

| 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 | HW1 SIZE | HW1 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 7/8" | 0'- 3 3/4" | 11'- 3 7/8" | 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 3/8" | 0'- 4 1/2" | 1'- 6 5/8" | 0'- 5 7/8" | 0'- 3 3/4" | 11'- 3 7/8" | 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 3/8" | 0'- 5 3/4" | 1'- 10 1/4" | 0'- 7 7/8" | 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 3/8" | 0'- 5 3/4" | 1'- 10 1/4" | 0'- 7 7/8" | 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 3/8" | 0'- 5 3/4" | 1'- 10 1/4" | 0'- 7 7/8" | 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 3/8" | 0'- 5 3/4" | 1'- 10 1/4" | 0'- 7 7/8" | 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 | 233.031 | 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'- 7/4" | 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'- 7/4" | 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'- 7/4" | 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 | 122.274 | 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 3/8" | 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 3/8" | 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 3/8" | 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 |

SPECIFICATION REFERENCE

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

VDOT
 ROAD AND BRIDGE STANDARDS

| | |
|---------------|--------------|
| REVISION DATE | SHEET 2 OF 2 |
| 1004.19 | |