



BRENDAN MCCARRICK, PE, CFEI

ASSISTANT DIRECTOR,
HALLIWELL FIRE RESEARCH US
BALTIMORE, MD/WASHINGTON DC AREA
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SPECIALTIES

- Fire Origin & Cause Investigation
- Fire Detection, Suppression, and Life Safety Systems
- Code Consulting
- Fire Chemistry, Fire Dynamics, and Fire Modeling
- Casual Factors in Fire Deaths and Injuries
- Performance-Based Design
- Code Compliance & Deficiencies Evaluation
- Fire Modeling, People Movement & Occupant Tenability Analysis
- Third Party Plan Review

BIOGRAPHY

Mr. McCarrick holds a Bachelor and Master's degree in Fire Protection Engineering and is a licensed engineer in several states. He is also a Certified Fire and Explosion Investigator (CFEI) with experience investigating small and large-scale fire losses. He previously served as a fire protection engineer and code official for the federal government where he was responsible for developing campus-wide, as-built drawings for existing fire alarm and fire suppression systems, reviewing design and construction submittals, designing and commissioning fire protection and life safety systems, and overseeing code compliance. In his previous position with the government, Mr. McCarrick was also responsible for fire incident investigation and programs on hot works and fire protection inspection, testing, and maintenance. He has experience as a fire protection consultant responsible for sprinkler and fire alarm system design, building code interpretation, building inspections, and evacuation planning. He also has experience as a firefighter and emergency medical technician.

EDUCATION

M.Eng., Fire Protection Engineering, University of Maryland, School of Engineering, College Park (2017)
B.S., Fire Protection Engineering, University of Maryland, School of Engineering (2013)

PROFESSIONAL EXPERIENCE

FireTox (now part of Halliwell), New Market, MD – Assistant Director, Senior Fire Protection Engineer and Investigator (2021 to present)

Serve as a forensic investigator for fire, combustion, and toxicological incidents. Manage design and construction projects involving complex structures and systems, performance-based approaches, fire modeling, and tenability analyses. Conduct building fire risk assessments and perform inspections of fire protection and life safety systems. Serve as an investigator on fire science and toxicological research projects including those associated with occupational safety

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and health, combustion toxicity, forensic toxicology, fire investigation, fire protection systems, and fire service training. Assist in the development and presentation of fire death/injury and fire investigation training courses.

National Institute of Standards and Technology, Gaithersburg, MD, *Fire Protection Engineer (2016 to 2021)*

Provided engineering services to institution personnel and fire protection contractors with expertise in sprinkler system design, fire alarm system design, and building code interpretation. Reviewed design and construction submittals for renovations and small- and large-scale construction projects on NIST campuses to ensure compliance with regulatory codes. Acted as the lead investigator of fire incidents occurring on NIST campuses. Conducted laboratory hazard assessments to identify safety concerns related to usage of hazardous chemicals such as flammable, combustible, toxic, pyrophoric, explosive, and reactive gas, liquids, and solids. Provided requirements to eliminate or protect against hazards associated with laboratory research including implementation of monitoring devices, fire suppression and detection systems, and personal protective equipment. Managed the deployment and implementation of the NIST *Fire Prevention During Welding, Cutting, and other Hot Works* program and developed the NIST *Inspection, Testing, and Maintenance of Fire Protection and Life Safety Systems* program. Surveyed and developed as-built drawings for existing fire alarm and fire suppression systems in over 50 buildings and 3 million square feet of building space.

Aon Fire Protection Engineering, Greenbelt, MD, *Fire Protection Consultant (2014 to 2016)*

Designed sprinkler and standpipe systems in compliance with applicable local codes, ICC codes, NFPA codes, and client specifications for over 15 multi-story retail stores, in new and existing buildings across the United States and Canada. Designed and reviewed fire alarm systems in multi-use commercial buildings. Performed fire protection and life safety surveys of office buildings, retail stores, healthcare facilities, and hotels/resorts.

National Park Service, Valley Forge National Historical Park, PA - *Engineering Technician (2013)*

Developed and implemented building evacuation plans for all public and staff buildings as part of the park's structural fire plan. Conducted employee fire extinguisher training sessions, performed fire extinguisher inspections, and installed fire extinguishers to achieve NFPA code compliance. Completed fire prevention building inspections and assisted with suppression and alarm system inspections.

RELATED EXPERIENCE

Branchville Vol. Fire Department (Station 11)/Prince George's County Fire Department (2013-2016)

Position(s) Held: Firefighter/EMT

Past Fire Department Certifications: Firefighter Level I, Emergency Medical Technician, Emergency Vehicle Operator.

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RELATED SKILLS

AutoCAD, AutoSPRINK, CONTAM, CFAST, FDS, HASS, MicroStation, Pathfinder

PROFESSIONAL CERTIFICATIONS

- National Association of Fire Investigators (NAFI), Certified Fire and Explosion Investigator
- Registered Professional Engineer, State of Maryland
- Registered Professional Engineer, District of Columbia
- Registered Professional Engineer, West Virginia
- Registered Professional Engineer, Virginia

PROFESSIONAL AFFILIATIONS (CURRENT)

- Member, National Fire Protection Association (NFPA)
- Member, Society of Fire Protection Engineers (SFPE)
- Member, National Association of Fire Investigators (NAFI)