SECTION 26 – TRAFFIC CONTROL DEVICES AND LIGHTING

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26.4 GROUND MOUNTED PANEL SIGN SUPPORTS *(Adop. 08-10-17)*

The W-beam structural steel supports for ground mounted panel signs are designed to meet the 2015 AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. As detailed in the SS and Standard Drawings they are also compliant with FHWA's eligibility requirements for roadside hardware. Proper installation is necessary for supports to withstand the design wind loadings and to breakaway during impact from a vehicle in such a manner that vehicle occupants have a significantly reduced chance of being seriously injured or killed.

Particular attention should be paid to the following:

1. There should be no perceivable gap between the upper and middle beam sections at the fuse/hinge plate – the allowable tolerance for this fit is 0 to 1/16 in. Also, the fuse plate/hinge plate attachment hardware should be fully tightened to the specification requirements. Excessive gaps and loose hardware results in premature fatigue in the fuse plates which can result in structural failures. The fuse plates are intentionally weakened via the perforated holes - this feature facilitates breakaway performance during impact. Refer to Standard Drawing E 802-SNGP-05 for fuse plate details.

2. The perforated fuse plate must be installed on the front (traffic approach) side of the sign and the hinge plate on the back side for the supports. Refer to Standard Drawing E 802-SNGP-05 for plate connection details.

3. The hardware at the base plate must be properly tightened within the range provided in the specification. The specified torque values are sufficient so that the structure should not "walk-off" the base and foundation but not so great as to prevent the breakaway slip mechanism from engaging when the structure is impacted.

4. The beams must extend through the entire height of the sign; for signs with an exit panel at least one of the beams must extend to the top of the sign. Refer to Standard Drawing E 802-SNGP-02 for beam placement.

Properly installed sign clips allow an even distribution of the forces transmitted from the sign to the beams improving the service life of the structure. See section 802.09(b) of the SS and the Standard Drawings.

26.5 LIGHTING LEVELS *(Adop. 08-10-17)*

Illumination levels, the amount of light that reaches the pavement, and the Correlated Color Temperature (CCT) can be verified after installation through the use of a Chroma meter. The Office of Traffic Administration has this equipment and may be contacted for this test if needed or desired.

26.6 DURABLE PAVEMENT MARKINGS *(Adop. 10-01-15)*

As the final, permanent pavement markings are one of the last items to be installed, with most projects they are installed in late fall, if durable markings are specified and the markings will be installed during cold weather the PE/S should be willing to consider alternative materials that are better suited for the prevailing conditions. The District Traffic Office should be consulted before a change of marking material is approved. The PE/S should also keep in mind that the pavement surface needs to be dry for successful application of any marking material. The standard specifications require that the surface be visibly dry but the contractor may also want to perform a pavement moisture test (ASTM D 1461) to verify.

Alternatives that may be substituted for durable markings in late season, cold weather conditions include, but are not limited to, methyl methacrylate (MMA) , low temperature water-borne paint, cold weather thermoplastic. Price adjustment, either up (e.g. for MMA) or down (e.g. paint), may be needed with a substitute material.

Consideration may also be given to installing temporary markings (paint, type I tape, 40 mil thermoplastic) and postponing the installation of the final markings until weather conditions are acceptable.