Johnson County Contractor Licensing program with the Heart of America Chapter, ICC present

# 2018 Spring Education Seminar



Feb. 20, 21, and 22, 2018 Overland Park Convention Center 6000 College Boulevard Overland Park, Kansas







### **About Contractor Licensing**

In Contract Licensing, our mission is to foster the highest standards of integrity, skill and trade practice in the construction disciplines regulated by our jurisdiction.

Our role is to safeguard the life, health, property and welfare of the public. Our office administers a uniform licensing program for participating jurisdictions, producing quality construction-related continuing education seminars for licensed contractors, trade practitioners and building inspection professionals. In 2016, the program added Tonganoxie and Mission Hills; making 17 jurisdictions within and beyond Johnson County.

We are proud to be designated as part of the

International Code Council's initial 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, and 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., C.B.O. Building official
- Mitch Dringman Building official
- Don West Class "D" contractor
- David Elliott General public representative
- Eric Wimmer Architect/engineer

#### Education Committee Members

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

#### Staff

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

### **Welcome to the Contractor Licensing Program** 2018 Spring Education Seminar

The 2018 Spring Education Seminar will be held at the Overland Park Convention Center, 6000 College Boulevard, Overland Park, Kansas, 66210.

#### **Pre-registration for sessions**

Because your class enrollment information is preprinted, we will not be able to accommodate walk-in attendees. **Pre-registration is required.** Registration closes at 5 p.m. on Feb. 16, 2018.

#### Relicensing

No relicensing for 2018 will be done at the seminar. You can relicense by mail, in person at the office, or online by using the Contractor Management System at:

cls.jocogov.org/CLSCOURSEREG/default.aspx

#### **Class check-in and check-out**

You must check-in (scan) when you enter and scan-out (scan) at the end of your classes. Use the bar code on your license card or the class schedule to be scanned when entering and exiting.

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. **No exceptions allowed.** 

#### 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. If you have special dietary needs, please let our team know before Feb. 16, 2018, by contacting Russell Thornburg via e-mail, <u>Russell.Thornburg@jocogov.org</u> or by phone 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.

# Tuesday, Feb. 20, 2018

#### 20-1A Residential Real World Application, 2018 IECC

8 a.m. to noon 4 Hours A, B, C, DR, DW Code Credit

This session will review beyond what the International Energy Conservation code requires for residential buildings, but also how to apply those requirements in the real world. We will see how things look in real buildings with pictures from actual plan review and inspections. Basic building science principles will be included in order to show how air and vapor movement moves our building assemblies.

Instructor: Shaunna Mozingo ICC PPP #: 14720

#### 20-1B Commercial Real World Applications, 2018 IECC 1:00 – 5:00 p.m. 4 Hours A, B, C, DR, DW Code Credit

This session will look at what the International Energy Conservation code requires for commercial buildings and how to apply those requirements in the real world.

Instructor: Shaunna Mozingo ICC PPP #: 14721

### 20-2A Understanding Residential Design Criteria Can Save You Money8 a.m. to 5 p.m.8 Hours A, B, C, DW Code Credit

This session will delve into the design criteria in the 2018 International Residential Code.

Topics will include:

- Climatic and Geographic Design Criteria
- Live and dead loads
- Fire-resistant construction requirements
- Minimum requirements (size, headroom, sanitation, EEROs, etc.) for rooms
- Egress, stairs, ramps

Upon completing the session the students will be able to answer:

• What is the smallest house I can build by code?

• Can I have a toilet in my kitchen?

Instructor: Chuck Bajnai ICC PPP #: 14722

## 20-3A Carbon Monoxide...Why Is It Dangerous?8 a.m. to 10 a.m.2 Hours A, B, C, DM, DP Code Credit

The fact is that we are living in a combustion culture. In the build environment, where most of us spend most of our time living and working, we can expect to be exposed to carbon monoxide often and from a variety of sources. During this session, we will discuss the facts associated with carbon monoxide in the built environment, as well as how to test furnace and water heaters to determine if the installation is safe. We will discuss tools, metering devices, and test procedures. This session, designed for Class DM mechanical and Class DP plumbing contractors, will also provide code credit to Class A, B, and C contractors, as well as being of interest to building inspectors and fire personnel.

Instructor: Eric Kjelshus ICC PPP #: 14917

### 20-3B How to Test Flues Gasses10 a.m. to noon2 Hours A, B, C, DM, DP Code Credit

During this session, Class DM mechanical, Class DP plumbing contractors, and home builders. Participants will learn the basics, the code's requirements, and the science behind flue testing. This session will show how back drafting effects water heater and furnace performance, while explaining the principles of positive pressure, and how to create and use positive pressure in rooms so flues will draft for safety and performance. We will also cover sizing flue, what to look for in flue gas.

Instructor: Eric Kjelshus ICC PPP #: 14918

#### 20-3C Duct Work Design Sizes & Testing 1 p.m. to 5 p.m. 4 Hours A, B, C, DM, DP Code Credit

This session will discuss static pressure testing and pressure drop of filters and coils. It will also review the design and clarify the sizing and testing procedures in accordance to Manual D and Manual J. While this session will be of greatest interest to DM, DP, and C contractors, it will provide code credit for Class A and B contractors and be of interest to building inspectors.

Instructor: Eric Kjelshus ICC PPP #: 14919

#### 20-4A Mass Timber and Tall Wood in the IBC (present and future)

#### 8 a.m. to noon 4 Hours A, B, C, DW Code Credit

There has been a surge of interest to utilize cross laminated timber (CLT) – now incorporated in the 2015 International Building Code (IBC) and the 2015 National Design Specification<sup>®</sup> (NDS<sup>®</sup>) for wood construction. CLT is now an option for use wherever heavy timber construction is approved for various types of construction in the CBC, for interior building elements in Type III construction, or for any building element in Type V construction. This four-hour session explores what mass timber is and how it is has been used to buildings up to 18 stories tall. Fire resistance, structural properties, current status of seismic design criteria, and examples of projects either built or currently under construction will be presented. Recent and ongoing fire and structural testing will be discussed along with clarifications provided by approved updates coming in the 2018 IBC and 2018 NDS, as well as proposals pending for three new types of construction in the 2021 IBC.

#### Instructor: Dennis Richardson ICC PPP #: 14747

### 20-4B Fire Resistance Design for Multi-Story Wood Framed Residential Construction1 p.m. to 5 p.m.4 Hours A, B, C, DW Code Credit

This session determines the proper code application for wood-frame fire assemblies can be challenging and is often further complicated with increases in a project's size and scale. There are four different floor framing methods applicable to mid- and low-rise residential wood structures. This presentation will include code requirements, compliance options, and nuances related to the intersection of fire resistance-rated floor/ceiling assemblies, exterior walls, fire barriers, fire partitions, and fire walls. Topics will include distinctions between fire-resistive elements for separation vs. structural fire resistance rating of supporting construction and when each is required by the type of construction.

- Apply approved methods and alternatives for establishing the fire-resistance of wood building elements.
- Discuss the differences in exterior walls, fire walls, fire barriers, and fire partitions considering performance expectations, code requirements, appropriate application and detailing.
- Understand the paths to achieving code-compliant, fire-rated wood-frame assemblies as outlined by the 2015 IBC including structural support and continuity.
- Recognize important nuances in the various methods for demonstrating fire-resistance including tested assemblies, prescriptive designs, calculations, and engineering analysis.

#### Instructor: Dennis Richardson ICC PPP #: 14748

### 20-5A Swimming Pools: Serious Considerations8 a.m. to noon4 Hours A, B, C, DS Code Credit

Plan review and construction details of residential swimming pools under the 2018 IRC and the 2018 International Pool Spa Code including:

- What type of pool, what functions it will provide, size, location, and budget?
- Are there any utilities or easements involved?
- Will it be a shallow pool with slide, will it slope from one end to the other?
- Will it be shallow on both ends, and slope to the middle?
- Are children considered, and will it have a diving board?
- Where will the lights and various fittings be placed?
- Where will the equipment be placed to be out of sight and sound?
- Will it have a variable speed pump, and timer on the pump?
- Is there a mediation clause in any documents that are signed?

#### Instructor: Curt Straub ICC PPP #: 14920

#### 20-5B 2018 General Plumbing Regulations in Accordance to the IPC, including Testing Procedures 1 p.m. to 5 p.m. 4 Hours A, B, C, DP, DS Code Credit

This session will outline approved methods for maintaining structural integrity when installing plumbing systems, and protection of the piping system. It will provide information on installing and inspecting underground piping and undermining of foundation footing methods. Topics also include hangers, anchors and pipe supports for various materials will be covered. Safety requirements of proper plumbing, testing and inspection procedures.

#### Instructor: Bobby Doran ICC PPP #: 14723

## 20-6A Just Foam It – The Ins and Outs of Spray Polyurethane Foam Insulation8 a.m. to noon4 Hours A, B, C Code Credit

This session will explain the different types of spray polyurethane foam (SPF) insulations used in residential and commercial construction. The presenter will identify the physical and performance properties of openand closed-cell SPF materials from low density to high density products used in all construction applications. Attendees can expect to learn the building code requirements of foam plastics and show how these products should meet compliance, for construction and safety practices, as well as proper installation guidelines. Participants will be able to distinguish the features and benefits of using spray polyurethane foam for construction, including sustainable attributes and compliance with more stringent energy efficiency requirements.

Instructor: Kelly Frauenkron ICC PPP #: 14749

#### 20-6B Staying out of Court

#### 1 p.m. to 3 p.m. 2 Hours Non-Code Credit

This session 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.

#### Instructor: Emilie Burdette, Pepper Jaso, and Jerry Howland

#### 20-6C Legal Toolbox – Tips for Contractors

#### 3 p.m. to 5 p.m. 2 Hours Non-Code Credit

This session will focus on two areas that contractors should understand to protect their legal interests. We will provide critical information about contract documents and construction law to help recognize the various roles and responsibilities of all contracting parties. We will discuss how contract documents can be helpful in solving problems, resolving issues and remedying conflicts. We will give a step-by-step walkthrough of the requirements for creating and filing a construction lien.

**Instructor: Mike Schilling** 

#### 20-7A Significant NEC Changes...2014 and 2017 Editions 8 a.m. to 5 p.m. 8 Hours A, B, C, DE Code Credit

More than 3,700 proposals were submitted to revise the 2011 National Electrical Code (NEC). More than 4,000 public inputs (formerly proposals) were submitted to revise the 2014 edition to the 2017 edition. While all of the public inputs did not make the cut, many did. Some changes offer a clarification of the Code; some of the changes help make the Code more user friendly. But most of the changes have been implemented to safeguard persons and property from hazards arising from the use of electricity. This seminar will cover the most significant changes in the 2014 NEC as well as the most significant changes in the 2017 NEC.

Instructor: Charles Miller ICC PPP #: 14724

# Wednesday, Feb. 21, 2018

#### 21-1A 2018 IRC Transition from the 2012 IRC

#### 8 a.m. to 5 p.m. 8 Hours A, B, C, DR, DW Code Credit

This session will assist participants in implementing the transition from the 2012 IRC to the 2018 IRC. It will include relevant changes in the 2015 IRC. This interactive training will focus on the key changes presented in the participant material. Knowledge review questions will provide opportunity for participants to discuss and consider the changes. During this training, participants will listen to lecture and engage in session discussion and exercises. Upon completion of the session, students will be able to better use the 2018 IRC, allowing them to apply its code requirements to design, plan review, and/or inspection of buildings.

#### Instructor: Steve Van Note ICC PPP #: 14725

### 21-2A Engineered Wood Products (EWP) Design Basics8 a.m. to 10 a.m.2 Hours A, B, C, DR, DW Code Credit

This session presents basic EWP design information, parameters, and recommendations that may be used to design residential and light commercial floor and roof systems. Included is a review of wood framing applications that employ engineered wood products as a competitive framing alternative and solution.

#### Instructor: Marty Thomson ICC PPP #: 14726

### 21-2B Selecting and Installing Hangers and Structural Screws10 a.m. to noon2 Hours A, B, C, DW Code Credit

This session gives guidance on selecting the correct hangers for typical wood framing applications. Instruction will be given on navigating product catalogs, selecting corrosion resistant coatings, and installing hangers correctly. It provides information on structural screws, replacing traditional hangers with structural screws, and selecting the proper structural fasteners for many common applications such as ledger board attachment, truss to plate attachment, and multi-ply fastening.

Instructor: Josh McIntyre ICC PPP #: 14727

# 21-2C The Complex Pressure Treated Wood1 p.m. to 5 p.m.4 Hours A, B, C, DW Code Credit

This session covers the complexity of pressure treated wood. While strict standards must be met, the process 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 gain 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 #: 14728

#### 21-3A Mechanical Plan Review, 2018 IMC

#### 8 a.m. to noon 4 Hours A, B, C, DM Code Credit

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

Instructor: Sam Dardano ICC PPP #: 14729

#### 21-3B Common Mistakes of Residential Mechanical Installation 1 p.m. to 5 p.m. 4 Hours A, B, C, DM Code Credit

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

#### Instructor: Sam Dardano ICC PPP #: 14730

# 21-4A UL's Fire Alarm CertificationHow UL Can Help Manage Fire Alarm Compliance, Based on Requirements in NFPA 728 a.m. to noon4 Hours A, B, C, DF Code Credit

This session covers UL's Fire Alarm Certification program, and how NFPA 72 references Certification programs. It will cover the basic supervising station requirements found in NFPA 72. An overview of how UL staff audits alarm contractors for compliance with NFPA 72, and how the AHJ may add UL Certification in order to maintain ongoing code compliance. This session will also cover NFPA 72 Chapter 26, including the requirements for new technologies for off-premise signaling, and also the types of supervising station systems and their requirements.

Instructor: Tom Presnak ICC PPP #: 14731

## 21-4B Existing Building Code, Principles, Theory, and 2018 Update1 p.m. to 5 p.m.4 Hours A, B, C Code Credit

This session discusses the principles of the IEBC and why jurisdictions need to adopt this code. It will include discussion on economic, health, and societal impacts that dilapidated and abandoned buildings have on our communities, principles of the IEBC such as triggers within the code that provide incremental safety enhancements to existing buildings and discussion on the major changes within the 2018 IEBC.

Instructor: Tim Ryan ICC PPP #: 14746

# 21-5A Water Pipe Design and Sizing According to the 2018 IRC8 a.m. to noon4 Hours A, B, C, DP, DS Code Credit

This session 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 for the proper operation of plumbing fixtures. It will also discuss the correct materials and installation used for potable water systems.

#### Instructor: Bobby Doran ICC PPP #: 14732

# 21-5B 2018 IPC Physics and Application of Drain, Waster, and Vent Systems1 p.m. to 5 p.m.4 Hours A, B, C, DP, DS Code Credit

This session covers a review of the 2018 IPC and IRC on the proper design, installation, and operation of drain, waste and vent systems. It will include the types of materials used along with the joining methods of the piping systems. It will address the appropriate use of various fittings and provisionsfor future fixtures and connections, placement and installation of cleanouts, and limitations pertaining to vertical and horizontal piping for proper flow and ventilation of plumbing fixtures will be discussed.

Instructor: Bobby Doran ICC PPP #: 14733

#### 21-6A Hidden Dangers of CO<sub>2</sub> Beverages and How to Protect the Public through Engineering and Enforcement 8 a.m. to 5 p.m 8 Hours A, B, C, DF, DM, DP Code Credit

This session begins by discussing the dangers of CO2 including a near fatal encounter as experienced by the Phoenix Fire Department. It will then look at the different uses of CO2 beyond just CO2 in beverage systems. Next, the session will address how to of protect the public from the dangers of a CO2 release using the International Fire Code and NFPA 55. Participants in this session should expect to gain a general understanding of CO2, the uses of CO2 and how to use the code to keep the public safe from a CO2 release.

#### Instructor: Brian Scholl ICC PPP #: 14734

### 21-7A Short-Circuit Current Calculations under the 2017 NEC8 a.m. to noon4 Hours A, B, C, DE Code Credit

This session will provide in-depth overview and instruction into the 2017 NEC® requirements surrounding the available fault current and its calculation procedure. Determination of compliant distribution equipment requires understanding and calculating the available short-circuit current, as well as the implications of equipment ratings. Instruction is focused on in-depth exploration of the relevant Code Sections which result in compliant installations. This training is well suited for electrical contractors, craftsmen, design professionals, enforcement, plan reviewers, and anyone in need of expanding their understanding and comprehension of available fault current calculation and compliant distribution equipment selection based on the 2017 NEC®.

#### Instructor: Mike Weaver ICC PPP #: 14735

### 21-7B Article 680 – Electrical Requirements for Swimming Pools, and Similar Installations – 2017 NEC1 p.m. to 5 p.m.4 Hours A, B, C, DE, DS Code Credit

This session provides overview of the 2017 NEC® requirements of Article 680 and related Articles as they pertain to swimming pools, spas, hot-tubs, hydro massage bathtubs, and fountains. Primary emphasis is placed on the requirements for grounding and bonding of these specific installations. Utilizing PowerPoint instruction and attendee handout material, this training will provide insight and clarity into the NEC® compliance requirements for structures and equipment associated with these types of installations. This session is well suited for designers, installers contractors, electrical craftsmen, and enforcement who may be involved in the approval or construction of such governable bodies of water, and their surroundings, which can be impacted by the NEC's® Article 680. Due to the emphasis on grounding and bonding, this session is also well suited for non-electrical pool, spa, hot-tub, and fountain contractors and installers.

Instructor: Mike Weaver ICC PPP #: 14736

# Thursday, Feb. 22, 2018

#### 22-1A Transition from the 2012 to 2018 IBC

#### 8 a.m. to 5 p.m 8 Hours A, B, C Code Credit

This session will explain the transition 2012 to 2018 IBC identifies many of the important changes in that occur in the 2015 and 2018 editions of the IBC. The presentation addresses not only the code change 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 #: 14737

#### 22-2A 2018 IRC Wood Wall Bracing

#### 8 a.m. to 5 p.m 8 Hours A, B, C, DW Code Credit

This session will explain why wall bracing is required. It will explain how to calculate the amount of wall bracing required and where the bracing panels have to be located so that a dwelling will not experience racking due to a serious wind event. Upon completion, the student will be able to perform the wall bracing analysis without having to rely on an engineer for professional help.

Instructor: Chuck Bajnai ICC PPP #: 14738

### 22-3A 2018 Significant Changes of Plumbing, Mechanical, and Fuel Gas8 a.m. to noon4 Hours A, B, C, DM, DP Code Credit

During this session participants will be able to better understand and identify the significant changes in the Plumbing, Mechanical, Fuel Gas codes. In addition, the changes will be presented to closely reflect applicability to the construction industry and the participant's daily workload.

Instructor: Guy Tomberlin ICC PPP #: 14739

### 22-3B Up on the Roof: Asphalt Shingles 2018 IRC and Manufacturer

#### 1 p.m. to 5 p.m 4 Hours A, B, C, DR, DW Code Credit

This session will focus on the anatomy, proper installation and troubleshooting. It will look at some special challenges in the design and installation of asphalt-shingled roofing systems in an attempt to learn from the mistakes of others. Attic ventilation will also be discussed, and participants will learn how to calculate the proper amount of intake and exhaust vents needed for a roofing system.

Instructor: Steve Hern ICC PPP #: 14740

### 22-4A Egress Behavior: Analytical Techniques8 a.m. to 5 p.m8 Hours A, B, C Code Credit

This session is about the evacuating population and using this understanding to help quantify performance and informing design. We will examine the basics of human behavior during a fire, referring to a number of different case studies to demonstrate the impact of evacuee performance on the outcome of an incident. It will look at the various models available to assess performance – from prescriptive codes, to evacuation drills, engineering calculations, and computer tools. It will examine the pros and cons of these approaches and identify real-world applications to provide further insights. The goal of the session is to enable the attendees to better understand evacuee behavior and why it happens. This will allow them to more effectively question building and procedural solutions and better account for evacuee behavior in their own practice.

#### Instructor: Steven Gwynne ICC PPP #: 14741

#### 22-5A Plumbing Plan Review, 2018 IPC 8 a.m. to 5 p.m 8 Hours A, B, C, DP Code Credit

This session will introduce the techniques of conducting plan review of a plumbing design. It is designed to provide a thorough understanding of plumbing construction requirements for plumbing plan review. The session will cover plan review methods used for plumbing installations and emerging technologies.

Instructor: Joseph Montoya ICC PPP #: 14742

#### 22-6A 2018 IFC Significant Changes

#### 8 a.m. to 5 p.m 8 Hours A, B, C, DF, DM, DP Code Credit

The session will review of Significant Changes to the International Fire Code<sup>®</sup> 2018 Edition is to familiarize fire officials, building officials, plans examiners, fire inspectors, design professionals, and others with the many important changes in the 2018 International Fire Code<sup>®</sup> (IFC<sup>®</sup>). This publication will assist code users in identifying the specific code changes that have occurred and, more important, assist them in understanding the reasoning behind the changes. It is also a valuable resource for jurisdictions in their code-adoption process. This seminar provides an overview of critical concepts included in the Significant Changes to the International Fire Code<sup>®</sup> 2018 Edition. The participants will learn the correct use of the code's requirements in the design, plan review, inspection, and analysis of projects. Attendees will apply the code in clear-cut situations and build their understanding of the intent of the code when asked to make compliance decisions.

Instructor: John Swanson ICC PPP #: 14743

# 22-7A Classification of Flammable Liquids, Gasses, Vapors and Combustible Dust per the NEC, NFPA 497, and 499 8 a.m. to noon 4 Hours A, B, C, DE, DF, DM, DP Code Credit

This session will review basic understanding of the classification of flammable liquids, gases, vapors, combustible dust, and the parameters that determine the degree and the extent of these hazardous (classified) locations. This information may also assist in the selection of special electrical equipment for these locations where electrical equipment is required.

Instructor: James Stallcup, Sr. ICC PPP #: 14744

#### 22-7B 2017 Electric Signs and Outline Lighting

#### 1 p.m. to 5 p.m. 4 Hours A, B, C, DE Code Credit

This session will review the Electric Signs and Outline Lighting. These topics are often mentioned in the electrical industry, however, there are many necessary topics. Topics include theory, design, engineering principles, installation, and inspection that are very relevant to those individuals who work in the sign industry. This session will not only attempt to show the relevancy of these topics, but will also provide UL tips, and a number of tips on each of the subjects mentioned. It will also discuss procedures for calculating the size of electrical components needed to complete the circuitry for an electric sign or outline lighting system.

#### Instructor: James Stallcup, Sr. ICC PPP #: 14745

Lunch menu during seminar days		
Tuesday, Feb. 20	Wednesday, Feb. 21	Thursday, Feb. 21
	•	•
Mom's meatloaf with brown gravy	Roasted whole hog	Hamburgers
Mashed potatoes	Potato chips	Hot dogs
Green beans	Coleslaw	Potato salad
Garden salad	Macaroni & cheese	Pasta salad
Cinnamon rolls	Fruit salad	Cookies
	Kaiser rolls	
	Cinnamon rolls	

Room	Tuesday, Feb. 20, 2018	Wednesday, Feb. 21, 2018	Thursday, Feb, 22, 2018	
1	Residential Real World Applications, 2018 IECC 8 a.m. to noon Commercial Real World Applications, 2018 IECC 1 p.m. to 5 p.m.	<b>2018 IRC Transition from the 2012 IRC</b> 8 a.m. to 5 p.m	<b>Transition from the 2012 to 2018 IBC</b> 8 a.m. to 5 p.m	
2	Understanding Residential Design Criteria Can Save You Money 8 a.m. to 5 p.m	Engineered Wood Products Design Basics 8 a.m. to 10 a.m. Selecting and Installing Hangers and Structural Screws 10 a.m. to noon The Complex Pressure Treated Wood 1 p.m. to 5 p.m.	<b>2018 IRC Wood Wall Bracing</b> 8 a.m. to 5 p.m	
	<b>Carbon MonoxideWhy Is it Dangerous?</b> 8 a.m. to 10 a.m.	Mechanical Plan Review, 2018 IMC 8 a.m. to noon	2018 Significant Changes of Plumbing, Mechanical, and Fuel Gas 8 a.m. to noon	
3	How to Test Flues Gasses 10 a.m. to noon Duct Work Design Sizes & Testing 1 p.m. to 5 p.m.	Common Mistakes Residential Mechanical Installation 1 p.m. to 5 p.m.	<b>Up on the Roof: Asphalt Shingles</b> 2018 IRC & Manufacturer 1 p.m. to 5 p.m.	
4	Mass Timber and Tall Wood in the IBC (present and future) 8 a.m. to noon	UL's Fire Alarm Certification – How UL Can Help Manage Fire Alarm Compliance – Based on Requirements in NFPA 72 8 a.m. to noon	Egress Behavior Analytical Techniques 8 a.m. to 5 p.m	
	Fire Resistance Design and Detailing for Multi Story Wood Framed Residential Construction 1 p.m. to 5 p.m.	The International Existing Building Code, Principles, Theory and 2018 Update 1 p.m. to 5 p.m.		
5	Swimming Pools: Serious Considerations 8 a.m. to noon	Water Pipe Design and Sizing According to the 2018 IRC 8 a.m. to noon	Plumbing Plan Review, 2018 IPC 8 a.m. to 5 p.m	
	2018 General Plumbing Regulations in Accordance to the IPC Including Testing Procedures 1 p.m. to 5 p.m.	2018 IPC Physics and Application of Drain, Waste, and Vent Systems 1 p.m. to 5 p.m.		
6	Just Foam It – The Ins and Outs of Spray Polyurethane Foam Insulation 2018 – IRC & IBC 8 a.m. to noon	The Hidden Dangers of CO2 Beverages and How to Protect the Public through	2018 IFC Significant Changes 8 a.m. to 5 p.m	
	Staying out of Court 1 p.m. to 3 p.m. Legal Toolbox – Tips for Contractors 3 p.m. to 5 p.m.	<b>Engineering and Enforcement</b> 8 a.m. to 5 p.m		
7	Significant NEC Changes2014 and 2017 Editions	Short-Circuit Current Calculations under the 2017 NEC 8 a.m. to noon	Classification of Flammable Liquids, Gases, Vapors, and Combustible Dust per the NEC, NFPA, 497, and 499 8 a.m. to noon	
	8 a.m. to 5 p.m	Article 680 – Electrical Requirements for Swimming Pools, and Similar Installations – 2017 NEC 1 p.m. to 5 p.m.	<b>2017 Electric Signs and Outline Lighting</b> 1 p.m. to 5 p.m.	

### **Registration information**

Due to preprinted bar-coded schedule documents, **you must pre-register** for sessions and lunch. All registration forms must be received in the Contractor Licensing Program office, **no later than 5 p.m.**, **February 16, 2018.** 

Please call 913-715-2233 if you have any questions.

#### Fees

The Qualifying Individual for Johnson County Program Companies licensed for 2017 or 2018 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 session 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:

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Staff	Session number	Session title

Register on line at **cls.jocogov.org/CLSCOURSEREG/default.aspx** and instantly see if there are available seats in a session.

### Seminar site information

#### **Overland Park Convention Center**

6000 College Boulevard Overland Park, KS 66211

The convention center is located on the south side of I-435 between the Metcalf and Nall highway exits.

Parking guidelines are also available.



### Accommodations

**Hyatt Place Convention Center** is offering a group rate of \$115.00 (plus tax), per night for the Johnson County Licensing Group over the dates of February 19-24, 2018. Guests can feel free to contact our central reservations department to make their reservations at 1-888-492-8847.

The cut-off date to make a reservation at the group rate is **Tuesday, Feb. 6, 2018.** We hope to see everyone soon!

What you'll enjoy:

- Spacious guestrooms with 42" TVs for movie nights and much more.
- Complimentary amenities: Make the most of free Wi-Fi, daily breakfast and access to a 24-hour StayFit<sup>®</sup> gym.
- Less than a mile from meetings at the Overland Park Convention Center.





### Additional hotels

There are a number of area hotels close to the Overland Park Convention Center. Here are some options:

- Sheraton OP Convention Center 6100 College Blvd.
   Overland Park, KS 913-234-2100 • 800-325-3535
- Hilton Garden Inn Overland Park 5800 College Blvd.
   Overland Park, KS
   913-345-2661
   800-445-8667
- Courtyard Marriott Convention Center
   11001 Woodson, Overland Park, KS 913-317-8500
   888-236-2427
- Cloverleaf
   6300 W. 110 St., Overland Park, KS
   913-491-3333
   888-433-9765

- Holiday Inn Suites Convention Center
   10920 Nall, Overland Park, KS
   913-312-0900
   866-276-8038
- Extended Stay America KC OP 5401 W. 110th St., Overland Park, KS 913-661-7111
   800-804-3724
- Super 8 Motel
   10750 Barkley St., Overland Park, KS
   913-341-0100
   800-441-1618
- Hampton
   10750 Barkley St., Overland Park, KS
   913-491-9002
   800-833-1516
- Days Inn Overland Park
   6800 W. 108 St.
   Overland Park, KS
   913-341-4440 800-800-8000

### 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.

#### Bajnia:

Chuck Bajnia has been the chief residential reviewer in Chesterfield County, Virginia for sixteen years.

His leadership has included:

- Chairman of the ICC Ad Hoc Committee on Wall Bracing
- Chairman of the ICC Building Code Action Committee
- Chairman of the Virginia IRC Committee
- Chairman of the Deck Code Coalition

He has taught wall bracing, residential plan review, and code change classes in numerous states. Chuck graduated with a bachelors in Mechanical Engineering and a Master's degree in Architecture. He and his wife of 48 years have three children and two grandchildren.

#### 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 the University of Kansas.

#### 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 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 over 30 years and began his teaching career with Texas A&M University Engineering Extension Service (TEEX) in 1994. He has been involved in the Continuing Education program since the initial 1993-1994 program. He taught with TEEX in the beginning and became an Individual Provider approved by the state 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 Texas and Louisiana continuing education 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. He represents various law firms as a professional plumbing witness in reference to Licensing laws and codes.

#### Frauenkron

Kelly Frauenkron is the National Account Manager and Spray Foam Team Lead for BASF Corporation. For 20 years, Kelly has been engaged in the spray foam contracting community as well as with the code, building science, and construction communities to provide training and education related to proper spray polyurethane foam SPF application. She has presented nationally for over 15 years to code officials, builders, architects, and contractors on code-compliant, best-practice installations of SPF materials. Kelly has been actively involved with the construction business, maintaining a LEED BD+C accredited professional status as well as chairing committees on various trade associations to ensure that market progress of the SPF and insulation trade continues.

#### Gwynne

Steven Gwynne is a Senior Research Officer at the National Research Council of Canada, where he works for the Fire Safety Unit (as Team Leader or the Fire Resistance and Risk Management Group). He has worked in evacuation and pedestrian dynamics for 20 years, adopting academic, consultant, and government roles in the UK, US, and Canada. He has been a Reader at the University of Greenwich (UK), a Senior Scientist at Hughes Associates, Inc. (US and UK), a Visiting Researcher at NIST (US), and is still an Adjunct Professor at the University of Maryland (US) and the University of Waterloo (Canada). He has worked in life safety, security, routine pedestrian circulation, procedural/structural design, incident investigation, and product design in areas of aviation, maritime, rail, and the built environment, along with urban-scale scenarios.

#### Hern

Steve Hern is the Field Technical Manager for CertainTeed's Roofing Products Group. For the past 19 years, he has investigated roofing systems relative to material, installation or other factors that can affect the effective life of roofs. He is also associated with CertainTeed Solar, involved in training, installation and troubleshooting of rooftop PV systems. Mr. Hern has a strong background in residential construction and renovation and has served as a facilities manager in commercial/industrial real estate.

#### 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.

#### Jaso

Pepper Jaso has been a Financial Crimes Investigator with the Johnson County Kansas District Attorney's Office for the past fourteen 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 the Vice President of the MO/KAN Chapter of the International Association of Financial Crimes Investigators. She is a Kansas Insurance Fraud Task Force board member and a member of the Postal Inspector's Kansas City Identity Theft Crimes Task Force. Pepper is also a Kansas Supreme Court Approved Mediator.

#### **Kjelshus**

Eric Kjelshus Energy Heating and Cooling has been providing heating and air conditioning services in the Kansas City area since 1972. Erics' expertise includes residential and commercial heating and air conditioning, solar power installation and service, energy audits and assessments, weatherization, insulation & energy efficiency and conservation through the implementation of energy saving techniques, installation of Energy Star Qualified equipment, and renewable energy such as solar and geothermal.

#### **McIntyre**

Josh McIntyre is the Simpson Strong-Tie Territory Manager covering Southern Illinois, Missouri, and Northern Kansas. Josh has been with Simpson Strong-Tie for six years and specializes in light frame wood construction. His work consists of educating and assisting specifiers, code officials, and builders in the construction of safe structures. He is a graduate of Southern Illinois University-Edwardsville and resides with his family in Glen Carbon, Illinois.

#### Miller

Charles Miller is a master electrician, business owner, author, educator, and talk-show host. Based out of Lebanon, TN, Charles spent 18 years as a successful business owner and electrical contractor. Since then, he focused his time and energy on writing and teaching to promote knowledge and proficiency among engineers, electricians, and tradespeople in the field. As an author and illustrator, he has an extensive list of electrical-related publications to his credit. Mr. Miller also sits on two NFPA committees, including the committee for NFPA 70E: Standard for Electrical Safety in the Workplace.

#### Montoya

Joseph Montoya has over 30 years' experience in Building, Plumbing, and Mechanical Installation, service and inspections. He has been licensed as a Plumbing Contractor in the State of California and holds a current Master Plumber license in the State of Colorado. Currently, Joseph works for the Town of Castle Rock as Chief Building Official, and in his free time he teaches Plumbing, Mechanical, and Fuel Gas code classes at Red Rocks Community College and Building Code classes at Community College of Denver.

#### Monzingo

Shaunna Monzingo, Building Plans Analyst, Inspector and Code Educator/Consultant for Colorado Code Consulting LLC (CCC). Shaunna manages the energy code contracts for CCC, conducting research and providing training to code officials, builders, Energy Raters, and designers both locally and around the U.S. Shaunna has served as a building inspector for the U.S. Department of Energy's Solar Decathlon Competitions and served as the inspector for the China Solar Decathlon Competition. She has been awarded the Department of Energy's Jeffrey A. Johnson Award for excellence in the advancement of building energy codes and performance, IMT and ICC's Standard Bearer's Award for her efforts in compliance with energy codes, as well as the South West Energy Efficiency Project's Award for Leadership in Energy Codes. Shaunna is a past president of the Colorado Chapter of ICC and serves on the Chapter's Education, Legislative, Code Development and Membership committees. She was appointed to the International Code Council's Commercial Energy Code Development Committee and Code Correlation Committee for the 2018 code cycle.

#### Presnak

Tom Presnak has been with UL's Northbrook Office since 1985; his duties include performing evaluations and audits of fire alarm contractors and supervising stations across the United States. Tom leads UL's outreach and support for AHJ's and alarm contractors to help them understand UL's Fire Alarm Certification programs. He holds NICET Level II certification as a Fire Alarm Technician, and an Associates Degree in Fire Science. Tom, represents UL on NFPA 72 Chapter 14 Inspection, Testing & Maintenance.

#### Richardson

Dennis Richardson PE, CBO, CAS Western Regional Manager, American Wood Council. Mr. Richardson joined the American Wood Council in January of 2013 after 17 years of being a building official and is a civil engineer registered in California with private sector design and consulting experience. He has been active on several code development and education efforts and has authored a number of code changes on subjects ranging from simplified seismic in the 1997 UBC to a rewrite of the heavy timber provisions in the 2018 IBC. Dennis currently serves on the IBC Fire Safety Code Committee and is a Past President of the Peninsula Chapter of ICC.

#### Ryan

Tim Ryan has served the City of Overland Park for over 39 years; all in the Building Safety Division. He has served that community as a field inspector, plans examiner, field supervisor, and currently as Code Administrator since 1998. Tim graduated from Pittsburg State University with a Bachelor of Science Degree in Construction Management and Technology in 1978. He is certified in 15 separate categories of building code administration and management. During his career, he has served on approximately 30 task force groups, ad hoc and administrative committees at the local, state, and national levels. He is well recognized as a public speaker and is highly regarded as an instructor on several topics of building and fire codes, legal aspects, leadership and management. He served 7 years on the Board of Directors for the International Code Council. He was appointed to the Board of Directors for the National Institute of Building Sciences in 2006 and is currently serving as one of six board members to be appointed to that Board by the President of the United States, President Obama, in 2012. He is the only Code official ever to be appointed to a position by a United States President. He currently is a member of the ICC Codes and Standards Council and serves as a moderator for the ICC Code Development hearings. He currently serves as the Executive Director of the International Building Officials Association. In 2012, Tim was awarded ICC's Bob Fowler award for his outstanding leadership in furthering a safer built environment in 2012. Tim was awarded the Mortimer M. Marshal Award from the National Institute of Building Sciences in January 2018.

#### Schilling

Mike Schilling 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.

#### Scholl

Brian Scholl earned a Bachelor of Science Degree majoring in Fire and Engineering Technology with a minor in Fire Prevention from Eastern Kentucky University. He has worked for the Phoenix Fire Department as a Fire Inspector for the past 16 years. For the majority of his career, Brian has been assigned to their Special Hazards Unit. This unit is tasked with inspecting new and existing facilities that store, handle, or use hazardous materials. He is also the Public Information Officer for the Fire Prevention Division of the Phoenix Fire Department, where he educates the public on fire safety through presentations, social media, and news media events.

#### Stallcup Sr.

James Stallcup Sr., upon completion of the apprenticeship program of the JATC in Fort Worth, Texas, he became 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 of 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, 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.

#### Straub

Curt Straub has twenty-seven years of experience building custom shotcrete pools, fountains, water features, retention basins, and structures. For the past 25+ years, Curt has been consulting professionally on swimming pools.

#### Swanson

John Swanson worked in the fire service as a firefighter, City Fire Marshal, and State Fire Marshal for nearly 20 years. He is currently a Deputy State Fire Marshal with the Minnesota State Fire Marshal Division. In this position he is responsible for completing inspections and reviewing architectural and engineering drawings for the State of Minnesota. John represents the Minnesota State Fire Marshal Division on several state and national code development committees; including the IBC Fire Safety Committee and NFPA 72, the National Fire Alarm and Signaling Code.

#### Thomson

Marty Thomson is a Territory Sales Manager for Roseburg Forest Products Company. He has been serving Roseburg and the Upper Midwest and Great Plains Territories since 2001. Prior to joining Roseburg, Marty worked for seven years as a Market Development and Engineered Wood Specialist with APA-The Engineered Wood Association. During his time with Roseburg and APA, Marty has presented numerous product education, design, and installation seminars to thousands of building industry design and construction professionals, code officials, and trades personnel. His background also includes experience in wood frame design and project construction.

#### Thornburg

Doug 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.

#### Tomberlin

Guy Tomberlin is the Branch Chief of Inspections for Fairfax County, Virginia. He has served as a code official, instructor and has been involved in code development for more than 30 years. His career path includes serving as an inspector, plan reviewer, manager of permits, inspections field supervisor, chief plumbing engineer, and processing code modifications. He has also served on the ICC board of directors.

#### Van Note

Steve Van Note is the Managing Director of Product Development for the International Code Council (ICC), where he is responsible for developing technical resource materials in support of the International Codes. His role also includes the management, review, and technical editing of publications developed by ICC staff members and other expert authors. In addition, Steve develops and presents code seminars nationally. He has over 40 years of experience in the construction and building code arena. Prior to joining ICC in 2006, Steve was building official for Linn County, Iowa. Prior to his 15 years at Linn County, he was a carpenter and construction project manager for residential, commercial, and industrial buildings. A certified building official and plans examiner, Steve also holds certifications in several inspection categories.

#### Weaver

Mike Weaver, Esq. began his career as an apprentice electrician with a local private contractor. After 10 years, he became a Block-Experior 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<sup>®</sup>, the International Association of Electrical Inspectors<sup>®</sup>, 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<sup>®</sup> Electrical Calculations, while continuing to develop a series of study guides based upon the latest code cycle of the NEC<sup>®</sup>.

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