

ENGINEERING GUIDE: **FIRE SAFETY FOR** VERY TALL BUILDINGS



Engineering Guide: Fire Safety for Very Tall Buildings

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PREFACE

The performance history of very tall buildings, while extremely successful, has not been without major incidents causing injury and death. The modern model building codes, including the *International Building Code*[®] (IBC[®]), have made major progress in addressing unique issues of design and construction in very tall buildings based on scientific research and lessons learned from catastrophic events.

From a historic perspective, the legacy model building codes, *Standard Building Code*,[®] *BOCA National Building Code*,[®] and the *Uniform Building Code*,[®] included elementary high-rise provisions in their early to mid-1970s editions that evolved over time to the current edition of the IBC,[®] which addresses many features such as separation of egress routes, additional egress shaft requirements, fire department and occupant evacuation elevators, egress markings, stairway structural integrity and higher level of protection for structural members. However, the current building codes still may not provide comprehensive performance solutions or adequately address other risks inherent in “very tall” or “super tall” buildings.

The complexity and unique challenges of today’s very tall buildings, coupled with sustainability goals of material, energy, water and resource savings, have created an environment where comprehensive performance-based solutions have become a necessity. Such is the reason for the Society of Fire Protection Engineers (SFPE) and the International Code Council (ICC) embarking on the development of this valuable guide in a joint partnership.

This guide is not intended to replace the adopted building and fire codes of jurisdictions; rather, it is intended to complement such codes and serves as an added tool for all those involved in the design, review, construction, inspection and commissioning of new or existing very tall buildings.

About the Society of Fire Protection Engineers

The Society of Fire Protection Engineers was established in 1950 and incorporated as an independent organization in 1971. It is the professional society representing those practicing in the field of fire protection engineering. The Society has over 4,500 members globally and over 60 regional chapters.

The purpose of the Society is to advance the science and practice of fire protection engineering and its allied fields, to maintain a high ethical standard among its members and to foster fire protection engineering education.

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About the International Code Council

The International Code Council is a member-focused association. It is dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures. Most U.S. communities and many global markets choose the International Codes.® ICC Evaluation Service (ICC-ES®) is the industry leader in performing technical evaluations for code compliance fostering safe and sustainable design and construction.

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