MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**STEEL CASING PIPE, \_\_ INCH, JACKED IN PLACE, MODIFIED**

DET:MS 1 of 2 APPR:DMG:NAP:10-07-21

**a. Description.** This work consists of furnishing and installing steel casing at the locations shown on the plans. Ensure the casing wall thickness is in accordance with the railroad and municipal utility requirements specified and no substitutions are permitted.

**b. Materials.** Furnish materials in accordance with section 401 of the Standard Specifications for Construction with the exceptions listed below.

For steel casing pipe jacked-in-place under a railroad replace the dimensions in Table 909-18 of the Standard Specifications for Construction for 20 inch, 24 inch and 30 inch nominal sizes with the following:

**Jacked-in-Place Steel Pipe Nominal OD and Wall Thickness**

|  |  |  |
| --- | --- | --- |
| Nominal Size (inch) | Nominal Outside Diameter (inch) | Wall Thickness (inch) |
| 20 | 20.000 | 0.500 |
| 24 | 24.000 | 0.500 |
| 30 | 30.000 | 0.500 |

Steel casing pipe must have a minimum yield strength of 35,000 psi and be in accordance with *ASTM A53/A53M, Type E or S, Grade A or B*.

**c. Construction.** Perform work in accordance with section 401 of the Standard Specifications for Construction and as detailed herein.

Excavate jacking and receiving pits as necessary. Provide and install sheeting, bracing, and other earth retention measures in accordance with section 704 of the Standard Specifications for Construction. Provide site drainage and subsurface dewatering and other items associated with the operation as necessary to facilitate the work.

Attach casing chocks to the carrier pipe and insert into the casing.

For Detroit Public Lighting Department (PLD) installations, bulkhead both ends of the casing and completely grout the annular space between the casing and carrier pipe with flowable fill.

For Detroit Water & Sewerage Department (DWSD) installations, seal the ends of the casing by placing pressure grout between the casing pipe and the surrounding earth in accordance with DWSD detail “Casing Pipe Section for Water Main” as shown on the plans.

Remove pits and backfill the excavation as necessary with material meeting the standard specifications as approved by the Engineer.

For steel casing pipe jacked in place under a railroad, the following will apply in accordance with the current *AREMA Manual:*

1. When steel casing pipe is used, ensure the joints are fully closed by welding or mechanical means as approved by the Engineer.

2. Minimum cover over the casing must be at least 5½ feet from the bottom of railroad tie to the top of the casing pipe at its closest point.

3. Casing pipe must extend beyond the limits of entire railroad right-of-way.

4. Ensure jacking construction requirements are in accordance with the current *AREMA* *Manual, Chapter 1, Part 4*.

**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**

Steel Casing Pipe, \_\_ inch, Jacked in Place, Modified Foot

**Steel Casing Pipe, \_\_ inch, Jacked in Place, Modified** of the size required will be paid for by the length installed. The unit price for **Steel Casing Pipe, \_\_ inch, Jacked in Place, Modified** includes the cost of excavating the pits; providing and installing sheeting, bracing, and any other safety devices; providing jacking equipment; drainage and dewatering; bulkheading the casing ends and filling with flowable fill or pressure grouting the ends (as applicable); and all other items associated with the operation.

The carrier pipe installed within the casing will be paid for separately by standard pay item. The unit price for the carrier pipe includes the cost casing chocks.