



May 18, 2021

Department of Administrative Services
Office of the State Building Inspector
450 Columbus Boulevard, Suite 1303
Hartford, CT 06103

Subject: Support for Provisions that Require Qualified Individuals for
Sampling, Testing, and Inspection of Concrete
Code Change Proposals

Codes and Standards Committee Members:

This letter is to recommend approval provisions that set minimum requirements for individuals engaged in the sampling and testing of concrete and inspection of structural elements to the *Connecticut State Building Code* as presented in the code change proposals initiated by the American Concrete Institute.

The Connecticut Concrete Promotion Council represents the state's ready mixed concrete producers and pumpers involved in the supply of ready mixed concrete. These firms directly contribute to the Connecticut economy.

Cast-in-place concrete is one of the few building materials formed, cured, and otherwise conditioned to create the final product on the construction site. Proper sampling and testing of cast-in-place concrete and specimens is crucial to assure quality concrete that will satisfy the intent of the building code. The code, directly or indirectly through referenced standards, establishes minimum requirements for the type and frequency of sampling, testing, and inspection. However, the code is remiss in that it does not establish or provide necessary direction to the building official regarding minimum qualifications for individuals conducting sampling, tests and inspections of structural concrete. The proposed modifications to the CT Building Code identifies qualified individual to perform these duties and establishes a level of competency to aid the building official approving other persons for the purpose of sampling, testing and inspecting.

Examples of specific existing referenced standard language are:

- ACI 318 *Code Requirements for Structural Concrete*, referenced in the CT State Building Code:
26.13.1.2 Inspection of concrete construction shall be conducted by the licensed design professional responsible for the design, a person under the supervision of the licensed design professional, or a qualified inspector.
- ASTM C94 *Standard Specification for Ready-Mixed Concrete* referenced in ACI 318:
7.2 Tests of concrete required to determine compliance with this specification shall be made by a certified technician in accordance with Practice C1077.
- ASTM C1077
6.1.3 Personnel performing laboratory and field testing shall possess current certification(s) that includes a written and performance examination for each relevant standard identified.

These standards are applicable to any use of structural concrete, not just buildings. Thus, the needed guidance to assist the building official in the approval process of qualified personnel is not specifically included in the standards. These proposed modifications are extremely important for the building officials, owners, public and all effected entities in the building design and construction process to understand the appropriate levels of competency to perform sampling, testing and inspection.

In addition to appropriate quality assurances, qualified individuals are necessary to reduce the frequency of improper sampling and testing which results in additional direct costs related to more expensive sampling (coring) and testing and indirect costs due to construction delays.

We find that it is increasingly more important to require qualified individuals because of significant changes in and increased complexities of mix designs, use of high strength and high-performance concrete, combined with improved engineering procedures that permit more economical use and sizing of concrete elements. Sampling and testing of concrete needs to have a level of precision commensurate with the current design and construction requirements.

We have reviewed the code change proposals initiated by ACI and respectfully request that they be approved for inclusion in the Connecticut State Building Code.

Thank you in advance for your consideration of this recommendation.

Sincerely,

A handwritten signature in black ink that reads "Dominic J. DiCenzo". The signature is written in a cursive, flowing style.

Dominic Di Cenzo
Executive Director
Connecticut Concrete Promotion Council