SPAN 4' (all measurements in feet and/or inches unless otherwise noted)

SPAN			4'										
HEIGHT			2'			3'				4'			
STRENGTH CLASSIFICATION			A	B	C	A	B	C	D	A	B	C	D
MAX FILL OVER TOP			11	21	32	11	23	34	46	11	23	34	46
Conc.	Top Slab	T_1	6 1/2	6 1/2	7 1/4	6 1/2	6 1/2	7 1/2	8 1/2	6 1/2	6 1/2	7 1/2	8 1/2
Conc.	Bottom Slab	T_2	6	7 1/4	8 1/2	6	7 1/2	8 1/2	9 1/2	6	7 1/2	8 1/2	9 1/2
Conc.	Sidewalls	T_3	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel	"a"	Size Bar #	5	4	4	5	4	4	4	5	4	4	4
Reinforcing Steel	"a"	Spacing	11	11	9	11	10 1/2	8 1/2	7 1/2	11	10 1/2	8 1/2	7 1/2
Reinforcing Steel	"a"	Length	10–3	10–2	10–2	10–3	10–2	10–2	10–2	10–3	10–2	10–2	10–2
Reinforcing Steel	"b" or "b_1"	Size Bar #	5	5	5	5	5	5	5	5	5	5	5
Reinforcing Steel	"b" or "b_1"	Spacing	11	11	9	11	10 1/2	8 1/2	7 1/2	11	10 1/2	8 1/2	7 1/2
Reinforcing Steel	"b" or "b_1"	Length "b"	9–4	9–4	9–6	9–4	9–4	9–6	9–7	9–4	9–4	9–6	9–7
Reinforcing Steel	"b" or "b_1"	Length "b_1"	9–4	9–5	9–6	9–4	9–4	9–6	9–7	9–4	9–4	9–6	9–7
Reinforcing Steel	"c"	Size Bar #	4	5	5	4	5	5	5	4	5	5	5
Reinforcing Steel	"c"	Spacing	11	11	9	11	10 1/2	8 1/2	7 1/2	11	10 1/2	8 1/2	7 1/2
Reinforcing Steel	"c"	Length	4–6	4–6	4–6	4–6	4–6	4–6	4–6	4–6	4–6	4–6	4–6
Reinforcing Steel	"d" Dist Bars	Top Slab–Tot. No.	10	6	6	10	6	6	6	10	6	6	6
Reinforcing Steel	"d" Dist Bars	Bottom Slab–Tot. No.	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel	"e" Bars	Size Bar #	4	4	4	4	4	4	4	4	4	4	5
Reinforcing Steel	"e" Bars	Spacing	18	18	18	18	18	16	12	18	12	9	10
Reinforcing Steel	Spacers	Number	23			26				29			
Quan.	Concrete: C.Y. per lin. ft.		0.47	0.51	0.57	0.53	0.57	0.63	0.69	0.59	0.63	0.69	0.75
Quan.	Reinf. lbs per lin. ft.		81	74	84	84	79	91	101	87	85	99	111

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.

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

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

Chairperson R.C.E. 19246 Date 7/26/2012

DRAWING NUMBER **D-77A**