

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**BRIDGE RAILING, 3 TUBE WITH PICKETS**

BRG:VZ

1 of 2

APPR:JAB:MJF:03-17-20  
APPR:FHWA:04-03-20

**a. Description.** This work consists of fabricating and constructing the Bridge Railing, 3 Tube with Pickets in accordance with the plans, section 711 and subsection 908.09 of the Standard Specifications for Construction except as noted in this special provision.

**b. Materials.**

1. Ensure rail posts and base plates are in accordance with the requirements of *AASHTO M270M/M270 Grade 50*.

2. Ensure hollow structural tubing is in accordance with the requirements of *ASTM A500/A500M, Grade C*. Ensure silicon content is less than 0.06 percent or between 0.15 and 0.25 percent.

3. Ensure pickets are in accordance with the requirements of *ASTM A513/A513M* with  $F_y = 36$  kips per square inch (ksi) minimum or *ASTM A500/A500M Grade B*.

4. Ensure picket carrier angles, anchor plates and splice tube plates are in accordance with the requirements of *AASHTO M270M/M270 Grade 36*.

5. Ensure countersunk machine screws are in accordance with the requirements of either *ASTM F835*, *ASTM A354* and are galvanized in accordance with *AASHTO M232M/M232*, *SAE 304* stainless steel or approved equal.

6. Ensure bolts, used as picket angle fasteners, are in accordance with the requirements of *ASTM F3125/F3125M Grade A 325*. Ensure washers are in accordance with the requirements of *ASTM F436/F436M Type 1* and nuts are in accordance with the requirements of *ASTM A563 Grade DH* or *ASTM A194/A194M Grade 2H*.

7. Ensure round head bolts, used as rail fasteners, and anchor bolts are in accordance with the requirements of *ASTM A449*. Ensure washers are in accordance with the requirements of *ASTM F436/F436M Type 1* and nuts are in accordance with the requirements of *ASTM A563 Grade DH*.

8. Ensure all hardware is galvanized in accordance with the requirements of *AASHTO M232M/M232*. Galvanized nuts must be tapped oversize in accordance with *ASTM A563* and meet Supplementary Requirements S1 (Lubricant and Rotational Capacity Test for Coated Nuts) and S2 (Lubricant Dye). Ensure all other steel elements are galvanized in accordance with the requirements of *ASTM A123/A123M*.

9. Ensure all steel, except the 5/8 inch anchor plate, is painted black (AMS-STD-595,

Colors Used in Government Procurement color number 17038) in accordance with section 915 of the Standard Specifications for Construction, including the heads of 7/8 inch round head bolts.

**c. Construction.** Construct bridge railing in accordance with section 711 of the Standard Specifications for Construction, Standard Plan B-27 Series, and the contract.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**Pay Item**

**Pay Unit**

Bridge Railing, 3 Tube with Pickets .....Foot

**Bridge Railing, 3 Tube with Pickets** will be paid for by the length based on plan quantities. All the nuts, bolts, washers, and other materials required to construct the railing will be included in and paid for as **Bridge Railing, 3 Tube with Pickets**.