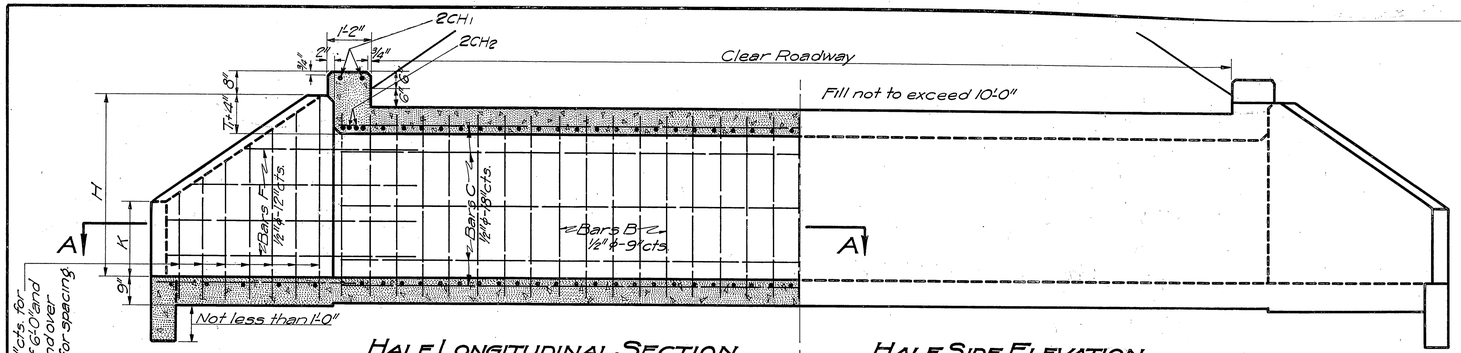
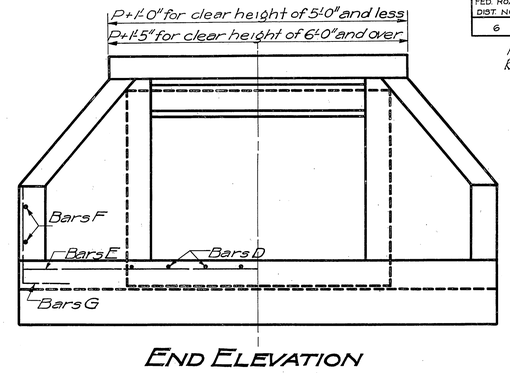
FED. ROAD DIST. NO.	STATE	AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				

Revised, Feb. 10, 1933
Rev. Note for Reinf. Wts. 5-7-63

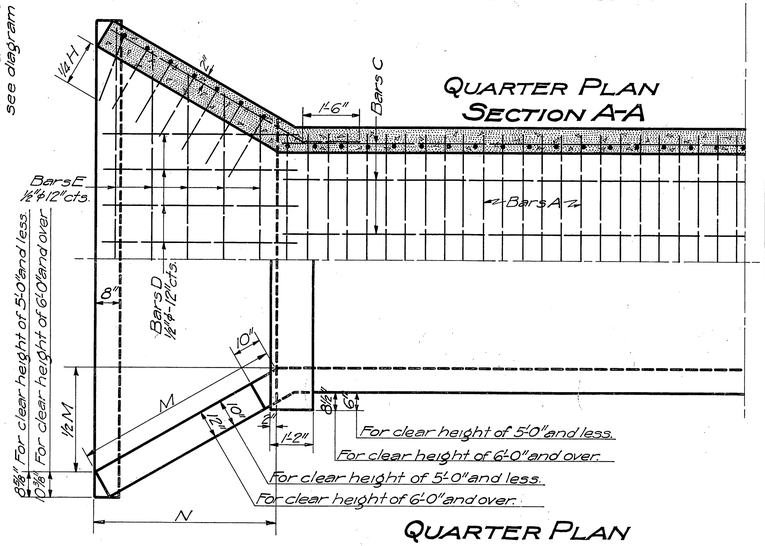


HALF LONGITUDINAL SECTION

HALF SIDE ELEVATION

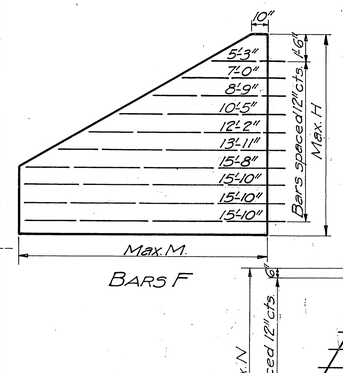


END ELEVATION

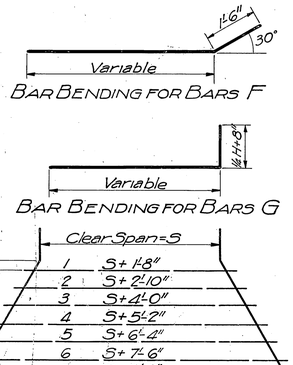


QUARTER PLAN

QUARTER PLAN SECTION A-A

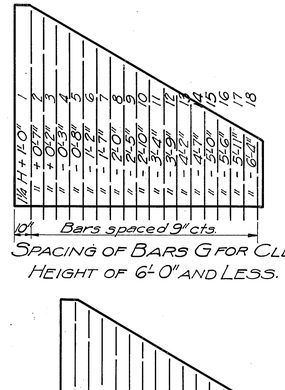


BARS F

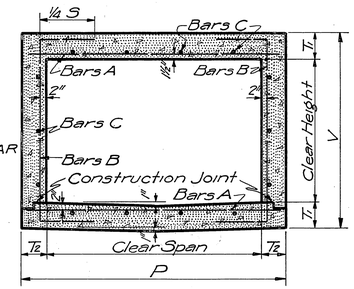


BAR BENDING FOR BARS F

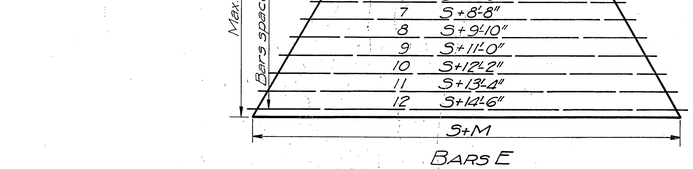
BAR BENDING FOR BARS G



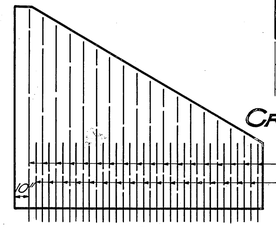
SPACING OF BARS G FOR CLEAR HEIGHT OF 6'-0" AND LESS.



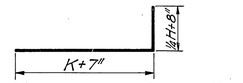
CROSS SECTION OF BARREL



BARS E



SPACING OF BARS G & G1 FOR CLEAR HEIGHT OF 7'-0" AND OVER



BAR BENDING FOR BARS G1

DESIGN No.	WATERWAY: CLEAR SPAN Ft.	CLEAR HEIGHT Ft.	AREA OF OPENING Sq. Ft.	BARREL OF CULVERT: DIMENSIONS: T1	T2	V	P	REINFORCING STEEL: BARS A: Size & Spacing	Length	BARS B: Size & Spacing	Length	BARS C: Size & Spacing	No.	QUANTITIES: Steel Per Lin. Ft. Lbs.	Conc. Per Lin. Ft. Cu. Yds.
1	2	2'-0"	4.0	6"	6"	3'-0"	3'-0"	1/2"ϕ-6"	2'-8"	1/2"ϕ-9"	3'-8"	1/2"ϕ-18"	8	19.34	0.185
2		2'-0"	6.0	6"	6"	3'-0"	4'-0"	〃	3'-8"	〃	4'-2"	〃	8	22.97	0.222
3	3	2'-6"	7.5	6"	6"	3'-6"	4'-0"	〃	3'-8"	〃	4'-8"	〃	8	23.88	0.241
4		3'-0"	9.0	6"	6"	4'-0"	4'-0"	〃	3'-8"	〃	5'-2"	〃	10	26.14	0.259
5		2'-0"	8.0	7"	6"	3'-2"	5'-0"	5/8"ϕ-8"	4'-8"	1/2"ϕ-9"	4'-10"	1/2"ϕ-18"	10	30.40	0.290
6	4	2'-6"	10.0	7"	6"	3'-8"	5'-0"	〃	4'-8"	〃	5'-4"	〃	10	31.31	0.308
7		3'-0"	12.0	7"	6"	4'-2"	5'-0"	〃	4'-8"	〃	5'-10"	〃	12	33.58	0.327
8		4'-0"	16.0	7"	8"	5'-2"	5'-4"	〃	5'-0"	〃	6'-10"	〃	12	36.45	0.428
9		2'-0"	10.0	8"	6"	3'-4"	6'-0"	5/8"ϕ- 7"	5'-8"	1/2"ϕ-9"	5'-6"	1/2"ϕ-18"	12	38.72	0.370
10		3'-0"	15.0	8"	6"	4'-4"	6'-0"	〃	5'-8"	〃	6'-6"	〃	14	41.90	0.407
11	5	4'-0"	20.0	8"	8"	5'-4"	6'-4"	〃	6'-0"	〃	7'-6"	〃	14	44.92	0.511
12		5'-0"	25.0	8"	10"	6'-4"	6'-8"	〃	6'-4"	〃	8'-6"	〃	16	49.30	0.638
13		6'-0"	30.0	8"	10"	7'-4"	6'-8"	〃	6'-4"	〃	9'-6"	〃	18	52.47	0.700
14		2'-0"	12.0	9"	6"	3'-6"	7'-0"	5/8"ϕ-6"	6'-8"	1/2"ϕ- 9"	6'-2"	1/2"ϕ-18"	12	47.61	0.463
15		3'-0"	18.0	9"	8"	4'-6"	7'-4"	〃	7'-0"	〃	7'-2"	〃	14	52.19	0.556
16	6	4'-0"	24.0	9"	8"	5'-6"	7'-4"	〃	7'-0"	〃	8'-2"	〃	14	54.01	0.605
17		5'-0"	30.0	9"	10"	6'-6"	7'-8"	〃	7'-4"	〃	9'-2"	〃	16	58.59	0.734
18		6'-0"	36.0	9"	10"	7'-6"	7'-8"	〃	7'-4"	〃	10'-2"	〃	18	61.76	0.796
19		3'-0"	24.0	12"	8"	5'-0"	9'-4"	3/4"ϕ-6 1/2"	9'-0"	1/2"ϕ- 9"	8'-8"	1/2"ϕ-18"	18	78.46	0.839
20		4'-0"	32.0	12"	8"	6'-0"	9'-4"	〃	9'-0"	〃	9'-8"	〃	18	80.27	0.889
21	8	5'-0"	40.0	12"	10"	7'-0"	9'-8"	〃	9'-4"	〃	10'-8"	〃	20	85.32	1.025
22		6'-0"	48.0	12"	10"	8'-0"	9'-8"	〃	9'-4"	〃	11'-8"	〃	22	88.49	1.086
23		7'-0"	56.0	12"	10"	9'-0"	9'-8"	〃	9'-4"	〃	12'-8"	〃	22	90.30	1.148
24		8'-0"	64.0	12"	11"	10'-0"	9'-10"	〃	9'-6"	〃	13'-8"	〃	24	94.41	1.272
25		6'-0"	60.0	14½"	10"	8'-5"	11'-8"	3/4"ϕ-5"	11'-2"	1/2"ϕ-9"	13'-1"	1/2"ϕ-18"	24	122.72	1.415
26		7'-0"	70.0	14½"	10"	9'-5"	11'-8"	〃	11'-2"	〃	14'-1"	〃	24	124.54	1.477
27	10	8'-0"	80.0	14½"	11"	10'-5"	11'-10"	〃	11'-6"	〃	15'-1"	〃	26	128.93	1.603
28		9'-0"	90.0	14½"	12"	11'-5"	12'-0"	〃	11'-8"	〃	16'-1"	〃	28	133.32	1.721
29		10'-0"	100.0	14½"	12"	12'-5"	12'-0"	〃	11'-8"	〃	17'-1"	〃	28	135.13	1.815
30	5	7'-0"	35.0	8"	10"	8'-4"	6'-8"	5/8"ϕ-7"	6'-4"	1/2"ϕ-9"	10'-8"	1/2"ϕ-18"	18	54.50	0.761

DESIGN No.	TWO WINGS AND ONE APRON: DIMENSIONS: H	K	M	N	REINFORCING STEEL: BARS D: No.	Length	BARS E: No.	Length	BARS F: No.	Length	No.	Length	BARS G: No.	Length	BARS G1: No.	Length	QUANTITIES: Steel	C.I.A. Concrete	Concrete in Two Curbs, Cu. Yds.	Concrete in One Curtain Wall Cu. Yds. Per Ft. of Depth
1	2'-10"	1'-6"	3'-2"	2'-9"	4	3'-2"	3		2	5'-2"	2	5'-2"	8				54	87	.31	.163
2	2'-10"	1'-6"	3'-2"	2'-9"	5	3'-2"	3		2	5'-2"	2	5'-2"	8				58	95	.40	.188
3	3'-2"	1'-7"	3'-10"	3'-4"	5	3'-9"	3		2	5'-3"	4	5'-10"	10				69	1.25	.40	.204
4	3'-10"	1'-9"	4'-6"	3'-10"	5	4'-4"	4		2	5'-3"	4	6'-6"	10				91	1.60	.40	.221
5	2'-1"	1'-7"	3'-2"	2'-9"	6	3'-2"	3		2	5'-2"	2	5'-2"	8				63	1.04	.48	.213
6	3'-5"	1'-8"	3'-10"	3'-4"	6	3'-9"	3		2	5'-3"	2	5'-10"	10				74	1.37	.48	.229
7	3'-11"	1'-10"	4'-6"	3'-10"	6	4'-4"	4		2	5'-3"	4	6'-6"	10				97	1.73	.48	.246
8	4'-1"	2'-0"	5'-10"	5'-0"	6	5'-6"	5		4	Var.	4	7'-10"	14				144	2.51	.50	.278
9	3'-0"	1'-8"	3'-2"	2'-9"	7	3'-2"	3		2	5'-2"	2	5'-2"	8				68	1.14	.56	.237
10	3'-10"	1'-11"	4'-6"	3'-10"	7	4'-4"	4		2	5'-3"	4	6'-6"	10				103	1.86	.56	.270
11	5'-0"	2'-1"	5'-10"	5'-0"	7	5'-6"	5		4	Var.	4	7'-10"	14				152	2.68	.58	.303
12	6'-0"	2'-4"	7'-2"	6'-2"	7	6'-8"	6		6	Var.	4	7'-10"	18				208	3.66	.61	.336
13	7'-0"	2'-7"	8'-6"	7'-4"	7	7'-9"	7		6	Var.	6	10'-6"	22				271	5.41	.64	.376
14	3'-1"	1'-9"	3'-2"	2'-9"	8	3'-2"	3		2	5'-2"	2	5'-2"	8				72	1.23	.64	.262
15	4'-1"	2'-0"	4'-6"	3'-10"	8	4'-4"	4		2	5'-3"	4	6'-6"	10				110	1.96	.67	.295
16	5'-1"	2'-2"	5'-10"	5'-0"	8	5'-6"	5		4	Var.	4	7'-10"	14				160	2.85	.67	.328
17	6'-1"	2'-5"	7'-2"	6'-2"	8	6'-8"	6		6	Var.	4	9'-2"	18				218	3.87	.69	.361
18	7'-1"	2'-8"	8'-6"	7'-4"	8	7'-9"	7		6	Var.	6	10'-6"	22				282	5.67	.72	.401
19	4'-4"	2'-3"	4'-6"	3'-10"	10	4'-4"	4		2	5'-3"	4	6'-6"	10				123	2.24	.83	.344
20	5'-4"	2'-5"	5'-10"	5'-0"	10	5'-6"	5		4	Var.	4	7'-10"	14				177	3.22	.83	.377
21	6'-4"	2'-8"	7'-2"	6'-2"	10	6'-8"	6		6	Var.	4	9'-2"	18				238	4.32	.85	.410
22	7'-4"	2'-11"	8'-6"	7'-4"	10	7'-9"	7		6	Var.	6	10'-6"	22				307	6.23	.88	.450
23	8'-4"	3'-2"	9'-10"	8'-6"	10	8'-11"	9		8	Var.	6	11'-10"	26	22	6'-6"		502	7.82	.88	.483
24	9'-4"	3'-5"	11'-2"	9'-8"	10	10'-1"	10		10	Var.	6	13'-2"	28	28	7'-0"		604	9.55	.89	.516
25	7'-6"	3'-2"	8'-6"	7'-4"	12	7'-9"	7		6	Var.	6	10'-6"	22				331	6.78	1.05	.500
26	8'-6"	3'-4"	9'-10"	8'-6"	12	8'-11"	9		8	Var.	6	11'-10"	26	22	6'-9"		535	8.43	1.05	.533
27	9'-6"	3'-7"	11'-2"	9'-8"	12	10'-1"	10		10	Var.	6	13'-2"	28	28	7'-2"		640	10.24	1.06	.566
28	10'-6"	3'-10"	12'-6"	10'-10"	13	11'-3"	11		12	Var.	6	14'-6"	32	32	7'-5"		775	12.25	1.07	.599
29	11'-6"	4'-0"	13'-10"	11'-11"	13	12'-5"	12		14	Var.	6	15'-10"	36	34	8'-0"		899	14.35	1.07	.631
30	8'-0"	2'-10"	9'-10"	8'-6"	7	8'-11"	9		6	Var.	6	11'-10"	26	24	6'-0"		452	6.87	.64	.409

DESIGN No.	TOTAL QUANTITIES: 38' ROADWAY: Steel	C.I.A. Concrete	40' ROADWAY: Steel	C.I.A. Concrete
1	899	9.78	937	10.15
2	1,058	11.56	1,104	12.00
3	1,116	12.95	1,164	13.43
4	1,251	14.40	1,303	14.92
5	1,386	14.59	1,447	15.17
6	1,444	16.00	1,507	16.61
7	1,581	17.51	1,648	18.17
8	1,793	23.20	1,866	24.05
9	1,737	18.11	1,814	18.85
10	1,934	21.10	2,018	21.91
11	2,156	26.99	2,246	28.01
12	2,446	34.12	2,545	35.40
13	2,701	40.21	2,806	41.61
14	2,109	22.14	2,205	23.07
15	2,372	27.42	2,476	28.53
16	2,544	31.23	2,652	32.44
17	2,846	38.51	2,963	39.98
18	3,102	44.70	3,226	46.29
19	3,499	39.56	3,656	41.24
20	3,680	43.58	3,840	45.36
21	4,008	51.31	4,178	53.36
22	4,274	57.68	4,451	59.85
23	4,737	63.41	4,917	65.70
24	5,107	71.90	5,296	74.45
25	5,717	72.21	5,922	75.04
26	6,198	78.06	6,427	81.01
27	6,640	10.24	6,843	90.00
28	7,033	96.37	7,299	99.85
29	7,355	103.63	7,623	107.26
30	3,136	45.64	3,245	47.16

DESIGN No.	TWO CURBS REINF STEEL SAME SIZE AS A BARS: * 4CH	* 4CH2
1	3'-8"	2'-8"
2	4'-8"	3'-8"
3	4'-8"	3'-8"
4	4'-8"	3'-8"
5	5'-8"	4'-8"
6	5'-8"	4'-8"
7	5'-8"	4'-8"
8	6'-0"	5'-0"
9	6'-8"	5'-8"
10	6'-8"	5'-8"
11	7'-0"	6'-0"
12	7'-4"	6'-4"
13	7'-9"	6'-4"
14	7'-8"	6'-8"
15	8'-0"	7'-0"
16	8'-0"	7'-0"
17	8'-4"	7'-4"
18	8'-9"	7'-4"
19	10'-0"	9'-0"
20	10'-0"	9'-0"
21	10'-4"	9'-4"
22	10'-9"	9'-4"
23	10'-9"	9'-4"
24	10'-11"	9'-6"
25	12'-9"	11'-4"
26	12'-9"	11'-4"
27	12'-11"	11'-6"
28	13'-1"	11'-8"
29	13'-1"	11'-8"
30	7'-9"	6'-4"

* NOTE:- THE HEIGHT OF THE CH1 AND CH2 BARS IS INCLUDED IN THE WT. OF THE TOTAL QUANTITIES FOR 38' AND 40' RDY.

M.R.K. & W.C.B. BY C.B.J. CHECKED BY
D.I.M.
REVISED BY ACCEE FEB. 10, 1933
DESIGNED BY
DETAILED BY
TRACED BY
CHECKED BY

GENERAL NOTES

All reinforcing steel shall be deformed round bars. The design and table are based upon net areas of bars as follows: 1/2"ϕ = 0.1963 sq. in. - 5/8"ϕ = 0.3068 sq. in. - 3/4"ϕ = 0.442 sq. in. Other sizes may be used provided they are spaced so as to give as much net sectional area per foot width of slab. Plans showing such changed sizes and spacing must be approved.

All exposed surfaces to have carborundum finish and this shall be included in price bid per cu. yd. for concrete.

DESIGN DATA.

Dead Load	1000 lbs.
Live Load	None
Impact	None

Quantities shown for reinforcing steel shall be reduced by 1½% (.015) to comply with approved C.R.S.I. weights per foot for reinforcing bars.

All exposed edges shall have a 3/4" chamfer.

OKLAHOMA STATE HIGHWAY COMMISSION STANDARD CONCRETE BOX CULVERTS SPANS 2 TO 10 FT. FOR FILLS 3 TO 10 FEET.

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