

# 2009 IBC<sup>®</sup> HANDBOOK

## Fire- and Life-Safety Provisions

Douglas W. Thornburg, AIA



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**THE AMERICAN  
INSTITUTE  
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# *2009 IBC Handbook*

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## *Fire- and Life-Safety Provisions*

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## *Preface*

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Internationally, code officials recognize the need for a modern, up-to-date building code addressing the design and installation of building systems through requirements emphasizing performance. The *International Building Code*® (IBC®) meets those needs by providing model code regulations that safeguard the public health and safety in all communities, large and small.

The IBC is one of a family of codes published by the International Code Council® (ICC®) that establishes comprehensive minimum regulations for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that use new materials and new building designs. Additionally, the IBC is compatible with the entire family of International Codes® published by the ICC.

There are three major subdivisions to the IBC:

1. The text of the IBC
2. The referenced standards listed in Chapter 35
3. The appendices

The first 34 chapters of the IBC contain both prescriptive and performance provisions that are to be applied. Chapter 35 contains those referenced standards that, although promulgated and published by separate organizations, are considered as a part of the IBC as applicable. The provisions of the appendix do not apply unless specifically included in the adoption ordinance of the jurisdiction enforcing the code.

The 2009 *IBC Handbook: Fire- and Life-Safety Provisions* is designed to present commentary only for those portions of the code for which commentary is helpful in furthering the understanding of the provision and its intent. This handbook uses many drawings and figures to help clarify the application and intent of many code provisions.

This handbook examines many design provisions for the administrative, fire- and life-safety, and inspection components of the IBC. It addresses in detail: means of egress, occupancy classification, allowable height and area, type of construction, fire protection systems and fire-resistance-rated construction.

As a benefit to the reader, ICC has included a CD-ROM containing the complete handbook. The CD-ROM also includes the complete ICC A117.1-2003 standard. This CD allows you to navigate easily through the handbook and ICC A117.1-2003, search for specific text, copy images from figures and tables, and copy and paste code provisions into correspondence or reports.

Questions or comments concerning this handbook are encouraged. Please direct any correspondence to [handbook@iccsafe.org](mailto:handbook@iccsafe.org).



## *Dedication*

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This book is dedicated to the memory of the late Robert B. Feldner, Sr., former Superintendent of Central Inspection for the City of Wichita, Kansas. Bob, a registered architect and professional engineer, was the ultimate professional and leader, respected by all with whom he interacted. His dedication and contribution to the development and enforcement of construction codes was significant.



## *Foreword*

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How often have you heard these questions when discussing building codes: “What is the intent of this section?” Or, “How do I apply this provision?” This publication offers the code user a resource that addresses much of the intent and application principles of the major design provisions of the 2009 *International Building Code*<sup>®</sup> (IBC<sup>®</sup>).

It is impossible for building codes and similar regulatory documents to contain enough information, both prescriptive and explanatory narrative, to remove all doubt as to the intent of the various provisions. If such a document were possible, it would be so voluminous that it would be virtually useless.

Because the *International Building Code* must be reasonably brief and concise in its provisions, the user—and particularly the enforcement official—must have knowledge of the intent and background of these provisions to apply their intent appropriately. The *International Building Code* places great reliance on the judgment of the designer and building official for the specific application of its provisions. Where the designer and building official have knowledge of the rationale behind the provisions, the design and enforcement of the code will be based on informed judgment rather than arbitrariness or rote procedure.

The information that this handbook provides, coupled with the designer’s and enforcement official’s experience and education, will result in better use of the IBC and more uniformity in its application. As lengthy as this document may seem, it still cannot provide all of the answers to questions of code intent; that is why the background, training and experience of the reader must also be called on to properly apply, interpret and enforce the code provisions.

The preparation of a document of this nature requires consulting a large number of publications, organizations and individuals. Even so, the intent of many code provisions is not completely documented. Sometimes the discussion is subjective; therefore, individuals may disagree with the conclusions presented. It is, however, important to note that the explanatory narratives are based on many decades of experience by the authors and the other contributors to the manuscript.





## *Acknowledgements*

The publication of this handbook is based on many decades of experience by the authors and other contributors. Since its initial publication, the handbook has become a living document subject to changes and refinements as newer code editions are released. This latest edition reflects extensive modifications based on the requirements found in the 2009 *International Building Code*.

The initial handbook, on which this document is based, was published in 1988. It was authored by Vincent R. Bush. In developing the discussions of intent, Mr. Bush drew heavily on his 25 years of experience in building regulation. Mr. Bush, a structural engineer, was intimately involved in code development work for many years.

In addition to the expertise of Mr. Bush, major contributions were made by John F. Behrens. Mr. Behrens' qualifications were as impressive as the original author's. He had vast experience as a building official, code consultant and seminar instructor. Mr. Behrens provided the original manuscript of the egress chapter and assisted in the preparation of many other chapters.

Revisions to the handbook occurred regularly over the years, with content based on the provisions of the *International Building Code* authored by Doug Thornburg, AIA, C.B.O. Mr. Thornburg, a certified building official and registered architect, has over 28 years of experience in the building regulatory profession. Previously a building inspector, plan reviewer, building code administrator, seminar instructor and code consultant, he is currently Technical Director of Product Development for the International Code Council. In his present role, Mr. Thornburg develops and reviews technical publications, reference books and resource materials relating to construction codes. He continues to present building code seminars nationally and has developed numerous educational texts. Mr. Thornburg was presented with ICC's inaugural Educator of the Year Award in 2008, recognizing his outstanding contributions in education and training.

The information and opinions expressed in this handbook are those of the present and past authors, as well as the many contributors, and do not necessarily represent the official position of the International Code Council. Additionally, the opinions may not represent the viewpoint of any enforcing agency. Opinions expressed in this handbook are only intended to be a resource in the application of the IBC, and the building official is not obligated to accept such opinions. The building official is the final authority in rendering interpretations of the code.



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