

SPAN		HGHT		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	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 3/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 3/8"	0'- 3 3/4"	14'- 11 1/8"	1'- 5 3/8"	15'- 9"	73	20	68.015	1.283	150.583	16'- 10"	6	16'- 6"	3	12	2.222	137.876	2.191	99.132	A
3	4	4	12"	2'- 8 3/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 3/8"	0'- 3 3/4"	14'- 11 1/8"	1'- 5 3/8"	15'- 9"	73	30	71.545	1.404	175.497	16'- 10"	6	16'- 6"	3	15	2.333	148.230	2.284	99.132	C
4	3	4	12"	3'- 5 3/8"	0'- 5 3/4"	1'- 10 1/4"	0'- 7 5/8"	0'- 5"	19'- 0"	1'- 11 3/4"	20'- 0"	93	20	84.715	1.626	193.113	20'- 10"	6	20'- 6"	3	12	2.595	161.908	2.577	123.164	B
4	4	4	12"	3'- 5 3/8"	0'- 5 3/4"	1'- 10 1/4"	0'- 7 5/8"	0'- 5"	19'- 0"	1'- 11 3/4"	20'- 0"	93	30	88.245	1.749	209.002	20'- 10"	6	20'- 6"	3	15	2.706	172.262	2.670	123.164	D
4	5	4	12"	3'- 5 3/4"	0'- 6"	1'- 10"	0'- 8"	0'- 5 1/4"	19'- 0"	1'- 11 1/2"	20'- 1"	93	40	91.775	1.901	222.899	20'- 10"	6	20'- 6"	3	18	2.808	182.616	2.753	123.164	F
4	6	4	12"	3'- 5 3/4"	0'- 6"	1'- 10"	0'- 8"	0'- 5 1/4"	19'- 0"	1'- 11 1/2"	20'- 1"	93	50	95.305	2.023	234.675	20'- 10"	6	20'- 6"	3	21	2.919	192.970	2.845	123.164	H
5	3	4	11"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	113	20	101.415	1.815	237.595	24'- 10"	6	24'- 6"	3	12	2.979	185.940	2.974	147.196	A
5	4	4	11"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	113	30	104.945	1.937	257.242	24'- 10"	6	24'- 6"	3	15	3.090	196.294	3.067	147.196	C
5	5	4	11"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	113	40	108.475	2.060	273.033	24'- 10"	6	24'- 6"	3	18	3.201	206.648	3.160	147.196	E
5	6	4	11"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	113	50	112.005	2.181	305.275	24'- 10"	6	24'- 6"	3	21	3.313	217.002	3.253	147.196	G
5	7	4	10"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	113	60	115.535	2.303	317.679	24'- 10"	6	24'- 6"	3	24	3.424	227.356	3.345	147.196	I
6	4	4	9"	5'- 1 3/8"	0'- 5 1/4"	2'- 8 1/4"	0'- 6 3/8"	0'- 4 1/2"	27'- 0"	3'- 2 3/4"	27'- 11"	133	30	121.645	2.112	329.861	28'- 10"	6	28'- 6"	3	15	3.499	220.326	3.489	171.228	C
6	5	4	9"	5'- 1 3/8"	0'- 5 1/4"	2'- 8 1/4"	0'- 6 3/8"	0'- 4 1/2"	27'- 0"	3'- 2 3/4"	27'- 11"	133	40	125.175	2.234	347.352	28'- 10"	6	28'- 6"	3	18	3.610	230.680	3.582	171.228	E
6	6	4	9"	5'- 1 3/8"	0'- 5 1/4"	2'- 8 1/4"	0'- 6 3/8"	0'- 4 1/2"	27'- 0"	3'- 2 3/4"	27'- 11"	133	50	128.705	2.356	365.445	28'- 10"	6	28'- 6"	3	21	3.721	241.034	3.674	171.228	G
6	7	4	9"	5'- 1 3/8"	0'- 5 1/4"	2'- 8 1/4"	0'- 6 3/8"	0'- 4 1/2"	27'- 0"	3'- 2 3/4"	27'- 11"	133	60	132.235	2.478	381.067	28'- 10"	6	28'- 6"	3	24	3.833	251.388	3.767	171.228	I
6	8	4	8"	5'- 1 3/8"	0'- 5 1/4"	2'- 8 1/4"	0'- 6 3/8"	0'- 4 1/2"	27'- 0"	3'- 2 3/4"	27'- 11"	133	70	135.765	2.599	420.329	28'- 10"	6	28'- 6"	3	27	3.944	261.742	3.860	171.228	K
7	4	4	8"	5'- 11"	0'- 5 1/4"	3'- 1 1/8"	0'- 6 3/8"	0'- 4 1/2"	31'- 1 1/8"	3'- 9 3/8"	31'- 11"	153	30	138.345	2.324	385.845	32'- 10"	6	32'- 6"	3	15	3.894	244.358	3.898	195.260	C
7	6	4	8"	5'- 11"	0'- 5 1/4"	3'- 1 1/8"	0'- 6 3/8"	0'- 4 1/2"	31'- 1 1/8"	3'- 9 3/8"	31'- 11"	153	50	145.405	2.569	413.787	32'- 10"	6	32'- 6"	3	21	4.117	265.066	4.083	195.260	G
7	8	5	11"	5'- 11"	0'- 5 3/8"	3'- 1 1/8"	0'- 7"	0'- 4 1/2"	31'- 1 1/8"	3'- 9 3/8"	31'- 11"	153	70	152.465	2.812	464.985	32'- 10"	6	32'- 6"	3	27	4.339	285.774	4.268	195.260	K
7	10	5	11"	5'- 10 3/8"	0'- 5 3/8"	3'- 7/8"	0'- 7 3/8"	0'- 4 3/4"	31'- 1 1/8"	3'- 9 3/8"	32'- 0"	153	90	159.525	3.105	488.545	32'- 10"	6	32'- 6"	3	33	4.543	306.482	4.435	195.260	O
8	4	5	12"	6'- 8 3/8"	0'- 5 5/8"	3'- 5 3/8"	0'- 7 3/8"	0'- 4 3/4"	34'- 11 1/8"	4'- 4 3/8"	35'- 11"	173	30	155.045	2.591	426.558	36'- 10"	6	36'- 6"	3	15	4.267	268.390	4.284	219.292	C
8	6	5	11"	6'- 8 3/8"	0'- 5 5/8"	3'- 5 3/8"	0'- 7 3/8"	0'- 4 3/4"	34'- 11 1/8"	4'- 4 3/8"	35'- 11"	173	50	162.105	2.834	486.589	36'- 10"	6	36'- 6"	3	21	4.490	289.098	4.469	219.292	G
8	8	5	11"	6'- 8 3/4"	0'- 5 5/8"	3'- 5 3/8"	0'- 7 3/4"	0'- 5"	34'- 11 1/8"	4'- 4 3/8"	36'- 0"	173	70	169.165	3.133	516.915	36'- 10"	6	36'- 6"	3	27	4.708	309.806	4.651	219.292	L
8	10	5	10"	6'- 8 3/4"	0'- 5 5/8"	3'- 5 3/8"	0'- 7 3/4"	0'- 5"	34'- 11 1/8"	4'- 4 3/8"	36'- 0"	173	90	176.225	3.376	571.311	36'- 10"	6	36'- 6"	3	33	4.931	330.514	4.836	219.292	P
9	4	5	11"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	39'- 0"	4'- 11 1/2"	40'- 1"	193	30	171.745	2.930	496.381	40'- 10"	6	40'- 6"	3	15	4.627	292.422	4.657	243.324	D
9	6	5	10"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	39'- 0"	4'- 11 1/2"	40'- 1"	193	50	178.805	3.171	566.532	40'- 10"	6	40'- 6"	3	21	4.850	313.130	4.843	243.324	H
9	8	5	10"	7'- 5 3/4"	0'- 6 1/8"	3'- 10"	0'- 8 1/8"	0'- 5 1/4"	39'- 0"	4'- 11 1/2"	40'- 1"	193	70	185.865	3.416	599.220	40'- 10"	6	40'- 6"	3	27	5.072	333.838	5.028	243.324	L
9	10	5	9"	7'- 6"	0'- 5 5/8"	3'- 10 1/2"	0'- 7 3/8"	0'- 4 3/4"	39'- 0"	5'- 0"	40'- 0"	193	90	192.925	3.535	677.535	40'- 10"	6	40'- 6"	3	33	5.327	354.546	5.246	243.324	O
9	12	6	12"	7'- 6"	0'- 5 3/4"	3'- 10 1/2"	0'- 7 1/2"	0'- 4 3/4"	39'- 0"	5'- 0"	39'- 11"	193	110	199.985	3.777	739.144	40'- 10"	6	40'- 6"	3	39	5.550	375.254	5.431	243.324	S
10	4	5	10"	8'- 3 3/4"	0'- 6 3/8"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	43'- 0"	5'- 6 1/2"	44'- 1"	213	30	188.445	3.225	574.236	44'- 10"	6	44'- 6"	3	15	4.985	316.454	5.028	267.356	D
10	6	5	9"	8'- 3 3/4"	0'- 6 3/8"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	43'- 0"	5'- 6 1/2"	44'- 1"	213	50	195.505	3.467	635.690	44'- 10"	6	44'- 6"	3	21	5.207	337.162	5.213	267.356	H
10	8	6	12"	8'- 3 3/4"	0'- 6 1/2"	4'- 2 1/2"	0'- 8 1/2"	0'- 5 1/2"	43'- 0"	5'- 6 1/2"	44'- 1"	213	70	202.565	3.708	720.301	44'- 10"	6	44'- 6"	3	27	5.430	357.870	5.399	267.356	L
10	10	5	8"	8'- 3 3/4"	0'- 6 3/8"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	43'- 0"	5'- 6 1/2"	44'- 1"	213	90	209.625	3.950	780.907	44'- 10"	6	44'- 6"	3	33	5.653	378.578	5.584	267.356	P
10	12	5	8"	8'- 3 3/4"	0'- 6 3/8"	4'- 2 1/2"	0'- 8 3/8"	0'- 5 1/2"	43'- 0"	5'- 6 1/2"	44'- 1"	213	110	216.685	4.194	818.659	44'- 10"	6	44'- 6"	3	39	5.875	399.286	5.770	267.356	T
12	6	5	8"	9'- 10 1/4"	0'- 6 3/8"	4'- 11 3/8"	0'- 9 3/8"	0'- 6"	51'- 1 1/8"	6'- 8 3/8"	52'- 3"	253	50	228.905	4.087	898.604	52'- 10"	6	52'- 6"	3	21	5.904	385.226	5.937	315.420	H
12	8	5	8"	9'- 10 1/4"	0'- 6 3/8"	4'- 11 3/8"	0'- 9 3/8"	0'- 6"	51'- 1 1/8"	6'- 8 3/8"	52'- 3"	253	70	235.965	4.336	875.009	52'- 10"	6	52'- 6"	3	27	6.127	405.934	6.122	315.420	L
12	10	6	11"	9'- 10 1/4"	0'- 7"	4'- 11 3/8"	0'- 9 3/4"	0'- 6"	51'- 1 1/8"	6'- 8 3/8"	52'- 3"	253	90	243.025	4.579	927.951	52'- 10"	6	52'- 6"	3	33	6.349	426.642	6.308	315.420	P
12	12	6	10"	9'- 10 1/4"	0'- 7"	4'- 11 3/8"	0'- 9 3/4"	0'- 6"	51'- 1 1/8"	6'- 8 3/8"	52'- 3"	253	110	250.085	4.818	1,028.977	52'- 10"	6	52'- 6"	3	39	6.572	447.350	6.493	315.420	T

STRUCTURE AND BRIDGE DIVISION

QUADRUPLE BOX CULVERTS

0 TO 2 FT. FILLS

VIRGINIA DEPARTMENT OF TRANSPORTATION

1005.05