

# Modernizing Chicago's Construction Codes

Phase 2 Ordinance  
Spring 2019



Rahm Emanuel,  
Mayor

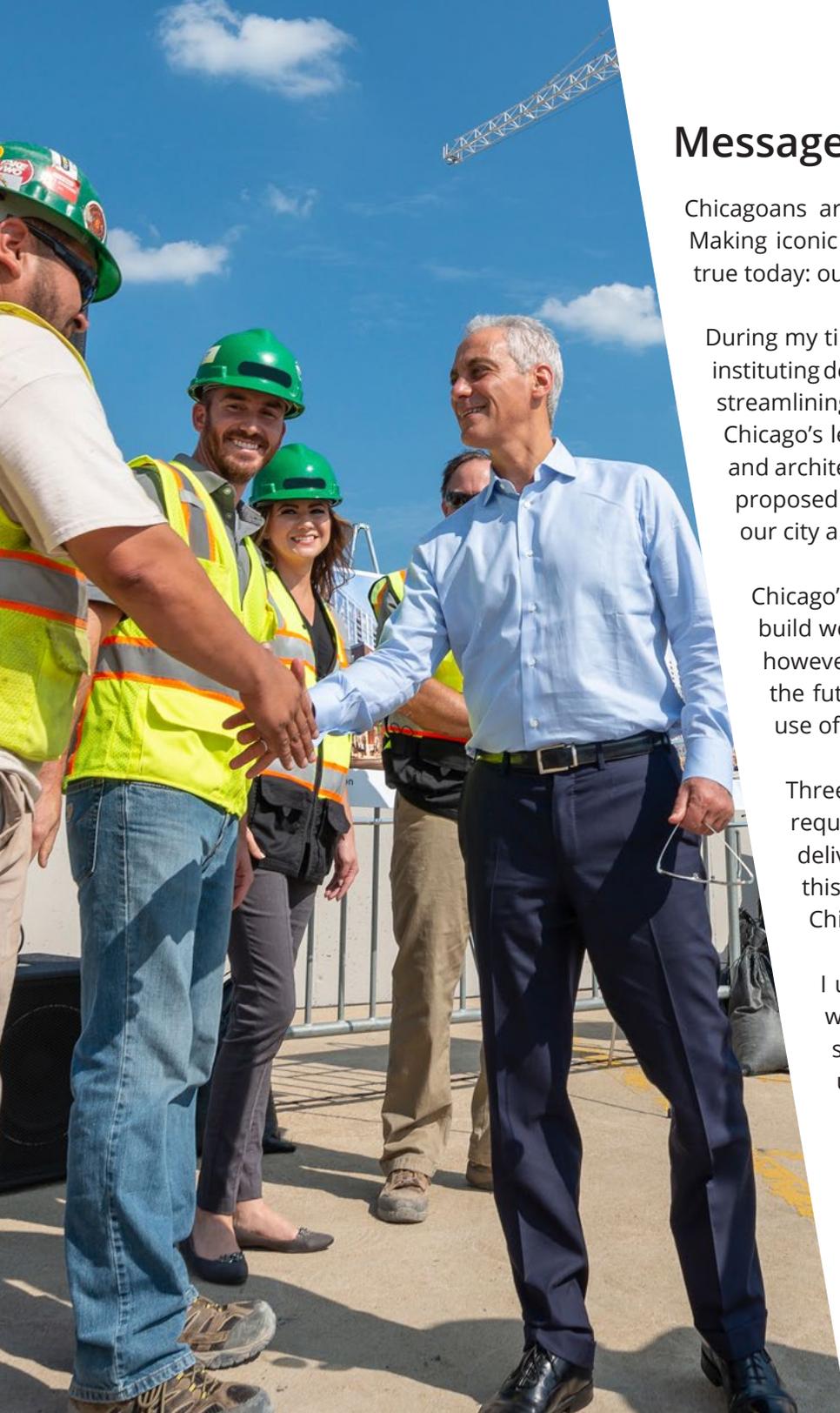


Richard C. Ford, II  
Commissioner



Judith Frydland,  
Commissioner





## Message from the Mayor

Chicagoans are world-renowned for their contributions to architecture and urban design. Making iconic buildings and places is in our civic DNA. Carl Sandburg's observation remains true today: ours is a city that is always wrecking, planning, building, breaking, and rebuilding.

During my time as mayor, I have consistently supported Chicago's designers and builders by instituting design competitions for new public buildings, strengthening licensing requirements, streamlining the building permit process, and establishing the Chicago Biennial to further Chicago's legacy of global design leadership. On our watch, Chicago's builders, developers, and architects have reinvigorated historic districts, created new community landmarks, and proposed bold visions for new buildings and neighborhoods that will continue to reshape our city and skyline long after my term is over.

Chicago's building code and fire code represent nearly 150 years of wisdom about how to build well and how to build safely in a dense urban setting. Construction requirements, however, must not only reflect the lessons of the past but also provide a framework for the future. As a global city, our code must establish reasonable requirements for the use of new materials and incorporate up-to-date industry standards.

Three years ago, I charged Commissioner Frydland with updating Chicago's requirements to align with widely-used model codes. She and her team have delivered by implementing new electrical and elevator codes in 2018 and preparing this monumental ordinance, which represents the first comprehensive update to Chicago's construction requirements since 1949.

I urge you to support this effort, which will update the rules for how Chicagoans wreck, plan, build, break, and rebuild based on construction terminology and standards that are widely-used throughout the United States and eliminate unnecessary barriers to investment in our neighborhoods.

*Rahm Emanuel*

Rahm Emanuel  
Mayor





## Message from the Commissioner

My top priority as Commissioner is to ensure the City of Chicago is a reliable partner in helping homeowners, businesses, and developers complete construction and renovation projects by improving consistency, communication, and customer service in the permitting and inspection processes. During Mayor Emanuel's administration, the Department of Buildings has made great progress in these areas while also supporting a boom in development that continues to reshape our neighborhoods and skyline.

For decades, there has been widespread recognition that Chicago should better align its construction requirements with model codes and standards used in other major U.S. jurisdictions.

Since my first day as Commissioner, I have been overwhelmed by the willingness of so many in Chicago's design, construction, and development communities to volunteer their time and resources to assist with development and implementation of important policy and program changes. Without this private sector support and encouragement, the new Chicago Electrical Code (2017) and Chicago Conveyance Device Code (2018) would not have been possible.

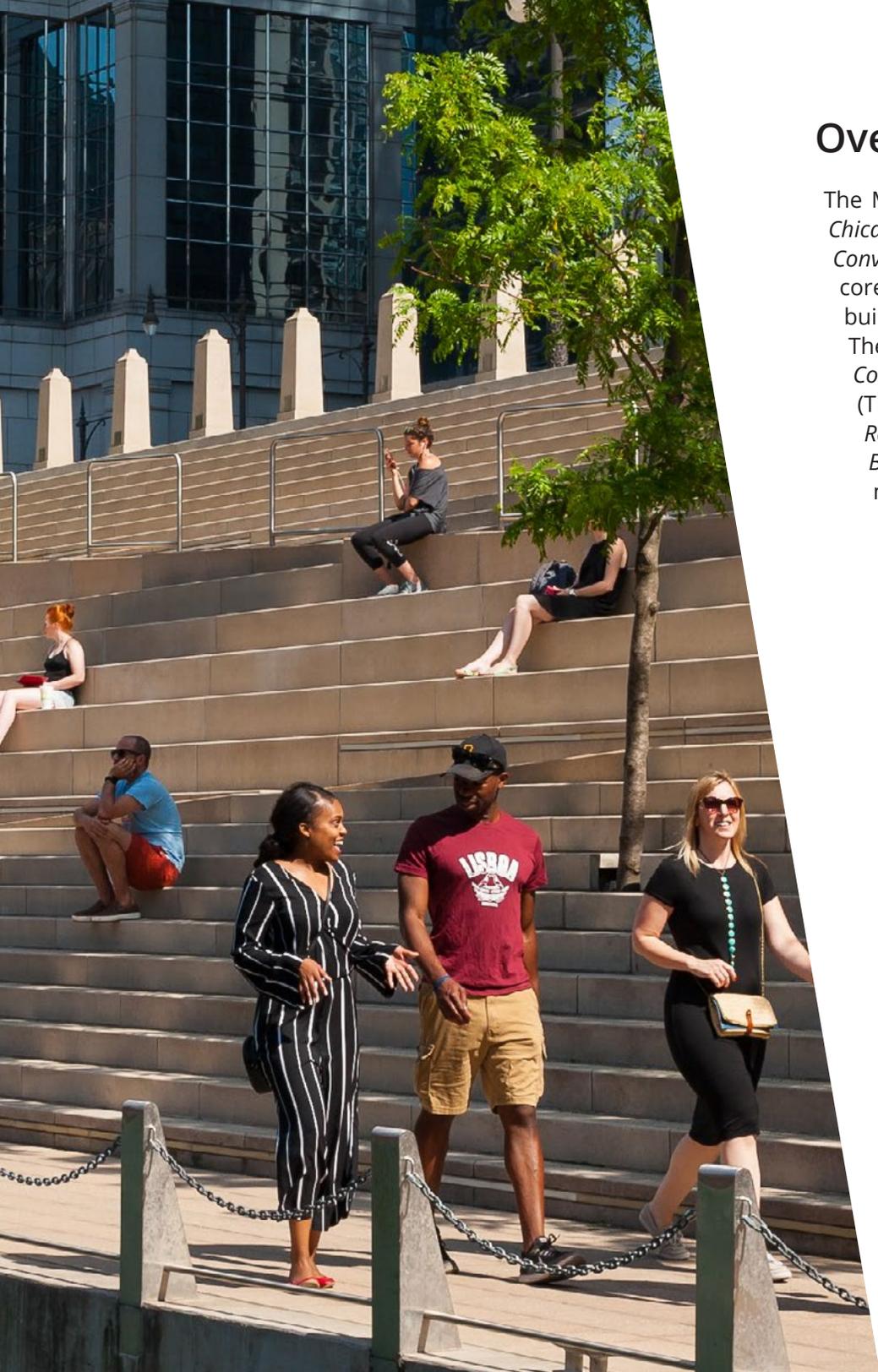
That same generosity and willingness to work toward consensus was essential to preparation of the March 2019 code modernization ordinance: the first comprehensive revisions to significant portions of the Chicago Building Code in 70 years. For this monumental task, my staff worked closely with the Departments of Fire, Health, Planning and Development, and the Mayor's Office for People with Disabilities over the past year to review and refine many drafts with the assistance of the International Code Council and more than 150 volunteer technical experts and industry leaders.

This booklet outlines some of the significant features of the proposed ordinance and how these changes will enable safer, more cost-effective, sustainable, accessible, and innovative construction in Chicago for years to come.

A handwritten signature in black ink that reads "Judy Frydland". The signature is written in a cursive, flowing style.

Judy Frydland,  
Commissioner,  
Department of Buildings





## Overview

The March 2019 construction code modernization ordinance builds upon the *Chicago Electrical Code* (Title 14E), adopted in September 2017, and *Chicago Conveyance Device Code* (Title 14C), adopted in March 2018, to bring Chicago's core requirements for the construction, renovation, and maintenance of buildings into much closer alignment with widely-adopted national standards. The ordinance will add five substantive titles to the Municipal Code: the *Chicago Construction Codes Administrative Provisions* (Title 14A), *Chicago Building Code* (Title 14B), *Chicago Energy Conservation Code* (Title 14N), *Chicago Building Rehabilitation Code* (Title 14R), and *Chicago Minimum Requirements for Existing Buildings* (Title 14X). The ordinance also makes conforming amendments to many other provisions of the *Municipal Code* that refer to construction or building maintenance-related requirements in Titles 13 and 15.

### Future Ordinances

Requirements related to plumbing, mechanical ventilation, refrigeration, natural gas, and fire prevention in hazardous occupancies will be addressed in future ordinances; however, this ordinance creates new placeholder provisions in the *Municipal Code* (Titles 14F, 14G, 14M, and 14P) in anticipation of these future phases of the construction code modernization initiative. Requirements related to signs and trade licensing will also be addressed in future ordinances, and existing provisions related to these topics are not changed in this ordinance.

### Phased Implementation

In order to allow for staff training and industry adjustment, the provisions of this ordinance will gradually phase in beginning in June 2019 and continuing through July 2020. The replacement administrative provisions (Title 14A), which are drafted to be consistent with existing requirements and procedures, will take effect at the outset, as will requirements related to energy efficiency (Title 14N) in order to align with recent changes in state law. Substantive construction and renovation provisions (Titles 14B and 14R) will become optional December 1, 2019, and mandatory August 1, 2020. Simplified minimum requirements for existing buildings (Title 14X) will take effect on a date in the first half of 2020 to be determined by the Commissioner.



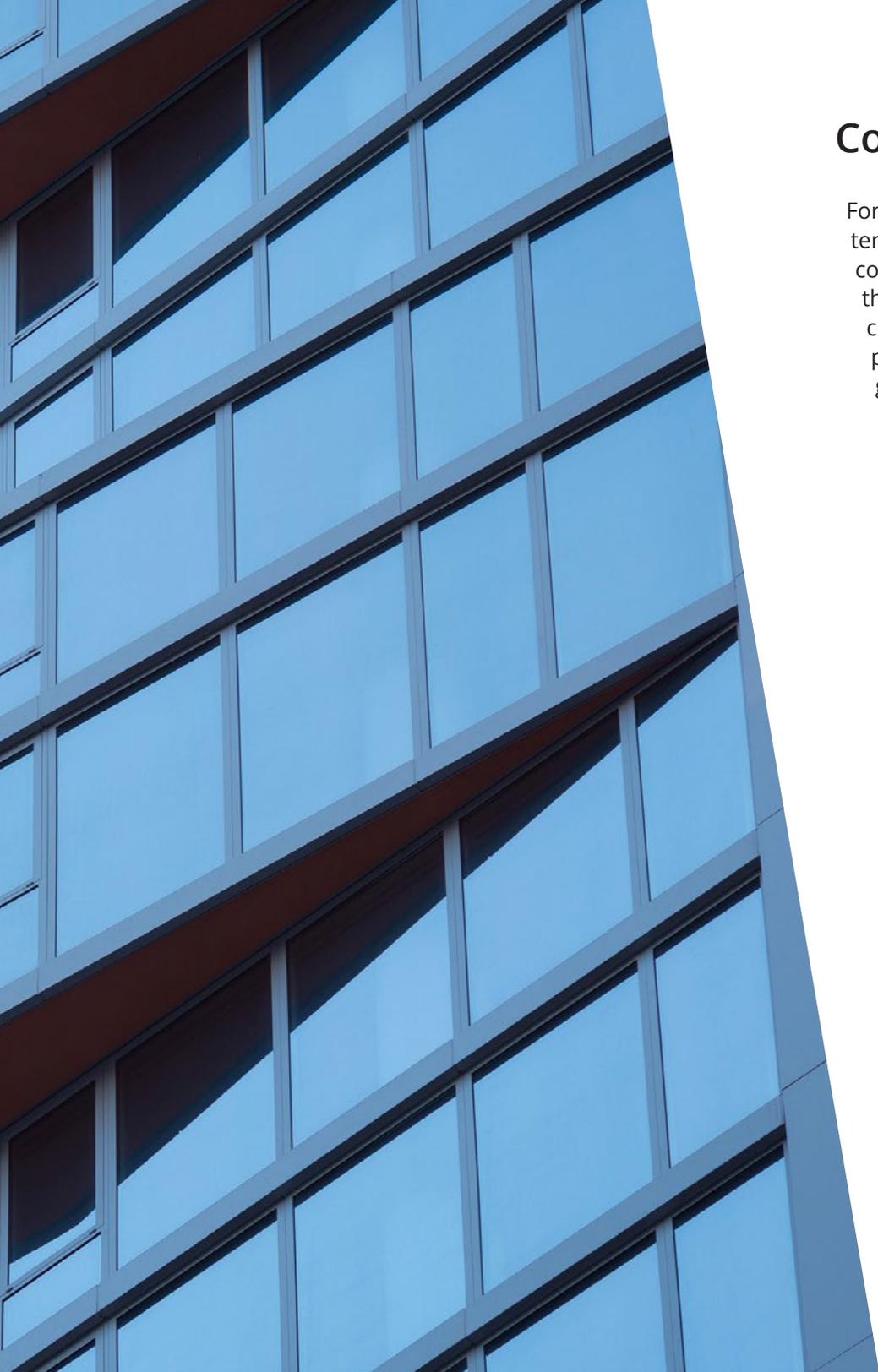


## Small Residential Buildings

One- to three-unit residential buildings form the fabric of many neighborhoods, from iconic bungalows and greystones, American four-squares, and frame Victorians to mid-century ranches. Approximately half of Chicago's households live in this type of home. The new building code will make it easier to rebuild on empty residential lots by providing more flexibility in material and design choices while preserving or enhancing structural stability and fire-resistance requirements. No longer will a two-story home need to meet the same wind-resistance requirements as a 15-story hospital. In many cases, wood-frame construction will become a viable option and several barriers to pre-fabricated construction will be eliminated.

The new building rehabilitation code will also make it easier to renovate and expand existing small residential buildings, by providing greater flexibility to accommodate existing conditions and reuse existing basement or attic space. This will make it easier for homeowners to grow and reinvest in the homes and neighborhoods they love while also preserving neighborhood character and charm.





## Commercial Buildings

For buildings of all types, the proposed code will replace Chicago-specific terminology and measurement conventions with standardized terms and conventions, as well as the standardized code-organization structure used throughout the construction industry in the United States. For larger commercial buildings with many partners involved in the development process, this alignment with the widely-used *International Building Code* will greatly reduce conflicts between the City's requirements and expectations of large lenders, insurance companies, and corporate tenants who are accustomed to dealing with this uniform set of terminology and requirements in most other places in the United States.

Alignment with the model codes will also greatly reduce the need to obtain special approvals or rely on interpretations for frequently-used materials such as roofing, masonry, and glass railing systems, increasing clarity and consistency in permitting.

For high-rise buildings taller than 400 feet (approximately 40 stories), the new building code will also incorporate specific requirements for safety and structural stability that are widely followed elsewhere, enhancing safety for the people who live and work in these structures.





## Building Reuse and Rehabilitation

In a 2017 report, the Urban Land Institute encouraged Chicago to adopt more flexible requirements for rehab work to encourage the reuse of smaller, older buildings in neighborhoods that often struggle to attract private investment. This code will accomplish that and will also provide greater flexibility for homeowners seeking to maintain or expand their homes, whether they live in houses, two-flats, or larger apartment buildings.

The new building rehabilitation code, based on the *International Existing Building Code*, will provide tailored requirements for different scopes of rehabilitation work, replacing the one-size-fits-all approach of our current rehab code with a more flexible framework of requirements that is designed to work for a wide range of projects, from small repairs to massive renovations. For complex projects, the new rehabilitation code will offer a point-based system to evaluate various approaches to ensuring a project will provide adequate life-safety protection for occupants. It will also provide greater clarity on alternatives available to historically-significant buildings.





## Structural Requirements

The new building code will bring the city's structural requirements much closer in line with widely-adopted national standards for structural engineering and adopt a risk-based classification system so that lower-risk buildings will not be penalized. The new code will also update geotechnical provisions for foundation design, with significant input from local geotechnical engineers. This will result in a relaxation of requirements for most low-rise buildings (less than 60 feet in height, and up to 130 feet, based on the structural system). For most buildings under 60 feet, wind design forces will be reduced by 20 percent. Taller buildings and critical facilities, such as fire stations and hospitals, however, will see increases in structural requirements, including new requirements to design for small earthquake forces, helping to ensure these facilities are more resilient in extreme situations.

The updated structural provisions also include much greater detail on a wide range of newer materials and building features, including structural glass, cellular towers, and solar panels. This will allow these materials to be used without the specialized approvals required today.

Additionally, the new rehabilitation code will provide clearer guidance and additional latitude for structural requirements when a building is remodeled or repurposed.



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## Fire Protection and Life Safety Systems

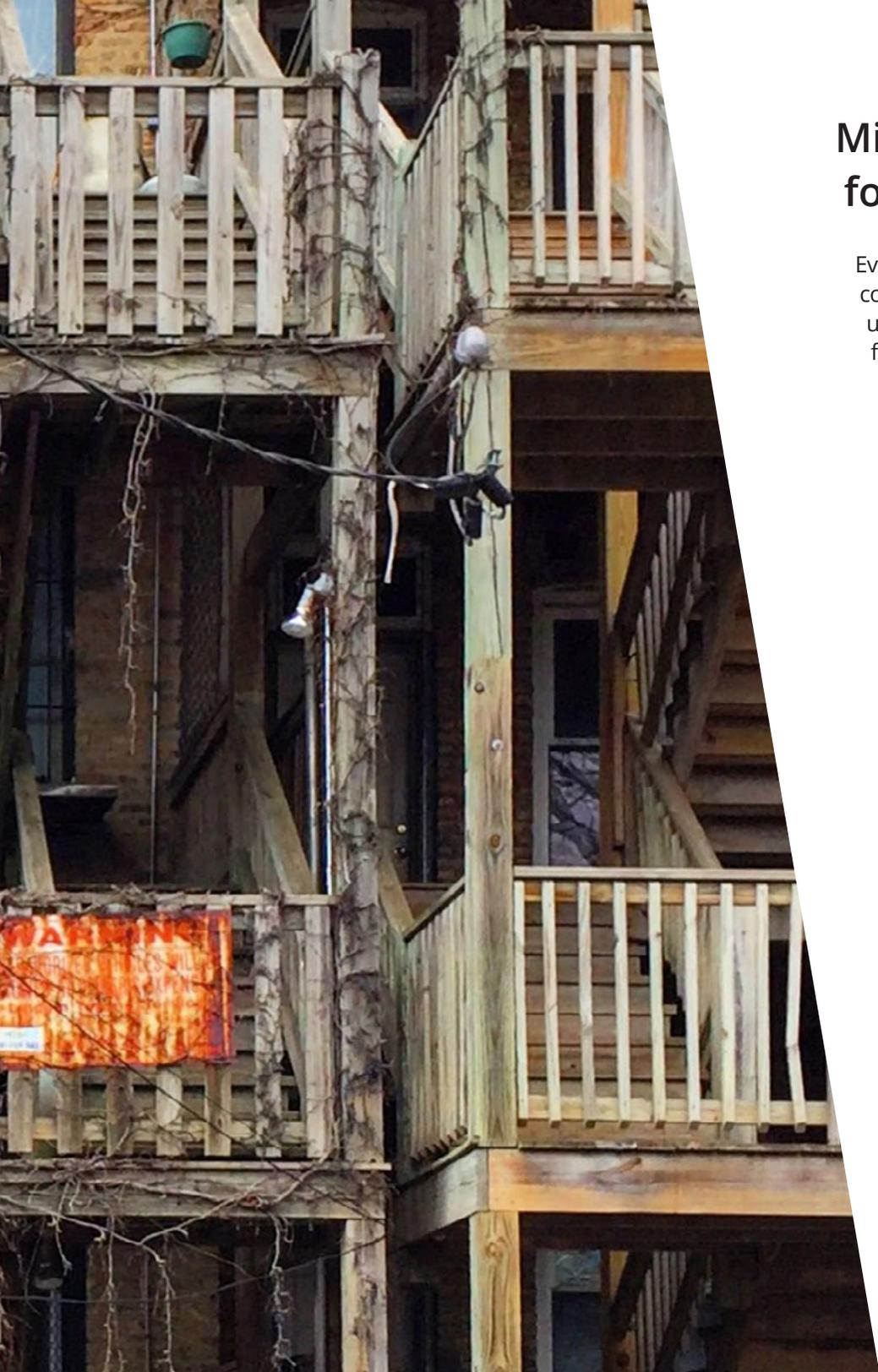
For decades, Chicago's requirements for fire alarms and sprinkler systems in new buildings have been significantly different than requirements found in the State of Illinois's fire code and the expectations of major lenders and insurance companies. This has resulted in a great deal of confusion, and sometimes required projects to undergo costly changes after work has already begun.

The new building code will have requirements that are much closer to widely-adopted national standards, and will require sprinkler systems in all new hotels, residential buildings with four or more units, schools, assembly occupancies where more than 300 people can gather, and hazardous industrial occupancies. In recognition of the significant benefit these systems provide, small and mid-sized buildings will be able to be built using less-costly construction materials and methods.

Recognizing that it is significantly more costly to retrofit an existing building with sprinklers compared to the cost of installing them during initial construction, the rehabilitation code allows a smoke detection system to be installed as an alternative where sprinklers would require upgrades to existing water or electrical service.



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## Minimum Requirements for Existing Buildings

Every year, the Department of Buildings investigates tens of thousands of complaints and initiates thousands of enforcement proceedings to remedy unsafe conditions. Most of the Department's enforcement activity involves the failure of owners to maintain existing buildings (including vacant buildings).

Because the minimum standards for property and building maintenance are closely tied to new construction requirements, this ordinance reorganizes and rewrites the existing requirements to use the same terminology as the new building code and to provide clearer guidance to property owners. The replacement requirements, which are substantively very similar to existing requirements, will be implemented in Spring of 2020, once inspectors can be fully trained on the reorganized provisions and the Department has an opportunity to update explanatory materials for building owners.





## Accessibility

Improving access for people with disabilities is a fundamental commitment of the City of Chicago, and this ordinance will further that commitment by updating the City's 2006 accessibility requirements to align with the 2009 American National Standard on Accessible and Usable Facilities, the 2010 Americans with Disabilities Act regulations, and the 2018 Illinois Accessibility Code. By adopting requirements that are more consistent with these newer state and national standards, the ordinance will make it easier for architects and building owners to achieve compliance with these complex and sometimes-confusing requirements. This ordinance will also grant the Commissioner of the Mayor's Office for People with Disabilities (MOPD) and the Commissioner of Housing additional authority to ensure City-funded affordable housing meets the needs of people with disabilities.





## Department Administration

A significant benefit of the code modernization ordinance is that it will make it easier for users to navigate our requirements and eliminate the need for many special requests to the Department because the code itself will be more detailed, consistent, and up-to-date with national best practices. This will allow Department staff to spend less time translating Chicago-specific language and more time providing assistance to homeowners and truly specialized cases.

The proposed ordinance will also completely rewrite the patchwork of provisions regulating the Department of Buildings' permitting, inspection, and enforcement activities in clear, consistent, and coordinated language. This rewrite will make it easier for department employees to provide a predictable customer experience and for customers to understand how to work with the City to build, renovate, or address violations. The rewrite will also facilitate ongoing work to replace the Department's computer system and move all in-person permitting and payment processes online by the end of 2020.

While these provisions have been rewritten, they will largely maintain current practices, and this ordinance does not alter the structure of fees or fines.





## Energy Efficiency

The City of Chicago has long been a leader in adopting requirements for energy efficiency and sustainable design, however, these requirements have never been fully integrated with the building code, sometimes making it difficult for architects and builders to comply with both sets of requirements. This ordinance will change that: by aligning with the International Codes, Chicago's energy conservation and core building code requirements will be coordinated and consistent for the first time, helping further the City's commitments to improving the efficiency and sustainability of our building stock in order to address climate change.

Consistent with Illinois law, this ordinance will also update the City's energy conservation code to be aligned with the latest (2018) edition of the *International Energy Conservation Code* and Illinois-specific amendments.

# ACKNOWLEDGEMENTS

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Clayco  
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