

2016 ROAD & BRIDGE STANDARDS

BCQ-10

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

DIMENSIONS						REINFORCING STEEL																										
SPAN	HGHT	T1	T2	T3	T4	BH1			BH2			BH3			BH4			BV1			BV2											
(FT.)	(FT.)	TOP SLAB	BOTTOM SLAB	EXTERIOR WALL (IN.)	INTERIOR WALL (IN.)	A	B	C	D	E	F	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	8"	8"	8"	8"	13	13'- 0"	13	13'- 0"	1	1'- 0"	4	12"	14'- 10"	4	12"	15'- 0"	--	---	----	----	4	12"	2'- 1 1/4"	2'- 8"	4'- 6"	4	12"	4'- 0"	4	12"	4'- 0"
3	4	8"	8"	8"	8"	13	13'- 0"	13	13'- 0"	2	2'- 0"	4	12"	14'- 10"	4	12"	15'- 0"	--	---	----	----	4	12"	2'- 1 1/4"	3'- 2"	5'- 0"	4	12"	5'- 0"	4	12"	5'- 0"
4	3	8"	8"	8"	8"	17	17'- 0"	17	17'- 0"	1	1'- 0"	4	12"	18'- 5"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 3 3/8"	2'- 8"	4'- 8"	4	12"	4'- 0"	4	12"	4'- 0"
4	4	8"	8"	8"	8"	17	17'- 0"	17	17'- 0"	2	2'- 0"	4	12"	18'- 5"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 3 3/8"	3'- 2"	5'- 2"	4	12"	5'- 0"	4	12"	5'- 0"
4	5	8"	8"	8"	8"	17	17'- 0"	17	17'- 0"	3	3'- 0"	4	12"	18'- 5"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 3 3/8"	3'- 8"	5'- 8"	4	12"	6'- 0"	4	12"	6'- 0"
4	6	8"	8"	8"	8"	17	17'- 0"	17	17'- 0"	4	4'- 0"	4	12"	18'- 5"	4	12"	19'- 0"	--	---	----	----	4	12"	2'- 3 3/8"	4'- 2"	6'- 2"	4	12"	7'- 0"	4	12"	7'- 0"
5	3	8"	8"	8"	8"	21	21'- 0"	21	21'- 0"	1	1'- 0"	4	12"	22'- 0"	4	12"	23'- 0"	--	---	----	----	4	12"	2'- 6"	2'- 8"	4'- 11"	4	12"	4'- 0"	4	12"	4'- 0"
5	4	8"	8"	8"	8"	21	21'- 0"	21	21'- 0"	2	2'- 0"	4	12"	22'- 0"	4	12"	23'- 0"	--	---	----	----	4	12"	2'- 6"	3'- 2"	5'- 5"	4	12"	5'- 0"	4	12"	5'- 0"
5	5	8"	8"	8"	8"	21	21'- 0"	21	21'- 0"	3	3'- 0"	4	12"	22'- 0"	4	12"	23'- 0"	--	---	----	----	4	12"	2'- 6"	3'- 8"	5'- 11"	4	12"	6'- 0"	4	12"	6'- 0"
5	6	8"	8"	8"	8"	21	21'- 0"	21	21'- 0"	4	4'- 0"	4	12"	22'- 0"	4	12"	23'- 0"	--	---	----	----	4	12"	2'- 6"	4'- 2"	6'- 5"	4	12"	7'- 0"	4	12"	7'- 0"
5	7	8"	8"	8"	8"	21	21'- 0"	21	21'- 0"	5	5'- 0"	4	12"	22'- 0"	4	12"	23'- 0"	--	---	----	----	4	12"	2'- 6"	4'- 8"	6'- 11"	4	12"	8'- 0"	4	12"	8'- 0"
6	4	8"	8"	8"	8"	25	25'- 0"	25	25'- 0"	2	2'- 0"	4	12"	25'- 11"	4	12"	27'- 0"	4	12"	2'- 8 3/8"	5'- 2"	4	12"	2'- 8 3/8"	3'- 2"	5'- 7"	4	12"	5'- 0"	4	12"	5'- 0"
6	5	8"	8"	8"	8"	25	25'- 0"	25	25'- 0"	3	3'- 0"	4	12"	25'- 11"	4	12"	27'- 0"	4	12"	2'- 8 3/8"	5'- 2"	4	12"	2'- 8 3/8"	3'- 8"	6'- 1"	4	12"	6'- 0"	4	12"	6'- 0"
6	6	8"	8"	8"	8"	25	25'- 0"	25	25'- 0"	4	4'- 0"	4	12"	25'- 11"	4	12"	27'- 0"	4	12"	2'- 8 3/8"	5'- 2"	4	12"	2'- 8 3/8"	4'- 2"	6'- 7"	4	12"	7'- 0"	4	12"	7'- 0"
6	7	8"	8"	8"	8"	25	25'- 0"	25	25'- 0"	5	5'- 0"	4	12"	25'- 11"	4	12"	27'- 0"	4	12"	2'- 11"	5'- 8"	4	12"	2'- 8 3/8"	4'- 8"	7'- 1"	4	12"	8'- 0"	4	12"	8'- 0"
6	8	8"	8"	8"	8"	25	25'- 0"	25	25'- 0"	6	6'- 0"	4	12"	25'- 11"	4	12"	27'- 0"	4	12"	3'- 2"	6'- 2"	4	12"	2'- 8 3/8"	5'- 2"	7'- 7"	4	12"	9'- 0"	4	12"	9'- 0"
7	4	8"	8"	8"	8"	29	29'- 0"	29	29'- 0"	2	2'- 0"	4	12"	29'- 8"	4	12"	31'- 0"	--	---	----	----	5	12"	2'- 10 3/4"	3'- 2"	5'- 9"	4	12"	5'- 0"	4	12"	5'- 0"
7	6	8"	8"	8"	8"	29	29'- 0"	29	29'- 0"	4	4'- 0"	4	12"	29'- 8"	4	12"	31'- 0"	--	---	----	----	5	12"	2'- 10 3/4"	4'- 2"	6'- 9"	4	12"	7'- 0"	4	12"	7'- 0"
7	8	8"	8"	8"	8"	29	29'- 0"	29	29'- 0"	6	6'- 0"	4	12"	29'- 8"	4	12"	31'- 0"	--	---	----	----	5	12"	2'- 10 3/4"	5'- 2"	7'- 9"	4	12"	9'- 0"	4	11 1/2"	9'- 0"
7	10	8"	8"	8"	8"	29	29'- 0"	29	29'- 0"	8	8'- 0"	4	11"	29'- 8"	4	11"	31'- 0"	--	---	----	----	5	11"	2'- 10 3/4"	6'- 2"	8'- 9"	5	10"	11'- 0"	4	12"	11'- 0"
8	4	8 1/4"	8 1/4"	8"	8"	33	33'- 0"	33	33'- 0"	2	2'- 0"	4	11"	33'- 8"	4	11"	35'- 0"	3	11"	3'- 1 1/4"	6'- 0"	5	11"	3'- 1 1/4"	3'- 2 1/4"	6'- 0"	4	9"	5'- 0"	4	12"	5'- 0"
8	6	8 1/2"	8 1/2"	8"	8"	33	33'- 0"	33	33'- 0"	4	4'- 0"	4	11"	33'- 8"	4	11"	35'- 0"	--	---	----	----	5	11"	3'- 1 1/4"	4'- 2 1/2"	7'- 0"	4	12"	7'- 1"	4	12"	7'- 1"
8	8	8 1/2"	8 1/2"	8"	8"	33	33'- 0"	33	33'- 0"	6	6'- 0"	4	10"	33'- 8"	4	10"	35'- 0"	--	---	----	----	5	10"	3'- 1 1/4"	5'- 2 1/2"	8'- 0"	4	12"	9'- 1"	4	12"	9'- 1"
8	10	8 3/4"	8 3/4"	8"	8"	33	33'- 0"	33	33'- 0"	8	8'- 0"	4	9"	33'- 8"	4	9"	35'- 0"	--	---	----	----	5	9"	3'- 1 1/4"	6'- 2 3/4"	9'- 0"	5	11"	11'- 2"	4	12"	11'- 2"
9	4	9"	9"	8"	8"	37	37'- 0"	37	37'- 0"	2	2'- 0"	5	9"	37'- 11"	4	9"	39'- 0"	3	9"	3'- 3 3/8"	6'- 5"	5	9"	3'- 3 3/8"	3'- 3"	6'- 3"	4	8"	5'- 2"	4	12"	5'- 2"
9	6	9 1/4"	9 1/4"	8"	8"	37	37'- 0"	37	37'- 0"	4	4'- 0"	5	9"	37'- 11"	4	9"	39'- 0"	--	---	----	----	5	9"	3'- 3 3/8"	4'- 3 1/4"	7'- 3"	4	12"	7'- 2"	4	12"	7'- 2"
9	8	9 1/2"	9 1/2"	8"	8"	37	37'- 0"	37	37'- 0"	6	6'- 0"	5	9"	37'- 11"	4	9"	39'- 0"	4	9"	3'- 3 3/8"	6'- 4"	4	9"	3'- 3 3/8"	5'- 3 1/2"	8'- 4"	4	12"	9'- 3"	4	12"	9'- 3"
9	10	9 1/2"	9 1/2"	8"	8"	37	37'- 0"	37	37'- 0"	8	8'- 0"	5	9"	37'- 11"	5	9"	39'- 0"	--	---	----	----	5	9"	3'- 3 3/8"	6'- 3 1/2"	9'- 3"	5	12"	11'- 3"	4	12"	11'- 3"
9	12	9 3/4"	9 3/4"	8"	8"	37	37'- 0"	37	37'- 0"	10	10'- 0"	4	8"	37'- 11"	4	8"	39'- 0"	4	8"	4'- 1"	7'- 11"	5	8"	3'- 3 3/8"	7'- 3 3/4"	10'- 3"	5	6"	13'- 3"	4	12"	13'- 3"
10	4	9 3/4"	9 3/4"	8"	8"	41	41'- 0"	41	41'- 0"	2	2'- 0"	5	8"	41'- 11"	4	8"	43'- 0"	--	---	----	----	5	8"	3'- 6"	3'- 3 3/4"	6'- 6"	4	7"	5'- 3"	4	12"	5'- 3"
10	6	10"	10"	8"	8"	41	41'- 0"	41	41'- 0"	4	4'- 0"	5	8"	41'- 11"	4	8"	43'- 0"	--	---	----	----	5	8"	3'- 6"	4'- 4"	7'- 6"	4	11 1/2"	7'- 4"	4	12"	7'- 4"
10	8	10 1/4"	10 1/4"	8"	8"	41	41'- 0"	41	41'- 0"	6	6'- 0"	5	8"	41'- 11"	4	8"	43'- 0"	4	8"	3'- 6"	6'- 9"	4	8"	3'- 6"	5'- 4 1/4"	8'- 7"	4	12"	9'- 5"	4	12"	9'- 5"
10	10	10 1/2"	10 1/2"	8"	8"	41	41'- 0"	41	41'- 0"	8	8'- 0"	5	8"	41'- 11"	5	8"	43'- 0"	--	---	----	----	5	8"	3'- 6"	6'- 4 1/4"	9'- 6"	5	12"	11'- 5"	4	12"	11'- 5"
10	12	10 1/2"	10 1/2"	8"	8"	41	41'- 0"	41	41'- 0"	10	10'- 0"	5	10"	41'- 11"	5	10"	43'- 0"	3	10"	4'- 1"	7'- 11"	6	10"	4'- 0"	7'- 8"	11'- 4"	5	7"	13'- 5"	4	12"	13'- 5"
12	6	11 3/4"	11 3/4"	8"	8"	49	49'- 0"	49	49'- 0"	4	4'- 0"	6	12"	49'- 8"	6	12"	51'- 0"	3	12"	3'- 10 3/4"	7'- 7"	6	12"	4'- 5"	4'- 9"	8'- 10"	4	10"	7'- 8"	4	10"	7'- 8"
12	8	11 3/4"	11 3/4"	8"	8"	49	49'- 0"	49	49'- 0"	6	6'- 0"	6	11"	49'- 8"	6	11"	51'- 0"	--	---	----	----	6	11"	4'- 5"	5'- 9"	9'- 10"	4	12"	9'- 8"	4	12"	9'- 8"
12	10	12"	12"	8"	8"	49	49'- 0"	49	49'- 0"	8	8'- 0"	6	9"	49'- 8"	5	9"	51'- 0"	3	9"	3'- 10 3/4"	7'- 7"	5	9"	3'- 10 3/4"	6'- 6"	10'- 1"	5	12"	11'- 8"	4	12"	11'- 8"
12	12	12 1/4"	12 1/4"	8"	8"	49	49'- 0"	49	49'- 0"	10	10'- 0"	6	9"	49'- 8"	5	9"	51'- 0"	--	---	----	----	6	9"	4'- 5"	7'- 10"	11'- 10"	6	10 1/2"	13'- 9"	4	12"	13'- 9"

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

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 2 REVISION DATE
1005.09 07/11

QUADRUPLE BOX CULVERTS
5 TO 10 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE