

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS								WINGWALL	
(FT.)	(FT.)	SIZE	SPACING C-C	a	b	c	d	e	f	g	LENGTH	NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS./LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS./LF)	HEADWALL LENGTH	SIZE	HW I LENGTH	NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)		OUTLET REINFORCING STEEL (LBS)
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	7'- 7 7/8"	-----	7'-11"	32	12	30.956	0.695	79.439	9'- 6"	6	9'- 2"	1	4	1.433	67.988	1.425	55.073	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"	7'- 7 7/8"	-----	7'-11"	32	18	33.074	0.768	85.703	9'- 6"	6	9'- 2"	1	5	1.531	71.439	1.517	55.073	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"	9'- 8"	-----	9'-11"	40	12	37.636	0.792	92.688	11'- 6"	6	11'- 2"	1	4	1.635	80.004	1.634	67.089	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"	9'- 8"	-----	9'-11"	40	18	39.754	0.866	98.952	11'- 6"	6	11'- 2"	1	5	1.734	83.455	1.726	67.089	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"	9'- 8"	-----	9'-11"	40	24	41.872	0.940	105.216	11'- 6"	6	11'- 2"	1	6	1.833	86.907	1.819	67.089	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"	9'- 8"	-----	9'-11"	40	30	43.990	1.013	111.480	11'- 6"	6	11'- 2"	1	7	1.932	90.358	1.912	67.089	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"	11'- 8"	-----	11'-11"	48	12	44.316	0.890	106.159	13'- 6"	6	13'- 2"	1	4	1.837	92.020	1.843	79.105	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"	11'- 8"	-----	11'-11"	48	18	46.434	0.964	112.423	13'- 6"	6	13'- 2"	1	5	1.936	95.471	1.935	79.105	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"	11'- 8"	-----	11'-11"	48	24	48.552	1.037	118.687	13'- 6"	6	13'- 2"	1	6	2.035	98.923	2.028	79.105	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"	11'- 8"	-----	11'-11"	48	30	50.670	1.111	124.951	13'- 6"	6	13'- 2"	1	7	2.134	102.374	2.121	79.105	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"	11'- 8"	-----	11'-11"	48	36	52.788	1.185	131.215	13'- 6"	6	13'- 2"	1	8	2.233	105.825	2.214	79.105	I
6	4	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'-11"	56	18	53.114	1.060	139.477	15'- 6"	6	15'- 2"	1	5	2.138	107.487	2.144	91.121	C
6	5	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'-11"	56	24	55.232	1.134	145.741	15'- 6"	6	15'- 2"	1	6	2.237	110.939	2.237	91.121	E
6	6	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'-11"	56	30	57.350	1.208	152.005	15'- 6"	6	15'- 2"	1	7	2.336	114.390	2.330	91.121	G
6	7	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'-11"	56	36	59.468	1.281	158.269	15'- 6"	6	15'- 2"	1	8	2.435	117.841	2.423	91.121	I
6	8	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'-11"	56	42	61.586	1.355	164.533	15'- 6"	6	15'- 2"	1	9	2.534	121.293	2.515	91.121	K
7	4	4	11"	5'-11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'-11"	64	18	59.794	1.158	155.533	17'- 6"	6	17'- 2"	1	5	2.341	119.503	2.353	103.137	C
7	6	4	11"	5'-11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'-11"	64	30	64.030	1.305	169.650	17'- 6"	6	17'- 2"	1	7	2.539	126.406	2.539	103.137	G
7	8	4	10"	5'-11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'-11"	64	42	68.266	1.451	198.156	17'- 6"	6	17'- 2"	1	9	2.736	133.309	2.724	103.137	K
7	10	4	9"	5'-11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'-11"	64	54	72.502	1.597	224.415	17'- 6"	6	17'- 2"	1	11	2.934	140.211	2.910	103.137	O
8	4	4	8"	6'- 8 7/8"	0'- 4 1/2"	3'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	17'- 7 7/8"	-----	17'-11"	72	18	66.474	1.252	219.693	19'- 6"	6	19'- 2"	1	5	2.543	131.519	2.562	115.153	C
8	6	5	11"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	17'- 7 7/8"	-----	17'-11"	72	30	70.710	1.398	244.924	19'- 6"	6	19'- 2"	1	7	2.741	138.422	2.748	115.153	G
8	8	5	11"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	17'- 7 7/8"	-----	17'-11"	72	42	74.946	1.545	259.865	19'- 6"	6	19'- 2"	1	9	2.939	145.325	2.933	115.153	K
8	10	5	10"	6'- 8 7/8"	0'- 4 5/8"	3'- 6 5/8"	0'- 6"	0'- 3 3/4"	17'- 7 7/8"	-----	17'-11"	72	54	79.182	1.691	291.375	19'- 6"	6	19'- 2"	1	11	3.137	152.227	3.119	115.153	O
9	4	5	9"	7'- 6 1/2"	0'- 4 5/8"	3'-11 1/2"	0'- 6"	0'- 3 3/4"	19'- 8"	-----	19'-11"	80	18	73.154	1.347	270.604	21'- 6"	6	21'- 2"	1	5	2.745	143.535	2.771	127.169	C
9	6	5	10"	7'- 6 3/8"	0'- 4 3/8"	3'-11 1/4"	0'- 6 1/4"	0'- 4"	19'- 8"	-----	19'-11"	80	30	77.390	1.525	283.329	21'- 6"	6	21'- 2"	1	7	2.933	150.438	2.946	127.169	G
9	8	5	9"	7'- 6 1/4"	0'- 5 1/8"	3'-11"	0'- 6 5/8"	0'- 4 1/4"	19'- 8"	-----	19'-11"	80	42	81.626	1.701	321.531	21'- 6"	6	21'- 2"	1	9	3.120	157.341	3.121	127.169	K
9	10	6	12"	7'- 6"	0'- 5 3/4"	3'-10 1/2"	0'- 7 1/2"	0'- 4 3/4"	19'- 8"	-----	20'- 0"	80	54	85.862	1.910	330.984	21'- 6"	6	21'- 2"	1	11	3.297	164.243	3.285	127.169	O
9	12	4	8"	7'- 6"	0'- 5 1/2"	3'-10 1/2"	0'- 7 1/4"	0'- 4 3/4"	19'- 8"	-----	20'- 0"	80	66	90.098	2.054	383.924	21'- 6"	6	21'- 2"	1	13	3.495	171.146	3.471	127.169	S
10	4	5	9"	8'- 3 3/8"	0'- 5 1/8"	4'- 3 3/4"	0'- 6 5/8"	0'- 4 1/4"	21'- 8"	-----	21'-11"	88	18	79.834	1.511	306.403	23'- 6"	6	23'- 2"	1	5	2.924	155.551	2.956	139.185	C
10	6	5	9"	8'- 3 3/4"	0'- 5 3/8"	4'- 3 1/2"	0'- 7"	0'- 4 1/2"	21'- 8"	-----	22'- 0"	88	30	84.070	1.691	331.079	23'- 6"	6	23'- 2"	1	7	3.109	162.454	3.129	139.185	G
10	8	6	12"	8'- 3 5/8"	0'- 5 3/4"	4'- 3 1/4"	0'- 7 1/2"	0'- 4 3/4"	21'- 8"	-----	22'- 0"	88	42	88.306	1.871	356.871	23'- 6"	6	23'- 2"	1	9	3.295	169.357	3.303	139.185	K
10	10	5	8"	8'- 3 1/2"	0'- 5 1/8"	4'- 3"	0'- 7 3/4"	0'- 5"	21'- 8"	-----	22'- 0"	88	54	92.542	2.051	392.934	23'- 6"	6	23'- 2"	1	11	3.499	176.259	3.495	139.185	P
10	12	6	10"	8'- 3 1/4"	0'- 6 1/2"	4'- 2 1/2"	0'- 8 1/2"	0'- 5 1/2"	21'- 8"	-----	22'- 0"	88	66	96.778	2.266	397.586	23'- 6"	6	23'- 2"	1	13	3.673	183.162	3.656	139.185	T
12	6	5	8"	9'-10 1/2"	0'- 6 3/8"	5'- 1/8"	0'- 8 3/8"	0'- 5 1/2"	25'- 8 1/8"	-----	26'- 0"	104	30	97.430	2.061	415.520	27'- 6"	6	27'- 2"	1	7	3.463	186.486	3.496	163.217	H
12	8	6	11"	9'-10 1/2"	0'- 6 1/2"	5'- 1/8"	0'- 8 1/2"	0'- 5 1/2"	25'- 8 1/8"	-----	26'- 0"	104	42	101.666	2.208	436.782	27'- 6"	6	27'- 2"	1	9	3.660	193.389	3.681	163.217	L
12	10	6	9"	9'-10 1/4"	0'- 7"	4'-11 5/8"	0'- 9 1/4"	0'- 6"	25'- 8 1/8"	-----	26'- 1"	104	54	105.902	2.429	523.549	27'- 6"	6	27'- 2"	1	11	3.828	200.291	3.837	163.217	P
12	12	7	12"	9'-10 1/4"	0'- 7 1/8"	4'-11 3/4"	0'- 9 1/4"	0'- 5 7/8"	25'- 8"	-----	26'- 1"	104	66	110.138	2.575	553.713	27'- 6"	6	27'- 2"	1	13	4.026	207.194	4.022	163.217	T

STRUCTURE AND BRIDGE DIVISION

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