

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SMALL DYNAMIC MESSAGE SIGN SUPPORT STRUCTURE

ITS:EG

1 of 2

APPR:MJF:REL:04-12-23
FHWA:APPR:04-12-23

a. Description. This work consists of fabricating, furnishing, and installing a small dynamic message sign (DMS) support structure. Perform all work in accordance with the MDOT Small DMS Sign Support plan sheets, the standard specifications (substituting a DMS sign type for any dynamic message sign reference), the contract, and as specified herein.

b. Materials.

1. Furnish stainless steel bolts (for connecting aluminum angles on DMS cabinet to DMS structure) meeting the requirements of *ASTM A320/A320M, Grade B8M, Class 1*.
2. Furnish high strength bolts, nuts, and washers in accordance with subsection 906.07 of the Standard Specifications for Construction.
3. Furnish steel hollow structural shape for chord members meeting the requirements of *ASTM A500/A500M, Grade B*.
4. Furnish structural steel plate and rolled shape meeting the requirements of *AASHTO M270M/M270, Grade 36 or Grade 50, or Grade 50W*.
5. Furnish conduit, grounding, and risers for electrical and lighting meeting the requirements of section 918 of the Standard Specifications for Construction. Other required material must meet local utility company specifications and the *NEC*.

The basis of acceptance for the fabricated DMS sign support structure is "Fabrication Inspection" per the *MQAP Manual*.

c. Fabrication. Fabricate and weld in accordance with section 707 of the Standard Specifications for Construction, except as modified herein.

1. Base plate warpage must not exceed 1/16 inch per foot.
2. Hot-dip galvanize structural steel in accordance with subsection 707.03.D.20 of the Standard Specifications for Construction, except steel 1/2 inch or thinner is not required to be blast cleaned unless recommended by the galvanizer in order to meet *AASHTO M111M/M111*.

d. Construction. Install the DMS structure in accordance with sections 707 and 810 of the Standard Specifications for Construction.

1. Ensure all site work is complete and power service installed and operational prior to

the site delivery of the DMS structure.

2. Tighten all high strength bolts by the turn of nut method per subsection 707.03.E.6 of the Standard Specifications for Construction.

3. Install signs in compliance with the codes and standards noted on the MDOT DMS Sign Support Plan and Details Standard, and the *AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*.

4. Do not lift the truss by the web members, column caps, or end caps.

5. Grounding of structure includes electrically bonding the foundation reinforcing steel to the anchor bolts, per 20SP-826A - Grounding, Bonding, Surge Protection and Lightning Protection for Intelligent Transportation System Equipment. Foundation paid per 20SP-718A - Dynamic Message Sign Foundation.

6. Remove galvanizing from surface of chord where bonding will take place. After galvanizing is removed, apply conductive grease compound to surface. Attach bonding clamp to chord and remove excess conductive grease compound from surface. Repair exposed areas of the chord with a paint that contains zinc dust in accordance with *ASTM A780/A780M Annex A2*.

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

Pay Item

Pay Unit

Dynamic Message Sign, Small Support Structure, Type ____.....Each

Dynamic Message Sign, Small Support Structure, Type ____ includes fabricating, furnishing, and installing the support structure as shown on the DMS Sign Support Plan and Details of the type required.