CONST. NO. _____

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| | 2010 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| | | | |

## 2 @ 18 x 9 REINFORCED CONCRETE BOX BRIDGE

| | Maximum Fill Height ft. | Dimensions ST in. | SB in. | WT in. | IT in. | BW ft. | Bars TST Size | No. | Spacing in. | Length ft. | Bars TSB Size | No. | Spacing in. | Length ft. | Bars BST Size | No. | Spacing in. | Length ft. | Bars BSB Size | No. | Spacing in. | Length ft. | Bars EWE Size | No. | Spacing in. | Length ft. | Bars EWI Size | No. | Spacing in. | Length ft. | Bars IW Size | No. | Spacing in. | Length ft. | Bars LNT No. | Bars LND No. | Bars WS No. | Concrete CY/LF | Reinf. Steel LB/LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Continuous | No Fill | 12.5 | 12 | 8 | 8 | 38.00 | 7 | 2 | 6 | 37.50 | 8 | 2 | 6 | 37.50 | 5 | 2 | 6 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 9.00 | 5 | 2 | 12 | 9.00 | 4 | 2 | 12 | 9.00 | 170 | 72 | 6 | 3.58 | 924 |
| | 3 | 15 | 15 | 8 | 8 | 38.00 | 11 | 1 | 12 | 37.50 | 7 | 2 | 6 | 37.50 | 8 | 1 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 9.00 | 6 | 2 | 12 | 9.00 | 4 | 2 | 12 | 9.00 | 170 | 72 | 6 | 4.23 | 954 |
| | 5 | 16 | 16 | 8 | 8 | 38.00 | 8 | 2 | 6 | 37.50 | 7 | 2 | 6 | 37.50 | 8 | 1 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 9.00 | 5 | 4 | 6 | 9.00 | 4 | 2 | 12 | 9.00 | 208 | 0 | 6 | 4.47 | 943 |
| | 10 | 20 | 20 | 8 | 8 | 38.00 | 9 | 2 | 6 | 37.50 | 7 | 2 | 6 | 37.50 | 9 | 1 | 12 | 38.50 | 9 | 2 | 6 | 38.50 | 4 | 2 | 12 | 9.00 | 6 | 4 | 6 | 9.00 | 4 | 2 | 12 | 9.00 | 208 | 0 | 6 | 5.42 | 1098 |
| Moment Break | 20 | 20 | 20 | 9 | 8 | 38.17 | 4 | 2 | 12 | 18.66 | 11 | 2 | 6 | 37.67 | 10 | 2 | 6 | 38.67 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 9.00 | 7 | 4 | 6 | 9.00 | 5 | 2 | 12 | 9.00 | 208 | 0 | 6 | 5.50 | 1106 |
| | 30 | 29 | 29 | 11 | 8 | 38.50 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.00 | 10 | 2 | 6 | 39.00 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 9.00 | 6 | 4 | 6 | 9.00 | 4 | 4 | 6 | 9.00 | 208 | 0 | 6 | 7.81 | 1022 |
| | 40 | 36 | 36 | 13 | 8 | 38.83 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.33 | 10 | 2 | 6 | 39.33 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 9.00 | 5 | 4 | 6 | 9.00 | 5 | 4 | 6 | 9.00 | 208 | 0 | 6 | 9.69 | 1024 |
| | 50 | 41 | 42 | 14 | 8 | 39.00 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.50 | 10 | 2 | 6 | 39.50 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 9.00 | 7 | 2 | 12 | 9.00 | 6 | 4 | 6 | 9.00 | 212 | 0 | 6 | 11.12 | 1046 |
| | 60 | 46 | 47 | 15 | 9 | 39.25 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.75 | 10 | 2 | 6 | 39.75 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 9.00 | 6 | 2 | 12 | 9.00 | 6 | 4 | 6 | 9.00 | 212 | 0 | 6 | 12.49 | 1040 |

## 2 @ 18 x 10 REINFORCED CONCRETE BOX BRIDGE

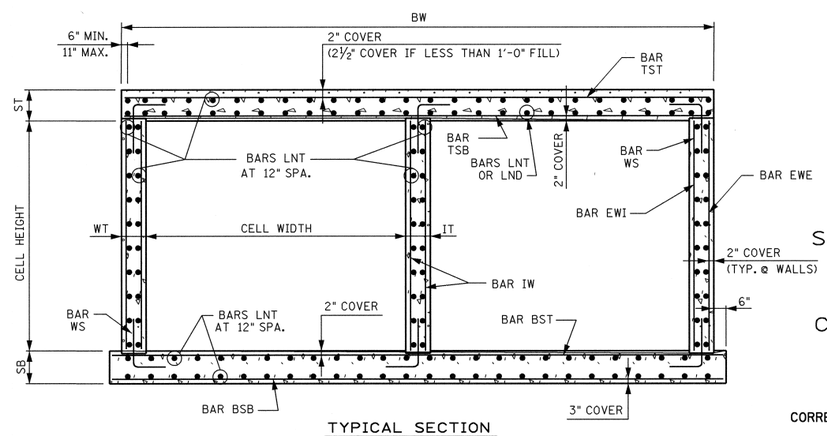
| | Maximum Fill Height ft. | Dimensions ST in. | SB in. | WT in. | IT in. | BW ft. | Bars TST Size | No. | Spacing in. | Length ft. | Bars TSB Size | No. | Spacing in. | Length ft. | Bars BST Size | No. | Spacing in. | Length ft. | Bars BSB Size | No. | Spacing in. | Length ft. | Bars EWE Size | No. | Spacing in. | Length ft. | Bars EWI Size | No. | Spacing in. | Length ft. | Bars IW Size | No. | Spacing in. | Length ft. | Bars LNT No. | Bars LND No. | Bars WS No. | Concrete CY/LF | Reinf. Steel LB/LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Continuous | No Fill | 12.5 | 12 | 8 | 8 | 38.00 | 7 | 2 | 6 | 37.50 | 8 | 2 | 6 | 37.50 | 5 | 2 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 10.00 | 6 | 2 | 12 | 10.00 | 4 | 2 | 12 | 10.00 | 176 | 72 | 6 | 3.65 | 942 |
| | 3 | 15 | 15 | 8 | 8 | 38.00 | 11 | 1 | 12 | 37.50 | 7 | 2 | 6 | 37.50 | 8 | 1 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 10.00 | 5 | 4 | 6 | 10.00 | 4 | 2 | 12 | 10.00 | 176 | 72 | 6 | 4.31 | 975 |
| | 5 | 16 | 16 | 8 | 8 | 38.00 | 8 | 2 | 6 | 37.50 | 7 | 2 | 6 | 37.50 | 8 | 1 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 10.00 | 7 | 2 | 12 | 10.00 | 4 | 2 | 12 | 10.00 | 214 | 0 | 6 | 4.54 | 953 |
| | 10 | 20 | 20 | 8 | 8 | 38.00 | 9 | 2 | 6 | 37.50 | 7 | 2 | 6 | 37.50 | 9 | 1 | 12 | 38.50 | 9 | 2 | 6 | 38.50 | 4 | 2 | 12 | 10.00 | 7 | 4 | 6 | 10.00 | 4 | 2 | 12 | 10.00 | 214 | 0 | 6 | 5.49 | 1133 |
| Moment Break | 20 | 20 | 20 | 10 | 8 | 38.33 | 4 | 2 | 12 | 18.66 | 11 | 2 | 6 | 37.83 | 10 | 2 | 6 | 38.83 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 10.00 | 7 | 4 | 6 | 10.00 | 5 | 2 | 12 | 10.00 | 214 | 0 | 6 | 5.66 | 1125 |
| | 30 | 29 | 29 | 12 | 8 | 38.67 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.17 | 10 | 2 | 6 | 39.17 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 10.00 | 6 | 4 | 6 | 10.00 | 6 | 2 | 12 | 10.00 | 214 | 0 | 6 | 8.00 | 1042 |
| | 40 | 36 | 36 | 14 | 8 | 39.00 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.50 | 10 | 2 | 6 | 39.50 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 10.00 | 6 | 4 | 6 | 10.00 | 5 | 4 | 6 | 10.00 | 218 | 0 | 6 | 9.89 | 1062 |
| | 50 | 41 | 42 | 16 | 8 | 39.33 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.83 | 10 | 2 | 6 | 39.83 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 10.00 | 4 | 4 | 6 | 10.00 | 6 | 4 | 6 | 10.00 | 218 | 0 | 6 | 11.44 | 1053 |
| | 60 | 46 | 47 | 17 | 9 | 39.58 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 39.08 | 10 | 2 | 6 | 40.08 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 10.00 | 5 | 4 | 6 | 10.00 | 6 | 4 | 6 | 10.00 | 218 | 0 | 6 | 12.83 | 1072 |

## 2 @ 18 x 11 REINFORCED CONCRETE BOX BRIDGE

| | Maximum Fill Height ft. | Dimensions ST in. | SB in. | WT in. | IT in. | BW ft. | Bars TST Size | No. | Spacing in. | Length ft. | Bars TSB Size | No. | Spacing in. | Length ft. | Bars BST Size | No. | Spacing in. | Length ft. | Bars BSB Size | No. | Spacing in. | Length ft. | Bars EWE Size | No. | Spacing in. | Length ft. | Bars EWI Size | No. | Spacing in. | Length ft. | Bars IW Size | No. | Spacing in. | Length ft. | Bars LNT No. | Bars LND No. | Bars WS No. | Concrete CY/LF | Reinf. Steel LB/LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Continuous | No Fill | 12.5 | 12 | 8 | 8 | 38.00 | 7 | 2 | 6 | 37.50 | 8 | 2 | 6 | 37.50 | 5 | 2 | 6 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 11.00 | 6 | 2 | 12 | 11.00 | 4 | 2 | 12 | 11.00 | 182 | 72 | 6 | 3.73 | 952 |
| | 3 | 15 | 15 | 8 | 8 | 38.00 | 11 | 1 | 12 | 37.50 | 7 | 2 | 6 | 37.50 | 8 | 1 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 11.00 | 7 | 2 | 12 | 11.00 | 4 | 2 | 12 | 11.00 | 182 | 72 | 6 | 3.48 | 838 |
| | 5 | 16 | 16 | 8 | 8 | 38.00 | 8 | 2 | 6 | 37.50 | 7 | 2 | 6 | 37.50 | 8 | 1 | 12 | 38.50 | 8 | 2 | 6 | 38.50 | 4 | 2 | 12 | 11.00 | 7 | 4 | 6 | 11.00 | 4 | 2 | 12 | 11.00 | 220 | 0 | 6 | 3.48 | 838 |
| | 10 | 20 | 20 | 9 | 8 | 38.17 | 9 | 2 | 6 | 37.67 | 7 | 2 | 6 | 37.67 | 9 | 1 | 12 | 38.67 | 9 | 2 | 6 | 38.67 | 4 | 2 | 12 | 11.00 | 7 | 4 | 6 | 11.00 | 4 | 2 | 12 | 11.00 | 220 | 0 | 6 | 3.48 | 838 |
| Moment Break | 20 | 20 | 20 | 11 | 8 | 38.50 | 4 | 2 | 12 | 18.66 | 11 | 2 | 6 | 38.00 | 10 | 2 | 6 | 39.00 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 11.00 | 7 | 4 | 6 | 11.00 | 5 | 2 | 12 | 11.00 | 220 | 0 | 6 | 3.48 | 838 |
| | 30 | 29 | 30 | 13 | 8 | 38.83 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.33 | 10 | 2 | 6 | 39.33 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 11.00 | 7 | 4 | 6 | 11.00 | 6 | 2 | 12 | 11.00 | 220 | 0 | 6 | 3.48 | 838 |
| | 40 | 36 | 36 | 15 | 8 | 39.17 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 38.67 | 10 | 2 | 6 | 39.67 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 11.00 | 7 | 4 | 6 | 11.00 | 5 | 4 | 6 | 11.00 | 224 | 0 | 6 | 3.48 | 838 |
| | 50 | 41 | 42 | 17 | 8 | 39.50 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 39.00 | 10 | 2 | 6 | 40.00 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 11.00 | 6 | 4 | 6 | 11.00 | 6 | 4 | 6 | 11.00 | 224 | 0 | 6 | 3.48 | 838 |
| | 60 | 46 | 47 | 19 | 9 | 39.92 | 4 | 2 | 12 | 18.66 | 10 | 2 | 6 | 39.42 | 10 | 2 | 6 | 40.42 | 4 | 2 | 12 | 18.66 | 4 | 2 | 12 | 11.00 | 6 | 4 | 6 | 11.00 | 6 | 4 | 6 | 11.00 | 224 | 0 | 6 | 3.48 | 838 |

Note: Maximum fill height shown in the table is measured from the bottom of the top slab. To obtain the total fill height from the flow line, add the height of the box.
Note: When height of fill above the top slab is less than 1 foot, the top mat of reinforcing in the top slab shall be constructed with 2-1/2 inches of concrete cover.

The following bar information applies to all fill cases in the tables above:
Bars LNT Size = 4 Spacing = 12 in.
Bars LND Size = 4 Spacing = 6 in.
Bars WS Size = 8 Length = 5.00 ft. Spacing = 12 in.




TYPICAL SECTION

NOTE: FOR DESCRIPTIONS OF BOX DIMENSIONS AND REINFORCING BAR DESIGNATIONS SEE STANDARD DRAWING NO. STD-17-5.

STATE OF TENNESSEE
**DEPARTMENT OF TRANSPORTATION**

STANDARD REINFORCED CONCRETE BOX BRIDGE
INTERIOR SECTION
SPANS: 2 BARRELS AT 18'-0"
CLEAR HEIGHTS 9'-0" THRU 11'-0"
0' THRU 60' FILL
2010

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

| | | | |
|---|---|---|---|
| DESIGNED BY | RLL/ALP | DATE | 12-09 |
| DRAWN BY | KEVIN MARTINKO | DATE | 1-10 |
| SUPERVISED BY | EPW/RLC | DATE | 12-09 |
| CHECKED BY | RLL/ALP | DATE | 2-10 |

STD-17-86