

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

SAMPLING, INSPECTION AND ACCEPTANCE
OF SIGNING MATERIAL

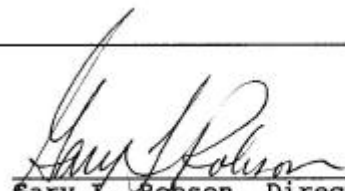
- 1.0 PURPOSE
- 1.1 This procedure sets forth the guidelines for the sampling, inspection and acceptance of traffic signs and accessories.
- 2.0 SCOPE
- 2.1 This procedure is applicable to project markers, flat sheet signs, extruded signs, blanks, and hardware.
- 3.0 APPLICABLE DOCUMENTS
- 3.1 Section 661 of the West Virginia Division of Highways (WVDOH) Standard Specifications for Roads and Bridges.
- 3.2 Shop Drawings
- 3.3 Standard Details
- 4.0 SAMPLING PROCEDURE
- 4.1 The Division's representative shall sample or witness all sampling. No samples will be accepted which have been pre-cut or pre-sampled.
- 4.2 Orders representing at least ten signs or 9 m² shall have all aluminum, sign legend, delineators/reflectors, and hardware sampled. Should pre-approved materials be used, no sampling is required, providing that the sign manufacturer can provide documentation showing approval by the WVDOH.

- 4.2.1 Orders for less than ten signs or 9 m² do not require sampling.
- 4.3 When sampling from a coil of aluminum, a 300 mm x 300 mm sample shall be cut from an area that is a minimum of 1.3 m from the beginning of the coil.
- 4.4 When sampling from precut blanks, a 300 mm x 300 mm sample shall be cut from each size.
- 4.5 When sampling from extrusions, a 300 mm length sample of the extrusion shall be cut from a randomly chosen piece.
- 4.6 When sampling hardware, five pieces of each component of the assembly shall be randomly selected per 2000 pieces represented.
- 4.7 When sampling sign legend, the number of samples required is specified in Section 711.14 of the Standard Specifications for Roads and Bridges.
- 4.8 When sampling delineators/reflectors, 50 pieces of each color shall be randomly selected.
- 4.9 A Materials Control, Soils and Testing Division T-702 sampling form shall be completed on each sample of aluminum, sign legend, each component of the hardware assembly, and each color of delineators/reflectors. The information required on this form is as follows:
 - 4.9.1 Material Description
 - 4.9.2 WVDOH Materials Code Number
 - 4.9.3 Project Number
 - 4.9.4 Date Sampled
 - 4.9.5 Sampler's Name and Agency Code Number (if sampled by a consultant agency)
 - 4.9.6 Field Sample Number - This can be a batch or LOT number, coil number, or an individual identifying number selected by the inspector.

- 4.9.7 Test Required
- 4.9.8 WVDOH Source Code Number
- 4.9.9 Source Name and Location
- 4.9.10 Quantity represented in the order being sampled.
- 4.10 The samples, along with the T-702 sampling forms, shall be submitted to the WVDOH laboratory at the following address:
 - West Virginia Division of Highways
 - Materials Control, Soils and Testing Division
 - 312 Michigan Avenue
 - Charleston, West Virginia 25311
- 4.11 Material represented by failing test results shall not be used for any West Virginia project.
- 5.0 INSPECTION PROCEDURES FOR FABRICATED SIGNS
- 5.1 The Division's representative will conduct all inspection procedures by performing the following:
 - 5.1.1 Verify component approval numbers if pre-approved.
 - 5.1.2 Verify the aluminum thickness.
 - 5.1.3 Check the quality of workmanship (no ink smudges, sheeting applied properly, no air bubbles or waviness).
 - 5.1.4 Verify the hole locations in relation to the standard details.
 - 5.1.5 Check the signs of flatness.
 - 5.1.6 Check the edges for roughness.
 - 5.1.7 Check the spacing of letters (sign legend on extruded signs), border widths, margin widths, corner radiuses.

- 5.1.8 Verify the quantity of each type of hardware against that specified in the order. This includes bolts, nuts, flat washers, lockwashers, clamps, post clips, rivets, and any other hardware which may be needed to attach the sign to a structure. If the quantity differs from that ordered, it shall be documented on the inspection report and shipping invoice.
- 5.1.8.1 Verify that the hardware is the type specified in the order (steel or aluminum nuts, bolts and washers; nylon, steel, or aluminum washers; galvanizing or cadmium plating).
- 6.0 REQUIRED DOCUMENTATION
- 6.1 The following documentation from the manufacturer shall be given to the WVDOH representative when samples are obtained. If no samples are required, this information shall be provided during the inspection of the fabricated signs.
 - 6.1.1 Reflective sheeting certification containing all of the information required in the Second Paragraph of Sub-Section 715.40 of the Standard Specifications.
 - 6.1.2 Mill test data for the hardware including both physical and chemical tests or a list of the WV approval numbers if they were tested by the WVDOH.
 - 6.1.3 Mill test data for the aluminum used in the signs or a list of the WV approval numbers if it was tested by the WVDOH.
 - 6.1.4 Letter of certification that the aluminum is of domestic origin. This document is to be signed by a person of authority at the place of manufacture.
 - 6.1.5 Letter explaining the process by which the sign panels were chemically treated prior to inking or application of reflective sheeting.
 - 6.1.6 Certified test data for the sign legend used on extruded signs or the West Virginia approval number if it was tested by the WVDOH.
- 6.2 The following documentation from the Division's representative shall be provided to the Division at the completion of each inspection:
 - 6.2.1 A written report listing the results of the inspection and include the documents listed in Section 6.1.

- 6.2.2 Each inspection report is to be issued an individual MCS&T laboratory number.
- 6.2.3 Each report is to list the type and gage of sign, quantity of each, and square meters represented for each. It shall also list the hardware, brackets, and any other material inspected which will be used to attach the signs to a structure.
- 6.2.4 All rejected material is to be identified in the inspection report as well as the reason for rejection.
- 6.2.5 In the event that all components of an order are not ready for inspection, material not inspected shall be identified on the inspection report.
- 7.0 ACCEPTANCE PROCEDURE
- 7.1 All approved components of the signs and accessories will be accepted by the issue of a final sign report by MCS&T Division.
- 7.2 Any material not meeting the inspection requirements will be rejected.
- 7.2.1 Rejected signs/accessories shall be replaced with new material and re-tested and/or re-inspected for conformance to the specification requirements.



Gary L. Robson, Director
Materials Control, Soils
and Testing Division

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