

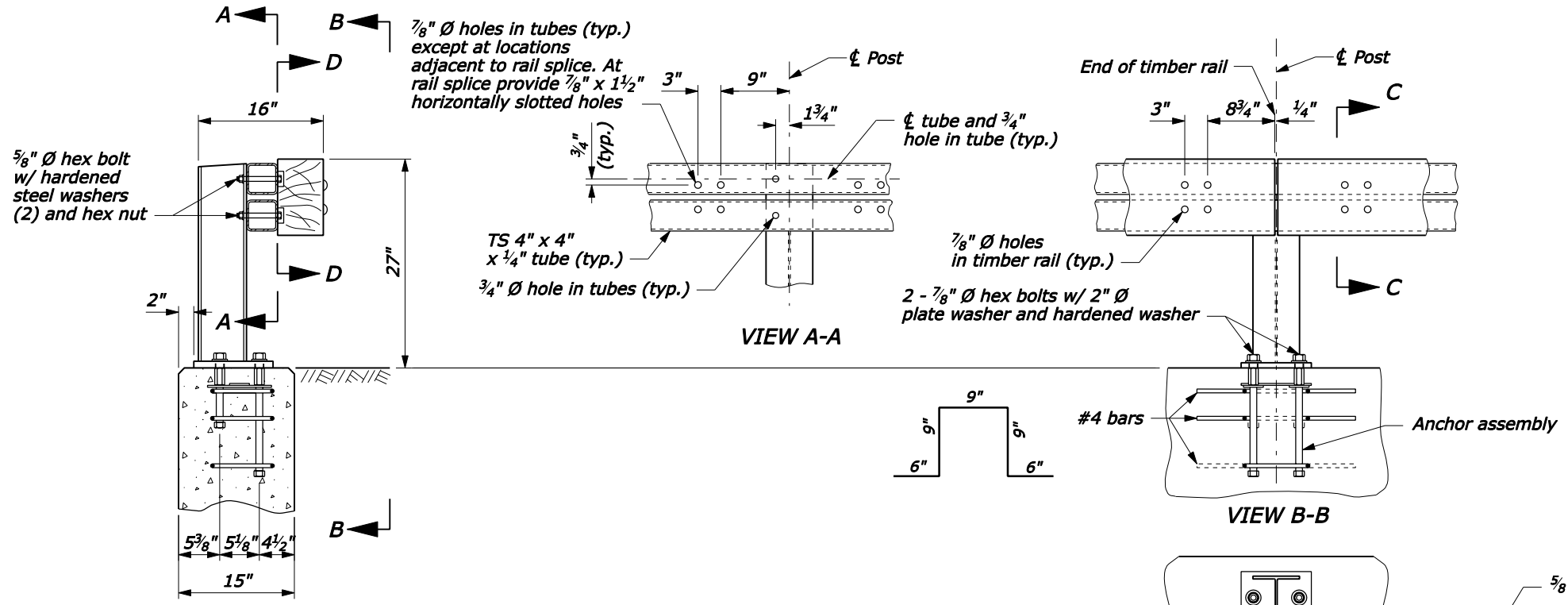
**TS 4" x 4" x 1/4" TUBES ELEVATION**

**BRIDGE RAIL ELEVATION**

**NOTE:**

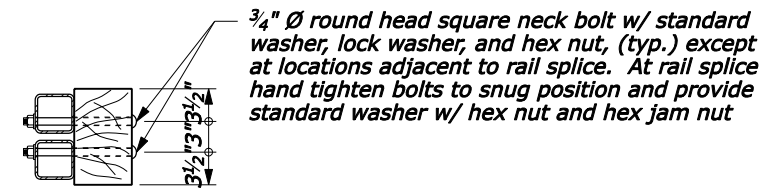
1. Steel for rail posts, base plates, shims, splice sleeves, and anchor assembly plates conforms to ASTM A36. Structural tubing for rails conforms to ASTM A500, Grade B. Paint all metal components of the bridge rail except post base shims, anchor assemblies, and rail splice sleeves. Galvanize post base shims, anchor assemblies, and rail splice sleeves. Hex bolts conform to AASHTO M164 (ASTM A325). Hex coupling nuts conform to ASTM A563, Grade C, D, or DH and shall have a center stop. All other fasteners conform to ASTM A307. See Special Contract Requirements for painting.
2. Shop fabricate structural steel. Submit shop drawings to the CO for approval before fabrication. Provide drawings showing rail section lengths, splice locations, rail post spacing, and fastener lengths. Welding conforms to ANSI/AASHTO/AWS D1.5. Use a certified welder. Fabricate all steel before galvanizing or painting.
3. Section lengths of TS 4" x 4" rails shall be continuous over a minimum of three posts.
4. Provide neat cement grout consisting of a mixture of cement and water mixed to a smooth viscous paste.
5. Erect the rail parallel to grade.
6. Timber conforms to Subsection 710.08.

FOR COMMENT

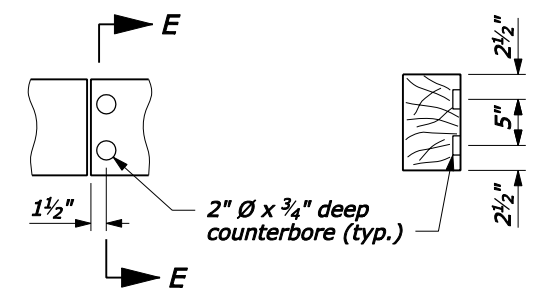


**TYPICAL SECTION @ POST**

**PLAN VIEW @ POST**



**SECTION C-C**



**VIEW D-D**

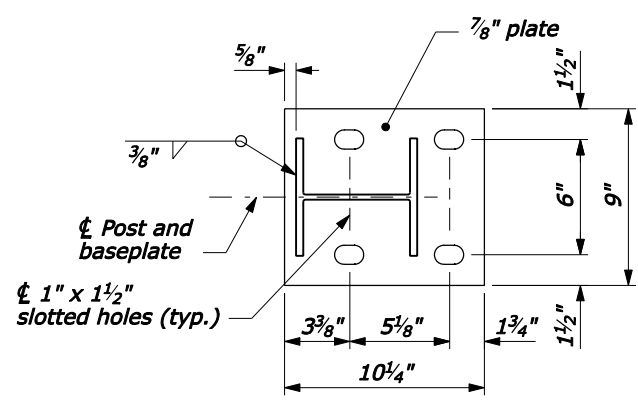
**SECTION E-E**

NO SCALE

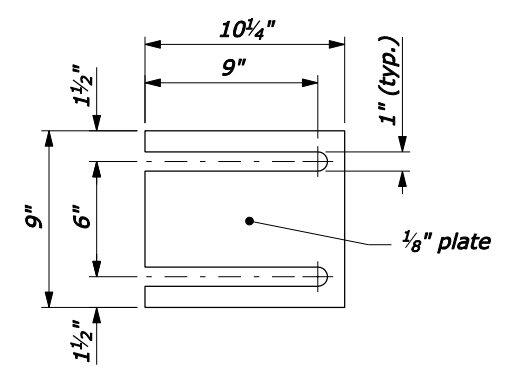
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD <b>STEEL TUBE-BACKED TIMBER BRIDGE RAIL</b>	
Sheet 1 of 3	
STANDARD APPROVED FOR USE --/----	STANDARD
REVISED: DRAFT: 6/2005	617-75

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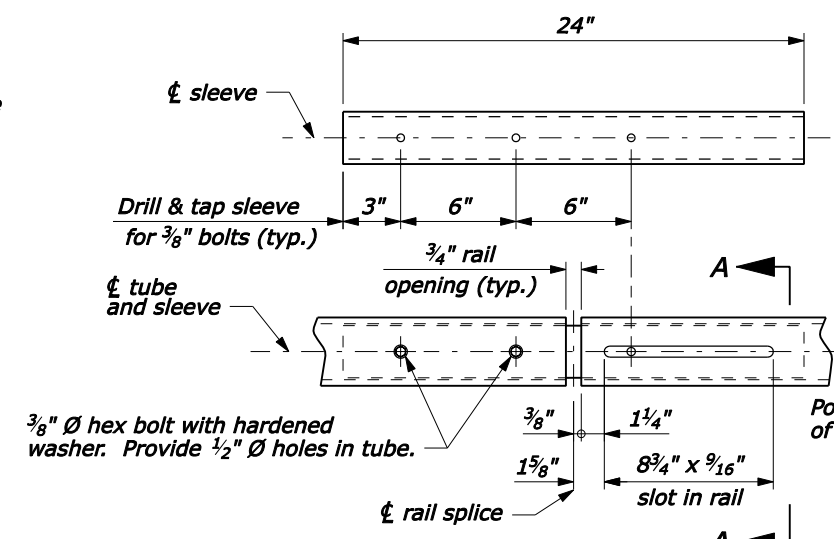
**FOR COMMENT**



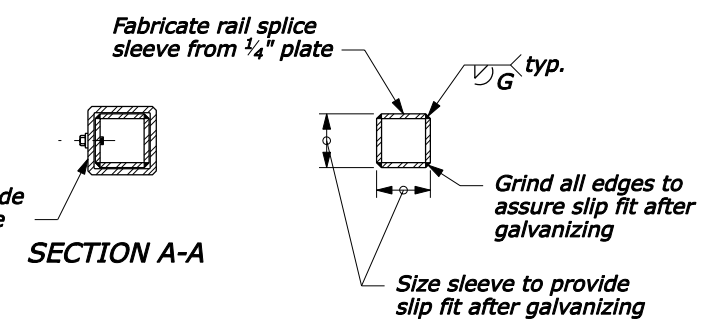
**BASEPLATE DETAIL**



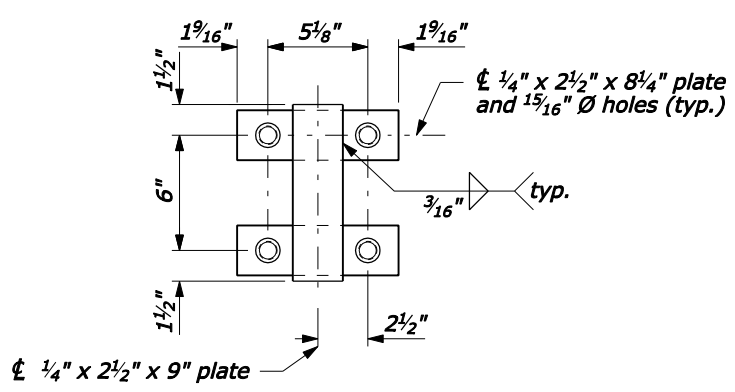
**RAIL POST BASE SHIM**



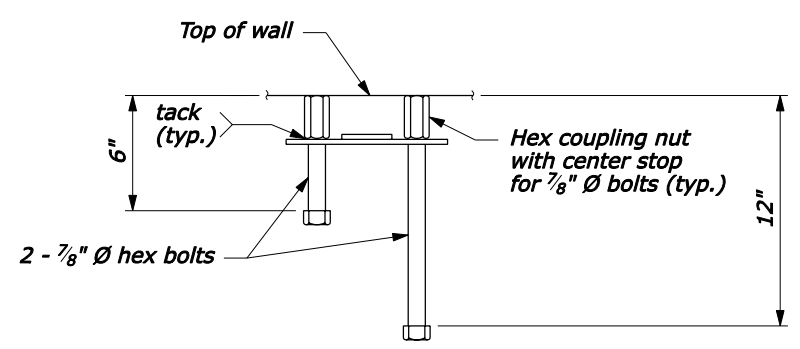
**RAIL SPLICE DETAIL**



**SLEEVE**

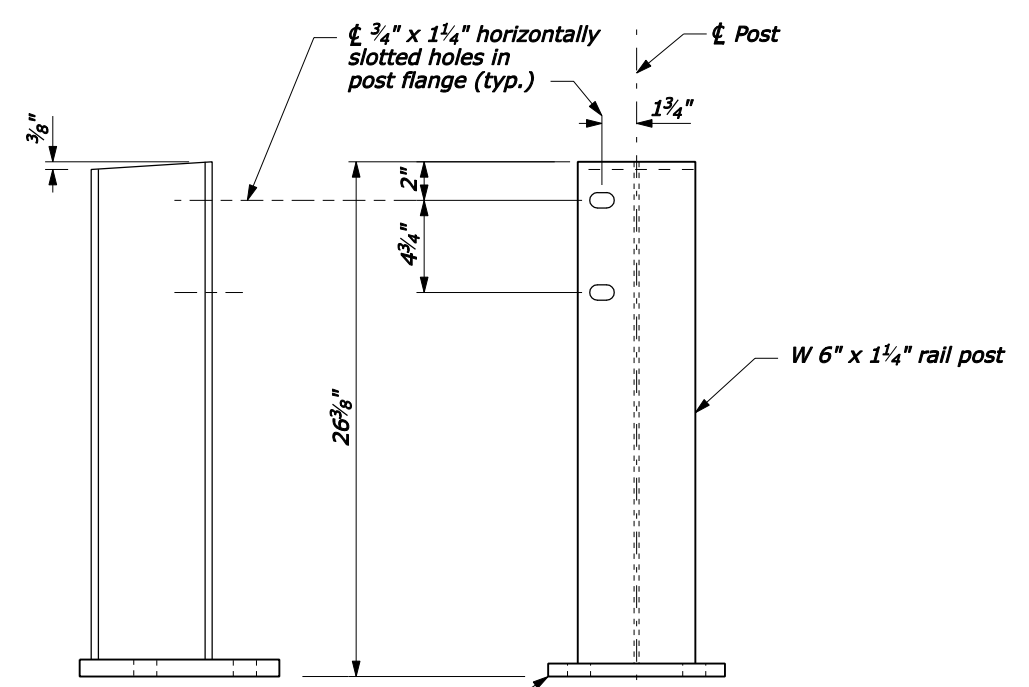


**PLAN**

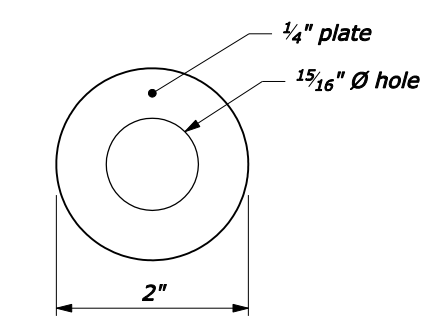


**ELEVATION**

**ANCHOR ASSEMBLY**



**POST ASSEMBLY**

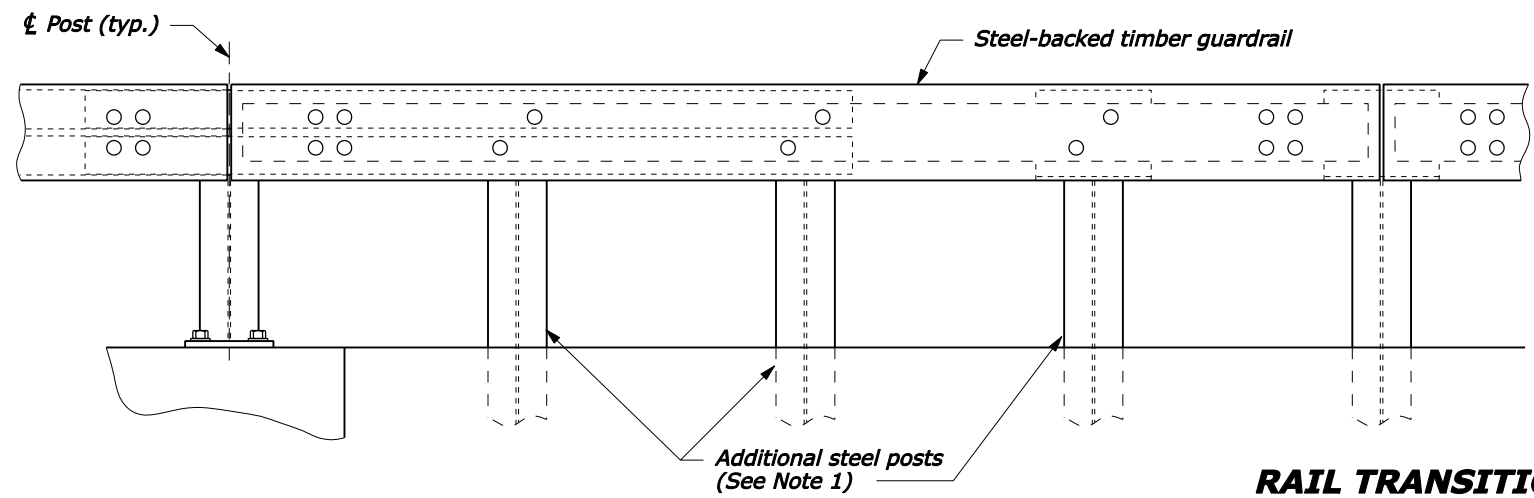


**PLATE WASHER**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD <b>STEEL TUBE-BACKED TIMBER BRIDGE RAIL</b> Sheet 2 of 3	
STANDARD APPROVED FOR USE --/----	STANDARD 617-75
REVISED: DRAFT: 6/2005	

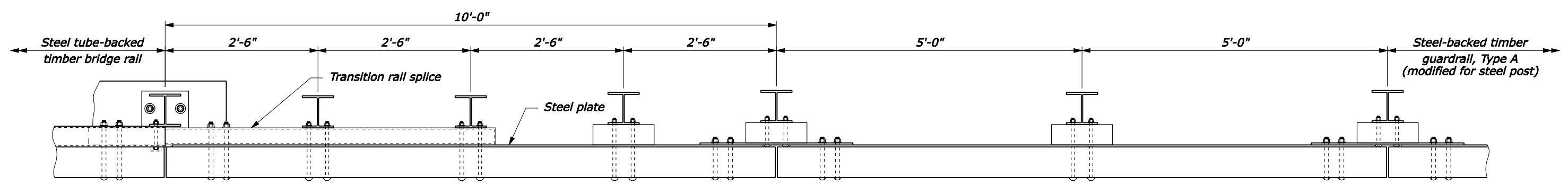
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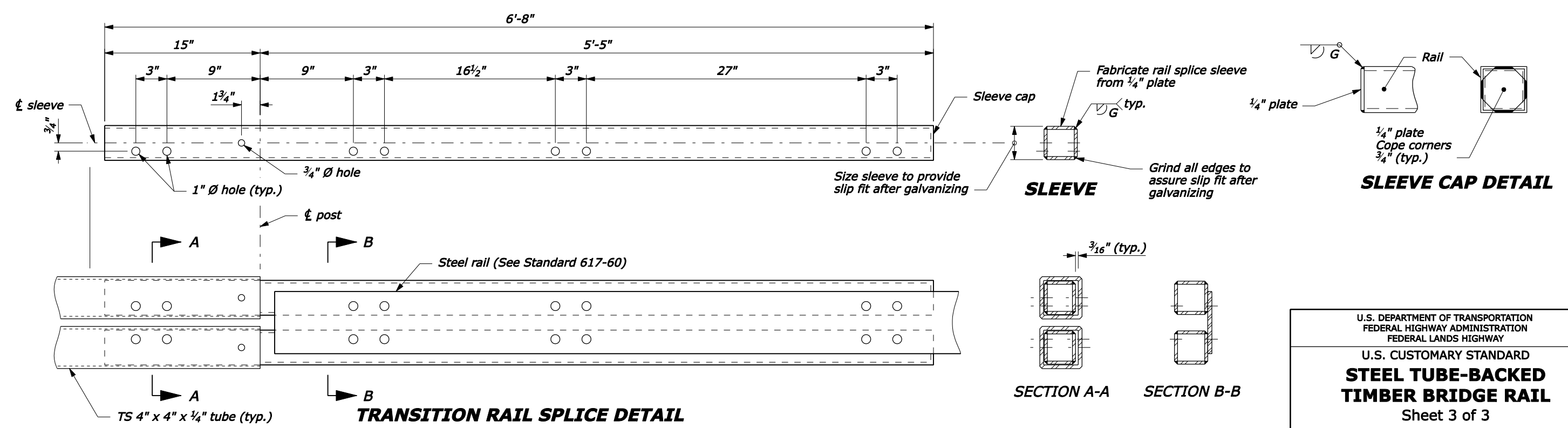
**NOTE:**  
 1. At each additional post provide 2<sup>5</sup>/<sub>8</sub>" Ø round head square neck bolts with plate washer and hex nut, a 3/4" x 2 1/2" slot in steel plate, and 3/4" Ø holes in timber rail, steel post, and timber block. See Standard 617-60, Steel-backed timber guardrail, Type A (modified for steel post).

**FOR COMMENT**

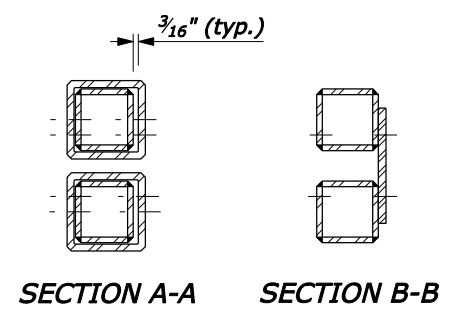
**RAIL TRANSITION ELEVATION**



**RAIL TRANSITION PLAN**



**TRANSITION RAIL SPLICE DETAIL**



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD <b>STEEL TUBE-BACKED TIMBER BRIDGE RAIL</b> Sheet 3 of 3	
STANDARD APPROVED FOR USE --/----	STANDARD 617-75
REVISED: DRAFT: 6/2005	

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