



## Mark S. Wassom, P.E.

Senior Consultant

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## Background

Mr. Mark Wassom holds a B.S. in Architectural Engineering and is a licensed professional engineer in Fire Protection in California, Florida, Illinois, Iowa, Kansas, Massachusetts, Missouri, Nebraska, and Texas. He holds several certifications through the International Code Council, including Certified Building Official and Certified Fire Marshal. He is also a Certified Fire Investigator through the International Association of Arson Investigators (IAAI) and holds a private detective license in Kansas.

Mr. Wassom has more than 25 years of experience in fire protection engineering, code consultation, code enforcement, and fire investigation. His areas of expertise include building, fire, and life-safety code consultation; fire suppression, fire alarm, and life-safety systems design; construction inspections; life-safety systems commissioning; and fire investigation. He has worked in a wide range of occupancies and building types from single-family residential to large complex commercial buildings, including high-rise structures, industrial, warehousing, telecommunications/data centers, sports arenas, and entertainment venues.

He has performed design work and prepared construction drawings and specifications, including water supply analysis, fire suppression systems design, fire alarm systems design, and smoke control systems. He has provided code compliance consultation and evaluation for a wide range of project types. He has also provided construction administration services including project management, site inspections, shop and installation drawing review, and commissioning of fire, life-safety, and smoke control systems.

Mr. Wassom also has public sector code enforcement experience as the Fire Marshal for a large municipality. He was responsible for the administration and enforcement of building and fire codes in a wide range of occupancy and building types in the city. Services included technical plan review of construction drawings, specifications, shop drawings, and design calculations, and periodic fire and life-safety inspections of commercial buildings and fire protection systems. He also led the fire investigation unit and was responsible for performing or overseeing fire investigations in the city.

## Code Development Experience

### • International Code Council

- Fire Code Action Committee (2022-Present), Committee member and chair of the enforcement and inspection, testing, and maintenance working group.

- Building Code – Fire Safety Code Development Committee (2021-Present), Committee member for the 2024 and 2027 editions of the International Building Code.
- Fire Service Membership Council Governing Committee (2020-2024), Committee member and chair of the training and education working group.
- Fire Code Development Committee (2009-2016), Committee member for the 2012, 2015, and 2018 editions of the International Fire Code.
- **National Fire Protection Association**
  - Educational and Day-Care Occupancies (SAF-END) (2014-2015), Principal member of the NFPA Educational and Day-Care Occupancies Technical Committee.

## Professional Engagements

### • Commercial

- Garmin Office Tower and Parking Garage - Olathe, KS, Fire protection engineer for this nine-story corporate headquarters building and the associated parking garage. Responsibilities included building fire sprinkler and standpipe system design, fire pump design, water supply analysis, fire alarm system design, construction administration, shop drawing, construction inspection, and commissioning.
- Summit Technology Campus - Lee's Summit, MO, Fire protection engineer and project manager for this 1-million-square-foot, multi-tenant technology center. Services included site survey of the existing building, design and specification of the new fire alarm system, project management, construction administration, shop drawing submittal review, construction meetings, construction observation, and commissioning.
- Ralph L Carr Colorado Judicial Center - Denver, CO, Senior fire protection engineer and lead fire and life safety code consultant for this 700,000-square-foot judicial complex housing the Colorado Supreme Court and attached 13-story office tower. Services included code research and report guiding the design of the building and life safety systems, consultation on the fire protection, fire alarm, and smoke control systems design for the complex. Construction administration services included review of engineered drawings, review of contractor submittals, site observation, and commissioning.
- Denver Museum of Nature and Science (DMNS) – Education Collections Facility Expansion - Denver, CO, Code consultant and fire protection engineer for this 126,000-square-foot, five-level expansion to the existing museum. Responsibilities included code compliance consultation, design of fire sprinklers and fire alarm systems, consultation on smoke control design, and performance-based design. Construction administration services included shop drawing review, construction observation, and commissioning.
- Lexmark - Lenexa, KS, Provided fire protection engineering and fire modeling services for this four-story office building and parking structure. Responsibilities included building sprinkler system design, water supply analysis, and fire alarm system design, development, and analysis of a computer fire model to aid in the performance-based design of the smoke control system for the 8,000-square-foot, four-story atrium in the building. Construction administration services included shop drawing and product submittal review, construction observation and inspection, and system commissioning.
- Johnson County Courthouse - Olathe, KS, Code Official providing technical plan review of construction drawings, fire alarm, and fire sprinkler drawings, along with construction inspections and commissioning of this new, seven-story district court building. Fire and life safety systems reviewed included fire sprinklers and standpipes supplied by a fire pump, fire detection and alarm systems with emergency voice evacuation, smoke control systems, and specialized systems including air sampling detection and clean agent suppression systems.

- **Industrial**

- Intervet Campus - Desoto, KS, Fire protection engineer for fire alarm system design and specification and construction administration for multiple manufacturing, office, and warehouse buildings for this new veterinary pharmaceutical campus.
- Garmin Building #5 - Olathe, KS, Code Official providing technical plan review of construction drawings, fire alarm and fire sprinkler drawings, along with construction inspections and commissioning of this new, 774,000-square-foot manufacturing and warehouse building. Fire and life safety systems reviewed included fire sprinklers, fire detection, and alarm systems with emergency voice evacuation. The project also included automatic storage and retrieval racking systems with unique suppression strategies that required close coordination between the fire department, designers, and contractors.
- National Renewable Energy Laboratory (NREL), Golden, CO, Code consultant providing code compliance review, including development of Hazardous Materials Inventory Statements and compliance plans for this national research facility.
- Lineage Logistics - Olathe, KS, Code Official providing technical plan review of construction drawings, fire alarm and fire sprinkler drawings, along with construction inspections and commissioning of this new, 420,000-square-foot refrigerated storage and logistics facility. Fire and life safety systems reviewed included fire sprinklers and standpipes supplied by a fire pump, fire detection and alarm systems with emergency voice evacuation, and specialized systems including clean agent suppression systems. The warehouse and logistics areas are kept below freezing, and the majority of the facility is automated with robotic systems, requiring unique solutions to overcome the challenges of the building.

- **K-12 Education**

- Olathe Northwest High School – Olathe, KS, Fire protection engineer for the two-story, 477,000-square-foot high school building with classrooms, gymnasium, and auditorium facilities. Services included design and specification of fire alarm and fire sprinkler systems, construction administration, and construction inspections.
- University Academy Charter School - Kansas City, MO, Fire protection engineer for this two-story charter school. Services included building sprinkler system design, water supply analysis, and fire alarm system design. Construction administration activities included shop drawing and product submittal review, construction observation, and inspection.

- **Higher Education**

- Kansas State University - Manhattan, KS, Provided on-call fire protection engineering services and fire protection and life safety code consultation in multiple types of buildings. Performed surveys of existing buildings, identified deficiencies, and provided design and specifications to correct code and fire and life safety system deficiencies.
- Missouri Western State College Dormitory - St. Joseph, MO, Fire protection engineer for this large, multistory dormitory. Responsibilities included building sprinkler system, standpipe and fire pump design, water supply analysis, and fire alarm system design. Construction administration services included shop drawing and product submittal review, construction observation and inspection, and system commissioning.

- **Telecommunications and Data**

- Sprint PCS Switch renovations - Multiple Locations Nationwide, Design services including fire alarm system design and specification, specialty smoke detection systems (air sampling), fire sprinkler system specification, clean agent fire suppression design and specification, site surveys, construction administration, and commissioning.

- **Hospital and Healthcare**

- Marshal Habilitation Center - Marshal, MO, Provided fire alarm system design and specification and fire sprinkler system design and specification for the new medical facility, which included nursing and memory care units.
- St. Anthony Summit Medical Center - Frisco, CO, Provided fire protection and code consultation services for this full-service hospital in Frisco, Colorado. The scope of service was to provide a pre-survey prior to official surveys by the Joint Commission, to identify code deficiencies and potential issues so they could be resolved prior to inspections. Fire protection engineering services were also provided as an on-call consultant to resolve any identified deficiencies and for remodel and construction projects.

- **Federal and Military**

- James F. Battin Federal Courthouse – Billings, MT, Provided third-party technical plan review, construction inspections, and commissioning on behalf of the General Services Administration for the four-story, 128,000-square-foot federal court building. Performed inspections for building and fire code compliance and testing of fire protection and life safety systems.
- Whiteman Air Force Base – Knob Noster, MO, Provided fire protection consulting services providing inspection and code compliance evaluation of several buildings on the Air Force Base. The evaluation was used to recommend improvements for fire and life safety systems in the existing buildings.

- **Entertainment and Hospitality**

- Ameristar Riverboat Casino Renovations - Council Bluffs, IA, Fire protection engineer for this riverboat casino renovation, which added fire sprinkler protection to the riverboat. Responsibilities included site survey of existing conditions, design and specification of a new fire sprinkler system incorporating marine design conditions and a fire pump utilizing the river water as a water supply.
- Hyatt Hotels - Multiple Projects and Locations in Colorado, Fire protection engineering and code consultation services for Hyatt Hotels in several locations. Responsibilities included performing surveys of existing buildings; design and specifications for new and modified fire sprinkler, fire alarm, and smoke control systems; and construction administration services including review and approval of contractor shop drawings, construction site observation, and commissioning.
- Marriott Hotels - Multiple Projects and Locations in Colorado and Utah, Fire protection engineering and code consultation services for Marriott Hotels in several locations. Responsibilities included performing surveys of existing buildings; design and specifications for new and modified fire sprinkler, fire alarm, and smoke control systems; construction administration services including review and approval of contractor shop drawings; construction site observation; and commissioning.
- Grand Canyon University Arena – Phoenix, AZ, Fire protection, code consultation, and fire modeling services for this renovation project of a 5,000-seat multi-use sports arena. Primary responsibility for the project was the development and execution of a computer fire model using the Fire Dynamics Simulator program. The model was used to prepare a performance-based design for the building's smoke control systems.
- Prairiefire Development - Leawood, KS, Fire protection engineer for this multi-use development including retail, restaurant, entertainment, and cinema tenants. Responsibilities included building sprinkler system design, water supply analysis, and fire alarm system design. Construction administration activities included shop drawing and product submittal review, construction observation and inspection, and system commissioning.
- Ford Center Stadium and Training Facility - Dallas Cowboys - Dallas, TX, Senior fire protection engineer for this headquarters and practice facility complex for the Dallas Cowboys. Responsibilities included quality

control and supervision of building sprinkler system and fire pump design, water supply analysis, and fire alarm system design.

- SoFi Stadium - Inglewood, CA, Senior Fire Protection Engineer for this 3,100,000-square-foot stadium with capacity for up to 100,000 spectators. Responsibilities on this project included the oversight and quality control review of designs for the project's fire sprinkler, fire pump, and fire alarm systems.

## Forensic Engagements

### • Natural Disaster Investigations

- Peabody, KS (2021), Damage assessment for structures following flooding.
- Eureka, KS (2018), Damage assessment for structures following tornado damage.

### • Residential and Multi-Family

- Fall River, MA (2025), Inspection and evaluation of fire sprinkler and fire alarm systems in an assisted living apartment building following a building fire.
- St. Louis, MO (2025), Inspection and evaluation of a dry-pipe fire sprinkler system in the attic of an apartment building following tornado damage.
- Mission, KS (2025), Inspection of a fire alarm system failure in a senior living facility.
- Ruston, LA (2025), Inspection of a broken fire sprinkler line in a multi-story hotel structure.
- St. Louis, MO (2024), Inspection and evaluation of a fire alarm system in a high-rise apartment building following a building fire.
- Seattle, WA (2024), Inspection of a broken fire sprinkler line in a multi-family condominium structure.
- Portland, OR (2024), Inspection of a broken fire sprinkler line in a multi-family apartment structure.
- Performed numerous origin and cause investigations for residential fires.
- Performed numerous origin and cause investigations in multi-family apartment structures.
- Code compliance surveys and inspections of numerous residential facilities.
- Technical review of construction drawings and specifications for residential structures and facilities.

### • Commercial

- Purcellville, VA (2025), Inspection and evaluation of a foam fire suppression system in an industrial process building following an accidental discharge.
- Stephenville, TX (2025), Inspection and evaluation of a dry-pipe sprinkler and standpipe system in a parking garage following a pipe failure.
- Dundalk, MD (2025), Inspection and evaluation of a fire sprinkler system following a building fire in a recycling facility.
- Woodbridge, VA (2025), Inspection and evaluation of a fire sprinkler system following a building fire in an indoor sports facility.
- Fredericktown, MO (2025), Inspection and evaluation of fire alarm and fire suppression systems following a building fire in a battery recycling facility.
- Plano, TX (2024), Inspection, programming, and alarm history review for a cause analysis following an accidental discharge of a clean agent fire suppression system in a data center facility.
- Houston, TX (2024), Inspection and cause analysis for a broken fire standpipe hose valve in a high-rise medical office building.
- Des Moines, IA (2024), Evaluation of a commercial kitchen hood fire suppression system following a building fire.

- Performed numerous origin and cause investigations for fires in commercial, warehouse, industrial, retail, and assembly occupancies.
- Code compliance surveys and inspections of numerous commercial facilities.
- Technical review of construction drawings and specifications for numerous commercial facilities.

## Professional Experience

- **Rimkus** **2024 – Present**
  - Senior Consultant  
As a Fire Protection Consultant, conducts fire protection, life safety, and code consulting evaluations in commercial and residential structures involving analysis of building and fire code compliance, active and passive fire protection systems, life safety systems, and fire alarm systems. Investigate and perform failure analysis concerning fire protection-related matters, as well as assess potential liability and subrogation issues.
- **Olathe Fire Department** **2016 – 2024**
  - Fire Marshal / Assistant Fire Chief  
Responsible for leading the Community Risk Reduction Section including, building and fire code enforcement, fire prevention, engineering, investigation, and public education divisions. Served as both the Chief Building Official and the Fire Marshal until the Building Codes Division was moved to another Department in 2020. Responsible for the administration, interpretation, and enforcement of the provisions of building and fire codes and other municipal regulations. Served as the liaison between the fire department, elected officials, citizens, and outside agencies on matters related to community risk reduction, building construction, fire prevention, and fire investigation.
- **Henderson Engineers** **2012 – 2015**
  - Associate / Senior Fire Protection Engineer  
Prepared or directed the preparation of fire protection and life safety system designs, calculations, engineering drawings, and specifications; served as a company-wide resource for code compliance, fire protection, and life safety challenges; responsible for quality control review, technical guidance, and company specifications and standards; project manager for multiple large scale projects; perform building and construction site surveys and observations; provided construction administration services and final acceptance testing/commissioning; prepared and executed computer fire models using Fire Dynamics Simulator and Smokeview for performance-based designs and system performance evaluations; and perform quality control reviews of construction documents.
- **BCER Engineering** **2010 – 2012**
  - Senior Fire Protection Engineer  
Provided technical studies using building and fire codes and standards and prepared detailed code compliance reports for project engineers and architects; prepared or directed the preparation of fire protection and life safety system designs, calculations, engineering drawings, and specifications; checked contractor shop drawings for fire and life safety systems for conformance to codes, plans, and specifications; perform quality control reviews of construction documents; perform building and construction site surveys and observations; provided project management for assigned projects; and performed life safety systems commissioning.

- **State of Colorado – Division of Fire Prevention and Control** **2007 – 2010**
  - Fire Protection Engineer  
Responsible for the administration of four regulatory programs including the state fire suppression program and construction of public schools, junior colleges, and casinos; developed the new Colorado public school fire safety program, overseeing fire protection and life safety in approximately 1,900 schools and junior colleges in Colorado; performed or supervised all construction plan reviews and inspections for the state fire safety programs; supervised division permitting and plan review functions, including plans examiners, inspectors, and administrative staff; responsible for developing and maintaining state laws, regulations, and adopted codes for regulatory programs; provided advanced technical assistance for local jurisdictions throughout Colorado; and developed and delivered continuing education classes covering building and fire code topics for engineers, architects, inspectors, and plans examiners..
  
- **Schirmer Engineering Corporation** **2006 – 2007**
  - Senior Consultant  
Prepared fire protection and life safety system designs, calculations, engineering drawings, and specifications; performed code studies using building and fire codes and standards and prepared code compliance reports; checked contractor shop drawings for fire and life safety systems for conformance to codes, plans, and specifications; performed quality control reviews of construction documents; performed building and construction site surveys and observations; and provided project management for assigned projects.
  
- **Henderson Engineers** **2002 – 2006**
  - Fire Protection Engineer  
Prepared or directed the preparation of fire protection and life safety system designs, calculations, engineering drawings, and specifications; provided technical research and information to project engineers and architects; made recommendations as to the feasibility of systems or equipment and evaluated products for their application; checked contractor shop drawings for fire and life safety systems for conformance to codes, plans, and specifications; responded to code review comments to resolve permit issues with the authority having jurisdiction; performed quality control reviews of construction documents; and performed building and construction site surveys and observations.
  
- **George Butler Associates** **1999 – 2002**
  - Fire Protection Designer / EIT  
Performed field investigation and office research for engineering studies and reports; wrote and developed engineering reports and code studies with supervision from senior staff; completed design work with supervision by senior engineers; drafted and sketched design work; prepared construction cost estimates; checked drawings prepared by technicians and drafters; and performed construction phase administration.
  
- **Manhattan Fire Department** **1996 – 1999**
  - Student Firefighter  
Charged with protecting the community from emergency situations, including house and building fires within the city limits of Manhattan, Kansas.

## Education and Certifications

- **Architectural Engineering, B.S.:** Kansas State University (1999)
- **Licensed Professional Engineer:** California, Florida, Illinois, Iowa, Kansas, Massachusetts, Missouri, Nebraska, and Texas
- **National Council of Examiners for Engineering and Surveying:** # 24-711-65
- **Certified Fire Investigator:** International Association of Arson Investigators (IAAI)
- **Certified Fire Marshal:** International Code Council (ICC)
- **Certified Fire Code Official:** International Code Council (ICC)
- **Certified Building Official:** International Code Council (ICC)
- **Fire Code Specialist:** International Code Council (ICC)
- **Fire Inspector II:** International Code Council (ICC)
- **Fire Plans Examiner:** International Code Council (ICC)
- **Building Plans Examiner:** International Code Council (ICC)
- **Commercial Building Inspector:** International Code Council (ICC)
- **Memberships:** Society of Fire Protection Engineers (SFPE), International Association of Arson Investigators (IAAI), International Code Council (ICC), National Fire Protection Association (NFPA), Fire Marshal's Association of Kansas (FMAK)

## Continuing Education

- **Engineering / Codes:** NFPA National Fire Alarm Code Seminar (2000); NFPA Life Safety Code Seminar (2000); OSU Fire Protection and Safety Symposium (2001); OSU Review of Sprinkler System Plans and Design (2001); Inspection, Testing and Maintenance of Fire Alarm Systems (2005); Seismic Bracing (2005); Accessibility Update (2006); Design Considerations for Smoke Control (2006); Inspection, Testing and Maintenance of Smoke Management Systems (2007); Egress Behavior and Analytical Techniques (2007); Legal Aspects of Code Enforcement (2008); International Fire Code Hazardous Materials (2008); CPVC Sprinkler Products Inspector Training (2009); Fire and Life Safety Plan Review (Instructor) (2009); Water Based Fire Suppression Systems Plan Review (2009); Residential Sprinklers (2009); Disabilities and Fire Alarm Systems (2010); Accessibility 101/202 (2011); 2009 International Building Code Overview (Instructor) (2012); Fire Pump Inspection, Testing and Maintenance (2012); Commissioning of Fire Protection Systems (Instructor) (2012); Inspection, Testing and Maintenance of Fire Doors (2012); Fire Protection in Atria (Instructor) (2012); Fire Modeling (Instructor) (2013); Commodity Classifications, Fire Testing and Design Considerations (2015); Effective Emergency Communication System Design (2015); Water Mist Systems (2015); Basic Commercial Building Inspections (2016); Residential Plan Review (2016); Commercial Plan Review (2016); Plumbing Plan Review (2016); Carbon Monoxide Monitoring (2016); Cause, Effects and Solutions to Corrosion in Sprinkler Systems (2017); Structural Highlights of the Code (2017); Commercial Building Inspector (2017); Community Risk Reduction Symposium (2018); Fire Service Instructor I (2018); Venting Gas Appliances (2018); Building Science for Contractors (2018); 2018 International Mechanical Code Design, Installation and Inspection (2018); Plumbing Inspections (2018); Concrete Construction Testing and Quality Control (2019); 2018 International Residential Code Safety Features (2019); Residential and Commercial Mechanical Code (2020); Pressure Reducing Valves (2020); Safety Challenges in the Built Environment (2020); Principals of Materials and Structures (2020) Smoke and CO Alarms (2020); 2018 International Building Code Fire and Life Safety Principles (2020); Fire Sprinkler Plan Review and Acceptance Testing (2021); Metal Building Systems (2021); 2018 International Building Code Building Classifications (2021); SFPE Elevator Requirements (2022); Fire Code Plan Review (2022); International Fire Code

- Significant Changes (2022); International Fire Code Essentials (2023); Quick Hits on Emerging Building Safety Topics (2023); 2023 National Electrical Code (2023); Safeguarding Buildings During Construction (2024); Risk Based Response to Battery Emergencies (2024); Explosion Protection Seminar (2024); Advanced Florida Building Code (2024); International Existing Building Code Essentials (2024); Determining Occupant Loads (2025); Advances in Automatic Devices and Automatic Testing (2025)
- **Fire Investigation:** Hazardous Materials Awareness and Operations (1996); Firefighter I (1997); Certified Fire Protection Specialist (Expired) (2002); Introduction to Fire Dynamics Simulator and Smokeview (2004); NAFI - National Fire, Arson & Explosion Investigation Training Program (2008); Use of Codes and Standards in Court (2009); Hazardous Materials (2009); Fire Resistance Rating and Firestopping (2012); Engineering Aspects of Fire Investigation (2015); Flashover (2015); Sprinkler Technology (2015); Scientific Method for Fire and Explosion Investigation (2016); Search and Seizure (2016); Physical Evidence at the Fire Scene (2016); Investigating Motor Vehicle Fires (2016); Investigating Fatal Fires (2016); Introduction to Fire Dynamics and Modeling (2016); Introduction to Evidence (2016); Fundamentals of Residential Building Construction (2016); Fire Investigator Scene Safety (2016); Documenting the Event (2016); Fire Investigation Techniques (2017); Fire Investigation Law (2017); Fire Death Scene and Analysis (2017); Forensic Photography for Fire Investigators (2017); The Practical Application of NFPA 1033 and NFPA 921 (2017); NFPA 1033 and your Career (2017); Ethics and the Fire Investigator (2017); NFA Fire Investigation Essentials (2018); Electrical Safety (2018); Basic Electricity (2018); Arc Mapping Basics (2018); Firefighter II (2018); Hazardous Materials Awareness (2018); Hazardous Materials Operations (2018); Venting Gas Appliances (2018); 2019 KS-IAAI Training Conference (2019); Fire Service Instructor I (2019); Fire Flow Analysis (2019); Fire Investigation for Fire Officers (2019); 2018 Residential Code Safety Features (2019); IBC and IFC Fire Protection Systems (2019); Principals of Materials and Structures (2020); Fire Dynamics (2021); NFPA 1033 Updates (2021); NFPA 921 Updates (2021); Wood Construction and the Fire Investigator (2021); KS IAAI Annual Training Conference (2022); KS-IAAI Annual Training Conference (2023); Advanced Electrical Investigation (2023); Expert Witness and Testimony (2023); KS-IAAI Annual Training Conference (2024); Homemade Explosives Awareness, Recognition and Response (2024); KS-IAAI Annual Training Conference (2025)
  - **Disaster Assessment / Emergency Management:** ICS-100 – Introduction to the Incident Command System (2009); ICS-200 – ICS for Single Resources and Initial Action Incidents (2009); IS-00700.a – National Incident Management System (2009); IS-00800.b – National Response Framework (2011); ICS-300 – Intermediate Incident Command System (2016); ICS-400 – Advanced Incident Command Center (2016); IS-00559 – Local Damage Assessment (2016); FEMA/USCOE Structures Specialist StS-1 (2016); Safety Assessment Program Training (2017); FEMA/USCAE – Regional Structures Specialist – StS-5 (2019); FEMA/USCOE Advanced Structures Specialist – StS-2 (2020)