

Agenda

Presented by Alan S. Tuck

Overview of Special Inspections

Defining special inspections, statement of special inspections
History of IBC Code, BOCA Code and special inspections
Role of special inspector, architect, engineer, building official
Discussion of special Inspection paperwork and reports
IBC reference documents - the SECRET of obtaining code compliance

Soil and Foundation Inspections

Geotechnical Engineering 101
Subsurface investigations
Geotechnical and soils special inspections required by the IBC code
Verifying soil bearing capacity in the field according to CODE (IBC)

Concrete Special Inspections – ACI 318

Concrete placement, testing and special inspections
Concrete reinforcement, anchor rods, post-installed concrete anchors
Concrete mixtures – verifying approved concrete mix in the field
Can mix water be added to truck during concrete discharge? NO!
WHERE do you REALLY sample concrete according to the CODE?

Masonry Special Inspections: ACI 530, ACI 530.1, TMS 402, TMS 602

Masonry/mortar inspection and testing REQUIRED by the CODE
Essential and non-essential structures – special inspections required
Failing masonry sands and mortar strengths – WHAT TO DO
Masonry fire ratings – pitfalls – what does the CODE actually require?

Structural Steel Construction – Special Inspections

Reference codes – AISC 360, AWS, RCSC, SJI, SDI
Welding code and special inspections
Bolted connections and special inspections
Types of bolted connections: snug-tight, pretensioned, slip-critical
Cold-formed steel and light-gauge steel – ANY DIFFERENCE?

Special Inspections for Sprayed Fire-Resistant Materials (SFRM)

SFRM thickness tests - density tests - frequency required by CODE
Bond strength – adhesion/cohesion tests – CODE mandates
BIG special inspection changes SINCE 9-11 twin tower disasters
Different types of SFRM materials

Glance Ahead at the NEXT IBC Code Cycle

Significant and dramatic changes in the upcoming IBC Code cycle
ACI 318-14 - FIRST CONCRETE CODE REORGANIZATION in 50 years
TMS 402-13/602-13 - big masonry code changes – What about ACI 530?
SWEEPING steel code changes – AISC 360-10 Chapter N (new world)
CODE requires ultrasonic (UT) testing of full pen welds for the first time

Special Inspections under the International
Building Code Chapter 17
Knoxville, TN - Wednesday, June 20, 2018



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Learning Objectives

You'll be able to:

Review the history of special inspections, and discuss the role of special inspectors.

Explore geotechnical, soil and foundation inspections.

Examine concrete and masonry special inspections.

Review structural steel construction special inspections.

Study special inspections for sprayed fire-resistant materials (SFRM).

Look ahead to the next building code update cycle.



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Continuing Education Credits

Professional Engineers

7.0 PDHs

Architects

7.0 HSW CEHs

7.0 AIA HSW Learning Units

International Code Council

.7 CEUs (Building)

Contractors

Non-Credit Continuing Ed.



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Faculty

Alan S. Tuck *Executive Director, Code Compliance and Training at Froehling & Robertson, Inc.* Mr. Tuck has more than 50 years of experience in the materials testing and construction inspection industry. He has been a code influencer. In the early 1990's, he published a 47 page Construction Specifications Institute (CSI) monograph entitled "BOCA Special Inspection Services" as a learning and teaching tool for testing agencies, architects, engineers, municipalities, and building officials, etc. This document became the foundation for the original Chesterfield County, Virginia, special inspection program which today is known to be one of the best special inspection programs in the region. This CSI monograph impacted and assisted the development of special inspection programs of many other Virginia jurisdictions during the early days of BOCA and IBC. Today, Mr. Tuck is the building code "go to" guy when architects, engineers, contractors and building officials across the Mid-Atlantic have special inspection questions about their ongoing projects.

He started his career with Froehling & Robertson in 1964 as a materials technician and fulfilled many duties including senior field technician, radiographic assistant, drill rig operator, laboratory technician, and structural steel inspector, quickly being promoted to branch manager of the Roanoke office in 1966. Over the next few decades, Mr. Tuck also managed F&R's operations in Norfolk, Lynchburg, and Chesapeake, Virginia. During this time, he was designated as the company-wide manager of construction materials testing services, working in F&R's Richmond headquarters. In the late 1990's, Mr. Tuck took on company business development. His success in this realm led to Mr. Tuck being elevated to the role of vice president of business development. His responsibilities in this role included hiring, training, and supervising business development managers throughout the company's Mid-Atlantic footprint. F&R was established in 1881 and is one of the oldest consulting engineering firms and testing agencies in the United States.

Mr. Tuck developed training courses related to special inspection requirements of the International Building Code (IBC) and the various statewide building codes in jurisdictions where F&R maintains operations, including Maryland, Virginia, District of Columbia and the Carolinas. He cultivated and expanded inter-company special inspections code training courses for F&R's technicians, special inspectors and engineers. These technical code training courses formed the basis of F&R's "Continuing Education Program" and "Lunch & Learn Series" which are comprised of building code training courses regarding soils, geotechnical engineering, concrete, masonry, sprayed fire-resistant materials, structural steel and many other disciplines. These courses are now offered to the entire Mid-Atlantic community of architects, engineers, construction professionals as well as to associations, municipalities, school systems and a host of other market sectors. As F&R's very first executive director of code compliance and training, Mr. Tuck has provided special inspections training and code training to hundreds of firms and thousands of professionals over the past decade and has dedicated this phase of his professional career to the study and instruction of the various building code changes throughout the different code cycles. He also is well versed in the major code changes of the "enforcer" codes such as AWS (welding), AISC (steel), ACI 318 (concrete), ACI 530 (masonry), in addition to the latest revisions of the International Building Code (IBC) and statewide codes within F&R's geographical region.

Here's what past attendees have to say about the program and presenter Alan Tuck:

"Another excellent seminar! Alan is tops!" – *Architect*

"Excellent presenter. Very technically competent." – *Professional Engineer*

"Alan has a wealth of experience with many specific examples of code issues."
– *Structural Engineer*

Seminar Information

Hyatt Place Knoxville Downtown
530 South Gay Street
Knoxville, TN 37902
(865) 544-9977

Tuition

\$279 for individual registration
\$259 for three or more registrations.

Each registration includes a complimentary continental breakfast and printed seminar manual.

Registration does not include a copy of the Code itself.

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How to Register

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Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the CD/manual package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public and offers 7.0 PDHs to professional engineers and 7.0 HSW continuing education hours to architects in all states, except Florida architects. Educators and courses are not subject to preapproval in Tennessee.

This seminar is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to the AIA/CES.

HalfMoon Education is deemed an approved architect continuing education provider in New York. HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Maryland, New Jersey (Approval No. 24GP0000700), New York (NYSSED Sponsor No. 35), North Carolina, and North Dakota.

The International Code Council has approved this event for .7 CEUs in the specialty area of Building.

This seminar offers a continuing education opportunity to contractors. It has not been approved by any state contractor licensing board for mandatory continuing education credit.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

Webinar Series

Pedestrians and Bicycle Transport Planning

- **Introduction to Current Conditions and Trends in Biking and Walking**

Thurs., June 21, 2018, 11:00 AM - 12:30 PM CDT

- **Engineering and Infrastructure: Design for Walkability and Bikeability**

Thurs., June 21, 2018, 1:00 - 2:30 PM CDT

- **Developing a Walking and Biking Plan, Part I**

Fri., June 22, 2018, 11:00 AM - 12:30 PM CDT

- **Developing a Walking and Biking Plan, Part II**

Fri., June 22, 2018, 1:00 - 2:30 PM CDT

For more information visit:
www.halfmoonseminars.org/webinars/

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Registration

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() I need special accommodations. Please contact me.	

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.

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