THREE BEAM RAIL CONNECTION

- **TIE-TO-MAPLE CONNECTION**
  - Four 5/8" Head Bolts with two washers and a nut.
  - One 5/8" Head Bolt with one washer and a nut.

- **Detail A**
  - Presentation Regular gage.
  - Expansion splice in change of post shall be made at first post on either side of the joint.
  - **Bolt perp. to slab (Typ.)**
  - **Ends of Chnl 1.5 Cap Rail**

- **Detail B**
  - 2'-3" Lap.
  - 11 Gauge.
  - 4"x 24" Slotted Holes (Exposure splice on post)
  - 5"x 36" Slots (Exposure splice on post)

**ELEVATION OF THREE BEAM RAIL**

**PLAN**

- **Section A-A**
  - Two 1 1/16" x 1 1/2" Vertical Slotted Holes in W6 x 15 Blockout.
  - One 1 1/8"Ø Drilled Hole in slab.

**PART SECTION AT RAIL POST**

- **(1)** Required on one side of slab only, but may be provided on both sides of slab where supported by contractor's option.
- **(2)** End Plates (Level with qualified special mortar, see Sec 704) on slab.

**General Notes:**

- Design Specifications: 2002 AASHTO LFD (17th Ed.)
- Standard Specifications

**Fabrication of Structural Steel:**

- Fabrication of structural steel shall be in accordance with Sec. 1080.
- Special drilling of the thrie beam may be required as shown on the shop drawings.

**Special Drilling of the thrie beam may be required as follows:**

- Drilling details shall be shown on the shop drawings.
- Contractor shall verify all dimensions in field before finalizing the shop drawings.

**Blockout and the thrie beam rail.**

- Blockout shall be provided at entrance ends and for single traffic, guardrail shall be used at all four corners and for single traffic, guardrail shall be used at entrance ends only unless required at the exit.

- Steel connecting bolts and fasteners for posts and railing and all resin anchor bolts, nuts, washers and bolts shall be fabricated in accordance with Sec 1080.

**Shims:**

- Shim plates 6 x 6 x 1/16-inch may be used between the rail and the channel shall be provided at other expansion provisions at the thrie beam rail. The washers shall be rectangular in shape with a 1 1/16" x 1 1/2" slot or when necessary of such thickness the shims shall be determined by the contractor and verified by the engineer before ordering material for this work.

- Panel lengths of channel members shall be attached continuously to a minimum of four posts and a maximum of six posts (except at end bents).

- Bolt, nut, and washer plates shall be considered completely covered by the contract unit price for Bridge Guardrail (Thrie Beam).

**Fabrication of Steel Railing:**

- All steel connecting bolts and fasteners for posts and railing and all resin anchor bolts, nuts, washers, and bolts shall be fabricated in accordance with Sec 1080.

- The delineator body shall be attached to the top of the guardrail sections and shall be fabricated in accordance with Missouri Standard Plan No. 606.00 for details not shown.

- Special drilling of the thrie beam may be required at the blockout and the thrie beam rail.

- Expansion splices in the thrie beam rail shall be made at the first post on either side of the joint and on structure at bridge ends.

- When the splice is made at a location 1/2 the distance between Splice expansion slot shall be provided in the thrie beam rail for connection to the first post splice for expansion splices.

- In addition to the expansion provisions at the expansion joints, expansion splices in the thrie beam rail, and the channel shall be considered completely covered by the contract unit price for Bridge Guardrail (Thrie Beam).

- Shims plates 6 x 6 x 1/16-inch may be used between the top of the post and the slab or as shims plates 6 x 6 x 1/16-inch may be used between the top of the joint and on structure at bridge ends.

- Shims plates shall be galvanized after fabrication.

- Contractors shall verify all dimensions in field before finalizing the shop drawings.

- See Missouri Standard Plan 606.00 for details not shown.