

2016 ROAD & BRIDGE STANDARDS

BCD-20

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

DIMENSIONS						REINFORCING STEEL																										
SPAN (FT.)	HGHT (FT.)	T1 TOP SLAB	T2 BOTTOM SLAB	T3 EXTERIOR WALL (IN.)	T4 INTERIOR WALL (IN.)	A	B	C	D	E	F	BH1			BH2			BH3			BH4			BV1			BV2					
												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"	6	6'- 0"	6	6'- 0"	1	1'- 0"	4	12"	6'- 7"	4	12"	7'- 8"	--	---	-----	-----	4	12"	2'- 4"	2'- 9"	4'- 9"	4	12"	4'- 0"	4	12"	4'- 0"
3	4	8"	8"	8"	8"	6	6'- 0"	6	6'- 0"	2	2'- 0"	4	12"	6'- 7"	4	12"	7'- 8"	--	---	-----	-----	4	12"	2'- 4"	3'- 3"	5'- 3"	4	12"	5'- 0"	4	12"	5'- 0"
4	3	8"	8"	8"	8"	8	8'- 0"	8	8'- 0"	1	1'- 0"	4	12"	8'- 7"	4	12"	9'- 8"	--	---	-----	-----	4	12"	2'- 4"	2'- 9"	4'- 9"	4	12"	4'- 0"	4	12"	4'- 0"
4	4	8"	8"	8"	8"	8	8'- 0"	8	8'- 0"	2	2'- 0"	4	12"	8'- 7"	4	12"	9'- 8"	--	---	-----	-----	4	12"	2'- 4"	3'- 3"	5'- 3"	4	12"	5'- 0"	4	12"	5'- 0"
4	5	8"	8"	8"	8"	8	8'- 0"	8	8'- 0"	3	3'- 0"	4	12"	8'- 7"	4	12"	9'- 8"	--	---	-----	-----	4	12"	2'- 4"	3'- 9"	5'- 9"	4	12"	6'- 0"	4	12"	6'- 0"
4	6	8"	8"	8"	8"	8	8'- 0"	8	8'- 0"	4	4'- 0"	4	12"	8'- 7"	4	12"	9'- 8"	--	---	-----	-----	4	12"	2'- 4"	4'- 3"	6'- 3"	4	12"	7'- 0"	4	12"	7'- 0"
5	3	8"	8"	8"	8"	10	10'- 0"	10	10'- 0"	1	1'- 0"	4	12"	10'- 7"	4	12"	11'- 8"	4	12"	2'- 6"	4'- 9"	4	12"	2'- 4"	2'- 9"	4'- 9"	4	12"	4'- 0"	4	12"	4'- 0"
5	4	8"	8"	8"	8"	10	10'- 0"	10	10'- 0"	2	2'- 0"	4	12"	10'- 7"	4	12"	11'- 8"	3	12"	2'- 6"	4'-10"	4	12"	2'- 4"	3'- 3"	5'- 3"	4	12"	5'- 0"	4	12"	5'- 0"
5	5	8"	8"	8"	8"	10	10'- 0"	10	10'- 0"	3	3'- 0"	4	12"	10'- 7"	4	12"	11'- 8"	3	12"	2'- 6"	4'-10"	4	12"	2'- 4"	3'- 9"	5'- 9"	4	12"	6'- 0"	4	12"	6'- 0"
5	6	8"	8"	8"	8"	10	10'- 0"	10	10'- 0"	4	4'- 0"	4	12"	10'- 7"	4	12"	11'- 8"	3	12"	2'- 9"	5'-3"	4	12"	2'- 4"	4'- 3"	6'- 3"	4	12"	7'- 0"	4	12"	7'- 0"
5	7	8"	8"	8"	8"	10	10'- 0"	10	10'- 0"	5	5'- 0"	4	12"	10'- 7"	4	12"	11'- 8"	4	12"	2'- 11"	5'- 7"	4	12"	2'- 4"	4'- 9"	6'- 9"	5	12"	8'- 0"	4	12"	8'- 0"
6	4	9/4"	9/4"	8"	8"	12	12'- 0"	12	12'- 0"	2	2'- 0"	4	12"	12'- 7"	4	12"	13'- 8"	4	12"	2'- 9"	5'- 2"	4	12"	2'- 4"	3'- 4"	5'- 4"	4	12"	5'- 2"	4	12"	5'- 2"
6	5	9/2"	9/2"	8"	8"	12	12'- 0"	12	12'- 0"	3	3'- 0"	4	12"	12'- 7"	4	12"	13'- 8"	4	12"	2'- 9"	5'- 2"	4	12"	2'- 4"	3'- 10"	5'- 10"	4	12"	6'- 3"	4	12"	6'- 3"
6	6	9/2"	9/2"	8"	8"	12	12'- 0"	12	12'- 0"	4	4'- 0"	4	12"	12'- 7"	4	12"	13'- 8"	4	12"	2'- 10"	5'- 5"	4	12"	2'- 4"	4'- 4"	6'- 4"	4	12"	7'- 3"	4	12"	7'- 3"
6	7	9/2"	9/2"	8"	8"	12	12'- 0"	12	12'- 0"	5	5'- 0"	4	12"	12'- 7"	4	12"	13'- 8"	4	12"	3'- 1"	5'- 10"	4	12"	2'- 4"	4'- 10"	6'- 10"	5	12"	8'- 3"	4	12"	8'- 3"
6	8	9 3/4"	9 3/4"	8"	8"	12	12'- 0"	12	12'- 0"	6	6'- 0"	4	12"	12'- 7"	4	12"	13'- 8"	4	12"	3'- 3"	6'- 3"	4	12"	2'- 4"	5'- 4"	7'- 5"	5	12"	9'- 3"	4	12"	9'- 3"
7	4	10 1/2"	10 1/2"	8"	8"	14	14'- 0"	14	14'- 0"	2	2'- 0"	4	10"	14'- 7"	4	10"	15'- 8"	3	10"	2'- 11"	5'- 8"	4	10"	2'- 4"	3'- 5"	5'- 5"	4	12"	5'- 5"	4	12"	5'- 5"
7	6	10 3/4"	10 3/4"	8"	8"	14	14'- 0"	14	14'- 0"	4	4'- 0"	4	10"	14'- 7"	4	10"	15'- 8"	--	---	-----	-----	4	10"	2'- 4"	4'- 5"	6'- 6"	4	12"	7'- 5"	4	12"	7'- 5"
7	8	11"	11"	8"	8"	14	14'- 0"	14	14'- 0"	6	6'- 0"	4	10"	14'- 7"	4	10"	15'- 8"	3	10"	3'- 5"	6'- 7"	4	10"	2'- 4"	5'- 6"	7'- 6"	5	12"	9'- 6"	4	12"	9'- 6"
7	10	11 1/4"	11 1/4"	8"	8"	14	14'- 0"	14	14'- 0"	8	8'- 0"	4	10"	14'- 4"	4	10"	15'- 8"	3	10"	3'-10"	7'- 5"	5	10"	2'- 6"	6'- 8"	8'- 9"	6	10 1/2"	11'- 6"	4	12"	11'- 6"
8	4	11 3/4"	11 3/4"	8"	8"	16	16'- 0"	16	16'- 0"	2	2'- 0"	5	9"	16'- 7"	4	9"	17'- 8"	3	9"	3'- 2"	6'- 1"	4	9"	2'- 9"	3'- 6"	6'- 0"	4	12"	5'- 7"	4	12"	5'- 7"
8	6	12"	12"	8"	8"	16	16'- 0"	16	16'- 0"	4	4'- 0"	5	9"	16'- 7"	4	9"	17'- 8"	--	---	-----	-----	4	9"	2'- 9"	4'- 6"	7'- 0"	4	12"	7'- 8"	4	12"	7'- 8"
8	8	12 1/4"	12 1/4"	8"	8"	16	16'- 0"	16	16'- 0"	6	6'- 0"	5	9"	16'- 7"	4	9"	17'- 8"	3	9"	3'- 6"	6'- 9"	4	9"	2'- 9"	5'- 7"	8'- 0"	5	12"	9'- 8"	4	12"	9'- 8"
8	10	12 1/2"	12 1/2"	8"	8"	16	16'- 0"	16	16'- 0"	8	8'- 0"	5	9"	16'- 7"	4	9"	17'- 8"	4	9"	3'- 11"	7'- 6"	4	9"	2'- 9"	6'- 7"	9'- 0"	5	7"	11'- 9"	4	12"	11'- 9"
9	4	13"	13"	8"	8"	18	18'- 0"	18	18'- 0"	2	2'- 0"	5	9"	18'- 7"	5	9"	19'- 8"	3	9"	3'- 4"	6'- 5"	4	9"	2'- 9"	3'- 7"	6'- 1"	4	11 1/2"	5'- 9"	4	12"	5'- 9"
9	6	13 1/4"	13 1/4"	8"	8"	18	18'- 0"	18	18'- 0"	4	4'- 0"	5	9"	18'- 7"	5	9"	19'- 8"	--	---	-----	-----	4	9"	2'- 9"	4'- 8"	7'- 1"	4	12"	7'-10"	4	12"	7'-10"
9	8	13 1/4"	13 1/4"	8"	8"	18	18'- 0"	18	18'- 0"	6	6'- 0"	5	9"	18'- 7"	5	9"	19'- 8"	3	9"	3'- 7"	6'- 11"	4	9"	2'- 9"	5'- 8"	8'- 1"	5	12"	9'-10"	4	12"	9'-10"
9	10	13 1/2"	13 1/2"	8"	8"	18	18'- 0"	18	18'- 0"	8	8'- 0"	5	9"	18'- 4"	5	9"	19'- 8"	3	9"	4'- 0"	7'- 9"	5	9"	2'- 11"	6'- 10"	9'- 4"	5	7 1/2"	11'-11"	4	12"	11'-11"
9	12	13 3/4"	13 3/4"	9 1/2"	8"	18	18'- 0"	18	18'- 0"	10	10'- 0"	5	9"	18'- 4"	5	9"	19'- 11"	3	9"	4'- 5"	8'- 7"	6	9"	3'- 0"	8'- 0"	10'- 7"	5	4 1/2"	13'-11"	4	12"	13'-11"
10	4	14 1/2"	14 1/2"	8"	8"	20	20'- 0"	20	20'- 0"	2	2'- 0"	6	9"	20'- 7"	5	9"	21'- 8"	3	9"	3'- 6"	6'-10"	4	9"	3'- 2"	3'- 9"	6'- 7"	4	11 1/2"	6'- 0"	4	12"	6'- 0"
10	6	15"	15"	8"	8"	20	20'- 0"	20	20'- 0"	4	4'- 0"	6	9"	20'- 7"	5	9"	21'- 8"	3	9"	3'- 6"	6'-10"	4	9"	3'- 2"	4'- 9"	7'- 8"	4	12"	8'- 2"	4	12"	8'- 2"
10	8	14 3/4"	14 3/4"	8"	8"	20	20'- 0"	20	20'- 0"	6	6'- 0"	6	9"	20'- 7"	5	9"	21'- 8"	3	9"	3'- 8"	7'- 2"	4	9"	3'- 2"	5'- 9"	8'- 8"	5	12"	10'- 1"	4	12"	10'- 1"
10	10	15"	15"	8"	8"	20	20'- 0"	20	20'- 0"	8	8'- 0"	6	9"	20'- 4"	5	9"	21'- 8"	3	9"	4'- 1"	8'- 0"	5	9"	3'- 4"	7'- 0"	9'- 11"	5	7 1/2"	12'- 2"	4	12"	12'- 2"
10	12	15"	15"	9 1/2"	8"	20	20'- 0"	20	20'- 0"	10	10'- 0"	6	9"	20'- 4"	5	9"	21'- 11"	3	9"	4'- 6"	8'- 10"	6	9"	3'- 5"	8'- 1"	11'- 1"	5	4 1/2"	14'- 2"	4	12"	14'- 2"
12	6	17 3/4"	17 3/4"	8"	8"	24	24'- 0"	24	24'- 0"	4	4'- 0"	6	8"	24'- 7"	5	8"	25'- 8"	--	---	-----	-----	4	8"	3'- 2"	5'- 0"	7'- 11"	4	12"	8'- 7"	4	12"	8'- 7"
12	8	17 3/4"	17 3/4"	8"	8"	24	24'- 0"	24	24'- 0"	6	6'- 0"	6	8"	24'- 7"	5	8"	25'- 8"	--	---	-----	-----	4	8"	3'- 2"	6'- 0"	8'- 11"	5	12"	10'- 7"	4	12"	10'- 7"
12	10	18"	18"	8"	8"	24	24'- 0"	24	24'- 0"	8	8'- 0"	6	8"	24'- 7"	5	8"	25'- 8"	4	8"	4'- 4"	8'- 5"	4	8"	3'- 2"	7'- 0"	9'- 11"	5	7"	12'- 8"	4	12"	12'- 8"
12	12	18"	18"	9 1/2"	8"	24	24'- 0"	24	24'- 0"	10	10'- 0"	6	8"	24'- 7"	5	8"	25'- 11"	4	8"	4'- 9"	9'- 3"	5	8"	3'- 4"	8'- 3"	11'- 2"	5	4 1/2"	14'- 8"	4	11 1/2"	14'- 8"

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
1003.11 07/11

DOUBLE BOX CULVERTS
10 TO 20 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE