

## **Section 2423. Support Structures for Highway Signs, Luminaires, and Traffic Signals**

### **2423.01 DESCRIPTION.**

Fabricate, furnish, and erect support structures for highway signs, luminaires, and traffic signals. Design according to the contract documents and the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

### **2423.02 MATERIALS.**

Apply [Section 4187](#).

### **2423.03 CONSTRUCTION.**

#### **A. General Requirements.**

1. Before fabrication, submit shop drawings according to [Article 1105.03](#).
2. Provide the Engineer ample notice:
  - Prior to the start of shop fabrication so that required inspection can be performed, and
  - Prior to shipment so that final shop inspections can be performed.
3. Fabricate support structures according to the contract documents. Present proposed design or material changes to the Engineer in written form, plan form, or both. Do not make changes without the Engineer's written approval. The Engineer will not approve substitution of material or design detail changes which constitute a reduction in quality or strength of the structure.
4. The Contractor is to defend and save the Contracting Authority harmless from any and all patent infringement suits resulting from the use of any design, device, material, process, portion, or phase thereof, employed in the manufacture or use of overhead sign support structures according to the contract documents and [Article 1107.04](#).

#### **B. Fabrication and Assembly.**

Fabricate structural steel supports according the Structural Welding Code – Steel, AWS D1.1, current edition, or the Structural Welding Code – Aluminum, AWS D1.2, current edition, with the following exceptions:

1. Apply AWS D1.1, Section 6, Part D to non-destructive tests of welds for steel structures, and include tests of column-to-base plate full penetration welds. Apply AWS D1.2, Section 5, to non-destructive tests of welds for aluminum structures and limit tests to the flange connections of the overhead section and the end supports.
2. Apply [Article 2408.03, B](#), relative to qualifications of welders, welding operators, and tackers and the effective period of their qualifications.
3. The provisions of AWS D1.2, Paragraph 9.1.2 do not apply. Structures are Class II structures.
4. Clean weld splatter, black smoke, and residue from fabrication before shipping completed structure to the job site. The fabricator is required to warrant that each complete structure is free from misfits or structural deficiencies prior to shipment.

#### **C. Packing.**

Pack prefabricated structural units in a manner to prevent damage or defacement during transportation.

#### **D. Acceptance and Rejection.**

Failure of the structure to meet requirements of this specification may be cause for rejection.

### **2423.04 METHOD OF MEASUREMENT.**

Measurement for items for construction of support structures for highway signs, luminaires, and traffic signs will be as follows:

**A. Superstructure.**

Each overhead sign support structure will be counted by the span and type specified and shown in the contract documents.

**B. Substructures.**

1. Excavation: as specified in [Article 2402.04](#) for the class shown in the contract documents.
2. Concrete: as specified in [Article 2403.04](#).
3. Reinforcement: as specified in [Article 2404.04](#).

**2423.05 BASIS OF PAYMENT.**

Payment for acceptable portions of the following items of work will be at the contract unit price as follows:

**A. Superstructure.**

1. For overhead sign support structures, payment will be for each span and type specified.
2. Payment is full compensation for the following:
  - a. Furnishing prefabricated structural units, supports, necessary fastenings for assembly of the structure, anchor bolts, and fittings for bolting the upright supports to the concrete bases.
  - b. Erection of the structure as designated by the contract documents or by the Engineer.

**B. Substructures.**

1. Excavation:
  - a. As specified in [Article 2402.05](#) for the class shown in the contract documents.
  - b. Payment is full compensation for excavation, placing backfill material, compaction of backfill material, replacement and compaction of special shoulder construction materials at the same depth and elevation encountered in the excavation, and depositing of unused excavated materials in a manner satisfactory to the Engineer.
2. Concrete:
  - a. As specified in [Article 2403.05](#).
  - b. Payment is full compensation for furnishing, placing, and finishing according to the provisions of [Section 2405](#).
3. Reinforcement: As specified in [Article 2404.05](#).