MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**TYPE D HANDHOLE**

DET:MS 1 of 2 APPR:EMS:DBP:08-29-21

**a. Description**. This work consist of constructing a custom handhole and providing hardware, connectors, fittings, and all material necessary to complete the work. The Contractor maintains responsibility for maintenance, vandalism and accident damage to the handhole and all other material installed, or to be installed. The following abbreviation apply to this special provision and to the plans:

Department of Public Works DPW

**b. Materials**. Use material in accordance with section 918 of the Standard Specifications for Construction.

1. Furnish a handhole that meets the live load requirements of AASHTO HS 25 for wheel loading.

2. Furnish Grade 4500 concrete in accordance with section 1004, which must attain a 28-day compressive strength of 4500 psi.

3. Provide smooth or deformed welded wire fabric in accordance with *ASTM A1064*/A1064M.

4. Furnish reinforcing steel meeting the requirements of *ASTM A615/A615M,* *Grade 60* rebar. Bend bars and place in accordance with the latest ACI standards.

5. Seal the top seam between the top and sides with 1-inch butyl rubber rope mastic.

6. Furnish handhole with of the capability of accommodating round cover and have integral wall and base.

7. Furnish the following dimensions and requirements as listed below:

A. One 7/8-inch hot-dipped galvanized rolled steel u-bolt pulling irons on each wall.

B. Six ½-inch threaded inserts embedded in each wall.

C. One, 12-inch diameter by 3-inch-deep sump dish in the base, with a ¾-inch drain hole with plug.

D. Conduit knockouts on each wall as shown on the plans.

E. Ensure the handhole has a sloped floor toward drain entrance.

F. For frame and cover, provide a heavy-duty frame and cover manufactured by East Jordan, Neenah Foundry, or a Engineer approved equal, with lettering “DPW DETROIT TRAFFIC” cast into the cover.

G. Nominal interior dimensions of handhole: 48-inch square with 42-inch depth.

8. Install cable racks 7 inches below rail and 28 inches apart.

9. The handhole has a 5/8-inch by 8-foot copper clad steel ground rod protruding approximately 4 to 5 inches near the perimeter of the hole, not in the center, in accordance with *NEC standard, Article 250 for Grounding and Bonding*.

**c. Construction**. Construct the handhole to accept a heavy-duty frame and cover centered atop the handhole. Ensure the inner surface of handhole is smooth.

Ensure construction is in accordance with section 819 of the Standard Specifications for Con­struction and the detail on the plans. Ensure in locations where the handhole is placed over existing conduit duct bank, the handhole is constructed on site.

Install 8-inch brick wall as shown on the handhole details sheet #1103; plan sheet 58 of 67.

**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**

Hh, Type D, Detroit Each

**Hh, Type D, Detroit** includes constructing a square handhole and providing hardware, connectors, fittings, grounding, and all material necessary to complete the work as shown on the plans. Required excavation, granular material, backfill, disposal of waste excavated material, and bulk-heading of unused openings are also included and are not paid for separately. Restoration of surrounding area to original condition after installation of handhole is included in this item and will not be paid separately.