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COMMERCIAL BUILDING CODES: PROTECTING LIVES AND LIVELIHOODS

Building codes are the regulatory structures in place to assure that minimum acceptable standards are used in the design, construction and maintenance of the places where people live and work. Building codes are intended to increase the safety and integrity of structures, thereby reducing deaths, injuries and property damage from a wide range of hazards.

Many people automatically associate building codes with the construction and retrofitting of homes, but codes also play an important role in promoting more durable commercial structures that are safeguarded from incidents such as fires, electrical malfunctions, and natural disasters. These standards are important not only to eliminate or reduce property damage, but also to protect employees from a variety of hazards and facilitate safe evacuations in the event of an emergency.

This article from the Insurance Institute for Business & Home Safety (IBHS) provides a brief overview of the building code process as it relates to commercial structures. It is important to stress that the model building codes have not been adopted in all local jurisdictions. Business owners should make sure that all construction projects incorporate adequate protections even if there are no code requirements governing a construction project or business operation.

Commercial building codes help to protect the substantial investment that business owners have in their facilities, inventories, operations and employees. The technical requirements outlined in the codes are a cost-effective means of achieving minimum life safety protections, while the enforcement mechanisms, such as inspections, that should accompany the codes are minimally invasive procedures that help protect lives and livelihoods by ensuring consistent application of the standards.

While most business owners need not have a detailed understanding of applicable building codes, this basic overview is intended to promote a broader understanding about the importance of codes and how they relate not only to construction, but also to the ongoing operations of many businesses.

I-CODE FAMILY

The International Code Council (ICC) is a non-profit organization whose mission is to develop comprehensive and coordinated national model building codes for residential and commercial structures. Through a public vetting process, the ICC develops, approves and publishes a series of International Codes (I-Codes)

that focus on building safety and fire prevention. Most U.S. communities use one or more of the I-Codes to provide minimum safety standards for public and private buildings. Although, not all states have adopted all of the codes and some states allow local opt-outs or weakening amendments.

The International Building Code® (IBC): The IBC is one of the most widely used codes and has been adopted at the state or local level in all 50 states and Washington, D.C. This code governs commercial and most multi-family residential design, construction, alteration and replacement.¹ Among the requirements are those governing structural strength, egress, stability, sanitation, adequate light and ventilation, energy conservation, and safety from fire and other natural hazards. The IBC also is designed to protect firefighters and other emergency responders during operations.

International Fire Code® (IFC): The IFC applies to new and existing construction and duplicates relevant provisions of the IBC. For example, Chapters 9 and 10 of the IBC and IFC are identical. This code also covers fire safety and evacuation plans and drills. Many states require periodic fire inspections by the Office of the State Fire Marshal to assure code compliance. For example, an inspection could ensure compliance with high-pile combustible storage requirements, fire exit location and access, hazardous material use and storage, and industrial and manufacturing heat-generating processes.

International Existing Building Code® (IEBC): The IEBC was developed to permit flexibility of approaches to achieve compliance with the minimum safety requirements prescribed in the code regulating new construction. The code can be used for repair, alteration, change of occupancy, addition and relocation of existing buildings.

¹ The IBC can also be used as the basis for designing and constructing any residential building as an option to the International Residential Code (IRC).

Other System-Specific I-Codes: Specific systems in both commercial and residential structures are governed by a variety of I-Codes, including the International Plumbing Code® that covers fixtures, faucets, fixture fittings, water heaters, water supply and distribution, vents, traps, sanitary drainage, storm drainage; the International Mechanical Code® that covers design, installation, maintenance, alteration, and inspection of HVAC, ventilation, exhaust, and duct systems; chimneys and vents; and combustion air; and the Fuel Gas Code® that covers fuel gas distribution piping and equipment, fuel gas-fired appliances, and fuel gas-fired appliance venting systems.

International Energy Conservation Code® (IECC): The IECC addresses energy efficiency and is designed to reduce energy usage, conserve natural resources, and reduce the impact of energy usage on the environment. The code addresses both residential and commercial energy conservation requirements for the building envelope, including doors and windows, mechanical equipment, water heaters, and lighting systems.

International Green Construction Code® (IGCC): In late 2011, the ICC completed final action hearings on the new IGCC with the goal of creating a model “green” building code for new and existing commercial buildings. Given its antecedents in the energy debate, the IGCC’s focus to date has been on energy efficiency and CO2 reductions. The IGCC is considered “above code” providing requirements that exceed requirements of the Energy Conservation Code for energy conservation. However, the IGCC was not designed to include enhanced property protection provisions. In fact, some provisions in the IGCC must be more fully evaluated in order to determine their effect not only on energy use, but also on durability and resiliency. Rhode Island is the only state to have adopted the IGCC as of April 5, 2012.

THE NEXT STEPS IN PROTECTING YOUR BUSINESS

Now that you have a better understanding of the building codes that govern commercial buildings, keep in mind that codes are minimum life safety standards. Business owners can further enhance the physical strength of their facilities during the construction process and reduce costly business interruptions by following the disaster-resistant building standards outlined in the **IBHS FORTIFIED for Safer Business™** program. This voluntary program provides additional technical standards that greatly increase a new commercial building’s durability and resilience to the natural hazards common in the area where it’s being constructed.

The structural strength of your business will help you keep the physical doors open following a disaster, but it’s also important to consider the financial strength of your operations. IBHS encourages all businesses to create a business continuity plan. The free **IBHS Open for Business®** planning tool provides a structured approach to help small business owners identify hazards that could make their place of business vulnerable to damage and make operational changes to promote financial security.

For more information about structural business protections and business resiliency tools visit the Commercial Section of the IBHS website, www.disastersafety.org.

IBHS is a non-profit applied research and communications organization dedicated to reducing property losses due to natural and man-made disasters by building stronger, more resilient communities.

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