

TYPICAL SECTION

GENERAL NOTE

Capacity: HS20-44 Loading and Alternate Military Loading.

Specifications:

Construction - Va. Department of Transportation Road and Bridge Specifications, 1991.
Design - AASHTO Standard Specifications for Highway Bridges, 1983, including Interim Specifications, 1984, 1985 and VDOT Modifications, using Load Factor Design.

All concrete shall be Class A4.

Deformed reinforcing bars shall conform to ASTM A615, Grade 60. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

Construction joints shall be constructed and bonded in accordance with the current Road and Bridge Specifications.

Barrels more than 35' in length shall be poured in sections by providing vertical construction joints, not exceeding 25' between joints nor more than 30' from ends of barrels.

** All bends shall be made with a pin diameter as listed in TABLE A except for Bars BH3 & BH4 which shall have a pin diameter of 24 bar diameters.

Dimensions on bar diagrams are out-to-out of bars. Bars are straight and #4 in size unless otherwise shown. BL2 shall be #3 in size.

The number of BL1 & BL2 bars shown in the table is the number of longitudinal bars shown in the Typical Section and may not equal the total number of bars required. BL1 & BL2 shall have a lap of 30 bar diameters at splices. At construction joints, first placed bars shall project 30 bar diameters beyond the joint. Estimated QUAN./LF shown for reinforcing steel does not include quantity for laps of BL1 & BL2 bars. The additional weight per longitudinal lap is shown in the table.

The centers of main reinforcing bars shall be 2" from the face of the concrete.

When concrete protective coating is required, all steel shall be epoxy-coated. All reinforcing steel for culverts under 0 to 2 foot fills shall be epoxy-coated.

At the Contractor's option, BV1 & BV2 bars may be spliced at the permissible construction joint in order to facilitate construction. No additional compensation shall be provided for the increase in reinforcing steel quantity due to the splices.

Bar HW2 shall be 4" less than culvert height in length.

Headwall quantities shown assume wingwalls are to be built at a 45° angle to the headwall.

The designs are applicable to the fill height and other conditions indicated. Any change in the conditions invalidates these designs.

Wingwalls referenced by letter apply when the acceptable foundation level is the same for both box and wings. If foundation levels are different, the height of the wingwall shall be adjusted by selection of another lettered wingwall of appropriate height. For wingwall details, refer to standard series BCW for the appropriate fill slope.

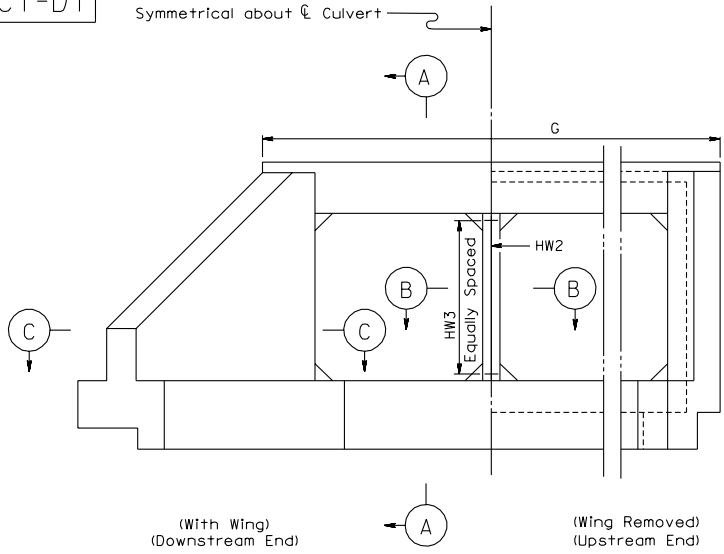
For details of extending existing boxes, refer to Standard BCE-01.

For modification of details for skewed culverts, see the Skewed Box Details included in the road plans.

This standard shall be used with the BCT standard series.

BCT-DT

Symmetrical about $\text{\textcircled{C}}$ Culvert



END ELEVATION

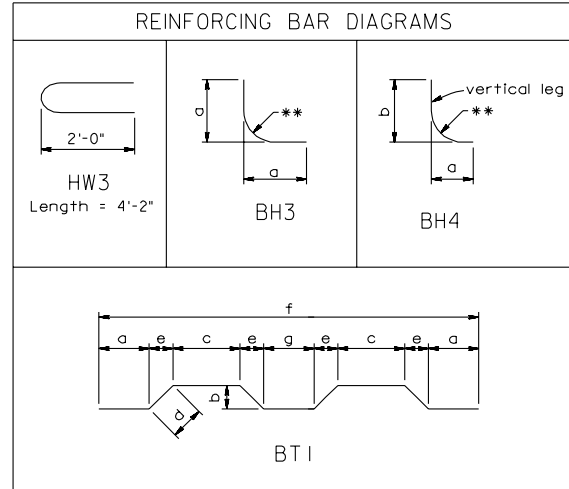
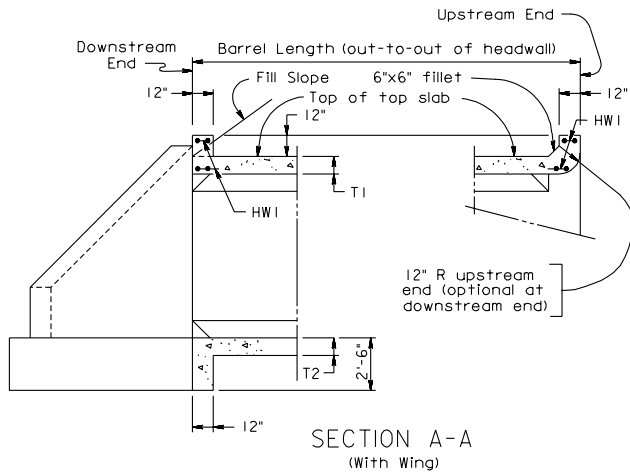
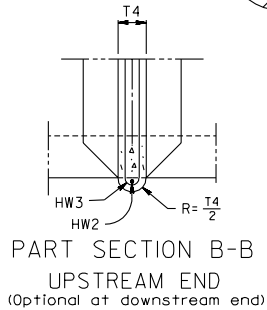


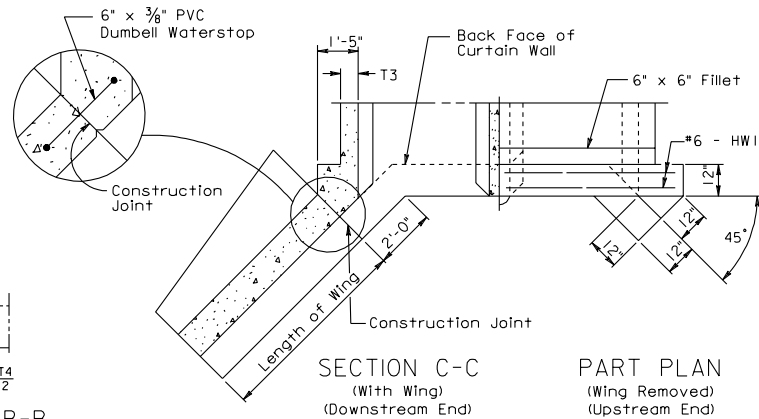
TABLE A	
Bar Size	Pin Dia.
#3	2 1/4"
#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"
#9	9"



SECTION A-A
(With Wing)



PART SECTION B-B
UPSTREAM END
(Optional at downstream end)



SECTION C-C
(With Wing)
(Downstream End)

PART PLAN
(Wing Removed)
(Upstream End)

BCT-02

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"	9	9'-0"	18	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	-----	-----	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	18	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	-----	-----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	8 1/4"	8 1/4"	8"	8"	12	12'-0"	24	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	2'-8 1/4"	4'-9"	4	12"	4'-0"	4	12"	4'-0"
4	4	8 1/4"	8 1/4"	8"	8"	12	12'-0"	24	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	3'-2 1/4"	5'-3"	4	12"	5'-0"	4	12"	5'-0"
4	5	8 1/4"	8 1/4"	8"	8"	12	12'-0"	24	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	3'-8 1/4"	5'-9"	4	12"	6'-0"	4	12"	6'-0"
4	6	8 1/4"	8 1/4"	8"	8"	12	12'-0"	24	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	4'-2 1/4"	6'-3"	4	12"	7'-0"	4	12"	7'-0"
5	3	8 1/4"	8 1/4"	8"	8"	15	15'-0"	30	15'-0"	1	1'-0"	4	11"	16'-4"	5	11"	17'-4"	4	11"	2'-6"	4'-9"	4	11"	2'-6"	2'-8 1/4"	4'-11"	4	12"	4'-0"	4	12"	4'-0"
5	4	8 1/4"	8 1/4"	8"	8"	15	15'-0"	30	15'-0"	2	2'-0"	4	10"	16'-4"	4	10"	17'-4"	4	10"	2'-6"	4'-9"	4	10"	2'-6"	3'-2 1/4"	5'-5"	4	12"	5'-0"	4	10"	5'-0"
5	5	8 1/4"	8 1/4"	8"	8"	15	15'-0"	30	15'-0"	3	3'-0"	4	10"	16'-4"	4	10"	17'-4"	4	10"	2'-6"	4'-9"	4	10"	2'-6"	3'-8 1/4"	5'-11"	4	12"	6'-0"	4	10"	6'-0"
5	6	8 1/4"	8 1/4"	8"	8"	15	15'-0"	30	15'-0"	4	4'-0"	4	10"	16'-4"	4	10"	17'-4"	4	10"	2'-6"	4'-9"	4	10"	2'-6"	4'-2 1/4"	6'-5"	4	12"	7'-0"	4	10"	7'-0"
5	7	8 1/4"	8 1/4"	8"	8"	15	15'-0"	30	15'-0"	5	5'-0"	4	9"	16'-4"	4	9"	17'-4"	4	9"	2'-6"	4'-9"	4	9"	2'-6"	4'-8 1/4"	6'-11"	4	12"	8'-0"	4	10"	8'-0"
6	4	9 3/4"	9 3/4"	8"	8"	18	18'-0"	36	18'-0"	2	2'-0"	4	11"	18'-11"	4	11"	20'-4"	4	11"	2'-8 3/8"	5'-2"	4	11"	2'-8 3/8"	3'-3 3/4"	5'-9"	4	12"	5'-3"	4	10"	5'-3"
6	5	9 3/4"	9 3/4"	8"	8"	18	18'-0"	36	18'-0"	3	3'-0"	4	10"	18'-11"	4	10"	20'-4"	4	10"	2'-8 3/8"	5'-2"	4	10"	2'-8 3/8"	3'-9 3/4"	6'-3"	4	12"	6'-3"	4	10"	6'-3"
6	6	9 3/4"	9 3/4"	8"	8"	18	18'-0"	36	18'-0"	4	4'-0"	4	10"	18'-11"	4	10"	20'-4"	4	10"	2'-8 3/8"	5'-2"	4	10"	2'-8 3/8"	4'-3 3/4"	6'-9"	4	12"	7'-3"	4	10"	7'-3"
6	7	9 3/4"	9 3/4"	8"	8"	18	18'-0"	36	18'-0"	5	5'-0"	4	9"	18'-11"	4	9"	20'-4"	4	9"	2'-8 3/8"	5'-2"	4	9"	2'-8 3/8"	4'-9 3/4"	7'-3"	4	12"	8'-3"	4	10"	8'-3"
6	8	9 3/4"	9 3/4"	8"	8"	18	18'-0"	36	18'-0"	6	6'-0"	4	9"	18'-11"	4	9"	20'-4"	4	9"	2'-8 3/8"	5'-2"	4	9"	2'-8 3/8"	5'-3 3/4"	7'-9"	4	12"	9'-3"	4	10"	9'-3"
7	4	9 1/2"	9 1/2"	8"	8"	21	21'-0"	42	21'-0"	2	2'-0"	4	9"	21'-6"	4	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	3'-3 1/2"	5'-11"	4	12"	5'-3"	4	9 1/2"	5'-3"
7	6	9 1/2"	9 1/2"	8"	8"	21	21'-0"	42	21'-0"	4	4'-0"	4	9"	21'-6"	5	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	4'-3 1/2"	6'-11"	4	12"	7'-3"	4	8 1/2"	7'-3"
7	8	9 3/4"	9 3/4"	8"	8"	21	21'-0"	42	21'-0"	6	6'-0"	4	8"	21'-6"	4	8"	23'-4"	4	8"	2'-10 3/4"	5'-6"	4	8"	2'-10 3/4"	5'-3 3/4"	7'-11"	4	12"	9'-3"	4	9"	9'-3"
7	10	9 3/4"	9 3/4"	8"	8"	21	21'-0"	42	21'-0"	8	8'-0"	4	8"	21'-6"	4	8"	23'-4"	4	8"	2'-10 3/4"	5'-6"	4	8"	2'-10 3/4"	6'-3 3/4"	8'-11"	4	12"	11'-3"	4	9"	11'-3"
8	4	9"	9"	8"	8"	24	24'-0"	48	24'-0"	2	2'-0"	4	8"	24'-2"	4	8"	26'-4"	4	8"	3'-1 1/4"	5'-11"	4	8"	3'-1 1/4"	3'-3"	6'-1"	4	12"	5'-2"	4	7 1/2"	5'-2"
8	6	9"	9"	8"	8"	24	24'-0"	48	24'-0"	4	4'-0"	5	12"	24'-2"	5	12"	26'-4"	5	12"	3'-1 1/4"	5'-11"	5	12"	3'-1 1/4"	4'-3"	7'-0"	4	12"	7'-2"	4	7"	7'-2"
8	8	9 1/4"	9 1/4"	8"	8"	24	24'-0"	48	24'-0"	6	6'-0"	5	11"	24'-2"	5	11"	26'-4"	5	11"	3'-1 1/4"	5'-11"	5	11"	3'-1 1/4"	5'-3 1/4"	8'-1"	4	12"	9'-2"	4	7"	9'-2"
8	10	9 3/4"	9 3/4"	8"	8"	24	24'-0"	48	24'-0"	8	8'-0"	5	10"	24'-2"	5	10"	26'-4"	5	10"	3'-1 1/4"	5'-11"	5	10"	3'-1 1/4"	6'-3 3/4"	9'-1"	4	12"	11'-3"	4	7 1/2"	11'-3"
9	4	9 1/4"	9 1/4"	8"	8"	27	27'-0"	54	27'-0"	2	2'-0"	5	11"	26'-9"	5	11"	29'-4"	4	11"	3'-3 5/8"	6'-4"	6	11"	3'-3 5/8"	3'-3 1/4"	6'-2"	4	12"	5'-2"	4	6 1/2"	5'-2"
9	6	9 1/2"	9 1/2"	8"	8"	27	27'-0"	54	27'-0"	4	4'-0"	5	10"	26'-9"	5	10"	29'-4"	4	10"	3'-3 5/8"	6'-4"	5	10"	3'-3 5/8"	4'-3 1/2"	7'-3"	4	12"	7'-3"	4	6 1/2"	7'-3"
9	8	9 1/2"	9 1/2"	8"	8"	27	27'-0"	54	27'-0"	6	6'-0"	5	10"	26'-9"	5	10"	29'-4"	5	10"	3'-3 5/8"	6'-3"	5	10"	3'-3 5/8"	5'-3 1/2"	8'-3"	4	12"	9'-3"	4	6 1/2"	9'-3"
9	10	9 1/2"	9 1/2"	8"	8"	27	27'-0"	54	27'-0"	8	8'-0"	5	9"	26'-9"	5	9"	29'-4"	5	9"	3'-3 5/8"	6'-3"	5	9"	3'-3 5/8"	6'-3 1/2"	9'-3"	4	12"	11'-3"	4	6 1/2"	11'-3"
9	12	9 3/4"	9 3/4"	8"	8"	27	27'-0"	54	27'-0"	10	10'-0"	6	12"	26'-9"	6	12"	29'-4"	6	12"	3'-3 5/8"	6'-2"	6	12"	3'-3 5/8"	7'-3 3/4"	10'-3"	4	11 1/2"	13'-3"	4	6 1/2"	13'-3"
10	4	9 1/2"	9 1/2"	8"	8"	30	30'-0"	60	30'-0"	2	2'-0"	5	9"	29'-4"	5	9"	32'-4"	--	---	-----	-----	5	9"	3'-6"	3'-3 1/2"	6'-6"	4	12"	5'-3"	5	9 1/2"	5'-3"
10	6	9 1/2"	9 1/2"	8"	8"	30	30'-0"	60	30'-0"	4	4'-0"	5	10"	29'-4"	5	10"	32'-4"	4	10"	3'-6"	6'-9"	5	10"	3'-6"	4'-3 1/2"	7'-6"	4	12"	7'-3"	5	9 1/2"	7'-3"
10	8	9 1/2"	9 1/2"	8"	8"	30	30'-0"	60	30'-0"	6	6'-0"	5	9"	29'-4"	5	9"	32'-4"	4	9"	3'-6"	6'-9"	5	9"	3'-6"	5'-3 1/2"	8'-6"	4	12"	9'-3"	5	9 1/2"	9'-3"
10	10	9 3/4"	9 3/4"	8"	8"	30	30'-0"	60	30'-0"	8	8'-0"	5	9"	29'-4"	5	9"	32'-4"	4	9"	3'-6"	6'-9"	5	9"	3'-6"	6'-3 3/4"	9'-6"	4	12"	11'-3"	4	6 1/2"	11'-3"
10	12	9 3/4"	9 3/4"	8"	8"	30	30'-0"	60	30'-0"	10	10'-0"	6	12"	29'-4"	6	12"	32'-4"	4	12"	3'-6"	6'-9"	6	12"	3'-6"	7'-3 3/4"	10'-5"	4	11 1/2"	13'-3"	4	7"	13'-3"
12	6	10"	10"	8"	8"	36	36'-0"	72	36'-0"	4	4'-0"	5	9"	34'-6"	5	9"	38'-4"	--	---	-----	-----	6	9"	3'-10 3/4"	4'-4"	7'-10"	4	12"	7'-4"	5	8"	7'-4"
12	8	10"	10"	8"	8"	36	36'-0"	72	36'-0"	6	6'-0"	6	12"	34'-6"	6	12"	38'-4"	--	---	-----	-----	7	12"	3'-10 3/4"	5'-4"	8'-9"	4	12"	9'-4"	5	8"	9'-4"
12	10	10"	10"	8"	8"	36	36'-0"	72	36'-0"	8	8'-0"	5	8"	34'-6"	5	8"	38'-4"	4	8"	3'-10 3/4"	7'-6"	5	8"	3'-10 3/4"	6'-4"	9'-11"	4	12"	11'-4"	4	5 1/2"	11'-4"
12	12	10 1/4"	10 1/4"	8"	8"	36	36'-0"	72	36'-0"	10	10'-0"	6	11"	34'-6"	6	11"	38'-4"	4	11"	3'-10 3/4"	7'-6"	6	11"	3'-10 3/4"	7'-4 1/4"	10'-10"	4	11 1/2"	13'-5"	4	6"	13'-5"

Sheet 1 of 2 For Typical Section, notes and other details, refer to standard BCT-DT.

1004.04	TRIPLE BOX CULVERTS	STRUCTURE AND BRIDGE DIVISION
	0 TO 2 FT. FILLS	
	VIRGINIA DEPARTMENT OF TRANSPORTATION	

SPAN		HIGHT		REINFORCING STEEL													QUAN./LF		HEADWALLS								WINGWALL	
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CL. A3 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)		OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 1/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	53	16	49.903	0.989	115.345	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 1/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	53	24	52.727	1.087	123.697	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 6 3/8"	0'- 4 3/4"	1'- 11 1/4"	0'- 6 1/4"	0'- 4"	14'- 4"	2'- 3/4"	14'- 11"	68	16	62.428	1.157	149.191	16'- 2"	6	15'- 10"	2	8	2.124	120.956	2.115	95.127	A		
4	4	4	12"	3'- 6 3/8"	0'- 4 3/4"	1'- 11 1/4"	0'- 6 1/4"	0'- 4"	14'- 4"	2'- 3/4"	14'- 11"	68	24	65.252	1.255	157.543	16'- 2"	6	15'- 10"	2	10	2.229	127.859	2.208	95.127	C		
4	5	4	12"	3'- 6 3/8"	0'- 4 3/4"	1'- 11 1/4"	0'- 6 1/4"	0'- 4"	14'- 4"	2'- 3/4"	14'- 11"	68	32	68.076	1.353	165.895	16'- 2"	6	15'- 10"	2	12	2.334	134.761	2.300	95.127	E		
4	6	4	12"	3'- 6 3/8"	0'- 4 3/4"	1'- 11 1/4"	0'- 6 1/4"	0'- 4"	14'- 4"	2'- 3/4"	14'- 11"	68	40	70.900	1.451	174.247	16'- 2"	6	15'- 10"	2	14	2.440	141.664	2.393	95.127	G		
5	3	4	11"	4'- 4"	0'- 4 3/4"	2'- 4"	0'- 6 1/4"	0'- 4"	17'- 4"	2'- 8"	17'- 11"	83	16	74.953	1.306	195.032	19'- 2"	6	18'- 10"	2	8	2.425	138.980	2.426	113.151	A		
5	4	4	10"	4'- 4"	0'- 4 3/4"	2'- 4"	0'- 6 1/4"	0'- 4"	17'- 4"	2'- 8"	17'- 11"	83	24	77.777	1.404	202.477	19'- 2"	6	18'- 10"	2	10	2.531	145.883	2.519	113.151	C		
5	5	4	10"	4'- 4"	0'- 4 3/4"	2'- 4"	0'- 6 1/4"	0'- 4"	17'- 4"	2'- 8"	17'- 11"	83	32	80.601	1.503	211.630	19'- 2"	6	18'- 10"	2	12	2.636	152.785	2.611	113.151	E		
5	6	4	10"	4'- 4"	0'- 4 3/4"	2'- 4"	0'- 6 1/4"	0'- 4"	17'- 4"	2'- 8"	17'- 11"	83	40	83.425	1.601	220.784	19'- 2"	6	18'- 10"	2	14	2.741	159.688	2.704	113.151	G		
5	7	4	9"	4'- 4"	0'- 4 3/4"	2'- 4"	0'- 6 1/4"	0'- 4"	17'- 4"	2'- 8"	17'- 11"	83	48	86.249	1.698	243.283	19'- 2"	6	18'- 10"	2	16	2.846	166.591	2.797	113.151	I		
6	4	4	11"	5'- 7/8"	0'- 6 1/4"	2'- 7 1/4"	0'- 8 3/8"	0'- 5 1/2"	20'- 4"	3'- 1 3/4"	21'- 1"	98	24	90.302	1.747	218.090	22'- 2"	6	21'- 10"	2	10	2.784	163.907	2.782	131.175	D		
6	5	4	10"	5'- 7/8"	0'- 6 1/4"	2'- 7 1/4"	0'- 8 3/8"	0'- 5 1/2"	20'- 4"	3'- 1 3/4"	21'- 1"	98	32	93.126	1.845	239.219	22'- 2"	6	21'- 10"	2	12	2.889	170.809	2.875	131.175	F		
6	6	4	10"	5'- 7/8"	0'- 6 1/4"	2'- 7 1/4"	0'- 8 3/8"	0'- 5 1/2"	20'- 4"	3'- 1 3/4"	21'- 1"	98	40	95.950	1.943	248.372	22'- 2"	6	21'- 10"	2	14	2.994	177.712	2.968	131.175	H		
6	7	4	9"	5'- 7/8"	0'- 6 1/4"	2'- 7 1/4"	0'- 8 3/8"	0'- 5 1/2"	20'- 4"	3'- 1 3/4"	21'- 1"	98	48	98.774	2.040	272.697	22'- 2"	6	21'- 10"	2	16	3.099	184.615	3.060	131.175	J		
6	8	4	9"	5'- 7/8"	0'- 6 1/4"	2'- 7 1/4"	0'- 8 3/8"	0'- 5 1/2"	20'- 4"	3'- 1 3/4"	21'- 1"	98	56	101.598	2.138	282.029	22'- 2"	6	21'- 10"	2	18	3.204	191.517	3.153	131.175	L		
7	4	4	9"	5'- 10 5/8"	0'- 6"	3'- 3/8"	0'- 8"	0'- 5 1/4"	23'- 4 1/8"	3'- 9 1/8"	24'- 1"	113	24	102.827	1.887	272.679	25'- 2"	6	24'- 10"	2	10	3.085	181.931	3.093	149.199	D		
7	6	4	9"	5'- 10 5/8"	0'- 6"	3'- 3/8"	0'- 8"	0'- 5 1/4"	23'- 4 1/8"	3'- 9 1/8"	24'- 1"	113	40	108.475	2.081	317.892	25'- 2"	6	24'- 10"	2	14	3.295	195.736	3.278	149.199	H		
7	8	4	8"	5'- 10 1/2"	0'- 6 1/4"	3'- 1/8"	0'- 8 3/8"	0'- 5 1/2"	23'- 4 1/8"	3'- 8 3/8"	24'- 1"	113	56	114.123	2.314	333.736	25'- 2"	6	24'- 10"	2	18	3.492	209.541	3.450	149.199	L		
7	10	4	8"	5'- 10 1/2"	0'- 6 1/4"	3'- 1/8"	0'- 8 3/8"	0'- 5 1/2"	23'- 4 1/8"	3'- 8 3/8"	24'- 1"	113	72	119.771	2.510	353.557	25'- 2"	6	24'- 10"	2	22	3.702	223.347	3.636	149.199	P		
8	4	4	8"	6'- 8 3/8"	0'- 5 1/2"	3'- 5 5/8"	0'- 7 1/4"	0'- 4 3/4"	26'- 3 3/8"	4'- 4 7/8"	27'- 0"	128	24	115.352	1.977	326.925	28'- 2"	6	27'- 10"	2	10	3.387	199.955	3.405	167.223	C		
8	6	5	12"	6'- 8 3/8"	0'- 5 5/8"	3'- 5 5/8"	0'- 7 3/8"	0'- 4 3/4"	26'- 3 3/8"	4'- 4 7/8"	27'- 0"	128	40	121.000	2.172	358.499	28'- 2"	6	27'- 10"	2	14	3.597	213.760	3.591	167.223	G		
8	8	5	11"	6'- 8 1/4"	0'- 5 3/8"	3'- 5 3/8"	0'- 7 3/4"	0'- 5"	26'- 3 3/8"	4'- 4 5/8"	27'- 0"	128	56	126.648	2.407	400.875	28'- 2"	6	27'- 10"	2	18	3.810	227.565	3.779	167.223	L		
8	10	5	10"	6'- 8"	0'- 5 3/8"	3'- 4 7/8"	0'- 8 3/8"	0'- 5 1/2"	26'- 3 3/8"	4'- 4 1/8"	27'- 1"	128	72	132.296	2.684	445.005	28'- 2"	6	27'- 10"	2	22	3.989	241.371	3.933	167.223	P		
9	4	5	11"	7'- 5 7/8"	0'- 5 5/8"	3'- 10 1/4"	0'- 7 3/4"	0'- 5"	29'- 4"	4'- 11 3/4"	30'- 0"	143	24	127.877	2.184	391.710	31'- 2"	6	30'- 10"	2	10	3.682	217.979	3.710	185.247	D		
9	6	5	10"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	143	40	133.525	2.425	428.310	31'- 2"	6	30'- 10"	2	14	3.874	231.784	3.877	185.247	H		
9	8	5	10"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	143	56	139.173	2.620	462.853	31'- 2"	6	30'- 10"	2	18	4.084	245.589	4.063	185.247	L		
9	10	5	9"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	143	72	144.821	2.813	519.001	31'- 2"	6	30'- 10"	2	22	4.295	259.395	4.248	185.247	P		
9	12	6	12"	7'- 5 5/8"	0'- 6 1/2"	3'- 9 7/8"	0'- 8 1/2"	0'- 5 1/2"	29'- 4"	4'- 11 1/4"	30'- 1"	143	88	150.469	3.053	569.921	31'- 2"	6	30'- 10"	2	26	4.487	273.200	4.416	185.247	T		
10	4	5	9"	8'- 3 3/8"	0'- 6 1/8"	4'- 2 3/4"	0'- 8 1/8"	0'- 5 1/4"	32'- 4"	5'- 6 3/4"	33'- 1"	158	24	140.402	2.402	448.938	34'- 2"	6	33'- 10"	2	10	3.953	236.003	3.991	203.271	D		
10	6	5	10"	8'- 3 3/8"	0'- 6 1/8"	4'- 2 3/4"	0'- 8 1/8"	0'- 5 1/4"	32'- 4"	5'- 6 3/4"	33'- 1"	158	40	146.050	2.598	464.846	34'- 2"	6	33'- 10"	2	14	4.164	249.808	4.177	203.271	H		
10	8	5	9"	8'- 3 3/8"	0'- 6 1/8"	4'- 2 3/4"	0'- 8 1/8"	0'- 5 1/4"	32'- 4"	5'- 6 3/4"	33'- 1"	158	56	151.698	2.791	522.567	34'- 2"	6	33'- 10"	2	18	4.374	263.613	4.362	203.271	L		
10	10	5	9"	8'- 3 3/4"	0'- 6 3/8"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	32'- 4"	5'- 6 1/2"	33'- 1"	158	72	157.346	3.038	543.566	34'- 2"	6	33'- 10"	2	22	4.564	277.419	4.527	203.271	P		
10	12	6	12"	8'- 3 1/4"	0'- 6 1/2"	4'- 2 1/2"	0'- 8 1/2"	0'- 5 1/2"	32'- 4"	5'- 6 1/2"	33'- 1"	158	88	162.994	3.232	583.045	34'- 2"	6	33'- 10"	2	26	4.774	291.224	4.713	203.271	T		
12	6	5	9"	9'- 10 3/8"	0'- 6 5/8"	4'- 11 7/8"	0'- 8 3/4"	0'- 5 3/4"	38'- 4 1/8"	6'- 8 5/8"	39'- 1"	188	40	171.100	3.061	570.341	40'- 2"	6	39'- 10"	2	14	4.693	285.856	4.726	239.319	H		
12	8	6	12"	9'- 10 3/8"	0'- 6 3/4"	4'- 11 1/8"	0'- 8 1/8"	0'- 5 3/4"	38'- 4 1/8"	6'- 8 5/8"	39'- 1"	188	56	176.748	3.255	625.255	40'- 2"	6	39'- 10"	2	18	4.903	299.661	4.912	239.319	L		
12	10	5	8"	9'- 10 3/8"	0'- 6 5/8"	4'- 11 7/8"	0'- 8 3/4"	0'- 5 3/4"	38'- 4 1/8"	6'- 8 5/8"	39'- 1"	188	72	182.396	3.448	676.174	40'- 2"	6	39'- 10"	2	22	5.114	313.467	5.097	239.319	P		
12	12	6	11"	9'- 10 1/4"	0'- 7"	4'- 11 5/8"	0'- 9 1/4"	0'- 6"	38'- 4 1/8"	6'- 8 3/8"	39'- 2"	188	88	188.044	3.703	708.974	40'- 2"	6	39'- 10"	2	26	5.299	327.272	5.257	239.319	T		

BCT-05

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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	8"	8"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	2'-8"	4'-8"	4	12"	4'-0"	4	12"	4'-0"
4	4	8"	8"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-2"	5'-2"	4	12"	5'-0"	4	12"	5'-0"
4	5	8"	8"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-8"	5'-8"	4	12"	6'-0"	4	12"	6'-0"
4	6	8"	8"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	4'-2"	6'-2"	4	12"	7'-0"	4	12"	7'-0"
5	3	8"	8"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	2'-8"	4'-11"	4	12"	4'-0"	4	12"	4'-0"
5	4	8"	8"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	3'-2"	5'-5"	4	12"	5'-0"	4	12"	5'-0"
5	5	8"	8"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	3'-8"	5'-11"	4	12"	6'-0"	4	12"	6'-0"
5	6	8"	8"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	4'-2"	6'-5"	4	12"	7'-0"	4	12"	7'-0"
5	7	8"	8"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	4'-8"	6'-11"	4	12"	8'-0"	4	12"	8'-0"
6	4	8"	8"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	5	12"	2'-8 3/8"	3'-2"	5'-6"	4	12"	5'-0"	4	11"	5'-0"
6	5	8"	8"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	5	12"	2'-8 3/8"	3'-8"	6'-0"	4	12"	6'-0"	4	11"	6'-0"
6	6	8"	8"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	5	12"	2'-8 3/8"	4'-2"	6'-6"	4	12"	7'-0"	4	11"	7'-0"
6	7	8"	8"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	5	12"	2'-8 3/8"	4'-8"	7'-0"	4	12"	8'-0"	4	11"	8'-0"
6	8	8"	8"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	11"	18'-11"	4	11"	20'-4"	4	11"	2'-8 3/8"	5'-2"	4	11"	2'-8 3/8"	5'-2"	7'-7"	4	12"	9'-0"	4	11 1/2"	9'-0"
7	4	8"	8"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	4	9"	21'-6"	4	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	3'-2"	5'-10"	4	12"	5'-0"	4	10"	5'-0"
7	6	8"	8"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	4	9"	21'-6"	4	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	4'-2"	6'-10"	4	12"	7'-0"	4	10"	7'-0"
7	8	8"	8"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	4	9"	21'-6"	4	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	5'-2"	7'-10"	4	12"	9'-0"	4	10"	9'-0"
7	10	8"	8"	8"	8"	21	21'-0"	21	21'-0"	8	8'-0"	4	9"	21'-6"	5	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	6'-2"	8'-10"	4	12"	11'-0"	4	10"	11'-0"
8	4	8"	8"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	5	11"	24'-2"	5	11"	26'-4"	--	---	----	----	6	11"	3'-1 1/4"	3'-2"	5'-10"	4	12"	5'-0"	4	7 1/2"	5'-0"
8	6	8"	8"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	5	11"	24'-2"	5	11"	26'-4"	4	11"	3'-1 1/4"	5'-11"	5	11"	3'-1 1/4"	4'-2"	6'-11"	4	12"	7'-0"	4	7 1/2"	7'-0"
8	8	8"	8"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	5	11"	24'-2"	5	11"	26'-4"	4	11"	3'-1 1/4"	5'-11"	5	11"	3'-1 1/4"	5'-2"	7'-11"	4	12"	9'-0"	4	7 1/2"	9'-0"
8	10	8"	8"	8"	8"	24	24'-0"	24	24'-0"	8	8'-0"	5	11"	24'-2"	5	11"	26'-4"	4	11"	3'-1 1/4"	5'-11"	6	11"	3'-1 1/4"	6'-2"	8'-10"	4	12"	11'-0"	4	8"	11'-0"
9	4	9 1/4"	9 1/4"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	5	11"	26'-9"	5	11"	29'-4"	4	11"	3'-3 5/8"	6'-4"	6	11"	3'-3 5/8"	3'-3 1/4"	6'-2"	4	12"	5'-2"	4	7 1/2"	5'-2"
9	6	9 1/2"	9 1/2"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	5	10"	26'-9"	5	10"	29'-4"	4	10"	3'-3 5/8"	6'-4"	5	10"	3'-3 5/8"	4'-3 1/2"	7'-3"	4	12"	7'-3"	4	7 1/2"	7'-3"
9	8	9 1/2"	9 1/2"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	5	10"	26'-9"	5	10"	29'-4"	5	10"	3'-3 5/8"	6'-3"	5	10"	3'-3 5/8"	5'-3 1/2"	8'-3"	4	12"	9'-3"	4	7"	9'-3"
9	10	9 1/2"	9 1/2"	8"	8"	27	27'-0"	27	27'-0"	8	8'-0"	5	9"	26'-9"	5	9"	29'-4"	5	9"	3'-3 5/8"	6'-3"	5	9"	3'-3 5/8"	6'-3 1/2"	9'-3"	4	12"	11'-3"	4	7"	11'-3"
9	12	9 3/4"	9 3/4"	8"	8"	27	27'-0"	27	27'-0"	10	10'-0"	5	9"	26'-9"	5	9"	29'-4"	5	9"	3'-3 5/8"	6'-3"	5	9"	3'-3 5/8"	7'-3 3/4"	10'-3"	4	11 1/2"	13'-3"	4	7 1/2"	13'-3"
10	4	9 1/2"	9 1/2"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	5	9"	29'-4"	5	9"	32'-4"	--	---	----	----	5	9"	3'-6"	3'-3 1/2"	6'-6"	4	12"	5'-3"	5	10 1/2"	5'-3"
10	6	9 1/2"	9 1/2"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	5	10"	29'-4"	5	10"	32'-4"	4	10"	3'-6"	6'-9"	5	10"	3'-6"	4'-3 1/2"	7'-6"	4	12"	7'-3"	4	6 1/2"	7'-3"
10	8	9 1/2"	9 1/2"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	5	9"	29'-4"	5	9"	32'-4"	4	9"	3'-6"	6'-9"	5	9"	3'-6"	5'-3 1/2"	8'-6"	4	12"	9'-3"	4	7"	9'-3"
10	10	9 3/4"	9 3/4"	8"	8"	30	30'-0"	30	30'-0"	8	8'-0"	5	9"	29'-4"	5	9"	32'-4"	4	9"	3'-6"	6'-9"	5	9"	3'-6"	6'-3 3/4"	9'-6"	4	12"	11'-3"	4	7 1/2"	11'-3"
10	12	9 3/4"	9 3/4"	8"	8"	30	30'-0"	30	30'-0"	10	10'-0"	6	12"	29'-4"	6	12"	32'-4"	4	12"	3'-6"	6'-9"	6	12"	3'-6"	7'-3 3/4"	10'-5"	4	12"	13'-3"	4	8"	13'-3"
12	6	10"	10"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	5	9"	34'-6"	5	9"	38'-4"	--	---	----	----	6	9"	3'-10 3/4"	4'-4"	7'-10"	4	12"	7'-4"	5	9"	7'-4"
12	8	10"	10"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	6	12"	34'-6"	6	12"	38'-4"	--	---	----	----	7	12"	3'-10 3/4"	5'-4"	8'-9"	4	12"	9'-4"	4	6"	9'-4"
12	10	10"	10"	8"	8"	36	36'-0"	36	36'-0"	8	8'-0"	5	8"	34'-6"	5	8"	38'-4"	4	8"	3'-10 3/4"	7'-6"	5	8"	3'-10 3/4"	6'-4"	9'-11"	4	12"	11'-4"	5	9 1/2"	11'-4"
12	12	10 1/4"	10 1/4"	8"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	11"	34'-6"	6	11"	38'-4"	4	11"	3'-10 3/4"	7'-6"	6	11"	3'-10 3/4"	7'-4 1/4"	10'-10"	4	12"	13'-5"	4	6 1/2"	13'-5"

Sheet 1 of 2

For Typical Section, notes and other details, refer to standard BCT-DT.

TRIPLE BOX CULVERTS
2 TO 5 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

1004.06

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS								WINGWALL			
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)		INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 1/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	109.333	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	117.685	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	16	52.408	1.136	129.262	16'- 2"	6	15'- 10"	2	8	2.131	120.956	2.121	95.127	A		
4	4	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	24	55.232	1.234	137.614	16'- 2"	6	15'- 10"	2	10	2.236	127.859	2.214	95.127	C		
4	5	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	32	58.056	1.332	145.966	16'- 2"	6	15'- 10"	2	12	2.341	134.761	2.307	95.127	E		
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	40	60.880	1.430	154.318	16'- 2"	6	15'- 10"	2	14	2.446	141.664	2.399	95.127	G		
5	3	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	16	62.428	1.281	162.105	19'- 2"	6	18'- 10"	2	8	2.434	138.980	2.435	113.151	A		
5	4	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	24	65.252	1.380	170.457	19'- 2"	6	18'- 10"	2	10	2.539	145.883	2.527	113.151	C		
5	5	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	32	68.076	1.478	178.809	19'- 2"	6	18'- 10"	2	12	2.644	152.785	2.620	113.151	E		
5	6	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	40	70.900	1.576	187.161	19'- 2"	6	18'- 10"	2	14	2.750	159.688	2.713	113.151	G		
5	7	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	48	73.724	1.674	195.513	19'- 2"	6	18'- 10"	2	16	2.855	166.591	2.806	113.151	I		
6	4	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	24	75.272	1.527	186.936	22'- 2"	6	21'- 10"	2	10	2.843	163.907	2.841	131.175	C		
6	5	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	32	78.096	1.625	196.281	22'- 2"	6	21'- 10"	2	12	2.948	170.809	2.934	131.175	E		
6	6	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	40	80.920	1.723	205.626	22'- 2"	6	21'- 10"	2	14	3.053	177.712	3.026	131.175	G		
6	7	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	48	83.744	1.821	214.971	22'- 2"	6	21'- 10"	2	16	3.158	184.615	3.119	131.175	I		
6	8	4	11"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	56	86.568	1.918	236.347	22'- 2"	6	21'- 10"	2	18	3.263	191.517	3.212	131.175	K		
7	4	4	9"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	24	85.292	1.669	255.887	25'- 2"	6	24'- 10"	2	10	3.146	181.931	3.154	149.199	C		
7	6	4	9"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	40	90.940	1.866	274.551	25'- 2"	6	24'- 10"	2	14	3.357	195.736	3.340	149.199	G		
7	8	4	9"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	56	96.588	2.062	293.214	25'- 2"	6	24'- 10"	2	18	3.567	209.541	3.525	149.199	K		
7	10	4	9"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	72	102.236	2.256	335.211	25'- 2"	6	24'- 10"	2	22	3.777	223.347	3.711	149.199	O		
8	4	5	11"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	26'- 3 3/8"	4'- 5 7/8"	26'- 10"	104	24	95.312	1.813	320.767	28'- 2"	6	27'- 10"	2	10	3.450	199.955	3.468	167.223	C		
8	6	5	11"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	26'- 3 3/8"	4'- 5 7/8"	26'- 10"	104	40	100.960	2.008	348.499	28'- 2"	6	27'- 10"	2	14	3.660	213.760	3.653	167.223	G		
8	8	5	11"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	26'- 3 3/8"	4'- 5 7/8"	26'- 10"	104	56	106.608	2.204	370.289	28'- 2"	6	27'- 10"	2	18	3.870	227.565	3.839	167.223	K		
8	10	5	11"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	26'- 3 3/8"	4'- 5 7/8"	26'- 10"	104	72	112.256	2.399	406.452	28'- 2"	6	27'- 10"	2	22	4.081	241.371	4.024	167.223	O		
9	4	5	11"	7'- 5 7/8"	0'- 5 7/8"	3'- 10 1/4"	0'- 7 3/4"	0'- 5"	29'- 4"	4'- 11 3/4"	30'- 0"	116	24	105.332	2.186	369.608	31'- 2"	6	30'- 10"	2	10	3.682	217.979	3.710	185.247	D		
9	6	5	10"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	116	40	110.980	2.426	404.837	31'- 2"	6	30'- 10"	2	14	3.874	231.784	3.877	185.247	H		
9	8	5	10"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	116	56	116.628	2.621	440.889	31'- 2"	6	30'- 10"	2	18	4.084	245.589	4.063	185.247	L		
9	10	5	9"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	116	72	122.276	2.814	496.333	31'- 2"	6	30'- 10"	2	22	4.295	259.395	4.248	185.247	P		
9	12	5	9"	7'- 5 5/8"	0'- 6 3/8"	3'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	29'- 4"	4'- 11 1/4"	30'- 1"	116	88	127.924	3.056	516.468	31'- 2"	6	30'- 10"	2	26	4.487	273.200	4.416	185.247	T		
10	4	5	9"	8'- 3 3/8"	0'- 6 1/8"	4'- 2 3/4"	0'- 8 1/8"	0'- 5 1/4"	32'- 4"	5'- 6 3/4"	33'- 1"	128	24	115.352	2.403	426.263	34'- 2"	6	33'- 10"	2	10	3.953	236.003	3.991	203.271	D		
10	6	5	10"	8'- 3 3/8"	0'- 6 1/8"	4'- 2 3/4"	0'- 8 1/8"	0'- 5 1/4"	32'- 4"	5'- 6 3/4"	33'- 1"	128	40	121.000	2.599	442.363	34'- 2"	6	33'- 10"	2	14	4.164	249.808	4.177	203.271	H		
10	8	5	9"	8'- 3 3/8"	0'- 6 1/8"	4'- 2 3/4"	0'- 8 1/8"	0'- 5 1/4"	32'- 4"	5'- 6 3/4"	33'- 1"	128	56	126.648	2.793	496.153	34'- 2"	6	33'- 10"	2	18	4.374	263.613	4.362	203.271	L		
10	10	5	9"	8'- 3 3/4"	0'- 6 3/8"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	32'- 4"	5'- 6 1/2"	33'- 1"	128	72	132.296	3.039	516.127	34'- 2"	6	33'- 10"	2	22	4.564	277.419	4.527	203.271	P		
10	12	6	12"	8'- 3 3/4"	0'- 6 1/2"	4'- 2 1/2"	0'- 8 1/2"	0'- 5 1/2"	32'- 4"	5'- 6 1/2"	33'- 1"	128	88	137.944	3.234	554.648	34'- 2"	6	33'- 10"	2	26	4.774	291.224	4.713	203.271	T		
12	6	5	9"	9'- 10 3/8"	0'- 6 5/8"	4'- 11 7/8"	0'- 8 3/4"	0'- 5 3/4"	38'- 4 1/8"	6'- 8 5/8"	39'- 1"	152	40	141.004	3.064	541.194	40'- 2"	6	39'- 10"	2	14	4.693	285.856	4.726	239.319	H		
12	8	6	12"	9'- 10 3/8"	0'- 6 3/4"	4'- 11 1/8"	0'- 8 1/8"	0'- 5 3/4"	38'- 4 1/8"	6'- 8 5/8"	39'- 1"	152	56	146.688	3.257	592.676	40'- 2"	6	39'- 10"	2	18	4.903	299.661	4.912	239.319	L		
12	10	5	8"	9'- 10 3/8"	0'- 6 5/8"	4'- 11 7/8"	0'- 8 3/4"	0'- 5 3/4"	38'- 4 1/8"	6'- 8 5/8"	39'- 1"	152	72	152.336	3.451	645.781	40'- 2"	6	39'- 10"	2	22	5.114	313.467	5.097	239.319	P		
12	12	6	11"	9'- 10 1/4"	0'- 7"	4'- 11 5/8"	0'- 9 1/4"	0'- 6"	38'- 4 1/8"	6'- 8 3/8"	39'- 2"	152	88	157.984	3.706	677.964	40'- 2"	6	39'- 10"	2	26	5.299	327.272	5.257	239.319	T		

BCT-10

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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-2"	--	---	----	----	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	8"	8"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	2'-8"	4'-8"	4	12"	4'-0"	4	12"	4'-0"
4	4	8"	8"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-2"	5'-2"	4	12"	5'-0"	4	12"	5'-0"
4	5	8"	8"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-8"	5'-8"	4	12"	6'-0"	4	12"	6'-0"
4	6	8"	8"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	4'-2"	6'-2"	4	12"	7'-0"	4	12"	7'-0"
5	3	8"	8"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	2'-8"	4'-11"	4	12"	4'-0"	4	12"	4'-0"
5	4	8"	8"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	3'-2"	5'-5"	4	12"	5'-0"	4	12"	5'-0"
5	5	8"	8"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	3'-8"	5'-11"	4	12"	6'-0"	4	12"	6'-0"
5	6	8"	8"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	4'-2"	6'-5"	4	12"	7'-0"	4	12"	7'-0"
5	7	8"	8"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	4'-8"	6'-11"	4	12"	8'-0"	4	12"	8'-0"
6	4	8"	8"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	12"	18'-11"	4	12"	20'-4"	3	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"	18	18'-0"	18	18'-0"	3	3'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	4	12"	2'-8 3/8"	3'-8"	6'-1"	4	12"	6'-0"	4	12"	6'-0"
6	6	8"	8"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	4	12"	2'-8 3/8"	4'-2"	6'-7"	4	12"	7'-0"	4	12"	7'-0"
6	7	8"	8"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	12"	18'-11"	4	12"	20'-4"	--	---	----	----	4	12"	2'-8 3/8"	4'-8"	7'-1"	4	12"	8'-0"	4	12"	8'-0"
6	8	8"	8"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	12"	18'-11"	4	12"	20'-4"	3	12"	2'-8 3/8"	5'-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"	21	21'-0"	21	21'-0"	2	2'-0"	4	12"	21'-6"	4	12"	23'-4"	--	---	----	----	5	12"	2'-10 3/4"	3'-2"	5'-9"	4	11 1/2"	5'-0"	4	12"	5'-0"
7	6	8"	8"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	4	12"	21'-6"	4	12"	23'-4"	4	12"	2'-10 3/4"	5'-6"	4	12"	2'-10 3/4"	4'-2"	6'-10"	4	12"	7'-0"	4	12"	7'-0"
7	8	8"	8"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	4	12"	21'-6"	4	12"	23'-4"	4	12"	2'-10 3/4"	5'-6"	4	12"	2'-10 3/4"	5'-2"	7'-10"	4	12"	9'-0"	4	12"	9'-0"
7	10	8"	8"	8"	8"	21	21'-0"	21	21'-0"	8	8'-0"	4	11"	21'-6"	4	11"	23'-4"	--	---	----	----	5	11"	2'-10 3/4"	6'-2"	8'-9"	4	12"	11'-0"	4	12"	11'-0"
8	4	8"	8"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	4	11"	24'-2"	4	11"	26'-4"	3	11"	3'-1 1/4"	6'-0"	5	11"	3'-1 1/4"	3'-2"	5'-11"	4	8"	5'-0"	4	12"	5'-0"
8	6	8 1/4"	8 1/4"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	4	10"	24'-2"	4	10"	26'-4"	--	---	----	----	5	10"	3'-1 1/4"	4'-2 1/4"	7'-0"	4	12"	7'-0"	4	12"	7'-0"
8	8	8 1/2"	8 1/2"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	4	10"	24'-2"	4	10"	26'-4"	--	---	----	----	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"	24	24'-0"	24	24'-0"	8	8'-0"	4	9"	24'-2"	4	9"	26'-4"	--	---	----	----	5	9"	3'-1 1/4"	6'-2 3/4"	9'-0"	4	12"	11'-2"	4	12"	11'-2"
9	4	8 3/4"	8 3/4"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	4	9"	26'-9"	4	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	5	9"	3'-3 5/8"	3'-2 3/4"	6'-2"	4	7 1/2"	5'-2"	4	12"	5'-2"
9	6	9"	9"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	4	9"	26'-9"	4	9"	29'-4"	--	---	----	----	5	9"	3'-3 5/8"	4'-3"	7'-3"	4	12"	7'-2"	4	12"	7'-2"
9	8	9 1/4"	9 1/4"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	4	9"	26'-9"	5	9"	29'-4"	--	---	----	----	5	9"	3'-3 5/8"	5'-3 1/4"	8'-3"	4	12"	9'-2"	4	12"	9'-2"
9	10	9 1/2"	9 1/2"	8"	8"	27	27'-0"	27	27'-0"	8	8'-0"	4	9"	26'-9"	5	9"	29'-4"	--	---	----	----	5	9"	3'-3 5/8"	6'-3 1/2"	9'-3"	4	12"	11'-3"	4	12"	11'-3"
9	12	9 1/2"	9 1/2"	8"	8"	27	27'-0"	27	27'-0"	10	10'-0"	4	8"	26'-9"	4	8"	29'-4"	3	8"	3'-3 5/8"	6'-5"	5	8"	3'-3 5/8"	7'-3 1/2"	10'-3"	4	8 1/2"	13'-3"	4	12"	13'-3"
10	4	9 3/4"	9 3/4"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	5	8"	29'-4"	4	8"	32'-4"	--	---	----	----	5	8"	3'-6"	3'-3 3/4"	6'-6"	4	7"	5'-3"	4	12"	5'-3"
10	6	10"	10"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	5	9"	29'-4"	5	9"	32'-4"	--	---	----	----	5	9"	3'-6"	4'-4"	7'-6"	4	11"	7'-4"	4	12"	7'-4"
10	8	10"	10"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	5	8"	29'-4"	5	8"	32'-4"	3	8"	3'-6"	6'-10"	4	8"	3'-6"	5'-4"	8'-7"	4	12"	9'-4"	4	12"	9'-4"
10	10	10 1/4"	10 1/4"	8"	8"	30	30'-0"	30	30'-0"	8	8'-0"	5	8"	29'-4"	5	8"	32'-4"	4	8"	3'-6"	6'-9"	4	8"	3'-6"	6'-4 1/4"	9'-7"	4	12"	11'-5"	4	12"	11'-5"
10	12	10 1/2"	10 1/2"	8"	8"	30	30'-0"	30	30'-0"	10	10'-0"	5	11"	29'-4"	5	11"	32'-4"	3	11"	3'-6"	6'-10"	6	11"	3'-6"	7'-4 1/2"	10'-6"	4	9"	13'-5"	4	12"	13'-5"
12	6	11 1/2"	11 1/2"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	5	9"	34'-6"	5	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	5	9"	3'-10 3/4"	4'-5 1/2"	8'-0"	4	9"	7'-7"	4	12"	7'-7"
12	8	11 3/4"	11 3/4"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	5	9"	34'-6"	5	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	5	9"	3'-10 3/4"	5'-5 3/4"	9'-1"	4	12"	9'-8"	4	12"	9'-8"
12	10	11 3/4"	11 3/4"	8"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	9"	34'-6"	5	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	5	9"	3'-10 3/4"	6'-5 3/4"	10'-1"	4	12"	11'-8"	4	12"	11'-8"
12	12	12"	12"	8"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	9"	34'-6"	5	9"	38'-4"	--	---	----	----	6	9"	3'-10 3/4"	7'-6"	11'-0"	4	11 1/2"	13'-8"	4	12"	13'-8"

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

STRUCTURE AND BRIDGE DIVISION

1004.08

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS								WINGWALL			
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)		INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	109.333	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	117.685	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	16	52.408	1.136	129.262	16'- 2"	6	15'- 10"	2	8	2.131	120.956	2.121	95.127	A		
4	4	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	24	55.232	1.234	137.614	16'- 2"	6	15'- 10"	2	10	2.236	127.859	2.214	95.127	C		
4	5	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	32	58.056	1.332	145.966	16'- 2"	6	15'- 10"	2	12	2.341	134.761	2.307	95.127	E		
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	40	60.880	1.430	154.318	16'- 2"	6	15'- 10"	2	14	2.446	141.664	2.399	95.127	G		
5	3	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	16	62.428	1.282	149.413	19'- 2"	6	18'- 10"	2	8	2.434	138.980	2.435	113.151	A		
5	4	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	24	65.252	1.381	157.765	19'- 2"	6	18'- 10"	2	10	2.539	145.883	2.527	113.151	C		
5	5	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	32	68.076	1.479	166.117	19'- 2"	6	18'- 10"	2	12	2.644	152.785	2.620	113.151	E		
5	6	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	40	70.900	1.577	174.469	19'- 2"	6	18'- 10"	2	14	2.750	159.688	2.713	113.151	G		
5	7	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	48	73.724	1.675	182.821	19'- 2"	6	18'- 10"	2	16	2.855	166.591	2.806	113.151	I		
6	4	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	24	75.272	1.527	185.465	22'- 2"	6	21'- 10"	2	10	2.843	163.907	2.841	131.175	C		
6	5	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	32	78.096	1.625	186.046	22'- 2"	6	21'- 10"	2	12	2.948	170.809	2.934	131.175	E		
6	6	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	40	80.920	1.723	194.398	22'- 2"	6	21'- 10"	2	14	3.053	177.712	3.026	131.175	G		
6	7	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	48	83.744	1.822	202.750	22'- 2"	6	21'- 10"	2	16	3.158	184.615	3.119	131.175	I		
6	8	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	56	86.568	1.919	218.873	22'- 2"	6	21'- 10"	2	18	3.263	191.517	3.212	131.175	K		
7	4	4	12"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	24	85.292	1.673	206.538	25'- 2"	6	24'- 10"	2	10	3.146	181.931	3.154	149.199	C		
7	6	4	12"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	40	90.940	1.869	229.245	25'- 2"	6	24'- 10"	2	14	3.357	195.736	3.340	149.199	G		
7	8	4	12"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	56	96.588	2.065	245.949	25'- 2"	6	24'- 10"	2	18	3.567	209.541	3.525	149.199	K		
7	10	4	11"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 1/8"	0'- 5 7/8"	0'- 3 3/4"	23'- 4 1/8"	3'- 10 5/8"	23'- 10"	92	72	102.236	2.261	272.518	25'- 2"	6	24'- 10"	2	22	3.777	223.347	3.711	149.199	O		
8	4	4	11"	6'- 8 7/8"	0'- 4 1/2"	3'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	26'- 3 3/8"	4'- 5 7/8"	26'- 10"	104	24	95.312	1.818	251.359	28'- 2"	6	27'- 10"	2	10	3.450	199.955	3.468	167.223	C		
8	6	4	10"	6'- 8 3/4"	0'- 4 3/4"	3'- 6 3/8"	0'- 6 1/4"	0'- 4"	26'- 3 3/8"	4'- 5 5/8"	26'- 11"	104	40	100.960	2.055	271.727	28'- 2"	6	27'- 10"	2	14	3.644	213.760	3.638	167.223	G		
8	8	4	10"	6'- 8 5/8"	0'- 5"	3'- 6 1/8"	0'- 6 1/2"	0'- 4 1/4"	26'- 3 3/8"	4'- 5 3/8"	26'- 11"	104	56	106.608	2.292	291.100	28'- 2"	6	27'- 10"	2	18	3.839	227.565	3.807	167.223	K		
8	10	4	9"	6'- 8 1/2"	0'- 5 1/4"	3'- 5 7/8"	0'- 6 7/8"	0'- 4 1/2"	26'- 3 3/8"	4'- 5 1/4"	26'- 11"	104	72	112.256	2.528	329.269	28'- 2"	6	27'- 10"	2	22	4.033	241.371	3.977	167.223	O		
9	4	4	9"	7'- 6 1/8"	0'- 5 1/4"	3'- 10 3/4"	0'- 6 7/8"	0'- 4 1/2"	29'- 4"	5'- 1 1/4"	29'- 11"	116	24	105.332	2.099	311.727	31'- 2"	6	30'- 10"	2	10	3.699	217.979	3.727	185.247	C		
9	6	4	9"	7'- 6"	0'- 5 1/2"	3'- 10 1/2"	0'- 7 1/4"	0'- 4 3/4"	29'- 4"	5'- 0"	30'- 0"	116	40	110.980	2.342	314.924	31'- 2"	6	30'- 10"	2	14	3.892	231.784	3.895	185.247	G		
9	8	4	9"	7'- 5 7/8"	0'- 5 3/4"	3'- 10 1/4"	0'- 7 5/8"	0'- 5"	29'- 4"	4'- 11 3/4"	30'- 0"	116	56	116.628	2.582	363.852	31'- 2"	6	30'- 10"	2	18	4.102	245.589	4.081	185.247	L		
9	10	4	9"	7'- 5 3/4"	0'- 6"	3'- 10"	0'- 8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	116	72	122.276	2.823	383.930	31'- 2"	6	30'- 10"	2	22	4.295	259.395	4.248	185.247	P		
9	12	4	8"	7'- 5 3/4"	0'- 6"	3'- 10"	0'- 8"	0'- 5 1/4"	29'- 4"	4'- 11 1/2"	30'- 1"	116	88	127.924	3.018	422.270	31'- 2"	6	30'- 10"	2	26	4.505	273.200	4.434	185.247	T		
10	4	4	8"	8'- 3 1/4"	0'- 6 1/4"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	32'- 4"	5'- 6 1/2"	33'- 1"	128	24	115.352	2.457	384.136	34'- 2"	6	33'- 10"	2	10	3.933	236.003	3.971	203.271	D		
10	6	4	9"	8'- 3 1/8"	0'- 6 1/2"	4'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	32'- 4"	5'- 6 1/4"	33'- 1"	128	40	121.000	2.704	402.995	34'- 2"	6	33'- 10"	2	14	4.123	249.808	4.136	203.271	H		
10	8	4	8"	8'- 3 1/8"	0'- 6 1/2"	4'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	32'- 4"	5'- 6 1/4"	33'- 1"	128	56	126.648	2.897	453.040	34'- 2"	6	33'- 10"	2	18	4.333	263.613	4.322	203.271	L		
10	10	4	8"	8'- 3"	0'- 6 3/4"	4'- 2"	0'- 9"	0'- 6"	32'- 4"	5'- 6"	33'- 2"	128	72	132.296	3.143	483.219	34'- 2"	6	33'- 10"	2	22	4.523	277.419	4.487	203.271	P		
10	12	5	11"	8'- 2 7/8"	0'- 7 1/8"	4'- 1 3/4"	0'- 9 1/2"	0'- 6 1/4"	32'- 4"	5'- 5 3/4"	33'- 2"	128	88	137.944	3.392	474.178	34'- 2"	6	33'- 10"	2	26	4.713	291.224	4.652	203.271	T		
12	6	5	9"	9'- 9 5/8"	0'- 8 1/8"	4'- 10 3/8"	0'- 10 7/8"	0'- 7 1/4"	38'- 4 1/8"	6'- 7 1/8"	39'- 4"	152	40	141.004	3.423	522.028	40'- 2"	6	39'- 10"	2	14	4.543	285.856	4.576	239.319	H		
12	8	5	9"	9'- 9 1/2"	0'- 8 3/8"	4'- 10 1/8"	0'- 11 1/4"	0'- 7 1/2"	38'- 4 1/8"	6'- 6 7/8"	39'- 4"	152	56	146.688	3.679	539.044	40'- 2"	6	39'- 10"	2	18	4.729	299.661	4.737	239.319	L		
12	10	5	9"	9'- 9 1/2"	0'- 8 3/8"	4'- 10 1/8"	0'- 11 1/4"	0'- 7 1/2"	38'- 4 1/8"	6'- 6 7/8"	39'- 4"	152	72	152.336	3.872	600.866	40'- 2"	6	39'- 10"	2	22	4.939	313.467	4.922	239.319	P		
12	12	5	9"	9'- 9 3/8"	0'- 8 5/8"	4'- 9 7/8"	0'- 11 5/8"	0'- 7 3/4"	38'- 4 1/8"	6'- 6 5/8"	39'- 5"	152	88	157.984	4.127	632.744	40'- 2"	6	39'- 10"	2	26	5.124	327.272	5.083	239.319	T		

STRUCTURE AND BRIDGE DIVISION

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

BCT-15

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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-2"	--	---	----	----	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	8"	8"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	2'-8"	4'-8"	4	12"	4'-0"	4	12"	4'-0"
4	4	8"	8"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-2"	5'-2"	4	12"	5'-0"	4	12"	5'-0"
4	5	8"	8"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-8"	5'-8"	4	12"	6'-0"	4	12"	6'-0"
4	6	8"	8"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	4'-2"	6'-2"	4	12"	7'-0"	4	12"	7'-0"
5	3	8"	8"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	2'-8"	4'-11"	4	12"	4'-0"	4	12"	4'-0"
5	4	8"	8"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	3'-2"	5'-5"	4	12"	5'-0"	4	12"	5'-0"
5	5	8"	8"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	3'-8"	5'-11"	4	12"	6'-0"	4	12"	6'-0"
5	6	8"	8"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	4'-2"	6'-5"	4	12"	7'-0"	4	12"	7'-0"
5	7	8"	8"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	12"	16'-4"	4	12"	17'-4"	--	---	----	----	4	12"	2'-6"	4'-8"	6'-11"	4	12"	8'-0"	4	12"	8'-0"
6	4	8"	8"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	12"	18'-11"	4	12"	20'-4"	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"	18	18'-0"	18	18'-0"	3	3'-0"	4	12"	18'-11"	4	12"	20'-4"	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"	18	18'-0"	18	18'-0"	4	4'-0"	4	12"	18'-11"	4	12"	20'-4"	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"	18	18'-0"	18	18'-0"	5	5'-0"	4	12"	18'-11"	4	12"	20'-4"	4	12"	2'-8 3/8"	5'-2"	4	12"	2'-8 3/8"	4'-8"	7'-1"	4	12"	8'-0"	4	12"	8'-0"
6	8	8 1/4"	8 1/4"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	12"	18'-11"	4	12"	20'-4"	4	12"	2'-8 3/8"	5'-2"	4	12"	2'-8 3/8"	5'-2 1/4"	7'-7"	4	12"	9'-0"	4	12"	9'-0"
7	4	9"	9"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	4	11"	21'-6"	4	11"	23'-4"	--	---	----	----	5	11"	2'-10 3/4"	3'-3"	5'-10"	4	10 1/2"	5'-2"	4	12"	5'-2"
7	6	9"	9"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	4	10"	21'-6"	4	10"	23'-4"	--	---	----	----	5	10"	2'-10 3/4"	4'-3"	6'-10"	4	12"	7'-2"	4	12"	7'-2"
7	8	9 1/4"	9 1/4"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	4	10"	21'-6"	4	10"	23'-4"	3	10"	2'-10 3/4"	5'-7"	4	10"	2'-10 3/4"	5'-3 1/4"	7'-11"	4	12"	9'-2"	4	12"	9'-2"
7	10	9 1/2"	9 1/2"	8"	8"	21	21'-0"	21	21'-0"	8	8'-0"	4	10"	21'-6"	4	10"	23'-4"	3	10"	2'-10 3/4"	5'-7"	5	10"	2'-10 3/4"	6'-3 1/2"	8'-10"	4	9 1/2"	11'-3"	4	12"	11'-3"
8	4	10"	10"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	4	9"	24'-2"	4	9"	26'-4"	--	---	----	----	5	9"	3'-1 1/4"	3'-4"	6'-1"	4	9"	5'-4"	4	12"	5'-4"
8	6	10 1/4"	10 1/4"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	4	9"	24'-2"	4	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	4	9"	3'-1 1/4"	4'-4 1/4"	7'-2"	4	12"	7'-5"	4	12"	7'-5"
8	8	10 1/4"	10 1/4"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	4	9"	24'-2"	4	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	4	9"	3'-1 1/4"	5'-4 1/4"	8'-2"	4	12"	9'-5"	4	12"	9'-5"
8	10	10 1/2"	10 1/2"	8"	8"	24	24'-0"	24	24'-0"	8	8'-0"	4	9"	24'-2"	5	9"	26'-4"	--	---	----	----	5	9"	3'-1 1/4"	6'-4 1/2"	9'-2"	4	11 1/2"	11'-5"	4	12"	11'-5"
9	4	11"	11"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	5	9"	26'-9"	5	9"	29'-4"	--	---	----	----	5	9"	3'-3 5/8"	3'-5"	6'-5"	4	8 1/2"	5'-6"	4	12"	5'-6"
9	6	11 1/4"	11 1/4"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	5	9"	26'-9"	5	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	4	9"	3'-3 5/8"	4'-5 1/4"	7'-6"	4	12"	7'-6"	4	12"	7'-6"
9	8	11 1/2"	11 1/2"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	5	9"	26'-9"	5	9"	29'-4"	--	---	----	----	4	9"	3'-3 5/8"	5'-5 1/2"	8'-6"	4	12"	9'-7"	4	12"	9'-7"
9	10	11 1/2"	11 1/2"	8"	8"	27	27'-0"	27	27'-0"	8	8'-0"	5	9"	26'-9"	5	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	5	9"	3'-3 5/8"	6'-5 1/2"	9'-5"	4	12"	11'-7"	4	12"	11'-7"
9	12	11 3/4"	11 3/4"	8"	8"	27	27'-0"	27	27'-0"	10	10'-0"	5	9"	26'-9"	5	9"	29'-4"	4	9"	3'-3 5/8"	6'-4"	5	9"	3'-3 5/8"	7'-5 3/4"	10'-5"	4	6"	13'-8"	4	12"	13'-8"
10	4	12"	12"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	5	8"	29'-4"	5	8"	32'-4"	4	8"	3'-6"	6'-9"	4	8"	3'-6"	3'-6"	6'-9"	4	8"	5'-8"	4	12"	5'-8"
10	6	12 1/4"	12 1/4"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	5	8"	29'-4"	5	8"	32'-4"	3	8"	3'-6"	6'-10"	4	8"	3'-6"	4'-6 1/4"	7'-9"	4	12"	7'-9"	4	12"	7'-9"
10	8	12 1/2"	12 1/2"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	5	8"	29'-4"	5	8"	32'-4"	3	8"	3'-6"	6'-10"	4	8"	3'-6"	5'-6 1/2"	8'-9"	4	12"	9'-9"	4	12"	9'-9"
10	10	12 1/2"	12 1/2"	8"	8"	30	30'-0"	30	30'-0"	8	8'-0"	5	8"	29'-4"	5	8"	32'-4"	4	8"	3'-6"	6'-9"	4	8"	3'-6"	6'-6 1/2"	9'-9"	4	12"	11'-9"	4	12"	11'-9"
10	12	12 3/4"	12 3/4"	8"	8"	30	30'-0"	30	30'-0"	10	10'-0"	5	8"	29'-4"	5	8"	32'-4"	4	8"	3'-6"	6'-9"	5	8"	3'-6"	7'-6 3/4"	10'-9"	4	6"	13'-9"	4	12"	13'-9"
12	6	14 1/4"	14 1/4"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	6	9"	34'-6"	5	9"	38'-4"	4	9"	3'-10 3/4"	7'-6"	4	9"	3'-10 3/4"	4'-8 1/4"	8'-4"	4	12"	8'-0"	4	12"	8'-0"
12	8	14 1/2"	14 1/2"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	6	9"	34'-6"	5	9"	38'-4"	4	9"	3'-10 3/4"	7'-6"	4	9"	3'-10 3/4"	5'-8 1/2"	9'-4"	4	12"	10'-1"	4	12"	10'-1"
12	10	14 1/2"	14 1/2"	8"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	9"	34'-6"	5	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	5	9"	3'-10 3/4"	6'-8 1/2"	10'-3"	4	12"	12'-1"	4	12"	12'-1"
12	12	14 3/4"	14 3/4"	8"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	9"	34'-6"	6	9"	38'-4"	4	9"	3'-10 3/4"	7'-6"	5	9"	3'-10 3/4"	7'-8 3/4"	11'-4"	4	6 1/2"	14'-1"	4	12"	14'-1"

Sheet 1 of 2

For Typical Section, notes and other details, refer to standard BCT-DT.

TRIPLE BOX CULVERTS
10 TO 15 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

1004.10

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS								WINGWALL				
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									LENGTH	NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CL. A3 A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS		INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	SIZE							LENGTH	SIZE	LENGTH								
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	109.333	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A			
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	117.685	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C			
4	3	3	12"	3'- 6 1/2"	0'- 4 3/8"	1'- 11 1/8"	0'- 5 7/8"	0'- 3 7/8"	14'- 4 1/8"	2'- 7/8"	14'- 10"	56	16	52.408	1.136	120.599	16'- 2"	6	15'- 10"	2	8	2.131	120.956	2.121	95.127	A			
4	4	3	12"	3'- 6 1/2"	0'- 4 3/8"	1'- 11 1/8"	0'- 5 7/8"	0'- 3 7/8"	14'- 4 1/8"	2'- 7/8"	14'- 10"	56	24	55.232	1.235	128.951	16'- 2"	6	15'- 10"	2	10	2.236	127.859	2.214	95.127	C			
4	5	3	12"	3'- 6 1/2"	0'- 4 3/8"	1'- 11 1/8"	0'- 5 7/8"	0'- 3 7/8"	14'- 4 1/8"	2'- 7/8"	14'- 10"	56	32	58.056	1.333	137.303	16'- 2"	6	15'- 10"	2	12	2.341	134.761	2.307	95.127	E			
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	40	60.880	1.430	154.318	16'- 2"	6	15'- 10"	2	14	2.446	141.664	2.399	95.127	G			
5	3	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	16	62.428	1.282	149.413	19'- 2"	6	18'- 10"	2	8	2.434	138.980	2.435	113.151	A			
5	4	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	24	65.252	1.381	157.765	19'- 2"	6	18'- 10"	2	10	2.539	145.883	2.527	113.151	C			
5	5	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	32	68.076	1.479	166.117	19'- 2"	6	18'- 10"	2	12	2.644	152.785	2.620	113.151	E			
5	6	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	40	70.900	1.577	174.469	19'- 2"	6	18'- 10"	2	14	2.750	159.688	2.713	113.151	G			
5	7	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	48	73.724	1.675	182.821	19'- 2"	6	18'- 10"	2	16	2.855	166.591	2.806	113.151	I			
6	4	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	24	75.272	1.526	191.499	22'- 2"	6	21'- 10"	2	10	2.843	163.907	2.841	131.175	C			
6	5	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	32	78.096	1.624	199.851	22'- 2"	6	21'- 10"	2	12	2.948	170.809	2.934	131.175	E			
6	6	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	40	80.920	1.722	208.203	22'- 2"	6	21'- 10"	2	14	3.053	177.712	3.026	131.175	G			
6	7	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	20'- 4"	3'- 3 1/2"	20'- 10"	80	48	83.744	1.821	216.555	22'- 2"	6	21'- 10"	2	16	3.158	184.615	3.119	131.175	I			
6	8	4	12"	5'- 1 5/8"	0'- 4 3/4"	2'- 8 3/4"	0'- 6 1/4"	0'- 4"	20'- 4"	3'- 3/4"	20'- 11"	80	56	86.568	1.951	225.019	22'- 2"	6	21'- 10"	2	18	3.252	191.517	3.201	131.175	K			
7	4	4	11"	5'- 10 7/8"	0'- 5 1/2"	3'- 7/8"	0'- 7 1/4"	0'- 4 3/4"	23'- 4 1/8"	3'- 9 5/8"	24'- 0"	92	24	85.292	1.818	219.045	25'- 2"	6	24'- 10"	2	10	3.093	181.931	3.101	149.199	C			
7	6	4	10"	5'- 10 7/8"	0'- 5 1/2"	3'- 7/8"	0'- 7 1/4"	0'- 4 3/4"	23'- 4 1/8"	3'- 9 5/8"	24'- 0"	92	40	90.940	2.014	249.784	25'- 2"	6	24'- 10"	2	14	3.303	195.736	3.286	149.199	G			
7	8	4	10"	5'- 10 3/4"	0'- 5 3/4"	3'- 5/8"	0'- 7 5/8"	0'- 5"	23'- 4 1/8"	3'- 9 3/8"	24'- 0"	92	56	96.588	2.246	265.066	25'- 2"	6	24'- 10"	2	18	3.519	209.541	3.477	149.199	L			
7	10	4	10"	5'- 10 5/8"	0'- 6"	3'- 3/8"	0'- 8"	0'- 5 1/4"	23'- 4 1/8"	3'- 9 1/8"	24'- 1"	92	72	102.236	2.478	302.360	25'- 2"	6	24'- 10"	2	22	3.715	223.347	3.649	149.199	P			
8	4	4	9"	6'- 7 7/8"	0'- 6 1/2"	3'- 4 5/8"	0'- 8 5/8"	0'- 5 3/4"	26'- 3 3/8"	4'- 3 3/8"	27'- 1"	104	24	95.312	2.145	274.288	28'- 2"	6	27'- 10"	2	10	3.343	199.955	3.361	167.223	D			
8	6	4	9"	6'- 7 3/4"	0'- 6 3/4"	3'- 4 3/8"	0'- 9"	0'- 6"	26'- 3 3/8"	4'- 3 5/8"	27'- 2"	104	40	100.960	2.383	290.153	28'- 2"	6	27'- 10"	2	14	3.537	213.760	3.531	167.223	H			
8	8	4	9"	6'- 7 3/4"	0'- 6 3/4"	3'- 4 3/8"	0'- 9"	0'- 6"	26'- 3 3/8"	4'- 3 5/8"	27'- 2"	104	56	106.608	2.579	307.747	28'- 2"	6	27'- 10"	2	18	3.748	227.565	3.716	167.223	L			
8	10	4	9"	6'- 7 5/8"	0'- 7"	3'- 4 1/8"	0'- 9 3/8"	0'- 6 1/4"	26'- 3 3/8"	4'- 3 3/8"	27'- 2"	104	72	112.256	2.814	358.640	28'- 2"	6	27'- 10"	2	22	3.942	241.371	3.886	167.223	P			
9	4	4	9"	7'- 5"	0'- 7 1/2"	3'- 8 1/2"	0'- 10 1/8"	0'- 6 3/4"	29'- 4"	4'- 10"	30'- 3"	116	24	105.332	2.507	357.147	31'- 2"	6	30'- 10"	2	10	3.556	217.979	3.584	185.247	D			
9	6	4	9"	7'- 4 7/8"	0'- 7 3/4"	3'- 8 1/4"	0'- 10 1/2"	0'- 7"	29'- 4"	4'- 9 3/4"	30'- 4"	116	40	110.980	2.750	372.196	31'- 2"	6	30'- 10"	2	14	3.748	231.784	3.751	185.247	H			
9	8	4	9"	7'- 4 3/4"	0'- 8"	3'- 8"	0'- 10 3/4"	0'- 7 1/4"	29'- 4"	4'- 9 1/2"	30'- 4"	116	56	116.628	2.993	377.257	31'- 2"	6	30'- 10"	2	18	3.940	245.589	3.919	185.247	L			
9	10	4	9"	7'- 4 3/4"	0'- 8"	3'- 8"	0'- 10 3/4"	0'- 7 1/4"	29'- 4"	4'- 9 1/2"	30'- 4"	116	72	122.276	3.186	426.256	31'- 2"	6	30'- 10"	2	22	4.151	259.395	4.104	185.247	P			
9	12	4	9"	7'- 4 5/8"	0'- 8 1/4"	3'- 7 3/4"	0'- 11 1/8"	0'- 7 1/2"	29'- 4"	4'- 9 1/4"	30'- 4"	116	88	127.924	3.426	474.139	31'- 2"	6	30'- 10"	2	26	4.343	273.200	4.272	185.247	T			
10	4	4	8"	8'- 2 1/8"	0'- 8 1/2"	4'- 1/4"	0'- 11 1/2"	0'- 7 3/4"	32'- 4"	5'- 4 1/4"	33'- 5"	128	24	115.352	2.907	435.055	34'- 2"	6	33'- 10"	2	10	3.750	236.003	3.788	203.271	D			
10	6	4	8"	8'- 2"	0'- 8 3/4"	4'- 0"	0'- 11 1/8"	0'- 8"	32'- 4"	5'- 4"	33'- 5"	128	40	121.000	3.155	438.006	34'- 2"	6	33'- 10"	2	14	3.940	249.808	3.953	203.271	H			
10	8	4	8"	8'- 1 7/8"	0'- 9"	3'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	32'- 4"	5'- 3 3/4"	33'- 6"	128	56	126.648	3.401	456.213	34'- 2"	6	33'- 10"	2	18	4.130	263.613	4.119	203.271	L			
10	10	4	8"	8'- 1 1/8"	0'- 9"	3'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	32'- 4"	5'- 3 3/4"	33'- 6"	128	72	132.296	3.597	485.891	34'- 2"	6	33'- 10"	2	22	4.340	277.419	4.304	203.271	P			
10	12	4	8"	8'- 1 3/4"	0'- 9 1/4"	3'- 11 1/2"	1'- 1/2"	0'- 8 1/2"	32'- 4"	5'- 3 1/2"	33'- 6"	128	88	137.944	3.840	546.489	34'- 2"	6	33'- 10"	2	26	4.530	291.224	4.469	203.271	T			
12	6	5	9"	9'- 8 1/4"	0'- 10 7/8"	4'- 7 5/8"	1'- 2 3/4"	0'- 10"	38'- 4 1/8"	6'- 4 3/8"	39'- 8"	152	40	141.004	4.076	560.177	40'- 2"	6	39'- 10"	2	14	4.269	285.856	4.302	239.319	H			
12	8	5	9"	9'- 8 1/8"	0'- 11 1/8"	4'- 7 3/8"	1'- 3 3/8"	0'- 10 1/4"	38'- 4 1/8"	6'- 4 1/8"	39'- 9"	152	56	146.688	4.332	578.337	40'- 2"	6	39'- 10"	2	18	4.454	299.661	4.463	239.319	L			
12	10	5	9"	9'- 8 1/6"	0'- 11 1/6"	4'- 7 3/6"	1'- 3 3/6"	0'- 10 1/4"	38'- 4 1/6"	6'- 4 1/6"	39'- 9"	152	72	152.336	4.528	604.622	40'- 2"	6	39'- 10"	2	22	4.665	313.467	4.648	239.319	P			
12	12	5	9"	9'- 8"	0'- 11 3/8"	4'- 7 1/8"	1'- 3 1/2"	0'- 10 1/2"	38'- 4 1/8"	6'- 3 3/8"	39'- 9"	152	88	157.984	4.778	699.034	40'- 2"	6	39'- 10"	2	26	4.850	327.272	4.808	239.319	T			

STRUCTURE AND BRIDGE DIVISION

TRIPLE BOX CULVERTS
10 TO 15 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

BCT-20

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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	-----	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	-----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	8"	8"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	-----	4	12"	2'-3 5/8"	2'-8"	4'-8"	4	12"	4'-0"	4	12"	4'-0"
4	4	8"	8"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	-----	4	12"	2'-3 5/8"	3'-2"	5'-2"	4	12"	5'-0"	4	12"	5'-0"
4	5	8"	8"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	-----	4	12"	2'-3 5/8"	3'-8"	5'-8"	4	12"	6'-0"	4	12"	6'-0"
4	6	8"	8"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	-----	4	12"	2'-3 5/8"	4'-2"	6'-2"	4	12"	7'-0"	4	12"	7'-0"
5	3	8"	8"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	2'-8"	4'-11"	4	12"	4'-0"	4	12"	4'-0"
5	4	8"	8"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	3'-2"	5'-5"	4	12"	5'-0"	4	12"	5'-0"
5	5	8"	8"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	12"	16'-4"	4	12"	17'-4"	3	12"	2'-6"	4'-10"	4	12"	2'-6"	3'-8"	5'-11"	4	12"	6'-0"	4	12"	6'-0"
5	6	8"	8"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	12"	16'-4"	4	12"	17'-4"	3	12"	2'-6"	4'-10"	4	12"	2'-6"	4'-2"	6'-5"	4	12"	7'-0"	4	12"	7'-0"
5	7	8"	8"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	4'-8"	6'-11"	4	12"	8'-0"	4	12"	8'-0"
6	4	9"	9"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	12"	18'-11"	4	12"	20'-4"	4	12"	2'-8 3/8"	5'-2"	4	12"	2'-8 3/8"	3'-3"	5'-8"	4	12"	5'-2"	4	12"	5'-2"
6	5	9"	9"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	11"	18'-11"	4	11"	20'-4"	4	11"	2'-8 3/8"	5'-2"	4	11"	2'-8 3/8"	3'-9"	6'-2"	4	12"	6'-2"	4	12"	6'-2"
6	6	9 1/4"	9 1/4"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	11"	18'-11"	4	11"	20'-4"	4	11"	2'-8 3/8"	5'-2"	4	11"	2'-8 3/8"	4'-3 1/4"	6'-8"	4	12"	7'-2"	4	12"	7'-2"
6	7	9 1/4"	9 1/4"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	11"	18'-11"	4	11"	20'-4"	4	11"	2'-8 3/8"	5'-2"	4	11"	2'-8 3/8"	4'-9 1/4"	7'-2"	4	12"	8'-2"	4	12"	8'-2"
6	8	9 1/4"	9 1/4"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	11"	18'-11"	4	11"	20'-4"	4	11"	2'-8 3/8"	5'-2"	4	11"	2'-8 3/8"	5'-3 1/4"	7'-8"	4	12"	9'-2"	4	12"	9'-2"
7	4	10 1/2"	10 1/2"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	4	10"	21'-6"	4	10"	23'-4"	3	10"	2'-10 3/4"	5'-7"	4	10"	2'-10 3/4"	3'-4 1/2"	6'-0"	4	12"	5'-5"	4	12"	5'-5"
7	6	10 3/4"	10 3/4"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	4	10"	21'-6"	4	10"	23'-4"	3	10"	2'-10 3/4"	5'-7"	4	10"	2'-10 3/4"	4'-4 3/4"	7'-0"	4	12"	7'-5"	4	12"	7'-5"
7	8	11"	11"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	4	9"	21'-6"	4	9"	23'-4"	3	9"	2'-10 3/4"	5'-7"	4	9"	2'-10 3/4"	5'-5"	8'-1"	4	12"	9'-6"	4	12"	9'-6"
7	10	11"	11"	8"	8"	21	21'-0"	21	21'-0"	8	8'-0"	4	9"	21'-6"	4	9"	23'-4"	--	---	----	-----	5	9"	2'-10 3/4"	6'-5"	9'-0"	4	7"	11'-6"	4	12"	11'-6"
8	4	11 3/4"	11 3/4"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	4	9"	24'-2"	5	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	4	9"	3'-1 1/4"	3'-5 3/4"	6'-4"	4	11"	5'-8"	4	12"	5'-8"
8	6	12"	12"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	4	9"	24'-2"	5	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	4	9"	3'-1 1/4"	4'-6"	7'-4"	4	12"	7'-8"	4	12"	7'-8"
8	8	12 1/4"	12 1/4"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	4	9"	24'-2"	5	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	4	9"	3'-1 1/4"	5'-6 1/4"	8'-4"	4	12"	9'-9"	4	12"	9'-9"
8	10	12 1/2"	12 1/2"	8"	8"	24	24'-0"	24	24'-0"	8	8'-0"	4	9"	24'-2"	5	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	5	9"	3'-1 1/4"	6'-6 1/2"	9'-4"	4	7"	11'-9"	4	12"	11'-9"
9	4	13"	13"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	5	9"	26'-9"	5	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	4	9"	3'-3 5/8"	3'-7"	6'-7"	4	10"	5'-10"	4	12"	5'-10"
9	6	13"	13"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	5	9"	26'-9"	5	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	4	9"	3'-3 5/8"	4'-7"	7'-7"	4	12"	7'-10"	4	12"	7'-10"
9	8	13 1/4"	13 1/4"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	5	9"	26'-9"	5	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	4	9"	3'-3 5/8"	5'-7 1/4"	8'-8"	4	12"	9'-10"	4	12"	9'-10"
9	10	13 1/4"	13 1/4"	8"	8"	27	27'-0"	27	27'-0"	8	8'-0"	5	9"	26'-9"	5	9"	29'-4"	3	9"	3'-3 5/8"	6'-5"	5	9"	3'-3 5/8"	6'-7 1/4"	9'-7"	4	8 1/2"	11'-10"	4	12"	11'-10"
9	12	13 1/2"	13 1/2"	8"	8"	27	27'-0"	27	27'-0"	10	10'-0"	5	8"	26'-9"	5	8"	29'-4"	4	8"	3'-3 5/8"	6'-4"	5	8"	3'-3 5/8"	7'-7 1/2"	10'-7"	5	7 1/2"	13'-11"	4	12"	13'-11"
10	4	14 1/4"	14 1/4"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	5	9"	29'-4"	5	9"	32'-4"	--	---	----	-----	5	9"	3'-6"	3'-8 1/4"	6'-10"	4	10"	6'-0"	4	12"	6'-0"
10	6	14 1/2"	14 1/2"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	5	9"	29'-4"	5	9"	32'-4"	3	9"	3'-6"	6'-10"	4	9"	3'-6"	4'-8 1/2"	7'-11"	4	12"	8'-1"	4	12"	8'-1"
10	8	14 1/2"	14 1/2"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	5	9"	29'-4"	5	9"	32'-4"	--	---	----	-----	5	9"	3'-6"	5'-8 1/2"	8'-11"	4	12"	10'-1"	4	12"	10'-1"
10	10	14 1/2"	14 1/2"	8"	8"	30	30'-0"	30	30'-0"	8	8'-0"	5	9"	29'-4"	5	9"	32'-4"	3	9"	3'-6"	6'-10"	5	9"	3'-6"	6'-8 1/2"	9'-11"	4	9"	12'-1"	4	12"	12'-1"
10	12	14 3/4"	14 3/4"	8"	8"	30	30'-0"	30	30'-0"	10	10'-0"	5	9"	29'-4"	5	9"	32'-4"	3	9"	3'-6"	6'-10"	6	9"	3'-6"	7'-8 3/4"	10'-10"	5	7 1/2"	14'-1"	4	12"	14'-1"
12	6	17"	17"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	6	9"	34'-6"	6	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	4	9"	3'-10 3/4"	4'-11"	8'-7"	4	12"	8'-6"	4	12"	8'-6"
12	8	17"	17"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	6	9"	34'-6"	6	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	4	9"	3'-10 3/4"	5'-11"	9'-7"	4	12"	10'-6"	4	12"	10'-6"
12	10	17 1/4"	17 1/4"	8"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	9"	34'-6"	6	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	5	9"	3'-10 3/4"	6'-11 1/4"	10'-6"	4	9"	12'-6"	4	12"	12'-6"
12	12	17 1/4"	17 1/4"	8"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	9"	34'-6"	6	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	6	9"	3'-10 3/4"	7'-11 1/4"	11'-5"	4	5"	14'-6"	4	12"	14'-6"

Sheet 1 of 2

For Typical Section, notes and other details, refer to standard BCT-DT.

1004.12

TRIPLE BOX CULVERTS
15 TO 20 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS								WINGWALL			
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. FT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)		INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	109.333	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	117.685	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	16	52.408	1.136	129.262	16'- 2"	6	15'- 10"	2	8	2.131	120.956	2.121	95.127	A		
4	4	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	24	55.232	1.234	137.614	16'- 2"	6	15'- 10"	2	10	2.236	127.859	2.214	95.127	C		
4	5	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	32	58.056	1.332	145.966	16'- 2"	6	15'- 10"	2	12	2.341	134.761	2.307	95.127	E		
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	40	60.880	1.430	154.318	16'- 2"	6	15'- 10"	2	14	2.446	141.664	2.399	95.127	G		
5	3	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	16	62.428	1.281	162.105	19'- 2"	6	18'- 10"	2	8	2.434	138.980	2.435	113.151	A		
5	4	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	24	65.252	1.380	170.457	19'- 2"	6	18'- 10"	2	10	2.539	145.883	2.527	113.151	C		
5	5	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	32	68.076	1.478	173.387	19'- 2"	6	18'- 10"	2	12	2.644	152.785	2.620	113.151	E		
5	6	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	40	70.900	1.576	181.739	19'- 2"	6	18'- 10"	2	14	2.750	159.688	2.713	113.151	G		
5	7	4	12"	4'- 4 7/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	17'- 4"	2'- 8 1/4"	17'- 10"	68	48	73.724	1.674	195.513	19'- 2"	6	18'- 10"	2	16	2.855	166.591	2.806	113.151	I		
6	4	4	12"	5'- 1 1/4"	0'- 5 1/2"	2'- 8"	0'- 7 1/4"	0'- 4 3/4"	20'- 4"	3'- 2 1/2"	21'- 0"	80	24	75.272	1.654	192.613	22'- 2"	6	21'- 10"	2	10	2.799	163.907	2.797	131.175	C		
6	5	4	11"	5'- 1 1/4"	0'- 5 1/2"	2'- 8"	0'- 7 1/4"	0'- 4 3/4"	20'- 4"	3'- 2 1/2"	21'- 0"	80	32	78.096	1.751	211.035	22'- 2"	6	21'- 10"	2	12	2.904	170.809	2.889	131.175	E		
6	6	4	11"	5'- 1 1/8"	0'- 5 3/4"	2'- 7 3/4"	0'- 7 5/8"	0'- 5"	20'- 4"	3'- 2 1/4"	21'- 0"	80	40	80.920	1.881	219.509	22'- 2"	6	21'- 10"	2	14	3.016	177.712	2.990	131.175	H		
6	7	4	11"	5'- 1 1/8"	0'- 5 3/4"	2'- 7 3/4"	0'- 7 5/8"	0'- 5"	20'- 4"	3'- 2 1/4"	21'- 0"	80	48	83.744	1.979	227.982	22'- 2"	6	21'- 10"	2	16	3.121	184.615	3.082	131.175	J		
6	8	4	11"	5'- 1 1/8"	0'- 5 3/4"	2'- 7 3/4"	0'- 7 5/8"	0'- 5"	20'- 4"	3'- 2 1/4"	21'- 0"	80	56	86.568	2.077	236.456	22'- 2"	6	21'- 10"	2	18	3.227	191.517	3.175	131.175	L		
7	4	4	10"	5'- 10 7/8"	0'- 7"	2'- 11 3/8"	0'- 9 3/8"	0'- 6 1/4"	23'- 4 1/8"	3'- 8 1/8"	24'- 2"	92	24	85.292	2.036	232.126	25'- 2"	6	24'- 10"	2	10	3.031	181.931	3.039	149.199	D		
7	6	4	10"	5'- 10"	0'- 7 1/4"	2'- 11 1/8"	0'- 9 3/4"	0'- 6 1/2"	23'- 4 1/8"	3'- 7 7/8"	24'- 3"	92	40	90.940	2.269	249.498	25'- 2"	6	24'- 10"	2	14	3.228	195.736	3.211	149.199	H		
7	8	4	9"	5'- 9 7/8"	0'- 7 1/2"	2'- 10 1/8"	0'- 10 1/8"	0'- 6 3/4"	23'- 4 1/8"	3'- 7 5/8"	24'- 3"	92	56	96.588	2.501	283.643	25'- 2"	6	24'- 10"	2	18	3.425	209.541	3.383	149.199	L		
7	10	4	9"	5'- 9 1/8"	0'- 7 1/2"	2'- 10 1/8"	0'- 10 1/8"	0'- 6 3/4"	23'- 4 1/8"	3'- 7 5/8"	24'- 3"	92	72	102.236	2.696	318.719	25'- 2"	6	24'- 10"	2	22	3.635	223.347	3.569	149.199	P		
8	4	4	9"	6'- 7"	0'- 8 1/4"	3'- 2 7/8"	0'- 11 1/8"	0'- 7 1/2"	26'- 3 3/8"	4'- 2 1/8"	27'- 4"	104	24	95.312	2.431	301.472	28'- 2"	6	27'- 10"	2	10	3.233	199.955	3.251	167.223	D		
8	6	4	9"	6'- 6 7/8"	0'- 8 1/2"	3'- 2 5/8"	0'- 11 1/2"	0'- 7 3/4"	26'- 3 3/8"	4'- 1 7/8"	27'- 5"	104	40	100.960	2.669	318.527	28'- 2"	6	27'- 10"	2	14	3.428	213.760	3.421	167.223	H		
8	8	4	9"	6'- 6 3/4"	0'- 8 3/4"	3'- 2 3/8"	0'- 11 7/8"	0'- 8"	26'- 3 3/8"	4'- 1 5/8"	27'- 5"	104	56	106.608	2.906	336.456	28'- 2"	6	27'- 10"	2	18	3.622	227.565	3.591	167.223	L		
8	10	4	9"	6'- 6 5/8"	0'- 9"	3'- 2 1/8"	1'- 1 1/4"	0'- 8 1/4"	26'- 3 3/8"	4'- 1 3/8"	27'- 6"	104	72	112.256	3.141	384.078	28'- 2"	6	27'- 10"	2	22	3.817	241.371	3.760	167.223	P		
9	4	4	9"	7'- 4"	0'- 9 1/2"	3'- 6 1/2"	1'- 7/8"	0'- 8 3/4"	29'- 4"	4'- 8"	30'- 6"	116	24	105.332	2.874	358.090	31'- 2"	6	30'- 10"	2	10	3.412	217.979	3.440	185.247	D		
9	6	4	9"	7'- 4"	0'- 9 1/2"	3'- 6 1/2"	1'- 7/8"	0'- 8 3/4"	29'- 4"	4'- 8"	30'- 6"	116	40	110.980	3.070	374.126	31'- 2"	6	30'- 10"	2	14	3.622	231.784	3.625	185.247	H		
9	8	4	9"	7'- 3 7/8"	0'- 9 3/4"	3'- 6 1/4"	1'- 1 1/4"	0'- 9"	29'- 4"	4'- 7 3/4"	30'- 7"	116	56	116.628	3.312	392.166	31'- 2"	6	30'- 10"	2	18	3.814	245.589	3.793	185.247	L		
9	10	4	9"	7'- 3 1/8"	0'- 9 3/4"	3'- 6 1/4"	1'- 1 1/4"	0'- 9"	29'- 4"	4'- 7 3/4"	30'- 7"	116	72	122.276	3.506	435.140	31'- 2"	6	30'- 10"	2	22	4.025	259.395	3.978	185.247	P		
9	12	4	8"	7'- 3 3/4"	0'- 10"	3'- 6"	1'- 1 5/8"	0'- 9 1/4"	29'- 4"	4'- 7 1/2"	30'- 7"	116	88	127.924	3.743	522.598	31'- 2"	6	30'- 10"	2	26	4.217	273.200	4.146	185.247	T		
10	4	5	9"	8'- 1"	0'- 10 7/8"	3'- 10"	1'- 2 3/4"	0'- 10"	32'- 4"	5'- 2"	33'- 8"	128	24	115.352	3.362	423.345	34'- 2"	6	33'- 10"	2	10	3.567	236.003	3.605	203.271	D		
10	6	5	9"	8'- 7/8"	0'- 11 1/8"	3'- 9 3/4"	1'- 3 1/8"	0'- 10 1/4"	32'- 4"	5'- 1 3/4"	33'- 9"	128	40	121.000	3.608	440.235	34'- 2"	6	33'- 10"	2	14	3.757	249.808	3.771	203.271	H		
10	8	5	9"	8'- 7/8"	0'- 11 1/8"	3'- 9 3/4"	1'- 3 1/8"	0'- 10 1/4"	32'- 4"	5'- 1 3/4"	33'- 9"	128	56	126.648	3.804	461.960	34'- 2"	6	33'- 10"	2	18	3.968	263.613	3.956	203.271	L		
10	10	5	9"	8'- 3/8"	0'- 11 1/8"	3'- 9 3/4"	1'- 3 1/8"	0'- 10 1/4"	32'- 4"	5'- 1 3/4"	33'- 9"	128	72	132.296	3.999	500.639	34'- 2"	6	33'- 10"	2	22	4.178	277.419	4.141	203.271	P		
10	12	5	9"	8'- 3/4"	0'- 11 3/8"	3'- 9 1/2"	1'- 3 1/2"	0'- 10 1/2"	32'- 4"	5'- 1 1/2"	33'- 9"	128	88	137.944	4.241	569.098	34'- 2"	6	33'- 10"	2	26	4.368	291.224	4.307	203.271	T		
12	6	6	9"	9'- 6 7/8"	1'- 1 3/4"	4'- 4 7/8"	1'- 6 3/4"	1'- 3/4"	38'- 4 1/8"	6'- 1 5/8"	40'- 1"	152	40	141.004	4.726	648.700	40'- 2"	6	39'- 10"	2	14	4.013	285.856	4.046	239.319	I		
12	8	6	9"	9'- 6 7/8"	1'- 1 3/4"	4'- 4 7/8"	1'- 6 3/4"	1'- 3/4"	38'- 4 1/8"	6'- 1 5/8"	40'- 1"	152	56	146.688	4.922	666.294	40'- 2"	6	39'- 10"	2	18	4.223	299.661	4.232	239.319	M		
12	10	6	9"	9'- 6 3/4"	1'- 2"	4'- 4 5/8"	1'- 7 1/8"	1'- 1"	38'- 4 1/8"	6'- 1 3/8"	40'- 1"	152	72	152.336	5.176	710.159	40'- 2"	6	39'- 10"	2	22	4.409	313.467	4.392	239.319	Q		
12	12	6	9"	9'- 6 3/4"	1'- 2"	4'- 4 5/8"	1'- 7 1/8"	1'- 1"	38'- 4 1/8"	6'- 1 3/8"	40'- 1"	152	88	157.984	5.369	778.792	40'- 2"	6	39'- 10"	2	26	4.619	327.272	4.578	239.319	U		

BCT-25

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"	9	9'- 0"	9	9'- 0"	1	1'- 0"	4	12"	11'- 2"	4	12"	11'- 4"	--	---	----	----	4	12"	2'- 1 1/4"	2'- 8"	4'- 6"	4	12"	4'- 0"	4	12"	4'- 0"
3	4	8"	8"	8"	8"	9	9'- 0"	9	9'- 0"	2	2'- 0"	4	12"	11'- 2"	4	12"	11'- 4"	--	---	----	----	4	12"	2'- 1 1/4"	3'- 2"	5'- 0"	4	12"	5'- 0"	4	12"	5'- 0"
4	3	8"	8"	8"	8"	12	12'- 0"	12	12'- 0"	1	1'- 0"	4	12"	13'- 9"	4	12"	14'- 4"	--	---	----	----	4	12"	2'- 3 5/8"	2'- 8"	4'- 8"	4	12"	4'- 0"	4	12"	4'- 0"
4	4	8"	8"	8"	8"	12	12'- 0"	12	12'- 0"	2	2'- 0"	4	12"	13'- 9"	4	12"	14'- 4"	--	---	----	----	4	12"	2'- 3 5/8"	3'- 2"	5'- 2"	4	12"	5'- 0"	4	12"	5'- 0"
4	5	8"	8"	8"	8"	12	12'- 0"	12	12'- 0"	3	3'- 0"	4	12"	13'- 9"	4	12"	14'- 4"	--	---	----	----	4	12"	2'- 3 5/8"	3'- 8"	5'- 8"	4	12"	6'- 0"	4	12"	6'- 0"
4	6	8"	8"	8"	8"	12	12'- 0"	12	12'- 0"	4	4'- 0"	4	12"	13'- 9"	4	12"	14'- 4"	--	---	----	----	4	12"	2'- 3 5/8"	4'- 2"	6'- 2"	4	12"	7'- 0"	4	12"	7'- 0"
5	3	8 3/4"	8 3/4"	8"	8"	15	15'- 0"	15	15'- 0"	1	1'- 0"	4	12"	16'- 4"	4	12"	17'- 4"	4	12"	2'- 6"	4'- 9"	4	12"	2'- 6"	2'- 8 3/4"	5'- 0"	4	12"	4'- 2"	4	12"	4'- 2"
5	4	9"	9"	8"	8"	15	15'- 0"	15	15'- 0"	2	2'- 0"	4	12"	16'- 4"	4	12"	17'- 4"	4	12"	2'- 6"	4'- 9"	4	12"	2'- 6"	3'- 3"	5'- 6"	4	12"	5'- 2"	4	12"	5'- 2"
5	5	9"	9"	8"	8"	15	15'- 0"	15	15'- 0"	3	3'- 0"	4	12"	16'- 4"	4	12"	17'- 4"	3	12"	2'- 6"	4'- 10"	4	12"	2'- 6"	3'- 9"	6'- 0"	4	12"	6'- 2"	4	12"	6'- 2"
5	6	9"	9"	8"	8"	15	15'- 0"	15	15'- 0"	4	4'- 0"	4	12"	16'- 4"	4	12"	17'- 4"	4	12"	2'- 6"	4'- 9"	4	12"	2'- 6"	4'- 3"	6'- 6"	4	12"	7'- 2"	4	12"	7'- 2"
5	7	9 1/4"	9 1/4"	8"	8"	15	15'- 0"	15	15'- 0"	5	5'- 0"	4	12"	16'- 4"	4	12"	17'- 4"	4	12"	2'- 6"	4'- 9"	4	12"	2'- 6"	4'- 9 1/4"	7'- 0"	4	12"	8'- 2"	4	12"	8'- 2"
6	4	10 1/2"	10 1/2"	8"	8"	18	18'- 0"	18	18'- 0"	2	2'- 0"	4	11"	18'- 11"	4	11"	20'- 4"	4	11"	2'- 8 3/8"	5'- 2"	4	11"	2'- 8 3/8"	3'- 4 1/2"	5'- 10"	4	12"	5'- 5"	4	12"	5'- 5"
6	5	10 1/2"	10 1/2"	8"	8"	18	18'- 0"	18	18'- 0"	3	3'- 0"	4	11"	18'- 11"	4	11"	20'- 4"	4	11"	2'- 8 3/8"	5'- 2"	4	11"	2'- 8 3/8"	3'- 10 1/2"	6'- 4"	4	12"	6'- 5"	4	12"	6'- 5"
6	6	10 3/4"	10 3/4"	8"	8"	18	18'- 0"	18	18'- 0"	4	4'- 0"	4	11"	18'- 11"	4	11"	20'- 4"	4	11"	2'- 8 3/8"	5'- 2"	4	11"	2'- 8 3/8"	4'- 4 3/4"	6'- 10"	4	12"	7'- 5"	4	12"	7'- 5"
6	7	10 3/4"	10 3/4"	8"	8"	18	18'- 0"	18	18'- 0"	5	5'- 0"	4	11"	18'- 11"	4	11"	20'- 4"	4	11"	2'- 8 3/8"	5'- 2"	4	11"	2'- 8 3/8"	4'- 10 3/4"	7'- 4"	4	12"	8'- 5"	4	12"	8'- 5"
6	8	10 3/4"	10 3/4"	8"	8"	18	18'- 0"	18	18'- 0"	6	6'- 0"	4	10"	18'- 11"	4	10"	20'- 4"	--	---	----	----	5	10"	2'- 8 3/8"	5'- 4 3/4"	7'- 9"	4	11 1/2"	9'- 5"	4	12"	9'- 5"
7	4	12"	12"	8"	8"	21	21'- 0"	21	21'- 0"	2	2'- 0"	4	9"	21'- 6"	4	9"	23'- 4"	--	---	----	----	4	9"	2'- 10 3/4"	3'- 6"	6'- 2"	4	12"	5'- 8"	4	12"	5'- 8"
7	6	12 1/4"	12 1/4"	8"	8"	21	21'- 0"	21	21'- 0"	4	4'- 0"	4	9"	21'- 6"	4	9"	23'- 4"	--	---	----	----	4	9"	2'- 10 3/4"	4'- 6 1/4"	7'- 2"	4	12"	7'- 9"	4	12"	7'- 9"
7	8	12 1/2"	12 1/2"	8"	8"	21	21'- 0"	21	21'- 0"	6	6'- 0"	4	9"	21'- 6"	4	9"	23'- 4"	3	9"	2'- 10 3/4"	5'- 7"	4	9"	2'- 10 3/4"	5'- 6 1/2"	8'- 2"	4	12"	9'- 9"	4	12"	9'- 9"
7	10	12 1/2"	12 1/2"	8"	8"	21	21'- 0"	21	21'- 0"	8	8'- 0"	4	11"	21'- 6"	5	11"	23'- 4"	3	11"	2'- 10 3/4"	5'- 7"	5	11"	2'- 10 3/4"	6'- 6 1/2"	9'- 1"	4	6"	11'- 9"	4	12"	11'- 9"
8	4	13 1/4"	13 1/4"	8"	8"	24	24'- 0"	24	24'- 0"	2	2'- 0"	5	9"	24'- 2"	5	9"	26'- 4"	3	9"	3'- 1 1/4"	6'- 0"	4	9"	3'- 1 1/4"	3'- 7 1/4"	6'- 5"	4	12"	5'- 10"	4	12"	5'- 10"
8	6	13 1/4"	13 1/4"	8"	8"	24	24'- 0"	24	24'- 0"	4	4'- 0"	5	9"	24'- 2"	5	9"	26'- 4"	3	9"	3'- 1 1/4"	6'- 0"	4	9"	3'- 1 1/4"	4'- 7 1/4"	7'- 5"	4	12"	7'- 10"	4	12"	7'- 10"
8	8	13 1/4"	13 1/4"	8"	8"	24	24'- 0"	24	24'- 0"	6	6'- 0"	5	9"	24'- 2"	5	9"	26'- 4"	3	9"	3'- 1 1/4"	6'- 0"	4	9"	3'- 1 1/4"	5'- 7 1/4"	8'- 5"	4	12"	9'- 10"	4	12"	9'- 10"
8	10	13 1/2"	13 1/2"	8"	8"	24	24'- 0"	24	24'- 0"	8	8'- 0"	5	9"	24'- 2"	5	9"	26'- 4"	3	9"	3'- 1 1/4"	6'- 0"	5	9"	3'- 1 1/4"	6'- 7 1/2"	9'- 5"	4	6"	11'- 11"	4	12"	11'- 11"
9	4	14 3/4"	14 3/4"	8"	8"	27	27'- 0"	27	27'- 0"	2	2'- 0"	5	8"	26'- 9"	5	8"	29'- 4"	--	---	----	----	4	8"	3'- 3 5/8"	3'- 8 3/4"	6'- 9"	4	12"	6'- 1"	4	12"	6'- 1"
9	6	15"	15"	8"	8"	27	27'- 0"	27	27'- 0"	4	4'- 0"	5	8"	26'- 9"	5	8"	29'- 4"	--	---	----	----	4	8"	3'- 3 5/8"	4'- 9"	7'- 9"	4	12"	8'- 2"	4	12"	8'- 2"
9	8	15"	15"	8"	8"	27	27'- 0"	27	27'- 0"	6	6'- 0"	5	8"	26'- 9"	5	8"	29'- 4"	3	8"	3'- 3 5/8"	6'- 5"	4	8"	3'- 3 5/8"	5'- 9"	8'- 9"	4	12"	10'- 2"	4	12"	10'- 2"
9	10	15 1/4"	15 1/4"	8"	8"	27	27'- 0"	27	27'- 0"	8	8'- 0"	5	8"	26'- 9"	5	8"	29'- 4"	4	8"	3'- 3 5/8"	6'- 4"	4	8"	3'- 3 5/8"	6'- 9 1/4"	9'- 10"	4	6"	12'- 3"	4	12"	12'- 3"
9	12	15 1/4"	15 1/4"	8"	8"	27	27'- 0"	27	27'- 0"	10	10'- 0"	5	9"	26'- 9"	5	9"	29'- 4"	--	---	----	----	7	9"	3'- 3 5/8"	7'- 9 1/4"	10'- 7"	5	6"	14'- 3"	4	12"	14'- 3"
10	4	16 1/4"	16 1/4"	8"	8"	30	30'- 0"	30	30'- 0"	2	2'- 0"	6	9"	29'- 4"	5	9"	32'- 4"	--	---	----	----	4	9"	3'- 6"	3'- 10 1/4"	7'- 1"	4	12"	6'- 4"	4	12"	6'- 4"
10	6	16 1/2"	16 1/2"	8"	8"	30	30'- 0"	30	30'- 0"	4	4'- 0"	6	9"	29'- 4"	5	9"	32'- 4"	3	9"	3'- 6"	6'- 10"	4	9"	3'- 6"	4'- 10 1/2"	8'- 1"	4	12"	8'- 5"	4	12"	8'- 5"
10	8	16 1/2"	16 1/2"	8"	8"	30	30'- 0"	30	30'- 0"	6	6'- 0"	6	9"	29'- 4"	5	9"	32'- 4"	3	9"	3'- 6"	6'- 10"	4	9"	3'- 6"	5'- 10 1/2"	9'- 1"	4	12"	10'- 5"	4	12"	10'- 5"
10	10	16 3/4"	16 3/4"	8"	8"	30	30'- 0"	30	30'- 0"	8	8'- 0"	6	9"	29'- 4"	5	9"	32'- 4"	3	9"	3'- 6"	6'- 10"	5	9"	3'- 6"	6'- 10 3/4"	10'- 1"	4	6"	12'- 6"	4	12"	12'- 6"
10	12	16 3/4"	16 3/4"	8"	8"	30	30'- 0"	30	30'- 0"	10	10'- 0"	6	9"	29'- 4"	5	9"	32'- 4"	--	---	----	----	7	9"	3'- 6"	7'- 10 3/4"	10'- 11"	5	6"	14'- 6"	4	12"	14'- 6"
12	6	19 1/2"	19 1/2"	8"	8"	36	36'- 0"	36	36'- 0"	4	4'- 0"	6	9"	34'- 6"	6	9"	38'- 4"	3	9"	3'- 10 3/4"	7'- 7"	4	9"	3'- 10 3/4"	5'- 1 1/2"	8'- 9"	4	12"	8'- 11"	4	11"	8'- 11"
12	8	19 1/2"	19 1/2"	8"	8"	36	36'- 0"	36	36'- 0"	6	6'- 0"	6	8"	34'- 6"	6	8"	38'- 4"	3	8"	3'- 10 3/4"	7'- 7"	4	8"	3'- 10 3/4"	6'- 1 1/2"	9'- 9"	4	12"	10'- 11"	4	11"	10'- 11"
12	10	19 1/2"	19 1/2"	8"	8"	36	36'- 0"	36	36'- 0"	8	8'- 0"	6	8"	34'- 6"	6	8"	38'- 4"	--	---	----	----	5	8"	3'- 10 3/4"	7'- 1 1/2"	10'- 8"	4	6"	12'- 11"	4	11"	12'- 11"
12	12	19 3/4"	19 3/4"	8"	8"	36	36'- 0"	36	36'- 0"	10	10'- 0"	6	9"	34'- 6"	6	9"	38'- 4"	4	9"	3'- 10 3/4"	7'- 6"	6	9"	3'- 10 3/4"	8'- 1 3/4"	11'- 8"	5	6"	15'- 0"	4	11"	15'- 0"

Sheet 1 of 2

For Typical Section, notes and other details, refer to standard BCT-DT.

TRIPLE BOX CULVERTS
20 TO 25 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

1004.14

SPAN		HIGHT		REINFORCING STEEL													QUAN./LF		HEADWALLS								WINGWALL	
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CL. A3 A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)		OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	109.333	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	3	12"	2'- 8 7/8"	0'- 4 3/8"	1'- 6 1/2"	0'- 5 7/8"	0'- 3 7/8"	11'- 4"	1'- 5 3/4"	11'- 10"	44	24	45.212	1.088	110.775	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	16	52.408	1.136	129.262	16'- 2"	6	15'- 10"	2	8	2.131	120.956	2.121	95.127	A		
4	4	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	24	55.232	1.234	137.614	16'- 2"	6	15'- 10"	2	10	2.236	127.859	2.214	95.127	C		
4	5	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	32	58.056	1.332	145.966	16'- 2"	6	15'- 10"	2	12	2.341	134.761	2.307	95.127	E		
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	14'- 4"	2'- 1"	14'- 10"	56	40	60.880	1.430	154.318	16'- 2"	6	15'- 10"	2	14	2.446	141.664	2.399	95.127	G		
5	3	4	12"	4'- 3 3/4"	0'- 5 1/4"	2'- 3 1/2"	0'- 6 1/8"	0'- 4 1/2"	17'- 4"	2'- 7 1/2"	17'- 11"	68	16	62.428	1.363	163.107	19'- 2"	6	18'- 10"	2	8	2.408	138.980	2.409	113.151	A		
5	4	4	12"	4'- 3 5/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	17'- 4"	2'- 7 1/4"	18'- 0"	68	24	65.252	1.489	171.571	19'- 2"	6	18'- 10"	2	10	2.504	145.883	2.493	113.151	C		
5	5	4	12"	4'- 3 5/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	17'- 4"	2'- 7 1/4"	18'- 0"	68	32	68.076	1.587	174.500	19'- 2"	6	18'- 10"	2	12	2.609	152.785	2.585	113.151	E		
5	6	4	12"	4'- 3 5/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	17'- 4"	2'- 7 1/4"	18'- 0"	68	40	70.900	1.685	188.275	19'- 2"	6	18'- 10"	2	14	2.715	159.688	2.678	113.151	G		
5	7	4	12"	4'- 3 1/2"	0'- 5 3/4"	2'- 3"	0'- 7 5/8"	0'- 5"	17'- 4"	2'- 7"	18'- 0"	68	48	73.724	1.810	196.627	19'- 2"	6	18'- 10"	2	16	2.830	166.591	2.781	113.151	J		
6	4	4	11"	5'- 1/2"	0'- 7"	2'- 6 1/2"	0'- 9 3/8"	0'- 6 1/4"	20'- 4"	3'- 1"	21'- 2"	80	24	75.272	1.844	204.293	22'- 2"	6	21'- 10"	2	10	2.751	163.907	2.749	131.175	D		
6	5	4	11"	5'- 1/2"	0'- 7"	2'- 6 1/2"	0'- 9 3/8"	0'- 6 1/4"	20'- 4"	3'- 1"	21'- 2"	80	32	78.096	1.942	212.766	22'- 2"	6	21'- 10"	2	12	2.856	170.809	2.842	131.175	F		
6	6	4	11"	5'- 3/8"	0'- 7 1/4"	2'- 6 1/4"	0'- 9 3/4"	0'- 6 1/2"	20'- 4"	3'- 3/4"	21'- 3"	80	40	80.920	2.072	221.361	22'- 2"	6	21'- 10"	2	14	2.950	177.712	2.923	131.175	H		
6	7	4	11"	5'- 3/8"	0'- 7 1/4"	2'- 6 1/4"	0'- 9 3/4"	0'- 6 1/2"	20'- 4"	3'- 3/4"	21'- 3"	80	48	83.744	2.170	229.834	22'- 2"	6	21'- 10"	2	16	3.055	184.615	3.016	131.175	J		
6	8	4	10"	5'- 3/8"	0'- 7 1/4"	2'- 6 1/4"	0'- 9 3/4"	0'- 6 1/2"	20'- 4"	3'- 3/4"	21'- 3"	80	56	86.568	2.268	248.578	22'- 2"	6	21'- 10"	2	18	3.160	191.517	3.109	131.175	L		
7	4	4	9"	5'- 9 3/8"	0'- 8 1/2"	2'- 9 1/8"	0'- 11 1/2"	0'- 7 3/4"	23'- 4 1/8"	3'- 6 5/8"	24'- 5"	92	24	85.292	2.255	238.519	25'- 2"	6	24'- 10"	2	10	2.951	181.931	2.959	149.199	D		
7	6	4	9"	5'- 9 1/4"	0'- 8 3/4"	2'- 9 5/8"	0'- 11 7/8"	0'- 8"	23'- 4 1/8"	3'- 6 3/8"	24'- 5"	92	40	90.940	2.488	256.448	25'- 2"	6	24'- 10"	2	14	3.148	195.736	3.131	149.199	H		
7	8	4	9"	5'- 9 1/8"	0'- 9"	2'- 9 3/8"	0'- 11 1/4"	0'- 8 1/4"	23'- 4 1/8"	3'- 6 1/8"	24'- 6"	92	56	96.588	2.720	285.387	25'- 2"	6	24'- 10"	2	18	3.345	209.541	3.303	149.199	L		
7	10	4	11"	5'- 9 1/8"	0'- 9"	2'- 9 3/8"	0'- 11 1/4"	0'- 8 1/4"	23'- 4 1/8"	3'- 6 1/8"	24'- 6"	92	72	102.236	2.914	321.963	25'- 2"	6	24'- 10"	2	22	3.555	223.347	3.489	149.199	P		
8	4	4	9"	6'- 6 1/4"	0'- 9 3/4"	3'- 1 3/8"	1'- 1 1/4"	0'- 9"	26'- 3 3/8"	4'- 5/8"	27'- 7"	104	24	95.312	2.676	326.361	28'- 2"	6	27'- 10"	2	10	3.139	199.955	3.157	167.223	D		
8	6	4	9"	6'- 6 1/4"	0'- 9 3/4"	3'- 1 3/8"	1'- 1 1/4"	0'- 9"	26'- 3 3/8"	4'- 5/8"	27'- 7"	104	40	100.960	2.873	343.956	28'- 2"	6	27'- 10"	2	14	3.349	213.760	3.342	167.223	H		
8	8	4	9"	6'- 6 1/4"	0'- 9 3/4"	3'- 1 3/8"	1'- 1 1/4"	0'- 9"	26'- 3 3/8"	4'- 5/8"	27'- 7"	104	56	106.608	3.069	361.550	28'- 2"	6	27'- 10"	2	18	3.559	227.565	3.528	167.223	L		
8	10	4	9"	6'- 6 1/8"	0'- 10"	3'- 1 1/8"	1'- 1 5/8"	0'- 9 1/4"	26'- 3 3/8"	4'- 3/8"	27'- 7"	104	72	112.256	3.304	414.233	28'- 2"	6	27'- 10"	2	22	3.754	241.371	3.698	167.223	P		
9	4	4	8"	7'- 3 3/8"	0'- 11 1/4"	3'- 4 3/4"	1'- 3 3/8"	0'- 10 1/2"	29'- 4"	4'- 6 1/4"	30'- 10"	116	24	105.332	3.193	375.056	31'- 2"	6	30'- 10"	2	10	3.286	217.979	3.314	185.247	D		
9	6	4	8"	7'- 3"	0'- 11 1/2"	3'- 4 1/2"	1'- 3 3/8"	0'- 10 3/4"	29'- 4"	4'- 6"	30'- 10"	116	40	110.980	3.435	393.597	31'- 2"	6	30'- 10"	2	14	3.478	231.784	3.481	185.247	H		
9	8	4	8"	7'- 3"	0'- 11 1/2"	3'- 4 1/2"	1'- 3 3/4"	0'- 10 3/4"	29'- 4"	4'- 6"	30'- 10"	116	56	116.628	3.630	426.113	31'- 2"	6	30'- 10"	2	18	3.688	245.589	3.667	185.247	L		
9	10	4	8"	7'- 2 7/8"	0'- 11 3/8"	3'- 4 1/4"	1'- 4 1/8"	0'- 11"	29'- 4"	4'- 5 3/4"	30'- 10"	116	72	122.276	3.870	472.095	31'- 2"	6	30'- 10"	2	22	3.899	259.395	3.853	185.247	Q		
9	12	5	9"	7'- 2 7/8"	0'- 11 7/8"	3'- 4 1/4"	1'- 4 1/8"	0'- 11"	29'- 4"	4'- 5 3/4"	30'- 10"	116	88	127.924	4.060	565.220	31'- 2"	6	30'- 10"	2	26	4.109	273.200	4.038	185.247	U		
10	4	5	9"	8'- 0"	1'- 1/8"	3'- 8"	1'- 5 5/8"	1'- 0"	32'- 4"	5'- 0"	34'- 0"	128	24	115.352	3.763	447.132	34'- 2"	6	33'- 10"	2	10	3.423	236.003	3.461	203.271	E		
10	6	5	9"	7'- 11 7/8"	1'- 1/8"	3'- 7 3/4"	1'- 6"	1'- 1/4"	32'- 4"	4'- 11 3/4"	34'- 0"	128	40	121.000	4.009	478.764	34'- 2"	6	33'- 10"	2	14	3.613	249.808	3.627	203.271	I		
10	8	5	9"	7'- 11 7/8"	1'- 1/8"	3'- 7 3/4"	1'- 6"	1'- 1/4"	32'- 4"	4'- 11 3/4"	34'- 0"	128	56	126.648	4.205	496.359	34'- 2"	6	33'- 10"	2	18	3.824	263.613	3.812	203.271	M		
10	10	5	9"	7'- 11 3/4"	1'- 1 3/8"	3'- 7 1/2"	1'- 6 1/4"	1'- 1/2"	32'- 4"	4'- 11 1/2"	34'- 0"	128	72	132.296	4.449	551.154	34'- 2"	6	33'- 10"	2	22	4.014	277.419	3.977	203.271	Q		
10	12	5	9"	7'- 11 3/4"	1'- 1 3/8"	3'- 7 1/2"	1'- 6 1/4"	1'- 1/2"	32'- 4"	4'- 11 1/2"	34'- 0"	128	88	137.944	4.639	638.821	34'- 2"	6	33'- 10"	2	26	4.224	291.224	4.163	203.271	U		
12	6	6	9"	9'- 5 5/8"	1'- 4 1/4"	4'- 2 3/8"	1'- 10 1/4"	1'- 3 1/4"	38'- 4 1/8"	5'- 11 1/8"	40'- 5"	152	40	141.040	5.322	654.464	40'- 2"	6	39'- 10"	2	14	3.764	285.856	3.797	239.319	I		
12	8	5	8"	9'- 5 5/8"	1'- 4 1/8"	4'- 2 3/8"	1'- 10 1/4"	1'- 3 1/4"	38'- 4 1/8"	5'- 11 1/8"	40'- 5"	152	56	146.688	5.518	679.835	40'- 2"	6	39'- 10"	2	18	3.974	299.661	3.982	239.319	M		
12	10	5	8"	9'- 5 5/8"	1'- 4 1/8"	4'- 2 3/8"	1'- 10 1/4"	1'- 3 1/4"	38'- 4 1/8"	5'- 11 1/8"	40'- 5"	152	72	152.336	5.712	722.175	40'- 2"	6	39'- 10"	2	22	4.184	313.467	4.168	239.319	Q		
12	12	6	9"	9'- 5 1/2"	1'- 4 1/2"	4'- 2 1/8"	1'- 10 5/8"	1'- 3 1/2"	38'- 4 1/8"	5'- 10 7/8"	40'- 5"	152	88	157.984	5.963	814.709	40'- 2"	6	39'- 10"	2	26	4.369	327.272	4.328	239.319	U		

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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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-2"	--	---	----	----	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	8 1/2"	8 1/2"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	2'-8 1/2"	4'-9"	4	12"	4'-1"	4	12"	4'-1"
4	4	8 1/2"	8 1/2"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-2 1/2"	5'-3"	4	12"	5'-1"	4	12"	5'-1"
4	5	8 1/2"	8 1/2"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-8 1/2"	5'-9"	4	12"	6'-1"	4	12"	6'-1"
4	6	8 1/2"	8 1/2"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	4'-2 1/2"	6'-3"	4	12"	7'-1"	4	12"	7'-1"
5	3	10"	10"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	12"	16'-4"	4	12"	17'-4"	3	12"	2'-6"	4'-10"	4	12"	2'-6"	2'-10"	5'-1"	4	12"	4'-4"	4	12"	4'-4"
5	4	10"	10"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	12"	16'-4"	4	12"	17'-4"	3	12"	2'-6"	4'-10"	4	12"	2'-6"	3'-4"	5'-7"	4	12"	5'-4"	4	12"	5'-4"
5	5	10 1/4"	10 1/4"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	12"	16'-4"	4	12"	17'-4"	3	12"	2'-6"	4'-10"	4	12"	2'-6"	3'-10 1/4"	6'-1"	4	12"	6'-5"	4	12"	6'-5"
5	6	10"	10"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	4'-4"	6'-7"	4	12"	7'-4"	4	12"	7'-4"
5	7	10"	10"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	12"	16'-4"	4	12"	17'-4"	4	12"	2'-6"	4'-9"	4	12"	2'-6"	4'-10"	7'-1"	4	12"	8'-4"	4	12"	8'-4"
6	4	12"	12"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	10"	18'-11"	4	10"	20'-4"	--	---	----	----	4	10"	2'-8 3/8"	3'-6"	5'-11"	4	12"	5'-8"	4	12"	5'-8"
6	5	12 1/4"	12 1/4"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	10"	18'-11"	4	10"	20'-4"	--	---	----	----	4	10"	2'-8 3/8"	4'-1/4"	6'-5"	4	12"	6'-9"	4	12"	6'-9"
6	6	12 1/4"	12 1/4"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	10"	18'-11"	4	10"	20'-4"	--	---	----	----	4	10"	2'-8 3/8"	4'-6 1/4"	6'-11"	4	12"	7'-9"	4	12"	7'-9"
6	7	11 1/2"	11 1/2"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	10"	18'-11"	4	10"	20'-4"	3	10"	2'-8 3/8"	5'-2"	4	10"	2'-8 3/8"	4'-11 1/2"	7'-5"	4	12"	8'-7"	4	12"	8'-7"
6	8	11 3/4"	11 3/4"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	10"	18'-11"	4	10"	20'-4"	--	---	----	----	5	10"	2'-8 3/8"	5'-5 3/4"	7'-10"	4	9"	9'-8"	4	12"	9'-8"
7	4	13 1/4"	13 1/4"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	4	9"	21'-6"	5	9"	23'-4"	--	---	----	----	4	9"	2'-10 3/4"	3'-7 1/4"	6'-3"	4	12"	5'-10"	4	12"	5'-10"
7	6	13 1/4"	13 1/4"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	4	9"	21'-6"	5	9"	23'-4"	--	---	----	----	4	9"	2'-10 3/4"	4'-7 1/4"	7'-3"	4	12"	7'-10"	4	12"	7'-10"
7	8	13 1/4"	13 1/4"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	4	9"	21'-6"	5	9"	23'-4"	3	9"	2'-10 3/4"	5'-7"	4	9"	2'-10 3/4"	5'-7 1/4"	8'-3"	4	9"	9'-10"	4	12"	9'-10"
7	10	13 1/4"	13 1/4"	8"	8"	21	21'-0"	21	21'-0"	8	8'-0"	4	9"	21'-6"	5	9"	23'-4"	3	9"	2'-10 3/4"	5'-7"	5	9"	2'-10 3/4"	6'-7 1/4"	9'-2"	6	11 1/2"	11'-10"	4	12"	11'-10"
8	4	15"	15"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	5	9"	24'-2"	5	9"	26'-4"	--	---	----	----	4	9"	3'-1 1/4"	3'-9"	6'-7"	4	12"	6'-2"	4	12"	6'-2"
8	6	15"	15"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	5	9"	24'-2"	5	9"	26'-4"	--	---	----	----	4	9"	3'-1 1/4"	4'-9"	7'-7"	4	12"	8'-2"	4	12"	8'-2"
8	8	15"	15"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	5	9"	24'-2"	5	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	4	9"	3'-1 1/4"	5'-9"	8'-7"	4	9 1/2"	10'-2"	4	12"	10'-2"
8	10	15"	15"	8"	8"	24	24'-0"	24	24'-0"	8	8'-0"	5	9"	24'-2"	5	9"	26'-4"	3	9"	3'-1 1/4"	6'-0"	5	9"	3'-1 1/4"	6'-9"	9'-6"	6	11 1/2"	12'-2"	4	12"	12'-2"
9	4	16 1/2"	16 1/2"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	5	8"	26'-9"	5	8"	29'-4"	--	---	----	----	4	8"	3'-3 5/8"	3'-10 1/2"	6'-11"	4	12"	6'-5"	4	12"	6'-5"
9	6	16 1/2"	16 1/2"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	5	9"	26'-9"	5	9"	29'-4"	--	---	----	----	4	9"	3'-3 5/8"	4'-10 1/2"	7'-11"	4	12"	8'-5"	4	12"	8'-5"
9	8	16 1/2"	16 1/2"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	5	8"	26'-9"	5	8"	29'-4"	3	8"	3'-3 5/8"	6'-5"	4	8"	3'-3 5/8"	5'-10 1/2"	8'-11"	4	9 1/2"	10'-5"	4	12"	10'-5"
9	10	16 1/2"	16 1/2"	8"	8"	27	27'-0"	27	27'-0"	8	8'-0"	5	8"	26'-9"	5	8"	29'-4"	3	8"	3'-3 5/8"	6'-5"	5	8"	3'-3 5/8"	6'-10 1/2"	9'-10"	6	11 1/2"	12'-5"	4	12"	12'-5"
9	12	16 3/4"	16 3/4"	8 1/4"	8"	27	27'-0"	27	27'-0"	10	10'-0"	6	9"	26'-9"	6	9"	29'-5"	--	---	----	----	7	9"	3'-3 7/8"	7'-10 3/4"	10'-9"	6	7 1/2"	14'-6"	4	12"	14'-6"
10	4	18 1/4"	18 1/4"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	6	9"	29'-4"	6	9"	32'-4"	--	---	----	----	4	9"	3'-6"	4'-1/4"	7'-3"	4	12"	6'-9"	4	11"	6'-9"
10	6	18 1/4"	18 1/4"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	6	9"	29'-4"	6	9"	32'-4"	--	---	----	----	4	9"	3'-6"	5'-1/4"	8'-3"	4	12"	8'-9"	4	11"	8'-9"
10	8	18 1/4"	18 1/4"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	6	9"	29'-4"	6	9"	32'-4"	3	9"	3'-6"	6'-10"	4	9"	3'-6"	6'-1/4"	9'-3"	4	9 1/2"	10'-9"	4	11"	10'-9"
10	10	18 1/2"	18 1/2"	8"	8"	30	30'-0"	30	30'-0"	8	8'-0"	6	9"	29'-4"	6	9"	32'-4"	3	9"	3'-6"	6'-10"	5	9"	3'-6"	7'-1/2"	10'-3"	5	8"	12'-9"	4	11"	12'-9"
10	12	18 1/2"	18 1/2"	8 1/2"	8"	30	30'-0"	30	30'-0"	10	10'-0"	6	9"	29'-4"	6	9"	32'-5"	4	9"	3'-6 1/2"	6'-10"	6	9"	3'-6 1/2"	8'-1/2"	11'-2"	5	5 1/2"	14'-9"	4	11"	14'-9"
12	6	21 1/2"	21 1/2"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	6	8"	34'-6"	6	8"	38'-4"	--	---	----	----	4	8"	3'-10 3/4"	5'-3 1/2"	8'-11"	4	12"	9'-3"	4	10"	9'-3"
12	8	21 1/2"	21 1/2"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	6	8"	34'-6"	6	8"	38'-4"	3	8"	3'-10 3/4"	7'-7"	4	8"	3'-10 3/4"	6'-3 1/2"	9'-11"	4	9"	11'-3"	4	10"	11'-3"
12	10	21 1/2"	21 1/2"	8"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	8"	34'-6"	6	8"	38'-4"	3	8"	3'-10 3/4"	7'-7"	5	8"	3'-10 3/4"	7'-3 1/2"	10'-10"	5	8"	13'-3"	4	10"	13'-3"
12	12	21 3/4"	21 3/4"	8 1/2"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	8"	34'-6"	6	8"	38'-5"	4	8"	3'-11 1/4"	7'-7"	5	8"	3'-11 1/4"	8'-3 3/4"	11'-11"	5	5 1/2"	15'-3"	4	10"	15'-3"

SPAN		HIGHT		REINFORCING STEEL													QUAN./LF		HEADWALLS								WINGWALL	
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)		OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	109.333	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	117.685	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 6 1/4"	0'- 5"	1'- 11"	0'- 6 1/2"	0'- 4 1/4"	14'- 4"	2'- 1/2"	14'- 11"	56	16	52.408	1.181	129.930	16'- 2"	6	15'- 10"	2	8	2.118	120.956	2.108	95.127	A		
4	4	4	12"	3'- 6 1/4"	0'- 5"	1'- 11"	0'- 6 1/2"	0'- 4 1/4"	14'- 4"	2'- 1/2"	14'- 11"	56	24	55.232	1.279	138.282	16'- 2"	6	15'- 10"	2	10	2.223	127.859	2.201	95.127	C		
4	5	4	12"	3'- 6 1/4"	0'- 5"	1'- 11"	0'- 6 1/2"	0'- 4 1/4"	14'- 4"	2'- 1/2"	14'- 11"	56	32	58.056	1.377	146.634	16'- 2"	6	15'- 10"	2	12	2.328	134.761	2.294	95.127	E		
4	6	4	12"	3'- 6 1/4"	0'- 5"	1'- 11"	0'- 6 1/2"	0'- 4 1/4"	14'- 4"	2'- 1/2"	14'- 11"	56	40	60.880	1.475	154.986	16'- 2"	6	15'- 10"	2	14	2.433	141.664	2.387	95.127	G		
5	3	4	12"	4'- 3 7/8"	0'- 6 1/2"	2'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	17'- 4"	2'- 6 1/4"	18'- 1"	68	16	62.428	1.500	158.798	19'- 2"	6	18'- 10"	2	8	2.383	138.980	2.383	113.151	B		
5	4	4	12"	4'- 3 7/8"	0'- 6 1/2"	2'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	17'- 4"	2'- 6 1/4"	18'- 1"	68	24	65.252	1.598	167.150	19'- 2"	6	18'- 10"	2	10	2.488	145.883	2.476	113.151	D		
5	5	4	12"	4'- 3"	0'- 6 3/4"	2'- 2"	0'- 9"	0'- 6"	17'- 4"	2'- 6"	18'- 2"	68	32	68.076	1.723	175.947	19'- 2"	6	18'- 10"	2	12	2.584	152.785	2.560	113.151	F		
5	6	4	12"	4'- 3 7/8"	0'- 6 1/2"	2'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	17'- 4"	2'- 6 1/4"	18'- 1"	68	40	70.900	1.794	189.277	19'- 2"	6	18'- 10"	2	14	2.698	159.688	2.662	113.151	H		
5	7	4	12"	4'- 3 7/8"	0'- 6 1/2"	2'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	17'- 4"	2'- 6 1/4"	18'- 1"	68	48	73.724	1.892	197.629	19'- 2"	6	18'- 10"	2	16	2.803	166.591	2.754	113.151	J		
6	4	4	10"	4'- 11 3/4"	0'- 8 1/2"	2'- 5"	0'- 11 1/2"	0'- 7 3/4"	20'- 4"	2'- 11 1/2"	21'- 5"	80	24	75.272	2.036	201.408	22'- 2"	6	21'- 10"	2	10	2.684	163.907	2.683	131.175	D		
6	5	4	10"	4'- 11 5/8"	0'- 8 3/4"	2'- 4 3/4"	0'- 11 3/8"	0'- 8"	20'- 4"	2'- 11 1/4"	21'- 5"	80	32	78.096	2.166	210.361	22'- 2"	6	21'- 10"	2	12	2.779	170.809	2.764	131.175	F		
6	6	4	10"	4'- 11 5/8"	0'- 8 3/4"	2'- 4 3/4"	0'- 11 3/8"	0'- 8"	20'- 4"	2'- 11 1/4"	21'- 5"	80	40	80.920	2.264	218.980	22'- 2"	6	21'- 10"	2	14	2.884	177.712	2.857	131.175	H		
6	7	4	10"	5'- 0"	0'- 8"	2'- 5 1/2"	0'- 10 3/4"	0'- 7 1/4"	20'- 4"	3'- 0"	21'- 4"	80	48	83.744	2.266	236.123	22'- 2"	6	21'- 10"	2	16	3.022	184.615	2.983	131.175	J		
6	8	4	10"	4'- 11 7/8"	0'- 8 1/4"	2'- 5 1/4"	0'- 11 1/8"	0'- 7 1/2"	20'- 4"	2'- 11 3/4"	21'- 4"	80	56	86.568	2.395	253.889	22'- 2"	6	21'- 10"	2	18	3.116	191.517	3.065	131.175	L		
7	4	4	9"	5'- 8 3/4"	0'- 9 3/4"	2'- 8 5/8"	1'- 1 1/4"	0'- 9"	23'- 4 1/8"	3'- 5 3/8"	24'- 7"	92	24	85.292	2.436	263.114	25'- 2"	6	24'- 10"	2	10	2.884	181.931	2.892	149.199	D		
7	6	4	9"	5'- 8 3/4"	0'- 9 3/4"	2'- 8 5/8"	1'- 1 1/4"	0'- 9"	23'- 4 1/8"	3'- 5 3/8"	24'- 7"	92	40	90.940	2.632	280.709	25'- 2"	6	24'- 10"	2	14	3.094	195.736	3.078	149.199	H		
7	8	4	9"	5'- 8 3/4"	0'- 9 3/4"	2'- 8 5/8"	1'- 1 1/4"	0'- 9"	23'- 4 1/8"	3'- 5 3/8"	24'- 7"	92	56	96.588	2.827	313.879	25'- 2"	6	24'- 10"	2	18	3.305	209.541	3.263	149.199	L		
7	10	4	9"	5'- 8 3/4"	0'- 9 3/4"	2'- 8 5/8"	1'- 1 1/4"	0'- 9"	23'- 4 1/8"	3'- 5 3/8"	24'- 7"	92	72	102.236	3.021	366.415	25'- 2"	6	24'- 10"	2	22	3.515	223.347	3.448	149.199	P		
8	4	4	9"	6'- 5 3/8"	0'- 11 1/2"	2'- 11 5/8"	1'- 3 3/4"	0'- 10 3/4"	26'- 3 3/8"	3'- 10 7/8"	27'- 10"	104	24	95.312	2.965	316.704	28'- 2"	6	27'- 10"	2	10	3.029	199.955	3.047	167.223	D		
8	6	4	9"	6'- 5 3/8"	0'- 11 1/2"	2'- 11 5/8"	1'- 3 3/4"	0'- 10 3/4"	26'- 3 3/8"	3'- 10 7/8"	27'- 10"	104	40	100.960	3.161	334.299	28'- 2"	6	27'- 10"	2	14	3.239	213.760	3.233	167.223	H		
8	8	4	9"	6'- 5 3/8"	0'- 11 1/2"	2'- 11 5/8"	1'- 3 3/4"	0'- 10 3/4"	26'- 3 3/8"	3'- 10 7/8"	27'- 10"	104	56	106.608	3.356	367.500	28'- 2"	6	27'- 10"	2	18	3.450	227.565	3.418	167.223	L		
8	10	4	9"	6'- 5 3/8"	0'- 11 1/2"	2'- 11 5/8"	1'- 3 3/4"	0'- 10 3/4"	26'- 3 3/8"	3'- 10 7/8"	27'- 10"	104	72	112.256	3.550	422.106	28'- 2"	6	27'- 10"	2	22	3.660	241.371	3.604	167.223	P		
9	4	4	8"	7'- 2 1/4"	1'- 1"	3'- 3"	1'- 5 7/8"	1'- 1 1/4"	29'- 4"	4'- 4 1/2"	31'- 0"	116	24	105.332	3.513	377.561	31'- 2"	6	30'- 10"	2	10	3.178	217.979	3.206	185.247	E		
9	6	5	9"	7'- 2 1/4"	1'- 1 1/8"	3'- 3"	1'- 6"	1'- 1 1/4"	29'- 4"	4'- 4 1/2"	31'- 0"	116	40	110.980	3.709	396.674	31'- 2"	6	30'- 10"	2	14	3.389	231.784	3.392	185.247	I		
9	8	4	8"	7'- 2 1/4"	1'- 1"	3'- 3"	1'- 5 7/8"	1'- 1 1/4"	29'- 4"	4'- 4 1/2"	31'- 0"	116	56	116.628	3.904	431.779	31'- 2"	6	30'- 10"	2	18	3.599	245.589	3.577	185.247	M		
9	10	4	8"	7'- 2 1/4"	1'- 1"	3'- 3"	1'- 5 7/8"	1'- 1 1/4"	29'- 4"	4'- 4 1/2"	31'- 0"	116	72	122.276	4.097	490.280	31'- 2"	6	30'- 10"	2	22	3.809	259.395	3.763	185.247	Q		
9	12	4	9"	7'- 2 3/8"	1'- 1 1/4"	3'- 2 3/4"	1'- 6 1/4"	1'- 1 1/2"	29'- 4 1/2"	4'- 4 1/4"	31'- 1"	116	88	127.924	4.354	616.538	31'- 2"	6	30'- 10"	2	26	3.979	273.200	3.907	185.247	U		
10	4	5	9"	7'- 11"	1'- 2 7/8"	3'- 6"	1'- 8 3/8"	1'- 2"	32'- 4"	4'- 10"	34'- 3"	128	24	115.352	4.163	491.307	34'- 2"	6	33'- 10"	2	10	3.261	236.003	3.299	203.271	E		
10	6	5	9"	7'- 11"	1'- 2 7/8"	3'- 6"	1'- 8 3/8"	1'- 2"	32'- 4"	4'- 10"	34'- 3"	128	40	121.000	4.359	509.388	34'- 2"	6	33'- 10"	2	14	3.471	249.808	3.484	203.271	I		
10	8	5	9"	7'- 11"	1'- 2 7/8"	3'- 6"	1'- 8 3/8"	1'- 2"	32'- 4"	4'- 10"	34'- 3"	128	56	126.648	4.554	544.951	34'- 2"	6	33'- 10"	2	18	3.681	263.613	3.670	203.271	M		
10	10	5	9"	7'- 10 7/8"	1'- 3 7/8"	3'- 5 3/4"	1'- 8 3/4"	1'- 2 1/4"	32'- 4"	4'- 9 3/4"	34'- 3"	128	72	132.296	4.798	602.613	34'- 2"	6	33'- 10"	2	22	3.871	277.419	3.835	203.271	Q		
10	12	5	9"	7'- 11 3/8"	1'- 3 7/8"	3'- 5 3/4"	1'- 8 3/4"	1'- 2 1/4"	32'- 5"	4'- 9 3/4"	34'- 4"	128	88	137.944	5.035	685.337	34'- 2"	6	33'- 10"	2	26	4.036	291.224	3.974	203.271	U		
12	6	6	8"	9'- 4 5/8"	1'- 6 1/4"	4'- 3 7/8"	2'- 1 1/8"	1'- 5 1/4"	38'- 4 1/8"	5'- 9 1/8"	40'- 8"	152	40	141.040	5.796	705.762	40'- 2"	6	39'- 10"	2	14	3.583	285.856	3.616	239.319	J		
12	8	6	8"	9'- 4 5/8"	1'- 6 1/4"	4'- 3 7/8"	2'- 1 1/8"	1'- 5 1/4"	38'- 4 1/8"	5'- 9 1/8"	40'- 8"	152	56	146.688	5.990	746.989	40'- 2"	6	39'- 10"	2	18	3.793	299.661	3.801	239.319	N		
12	10	6	8"	9'- 4 5/8"	1'- 6 1/4"	4'- 3 7/8"	2'- 1 1/8"	1'- 5 1/4"	38'- 4 1/8"	5'- 9 1/8"	40'- 8"	152	72	152.336	6.183	808.886	40'- 2"	6	39'- 10"	2	22	4.003	313.467	3.987	239.319	R		
12	12	6	8"	9'- 5"	1'- 6 1/2"	4'- 1 7/8"	2'- 1 1/2"	1'- 5 1/2"	38'- 5 1/8"	5'- 8 7/8"	40'- 10"	152	88	157.984	6.484	870.455	40'- 2"	6	39'- 10"	2	26	4.141	327.272	4.099	239.319	V		

BCT-35

DIMENSIONS						REINFORCING STEEL																													
SPAN	HGHT	T1	T2	T3	T4																														
(FT.)	(FT.)	TOP SLAB	BOTTOM SLAB	EXTERIOR WALL (IN.)	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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	3	12"	2'-1 1/4"	4'-0"	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	--	----	----	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	9 1/4"	9 1/4"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	2'-9 1/4"	4'-10"	4	12"	4'-2"	4	12"	4'-2"	4	12"	4'-2"
4	4	9 1/4"	9 1/4"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	3'-3 1/4"	5'-4"	4	12"	5'-2"	4	12"	5'-2"	4	12"	5'-2"
4	5	9 1/4"	9 1/4"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	3'-9 1/4"	5'-10"	4	12"	6'-2"	4	12"	6'-2"	4	12"	6'-2"
4	6	9 1/4"	9 1/4"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	3	12"	2'-3 5/8"	4'-5"	4	12"	2'-3 5/8"	4'-3 1/4"	6'-4"	4	12"	7'-2"	4	12"	7'-2"	4	12"	7'-2"
5	3	10 3/4"	10 3/4"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	11"	16'-4"	4	11"	17'-4"	--	--	----	----	4	11"	2'-6"	2'-10 3/4"	5'-2"	4	12"	4'-5"	4	12"	4'-5"	4	12"	4'-5"
5	4	10 3/4"	10 3/4"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	11"	16'-4"	4	11"	17'-4"	--	--	----	----	4	11"	2'-6"	3'-4 3/4"	5'-8"	4	12"	5'-5"	4	12"	5'-5"	4	12"	5'-5"
5	5	11"	11"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	11"	16'-4"	4	11"	17'-4"	--	--	----	----	4	11"	2'-6"	3'-11"	6'-2"	4	12"	6'-6"	4	12"	6'-6"	4	12"	6'-6"
5	6	11"	11"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	11"	16'-4"	4	11"	17'-4"	3	11"	2'-6"	4'-10"	4	11"	2'-6"	4'-5"	6'-8"	4	12"	7'-6"	4	12"	7'-6"	4	12"	7'-6"
5	7	11"	11"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	11"	16'-4"	4	11"	17'-4"	4	11"	2'-6"	4'-9"	4	11"	2'-6"	4'-11"	7'-2"	4	10 1/2"	8'-6"	4	12"	8'-6"	4	12"	8'-6"
6	4	13"	13"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	9"	18'-11"	4	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	3'-7"	6'-0"	4	12"	5'-10"	4	12"	5'-10"	4	12"	5'-10"
6	5	13"	13"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	9"	18'-11"	4	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	4'-1"	6'-6"	4	12"	6'-10"	4	12"	6'-10"	4	12"	6'-10"
6	6	13"	13"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	9"	18'-11"	4	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	4'-7"	7'-0"	4	12"	7'-10"	4	12"	7'-10"	4	12"	7'-10"
6	7	13"	13"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	9"	18'-11"	4	9"	20'-4"	3	9"	2'-8 3/8"	5'-2"	4	9"	2'-8 3/8"	5'-1"	7'-6"	4	11"	8'-10"	4	12"	8'-10"	4	12"	8'-10"
6	8	13"	13"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	9"	18'-11"	4	9"	20'-4"	--	--	----	----	5	9"	2'-8 3/8"	5'-7"	7'-11"	5	10 1/2"	9'-10"	4	12"	9'-10"	4	12"	9'-10"
7	4	14 1/2"	14 1/2"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	4	9"	21'-6"	5	9"	23'-4"	--	--	----	----	4	9"	2'-10 3/4"	3'-8 1/2"	6'-4"	4	12"	6'-1"	4	12"	6'-1"	4	12"	6'-1"
7	6	14 1/2"	14 1/2"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	4	9"	21'-6"	5	9"	23'-4"	--	--	----	----	4	9"	2'-10 3/4"	4'-8 1/2"	7'-4"	4	12"	8'-1"	4	12"	8'-1"	4	12"	8'-1"
7	8	14 1/2"	14 1/2"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	4	9"	21'-6"	5	9"	23'-4"	3	9"	2'-10 3/4"	5'-7"	4	9"	2'-10 3/4"	5'-8 1/2"	8'-4"	4	7"	10'-1"	4	12"	10'-1"	4	12"	10'-1"
7	10	14 1/2"	14 1/2"	8"	8"	21	21'-0"	21	21'-0"	8	8'-0"	4	9"	21'-6"	5	9"	23'-4"	--	--	----	----	6	9"	2'-10 3/4"	6'-8 1/2"	9'-2"	6	9 1/2"	12'-1"	4	12"	12'-1"	4	12"	12'-1"
8	4	16 1/4"	16 1/4"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	5	9"	24'-2"	5	9"	26'-4"	--	--	----	----	4	9"	3'-1 1/4"	3'-10 1/4"	6'-8"	4	12"	6'-4"	4	12"	6'-4"	4	12"	6'-4"
8	6	16 1/4"	16 1/4"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	5	8"	24'-2"	5	8"	26'-4"	--	--	----	----	4	8"	3'-1 1/4"	4'-10 1/4"	7'-8"	4	12"	8'-4"	4	12"	8'-4"	4	12"	8'-4"
8	8	16 1/4"	16 1/4"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	5	8"	24'-2"	5	8"	26'-4"	3	8"	3'-1 1/4"	6'-0"	4	8"	3'-1 1/4"	5'-10 1/4"	8'-8"	4	7 1/2"	10'-4"	4	12"	10'-4"	4	12"	10'-4"
8	10	16 1/4"	16 1/4"	8"	8"	24	24'-0"	24	24'-0"	8	8'-0"	5	8"	24'-2"	5	8"	26'-4"	3	8"	3'-1 1/4"	6'-0"	5	8"	3'-1 1/4"	6'-10 1/4"	9'-8"	6	9 1/2"	12'-4"	4	12"	12'-4"	4	12"	12'-4"
9	4	18 1/4"	18 1/4"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	6	9"	26'-9"	5	9"	29'-4"	--	--	----	----	4	9"	3'-3 5/8"	4'-1/4"	7'-1"	4	12"	6'-9"	4	10 1/2"	6'-9"	4	10 1/2"	6'-9"
9	6	18 1/4"	18 1/4"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	6	9"	26'-9"	5	9"	29'-4"	--	--	----	----	4	9"	3'-3 5/8"	5'-1/4"	8'-1"	4	12"	8'-9"	4	10 1/2"	8'-9"	4	10 1/2"	8'-9"
9	8	18 1/4"	18 1/4"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	6	9"	26'-9"	5	9"	29'-4"	--	--	----	----	5	9"	3'-3 5/8"	6'-1/4"	9'-0"	5	10 1/2"	10'-9"	4	10 1/2"	10'-9"	4	10 1/2"	10'-9"
9	10	18 1/4"	18 1/4"	8"	8"	27	27'-0"	27	27'-0"	8	8'-0"	6	9"	26'-9"	5	9"	29'-4"	--	--	----	----	6	9"	3'-3 5/8"	7'-1/4"	9'-11"	6	9 1/2"	12'-9"	4	11"	12'-9"	4	11"	12'-9"
9	12	18 1/2"	18 1/2"	9 1/4"	8"	27	27'-0"	27	27'-0"	10	10'-0"	6	9"	26'-9"	5	9"	29'-6"	--	--	----	----	7	9"	3'-4 7/8"	8'-1/2"	11'-0"	5	5 1/2"	14'-9"	4	10 1/2"	14'-9"	4	10 1/2"	14'-9"
10	4	20"	20"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	4	9"	3'-6"	4'-2"	7'-5"	4	12"	7'-0"	4	10"	7'-0"	4	10"	7'-0"
10	6	20"	20"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	4	9"	3'-6"	5'-2"	8'-5"	4	12"	9'-0"	4	10"	9'-0"	4	10"	9'-0"
10	8	20"	20"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	6	9"	29'-4"	6	9"	32'-4"	3	9"	3'-6"	6'-10"	4	9"	3'-6"	6'-2"	9'-5"	5	10 1/2"	11'-0"	4	10"	11'-0"	4	10"	11'-0"
10	10	20"	20"	8"	8"	30	30'-0"	30	30'-0"	8	8'-0"	6	9"	29'-4"	6	9"	32'-4"	3	9"	3'-6"	6'-10"	5	9"	3'-6"	7'-2"	10'-4"	6	9 1/2"	13'-0"	4	10"	13'-0"	4	10"	13'-0"
10	12	20 1/4"	20 1/4"	9 1/4"	8"	30	30'-0"	30	30'-0"	10	10'-0"	6	9"	29'-4"	6	9"	32'-6"	3	9"	3'-7 1/4"	7'-0"	6	9"	3'-7 1/4"	8'-2 1/4"	11'-5"	5	5 1/2"	15'-0"	4	10"	15'-0"	4	10"	15'-0"
12	6	24"	24"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	6	8"	34'-6"	6	8"	38'-4"	--	--	----	----	4	8"	3'-10 3/4"	5'-6"	9'-2"	4	12"	9'-8"	4	10"	9'-8"	4	10"	9'-8"
12	8	24"	24"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	6	8"	34'-6"	6	8"	38'-4"	3	8"	3'-10 3/4"	7'-7"	4	8"	3'-10 3/4"	6'-6"	10'-2"	5	9 1/2"	11'-8"	4	10"	11'-8"	4	10"	11'-8"
12	10	24"	24"	8"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	8"	34'-6"	6	8"	38'-4"	3	8"	3'-10 3/4"	7'-7"	5	8"	3'-10 3/4"	7'-6"	11'-1"	4	4"	13'-8"	4	10"	13'-8"	4	10"	13'-8"
12	12	24"	24"	9 1/4"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	8"	34'-6"	6	8"	38'-6"	4	8"	4'-0"	7'-9"	5	8"	4'-0"	8'-6"	12'-2"	6	7 1/2"	15'-8"	4	10"	15'-8"	4	10"	15'-8"

Sheet 1 of 2

For Typical Section, notes and other details, refer to standard BCT-DT.

1004.18

TRIPLE BOX CULVERTS
30 TO 35 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS								WINGWALL			
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CL. A3 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)		INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 1/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.989	115.349	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	117.685	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 5 7/8"	0'- 5 3/4"	1'- 10 1/4"	0'- 7 5/8"	0'- 5"	14'- 4"	1'- 11 3/4"	15'- 0"	56	16	52.408	1.249	130.598	16'- 2"	6	15'- 10"	2	8	2.117	120.956	2.108	95.127	B		
4	4	4	12"	3'- 5 7/8"	0'- 5 3/4"	1'- 10 1/4"	0'- 7 5/8"	0'- 5"	14'- 4"	1'- 11 3/4"	15'- 0"	56	24	55.232	1.347	138.950	16'- 2"	6	15'- 10"	2	10	2.222	127.859	2.200	95.127	D		
4	5	4	12"	3'- 5 7/8"	0'- 5 3/4"	1'- 10 1/4"	0'- 7 5/8"	0'- 5"	14'- 4"	1'- 11 3/4"	15'- 0"	56	32	58.056	1.445	147.302	16'- 2"	6	15'- 10"	2	12	2.327	134.761	2.293	95.127	F		
4	6	4	12"	3'- 5 7/8"	0'- 5 3/4"	1'- 10 1/4"	0'- 7 5/8"	0'- 5"	14'- 4"	1'- 11 3/4"	15'- 0"	56	40	60.880	1.543	162.297	16'- 2"	6	15'- 10"	2	14	2.432	141.664	2.386	95.127	H		
5	3	4	11"	4'- 2 3/4"	0'- 7 1/4"	2'- 1 1/2"	0'- 9 3/4"	0'- 6 1/2"	17'- 4"	2'- 5 1/2"	18'- 3"	68	16	62.428	1.582	159.869	19'- 2"	6	18'- 10"	2	8	2.357	138.980	2.357	113.151	B		
5	4	4	11"	4'- 2 3/4"	0'- 7 1/4"	2'- 1 1/2"	0'- 9 3/4"	0'- 6 1/2"	17'- 4"	2'- 5 1/2"	18'- 3"	68	24	65.252	1.680	168.342	19'- 2"	6	18'- 10"	2	10	2.462	145.883	2.450	113.151	D		
5	5	4	11"	4'- 2 3/8"	0'- 7 1/2"	2'- 1 1/4"	0'- 10 1/8"	0'- 6 3/4"	17'- 4"	2'- 5 1/4"	18'- 3"	68	32	68.076	1.805	177.149	19'- 2"	6	18'- 10"	2	12	2.558	152.785	2.534	113.151	F		
5	6	4	11"	4'- 2 3/8"	0'- 7 1/2"	2'- 1 1/4"	0'- 10 1/8"	0'- 6 3/4"	17'- 4"	2'- 5 1/4"	18'- 3"	68	40	70.900	1.903	193.553	19'- 2"	6	18'- 10"	2	14	2.663	159.688	2.627	113.151	H		
5	7	4	11"	4'- 2 5/8"	0'- 7 1/2"	2'- 1 1/4"	0'- 10 1/8"	0'- 6 3/4"	17'- 4"	2'- 5 1/4"	18'- 3"	68	48	73.724	2.000	209.564	19'- 2"	6	18'- 10"	2	16	2.768	166.591	2.719	113.151	J		
6	4	4	9"	4'- 11 1/4"	0'- 9 1/2"	2'- 4"	1'- 7/8"	0'- 8 3/4"	20'- 4"	2'- 10 1/2"	21'- 6"	80	24	75.272	2.162	215.436	22'- 2"	6	21'- 10"	2	10	2.640	163.907	2.638	131.175	D		
6	5	4	9"	4'- 11 1/4"	0'- 9 1/2"	2'- 4"	1'- 7/8"	0'- 8 3/4"	20'- 4"	2'- 10 1/2"	21'- 6"	80	32	78.096	2.260	224.233	22'- 2"	6	21'- 10"	2	12	2.745	170.809	2.731	131.175	F		
6	6	4	9"	4'- 11 1/4"	0'- 9 1/2"	2'- 4"	1'- 7/8"	0'- 8 3/4"	20'- 4"	2'- 10 1/2"	21'- 6"	80	40	80.920	2.358	236.031	22'- 2"	6	21'- 10"	2	14	2.850	177.712	2.824	131.175	H		
6	7	4	9"	4'- 11 1/4"	0'- 9 1/2"	2'- 4"	1'- 7/8"	0'- 8 3/4"	20'- 4"	2'- 10 1/2"	21'- 6"	80	48	83.744	2.456	253.262	22'- 2"	6	21'- 10"	2	16	2.956	184.615	2.917	131.175	J		
6	8	4	9"	4'- 11 1/4"	0'- 9 1/2"	2'- 4"	1'- 7/8"	0'- 8 3/4"	20'- 4"	2'- 10 1/2"	21'- 6"	80	56	86.568	2.553	276.467	22'- 2"	6	21'- 10"	2	18	3.061	191.517	3.009	131.175	L		
7	4	4	9"	5'- 8 1/8"	0'- 11"	2'- 7 3/8"	1'- 3"	0'- 10 1/4"	23'- 4 1/8"	3'- 4 1/8"	24'- 9"	92	24	85.292	2.618	264.710	25'- 2"	6	24'- 10"	2	10	2.817	181.931	2.825	149.199	D		
7	6	4	9"	5'- 8 1/8"	0'- 11"	2'- 7 3/8"	1'- 3"	0'- 10 1/4"	23'- 4 1/8"	3'- 4 1/8"	24'- 9"	92	40	90.940	2.815	282.305	25'- 2"	6	24'- 10"	2	14	3.027	195.736	3.011	149.199	H		
7	8	4	9"	5'- 8 1/8"	0'- 11"	2'- 7 3/8"	1'- 3"	0'- 10 1/4"	23'- 4 1/8"	3'- 4 1/8"	24'- 9"	92	56	96.588	3.009	320.718	25'- 2"	6	24'- 10"	2	18	3.238	209.541	3.196	149.199	L		
7	10	4	9"	5'- 8 1/8"	0'- 11"	2'- 7 3/8"	1'- 3"	0'- 10 1/4"	23'- 4 1/8"	3'- 4 1/8"	24'- 9"	92	72	102.236	3.202	387.381	25'- 2"	6	24'- 10"	2	22	3.448	223.347	3.382	149.199	P		
8	4	5	9"	6'- 4 3/4"	1'- 7/8"	2'- 10 3/8"	1'- 5 5/8"	1'- 0"	26'- 3 3/8"	3'- 9 5/8"	28'- 0"	104	24	95.312	3.169	345.966	28'- 2"	6	27'- 10"	2	10	2.969	199.955	2.987	167.223	E		
8	6	4	8"	6'- 4 3/4"	1'- 3/4"	2'- 10 3/8"	1'- 5 1/2"	1'- 0"	26'- 3 3/8"	3'- 9 5/8"	28'- 0"	104	40	100.960	3.365	362.767	28'- 2"	6	27'- 10"	2	14	3.180	213.760	3.173	167.223	I		
8	8	4	8"	6'- 4 3/4"	1'- 3/4"	2'- 10 3/8"	1'- 5 1/2"	1'- 0"	26'- 3 3/8"	3'- 9 5/8"	28'- 0"	104	56	106.608	3.560	402.626	28'- 2"	6	27'- 10"	2	18	3.390	227.565	3.358	167.223	M		
8	10	4	8"	6'- 4 3/4"	1'- 3/4"	2'- 10 3/8"	1'- 5 1/2"	1'- 0"	26'- 3 3/8"	3'- 9 5/8"	28'- 0"	104	72	112.256	3.752	464.454	28'- 2"	6	27'- 10"	2	22	3.600	241.371	3.544	167.223	Q		
9	4	5	9"	7'- 1 3/8"	1'- 2 7/8"	3'- 1 1/4"	1'- 8 3/8"	1'- 2"	29'- 4"	4'- 2 3/4"	31'- 3"	116	24	105.332	3.831	417.023	31'- 2"	6	30'- 10"	2	10	3.052	217.979	3.080	185.247	E		
9	6	5	9"	7'- 1 3/8"	1'- 2 7/8"	3'- 1 1/4"	1'- 8 3/8"	1'- 2"	29'- 4"	4'- 2 3/4"	31'- 3"	116	40	110.980	4.027	435.381	31'- 2"	6	30'- 10"	2	14	3.263	231.784	3.266	185.247	I		
9	8	5	9"	7'- 1 3/8"	1'- 2 7/8"	3'- 1 1/4"	1'- 8 3/8"	1'- 2"	29'- 4"	4'- 2 3/4"	31'- 3"	116	56	116.628	4.221	482.709	31'- 2"	6	30'- 10"	2	18	3.473	245.589	3.451	185.247	M		
9	10	5	9"	7'- 1 3/8"	1'- 2 7/8"	3'- 1 1/4"	1'- 8 3/8"	1'- 2"	29'- 4"	4'- 2 3/4"	31'- 3"	116	72	122.276	4.414	545.190	31'- 2"	6	30'- 10"	2	22	3.683	259.395	3.637	185.247	Q		
9	12	5	9"	7'- 2 1/2"	1'- 3 1/8"	3'- 1"	1'- 8 3/4"	1'- 2 1/4"	29'- 6 1/2"	4'- 2 1/2"	31'- 6"	116	88	127.924	4.768	619.468	31'- 2"	6	30'- 10"	2	26	3.760	273.200	3.688	185.247	U		
10	4	6	9"	7'- 10 1/8"	1'- 4 3/4"	3'- 4 1/4"	1'- 11"	1'- 3 3/4"	32'- 4"	4'- 8 1/4"	34'- 6"	128	24	115.352	4.512	537.927	34'- 2"	6	33'- 10"	2	10	3.119	236.003	3.157	203.271	E		
10	6	6	9"	7'- 10 1/8"	1'- 4 3/4"	3'- 4 1/4"	1'- 11"	1'- 3 3/4"	32'- 4"	4'- 8 1/4"	34'- 6"	128	40	121.000	4.708	556.591	34'- 2"	6	33'- 10"	2	14	3.329	249.808	3.342	203.271	I		
10	8	6	9"	7'- 10 1/8"	1'- 4 3/4"	3'- 4 1/4"	1'- 11"	1'- 3 3/4"	32'- 4"	4'- 8 1/4"	34'- 6"	128	56	126.648	4.903	600.486	34'- 2"	6	33'- 10"	2	18	3.539	263.613	3.528	203.271	M		
10	10	6	9"	7'- 10 1/8"	1'- 4 3/4"	3'- 4 1/4"	1'- 11"	1'- 3 3/4"	32'- 4"	4'- 8 1/4"	34'- 6"	128	72	132.296	5.096	659.952	34'- 2"	6	33'- 10"	2	22	3.750	277.419	3.713	203.271	Q		
10	12	5	9"	7'- 11 1/4"	1'- 4 7/8"	3'- 4"	1'- 11 1/4"	1'- 4"	32'- 6 1/2"	4'- 8"	34'- 9"	128	88	137.944	5.460	684.764	34'- 2"	6	33'- 10"	2	26	3.822	291.224	3.760	203.271	U		
12	6	6	8"	9'- 3 3/8"	1'- 8 3/4"	3'- 9 7/8"	2'- 4 5/8"	1'- 7 3/4"	38'- 4 1/8"	5'- 6 5/8"	41'- 0"	152	40	141.040	6.392	710.159	40'- 2"	6	39'- 10"	2	14	3.333	285.856	3.366	239.319	J		
12	8	6	8"	9'- 3 3/8"	1'- 8 3/4"	3'- 9 7/8"	2'- 4 5/8"	1'- 7 3/4"	38'- 4 1/8"	5'- 6 5/8"	41'- 0"	152	56	146.688	6.586	761.530	40'- 2"	6	39'- 10"	2	18	3.543	299.661	3.552	239.319	N		
12	10	6	8"	9'- 3 3/8"	1'- 8 3/4"	3'- 9 7/8"	2'- 4 5/8"	1'- 7 3/4"	38'- 4 1/8"	5'- 6 5/8"	41'- 0"	152	72	152.336	6.779	826.605	40'- 2"	6	39'- 10"	2	22	3.754	313.467	3.737	239.319	R		
12	12	6	8"	9'- 4 5/8"	1'- 8 3/4"	3'- 9 7/8"	2'- 4 5/8"	1'- 7 3/4"	38'- 6 5/8"	5'- 6 5/8"	41'- 3"	152	88	157.984	7.095	882.169	40'- 2"	6	39'- 10"	2	26	3.842	327.272	3.799	239.319	V		

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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"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	4	12"	2'-1 1/4"	3'-11"	4	12"	2'-1 1/4"	2'-8"	4'-6"	4	12"	4'-0"	4	12"	4'-0"	4	12"	4'-0"
3	4	8"	8"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	3	12"	2'-1 1/4"	4'-0"	4	12"	2'-1 1/4"	3'-2"	5'-0"	4	12"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	9 3/4"	9 3/4"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	2'-9 3/4"	4'-10"	4	12"	4'-3"	4	12"	4'-3"	4	12"	4'-3"
4	4	9 3/4"	9 3/4"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	3'-3 3/4"	5'-4"	4	12"	5'-3"	4	12"	5'-3"	4	12"	5'-3"
4	5	9 3/4"	9 3/4"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	3'-9 3/4"	5'-10"	4	12"	6'-3"	4	12"	6'-3"	4	12"	6'-3"
4	6	9 3/4"	9 3/4"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	4'-3 3/4"	6'-4"	4	12"	7'-3"	4	12"	7'-3"	4	12"	7'-3"
5	3	12"	12"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	11"	16'-4"	4	11"	17'-4"	--	--	----	----	4	11"	2'-6"	3'-0"	5'-3"	4	12"	4'-8"	4	12"	4'-8"	4	12"	4'-8"
5	4	12"	12"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	11"	16'-4"	4	11"	17'-4"	--	--	----	----	4	11"	2'-6"	3'-6"	5'-9"	4	12"	5'-8"	4	12"	5'-8"	4	12"	5'-8"
5	5	11 3/4"	11 3/4"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	4	10"	2'-6"	3'-11 3/4"	6'-3"	4	12"	6'-8"	4	12"	6'-8"	4	12"	6'-8"
5	6	11 3/4"	11 3/4"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	4	10"	2'-6"	4'-5 3/4"	6'-9"	4	12"	7'-8"	4	12"	7'-8"	4	12"	7'-8"
5	7	11 3/4"	11 3/4"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	5	10"	2'-6"	4'-11 3/4"	7'-2"	4	8 1/2"	8'-8"	4	12"	8'-8"	4	12"	8'-8"
6	4	13 3/4"	13 3/4"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	9"	18'-11"	4	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	3'-7 3/4"	6'-1"	4	12"	6'-0"	4	12"	6'-0"	4	12"	6'-0"
6	5	13 3/4"	13 3/4"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	10"	18'-11"	5	10"	20'-4"	--	--	----	----	4	10"	2'-8 3/8"	4'-1 3/4"	6'-7"	4	12"	7'-0"	4	12"	7'-0"	4	12"	7'-0"
6	6	13 3/4"	13 3/4"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	10"	18'-11"	5	10"	20'-4"	--	--	----	----	4	10"	2'-8 3/8"	4'-7 3/4"	7'-1"	4	12"	8'-0"	4	12"	8'-0"	4	12"	8'-0"
6	7	13 3/4"	13 3/4"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	10"	18'-11"	5	10"	20'-4"	3	10"	2'-8 3/8"	5'-2"	4	10"	2'-8 3/8"	5'-1 3/4"	7'-7"	4	9"	9'-0"	4	12"	9'-0"	4	12"	9'-0"
6	8	13 1/2"	13 1/2"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	9"	18'-11"	4	9"	20'-4"	--	--	----	----	5	9"	2'-8 3/8"	5'-7 1/2"	8'-0"	5	9 1/2"	9'-11"	4	12"	9'-11"	4	12"	9'-11"
7	4	15 3/4"	15 3/4"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	5	9"	21'-6"	5	9"	23'-4"	--	--	----	----	4	9"	2'-10 3/4"	3'-9 3/4"	6'-5"	4	12"	6'-3"	4	12"	6'-3"	4	12"	6'-3"
7	6	15 3/4"	15 3/4"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	5	9"	21'-6"	5	9"	23'-4"	--	--	----	----	4	9"	2'-10 3/4"	4'-9 3/4"	7'-5"	4	12"	8'-3"	4	12"	8'-3"	4	12"	8'-3"
7	8	15 3/4"	15 3/4"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	5	9"	21'-6"	5	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	5'-9 3/4"	8'-5"	4	6"	10'-3"	4	12"	10'-3"	4	12"	10'-3"
7	10	15 3/4"	15 3/4"	8 1/2"	8"	21	21'-0"	21	21'-0"	8	8'-0"	5	9"	21'-6"	5	9"	23'-5"	3	9"	2'-11 1/4"	5'-8"	5	9"	2'-11 1/4"	6'-9 3/4"	9'-5"	5	6 1/2"	12'-3"	4	12"	12'-3"	4	12"	12'-3"
8	4	17 3/4"	17 3/4"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	5	8"	24'-2"	5	8"	26'-4"	--	--	----	----	4	8"	3'-1 1/4"	3'-11 3/4"	6'-10"	4	12"	6'-7"	4	10 1/2"	6'-7"	4	10 1/2"	6'-7"
8	6	17 3/4"	17 3/4"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	5	8"	24'-2"	5	8"	26'-4"	--	--	----	----	4	8"	3'-1 1/4"	4'-11 3/4"	7'-10"	4	12"	8'-7"	4	10 1/2"	8'-7"	4	10 1/2"	8'-7"
8	8	18"	18"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	5	8"	24'-2"	5	8"	26'-4"	3	8"	3'-1 1/4"	6'-0"	4	8"	3'-1 1/4"	6'-0"	8'-10"	4	6"	10'-8"	4	10 1/2"	10'-8"	4	10 1/2"	10'-8"
8	10	18"	18"	8 1/2"	8"	24	24'-0"	24	24'-0"	8	8'-0"	5	8"	24'-2"	5	8"	26'-5"	3	8"	3'-1 3/4"	6'-1"	5	8"	3'-1 3/4"	7'-0"	9'-10"	6	9"	12'-8"	4	10 1/2"	12'-8"	4	10 1/2"	12'-8"
9	4	19 3/4"	19 3/4"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	6	9"	26'-9"	6	9"	29'-4"	--	--	----	----	4	9"	3'-3 5/8"	4'-1 3/4"	7'-2"	4	12"	7'-0"	4	10"	7'-0"	4	10"	7'-0"
9	6	19 3/4"	19 3/4"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	6	9"	26'-9"	6	9"	29'-4"	--	--	----	----	4	9"	3'-3 5/8"	5'-1 3/4"	8'-2"	4	12"	9'-0"	4	10"	9'-0"	4	10"	9'-0"
9	8	19 3/4"	19 3/4"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	6	9"	26'-9"	6	9"	29'-4"	--	--	----	----	5	9"	3'-3 5/8"	6'-1 3/4"	9'-1"	4	6"	11'-0"	4	10"	11'-0"	4	10"	11'-0"
9	10	19 1/2"	19 1/2"	8 1/2"	8"	27	27'-0"	27	27'-0"	8	8'-0"	6	9"	26'-9"	6	9"	29'-5"	--	--	----	----	6	9"	3'-4 1/8"	7'-1 1/2"	10'-1"	6	9"	12'-11"	4	10"	12'-11"	4	10"	12'-11"
9	12	19 3/4"	19 3/4"	10"	8"	27	27'-0"	27	27'-0"	10	10'-0"	6	9"	26'-9"	6	9"	29'-8"	--	--	----	----	7	9"	3'-5 5/8"	8'-1 3/4"	11'-2"	5	5 1/2"	15'-0"	4	10"	15'-0"	4	10"	15'-0"
10	4	22"	22"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	4	9"	3'-6"	4'-4"	7'-7"	4	12"	7'-4"	4	10"	7'-4"	4	10"	7'-4"
10	6	22"	22"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	4	9"	3'-6"	5'-4"	8'-7"	4	12"	9'-4"	4	10"	9'-4"	4	10"	9'-4"
10	8	22"	22"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	5	9"	3'-6"	6'-4"	9'-6"	4	6"	11'-4"	4	10"	11'-4"	4	10"	11'-4"
10	10	22"	22"	8 1/2"	8"	30	30'-0"	30	30'-0"	8	8'-0"	7	9"	29'-4"	6	9"	32'-5"	--	--	----	----	6	9"	3'-6 1/2"	7'-4"	10'-6"	4	4"	13'-4"	4	10"	13'-4"	4	10"	13'-4"
10	12	22 1/4"	22 1/4"	10"	8"	30	30'-0"	30	30'-0"	10	10'-0"	6	9"	29'-4"	6	9"	32'-8"	3	9"	3'-8"	7'-2"	6	9"	3'-8"	8'-4 1/4"	11'-7"	6	7 1/2"	15'-4"	4	10"	15'-4"	4	10"	15'-4"
12	6	25 1/2"	25 1/2"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	6	8"	34'-6"	6	8"	38'-4"	--	--	----	----	4	8"	3'-10 3/4"	5'-7 1/2"	9'-3"	4	12"	9'-11"	4	9 1/2"	9'-11"	4	9 1/2"	9'-11"
12	8	25 1/2"	25 1/2"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	6	8"	34'-6"	6	8"	38'-4"	3	8"	3'-10 3/4"	7'-7"	4	8"	3'-10 3/4"	6'-7 1/2"	10'-3"	5	9"	11'-11"	4	9 1/2"	11'-11"	4	9 1/2"	11'-11"
12	10	25 3/4"	25 3/4"	8 1/2"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	8"	34'-6"	6	8"	38'-5"	3	8"	3'-11 1/4"	7'-8"	5	8"	3'-11 1/4"	7'-7 3/4"	11'-3"	7	11 1/2"	13'-11"	4	9 1/2"	13'-11"	4	9 1/2"	13'-11"
12	12	25 3/4"	25 3/4"	10"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	8"	34'-6"	6	8"	38'-8"	4	8"	4'-3/4"	7'-10"	5	8"	4'-3/4"	8'-7 3/4"	12'-5"	7	10"	15'-11"	4	9"	15'-11"	4	9"	15'-11"

Sheet 1 of 2 For Typical Section, notes and other details, refer to standard BCT-DT.

1004.20	<h2 style="margin: 0;">TRIPLE BOX CULVERTS</h2> <p style="margin: 0;">35 TO 40 FT. FILLS</p> <p style="margin: 0;">VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	<p>STRUCTURE AND BRIDGE DIVISION</p>
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SPAN		HIGHT		REINFORCING STEEL													QUAN./LF		HEADWALLS								WINGWALL	
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CL. A3 A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)		OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	16	42.388	0.988	119.799	13'- 2"	6	12'- 10"	2	8	1.827	102.932	1.808	77.103	A		
3	4	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	11'- 3 3/8"	1'- 5 7/8"	11'- 10"	44	24	45.212	1.087	123.701	13'- 2"	6	12'- 10"	2	10	1.932	109.835	1.901	77.103	C		
4	3	4	12"	3'- 5 5/8"	0'- 6 1/4"	1'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	14'- 4"	1'- 11 1/4"	15'- 1"	56	16	52.408	1.294	131.043	16'- 2"	6	15'- 10"	2	8	2.104	120.956	2.095	95.127	B		
4	4	4	12"	3'- 5 5/8"	0'- 6 1/4"	1'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	14'- 4"	1'- 11 1/4"	15'- 1"	56	24	55.232	1.392	139.395	16'- 2"	6	15'- 10"	2	10	2.209	127.859	2.188	95.127	D		
4	5	4	12"	3'- 5 5/8"	0'- 6 1/4"	1'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	14'- 4"	1'- 11 1/4"	15'- 1"	56	32	58.056	1.490	147.747	16'- 2"	6	15'- 10"	2	12	2.315	134.761	2.280	95.127	F		
4	6	4	12"	3'- 5 5/8"	0'- 6 1/4"	1'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	14'- 4"	1'- 11 1/4"	15'- 1"	56	40	60.880	1.588	167.678	16'- 2"	6	15'- 10"	2	14	2.420	141.664	2.373	95.127	H		
5	3	4	11"	4'- 2 1/8"	0'- 8 1/2"	2'- 1/4"	0'- 11 1/2"	0'- 7 3/4"	17'- 4"	2'- 4 1/4"	18'- 5"	68	16	62.428	1.718	161.356	19'- 2"	6	18'- 10"	2	8	2.313	138.980	2.313	113.151	B		
5	4	4	11"	4'- 2 1/8"	0'- 8 1/2"	2'- 1/4"	0'- 11 1/2"	0'- 7 3/4"	17'- 4"	2'- 4 1/4"	18'- 5"	68	24	65.252	1.816	169.830	19'- 2"	6	18'- 10"	2	10	2.418	145.883	2.406	113.151	D		
5	5	4	10"	4'- 2 1/4"	0'- 8 1/4"	2'- 1/2"	0'- 11 1/4"	0'- 7 1/2"	17'- 4"	2'- 4 1/2"	18'- 4"	68	32	68.076	1.886	187.582	19'- 2"	6	18'- 10"	2	12	2.532	152.785	2.508	113.151	F		
5	6	4	10"	4'- 2 1/4"	0'- 8 1/4"	2'- 1/2"	0'- 11 1/4"	0'- 7 1/2"	17'- 4"	2'- 4 1/2"	18'- 4"	68	40	70.900	1.984	196.202	19'- 2"	6	18'- 10"	2	14	2.637	159.688	2.600	113.151	H		
5	7	4	10"	4'- 2 1/4"	0'- 8 1/4"	2'- 1/2"	0'- 11 1/4"	0'- 7 1/2"	17'- 4"	2'- 4 1/2"	18'- 4"	68	48	73.724	2.081	222.221	19'- 2"	6	18'- 10"	2	16	2.742	166.591	2.693	113.151	J		
6	4	4	9"	4'- 10 7/8"	0'- 10 1/4"	2'- 3/4"	1'- 2"	0'- 9 1/2"	20'- 4"	2'- 9 3/4"	21'- 8"	80	24	75.272	2.258	216.698	22'- 2"	6	21'- 10"	2	10	2.607	163.907	2.605	131.175	D		
6	5	4	10"	4'- 10 7/8"	0'- 10 1/4"	2'- 3/4"	1'- 2"	0'- 9 1/2"	20'- 4"	2'- 9 3/4"	21'- 8"	80	32	78.096	2.356	230.598	22'- 2"	6	21'- 10"	2	12	2.712	170.809	2.698	131.175	F		
6	6	4	10"	4'- 10 7/8"	0'- 10 1/4"	2'- 3/4"	1'- 2"	0'- 9 1/2"	20'- 4"	2'- 9 3/4"	21'- 8"	80	40	80.920	2.454	239.218	22'- 2"	6	21'- 10"	2	14	2.817	177.712	2.791	131.175	H		
6	7	4	10"	4'- 10 7/8"	0'- 10 1/4"	2'- 3/4"	1'- 2"	0'- 9 1/2"	20'- 4"	2'- 9 3/4"	21'- 8"	80	48	83.744	2.551	261.170	22'- 2"	6	21'- 10"	2	16	2.922	184.615	2.883	131.175	J		
6	8	4	9"	4'- 11"	0'- 10"	2'- 3/2"	1'- 1 5/8"	0'- 9 1/4"	20'- 4"	2'- 10"	21'- 7"	80	56	86.568	2.616	279.989	22'- 2"	6	21'- 10"	2	18	3.039	191.517	2.987	131.175	L		
7	4	4	9"	5'- 7 1/2"	1'- 1/4"	2'- 6 1/8"	1'- 4 3/4"	0'- 11 1/2"	23'- 4 1/8"	3'- 2 7/8"	24'- 11"	92	24	85.292	2.799	287.472	25'- 2"	6	24'- 10"	2	10	2.769	181.931	2.777	149.199	E		
7	6	4	9"	5'- 7 1/2"	1'- 1/4"	2'- 6 1/8"	1'- 4 3/4"	0'- 11 1/2"	23'- 4 1/8"	3'- 2 7/8"	24'- 11"	92	40	90.940	2.995	305.066	25'- 2"	6	24'- 10"	2	14	2.979	195.736	2.962	149.199	I		
7	8	4	9"	5'- 7 1/2"	1'- 1/4"	2'- 6 1/8"	1'- 4 3/4"	0'- 11 1/2"	23'- 4 1/8"	3'- 2 7/8"	24'- 11"	92	56	96.588	3.189	355.950	25'- 2"	6	24'- 10"	2	18	3.189	209.541	3.148	149.199	M		
7	10	4	9"	5'- 8"	1'- 1/4"	2'- 6 1/8"	1'- 4 3/4"	0'- 11 1/2"	23'- 5 1/8"	3'- 2 7/8"	25'- 0"	92	72	102.236	3.422	401.643	25'- 2"	6	24'- 10"	2	22	3.361	223.347	3.294	149.199	Q		
8	4	4	8"	6'- 4"	1'- 2 1/4"	2'- 8 3/8"	1'- 7 5/8"	1'- 1 1/2"	26'- 3 3/8"	3'- 8 1/8"	28'- 2"	104	24	95.312	3.415	349.243	28'- 2"	6	27'- 10"	2	10	2.875	199.955	2.893	167.223	E		
8	6	4	8"	6'- 4"	1'- 2 1/4"	2'- 8 3/8"	1'- 7 5/8"	1'- 1 1/2"	26'- 3 3/8"	3'- 8 1/8"	28'- 2"	104	40	100.960	3.612	368.047	28'- 2"	6	27'- 10"	2	14	3.085	213.760	3.079	167.223	I		
8	8	4	8"	6'- 3 3/8"	1'- 2 1/2"	2'- 8 5/8"	1'- 8"	1'- 1 3/4"	26'- 3 3/8"	3'- 7 7/8"	28'- 3"	104	56	106.608	3.847	415.170	28'- 2"	6	27'- 10"	2	18	3.280	227.565	3.248	167.223	M		
8	10	4	8"	6'- 4 3/8"	1'- 2 1/2"	2'- 8 5/8"	1'- 8"	1'- 1 3/4"	26'- 4 7/8"	3'- 7 7/8"	28'- 4"	104	72	112.256	4.080	476.275	28'- 2"	6	27'- 10"	2	22	3.451	241.371	3.394	167.223	Q		
9	4	5	9"	7'- 5/8"	1'- 4 3/8"	2'- 11 3/4"	1'- 10 1/2"	1'- 3 1/2"	29'- 4"	4'- 1 1/4"	31'- 5"	116	24	105.332	4.102	455.854	31'- 2"	6	30'- 10"	2	10	2.944	217.979	2.972	185.247	E		
9	6	5	9"	7'- 5/8"	1'- 4 3/8"	2'- 11 3/4"	1'- 10 1/2"	1'- 3 1/2"	29'- 4"	4'- 1 1/4"	31'- 5"	116	40	110.980	4.298	474.517	31'- 2"	6	30'- 10"	2	14	3.155	231.784	3.158	185.247	I		
9	8	5	9"	7'- 5/8"	1'- 4 3/8"	2'- 11 3/4"	1'- 10 1/2"	1'- 3 1/2"	29'- 4"	4'- 1 1/4"	31'- 5"	116	56	116.628	4.492	525.747	31'- 2"	6	30'- 10"	2	18	3.365	245.589	3.343	185.247	M		
9	10	5	9"	7'- 1 1/4"	1'- 4 1/8"	3'- 0"	1'- 10 1/4"	1'- 3 1/4"	29'- 5"	4'- 1 1/2"	31'- 6"	116	72	122.276	4.680	591.064	31'- 2"	6	30'- 10"	2	22	3.553	259.395	3.506	185.247	Q		
9	12	5	9"	7'- 2 5/8"	1'- 4 3/8"	2'- 11 3/4"	1'- 10 1/2"	1'- 3 1/2"	29'- 8"	4'- 1 1/4"	31'- 9"	116	88	127.924	5.066	662.948	31'- 2"	6	30'- 10"	2	26	3.598	273.200	3.525	185.247	U		
10	4	6	9"	7'- 9 1/8"	1'- 6 3/4"	3'- 2 1/4"	2'- 1 7/8"	1'- 5 3/4"	32'- 4"	4'- 6 1/4"	34'- 9"	128	24	115.352	4.915	541.037	34'- 2"	6	33'- 10"	2	10	2.975	236.003	3.013	203.271	F		
10	6	6	9"	7'- 9 1/8"	1'- 6 3/4"	3'- 2 1/4"	2'- 1 7/8"	1'- 5 3/4"	32'- 4"	4'- 6 1/4"	34'- 9"	128	40	121.000	5.112	559.700	34'- 2"	6	33'- 10"	2	14	3.185	249.808	3.198	203.271	J		
10	8	6	9"	7'- 9 1/8"	1'- 6 3/4"	3'- 2 1/4"	2'- 1 7/8"	1'- 5 3/4"	32'- 4"	4'- 6 1/4"	34'- 9"	128	56	126.648	5.305	612.208	34'- 2"	6	33'- 10"	2	18	3.395	263.613	3.384	203.271	N		
10	10	6	9"	7'- 9 5/8"	1'- 6 3/4"	3'- 2 1/4"	2'- 1 7/8"	1'- 5 3/4"	32'- 5"	4'- 6 1/4"	34'- 10"	128	72	132.296	5.536	722.125	34'- 2"	6	33'- 10"	2	22	3.564	277.419	3.527	203.271	R		
10	12	6	9"	7'- 11"	1'- 7"	3'- 2"	2'- 2 1/8"	1'- 6"	32'- 8"	4'- 6"	35'- 1"	128	88	137.944	5.935	737.468	34'- 2"	6	33'- 10"	2	26	3.603	291.224	3.540	203.271	V		
12	6	6	8"	9'- 2 5/8"	1'- 10 1/4"	3'- 8 3/8"	2'- 6 3/4"	1'- 9 1/4"	38'- 4 1/8"	5'- 5 1/8"	41'- 3"	152	40	141.040	6.750	714.428	40'- 2"	6	39'- 10"	2	14	3.184	285.856	3.217	239.319	J		
12	8	6	8"	9'- 2 5/8"	1'- 10 1/4"	3'- 8 3/8"	2'- 6 3/4"	1'- 9 1/4"	38'- 4 1/8"	5'- 5 1/8"	41'- 3"	152	56	146.688	6.943	768.206	40'- 2"	6	39'- 10"	2	18	3.394	299.661	3.402	239.319	N		
12	10	6	8"	9'- 3"	1'- 10 1/2"	3'- 8 3/8"	2'- 7 1/8"	1'- 9 1/2"	38'- 5 1/8"	5'- 4 1/8"	41'- 4"	152	72	152.336	7.240	837.453	40'- 2"	6	39'- 10"	2	22	3.535	313.467	3.518	239.319	R		
12	12	6	8"	9'- 4 1/2"	1'- 10 1/2"	3'- 8 3/8"	2'- 7 1/8"	1'- 9 1/2"	38'- 8 1/8"	5'- 4 1/8"	41'- 7"	152	88	157.984	7.590	895.574	40'- 2"	6	39'- 10"	2	26	3.590	327.272	3.547	239.319	V		

BCT-45

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 1/4"	8 1/4"	8"	8"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	4	12"	2'-1 1/4"	3'-11"	4	12"	2'-1 1/4"	2'-8 1/4"	4'-6"	4	12"	4'-0"	4	12"	4'-0"
3	4	8 1/4"	8 1/4"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	4	12"	2'-1 1/4"	3'-11"	4	12"	2'-1 1/4"	3'-2 1/4"	5'-0"	4	12"	5'-0"	4	12"	5'-0"
4	3	10 1/2"	10 1/2"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	2'-10 1/2"	4'-11"	4	12"	4'-5"	4	12"	4'-5"
4	4	10 1/2"	10 1/2"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	3'-4 1/2"	5'-5"	4	12"	5'-5"	4	12"	5'-5"
4	5	10 3/4"	10 3/4"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	--	----	----	4	12"	2'-3 5/8"	3'-10 3/4"	5'-11"	4	12"	6'-5"	4	12"	6'-5"
4	6	10 3/4"	10 3/4"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	4'-4 3/4"	6'-5"	4	11"	7'-5"	4	12"	7'-5"
5	3	12 1/2"	12 1/2"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	4	10"	2'-6"	3'-1 1/2"	5'-3"	4	12"	4'-9"	4	12"	4'-9"
5	4	12 1/2"	12 1/2"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	4	10"	2'-6"	3'-6 1/2"	5'-9"	4	12"	5'-9"	4	12"	5'-9"
5	5	12 1/2"	12 1/2"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	4	10"	2'-6"	4'-1/2"	6'-3"	4	12"	6'-9"	4	12"	6'-9"
5	6	12 1/2"	12 1/2"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	4	10"	2'-6"	4'-6 1/2"	6'-9"	4	12"	7'-9"	4	12"	7'-9"
5	7	12 1/2"	12 1/2"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	10"	16'-4"	4	10"	17'-4"	--	--	----	----	5	10"	2'-6"	5'-1/2"	7'-3"	4	7 1/2"	8'-9"	4	12"	8'-9"
6	4	14 3/4"	14 3/4"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	9"	18'-11"	5	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	3'-8 3/8"	6'-2"	4	12"	6'-1"	4	12"	6'-1"
6	5	14 3/4"	14 3/4"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	9"	18'-11"	5	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	4'-2 3/4"	6'-8"	4	12"	7'-1"	4	12"	7'-1"
6	6	14 3/4"	14 3/4"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	9"	18'-11"	5	9"	20'-4"	--	--	----	----	4	9"	2'-8 3/8"	4'-8 3/4"	7'-2"	4	12"	8'-1"	4	12"	8'-1"
6	7	14 3/4"	14 3/4"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	9"	18'-11"	5	9"	20'-4"	3	9"	2'-8 3/8"	5'-2"	4	9"	2'-8 3/8"	5'-2 3/4"	7'-8"	4	7 1/2"	9'-1"	4	12"	9'-1"
6	8	14 3/4"	14 3/4"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	9"	18'-11"	5	9"	20'-4"	--	--	----	----	5	9"	2'-8 3/8"	5'-8 3/4"	8'-1"	4	5 1/2"	10'-1"	4	12"	10'-1"
7	4	17 1/4"	17 1/4"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	4	9"	21'-6"	5	9"	23'-4"	--	--	----	----	4	9"	2'-10 3/4"	3'-11 1/4"	6'-7"	4	12"	6'-6"	4	10 1/2"	6'-6"
7	6	17 1/4"	17 1/4"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	5	9"	21'-6"	5	9"	23'-4"	--	--	----	----	4	9"	2'-10 3/4"	4'-11 1/4"	7'-7"	4	11 1/2"	8'-6"	4	11"	8'-6"
7	8	17 1/4"	17 1/4"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	5	9"	21'-6"	5	9"	23'-4"	4	9"	2'-10 3/4"	5'-6"	4	9"	2'-10 3/4"	5'-11 1/4"	8'-7"	4	5 1/2"	10'-6"	4	11"	10'-6"
7	10	17 1/4"	17 1/4"	9"	8"	21	21'-0"	21	21'-0"	8	8'-0"	5	9"	21'-6"	5	9"	23'-6"	3	9"	2'-11 3/4"	5'-9"	5	9"	2'-11 3/4"	6'-11 1/4"	9'-7"	4	4"	12'-6"	4	11"	12'-6"
8	4	19 1/4"	19 1/4"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	5	8"	24'-2"	5	8"	26'-4"	--	--	----	----	4	8"	3'-1 1/4"	4'-1 1/4"	6'-11"	4	12"	6'-10"	4	10"	6'-10"
8	6	19 1/4"	19 1/4"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	4	8"	24'-2"	5	8"	26'-4"	--	--	----	----	4	8"	3'-1 1/4"	5'-1 1/4"	7'-11"	4	11"	8'-10"	4	10"	8'-10"
8	8	19"	19"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	4	8"	24'-2"	5	8"	26'-4"	3	8"	3'-1 1/4"	6'-0"	4	8"	3'-1 1/4"	6'-1"	8'-11"	4	5 1/2"	10'-10"	4	10"	10'-10"
8	10	19 1/4"	19 1/4"	9"	8"	24	24'-0"	24	24'-0"	8	8'-0"	5	8"	24'-2"	5	8"	26'-6"	3	8"	3'-2 1/4"	6'-2"	5	8"	3'-2 1/4"	7'-1 1/4"	10'-0"	4	4"	12'-10"	4	10"	12'-10"
9	4	21 1/4"	21 1/4"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	6	9"	26'-9"	6	9"	29'-4"	--	--	----	----	4	9"	3'-3 5/8"	4'-3 1/4"	7'-4"	4	12"	7'-3"	4	10"	7'-3"
9	6	21 1/4"	21 1/4"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	6	9"	26'-9"	6	9"	29'-4"	--	--	----	----	4	9"	3'-3 5/8"	5'-3 1/4"	8'-4"	4	11"	9'-3"	4	10"	9'-3"
9	8	21 1/4"	21 1/4"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	6	9"	26'-9"	6	9"	29'-4"	--	--	----	----	5	9"	3'-3 5/8"	6'-3 1/4"	9'-3"	6	11 1/2"	11'-3"	4	10"	11'-3"
9	10	21 1/4"	21 1/4"	9"	8"	27	27'-0"	27	27'-0"	8	8'-0"	6	9"	26'-9"	6	9"	29'-6"	--	--	----	----	6	9"	3'-4 5/8"	7'-3 1/4"	10'-3"	5	6"	13'-3"	4	10"	13'-3"
9	12	21 1/2"	21 1/2"	10 1/2"	8"	27	27'-0"	27	27'-0"	10	10'-0"	6	9"	26'-9"	6	9"	29'-9"	--	--	----	----	7	9"	3'-6 1/8"	8'-3 1/2"	11'-4"	7	10 1/2"	15'-3"	4	10"	15'-3"
10	4	23 1/4"	23 1/4"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	4	9"	3'-6"	4'-5 1/4"	7'-8"	4	12"	7'-6"	4	10"	7'-6"
10	8	23 1/4"	23 1/4"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	6	9"	29'-4"	6	9"	32'-4"	--	--	----	----	4	9"	3'-6"	5'-5 1/4"	8'-8"	4	10 1/2"	9'-6"	4	10"	9'-6"
10	8	23 1/4"	23 1/4"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	6	9"	29'-4"	6	9"	32'-4"	3	9"	3'-6"	6'-10"	4	9"	3'-6"	6'-5 1/4"	9'-8"	6	11 1/2"	11'-6"	4	10"	11'-6"
10	10	23 1/4"	23 1/4"	9"	8"	30	30'-0"	30	30'-0"	8	8'-0"	6	9"	29'-4"	6	9"	32'-6"	3	9"	3'-7"	7'-0"	5	9"	3'-7"	7'-5 1/4"	10'-8"	5	6"	13'-6"	4	10"	13'-6"
10	12	23 1/2"	23 1/2"	10 1/2"	8"	30	30'-0"	30	30'-0"	10	10'-0"	6	9"	29'-4"	6	9"	32'-9"	3	9"	3'-8 1/2"	7'-3"	6	9"	3'-8 1/2"	8'-5 1/2"	11'-9"	5	5"	15'-7"	4	10"	15'-7"
12	6	27 1/2"	27 1/2"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	7	8"	34'-6"	6	8"	38'-4"	--	--	----	----	4	8"	3'-10 3/4"	5'-9 1/2"	9'-5"	4	9"	10'-3"	4	8 1/2"	10'-3"
12	8	27 1/2"	27 1/2"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	7	8"	34'-6"	6	8"	38'-4"	3	8"	3'-10 3/4"	7'-7"	4	8"	3'-10 3/4"	6'-9 1/2"	10'-5"	5	7 1/2"	12'-3"	4	8 1/2"	12'-3"
12	10	27 1/2"	27 1/2"	9 1/4"	8"	36	36'-0"	36	36'-0"	8	8'-0"	6	8"	34'-6"	6	8"	38'-6"	3	8"	4'-0"	7'-10"	5	8"	4'-0"	7'-9 1/2"	11'-6"	5	6"	14'-3"	4	8 1/2"	14'-3"
12	12	27 1/2"	27 1/2"	10 1/2"	8"	36	36'-0"	36	36'-0"	10	10'-0"	6	8"	34'-6"	6	8"	38'-9"	3	8"	4'-1 1/4"	8'-0"	6	8"	4'-1 1/4"	8'-9 1/2"	12'-6"	6	7"	16'-3"	4	8"	16'-3"

Sheet 1 of 2 For Typical Section, notes and other details, refer to standard BCT-DT.

1004.22	<h2 style="margin: 0;">TRIPLE BOX CULVERTS</h2> <p style="margin: 0;">40 TO 45 FT. FILLS</p> <p style="margin: 0;">VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	STRUCTURE AND BRIDGE DIVISION
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SPAN		HIGHT		REINFORCING STEEL													QUAN./LF		HEADWALLS									
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									LENGTH	NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G			HWI		INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)	WINGWALL
				a	b	c	d	e	f	g	HEADWALL LENGTH	SIZE							LENGTH	NO. HW2 BARS	NO. HW3 BARS							
3	3	4	12"	2'- 8 3/4"	0'- 4 3/4"	1'- 6 3/8"	0'- 6 1/4"	0'- 4"	11'- 3 3/8"	1'- 5 5/8"	11'- 11"	44	16	42.388	1.006	119.910	13'- 2"	6	12'- 10"	2	8	1.823	102.932	1.804	77.103	A		
3	4	4	12"	2'- 8 3/4"	0'- 4 3/4"	1'- 6 3/8"	0'- 6 1/4"	0'- 4"	11'- 3 3/8"	1'- 5 5/8"	11'- 11"	44	24	45.212	1.105	128.262	13'- 2"	6	12'- 10"	2	10	1.928	109.835	1.896	77.103	C		
4	3	4	12"	3'- 5 1/4"	0'- 7"	1'- 9"	0'- 9 3/8"	0'- 6 1/4"	14'- 4"	1'- 10 1/2"	15'- 2"	56	16	52.408	1.362	132.045	16'- 2"	6	15'- 10"	2	8	2.085	120.956	2.076	95.127	B		
4	4	4	12"	3'- 5 1/4"	0'- 7"	1'- 9"	0'- 9 3/8"	0'- 6 1/4"	14'- 4"	1'- 10 1/2"	15'- 2"	56	24	55.232	1.460	140.397	16'- 2"	6	15'- 10"	2	10	2.190	127.859	2.168	95.127	D		
4	5	4	12"	3'- 5 1/8"	0'- 7 1/4"	1'- 8 3/4"	0'- 9 3/4"	0'- 6 1/2"	14'- 4"	1'- 10 1/4"	15'- 3"	56	32	58.056	1.581	148.861	16'- 2"	6	15'- 10"	2	12	2.289	134.761	2.255	95.127	F		
4	6	4	12"	3'- 5 1/8"	0'- 7 1/4"	1'- 8 3/4"	0'- 9 3/4"	0'- 6 1/2"	14'- 4"	1'- 10 1/4"	15'- 3"	56	40	60.880	1.678	169.692	16'- 2"	6	15'- 10"	2	14	2.394	141.664	2.347	95.127	H		
5	3	4	10"	4'- 1 7/8"	0'- 9"	1'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	17'- 4"	2'- 3 3/4"	18'- 6"	68	16	62.428	1.772	170.945	19'- 2"	6	18'- 10"	2	8	2.295	138.980	2.296	113.151	B		
5	4	4	10"	4'- 1 7/8"	0'- 9"	1'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	17'- 4"	2'- 3 3/4"	18'- 6"	68	24	65.252	1.870	179.564	19'- 2"	6	18'- 10"	2	10	2.401	145.883	2.389	113.151	D		
5	5	4	10"	4'- 1 7/8"	0'- 9"	1'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	17'- 4"	2'- 3 3/4"	18'- 6"	68	32	68.076	1.968	188.184	19'- 2"	6	18'- 10"	2	12	2.506	152.785	2.481	113.151	F		
5	6	4	10"	4'- 1 7/8"	0'- 9"	1'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	17'- 4"	2'- 3 3/4"	18'- 6"	68	40	70.900	2.066	196.803	19'- 2"	6	18'- 10"	2	14	2.611	159.688	2.574	113.151	H		
5	7	4	10"	4'- 1 7/8"	0'- 9"	1'- 11 3/4"	1'- 1/4"	0'- 8 1/4"	17'- 4"	2'- 3 3/4"	18'- 6"	68	48	73.724	2.162	225.486	19'- 2"	6	18'- 10"	2	16	2.716	166.591	2.667	113.151	J		
6	4	4	9"	4'- 10 3/8"	0'- 11 1/4"	2'- 2 1/4"	1'- 3 3/8"	0'- 10 1/2"	20'- 4"	2'- 8 3/4"	21'- 9"	80	24	75.272	2.384	237.810	22'- 2"	6	21'- 10"	2	10	2.563	163.907	2.561	131.175	D		
6	5	4	9"	4'- 10 3/8"	0'- 11 1/4"	2'- 2 1/4"	1'- 3 3/8"	0'- 10 1/2"	20'- 4"	2'- 8 3/4"	21'- 9"	80	32	78.096	2.482	246.608	22'- 2"	6	21'- 10"	2	12	2.668	170.809	2.654	131.175	F		
6	6	4	9"	4'- 10 3/8"	0'- 11 1/4"	2'- 2 1/4"	1'- 3 3/8"	0'- 10 1/2"	20'- 4"	2'- 8 3/4"	21'- 9"	80	40	80.920	2.580	255.405	22'- 2"	6	21'- 10"	2	14	2.773	177.712	2.746	131.175	H		
6	7	4	9"	4'- 10 3/8"	0'- 11 1/4"	2'- 2 1/4"	1'- 3 3/8"	0'- 10 1/2"	20'- 4"	2'- 8 3/4"	21'- 9"	80	48	83.744	2.677	281.845	22'- 2"	6	21'- 10"	2	16	2.878	184.615	2.839	131.175	J		
6	8	4	9"	4'- 10 3/8"	0'- 11 1/4"	2'- 2 1/4"	1'- 3 3/8"	0'- 10 1/2"	20'- 4"	2'- 8 3/4"	21'- 9"	80	56	86.568	2.774	304.790	22'- 2"	6	21'- 10"	2	18	2.983	191.517	2.932	131.175	L		
7	4	5	9"	5'- 6 3/4"	1'- 1 7/8"	2'- 4 5/8"	1'- 7"	1'- 1"	23'- 4 1/8"	3'- 1 3/8"	25'- 1"	92	24	85.292	3.018	295.429	25'- 2"	6	24'- 10"	2	10	2.689	181.931	2.697	149.199	E		
7	6	4	9"	5'- 6 3/4"	1'- 1 3/4"	2'- 4 5/8"	1'- 6 7/8"	1'- 1"	23'- 4 1/8"	3'- 1 3/8"	25'- 1"	92	40	90.940	3.214	309.518	25'- 2"	6	24'- 10"	2	14	2.899	195.736	2.882	149.199	I		
7	8	4	9"	5'- 6 3/4"	1'- 1 3/4"	2'- 4 5/8"	1'- 6 7/8"	1'- 1"	23'- 4 1/8"	3'- 1 3/8"	25'- 1"	92	56	96.588	3.408	363.278	25'- 2"	6	24'- 10"	2	18	3.109	209.541	3.068	149.199	M		
7	10	4	9"	5'- 7 3/4"	1'- 1 3/4"	2'- 4 5/8"	1'- 6 7/8"	1'- 1"	23'- 6 1/8"	3'- 1 3/8"	25'- 3"	92	72	102.236	3.681	410.043	25'- 2"	6	24'- 10"	2	22	3.241	223.347	3.174	149.199	Q		
8	4	5	8"	6'- 3 1/4"	1'- 3 3/8"	2'- 7 3/8"	1'- 9 3/8"	1'- 3"	26'- 3 3/8"	3'- 6 5/8"	28'- 5"	104	24	95.312	3.660	384.188	28'- 2"	6	27'- 10"	2	10	2.781	199.955	2.799	167.223	E		
8	6	5	8"	6'- 3 1/4"	1'- 3 3/8"	2'- 7 3/8"	1'- 9 3/8"	1'- 3"	26'- 3 3/8"	3'- 6 5/8"	28'- 5"	104	40	100.960	3.858	377.182	28'- 2"	6	27'- 10"	2	14	2.991	213.760	2.985	167.223	I		
8	8	5	8"	6'- 3 3/8"	1'- 3 3/8"	2'- 7 3/8"	1'- 9 1/2"	1'- 2 3/4"	26'- 3 3/8"	3'- 6 5/8"	28'- 4"	104	56	106.608	4.011	425.598	28'- 2"	6	27'- 10"	2	18	3.217	227.565	3.186	167.223	M		
8	10	5	8"	6'- 4 1/4"	1'- 3 3/8"	2'- 7 3/8"	1'- 9 3/8"	1'- 3"	26'- 5 3/8"	3'- 6 5/8"	28'- 7"	104	72	112.256	4.324	513.594	28'- 2"	6	27'- 10"	2	22	3.331	241.371	3.274	167.223	Q		
9	4	5	9"	6'- 11 1/8"	1'- 5 5/8"	2'- 10 1/4"	2'- 5 8"	1'- 5"	29'- 4"	3'- 11 3/4"	31'- 8"	116	24	105.332	4.377	458.279	31'- 2"	6	30'- 10"	2	10	2.855	217.979	2.883	185.247	F		
9	6	5	9"	6'- 11 1/8"	1'- 5 5/8"	2'- 10 1/4"	2'- 5 8"	1'- 5"	29'- 4"	3'- 11 3/4"	31'- 8"	116	40	110.980	4.573	478.066	31'- 2"	6	30'- 10"	2	14	3.065	231.784	3.068	185.247	J		
9	8	5	9"	6'- 11 7/8"	1'- 5 5/8"	2'- 10 1/4"	2'- 5 8"	1'- 5"	29'- 4"	3'- 11 3/4"	31'- 8"	116	56	116.628	4.766	534.043	31'- 2"	6	30'- 10"	2	18	3.275	245.589	3.254	185.247	N		
9	10	5	9"	7'- 7/8"	1'- 5 5/8"	2'- 10 1/4"	2'- 5 8"	1'- 5"	29'- 6"	3'- 11 3/4"	31'- 10"	116	72	122.276	5.042	598.272	31'- 2"	6	30'- 10"	2	22	3.403	259.395	3.356	185.247	R		
9	12	5	9"	7'- 2 1/4"	1'- 6 1/8"	2'- 10"	2'- 1"	1'- 5 1/4"	29'- 9"	3'- 11 1/2"	32'- 1"	116	88	127.924	5.437	673.368	31'- 2"	6	30'- 10"	2	26	3.439	273.200	3.366	185.247	V		
10	4	6	9"	7'- 8 1/2"	1'- 8"	3'- 1"	2'- 3 3/8"	1'- 7"	32'- 4"	4'- 5"	34'- 11"	128	24	115.352	5.167	542.758	34'- 2"	6	33'- 10"	2	10	2.873	236.003	2.911	203.271	F		
10	8	6	9"	7'- 8 1/2"	1'- 8"	3'- 1"	2'- 3 3/8"	1'- 7"	32'- 4"	4'- 5"	34'- 11"	128	40	121.000	5.363	563.235	34'- 2"	6	33'- 10"	2	14	3.083	249.808	3.097	203.271	J		
10	8	6	9"	7'- 8 1/2"	1'- 8"	3'- 1"	2'- 3 5/8"	1'- 7"	32'- 4"	4'- 5"	34'- 11"	128	56	126.648	5.557	614.472	34'- 2"	6	33'- 10"	2	18	3.294	263.613	3.282	203.271	N		
10	10	6	9"	7'- 9 1/2"	1'- 8"	3'- 1"	2'- 3 5/8"	1'- 7"	32'- 6"	4'- 5"	35'- 1"	128	72	132.296	5.836	673.740	34'- 2"	6	33'- 10"	2	22	3.419	277.419	3.382	203.271	R		
10	12	6	9"	7'- 10 1/8"	1'- 8 1/4"	3'- 3/4"	2'- 4"	1'- 7 1/4"	32'- 9"	4'- 4 3/4"	35'- 5"	128	88	137.944	6.238	745.759	34'- 2"	6	33'- 10"	2	26	3.450	291.224	3.387	203.271	V		
12	6	6	8"	9'- 1 5/8"	2'- 1/4"	3'- 6 3/8"	2'- 9 5/8"	1'- 11 1/4"	38'- 4 1/8"	5'- 3 3/8"	41'- 6"	152	40	141.040	7.222	782.528	40'- 2"	6	39'- 10"	2	14	3.003	285.856	3.036	239.319	K		
12	8	6	8"	9'- 1 5/8"	2'- 1/4"	3'- 6 3/8"	2'- 9 5/8"	1'- 11 1/4"	38'- 4 1/8"	5'- 3 3/8"	41'- 6"	152	56	146.688	7.415	839.828	40'- 2"	6	39'- 10"	2	18	3.213	299.661	3.221	239.319	O		
12	10	6	8"	9'- 2 7/8"	2'- 1/4"	3'- 6 3/8"	2'- 9 5/8"	1'- 11 1/4"	38'- 6 3/8"	5'- 3 3/8"	41'- 9"	152	72	152.336	7.725	848.516	40'- 2"	6	39'- 10"	2	22	3.312	313.467	3.294	239.319	S		
12	12	6	8"	9'- 4 1/8"	2'- 1/4"	3'- 6 3/8"	2'- 9 5/8"	1'- 11 1/4"	38'- 9 3/8"	5'- 3 3/8"	41'- 11"	152	88	157.984	8.059	933.076	40'- 2"	6	39'- 10"	2	26	3.379	327.272	3.336	239.319	W		

BCT-50

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	SIZE	SPACING C-C	LENGTH
3	3	9"	9"	8"	8"	9	9'-0"	9	9'-0"	1	1'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	2'-9"	4'-7"	4	12"	4'-2"	4	12"	4'-2"	4	12"	4'-2"
3	4	9"	9"	8"	8"	9	9'-0"	9	9'-0"	2	2'-0"	4	12"	11'-2"	4	12"	11'-4"	--	---	----	----	4	12"	2'-1 1/4"	3'-3"	5'-1"	4	12"	5'-2"	4	12"	5'-2"	4	12"	5'-2"
4	3	11"	11"	8"	8"	12	12'-0"	12	12'-0"	1	1'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	2'-11"	4'-11"	4	12"	4'-6"	4	12"	4'-6"	4	12"	4'-6"
4	4	11 1/4"	11 1/4"	8"	8"	12	12'-0"	12	12'-0"	2	2'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-5 1/4"	5'-6"	4	12"	5'-6"	4	12"	5'-6"	4	12"	5'-6"
4	5	11"	11"	8"	8"	12	12'-0"	12	12'-0"	3	3'-0"	4	12"	13'-9"	4	12"	14'-4"	--	---	----	----	4	12"	2'-3 5/8"	3'-11"	5'-11"	4	12"	6'-6"	4	12"	6'-6"	4	12"	6'-6"
4	6	11 1/4"	11 1/4"	8"	8"	12	12'-0"	12	12'-0"	4	4'-0"	4	12"	13'-9"	4	12"	14'-4"	4	12"	2'-3 5/8"	4'-4"	4	12"	2'-3 5/8"	4'-5 1/4"	6'-6"	4	9"	7'-6"	4	12"	7'-6"	4	12"	7'-6"
5	3	13 1/4"	13 1/4"	8"	8"	15	15'-0"	15	15'-0"	1	1'-0"	4	9"	16'-4"	4	9"	17'-4"	--	---	----	----	4	9"	2'-6"	3'-1 1/4"	5'-4"	4	12"	4'-10"	4	12"	4'-10"	4	12"	4'-10"
5	4	13 1/4"	13 1/4"	8"	8"	15	15'-0"	15	15'-0"	2	2'-0"	4	9"	16'-4"	4	9"	17'-4"	--	---	----	----	4	9"	2'-6"	3'-7 1/4"	5'-10"	4	12"	5'-10"	4	12"	5'-10"	4	12"	5'-10"
5	5	13 1/2"	13 1/2"	8"	8"	15	15'-0"	15	15'-0"	3	3'-0"	4	9"	16'-4"	4	9"	17'-4"	--	---	----	----	4	9"	2'-6"	4'-1 1/2"	6'-4"	4	12"	6'-11"	4	12"	6'-11"	4	12"	6'-11"
5	6	13 1/2"	13 1/2"	8"	8"	15	15'-0"	15	15'-0"	4	4'-0"	4	9"	16'-4"	4	9"	17'-4"	--	---	----	----	4	9"	2'-6"	4'-7 1/2"	6'-10"	4	9 1/2"	7'-11"	4	12"	7'-11"	4	12"	7'-11"
5	7	13 1/2"	13 1/2"	8"	8"	15	15'-0"	15	15'-0"	5	5'-0"	4	10"	16'-4"	4	10"	17'-4"	--	---	----	----	5	10"	2'-6"	5'-1 1/2"	7'-4"	5	10 1/2"	8'-11"	4	12"	8'-11"	4	12"	8'-11"
6	4	16"	16"	8"	8"	18	18'-0"	18	18'-0"	2	2'-0"	4	9"	18'-11"	5	9"	20'-4"	--	---	----	----	4	9"	2'-8 3/8"	3'-10"	6'-3"	4	12"	6'-4"	4	11"	6'-4"	4	11"	6'-4"
6	5	16"	16"	8"	8"	18	18'-0"	18	18'-0"	3	3'-0"	4	9"	18'-11"	5	9"	20'-4"	--	---	----	----	4	9"	2'-8 3/8"	4'-4"	6'-9"	4	12"	7'-4"	4	11"	7'-4"	4	11"	7'-4"
6	6	15 1/2"	15 1/2"	8"	8"	18	18'-0"	18	18'-0"	4	4'-0"	4	9"	18'-11"	5	9"	20'-4"	--	---	----	----	4	9"	2'-8 3/8"	4'-9 1/2"	7'-3"	4	10"	8'-3"	4	11 1/2"	8'-3"	4	11 1/2"	8'-3"
6	7	15 1/2"	15 1/2"	8"	8"	18	18'-0"	18	18'-0"	5	5'-0"	4	9"	18'-11"	5	9"	20'-4"	3	9"	2'-8 3/8"	5'-2"	4	9"	2'-8 3/8"	5'-3 1/2"	7'-9"	5	10 1/2"	9'-3"	4	11 1/2"	9'-3"	4	11 1/2"	9'-3"
6	8	15 1/2"	15 1/2"	8"	8"	18	18'-0"	18	18'-0"	6	6'-0"	4	9"	18'-11"	5	9"	20'-4"	--	---	----	----	5	9"	2'-8 3/8"	5'-9 1/2"	8'-2"	4	5"	10'-3"	4	11 1/2"	10'-3"	4	11 1/2"	10'-3"
7	4	18"	18"	8"	8"	21	21'-0"	21	21'-0"	2	2'-0"	5	9"	21'-6"	5	9"	23'-4"	--	---	----	----	4	9"	2'-10 3/4"	4'-0"	6'-8"	4	12"	6'-8"	4	10"	6'-8"	4	10"	6'-8"
7	6	18"	18"	8"	8"	21	21'-0"	21	21'-0"	4	4'-0"	5	9"	21'-6"	5	9"	23'-4"	--	---	----	----	4	9"	2'-10 3/4"	5'-0"	7'-8"	4	9 1/2"	8'-8"	4	10"	8'-8"	4	10"	8'-8"
7	8	18"	18"	8"	8"	21	21'-0"	21	21'-0"	6	6'-0"	5	9"	21'-6"	5	9"	23'-4"	--	---	----	----	5	9"	2'-10 3/4"	6'-0"	8'-7"	5	7 1/2"	10'-8"	4	10"	10'-8"	4	10"	10'-8"
7	10	18"	18"	9 3/4"	8"	21	21'-0"	21	21'-0"	8	8'-0"	5	9"	21'-6"	5	9"	23'-8"	4	9"	3'-1 1/2"	5'-10"	5	9"	3'-1 1/2"	7'-0"	9'-9"	6	9"	12'-8"	4	10"	12'-8"	4	10"	12'-8"
8	4	20 1/2"	20 1/2"	8"	8"	24	24'-0"	24	24'-0"	2	2'-0"	6	9"	24'-2"	6	9"	26'-4"	--	---	----	----	4	9"	3'-1 1/4"	4'-2 1/2"	7'-1"	4	12"	7'-1"	4	10"	7'-1"	4	10"	7'-1"
8	6	20 1/2"	20 1/2"	8"	8"	24	24'-0"	24	24'-0"	4	4'-0"	5	8"	24'-2"	5	8"	26'-4"	--	---	----	----	4	8"	3'-1 1/4"	5'-2 1/2"	8'-1"	4	9"	9'-1"	4	10"	9'-1"	4	10"	9'-1"
8	8	20 1/2"	20 1/2"	8"	8"	24	24'-0"	24	24'-0"	6	6'-0"	5	8"	24'-2"	5	8"	26'-4"	3	8"	3'-1 1/4"	6'-0"	4	8"	3'-1 1/4"	6'-2 1/2"	9'-1"	5	7 1/2"	11'-1"	4	10"	11'-1"	4	10"	11'-1"
8	10	20 1/2"	20 1/2"	9 3/4"	8"	24	24'-0"	24	24'-0"	8	8'-0"	5	8"	24'-2"	5	8"	26'-8"	3	8"	3'-3"	6'-4"	5	8"	3'-3"	7'-2 1/2"	10'-2"	6	9"	13'-1"	4	10"	13'-1"	4	10"	13'-1"
9	4	22 1/2"	22 1/2"	8"	8"	27	27'-0"	27	27'-0"	2	2'-0"	6	9"	26'-9"	6	9"	29'-4"	--	---	----	----	4	9"	3'-3 5/8"	4'-4 1/2"	7'-5"	4	12"	7'-5"	4	10"	7'-5"	4	10"	7'-5"
9	6	22 1/2"	22 1/2"	8"	8"	27	27'-0"	27	27'-0"	4	4'-0"	6	9"	26'-9"	6	9"	29'-4"	--	---	----	----	4	9"	3'-3 5/8"	5'-4 1/2"	8'-5"	4	8 1/2"	9'-5"	4	10"	9'-5"	4	10"	9'-5"
9	8	22 1/2"	22 1/2"	8"	8"	27	27'-0"	27	27'-0"	6	6'-0"	6	9"	26'-9"	6	9"	29'-4"	--	---	----	----	5	9"	3'-3 5/8"	6'-4 1/2"	9'-4"	4	4 1/2"	11'-5"	4	10"	11'-5"	4	10"	11'-5"
9	10	22 1/2"	22 1/2"	9 3/4"	8"	27	27'-0"	27	27'-0"	8	8'-0"	6	9"	26'-9"	6	9"	29'-8"	--	---	----	----	6	9"	3'-5 3/8"	7'-4 1/2"	10'-5"	4	4"	13'-5"	4	10"	13'-5"	4	10"	13'-5"
9	12	22 1/2"	22 1/2"	11"	8"	27	27'-0"	27	27'-0"	10	10'-0"	6	9"	26'-9"	6	9"	29'-10"	3	9"	3'-6 5/8"	6'-11"	7	9"	3'-6 5/8"	8'-4 1/2"	11'-6"	6	7"	15'-5"	4	9 1/2"	15'-5"	4	9 1/2"	15'-5"
10	4	25"	25"	8"	8"	30	30'-0"	30	30'-0"	2	2'-0"	6	9"	29'-4"	6	9"	32'-4"	--	---	----	----	4	9"	3'-6"	4'-7"	7'-10"	4	12"	7'-10"	4	9"	7'-10"	4	9"	7'-10"
10	6	25"	25"	8"	8"	30	30'-0"	30	30'-0"	4	4'-0"	6	9"	29'-4"	6	9"	32'-4"	--	---	----	----	4	9"	3'-6"	5'-7"	8'-10"	4	8"	9'-10"	4	9"	9'-10"	4	9"	9'-10"
10	8	25"	25"	8"	8"	30	30'-0"	30	30'-0"	6	6'-0"	6	9"	29'-4"	6	9"	32'-4"	3	9"	3'-6"	6'-10"	4	9"	3'-6"	6'-7"	9'-10"	4	4 1/2"	11'-10"	4	9"	11'-10"	4	9"	11'-10"
10	10	25"	25"	9 3/4"	8"	30	30'-0"	30	30'-0"	8	8'-0"	6	9"	29'-4"	6	9"	32'-7"	3	9"	3'-7 3/4"	7'-1"	5	9"	3'-7 3/4"	7'-7"	10'-11"	5	6"	13'-10"	4	9"	13'-10"	4	9"	13'-10"
10	12	25"	25"	11"	8"	30	30'-0"	30	30'-0"	10	10'-0"	6	9"	29'-4"	6	9"	32'-10"	3	9"	3'-9"	7'-4"	6	9"	3'-9"	8'-7"	11'-11"	7	9 1/2"	15'-10"	4	9"	15'-10"	4	9"	15'-10"
12	6	29 1/4"	29 1/4"	8"	8"	36	36'-0"	36	36'-0"	4	4'-0"	7	9"	34'-6"	7	9"	38'-4"	--	---	----	----	4	9"	3'-10 3/4"	5'-11 1/4"	9'-7"	4	7 1/2"	10'-6"	5	12"	10'-6"	5	12"	10'-6"
12	8	29"	29"	8"	8"	36	36'-0"	36	36'-0"	6	6'-0"	7	9"	34'-6"	7	9"	38'-4"	3	9"	3'-10 3/4"	7'-7"	4	9"	3'-10 3/4"	6'-11"	10'-7"	6	9 1/2"	12'-6"	5	12"	12'-6"	5	12"	12'-6"
12	10	29 1/4"	29 1/4"	9 3/4"	8"	36	36'-0"	36	36'-0"	8	8'-0"	7	8"	34'-6"	7	8"	38'-7"	3	8"	4'-1 1/2"	7'-11"	5	8"	4'-1 1/2"	7'-11 1/4"	11'-8"	6	8"	14'-6"	4	7 1/2"	14'-6"	4	7 1/2"	14'-6"
12	12	29 1/4"	29 1/4"	11 1/4"	8"	36	36'-0"	36	36'-0"	10	10'-0"	7	8"	34'-6"	7	8"	38'-10"	3	8"	4'-2"	8'-2"	6	8"	4'-2"	8'-11 1/4"	12'-8"	7	9 1/2"	16'-6"	4	7 1/2"	16'-6"	4	7 1/2"	16'-6"

Sheet 1 of 2 For Typical Section, notes and other details, refer to standard BCT-DT.

1004.24	<h2 style="margin: 0;">TRIPLE BOX CULVERTS</h2> <p style="margin: 0;">45 TO 50 FT. FILLS</p> <p style="margin: 0;">VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	STRUCTURE AND BRIDGE DIVISION
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SPAN		HIGHT		REINFORCING STEEL													QUAN./LF		HEADWALLS								WINGWALL	
(FT.)	(FT.)	SIZE	SPACING C-C	BTI									NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HWI		NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)		OUTLET REINFORCING STEEL (LBS)
				a	b	c	d	e	f	g	LENGTH	HEADWALL LENGTH						SIZE	LENGTH									
3	3	4	12"	2'- 8 3/8"	0'- 5 1/2"	1'- 5 5/8"	0'- 7 1/4"	0'- 4 3/4"	11'- 3 3/8"	1'- 4 7/8"	12'- 0"	44	16	42.388	1.061	110.447	13'- 2"	6	12'- 10"	2	8	1.811	102.932	1.791	77.103	A		
3	4	4	12"	2'- 8 3/8"	0'- 5 1/2"	1'- 5 5/8"	0'- 7 1/4"	0'- 4 3/4"	11'- 3 3/8"	1'- 4 7/8"	12'- 0"	44	24	45.212	1.159	118.799	13'- 2"	6	12'- 10"	2	10	1.916	109.835	1.884	77.103	C		
4	3	4	12"	3'- 5"	0'- 7 1/2"	1'- 8 1/2"	0'- 10 1/8"	0'- 6 3/4"	14'- 4"	1'- 10"	15'- 3"	56	16	52.408	1.407	132.491	16'- 2"	6	15'- 10"	2	8	2.072	120.956	2.063	95.127	B		
4	4	4	12"	3'- 4 7/8"	0'- 7 3/4"	1'- 8 1/4"	0'- 10 1/2"	0'- 7"	14'- 4"	1'- 9 3/4"	15'- 4"	56	24	55.232	1.528	141.177	16'- 2"	6	15'- 10"	2	10	2.171	127.859	2.149	95.127	D		
4	5	4	12"	3'- 5"	0'- 7 1/2"	1'- 8 1/2"	0'- 10 1/8"	0'- 6 3/4"	14'- 4"	1'- 10"	15'- 3"	56	32	58.056	1.603	149.195	16'- 2"	6	15'- 10"	2	12	2.282	134.761	2.248	95.127	F		
4	6	4	12"	3'- 4 7/8"	0'- 7 3/4"	1'- 8 1/4"	0'- 10 1/2"	0'- 7"	14'- 4"	1'- 9 3/4"	15'- 4"	56	40	60.880	1.723	172.799	16'- 2"	6	15'- 10"	2	14	2.381	141.664	2.334	95.127	H		
5	3	4	9"	4'- 1 1/2"	0'- 9 3/4"	1'- 11"	1'- 1 1/4"	0'- 9"	17'- 4"	2'- 3"	18'- 7"	68	16	62.428	1.852	182.888	19'- 2"	6	18'- 10"	2	8	2.269	138.980	2.270	113.151	B		
5	4	4	9"	4'- 1 1/2"	0'- 9 3/4"	1'- 11"	1'- 1 1/4"	0'- 9"	17'- 4"	2'- 3"	18'- 7"	68	24	65.252	1.951	191.685	19'- 2"	6	18'- 10"	2	10	2.374	145.883	2.362	113.151	D		
5	5	4	9"	4'- 1 3/8"	0'- 10"	1'- 10 3/4"	1'- 1 3/8"	0'- 9 1/4"	17'- 4"	2'- 2 3/4"	18'- 7"	68	32	68.076	2.076	200.816	19'- 2"	6	18'- 10"	2	12	2.471	152.785	2.446	113.151	F		
5	6	4	9"	4'- 1 3/8"	0'- 10"	1'- 10 3/4"	1'- 1 5/8"	0'- 9 1/4"	17'- 4"	2'- 2 3/4"	18'- 7"	68	40	70.900	2.174	212.397	19'- 2"	6	18'- 10"	2	14	2.576	159.688	2.539	113.151	H		
5	7	4	10"	4'- 1 3/8"	0'- 10"	1'- 10 3/4"	1'- 1 5/8"	0'- 9 1/4"	17'- 4"	2'- 2 3/4"	18'- 7"	68	48	73.724	2.271	229.035	19'- 2"	6	18'- 10"	2	16	2.681	166.591	2.632	113.151	J		
6	4	4	9"	4'- 9 3/4"	1'- 1 1/2"	2'- 1"	1'- 5 1/8"	0'- 11 3/4"	20'- 4"	2'- 7 1/2"	21'- 11"	80	24	75.272	2.543	240.945	22'- 2"	6	21'- 10"	2	10	2.526	163.907	2.524	131.175	E		
6	5	4	9"	4'- 9 3/4"	1'- 1 1/2"	2'- 1"	1'- 5 1/8"	0'- 11 3/4"	20'- 4"	2'- 7 1/2"	21'- 11"	80	32	78.096	2.641	249.985	22'- 2"	6	21'- 10"	2	12	2.631	170.809	2.617	131.175	G		
6	6	4	9"	4'- 10"	1'- 0"	2'- 1 1/2"	1'- 4 1/2"	0'- 11 1/4"	20'- 4"	2'- 8"	21'- 11"	80	40	80.920	2.675	259.830	22'- 2"	6	21'- 10"	2	14	2.758	177.712	2.732	131.175	I		
6	7	4	9"	4'- 10"	1'- 0"	2'- 1 1/2"	1'- 4 1/2"	0'- 11 1/4"	20'- 4"	2'- 8"	21'- 11"	80	48	83.744	2.772	286.594	22'- 2"	6	21'- 10"	2	16	2.864	184.615	2.825	131.175	K		
6	8	4	9"	4'- 10"	1'- 0"	2'- 1 1/2"	1'- 4 1/2"	0'- 11 1/4"	20'- 4"	2'- 8"	21'- 11"	80	56	86.568	2.869	310.660	22'- 2"	6	21'- 10"	2	18	2.969	191.517	2.917	131.175	M		
7	4	5	9"	5'- 6 3/8"	1'- 2 5/8"	2'- 3 3/8"	1'- 8 1/8"	1'- 1 3/4"	23'- 4 1/8"	3'- 5 1/8"	25'- 3"	92	24	85.292	3.126	319.439	25'- 2"	6	24'- 10"	2	10	2.649	181.931	2.657	149.199	E		
7	6	5	9"	5'- 6 3/8"	1'- 2 5/8"	2'- 3 3/8"	1'- 8 1/8"	1'- 1 3/4"	23'- 4 1/8"	3'- 5 1/8"	25'- 3"	92	40	90.940	3.321	341.149	25'- 2"	6	24'- 10"	2	14	2.859	195.736	2.842	149.199	I		
7	8	5	9"	5'- 6 3/8"	1'- 2 5/8"	2'- 3 3/8"	1'- 8 1/8"	1'- 1 3/4"	23'- 4 1/8"	3'- 5 1/8"	25'- 3"	92	56	96.588	3.515	394.986	25'- 2"	6	24'- 10"	2	18	3.069	209.541	3.028	149.199	M		
7	10	5	9"	5'- 8 1/8"	1'- 2 5/8"	2'- 3 3/8"	1'- 8 1/8"	1'- 1 3/4"	23'- 7 5/8"	3'- 5 1/8"	25'- 6"	92	72	102.236	3.849	451.442	25'- 2"	6	24'- 10"	2	22	3.140	223.347	3.073	149.199	Q		
8	4	5	9"	6'- 2 5/8"	1'- 5 1/8"	2'- 6 1/8"	1'- 11 5/8"	1'- 4 1/4"	26'- 3 3/8"	3'- 5 3/8"	28'- 7"	104	24	95.312	3.863	417.676	28'- 2"	6	27'- 10"	2	10	2.703	199.955	2.721	167.223	E		
8	6	5	8"	6'- 2 5/8"	1'- 5 1/8"	2'- 6 1/8"	1'- 11 5/8"	1'- 4 1/4"	26'- 3 3/8"	3'- 5 3/8"	28'- 7"	104	40	100.960	4.061	409.667	28'- 2"	6	27'- 10"	2	14	2.913	213.760	2.906	167.223	I		
8	8	5	8"	6'- 2 5/8"	1'- 5 1/8"	2'- 6 1/8"	1'- 11 5/8"	1'- 4 1/4"	26'- 3 3/8"	3'- 5 3/8"	28'- 7"	104	56	106.608	4.255	460.451	28'- 2"	6	27'- 10"	2	18	3.123	227.565	3.092	167.223	M		
8	10	5	8"	6'- 4 3/8"	1'- 5 1/8"	2'- 6 1/8"	1'- 11 5/8"	1'- 4 1/4"	26'- 7 3/8"	3'- 5 3/8"	28'- 10"	104	72	112.256	4.593	518.086	28'- 2"	6	27'- 10"	2	22	3.190	241.371	3.132	167.223	Q		
9	4	6	9"	6'- 11 1/4"	1'- 7 1/4"	2'- 9"	2'- 2 1/2"	1'- 6 1/4"	29'- 4"	3'- 10 1/2"	31'- 10"	116	24	105.332	4.603	498.766	31'- 2"	6	30'- 10"	2	10	2.765	217.979	2.793	185.247	F		
9	6	6	9"	6'- 11 1/4"	1'- 7 1/4"	2'- 9"	2'- 2 1/2"	1'- 6 1/4"	29'- 4"	3'- 10 1/2"	31'- 10"	116	40	110.980	4.798	522.604	31'- 2"	6	30'- 10"	2	14	2.975	231.784	2.978	185.247	J		
9	8	6	9"	6'- 11 1/4"	1'- 7 1/4"	2'- 9"	2'- 2 1/2"	1'- 6 1/4"	29'- 4"	3'- 10 1/2"	31'- 10"	116	56	116.628	4.992	579.878	31'- 2"	6	30'- 10"	2	18	3.185	245.589	3.164	185.247	N		
9	10	6	9"	7'- 1"	1'- 7 1/4"	2'- 9"	2'- 2 1/2"	1'- 6 1/4"	29'- 7 1/2"	3'- 10 1/2"	32'- 1"	116	72	122.276	5.333	639.270	31'- 2"	6	30'- 10"	2	22	3.249	259.395	3.201	185.247	R		
9	12	6	9"	7'- 2 1/4"	1'- 7 1/4"	2'- 9"	2'- 2 1/2"	1'- 6 1/4"	29'- 10"	3'- 10 1/2"	32'- 4"	116	88	127.924	5.666	737.378	31'- 2"	6	30'- 10"	2	26	3.317	273.200	3.243	185.247	V		
10	4	6	9"	7'- 7 5/8"	1'- 9 3/4"	2'- 11 1/4"	2'- 6"	1'- 8 3/4"	32'- 4"	4'- 3 1/4"	35'- 2"	128	24	115.352	5.520	548.658	34'- 2"	6	33'- 10"	2	10	2.731	236.003	2.769	203.271	F		
10	6	6	9"	7'- 7 5/8"	1'- 9 3/4"	2'- 11 1/4"	2'- 6"	1'- 8 3/4"	32'- 4"	4'- 3 1/4"	35'- 2"	128	40	121.000	5.715	574.603	34'- 2"	6	33'- 10"	2	14	2.941	249.808	2.954	203.271	J		
10	8	6	9"	7'- 7 5/8"	1'- 9 3/4"	2'- 11 1/4"	2'- 6"	1'- 8 3/4"	32'- 4"	4'- 3 1/4"	35'- 2"	128	56	126.648	5.909	627.462	34'- 2"	6	33'- 10"	2	18	3.152	263.613	3.140	203.271	N		
10	10	6	9"	7'- 9 3/8"	1'- 9 3/4"	2'- 11 1/4"	2'- 6"	1'- 8 3/4"	32'- 7 1/2"	4'- 3 1/4"	35'- 5"	128	72	132.296	6.255	684.355	34'- 2"	6	33'- 10"	2	22	3.210	277.419	3.172	203.271	R		
10	12	6	9"	7'- 10 5/8"	1'- 9 3/4"	2'- 11 1/4"	2'- 6"	1'- 8 3/4"	32'- 10"	4'- 3 1/4"	35'- 8"	128	88	137.944	6.593	758.782	34'- 2"	6	33'- 10"	2	26	3.275	291.224	3.211	203.271	V		
12	6	7	9"	9'- 3/4"	2'- 2 1/8"	3'- 4 3/4"	3'- 1 1/8"	2'- 7 1/8"	38'- 4"	5'- 1 1/2"	41'- 9"	152	40	141.040	7.635	841.525	40'- 2"	6	39'- 10"	2	14	2.828	285.856	2.861	239.319	K		
12	8	7	9"	9'- 2 1/2"	2'- 1 1/8"	3'- 5"	2'- 1 1/4"	2'- 5 1/8"	38'- 4"	5'- 1 3/4"	41'- 9"	152	56	146.688	7.769	899.641	40'- 2"	6	39'- 10"	2	18	3.063	299.661	3.071	239.319	O		
12	10	6	8"	9'- 2 1/2"	2'- 2"	3'- 4 5/8"	3'- 1 1/8"	2'- 1"	38'- 7 5/8"	5'- 1 3/8"	42'- 1"	152	72	152.336	8.180	984.580	40'- 2"	6	39'- 10"	2	22	3.089	313.467	3.071	239.319	S		
12	12	6	8"	9'- 4"	2'- 2"	3'- 4 5/8"	3'- 1 1/8"	2'- 1"	38'- 10 5/8"	5'- 1 3/8"	42'- 4"	152	88	157.984	8.550	1,063.377	40'- 2"	6	39'- 10"	2	26	3.123	327.272	3.079	239.319	W		