
INSPECTION AND ACCEPTANCE OF TYPE A & B SIGN FABRICATION

GENERAL

This Instructional Memorandum addresses the fabrication requirements for Type A and Type B signs to be used on highway construction projects. All materials incorporated into the fabricated signs shall conform to the Standard Specifications, plans and the applicable Materials Instructional Memorandums.

FABRICATION APPROVAL

A sign fabricator must be on the Approved Fabricator List to furnish Type A or Type B signs. To become approved, the fabricator shall submit a written Quality Control Plan to the District Materials Engineer (DME) for review. Upon approval of the Quality Control Plan the fabricator will be placed on the Approved Fabricator List (Appendix A). Failure to comply with the following requirements shall be considered sufficient cause for suspension or termination of fabrication approval:

The written Quality Control Plan shall address, as a minimum, the following elements to ensure that the requirements of the contract documents will be met during the fabrication process:

1. DME notification of shop drawing submittal
2. DME notification of material availability for sampling and testing
3. Process used to maintain tested material identity (tags or markings, lot identification, isolated warehouse storage)
4. DME notification of fabrication schedule
5. Identification of personnel responsible for Quality Control
6. Sign Fabrication Quality Control process and documentation records. As a minimum, the following Quality Control items shall be verified and documented:
 - A. Sign blank preparation.
 - B. Sheeting application inspection (color uniformity, application quality)
 - C. Letter style and size (Guidelines for stroke width are shown in Appendix B.)
 - D. Letter message spacing
 - E. Final message content
 - F. Overall conformance to the approved shop drawing

The designated Quality Control person or persons shall perform documentation of quality checks at the time of fabrication.

NOTE: Out-of-state fabricators shall submit the Quality Control Plan and notifications associated with documentation and fabrication to the Central Materials Office in Ames, Iowa.

MATERIALS SAMPLING & TESTING

The **DME** Office will normally sample materials for use on Iowa projects. Out-of-state fabricators may be requested to submit samples of their materials. These samples shall be delivered to the Iowa DOT Materials Laboratory in Ames, Iowa.

Sign sheeting and sign panels shall be sampled for every lot of signs fabricated. A lot is defined as 900 m² (10,000 sq. ft.) of signs fabricated for Iowa DOT projects.

Reflective sheeting shall meet the requirements of ASTM D 4956 and shall normally be sampled at a rate of one sample [300 mm square (one square foot) per lot]. Samples shall have a minimum width of 100 mm (4 in.). A sample of each color and each type of reflective sheeting used in a lot shall be obtained. Normally, samples will not be needed if less than 9 m² (100 sq. ft.) of a specific color or type of sheeting is used in a lot.

Aluminum sign blanks shall meet the requirements of ASTM B-209, Alloy 5052-H38 or Alloy 6061-T6. Aluminum for signing projects shall be sampled at the same frequency as reflective sheeting. A sample shall be taken of each thickness and type of aluminum intended for use in a lot of fabricated signs. Samples shall be a minimum of 0.09 m² (1 sq. ft.) in surface area for sheet aluminum for Type A signs. For structural panels used in Type B signs, a 300 mm (1 ft.) length of panel shall be furnished.

The fabricator shall furnish a copy of the aluminum producer Type B certification of compliance showing chemical and physical test results conforming to ASTM B-209 for materials used on Iowa Department of Transportation projects.

All fastening accessories shall be sampled in accordance with the following schedule for each purchase order lot or shipment to the fabricator:

One	(1)	Sample per 800 pieces
Two	(2)	Samples per 801-8000 pieces
Three	(3)	Samples per 8001-22000 pieces
Five	(5)	Samples per 22000 and over.

NOTE: If a fabricator produces more than 3700 m² (40,000 sq. ft.) of signs per year for Iowa DOT projects, then reflective sheeting and sign panels shall be sampled quarterly. All colors and types of sheeting anticipated for use shall be sampled. Each thickness and type of sign panel shall be sampled. The small quantity exception of 9 m² (100 sq. ft.) of a specific color or type of reflective sheeting shall apply as described above.

FABRICATION REPORT

The fabricator shall issue a shipping report to the **DME** responsible for monitoring the fabrication, or as directed, for each shipment of signs sent to Iowa projects. The report shall contain, as a minimum, the following information:

1. A listing of signs shipped, showing the sign message and identification number
2. The area (square feet or square meter) of each sign being shipped
3. Tabulation of all materials used in the sign fabrication. The tabulation shall show the laboratory test number, or copies of applicable material certifications.
4. Shipping report certification

The following certification statement signed, by a responsible company representative, is required on each report:

I certify that the signs contained in this shipment were fabricated according to the contract documents using the tested and/or certified materials listed above.

Signed _____

Date _____

FABRICATOR RECORDS

The fabricator shall keep all material approvals, certifications, shop drawings, and Quality Control documentation on file for a period of five years after shipment.

ACCEPTANCE

The acceptance of fabricated signs will be based on a report issued by the **DME** responsible for monitoring the fabrication and visual inspection for damage at the project site. The materials report will be distributed to Office of Materials, **DME**, Project Engineer, sign fabricator, and contractor.