



THE FIRE PROTECTION RESEARCH FOUNDATION

Evaluating Occupant Load Factors for Concentrated and Non-Concentrated Business Use Areas

Project Summary

Background

The current occupant load factor, as specified by NFPA 101, *Life Safety Code*, and NFPA 5000, *Building Construction and Safety Code*, for business use areas may not be adequate for all types of business uses that we see today. Some business uses, such as call centers or high productivity, technology based businesses, may be arranged so as to contain a higher density of occupants within the space than would normally be found in a traditional office layout. This generates the question if the current occupant load factor of 100 square feet/person is appropriate for all business uses, and if not, is there a need for multiple business use occupant load factors to accurately calculate occupant loads for business use areas with alternative densities of occupants.

Research Objective

The objective of this research is to provide data to the Technical Committee on Mercantile and Business Occupancies to either support the current occupant load factor of 100 square feet/person or to justify the need for multiple occupant load factors for business use areas that would accommodate both the "concentrated" (i.e. call centers) and "less concentrated" uses (i.e. standard cubicle and office arrangement).

Project Description

A recent project completed at Worcester Polytechnic Institute (WPI) investigated this topic by looking into the history of the requirement as well as the evolution of office spaces. The project team also developed surveys for architects and building owners about how current office spaces are being used. However, the Technical Committee needs more data on business use area loading to make any changes to the codes.

This research project includes the following tasks:

- Development of a universal survey form to collect data on business use area loading.
- Collection of data on business use area loading through on-site surveys of office buildings.
- Summarization of the data collected during site surveys into a report.

Schedule

Completion May 2013.