

**NOTES:**  
All tubes shall be fabricated from ASTM A-500 Grade B. All posts and tube splices shall be fabricated from ASTM A-572 Grade 50 or ASTM-A588 steel. All miscellaneous steel shall be fabricated from ASTM A-36 steel.

The above material, except as noted, and all anchor bolts and miscellaneous bolts, nuts and washers shall be galvanized after fabrication in accordance with Section 509. Structural steel elements shall conform to the requirements of Section 509.

Tubes shall be continuous over not less than two posts. No welded butt splices will be allowed in the tube sections. All bolts that have lock washers shall be tightened to snug only.

Posts shall be perpendicular to the grade of the deck.

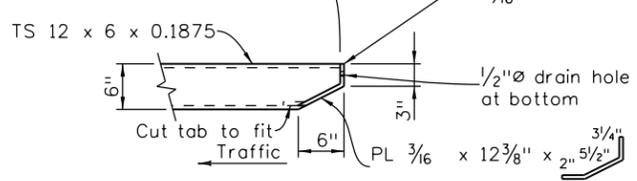
Posts, backing plates, miscellaneous plates, angles, lag screws, miscellaneous bolts, nuts, washers, tubes, tube splices, end plates, reflector tabs, galvanizing and painting shall be included in Item 606 - Bridge Rail Type 10R.

Prior to fabrication of this item, three sets of working drawings shall be submitted to the Engineer for information only.

**ELEVATION - BRIDGE RAIL**

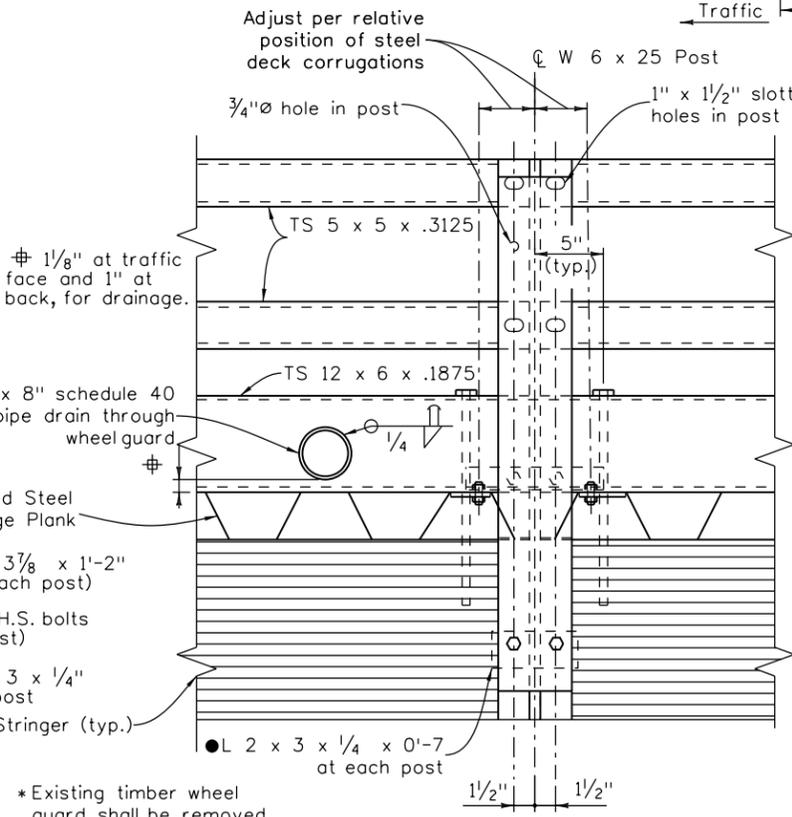
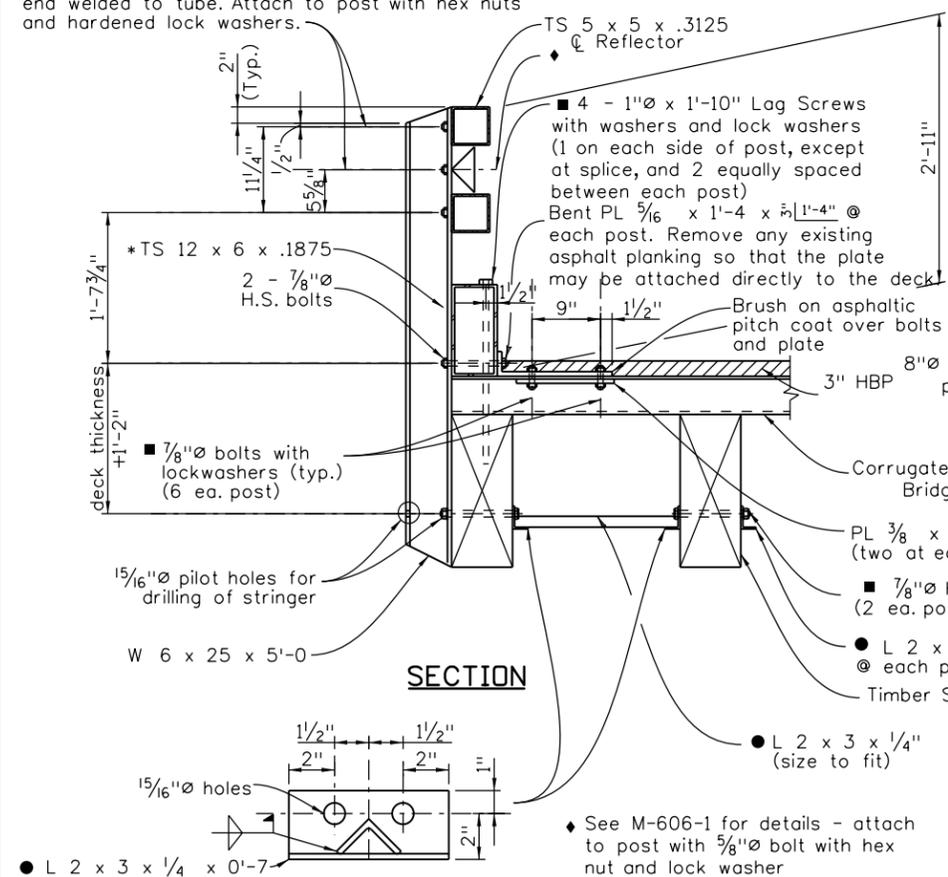
⌀ 2-3/4" ⌀ x 2" threaded anchor studs automatically end welded to tube. Attach to post with hex nuts and hardened lock washers.

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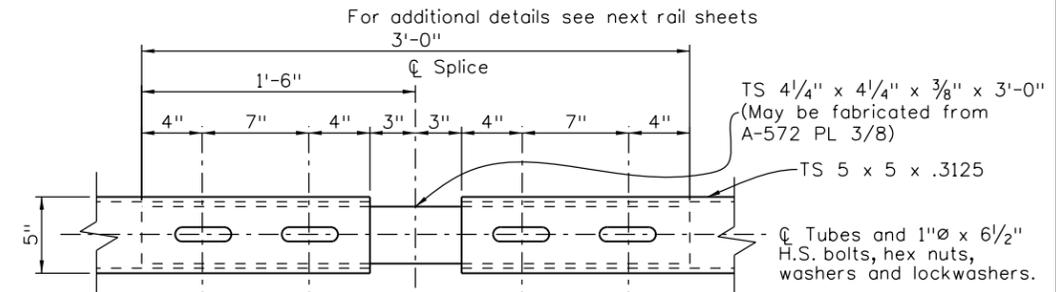


■ Treat all bolt holes in timber with an acceptable timber treatment (preservative).

Structural Steel:  
AASHTO M-222 (ASTM A-588) or AASHTO M-223 (ASTM A-572)  $f_y = 50,000$  psi  
 $f_y = 36,000$  psi  
AASHTO M-183 (ASTM A-36)  $f_y = 46,000$  psi  
Cold formed ASTM A-500 Grade B



**ELEVATION**



⌀ 1/8" x 1 3/8" slots at tube splice. Slot both inner and outer tubes. Stagger top and bottom splices into different post spacings. Place at opposite ends of same post space.

**PLAN - TUBE SPLICE**

Use similar detail at 1' x 6" wheel guard tubing, using a fabricated splice tube of 1 1/2" x 5 1/2" x 3/16". Vertically center 1" x 1'-10" lag screws in slotted holes in tube splices. Screws must go through deck and into stringer.

**FOR INFORMATION ONLY**

Description	Unit	Per Lin. Ft.
Structural Steel (Galvanized)	Lb.	81.3

Revision Dates	Quantity	Initial	Date
11/99	XXX	XXX	MM/YY
3/99	XXX	XXX	MM/YY
5/00	XXX	XXX	MM/YY
4/02	XXX	XXX	MM/YY
3/07	XXX	XXX	MM/YY
10/13	XXX	XXX	MM/YY

Design	Detail	Quantity	Initial	Date
Designed By	Checked By	Quantity	Initial	Date
Checked By	Checked By	Quantity	Initial	Date

Print Date: \$DATE\$  
File Name: Sheet\_B-606-10P.dgn  
Horiz. Scale: NTS Vert. Scale: As Noted  
Staff Bridge Branch - Unit 022X Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation  
4201 East Arkansas Avenue  
Room 107  
Denver, CO 80222  
Phone: 303-757-9309 FAX: 303-757-9197  
Staff Bridge Branch Initials

As Constructed  
No Revisions:  
Revised:  
Void:

**BRIDGE RAIL TYPE 10R REPLACEMENT RAIL**  
Designer: XXXXXXXX Structure X-XX-XX  
Detailer: XXXXXXXX Numbers X-XX-XX  
Sheet Subset: BRIDGE Subset Sheets: BXX of XXX

Project No./Code  
Project Number  
Code  
Sheet Number