

The Johnson County Contractor Licensing Program *with the*
Heart of America Chapter, ICC *present the*

2017 Fall Education Seminar

October 30, 31, November 1, 2, and 3, 2017
Overland Park Convention Center
6000 College Boulevard
Overland Park, Kansas



Who We Are



Our mission is to foster the highest standards of integrity, skill, and trade practice in the construction disciplines regulated by the program. In so doing, we work to safeguard the life, health, property, and welfare of the public. We accomplish our mission by administering a uniform licensing program for participating jurisdictions and by producing quality construction-related continuing education seminars for licensed contractors, trade practitioners, and building inspection professionals. 2016 was a growth year for the program, having added Tonganoxie and Mission Hills. Now, representing 18 jurisdictions inside and outside Johnson County, we are proud to have been designated as the International Code Council's first Preferred Provider Program.



The Heart of America Chapter, ICC, has been the association representing building inspection professionals across Kansas for more than fifty years. The Heart of America Chapter, ICC, was awarded ICC Chapter of Merit awards in 2006 and 2007, then received the prestigious ICC Chapter of the Year Award in 2008.

The program is guided by the nine-member Contractor Licensing Review Board who are appointed by the Johnson County Board of County Commissioners.

Contractor License Review Board

August Huber III, Chair Class "A" Contractor	Lawrence Levy Class "B" Contractor	Charlie Blair Class "C" Contractor	William Jones Class "D" Contractor
Jim Jorgensen, P.E. Building Official	Mitch Dringman Building Official	Don West Class "D" Contractor	David Elliott General Public
Eric Wimmer Architect/Engineer			

Education Committee Members

Dr. Richard Bruce, Chair	Charlie Blair	Don West	Dr. David Jones	Barry Walthall
David Elliott	Michael Sandifer	Paul Alvarado, Sr.	Rob Poettgen	Jason Wright
Bill Jones	Tony Lacy			

Staff

Jay Leipzig Director	Russell Thornburg Program Manager	Samantha Nichols Asst. Program Manager	Amber Clark License Monitor	Shiloh Wells License Monitor
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Lunch Menu

Monday

Brisket Chili, Baked Potato Bar, Green Salad, Broccoli/Cauliflower With Cheese, Bread Pudding

Tuesday

Taco Buffet, Spanish rice, Churro beans, Garden Salad, and Churros

Wednesday

Mom's Meatloaf with Brown Gravy, Mashed Potatoes, Green Beans, Garden Salad, and Cinnamon Rolls

Thursday

Roasted Whole Hog, Potato Chips, Coleslaw, Macaroni & Cheese, Kaiser Rolls, Fruit Salad, and Cinnamon Rolls

Friday

Hamburgers, Hot Dogs, Potato Salad, Pasta Salad, and Cookies



Welcome to the 2017 Fall Seminar

Welcome to the Contractor Licensing Program 2017 Fall Education Seminar. The 2017 Fall Education Seminar will be held at the Overland Park Convention Center, 6000 College Boulevard, Overland Park, Kansas, 66210.

Pre-registration for Classes: Be sure to pre-register for classes. Because your class enrollment information is pre-printed, we will not be able to accommodate walk-in attendees. Popular classes fill early and registration closes at 5:00 pm, October 27, 2017.

Relicensing: We won't be able to relicense for 2018 at the seminar. You can relicense by mail, in person at the office, or online by using the Contractor Management System at <http://cls.jocogov.org/CLSCOURSEREG/default.aspx>.

Class Check In and Check Out: You must scan-in when you enter and scan-out at the end of your classes. Have the bar code on your license card or class schedule scanned at the entry to, and exit from, your class. Please be sure to have your bar code scanned when you enter and when you exit the class, or we will not be able to give you credit for your attendance.

Lunch: We will be serving lunch to attendees who are enrolled in both morning and afternoon classes. You will use your bar code for entry into the lunch line, so be sure to keep your bar code document. If you have special dietary needs, please make your request before October 23, 2017 by e-mailing Russell.Thornburg@jocogov.org or by calling (913) 715-2233.

Certificates: We do not distribute certificates at the conclusion of classes. At the Contractor Licensing web site you can use the Contractor Management System feature to retrieve and print a copy of your official transcript, or any of your certificates, from your home or office computer. The Contractor Management System can be found on-line at:

<http://cls.jocogov.org/CLSCOURSEREG/default.aspx>



Monday October 30, 2017

30-1A The Complex Pressure Treated Wood Arena

8:00 AM to 12:00 PM 4 Hours A, B, C, DR, DW Code Credits

This session will dive into the complex pressure treated wood arena. While there are strict standards to be met, the process itself is a maze of chemicals, drying techniques, appearance standards and final product dependability controls that have turned this industry into something complex and exciting. Attendees will be introduced to various properties of lumber, the treating chemicals used during the treating process, what chemicals work for different applications and why, and a discussion about why this industry continues to evolve both for the health of the consumer and the economy. Attendees will obtain the ability to identify treated wood components, understand various building code expectations, and list the steps needed to produce and sell a high quality pressure treated wood product.

Instructor: Peder Anderson

ICC PPP #: 13323

30-1B Managing Moisture in Residential Construction and Roofing Underlayment

1:00 PM to 3:00 PM 2 Hours A, B, C, DR Code Credits

The industry is increasing the energy efficiency of buildings, but a building cannot be truly efficient unless it is durable. As new materials and methods are introduced to meet higher energy efficiency standards, new construction methods and details will be required. This presentation will discuss the challenges in moisture management and durability posed by energy efficient wall systems. A significant amount of research has been conducted on traditional wall systems, leading to water-resistant barrier, drainage, window installation and flashing recommendations. This presentation will review water management code requirements and discuss how these established water management recommendations and code requirements relate to highly insulated and airtight wall assemblies. The implications of air barriers and vapor retarders on wall system moisture management and building durability will also be discussed.

Instructors: Keenan Watson & Christopher Fetterman

ICC PPP #: 13104

30-1C Choices of Air Barriers for Commercial Building Enclosures

3:00 PM to 5:00 PM 2 Hours A, B, C, DR, DW Code Credits

This seminar will help you understand the importance of air barriers on building enclosure performance, and the choices of air barrier systems for air leakage control. Based on the application method there are 4 main types of air barriers for commercial buildings: (i) Fluid-Applied Membranes (FA), (ii) Mechanically Fastened (Building Wraps), (iii) Self-Adhered Membranes (SA), and (iv) Spray Polyurethane Foams (SPF). Based on vapor permeability, air barriers can be vapor permeable and non-permeable. This seminar will discuss air barrier choices based on the application method; vapor permeability is beyond the scope of this presentation. The seminar is organized in 2 main sections:

1. The first section is a very brief review of air leakage and the importance of air leakage control for commercial building enclosures.
2. The second section will address the following for each air barrier type: brief description, examples of products, typical properties, application methods, system components and advantages & limitations. Examples of proper field installation and common mistakes will be outlined for each air barrier type.

Instructor: Mike Houim

ICC PPP #: 13105

30-2A Transition from 2012 IRC to 2018 IRC

8:00 AM to 5:00 PM 8 Hours A, B, C Code Credits

This seminar will assist attendees in implementing the transition from the 2012 to the 2018 International Residential Code (IRC). Seminar will include changes in the 2015 IRC. This interactive seminar will incorporate site photographs and graphics to help clarify new code provisions and stimulate discussions among attendees.

- Upon completion of this seminar attendees will better be able to:
- Identify the changes from the 2012 IRC through the 2015 IRC to the 2018 IRC.
- Explain differences between current and previous editions of the IRC.
- Correctly apply the new 2018 IRC provisions.
- Correctly apply changes to plan review and field inspections.

Instructor: Roger Axel

ICC PPP #: 13106

30-3A Mechanical Ventilation: the Do's and Don'ts

8:00 AM to 5:00 PM 8 Hours A, B, C, DM Code Credits

This course will provide an overview of mechanical ventilation requirements of the code, will address tough questions like why we build tight and ventilate, and will point to what's on the horizon with respect to ventilation systems and codes.

Instructors: Mike Moore & Luke Howard

ICC PPP #: 13107

30-4A 2018 IBC/IFC Essentials: Hazardous Materials

8:00 AM to 12:00 PM 4 Hours A, B, C, DF Code Credits

- Describe the specific general requirements for hazardous materials to protect building occupants from an accidental release.
- Explain the storage, use, handling, and dispensing requirements of flammable and combustible liquids to prevent unwanted fires.
- Identify the health, flammability, and chemical instability of a hazardous material using a hazard identification sign.
- Describe how to handle damaged gas containers that present fire safety and health implications.
- Recall how many openings a storage tank should have to prevent fatal incidents from occurring.

Instructor: Terrell Stripling

ICC PPP #: 13238

30-4B 2018 IFC Significant Changes

1:00 PM to 5:00 PM 4 Hours A, B, C, DF Code Credits

- Identify the most significant differences between the 2012 IFC and the 2018 IFC.
- Explain the differences between the current and previous edition.
- Identify the applicability of design, plan review, and inspection requirements.
- Identify changes in organization and code requirements.

Instructor: Terrell Stripling

ICC PPP #: 13239

30-5A Medical Gas & Vacuum Systems of NFPA 99 Health Care Facilities Code

8:00 AM to 5:00 PM 8 Hours A, B, C, DP Code Credits

This course will review chapter 5 of NFPA 99 Health Care and Facilities Code. It will include the installation of plumbing piping for both medical gas and vacuum systems. Chapter 5 covers the equipment, installation, performance, testing, and maintenance of medical gas and vacuum systems (MGVS) and medical support gases (MSG).

Instructor: Bobby Doran

ICC PPP #: 13108

30-6A Fundamentals of Concrete Construction

8:00 AM to 12:00 PM 4 Hours A, B, C Code Credits

Basic Properties of Concrete

Residential vs. Commercial Concrete

Delivery and Placement Problems

Deterioration and Structural Distress in Concrete Structures

Common Methods for Repair of Concrete Structures

Instructor: Tom Rewerts, SE

ICC PPP #: 13109

30-6B Fundamentals of Masonry Construction

1:00 PM to 5:00 PM 4 Hours A, B, C Code Credits

Basic Properties of Brick, Block, and Stone Masonry

Building Code Requirements for Masonry Buildings

Deterioration and Structural Distress in Masonry Structures

Moisture Control Solutions for Masonry Buildings

Instructor: Tom Rewerts, SE

ICC PPP #: 13110

30-7A Analysis of Changes to the 2017 NEC

8:00 AM to 5:00 PM 8 Hours A, B, C, DE Code Credits

This overview and analysis provides a jumpstart into the more significant changes which impact all electrical work. Over 4,100 public inputs and 1,500 public comments (to those inputs), processed by twenty code making panels, have shaped the 2017 NEC® into a document unlike its predecessor. While all of the changes cannot be covered in this training event, this course is intended to provide detail into the more significant changes adopted into the 2017 National Electrical Code NEC®. The PowerPoint presentation and the coursework ensure maximum exposure to the more significant changes. This course is especially suited for contractors, tradesmen, design professionals, code officials, and individuals with a “need-to-know” regarding the latest version of the NEC®. Attendees will be able to recognize and analyze the changes which impact both new and existing electrical installations. Participants may find highlighters and sticky notes useful during this course (not provided). (Note: Contact hours and potential discussion will dictate the quantity of changes covered in order of their significance.)

Instructor: Mike Weaver

ICC PPP #: 13111



Tuesday October 31, 2017

31-1A 2012 to the 2018 Significant Changes of the IBC

8:00 AM to 5:00 PM 8 Hours A, B, C Code Credits

Identifies many of the important changes that occurred between the 2012 and the 2018 editions of the IBC. The presentation addresses not only the code change itself but also the intent behind the change. The discussion includes additions, deletions, modifications and clarifications of provisions throughout the code, with a focus on the fire- and life-safety provisions found in IBC Chapters 3 through 10. The presentation will also address any changes in application of the code requirements.

Instructor: Doug Thornburg

ICC PPP #: 13112

31-2A 2012 IRC to the 2018 IRC: Fire Separation Requirements Between Two-Family Dwellings & Townhouses

8:00 AM to 5:00 PM 8 Hours A, B, C, DW Code Credits

Attendees will be able to apply the fire and life/safety provisions for townhouse construction using the 2018 International Residential Code (IRC). This seminar addresses issues based on exterior wall and opening protection, separation of dwelling and dwelling units, and means of egress. The extensive use of actual site photographs and graphics provides an interactive format that provides opportunities for participants to research code provisions and discuss answers with other participants.

- Upon completion of this seminar attendees will better be able to:
- Identify the changes from the 2012 IRC through the 2015 IRC to the 2018 IRC.
- Identify fire-resistive dwelling separations.
- Apply provisions of the 2018 IRC.
- Explain the intent of multiple dwelling separations.

Instructors: Roger Axel

ICC PPP #: 13113

31-3A Manual D and J Designs & Installations based out of the 2018 Codes

8:00 AM to 5:00 PM 8 Hours A, B, C, DM Code Credits

Learn how to size your system from accepted engineering practices found in Manual J and how energy conservation trends have changed the size of equipment. This course will follow through to the sizing of duct work once the determined loads have been identified.

Instructor: Jason Van Ausdal

ICC PPP #: 13114

31-4A Firestopping Responsibilities for – Contractors, Designers, and Code Officials

8:00 AM to 5:00 PM 8 Hours A, B, C, DW Code Credits

This firestop training is designed for Contractors, Fire and Building code officials and Architects. We will review what some code officials are starting to require along with discussing the new ASTM firestop inspection standards. Will receive an overview of draftstopping along with the residential requirements of fireblocking. This program will also provide helpful hints for Contractors, to work with code officials.

Instructor: Brice Miller

ICC PPP #: 13115

31-5A Tankless Water Heater Technology

8:00 AM to 10:00 AM 2 Hours A, B, C, DP Code Credits

With the installation of tankless water heaters becoming popular in modern day construction, it is important to understand the changes in design necessary for both water and energy conservation.

Instructor: Bobby Doran

ICC PPP #: 13116

31-5B Water Pipe Sizing according to the IRC

10:00 AM to 12:00 PM 2 Hours A, B, C, DP Code Credits

This seminar will review chapter 29 of the 2015 International Residential Code Water Supply and Distribution in which we will discuss the importance of correct water pipe sizing along with the code requirements on the installation of water piping in order for the proper operation of plumbing fixtures. We will also discuss the correct materials and installation used for potable water systems.

Instructor: Bobby Doran

ICC PPP #: 13117

31-5C Swimming Pool

1:00 PM to 5:00 PM 4 Hours A, B, C, DM, DP, DS Code Credits

- Overview of pool types
- Overview of filter types
- Plumbing, the number one mistake for beginners
- Discussion about saltwater pools
 - Advantages, disadvantages
- Main drain safety
- Commercial pools verses residential pools, big difference
- Innovations in the industry

Instructor: Garry Bair

ICC PPP #: 13408

31-6A Concrete Specifications Changes

8:00 AM to 10:00 AM 2 Hours A, B, C Code Credits

ACI 318-14, learn about a transition key from the old ACI doc to the new ACI doc. Learn about the major changes to the KC APWA Section 2600, flowable backfill specification and why they were made. Learn changes to the pervious concrete guidelines (Specifiers Guide to Pervious Concrete in Kansas City v1.4.17) that effect the contractor, the ready mix producer, and the designer. Learn where all 3 specifications and guides can be found for the future.

Instructors: Joe Hug, John Cooper, and Christy Martin

ICC PPP #: 13118

31-6B Batch Ticket & Troubleshooting Concrete Surface Defects

10:00 AM to 12:00 PM 2 Hours A, B, C Code Credits

1. This class will address ASTM C94, The Standard Specification for Ready-Mixed Concrete – Specifically the Batch Ticket
2. This class will also cover the five Most Common surface defects in concrete, what causes them, how to avoid them, etc.
 - Dusting
 - Scaling
 - Cracking or Mapping
 - Plastic Shrinkage Cracks
 - Mortar Flaking

Instructors: Joe Hug, Monarch Cement and Shannon Seipel, Eden Innovations LLC

ICC PPP #: 13119

31-6C Kansas Disaster Assessment Team Certification and Recertification

1:00 PM to 5:00 PM 4 Hours Non-Code Credits

This is a non-code credit class intended for public agency building inspectors, plan reviewers, administrative professionals, and Kansas licensed Architects or Engineers. Public employees must have permission from their jurisdiction to serve as members of the Kansas Disaster Assessment Team. Contractors cannot be certified as inspectors or administrative staff. The Kansas Disaster Assessment Team serves the citizens of Kansas by providing damage assessment in post-disaster event environments. Initial certification requires attending the full four-hour class. Attending the class also qualifies certified team members for recertification.

Instructors: Jim Sherman & Sean Reid

ICC PPP #: 13436

31-7A Grounding and Bonding of Electrical Systems – 2017 NEC

8:00 AM to 5:00 PM 8 Hours A, B, C, DE Code Credits

This overview on grounding and bonding provides review into the most misunderstood region of the National Electrical Code®. The training provides attendees with up-close-and-personal instruction into the mystery surrounding the grounding and bonding of electrical systems and how it is addressed in the NEC®. While all of the material cannot be covered in a single session, this course provides excellent detail into the more relevant, most-frequently used applications surrounding the grounding and bonding requirements. This course is designed to provide all the necessary information to explain and comprehend Article 250 and related articles of the NEC® without additional materials. The PowerPoint presentation and the attendee coursework will ensure maximum exposure to the material covered. This course is especially suited for contractors, tradesmen, design professionals, code officials, and anyone who still has questions about the grounding and bonding of electrical systems. Attendees will have maximum exposure to the most authoritative information available on the most mysterious portions of the National Electrical Code®.

Instructor: Mike Weaver

ICC PPP #: 13120



Wednesday November 1, 2017

01-1A Primary Information on PV

8:00 AM to 12:00 PM 4 Hours A, B, C, DE Code Credits

Learn what constitutes a basic PV system, including how PV modules are manufactured, how to determine the number of PV modules for series and parallel calculations, and the method of calculating voltage loss due to heat in order to determine the load capacity of a system. The voltage necessary for PV inverter trigger voltage will also be discussed.

Instructor: Mark Ode

ICC PPP #: 13121

01-1B NEC Requirements for Photovoltaic Installations

1:00 PM to 5:00 PM 4 Hours A, B, C, DE Code Credits

This class will provide guidance on the calculations for the minimum and maximum voltage of a PV system, sizing of conductors and overcurrent protection devices, wiring methods permitted for PV systems, a review of the new rapid shutdown requirements, and necessary signage. The course will also cover the grounding and bonding requirements for PV systems based on the 2017 NEC.

Instructor: Mark Ode

ICC PPP #: 13122

01-2A Structural – High Lights of the Code

8:00 AM to 5:00 PM 8 Hours A, B, C, DR, DW Code Credits

This class will focus on the technical structural wood framing requirements of the International Residential Code starting from the foundation through final inspections. Prescriptive requirements along with alternative products allowed by the code will be discussed and reflected in an assembled structure. Emphasis will be placed on load path development in combination with proper attachments.

Instructors: Paul Johnson & Nick Sitzman

ICC PPP #: 13123

01-3A Residential Duct Design and Airflow Diagnostics

8:00 AM to 10:00 AM 2 Hours A, B, C, DM Code Credits

Become familiar with the equipment selection process. Be able to determine air flow needs to maximize equipment performance and efficiency. Learn to calculate heating and cooling air flow factors. Determine between measured length, equivalent length and effective length, Calculate duct friction loss per 100 feet of straight duct. Correctly use a duct calculator using friction loss to size a trunk line and branch ducts.

Instructor: Dan West

ICC PPP #: 13125

01-3B Ductless: Comfort with Complete Zone Control

10:00 AM to 12:00 PM 2 Hours A, B, C, DM Code Credits

We will look at the overall view of the ductless HVAC industry, including an example of how to size a space or an entire house for a ductless system. It will review the necessary application to insure the purchase and installation of the correct equipment. Product selection and features, as well as quick installations and service/maintenance procedures will be covered. This class will help you understand that ductless systems are an opportunity to broaden the solutions for your customers and your company.

Instructor: Steve Hadley

ICC PPP #: 13124

01-3C Profit with Uncomfortable or Uncomfortable with Profit...Why Forced-Air-Zoning makes common CENTS

1:00 PM to 5:00 PM 4 Hours A, B, C, DM, DP Code Credits

This course will take an in depth look at Sales, Application, Installation, New Construction, Retrofit, Wiring and Set-up of a Forced-Air-Zoning System. We will look at what makes zoning installations successful. We will cover current trends in avoiding Bypass dampers as well as what makes a properly sized and setup bypass system work. We will cover ACCA's Manual Z which include guidelines for proper zoning installations.

Instructor: David Imig

ICC PPP #: 13126

01-4A Wood Shrinkage: Lessons Learned, Performance Problems, and Failures

8:00 AM to 10:00 AM 2 Hours A, B, C Code Credits

Engineers, architects, and others may have a limited background in wood design. Often, for engineers, this is centered around the National Design Specification for Wood Structures. What carpenters and cabinet makers know is that wood moves, and that hygroscopic movement can alter the appearance of cabinets, trim, and even affect the performance of wood-frame buildings. This presentation will recount several stories of problems that derive from wood shrinkage, but which may be mis-diagnosed where the investigator is familiar with engineering principles, but unfamiliar with wood behavior.

Instructor: Leonard Morse-Fortier

ICC PPP #: 13127

01-4B Performance Problems and Failures in Non-Engineered Wood-Frame Buildings

10:00 AM to 12:00 PM 2 Hours A, B, C Code Credits

Prepared for and presented to Home inspectors, this presentation covers how to look for the visible symptoms of real structural problems in houses, and how to interpret what these physical symptoms mean. This presentation recounts stories of problems that derive from changes in building culture, in the ways that we inhabit buildings, and what happens when we change the rules of engagement for how we treat our buildings.

Instructor: Leonard Morse-Fortier

ICC PPP #: 13128

01-4C Broken Things, What, Why, and What might have been done to prevent them

1:00 PM to 3:00 PM 2 Hours A, B, C Code Credits

Drawing from the stories that make up the presentations outlined above, this presentation covers how we might change the way we build and/or strengthen the buildings we have now to prevent the failures, symptoms, and challenges posed by the problems outlined above. As one example, we consider what ought to be done before we allow a homeowner to get up from the football game, buy a lot of attic insulation, and install it overhead.

Instructor: Leonard Morse-Fortier

ICC PPP #: 13129

01-4D When the Lumber Yard Becomes the Engineer

3:00 PM to 5:00 PM 2 Hours A, B, C Code Credits

Wood frame houses are common and plentiful. They are not always well understood by builders, architects, engineers, or materials suppliers. They usually work anyway. Usually...This presentation explores the ways that individual components may find their way into houses. Often, when these involve engineered products, the local building official may insist that an engineer provide a seal and signature to assure that these elements have been carefully considered. However, unless someone is taking – and accepting – responsibility for the entire building, there are instances where this partial engineering may lead to false confidence in the overall outcome.

Instructor: Leonard Morse-Fortier

ICC PPP #: 13130

01-5A Plumbing Theory to Code

8:00 AM to 12:00 PM 4 Hours A, B, C, DP Code Credits

This course is based out the 2018 IPC and will cover basic concepts of plumbing and how it converts to code and drives the plumbing code for restrictions and installation. This will also cover some of the changes that are found in the 2018 IPC.

Instructor: Jason Van Ausdal

ICC PPP #: 13131

01-5B Plumbing, Venting and Installation

1:00 PM to 5:00 PM 4 Hours A, B, C, DP Code Credits

This course will be based out of the **2018 IPC** and will cover the changes to venting from the 2015 edition of the IPC and the general practices for venting of a plumbing system and installation practices. We will cover drain waste venting, combination venting, wet venting and air admittance valves when and where to use them.

Instructor: Jason Van Ausdal

ICC PPP #: 13132

01-6A “How Business Really Works” – Finance for Non-Financial Managers

8:00 AM to 12:00 PM 4 Hours Non-Code Credits

In this workshop, you will learn the language of finance and accounting; how to read balance sheets and income statements; how to analyze retained earnings and cash flow statements; how to calculate key financial ratios, and more. This information-packed workshop has been developed following the accelerated learning model of teaching adults. Interactive exercises, relevant examples, and attendee participation reinforce learning and keep the session interesting and fun.

Instructor: Bill Kay

01-6B Construction Contracts from A to Z

1:00 PM to 5:00 PM 4 Hours Non-Code Credits

This program will provide a comprehensive overview of construction contracts. Specifically, participants will learn about key contractual clauses related to indemnity, insurance, payment, differing site conditions, and applicable state statutes in Kansas. After attending this program, participants will be better equipped to identify risk in construction contracts and how to better mitigate such risk in negotiation.

Instructor: Mishelle Martinez

01-7A Application and Testing of Fans and Blowers

8:00 AM to 10:00 AM 2 Hours A, B, C, DE Code Credits

The focus of this class is two-fold: as an introduction to fan and blower applications and technology, and as a refresher on test and measurement practices for commissioning and troubleshooting existing fan and blower systems. The basic types and configurations of air moving equipment will be discussed first including fan and system curves, fan laws and sizing criteria. Following this introductory material, we will discuss performance testing and evaluation procedures, including common fan problems, basic fan system economics, and drive and control strategies.

Instructor: Joe Nelson

ICC PPP #: 13149

01-7B Installation and Maintenance of Swimming Pool Electrical Systems

10:00 AM to 12:00 PM 2 Hours A, B, C, DE Code Credits

Swimming pools present a somewhat unique design and maintenance challenge due, in part, to the proximity of electrical devices to unprotected bathers. Article 680 of the NEC addresses the provisions applicable to the construction and installation practices for electrical wiring and associated equipment in and adjacent to swimming pools. The focus of this class will be on outdoor in-ground swimming pools, although many of the same topics will also be applicable to other types of pools, fountains, and similar installations. We will discuss some of the code requirements for swimming pool wiring, grounding, and bonding that every contractor and maintenance technician should be aware of for this type of occupancy and explore some of the options that may be available to meet these requirements. Testing and measurement of grounding and bonding integrity will also be described, as well as procedures for measurement and evaluation of stray voltages associated with pool surfaces and equipment.

Instructor: Joe Nelson

ICC PPP #: 13150

01-7C Hazardous Locations under the 2017 NEC

1:00 PM to 5:00 PM 4 Hours A, B, C, DE Code Credits

This overview on hazardous locations provides review into the 2017 NEC® requirements for hazardous locations governed under Articles 500 through 516. This course specifically addresses the impact of changes and modifications to hazardous location installations which result from the latest 2017 NEC® revision cycle. While all of the material cannot be covered in a single session, this course provides excellent introduction and detail into the more relevant, most-frequently used applications surrounding hazardous location requirements. This course is designed to provide all the necessary information to explain and comprehend Articles 500 through 516 and related articles of the NEC®. This course is especially suited for contractors, tradesmen, design professionals, code officials and anyone who may be involved in hazardous location electrical installations. Attendees will have maximum exposure to the most authoritative information available regarding hazardous (classified) locations governed under the National Electrical Code®.

Instructor: Mike Weaver

ICC PPP #: 13133



Thursday November 2, 2017

02-1A How to Keep Your Roof When Everyone Else is Losing Theirs: A Low-Slope Roofing Primer

8:00 AM to 12:00 PM 4 Hours A, B, C, DR, DW Code Credits

What is the best roof system for wind, hail, sun and traffic? Get a grasp of the latest design considerations for a roofing project. Differentiate between wind speed and uplift pressures and gain an appreciation for factors that affect roof performance or failure. What is LTTR and why should I care? Find out about the long-term characteristics of insulation, current performance requirements and standards, and how to keep the heat and cold on opposite sides. Why choose modified bitumen over a single-ply? Discover the beauty of asphalt on the roof. Why settle for one membrane when you can have two (or three)? Modified bitumen systems are long-lasting redundant systems that can be installed in many different ways. But which one to choose? Fall in love again with single ply. Understand the manufacturing process and performance characteristics. Find the perfect balance of heat reflection and emissivity. Understand the long-term characteristics and how to keep it happy over time.

Instructor: Dwight Stone, MBA, CDT

ICC PPP #: 13134

02-1B Elements of Steep Slope Roofing from a Contractor's Point of View

1:00 PM to 5:00 PM 4 Hours A, B, C, DR, DW Code Credit

1. Common & Difficult Steep Roof Flashings: A pictorial description of dealing with common, as well as difficult steep slope flashings. Drip edge, headwalls, chimney flashing options, dead pans, skylights, expansion joints and uncommon valley details.
2. Roofing Contractors Risk & Liability of Large Loss Claims: In the roofing industry, large loss claims can be profitable but at times carry an element of high risk for financial liability, as well as danger to the public. This class will include estimating, storage and handling of materials, code requirements, OSHA standards and public safety.
3. Investigating Roof Related Environmental Issues: Water infiltration to a residence isn't necessarily caused by a roof leak and investigating issues can be difficult at times. Most are caused from improper ventilation, architectural design and sources such as plumbing leaks or indoor pools. We will explore ventilation codes and ventilation options.
4. Kansas Roofing Registration & Legislation updates: Effective Jan. 1 2014, the Kansas Roofing Registration Act requires roofing contractors providing commercial or residential roofing services to be registered through the Kansas Attorney General's office. Now in its 4th year, is the Kansas Roofing Registration law working? An update of further legislation proposed for the future, as well as legislation from surrounding states.

Instructor: Blake Roberts

ICC PPP #: 13324

02-2A The Value of Engineered Trusses and Wood Components

8:00 AM to 12:00 PM 4 Hours A, B, C DR, DW Code Credits

The course will take a close look into the use of truss components and engineered wood products for solving today's construction requirements regarding open living, energy efficiencies and labor shortage. The engineering concepts behind the products will be discussed so simple cost affected solutions can emerge.

Instructor: Paul Johnson, P.E.

ICC PPP #: 13135

02-2B Proper Window Installation and Integration

1:00 PM 3:00 PM 2 Hours A, B, C Code Credits

This session will cover and demonstrate our manufacturer's recommended installation instructions for windows and doors to include: Weather resistant barriers, Sill pan types and options, Sealant and flashing suggestions and compatibility discussion, Shiming techniques Plumb, level, square and true as it relates to a successful installation, Proper flashing techniques, High pressure skirt application, Installation finishing techniques. This will be accomplished through presentation, demonstration and discussion. Eric will also be available to answer questions following the presentation.

Instructor: Eric Klein & Eric Mason

ICC PPP #: 13409

02-2C Sealant and Process Selection, New Construction Window Installation...Or How Not to Install Your Windows

3:00 PM to 5:00 PM 2 Hours A, B, C, DW Code Credits

A course to review the current method for installing flanged new construction vinyl windows with emphasis on proper flashing, sealant and insulation selection and use.

Instructor: Stephen Padgett

ICC PPP #: 13136

02-3A 2018 Significant Changes to IMC and IFGC 2018 Codes

8:00 AM to 12:00 PM 4 Hours A, B, C, DM Code Credit

This course will be a side by side comparison of the requirement of the 2015 IMC / 2015 IFGC to the 2018 IMC/IFGC. Upon completion of this course you will be better able to find and use the significant changes to the 2018 IMC/IFGC

Instructor: Sam Dardano

ICC PPP #: 13137

02-3B Common Mistakes Residential Mechanical Installation

1:00 PM to 5:00 PM 4 Hours A, B, C, DM Code Credit)

A basic course covering the most common occurrences of improper or inadequate mechanical installation found during inspections, including heating and cooling equipment, ductwork and condensate lines. This course will include discussion of solutions to some of the most common installation errors.

Instructor: Sam Dardano

ICC PPP #: 13138

02-4A Commercial Plan Review based on the 2018 IBC

8:00 AM to 5:00 PM 8 Hours A, B, C Code Credits

This class will walk through a basic commercial plan review based on the 2018 IBC. What should be included with any commercial plan submittal? A life/safety plan, code and building area analysis, MEP and energy code path, etc.

Instructor: Gil Rossmiller

ICC PPP #: 13139

02-5A Significant Changes 2018 IPC

8:00 AM to 5:00 PM 8 Hours A, B, C, DP Code Credits

This class will cover the significant changes from the 2015 to the 2018 IPC. It is important to keep up with the most current codes and current technologies in the plumbing systems and materials. The student will also gain the knowledge of the changes in the code along with the purpose behind the changes. This course is designed for Plumbing Contractors, Engineers, and Inspectors.

Instructor:

ICC PPP #: 13419

02-6A Safety Basics for Small Business

8:00 AM to 10:00 AM 2 Hours Non-Code Credits

Cover the basic elements of a safety and health program. Review documentation and record-keeping compliance requirements. Discuss OSHA's regional emphasis program and how it affects you. What you can start doing today to improve your safety & health program. Share personal experiences with job site injuries and illnesses.

Instructor: Adam Patterson

02-6B “Stay Out of Court” – The Kansas Consumer Protection Act: Hammer & Nails

10:00 AM to 12:00 PM 2 Hours Non-Code Credits

This course will present an overview of the Kansas Consumer Protection and compliance with Kansas law. The history, purpose and application of the KCPA will be discussed, as well as specific examples of home improvement-related cases prosecuted by the District Attorney’s Office under the authority of the KCPA. Other topics to be discussed are contract formation, advertising compliance, and special rules during times of disaster.

Instructors: Emilie Burdett, Pepper Jaso, and Jerry Howland

02-6C Getting to the Money (If there is any) – Legal Tools for Contractors

1:00 PM to 5:00 PM 4 Hours Non-Code Credits

This course will focus on what contractors can do to ensure that their interests are protected and what measures can be taken when a customer refuses to pay once work is completed. We will provide an overview of a legally sufficient contract highlighting and give suggestions as to key provisions that should be included in the event it is breached. We will discuss self-help options available to the contractor when a customer refuses payment including the drafting of written demands and small claims court and what steps will be taken if collection related litigation becomes necessary. We will give a step-by-step walkthrough of the requirements for creating and filing a construction lien.

Instructor: Mike Schilling

02-7A 1 & 2 Family Residential Calculations – 2017 NEC

8:00 AM to 12:00 PM 4 Hours A, B, C, DE Code Credits

Residential calculations are the most difficult to perform because the rules and regulations of the NEC® are more restrictive than those for commercial and industrial facilities. The standard or optional calculation may be used to calculate the loads to size and select the elements for the feeder or service. The optional calculation seems to be the favorite method used by designers and electricians. This is true because once loads are calculated, they produce smaller VA or amps than the more complicated standard calculation. Therefore, smaller components are required in the electrical system and greater savings in wiring methods are achieved. The procedure for laying out residential calculations will be different in some ways from those used for commercial and industrial.

Instructor: James Stallcup Sr.

ICC PPP #: 13140

02-7B Commercial Calculations – 2017 NEC

1:00 PM to 5:00 PM 4 Hours A, B, C, DE Code Credits

Commercial facilities such as offices, banks, stores, and restaurants have diverse loads. These loads are classified as continuous or noncontinuous, or such loads may cycle on and off, allowing demand factors to be applied. The procedure and manner in which the lighting, receptacle, and equipment loads are used in the electrical system determines how they are classified. Loads shall be calculated based on the type of occupancy and the requirements of the equipment supplied. Either the standard or optional calculation is utilized to calculate the loads in volt-amps or amps to size the service equipment and associated elements.

Instructor: James Stallcup Sr.

ICC PPP #: 13141



Friday November 3, 2017

03-1A Significant Changes: IRC 2012-2018

8:00 AM to 5:00 PM 8 Hours A, B, C, DR, DW Code Credits

This class will review many of the significant changes from the 2012 to the 2018 IRC. Will any of the changes affect how you currently build? How much has the energy section changed? Does the 2018 edition require 3-0-6’ 8” doors to each room? You will need to attend to find answers to these questions and many more.

Instructor: Gil Rossmiller

ICC PPP #: 13143

03-2A 2018 IEBC Overview

8:00 AM to 5:00 PM 8 Hours A, B, C Code Credits

This one-day seminar addresses the relationship of the International Existing Building Code to existing buildings. The seminar focuses on the fundamental requirements on an existing structure that undergoes repair work, alteration, renovation activity or construction of an addition, and the effect of a change in the building's occupancy classification. Discussion will also include the "Performance Compliance Alternatives" method of evaluating a building.

Instructor: Steve Thomas

ICC PPP #: 13142

03-3A Mechanical Plan Review

8:00 AM to 12:00 PM 4 Hours A, B, C, DM Code Credit

A basic Mechanical plan review to cover requirements of: submittal including engineering seals, energy code, supply/return ductwork, new/existing equipment, and location of rooftop units, commercial kitchen requirements and smoke detection systems and fire/smoke a ceiling dampers. Upon completion of this course you will be able to do a basic Mechanical plan review.

Instructor: Sam Dardano

ICC PPP #: 13144

03-3B Combustion Air for Gas Appliances

1:00 PM to 5:00 PM 4 Hours A, B, C, DM, DP Code Credit

We will cover sizing, material, and location of combustion air with some actual working problems for you to solve. We will address supplying adequate combustion air to fuel-burning appliances, as insufficient oxygen for CA will result in the formation of carbon monoxide. Energy conservation regulation now requires that home be tightly sealed, weather-stripped, and insulated to avoid infiltration of outside air to the interior of the home.

Instructor: Sam Dardano

ICC PPP #: 13145

03-4A Accessible Design in Action: Reinterpreting 2010 DOJ Standards for Accessible Design and Related Regulations

08:00 AM to 5:00 PM 8 Hours A, B, C Code Credits

This highly-advanced program examines key concepts of the 2010 DOJ Standards for Accessible Design. We focus on the application of accessibility standards alterations and remodeled structures while covering highlights in all 10 chapters of the regulations. We examine interpretations, technical assistance and clarifications from the US Access Board and the Dept. of Justice. Conflicts, questions and concerns that have been raised by designers, agencies and persons with disabilities, and technical assistance experts are debated. The course also briefly explores the significantly increased provisions in the upcoming 2018 A117.1. Expanded footprints for wheelchairs, turning radius', and other fundamental changes in the ANSI are discussed as they relate to harmonization with Federal standards and shifting perceptions and applications of accessibility in society.

Instructor: Richard Sternadori

ICC PPP #: 13146

03-6A Erosion & Sediment Control: What do we do and why do we do it?

8:00 AM to 5:00 PM 8 Hours A, B, C, DE, DF, DM, DP, DR, DS, DW Code Credits

The course will cover the history of the Clean Water Act, principles of erosion and sedimentation, common erosion and sediment controls, and inspection criteria. The course content will be supplemented with examples of erosion and sediment control techniques. Erosion and sediment control products will be reviewed and will be made available to the class for viewing and handling. The permitting requirements for construction site land disturbance will be covered. The outcomes for the class is that each member will have a better understanding of erosion and sedimentation processes, will be able to complete a Notice of Intent under the State of Kansas General Permit, and complete a storm water pollution prevention plan (SWPPP). Participants who attend the class and pass the exam offered at the end of the course will receive a certificate as a Johnson County Erosion and Sediment Control Certified Inspector. The certification is valid for three years.

Instructor: Don Baker

ICC PPP #: 13147

03-7A NFPA 70E Illustrated Code Changes

8:00 AM to 5:00 PM 8 Hours A, B, C, DE Code Credits

The Standard *NFPA 70E* was developed by NFPA at the request of OSHA. OSHA needed this standard to help them keep as current as possible with the requirements in the NEC that pertain to safety-related work practices, including the newly implemented arc-flash requirements. The OSHA standards are rarely changed and therefore lag behind the NEC as well as other codes and standards. During this course you will be given examples, illustrations, and references to other Standards, which interface with *NFPA 70E*, OSHA, and the NEC, where applicable.

Instructor: James Stallcup Sr.

ICC PPP #: 13148

	Room 1	Room 2	Room 3
Monday October 30, 2017	The Complex Pressure Treated Wood Arena 08:00 AM to 12:00 PM	Transition from 2012 IRC to 2018 IRC 8:00 AM to 5:00 PM	Mechanical Ventilation: the Do's and Don'ts 8:00 AM to 5:00 PM
	Managing Moisture in Residential Construction and Roofing Underlayment 1:00 PM to 3:00 PM		
	Choices of Air Barriers for Commercial Building Enclosures 3:00 PM to 5:00 PM		
Tuesday October 31, 2017	2012 to the 2018 Significant Changes of the IBC 8:00 AM to 5:00 PM	2012 IRC to the 2018 IRC: Fire Separation Requirements between Two-Family Dwellings & Townhouses 8:00 AM to 5:00 PM	Manual D and J Designs & Installations based out of the 2018 Codes 8:00 AM to 5:00 PM
Wednesday November 01, 2017	"Primary Information on PV" 8:00 AM to 12:00 PM	Structural – Highlights of the Code 8:00 AM to 5:00 PM	Residential Duct Design and Airflow Diagnostics 8:00 AM to 10:00 AM
	"NEC Requirements for Photovoltaic Installations" 1:00 PM to 5:00 PM		Ductless: Comfort with Complete Zone Control 10:00 AM to 12:00 PM
Thursday November 02, 2017	How to Keep Your Roof When Everyone Else is Losing Theirs: A Low-Slope Roofing Primer 8:00 AM to 12:00 PM	The Value of Engineered Trusses and Wood Components 8:00 AM to 12:00 PM	2018 Significant Changes to IMC & IFGC 2018 Codes 8:00 AM to 12:00 PM
	Elements of Steep Slope Roofing from a Contractors Point of View 1:00 PM to 5:00 PM	Proper Window Installation and Integration 1:00 PM to 3:00 PM	Common Mistakes Residential Mechanical Installation 1:00 PM to 5:00 PM
		Sealant and Process Selection, New Construction Window Installation 3:00 PM to 5:00 PM	
Friday November 03, 2017	Significant Changes: IRC 2012-2018 8:00 AM to 5:00 PM	2018 IEBC Overview 8:00 AM to 5:00 PM	Mechanical Plan Review 8:00 AM to 12:00 PM
			Combustion Air for Gas Appliances 1:00 PM to 5:00 PM

Room 4	Room 5	Room 6	Room 7
2018 IBC/IFC Essentials: Hazardous Materials 8:00 AM to 12:00 PM	Medical Gas & Vacuum Systems of NFPA 99 Health Care Facilities Code 8:00 AM to 5:00 PM	Fundamentals of Concrete Construction 8:00 AM to 12:00 PM	Analysis of Changes to the 2017 NEC 8:00 AM to 5:00 PM
2018 IFC Significant Changes 1:00 PM to 5:00 PM		Fundamentals of Masonry Construction 1:00 PM to 5:00 PM	
Firestopping Responsibilities for – Contractors, Designers, and Code Officials 8:00 AM to 5:00 PM	Tankless Water Heater Technology 8:00 AM to 10:00 AM	Concrete Specifications Changes 8:00 AM to 10:00 AM	Grounding and Bonding of Electrical Systems- 2017 NEC 8:00 AM to 5:00 PM
	Water Pipe Sizing according to the IRC 10:00 AM to 12:00 PM	Batch Ticket & Troubleshooting Surface Defects 10:00 AM to 12:00 PM	
	Swimming Pool 1:00 PM to 5:00 PM	Kansas Disaster Assessment Team Certification and Recertification 1:00 PM to 5:00 PM	
Wood Shrinkage: Lessons Learned, Performance Problems and Failures 8:00 AM to 10:00 AM	Plumbing Theory to Code – 2018 IPC 8:00 AM to 12:00 PM	“How Business Really Works” Finance for Non-Financial Managers 8:00 AM to 12:00 PM	Application and Testing of Fans and Blowers 8:00 AM to 10:00 AM
Performance Problems and Failures in Non-Engineered Wood-Frame Buildings 10:00 AM to 12:00 PM			Installation and Maintenance of Swimming Pool Electrical Systems 10:00 AM to 12:00 PM
Broken Things, What, Why, and What might have been done to prevent them 1:00 PM to 3:00 PM	Plumbing Venting and Installation – 2017 IPC 1:00 PM to 5:00 PM	Construction Contracts from A to Z 1:00 PM to 5:00 PM	Hazardous Locations under the 2017 NEC 1:00 PM to 5:00 PM
When the Lumber Yard Becomes the Engineer 3:00 PM to 5:00 PM			
Commercial Plan Review based on the 2018 IBC 8:00 AM to 5:00 PM	2018 Plumbing Code with Changes 8:00 AM to 5:00 PM	Safety Basics for Small Business 8:00 AM to 10:00 AM	1 & 2 Family Residential Calculations – 2017 NEC 8:00 AM to 12:00 PM
		Stay Out of Court – The Kansas Consumer Protection Act: Hammer & Nail 10:00 AM to 12:00 PM	
		Getting to the Money (If there is any) – Legal Tools for Contractors 1:00 PM to 5:00 PM	Commercial Calculations – 2017 NEC 1:00 PM to 5:00 PM
Accessible Design in Action: Reinterpreting 2010 DOJ Standards for Accessible Design and Related Regulations 8:00 AM to 5:00 PM		Erosion & Sediment Control: What do we do and why do we do it? Certified Inspector Training 8:00 AM to 5:00 PM	NFPA 70E Illustrated Code Changes 8:00 AM to 5:00 PM

Registration Information

Registration: Because bar-coded schedule documents are preprinted, you must pre-register for classes and lunch. All registration forms must be received in the Contractor Licensing Program office, not later than 5:00 PM, October 27, 2017. Please call (913) 715-2233 if you have any questions.

Fees: The *Qualifying Individual* for Johnson County Program Companies licensed for 2016 or 2017 and building inspection employees employed by participating jurisdictions may attend the Education Seminar at no cost. City of Lawrence *Qualifying Person's* fees are not paid by the City of Lawrence. Lawrence program attendants and all other out-of-program attendees must pay \$30 per classroom hour. Please make checks payable to Johnson County Contractor Licensing. All refunds must be requested/submitted in writing at least one week prior to the first day of the seminar.

Fee enclosed

Name _____

Company Name _____

Address _____

City/State/Zip _____

Telephone _____ **Date of Birth** _____

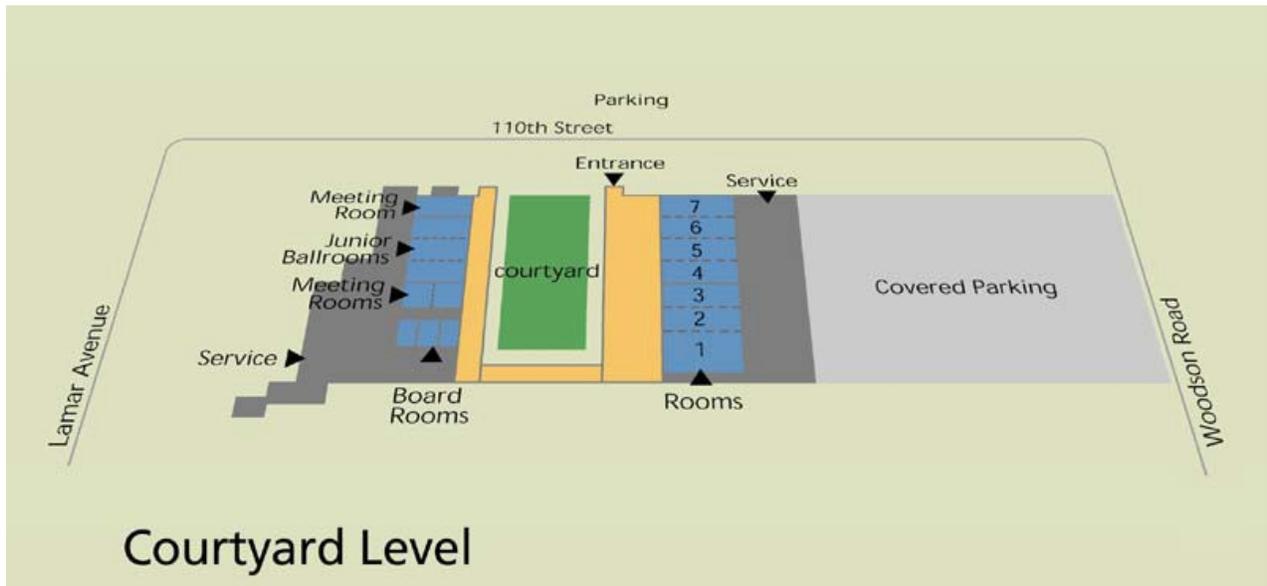
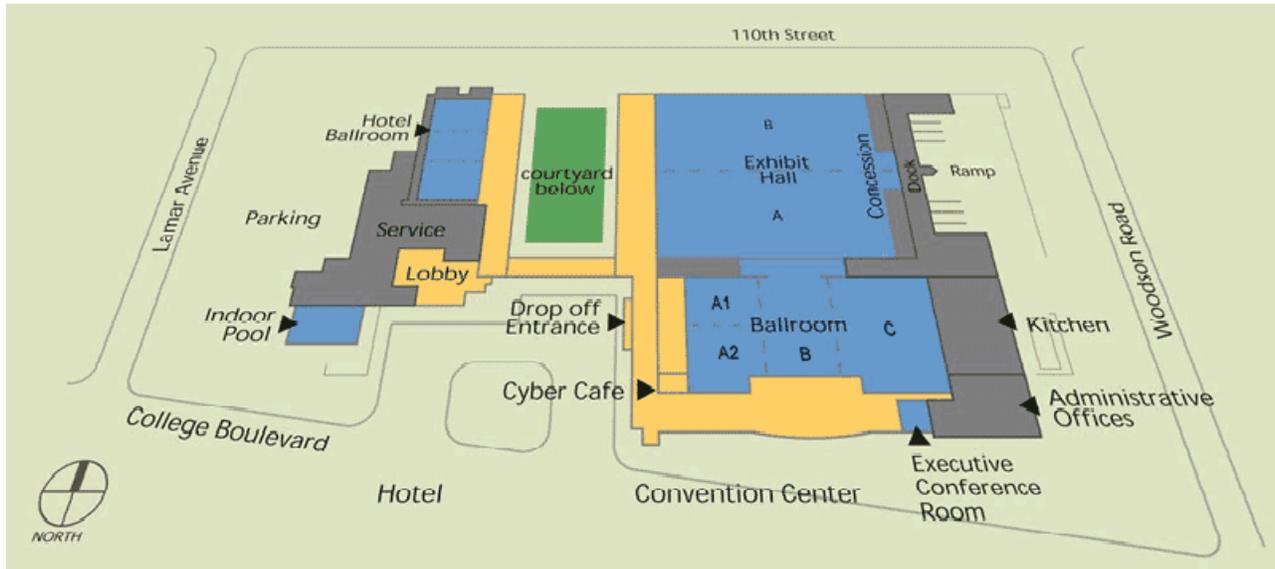
E-mail Address _____

Staff	Course Number	Course Title

Register on line at <http://cls.jocoqov.org/CLSCOURSEREG/default.aspx> and instantly see if there are available seats in a class!
Johnson County contractors may only apply 4 hours of non-code to renewal.

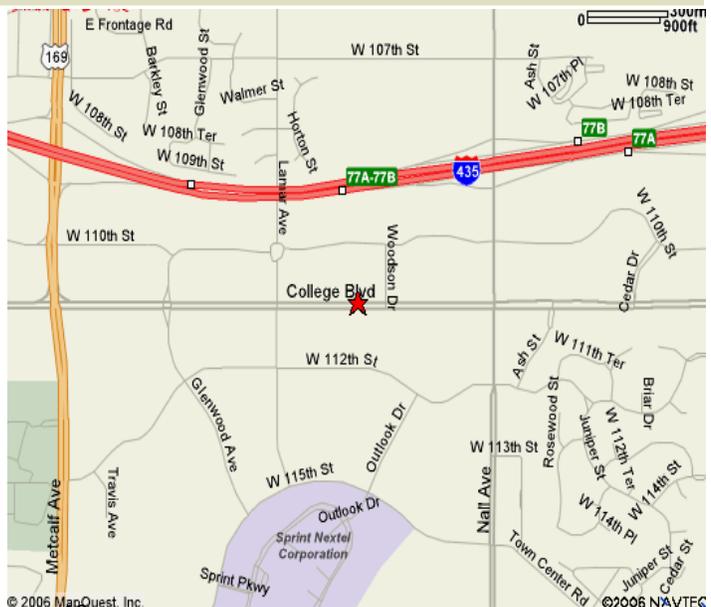


Seminar Site Information



**Overland Park Convention Center 6000 College
Boulevard Overland Park, Kansas**

**Located on the south side of I-435 between
Metcalf and Nall off ramps**





Accommodations

To accommodate overnight attendees of the 2017 Fall Education Seminar, a special rate of \$79.00 for a one-bedroom suite, has been arranged, with the Chase Suite Hotel of Overland Park, Kansas. To take advantage of the special rate, you must make your reservation before October 1, 2017, by calling (888) 433-9765 and requesting the **Johnson County Contractor Licensing** group rate. The special rate is subject to availability. The hotel is located adjacent to I-435, near the north-west corner of the convention center, at 6300 W. 110 Street, Overland Park, Kansas, 66210. Chase Suites are spacious, bright,



well-appointed, one or two-bedroom accommodations that include a large living and working area, comfortable bedrooms, full-bath equipped kitchen facilities and private entrances. The 1 bedroom suites truly exemplify the “home away from home” atmosphere. Chase provides the most spacious suites you'll find, with fully equipped kitchens, separate living and dining areas, cable TV including premium comfortable beds, luxurious bathrooms and a workspace area with high speed Internet access. It won't take long for you to experience difference the range of complimentary services makes to the usual hotel package. The continental breakfast buffet will satisfy the hungriest. Make Chase Suites your home away from home.

Other Area Hotels

1. Sheraton OP Convention Center

6100 College Blvd., Overland Park, Kansas
(913) 234-2100 (800) 325-3535

2. Hilton Garden Inn Overland Park

5800 College Blvd., Overland Park, Kansas
(913) 345-2661 (800) 445-8667

3. Courtyard Marriott Convention Center

11001 Woodson, Overland Park, Kansas
(913) 317-8500 (888) 236-2427

4. Chase Suite Hotel

6300 W. 110 St, Overland Park, Kansas
(913) 491-3333 (888) 433-9765

5. Holiday Inn Suites Convention Center

10920 Nall, Overland Park, Kansas
(913) 312-0900 (866) 276-8038

6. Extended Stay America KC OP

5401 W. 110th St., Overland Park, Kansas
(913) 661-7111 (800) 804-3724

7. Super 8 Motel

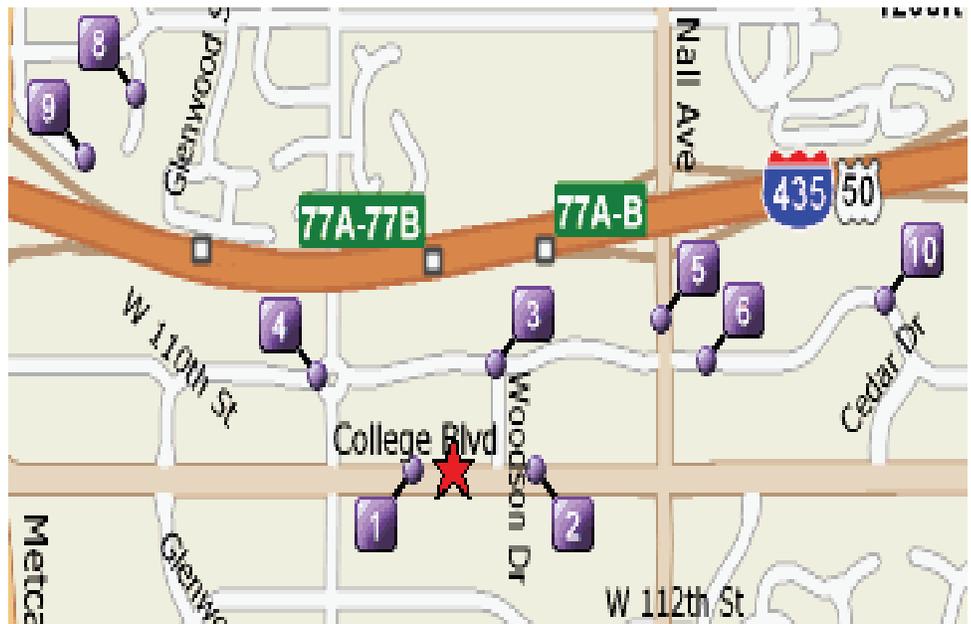
10750 Barkley St., Overland Park, Kansas
(913) 341-4440 (800) 800-8000

9. Hampton

10750 Barkley St., Overland Park, Kansas
(913) 491-9002 (800) 833-1516

10. Hyatt Place Kansas City/Overland Park Convention Center

5001 W. 110 St., Overland Park, Kansas
(913) 491-9002 (866) 599-667



8. Days Inn Overland Park

6800 W. 108 St., Overland Park, Kansas
(913) 341-0100 (800) 441-1618



Meet the Instructors

Anderson: Peder Anderson is the Vice President of Sales and Marketing for Northern Crossarm Co., Inc. in Chippewa Falls, Wisconsin. Northern Crossarm has been treating lumber since 1922. Peder has a degree in Business Administration from Lakeland University and has been involved in the pressure treating business for 24 years. He has spent these 24 years with Northern Crossarm Company and has firsthand experience in the multitude of changes in the industry, production techniques and sales and marketing evolution in the world of treated wood.

Axel: Roger Axel, C.B.O., Building Official, City of New Hope, Minnesota, has 30+ years combined construction and inspection experience including single and multi-family residential, educational, industrial, business and mercantile occupancies including the Mall of America; Bachelor of Science Degree in Industrial Education, University of Minnesota; Associate in Applied Science Degree in Building Inspection Technology, Inver Hills Community College; State of Minnesota Certified Building Official; Building Inspector, Mechanical Inspector, Plumbing Inspector, Plans Examiner and Accessibility/Usability Specialist; International Code Council contract instructor; instructor for Housing and Building Inspection Institute at UW-Madison College of Engineering; instructor for MN Licensed Residential Contractor continuing education seminars; past Chairman, and current Executive Officer of the Association of MN Building Officials.

Bair: Garry Bair is the second of a three generations pool construction family that started building in Kansas City with his father Floyd in 1959. They are the oldest pool building family in Kansas City. Garry has built most types of pools in his 58 years of experience from stacked block wall vinyl liners in the 60's to million dollar residential shotcrete pools over the years and from small back yard pools to aquatic parks. Garry was the innovator the system of placing rebar that we use today with the vertical dead bar system as featured in the May, 1979 issue of *Aqua* magazine. Changing construction technics and modifying priorities has always been an ever-evolving focus of Garry Bair's mind set. Known for his creativity in solving mechanical and plumbing problems throughout the metro area he has always lent and open hand to all builders.

Baker: Don Baker, P.E., is a Professional Engineer registered in 11 states. Don has experience with the design and construction of erosion and sediment control facilities and specializes in erosion process and sediment transport modeling and computations. Don teaches the erosion & sediment control inspector's class for KDOT as part of its consent decree for EPA. Don is active in the Environmental and Water Resources Institute (EWRI) of ASCE where served as the Design Guidebook Subcommittee Coordinator and Chair for EWRI's Management Practices for Erosion and Sediment Control Standards Committee. The ASCE/EWRI/ANSI standard will be published Fall of 2017.

Burdette: Emilie Burdette serves as an Assistant District Attorney in the Johnson County DA's Office, Economic Crimes Unit. Her work primarily focuses on prosecuting violations of the Kansas Consumer Protection Act. She also serves as a Special Assistant Attorney General (SAAG) and a Special Assistant United States Attorney (SAUSA) in consumer protection-related matters. Prior to joining the DA's Office in 2011, Emilie spent 6 years as an Assistant Attorney General for the State of Kansas. Emilie obtained both journalism and law degrees from KU.

Cooper: John Cooper, P.E., GBA Architects & Engineers, Senior Associate, leading the Construction Engineering and Inspection Group. A KSU graduate with 23 years of experience, his career has been focused on field inspecting highway, municipal, and bridge construction projects. He also has experience with utility coordination, design-build, railroads, airports, and materials testing.

Dardano: Sam Dardano is considered an expert in the Mechanical Code by many people. He taught the Mechanical or Fuel Gas Code for over 25 years and in over 40 states for such national organizations as ICC, BOAT, and Johnson County Contractor Licensing. He teaches entry to advanced level classes. He was the Chief Mechanical Inspector for the city of Boulder, Colorado, for 17 years. He now has a mechanical consulting business doing plan review and consulting for smaller jurisdictions.

Doran: Bobby Doran has been a master plumber for nearly 30 years and began his teaching career with Texas A&M University Engineering Extension Service. He has been involved in the Continuing Education program since the initial 1993-1994 program. He has taught with TEEEX in the beginning and became an Individual Provider in 2000. In addition, he instructs at the Builders Professional Institute on subjects related to code, along with other conventions or sessions as requested. Bobby currently writes chapters for the CPE Books. Bobby is requested to offer Plumbing Continuing Education to customize his courses given to specialized groups throughout the state due to his ability to deliver a concise and highly informative presentation in a straightforward, business-like manner.

Howland: Jerry Howland is an Investigator with the Johnson County District Attorney's Economic Crime Unit, where he investigates consumer protection cases. Prior to joining the Johnson County DA's Office in 2012, Jerry spent 11 years with the Kansas Attorney General's Office as a Special Agent and Special Agent Supervisor assigned to the Consumer Protection Division. Jerry graduated from Washburn University in Topeka, Kansas with a BA in Criminal Justice. Jerry has investigated and closed over 6,000 cases involving all issues in the field of consumer protection. He is a former Director of the North American Consumer Protection Investigators network and is involved in numerous organizations task forces involving economic crime.

Howard: Luke Howard is a building science specialist with the WSU Energy Program. With 13 years of academic and professional experience researching, developing and implementing sustainable and resource-conserving building design strategies, Luke's primary responsibilities with the WSU Energy Program are in residential energy conservation and indoor air quality research, code development, and educational resource development and implementation. He has been an active member of the State of Washington's Mechanical and Ventilation Codes Technical Advisory Group since 2011.

Hug: Joe Hug, P.E. is the Technical Services Manager for the Monarch Cement Company, where he has been for over 16 years. His responsibilities include optimizing concrete mix designs for customers and subsidiary companies, performing both field and laboratory testing and research, and consulting on plastic and hardened concrete problems. Mr. Hug received a Bachelor of Science Degree in Mechanical Engineering from Kansas State University and is a Registered Professional Engineer in Kansas, Missouri, and Arkansas. Joe is a Certified ACI Concrete Flatwork and Grade I Field Technician, NRMCA Concrete Technologist Level 4, and NRMCA Certified Concrete Professional. He is a past president of the Kansas ACI Chapter and currently is the Chairman of the Kansas Joint Certification Committee. He is also active on several ACI, ASTM, and PCA committees, and serves on the board of the MO/KS Chapter ACPA and the Concrete Promotional Group of Kansas City. He was recently awarded the honorable Fellows from ACI International and currently serves their Board of Directors.

Imig: David Imig has been in the HVAC industry for 25 years with the last 16 serving as Western Regional Manager for EWC Controls, Inc. His position has him involved with the design and installation of Forced-Air zoning components. He has trained over 5000 contractors as his training classes have been conducted across the Western Half of the United States. David says this about our industry, "We are a close group of individuals trying to help others stay comfortable!"

Jaso: Pepper Jaso has been a Financial Crimes Investigator with the Johnson County Kansas District Attorney's Office for the past fifteen years. Pepper's primary focus is financial crimes with an expertise in the Kansas Consumer Protection Act. She has a Paralegal Degree from Johnson County Community College and a Bachelor's Degree in Integrated Studies from Washburn University. Pepper is also the Vice President of the MO/KAN Chapter of the International Association of Financial Crimes Investigators and a Kansas City Insurance Fraud Task Force board member. Pepper is also a Kansas Supreme Court Approved Mediator.

Johnson: Paul Johnson P.E., Universal Forest Products; Director of Technical Services; Licensed Professional Engineer, with over 30 years' experience in the wood framing and component industry. He teaches various code and component classes throughout the US. He was the past president of TMAT and served as board member for several other related construction committees and associations.

Kay: William (Bill) Kay is dedicated to helping organizations and individuals enhance their competitiveness, productivity and performance. His professional background includes over 20 years of experience as CEO, CFO, and owner of a major manufacturing company and, for the past 26 years, he has helped major Fortune 500 companies and Universities working with their managers and students on business training and development.

Klein: Eric Klein, Installation and Service Instructor for Marvin Windows and Doors. Eric has been employed by Marvin for over 33 years. Eric is a certified installer and an accredited instructor for Installation Masters. He is well versed in residential, light commercial, and commercial installation applications. His experience includes new construction, replacement, commercial, historical, and institutional applications. Eric has taught proper installation methods to thousands of installers from across the United States and internationally.

Martinez: Mishelle Martinez is an associate practicing in Polsinelli's Construction and Energy Litigation department. Mishelle counsels clients from project inception through project completion and, if necessary, during dispute resolution processes. Mishelle represents owners, design professionals, general contractors, subcontractors and engineers, and has negotiated and drafted contracts and handled a variety of claims related to breach of contract, design errors and omissions, payment and performance bonds, mechanic's liens, delay and disruption claims, and real property disputes involving ownership rights.

Miller: Brice Miller has over 25 years' experience as Building Official, Inspector and Plans Examiner and holds four International Code Council (ICC) certifications. For over 11 years he has been speaking to Code Officials, Contractors, Engineers and Architects throughout the country on firestopping. Brice was instrumental in the development of the new ICC

book, titled Firestopping, Joint Systems and Dampers. Brice is also a part time code instructor for a local community college in Fort Collins, Colorado. He also served for 2 ½ years as the Executive Director of the International Firestop Council.

Moore: Mike Moore is a professional engineer and technical consultant with over 15 years of experience in technology transfer and demonstration, building and energy codes and standards, product development, and RD&D of energy efficient, and durable buildings and systems. With respect to ventilation codes and standards, he drafted the whole-house mechanical ventilation requirements of the IRC, serves on ASHRAE 62.2, and works as a consultant for manufacturers in the industry.

Morse-Fortier: Dr. Leonard J. Morse-Fortier is a Staff Consultant with Simpson Gumpertz & Heger Inc. (SGH). A self-described recovering academic, he taught at the University of Notre Dame and at the Massachusetts Institute of Technology prior to joining SGH in 1996. He has worked in wind engineering, structural design, structural investigation, and design for repair and rehabilitation, including historic preservation. Currently, he specializes in forensic investigation across a range of building structures, including wood-frame buildings and non-engineered structures. His background in wind engineering includes several years' operating a wind tunnel and performing testing and analysis on buildings.

Nelson: Joe Nelson brings a diversified engineering background in both the consulting and industrial sectors. He earned undergraduate and advanced degrees from the University of Illinois and is registered in several engineering disciplines in the Midwest and Alaska. As an engineering program manager with international consulting firms, Joe has led project teams performing environmental remediation from hydrocarbon and mercury contamination. Other assignments have included various phases of design and operation of water and wastewater treatment systems and hazardous waste disposal facilities, design of industrial instrumentation and control systems, and environmental compliance and investigations at state and EPA Superfund sites. In the industrial sector, Joe was the engineering manager at a large Midwestern company involved with asphalt manufacturing and hazardous waste treatment, storage, and disposal.

Ode, Mark C. Ode is a member of the Roadrunners Club for IAEL, recipient of the Arties' Apple Award for the Southwest Section IAEL, a member of the NEC Quarter Century Club, and a Distinguished Member of Technical Staff for the William Henry Merrill Society of Underwriters Laboratories. He was a principle member of NEC Panel 20 for the 1990 NEC, an alternate member of Panel 3 for the 2002, 2005, 2008, 2011, 2014, and the 2017 NEC, a principle member of Panel 4 for the 2002, 2005, 2008, and a principle member of Panel 13 for the 2011, the 2014, and the 2017 NEC. He has been an alternate on the NEC Technical Correlating Committee for the 2005, 2008, 2011, 2014, and the 2017 NEC.

Reid: Sean Reid has worked in the construction industry since 1972. Starting as a laborer, he was a carpenter until 1982, when he started work as a building inspector. Over the course of the past thirty-five years he has been an inspector, plan analyst, Chief Building Inspector, Building Official, and is currently the Director of the Douglas County, Kansas, Zoning and Codes Department. For more than a decade, Sean managed the Johnson County Contractor Licensing program. Sean has been an Inspector for the Kansas Disaster Assessment Team since 2004 and currently serves as the President of the Heart of America Chapter, ICC. He is certified by the International Code Council as a Building Inspector, a Building Plans Examiner, and as a Certified Building Official. He currently sits on the Education Committee of the International Code Council's (ICC) Professional Development Council, as well as the ICC Building Official's Membership Councils Higher Education Task Group and Participation Task Group. Professional achievements notwithstanding, he considers his son Dash to be his greatest accomplishment.

Rewerts: Tom Rewerts has a traditional structural engineering practice dedicated to solving construction problems of a particularly troublesome and difficult nature. He has nearly 40 years of experience in forensic structural and architectural engineering, and restoration engineering. Twenty-nine of those years were spent in private practice in Chicago, with the remainder in Kansas City. His main areas of practice are investigation and design of repairs for problems in residential and commercial concrete and masonry structures.

Roberts: Blake Roberts joined the Eaton Roofing & Exteriors team in July of 1998. Due to a varied background in both the roofing and gutter industries, Blake serves as the Sales Development Coordinator and Large Loss Damage Estimator. Blake brought with him a vast background of experience in various facets of roofing and exterior structural components. Having previously owned his own roofing and guttering business, Blake worked in both residential and commercial areas of roof replacement, roof repairs, and storm damage. Blake has years of industry experience from various vendor schools and industry approved training. Blake has years of hands-on experience, making his training skills practical and clear to understand. He enjoys training Insurance Professionals for a better understanding of roofing and damage assessment, enabling them to help insured's navigate the insurance claims processes. Blake travels to various locations across the state of Kansas for conducting training events for both Agents and Adjusters.

Robinson: Kevin Robinson is the Assistant Building Official for the City of Amarillo over field operations. He has 28 years' experience in the plumbing industry. Kevin holds a State of Texas Inspectors license with the medical gas endorsement as well as his Master Plumber license. He also holds the Commercial and Residential Plumbing and Mechanical ICC certifications. Kevin has been an instructor for PHCC-TX for the past nine years teaching plumbing continuing education,

medical gas certification, eight and eighteen hour code classes required by the Texas State Board of Plumbing Examiners. In his spare time he is finishing his BS in Business Management and enjoys spending time with his six grandkids.

Rossmiller: Gil Rossmiller, Colorado Code Consulting, LLC. Gil has been in the construction industry for over 40 years and brings a hands-on perspective to building code compliance. He has served on code development committees for the International Residential Code / Plumbing and Mechanical for the 2009 and 2012 editions of the IRC and the Commercial Energy Code for the 2015 IECC and 2018 IECC.

Schilling: Michael J Schilling has spent nearly 15 years in military and federal law enforcement assignments. Mike and his family came home to the KC area to help manage his family's commercial roofing company through an ownership transition. He is a graduate of the University of Nevada, Las Vegas where he earned both his undergraduate and law degrees. Mike established his own practice in 2015 making service to building contractors his firm's primary focus. When he is not in the courtroom or meeting with clients, he continues to serve in the U.S. Army Reserve and closer to home, volunteers with his church and in the community.

Seipel: Shannon Seipel, In her current position, Shannon is a Senior Sales Specialist for Eden Innovations LLC. Eden Innovations LLC is based in Littleton, CO where they manufacture and distribute a product called EdenCrete®. Shannon represents the company as a technical sales and marketing specialist in her 7-state territory. With over thirteen years in the construction industry Shannon has a vast range of concrete experience. She spent most of her career with LafargeHolcim working in different parts of the country. Shannon was a Technical Specialist and Value Added Product Specialist for nearly 7 years where she spent most of her time working with architects and engineers giving presentations and working with specifications. She also has quality control, dispatch and field experience. Prior to leaving LafargeHolcim, she was the Sales Manager for Aggregates, Asphalt & Concrete in Buffalo, NY. Graduate of University of Missouri – Columbia, BA, 2003; Metropolitan Community College, BS in Construction Management, 2012

Sherman: Jim Sherman has been a Building Official in the Kansas City region since 2001 and has served for 6 different municipalities in his 30 year career. Previous to his duties as a Building Official, Jim was a building inspector, plans examiner and Fire Code Official in 3 Kansas Counties. Jim holds certification from the legacy organization ICBO and ICC and is currently a committee member for the International Mechanical Code Exam Development Committee. Jim is the present Heart of America Chapter Disaster Assessment Coordinator and serves as the liaison between the executive branch of the Chapter and the Kansas Department of Emergency Management. Jim has been involved with disaster assessment and assistance as an Inspector, Regional Coordinator and State Coordinator since 1995.

Stallcup: James Stallcup Upon completion of the apprenticeship program of the JATC in Fort Worth, Texas, went on to become a journeyman and master electrician. Soon after, he became an electrical inspector and within one year he was chosen to become the Chief Electrical Inspector of Fort Worth, Texas. Through determination and continued study on the numerous codes and standards that were essential to his work as an electrical inspector, he became a nationally recognized author, instructor, and consultant. As Past President of the Electrical Section of NFPA, Former Chairman of Code Making Panels 14 and 15, and Present Chairman of the EECA Committee (Electrical Equipment in Chemical Atmospheres) and a principal member of the 70E Committee (Electrical Safety Requirements for Employee Workplaces), James has not only earned a reputation as a knowledgeable and respected authority in the electrical industry but has gained prominence as a nationally known consultant to private enterprise and industry.

Sternadori: Richard Sternadori is an Instructor and doctoral student in the University of Missouri (MU) College of Human Environmental Sciences, Dept. Of Architecture. He teaches ADA programs for the MU Great Plains ADA Center. He was a Chief Building Official for 16 years. Governor Joan Finney appointed Richard to the Kansas State Board of Architects/Technical Professions as the first Code Official on the board. Richard created Ramp-Up Disability Consultants LLC, providing consulting services regarding the Americans with Disabilities Act and the International Building Codes. He is a published researcher and author regarding accessibility, design and government.

Stripling: Terrell Stripling is a seasoned instructor with 20 years of fire service experience, and has also worked in the construction industry. He holds a Bachelor of Science degree from Oklahoma State University in Fire Protection Engineering and Technology. His experience in fire prevention, code management and the ability to effectively communicate a pro-active philosophy is reflected in Terrell's passion for education. At the college level, he has served in the positions of Department Chair and adjunct professor in the Fire Science Department, utilizing the theory of the code along with hands-on practical application to achieve ICC's vision of "Protecting the health, safety, and welfare of people creating better buildings and safer communities."

Stone: Dwight Stone, MBA, CDT Senior Specifiers Services Representative – Johns Manville
Dwight joined Johns Manville in April 2015. Dwight has had a successful career as project manager and specification consultant for architectural firms since 1997. He completed his NCARB requirements in 2004. He holds an MBA from the University of Colorado and is a national member of CSI and RCI.

Thomas: Steve Thomas has over thirty years of experience in working with building codes including plan reviews, inspections and administration. His firm provides building code consulting services for governmental agencies and architectural firms, as well as educational seminars on building codes. Starting a building code-consulting firm in 1999, he has served as the contract Building Official for local jurisdictions in Colorado. Mr. Thomas has served on several ICBO committees and recently served as the Chairman of the ICC Means of Egress Code Development Committee. He currently serves on the ICC Codes & Standards Committee. He is also the author of the book, *Building Code Basics, Based on the 2009 & 2012 IBC*, and *Building Code Essentials based on the 2015 IBC*, all available from ICC. He has presented building code classes for the last 25 years and provides an interesting and engaging look at building codes.

Thornburg: Douglas W. Thornburg, AIA, CBO, is currently Vice-President and Technical Director of Products and Services for the International Code Council (ICC) where he provides administrative and technical leadership for the ICC product development activities. In his current role, Doug also continues to create and present building code seminars nationally and has developed numerous educational texts and resource materials. He was presented with ICC's inaugural Educator of the Year Award in 2008, recognizing his outstanding contributions in education and training. A graduate of Kansas State University and a registered architect, Doug has over 37 years of experience in building code training and administration. He has authored a variety of code-related support publications, including the *IBC Illustrated Handbook* and the *Significant Changes to the International Building Code*.

Van Ausdal: Jason Van Ausdal offers 20 plus years of construction experience. He is the Building Official for Springville City in Utah and is a certified combination inspector, plans examiner and certified Building Official. Jason teaches courses for all trades. Jason is a member to many professional organizations such as the Home Builders association, International Association of Electrical Inspectors and International Code Council.

Weaver: Michael Weaver, Esq., began his career as an apprentice electrician with a local private contractor. After 10 years, he became a Block-Exterior Certified Master Electrician and with his wife, started their own electrical contracting business, which they operated for over 20 years. Mr. Weaver is a Principal of C&M Enterprises in Salina, Kansas and develops and presents electrical and safety based training programs for contractors, tradesmen, design professionals, and code officials. As a nationally recognized instructor and trainer, he is routinely entrusted with the responsibility of providing education for the International Code Council®, the International Association of Electrical Inspectors®, various municipalities and government jurisdictions across the nation, and private industry. He is the author of *Dwelling Service and Feeder Calculations*, *Commercial Service and feeder Calculations*, and *NEC® Electrical Calculations*, while continuing to develop a series of study guides based upon the latest code cycle of the NEC®.

West: Dan West has worked or taught in the HVAC industry for 24 years. Dan is currently a Field Service Representative for the O'Connor Company INC. and has been for the past 16 years. Prior to that Dan worked for Lennox for 5 years and was the director for the HVAC department for Penn Valley Community College for 3 years before that.

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