

The check list below is a summary of many of the specified items for Traffic Signals and Arms, Sign Structures, High Strength Bolts, Anchor Bolts, Concrete Footings and Signs and Blanks used on WisDOT projects. The following items should have been performed, submitted, detailed, conformed to or checked by the contractor prior to review and approval by the department staff.

1. Traffic Signal Poles and Arms for Monotube Types 9, 10, 12 and 13

A. Department furnished materials:

- Pole, arm, anchor bolt assembly, mounting hardware including luminaire arm, connecting bolts and tightening procedure.

B. Contractor furnished materials:

- Submitted shop drawings and 5 copies of material listing. Forward a copy to Bureau of Structures (BOS).
- Pole, arm, anchor bolt assembly, HS bolts, mounting hardware including luminaire arm, connecting bolts and tightening procedure.

C. Contractor furnished poles from Department approved manufacturer:

- Submitted material listing and certificate of compliance for design.
- Sent copy of certification and shop drawings to the Department electrical engineer

2. Sign Structures

- Contractor submitted material certifications
- Project engineer approved certifications and materials

A. Sign Bridges

- Submitted shop drawings and mill test reports to project engineer and forward a copy to BOS.
- Contractor furnished sign bridge trusses, columns, and steel accessories with zinc coating.
- Inspected welds visually and performed other tests as required by the engineer per [standard spec 641.3.3\(3\)](#).
- Submitted certification of compliance for HS bolt shop installation for truss section and fitting match mark.
- Field assembled truss sections together as a single unit before attaching to the columns.
- Zinc coated members are protected during transportation, storage and erection.
- Contractor repaired damages.

B. Overhead Sign Supports

- Shop drawings are sealed, signed and dated by a professional engineer registered in the state of Wisconsin.
- Provided certification of design conforms to AASHTO standards and the contract.
- Contractor submitted shop drawings, mill test reports and design computations to the project engineer and BOS.
- Faying surfaces on mast arm connections to be in contact (no washers are allowed between faying surfaces).

3. High Strength Bolt Assemblies

- Contractor furnished high strength bolt assemblies (bolts, nuts and flat washers) except as noted in 657.2.1. A490 bolts are not allowed.
- Contractor furnished certificate of manufacturer/supplier test reports.
- Contractor furnished zinc-coated DTI washers and manufacturer's installation instructions.
- Contractor stored bolt assemblies and DTI washers in closed containers.
- Contractor provided calibrated torque wrench and load cell to perform pre-installation test.

A. Standard A325 Bolts

- Contractor performed pre-installation test and install bolts per Department Form [DT2322](#).
- Engineer is to be present during pre-installation test and installation of bolts and performed quality assurance (QA).

B. Tensioning procedures for nonstandard (proprietary) connections is to be detailed in the shop drawings.

4. Anchor Bolt Assembly

- Department furnished anchor bolt assembly for concrete base type 10 and 13.
- Contractor furnished anchor bolt assembly for all sign structures.
- Contractor provided calibrated torque wrench to perform verification torque.

- Contractor installed anchor bolt per Department Form [DT2321](#).
- Contractor verified anchor bolt assembly: quantity, size, length, coating and storage.
- Engineer is to be present during anchor bolt installation and performed QA.

5. Concrete Footing

- A. Excavation:
 - Contractor located all existing underground utilities
 - Excavation by the use of circular auger, and minimize disturbance of the surrounding soil.
 - Checked for a firm and clean hole at the bottom.
- B. Engineer determined possible cave-in or seepage of water conditions, and use of form and casing.
- C. Contractor submitted proposal when encountering rock, boulder, or seepage of water that cannot be shut off with casing. Contact responsible individuals listed on the contract plans for review and approval.
- D. Bar cage assembled with tie wires, properly positioned and supported prior to placing concrete.
- E. Secured anchor assembly in proper alignment and ensure adequate embedment prior to placing concrete.
- F. Contractor protected exposed portion of anchor bolts during and after placement of concrete.
- G. Contractor used tremie to place concrete in drilled hole with standing water.
- H. Backfilling around the base by tamping tight against bare concrete base in layers of 1-ft. or less.
- I. Contractor removed all forms and casing unless noted otherwise on the plans.
- J. Erected structure when concrete base has attained 3,500 psi compressive strength or seven equivalent days.

6. Signs and Blanks

- A. Contractor installed signs or blanks immediately after erection of structure, and per [standard spec 637.3.3](#) and [standard spec 641.3.1.4](#).
- B. Contractor used only approved sign mounting hardware.

7. Initial Inspection after Structure Erection

- A. Engineer contact region maintenance to schedule initial inspection, and submit a copy of the completed Department forms [DT2321](#) and [DT2322](#) to the inspector for inclusion into HSIS initial inspection report.