

FREDERICK C. BRADLEY, P.E.

EDUCATION

BS in Civil Engineering, Lowell Tech, Lowell, MA
BS in Fire Protection Engineering, University of Maryland, College Park, MD

SPECIALTY FIELDS

Fire Protection Engineering	Project Management
Public Fire Protection	Systems Design
Building Code Analysis	Litigation Support

SPECIALIZED PROFESSIONAL COMPETENCE

Life Safety Studies: Industrial, educational, health care, detention and correctional, high-rise, office, rapid transit, residential, military, commercial and assembly.

Systems Design: Water supply and distribution systems, automatic fire sprinklers, fire alarm and fire detection systems, central alarm systems, security systems.

Systems Analysis: System safety, public fire safety.

Public Protection: Emergency communications and alarm systems, water supply and distribution systems, fire department operations, public fire defense grading, community risk analysis and fire defense planning.

Litigation support/

Loss Investigation: Fire, explosion, system failure.

Historic Buildings: Fire protection/security master planning and retrofit design.

PROFESSIONAL REGISTRATION AND MEMBERSHIPS

Registered Professional Engineer (Fire Protection): Alabama, California, Florida, Georgia, Maryland, Massachusetts,, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, and Virginia.

Former Member of the Technical Correlating Committee of the Life Safety Code (NFPA 101).

Former Member of the Standard Building Code's (SBCCI) Fire Door Further Study Committee.

Member of the Committee on Residential Sprinkler Systems (NFPA 13D and 13R).

Former Member of NFPA13 Task Group for the utilization of sprinklers in Performance Based Codes.

Former Member of SFPE's Committee for the Development of "The Engineering Guide to Performance Base Fire Protection Analysis and Design."

Former Member of three NFPA-30 combustible liquids committees.
Former Member of the National Institute of Standards and Technology (NIST, formerly National Bureau of Standards) Performance Base Building Codes Advisory Committee.
Former Member of the Standard Fire Prevention Code's (SBCCI/IAFC) Assisted Living/Residential Care Occupancy Further Study Committee.
Former Member of SBCCI's Plumbing Code Ad Hoc Committee for Medical Gas.
Former Member of the SBCCI's Study Committee for Standpipe Requirements.
"Member" Grade of Society of Fire Protection Engineers since 1980.
Member of National Fire Protection Association since 1972.
Member of Standard Building Code Congress International (SBCCI).

RELATED PROJECTS AND QUALIFICATIONS

- Over 30 years fire protection/life safety engineering experience.
- Over 15 years of experience as both a paid and volunteer fire fighter.
- Former Adjunct Faculty Instructor for National Fire Academy.
- Co-author of Airport Facility Building Code for all airports in Saudi Arabia.
- Code Consultant to architects for over 300 projects, including stadiums, courthouses, historic buildings, office buildings, colleges, schools, churches, physical activity/gymnasium centers, health care facilities, apartments, condominiums, hospitals, military facilities and warehouses.
- Project Manager/Engineer; fire/life safety design and code consulting to GSA, and fire/life safety review and system testing for Federal Building/Courthouse renovation projects in Nashville, TN; Jackson, MS, Memphis, TN; Knoxville, TN; Louisville, KY; Atlanta, GA; Birmingham, AL; Jacksonville, FL; Chattanooga, TN; St. Petersburg, FL; Miami, FL; Asheville, NC; Columbia, SC; and M.L.K. Jr. Federal Building and GSA's Peachtree Summit Building, Atlanta, GA.
- Project Manager/Engineer; for the development of design criteria and review of design drawings for five service facilities at Riyadh International Airport and Eastern Province International Airport in Saudi Arabia and for the petro-chemical city of Jubilee, Saudi Arabia.
- Project Engineer for development of design criteria for fire service facilities at Kansas City, MO; San Mateo County, CA; Pittsburgh, PA; Kern County, CA (oil fields); and Bakersfield, CA (oil fields).
- Project Manager for a fire departmental accessibility study; fire flow and fire service operations study; and a fire protection Master Plan at the University of Georgia campus, Athens, GA.
- Project Manager; fire/life safety survey for code compliance of over 1400 Government owned or leased buildings in Region IV for GSA.
- Project Fire Protection Engineer for over 80 design/build military projects.
- Project Manager/Engineer; rewrite of the fire protection section including incorporating requirements from the latest edition of the Life Safety Code of Military Handbook 1191, "Design Criteria for Medical Facilities which is to become the code for medical facilities of all military branches.
- Project Manager for the design and construction period services for fire protection systems protecting the USS Cairo display in Vicksburg, Mississippi.

FORCON

INTERNATIONAL

WWW.FORCON.COM

- Expert Witness for litigation support for sprinkler system failures in Atlanta, GA; Alpharetta, GA; Orlando, FL; Memphis, TN; Stuart, FL; Hialeah, FL; LaFayette, GA; Ft. Lauderdale, FL; and Elizabeth, NC; fire alarm system failure in Atlanta, GA; and Orlando, FL; fixed suppression system failure in Atlanta, GA; Tampa, FL, and Bessemer, AL; community water supply conditions in SC; and firestop systems in Cleveland, OH; Greenville, SC; and Atlanta, GA.
- Project Engineer for design and construction period services for Winn Dixie Stores, Inc. Projects include water storage tanks, fire pumps in pump houses, underground fire mains and ESFR and Large Drop sprinkler systems in warehouses at three new distribution centers.
- Project Engineer for design and construction period services for over 30 aircraft hangar projects. Projects include water storage tanks, underground fire mains, fire pumps and HEF and AFFF fire protection systems.

PROFESSIONAL EMPLOYMENT HISTORY

University of Maryland, Department of Public Safety, College Park, MD; Fire Inspector, 1972-73

College Park Fire Department, College Park, MD; Assistant Fire Marshal, Fire Marshal, 1970-73

Insurance Services Office of New York, Syracuse, NY; Field Engineer, 1973-74, evaluating communities' fire protection, including Building Codes, Fire Code, and enforcement of same.

National Fire Academy, Emmetsburg, MD; Adjunct Faculty, 1979-82

Gage-Babcock & Associates, Inc., Oakland, CA; Vienna, VA; Atlanta, GA; Staff Fire Protection Engineer, 1974-80, Senior Fire Protection Engineer, 1980-87, Principal, 1987-2001

FCB Engineering, Atlanta, GA; Principal, 2001-Present

TECHNICAL PAPERS, ARTICLES, REPORTS PUBLISHED

- "Innovative Sprinkler System Modifications to Meet Modern Storage Requirements", Paper presented to Fall NFPA Meeting, Phoenix, AZ.
- "Modifications to Meet Modern Materials Storage Practices", Article in Plumbing Engineer magazine.
- "Controlling Your Community's Fire Risk", Article in Water and Pollution Control Associations Journal.

REPRESENTATIVE EXPERIENCE

Fireman's Fund; Linen Warehouse - Lauderdale Lakes. FL

Fire protection services/litigation support involving a fire in a sprinklered retail store, in which an extraordinary number of sprinklers operated, causing extensive water damage.

Residential Sprinklers - Massachusetts

Fire protection services/litigation support involving a fire in a 4 story apartment building with a residential (NFPA 13R) sprinkler system, in which the building and contents were destroyed by fire.

Boat Storage Facility - Pensacola, Florida

Fire protection services/litigation support involving a fire in a sprinklered, multi-level marina boat storage facility, in which part of the building and contents were destroyed. The effort includes review of cause and origin, sprinkler system performance, flammable and combustible liquids expertise, and fire spread expertise

The Prudential - Memphis Reality - Memphis, TN

Fire protection services/litigation support involving a dry pipe type sprinkler system freeze-up in a 5 story building in downtown Memphis.

CNA Insurance Company; Cello-Foil Products - Albany GA

Fire protection services/litigation support involving two fires in an 8-color rotogravure press. The effort includes review of the carbon dioxide system installed by Fire Suppression Sales and Service, the work performed by others, review of the design data and drawings, fire spread expertise, and review of the fire origin.

Fireman's Fund; Budgetal Inn - Cleveland, TN

Fire protection services/litigation support for an incident where a sprinkler was activated by a guest in the 54 room hotel. The system was inadvertently activated when a sprinkler was used as a "hook" for a cap and gown on a clothes hanger.

Sandusky Cabinets - Memphis, TN

Fire protection services/litigation support involving a fire in a sprinklered paint spray booth, in which the sprinkler in the exhaust duct failed to operate.

Phoenix Condominiums - Orange Beach, AL

Fire protection services/litigation support involving the construction of high-rise condominiums. The effort included determination of compliance with the Local Ordinance as well as the Standard Building Code on several issues (height of building in stories and feet, allowance for sleeping accommodations in the basement, and the number of units and the placement of the buildings on the lot).

Transamerica Insurance Company - Atlanta, GA

Fire protection services/litigation support involving provided services and condition of a fire alarm system/life safety system in a high rise building in downtown Atlanta.

Firemen's Fund and Scottsdale Insurance Company - Red Barn Flea Market; Tampa, FL
Fire protection services/litigation support involving a fire in a flea market structure. The effort included review of code requirements for mercantile and open-air mercantile structures, review of the cause and origin, fire spread expertise, sprinkler systems expertise, fire partitions and fire wall expertise and expertise in fire blocking and draft stops.

Sonoma County Jail - Santa Rosa, CA

Fire protection services/litigation support involving the installation of fire alarm and detection systems and electronic security systems in a county detention center. The review included code research and review of contract drawings, shop drawings, and installation reports.

Fireman's Fund; Cumulus Fiber - Miami. FL

Fire protection services/litigation support involving a fire in a resin spray oven protected with a water spray fire suppression system. The oven produces foam for use in pillows and "overstuffed" chairs. The fire suppression system failed to operate, causing damage to the oven and building. The effort included review of the cause and origin, sprinkler system expertise, and fire spread expertise.

Kentucky Fried Chicken Hood & Duct System - Tampa FL

Fire protection services/litigation support involving a fire in a deep fat fryer with a hood and duct fire suppression system. The effort included review of the placement of discharge nozzles and the equipment, and the review of the cause and origin of the fire.

108 & 110 North 19th Street Fire - Bessemer, AL

Fire protection services/litigation support involving a fire in a 2 story mercantile. The services included review of fire spread, the fire service operations, the use of the ladder truck by the Bessemer Fire Department, the subsequent request for mutual aid and the method of fire extinguishment of a fire in the building.

The Travelers Insurance Company, Freezer Building - Memphis, TN

Fire protection engineering services/litigation support involving the activation of a double-interlock deluge sprinkler system with only the activation of the fire detection system by HVAC Contractor's personal.

The Celina Mutual Insurance Company - Kensington, GA

Fire protection services/litigation support involving a fire in a sprinklered warehouse storing flaked polyester plastics, in which the building and contents were destroyed. The effort included review of available fire protection systems, the condition of available systems, fire spread expertise, and the cause and origin of the fire.

Western Maryland Correction Institute - Cumberland, MD

Fire protection services/litigation support involving the installation of alarm and detection communication cable in an underground cable duct bank/manhole system. The review included code research and the review of contract documents for the use of moisture resistant/proof material in a submerged (underwater) environment.

U.S. Department of Labor, Office of Solicitor - Ft. Lauderdale, FL

Fire/Life Safety consulting services/litigation support involving OSHA compliance.

Fireman's Fund, Drago Enterprises - Hialeah, FL

Fire protection services/litigation support involving sprinkler activation in a retail store and warehouse during non-fire conditions.

Kiawah Island Resort Community - Kiawah Island, SC

Fire protection services/litigation support involving a fire in two multi-million dollar residential fires and further services for analysis and design of the Town of Kiawah Island's water service and distribution system for fire suppression. The effort included review of the cause and origin of the fire and fire spread expertise.

Fireman's Fund; Martin County Courthouse - Stuart, FL

Fire protection services/litigation support involving a sprinkler system piping failure, and resulting water flow, during non-fire conditions.

DOE Savannah River Site - Aiken, SC

Fire protection services/litigation support for an arbitration hearing involving sprinkler system and fire system and detection system installation. The review included Code research and analysis of Contractor's design documents for determination of the extent of compliance with contract documents in regard to information provided and submission schedule.

Harris County Jail - Houston Texas

Fire/Life Safety consulting services/litigation support for a 4,000 bed county jail.

Fireman's Fund; Flammable & Combustible Liquids Testing Lab - Norcross, GA

Fire protection services/litigation support involving a fire in a laboratory hood within a room that was protected with a Halon fire suppression system. The effort included a review of the cause and origin, the extent of damage, fire spread expertise and a review of the suppression system design and installation.

CNA Insurance Company; College of the Albemarle

Fire protection engineering services/litigation support involving a curtain fire in a theater. The effort included the evaluation of the cause and origin and expertise in the treatment of theater curtains with fire retardants for compliance with fire code standards

Acker V. Lion Uniform - Birmingham, AL

Fire protection engineering services/litigation support involving performance of fire fighters' protective clothing.

Corp Plaza I & II - Cleveland, OH

Fire protection engineering services/litigation support involving the investigation of the use of Dow Corning/Hilti Firestop Systems (recalled material) in two mid-rise office building.

Paces Court Apartments - Greenville, SC

Fire protection engineering services/litigation support involving the investigation of the use of Dow Corning/Hilti Firestop Systems (recalled material) in 234 apartment units.

Fireman's Fund; Hotel - Orlando, FL

Fire protection engineering services/litigation support involving a sprinkler system failure/activation in a guest room during non-fire conditions.