

# James R. (Ronnie) Thomas, M.Sc., PE

## Professional Profile

Ronnie Thomas is an associate for Reax Engineering Inc. in Auburn, CA and has over 15 years of experience in building design and construction. His responsibilities span building code and fire code consulting, smoke control design, fire science research, and design of fire protection and life safety systems. Ronnie's work combines fire/building codes and related standards with technical aspects of fire science such as combustion, heat transfer, fluid dynamics, thermodynamics, fire dynamics, and fire modeling.

## Professional Licensure

Licensed Professional Engineer, State of California #1985

Licensed Professional Engineer, State of Nevada #025226

## Education

MSc – Fire Protection Engineering, Worcester Polytechnic Institute, 2011-2013

BS – Fire Science, University College - University of Maryland, 2006-2009

## Professional Experience

- 2018 – present    **Reax Engineering Inc.** Berkeley, CA and Auburn, CA *Associate Fire Protection Engineer*
- Actively works on code consulting, fire/life safety systems, sizing of atrium smoke exhaust systems, development of equivalencies or alternate methods of design, and peer review.
  - Utilizes fire modeling to determine smoke alarm/detector activation, heat detector/sprinkler activation, time to untenability or incapacitation by smoke and heat.
  - Responsible for smoke control system sizing and design for high-rise buildings and atria.
- 2014 – 2018    **Peak Engineering Inc.** Rocklin, CA *Associate Fire Protection Specialist*
- Focused on the application and interpretation of building codes to develop performance-based solutions to complex fire/life safety challenges, most notably those involving special fire-safety issues such as atria and large assembly spaces.
  - Built upon extensive experience in smoke control analysis and fire and egress modeling.
- 2011 – 2014    **Arup** San Francisco, CA *Fire Protection Specialist*
- Assisted clients with fire safety design and achieving code compliance or performance-based solutions for hospitals, casinos, malls, libraries, schools, museums, airports, and offices.
  - Assessed fire performance of buildings using fire modeling and egress analyses in support of alternate methods of design.

### Representative projects:

- *Epic Conference Center 2, Verona, WI:* Prepared a fire-protection report, provided modeling support and fire- life safety plans for a 12,000-seat auditorium. Utilized the provisions of smoke-protected assembly seating and furnished structural fire-resistance calculations.
- *Epic Campus 4 and 5, Verona, WI:* Prepared a fire-protection report, provided code interpretation and fire/life safety plans for five (5), 3-4 story, 70,000ft<sup>2</sup>+ office buildings and food service building located above a sub-grade, 4 level 720,000ft<sup>2</sup> garage.
- *Genentech Building 35, South San Francisco, CA:* A 255,000 ft<sup>2</sup> office building with a 7-story atrium including multiple conference rooms and walkways crossing the atrium, a particular challenge from a smoke control perspective.
- *Samsung AHQ(DS) Headquarters and Campus, San Jose, CA:* Designed smoke control systems and provided fire-life safety report for 1.1mil ft<sup>2</sup> research and development (R&D) headquarters.
- *Hakkasan, Las Vegas, NV:* Provided general code consultation and fire- life safety plans for a 75,000 ft<sup>2</sup> restaurant and nightclub. Prepared alternate design method request utilizing smoke-protected exiting.

- *807 Stewart, Seattle, WA*: Modelled smoke control and egress protection for 400ft+ high rise, underground garage and conference center.
- *Park8, Bellevue, WA*: Developed smoke control and egress protection for 43 story high-rise mixed-use condominium and hotel complex with underground garage and central podium. (Currently under design)
- *AC2, Cupertino, CA*: Furnished structural fire-resistance calculations for building base isolation system. Provided smoke control, code analysis and structural fire engineering for 1.2mil ft<sup>2</sup> main campus structure, 4-story parking garage, central plant, recreation building, and underground theater.
- *Lumina, San Francisco, CA*: Developed the egress strategy and smoke control approach for the mixed-use podium and 400ft+ tall Condo Tower Development. Prepared alternate design method requests and phased-build recommendations, resulting in substantial cost savings for the client while maintaining a high level of protection for occupants and first responders.
- *Transbay Transit Center, San Francisco, CA*: Provided fire protection assessment, design for smoke control strategy, and fire modeling support for egress analysis and naturally ventilated smoke control (Under construction)
- *Crenshaw/LAX Transit Project, Los Angeles, CA*: Designed smoke control strategy and provided CFD fire modeling support for three (3) underground subway stations on a new light-rail line.
- *UCSF Medical Center, San Francisco, CA*: Provided general code consultancy and egress analyses, smoke control design, and fire life safety drawings and fire-protection report used to coordinate between the architect and mechanical, plumbing and electrical engineers.
- *Sutter Roseville Medical Center ICU Expansion, Roseville, CA*: Provided general code consultancy and egress analysis and fire-protection report used to coordinate between the architect and mechanical, plumbing and electrical engineers in support of a 96,000 ft<sup>2</sup> addition to main facility.
- *Tulare County Correctional Facility, Porterville, CA*: Commissioned the smoke control system with California State Fire Marshall. Services included smoke barrier inspection/leakage testing, sequence of operations tests, pressure differentials and door opening force testing. Provided 3rd party review of smoke control system.

### **Publications, Presentations, and Seminars**

1. Linden, Paul; Ed Arens; Nick Daish, et. Al. (UC San Diego). 2015. *Natural Ventilation for Energy Savings in California Commercial Buildings*. California Energy Commission. Publication Number: CEC-500-2016-039.
2. "Barriers to implementation of natural ventilation: A fire and life safety perspective," *Center for the Built Environment*, Berkeley, CA, October 2013.
3. "Advancements in fire safety for the cannabis industry: codes, equipment and processes to prevent them from going up in smoke," *2018 SFPE Annual Conference & Expo*, Nashville, TN, October 2018.
4. "Advancements in smoke control modeling: a comparison of methods commonly used in smoke control applications," *2019 SFPE Annual Conference & Expo*, Phoenix, AZ, October 2019.

### **Professional Associations and Appointments**

- Society of Fire Protection Engineers (SFPE), *Member*
- Northern California – Nevada Society of Fire Protection Engineers (NCN-SFPE), *President*
- National Fire Protection Association (NFPA), *Member*