

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

BCQ-50

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS											
(FT.)	(FT.)	SIZE	SPACING C-C	BTI											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)	WINGWALL
				a	b	c	d	e	f	g	LENGTH	NO. BL1 #4 BARS	NO. BL2 #3 BARS	NO. HW2 LENGTH				NO. HW3 LENGTH										
3	3	4	12"	2'- 6"	0'- 5"	1'- 10"	0'- 6 ⁵ / ₈ "	0'- 4 ¹ / ₄ "	15'- 0"	1'- 1"	15'- 10"	60	20	57.160	1,378	142.459	16'- 10"	6	16'- 6"	3	12	2.194	137.876	2.163	99.132	A		
3	4	4	12"	2'- 6"	0'- 5"	1'- 10"	0'- 6 ⁵ / ₈ "	0'- 4 ¹ / ₄ "	15'- 0"	1'- 1"	15'- 10"	60	30	60.690	1,501	152.899	16'- 10"	6	16'- 6"	3	15	2.305	148.230	2.256	99.132	C		
4	3	4	12"	3'- 1"	0'- 7 ¹ / ₂ "	2'- 3"	0'- 10 ¹ / ₈ "	0'- 6 ³ / ₄ "	19'- 0"	1'- 3"	20'- 4"	76	20	70.520	1,896	172.650	20'- 10"	6	20'- 6"	3	12	2.525	161.908	2.507	123.164	B		
4	4	4	12"	3'- 1"	0'- 7 ¹ / ₄ "	2'- 3"	0'- 9 ³ / ₄ "	0'- 6 ¹ / ₂ "	19'- 0"	1'- 3"	20'- 3"	76	30	74.050	1,989	182.743	20'- 10"	6	20'- 6"	3	15	2.626	172.262	2.590	123.164	D		
4	5	4	12"	3'- 2"	0'- 7"	2'- 3"	0'- 9 ³ / ₈ "	0'- 6 ¹ / ₄ "	19'- 0"	1'- 4"	20'- 3"	76	40	77.580	2,082	197.711	20'- 10"	6	20'- 6"	3	18	2.747	182.616	2.693	123.164	F		
4	6	4	12"	3'- 1"	0'- 7 ¹ / ₄ "	2'- 3"	0'- 9 ³ / ₄ "	0'- 6 ¹ / ₂ "	19'- 0"	1'- 3"	20'- 3"	76	50	81.110	2,232	229.690	20'- 10"	6	20'- 6"	3	21	2.849	192.970	2.775	123.164	H		
5	3	4	10"	3'- 8"	0'- 9 ³ / ₄ "	2'- 8"	1'- 1 ¹ / ₄ "	0'- 9"	23'- 0"	1'- 5"	24'- 10"	92	20	83.880	2,500	223.900	24'- 10"	6	24'- 6"	3	12	2.774	185.940	2.770	147.196	B		
5	4	4	9"	3'- 9"	0'- 9 ¹ / ₂ "	2'- 8"	1'- 1"	0'- 8 ³ / ₄ "	23'- 0"	1'- 6"	24'- 9"	92	30	87.410	2,586	248.666	24'- 10"	6	24'- 6"	3	15	2.886	196.294	2.863	147.196	D		
5	5	4	9"	3'- 9"	0'- 9 ¹ / ₂ "	2'- 8"	1'- 1"	0'- 8 ³ / ₄ "	23'- 0"	1'- 6"	24'- 9"	92	40	90.940	2,708	264.739	24'- 10"	6	24'- 6"	3	18	2.997	206.648	2.955	147.196	F		
5	6	4	10"	3'- 9"	0'- 9 ¹ / ₂ "	2'- 8"	1'- 1"	0'- 8 ³ / ₄ "	23'- 0"	1'- 6"	24'- 9"	92	50	94.470	2,831	275.931	24'- 10"	6	24'- 6"	3	21	3.108	217.002	3.048	147.196	H		
5	7	4	10"	3'- 9"	0'- 9 ¹ / ₂ "	2'- 8"	1'- 1"	0'- 8 ³ / ₄ "	23'- 0"	1'- 6"	24'- 10"	92	60	98.000	2,981	299.076	24'- 10"	6	24'- 6"	3	24	3.220	227.356	3.141	147.196	J		
6	4	4	9"	4'- 4"	1'- 1/2"	3'- 0"	1'- 5 ¹ / ₈ "	0'- 11 ³ / ₄ "	27'- 0"	1'- 8"	29'- 4"	108	30	100.770	3,420	314.735	28'- 10"	6	28'- 6"	3	15	3.082	220.326	3.072	171.228	E		
6	5	4	9"	4'- 4"	1'- 1/2"	3'- 0"	1'- 5 ¹ / ₈ "	0'- 11 ³ / ₄ "	27'- 0"	1'- 8"	29'- 4"	108	40	104.300	3,542	331.548	28'- 10"	6	28'- 6"	3	18	3.193	230.680	3.165	171.228	G		
6	6	4	9"	4'- 4"	1'- 1/2"	3'- 0"	1'- 5 ¹ / ₈ "	0'- 11 ³ / ₄ "	27'- 0"	1'- 8"	29'- 4"	108	50	107.830	3,665	348.168	28'- 10"	6	28'- 6"	3	21	3.305	241.034	3.258	171.228	I		
6	7	4	9"	4'- 4"	1'- 0"	3'- 0"	1'- 4 ¹ / ₂ "	0'- 11 ¹ / ₄ "	27'- 0"	1'- 9"	29'- 3"	108	60	111.360	3,701	385.056	28'- 10"	6	28'- 6"	3	24	3.400	251.388	3.334	171.228	K		
6	8	4	9"	4'- 6"	1'- 0"	3'- 0"	1'- 4 ¹ / ₂ "	0'- 11 ¹ / ₄ "	27'- 3"	1'- 9"	29'- 6"	108	70	114.890	3,921	414.988	28'- 10"	6	28'- 6"	3	27	3.544	261.742	3.460	171.228	M		
7	4	5	8"	4'- 11"	1'- 3"	3'- 5"	1'- 8 ⁵ / ₈ "	1'- 2 ¹ / ₈ "	31'- 0"	1'- 10"	33'- 10"	124	30	114.130	4,300	458.908	32'- 10"	6	32'- 6"	3	15	3.217	244.358	3.221	195.260	E		
7	6	5	8"	4'- 11"	1'- 2 ¹ / ₂ "	3'- 5"	1'- 7 ¹ / ₈ "	1'- 1 ⁵ / ₈ "	31'- 0"	1'- 11"	33'- 9"	124	50	121.190	4,448	493.091	32'- 10"	6	32'- 6"	3	21	3.459	265.066	3.426	195.260	I		
7	8	5	9"	5'- 1"	1'- 2 ¹ / ₂ "	3'- 5"	1'- 7 ¹ / ₈ "	1'- 1 ⁵ / ₈ "	31'- 3"	1'- 11"	34'- 0"	124	70	128.250	4,795	525.762	32'- 10"	6	32'- 6"	3	27	3.682	285.774	3.611	195.260	M		
7	10	5	9"	5'- 3"	1'- 2"	3'- 5"	1'- 7 ¹ / ₈ "	1'- 1 ¹ / ₈ "	31'- 7"	2'- 0"	34'- 3"	124	90	135.310	5,118	597.629	32'- 10"	6	32'- 6"	3	33	3.746	306.482	3.637	195.260	Q		
8	4	6	9"	5'- 7"	1'- 5"	3'- 10"	1'- 11 ¹ / ₄ "	1'- 4"	35'- 0"	2'- 2"	38'- 3"	140	30	127.490	5,198	560.606	36'- 10"	6	36'- 6"	3	15	3.275	268.390	3.292	219.292	E		
8	6	6	9"	5'- 7"	1'- 5"	3'- 10"	1'- 11 ¹ / ₄ "	1'- 4"	35'- 0"	2'- 2"	38'- 3"	140	50	134.550	5,442	597.229	36'- 10"	6	36'- 6"	3	21	3.498	289.098	3.477	219.292	I		
8	8	6	9"	5'- 8"	1'- 5"	3'- 10"	1'- 11 ¹ / ₄ "	1'- 4"	35'- 1"	2'- 2"	38'- 5"	140	70	141.610	5,754	674.797	36'- 10"	6	36'- 6"	3	27	3.743	309.806	3.685	219.292	M		
8	10	6	9"	5'- 11"	1'- 4 ¹ / ₂ "	3'- 10"	1'- 10 ⁵ / ₈ "	1'- 3 ¹ / ₂ "	35'- 6"	2'- 3"	38'- 8"	140	90	148.670	6,106	736.173	36'- 10"	6	36'- 6"	3	33	3.822	330.514	3.726	219.292	Q		
9	4	6	9"	6'- 2"	1'- 7 ¹ / ₂ "	4'- 3"	2'- 2 ¹ / ₈ "	1'- 6 ¹ / ₂ "	39'- 0"	2'- 4"	42'- 9"	156	30	140.850	6,315	667.572	40'- 10"	6	40'- 6"	3	15	3.289	292.422	3.319	243.324	F		
9	6	6	9"	6'- 2"	1'- 7 ¹ / ₂ "	4'- 3"	2'- 2 ¹ / ₈ "	1'- 6 ¹ / ₂ "	39'- 0"	2'- 4"	42'- 9"	156	50	147.910	6,559	708.128	40'- 10"	6	40'- 6"	3	21	3.512	313.130	3.505	243.324	J		
9	8	6	9"	6'- 3"	1'- 7"	4'- 3"	2'- 2 ¹ / ₈ "	1'- 6"	39'- 0"	2'- 5"	42'- 9"	156	70	154.970	6,716	772.935	40'- 10"	6	40'- 6"	3	27	3.760	333.838	3.716	243.324	N		
9	10	6	9"	6'- 6"	1'- 7"	4'- 3"	2'- 2 ¹ / ₈ "	1'- 6"	39'- 6"	2'- 5"	43'- 3"	156	90	162.030	7,219	854.017	40'- 10"	6	40'- 6"	3	33	3.835	354.546	3.752	243.324	R		
9	12	6	9"	6'- 8"	1'- 7"	4'- 3"	2'- 2 ¹ / ₈ "	1'- 6"	40'- 0"	2'- 5"	43'- 8"	156	110	169.090	7,747	939.496	40'- 10"	6	40'- 6"	3	39	3.941	375.254	3.820	243.324	V		
10	4	7	9"	6'- 9"	1'- 10"	4'- 8"	2'- 6 ¹ / ₄ "	1'- 8 ³ / ₄ "	43'- 0"	2'- 6"	47'- 2"	172	30	154.210	7,549	867.051	44'- 10"	6	44'- 6"	3	15	3.280	316.454	3.324	267.356	F		
10	6	6	9"	6'- 9"	1'- 10"	4'- 8"	2'- 6 ³ / ₈ "	1'- 9"	43'- 0"	2'- 6"	47'- 3"	172	50	161.270	7,802	778.346	44'- 10"	6	44'- 6"	3	21	3.532	337.162	3.538	267.356	J		
10	8	6	9"	6'- 9"	1'- 10"	4'- 8"	2'- 6 ³ / ₈ "	1'- 9"	43'- 0"	2'- 6"	47'- 3"	172	70	168.330	8,043	853.629	44'- 10"	6	44'- 6"	3	27	3.754	357.870	3.723	267.356	N		
10	10	6	9"	7'- 0"	1'- 10"	4'- 8"	2'- 6 ³ / ₈ "	1'- 9"	43'- 6"	2'- 6"	47'- 9"	172	90	175.390	8,551	921.651	44'- 10"	6	44'- 6"	3	33	3.826	378.578	3.756	267.356	R		
10	12	6	9"	7'- 3"	1'- 10"	4'- 8"	2'- 6 ³ / ₈ "	1'- 9"	44'- 0"	2'- 6"	48'- 3"	172	110	182.450	9,132	981.141	44'- 10"	6	44'- 6"	3	39	3.903	399.286	3.796	267.356	V		
12	6	7	9"	7'- 11"	2'- 3"	5'- 5"	3'- 1 ³ / ₈ "	2'- 1 ³ / ₄ "	51'- 0"	2'- 11"	56'- 3"	204	50	187.990	10,642	1154.370	52'- 10"	6	52'- 6"	3	21	3.286	385.226	3.319	315.420	K		
12	8	7	9"	8'- 0"	2'- 2 ¹ / ₂ "	5'- 5"	3'- 5 ¹ / ₈ "	2'- 1 ¹ / ₄ "	51'- 0"	3'- 0"	56'- 2"	204	70	195.050	10,724	1228.555	52'- 10"	6	52'- 6"	3	27	3.509	405.934	3.504	315.420	O		
12	10	7	9"	8'- 1"	2'- 2 ¹ / ₂ "	5'- 5"	3'- 5 ¹ / ₈ "	2'- 1 ¹ / ₄ "	51'- 3"	3'- 0"	56'- 5"	204	90	202.110	11,128	1309.696	52'- 10"	6	52'- 6"	3	33	3.572	426.642	3.529	315.420	S		
12	12	7	8"	8'- 4"	2'- 3"	5'- 5"	3'- 1 ³ / ₈ "	2'- 1 ³ / ₄ "	51'- 9"	2'- 11"	57'- 1"	204	110	209.170	11,884	1519.696	52'- 10"	6	52'- 6"	3	39	3.582	447.350	3.500	315.420	W		

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

SPECIFICATION REFERENCE	<h2>QUADRUPLE BOX CULVERTS</h2> <h3>40 TO 50 FT. FILLS</h3> <p>VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	 ROAD AND BRIDGE STANDARDS	REVISION DATE	SHEET 2 OF 2
			07/11	1005.18