



## Florida Department of Transportation

CHARLIE CRIST  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

STEPHANIE KOPELOUSOS  
SECRETARY

December 22, 2009

Monica Gourdine  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 105  
Proposed Specification: **1050807 Contractor Quality Control General Requirements  
– Concrete QC Personnel**

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Susan Blazo of the State Materials Office to change “concrete field technician” to “concrete field inspector” to be consistent with national standards and the Construction Training and Qualification Manual (CTQM), Chapter 4; to add additional qualification alternatives for the Concrete Production Facility Quality Control Manager; and to specify the requirements for Concrete Laboratory Technician Level II.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to ST986RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4280.

Sincerely,

Rudy Powell, Jr., P.E.  
State Specifications Engineer

RP/dt

Attachment

cc: Gregory Jones, Chief Civil Litigation  
Florida Transportation Builders' Assoc.  
State Construction Engineer

## CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS CONCRETE QC PERSONNEL.

(REV ~~12~~10-22-09)

Subarticle 105-8.7 (Pages 144-145) is deleted and the following substituted:

### 105-8.7 Concrete QC Personnel:

**105-8.7.1 Concrete Field Technician - Level I:** Ensure technicians performing plastic property testing on concrete for materials acceptance are qualified CTQP Concrete Field Technicians Level I. Plastic property testing will include but not be limited to slump, temperature, air content, water-to-cementitious materials ratio calculation, and making and curing concrete cylinders. Duties will include initial sampling and testing to confirm specification compliance prior to beginning concrete placements, ensuring timely placement of initial cure and providing for the transport of compressive strength samples to the designated laboratories. ~~Technicians who test concrete properties or perform Verification testing for the Department must possess this qualification.~~

**105-8.7.2 Concrete Field Technician-Inspector - Level II:** Ensure field technicians *inspectors* responsible for the quality of concrete being placed on major bridge projects are qualified CTQP Concrete Field Technicians-Inspectors Level II. A Level II Technician-Inspector must be present on the jobsite during all concrete placements. Prior to the placement of concrete, the technician-inspector will inspect the element to be cast to ensure compliance with Contract Documents. A Level II Technician's Inspector's duties may include ensuring that concrete testing, inspection, and curing in the field is *are* performed in accordance with the Contract Documents. The QC Technician-Inspector will inform the Verification Technician-Inspector of anticipated concrete placements and LOT sizes.

### 105-8.7.3 Concrete Laboratory Technician:

**105-8.7.3.1 Concrete Laboratory Technician - Level I:** Ensure technicians testing cylinders and recording concrete strength for material acceptance are qualified CTQP Concrete Laboratory Technicians Level I. Duties include final curing, compressive strength testing, and the recording/reporting of all test data.

**105-8.7.3.2 Concrete Laboratory Technician – Level II:** *Ensure that laboratories providing hardened property test results to the Department are under the supervision of a CTQP Concrete Laboratory Technician - Level II. This person is responsible to ensure that the tests are performed in accordance with Standard Test Methods, project specifications and other contract documents.*

### 105-8.7.4 Concrete Production Facility Manager for Quality Control:

Ensure each concrete production facility has a Facility Manager for QC with the following qualifications:

1. CTQP Concrete Laboratory Technician Level I, CTQP Concrete Field Technician-Level I, and CTQP Batch Plant Operator. As alternatives to these qualifications, the Department will accept *the following qualifications*:

*a. Prestressed Concrete Institute (PCI) Level III*

~~or~~ *certification,*

*b. National Ready Mixed Concrete Association (NRMCA) Concrete Technologist Level II, ~~as equivalent qualifications.~~ or*

*c. Precast Concrete Pipe, Box Culverts, Drainage Structures or Incidental Precast Concrete Plants Level II Quality Control Inspector Certifications meeting the requirements of 105-8.11.*

2. Three years of QC experience directly related to cement concrete production.

3. Demonstrated proficiency in implementing, supervising, and maintaining surveillance over a QC Program.

4. Experience and certification in performance of required QC tests and statistical evaluation of QC test results.

**105-8.7.5 Concrete Mix Designer:** Ensure all mix designs are developed by individuals who are qualified under one of the following:

1. CTQP Concrete Lab Technician Level II;
2. National Ready Mix Concrete Association Level 2 Production Control Technician Certification;
3. Precast Concrete Pipe, Box Culverts, Drainage Structures, and Incidental Precast Concrete Level II Quality Control Inspector meeting the requirements of 105-8.11; or
4. PCI Quality Control Level III certification.

**CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS  
CONCRETE QC PERSONNEL.****(REV 12-22-09)**

Subarticle 105-8.7 (Pages 144-145) is deleted and the following substituted:

**105-8.7 Concrete QC Personnel:**

**105-8.7.1 Concrete Field Technician - Level I:** Ensure technicians performing plastic property testing on concrete for materials acceptance are qualified CTQP Concrete Field Technicians Level I. Plastic property testing will include but not be limited to slump, temperature, air content, water-to-cementitious materials ratio calculation, and making and curing concrete cylinders. Duties will include initial sampling and testing to confirm specification compliance prior to beginning concrete placements, ensuring timely placement of initial cure and providing for the transport of compressive strength samples to the designated laboratories.

**105-8.7.2 Concrete Field Inspector - Level II:** Ensure field inspectors responsible for the quality of concrete being placed on major bridge projects are qualified CTQP Concrete Field Inspectors Level II. A Level II Inspector must be present on the jobsite during all concrete placements. Prior to the placement of concrete, the inspector will inspect the element to be cast to ensure compliance with Contract Documents. A Level II Inspector's duties may include ensuring that concrete testing, inspection, and curing in the field are performed in accordance with the Contract Documents. The QC Inspector will inform the Verification Inspector of anticipated concrete placements and LOT sizes.

**105-8.7.3 Concrete Laboratory Technician:**

**105-8.7.3.1 Concrete Laboratory Technician - Level I:** Ensure technicians testing cylinders and recording concrete strength for material acceptance are qualified CTQP Concrete Laboratory Technicians Level I. Duties include final curing, compressive strength testing, and the recording/reporting of all test data.

**105-8.7.3.2 Concrete Laboratory Technician – Level II:** Ensure that laboratories providing hardened property test results to the Department are under the supervision of a CTQP Concrete Laboratory Technician - Level II. This person is responsible to ensure that the tests are performed in accordance with Standard Test Methods, project specifications and other contract documents.

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1. CTQP Concrete Laboratory Technician Level I, CTQP Concrete Field Technician-Level I, and CTQP Batch Plant Operator. As alternatives to these qualifications, the Department will accept the following qualifications:

- a. Prestressed Concrete Institute (PCI) Level III certification,
- b. National Ready Mixed Concrete Association (NRMCA) Concrete Technologist Level II, or
- c. Precast Concrete Pipe, Box Culverts, Drainage Structures or Incidental Precast Concrete Plants Level II Quality Control Inspector Certifications meeting the requirements of 105-8.11.

2. Three years of QC experience directly related to cement concrete production.
3. Demonstrated proficiency in implementing, supervising, and maintaining surveillance over a QC Program.
4. Experience and certification in performance of required QC tests and statistical evaluation of QC test results.

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2. National Ready Mix Concrete Association Level 2 Production Control Technician Certification;
3. Precast Concrete Pipe, Box Culverts, Drainage Structures, and Incidental Precast Concrete Level II Quality Control Inspector meeting the requirements of 105-8.11; or
4. PCI Quality Control Level III certification.