

## Section 5.4

### FINAL PROJECT MATERIAL CERTIFICATION

#### 5.4.1 PURPOSE

To describe the Material Certification process requirements.

#### 5.4.2 AUTHORITY

Sections 334.044(2), 334.044(10) (a) and 334.048 Florida Statutes

#### 5.4.3 SCOPE

Offices affected by this procedure include the State Materials Office (SMO), State Construction Office (SCO) District Construction Offices (DCOs) and District Materials and Research Offices (DMROs).

#### 5.4.4 REFERENCES

FEDERAL-AID POLICY GUIDE (FAPG), 23CFR, Subchapter G - Engineering and Traffic Operations, Part 637 - Construction Inspection and Approval, Subpart B - Quality Assurance Procedures for Construction

#### 5.4.5 GENERAL INFORMATION

Sampling, testing and reporting requirements are applicable for both Federal-Aid and state funded projects, including construction projects greater than \$250,000 and let at the district level. The Districts are encouraged to adopt these same requirements for other projects at the District level.

The following systems are used in the Material Certification process: Materials Acceptance and Certification (MAC) system, SiteManager and the Electronic Document Management System (EDMS). Project Personnel make the required documentation available to the Materials Office to complete the certification process.

Material Certifications are required for all Federal Aid contracts. The Director, Office of Materials issues the Material Certifications for all Federal Aid Projects of Distinct Interest (PODI) contracts. For other Federal Aid contracts, the District Materials and Research Engineer (DMRE) prepares the Certification and forwards it to the SMO for the signature of the Director, Office of Materials.

Note: The use of electronic signatures are acceptable for the Certification Letter.

The DMREs are delegated the authority to prepare and issue the Materials Certification for all state funded construction contracts for their Districts following a review of all applicable materials-related documents as described in **Section 5.4.6**. The Districts will set their policy for material certification of state funded construction projects less than \$250,000. Note: All projects shall be reviewed to ensure that there are no federal funds (grants, special programs, etc.) included in the project funding.

The District Material Certification (DMC) personnel review reports, review open samples, and review other documents periodically (at least once a month) while construction is in progress for all of the projects in the District. The DMC personnel initiate resolution with the responsible construction offices in order to minimize any possible exceptions or delays in issuing the Material Certification.

#### **5.4.6 REQUIRED DOCUMENTS**

The Materials Office must have access, as requested, to the following documents in order to issue the Material Certification.

(A) Earthwork Records System

Include documentation from the District Earthwork personnel indicating that the Earthwork Record System has been reviewed and approved with any exceptions noted.

(B) Various Production Reports

(C) Contract Documents, including: Plans and Specifications, Supplemental Agreements, Field Supplemental Agreements, and/or Field Work Orders.

(D) All correspondence relating to failing materials including completed MARs for a material that does not meet the **Specifications** and is left in place. Each MAR will contain a recommendation for disposition. The DMREs are responsible for reviewing the analysis and recommending disposition to the District Construction Engineer (DCE).

(E) Thickness (core-out) reports for concrete pavements and base courses, including final disposition of noted deficiencies generated from MAC.

- (F) Surface tolerance (straightedge/laser profiler) deficiency reports generated from MAC, as described in **CPAM Chapter 11.2, Guidance Document 11-2-A**, for the final surface of pavements including final disposition for any noted deficiencies.
- (G) All miscellaneous test results; for example, structural steel and miscellaneous metals not commercially inspected, etc.
- (H) District sign inspection reports, including all deficiencies noted by project personnel and documentation of corrections.
- (I) Applicable Independent Verification (IV) test reports.
- (J) All material certifications for pre-stressed / precast concrete units, including piling, beams, etc.
- (K) Final summary report for commercial inspection performed by a consultant firm.
- (L) For Design Build and Lump Sum Projects, a Job Guide Schedule (JGS) generated by MAC specifying each material placed by the material number and related information, and the total quantity placed throughout the project duration.
- (M) Pay Item tracking for APL products used.

#### 5.4.7 MATERIAL ACCEPTANCE

- (A) For CQC Testing
  - (1) Asphalt meets the standards if all of the acceptance criteria described in the **FDOT Specifications** are met and the composite pay factor (CPF) for each lot is 80% or greater. The IV test results, while not truly an acceptance test, will be included in the project review.
  - (2) Concrete meets the standards if the QC compressive strength tests pass and are verified.
  - (3) Earthwork meets the standards if the QC tests pass and are verified.
- (B) For Non-CQC Testing

- (1) Material meets the standards if the Verification (V) tests pass.
- (C) For Fabricated Structures and Roadway Surface Tolerance
  - (1) Review the reports for acceptance decisions.

#### 5.4.8 EXCEPTIONS TO CERTIFICATION

(A) Materials

Materials that do not meet the **FDOT Specifications**, as described above in **Section 5.4.7** and are left in place, regardless of payment, are considered exceptions.

Defective material that is 'rejected for use' or 'removed and replaced' is not an exception to the Certification. All other instances will require the finding for the sample in question to be 'promoted' to the Material Acceptance Resolution (MAR) process in MAC. Note: Promotion to MAR does not necessarily create an exception. For example: Failing Concrete plastic property tests are not an exception.

(B) Minimum Testing Frequency

Materials that have not been tested or were tested at a frequency not in conformance with the **FDOT Specifications** and left in place are considered an exception. Note: Concrete plastic property tests, while not used for material acceptance, are required and a missed sampling and/or testing is an exception.

(C) Technicians, Laboratories and Production Facilities

Sampling or testing performed by an unqualified technician is considered an exception. This includes sampling and testing done by a qualified technician who is suspended.

Any laboratory performing testing must be qualified and must be included on the Qualified Laboratory List. Testing performed at an unqualified laboratory is an exception.

Production facilities that produce materials in accordance with the **FDOT Specifications Section 105** must be on the **Production Facility Listing** (in MAC). Materials produced by production facilities that are not on the list or are in a status other than Quality Control Program (QCP) accepted, and left in place, are exceptions.

### **5.4.9 PREPARING FOR CERTIFICATION**

A review of the documents listed above should verify completeness and accuracy of the information in the various databases.

Exceptions, as described above, must include enough information to define the problem and the steps taken to resolve the issue. The exception should contain the following information:

- (A) Description – What is the problem?
- (B) Location – Where is the problem?
- (C) Quantity – How much material is involved?
- (D) Resolution – What was done to fix the problem?
- (E) Concurrence – Who signed off on the acceptance?

### **5.4.10 USING MAC FOR AUDIT RECORDS**

Each project audit is reported in MAC using the Materials Certification Module. MAC generates findings based on conditions on samples, such as a failing result, a test or comparison that was required but not performed, or an unqualified technician or laboratory. Findings are questions that need more information to determine if the issue is a true exception. Project personnel should be contacted to resolve the findings. When an exception is determined, and all information is available, use the Exception Module to document the exception. Upon the resolution of all findings and MARs, generate a Material Certification Letter, as described in **Section 5.4.11**.

In the event that responses from the project personnel create additional questions that are critical to the acceptance of the materials, initiate a new finding for recording the details.

### **5.4.11 PROJECT MATERIAL CERTIFICATION LETTER**

The Project Material Certification Letter (PMCL) consists of a cover letter and exception report from MAC, if applicable. The PMCL will state that all the materials are in compliance with the contract documents, and will list all known exceptions. The letter will be addressed to the appropriate DCE for all projects except for PODI projects, in which case, will be addressed to the Division Administrator of the Federal Highway Administration (FHWA). A notification of the posting/copies will be distributed to the FHWA, DCE, and the District Final

Estimates Manager. The signed letter will then be posted in MAC. No additional steps are required to add the document to EDMS. Note: The use of electronic signatures are acceptable for the Certification Letter.

#### **5.4.12 SUPPORT DOCUMENT RETENTION**

A copy (electronic is preferred) of the various production reports will be retained by the District Materials and Research Offices for audit purposes for the time frame identified by the Department, and no less than three years from the final payment date of the contract.

#### **5.4.13 KEY PERFORMANCE MEASURES FOR CERTIFICATION**

Key Performance Measures (KPMs) are developed to evaluate the effectiveness of the audit and to provide feedback to the users on improvement opportunities. The KPMs are evaluated monthly followed by an annual summary report.

(A) Process Time

Process time is used to monitor the performance of the Districts and the statewide process time. This includes lag times, review time, response time, and the overall process time. The goal is to optimize the time for certification.

(B) Quality Assurance Review (QAR) of the Certification Process

A random review, one rotating material per month, is made to determine the completeness of the PMCL. Additionally, the review will include the "Excluded" and "MC Resolved" items to determine appropriateness and constancy. Steps involved are as follows:

1. PMCLs from each District are selected randomly from the recently certified contracts.
2. Information of the specific scheduled material is obtained from the MAC database and used to evaluate the PMCL. This evaluation is to simulate a third-party audit of the Certification process.
3. At the same time, the Excluded and MC Resolved items are evaluated.
4. Discrepancies are reported to the Districts via the Department's Share Point site, allowing affected parties to respond. This is to give

the Reviewers an opportunity to review their processes and make improvements.

(C) Quantity of Non-Standard Materials Left in Place

The quantity of non-standard materials left in place is reviewed and is recorded as a percentage of the total quantity placed on an annual basis.

**5.4.14 TRAINING**

None required.

**5.4.15 FORMS**

None required.