Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Add Metric		T. Stanton	03/03
Reviewed		T. Stanton	04/06
Edited		T. Stanton	02/09
Edited	S.S.	T. Regello	03/11

SAN DIEGO REGIONAL STANDARD DRAWING

DOUBLE BOX CULVERT

DETAILS No. 1

SPAN 12' (all measurements in feet and/or inches unless otherwise noted)

SPAN			12'																			
HEIGHT			6'			7'			8'			9'				10'				12'			
STRENGTH CLASSIFICATION			A	B	C	A	B	C	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D
MAX FILL OVER TOP			2	14	26	2	14	26	2	14	26	2	14	26	36	2	14	26	36	2	14	26	36
Conc.	Top Slab	T_1	10	14	17 1/2	10	14 1/.4	17 1/2	10 1/4	14 1/4	17 3/4	10 1/4	14 1/2	17 3/4	20 3/4	10 1/4	14 1/2	17 3/4	20 3/4	10 1/4	14 1/2	18 1/4	21 1/4
Conc.	Bottom Slab	T_2	9 1/4	14 3/4	18	9 1/4	15	18 1/4	9 3/4	15	18 1/2	10	15 1/4	18 3/4	21 1/4	10 1/4	15 1/4	18 3/4	21 1/2	10 1/2	15 1/4	19 1/4	22
Conc.	Sidewalls	T_3	6	6	6 1/2	7	7	7	8	8	8 1/2	9	9	9	10	9	9	9 1/2	11	9	10	11	12
Reinforcing Steel	"a"	Size Bar #	6	4	4	6	4	4	6	4	4	6	4	4	4	6	4	4	4	6	4	4	4
		Spacing	9	11 1/2	9	9	11 1/2	9	9	11	8 1/2	9	11	8 1/2	9	9	11	8 1/2	9	9	11	8 1/2	9
		Length	26–4	26–2	26–4	26–7	26–5	26–5	26–10	26–8	26–10	27–1	26–11	26–11	27–1	27–1	26–11	27–3	27–5	27–1	27–2	27–5	27–8
	"b" or "b_1"	Size Bar #	6	8	8	6	8	8	6	8	8	6	8	8	9	6	8	8	9	6	8	8	9
		Spacing	9	11 1/2	9	9	11 1/2	9	9	11	8 1/2	9	11	8 1/2	9	9	11	8 1/2	9	9	11	8 1/2	9
		Length "b"	25–8	25–10	26–3	25–11	26–1	26–4	26–2	26–4	26–9	26–5	26–8	26–10	27–4	26–5	26–8	27–2	27–6	26–5	26–11	27–5	27–10
		Length "b_1"	25–6	25–10	26–3	25–9	26–2	26–4	26–1	26–5	26–9	26–4	26–8	26–11	27–4	26–4	26–8	27–2	27–7	26–4	26–11	27–5	27–11
	"c"	Size Bar #	5	8	8	5	8	8	5	8	8	5	8	8	9	5	8	8	9	5	8	8	9
		Spacing	9	11 1/2	9	9	11 1/2	9	9	11	8 1/2	9	11	8 1/2	9	9	11	8 1/2	9	9	11	8 1/2	9
		Length	12–6	12–6	12–7	12–7	12–7	12–7	12–8	12–8	12–9	12–9	12–9	12–9	12–10	12–9	12–9	12–10	12–11	12–9	12–10	12–11	13
	"d" Dist Bars	Top Slab–Tot. No.	24	10	10	24	10	10	24	10	10	24	10	10	10	24	10	10	10	24	10	10	10
		Bottom Slab–Tot. No.	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	"e" Bars	Size Bar #	4	4	5	4	4	5	4	4	5	4	5	7	8	4	7	8	8	6	7	8	9
		Spacing	18	8	8	15	6	6 1/2	12	5 1/2	6	9	7 1/2	8 1/2	8	8 1/2	11	8 1/2	9	12	8	7	7
	Spacers	Number	52			55			68			68				72				76			
Quan.	Concrete: C.Y. per lin. ft.		1.84	2.59	3.16	1.97	2.77	3.28	2.19	2.93	3.59	2.38	0.74	3.69	4.25	2.48	3.23	3.86	4.49	2.67	3.53	4.30	4.92
Quan.	Reinf :lbs per lin. ft.		309	317	401	316	330	415	336	363	460	345	374	485	578	351	394	519	582	371	427	567	673

NOTE

For boxes of height less than that shown in table, use next greater table height slabs, wall dimensions and reinforcing steel, and make necessary changes in bar lengths, number of spacers and quantities. Number of "d" bars in table is slab total for both cells.

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

7/26/2012

Chairperson R.C.E. 19246 Date

DRAWING NUMBER **D-77F**