## ESTIMATED QUANTITIES (WITH CAST-IN-PLACE ABUTMENTS)

| | | REINFORCED CONCRETE BOX BEAMS | | | PRETENSIONED PRESTRESSED CONCRETE BOX BEAMS | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SPAN | | 30'-0 | 40'-0 | 50'-0 | 30'-0 | 40'-0 | 50'-0 | 60'-0 | 70'-0 |
| UHPC JOINT FOR CONCRETE BOX BEAM BRIDGE | L.F. | 156 | 206 | 256 | 156 | 206 | 256 | 306 | 356 |
| STRUCTURAL CONCRETE * | C.Y. | 29.6 | 29.6 | 31.0 | 27.9 | 27.9 | 29.6 | 29.6 | 31.0 |
| EPOXY COATED REINFORCING STEEL * | LBS. | 4,849 | 4,849 | 4,953 | 4,698 | 4,698 | 4,849 | 4,849 | 4,974 |
| STRUCTURAL STEEL ** | LBS. | 1,726 | 2,222 | 3,112 | 1,478 | 1,900 | 2,718 | 3,215 | 4,442 |
| REINFORCED CONCRETE BOX BEAM | NO. | 6-27"x48"x30'-0 RCBB | 6-27"x48"x40'-0 RCBB | 6-33"x48"x50'-0 RCBB | - | - | - | - | - |
| PRETENSIONED PRESTRESSED CONCRETE BOX BEAM | NO. | - | - | - | 6-21"x48"x30'-0 PPCBB | 6-21"x48"x40'-0 PPCBB | 6-27"x48"x50'-0 PPCBB | 6-27"x48"x60'-0 PPCBB | 6-33"x48"x70'-0 PPCBB |
| NO. OF STEEL H-PILES (HP 10x57) FOR TWO ABUTMENTS | NO. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 |

NOTES:
* INCLUDES TWO ABUTMENT FOOTINGS AND TWO ABUTMENT BACKWALLS.
** INCLUDES FOUR RETAINER ANGLE ASSEMBLIES AND BRIDGE RAIL POSTS.

## ESTIMATED QUANTITIES (WITH PRECAST ABUTMENTS)

| | | REINFORCED CONCRETE BOX BEAMS | | | PRETENSIONED PRESTRESSED CONCRETE BOX BEAMS | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SPAN | | 30'-0 | 40'-0 | 50'-0 | 30'-0 | 40'-0 | 50'-0 | 60'-0 | 70'-0 |
| UHPC JOINT FOR CONCRETE BOX BEAM BRIDGE | L.F. | 156 | 206 | 256 | 156 | 206 | 256 | 306 | 356 |
| STRUCTURAL STEEL ** | LBS. | 1,726 | 2,222 | 3,112 | 1,478 | 1,900 | 2,718 | 3,215 | 4,442 |
| PRECAST FOOTING (CONCRETE WINGS) *** | NO. | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PRECAST ABUTMENT BACKWALL | NO. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| REINFORCED CONCRETE BOX BEAM | NO. | 6-27"x48"x30'-0 RCBB | 6-27"x48"x40'-0 RCBB | 6-33"x48"x50'-0 RCBB | - | - | - | - | - |
| PRETENSIONED PRESTRESSED CONCRETE BOX BEAM | NO. | - | - | - | 6-21"x48"x30'-0 PPCBB | 6-21"x48"x40'-0 PPCBB | 6-27"x48"x50'-0 PPCBB | 6-27"x48"x60'-0 PPCBB | 6-33"x48"x70'-0 PPCBB |
| NO. OF STEEL H-PILES (HP 10x57) FOR TWO ABUTMENTS | NO. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 |

NOTES:
** INCLUDES FOUR RETAINER ANGLE ASSEMBLIES AND BRIDGE RAIL POSTS.
*** INCLUDES HIGH EARLY STRENGTH SELF-CONSOLIDATING CONCRETE FOR CMP PILE POCKETS. SEE SHEET B24-20-16 FOR VOLUME OF HIGH EARLY STRENGTH SELF-CONSOLIDATING CONCRETE REQUIRED FOR EACH BOX BEAM TYPE AND SPAN LENGTH.

NOTES:
QUANTITIES SHOWN ONLY INCLUDE QUANTITIES COVERED BY THESE STANDARDS. OTHER QUANTITIES, AS REQUIRED, MAY ALSO NEED TO BE COMPUTED BY THE USER OF THESE STANDARDS SUCH AS UHPC JOINT WATER INTEGRITY TEST, EXCAVATION CLASS 20 OR 21, REMOVAL OF STRUCTURE, BRIDGE WING ARMORING, ETC.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 24'-0 ROADWAY, SINGLE SPAN

# CONCRETE BOX BEAM BRIDGES

DECEMBER, 2016

QUANTITY SUMMARIES
CONCRETE WINGS
0° SKEW

B24-29-16