Agenda

Presented by Alan S. Tuck

Day One: Tuesday, August 17, 2021 | 8:30 - 11:45 am EDT (including a 15-min. break)

Overview of Special Inspections

Definition of special inspections and brief history of special inspections Precedence of statewide code, IBC code, reference codes and standards Roles of special inspector, architect, engineer, building official and contractor Statement of Special Inspections - What's the real purpose of this document Dramatic exceptions to the IBC code by the Virginia Construction Code (VCC)

Soil, Foundation and Geotechnical Investigations 101

Code required special inspections Code required laboratory tests Verifying soil bearing capacity Types of foundations Periodic and continuous field testsrole of engineer of record (EOR)

Concrete Special Inspections and the New Concrete Code

FIRST Concrete Code reorganization in 50 years – lots of changes What testing and special inspections does the code require? Concrete mix designs – How do you know they comply with new code Important roles of ACI 318 and ACI 301 at the job site **Reinforcing steel**

Day Two: Wednesday, August 18, 2021 | 8:30 am - 12:50 pm EDT (including two 10-min. breaks)

Structural Steel Special Inspections

Shop fabrication tests/inspection Types of bolted connections AISC 360 Chapter N (Quality Assurance) Welding code and special inspections Reference codes AISC 360, AWS, RCSC, SII, SDI, AISI 240 and others

Masonry Special Inspections

Submittal process and code required mock-up panel testing Level A, B, C Special Inspections or Level 1, 2, 3 - What's the difference? Understanding ASTM C 270 and ASTM C 780 – Mortar confusion goes away Constant failing masonry sands and mortar tests - Does the code really care Code required special inspections on mortar and concrete masonry units (CMU)

Sprayed Fire-Resistant Materials (SFRM)

Frequency of thickness tests and density tests according to the CODE

- Bond strengths adhesion/cohesion
- SFRM special inspections on high-rise buildings
- SFRM code changes due to NIST Investigations on 9-11 collapse studies

Overview of New Virginia Statewide Code Effective on July 1, 2021

What is the order of precedence when the Virginia code conflicts with IBC code? What happens when Virginia code conflicts with local jurisdictions (cities, towns?) Pre-engineered metal building conundrum – AC 472

New AISI S 240 cold-formed steel light-frame construction never existed before Does the Virginia Statewide Code cancel the IBC mandate

for inspections on small jobs?

What about the "grace period" of the Virginia Statewide Code – How does it work?

2021 Chapter Οŵ le Code August 18 ia Statewide and Wednesday, Au under ctions d New Virginia Tuesday, August 17 and **Special Inspe** and Online -BC 17





Learning Objectives

You'll be able to:

Explore the roles of special inspectors, architects, engineers, building officials and contractors.

Discuss the real purpose of the statement of special inspections.

Examine special inspection requirements for soil, foundations and geotechnical investigations.

Comply with new concrete code requirements.

Meet requirements for masonry special inspections and for sprayed fireresistant materials.

Discuss the new Virginia Statewide Code, which takes effect on July 1, 2021.

Resolve conflicts between the International Building Code, the Virginia Statewide Code and local codes.



IBC Special Inspections

HalfMoon Education Online Learning under Chapter 17 and New 2018 Virginia Statewide Code

Live, Interactive Webinar Series Tuesday, August 17 and Wednesday, August 18, 2021



Examine the precedence of the Virginia statewide code, IBC code, reference codes & standards

Verify soil bearing capacity and analyze types of foundations

Explore concrete special inspections and the new concrete code

Continuing Education Credits

Professional Engineers 7.0 PDHs

Architects 7.0 HSW CE Hours

AIA Continuing Education Provider



Discuss Structural Steel Special Inspections

Learn the code required special inspections on mortar and concrete masonry units (CMU)

Identify sprayed fire-resistant materials (SFRM)

Analyze the new Virginia statewide code effective in July

AIA 7.0 LU|HSW

International Code Council .7 CEUs (Building)





Faculty

Alan 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 1990s, 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 1990s, 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,

Webinar Information

Day One: Tuesday, August 17, 2021 8:30 - 11:45 am EDT (including a 30-min. break)

Day Two: Wednesday, August 18, 2021

8:30 am - 12:50 pm EDT (including a 30-min. break) (please log into the webinar 15 - 30 minutes before start time)

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Continuing Education Credit Information

This webinar offers 7.0 PDHs to professional engineers and 7.0 HSW continuing education hours to architects licensed in Virginia. Educators and courses are not subject to preapproval in Virginia.

The American Institute of Architects Continuing Education System has approved this course for 7.0 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Building (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to all prompts, and earn a passing score (80%) on the guiz that follows the presentation (multiple attempts allowed).

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, and 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 various building code changes throughout 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), and ACI 530 (masonry), in addition to the latest revisions of the International Building Code (IBC) and statewide codes within F&R's geographical region.

Additional Learning -

Universal Residential Design - Thurs, July 15, 2021 8:30 am - 4:30 pm CDT

Engineered Lumber Design and Construction - Fri, July 16, 2021 9:00 am - 4:00 pm CDT

2021 International Residential Code: **Residential Electrical Systems** - Fri, July 16, 2021, 11:00 am - 3:30 pm CDT

Managing Construction with **AIA Document A201: General Conditions** - Tues, July 20, 2021 | 8:30 am - 4:00 pm CDT

High-Performance Building Envelopes - Wed, July 21, 2021 | 11:00 am - 2:45 pm CDT - Thurs, July 22, 2021 | 11:00 am - 2:45 pm CDT

Understanding and Working with Urban Soils

- Fri, July 23, 2021 | 8:30 - 10:30 am CDT

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Registration

IBC Special Inspections under Chapter 17 and New 2018 Virginia Statewide Code

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