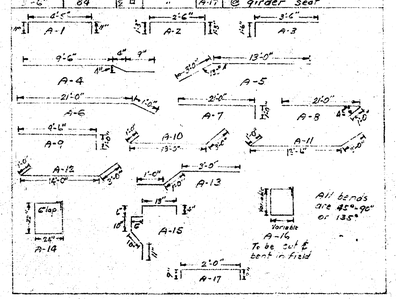
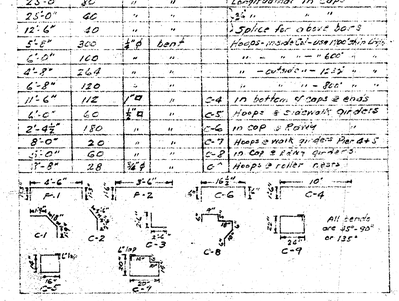
Abutment Steel

Length	No. of Pcs	Size	Shape	Bar No.	Location
25'-0"	68	½"ø	Straight		Front Footing
10'- "	46	"	"		Front Wall (Vertical)
12'-6"	20	"	"		Wing Footing
25'-0"	38	"	"		Front wall (Longitudinal)
14'-3"	24	"	"		Wing Wall (Vertical)
6'-3"	130	"	Bent	A-1	Footing
5'-0"	60	"	"	A-2	Wing Footing
5'-0"	120	"	"	A-3	Dowels
10'-1"	44	"	"	A-4	Front part of front wall
12'-0"	60	"	"	A-5	Horizontal bar in wing Wall
11'-5"	3	"	Straight		" " " " "
12'-0"	20	"	"		" " " " "
23'-2"	38	"	"		Columns
22'-0"	12	"	Bent	A-6	Tie rein. outside tie beams
22'-0"	12	"	"	A-7	Ctr. " " " "
22'-2"	12	"	"	A-8	inside " " " "
16'-4"	36	"	"	A-9	bars in 1st inside tie beam
17'-0"	12	"	"	A-10	outside " " " "
17'-6"	12	"	"	A-11	Ctr. " " " "
18'-0"	12	"	"	A-12	inside " " " "
5'-0"	92	"	"	A-13	Roof Wall
8'-8"	28	"	"	A-14	Hoop bars @ Roller nests
5'-0"	48	½" □	"	A-15	Coping on Wing Walls
5'-4"	88	⅝"ø	"	A-16	Hoop bars in Columns
5'-6"	84	½" □	"	A-17	@ girder seat



Steel for Piers

Length	No. of Pcs	Size	Shape	Bar No.	Location
25'-0"	192	⅝"ø	Straight		Longitudinal in pier facing
2'-0"	96	"	"		Splices for above bars
7'-6"	560	"	bent	A-1	Trans. bars in pier footing
5'-0"	672	"	"	F-2	Dowels
10'-6"	430	"	Straight		Vertical - inside Columns
5'-0"	320	"	bent	C-1	Cap ties
5'-0"	264	"	"	C-2	Anchor bar in girders
22'-6"	40	"	Straight		Vert. outside Col. piers E.S
9'-2"	8	"	"		" " " " "
11'-6"	8	"	"		" " " " "
5'-0"	8	"	bent	C-3	Dowels " "
23'-6"	40	"	Straight		Vert. outside Col. piers 2 & 7
9'-6"	8	"	"		" " " " "
12'-2"	8	"	"		" " " " "
5'-5"	8	"	bent	C-3	Dowels " "
25'-6"	40	"	Straight		Vert. outside Col. " 3 to 6
9'-6"	8	"	"		" " " " "
12'-8"	8	"	"		" " " " "
5'-6"	8	"	bent	C-3	Dowels " "
25'-0"	40	"	Straight		Vert. outside Col. " 4 & 5
8'-8"	40	"	"		" " " " "
7'-6"	8	"	"		" " " " "
18'-8"	8	"	"		" " " " "
5'-0"	8	"	bent	C-3	Dowels " "
25'-0"	80	"	"		Longitudinal in caps
25'-0"	60	"	"		" " " "
12'-6"	10	"	"		Splice for above bars
5'-8"	300	¾"ø	bent		Hoops - inside Col. use spacing 6 @ 5
6'-0"	160	"	"		" " " " 6"
6'-8"	264	"	"		" " outside " 12 @ 5 " "
6'-8"	120	"	"		" " " " 6" "
11'-6"	112	1" □	"	C-4	In bottom of caps & ends
6'-6"	66	⅝"ø	"	C-5	Hoops & Sidewalk girders
2'-4½"	180	"	"	C-6	In cap @ Roadway
8'-0"	20	"	"	C-7	Hoops @ walk girders Pier 4 & 5
5'-0"	60	"	"	C-8	In cap @ Roadway girders
1'-8"	28	⅝"ø	"	C	Hoops @ roller nests



Steel for 30' Spans

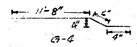
Length	No. of Pcs	Size	Shape	Bar No.	Location
30'-6"	40	1"ø	Hook		Roadway Girder - lower layer
29'-6"	40	⅞"ø	"		" " Middle "
31'-0"	30	1"□	bent		" " Top "
82'-0"	10	"	"		" " "
6'-8"	230	⅝"ø	"	G-1	" " Stirrups
30'-6"	12	1"ø	Hook		Sidewalk Girder - lower layer
29'-6"	4	⅞"ø	"		" " " Top "
30'-9"	8	"	bent		" " " "
8'-0"	88	½"ø	"	G-2	" " Stirrups
25'-0"	180	¾"ø	Straight		Roadway - Trans. bar
8'-2"	180	"	"		3'-6" " "
8'-4"	120	"	"		Sidewalk " "
6'-3"	120	"	"		" " "
25'-0"	164	"	"		Roadway - Long. bar
6'-3"	50	"	"		splice above bar
12'-6"	52	"	"		splice into next span

See Bridge plans for bending of girder steel

Steel for 32' Spans

Length	No. of Pcs	Size	Shape	Bar No.	Location
32'-6"	40	1"ø	Hook		Roadway Girder - lower layer
31'-6"	40	⅛"□	"		" " Middle "
33'-0"	30	1"ø	bent		" " Top "
34'-0"	10	"	"		" " "
6'-8"	240	⅝"ø	"	G-1	" " Stirrups
32'-6"	12	1"ø	Hook		Sidewalk " lower layer
31'-6"	4	"	"		" " Top "
32'-9"	8	"	bent		" " "
8'-0"	92	½"ø	"	G-2	" " Stirrups
25'-0"	142	¾"ø	Straight		3'-6" " "
8'-8"	142	"	"		Roadway - Trans. bar
8'-6"	128	"	"		Sidewalk " "
6'-3"	128	"	"		" " "
25'-0"	102	"	"		Roadway - Long. bar
8'-2"	50	"	"		Splice - top layer
12'-6"	52	"	bent	G-6	" lower layer

See Bridge plans for bending of girder steel



HANDRAIL

No. of Pcs	Length	Size	Wt	Location
4	24'-6"	6" Channel	82	Top rail 24' span
1	24'-6"	"	"	" 23' "
4	28'-6"	"	"	" 30' "
4	30'-3"	"	"	" 32' "
2	33'-0"	"	"	" 35' "
4	11'-3"	"	"	" Wing Rail
144	3'-0"	"	"	Posts
4	24'-6"	1" Angle	6.8	cap on rail
6	26'-6"	"	"	" " "
4	28'-6"	"	"	" " "
4	30'-3"	"	"	" " "
2	33'-0"	"	"	" " "
6	11'-3"	"	"	" " "
68	1'-9"	"	"	Top bar guide
8	4'-4"	"	"	" " "
8	5'-6"	"	"	" " "
8	6'-4"	"	"	" " "
4	6'-0"	"	"	" " "
8	6'-3"	"	"	" " "
68	1'-9"	"	149	bottom " "
8	5'-9"	"	"	" " "
8	5'-8"	"	"	" " "
8	5'-0"	"	"	" " "
4	6'-6"	"	"	" " "
8	5'-3"	"	"	" " "
88	0'-2"	2" angle	4.7	Support
920	2'-8½"	½"ø plain	141	rail bars (Length Varies)

EXPANSION JOINT

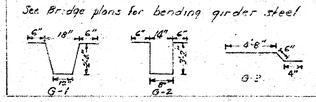
No. of Pcs	Length	Size	Location
4	7'-0"	4"x4"x½" L	Sidewalk
4	7'-3"	" " " "	"
56		¾"ø x 6"	Anchors to be welded
4	30'-0"	6"x6"x⅝" L	Roadway
4	32'-0"	6"x6"x⅝" L	"
2	35'-0"	6"x6"x⅝" L	"
2	30'-8"	⅝"x10" plate	" bent
256		¾"ø x 9"	Anchors to be welded

20 Roller Nests for 15" Girs
8 " " " 12" "

Steel for 26' Spans

Length	No. of Pcs	Size	Shape	Bar No.	Location
27'-2"	60	1"ø	Hook		Rdwy Girder - lower layer
26'-2"	60	⅞"ø	"		" " Middle "
27'-8"	30	1"ø	bent		" " Top "
28'-8"	10	"	"		" " " "
6'-8"	200	⅝"ø	"	G-1	" " Stirrups
27'-2"	2	⅞"ø	Hook		Sidewalk Girder - lower layer
26'-2"	4	"	"		" " Top "
12'-5"	8	"	bent		" " " "
8'-10"	80	½"ø	"	G-2	" " Stirrups
25'-0"	156	¾"ø	Straight		3'-4" Roadway Trans. bar
8'-4"	156	"	"		" " " "
8'-4"	104	"	"		Sidewalk " "
6'-3"	104	"	"		" " " "
25'-0"	102	"	"		Roadway - long. bar
5'-6"	52	"	bent	G-3	splice - lower layer next span
5'-6"	50	"	Straight		" top layer long. bar

See Bridge plans for bending girder steel



Steel for 28' Spans

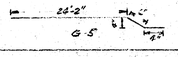
Length	No. of Pcs	Size	Shape	Bar No.	Location
28'-6"	60	1"ø	Hook		Rdwy Girder - lower layer
27'-6"	40	"	"		" " Middle "
29'-0"	30	"	bent		" " Top "
30'-0"	10	"	"		" " " "
6'-8"	220	⅝"ø	"	G-1	" " Stirrups
28'-6"	12	⅞"ø	Hook		Sidewalk Girder - lower layer
27'-6"	4	"	"		" " Top "
25'-9"	8	"	bent		" " " "
8'-0"	84	½"ø	"	G-2	" " Stirrups
25'-0"	168	¾"ø	Straight		3'-4"
8'-4"	168	"	"		Roadway - Trans. bar
8'-4"	112	"	"		Sidewalk Trans. bar
6'-3"	112	"	"		" " "
25'-0"	102	"	"		Roadway - Long. bar
5'-0"	50	"	"		Splice Top layer long. bar
8'-4"	52	"	"		" lower layer next span

See Bridge plans for bending of girder steel

Steel for 35' Span

Length	No. of Pcs	Size	Shape	Bar No.	Location
35'-6"	20	1⅛"ø	Hook		Rdwy Girder - lower layer
36'-6"	20	1"□	"		" " Middle "
36'-0"	15	1⅛"ø	bent		" " Top "
37'-0"	5	"	"		" " "
6'-8"	130	½"ø	"	G-1	" " Stirrups
35'-6"	6	1"ø	Hook		Sidewalk " - lower layer
34'-6"	2	"	"		" " Top "
35'-9"	4	"	bent		" " "
8'-0"	48	½"ø	"	G-2	" " Stirrups
25'-0"	108	¾"ø	Straight		Rdwy - Trans. bar
8'-6"	108	"	"		3½" " " Splices
8'-4"	70	"	"		Sidewalk " "
6'-3"	70	"	"		" " "
25'-0"	25	"	"		Rdwy - Long. bar
12'-6"	25	"	"		" " "
12'-6"	26	"	bent	G-4	" " lower layer
25'-0"	26	"	"	G-5	" " " "

See Bridge plan for bending of girder steel



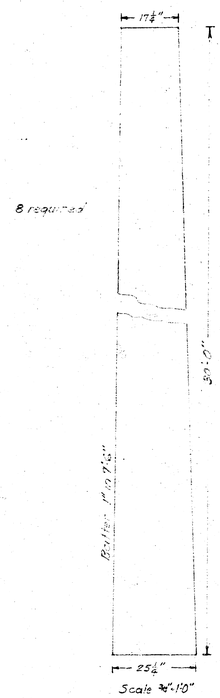
Bid on ½" steel cut to length. ¾" ø steel not to be cut but stock length. Do not bid on ⅝" ø steel.
Expansion Joint steel & Roller nests to be fabricated.
Holes to be drilled in Channels & angles.

Reinforcing Steel for CANTILEVER BRIDGE Over the Little Arkansas River at 11th St. Wichita Kansas.

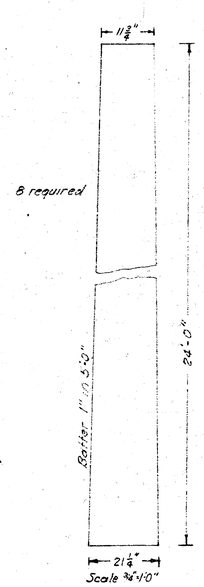
Engineering Department
City of Wichita, Kansas
R.L. Brostrom, City Engineer
September 1934

11th St.
Little Ark. R.
Bridge 1

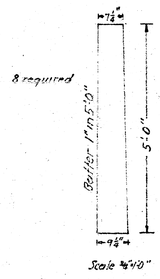
Form Design for Outside Columns
Campbell Bridge
Wichita Kansas.



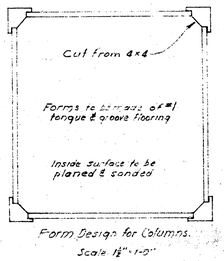
Scale ¾"-1'0"



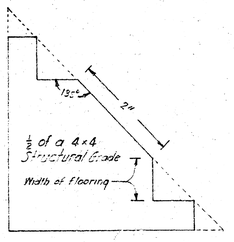
Scale ¾"-1'0"



Scale ¾"-1'0"



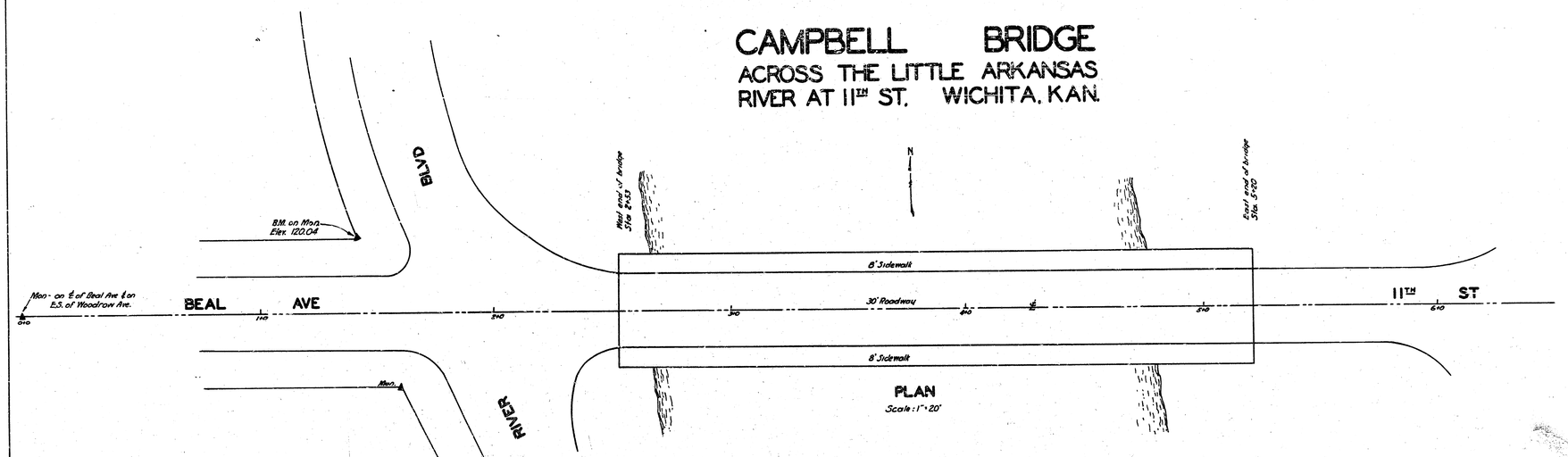
Form Design for Columns.
Scale 1½"-1'0"



Engineering Department
City of Wichita, Kansas.
P.L. Brockway City Engineer.

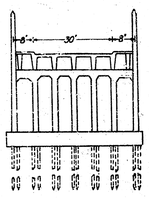
CAMPBELL BRIDGE

ACROSS THE LITTLE ARKANSAS RIVER AT 11TH ST. WICHITA, KAN.

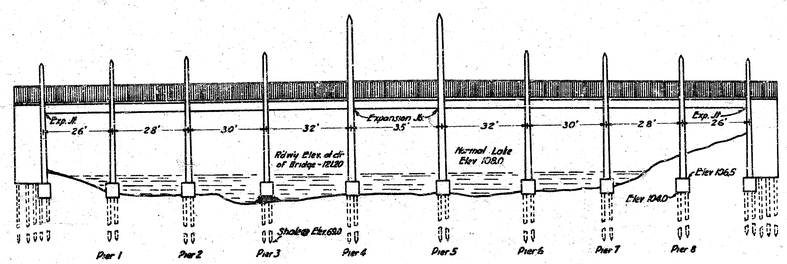


PLAN

Scale: 1" = 20'



CROSS-SECTION



ELEVATION

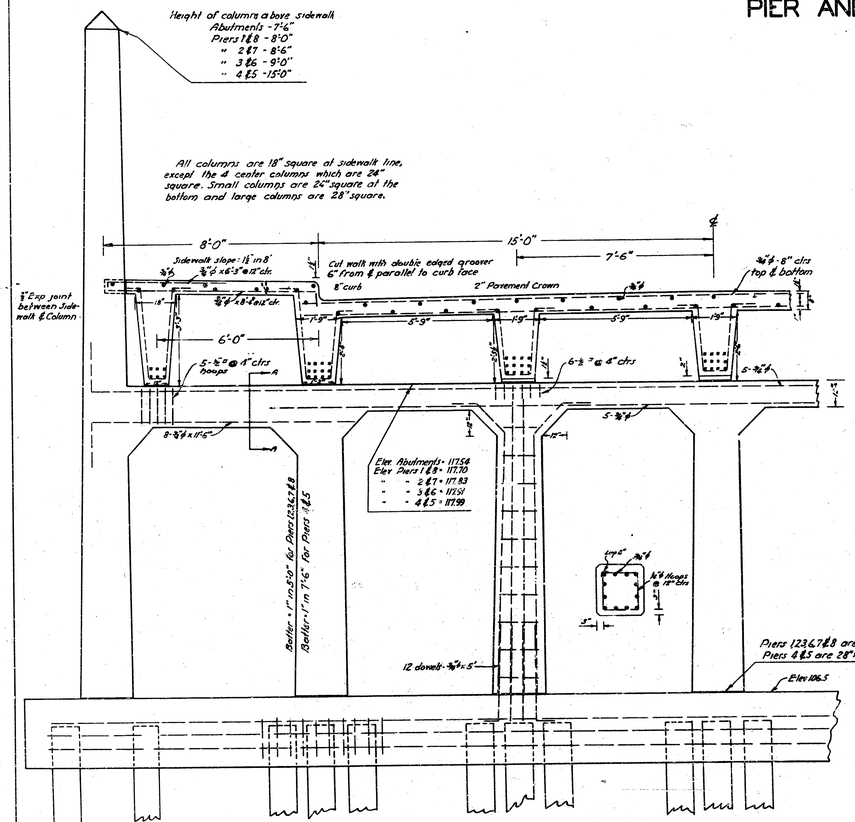
Scale: Horiz 1" = 20'
Vert 1" = 10'

REINFORCED CONCRETE DECK GIRDER

ENGINEERING DEPARTMENT
CITY OF WICHITA, KANSAS
P.L. BEGGERLY, CITY ENGINEER
AUGUST 1934
SHEET 1 7 SHEETS

D.D.W.

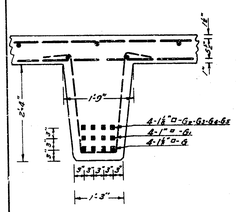
PIER AND DECK DETAILS

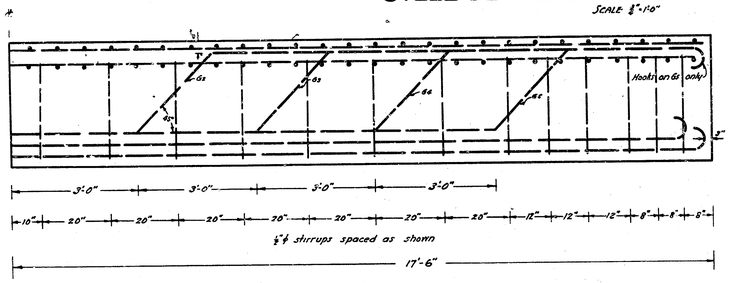


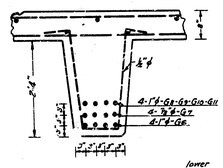
CAMPBELL BRIDGE
Engineering Department
City of Wichita, Kansas
R.L. Stuckey City Engineer
Sheet 2 7 Sheets

STEEL DETAIL OF ROADWAY GIRDERS

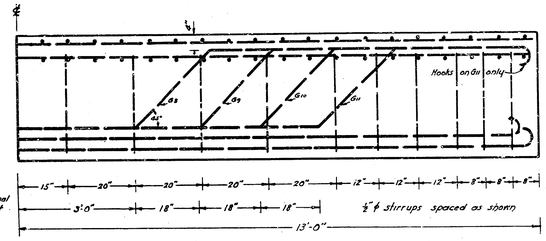
SCALE ¾"=1'0"





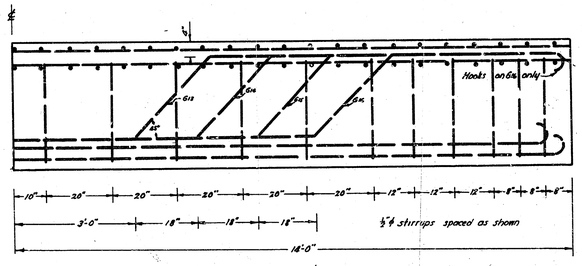


lower
At fixed ends longitudinal bars in floor lap next span bars 2 ft.

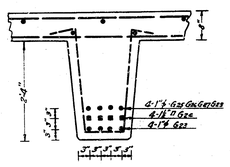


Add 8" at abutment end on all longitudinal steel.
Add one stirrup.

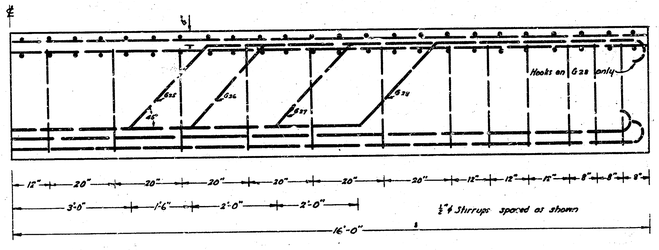
Longitudinal bars in floor lap next span bars 2 ft.

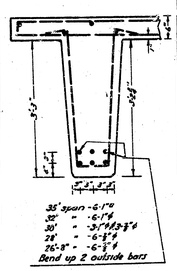


Longitudinal bars in floor lap next span bars 2 ft.

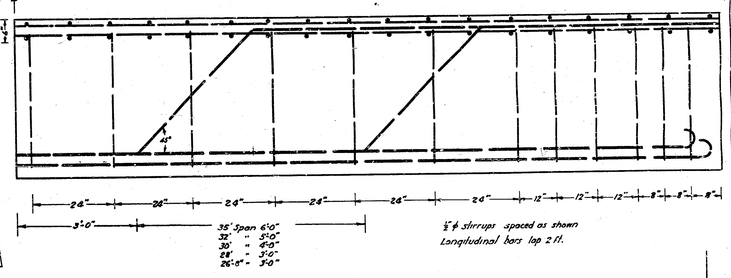


Longitudinal bars in floor lap next span bars 2 ft.



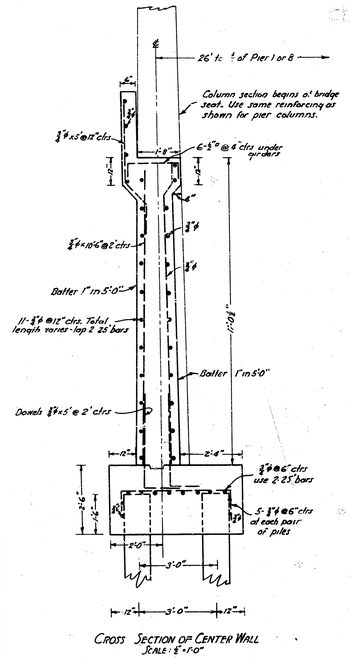


Bend up 2 outside bars

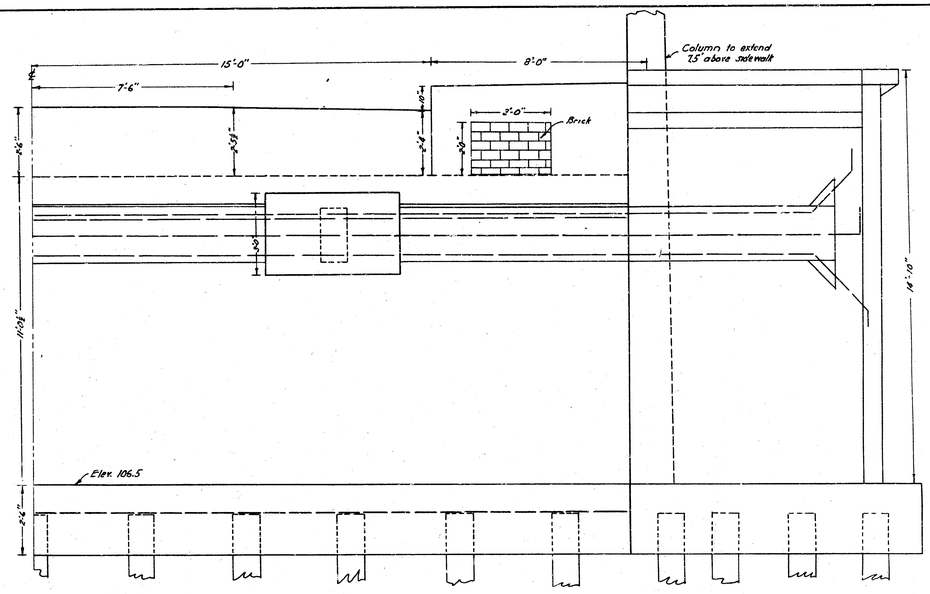


STEEL DETAIL OF SIDEWALK GIRDER

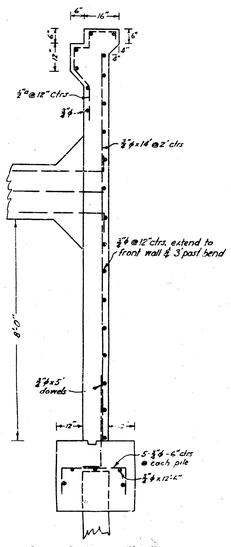
CAMPBELL BRIDGE
Engineering Department
City of Wichita, Kansas
R.L. Brockway City Engineer
Sheet 3 7 Sheets



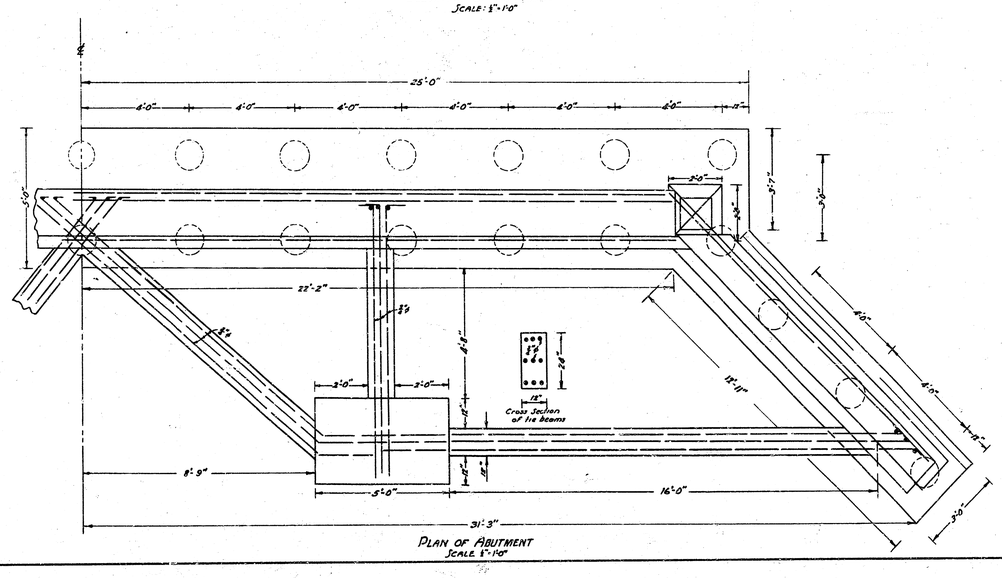
CROSS SECTION OF CENTER WALL
SCALE: 1/2" = 1'-0"



ELEVATION OF ABUTMENT
SCALE: 1/2" = 1'-0"



CROSS SECTION OF WING WALL
SCALE: 1/2" = 1'-0"



PLAN OF ABUTMENT
SCALE: 1" = 1'-0"

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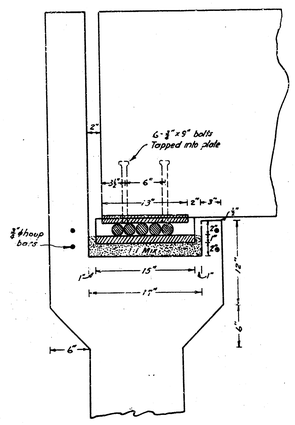
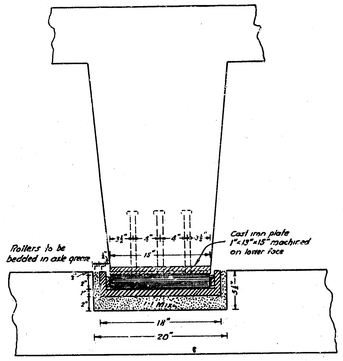
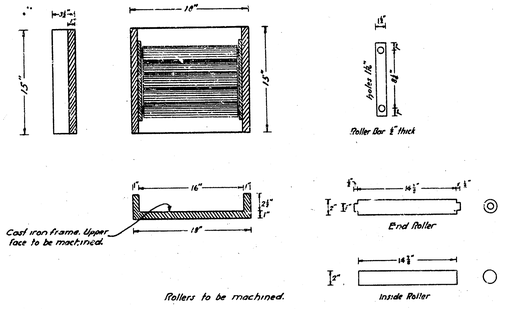






ROLLER NESTS FOR 15" GIRDERS

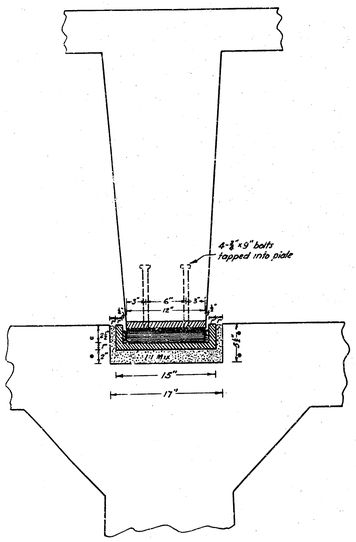
NUMBER REQUIRED	
20 plates 1"x 13"x 15"	20 Sets
20 frames 12"x 18"	
40 end rollers	
60 inside rollers	
40 roller bars	
120 bolts ¾"x 9"	

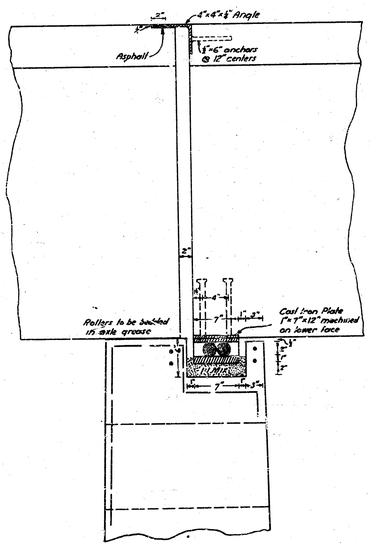
ROLLER NESTS FOR 12" GIRDERS

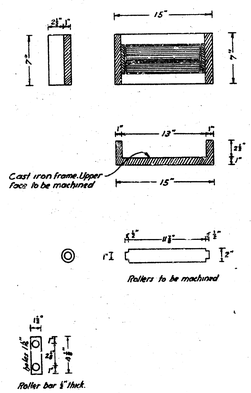
NUMBER REQUIRED	
8 plates 1"x 7"x 12"	8 Sets.
8 frames 7"x 15"	
16 rollers	
16 roller bars	
32 bolts ¾"x 9"	

DETAIL OF ROLLER NESTS FOR 15" GIRDERS

Scale 1½"=1'0"







DETAIL OF ROLLER NESTS FOR 12" GIRDERS

Scale 1½"=1'0"

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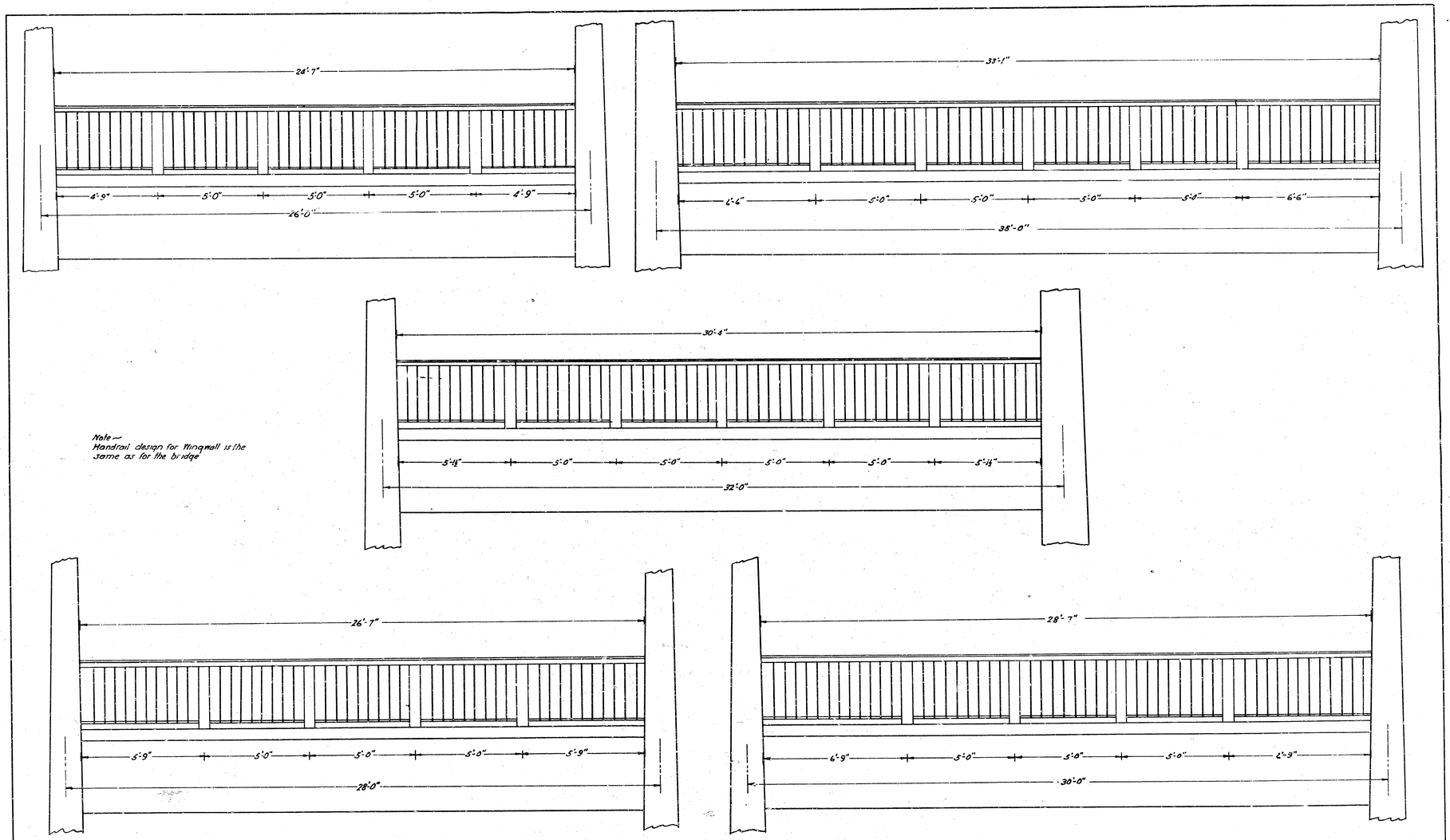

Note —
Handrail design for Wingwall is the same as for the bridge

HANDRAIL PANELS

Scale: ½"=1'0"

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