

2024 Ohio Existing Building Code

First Printing: November 2023

ISBN: 978-1-962103-20-6 (soft-cover edition)
ISBN: 978-1-962103-21-3 (PDF download)

COPYRIGHT © 2023
by
INTERNATIONAL CODE COUNCIL, INC.

ALL RIGHTS RESERVED. This 2024 *Ohio Existing Building Code* contains substantial copyrighted material from the 2021 *International Existing Building Code*[®], third printing, which is a copyrighted work owned by the International Code Council, Inc. (“ICC”). Without separate written permission from the copyright owner, no part of this publication may be reproduced, distributed or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example, and not limitation, photocopying or recording by or in an information storage and/or retrieval system). For information on use rights and permissions, please contact: ICC Publications, 4051 Flossmoor Road, Country Club Hills, Illinois 60478; 1-888-ICC-SAFE (422-7233); <https://www.iccsafe.org/about/periodicals-and-newsroom/icc-logo-license/>.

Trademarks: “International Code Council,” the “International Code Council” logo, “ICC,” the “ICC” logo, “International Existing Building Code,” “IEBC” and other names and trademarks appearing in this publication are registered trademarks of the International Code Council, Inc., and/or its licensors (as applicable), and may not be used without permission.

PRINTED IN THE USA

PREFACE

Introduction

This 2024 *Ohio Existing Building Code* is based on the 2021 *International Existing Building Code*® (IEBC®) with incorporated Ohio changes.

The IEBC establishes minimum requirements for existing buildings using prescriptive and performance-related provisions. It is founded on broad-based principles intended to encourage the use and reuse of existing buildings while requiring reasonable upgrades and improvements. This 2021 edition is fully compatible with all of the International Codes® (I-Codes®) published by the International Code Council® (ICC®), including the *International Building Code*® (IBC®), *International Energy Conservation Code*® (IECC®), *International Fire Code*® (IFC®), *International Fuel Gas Code*® (IFGC®), *International Green Construction Code*® (IgCC®), *International Mechanical Code*® (IMC®), *International Plumbing Code*® (IPC®), *International Private Sewage Disposal Code*® (IPSDC®), *International Property Maintenance Code*® (IPMC®), *International Residential Code*® (IRC®), *International Swimming Pool and Spa Code*® (ISPSC®), *International Wildland-Urban Interface Code*® (IWUIC®), *International Zoning Code*® (IZC®) and *International Code Council Performance Code*® (ICCPC®).

The I-Codes, including the IEBC, are used in a variety of ways in both the public and private sectors. Most industry professionals are familiar with the I-Codes as the basis of laws and regulations in communities across the US and in other countries. However, the impact of the codes extends well beyond the regulatory arena, as they are used in a variety of nonregulatory settings, including:

- Voluntary compliance programs such as those promoting sustainability, energy efficiency and disaster resistance.
- The insurance industry, to estimate and manage risk, and as a tool in underwriting and rate decisions.
- Certification and credentialing of individuals involved in the fields of building design, construction and safety.
- Certification of building and construction-related products.
- US federal agencies, to guide construction in an array of government-owned properties.
- Facilities management.
- “Best practices” benchmarks for designers and builders, including those who are engaged in projects in jurisdictions that do not have a formal regulatory system or a governmental enforcement mechanism.
- College, university and professional school textbooks and curricula.
- Reference works related to building design and construction.

In addition to the codes themselves, the code development process brings together building professionals on a regular basis. It provides an international forum for discussion and deliberation about building design, construction methods, safety, performance requirements, technological advances and innovative products.

Development

This 2021 edition presents the code as originally issued, with changes reflected in the 2006 through 2018 editions and further changes approved by the ICC Code Development Process through 2019. A new edition such as this is promulgated every 3 years.

This code is founded on principles intended to encourage the use and reuse of existing buildings that adequately protect public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

Maintenance

The IEBC is kept up to date through the review of proposed changes submitted by code enforcement officials, industry representatives, design professionals and other interested parties. Proposed changes are carefully considered through an open code development process in which all interested and affected parties may participate.

The ICC Code Development Process reflects principles of openness, transparency, balance, due process and consensus, the principles embodied in OMB Circular A-119, which governs the federal government's use of private-sector standards. The ICC process is open to anyone; there is no cost to participate, and people can participate without travel cost through the ICC's cloud-based app, cdpAccess®. A broad cross section of interests are represented in the ICC Code Development Process. The codes, which are updated regularly, include safeguards that allow for emergency action when required for health and safety reasons.

In order to ensure that organizations with a direct and material interest in the codes have a voice in the process, the ICC has developed partnerships with key industry segments that support the ICC's important public safety mission. Some code development committee members were nominated by the following industry partners and approved by the ICC Board:

- American Institute of Architects (AIA)
- National Association of Home Builders (NAHB)

The code development committees evaluate and make recommendations regarding proposed changes to the codes. Their recommendations are then subject to public comment and council-wide votes. The ICC's governmental members—public safety officials who have no financial or business interest in the outcome—cast the final votes on proposed changes.

The contents of this work are subject to change through the code development cycles and by any governmental entity that enacts the code into law. For more information regarding the code development process, contact the Codes and Standards Development Department of the ICC.

While the I-Code development procedure is thorough and comprehensive, the ICC, its members and those participating in the development of the codes disclaim any liability resulting from the publication or use of the I-Codes, or from compliance or noncompliance with their provisions. The ICC does not have the power or authority to police or enforce compliance with the contents of this code.

Marginal Markings

For Digital Codes Basic and Premium services, Ohio amendments to the International Codes are shown in red text. An open arrow (>) in the margin indicates I-Code text has been omitted.

For print and PDF versions of the code, double vertical lines in the margin within the body of the code indicate Ohio amendments. An open arrow (>) in the margin indicates I-Code text has been omitted.

Coordination of the International Codes

The coordination of technical provisions is one of the strengths of the ICC family of model codes. The codes can be used as a complete set of complementary documents, which will provide users with full integration and coordination of technical provisions. Individual codes can also be used in subsets or as stand-alone documents. To make sure that each individual code is as complete as possible, some technical provisions that are relevant to more than one subject area are duplicated in some of the model codes. This allows users maximum flexibility in their application of the I-Codes.

Italicized Terms

Terms italicized in code text, other than document titles, are defined in Chapter 2. The terms selected to be italicized have definitions that the user should read carefully to better understand the code. Where italicized, the Chapter 2 definition applies. If not italicized, common-use definitions apply.

Adoption

The ICC maintains a copyright in all of its codes and standards. Maintaining copyright allows the ICC to fund its mission through sales of books, in both print and electronic formats. The ICC welcomes adoption of its codes by jurisdictions that recognize and acknowledge the ICC's copyright in the code, and further acknowledge the substantial shared value of the public/private partnership for code development between jurisdictions and the ICC.

The ICC also recognizes the need for jurisdictions to make laws available to the public. All I-Codes and I-Standards, along with the laws of many jurisdictions, are available for free in a nondownloadable form on the ICC's website. Jurisdictions should contact the ICC at adoptions@iccsafe.org to learn how to adopt and distribute laws based on the IEBC in a manner that provides necessary access, while maintaining the ICC's copyright.

Effective Use of the International Existing Building Code

The IEBC is a model code in the International Code family of codes intended to provide requirements for repair and alternative approaches for alterations, changes of occupancy and additions to existing buildings. A large number of existing buildings and structures do not comply with the current building code requirements for new construction. Although many of these buildings are potentially salvageable, rehabilitation is often cost-prohibitive because compliance with all the requirements for new construction could require extensive changes that go well beyond the value of the building or the original scope of the alteration. At the same time, it is necessary to regulate construction in existing buildings that undergo additions, alterations, extensive repairs or change of occupancy. Such activity represents an opportunity to ensure that new construction complies with the current building codes and that existing conditions are maintained, at a minimum, to their current level of compliance or are improved as required to meet basic safety levels. To accomplish this objective, and to make the alteration process easier, this code allows for options for controlled departure from full compliance with the International Codes dealing with new construction, while maintaining basic levels for fire safety, structural and life safety features of the rehabilitated building.

This code provides three main options for a designer in dealing with alterations of existing buildings. These are laid out in Section 301 of this code:

OPTION 1: Work for alteration, change of occupancy or addition of all existing buildings shall be done in accordance with the Prescriptive Compliance Method given in Chapter 5. It should be noted that this method originates from the former Chapter 34 of the *International Building Code* (2012 and earlier editions).

OPTION 2: Work for alteration, change of occupancy or addition of all existing buildings shall be done in accordance with the Work Area Compliance Method given in Chapters 6 through 12.

OPTION 3: Work for alteration, change of occupancy or addition of all existing buildings shall be done in accordance with the Performance Compliance Method given in Chapter 13. It should be noted that this option was also provided in the former Chapter 34 of the *International Building Code* (2012 and earlier editions).

Under limited circumstances, a building alteration can be made to comply with the laws under which the building was originally built, as long as the accessibility requirements are met, there has been no substantial structural damage and there will be limited structural alteration. Flood hazard provisions also must still be addressed where there is a substantial improvement.

Note that all repairs must comply with Chapter 4 and all relocated buildings are addressed by Chapter 14.

TABLE OF CONTENTS

CHAPTER 1 ADMINISTRATION	1-1	505 Windows and Emergency Escape Openings	5-5
Section		506 Change of Occupancy	5-6
101 General	1-1	507 Historic Buildings	5-8
CHAPTER 2 DEFINITIONS	2-1	CHAPTER 6 CLASSIFICATION OF WORK	6-1
Section		Section	
201 General	2-1	601 General	6-1
202 General Definitions	2-1	602 Alteration—Level 1	6-1
		603 Alteration—Level 2	6-1
CHAPTER 3 PROVISIONS FOR ALL		604 Alteration—Level 3	6-1
COMPLIANCE METHODS	3-1	605 Change of Occupancy	6-1
Section		606 Additions	6-1
301 Administration	3-1	607 Historic Buildings	6-1
302 General Provisions	3-1		
303 Storm Shelters	3-2	CHAPTER 7 ALTERATIONS—LEVEL 1	7-1
304 Structural Design Loads and Evaluation		Section	
and Design Procedures	3-2	701 General	7-1
305 In-Situ Load Tests	3-3	702 Building Elements and Materials	7-1
306 Accessibility for Existing Buildings	3-3	703 Fire Protection	7-2
307 Smoke Alarms	3-6	704 Means of Egress	7-2
308 Carbon Monoxide Detection	3-6	705 Reroofing	7-2
309 Additions and Replacements of Exterior Wall		706 Structural	7-3
Coverings and Exterior Wall Envelopes	3-7	707 Electrical	7-4
		708 Energy Conservation	7-4
CHAPTER 4 REPAIRS	4-1		
Section		CHAPTER 8 ALTERATIONS—LEVEL 2	8-1
401 General	4-1	Section	
402 Building Elements and Materials	4-1	801 General	8-1
403 Fire Protection	4-1	802 Building Elements and Materials	8-1
404 Means of Egress	4-1	803 Fire Protection	8-3
405 Structural	4-1	804 Means of Egress	8-5
406 Electrical	4-2	805 Structural	8-9
407 Mechanical	4-2	806 Electrical	8-10
408 Plumbing	4-3	807 Mechanical	8-10
		808 Plumbing	8-10
CHAPTER 5 PRESCRIPTIVE		809 Energy Conservation	8-11
COMPLIANCE METHOD	5-1		
Section		CHAPTER 9 ALTERATIONS—LEVEL 3	9-1
501 General	5-1	Section	
502 Additions	5-1	901 General	9-1
503 Alterations	5-3	902 Special Use and Occupancy	9-1
504 Fire Escapes	5-5		

TABLE OF CONTENTS

903 Building Elements and Materials 9-1
904 Fire Protection 9-2
905 Means of Egress 9-3
906 Structural 9-3
907 Energy Conservation 9-3

CHAPTER 10 CHANGE OF OCCUPANCY 10-1

Section
1001 General 10-1
1002 Special Use and Occupancy 10-1
1003 Building Elements and Materials 10-1
1004 Fire Protection 10-2
1005 Means of Egress 10-2
1006 Structural 10-2
1007 Electrical 10-2
1008 Mechanical 10-3
1009 Plumbing 10-3
1010 Other Requirements 10-3
1011 Change of Occupancy Classification 10-3

CHAPTER 11 ADDITIONS 11-1

Section
1101 General 11-1
1102 Heights and Areas 11-1
1103 Structural 11-1
1104 Energy Conservation 11-2

CHAPTER 12 HISTORIC BUILDINGS 12-1

Section
1201 General 12-1
1202 Repairs 12-1
1203 Fire Safety 12-2
1204 Change of Occupancy 12-2
1205 Structural 12-3
1206 Relocated Buildings 12-3

CHAPTER 13 PERFORMANCE COMPLIANCE METHODS 13-1

Section
1301 General 13-1

CHAPTER 14 RELOCATED OR MOVED BUILDINGS 14-1

Section
1401 General 14-1
1402 Requirements 14-1

CHAPTER 15 CONSTRUCTION SAFEGUARDS 15-1

Section
1501 General 15-1
1502 Protection of Adjoining Property 15-2
1503 Temporary Use of Streets, Alleys and Public Property 15-3
1504 Fire Extinguishers 15-3
1505 Means of Egress 15-3
1506 Standpipes 15-3
1507 Automatic Sprinkler System 15-4
1508 Accessibility 15-4
1509 Water Supply for Fire Protection 15-4

CHAPTER 16 REFERENCED STANDARDS 16-1

APPENDIX A GUIDELINES FOR THE SEISMIC RETROFIT OF EXISTING BUILDINGS APPENDIX A-1

CHAPTER A1 SEISMIC STRENGTHENING PROVISIONS FOR UNREINFORCED MASONRY BEARING WALL BUILDINGS APPENDIX A-1

Section
A101 Purpose APPENDIX A-1
A102 Scope APPENDIX A-1
A103 Definitions APPENDIX A-1
A104 Symbols and Notations APPENDIX A-2
A105 General Requirements APPENDIX A-3
A106 Materials Requirements APPENDIX A-4
A107 Quality Control APPENDIX A-5
A108 Design Strengths APPENDIX A-6
A109 Analysis and Design Procedure APPENDIX A-7
A110 General Procedure APPENDIX A-7
A111 Special Procedure APPENDIX A-8
A112 Analysis and Design APPENDIX A-11
A113 Detailed Building System Design Requirements APPENDIX A-13
A114 Walls of Unburned Clay, Adobe or Stone Masonry APPENDIX A-14

**CHAPTER A2 EARTHQUAKE HAZARD
REDUCTION IN EXISTING
REINFORCED CONCRETE AND
REINFORCED MASONRY WALL
BUILDINGS WITH FLEXIBLE
DIAPHRAGMS.....APPENDIX A-15**

Section

A201 Purpose APPENDIX A-15
 A202 Scope..... APPENDIX A-15
 A203 Definitions..... APPENDIX A-15
 A204 Symbols and Notations APPENDIX A-15
 A205 General Requirements..... APPENDIX A-15
 A206 Analysis and Design APPENDIX A-16
 A207 Materials of Construction APPENDIX A-17

**CHAPTER A3 PRESCRIPTIVE PROVISIONS
FOR SEISMIC STRENGTHENING
OF CRIPPLE WALLS AND
SILL PLATE ANCHORAGE
OF LIGHT, WOOD-FRAME
RESIDENTIAL
BUILDINGSAPPENDIX A-19**

Section

A301 General APPENDIX A-19
 A302 Definitions..... APPENDIX A-19
 A303 Structural Weaknesses..... APPENDIX A-20
 A304 Strengthening Requirements..... APPENDIX A-20

**CHAPTER A4 EARTHQUAKE RISK
REDUCTION IN WOOD-FRAME
RESIDENTIAL BUILDINGS
WITH SOFT, WEAK OR OPEN
FRONT WALLS.....APPENDIX A-37**

Section

A401 General APPENDIX A-37
 A402 Definitions..... APPENDIX A-37
 A403 Analysis and Design APPENDIX A-37
 A404 Prescriptive Measures
 for Weak Story APPENDIX A-39
 A405 Materials of Construction APPENDIX A-40
 A406 Construction Documents APPENDIX A-40
 A407 Quality Control APPENDIX A-41

**CHAPTER A5 REFERENCED
STANDARDSAPPENDIX A-43**

Section

A501 Referenced Standards APPENDIX A-43

**APPENDIX B SUPPLEMENTARY ACCESSIBILITY
REQUIREMENTS FOR EXISTING
BUILDINGS AND
FACILITIES (Deleted).. APPENDIX B-1**

**APPENDIX C GUIDELINES FOR THE WIND
RETROFIT OF EXISTING
BUILDINGS (Deleted) .. APPENDIX C-1**

**APPENDIX D BOARD OF APPEALS
(Deleted) APPENDIX D-1**

**RESOURCE A GUIDELINES ON FIRE
RATINGS OF ARCHAIC
MATERIALS AND
ASSEMBLIES..... RESOURCE A-1**

Section

1 Fire-related Performance of Archaic
 Materials and Assemblies RESOURCE A-2
 2 Building Evaluation..... RESOURCE A-3
 3 Final Evaluation and Design
 Solution RESOURCE A-6
 4 Summary RESOURCE A-13
 Appendix RESOURCE A-15
 Resource A Table of Contents... RESOURCE A-15
 Bibliography RESOURCE A-134

INDEX.....INDEX-1