Bridge Rail Notes

Tile Head bolts shall conformed to ASTM F1554, Grade 1. The nuts shall conform to ASTM A563, Grade C. All high strength bolts shall conform to ASTM F3125, Grades A325, Grade 1, or ASTM A576, Grade 5. The components shall be hot-dip galvanized in accordance with ASTM A123.

The curtain wall shall be made of 1" x 1" bevel, extruded aluminum extrusions. The extrusions shall be produced to the horizontal and vertical alignment of the structure. They shall be installed normal to grade in the longitudinal direction and vertical in the transverse direction.

The bolt will be threaded metal inserts, nuts and washers. The bolt and inserts shall be hot-dip galvanized in accordance with ASTM A123. All the nuts and washers shall conform to ASTM A563, Grade C or ASTM A563, Grade D.

The 3-Tube Curb Mounted Bridge Rail has been evaluated at Test Levels TL-4 and Complies With MASH 2016. The 3-Tube Curb Mounted Bridge Rail has a maximum strength of 13 kips and shall be hot-dip galvanized in accordance with ASTM A123.

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The silicon content of the steel used for the bridge rail elements shall be within the range of 0.04% to 0.30%.

The bridge rail elements shall be fabricated to the horizontal and vertical alignment of the structure. They shall be installed normal to grade in the longitudinal direction and vertical in the transverse direction.

All steel shall conform to ASTM A325, Grade 1, or ASTM A576, Grade 5. The nuts shall conform to ASTM A563, Grade C. All high strength bolts shall conform to ASTM F3125, Grades A325, Grade 1, or ASTM A576, Grade 5. The components shall be hot-dip galvanized in accordance with ASTM A123.

The 1" x 1" bevel, extruded aluminum constitutes the bridge rail elements. The extrusions shall be produced to the horizontal and vertical alignment of the structure. They shall be installed normal to grade in the longitudinal direction and vertical in the transverse direction.

The 3-Tube Curb Mounted Bridge Rail shall be hot-dip galvanized in accordance with ASTM A123.

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**CONCRETE INSERT NOTES**

- The concrete inserts shall be hot-dip galvanized expanded coil concrete inserts with a closed-back.
- The inserts shall be threaded to receive 0.5" Dia. bolts. The inserts shall meet the following requirements:
  - Minimum insert length = 4.5".
  - Minimum safe working load in tension = 4000 lbs.

**Requirements:**
- ASTM A307 bolts. The inserts shall be threaded to receive 0.5" Dia. bolts. The inserts shall meet the following requirements:

**Fabricate from 0.5" plate (similar to rail splice):**

- The inserts shall be fabricated from 0.5" plate (similar to rail splice).

**Eliminate Chamfer at Plates:**

- Elminate chamfer at plates.

**Section**

- Scale: 1" = 1'-0".

**Plates:**

- Make splice tube from 4.5" plate.

**Rail Splice Details**

- Scale: 1" = 1'-0".

**Anchor Plate Detail**

- 1" X 12" X 13" PLATE
- 6" HOLE
- 1" Hole (Typ.)

**Base Plate Detail**

- Scale: 1" = 1'-0".

**Top Rail Attachment Bracket**

- Scale: 1" = 1'-0".

**Rail Attachment Bracket**

- Scale: 1" = 1'-0".

**Plate Washer "C"**

- Scale: Full Scale.

- Scale: 3" = 1'-0".

**Concrete**

- Scale: 3" = 1'-0".
REINFORCEMENT SPLICE NOTES:

1. THE SPLICE LENGTH FOR THE CONCURRENT REINFORCEMENT IN THE CURB AND ENDBLOCK SHALL BE AS FOLLOWS UNLESS DIMENSIONED OTHERWISE:

   BAR SIZE  SPLICE LENGTH
   #5        @ 4"

2. THE SPLICES SHALL BE ALTERNATED SO THAT 50% OF THE LONGITUDINAL BARS ARE SPLICED AT THE SAME LOCATION.

- APPLY PENETRATING SEALER PROTECTIVE COMPOUND TO ALL EXPOSED SURFACES OF CURB AND ENDBLOCK.

- TOP OF DECK OVERLAY, CONCRETE CURB

- TYPE "A" BAR, SEE REINFORCEMENT CHART FOR BAR SPACING

- ADDED 4 - #5 BAR IN HOOK WITHIN CONCRETE CURB

- ADDITIONAL 4 - #5 BAR IN HOOK WITHIN CURB AND ENDBLOCK

- ELEVATION - CURB AND ENDBLOCK REINFORCEMENT

- SCALE: 3" = 1'-0"

- PLAN SECTION - ENDBLOCK REINFORCEMENT

- SCALE: 3" = 1'-0"

- ISOMETRIC VIEW - REINFORCEMENT DETAIL AT ENDBLOCK

- SCALE: N.T.S.

- TYPICAL RUSTICATION DETAIL

- SCALE: 3" = 1'-0"

- PARAPET

- WINGWALL