MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**DOWNSPOUT REPLACEMENT, SPECIAL**

BRG:JJA 1 of 2 APPR:SCK:REL:05-10-22

**a. Description.** This work consists of constructing the downspout replacement in accordance with the plans and standard specifications except as modified herein.

**b. Materials.**

1. Furnish downspouts in accordance with subsection 909.08.A of the Standard Specifications for Construction.

2. Furnish galvanized pipe roller hanger system that meet Anvil “Adjustable Steel Yoke Pipe Roll”, or Piping Technology & Products, Inc. “Roller Hanger”, or an approved equal.

3. Attach hangers to the bottom of the deck with cast-in-place concrete inserts that meet Dayton Superior, Type F5, F42, or F50; Williams Form, Type F16; or Meadow Burke, Type FX-5, or approved equal.

4. Furnish 2 inch wide by 0.25 inches thick galvanized steel pipe clamps meeting *ASTM A36/A36M*. Anchor pipe clamps with 0.5 inch diameter adhesive anchor bolts, nuts, and washers meeting subsection 908.14 of the Standard Specifications for Construction. Furnish adhesive anchors from the Qualified Products List (712.03J).

5. Galvanize material using the hot dip process in accordance with subsection 707.03.D.20 of the Standard Specifications for Construction.

**c. Construction**. Install the downspout and fittings in accordance with section 717 of the Standard Specifications for Construction, and the manufacturer’s recommendations. Connect the downspout to the existing pier using pipe clamps and adhesive anchor bolts. Install adhesive anchor bolts in accordance with subsection 712.03.J of the Standard Specifications for Construction. Space and install hangers and clamps in accordance with the manufacture’s recommendations.

Submit shop drawings to the Engineer for review and approval prior to fabrication. Do not begin fabrication until the Engineer has approved the shop drawings. Complete fabrication operations prior to galvanizing.

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

**Pay Item Pay Unit**

Downspout Replacement, Spec, Type \_\_ Each

**Downspout Replacement, Spec, Type \_\_** includes fabricating and replacing bridge deck drain downspouts, furnishing and installing the pipe hangers, and clamping the pipe to the existing piers. **Downspout Replacement, Spec, Type \_\_** will be paid for each type as specified on the plans. The work for the removal of the existing downspouts is paid for separately.