



Phillip A. Keena, IAAI-CFI, BsFPSET

Practice Leader, Fire Protection

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Background

Mr. Phillip Keena holds an A.A. in Fire Administration, a B.S. in Organizational Leadership, a B.S. in Fire Protection and Safety Engineering Technology, and an M.S. in Management. He is a Certified Fire Investigator through the IAAI, as well as in Missouri. He is also a licensed Private Fire Investigator in Illinois and Missouri. Mr. Keena also holds a Private Detective License in Iowa, Kansas, Montana, Nebraska, and Oklahoma.

Mr. Keena utilizes his background as a fire protection engineer, which involved design, inspection, testing, operation, and maintenance of fire protection appliances, devices, and systems, as well as the testing of fire-resistant materials in performing failure analysis of fire protection systems/components. He has conducted fire protection and code consulting evaluations in commercial and residential structures, as well as investigated and performed failure analysis involving passive and active fire protection systems, life safety systems, and fire alarm systems. As a fire investigator, he has conducted origin and cause investigations on fatal structure fires, residential fires, commercial fires, and vehicle fires.

Mr. Keena has been qualified in court as a codes and standards expert and is highly knowledgeable about fire suppression systems, fire alarm systems, life safety systems, fire department operations, technical rescue, hazardous materials incidents, building construction plans, and fire and explosion investigations. He also has extensive knowledge in the construction industry due to his experience as a licensed contractor for 15+ years and has been qualified in court as an expert in NFPA 51B, Standard for Fire Prevention During Welding, Cutting, and Other Hot Work.

Professional Engagements

• Firefighter

- Lawrence Fire Dept. – Lawrence, KS (1993-1996), As a member of the firefighting team, he was responsible for fire suppression and fire/non-fire response activities.
- Overland Park Fire Department – Overland Park, KS (1996-2020), As a member of the firefighting team, he is responsible for fire suppression and fire/non-fire response activities.

• Fire, Arson, and Explosions

- Investigator – Lenexa, KS (2012-2021), Investigated and analyzed cause and origin of damage. Collected, documented, and preserved evidence to ensure the chain of custody.

- Fire Protection Consultant (2020-Present), Conducts fire protection and code consulting evaluations in commercial and residential structures. Investigate and perform failure analysis concerning fire protection-related systems.

Forensic Engagements

• Residential and Multi-Family

- Code consulting for multi-fatality building fires.
- Code consulting dealing with failures in the apartment's fire alarm systems.
- Provided code consulting and expert services involving smoke alarm requirements for residential structures.
- Provided code consulting and expert services involving portable fire extinguisher requirements for residential structures.
- Failure analysis of sprinkler systems for residential structures.
- Performed origin and cause investigations for residential fires due to natural/propane gas leaks.
- Performed numerous origin and cause investigations for apartment fires involving fatalities.

• Commercial

- Failure analysis of wet, dry, pre-action, and deluge automatic sprinkler systems for all types of commercial structures, warehouses, and storage facilities.
- Design analysis and system compliance analysis as they pertain to relevant building codes.
- Numerous origin and cause investigations for large losses in businesses as a result of rechargeable battery failures.
- Failure analysis for commercial kitchen suppression systems.
- Code consulting for commercial kitchen restaurant fire suppression systems.
- Failure analysis of fire alarm systems and associated components.
- Code consulting and failure analysis dealing with portable fire extinguishers.

Professional Experience

• Rimkus

2018 – Present

- Practice Leader Fire Protection

Oversees the National Fire Protection Practice Area in addition to conducting fire protection and code consulting evaluations in commercial and residential structures involving analysis of active and passive fire protection systems, life safety systems, and fire alarm systems. Investigates and performs failure analysis concerning fire protection-related matters, as well as assesses potential liability and subrogation issues. Collects, documents, and preserves evidence to ensure the chain of custody.

- Senior Fire Consultant

Conduct fire and explosion evaluations in commercial and residential structures, vehicles, and agricultural and heavy equipment. Investigate fires involving appliances and electrical devices; assess potential liability and subrogation issues. Collect, document, and preserve evidence to ensure the chain of custody. Conduct interviews with witnesses, public agency personnel, and other pertinent third-party individuals. Prepare detailed written investigative reports pertaining to fire and explosion origin and causation. Offer expert technical and scientific support to clients for subrogation and litigation purposes.

• Poole Fire Protection, Inc.**2020 – 2022**

- Fire Protection Consultant – Engineering Division

Conduct fire protection and code consulting evaluations in commercial and residential structures. Investigate and perform failure analysis concerning fire protection-related matters, as well as assess potential liability and subrogation issues. Collect, document, and preserve evidence to ensure the chain of custody. Prepare detailed written reports.

- Engineer I – Engineering Division

Fire Protection Engineer performing duties related to advising, administering, supervising, or performing research or other professional and scientific work in the investigation or development of fire protection projects. Assignments may include design, construction, inspection, testing, operation, maintenance of fire protection appliances, devices, and systems, or the testing of fire-resistant materials.

- Engineering Intern – Engineering Division

Fire Protection Engineer Intern assisting the engineers on duties related to advising on, administering, supervising, or performing research or other professional and scientific work in the investigation or development of fire protection projects. Assignments may include design, construction, inspection, testing, operation, maintenance of fire protection appliances, devices, and systems, or the testing of fire-resistant materials.

• Anderson Investigations, LLC**2012 – 2017**

- Director of Operations

Conducted fire and explosion loss investigations. Responsible for the day-to-day operations of an investigation firm with a caseload in excess of 600 fires per year. Other duties included providing strategic leadership for the CEO and CFO to establish long-range goals, strategies, plans, and policies.

- Fire Consultant

Conducted fire and explosion evaluations in commercial and residential structures, vehicles, and agricultural and heavy equipment. Investigated fires involving appliances and electrical devices; assessed potential liability and subrogation issues. Collected, documented, and preserved evidence to ensure the chain of custody. Conducted interviews with witnesses, public agency personnel, and other pertinent third-party individuals. Prepared detailed written investigative reports pertaining to fire and explosion origin and causation. Offered expert technical and scientific support to clients for subrogation and litigation purposes.

- Assistant Fire Consultant

Assisted the Fire Consultant in conducting fire and explosion evaluations in commercial and residential structures, vehicles, and agricultural and heavy equipment. Investigated fires involving appliances and electrical devices; assessed potential liability and subrogation issues. Collected, documented, and preserved evidence to ensure the chain of custody. Conducted interviews with witnesses, public agency personnel, and other pertinent third-party individuals. Prepared detailed written investigative reports pertaining to fire and explosion origin and causation. Offered expert technical and scientific support to clients for subrogation and litigation purposes.

• Overland Park Fire Department (Retired)**1996 – 2020**

- Firefighter

Charged with protecting the community from disaster situations, including house and building fires, and promoting an environment of public safety within the city limits. Participates in fire prevention, investigations,

and training dealing with all phases of fire suppression, prevention, inspection, rescue, and emergency operations.

• **Lawrence Fire Department** 1993 – 1996

- Firefighter

Charged with protecting the community from disaster situations, including house and building fires, and promoting an environment of public safety within the city limits of Lawrence, Kansas. Participated in fire prevention, investigations, and training dealing with all phases of fire suppression, prevention, inspection, rescue, and emergency operations.

• **Keena Construction, Inc.** 1997 – 2012

- President/CEO

Owner of a residential remodeling company, licensed contractor in Johnson County, Kansas, and nationally certified remodeler specializing in room additions, kitchen remodels, and basement finishes. Established as a master framer, trim carpenter, and cabinet maker. Responsible for all bidding and estimating of projects and customer and subcontractor relationships. Projects ranged from \$80,000 to \$500,000.

Education and Certifications

- **Fire Administration, A.A.:** Johnson County Community College
- **Organizational Leadership, B.S.:** Mid-America Nazarene University (2012)
- **Management, M.S.:** Colorado State University
- **Fire Protection and Safety Engineering Technology, B.S.:** Eastern Kentucky University
- **Certified Investigator:** International Association of Arson Investigators (IAAI)
- **Certified Fire Investigator:** State of Missouri (Tested)
- **Motor Vehicle Fire Investigation**
- **Licensed Private Fire Investigator:** Missouri and Illinois
- **Licensed Private Detective:** Iowa, Kansas, Montana, Nebraska, and Oklahoma
- **Certified Firefighter 1&2:** Kansas (Tested)
- **Certified Fire Service Instructor:** (Tested)
- **Certified Hazardous Materials Technician:** (Tested)
- **OSHA 10 Hour Construction Program:** (Tested)

Continuing Education

- **International Association of Arson Investigators:** Arc Mapping Basics (2024); Motor Vehicle Fire Investigation 24 hour (3 day) Tested Course (2023); Residential Natural Gas Systems (2023); Introduction to Fire Dynamics and Modeling (2022); Fire Flow Analysis (2022); Fire Protection Systems (2022); Understanding Fire Through the Candle Experiment (2019); Investigation of Natural Gas Systems (2019); Insurance and the Fire Investigator (2018); Fire Chemistry (2018); Explosion Dynamics (2018); Fundamentals of Residential Building Construction (2018); Ethics and Social Media (2018); Ethical Duties Beyond the Fire Scene (2018); Discovery in Civil Cases (2018); The Deposition Part 2: Questioning, Tactics, and Effective Response (2018); 40-hour Expert Witness Courtroom Testimony Class (2018); Thermometry, Heat, and Heat Transfer (2017); Investigation and Examination of Appliance Fires (2017); Evidence Documentation and Collection (2017); Documenting the Event (2017); Process of Elimination (2017); Effective Investigation and Testimony (2017); The Deposition Part 1: Format, Content, and Preparation (2017); The Scientific Method for Fire and Explosion Investigation (2017); Accreditation, Certification, and Certificates (2016); Explosion Dynamics (2016); Critical

Thinking Solves Cases (2016); Basic Electricity (2016); Ethics and the Fire Investigator (2015); NFPA 1033 and Your Career (2015); The Practical Application of the Relationship between NFPA 1033 and NFPA 921 (2015); Arc Mapping Basics (2015); The Impact of Ventilation in Building Structures on Fire Development (2015); 80-hour Basic Fire Investigation training (2012)

- **Johnson County Community College:** Instruction Methodologies (1994); Building and Fire Codes (1994); Incident Command Systems (1994); Fire Tactics and Strategies (1993); Fire Science Law (1993)
- **Johnson County Contractor Licensing:** International Building Code Update (2009); Roof/Ceilings and Roof Assemblies in the IRC (2009); Common Framing Errors (2007); Residential Stair Construction (2007); IRC Update (2006); International Plumbing Code (2006); Garage Wall Bracing (2005); Classification of Buildings (2005); Fire Alarms and Suppression Systems (2005); Steel Framing Techniques (2004); Trusses and the IRC (2004)
- **Kansas University:** IFSAC Hazardous Materials Technician (2013); IFSAC Hazardous Materials Operations (2010); Firefighter II/III certification (1994); Hazardous Material Technician (1994); Firefighter I certification (1993)
- **Eastern Kentucky University:** Computer-Aided Drafting (2019); Principles of Occupational Safety and Health (2019); Introductory Chemistry II with Lab (2019); Technical Report Writing for Emergency Services (2019); Hazardous Materials (2019); Fire Behavior and Combustion (2019); Fire Detection and Suppression Systems (2019); Physics I (2020); Fire Dynamics (2020); Fire Arson and Explosion Investigation (2020); Fire Protection Hydraulics and Water Supply (2020); Physics II (2020); Introduction to Statistical Reasoning (2020); Human Behavior in Fire (2020); Advanced Structural Fire Protection (2020); Industrial Fire Safety (2020); Statics and Strength of Materials (2021); Fire Protection Structures and Systems Design (2021); Fire Protection Design (2021); Statics and Strength of Materials (2021); Engineering Thermodynamics (2021)
- **Lawrence Fire Department:** Fire Academy training (1993); Emergency Medical Technician (1993)
- **Overland Park Fire Department:** Overland Park Fire Department Command Operations and Size Up (2016); Response to Hostile Events Part II (2016); Response to Hostile Events Part I (2015); Structure Breaking and Breaching (2014); Trench and Rescue Operations (2012); Incident Management – Initial Actions (2010); Fire Preparation (2010); Fire Officer I (2009); NIMS ICS 100 (2009); NIMS ICS 200 (2009); NIMS ICS 700 (2009); Fire Academy training (1996); Fire Officer I (2004)
- **Other Courses:** Rimkus - Pipe Freeze Investigations (2021); Basic Automatic Fire Alarms (2021); Fire Findings - Investigation of Gas and Electric Appliance Fires – 30 hour tested (2019); Kansas City Power and Light Electrical Safety (2016); Civil Support Team HAZMAT Sampling and Field Screening (2016); Colorado State University Foundations of Global Management (2016); Colorado State University Advance Strategic Management (2016); Mid-America Regional Council, Overland Park, Kansas – Cargo Tank Emergency Response Workshop (2015); Missouri Division of Fire Safety 40-hour Basic Fire Investigation Training (2015); Atmos Gas Response to Natural Gas Emergencies (2015); Mid-America Regional Council Street Smart HAZMAT Safety Officer (2012); National Fire Academy Chemistry for HazMat (2011); University of Missouri Ignitable Liquids and Class B Foam training (2011); National Association of the Remodeling Industry, Shawnee, Kansas–Certified Remodeler (2008)
- **Society of Fire Protection Engineering (SFPE):** Forensics and Fire Protection Engineering (2021); Engineering Analysis and Building Fires (2021); Applications of Fire Science in Forensics (2021); Analysis of Selected Fire Protection System Failures (2021)
- **BlazeMaster:** Installation of BlazeMaster Fire Protection Systems (2022)
- **Lubrizol:** CPVC Education Series - BlazeMaster - NFPA 13, Listings & Approvals, Chemical Compatibility, and more (2023)
- **Potter:** Pressure Switches Overview (2022)

- **Specified Technologies Inc:** Fire Stop Instructional Training Level 1 (2022)
- **Victaulic:** Basics Principles of Grooved Mechanical Joints (2022); Verifying Groove Dimensions (2022); Dry Sprinklers For Commercial and Residential Fire Protection (2022)
- **Everkem:** Firestop Training (2022)
- **3M: Fire Protection Products:** Through Penetration (2023)
- **Johnson Controls:** Storage Fire Protection (2023); Fire Pumps (2023)
- **Safety Compliance Management:** OSHA Confined Space Entry Training 29CFR 1910.146 & 29 CFR 1926 Subpart AA (2023)
- **Firestop Contractors International Association:** The “DIIM” of Firestopping (2024)
- **Oklahoma State University:** Inspection, Testing & Maintenance of Automatic Sprinkler Systems (2024); Fire Pump Applications, Inspection & Testing (2024); Property Loss Control for Insurance Property Specialists (Suppression Systems and Fire Pumps) (2025)
- **Firek:** Introduction to Combustible Dust, Dust Testing & Application of Results, Dust Hazard Analysis- Understanding NFPA 652, Hazard Management (2024)
- **Meyer Fire University:** Sprinkler Occupancy Hazard Classification (2025); Introduction to Hydraulic Calculations (2025); Exit Types and Locations (2025); Sprinkler Systems Types and Layouts (2025); Introduction to Fire Alarm Systems (2025)