



BUILDING CODES PRIMER

Building codes and industry standards have an important impact on the apartment sector. The National Multifamily Housing Council and the National Apartment Association (NMHC/NAA) have an extensive history in the development of national model codes and standards. We advocate for codes and standards that are technologically feasible, cost-effective and able to address the unique needs of the multifamily industry.

NATIONAL MODEL BUILDING CODES AND STANDARDS

National model building codes and standards establish minimum requirements for the design, construction, alteration and maintenance of structures. They provide uniformity and relieve state and local jurisdictions from the burden of creating individual building codes.

Model codes and standards are developed and published by independent organizations, based on the participation of a diverse group of stakeholders, including code officials, product manufacturers, health and safety advocates, and industry representatives. The international model codes are produced by the International Code Council (ICC). Several other organizations, including the National Fire Protection Association (NFPA), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the International Association of Plumbing and Mechanical Officials (IAPMO) publish additional building codes and standards.

These codes and standards routinely serve as the basis for state and local building codes and federal regulations. However, they are not in effect or enforceable until they are adopted by a state or local jurisdiction. Accordingly, state and local governments may adopt model codes and standards in whole, in part or amend the model provisions to accommodate specific regional conditions.

Model codes and standards are generally not retroactive; rather, they apply to new buildings constructed from the time of adoption forward. However, some model provisions are specifically intended to apply to existing structures. Such provisions are found in Chapter 34 of the International Building Code, the International Fire Code and the International Property Maintenance Code.

NMHC/NAA ROLE

NMHC/NAA advocate for codes and standards that are technologically feasible, cost effective and reflect the unique needs of the multifamily industry. As active participants in the code development process, we and our consultants regularly serve as members of code and standard development committees, as well as organizational governance committees. In other cases, we collaborate with the development committees, craft code proposals, represent the multifamily sector at code hearings, develop code commentary, collaborate with local code officials and serve as a resource for the code- and standard-making organizations.

Throughout the development process, we monitor proposals for the practical impacts to apartments and the costs of implementing new codes. Unnecessarily and prohibitively increasing the construction costs of apartment communities limits the affordability of rental units and aggravates the shortage of affordable housing that already exists in the U.S.

ICC MODEL BUILDING CODES

ICC CODES AND STANDARDS

The ICC publishes 15 International Model Codes (I-Codes). Those of primary interest to the apartment sector are:

- **International Building Code (IBC)** – The IBC is a comprehensive code providing requirements for all buildings, except one- and two-family dwellings and townhouses up to three stories. It contains broad-ranging provisions that regulate building systems and structural requirements, including fire protection systems, accessibility, indoor environmental air quality and structural design measures.
- **International Fire Code (IFC)** – The IFC covers general fire precautions, emergency planning and preparedness, including fire department access, water supplies, sprinkler systems, fire alarm systems and maintenance of fire protection equipment in existing buildings.
- **International Energy Conservation Code (IECC)** – The IECC addresses building energy efficiency and provides requirements for energy design and performance of building systems, including the building envelope, lighting, and mechanical and water systems.
- **International Green Construction Code (IgCC)** – Provides comprehensive requirements for site and building environmental design and performance, including land development, material selection, energy and water efficiency, and indoor air quality.
- **International Property Maintenance Code (IPMC)** – Provides requirements for the continued use and maintenance of plumbing, mechanical, electrical and fire protection systems in existing buildings.
- Other I-Codes include: *International Fuel Gas Code; International Mechanical Code; International Plumbing Code; International Private Sewage Disposal Code; International Existing Building Code; International Performance Code; International Wildland-Urban Interface Code; International Zoning Code; International Residential Code; and International Swimming Pool Code and Spa Code.*

ICC also publishes two standards that are important to the apartment industry:

- **National Green Building Standard (ICC 700)** – Provides a comprehensive, points-based system for improving the environmental design and performance of residential buildings and building sites. Includes provisions addressing land use, material selection, energy and water efficiency, indoor air quality and resident education.
- **Accessible and Usable Buildings and Facilities (ICC A117.1)** – Provides the technical requirements for accessibility in commercial and residential occupancies and is aligned with provisions from the Americans with Disabilities Act. The International Building Code specifies the applicability of A117.1.

ICC uses a different process for updating its codes and standards, both of which are detailed below.

ICC CODE DEVELOPMENT PROCESS

ICC codes are updated and published every three years using the governmental consensus approach. The ICC process provides open public forums, transparency, diverse stakeholder participation, due process, appeals and consensus decision-making. Although a broad array of experts participate in the process, government representatives (i.e., code officials) make the final determinations on code provisions. NMHC/NAA participate in every step of the process.

To improve the efficiency of the process, ICC has revamped its timeline for updating the I-Codes. The codes have been divided into three groups—Group A, B and C—and given staggered hearing schedules. Although each group has a separate time table for the revision process, all new code editions are published at the same time. ICC is currently working on the 2015 editions of its codes. (More information on the 2015 code development process is available at NMHC/NAA's *Building Codes & Standards Development Schedule Fact Sheet*.)

The code change process is detailed below.

- **Code Change Submittal.** Any interested person or organization may submit a proposed code change. The deadline for submitting code change proposals occurs two to three years before a new code edition is published. The deadlines are posted by the ICC and published in the Federal Register. NMHC/NAA often develop and submit code change proposals to address the needs of the apartment sector.
- **Code Change Review.** Approximately two months after the code change proposal deadline, ICC publishes all submitted

proposals for review. During this period, NMHC/NAA analyze the proposals and identify those having repercussions for multifamily properties.

- *Code Development Hearing.* Approximately four months after code change proposals are submitted, ICC holds public code development hearings where interested parties testify before the Code Development Committee (CDC) in support of or in opposition to a change proposal. NMHC/NAA routinely testify at these public hearings to ensure that the code committees understand the issues important to the apartment industry. After testimony is complete, the committee recommends accepting or denying a code change proposal.
- *Report and Public Comment.* ICC publishes the hearing results shortly after completion. The public is then invited to submit comments on the CDC decisions, which can include objections to the hearing results. NMHC/NAA review the hearing results and comment as needed.
- *Final Action Hearing and Publication.* Roughly 10 months after code change proposals are submitted, ICC holds another round of public hearings, allowing interested parties to offer testimony on the public comments and CDC recommendations. After testimony designated ICC voting members (largely code officials) vote for or against code change proposals. ICC incorporates all approved final action items into the next edition of the I-Code.
- *State and Local Adoption.* The revised codes are not in effect until adopted by a state or local jurisdiction. Advocacy on behalf of the apartment sector at the state and local level can help policymakers understand the code changes and make recommendations for amendment or non-adoption of model code provisions.

While NMHC/NAA direct code development resources toward those with the greatest impact on apartment properties, we monitor and participate in the development of other I-Codes on an ad hoc basis.

ICC STANDARDS DEVELOPMENT PROCESS

The ICC standards—ICC 700 and ICC/ANSI A117.1—are developed under the American National Standards Institute (ANSI) consensus process and are updated on a five-year cycle. This process significantly differs from the ICC code development system.

The ANSI process provides for public participation, balanced committee membership, transparency and consensus decision-making. Although the ANSI process does not involve formal hearings, interested parties can submit proposed changes to the standards. Changes can also be developed by the committee during the deliberation process. All are invited to submit comments on change proposals and participate in the committee deliberations. However, the ANSI process does not include formal hearings comparable to the ICC system, and final determinations are made by all committee members. The process provides ample opportunities for input from the apartment sector and other interested parties.

OTHER RELEVANT BUILDING STANDARDS

NFPA CODES/STANDARDS

The National Fire Protection Association produces over 300 standards and one code, the NFPA 5000 – Building Construction and Safety Code (an alternative to the IBC that is rarely adopted).

While NFPA documents can be adopted locally, they are typically enacted indirectly by reference in the I-Codes. This means that a document is not independently vetted at the time of adoption, but rather is included in an I-Code during the code's development process. Unless otherwise noted, the codes and standards referenced in an I-Code become part of the jurisdictional compliance requirements at the time such code is adopted. I-Codes may include dozens of references to other codes and standards.

NMHC/NAA closely monitor and participate in the development of the following NFPA codes and standards:

- **Fire Code (NFPA 1)**
- **National Fire Alarm Code (NFPA 72)**
- **Life Safety Code (NFPA 101)**
- **Building Construction and Safety Code (NFPA 5000)**
- **National Electrical Code (NFPA 70)**

Like ICC, NFPA develops standards using the ANSI consensus process; although the procedure differs slightly. NFPA documents are updated on a three-year cycle. Anyone can submit proposed changes; however, participation is limited to committee members



unless specific permission is asked for and granted prior to the committee meeting.

ASHRAE STANDARDS DEVELOPMENT

Like NFPA, ASHRAE develops ANSI standards that are updated every three years. However, some standards are on continuous maintenance, meaning that these standards are updated continuously through addenda to the existing standard. They can be adopted locally but are most often referenced by the I-Codes. Participation in the development process and distribution of committee correspondence is limited to committee and subcommittee members with participation by others at the discretion of the chair.

NMHC/NAA track and participate in the development of the following ASHRAE standards:

- **ASHRAE Standard 90.1 – *Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings***
- **ASHRAE Standard 90.2 – *Energy Efficient Design of Low-Rise Residential Buildings***
- **ASHRAE Standard 189.1 – *Standard for the Design of High-Performance Green Buildings except Low-Rise Residential Buildings***