

**MATERIALS QUALITY ASSURANCE
PROCEDURES MANUAL**

October 2016 Edition
In accordance with the 2012
Standard Specifications for Construction



**CONSTRUCTION FIELD SERVICES
DIVISION**

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Terminology and Definitions

AASHTO - American Association of State Highway and Transportation Officials

AMRL - AASHTO Materials Reference Laboratory

ASTM - American Society for Testing and Materials

CCRL - Cement and Concrete Reference Laboratory

CML – Central Materials Laboratory

LIMS - Laboratory Information Management System

MSG – Materials Source Guide

MTM – Michigan Test Method

NIST - National Institute of Standards and Technology

NRL - National Reference Laboratory

NTPEP - National Transportation Product Evaluation Program

QPL – Qualified Products List

Acceptance: Criteria used to make a decision on the acceptability of the material placed or intended for use on construction project. Samples are taken by MDOT, consultant, or contractor personnel (when independently verified). For certain local government projects, this function may also be accomplished by employees of the local agency or their consultants.

BASIS OF ACCEPTANCE: Refers to the method by which materials incorporated into MDOT projects are accepted. Below is a list of all the current Basis of Acceptance methods used by MDOT for acceptance of materials.

- **Visual Inspection (VI)**: (See MQAP Section 1.07) Materials which may be visually inspected by MDOT personnel for acceptance or rejection. When a maximum VI limit is given for materials with another specified basis of acceptance, materials may be accepted by VI up to maximum VI quantities as indicated for that material, per item, per project. (NOTE: All materials should be visually inspected prior to incorporation into the job without quantity limit, and may be rejected on that basis even though material may be acceptable on another basis.)
- **Tested Stock (Tested Stock)**: (See Section 2.01) Tested stock samples represent a defined quantity (batch, heat, lot, tank, etc.) of the manufacturer's or supplier's inventory that is sampled and tested by MDOT and has been set aside for use on state and federally funded projects. Approved material(s) may then be shipped to any MDOT project until the approved quantity is depleted. Distribution of form 1922 "Shipment of Tested Stock Report" as detailed in the MQAP is required upon shipment of approved Tested Stock material(s) to MDOT projects.

- **General Certification (Gen Cert):** (See Section 3.01) When this certification is specified as the basis of acceptance in the contract documents, it must be provided in accordance with Section 3.01 of this manual. A general certification must include Company name, address, and contact information, contract number, date certification was produced, name of contractor, a general description of the material(s) with MDOT specification designation, a list of the applicable specifications (ASTM, AASHTO, MDOT or other designations as appropriate), and a statement that the material(s) conforms to these specifications.
 - **Qualified Product List (QPL):** (See Section 6.01) Products that have been tested and/or evaluated by MDOT and found to meet performance and/or other specification requirements. A Qualified Products List (QPL) of these products is maintained in the Materials Source Guide. All QPL materials must be documented per Section 6.01 of this manual with a General Certification.
- **Test Data Certification (Test Data Cert):** (See Section 3.01) When this certification is specified as the basis of acceptance in the Materials Acceptance Requirements Table, in addition to the requirements of a General Certification, the certification must also include laboratory test report(s) for samples obtained from the same lot(s), batch, heat, etc. of material represented by the certification and tested according to applicable specifications (ASTM, AASHTO, MDOT).
- **Approved Manufacturer (Appr Mfr):** (See Section 3.02) A manufacturer who has submitted quality control documentation and/or material samples, and has been given approval status to certify specific material(s). General Certification per the requirements of Section 3.01 must accompany all Approved Manufacturer shipments to either an Approved Supplier location or the MDOT project site. These certifications must also include quantity shipped. Strict adherence to the requirements for Certification Documentation and Distribution is required of all Approved Manufacturers.
 - **Approved Supplier:** (See Section 3.02) When Approved Manufacturer is specified as the basis of acceptance in the contract documents, the material must be supplied by the manufacturer or by an Approved Supplier. An Approved Supplier must recertify Approved Manufacturer material(s). Strict adherence to the requirements for Certification Documentation and Distribution is required of all Approved Suppliers for the recertification of material(s). All original Approved Manufacturer General Certification(s) must accompany the material(s) shipment to the MDOT project site. When Approved Manufacturer is specified, a supplier may not distribute or recertify material(s) unless they have been granted Approved Supplier status.
- **Special Provision:** Revisions and additions to the Standard and Supplemental Specifications applicable to an individual project. Special Provisions have been reviewed and approved for use by the Construction Field Services Support Area. Materials acceptance may be defined by these documents included in the project proposals.
- **Fabrication Inspection (Fabrication Inspection):** Materials subjected to Fabrication Inspection are those that are typically manufactured offsite and shipped to the project. Refer to the proper subsection of the Materials Quality Assurance Procedures Manual (Chapter 4) to find the requirements of the various Fabrication Inspections currently performed by MDOT.
- **Acceptance Testing (Test):** Sampling and testing of a material to determine compliance with specification requirements prior to incorporation into the project. Acceptance testing is the required basis of acceptance for some materials, as indicated in the contract documents, but may be applied to all materials regardless of the basis of acceptance.

Certification Verification (CV): (See Section 3.03) Samples and tests used to validate and monitor manufacturer's certifications of construction materials.

Independent Assurance Test (IAT): (See Section 5.02) Samples and tests performed to provide an independent check on the reliability of personnel conducting acceptance sampling and testing and the equipment used.

For Information Only (FIO): (See Section 1.01) Representative samples and tests and/or other procedures used for the purpose of making independent checks on the quality of the product being furnished. Comparative samples and tests conducted as described in section 1.01.07.D of this manual will be considered FOI samples.

Research and Development (R&D): Sampling and testing performed in an effort to enhance the department's knowledge of material performance. This may be either for evaluation of new materials or as part of a forensic investigation of material performance.