

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

SPAN		HGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS							WINGWALL				
(FT.)	(FT.)	SIZE	SPACING C-C	BT I								LENGTH	NO. BL1 #4 BARS	NO. BL2 #3 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	G		HW I		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	HEADWALL LENGTH							SIZE	LENGTH									
3	3	4	12"	2'- 7"	0'- 4"	1'- 10"	0'- 5 1/8"	0'- 3 1/4"	7'- 8"	-----	7'-10"	32	12	30.950	0.694	89.205	9'- 6"	6	9'- 2"	1	4	1.433	67.988	1.425	55.073	A		
3	4	4	12"	2'- 7"	0'- 4"	1'- 10"	0'- 5 1/8"	0'- 3 1/4"	7'- 8"	-----	7'-10"	32	18	33.065	0.768	91.575	9'- 6"	6	9'- 2"	1	5	1.531	71.439	1.517	55.073	C		
4	3	4	12"	3'- 3"	0'- 6"	2'- 3"	0'- 8"	0'- 5 1/4"	9'- 8"	-----	10'- 0"	40	12	37.630	0.916	93.570	11'- 6"	6	11'- 2"	1	4	1.631	80.004	1.630	67.089	B		
4	4	4	12"	3'- 3"	0'- 6"	2'- 3"	0'- 8"	0'- 5 1/4"	9'- 8"	-----	10'- 0"	40	18	39.754	0.989	99.834	11'- 6"	6	11'- 2"	1	5	1.730	83.455	1.722	67.089	D		
4	5	4	12"	3'- 3"	0'- 6"	2'- 3"	0'- 8"	0'- 5 1/4"	9'- 8"	-----	10'- 0"	40	24	41.860	1.063	106.098	11'- 6"	6	11'- 2"	1	6	1.829	86.907	1.815	67.089	F		
4	6	4	12"	3'- 3"	0'- 6"	2'- 3"	0'- 8"	0'- 5 1/4"	9'- 8"	-----	10'- 0"	40	30	43.975	1.136	126.186	11'- 6"	6	11'- 2"	1	7	1.928	90.358	1.908	67.089	H		
5	3	4	11"	3'- 10"	0'- 8 1/2"	2'- 8"	0'- 11 1/2"	0'- 7 3/4"	11'- 8"	-----	12'- 2"	48	12	44.316	1.224	94.204	13'- 6"	6	13'- 2"	1	4	1.786	92.020	1.791	79.105	B		
5	4	4	11"	3'- 10"	0'- 8 1/2"	2'- 8"	0'- 11 1/2"	0'- 7 3/4"	11'- 8"	-----	12'- 2"	48	18	46.425	1.298	100.590	13'- 6"	6	13'- 2"	1	5	1.885	95.471	1.884	79.105	D		
5	5	4	11"	3'- 10"	0'- 8 1/2"	2'- 8"	0'- 11 1/2"	0'- 7 3/4"	11'- 8"	-----	12'- 2"	48	24	48.540	1.372	106.975	13'- 6"	6	13'- 2"	1	6	1.984	98.923	1.977	79.105	F		
5	6	4	11"	3'- 10"	0'- 8 1/4"	2'- 8"	0'- 11 1/8"	0'- 7 1/2"	11'- 8"	-----	12'- 2"	48	30	50.655	1.425	128.640	13'- 6"	6	13'- 2"	1	7	2.078	102.374	2.065	79.105	H		
5	7	4	11"	3'- 10"	0'- 8 1/4"	2'- 8"	0'- 11 1/8"	0'- 7 1/2"	11'- 8"	-----	12'- 2"	48	36	52.770	1.498	153.361	13'- 6"	6	13'- 2"	1	8	2.177	105.825	2.158	79.105	J		
6	4	4	9"	4'- 6"	0'- 10 1/2"	3'- 0"	1'- 2 3/8"	0'- 9 3/4"	13'- 8"	-----	14'- 4"	56	18	53.105	1.621	153.154	15'- 6"	6	15'- 2"	1	5	2.009	107.487	2.015	91.121	D		
6	5	4	9"	4'- 6"	0'- 10 1/2"	3'- 0"	1'- 2 3/8"	0'- 9 3/4"	13'- 8"	-----	14'- 4"	56	24	55.220	1.695	159.864	15'- 6"	6	15'- 2"	1	6	2.102	110.939	2.102	91.121	F		
6	6	4	9"	4'- 6"	0'- 10 1/4"	3'- 0"	1'- 2"	0'- 9 1/2"	13'- 8"	-----	14'- 3"	56	30	57.335	1.746	172.388	15'- 6"	6	15'- 2"	1	7	2.207	114.390	2.201	91.121	H		
6	7	4	9"	4'- 6"	0'- 10 1/4"	3'- 0"	1'- 2"	0'- 9 1/2"	13'- 8"	-----	14'- 3"	56	36	59.450	1.818	202.599	15'- 6"	6	15'- 2"	1	8	2.306	117.841	2.293	91.121	J		
6	8	4	9"	4'- 6"	0'- 10 1/4"	3'- 0"	1'- 2"	0'- 9 1/2"	13'- 9"	-----	14'- 4"	56	42	61.565	1.922	224.956	15'- 6"	6	15'- 2"	1	9	2.405	121.293	2.386	91.121	L		
7	4	4	8"	5'- 1"	1'- 0 1/2"	3'- 5"	1'- 5 1/8"	0'- 11 3/4"	15'- 8"	-----	16'- 5"	64	18	59.785	1.994	202.803	17'- 6"	6	17'- 2"	1	5	2.132	119.503	2.144	103.137	E		
7	6	5	9"	5'- 2"	1'- 0 1/4"	3'- 5"	1'- 4 3/4"	0'- 11 3/8"	15'- 8"	-----	16'- 5"	64	30	64.015	2.116	223.899	17'- 6"	6	17'- 2"	1	7	2.330	126.406	2.330	103.137	I		
7	8	5	9"	5'- 2"	1'- 0 1/4"	3'- 5"	1'- 4 3/4"	0'- 11 3/8"	15'- 8"	-----	16'- 5"	64	42	68.245	2.259	291.161	17'- 6"	6	17'- 2"	1	9	2.528	133.309	2.515	103.137	M		
7	10	4	9"	5'- 4"	1'- 0 1/4"	3'- 5"	1'- 4 7/8"	0'- 11 1/2"	16'- 0"	-----	16'-10"	64	54	72.475	2.601	315.835	17'- 6"	6	17'- 2"	1	11	2.687	140.211	2.662	103.137	Q		
8	4	5	9"	5'- 9"	1'- 2 1/2"	3'- 10"	1'- 7 7/8"	1'- 1 5/8"	17'- 8"	-----	18'- 7"	72	18	66.474	2.415	266.568	19'- 6"	6	19'- 2"	1	5	2.211	131.519	2.230	115.153	E		
8	6	5	9"	5'- 9"	1'- 2 1/2"	3'- 10"	1'- 7 7/8"	1'- 1 5/8"	17'- 8"	-----	18'- 7"	72	30	70.695	2.562	287.084	19'- 6"	6	19'- 2"	1	7	2.400	138.422	2.407	115.153	I		
8	8	5	9"	5'- 9"	1'- 2 3/4"	3'- 10"	1'- 8 1/4"	1'- 1 7/8"	17'- 9"	-----	18'- 8"	72	42	74.925	2.768	344.193	19'- 6"	6	19'- 2"	1	9	2.589	145.325	2.583	115.153	M		
8	10	5	9"	5'- 11"	1'- 2 1/2"	3'- 10"	1'- 7 7/8"	1'- 1 5/8"	18'- 0"	-----	19'- 0"	72	54	79.155	3.052	392.132	19'- 6"	6	19'- 2"	1	11	2.756	152.227	2.737	115.153	Q		
9	4	6	9"	6'- 5"	1'- 4 1/2"	4'- 3"	1'- 10 5/8"	1'- 3 1/2"	19'- 8"	-----	20'- 8"	80	18	73.154	2.886	318.325	21'- 6"	6	21'- 2"	1	5	2.266	143.535	2.292	127.169	E		
9	6	6	9"	6'- 5"	1'- 4 1/2"	4'- 3"	1'- 10 5/8"	1'- 3 1/2"	19'- 8"	-----	20'- 8"	80	30	77.375	3.033	339.090	21'- 6"	6	21'- 2"	1	7	2.464	150.438	2.477	127.169	I		
9	8	6	9"	6'- 5"	1'- 4 1/4"	4'- 3"	1'- 10 1/4"	1'- 3 1/4"	19'- 8"	-----	20'- 8"	80	42	81.605	3.146	393.408	21'- 6"	6	21'- 2"	1	9	2.662	157.341	2.663	127.169	M		
9	10	6	9"	6'- 8"	1'- 4"	4'- 3"	1'- 9 7/8"	1'- 3"	20'- 2"	-----	21'- 2"	80	54	85.835	3.507	437.714	21'- 6"	6	21'- 2"	1	11	2.829	164.243	2.818	127.169	Q		
9	12	6	9"	6'- 10"	1'- 4 1/2"	4'- 3"	1'- 10 5/8"	1'- 3 1/2"	20'- 6"	-----	21'- 6"	80	66	90.065	3.941	505.735	21'- 6"	6	21'- 2"	1	13	2.858	171.146	2.833	127.169	U		
10	4	6	8"	7'- 0"	1'- 6 3/4"	4'- 8"	2'- 1 3/4"	1'- 5 3/4"	21'- 8"	-----	22'-10"	88	18	79.825	3.440	380.166	23'- 6"	6	23'- 2"	1	5	2.290	155.551	2.323	139.185	F		
10	6	6	8"	7'- 0"	1'- 6 3/4"	4'- 8"	2'- 1 3/4"	1'- 5 3/4"	21'- 8"	-----	22'-10"	88	30	84.055	3.587	402.516	23'- 6"	6	23'- 2"	1	7	2.488	162.454	2.508	139.185	J		
10	8	6	8"	7'- 0"	1'- 6 1/2"	4'- 8"	2'- 1 3/8"	1'- 5 1/2"	21'- 8"	-----	22'-10"	88	42	88.285	3.697	458.144	23'- 6"	6	23'- 2"	1	9	2.698	169.357	2.706	139.185	N		
10	10	6	8"	7'- 2"	1'- 6 1/4"	4'- 8"	2'- 1 1/8"	1'- 5 1/4"	22'- 0"	-----	23'- 2"	88	54	92.515	3.976	508.710	23'- 6"	6	23'- 2"	1	11	2.866	176.259	2.861	139.185	R		
10	12	6	9"	7'- 5"	1'- 6 1/4"	4'- 8"	2'- 1 1/8"	1'- 5 1/4"	22'- 5"	-----	23'- 7"	88	66	96.745	4.385	598.699	23'- 6"	6	23'- 2"	1	13	2.914	183.162	2.895	139.185	V		
12	6	7	9"	8'- 3"	1'- 11 1/2"	5'- 5"	2'- 8 3/8"	1'- 10 1/4"	25'- 8"	-----	27'- 2"	104	30	97.415	4.900	543.924	27'- 6"	6	27'- 2"	1	7	2.468	186.486	2.501	163.217	J		
12	8	7	9"	8'- 3"	1'- 11"	5'- 5"	2'- 7 5/8"	1'- 9 3/4"	25'- 8"	-----	27'- 1"	104	42	101.645	4.964	603.378	27'- 6"	6	27'- 2"	1	9	2.681	193.389	2.702	163.217	N		
12	10	7	9"	8'- 5"	1'- 11"	5'- 5"	2'- 7 5/8"	1'- 9 3/4"	25'- 11"	-----	27'- 4"	104	54	105.875	5.241	674.441	27'- 6"	6	27'- 2"	1	11	2.835	200.291	2.843	163.217	R		
12	12	7	9"	8'- 7"	1'- 10 3/4"	5'- 5"	2'- 7 1/4"	1'- 9 1/2"	26'- 3"	-----	27'- 9"	104	66	110.138	5.617	720.581	27'- 6"	6	27'- 2"	1	13	2.860	207.194	2.855	163.217	V		

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

SPECIFICATION REFERENCE	<h2>DOUBLE BOX CULVERTS</h2> <h3>30 TO 40 FT. FILLS</h3> <p>VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	 ROAD AND BRIDGE STANDARDS	
		REVISION DATE 07/11	SHEET 2 OF 2 1003.16