U-channel post sections shall be of the same general configuration as that shown in the contract, however, minor variations may be considered acceptable by the Engineer, provided all other requirements are met.

(D) Steel Square Tube Posts

Use steel square tube posts of variable length galvanized steel. The post shall be a minimum 14 gauge steel square tube. Before galvanizing punch or drill all posts with 3/8" diameter holes on the centerline, spaced 1" on centers, starting 1" from the top and extending to the bottom of the posts.

Galvanize these posts after fabrication for the full length and total area in accordance with ASTM A123. G90 zinc coating shall not be accepted. The zinc coating inside of the 3/8" diameter holes shall not exceed Specification requirements enough to prevent a 5/16" diameter bolt from freely passing through.

Steel square tube sections shall be of the same general configuration as that shown in the contract, however, minor variations may be considered acceptable by the Engineer, provided all other requirements are met.

(E) Wood Supports

Wood supports shall conform to Articles 1082-2 and 1082-3.

1094-2 RIVETS FOR SIGN OVERLAYS

Rivets for sign overlays shall be 1/8" diameter aluminum rivets of the pull through type, and be approved by the Engineer. Submit for approval several samples of rivets, along with adequate descriptive catalog literature.

SECTION 1096
OVERHEAD SIGN STRUCTURES

1096-1 ALUMINUM OVERHEAD SIGN STRUCTURES

Materials for aluminum overhead sign structures shall conform to Article 1092-1 and *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*. Where the Contractor proposes to use materials that are not covered by these references, such use will be contingent on the Engineer's approval of these materials.

1096-2 STEEL OVERHEAD SIGN STRUCTURES

Use Category I certified by the American Institute of Steel Construction Fabricators for steel overhead sign structures as required by Subarticle 1072-1(A). Use either structural carbon steel or structural low-alloy steel for steel overhead sign structures meeting *AASHTO LRFD Bridge Design Specifications*. Other steel may be used, subject to the approval of the Engineer. Structural steel that has been cold-rolled to increase the yield strength will be permitted. Mechanically galvanize all fasteners. Hot-dip galvanize all other components of the structural assembly after fabrication has been completed. The galvanizing shall meet ASTM B695, Class 55, for fasteners and ASTM A123 for other structural steel.

1096-3 WELDING

Perform all welding in the fabrication of the supports by AWS certified welders. Furnish a copy of the AWS certification for each welder used for fabrication. All welds shall be free of cracks, blow holes, slag, and other irregularities, and be wire brushed, sandblasted or otherwise cleaned.

Aluminum welding processes and procedures, shielding gases, preparation, weld quality, inspection and correction of welds, and the qualification of welding procedures, welders and welding operators will be governed by the AWS Structural Welding Code, D1.2.

The welding of steel components, including structural details, filler metal, workmanship and technique, qualification and inspection will be based on the applicable requirements of the AWS Structural Welding Code, D1.1.

SECTION 1098
SIGNALS AND INTELLIGENT TRANSPORTATION SYSTEM MATERIALS

1098-1 GENERAL REQUIREMENTS

(A) Qualified Products

Furnish new equipment, materials, and hardware unless otherwise required. Inscribe manufacturer's name, model number, serial number and any additional information needed for proper identification on each piece of equipment housed in a case or housing.

ITS and Signals Qualified Products List (QPL) is available on the Department's website.

Certain signal and communications equipment, material and hardware shall be pre-approved on the QPL by the date of installation. Equipment, material and hardware not pre-approved when required will not be allowed for use on the project. Consult the QPL web site to obtain pre-approval procedures.

(B) Submittal Requirements

Furnish a Type 3 material certification in accordance with Article 106-3. When requested by the Department, provide additional certifications from independent testing laboratories and sufficient data to verify item meets applicable Specifications. Ensure additional certification states the testing laboratory is independent of the material manufacturer and neither the laboratory nor the manufacturer has a vested interest in the other.

Identify all proprietary parts in Contractor-furnished material. The Department reserves the right to reject material that uses proprietary components not commercially available through electronic supply houses.

For Contractor-furnished material listed on the QPL, furnish submittals in the format defined by the QPL.

For Contractor-furnished material not on the QPL, furnish 3 copies of the equipment list including 3 copies of catalog cuts. Identify proposed material on catalog cuts by a reproducible means (highlighter pen does not transfer to copies). Ensure material lists contain material description, brand name, manufacturer's address and telephone number, stock number, size, identifying trademark or symbol and other appropriate ratings.

Do not fabricate or order material until receipt of the Engineer's approval.

(C) Observation Period

Warrant workmanship and Contractor-furnished equipment for a 30-day observation period under the payment and performance bond from date of acceptance.

If workmanship or equipment fails during the 30-day observation period, repair or replace with new equipment and begin a new 30-day observation period.

The observation period for this work is not part of the work to be completed by the project completion date.