

Volume 1

Section 5.4

FINAL PROJECT MATERIALS 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 federally funded 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 or reports are used in the Material Certification process: Materials Acceptance and Certification (MAC) system, AASHTOWare Project Construction (PrC), and the Electronic Document Management System (EDMS). Project personnel make the required documentation available to the materials office to complete the Material Certification process.

Material Certifications are required for all federally funded contracts. The Director, Office of Materials issues the Material Certifications for all federally funded Project of Division Interest (PoDI) contracts. For other federally funded

contracts, the District Materials and Research Engineer (DMRE) prepares the Material Certification and forwards it to the SMO for the signature of the Director, Office of Materials. The use of electronic signatures is acceptable for the Certification Letter.

DMREs are delegated the authority to prepare and issue the Material Certifications 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**. Districts will set their policy for Material Certifications of state funded construction projects less than \$250,000. All projects must be reviewed to ensure that there are no federal funds (grants, special programs, etc.) included in the project funding.

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

5.4.6 REQUIRED DOCUMENTS

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

(A) Project Administrator's Material Statement (**Appendix A**)

This letter states that all materials used on a contract were accepted in accordance with specification requirements and contract documents.

(B) Earthwork Records System

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

(C) Various Production Reports

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

(E) All correspondence relating to failing materials including completed Material Acceptance Resolutions (MAR) 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).

- (F) Thickness (core-out) reports generated from MAC for concrete pavements and base courses, including final disposition of noted deficiencies in MAC.
- (G) 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.
- (H) All miscellaneous test results: for example, structural steel and miscellaneous metals not commercially inspected, etc.
- (I) Applicable Independent Verification (IV) test reports.
- (J) All material certifications for precast/prestressed concrete products, including piling, beams, drainage products, etc.
- (K) Final summary report for commercial inspection performed by a consultant firm as required in **FDOT Specification subarticle 105-1.2.3** and **CPAM Chapter 10.9.3**.
- (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, updated monthly, and the total quantity placed throughout the project duration, including a final report.
- (M) APL Project Tracking Summary report in MAC with appropriate APL tracking samples.

5.4.7 MATERIAL ACCEPTANCE

- (A) For Contractor Quality Control (QC) Testing
 - (1) Asphalt meets the standards if all the acceptance criteria described in the **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-QC Testing
 - (1) Material meets the standards if the Verification (VT) 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 **Specifications**, as described in **Section 5.4.7** above 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 Materials Certification. All other dispositions will require the finding for the sample in question to be 'promoted' to the 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 **Specifications** and left in place are considered an exception.

For concrete VT samples that are obtained based on a random number, if production is stopped for that concrete mix design before the randomly selected LOT for the VT sample is reached, it is not 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 in the appropriate test methods and must be included in the MAC **Qualified Labs Report**. Testing performed by an unqualified laboratory is an exception.

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

5.4.9 PREPARING FOR CERTIFICATION

A review of the documents listed in **Section 5.4.7** should verify completeness and accuracy of the information in the various databases.

Exceptions, as described in **Section 5.4.8**, must include enough information to define the problem and the reason for leaving the material in place. The exception should contain the following information:

(A) Description of the problem.

(B) Location – Where is the problem? Include the GPS coordinates.

(C) Quantity – How much material is involved?

(D) Concern – What is the potential impact or concern with the problem? (This is the undesired outcome of the problem)?

(E) Resolution – See Below:

- How was the problem evaluated?
- What were the results of the evaluation?
- What was the final recommendation?

(F) Concurrence – Who signed off on the acceptance resolution?

Examples of Exception write-ups are available through the SMO website under Project Material Certification Letter (PMCL) templates and can be used as guides. The SharePoint link is provided below:

<https://fldot.sharepoint.com/sites/SM-ADM/QS-Certifications/Forms/AllItems.aspx?id=%2Fsites%2FSM%2DADM%2FQS%2DCertifications%2FPMCL%20Templates&viewid=77bfe88a%2Ddb45%2D408e%2D82fd%2Dbb35a3393dc7>

The PMCL workflow is also provided in Appendix B of this document.

5.4.10 USING MAC FOR AUDIT RECORDS

Each project audit is reported in MAC using the Materials Certification/MAR Module. MAC generates findings based on sample conditions such as a failing test result, a test or comparison package 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 an exception. Project personnel should be contacted to resolve the findings. If a finding is promoted to MAR and an exception is determined to exist, and all information is available, use the Create Exception option to generate the Exceptions Tab and document the exception. Upon the resolution of all findings and MARs, generate a Material Certification Letter, as described in **Section 5.4.11**.

5.4.11 PROJECT MATERIAL CERTIFICATION LETTER

The Project Material Certification Letter (PMCL) from MAC consists of a cover letter and exception report, if applicable. The PMCL will state that all the materials are in conformity with the contract documents and will list all known exceptions, if applicable. The project contract and funding type will determine to whom the PMCL is addressed and the required signatures.

(A) Non-Federal

The PMCL is addressed to the appropriate DCE and is signed only by the appropriate DMRE.

(B) Federal Not Full Oversight

The PMCL is addressed to the appropriate DCE and is signed by both the appropriate DMRE and the Director, Office of Materials.

(C) Federal Full Oversight, also known as PoDI

The PMCL is addressed to the Division Administrator of the Federal Highway Administration (FHWA) and is signed only by the Director, Office of Materials.

Electronic signatures will be used for the PMCL. A notification of the posting, or copies, will be distributed to the FHWA, DCE, and the District Final Estimates Manager. The signed letter is available in MAC.

5.4.12 SUPPORT DOCUMENT RETENTION

A copy (electronic is preferred) of the various production reports will be retained by the DMROs for audit purposes for the time frame specified in the Department of State's Retention and Disposal Schedule, which is a minimum of 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. These reports are available on the SMO SharePoint site and can be accessed through the link below:

<https://fdot.sharepoint.com/sites/SM-ADM/QS-Certifications/Forms/AllItems.aspx?id=%2Fsites%2FSM%2DADM%2FQS%2DCertifications%2FProcess%20Time&viewid=77bfe88a%2Ddb45%2D408e%2D82fd%2Dbb35a3393dc7>

(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 with the average materials process time of no more than 16 business days.

(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. The review evaluates the "Excluded"

and “MC Resolved” findings to determine appropriateness, constancy, and completeness of the PMCL. Steps involved are as follows:

1. PMCLs from each District are selected randomly from the recently certified contracts.
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 Materials Certification process. Discrepancies are reported to the Districts via the Department’s Share Point site, allowing affected parties to respond. This is to give the DMCs an opportunity to review their processes and make improvements.
2. After review from the DMCs, the QAR results are entered into MAC for each contract that is reviewed.

(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

Training is covered by the MAC MC Review Program Maintenance User Manual, found at the following link:

https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/materials/mac/training/mcreview/pmu-mcreview-mar-668413571.pdf?sfvrsn=c94fc87f_2

5.4.15 FORMS

None required.

APPENDIX A

Project Administrator's Materials Statement

To: _____

Subject: Project Administrator's Materials Statement

Financial Project No: _____

Federal Project No: _____

Contract No: _____

Project Description: _____

County: _____

All materials incorporated into the referenced project(s) were accepted in accordance with the Sampling Testing and Reporting Guide (STRG) or pertinent contract documents and meet all applicable requirements as indicated by initialing the below items.

- Earthwork density test locations and results are in substantial compliance with the pertinent specification requirements of this project. A review of the project density records indicates substantial compliance with the governing specifications, sampling and testing guides, and procedures. _____
- All Contractor Quality Control (QC) material test results have been verified in accordance with contract requirements. The final disposition of all material represented by QC results has been accurately documented. _____
- All required certifications and/or certified test reports have been received in accordance with contract requirements. _____
- All Commercial Inspection items are acceptable. _____
- All APL items have been entered into MAC. _____

Additionally, the total quantities of all reinforcing steel and guardrail used on the contract are listed below.

Reinforcing Steel: _____ Tons

Guardrail: _____ Linear Feet

Any exceptions to the above-listed information are attached to this statement.

Project Administrator's Name (Type or Print)

Signature

APPENDIX B

PMCL WORKFLOW

