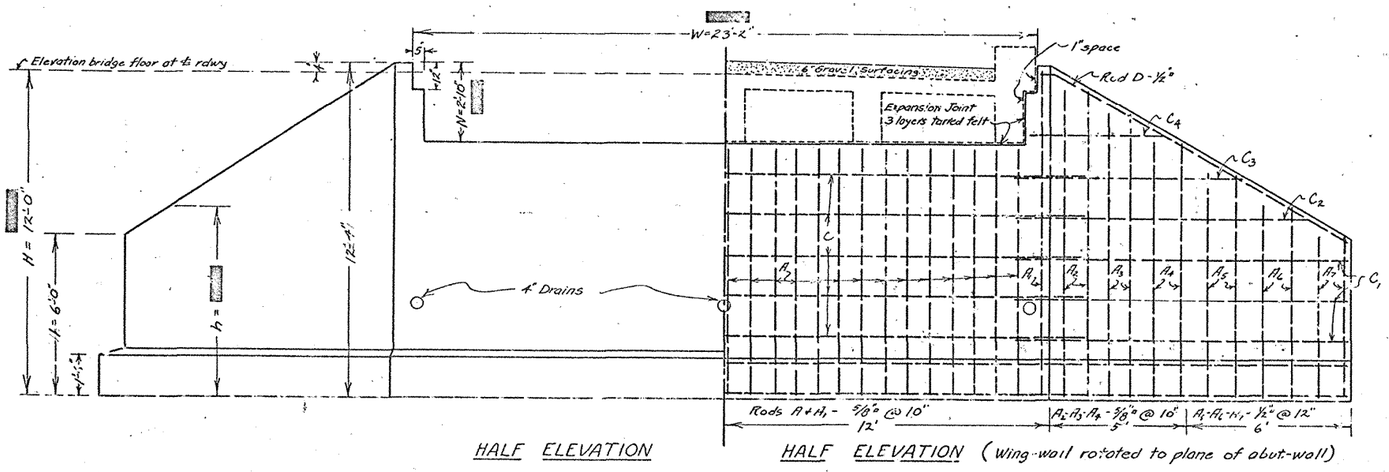
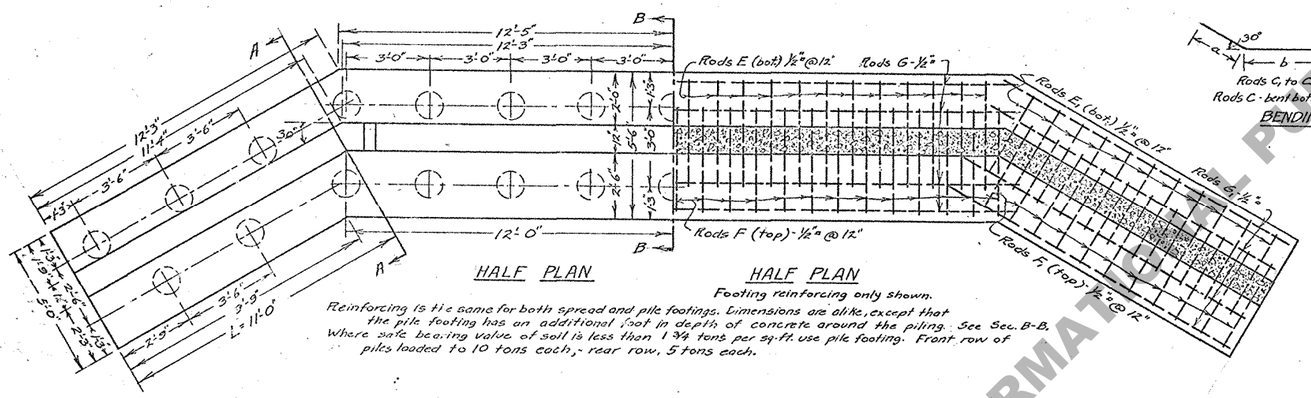
FED. RD. PROJ. NO.	STATE	FED. RD. PROJ. NO.	LOCAL PROJ. NO.	SHEET NO.	TOTAL SH. NO.
6	LA.				



HALF ELEVATION

HALF ELEVATION (Wing-wall rotated to plane of abut-wall)

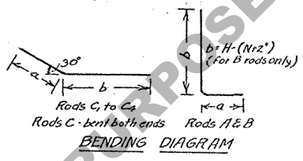


HALF PLAN

HALF PLAN

Footing reinforcing only shown.

Reinforcing is the same for both spread and pile footings. Dimensions are alike, except that the pile footing has an additional foot in depth of concrete around the piling. See Sec. B-B. Where safe bearing value of soil is less than 1 3/4 tons per sq. ft. use pile footing. Front row of piles loaded to 10 tons each, - rear row, 5 tons each.



BENDING DIAGRAM

TABLE I

ABUTMENT STEEL SCHEDULE

H= 12'-0", 30' Girder, 20' Rdwy, W= 23'-2", N= 2'-10"

Location	Mk.	Size	Spcg.	No.	Lgth.	Wgt.	Bending
Rear-vert.	A	5/8	10"	27	11'-9"	220	a = 2'-8"
" "	A_1	5/8	10	2	14'-6"	[illegible]	do.
" h.r.	C	½	18	5	28'-6"	121	a=1'-0" (others)
Ftg. (bot.)	E	½	12	24	4'-0"	82	straight
" (top)	F	½	12	25	4'-0"	85	do.
" long.	G	½	—	4	23'-0"	85	do.
TOTAL	15.1	Cu.yds. Conc.			832	Lbs. Steel	
For pile ftg. add	5.0	Cu.yds. Conc.			18	piles	

STEEL IN TWO WINGS

H= 12'-0", h= 6'-0" L= 11'-0"

Location	Mk.	Size	Spcg.	No.	Lgth.	Wgt.	Bending.
Rear-vert.	A_2	5/8	10"	4	13'-6"	72	a = 2'-8"
"	A_3	5/8	10	4	12'-6"	66	do.
"	A_4	5/8	10	4	11'-6"	61	do.
"	A_5	½	12	4	10'-9"	35	do.
"	A_6	½	12	4	9'-2"	31	do.
"	A_7	½	12	4	8'-0"	27	do.
Rear-hor.	C_1	½	18	6	13'-0"	66	c = 1'-0"
"	C_2	½	18	2	11'-9"	20	do.
"	C_3	½	18	2	9'-3"	16	do.
"	C_4	½	18	2	6'-0"	9	straight
Top wing	D	½	—	2	12'-9"	22	do.
Ftg. (bot.)	E_1	½	12	22	3'-6"	65	do.
" (top)	F_1	½	12	22	3'-6"	65	do.
" long.	G_1	½	—	8	12'-0"	82	do.
TOTAL	12.6	Cu.yds. Conc.			637	Lbs. Steel	
For pile ftg. add	4.1	Cu.yds. Conc.			10	piles	

TOTAL ONE ABUT.	FOOTING	CU. YDS. CONC.	LBS. STEEL	PILING	
	Sprd.	27.7	1462		
	Pile	36.8	1469	2.8	@30°: 840'

TABLE II

ABUTMENT STEEL SCHEDULE

H= , Girder, Rdwy, W= , N=

Location	Mk.	Size	Spcg.	No.	Lgth.	Wgt.	Bending.
TOTAL		Cu.yds. Conc.				Lbs. Steel	
For pile ftg. add		Cu.yds. Conc.				piles	

STEEL IN TWO WINGS

H= h= L=

Location	Mk.	Size	Spcg.	No.	Lgth.	Wgt.	Bending.
TOTAL		Cu.yds. Conc.				Lbs. Steel	
For pile ftg. add		Cu.yds. Conc.				piles	

TOTAL ONE ABUT.	FOOTING	CU. YDS. CONC.	LBS. STEEL	PILING	
	Sprd.				
	Pile				

TABLE III

QUANTITIES FOR 12' & 11' HEIGHTS & VARIOUS WING LENGTHS

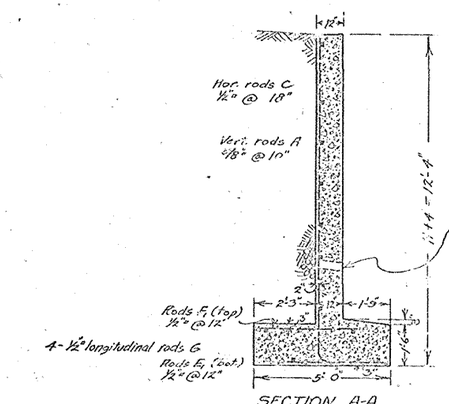
30' Girder, 20' Rdwy, N= 2'-10", W= 23'-2"

H	h	L	B	Conc.	Steel	No. Piles	Conc. per pile ftg.
12'-0"	4'-0"	14'-6"	—				
"	5'-0"	12'-8"	—				
"	6'-0"	11'-0"	—	27.7	1469	2.8	36.8
"	7'-0"	9'-3"	—				
"	8'-0"	7'-6"	—				
11'-0"	4'-6"	12'-8"	—				
"	5'-0"	11'-0"	—				
"	6'-0"	9'-3"	—				
"	7'-0"	7'-6"	—				

TABLE IV.

QUANTITIES TO BE ADDED TO TABLE III FOR VARIOUS GIRDER SPANS & ROADWAY WIDTHS. ALSO VALUES OF W & N

Spn	20' Roadway N	W	Conc.	Steel	Roadway N	W	Conc.	Steel	Roadway N	W	Conc.	Steel
16'-0"	2'-0"	23'-2	0.66									
18'-0"	2'-2"	"	0.53									
20'-0"	2'-4"	"	0.40									
22'-0"	2'-5"	"	0.33									
24'-0"	2'-6"	"	0.26									
26'-0"	2'-7"	"	0.20									
28'-0"	2'-8"	"	0.13									
30'-0"	2'-10"	"	0.00	0								

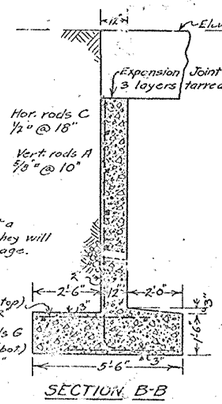


SECTION A-A

WING-WALL

Spread Footing

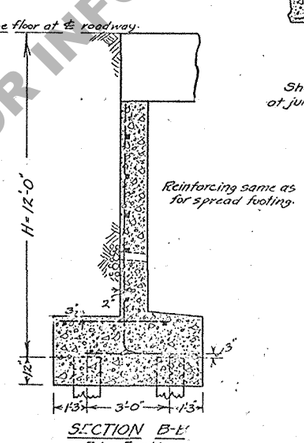
NOTE:- For reinforcing at sections other than A-A, see Elevation of wing.



SECTION B-B

ABUT.-WALL

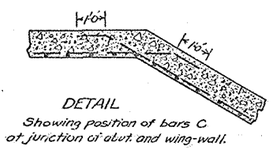
Spread Footing



SECTION B-B

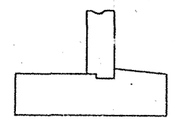
Pile Footing

NOTE:- Dimensions same as for sprd. ftg., except for the additional ft. in depth of ftg.



DETAIL

Showing position of bars C at juriction of abut. and wing-wall.



DETAIL

Construction Joint

GENERAL NOTES & DESIGN DATA.

General Spec. - La. State Hwy. Dept.

All concrete to be Class A (1:2:4).

All reinforcing to consist of deformed bars, having an effective area equal to that of the bars noted on plan.

All exposed corners to be given a 3/4" chamfer, except where noted otherwise.

Design as shown on plan is for 30' girder, with 20' roadway. For other girder spans and roadway widths, see table IV. For 12' & 11' heights, with various wing lengths, see table III.

Construction joint between footing and wall to be keyed as shown on plan.

All dimensions relating to reinforcing bars, refer to centers of bars.

NOTATION:-

H= height, taken as distance from bridge floor at ℄ rdwy. to bottom of sprd. ftg., - and to top of piling for pile ftg.

H= height of wing-wall at end, as shown.

L= length of wing-wall, as shown.

d= depth of notch for girder.

W= width of notch for girder.

Values of N and W for different girder spans and roadway widths are given in table IV.

Lateral earth pressure taken as equal to that of a fluid weighing 25 lbs. per cu. ft. and having a depth equal to that of the earth fill.

f_c = 650#, f_s = 16,000#. Wgt. earth = 100# per cu. ft.

Expansion joint between abutment and girder to be constructed at one end only - the other end of girder to be anchored to abutment.

Station	Spn	Rdy	Plan	H	h	Quantities - 2 Abut's. Conc.	Steel	Piling.	Remarks

12' CONCRETE ABUTMENT

FOR CONC GIRDER BRIDGES, - 16' to 30' SPANS

16', 18' & 20' ROADWAYS

Louisiana State Highway Department

State Board of Engineers

NEW ORLEANS, LA. Scale 3/8" = 1 ft JULY 1921

APPROVED:-

STATE HIGHWAY ENGINEER

Designed by:- A.F.J. 7/2/21.
Drawn by:- A.F.J. 7/6/21.
Traced by:- A.F.J. 7/12/21.
Checked by:-
Revisions:-

(B-2-57) C-5-9

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