2027 IPSDC® Code and Commentary

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FORMATTING UPDATES FOR THE 2027 I-CODES

ICC INTERNATIONAL CODE COUNCIL®

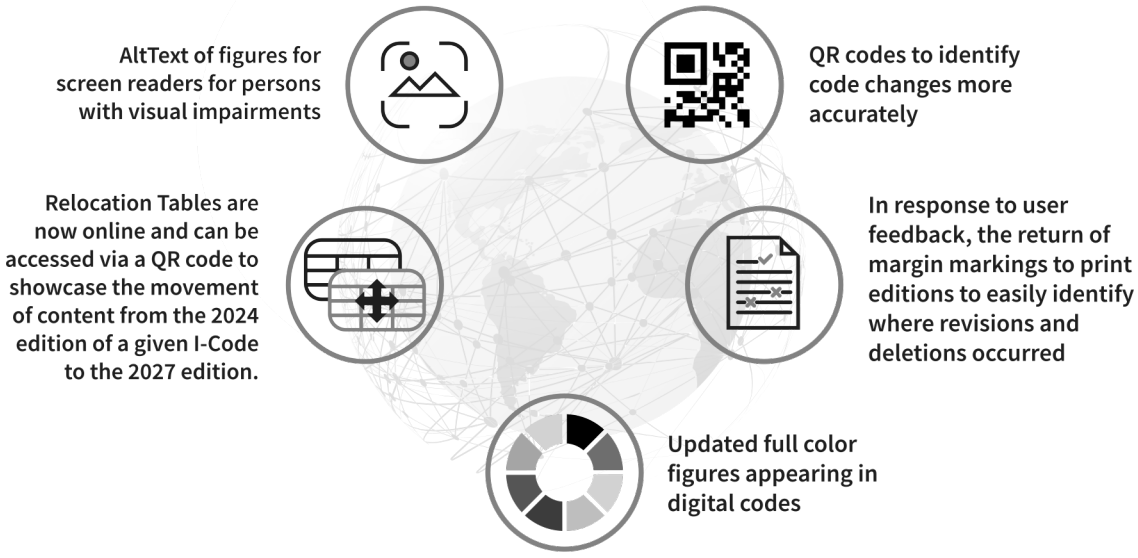
IBC IRC IFC IPC IMC IECC IEBC IFGC

IPMC IPSDC IWUIC IZC ICCPC IgCC ISPSC

The 2027 International Codes® (I-Codes®) reflect ongoing formatting enhancements that advance the International Code Council's® (ICC®) digital transformation strategy and improve the overall user experience across both print and digital platforms. These updates align the print editions with ICC's Digital Codes content online, creating a more consistent and integrated product experience.

With the 2027 editions, the I-Codes include some key updates:

- In the 2024 I-Code print editions, solid vertical lines and deletion arrows in the margins were replaced with QR codes to more precisely identify revisions. While this approach improved specificity, many users indicated that margin markings remained valuable, particularly in environments with limited internet access. In response to this feedback, ICC has reintroduced margin markings in the 2027 print editions. QR codes will continue to be included, providing users with flexible and reliable options for locating and reviewing code changes.
- Relocation Tables are now online and can be accessed via a QR code to showcase the movement of content from the 2024 edition of a given I-Code to the 2027 edition.
- AltText is added to digital formats, providing text descriptions for screen readers to assist those with visual impairments.
- Figures have been enhanced for greater clarity, and now appear in full color in all digital formats.



PREFACE

The *International Private Sewage Disposal Code*® (IPSDC®) establishes minimum requirements for sewage disposal systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new sewage disposal designs.

As a follow-up to the IPSDC, we offer a companion document, the *IPSDC® Code and Commentary*. The basic appeal of the Commentary is thus: it provides in a small package and at reasonable cost thorough coverage of many issues likely to be dealt with when using the IPSDC—and then supplements that coverage with historical and technical background. Reference lists, information sources and bibliographies are also included.

Throughout all of this, effort has been made to keep the vast quantity of material accessible and its method of presentation useful. With a comprehensive yet concise summary of each section, the Commentary provides a convenient reference for private sewage disposal regulations. In the chapters that follow, discussions focus on the full meaning and implications of the code text. Guidelines suggest the most effective method of application and the consequences of not adhering to the code text. Illustrations are provided to aid understanding; they do not necessarily illustrate the only methods of achieving code compliance.

The format of the Commentary includes the full text of each section, table and figure in the code, followed immediately by the commentary applicable to that text. Each section's narrative includes a statement of its objective and intent, and usually includes a discussion about why the requirement commands the conditions set forth. Code text and commentary text are easily distinguished from each other. All commentary is indented below the code text, accompanied by a "C" icon and vertical line.

Readers should note that the Commentary is to be used in conjunction with the IPSDC and not as a substitute for the code. The Commentary is advisory only; the local regulatory authority alone possesses the authority and responsibility for interpreting the code.

Comments and recommendations are encouraged, for through your input we can improve future editions. Please direct your comments to customersuccess@iccsafe.org.

For the complete errata history of this code, please visit: https://www.iccsafe.org/contentupdates/

ABOUT THE INTERNATIONAL CODES

The 2027 International Codes® (I-Codes®), published by the International Code Council® (ICC®), are 15 fully compatible titles intended to establish provisions that adequately protect public health, safety and welfare; that do not unnecessarily increase construction costs; that do not restrict the use of new materials, products or methods of construction; and that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

The I-Codes are updated on a 3-year cycle to allow for new construction methods and technologies to be incorporated into the codes. Alternative materials, designs and methods not specifically addressed in an I-Code can be approved by the building official where the proposed materials, designs or methods comply with the intent of the provisions of the code.

The I-Codes are used as the basis of laws and regulations in communities across the US and in other countries. They are also used in a variety of nonregulatory settings, including:

- Voluntary compliance programs.
- The insurance industry.
- Certification and credentialing for building design, construction and safety professionals.
- Certification of building and construction-related products.
- Facilities management.
- "Best practices" benchmarks for designers and builders.
- College, university and professional school textbooks and curricula.
- Reference works related to building design and construction.

The coordination of technical provisions allows the I-Codes to be used as a complete set of complementary documents. Individual codes can also be used in subsets or as stand-alone documents. Some technical provisions that are relevant to more than one subject area are duplicated in multiple model codes.

THE CODE DEVELOPMENT PROCESS

The code development process regularly provides an international forum for building professionals to discuss requirements for building design, construction methods, safety, performance, technological advances and new products. Proposed changes to the I-Codes, submitted by code enforcement officials, industry representatives, design professionals and other interested parties are deliberated through an open code development process in which all interested and affected parties may participate.

Openness, transparency, balance, due process and consensus are the guiding principles of both the ICC Code Development Process and OMB Circular A-119, which governs the federal government's use of private-sector standards. The ICC process is open to anyone without cost. Remote participation is available through cdpAccess®, ICC's cloud-based app. Details on the code development

process and information on how you can engage in the process can be found at https://www.iccsafe.org/committees/cdc/. This includes details of past, present, and future cycles.

To ensure that organizations with a direct and material interest in the codes have a voice in the process, ICC has developed partnerships with key industry segments that support ICC's important public safety mission.

Code development committees evaluate and make recommendations regarding proposed changes to the codes. Beginning with the 2027 cycle, a second Committee Action Hearing (CAH) was introduced. The second CAH allowed for proponents and interested parties to respond to the committee's recommendations at CAH#1. At CAH#2 the committee could consider these comments once introduced and either modify or reaffirm their recommendation at CAH#1. Their recommendations are then subject to public comment and council-wide votes. 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 I-Codes are subject to change through future 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 ICC at iccsafe.org/products-and-services/i-codes/code-development/.

While the I-Code development procedure is thorough and comprehensive, ICC, its members and those participating in the development of the codes expressly disclaim any liability resulting from the publication or use of the I-Codes, or from compliance or noncompliance with their provisions. NO WARRANTY OF ANY KIND, IMPLIED, EXPRESSED OR STATUTORY, IS GIVEN WITH RESPECT TO THE I-CODES. ICC does not have the power or authority to police or enforce compliance with the contents of the I-Codes.

CODE DEVELOPMENT COMMITTEE RESPONSIBILITIES (LETTER DESIGNATIONS IN FRONT OF SECTION NUMBERS)

In each cycle, proposed changes are considered by the Code Development Committee assigned to a specific code or subject matter. Committee Action Hearings result in recommendations regarding a proposal to the voting membership. Where changes to a code section are not considered by that code's own committee, the code section is preceded by a bracketed letter designation identifying a different committee. Bracketed letter designations for the I-Code committees are:

[A] = Administrative Code Development Committee

[BE] = IBC—Means of Egress Code Development Committee

[BF] = IBC—Fire Safety Code Development Committee

[BG] = IBC—General Code Development Committee

[BS] = IBC—Structural Code Development Committee

[CE] = IECC—Commercial Energy Committee*

[EB] = International Existing Building Code Development Committee

[F] = International Fire Code Development Committee

[FG] = International Fuel Gas Code Development Committee

[M] = International Mechanical Code Development Committee

[MP] = IRC—Mechanical/Plumbing Code Development Committee

[P] = International Plumbing Code Development Committee

[PC] = International Code Council Performance Code Development Committee

[PM] = International Property Maintenance Code Development Committee

[RB] = IRC—Building Code Development Committee

[RE] = IECC—Residential Energy Committee*

[SP] = International Swimming Pool and Spa Code Development Committee

[W] = International Wildland-Urban Interface Code Development Committee

[Z] = International Zoning Code Development Committee**

* This code is currently developed through the ICC Consensus Procedures CP12.

** IZC proposals will be heard by the IPMC committee.

Code change proposals submitted for code sections that have a letter designation in front of them will be heard by the respective committee responsible for such code sections. Because different committees hold Committee Action Hearings in different years, proposals for most codes will be heard by committees in both the 2027 (Group A) and the 2028 (Group B) code development cycles. It is very important that anyone submitting code change proposals understands which code development committee is responsible for the section of the code that is the subject of the code change proposal.

HOW TO IDENTIFY CODE CHANGES

Changes to the I-Codes are identified in multiple ways, including QR codes, colored text and margin markings (solid vertical lines and deletion arrows). QR codes were used in the 2024 I-Codes to precisely identify revisions. In 2027, in addition to QR codes, solid vertical lines denoting changed text and arrows denoting deletions were reintroduced to print editions.

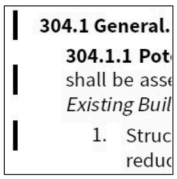
The following key details how those methods appear in the I-Codes:

QR Codes

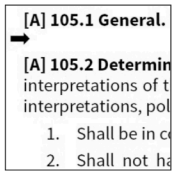
A section bearing a QR code indicates that section has undergone technical revision from the previous code cycle. QR codes take the user to ICC's Digital Codes website (codes.iccsafe.org), where technical revisions are displayed. Use the QR code via one of the following methods:

- Scan the QR code with a mobile device.
- Enter the 7-digit code printed below the QR code at the end of the following URL: qr.iccsafe.org/
- Click the QR code when viewing the code in PDF format.

Margin Markings (specific to print/pdf versions)



Solid vertical lines indicate a technical change from the requirements of the previous edition.



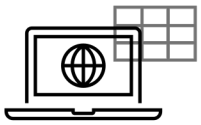
Deletion arrows indicate where an entire section, paragraph, list item, exception, table or table row has been deleted.

Blue Text (specific to Digital Codes)

ICC DIGITAL CODES

While print editions may not display color, digital formats, including online and PDF versions, use **blue text** to denote changes made from the previous I-Code cycle.

Content Relocations



The Content Relocations section of this Preface provides a QR code linking to a table that indicates the relocation of content from the 2024 edition of this code to the 2027 edition.

CONTENT RELOCATIONS

The following QR code links to a Relocations Table documenting the movement of content from the 2024 edition of this code to the 2027 edition:

ITALICIZED TERMS

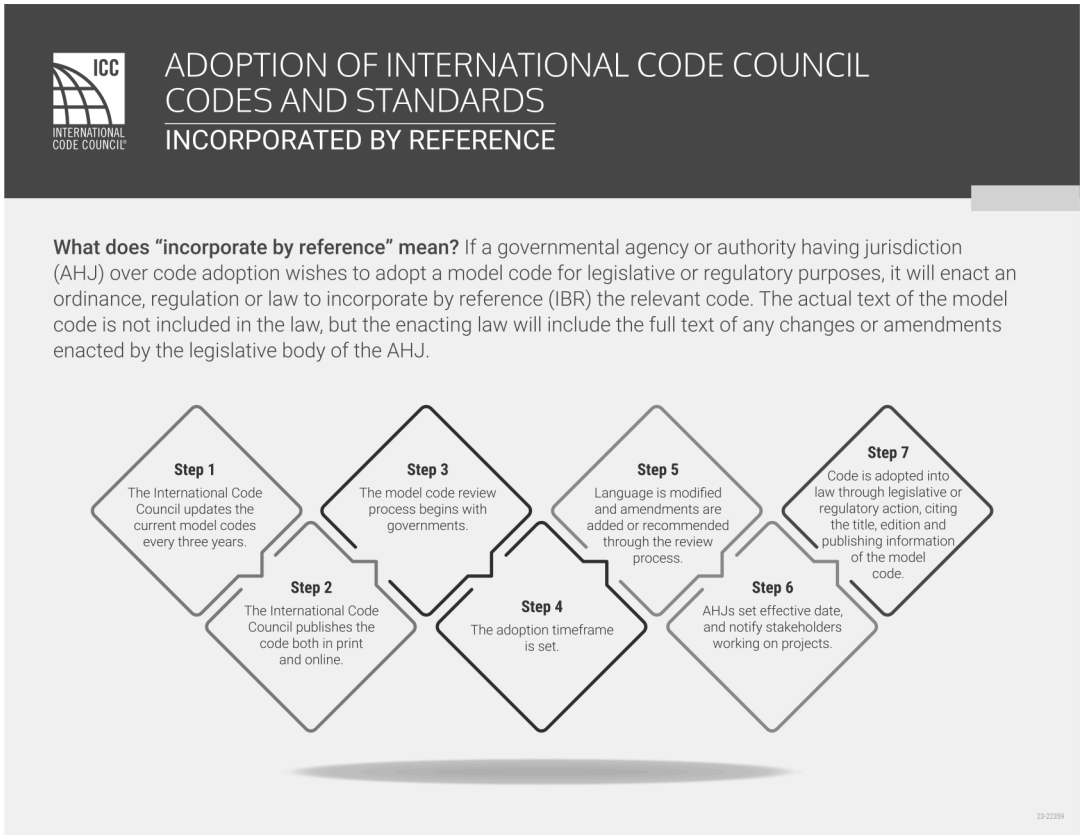
Words and terms defined in Chapter 2, Definitions, are italicized where they appear in code text and the Chapter 2 definitions apply. Although care has been taken to ensure applicable terms are italicized, there may be instances where a defined term has not been italicized or where a term is italicized but the definition found in Chapter 2 is not applicable. For example, Chapter 2 of the *International Building Code*® (IBC®) contains a definition for "Listed" that is applicable to equipment, products and services. The term "listed" is also used in that code to refer to a list of items within the code or within a referenced document. For the latter, the Chapter 2 definition would not be applicable.

ADOPTION OF INTERNATIONAL CODE COUNCIL CODES AND STANDARDS

ICC maintains copyright in all of its codes and standards. Maintaining copyright allows ICC to fund its mission through sales of books in both print and digital format. ICC welcomes incorporation by reference of its codes and standards by jurisdictions that recognize and acknowledge ICC's copyright in the codes and standards, and further acknowledge the substantial shared value of the public/private partnership for code development between jurisdictions and ICC. By making its codes and standards available for incorporation by reference, ICC does not waive its copyright in its codes and standards.

ICC's codes and standards may only be adopted by incorporation by reference in an ordinance passed by the governing body of the jurisdiction. "Incorporation by reference" means that in the adopting ordinance, the governing body cites only the title, edition, relevant sections or subsections (where applicable), and publishing information of the model code or standard and the actual text of the model code or standard is not included in the ordinance (see graphic, "Adoption of International Code Council Codes and

Standards"). The Code Council does not consent to the reproduction of the text of its codes or standards in any ordinance. If the governing body enacts any changes, only the text of those changes or amendments may be included in the ordinance.



ICC also recognizes the need for jurisdictions to make laws accessible to the public. Accordingly, all I-Codes and I-Standards, along with the laws of many jurisdictions, are available to view for free at codes.iccsafe.org/codes/i-codes. These documents may also be purchased, in both digital and print versions, at shop.iccsafe.org.

RESOURCES FOR ADOPTION

To facilitate adoption, some I-Code sections contain blanks for fill-in information that needs to be supplied by the adopting jurisdiction as part of the adoption legislation. Template adoption ordinances are available at https://www.iccsafe.org/advocacy/sample-adoption-ordinances/.

For further information or assistance with adoption, including a sample ordinance, jurisdictions should contact ICC via email at incorporation@iccsafe.org.

For a list of frequently asked questions (FAQs) addressing a range of foundational topics about the adoption of model codes by jurisdictions and to learn more about the Code Council's code adoption resources, scan the QR code or visit iccsafe.org/code-adoption-resources.

INTRODUCTION TO THE INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE

The *International Private Sewage Disposal Code*, or IPSDC, establishes minimum requirements for sewage disposal systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new sewage disposal designs.

The IPSDC is a model code that regulates minimum requirements for the installation of new or the alteration of existing private sewage disposal systems. Where a building cannot be served by a public sewer system, the building site must be provided with a system for treating the wastewater generated from the use of plumbing fixtures in the building. The IPSDC addresses site evaluations, materials, various soil absorption systems, holding tanks, cesspools and on-site wastewater treatment systems. The IPSDC provides a total approach for the on-site, safe disposal of the waste flow discharged to the plumbing fixtures in a building.

The IPSDC is a specification- (prescriptive-) oriented code with very few occurrences of performance-oriented text. The site soil must be evaluated in a prescribed manner to determine its ability to accept the waste flow. The chosen waste treatment method must be designed in a prescribed manner for the soil conditions at the building site, constructed using prescribed materials and installed according to prescribed dimensions. The IPSDC sets forth the minimum acceptable requirements for private sewage disposal systems in order to protect humans and the environment from insanitary conditions that would develop if waste flows were not rendered harmless.

ARRANGEMENT AND FORMAT OF THE 2027 IPSDC

The format of the IPSDC allows each chapter to be devoted to a particular subject except for Chapter 3, which contain subject matters that are not extensive enough to warrant their own independent chapter. The following table shows how the IPSDC is divided. The chapter synopses detail the scope and intent of the provisions of the IPSDC.

CHAPTER TOPICS	
CHAPTERS	**SUBJECTS**
1	Scope and Administration
2	Definitions
3	General Regulations
4	Site Evaluation and Requirements
5	Materials
6	Soil Absorption Systems
7	Pressure Distribution Systems
8	Tanks
9	Mound Systems
10	Cesspools
11	Residential Wastewater Systems
12	Inspections
13	Nonliquid Saturated Treatment Systems
14	Referenced Standards
Appendix A	System Layout Illustrations
Appendix B	Tables for Pressure Distribution Systems
Appendix C	Board of Appeals

Chapter 1 Scope and Administration.

Chapter 1 establishes the limits of applicability of the code and describes how the code is to be applied and enforced. The provisions of Chapter 1 establish the authority and duties of the code official appointed by the authority having jurisdiction and also establish the rights and privileges of the design professional, contractor and property owner.

Chapter 2 Definitions.

Chapter 2 is the repository of the definitions of terms used in the body of the code. The user of the code should be familiar with and consult this chapter because the definitions are essential to the correct interpretation of the code and because the user may not be aware that a term is defined.

Chapter 3 General Regulations.

The content of Chapter 3 is often referred to as “miscellaneous,” rather than general regulations. Chapter 3 received that label because it is the only chapter in the code where requirements do not interrelate. If a requirement cannot be located in another chapter, it can be found in this chapter. Specific requirements concerning flood hazard areas are in this chapter.

Chapter 4 Site Evaluation and Requirements.

A private sewage disposal system has an effluent that cannot be directly discharged into waterways or open ponds. Soil of the right consistency and water content provides natural filtering and treatment of this discharge. Because soil conditions vary widely, even on the same building site, tests and inspections of the soils must be performed to evaluate the degree to which the soil can accept these liquids. The results of the tests provide necessary information to design an adequate private sewage disposal system. Chapter 4 provides the methods for evaluating the building site.

Chapter 5 Materials.

Private sewage disposal systems depend on the strength, quality and chemical resistance of the components that make up the system. To that end, the purpose of Chapter 5 is to specify the minimum material and component standards to ensure that the private sewage disposal system will correctly perform for its intended life.

Chapter 6 Soil Absorption Systems.

The design of soil absorption systems depends heavily on the result of the tests and evaluation of the site soil conditions required in Chapter 4. Where soil is less permeable, the area of the soil absorption must be large as compared to that required for soils that are highly permeable. The type of building that is being served by the private sewage disposal system also affects the size of the planned soil absorption area. Chapter 6 provides the methods for computing the required absorption area and details for the proper installation of the soil absorption systems.

Chapter 7 Pressure Distribution Systems.

Chapter 6 deals with gravity-type soil absorption systems or systems where the effluent is allowed to drain out of the distribution piping by gravity. Chapter 7 offers an alternative method of discharging the effluent into the ground by pressure means. As such, Chapter 7 provides the necessary details for designing the piping and pumping systems for pressure distribution systems.

Chapter 8 Tanks.

Tanks are an integral part of any private sewage disposal system, whether they serve as treatment (septic) tanks or merely just holding tanks for leveling the peaks in flow to the system. Where tanks are used for treatment, the dimensions, volume and location of internal features are very important to ensure that the solid wastes are kept within the tank so as to not clog the effluent distribution system. Where tanks are used for holding purposes, they must be sized large enough to accommodate the total of peak flows coming from a building. Chapter 8 provides the necessary requirements for tanks.

Chapter 9 Mound Systems.

Mound systems are another method for applying the effluent from a private sewage disposal system to the soil. This type of system may be advantageous in some localities due to the existing soil conditions. Chapter 9 has specific requirements for soil and site evaluations for mound systems.

Chapter 10 Cesspools.

Although prohibited from being installed as a permanent private sewage disposal system, cesspools may be necessary where permanent systems are under repair or are being built. Chapter 10 provides the details for constructing a cesspool.

Chapter 11 Residential Wastewater Systems.

Another method of private sewage disposal is a small wastewater treatment plant. Where permitted, these systems can discharge effluent directly to streams and rivers. Chapter 11 specifies the standard to which wastewater treatment plants must conform.

Chapter 12 Inspections.

The best soil and site analysis along with the best design will be rendered useless if the system is not installed according to the plans for the system. Chapter 12 provides requirements for inspection of private sewage disposal systems.

Chapter 13 Nonliquid Saturated Treatment Systems.

In some locations, water for the flushing of waste into and through a sanitary piping system is not available. For example, a toilet facility provided for a remote campground without running water would require such a system. Chapter 13 specifies the standard to which nonliquid saturated treatment systems must conform.

Chapter 14 Referenced Standards.

Chapter 14 lists all of the product and installation standards and codes that are referenced throughout Chapters 1 through 13 and includes identification of the promulgators and the section numbers in which the standards and codes are referenced. As stated in Section 102.10, these standards and codes become an enforceable part of the code (to the prescribed extent of the reference) as if printed in the body of the code.

Appendix A System Layout Illustrations.

Because each chapter of this code uses only words to describe requirements, illustrations can offer greater insight as to what the words mean. Appendix A has a number of illustrations referenced to specific sections of the code to help the reader gain a better understanding of the requirements of the code.

Appendix B Tables for Pressure Distribution Systems.

The design of a pressure distribution system is accomplished by the use of several complex formulas found in Chapter 7. Because a user of the code may not have the necessary experience to manipulate the formulas, a tabular approach for designing pressure distribution systems is provided in Appendix B.

Appendix C Board of Appeals.

Appendix C contains the provisions for appeal and the establishment of a board of appeals. The provisions include the application for an appeal, the makeup of the board of appeals and the conduct of the appeal process.

CONTENTS