

Certification Policies for Concrete Construction Special Inspector

Approved by the ACI Board of Direction October 27, 1994

Last revised by the Certification Programs Committee March 21, 2014; effective January 1, 2015

The statements contained herein are a consolidation of approved policies and procedures. This policy statement supersedes all previous action regarding the Concrete Construction Special Inspector Certification program.

The certification program policies are divided into seven sections as follows:

| Section 1.0 | Certification Criteria |
|-------------|---------------------------|
| Section 2.0 | Examination Criteria |
| Section 3.0 | Appeals Criteria |
| Section 4.0 | Sponsoring Group Criteria |
| Section 5.0 | Examiner/Proctor Criteria |
| Section 6.0 | ACI Responsibilities |
| Section 7.0 | Recertification Criteria |

SECTION 1.0 CERTIFICATION CRITERIA

1.1 The American Concrete Institute (ACI) shall recognize two classifications of certification for inspectors:

Concrete Construction Special Inspector
Associate Concrete Construction Special Inspector

- 1.2 Certification as an Associate Concrete Construction Special Inspector shall require:
 - A) Successful completion of respective written examinations on inspection and plans reading.
 - B) Fulfillment of requirements in ACI Concrete Field Testing Technician—Grade I as follows:
 - Be currently certified as an ACI Concrete Field Testing Technician—Grade

OR

 Have been certified as an ACI Concrete Field Testing Technician—Grade I at one time

AND

3. Pass the current ACI Concrete Field Testing Technician—Grade I written exam within one year of passing the Inspector exam.

If the Concrete Field Testing Technician—Grade I requirement is not held at the time of testing for <u>Associate Concrete Construction Special Inspector</u>, the requisite Concrete Field Testing Technician—Grade I certification or validation of prior Concrete Field Testing Technician—Grade I certification with successful completion of the current Concrete Field Testing Technician—Grade I written examination must be obtained within one year of the first examination passed for Inspector. Otherwise, the written inspection and plans reading examinations must be retaken in their entireties. No specific education or work experience shall be required to sit for the examination for Associate Concrete Construction Special Inspector.

- 1.3 Certification as a Concrete Construction Special Inspector shall require:
 - A) Successful completion of respective written examinations on inspection and plans reading.
 - B) Fulfillment of requirements in ACI Concrete Field Testing Technician—Grade I as follows:
 - Be currently certified as an ACI Concrete Field Testing Technician—Grade

OR

2. Have been certified as an ACI Concrete Field Testing Technician—Grade I at one time

AND

3. Pass the current ACI Concrete Field Testing Technician—Grade I written exam within one year of passing the Inspector exam.

If the ACI Concrete Field Testing Technician—Grade I requirement is not held at the time of testing for <u>Concrete Construction Special Inspector</u>, the requisite ACI Concrete Field Testing Technician—Grade I certification or validation of prior ACI Concrete Field Testing Technician—Grade I certification with successful completion of the current ACI Concrete Field Testing Technician—Grade I written examination must be obtained within one year of the first examination passed for Inspector. Otherwise, the written inspection and plans reading examinations must be retaken in their entireties.

- C) Demonstrate satisfactory education and work experience.
- 1.4 The education and work experience required for Concrete Construction Special Inspector certification is as follows:
 - A) A B.S. degree in Civil Engineering, Civil Engineering Technology, Engineering Technology, Construction Engineering or Construction Engineering Technology from a program accredited by ABET (aka Accreditation Board for Engineering and Technology), including courses in concrete materials, design or construction, plus six months satisfactory work experience, or
 - B) A B.S. degree in an engineering program, plus one year of satisfactory work experience, or
 - C) A minimum of two years of college or technical school, earning at least 60 credit hours, plus two years of satisfactory work experience, or
 - D) A high school diploma, or equivalent, plus a minimum of three years of satisfactory work experience, or
 - E) Five years of satisfactory work experience.
- 1.5 Satisfactory work experience must include:
 - A) Decision making responsibility and authority.
 - B) Verification of compliance with plans, specifications, and codes.

- C) Evaluation of concrete construction in the field.
- D) Documentation and reporting of inspection results.
- E) Construction Special Inspector Certification requires proficiency in the following areas of inspection: formwork installation and removal, reinforcement, embedments, sampling and testing of freshly mixed concrete, conveying, placement, consolidation, finishing, jointing, curing, and protection.
- 1.6 ACI certification shall be valid for a period of five years from the date of completion of all certification requirements. An Associate Inspector shall be upgraded to full Inspector upon completion of appropriate certification requirements.

SECTION 2.0 EXAMINATION CRITERIA

- 2.1 The written inspection examination shall consist of approximately 80 multiple choice questions pertaining to inspection and reporting of inspection information for preplacement, placement, and post-placement periods of concrete construction. The written plans reading examination shall consist of approximately 20 multiple choice questions designed to test the examinee's ability to read and understand engineering drawings.
- 2.2 The written inspection examination includes questions on formwork installation and removal, reinforcement, embedments, conveying, placement, consolidation, finishing, jointing, curing, protection, drilled piers, pilings, pavements and soil cement, as appropriate. The written plans reading examination includes questions on terminology, reinforcement, tolerances, and special requirements as expressed on engineering drawings.
- 2.3 The body of knowledge covered on the Concrete Construction Special Inspector examination is contained in the publications listed in Appendix A.
- 2.4 The examinations are open book. The technical materials allowed into the examination room are limited to the resource materials listed in Appendix A.
- 2.5 A maximum time of three hours shall be allowed to complete the written inspection examination. A maximum time of one hour shall be allowed to complete the written plans reading examination.
- 2.6 The examination shall be supervised by an ACI-approved Examiner, assisted, when necessary, by a proctor appointed by the Examiner.
- 2.7 The Examiner, proctors, and members of the Sponsoring Group have no jurisdiction over the content of questions on any specific examinations.

- 2.8 Oral administration of the examinations shall be permitted, contingent upon prior approval by the ACI Certification Department.
- 2.9 Successful completion of each written examination requires a minimum grade of 70%.
- 2.10 The written inspection and plans reading examinations may be taken separately, but must be passed within one [1] year of each other. Otherwise, both the written inspection and plans reading examinations must be retaken in their entireties.
- 2.11 Examinations shall be graded by ACI.
- 2.12 Multiple versions of the examinations, of approximately equal difficulty, may be provided.
- 2.13 Arrangements for reexamination shall be made with the Sponsoring Group.

SECTION 3.0 APPEALS CRITERIA

- 3.1 An appeal procedure shall be available if the examinee feels some aspect of the examination process is unclear, incorrect, or unfair.
- 3.2 Appeals regarding the conduct of the examination should be referred initially to the Examiner. If the Examiner cannot satisfy the complaint, it should be referred to the Sponsoring Group.
- 3.3 Challenges regarding specific questions shall be referred to ACI in writing.
- 3.4 A challenge form shall be provided with each exam on which the examinee may describe a complaint involving specific questions. It should be returned with the completed examination.
- 3.5 ACI will consider a written challenge/appeal if it is received by the ACI Certification Department within 60 days from the receipt of the examination by ACI.
- 3.6 Appeals referred to ACI are handled in order by the following people or groups:
 - 1. ACI Director of Certification
 - The Certification Appeals Committee [consisting of the Director of Certification; the Certification Programs Committee Chairman, and the Chairman of Committee C 630]
 - 3. Committee C 630, Construction Inspector Certification
 - 4. Certification Programs Committee

SECTION 4.0 SPONSORING GROUP CRITERIA

Groups desiring to conduct ACI Certification program(s) shall adhere to the current <u>Policy on Sponsoring Groups for Certification</u>.

SECTION 5.0 EXAMINER/PROCTOR CRITERIA

5.1 The Examiner shall be authorized by ACI to conduct the ACI certification examinations for:

Concrete Construction Special Inspector Associate Concrete Construction Special Inspector

- 5.2 The Examiner shall be present and in full supervision during the examination session.
- 5.3 The Examiner shall be approved by ACI. Qualifications shall be submitted on the Examiner Application.
- 5.4 The Examiner shall meet the following requirements:
 - 1. Be a registered professional engineer.
 - 2. Have had five years of recent experience in inspection of concrete construction.
 - 3. Be adjudged qualified by ACI.
- 5.5 Proctors shall be permitted to assist the Examiner in conducting the written examination.
- 5.6 Proctors shall satisfy the following requirements:
 - 1. Have some knowledge of concrete construction.
 - 2. Be trustworthy and conscientious.
 - 3. Be adjudged qualified by the examiner.
- 5.7 Examiners and proctors shall be unrelated professionally and personally to the examinees. Government organizations may petition ACI, in writing, and request a waiver of this requirement. Waivers shall be granted only if it can be shown that the intent of the policy will be maintained.
- 5.8 The Examiner shall:
 - 1. Select the proctors and inform ACI of their names.

- 2. Verify the identity of each examinee, and ensure that the examinees are aware of the certification criteria.
- 3. Confirm the suitability of the facilities selected by the Sponsoring Group.
- 4. Receive inspector applications, evaluate education and work experience, and determine if requirements for certification are met. This responsibility may be performed by ACI, if delegated by the Sponsoring Group.
- 5. Maintain secrecy of the examination content.
- 6. Refrain from defining terms or interpreting examination questions while conducting the examination.

SECTION 6.0 ACI DUTIES AND RESPONSIBILITIES

6.1 ACI shall:

- 1. Approve the Sponsoring Group.
- 2. Approve the Examiner.
- 3. Grade the examinations and notify the examinee and the examiner of the final results in writing.
- 4. Evaluate education and work experience and determine conformance with requirements of applicants as a Concrete Construction Special Inspector if requested by the Sponsoring Group.
- 5. Authorize the Sponsoring Group to conduct examination sessions for:
 - Concrete Construction Special Inspector Associate Concrete Construction Special Inspector
- 6. Issue a certificate and wallet card to successful examinees.
- 7. Process appeals.

SECTION 7.0 RECERTIFICATION CRITERIA

Recertification criteria shall be the successful completion of the then-current requirements for certification. Reevaluation of work experience is not required for recertification at the same certification level.

APPENDIX A—Resource Materials ACI Concrete Construction Special Inspector Certification Program

Documents:

ACI Concrete Terminology

| ACI 117 | Specifications for Tolerances for Concrete Construction and Materials |
|------------|---|
| ACI 213R | Guide for Structural Lightweight-Aggregate Concrete |
| ACI 301 | Specifications for Structural Concrete |
| ACI 302.1R | Guide for Concrete Floor and Slab Construction |
| ACI 304R | Guide for Measuring, Mixing, Transporting, and Placing Concrete |
| ACI 304.2R | Placing Concrete by Pumping Methods |
| ACI 305R | Guide to Hot Weather Concreting |
| ACI 306R | Guide to Cold Weather Concreting |
| ACI 308R | Guide to Curing Concrete |
| ACI 309R | Guide for Consolidation of Concrete |
| ACI 318 | Building Code Requirements for Structural Concrete |
| ACI 347 | Guide to Formwork for Concrete |
| ICC | International Building Code, Chapters 17 & 19 |
| CRSI | Manual of Standard Practice |
| ACI SP-2 | Manual of Concrete Inspection |