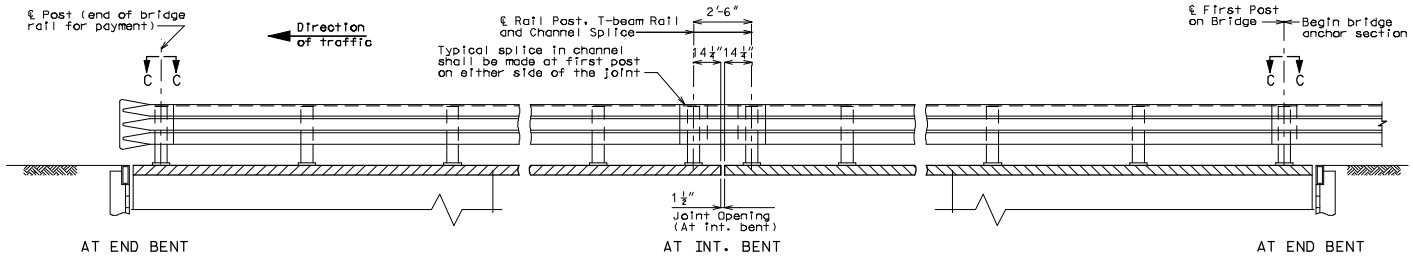
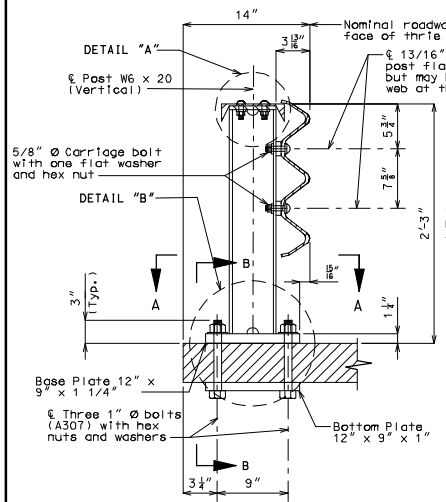


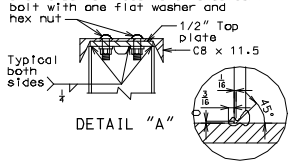
PART SECTION SHOWING THRIE BEAM RAIL

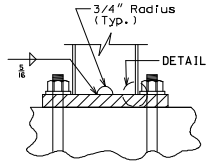
Note: At the bridge ends for head to head traffic, guardrail shall be used at all four corners and for single directional traffic, guardrail shall be used at the entrance ends only unless required at the exit.



PART SECTION AT RAIL POST

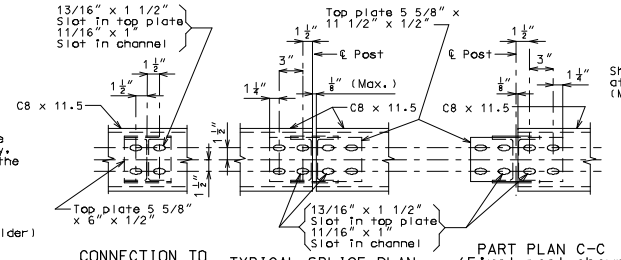
Note: The size of base and bottom plate may be increased depending on which grid option is used.





Note: Semi-circular notches centered on the axis of the post web ends may be made to facilitate galvanizing.

DETAIL "B"



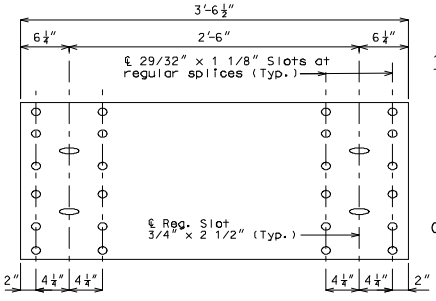
CONNECTION TO BASIC POST PLAN

TYPICAL SPLICE PLAN

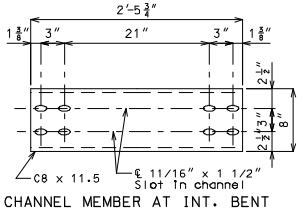
PART PLAN C-C (First post shown last post opposite)

OPTIONAL SPLICE

CHANNEL MEMBER DETAILS



THRIE BEAM MEMBER AT INT. BENT



CHANNEL MEMBER AT INT. BENT

GENERAL NOTES:

Design Specification: 2002 - AASHTO 17th Edition

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).

All bolts, nuts, washers and plates will be considered completely covered by the contract unit price for Bridge Guardrail (Thrie Beam).

All steel connecting bolts and fasteners for posts and railing, and all anchor bolts, nuts, washers and plates shall be galvanized after fabrication except for the bottom plate. Protective coating and material requirement of steel railing shall be in accordance with Sec 1040.

Rail posts shall be set perpendicular to roadway profile grade, vertically in cross section and aligned in accordance with Sec 713 except that the rail posts shall be aligned by the use of shims such that the post deviates not more than 1/2 inch from true horizontal alignment after final adjustment. The shims shall be 3" x 1 3/4" and placed between the blockout post and the thrie beam rail. The thickness of the shims shall be determined by the contractor and verified by the engineer before ordering material for this work.

At the expansion slots in the thrie beam rails and channels, the bolts shall be tightened and backed off one-half turn and the threads shall be burred.

At the thrie beam connection to posts on wings, the bolts shall be tightened and backed off one-half turn and the threads shall be burred.

Minimum length of thrie beam sections is equal to one post space.

5/8" button head, oval shoulder bolts with 3/8" minimum hex nuts shall be used at all slots.

Posts, top plates, base plates, channels and channel splice plates shall be fabricated from ASTM A709 Grade 36 steel and galvanized.

Washers shall be used at all post bolts between the bolt head and beam. The flat washers shall be rectangular in shape, 3" x 1 3/4" x 3/16" minimum and with a 11/16" x 1" slot, or when necessary for such design as to fit the contour of the beam. A 3" x 1 3/4" x 5/8" rectangular washer shall be used between the post and the thrie beam rail.

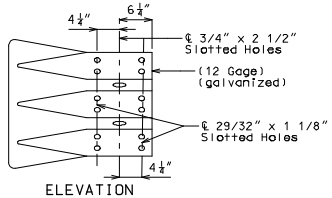
Special drilling of the thrie beam may be required at the splices. All drilling details shall be shown on the shop drawings.

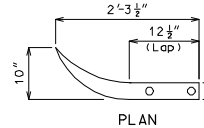
Fabrication of structural steel shall be accordance with Sec 1080.

Grade A321 threaded rods with 2 hex nuts and washers may be substituted for the A307 anchor bolts.

If type "A" guardrail is not attached to ends of the temporary structure, flared ends shall be required. The existing thrie beam rails shall be modified to accept flared ends. Cost for furnishing and installing flared ends will be considered completely covered by the contract unit price for other items.

Contractor shall verify all dimensions in field before ordering materials.



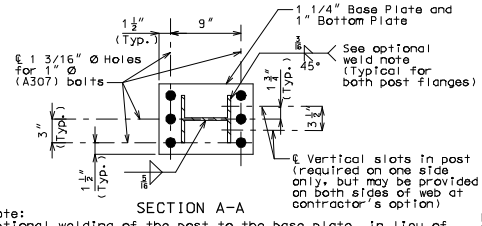


PLAN

ELEVATION

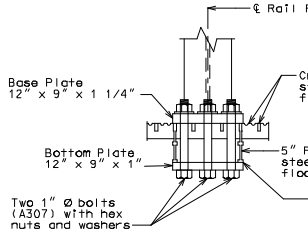
DETAIL OF FLARED END

Note: See preceding sheet for post spacing.



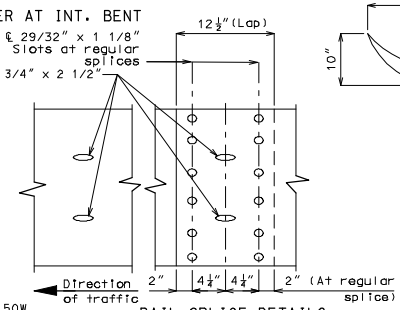
SECTION A-A

Note:
Optional welding of the post to the base plate, in lieu of the weld shown, is a 5/16" fillet weld all around, including the edges of the post flanges.

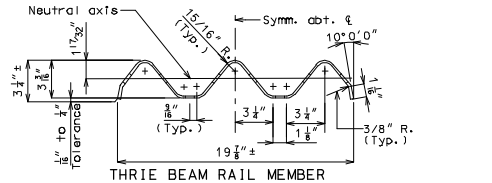


SECTION B-B

Note:
Bottom plate shall be fabricated from ASTM A709 Grade 50W steel and shall be welded to two 5" floor bars. Bottom plate shall not be galvanized.



RAIL SPLICE DETAILS
(Part Elevation Thrie Beam Member)



THRIE BEAM RAIL MEMBER

Note: This drawing is not to scale. Follow dimensions.

Detailed
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