

**Existing Building Code Essentials:  
Based on the 2024 *International  
Existing Building Code*<sup>®</sup>**

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# Preface

**B**uilding construction has progressed over the centuries from stone to 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 new building practices improve and new technologies are developed, the complexity of buildings has increased, and 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 for both new construction and existing buildings has had to keep up with 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 intricacies and detailed provisions of the code can be daunting as not all of the provisions apply to every building.

Existing buildings have a major impact on our communities if not properly maintained and updated to meet the contemporary needs of the community. Newer designs and newer technologies are essential to maintaining existing buildings as economically viable for the community.

Existing buildings that are allowed to deteriorate can cost a community millions of dollars in lost taxes due to devaluation of property. In addition, blighted communities with dilapidated buildings are usually fraught with increased fire hazards and crime.

The *International Existing Building Code*® (IEBC®) is intended to trigger essential upgrades to the life safety of the building that are reasonable and possibly more affordable. This provides incentives to owners to make necessary renovations in order to maintain the viability of their buildings.

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

Anyone involved in the design, construction or regulatory aspects of building construction, and all levels of experience, can benefit from the information provided in this book. It can be used for learning the fundamental provisions and intent of the 2021 IEBC, as the most common provisions have been addressed.

The information in *Existing 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. Provisions related to various approaches in the design, construction and evaluation of construction work in existing buildings are provided in parts and chapters organized for easy comprehension. The three specific compliance methods of Prescriptive, Work Area and Performance are addressed in various chapters. The discussion of life safety issues includes the methods used in design and construction to ensure that occupants are provided with a safe means of evacuating a building in an emergency. It also provides the provisions that allow people with physical disabilities to access buildings. Health safety provisions regarding weather protection and interior environ-

ment 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 existing 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 2021 *International Existing Building Code*, which should be referenced for more details and information.

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

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## ABOUT THE INTERNATIONAL EXISTING BUILDING CODE

The IEBC covers all existing buildings, both commercial and residential, except that detached one- and two-family dwellings and townhouses not more than three stories in height may comply with the *International Residential Code*® (IRC®) as an alternative. This comprehensive code applies to the repair, alteration, change of occupancy, addition to and relocation of existing buildings and 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 IEBC has technical requirements that, in some cases, are more stringent than the codes under which existing buildings were initially built, but not as stringent as the model codes for new buildings. This approach incentivizes bringing existing buildings back into a safe and reasonable level of code compliance for new or existing uses and occupancies by making the cost to upgrade more reasonable.

The IEBC 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 regulations for the built environment. The IEBC and all of the 2021 codes and commentaries in the family of I-Codes are available in various print and digital formats including Digital Codes Premium, the state-of-the-art online platform, with powerful features of search, highlighting, annotations, collaboration and other premium features. Various lengths of subscription for Digital Codes Premium are available to fit the individual needs of projects and activities.

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## ACKNOWLEDGMENTS

As noted in the book, the *International Existing Building Code* represents a paradigm shift from traditional code requirements addressing new work in existing buildings. As such, I would like to first thank those who helped spearhead this change in philosophy. They include, but are not limited to, Bill Connelly, Mel Green and David Hattis, along with those who served on the ICC Existing Building Code Drafting Committee and later Code Development Committee, initially chaired by John Terry.

The coauthors of the initial edition of the *Existing Building Code Essentials*, Bill Koffel, P.E., FSFPE, and Clay Aler, P.E., whose major contributions continue to be the foundation on which the 2021 edition was created.

The assistance provided by ICC staff, including Sandra Hyde, Managing Director of Product Development; Sharon Gordy, Senior Staff Editor; Julia Lange, Senior Graphic Designer; and the Publications Department with respect to editing and producing the document, along with collecting many of the photographs, also needs to be acknowledged.

Last, but certainly not least, I would like to thank my wife Mary for her support and patience throughout the development of this book.



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Rehabilitation Provisions (NARRP). In 1986, Bill founded Koffel Associates and has presided over its national and international growth. He is a past president of the Society of Fire Protection Engineers and past member of the Department of Veterans' Affairs Advisory Committee on Structural Safety. He has co-authored important manuals, including *Fire Warning and Safety Systems*, American Hospital Association's manual that is the industry's guide to selecting, testing and maintaining fire suppression, fire alarm and smoke control systems.

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## 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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