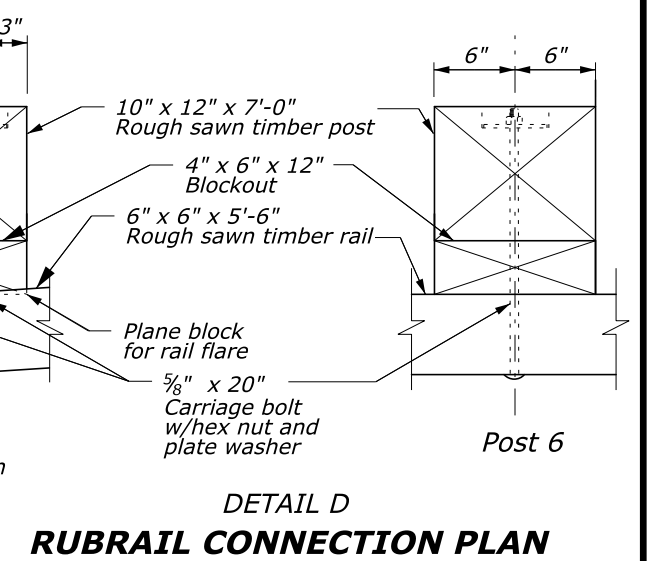
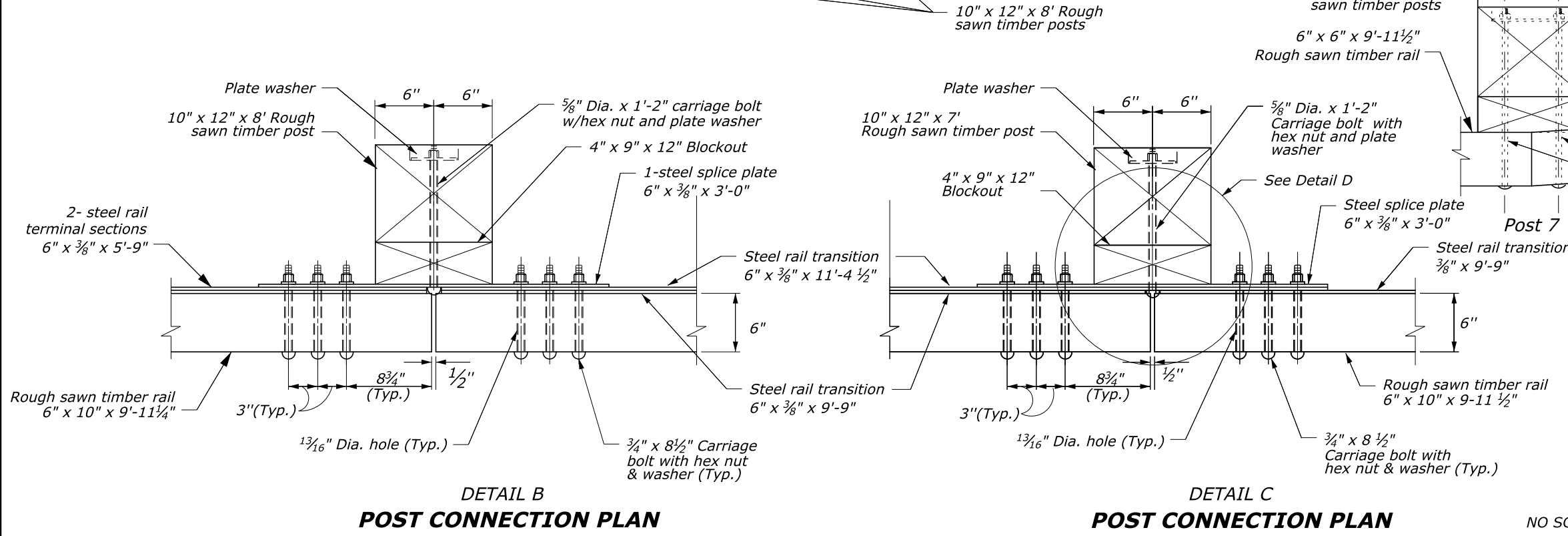
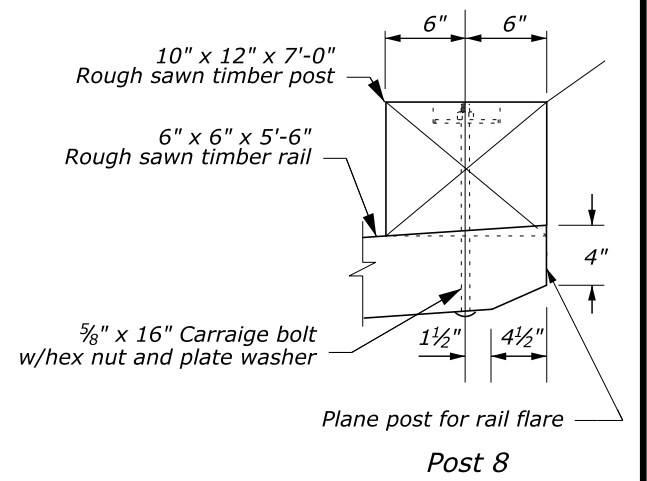


- NOTES:**
- See Sheet 2 of 3 for Sections A-A through C-C, and post connection Detail A. See Sheet 3 of 3, for steel rail details.
  - Use weathering steel for all structural steel and fastener hardware.
  - Transition shown for curved end structure. For transition to a straight parapet end, install the timber rail so that the face of the timber rail is offset 1-inch towards the roadway.



**DETAIL D**  
**RUBRAIL CONNECTION PLAN**

U.S. DEPARTMENT OF TRANSPORTATION  
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EASTERN FEDERAL LANDS HIGHWAY DIVISION

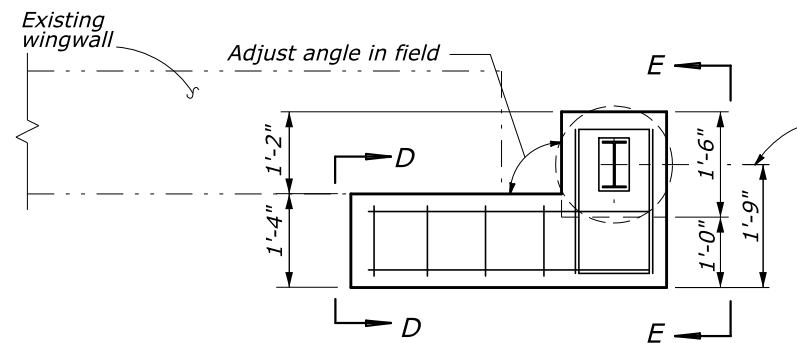
U.S. CUSTOMARY DETAIL

**STEEL-BACKED TIMBER GUARDRAIL  
TEST LEVEL 2 TRANSITION TO  
STRAIGHT OR CURVED-END STRUCTURE**  
Sheet 1 of 3

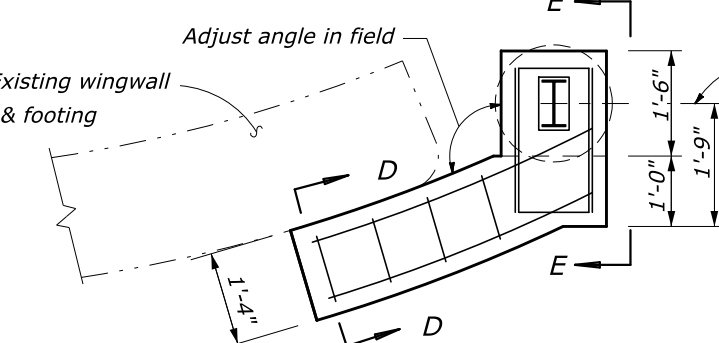
DETAIL APPROVED FOR USE	DETAIL
APPROVED: MAY 2011 REVISED: MAY 2020	E617-67

NO SCALE

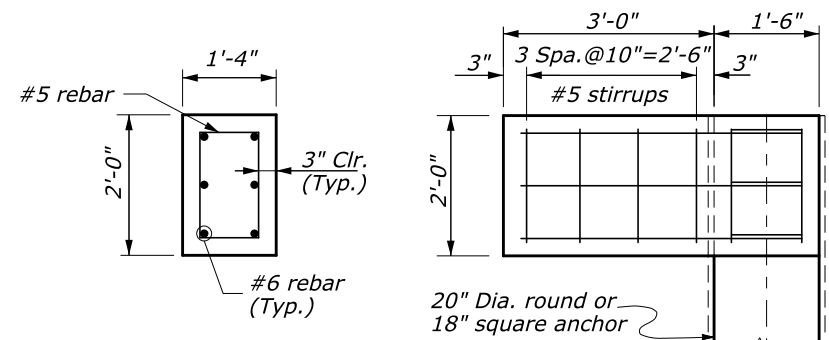
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**PLAN FOR NON-FLARED WINGWALL**



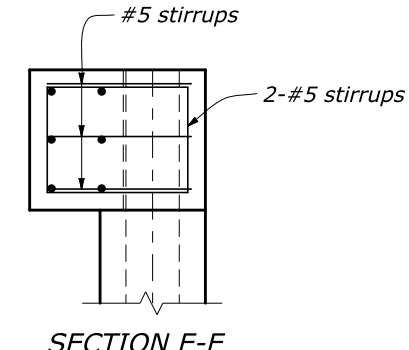
**PLAN FOR FLARED WINGWALL**



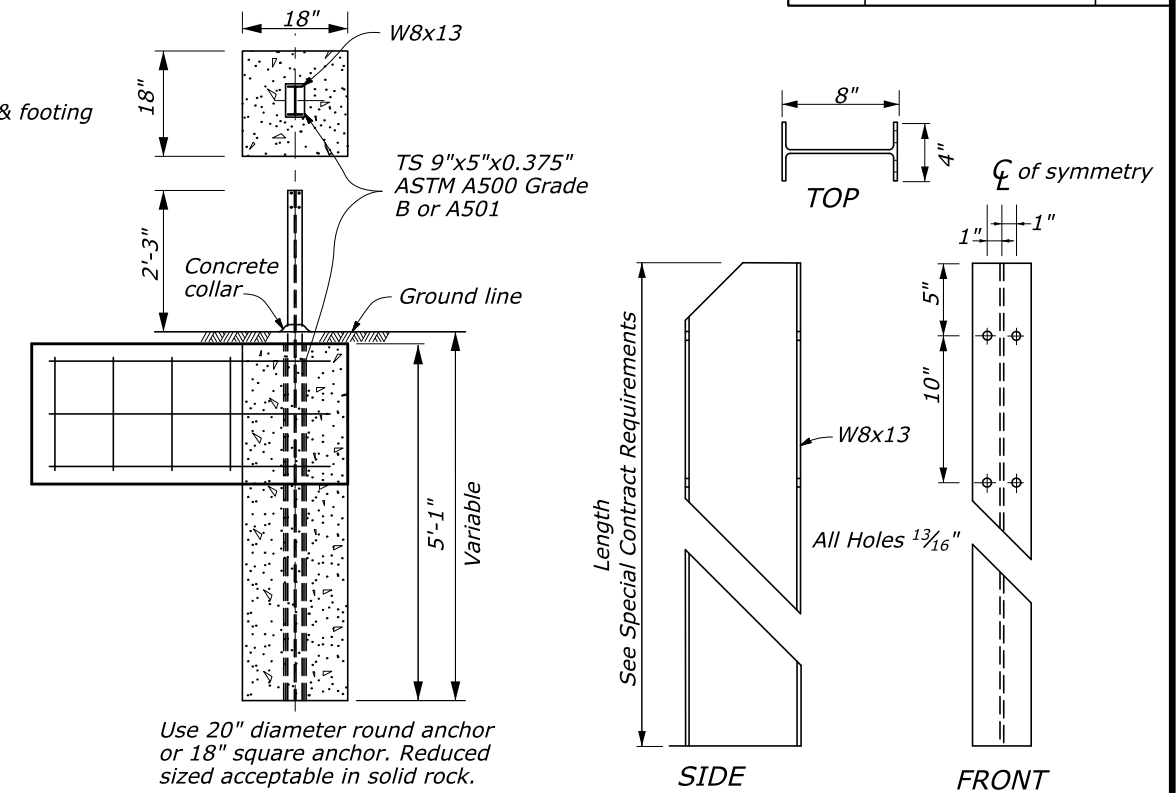
**SECTION D-D**  
(Wingwall Not Shown)

**ELEVATION**  
(Wingwall Not Shown)

**CONNECTION TO CONCRETE ANCHOR**  
(Post Not Shown)

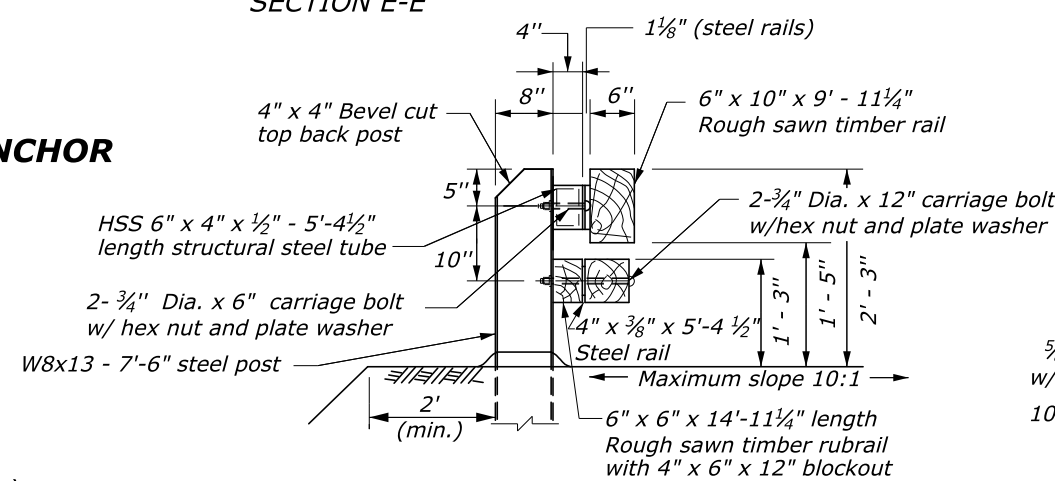


**SECTION E-E**

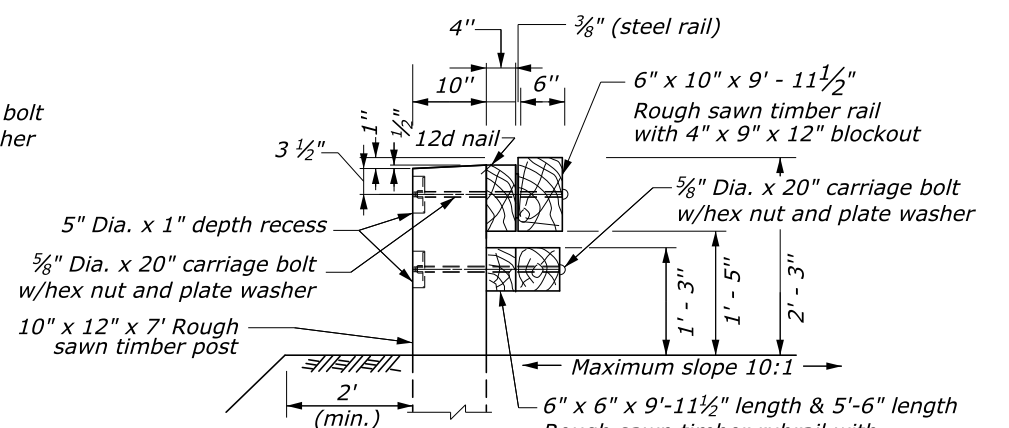


Use 20" diameter round anchor or 18" square anchor. Reduced sized acceptable in solid rock.

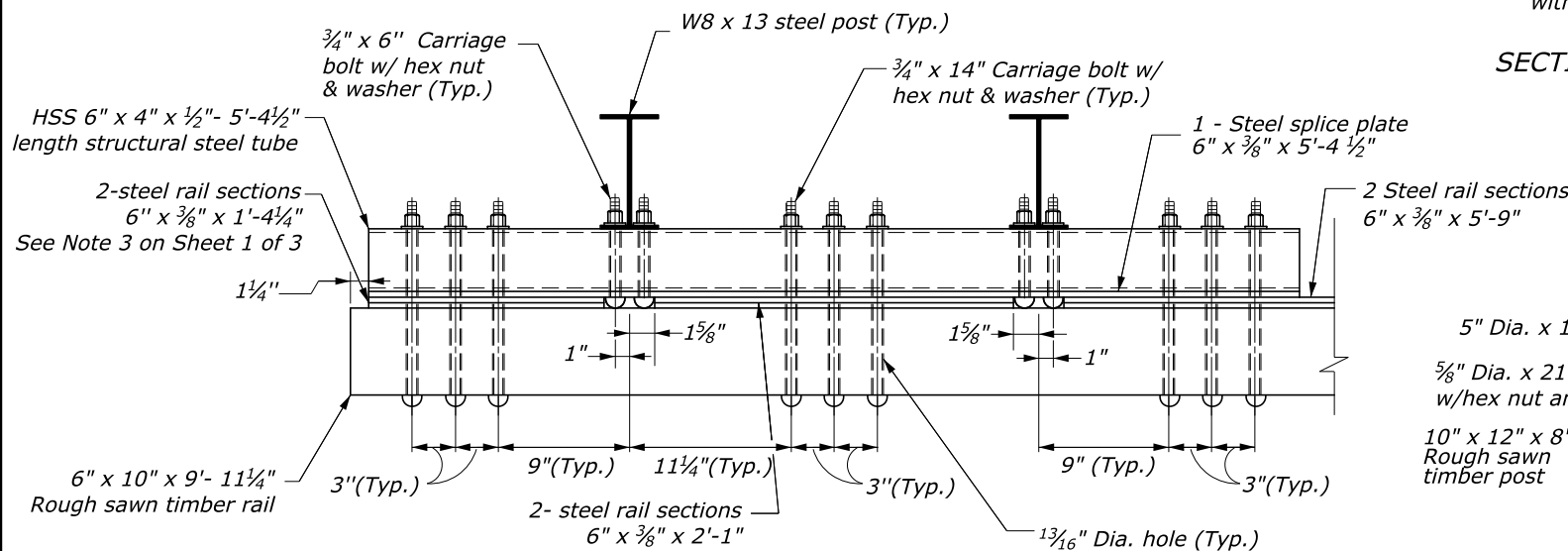
**CONCRETE ANCHOR FOR GUARDRAIL POST**



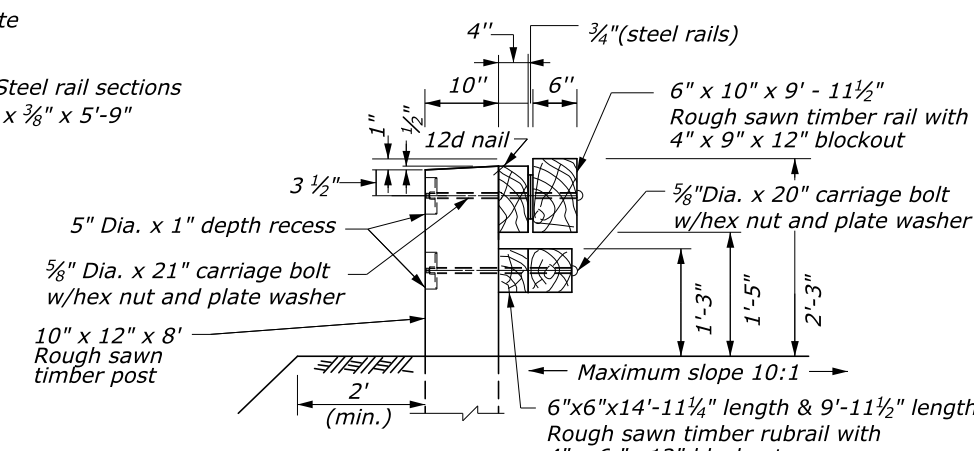
**SECTION A-A**



**SECTION C-C**



**DETAIL A**  
**POST CONNECTION PLAN**



**SECTION B-B**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
EASTERN FEDERAL LANDS HIGHWAY DIVISION

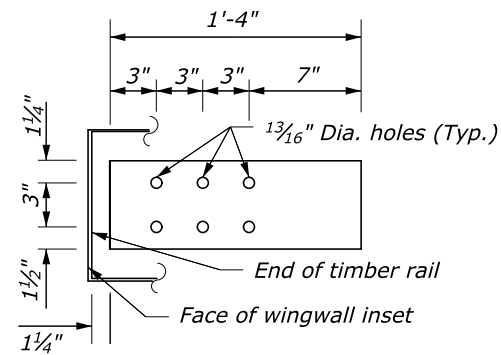
U.S. CUSTOMARY DETAIL

**STEEL-BACKED TIMBER GUARDRAIL  
TEST LEVEL 2 TRANSITION TO  
STRAIGHT OR CURVED-END STRUCTURE**  
Sheet 2 of 3

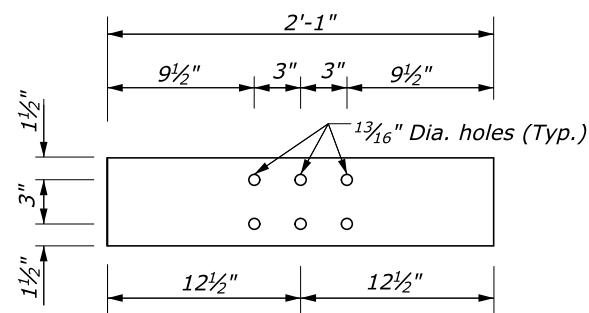
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APPROVED: MAY 2011  
REVISED: MAY 2020

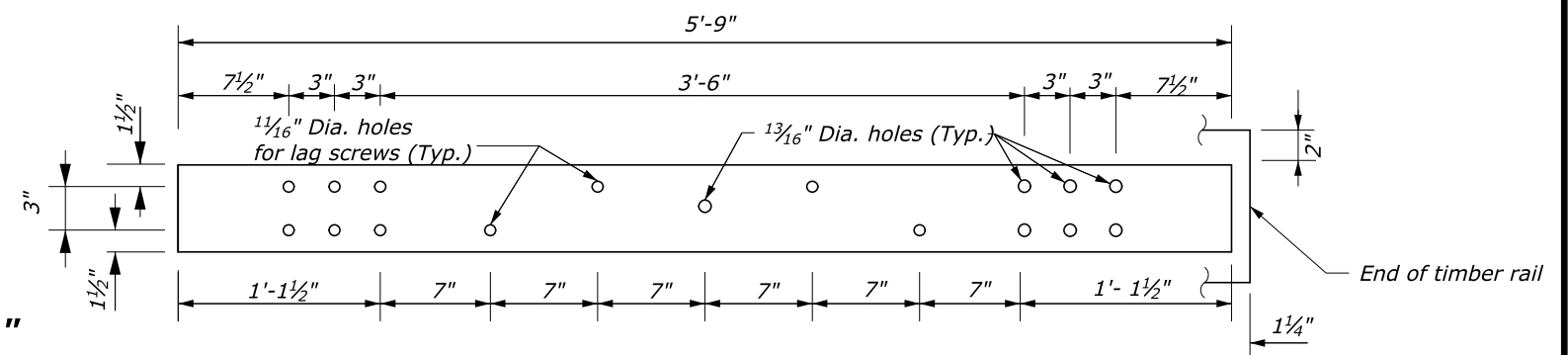
DETAIL  
E617-67



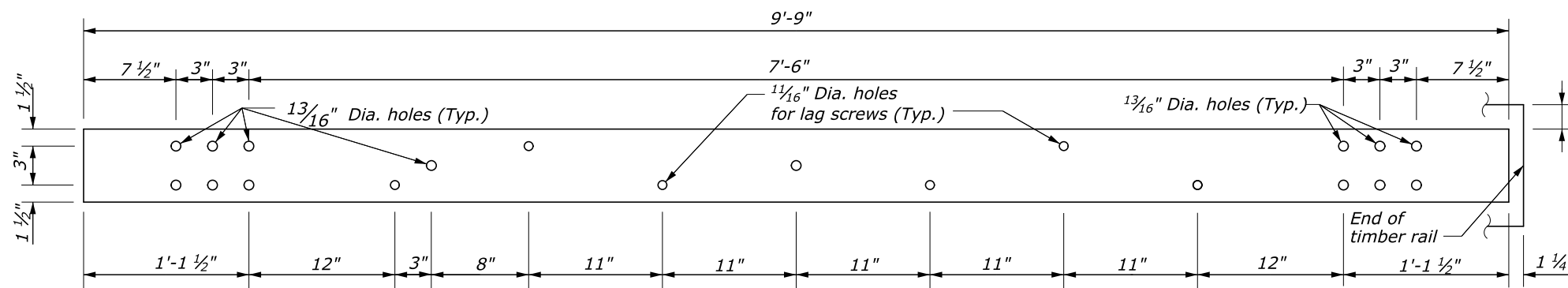
**TERMINAL SECTION 6" x 3/8" x 1'-4"**



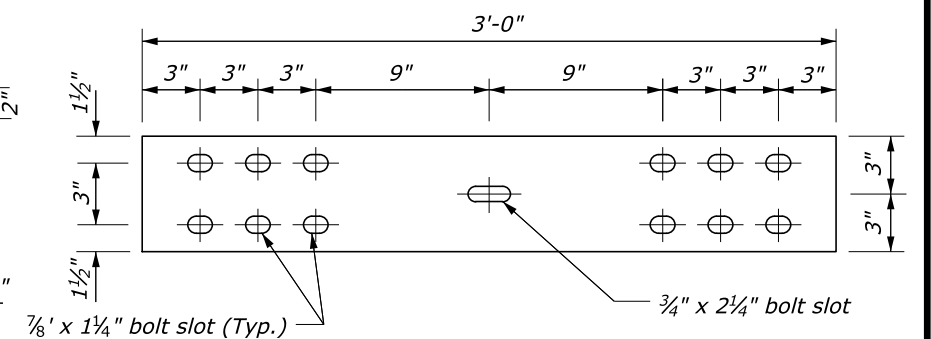
**TERMINAL SECTION 6" x 3/8" x 2'-1"**



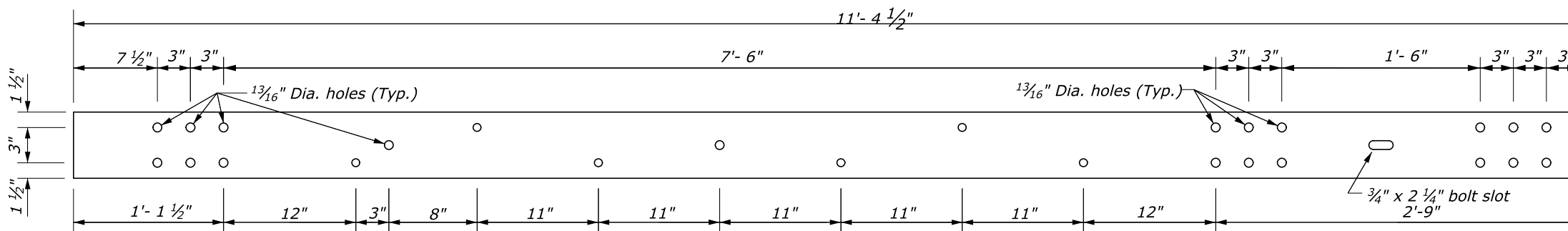
**TERMINAL SECTION 6" x 3/8" x 5'-9"**



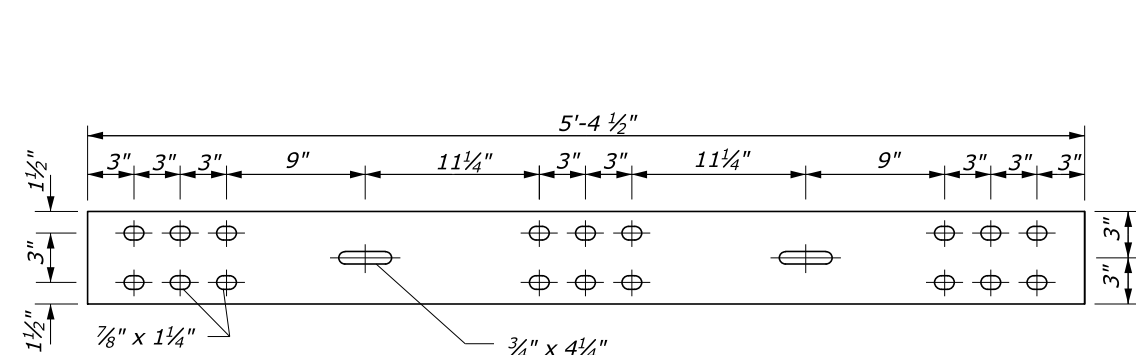
**TRANSITION SECTION 6" x 3/8" x 9'-9"**



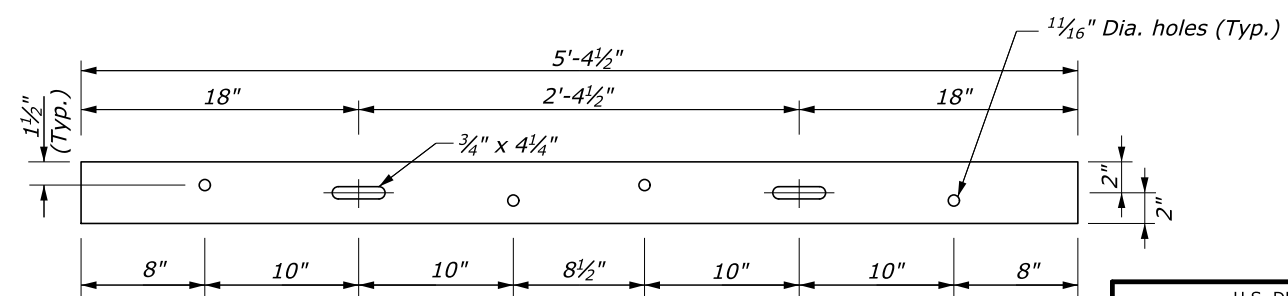
**STEEL SPLICE PLATE 6" x 3/8" x 3'-0"**



**TRANSITION SECTION 6" x 3/8" x 11'-4 1/2"**



**STEEL SPLICE PLATE 6" x 3/8" x 5'-4 1/2"**



**TERMINAL SECTION (RUBRAIL) 4" x 3/8" x 5'-4 1/2"**

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NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
<b>STEEL-BACKED TIMBER GUARDRAIL TEST LEVEL 2 TRANSITION TO STRAIGHT OR CURVED-END STRUCTURE</b> Sheet 3 of 3	
DETAIL APPROVED FOR USE	DETAIL
APPROVED: MAY 2011 REVISED: MAY 2020	E617-67