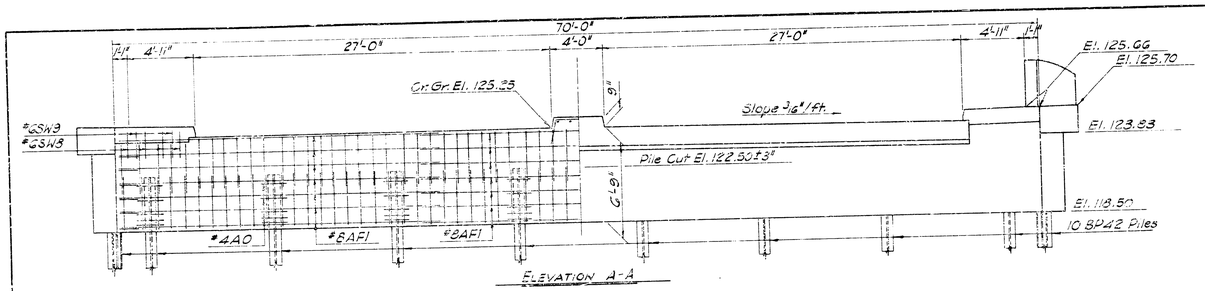
25th. STREET BRIDGE OVER
LITTLE ARKANSAS RIVER

CONSTRUCTION LAYOUT

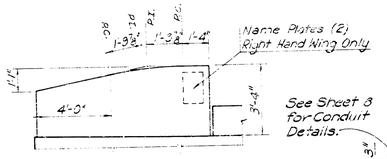
NORTH WICHITA THRUWAY

R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE	Apr., 1967	
	SCALE	1"=10'	DWG NO. 89-0-3

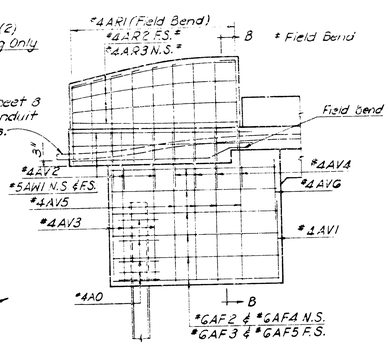
PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CIG-37	1967	4	11



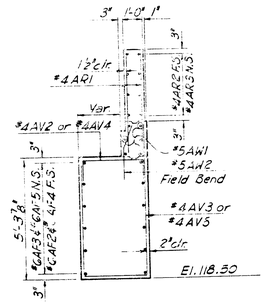
ELEVATION A-A



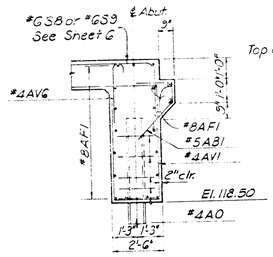
ABUTMENT RAIL DETAILS



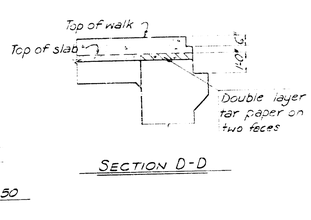
DEVELOPED VIEW OF WINGWALL



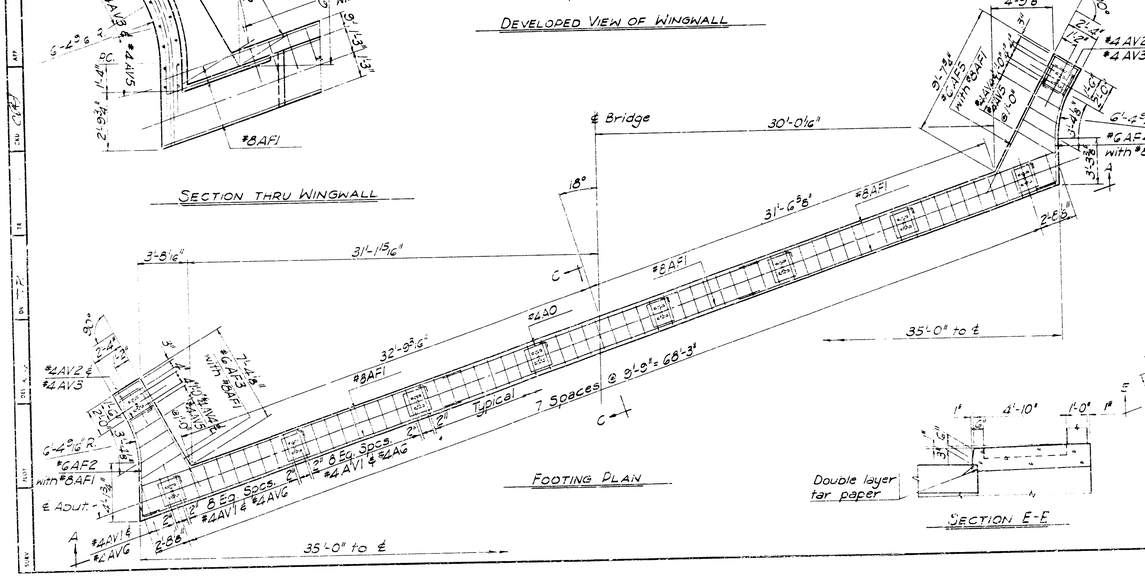
SECTION B-B



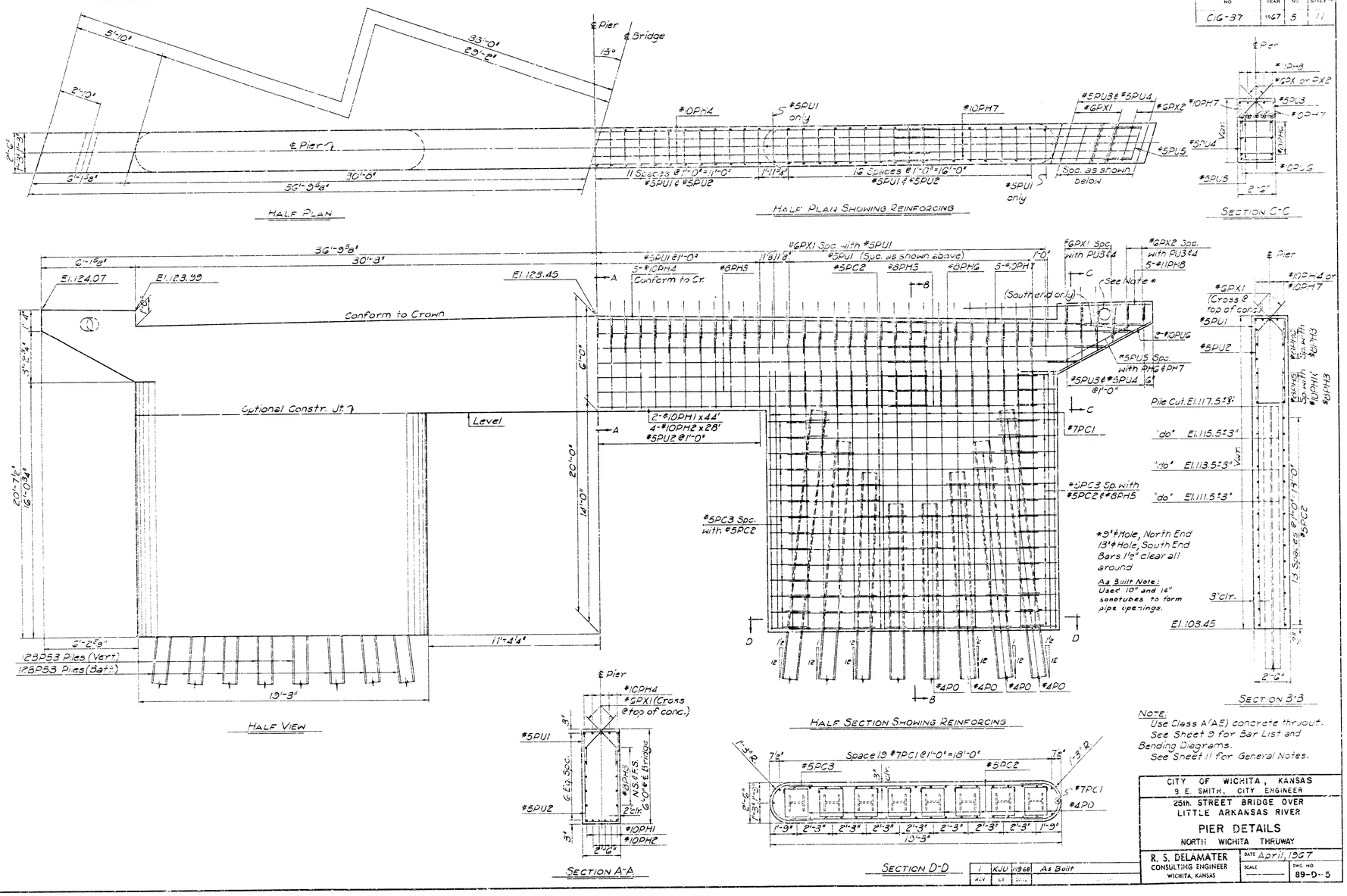
SECTION C-C



SECTION D-D


℄ Bridge
30'-0⅛"
31'-1⅝"
3'-8⅛"
18°
31'-6⅝"
#8AF1
#4A0
32'-9⅜"
35'-0" to ℄
7 Spaces @ 9'-6" = 66'-3"
Typical
2'-6"
#4AV2 & #4AV3
#4AV1 & #4AVG
#4AV1 & #4AVG
#GAF2 with #8AF1
#GAF3 with #8AF1
#GAF4 with #8AF1
6'-4°6"R.
6'-2°6"R.
7'-4⅛"
7'-4⅛"
3'-1⅜"
3'-1⅜"
2'-6⅝"
2'-8⅝"
2'-8⅝"
2'-8

PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
CIG-37	1967	5	11



1	KJU	11/68	As Built	
A.V.	E.T.	DATE		

Note:
Use Class A (AE) concrete thruout.
See Sheet 9 for Bar List and Bending Diagrams.
See Sheet 11 for General Notes.

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER

25th STREET BRIDGE OVER LITTLE ARKANSAS RIVER

PIER DETAILS

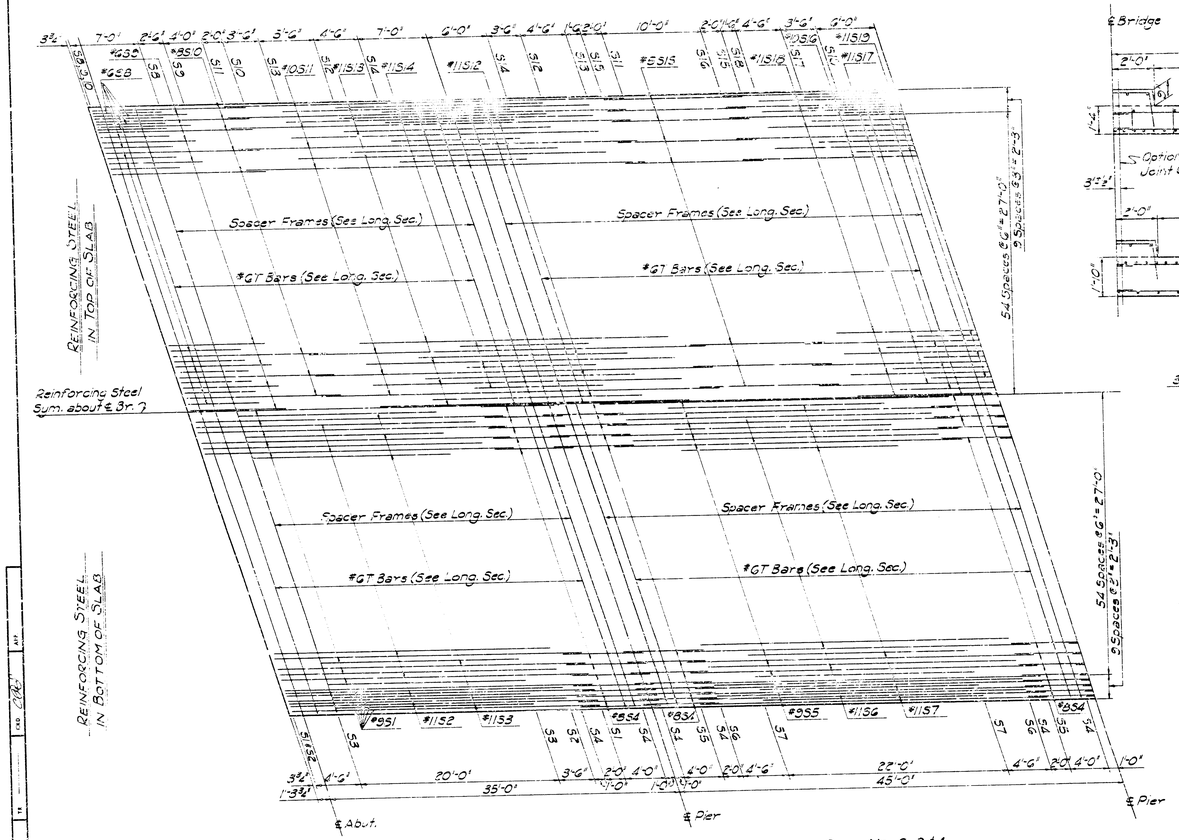
NORTH WICHITA THRUWAY

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE April, 1967
SCALE ———
DWG. NO. 89-D-5

PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
CIG-37	1967	6	11

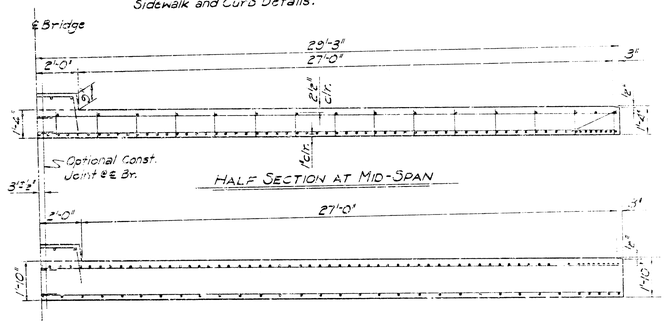
NOTE:
See Sheet 7 for Deck Section, Sidewalk and Curb Details.



SPAN NO. 1 OR 5

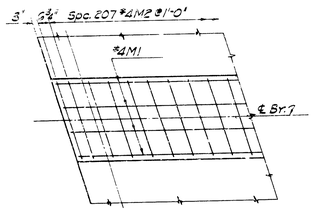
SPAN NO. 2, 3 & 4

PART PLAN SHOWING REINFORCING

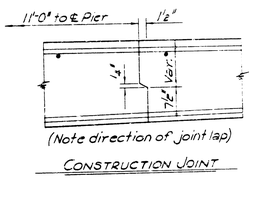


HALF SECTION AT MID-SPAN

HALF SECTION AT PIER

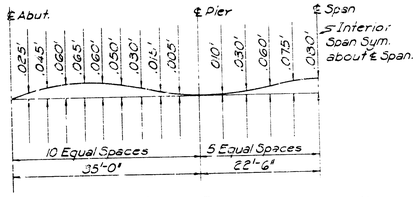


REINFORCING STEEL IN MEDIAN



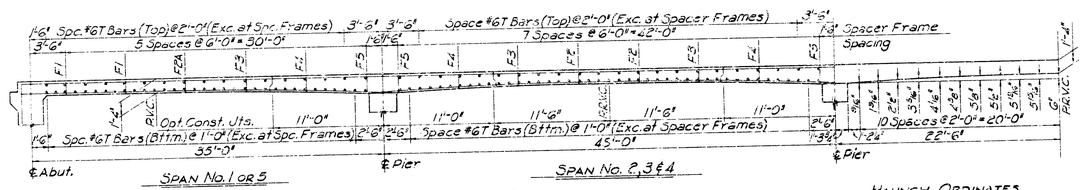
(Note direction of joint lap)

CONSTRUCTION JOINT



DEAD LOAD CAMBER DIAGRAM

NOTE:
Use Class AAA(AE) concrete thruout.

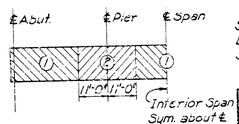


SPAN NO. 1 OR 5

SPAN NO. 2, 3 & 4

PART LONGITUDINAL SECTION AT ℄ BRIDGE

HAUNCH ORDINATES



* POURING SEQUENCE

* To be used only if falsework is steel beams.

See Sheet 9 for Bar List and Bending Diagrams.
See Sheet 11 for General Notes.

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER

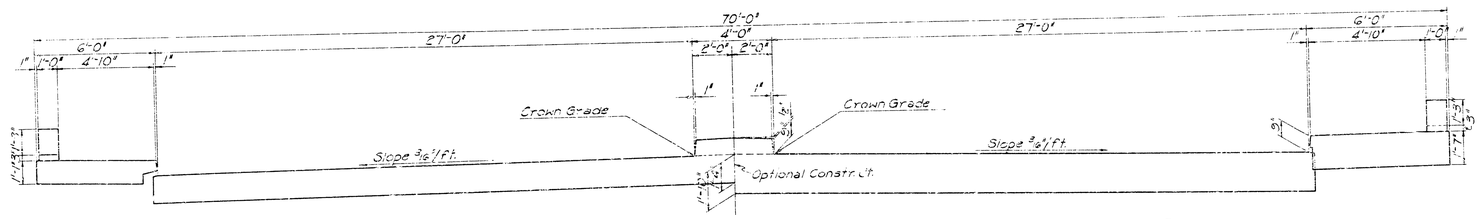
25th. STREET BRIDGE OVER LITTLE ARKANSAS RIVER

SUPERSTRUCTURE DETAILS

NORTH WICHITA THRUWAY

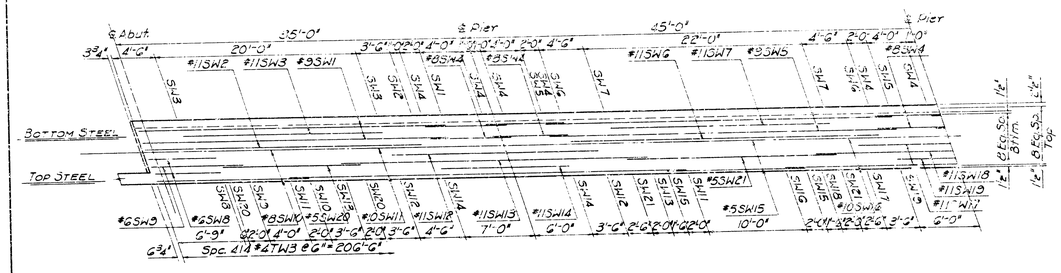
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE April 1967
	SCALE ———
	DWG. NO. 89-D-6

PROJECT NO.	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
C-G-37	146	7	

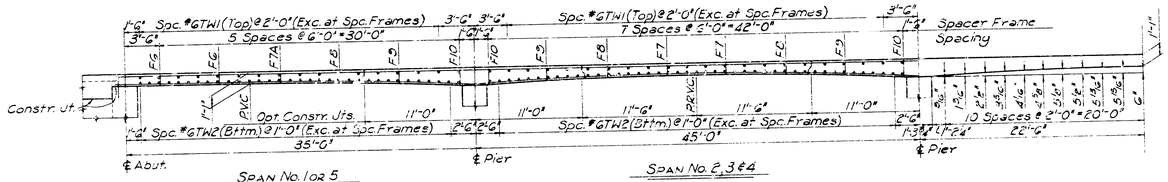


HALF SECTION AT MID-SPAN

HALF SECTION AT PIER



PART PLAN OF SIDEWALK SHOWING REINFORCING

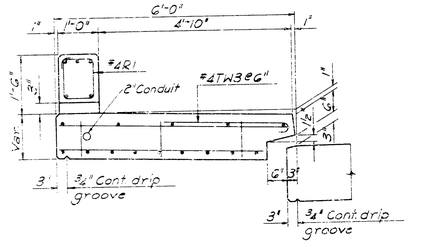


SPAN No. 1 or 5

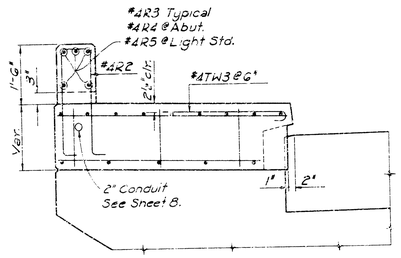
SPAN No. 2, 3 & 4

LONGITUDINAL SECTION THRU SIDEWALK

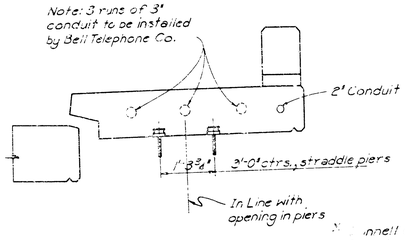
HAUNCH ORDINATES



SECTION NEAR MID-SPAN



SECTION AT PIER



PIPE HANGER DETAIL
South Walk Only

* Grinnell CB Universal Concrete Inserts, Fig. 282 or equal, for 3/4" hanger rods. Subsidiary to item 0.^ Class AAA(AE) Concrete.

TYPICAL SECTION THRU SIDEWALK & PARAPET

NOTE:
See Sheet 9 for Bar List and Bending Diagrams.
See Sheet 11 for General Notes.
See Sheet 6 for Dead Load Camber Diagram.

* Const. Note:
Bolt washers from Grinnell fittings were given to Water Dept. office for safe keeping

	KJU 11/1968	As Built

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER

25th. STREET BRIDGE OVER LITTLE ARKANSAS RIVER

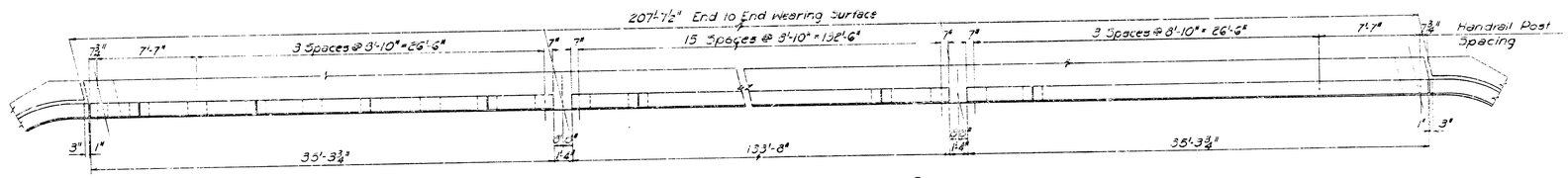
DECK SECTION & WALK DETAILS

NORTH WICHITA THRUWAY

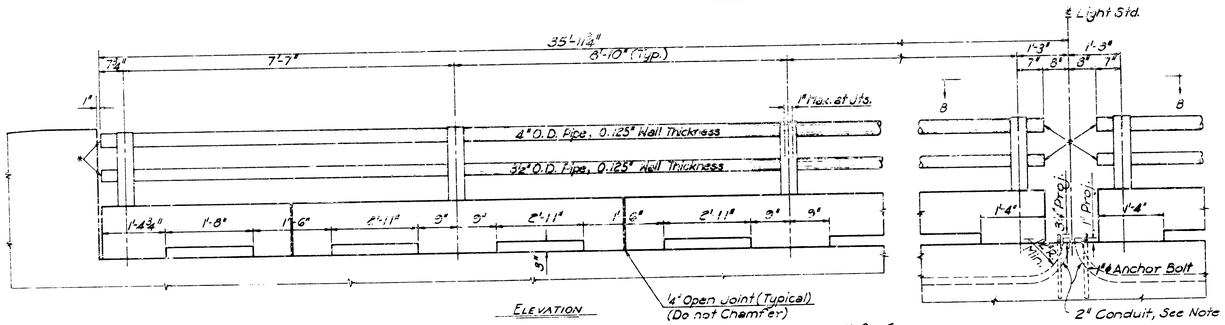
R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE 4-27-67
SCALE
DWG. NO. 89-0-7

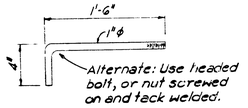
CIG-37 67 8 11



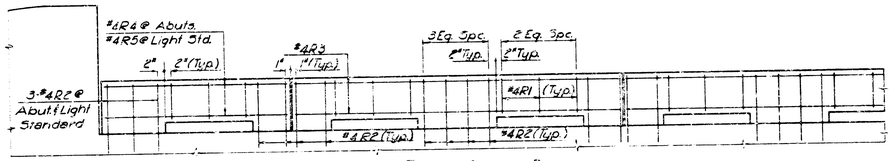
HANDRAIL PARAPET WALL PLAN



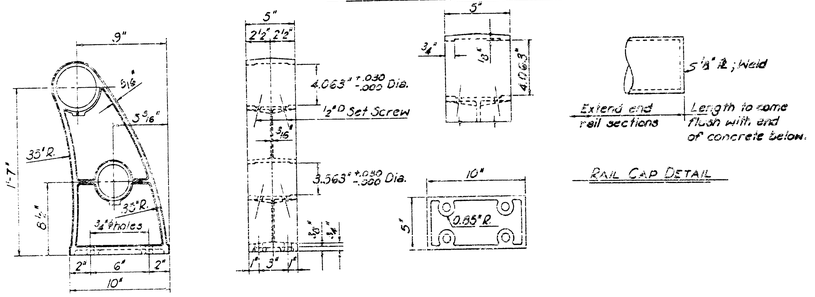
ELEVATION



ANCHOR BOLT

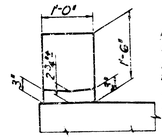


PART ELEVATION SHOWING REINFORCING



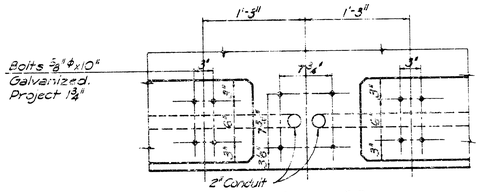
HANDRAIL POST DETAILS

RAIL CAP DETAIL



NOTE: At the option of the Contractor, the parapet slot may be constructed to the dimensions shown, or similarly, to expedite form removal.

OPTIONAL CURB SECTION



SECTION B-B

NOTE:
The top surface of the parapet wall shall be given a troweled finish, with special care given to provide smooth contact surfaces under handrail posts.

Rail sections shall be of such length as to span at least two full handrail panels.

This handrail is intended to be identical, except for panel lengths, to that previously used on the Amicon Bridge for the City of Wichita.

Bevel exposed edges of parapet slots ½".

See Sheet 11 for General Notes.
See Sheet 9 for Bar List and Bending Diagrams.
2" Galvanized Rigid Conduit shall be approved by Underwriters Laboratories. All conduit ends shall be closed, using permanent type caps.

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER

25th. STREET BRIDGE OVER LITTLE ARKANSAS RIVER

HANDRAIL DETAILS

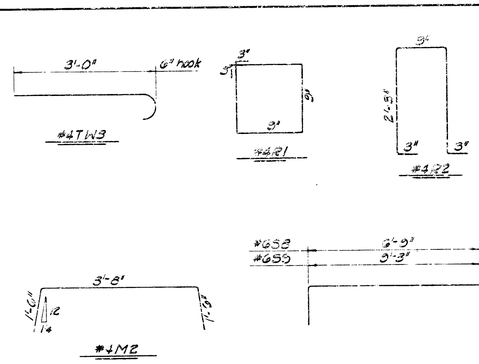
NORTH WICHITA THRUWAY

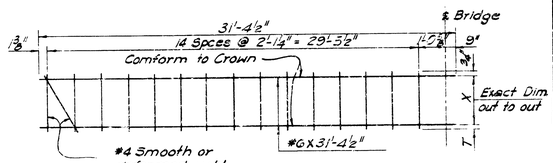
R. S. DELAMATER CONSULTING ENGINEER WICHITA, KANSAS	DATE April, 1967
	SCALE ———
	DWG NO 89-D-8

PROJECT NO	FED. AID PROJ. NO.	STATE SHEET NO.	TOTAL SHEETS
0G-37	1967	D	11

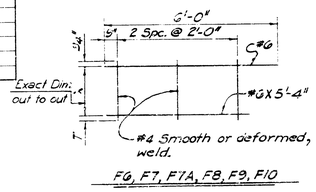
SUPERSTRUCTURE

Straight Bars				Bent Bars			
Mark	No.	Size	Length	Mark	No.	Size	Length
S1	126	#9	31'-0"	F1	8	*	*
S2	60	#11	28'-0"	F2	12	*	*
S3	64	#11	20'-0"	F2A	4	*	*
S4	504	#8	8'-0"	F3	16	*	*
S5	189	#9	58'-0"	F4	16	*	*
S6	90	#11	31'-0"	F5	16	*	*
S7	96	#11	22'-0"	F6	6	*	*
S8	64	#8	15'-8"	F7	12	*	*
S9	64	#10	40'-0"	F7A	4	*	*
S10	64	#8	21'-0"	F8	16	*	*
S11	64	#11	21'-0"	F9	16	*	*
S12	64	#11	31'-0"	F10	16	*	*
S13	62	#11	13'-0"				
S14	60	#11	13'-0"				
S15	96	#3	14'-0"				
S16	64	#10	35'-0"	S8	124	#6	9'-0"
S17	64	#11	19'-0"	S9	62	#6	11'-6"
S18	62	#11	28'-0"				
S19	60	#11	12'-0"				
M1	32	#4	27'-0"	M2	209	#4	6'-8"
T	446	#6	31'-4"				
TW1	128	#6	6'-0"	TW3	828	#4	3'-6"
TW2	318	#6	5'-3"				
R3	200	#4	6'-9"	R1	276	#4	3'-6"
R4	20	#4	3'-7"	R2	380	#4	5'-9"
R5	40	#4	4'-10"				
SW1	20	#9	31'-0"				
SW2	8	#11	28'-0"				
SW3	8	#11	20'-0"	*See Bending Diagram			
SW4	80	#3	8'-0"				
SW5	30	#9	35'-0"				
SW6	12	#11	31'-0"				
SW7	12	#11	22'-0"				
SW10	12	#8	15'-3"				
SW11	12	#10	40'-0"				
SW12	8	#11	21'-0"				
SW13	8	#11	31'-0"				
SW14	8	#11	13'-0"				
SW15	16	#5	14'-0"				
SW16	12	#10	35'-0"				
SW17	8	#11	19'-0"				
SW18	8	#11	28'-0"				
SW19	8	#11	12'-0"				
SW20	8	#5	13'-5"				
SW21	12	#5	21'-0"				





F1, F2, F2A, F3, F4, F5



F6, F7, F7A, F8, F9, F10

BAR	X	T
F1	10 15/16"	2 7/16"
F2	10 7/16"	2 7/16"
F2A	3 5/16"	2 7/16"
F3	10 5/16"	2 7/16"
F4	11-11/16"	2 1/8"
F5	11-3 5/16"	2"
F6	7 5/16"	2 7/16"
F7	7 5/16"	2 7/16"
F7A	6 5/16"	2 7/16"
F8	7 5/16"	2 7/16"
F9	10 1/16"	2 1/8"
F10	11-0 15/16"	2"

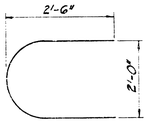
ONE ABUTMENT (2 THUS)

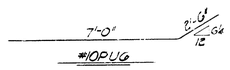
Straight Bars				Bent Bars			
Mark	No.	Size	Length	Mark	No.	Size	Length
AF1	57	#8	23'-3"	AB1	59	#5	5'-5"
AF3	6	#6	9'-0"	AF2	6	#6	10'-7"
AF5	6	#6	11'-3"	AF4	6	#6	3'-9"
AR1	36	#4	3'-0"	AV1	67	#4	12'-3"
AR2	8	#4	3'-10"	AV2	6	#4	4'-0"
AR3	6	#4	8'-4"	AV3	6	#4	13'-10"
				AV4	8	#4	*
AN1	12	#5	10'-6"	AV5	3	#4	*
AW2	14	#5	3'-6"	AV6	67	#4	3'-6"
				AO	30	#4	8'-8"
				SW1	8	#6	9'-9"
				SW3	4	#6	12'-3"

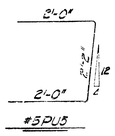
ONE PIER (1 THUS)

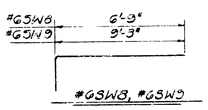
PC1	80	#7	16'-6"				
PC2	56	#5	16'-6"				
				PC3	62	#5	6'-2"
PH1	2	#10	44'-0"				
PH2	4	#10	29'-0"	PO	36	#4	7'-2"
PH3	10	#8	44'-0"				
PH4	5	#10	44'-0"	PU1	61	#5	5'-2"
PH5	12	#8	10'-0"	PU2	57	#5	12'-6"
PH6	12	#8	*	PU3	12	#5	4'-3"
PH7	10	#10	16'-9"	PU4	12	#5	*
PH8	10	#11	12'-0"	PU5	8	#5	6'-2"
				PU6	4	#10	9'-2"
PX2	8	#6	3'-3"	PX1	138	#6	4'-6"

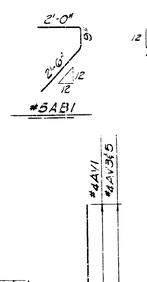
* See Bending Diagram

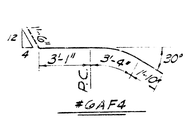


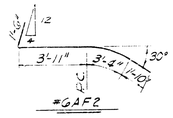


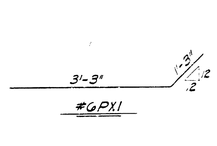


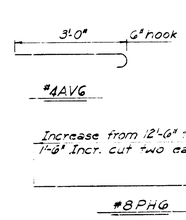












** Increase from 2'-1" to 3'-4¾" by 5¼" increment cut two each length.
* Increase from 1'-1½" to 3'-10" by 6½" incr. cut two each length.

1	KJV	11/24/67	As Built

CITY OF WICHITA, KANSAS
B. E. SMITH, CITY ENGINEER

25th STREET BRIDGE OVER LITTLE ARKANSAS RIVER

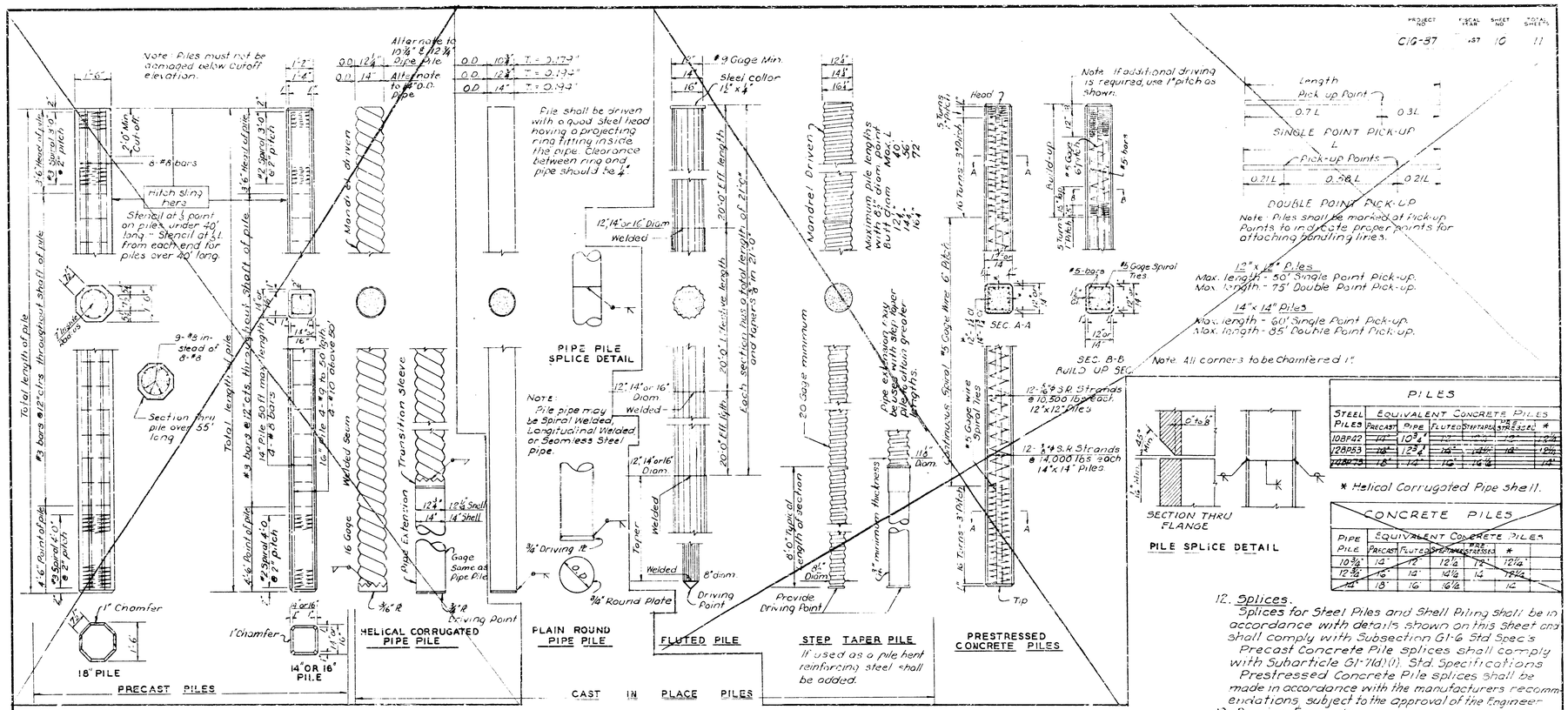
BAR LIST

NORTH WICHITA THRUWAY

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE April, 1967
SCALE ———
DWG NO 69-D-9

PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
C16-87	87	10	11



PILES						
STEEL PILES	EQUIVALENT CONCRETE PILES					
	PRECAST	PIPE	FLUTED	STEP TAPER	PRE STRESSED	*
10BP42	14"	10¾"	12"	12"	12"	12¾"
12BP53	16"	12¾"	14"	14"	14"	14¾"
14BP73	18"	14"	16"	16"		16¾"

* Helical Corrugated Pipe shell.

CONCRETE PILES					
PRECAST PILE	EQUIVALENT CONCRETE PILES				
	PRECAST	FLUTED	STEP TAPER	PRE STRESSED	*
10¾"	14"	12"	12"	12"	12¾"
12¾"	16"	14"	14"	14	14¾"
14"	18"	16"	16"		16¾"

GENERAL NOTES

1. Specifications.
Standard Specifications for State Road and Bridge Construction as currently used by the State Highway Commission of Kansas (Ed. 1966)

2. Choice of Piles.
Where 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 Concrete 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.
Other types of concrete piles not shown here are subject to the approval of the Engineer. Prestressed Concrete piles, Helical Corrugated Pipe shell or Step Taper piles shall not be used for abutments without expansion joints on bridges more than 150 ft. long.

3. Concrete.
All concrete for Precast and Cast-in-place shall be Class A concrete, fc' = 3,600 p.s.i.. See Article 61-7(a) Standard Specs.
Concrete for Prestressed Concrete piles shall be Class AAA concrete, fc's 4,000 p.s.i.. See Article 61-7(b) Standard Specs.

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 Article 61-7(a). Standard Specifications.

6. Cast-in-Place Shells.
Steel Shells for Cast-in-place Concrete Piles shall conform to the requirements of Section U-7. Standard Specifications.
All piles driven without mandrel use gages or thicknesses shown above, except fluted pile use No. 9 gage minimum. Piles driven with mandrel 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 the mandrel is removed.
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.
The Contractor shall maintain on the job at all times prior to and during the filling of the shells, a light suitable for visual inspection of the pile.

7. Steel Pile
Steel Pile shall conform to requirements of Subsection U5-8 Standard Specifications.

8. Pile Points
Pile points shall conform to the dimensions shown and requirements of Article U7-2(c) Standard Specifications. Pile points shall be mill welded to pile.

9. Welding
All field welding shall meet the requirements of Subsection G3-8 Standard Specifications.

10. Paint
All paint shall comply with Subsection G3-8 Standard Specifications. Or as specified on the plans.

11. 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.

12. Splices.
Splices for Steel Piles and Shell Piling shall be in accordance with details shown on this sheet and shall comply with Subsection G1-6 Std Spec's
Precast Concrete Pile splices shall comply with Subarticle G1-7(d)(1). Std. Specifications
Prestressed Concrete Pile splices shall be made in accordance with the manufacturers recommendations, subject to the approval of the Engineer

13. Driving Formula.
Driving Formula shall conform to Subarticle G1-4(d)(3).

14. Mill Test Reports
Steel Piles test reports shall comply with Art. U5-8(c) Standard Specifications.
Steel Shells test reports for cast-in-place piles shall comply with Subsection U7-4 Std. Specs.

15. Payment
Payment for all piles shall comply with Subsec. G1-9 Std. Specifications.

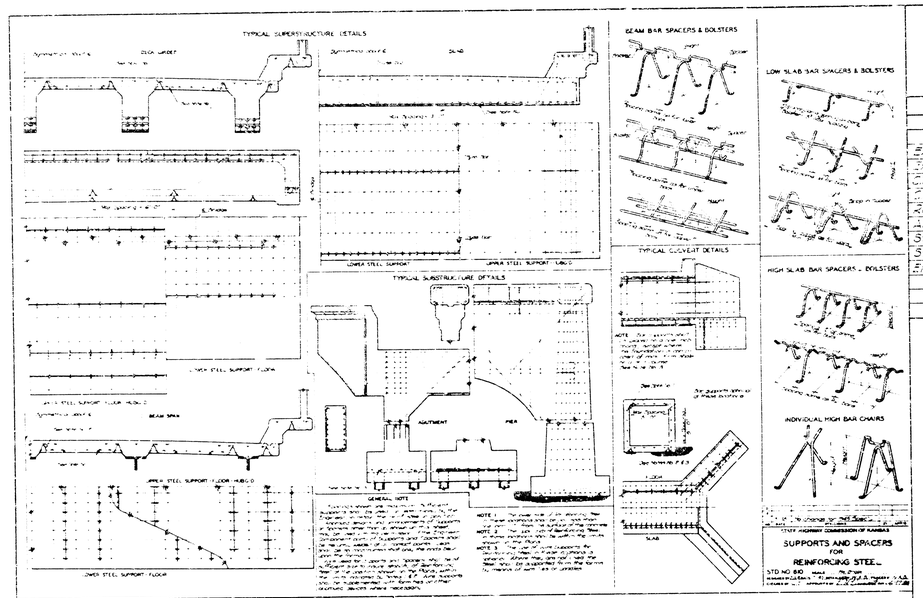
NO	DATE	REVISION	DES.	DET.	CK.
5	8-26-66	Revise Entire Gen. Note	J.C.L.	E.E.W.	
4	6-8-62	Add Longitudinal Welded Pipe 2 ea	-	T.A.C.	
3	6-2-61	Revise Gen. Note	J.C.L.	T.A.C.	
2	11-27-61	Revise Steel Pile General Note	J.C.L.	T.A.C.	
1	11-24-61	Remove note on Prestressed Conc. Pile	J.C.L.	T.A.C.	

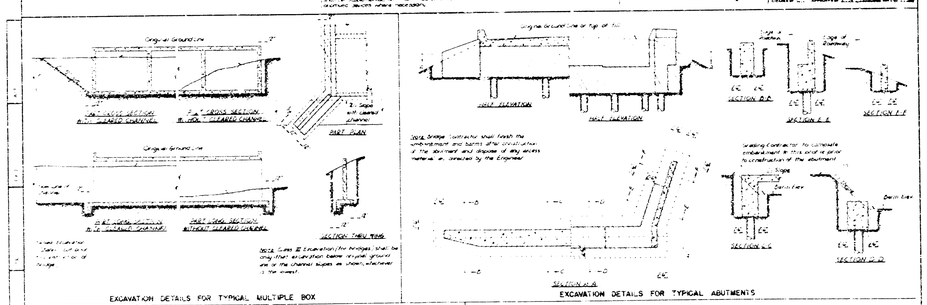
STATE HIGHWAY COMMISSION OF KANSAS

STANDARD PILE DETAILS

STD. NO. 102

SHEET NO.	SCALE	APP.	APP.
DESIGNED	DETAILED	QUANTITIES	CHECKED
DESIGN OK	DETAILED	QUANTITIES	TRACED





Summary of Bridge Quantities

Item	Abut #1	Pier #2	Pier #2	Pier #3	Pier #3	Pier #4	Abut #4	Superst.	Total	Unit
Excavation Class I	60	2				2	40		124	Cu. Yds.
Excavation Class II		21	61	21	61				344	Cu. Yds.
Class AAA(AE) Conc.	50.6						50.3	612.0	681.9	Cu. Yds.
Class A(AE) Conc.		84.5	84.5	84.5	84.5				338.0	Cu. Yds.
Reinforcing Steel *	6,330	(2,030	(2,030	2,030	2,030	6,330	3,770	270,550	Lbs.
Aluminum Handrail								201.33	201.33	Lin. Ft.
Steel Piles 10" #	490					490			980	Lin. Ft.
Steel Piles 12" #		560	1140	560	560				2,560	Lin. Ft.
Electrical Installation								1.5	Lump Sum	L.S.

Const. Note:
* See pile logs for lengths in place and cut off.
K Paid plan quantity for superstructure steel.

Summary of Grading Quantities

Item	Total	Unit
Brm. Soil Reuse (F.B.)	1.5	L.S.
Incl. Regrade (F.B.)	1.5	L.S.
Compacted Emb.	20	Cu. Yds.
Riprap	2,205	Cu. Yds.
Chain Link Fence	1.5	L.S.

General Notes

EARTH EXCAVATION: There will be no direct payment for Common Excavation, or borrow, as such. Payment will be for material in place, as Compacted Embankment.

EMBANKMENTS: The Contractor shall construct the embankments and shape the banks at the abutments as shown on Construction Layout and Contour Map prior to construction of the bridge.

EXCAVATION: Elevation 110.60 constitutes the Excavation Boundary Plane for estimating quantities for Class I and Class II Bridge Excavation; Class I above and Class II below; see diagrams this sheet for limits of pay excavation.

SOUNDINGS: Sounding information shown on Sheet 3 is as obtained from borings made in the field and represents the best information available to the City of Wichita.

PILES: All piles shall be driven to the penetration shown unless in the opinion of the Engineer such penetration cannot be secured without injury to the pile. All piles shall be driven to a minimum computed bearing value of 43 tons per pile in piers, 16 tons per pile in abutments.

PILE DRIVING: All piles shall be driven with a steam or diesel hammer; if a diesel hammer is used, sufficient hammer data shall be provided to permit rating by the Engineer before driving starts.

FALSEWORK AND FORMING: Falsework under superstructure, including each sidewalk slab, shall be left in place on any span until the concrete in that span and the adjacent span constructed first shall have attained its design strength; but in no case shall the falsework be removed before 14 days after placing concrete. Formset walls under handrails shall preferably, but not necessarily, be placed after falsework supporting the walk has been removed. Danger shall be provided in the grounds shown on the Dead-Load Camber Diagram.

CONCRETE: Class AAA(AE) Concrete shall be used in abutments and superstructure, including walks; Class A(AE) in Piers. Bevel all exposed edges with a 3/4" triangular molding and fillet all corners 3/4" unless otherwise noted.

REINFORCING STEEL: All dimensions shown relative to reinforcing steel placement are to centerline of bars unless otherwise noted. All dimensions shown in bending diagrams are out to out of bars.

DECK TREATMENT: Bridge deck shall be cured with Linseed Oil emulsion, in accordance with the Specifications.

DESIGN:
Design Loading: H20-S16-44 A.A.S.H.T.O. Specifications 1961 edit.

Unit Stresses: fc = 1,350 p.s.i. Class AAA
fc = 1,125 p.s.i. Class A
fs = 20,000 p.s.i. Intermediate
fy = 40,000 p.s.i. Class AAA
fy = 24,000 p.s.i. Class A

Pile Loading: 43 tons per pile in piers
16 tons per pile in abutments

CITY OF WICHITA, KANSAS
R. E. SMITH, CITY ENGINEER
25th. STREET BRIDGE OVER
LITTLE ARKANSAS RIVER
B.S., B.E., NOTES & QUANTITIES
NORTH WICHITA THRUWAY

R. S. DELAMATER
CONSULTING ENGINEER
WICHITA, KANSAS

DATE: Dec. '67
SCALE: ———
DWG. NO. 69-D-11