CHAPTER

2

Legal Aspects, Permits and Inspections

The *International Existing Building Code*® (IEBC®) is what is called a model code, which means that it can be adopted by a governmental agency and become law. The IEBC is adopted across the country by federal, state and local government agencies. This chapter describes the adoption process and how the code is enforced through the review of construction plans and the inspection of the work. The building department's authority and code administration responsibilities also are discussed.

CODE ADOPTION

In order for a jurisdiction to enforce the IEBC, first it must adopt the code as a law. Many states adopt the code through legislation, whereas others delegate that authority to a specific board or state agency. In some states, the local county, city, town or parish may adopt the code to regulate construction in its jurisdiction. Users of the code should contact their local jurisdictions to determine what building code has been adopted. The adopting legislation or ordinance goes through the public hearing process required by the adopting agency. Many jurisdictions develop amendments to the code to address local conditions and needs. When dealing with a local authority, users of the codes are advised to contact the jurisdiction and review any potential amendments.

Codes versus standards

The IEBC is generally a performance-oriented code. In some cases, the code references specific documents that regulate materials and methods of construction to enhance the requirements. These documents are called *referenced standards*. Referenced standards are typically developed by agencies other than the International Code Council (ICC). However, the Council does publish several standards, such as ICC A117.1 *Standard for Accessible and Usable Buildings and Facilities*. The standards are reviewed by code development committees to ensure that they meet ICC's requirements to be included in the code. When the standards are referenced in the code, they are considered to be a part of the code. Therefore, when a jurisdiction adopts the code, all of the standards listed in Chapter 16 are also considered to be adopted. However, only those portions of the standard that are applicable to the specific code provision apply.

Many types of standards are referenced throughout the IEBC, including structural engineering standards, material standards, installation standards and testing standards. For example, Section 406.1.1 requires electrical receptacles to comply with NFPA 70, the *National Electrical Code*. The National Fire Protection Association (NFPA) publishes different types of electrical and fire protection standards that are referenced throughout the IEBC.

Standards used in the IEBC

Chapter 16 of the IEBC lists all of the referenced standards. They are alphabetized by the initials of the promulgating agency. Each standard is listed with the document's publication designation, edition year, title and the section of the code where the document is referenced (Figure 2-1). It is important that the correct edition of the standard is used because the revision dates of the standards do not always coin-

cide with the revision of the IEBC. The referenced codes and standards are considered part of the requirements of the IEBC. Where there are conflicts between the code provisions and the referenced document, the provisions of the code will apply.

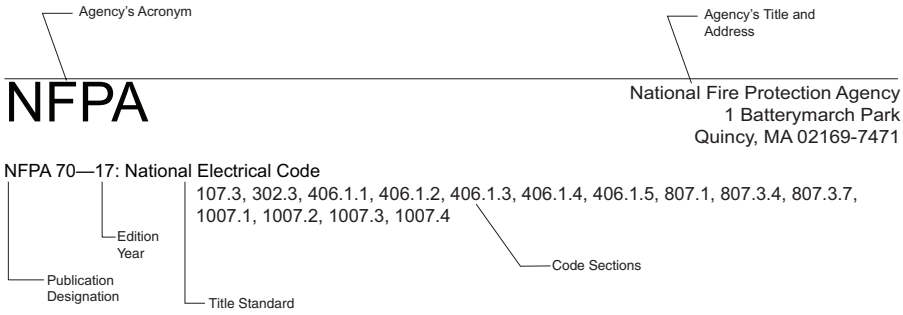
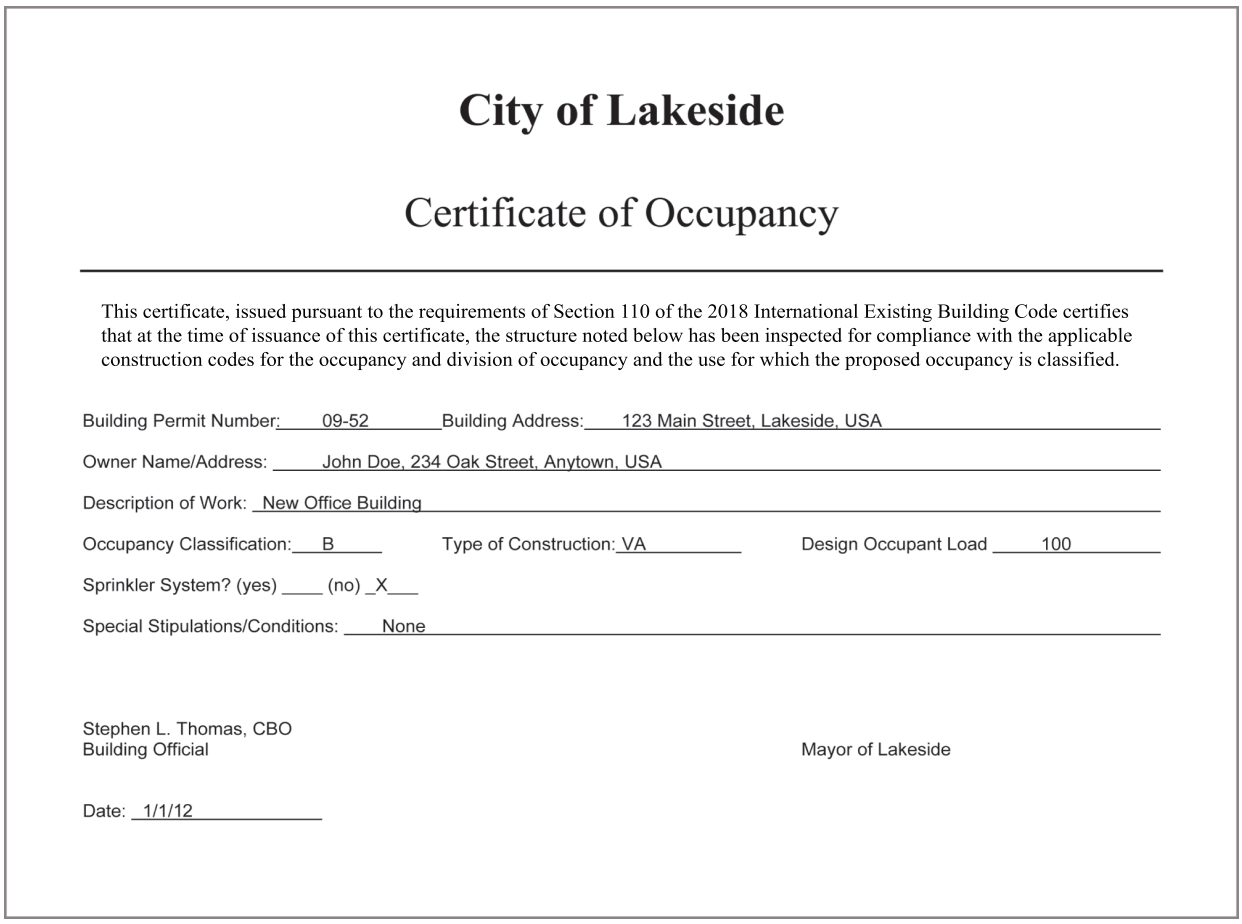


FIGURE 2-1 Referenced standard example.

AUTHORITY

When the IEBC is adopted by a jurisdiction, it needs to be enforced. To provide for this enforcement, the jurisdiction creates the Department of Building Safety. This department is managed by the building official, who is appointed by the chief appointing authority of the jurisdiction. This can range from a city/county manager to the city council to the governor. The building official has the authority to enforce and interpret the code. This person also appoints deputies—building inspectors, plans examiners and permit technicians—to assist in the enforcement of the code. Building departments range from a one-person office to hundreds of employees in an agency. **[Ref. 103]**

Because the building code is adopted as a law in a jurisdiction, it must be enforced just like any other law. A department enforces the code by reviewing building plans prior to construction and issuing building permits authorizing the work. The project is then inspected by building inspectors trained and certified in their area of expertise. Inspections are also conducted by experts in specialized subjects. The inspection process is discussed further in this chapter. After the inspections are complete and the building complies with the applicable codes, a Certificate of Occupancy is issued, permitting the building to be occupied by the public (Figure 2-2).



City of Lakeside

Certificate of Occupancy

This certificate, issued pursuant to the requirements of Section 110 of the 2018 International Existing Building Code certifies that at the time of issuance of this certificate, the structure noted below has been inspected for compliance with the applicable construction codes for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.

Building Permit Number: 09-52 Building Address: 123 Main Street, Lakeside, USA

Owner Name/Address: John Doe, 234 Oak Street, Anytown, USA

Description of Work: New Office Building

Occupancy Classification: B Type of Construction: VA Design Occupant Load 100

Sprinkler System? (yes) ____ (no) _X___

Special Stipulations/Conditions: None

Stephen L. Thomas, CBO
Building Official

Mayor of Lakeside

Date: 1/1/12

FIGURE 2-2 Certificate of Occupancy.

Even though the code is adopted as a law, there are many provisions that are not designed to be specific. Some of the language is written to be vague to allow the building official to determine what is needed for code compliance. The building official, who has the authority to interpret the code, must understand the underlying intent and purpose of the code provisions to provide a reasonable interpretation. The interpretation cannot have the effect of waiving the code. **[Ref. 104.1]**

Several resources are available to the users of the IEBC to obtain the intent of a specific code section. One document is the *International Existing Building Code and Commentary*® published by ICC. This document contains each section of the code followed by an explanation and description of the intent of the requirements. ICC also publishes *2018 International Building Code Illustrated Handbook* which can provide an explanation for the purpose behind provisions for new construction. Combined with the commentary, the two books enhance understanding of code provisions for new buildings and how they are intended to be modified for existing buildings. ICC members can call the Council and talk with a staff engineer for assistance in applying the code. Users of the code should contact their local jurisdiction to

get the local building official's interpretation. Building departments are always willing to assist a designer or contractor in using the code. It is important to remember that the authority having jurisdiction is responsible for interpreting the code. Therefore, that authority is the sole provider of the interpretation of the code.

As technology improves and new products are developed, the building code falls behind because it is only updated every 3 years. Therefore, the code gives the jurisdiction the authority to approve alternate materials, designs, and methods of construction. Although many parts of the code are prescriptive in nature, it allows a performance-based process in complying with its requirements. A *prescriptive code* is a requirement that must be specifically met. A *performance code* requirement describes the intent of a section and allows the architect to come up with a design to comply with the code. The design must be acceptable to the building official and meet the intent of the code.

Alternate materials and methods of construction

The IEBC is not intended to prohibit any type of material or design that may be developed. Therefore, there are provisions for evaluating these new materials and methods of construction. The building official reviews alternate designs and products to determine if they comply with the purpose and intent of the code. The official must determine if the alternate is at least the equivalent to the code in quality, strength, effectiveness, fire resistance, durability and safety. This is accomplished by reviewing testing information and research reports provided by the manufacturer of the product. The ICC Evaluation Service (ICC-ES) was created to assist the building official in this process. ICC-ES develops acceptance criteria for different types of construction products and evaluates the products to determine they comply with the intent of the particular code (Figure 2-3).

An evaluation report includes specific information about the product being reviewed (Figure 2-4). It provides manufacturer information, installation requirements and details, and specific conditions for the approval. The report is issued for a specific time period and renewed as required. It is also approved based on specific editions of the code. Because the code is revised every 3 years, it is important for the current report to be used in evaluating the product for use in a project. **[Ref. 104.11]**

You Should Know

Prescriptive versus Performance

Prescriptive code example:

"Handrail height, measured above stair tread nosings, or finish surface of ramp slope shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm)."

Performance code example:

"Fire walls shall be designed and constructed to allow collapse of the structure on either side without collapse of the wall under fire conditions." ●

FIGURE 2-3 Using the 2018 edition of the I-Codes, a building built using shipping containers is considered an alternate design.

ICC EVALUATION SERVICE — Most Widely Accepted and Trusted

ICC-ES Evaluation Report

ESR-5000

Issued January 2018

This report is subject to renewal January 2019.

www.icc-es.org | (800) 423-6587 | (562) 699-0543 *A Subsidiary of the International Code Council®*

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 30 05—Roofing Felt and Underlayment

REPORT HOLDER:

ACME UNDERLAYMENTS UNLIMITED
52380 FLOWER STREET
CHICO, MONTANA 43820
(808) 664-1512
www.underlaymentunlimited.com

EVALUATION SUBJECT:

UU 100 UNDERLAYMENT FOR ASPHALT SHINGLE ROOF COVERINGS IN SEVERE CLIMATE AREAS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018 and 2015 *International Building Code®* (IBC)
- 2018 and 2015 *International Residential Code®* (IRC)

Property evaluated:

Ice barrier

2.0 USES

UU 100 is a self-adhering, rubberized asphalt membrane, complying with ASTM D1970, that is used over plywood substrates as ice barriers as specified in Chapter 15 of the IBC and Chapter 9 of the IRC.

3.0 DESCRIPTION

The UU 100 has a granule surfacing. The membrane has a silicone-treated release paper on the back that is removed prior to attachment to plywood sheathing. The membrane is a minimum of 0.040 inch (1.02 mm) thick and is supplied in rolls 36 inches (914 mm) wide and 66.7 feet (20.3 m) long.

4.0 INSTALLATION

Installation of the UU 100 membrane must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions and this report must be available at the jobsite at all times during the installation.

Prior to application of the membrane, the deck surface must be free of frost, dust and dirt, loose nails and other protrusions. Damaged sheathing must be replaced. Installation is limited to plywood substrates. The membrane is designed for applications when the ambient air temperature is above 40°F (4.4°C).

Vertical ends and horizontal edges must be overlapped a minimum, respectively, of 6 inches (152 mm) and 3 1/2 inches (89 mm). Horizontal edge overlaps must run with the flow of water in a shingling effect. A minimum of two layers of the membrane must be applied, starting at the lower edge (eave) of the roof, and extend a minimum of 24 inches (610 mm) inside the exterior wall line of the building. Final coverage width must comply with the code.

Installation of the roof covering can proceed immediately following application of the membrane. The membrane must be covered by an approved roof covering as soon as possible. For reroofing applications, the same procedures apply after removal of the old roof covering and roofing felts to expose the plywood roof deck.

5.0 CONDITIONS OF USE

The UU 100 membrane described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report and the manufacturer's published installation instructions. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

5.2 Installation is limited to use on plywood substrates on structures located in areas where non-classified roof coverings are permitted.

5.3 Installation is limited to use with roof coverings that are mechanically fastened through the underlayment to the sheathing or rafters.

5.4 Installation is limited to roofs with ventilated attic spaces, in accordance with the requirements of the applicable code.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Self-adhered Roof Underlayment for Use as an Ice Barrier in Severe Climate Areas (AC48), dated February 2012 (editorially revised December 2015).

6.2 Reports of testing in accordance with ASTM D1970.

7.0 IDENTIFICATION

The membrane is identified by labels on the rolls or packaging, displaying the Acme Underlayments Unlimited's name and address, the product name, and the evaluation report number ESR-5000.

FIGURE 2-4 ICC Evaluation Report.

Occasionally there are instances when there is a practical difficulty with building code compliance. Therefore, the IEBC allows a modification to be approved by the building official for individual cases. The owners or their authorized agent must apply for the modification and explain why there is a practical difficulty in complying with the strict letter of the code. They also must provide documentation that their proposed fix or modification is in compliance with the intent and purpose of the code and that such modification does not lessen the health, accessibility, life and fire safety or structural requirements. The building official reviews this information and determines whether the modification should be granted. The official then records the decision in the building department files. **[Ref. 104.10]**

PERMITS

Building permits are issued after the building department reviews the plans for compliance with the applicable codes. When a property owner wants to build, remodel or add onto an existing building, he or she must obtain a permit from the building department. A set of plans drawn by an architect or engineer must be submitted to the building department, showing the type of work that will be done on the project.

The building department then reviews the drawings to determine whether or not the plans comply with the adopted codes in the jurisdiction. If the plans are not in compliance, a plan review report is issued by the plans examiner and returned to the applicant. The drawings are required to be revised to correct the areas noted in the report. Once it is determined that the drawings comply with the minimum codes, a building permit is issued to the owner or contractor. The contractor is then authorized to start the work outlined in the plans. The contractor is required to keep the permit on the job site for the inspectors as the job progresses.

It is important that owners of a building, as well as the architect or contractor, obtain a building permit from their local building department. The building permit ensures that the building is constructed to the minimum standards of the code and the work is completed properly. Occupants expect a building to be safe when they enter. Working on a building without a permit and assistance from the building department may create an unsafe condition for the occupants of the building. If someone does construction without the proper permits, that individual may be subject to criminal prosecution and the work may need to be removed. The individual also risks the chance of additional liability if someone is injured in the building and it is determined that a building permit and the required inspections were not obtained.

FIGURE 2-5 Playground equipment accessory to a single-family dwelling does not require a permit.

Not every little bit of work in a building requires a permit. The code exempts small projects like storage sheds less than 120 square feet, fences over 7 feet, retaining walls less than 4 feet, painting, wallpaper installations, playground equipment accessory to one- and two-family dwellings (Figure 2-5) and other minor construction. It also allows building owners to do minor maintenance without needing a permit. Although a permit may not be necessary and no inspections are required, the owner is obligated to do the work properly and in accordance with the code. Property owners should always check with their local jurisdictions to determine whether a building permit is required for their project.

Submittal requirements

To obtain a building permit from a jurisdiction, an applicant must submit an application, a set of construction documents and specifications showing what type of work will be done. These documents must also show how the project will comply with the applicable portions of the code. A typical set of drawings includes floor plans, elevations, sections, details and specifications on materials and installation of equipment. The drawings should give enough information that anyone could take the plans and alter or add to the structure without knowing anything about the project. The code requires that a minimum of two sets of documents be submitted. Once a permit is issued, one set is kept on the job site and the other is kept on file in the building department. **[Ref. 106.5]**

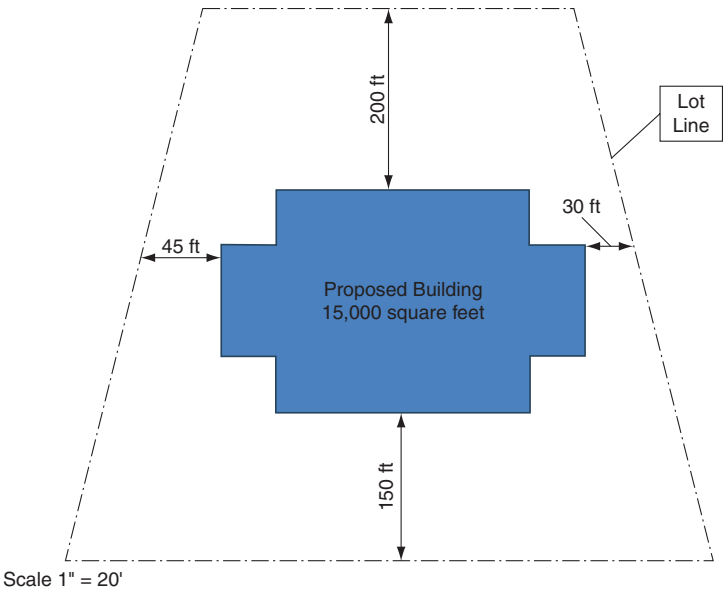


FIGURE 2-6 Site plan example.

The code provides specific information that is required to be submitted on the construction documents. The plans must show the location of the existing building, the planned construction, and the size and character of the means of egress. This includes the number of occupants that will be in the building. The design of the exterior wall envelope must also be shown on the drawings. Details on the flashing, water-resistive membrane, and means of drainage must be included. Manufacturers' installation instructions are needed to ensure that penetrations and opening details are done correctly. A site plan must be provided showing the location of the building on a lot, as well as the dimensions between

Building Code Data

Project Description

Odyssey Flats is a new residential building located at 123 Main Street. The building comprises 12,000 square feet in 3 stories, located on a 5,125 square foot site. The building is light-frame wood construction. The building is a three story residential apartment project.

Applicable Codes	Building Classification	
2018 International Building Code	Occupancy Classification:	Group R-2
2018 International Mechanical Code	Type of Construction:	Type VB
2018 International Plumbing Code	Fire Sprinklers:	NFPA 13R
2017 National Electric Code	Seismic Design Category:	B
2018 International Energy Code	Wind Speed:	90 mph
2018 International Fire Code	Snow Load:	30 psf

Area Calculations

Actual Building Area		Allowable Area & Height	
First Floor	4,000 SF	Tabular Area	7,000
Second Floor	4,000 SF	Total Allowable Building Area	21,000 SF
Third Floor	4,000 SF	Allowable Height	Three stories w/NFPA 13R Spr.
Total	12,000 SF		60 feet w/NFPA 13 R Spr.

Means of Egress

Occupant Load		Exits per Floor	
First Floor	4,000 SF/200 SF/Occ. = 20	First Floor	2
Second Floor	4,000 SF/200 SF/Occ. = 20	Second Floor	2
Third Floor	4,000 SF/200 SF/Occ. = 20	Third Floor	2

FIGURE 2-7 Building Code Data sample.

the building and the lot lines (Figure 2-6). When the building is located in a flood hazard area, the plans must indicate the location of the flood hazard areas and the elevation of the 100-year flood. The most common way of showing this information on the drawings is with a code data sheet. This sheet provides an overview of the code requirements for the building. Figure 2-7 is a sample of a code data sheet.

In most states, construction documents are required to be prepared by a licensed architect and/or engineer. The IEBC requires an owner to engage and designate a registered design professional to be in charge of the project. If the owner changes the design professional, he or she must notify the building official in writing. The registered design professional is responsible for reviewing and coordinating any documents submitted by other people involved in the project and must ensure that the information is compatible with the design of the building. **[Ref. 106.6]**

Plan review process

When construction documents are submitted to the building department, the code requires that the plans be reviewed for compliance. It also requires that the review include other applicable laws of the