

| BCT-40 | | DIMENSIONS | | | | | | | | | | REINFORCING STEEL | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---------------|-------------|----------------|---------------------------|---------------------------|----|---------|----|---------|----|---------|-------------------|----------------|----------|------|----------------|---------|------|----------------|-------------|---------|------|----------------|-------------|-------------|---------|------|----------------|----------|------|----------------|----------|---|---------|----------|
| SPAN (FT.) | HGHT (FT.) | T1 | T2 | T3 | T4 | A | B | C | D | E | F | BH1 | | | BH2 | | | BH3 | | | BH4 | | | BV1 | | | BV2 | | | | | | | | |
| | | TOP SLAB | BOTTOM SLAB | EXTERIOR WALL (IN.) | INTERIOR WALL (IN.) | | | | | | | SIZE | SPACING C-C | LENGTH | SIZE | SPACING C-C | LENGTH | SIZE | SPACING C-C | a | LENGTH | SIZE | SPACING C-C | a | b | LENGTH | SIZE | SPACING C-C | LENGTH | SIZE | SPACING C-C | LENGTH | | | |
| 3 | 3 | 8" | 8" | 8" | 8" | 9 | 9'- 0" | 9 | 9'- 0" | 1 | 1'- 0" | 4 | 12" | 11'- 2" | 4 | 12" | 11'- 4" | 4 | 12" | 2'- 1 1/4" | 3'- 11" | 4 | 12" | 2'- 1 1/4" | 2'- 8" | 4'- 6" | 4 | 12" | 4'- 0" | 4 | 12" | 4'- 0" | 4 | 12" | 4'- 0" |
| 3 | 4 | 8" | 8" | 8" | 8" | 9 | 9'- 0" | 9 | 9'- 0" | 2 | 2'- 0" | 4 | 12" | 11'- 2" | 4 | 12" | 11'- 4" | 3 | 12" | 2'- 1 1/4" | 4'- 0" | 4 | 12" | 2'- 1 1/4" | 3'- 2" | 5'- 0" | 4 | 12" | 5'- 0" | 4 | 12" | 5'- 0" | 4 | 12" | 5'- 0" |
| 4 | 3 | 9 3/4" | 9 3/4" | 8" | 8" | 12 | 12'- 0" | 12 | 12'- 0" | 1 | 1'- 0" | 4 | 12" | 13'- 9" | 4 | 12" | 14'- 4" | -- | -- | ---- | ---- | 4 | 12" | 2'- 3 5/8" | 2'- 9 3/4" | 4'- 10" | 4 | 12" | 4'- 3" | 4 | 12" | 4'- 3" | 4 | 12" | 4'- 3" |
| 4 | 4 | 9 3/4" | 9 3/4" | 8" | 8" | 12 | 12'- 0" | 12 | 12'- 0" | 2 | 2'- 0" | 4 | 12" | 13'- 9" | 4 | 12" | 14'- 4" | -- | -- | ---- | ---- | 4 | 12" | 2'- 3 5/8" | 3'- 3 3/4" | 5'- 4" | 4 | 12" | 5'- 3" | 4 | 12" | 5'- 3" | 4 | 12" | 5'- 3" |
| 4 | 5 | 9 3/4" | 9 3/4" | 8" | 8" | 12 | 12'- 0" | 12 | 12'- 0" | 3 | 3'- 0" | 4 | 12" | 13'- 9" | 4 | 12" | 14'- 4" | -- | -- | ---- | ---- | 4 | 12" | 2'- 3 5/8" | 3'- 9 3/4" | 5'- 10" | 4 | 12" | 6'- 3" | 4 | 12" | 6'- 3" | 4 | 12" | 6'- 3" |
| 4 | 6 | 9 3/4" | 9 3/4" | 8" | 8" | 12 | 12'- 0" | 12 | 12'- 0" | 4 | 4'- 0" | 4 | 12" | 13'- 9" | 4 | 12" | 14'- 4" | 4 | 12" | 2'- 3 5/8" | 4'- 4" | 4 | 12" | 2'- 3 5/8" | 4'- 3 3/4" | 6'- 4" | 4 | 12" | 7'- 3" | 4 | 12" | 7'- 3" | 4 | 12" | 7'- 3" |
| 5 | 3 | 12" | 12" | 8" | 8" | 15 | 15'- 0" | 15 | 15'- 0" | 1 | 1'- 0" | 4 | 11" | 16'- 4" | 4 | 11" | 17'- 4" | -- | -- | ---- | ---- | 4 | 11" | 2'- 6" | 3'- 0" | 5'- 3" | 4 | 12" | 4'- 8" | 4 | 12" | 4'- 8" | 4 | 12" | 4'- 8" |
| 5 | 4 | 12" | 12" | 8" | 8" | 15 | 15'- 0" | 15 | 15'- 0" | 2 | 2'- 0" | 4 | 11" | 16'- 4" | 4 | 11" | 17'- 4" | -- | -- | ---- | ---- | 4 | 11" | 2'- 6" | 3'- 6" | 5'- 9" | 4 | 12" | 5'- 8" | 4 | 12" | 5'- 8" | 4 | 12" | 5'- 8" |
| 5 | 5 | 11 3/4" | 11 3/4" | 8" | 8" | 15 | 15'- 0" | 15 | 15'- 0" | 3 | 3'- 0" | 4 | 10" | 16'- 4" | 4 | 10" | 17'- 4" | -- | -- | ---- | ---- | 4 | 10" | 2'- 6" | 3'- 11 3/4" | 6'- 3" | 4 | 12" | 6'- 8" | 4 | 12" | 6'- 8" | 4 | 12" | 6'- 8" |
| 5 | 6 | 11 3/4" | 11 3/4" | 8" | 8" | 15 | 15'- 0" | 15 | 15'- 0" | 4 | 4'- 0" | 4 | 10" | 16'- 4" | 4 | 10" | 17'- 4" | -- | -- | ---- | ---- | 4 | 10" | 2'- 6" | 4'- 5 3/4" | 6'- 9" | 4 | 12" | 7'- 8" | 4 | 12" | 7'- 8" | 4 | 12" | 7'- 8" |
| 5 | 7 | 11 3/4" | 11 3/4" | 8" | 8" | 15 | 15'- 0" | 15 | 15'- 0" | 5 | 5'- 0" | 4 | 10" | 16'- 4" | 4 | 10" | 17'- 4" | -- | -- | ---- | ---- | 5 | 10" | 2'- 6" | 4'- 11 3/4" | 7'- 2" | 4 | 8 1/2" | 8'- 8" | 4 | 12" | 8'- 8" | 4 | 12" | 8'- 8" |
| 6 | 4 | 13 3/4" | 13 3/4" | 8" | 8" | 18 | 18'- 0" | 18 | 18'- 0" | 2 | 2'- 0" | 4 | 9" | 18'- 11" | 4 | 9" | 20'- 4" | -- | -- | ---- | ---- | 4 | 9" | 2'- 8 3/8" | 3'- 7 3/4" | 6'- 1" | 4 | 12" | 6'- 0" | 4 | 12" | 6'- 0" | 4 | 12" | 6'- 0" |
| 6 | 5 | 13 3/4" | 13 3/4" | 8" | 8" | 18 | 18'- 0" | 18 | 18'- 0" | 3 | 3'- 0" | 4 | 10" | 18'- 11" | 5 | 10" | 20'- 4" | -- | -- | ---- | ---- | 4 | 10" | 2'- 8 3/8" | 4'- 1 3/4" | 6'- 7" | 4 | 12" | 7'- 0" | 4 | 12" | 7'- 0" | 4 | 12" | 7'- 0" |
| 6 | 6 | 13 3/4" | 13 3/4" | 8" | 8" | 18 | 18'- 0" | 18 | 18'- 0" | 4 | 4'- 0" | 4 | 10" | 18'- 11" | 5 | 10" | 20'- 4" | -- | -- | ---- | ---- | 4 | 10" | 2'- 8 3/8" | 4'- 7 3/4" | 7'- 1" | 4 | 12" | 8'- 0" | 4 | 12" | 8'- 0" | 4 | 12" | 8'- 0" |
| 6 | 7 | 13 3/4" | 13 3/4" | 8" | 8" | 18 | 18'- 0" | 18 | 18'- 0" | 5 | 5'- 0" | 4 | 10" | 18'- 11" | 5 | 10" | 20'- 4" | 3 | 10" | 2'- 8 3/8" | 5'- 2" | 4 | 10" | 2'- 8 3/8" | 5'- 1 3/4" | 7'- 7" | 4 | 9" | 9'- 0" | 4 | 12" | 9'- 0" | 4 | 12" | 9'- 0" |
| 6 | 8 | 13 1/2" | 13 1/2" | 8" | 8" | 18 | 18'- 0" | 18 | 18'- 0" | 6 | 6'- 0" | 4 | 9" | 18'- 11" | 4 | 9" | 20'- 4" | -- | -- | ---- | ---- | 5 | 9" | 2'- 8 3/8" | 5'- 7 1/2" | 8'- 0" | 5 | 9 1/2" | 9'- 11" | 4 | 12" | 9'- 11" | 4 | 12" | 9'- 11" |
| 7 | 4 | 15 3/4" | 15 3/4" | 8" | 8" | 21 | 21'- 0" | 21 | 21'- 0" | 2 | 2'- 0" | 5 | 9" | 21'- 6" | 5 | 9" | 23'- 4" | -- | -- | ---- | ---- | 4 | 9" | 2'- 10 3/4" | 3'- 9 3/4" | 6'- 5" | 4 | 12" | 6'- 3" | 4 | 12" | 6'- 3" | 4 | 12" | 6'- 3" |
| 7 | 6 | 15 3/4" | 15 3/4" | 8" | 8" | 21 | 21'- 0" | 21 | 21'- 0" | 4 | 4'- 0" | 5 | 9" | 21'- 6" | 5 | 9" | 23'- 4" | -- | -- | ---- | ---- | 4 | 9" | 2'- 10 3/4" | 4'- 9 3/4" | 7'- 5" | 4 | 12" | 8'- 3" | 4 | 12" | 8'- 3" | 4 | 12" | 8'- 3" |
| 7 | 8 | 15 3/4" | 15 3/4" | 8" | 8" | 21 | 21'- 0" | 21 | 21'- 0" | 6 | 6'- 0" | 5 | 9" | 21'- 6" | 5 | 9" | 23'- 4" | 4 | 9" | 2'- 10 3/4" | 5'- 6" | 4 | 9" | 2'- 10 3/4" | 5'- 9 3/4" | 8'- 5" | 4 | 6" | 10'- 3" | 4 | 12" | 10'- 3" | 4 | 12" | 10'- 3" |
| 7 | 10 | 15 3/4" | 15 3/4" | 8 1/2" | 8" | 21 | 21'- 0" | 21 | 21'- 0" | 8 | 8'- 0" | 5 | 9" | 21'- 6" | 5 | 9" | 23'- 5" | 3 | 9" | 2'- 11 1/4" | 5'- 8" | 5 | 9" | 2'- 11 1/4" | 6'- 9 3/4" | 9'- 5" | 5 | 6 1/2" | 12'- 3" | 4 | 12" | 12'- 3" | 4 | 12" | 12'- 3" |
| 8 | 4 | 17 3/4" | 17 3/4" | 8" | 8" | 24 | 24'- 0" | 24 | 24'- 0" | 2 | 2'- 0" | 5 | 8" | 24'- 2" | 5 | 8" | 26'- 4" | -- | -- | ---- | ---- | 4 | 8" | 3'- 1 1/4" | 3'- 11 3/4" | 6'- 10" | 4 | 12" | 6'- 7" | 4 | 10 1/2" | 6'- 7" | 4 | 10 1/2" | 6'- 7" |
| 8 | 6 | 17 3/4" | 17 3/4" | 8" | 8" | 24 | 24'- 0" | 24 | 24'- 0" | 4 | 4'- 0" | 5 | 8" | 24'- 2" | 5 | 8" | 26'- 4" | -- | -- | ---- | ---- | 4 | 8" | 3'- 1 1/4" | 4'- 11 3/4" | 7'- 10" | 4 | 12" | 8'- 7" | 4 | 10 1/2" | 8'- 7" | 4 | 10 1/2" | 8'- 7" |
| 8 | 8 | 18" | 18" | 8" | 8" | 24 | 24'- 0" | 24 | 24'- 0" | 6 | 6'- 0" | 5 | 8" | 24'- 2" | 5 | 8" | 26'- 4" | 3 | 8" | 3'- 1 1/4" | 6'- 0" | 4 | 8" | 3'- 1 1/4" | 6'- 0" | 8'- 10" | 4 | 6" | 10'- 8" | 4 | 10 1/2" | 10'- 8" | 4 | 10 1/2" | 10'- 8" |
| 8 | 10 | 18" | 18" | 8 1/2" | 8" | 24 | 24'- 0" | 24 | 24'- 0" | 8 | 8'- 0" | 5 | 8" | 24'- 2" | 5 | 8" | 26'- 5" | 3 | 8" | 3'- 1 3/4" | 6'- 1" | 5 | 8" | 3'- 1 3/4" | 7'- 0" | 9'- 10" | 6 | 9" | 12'- 8" | 4 | 10 1/2" | 12'- 8" | 4 | 10 1/2" | 12'- 8" |
| 9 | 4 | 19 3/4" | 19 3/4" | 8" | 8" | 27 | 27'- 0" | 27 | 27'- 0" | 2 | 2'- 0" | 6 | 9" | 26'- 9" | 6 | 9" | 29'- 4" | -- | -- | ---- | ---- | 4 | 9" | 3'- 3 5/8" | 4'- 1 3/4" | 7'- 2" | 4 | 12" | 7'- 0" | 4 | 10" | 7'- 0" | 4 | 10" | 7'- 0" |
| 9 | 6 | 19 3/4" | 19 3/4" | 8" | 8" | 27 | 27'- 0" | 27 | 27'- 0" | 4 | 4'- 0" | 6 | 9" | 26'- 9" | 6 | 9" | 29'- 4" | -- | -- | ---- | ---- | 4 | 9" | 3'- 3 5/8" | 5'- 1 3/4" | 8'- 2" | 4 | 12" | 9'- 0" | 4 | 10" | 9'- 0" | 4 | 10" | 9'- 0" |
| 9 | 8 | 19 3/4" | 19 3/4" | 8" | 8" | 27 | 27'- 0" | 27 | 27'- 0" | 6 | 6'- 0" | 6 | 9" | 26'- 9" | 6 | 9" | 29'- 4" | -- | -- | ---- | ---- | 5 | 9" | 3'- 3 5/8" | 6'- 1 3/4" | 9'- 1" | 4 | 6" | 11'- 0" | 4 | 10" | 11'- 0" | 4 | 10" | 11'- 0" |
| 9 | 10 | 19 1/2" | 19 1/2" | 8 1/2" | 8" | 27 | 27'- 0" | 27 | 27'- 0" | 8 | 8'- 0" | 6 | 9" | 26'- 9" | 6 | 9" | 29'- 5" | -- | -- | ---- | ---- | 6 | 9" | 3'- 4 1/8" | 7'- 1 1/2" | 10'- 1" | 6 | 9" | 12'- 11" | 4 | 10" | 12'- 11" | 4 | 10" | 12'- 11" |
| 9 | 12 | 19 3/4" | 19 3/4" | 10" | 8" | 27 | 27'- 0" | 27 | 27'- 0" | 10 | 10'- 0" | 6 | 9" | 26'- 9" | 6 | 9" | 29'- 8" | -- | -- | ---- | ---- | 7 | 9" | 3'- 5 5/8" | 8'- 1 3/4" | 11'- 2" | 5 | 5 1/2" | 15'- 0" | 4 | 10" | 15'- 0" | 4 | 10" | 15'- 0" |
| 10 | 4 | 22" | 22" | 8" | 8" | 30 | 30'- 0" | 30 | 30'- 0" | 2 | 2'- 0" | 6 | 9" | 29'- 4" | 6 | 9" | 32'- 4" | -- | -- | ---- | ---- | 4 | 9" | 3'- 6" | 4'- 4" | 7'- 7" | 4 | 12" | 7'- 4" | 4 | 10" | 7'- 4" | 4 | 10" | 7'- 4" |
| 10 | 6 | 22" | 22" | 8" | 8" | 30 | 30'- 0" | 30 | 30'- 0" | 4 | 4'- 0" | 6 | 9" | 29'- 4" | 6 | 9" | 32'- 4" | -- | -- | ---- | ---- | 4 | 9" | 3'- 6" | 5'- 4" | 8'- 7" | 4 | 12" | 9'- 4" | 4 | 10" | 9'- 4" | 4 | 10" | 9'- 4" |
| 10 | 8 | 22" | 22" | 8" | 8" | 30 | 30'- 0" | 30 | 30'- 0" | 6 | 6'- 0" | 6 | 9" | 29'- 4" | 6 | 9" | 32'- 4" | -- | -- | ---- | ---- | 5 | 9" | 3'- 6" | 6'- 4" | 9'- 6" | 4 | 6" | 11'- 4" | 4 | 10" | 11'- 4" | 4 | 10" | 11'- 4" |
| 10 | 10 | 22" | 22" | 8 1/2" | 8" | 30 | 30'- 0" | 30 | 30'- 0" | 8 | 8'- 0" | 7 | 9" | 29'- 4" | 6 | 9" | 32'- 5" | -- | -- | ---- | ---- | 6 | 9" | 3'- 6 1/2" | 7'- 4" | 10'- 6" | 4 | 4" | 13'- 4" | 4 | 10" | 13'- 4" | 4 | 10" | 13'- 4" |
| 10 | 12 | 22 1/4" | 22 1/4" | 10" | 8" | 30 | 30'- 0" | 30 | 30'- 0" | 10 | 10'- 0" | 6 | 9" | 29'- 4" | 6 | 9" | 32'- 8" | 3 | 9" | 3'- 8" | 7'- 2" | 6 | 9" | 3'- 8" | 8'- 4 1/4" | 11'- 7" | 6 | 7 1/2" | 15'- 4" | 4 | 10" | 15'- 4" | 4 | 10" | 15'- 4" |
| 12 | 6 | 25 1/2" | 25 1/2" | 8" | 8" | 36 | 36'- 0" | 36 | 36'- 0" | 4 | 4'- 0" | 6 | 8" | 34'- 6" | 6 | 8" | 38'- 4" | -- | -- | ---- | ---- | 4 | 8" | 3'- 10 3/4" | 5'- 7 1/2" | 9'- 3" | 4 | 12" | 9'- 11" | 4 | 9 1/2" | 9'- 11" | 4 | 9 1/2" | 9'- 11" |
| 12 | 8 | 25 1/2" | 25 1/2" | 8" | 8" | 36 | 36'- 0" | 36 | 36'- 0" | 6 | 6'- 0" | 6 | 8" | 34'- 6" | 6 | 8" | 38'- 4" | 3 | 8" | 3'- 10 3/4" | 7'- 7" | 4 | 8" | 3'- 10 3/4" | 6'- 7 1/2" | 10'- 3" | 5 | 9" | 11'- 11" | 4 | 9 1/2" | 11'- 11" | 4 | 9 1/2" | 11'- 11" |
| 12 | 10 | 25 3/4" | 25 3/4" | 8 1/2" | 8" | 36 | 36'- 0" | 36 | 36'- 0" | 8 | 8'- 0" | 6 | 8" | 34'- 6" | 6 | 8" | 38'- 5" | 3 | 8" | 3'- 11 1/4" | 7'- 8" | 5 | 8" | 3'- 11 1/4" | 7'- 7 3/4" | 11'- 3" | 7 | 11 1/2" | 13'- 11" | 4 | 9 1/2" | 13'- 11" | 4 | 9 1/2" | 13'- 11" |
| 12 | 12 | 25 3/4" | 25 3/4" | 10" | 8" | 36 | 36'- 0" | 36 | 36'- 0" | 10 | 10'- 0" | 6 | 8" | 34'- 6" | 6 | 8" | 38'- 8" | 4 | 8" | 4'- 3/4" | 7'- 10" | 5 | 8" | 4'- 3/4" | 8'- 7 3/4" | 12'- 5" | 7 | 10" | 15'- 11" | 4 | 9" | 15'- 11" | 4 | 9" | 15'- 11" |

Sheet 1 of 2

For Typical Section, notes and other details, refer to standard BCT-DT.

TRIPLE BOX CULVERTS

35 TO 40 FT. FILLS

VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE
AND
BRIDGE
DIVISION

1004.20