



## NATHAN J. BIRMINGHAM P.E.

### Principal

#### EDUCATION

Worcester Polytechnic Institute, Worcester, MA  
Master of Science, Fire Protection Engineering,  
May 2008  
Bachelor of Science, Mechanical Engineering,  
May 2006

#### PROFESSIONAL AFFILIATIONS

National Fire Protection Association (NFPA)  
Society of Fire Protection Engineers (SFPE)  
MA Registered Fire Protection Engineer  
LEED Accredited Professional

#### CONTACT

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# CODE RED CONSULTANTS

#### PROFESSIONAL EXPERIENCE

Nathan Birmingham is a Principal with Code Red Consultants. Mr. Birmingham has significant experience reviewing architectural and engineering drawings and specifications for conformance with local, state and national codes and standards. He has conducted fire protection and life safety evaluations on high-rise buildings, atria, facilities utilizing hazardous materials, warehouses, healthcare facilities, residential buildings, and office and mixed-use facilities.

Mr. Birmingham specializes in creating performance based design solutions where traditional prescriptive codes approaches won't work. His experience includes smoke control special inspections, fire and egress modeling, code compliance alternatives and equivalencies and third party reviews and inspections. He has extensive experience with computer fire models, including NIST's Fire Dynamics Simulator (FDS) and CONTAMW performing tenability, smoke movement, flame spread, atrium smoke control, stair and elevator pressurization and fire/smoke detection analyses.

#### ARTICLES & SPEAKING ENGAGEMENTS

Birmingham, Tafone, Burroughs, Becker, "Pass Your Smoke Control Acceptance Test the First Time, Every Time." 2013 Architecture Boston Expo, Boston Massachusetts. November 2013.

Birmingham, Nathan, P.E. "Performance-Based Design of Smoke Control Systems Using FDS." National Fire Protection Association World Safety Conference. Boston Massachusetts. July 2011.

Birmingham, Nathan, P.E. and Leblanc, David. "Steps for Designing a Successful Smoke Control System". *Engineered Systems*, January, 2010