

SECTION 1022—STEEL BRIDGE HAND RAILING

1022.1 DESCRIPTION—This work is construction of a steel bridge hand railing.

1022.2 MATERIAL—

(a) Railing.

- Pipe for the Rails—[ASTM A 53](#), Type F, Schedule 40, certified as specified in [Section 106.03\(b\)3](#).
- Plates—AASHTO M 270/M 270M ([ASTM A 709/A 709M](#)), Grade 250 (Grade 36). Certify as specified in [Section 106.03\(b\)3](#).
- Welding Material—[Section 1105.02\(t\)](#)

(b) Toggle Bolts. Use an acceptable galvanized type capable of supporting a 4.5 kN (1,000-pound) load in tension, when tested through a 19 mm (3/4-inch) round hole. Toggle bolts may be cadmium-plated to meet the requirements of [ASTM B 766 \(ASTM A 165\)](#), Class 5 (Type TS), in place of being galvanized.

 Certify as specified in [Section 106.03\(b\)3](#).

(c) Malleable Iron Wedges, Shims, End Caps, Washers, and Nuts. Certify as specified in [Section 106.03\(b\)3](#).

(d) Anchor Bolts, and Nuts and Washers for Anchor Bolts. [Section 1105.02\(c\)2](#)

(e) Caulking Compound. [Section 705.8](#)

(f) Galvanizing. [Section 1105.02\(s\)](#)

1022.3 CONSTRUCTION—Construct as shown on the [Standard Drawings](#) and as follows:

(a) General. Submit shop drawings for review and acceptance before starting fabrication.

 Before erection, coat the surface of posts in contact with concrete or masonry, using caulking compound. After erection and alignment, use caulking compound to seal openings between metal surfaces and concrete.

 After the concreting and other operations have been completed, clean the railing. Use an acceptable solvent cleaner to remove accumulations of oil, grease, dirt, and foreign materials.

(b) Assembly. Remove blemishes and scratches from exposed surfaces. Assemble the rail members with the rails parallel to grade and with the posts normal to grade. Place joints as indicated.

 Make cuts true, smooth, and free from burrs or ragged edges.

 Fillet drill all re-entrant cuts before cutting.

(c) Welding. [Section 1105.03\(m\)](#)

1022.4 MEASUREMENT AND PAYMENT—Meter (Linear Foot)

 Measured from center to center of end posts. The Department will not deduct gaps at lighting pole foundations.