

**Building Code Essentials:
Based on the 2024 *International
Building Code*[®]**

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Preface

Construction of buildings has progressed over the centuries from stone buildings to the steel and concrete monuments, to the industrial revolution and technology today. People have an expectation that when they enter a building, it has been constructed in such a manner that if an emergency situation occurs, they will be protected. As established building practices improve and new building technologies are developed, the complexity of the buildings has increased. As these complexities increase, building regulations must keep up with the technology. The codes adopted by governmental agencies should not prohibit or limit the use of new materials or technologies. However, buildings must be constructed to be safe for the occupants. Therefore, the building code has had to keep up with the complex building practices and has become a complex document in itself. The codes and standards used to regulate the construction of buildings can overwhelm the casual user of the code. Navigating the complex and detailed provisions of the code can be daunting. Not all of the provisions apply to every building.

This text, *Building Code Essentials*, has been written to provide an easy-to-read overview of the *International Building Code*® (IBC®). It is an illustrated look at the most common code provisions. This text provides an overall understanding of the provisions of the building code. It is presented in a user-friendly manner with emphasis on technical accuracy and clear noncode language. This book targets readers who have a basic understanding of architecture and construction but a limited knowledge of the code requirements.

Anyone who is involved in the design, construction or regulatory aspects of building construction, regardless of level of experience, can benefit from the information provided in this book. The user will be able to reference this document for learning the fundamental provisions and intents of the building code. The most common and most used provisions of the 2024 *International Building Code* have been addressed.

The information in *Building Code Essentials* has been organized by the different purposes of the code. It discusses the administrative provisions that building departments use to enforce the building code. The provisions used to design the overall building use, construction, size and specific occupancy requirements are covered in the building planning portion of the code. The fire safety topics include the use of passive and active fire protection. The discussion of life safety issues includes the methods used in the design and construction to ensure that occupants are provided with a safe means of evacuating a building in an emergency. It also includes the provisions that allow people with physical disabilities to access buildings. Health safety provisions regarding weather protection and interior environment have been provided. Finally, the structural provisions of the code have been put into easy-to-understand language.

This book is not intended to cover all of the provisions of the building code or all of the acceptable materials and methods of construction. This is not to say that the information not included in this book is not important. This book should be used with the 2024 *International Building Code*, which should be referenced for more details and information. This book only provides a basic understanding of a very complex document and referenced standards.

Building Code Essentials includes full-color photos and illustrations to help the reader understand the provisions and application of the building code requirements. It provides examples, simplified tables and highlights to explain the fundamental requirements of

the *International Building Code* and to gain compliance with its regulations. References to the applicable sections or standards have been provided to assist the reader in locating more detailed and complete information in the code. A glossary of code and construction terms clarifies the meaning of the technical provisions.

ABOUT THE INTERNATIONAL BUILDING CODE

The IBC covers all buildings except detached one- and two-family dwellings and townhouses not more than three stories in height. This comprehensive code features time-tested safety concepts; structural, fire and life safety provisions covering means of egress; interior finish requirements; comprehensive roof provisions; seismic engineering provisions; innovative construction technology; occupancy classifications; and the latest industry standards in material design. It is founded on broad-based principles that make possible the use of new materials and new building designs.

The IBC is one of the codes in the family of International Codes published by the International Code Council® (ICC). All of these codes are maintained and updated through an open code-development process and are available internationally for adoption by the governing authority to provide consistent enforceable regulation for the built environment.

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I would like to dedicate this book to my wife and family. They have supported me for more than 40 years of my code journey. My wife, Teri, has held down the fort any time I was traveling for code hearings, code training and working out of town. My children, Chris and Kiha, have always understood the importance of what I do. Thank you to you all for your support and understanding.

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Mr. Thomas has over 40 years of experience in building code plan review, inspection and administration. He is currently the Education Director for Shums Coda Associates. He began his successful consulting company, Colorado Code Consulting, in 1999 and merged with Shums Coda Associates in 2020. He served as the Building Official for the City of Glendale, Colorado, for 18 years. Mr. Thomas served on ICBO Code Development Committees and the ICBO Chairman's Advisory Committee for Small Jurisdictions. He has also served as a member and the Chair of the ICC Means of Egress Code Development Committee. He currently serves on the ICC Code Correlating Committee and is very involved in code development. Mr. Thomas received his Bachelor of Science degree in business administration from the University of Phoenix. Mr. Thomas is a Certified Building Official and holds nine other ICC certifications. He is also an honorary member of ICC.

ABOUT THE INTERNATIONAL CODE COUNCIL®

The International Code Council is the leading global source of model codes and standards and building safety solutions that include product evaluation, accreditation, technology, codification, consulting, training and certification. The International Code Council's codes, standards and solutions are used to ensure safe, affordable and sustainable communities and buildings worldwide.

The International Code Council family of solutions includes the ICC Evaluation Service (ICC ES), S. K. Ghosh Associates, the International Accreditation Service (IAS), General Code, ICC NTA, ICC Community Development Solutions, Alliance for National & Community Resilience (ANCR) and American Legal Publishing.

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