



Stephen L. Presnell, PE
Senior Fire Protection Engineer

Education

B.S., Industrial Engineering, University of Tennessee, 1998, Cum Laude
A.A.S., Computer Integrated Drafting and Design, Pellissippi State Technical Comm. College, 1991
National Fire Protection Association, Designing Mass Notification Systems Course, 2012
Society of Fire Protection Engineers, Fire Dynamics Seminar, 2005
Edwards Systems Technology, EST3 Certification (SDU) Course, 2004
National Fire Protection Association, NFPA 13 Seminar, 2003
Society of Fire Protection Engineers, Life Safety Code Seminar, 1998
HSB PLC, Fire and Explosion Risk Assessment and Consequence Modeling Seminar, 1994

Registered Professional Engineer (Fire Protection)

States of Tennessee, North Carolina, and Texas

Professional Affiliations

Society of Fire Protection Engineers, Member
National Fire Protection Association, Member
Tau Beta Pi (National Engineering Honor Society)
Alpha Pi Mu (Industrial Engineering Honor Society)

Professional Experience

January 1998 through Present - Performance Design Technologies, Inc.
Fire Protection Designer/Consultant and Fire Protection Engineer

While serving as a fire protection engineer for PDT, Mr. Presnell has been responsible for the fire detection and alarm system design for three nuclear generating facilities, ten local elementary schools, two large local high schools, two business/residential high-rise buildings, major Department of Energy (DOE) processing facility, and a large two-building complex at Oak Ridge National Laboratory. These designs have included development of design drawings, development of system specifications, and providing construction management during installation. Mr. Presnell has also been responsible for fire suppression system designs at two business/residential high-rise buildings and a local university football stadium modification. These designs have also included the development of design drawings and system specifications.

While serving as a fire protection designer/consultant for PDT, Mr. Presnell participated on the design and construction management teams for fire detection and alarm system upgrades at two major nuclear power generating facilities, a campus-style multiple facility high-rise office complex, and nine buildings at Oak Ridge National Laboratory. The project designs involved the placement of notification and initiating devices in accordance with applicable codes, standards and practices.

Mr. Presnell has participated in the development and preparation of Fire Hazard Analyses (FHA) and Fire Protection Engineering Assessments (FPEA) for buildings at the Y-12 National Security Complex. The FHA's and FPEA's included life safety assessments, sprinkler system analysis, fire alarm and employee notification systems, fire

hazards and scenarios, and code review. Mr. Presnell participated on the project design team for automatic sprinkler design packages at another facility at Y-12. The packages included detailed design drawings, construction packages, and hydraulic calculations using the HASS software.

He has participated in the assessment of all fire suppression and detection systems at an area university campus. The project included corrective action plans and cost estimation.

Mr. Presnell is also involved in a long-term project in which a large metropolitan school system is working to address and resolve various code-related issues. The project involves more than 90 facilities and focuses on fire alarm capabilities and means of egress requirements.

Mr. Presnell has been involved in a fire alarm assessment and emergency alarm system design for a large chemical plant with over 100 buildings and facilities. This project includes the integration of the new system with the existing system in a performance-based design.

August, 1990 through December, 1997 - HSB Professional Loss Control
Technician/CAD Operator

Mr. Presnell worked on a variety of fire protection engineering projects. His work included providing engineering assistance and drawing development for major DOE and commercial nuclear power clients.

Specific DOE experience includes providing engineering support on a fire alarm replacement project at a major DOE facility. This effort involved development of block and logic diagrams, riser diagrams, test procedures, modification tables, equipment safety classifications, and equipment replacement lists. He also developed pre-fire plan drawings and updated test procedures for a fire alarm replacement project for another major DOE site.

Specific commercial nuclear experience includes the following: development and review of fire hazard analysis, penetration seal detail drawing development, pre-fire plan drawing development, and hydraulic calculations and development of drawings for new and existing sprinkler systems. In addition Mr. Presnell performed combustible loading calculations, including field verification, and assisted in performing computerized analyses of structural steel to determine its ability to withstand fire exposure.

Mr. Presnell performed numerous sets of hydraulic calculations for a variety of occupancies and hazards. In addition to performing fire sprinkler calculations, he evaluated fire protection water supply systems.

Mr. Presnell's work also involved computerized drafting and other computer graphic support. Through Mr. Presnell's education and experience, he became proficient in AutoCAD and MicroStation drawing software. In addition, he created visual aids, charts, event trees, and graphs for project, proposal, and training purposes.

Areas of Specialization

Fire Detection and Alarm Design
Fire Suppression Design
Life Safety Code Analysis
Hydraulic Calculations
AutoCAD
MicroStation
Visual Graphics