

Quality Management System

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Please note that this Quality Management System (QM) was originated on . Any changes made after this date will be reflected on a later revision date indicated on the bottom of each respective page.

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Organization and Organizational Policies

Organization

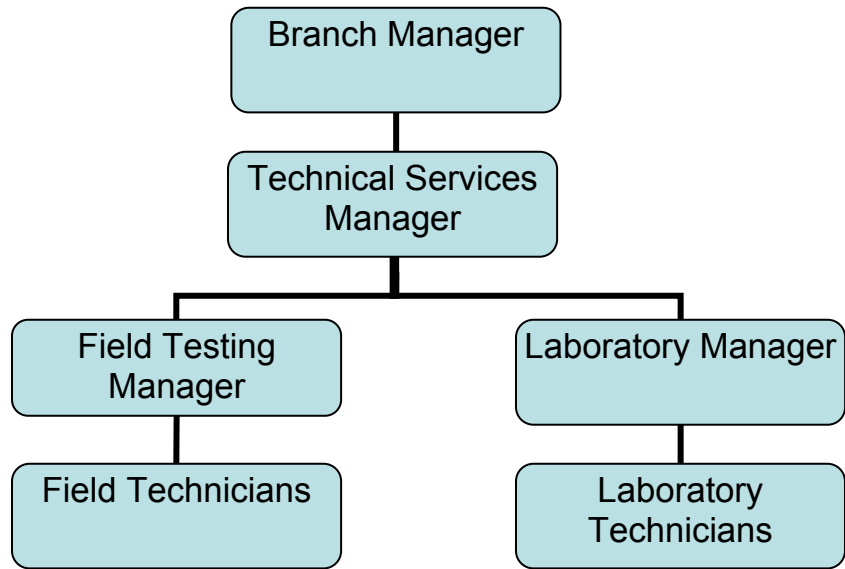
Legal Name:

Corporate Office Address:
Phone:

Local office:
Phone:

Chief Executive Officer /
President /
Vice President /
Secretary /
Treasurer /

Organization Chart



Quality Policy Statement:

A large yellow rectangular area with horizontal black lines, intended for writing the Quality Policy Statement.

Staff

Management Structure: Laboratory name
Location

CEO / President	
Branch Manager	
Technical Services Manager	
Field Testing Manager	
Field Technicians	
Laboratory Manager	
Lab Technician	

Position Descriptions

Branch Manager / Senior Engineer

Requirements for Branch Manager / Senior Engineer

The Senior Engineer position requires the following qualifications:

- Registered professional engineer with at least years experience in inspecting and testing of materials and construction.
- Must be familiar with and be able to use laboratory test results for engineering analysis and recommendations.
- Must be a motivated individual with excellent oral and written communication skills.
- Must be able to manage several projects and personalities simultaneously with a positive, effective attitude.
- Must have a proven record in business development. Must develop, manage and execute marketing plans.
- Must be able to recruit new staff and cultivate and grow existing, capable, energetic engineering staff into profitable project managers and client-servers.

The Branch Manager / Senior Engineer supervises the Technical Services Manager.

The Branch Manager / Senior Engineer reports directly to the President.

Technical Services Manager

Requirements for Technical Services Manager

The Technical Services Manager position requires the following qualifications:

- Registered professional engineer with at least [redacted] years experience in inspecting and testing of materials and construction.
- Must be familiar with and be able to use laboratory test results for engineering analysis and recommendations.
- Must be familiar with AASHTO, ASTM and FDOT standards for testing and inspection.
- Must be a motivated individual with excellent oral and written communication skills.
- Must be able to manage several projects and personalities simultaneously with a positive, effective attitude.
- Must be able to recruit new staff and cultivate and grow existing, capable, energetic engineering staff into profitable project managers and client-servers.

The Technical Services Manager supervises the Laboratory and Field Testing Manager in the performing of his duties of materials testing and inspection.

The Technical Services Manager reports directly to the Branch Manager.

Laboratory Manager/Senior Testing Technician

Requirements for Laboratory Manager

The Lab Manager position requires the following qualifications:

- Must have at least [redacted] years experience performing various asphalt, earthwork, concrete, masonry, cement, and aggregate testing, both in the field and in the laboratory. Should also have Inspection experience with batch plants and field placements.
- Must be thoroughly familiar with AASHTO, ASTM and FDOT procedures and specifications. Must be qualified by governing authority (AASHTO, ASTM and/or FDOT) for specific tests.
- Must be a motivated individual with excellent oral and written communication skills.

The Lab Manager supervises engineering testing technicians involved in performing lab and field testing, and reviews their reports prior to being forwarded to the Senior Engineer for final review and signature.

The Lab Manager is supervised by the Technical Services Manager.

Field Testing Manager

Requirements for Field Testing Manager

The Field Testing Manager position requires the following qualifications:

- Must have at least years experience performing various asphalt, earthwork, concrete, masonry, cement, and aggregate testing, both in the field and in the laboratory. Should also have Inspection experience with batch plants and field placements.
- Must be thoroughly familiar with AASHTO, ASTM and FDOT procedures and specifications. Must be qualified by governing authority (AASHTO, ASTM and/or FDOT) for specific tests.
- Must be a motivated individual with excellent oral and written communication skills.

The Field Testing Manager supervises field testing technicians involved in performing lab and field testing, and reviews their reports prior to being forwarded to the Senior Engineer for final review and signature.

The Field Testing Manager is supervised by the Technical Services Manager.

Testing / Field Technician

Requirements for Testing / Field Technician

The Testing / Field Technician position requires the following qualifications:

- Must be thoroughly familiar with AASHTO, ASTM and FDOT procedures and specifications. Must maintain certifications by governing authority (AASHTO, ASTM and/or FDOT) for specific tests.
- Adequate mathematical skills, ability to pass written exam.
- Adequate oral and written communication skills.
- If the job requires solo work assignments outside the office, then a valid Florida driver's license is required.
- Flexibility to work outside normal business hours as required.

The Testing / Field Technician is supervised by the Laboratory Manager.

Biographies

Branch Manager / Senior Engineer

Name: _____

Title: Branch Manager / Senior Engineer

Certifications: _____

General Duties: General duties include overseeing the lab technicians to ensure that lab procedures are being correctly followed and all equipment calibrations are kept up to date.

Supervision Exercised / Received: Periodic Inspection of lab paperwork, and equipment. Lab is subjected to yearly reference testing and / or inspection by CMEC and FDOT.

Formal Education: _____

Experience: _____

Technical Services Manager

Name: _____

Title: Technical Services Manager

Certifications: _____

General Duties: This individual acts as technical manager of the laboratory. General duties include periodic testing of materials, overseeing the lab and technicians to insure that lab procedures are being correctly followed and all equipment calibrations are kept up to date whenever the lab manager is either unavailable or unable to perform these duties. This is to ensure that the Quality System Manual stays current and up to date in the event that unforeseen circumstances prevent the Laboratory Manager from performing these duties.

Supervision Exercised / Received: Supervised by the senior engineer.

Formal Education: _____

Experience: _____

Lab Manager

Name: _____

Title: Lab Manager

Certifications: _____

General Duties: General duties include periodic testing of construction materials, overseeing the lab and technicians to ensure that lab procedures are being correctly followed and all equipment calibrations are kept up to date. This individual acts as technical manager in the event that the technical services manager is unavailable.

Supervision Exercised / Received: Supervised by technical services manager. Conducts training and evaluations of the laboratory staff at _____ month intervals.

Formal Education: _____

Experience: _____

Field Testing Manager

Name: _____

Title: Field Testing Manager

Certifications: _____

General Duties: General duties include periodic testing of construction materials, overseeing the field technicians to ensure that field testing procedures are being correctly followed and all equipment calibrations are kept up to date whenever the lab manager is either unavailable or unable to perform these duties.

Supervision Exercised / Received: Supervised by technical services manager. Conducts training and evaluations of the field staff at _____ month intervals.

Formal Education: _____

Experience: _____

Testing / Field Technicians

Name:

Title: Testing / Field Technician

Certifications:

General Duties: General duties include periodic testing of construction materials. May be asked to perform equipment calibrations and checks by the Laboratory or Field Testing Manager.

Supervision Exercised / Received: Supervised by Laboratory or Field Testing Manager. Receives training and annual reviews from the Laboratory or Field Testing Manager.

Formal Education:

Experience:

STAFF TRAINING PROGRAM FOR TESTING TECHNICIANS

The Laboratory Manager and Field Testing Manager are responsible for implementing the training programs and maintaining records. The training records shall be retained in the Materials Testing Laboratory office.

The following procedure shall be followed for each test:

1. The trainee is given a copy of the test method he/she is to perform.
2. The trainee studies the procedure, test report form, equipment and calculations to become familiar with the test.
3. The Laboratory Manager or Field Testing Manager will first demonstrate the procedure and calculations for each test.
4. The trainee should repeat the test procedure until proficiency is demonstrated.
5. The Laboratory Manager or Field Testing Manager will observe the trainee demonstrate the procedure, and acknowledge his ability to perform the test. The acknowledgement is recorded and included in the trainee's training record.
6. All technicians are required to perform CMEC proficiency sample tests.

METHOD FOR REVIEWING TECHNICIAN COMPETENCY

The Laboratory Manager and Field Testing Manager are responsible for evaluating the testing / field technician's competency at least once every months by requiring each technician to demonstrate his ability to perform the AASHTO, ASTM, and/or FDOT test procedures for which they have been trained to perform.

For each technician, the Manager shall record the test demonstrated, the date of the demonstration, and the results of the evaluation. The Laboratory Manager or Field Testing Manager shall date each entry on the evaluation record.

If an unsatisfactory result is recorded for a specific test, the Manager shall review all observed deviations from the standard test method with the testing technician, observe the technician re-demonstrate the procedure and record the results as stated above.

Equipment Calibration / Standardization / Check / Maintenance Policies and Procedures

General Policies:

1. Required equipment used shall be calibrated at specific intervals following the general procedures below.
2. Newly acquired equipment without manufacturer's certification and equipment that has not been calibrated or checked because it has not been in service shall be calibrated or checked before being placed in service.
3. When any of the equipment has been overloaded, mishandled, giving suspect test results, or is not meeting specification tolerances, the lab manager will remove the test equipment and tag it for repair. The test equipment must be repaired to meet specification tolerances, and then calibrated prior to returning to service.

General Procedures:

1. The Lab Manager will maintain a record on each piece of equipment requiring calibration, standardization, checks, and maintenance. The record for each piece of equipment shall contain dated, detailed records of calibration, standardization, checks, and maintenance performed. These records will be kept in the Quality System Manual in the Lab Manager's office.
2. The Lab Manger will keep a schedule **on the lab wall / in microsoft outlook / in monthly folders** for each month of the year, which contains a list of equipment to be calibrated, standardized, checked, and maintained that month.
3. The Lab Manager will review all equipment calibration, standardization, check, and maintenance records.
4. In-house equipment calibration, standardization, check, and maintenance procedures are found in the Quality System Manual. AASHTO and ASTM calibration procedures are provided in reference manuals.
5. The in house equipment used to calibrate, standardize or check test equipment, such as a traceable thermometer, shall have a certificate included in this Quality System Manual.

Reference Standards:

1. The reference standards used for performing any in-house calibrations or standardizations shall be sent out for calibration at least once every 5 years.

Test Records and Reports

Test Records and Reports

Preparing Sample Log:

Each sample brought into the lab for testing is recorded in a logbook maintained by the active technician or the Lab Manager. The following is recorded for each sample.

1. Sample number (this is assigned sequentially to each line of the log book).
2. (Name) contract number.
3. Description of the material.
4. Supplier of the material.
5. Location from which the sample was taken.
6. Name of person(s) who sampled the material.
7. Date of sampling.
8. Date the sample was received in the materials laboratory.
9. The date testing was completed.
10. The name of the testing technician.

Preparing and Checking Test Reports:

Test reports are recorded on standard worksheets by the testing technician and are submitted to Lab Manager for review. The worksheets are kept on file by date and log number. The testing technician accepts responsibility for the correctness for the form.

Test records and Retention:

The original test worksheets are kept on file for a minimum of 5 years, and then purged.

Records Retention

Quality Management System Records:

Records pertaining to external assessments, internal audits, management reviews, proficiency sample testing, test technician training and evaluation, and personnel shall be retained by the laboratory for a minimum of five years.

Technical Records:

The laboratory shall retain records of test data, test reports, and equipment calibration, standardization, check maintenance activities for a minimum of five years.

Sample Management

Identification:

Each sample will be marked with date and job number if applicable.

Storage:

Samples will be stored in accordance with all applicable ASTM specifications.

Retention:

Samples with acceptable test results are generally discarded when testing is completed. Samples with failing test results are retained until review of the results is complete. At that time the decision is made to retain or discard the sample.

Disposal:

All materials are to be disposed of in a safe and non-hazardous manner.

Participation in Proficiency Sample Testing

Participation: Lab participates in yearly proficiency sample testing by CMEC.

Identifying Poor Test Results:

Any test result that is greater than two standard deviations for the group average value.

Procedures to Follow When Poor Results Occur:

1. Check the report submitted for correct data entry.
2. Check that the data transferred from the worksheet to the report was correct.
3. Check the calculations on the worksheet.
4. Check the equipment used to perform the test meets spec.
5. Repair or replace equipment if necessary.
6. Evaluate the technician that performed the test.
7. Prepare a Diagnostic and Corrective Action Report summarizing the results of the investigation and any corrective action taken.

Participation in External On-Site Inspections

Participation: Lab is inspected yearly by CMEC and FDOT

Procedures to Follow When Deficiencies are Reported:

(Apparatus Deficiencies)

1. Determine if equipment meets specification requirements.
2. If equipment is found to be defective take necessary steps to repair or replace it.
3. Prepare a Diagnostic and Corrective Action Report summarizing the results of the investigation and any corrective actions taken.

(Procedural Deficiencies)

1. Review the procedural deficiency with the technician that performed the test.
2. Observe the technician perform the test properly.
3. Prepare a Diagnostic and Corrective Action Report summarizing the results of the investigation and any corrective actions taken.

(Quality System Deficiencies)

1. The Lab Manager reviews the deficiencies cited by the evaluator with the responsible technician.
2. Corrective actions are taken.
3. Prepare a Diagnostic and Corrective Action Report summarizing the results of the investigation and the corrective actions taken.

Procedure for Handling Technical Complaints

Upon receipt of a technical complaint the following actions shall be taken:

1. The Lab Manager shall be notified.
2. The Lab Manager contacts the source of the complaint to verify the specifics of the complaint and establish a resolution date (if necessary)
3. The Lab Manager shall review all specific technical data and all calculations shall be checked for accuracy.
4. The technician or technicians performing the tests are consulted by the Lab Manager to discuss the specific circumstances.
5. The Lab Manager shall formulate an appropriate reply to the complainer.
6. Prepare a Diagnostic and Corrective Action Report summarizing the action taken.

Corrective Action Procedure

1. The Lab Manager is responsible for implementing corrective action when nonconforming work or departures from policies and procedures have been discovered. The Lab Manager shall begin an investigation to determine the root cause of the problem.
2. The corrective action procedure shall be implemented for nonconformities in the following areas: internal audits; management reviews; customer complaints; equipment calibrations, standardizations, and checks; external assessments; and proficiency sample checks.
3. The Lab Manager shall prepare a Diagnostic and Corrective Action Report summarizing the action taken. Records of corrective action shall be maintained.

Diagnostic and Corrective Action Report

Test Procedure:	Date:
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Non Conformity Description:

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Immediate Action <i>taken to prevent this nonconformity from affecting test results</i>
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Root Cause Analysis

<i>What are the reason(s) that allowed the nonconformity to happen:</i>

<i>What improvements to the quality management system can be implemented to prevent a similar finding:</i>

Planned Monitoring Activities <i>to check the effective implementation of the improvements identified above:</i>

--

Assessment Made By:	Assessment Approved By:	Date:

Internal Quality System Review

The Lab Manager shall review the following records, reports, and associated documentation every [redacted] months to assure that the established quality procedures are being followed:

1. Quality Management System
2. Proficiency Sample Reports
3. On-Site Inspection Reports
4. Equipment Calibration, Verification & Check Records
5. Testing Technician Training Records
6. Testing Technician Competency Evaluation Records

After each [redacted] month review the lab manager will discuss any deficiencies noted with the appropriate staff to make sure all corrective actions are taken. All documents reviewed and the Internal Quality System Review forms are filed in this quality management system.

Management Reviews

1. The laboratory's management shall review the quality management system at least every 12 months, and whenever a technical complaint casts doubt on the quality of the laboratory's work, to ensure the quality management system's continuing suitability and effectiveness and introduce any necessary changes or improvements.
2. The reviews shall consider the suitability of policies and procedures, results of internal audits, results of external assessments, results of proficiency testing, results of customer feedback, and quality policy objectives.
3. Findings from management reviews and the actions that arise from them shall be recorded and filed with this quality management system.

Subcontracting

On occasions, services are required that are beyond the capabilities of this laboratory. When this occurs, a qualified laboratory shall be selected to perform the required tests. This selected laboratory shall be accredited through a nationally recognized accreditation authority.

The companies providing the calibration services shall be reviewed prior to performing the work. The calibration agency shall provide examples of the calibrations they will be performing. The agency shall provide certificates of their calibration equipment.

Internal Quality System Review Checklist

1. Quality Manual
 - a. Organization Charts & Biographies up-to-date?
 - b. Equipment inventory up-to-date?
 - c. Current revision dates?

2. Proficiency Sample Reports
 - a. Tested all required proficiency samples?
 - b. Are all results within the acceptable limits?
 - c. Were all results not meeting the above reviewed?
 - d. Technician procedures been observed if the results were not acceptable?
 - e. Findings recorded and on file?

3. On-Site Inspections
 - a. Received all necessary inspections?
 - b. Nonconformities?
 - c. Responses for nonconformities?

4. Equipment Calibration, Verification & Check Records
 - a. All required equipment calibrated, verified or checked?
 - b. At the required intervals?
 - c. Equipment all satisfactory or appropriate actions taken?

5. Technician Training Records
 - a. All new technicians trained?
 - b. Records of new technician training?
 - c. Is training satisfactory?

6. Technician Competency Evaluation Records
 - a. All technicians evaluated for tests performed?
 - b. Records of technician evaluations?
 - c. Are evaluations satisfactory?

Comments:

Reviewed by: _____

Date Reviewed: _____