

2016 ROAD & BRIDGE STANDARDS

BCQ-50

FOR TYPICAL SECTION, NOTES AND OTHER DETAILS, REFER TO STANDARD BCQ-DT.

DIMENSIONS						REINFORCING STEEL																																
SPAN	HGHT	T1	T2	T3	T4	A		B		C		D		E		F		BH1			BH2			BH3			BH4			BV1			BV2					
(FT.)	(FT.)	TOP SLAB	BOTTOM SLAB	EXTERIOR WALL (IN.)	INTERIOR WALL (IN.)													SIZE	SPACING C-C	LENGTH	SIZE	SPACING C-C	LENGTH	SIZE	SPACING C-C	a	LENGTH	SIZE	SPACING C-C	a	b	LENGTH	SIZE	SPACING C-C	LENGTH	SIZE	SPACING C-C	LENGTH
3	3	9"	9"	8"	8"	13	13'- 0"	13	13'- 0"	1	1'- 0"	4	12"	13'- 11"	4	12"	15'- 0"	--	---	----	----	4	12"	2'- 4"	2'- 9"	4'- 10"	4	12"	4'- 2"	4	12"	4'- 2"	4	12"	4'- 2"			
3	4	9"	9"	8"	8"	13	13'- 0"	13	13'- 0"	2	2'- 0"	4	12"	13'- 11"	4	12"	15'- 0"	--	---	----	----	4	12"	2'- 4"	3'- 3"	5'- 4"	4	12"	5'- 2"	4	12"	5'- 2"						
4	3	11 1/2"	11 1/2"	8"	8"	17	17'- 0"	17	17'- 0"	1	1'- 0"	4	12"	17'- 11"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 4"	3'- 0"	5'- 0"	4	12"	4'- 7"	4	12"	4'- 7"						
4	4	11 1/4"	11 1/4"	8"	8"	17	17'- 0"	17	17'- 0"	2	2'- 0"	4	12"	17'- 11"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 4"	3'- 6"	5'- 6"	4	12"	5'- 6"	4	12"	5'- 6"						
4	5	11"	11"	8"	8"	17	17'- 0"	17	17'- 0"	3	3'- 0"	4	12"	17'- 11"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 4"	3'- 11"	6'- 0"	5	12"	6'- 6"	4	12"	6'- 6"						
4	6	11 1/4"	11 1/4"	8"	8"	17	17'- 0"	17	17'- 0"	4	4'- 0"	4	12"	17'- 11"	4	12"	19'- 0"	4	12"	3'- 0"	5'- 9"	4	12"	2'- 4"	4'- 6"	6'- 6"	5	9"	7'- 6"	4	12"	7'- 6"						
5	3	13 3/4"	13 3/4"	8"	8"	21	21'- 0"	21	21'- 0"	1	1'- 0"	4	10"	21'- 11"	4	10"	23'- 0"	--	---	----	----	4	10"	2'- 4"	3'- 2"	5'- 3"	4	12"	4'- 11"	4	12"	4'- 11"						
5	4	13 1/2"	13 1/2"	8"	8"	21	21'- 0"	21	21'- 0"	2	2'- 0"	4	9"	21'- 11"	4	9"	23'- 0"	--	---	----	----	4	9"	2'- 4"	3'- 8"	5'- 8"	4	12"	5'- 11"	4	12"	5'- 11"						
5	5	13 1/2"	13 1/2"	8"	8"	21	21'- 0"	21	21'- 0"	3	3'- 0"	4	9"	21'- 11"	4	9"	23'- 0"	--	---	----	----	4	9"	2'- 4"	4'- 2"	6'- 2"	5	12"	6'- 11"	4	12"	6'- 11"						
5	6	13 1/2"	13 1/2"	8"	8"	21	21'- 0"	21	21'- 0"	4	4'- 0"	4	10"	21'- 11"	4	10"	23'- 0"	3	10"	3'- 2"	6'- 2"	4	10"	2'- 4"	4'- 8"	6'- 8"	5	10"	7'- 11"	4	12"	7'- 11"						
5	7	13 1/2"	13 1/2"	8 1/2"	8"	21	21'- 0"	21	21'- 0"	5	5'- 0"	4	10"	21'- 9"	4	10"	23'- 1"	--	---	----	----	5	10"	2'- 6"	5'- 4"	7'- 5"	6	10 1/2"	8'- 11"	4	12"	8'- 11"						
6	4	16 1/2"	16 1/2"	8"	8"	25	25'- 0"	25	25'- 0"	2	2'- 0"	4	9"	25'- 11"	5	9"	27'- 0"	--	---	----	----	4	9"	2'- 4"	3'- 11"	5'- 11"	4	12"	6'- 5"	4	11"	6'- 5"						
6	5	16 1/2"	16 1/2"	8"	8"	25	25'- 0"	25	25'- 0"	3	3'- 0"	4	9"	25'- 11"	5	9"	27'- 0"	--	---	----	----	4	9"	2'- 4"	4'- 5"	6'- 5"	5	12"	7'- 5"	4	11"	7'- 5"						
6	6	16 1/2"	16 1/2"	8"	8"	25	25'- 0"	25	25'- 0"	4	4'- 0"	4	9"	25'- 11"	5	9"	27'- 0"	--	---	----	----	4	9"	2'- 4"	4'- 11"	6'- 11"	5	9 1/2"	8'- 4"	4	11"	8'- 4"						
6	7	16"	16"	8"	8"	25	25'- 0"	25	25'- 0"	5	5'- 0"	4	9"	25'- 11"	5	9"	27'- 0"	3	9"	3'- 7"	7'- 0"	4	9"	2'- 4"	5'- 4"	7'- 5"	5	6 1/2"	9'- 3"	4	11"	9'- 3"						
6	8	16"	16"	9 1/2"	8"	25	25'- 0"	25	25'- 0"	6	6'- 0"	4	9"	25'- 11"	5	9"	27'- 3"	--	---	----	----	5	9"	2'- 6"	6'- 0"	8'- 2"	5	5"	10'- 3"	4	11"	10'- 3"						
7	4	19"	19"	8"	8"	29	29'- 0"	29	29'- 0"	2	2'- 0"	5	8"	29'- 11"	5	8"	31'- 0"	--	---	----	----	4	8"	2'- 9"	4'- 2"	6'- 7"	4	12"	6'- 10"	4	10"	6'- 10"						
7	6	18 1/2"	18 1/2"	8"	8"	29	29'- 0"	29	29'- 0"	4	4'- 0"	5	8"	29'- 11"	5	8"	31'- 0"	--	---	----	----	4	8"	2'- 9"	5'- 1"	7'- 6"	5	9 1/2"	8'- 9"	4	10"	8'- 9"						
7	8	18 1/2"	18 1/2"	9 1/2"	8"	29	29'- 0"	29	29'- 0"	6	6'- 0"	5	9"	29'- 11"	5	9"	31'- 3"	--	---	----	----	5	9"	2'- 11"	6'- 3"	8'- 9"	6	7 1/2"	10'- 9"	4	10"	10'- 9"						
7	10	18"	18"	11 1/2"	8"	29	29'- 0"	29	29'- 0"	8	8'- 0"	5	9"	30'- 3"	5	9"	31'- 7"	4	9"	4'- 4"	8'- 5"	5	9"	2'- 11"	7'- 2"	9'- 9"	7	9"	12'- 7"	4	10"	12'- 7"						
8	4	21"	21"	8"	8"	33	33'- 0"	33	33'- 0"	2	2'- 0"	6	9"	33'- 11"	5	9"	35'- 0"	--	---	----	----	4	9"	3'- 2"	4'- 3"	7'- 2"	4	12"	7'- 2"	4	10"	7'- 2"						
8	6	21"	21"	8"	8"	33	33'- 0"	33	33'- 0"	4	4'- 0"	6	9"	33'- 11"	5	9"	35'- 0"	--	---	----	----	4	9"	3'- 2"	5'- 3"	8'- 2"	5	9"	9'- 1"	4	10"	9'- 1"						
8	8	21"	21"	9"	8"	33	33'- 0"	33	33'- 0"	6	6'- 0"	6	9"	33'- 10"	5	9"	35'- 1"	--	---	----	----	5	9"	3'- 4"	6'- 5"	9'- 5"	5	4 1/2"	11'- 1"	4	10"	11'- 1"						
8	10	20 1/2"	20 1/2"	11 1/2"	8"	33	33'- 0"	33	33'- 0"	8	8'- 0"	6	9"	34'- 0"	5	9"	35'- 6"	--	---	----	----	6	9"	3'- 5"	7'- 7"	10'- 7"	7	9"	13'- 0"	4	10"	13'- 0"						
9	4	23 1/2"	23 1/2"	8"	8"	37	37'- 0"	37	37'- 0"	2	2'- 0"	6	9"	37'- 11"	6	9"	39'- 0"	--	---	----	----	4	9"	3'- 2"	4'- 6"	7'- 4"	4	12"	7'- 7"	4	10"	7'- 7"						
9	6	23 1/2"	23 1/2"	8"	8"	37	37'- 0"	37	37'- 0"	4	4'- 0"	6	9"	37'- 11"	6	9"	39'- 0"	--	---	----	----	4	9"	3'- 2"	5'- 6"	8'- 4"	5	8"	9'- 6"	4	10"	9'- 6"						
9	8	23"	23"	8 1/2"	8"	37	37'- 0"	37	37'- 0"	6	6'- 0"	6	9"	37'- 9"	6	9"	39'- 0"	--	---	----	----	5	9"	3'- 4"	6'- 8"	9'- 7"	6	7 1/2"	11'- 6"	4	10"	11'- 6"						
9	10	23"	23"	11 1/2"	8"	37	37'- 0"	37	37'- 0"	8	8'- 0"	6	9"	38'- 0"	6	9"	39'- 6"	--	---	----	----	6	9"	3'- 5"	7'- 9"	10'- 9"	6	6"	13'- 6"	4	10"	13'- 6"						
9	12	23"	23"	14"	8"	37	37'- 0"	37	37'- 0"	10	10'- 0"	6	9"	38'- 2"	6	9"	40'- 0"	3	9"	5'- 2"	10'- 2"	7	9"	3'- 7"	9'- 0"	12'- 1"	6	7"	15'- 6"	4	10"	15'- 6"						
10	4	26"	26"	8"	8"	41	41'- 0"	41	41'- 0"	2	2'- 0"	7	9"	41'- 11"	6	9"	43'- 0"	--	---	----	----	4	9"	3'- 10"	4'- 8"	8'- 3"	4	12"	8'- 0"	4	9"	8'- 0"						
10	6	26"	26"	8"	8"	41	41'- 0"	41	41'- 0"	4	4'- 0"	6	9"	41'- 11"	6	9"	43'- 0"	--	---	----	----	4	9"	3'- 2"	5'- 8"	8'- 7"	5	8"	10'- 0"	4	9"	10'- 0"						
10	8	26"	26"	8"	8"	41	41'- 0"	41	41'- 0"	6	6'- 0"	6	9"	41'- 11"	6	9"	43'- 0"	3	9"	4'- 8"	9'- 1"	4	9"	3'- 2"	6'- 8"	9'- 7"	5	4 1/2"	12'- 0"	4	9"	12'- 0"						
10	10	26"	26"	11"	8"	41	41'- 0"	41	41'- 0"	8	8'- 0"	6	9"	42'- 2"	6	9"	43'- 6"	3	9"	5'- 0"	9'- 10"	5	9"	3'- 4"	7'- 10"	10'- 10"	6	6"	14'- 0"	4	9"	14'- 0"						
10	12	26"	26"	14"	8"	41	41'- 0"	41	41'- 0"	10	10'- 0"	6	9"	42'- 5"	6	9"	44'- 0"	3	9"	5'- 5"	10'- 8"	6	9"	3'- 5"	9'- 0"	12'- 0"	7	9 1/2"	16'- 0"	4	9"	16'- 0"						
12	6	31"	31"	8"	8"	49	49'- 0"	49	49'- 0"	4	4'- 0"	7	9"	49'- 11"	7	9"	51'- 0"	--	---	----	----	4	9"	3'- 10"	6'- 2"	9'- 8"	5	7"	10'- 10"	4	7 1/2"	10'- 10"						
12	8	30 1/2"	30 1/2"	8"	8"	49	49'- 0"	49	49'- 0"	6	6'- 0"	7	9"	49'- 11"	7	9"	51'- 0"	3	9"	5'- 0"	9'- 10"	4	9"	3'- 10"	7'- 1"	10'- 7"	6	6 1/2"	12'- 8"	4	7 1/2"	12'- 8"						
12	10	30 1/2"	30 1/2"	9 3/4"	8"	49	49'- 0"	49	49'- 0"	8	8'- 0"	7	9"	49'- 8"	7	9"	51'- 3"	--	---	----	----	6	9"	4'- 1"	8'- 5"	12'- 1"	7	8"	14'- 8"	4	7 1/2"	14'- 8"						
12	12	31"	31"	13"	8"	49	49'- 0"	49	49'- 0"	10	10'- 0"	7	8"	50'- 3"	7	8"	51'- 9"	3	8"	5'- 10"	11'- 6"	6	8"	4'- 1"	9'- 5"	13'- 1"	9	12"	16'- 10"	4	7 1/2"	16'- 10"						

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE

<b>VDOT</b> ROAD AND BRIDGE STANDARDS	
SHEET 1 OF 2	REVISION DATE
1005.17	07/11

**QUADRUPLE BOX CULVERTS**  
40 TO 50 FT. FILLS

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE