

Modernizing Chicago's Construction Codes
Phase 2





Rahm Emanuel,
Mayor



Richard C. Ford, II,
Commissioner



Judith Frydland, Commissioner

Modernizing Chicago's Construction Codes

Overview

- Why modernize the code?
- What is planned?
- What has happened before?
- How will Phase 2a work?
- How might the code change?

2

Modernizing Chicago's Construction Codes

Goal

To better align the City of Chicago's construction requirements with up-to-date model codes and standards used in other major US jurisdictions while maintaining longstanding local requirements that are adapted to unique conditions in Chicago.

3

Modernizing Chicago's Construction Codes

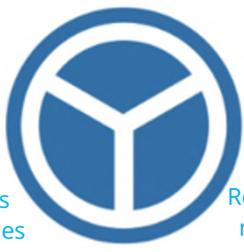
Outcomes

- streamline permitting process
- reduce barriers to cost-effective construction
- enhance public safety
- promote energy efficiency and sustainability
- facilitate innovative design and construction
- benefit from national code development efforts

4

Modernizing Chicago's Construction Codes

Retain current requirements



New provisions from model codes

Replace current requirements

5

Modernizing Chicago's Construction Codes

Phase 1 (2016-18)



6

Modernizing Chicago's Construction Codes

Phase 2a (2016-2020)

A Administrative Provisions	B Building Code	C ✓ Conveyance Device Code	E ✓ Electrical Code
	N Energy Conservation Code	R Rehabilitation Code	X Existing Building Code

7

Modernizing Chicago's Construction Codes

Phase 2b (2018-2020)

A ✓	B	C ✓	E ✓	F
Administrative Provisions	Building Code	Conveyance Device Code	Electrical Code	Fire Prevention Code
	N ✓	R ✓	X ✓	
	Energy Conservation Code	Rehabilitation Code	Existing Building Code	

8

Modernizing Chicago's Construction Codes

Phase 3 (2019-2021)

A ✓	B ✓	C ✓	E ✓	F ✓	G
Administrative Provisions	Building Code	Conveyance Device Code	Electrical Code	Fire Prevention Code	Fuel Gas Code
M	N	P	R ✓	S	X ✓
Mechanical Code	Energy Conservation Code	Plumbing Code	Rehabilitation Code	Sign Code	Existing Building Code

... and trade licensing.

Modernizing Chicago's Construction Codes

Full Project (2016-2021)

A	B	C	E	F	G
Administrative Provisions	Building Code	Conveyance Device Code	Electrical Code	Fire Prevention Code	Fuel Gas Code
M	N	P	R	S	X
Mechanical Code	Energy Conservation Code	Plumbing Code	Rehabilitation Code	Sign Code	Existing Building Code

... and trade licensing.

Modernizing Chicago's Construction Codes

Rinse and Repeat

The new construction codes will not be static requirements but a regulatory foundation that will make it easier for the City of Chicago to remain current with the latest building technologies and benefit from national code development efforts.



11

Modernizing Chicago's Construction Codes

History

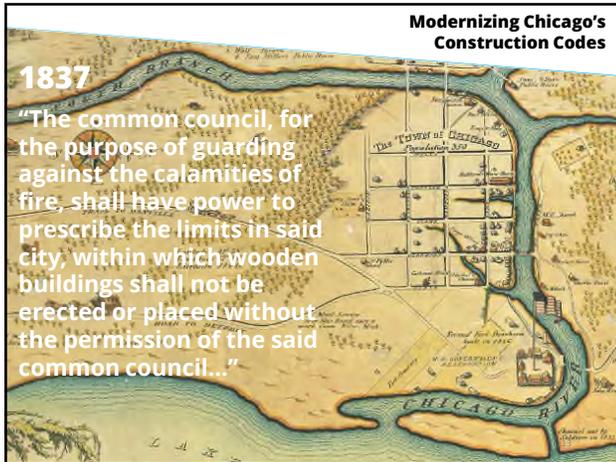
Understanding where the current code comes from is critical to understanding how we can and should reshape it going forward.

12

Modernizing Chicago's Construction Codes

1837

"The common council, for the purpose of guarding against the calamities of fire, shall have power to prescribe the limits in said city, within which wooden buildings shall not be erected or placed without the permission of the said common council..."

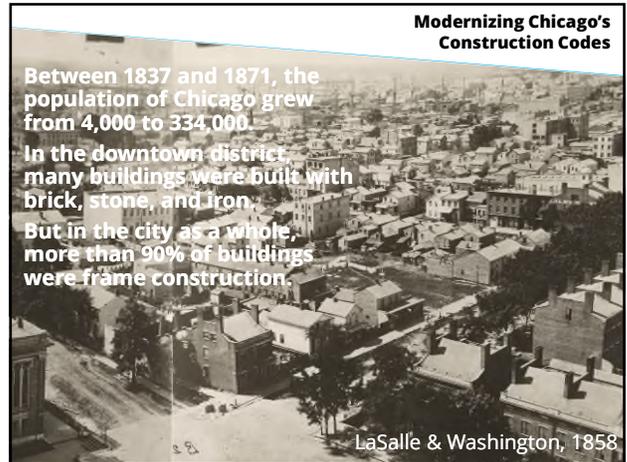


Modernizing Chicago's Construction Codes

Between 1837 and 1871, the population of Chicago grew from 4,000 to 334,000.

In the downtown district many buildings were built with brick, stone, and iron.

But in the city as a whole, more than 90% of buildings were frame construction.

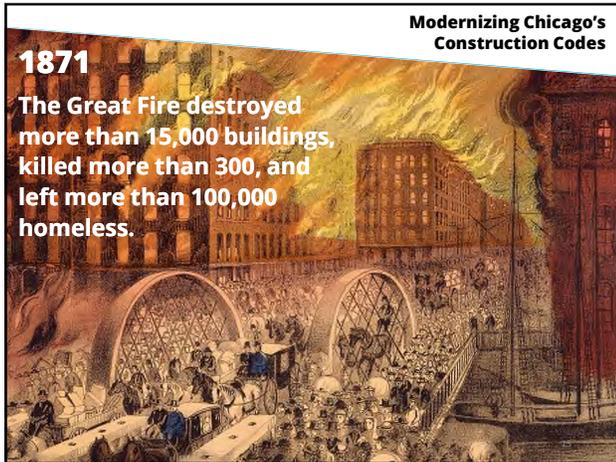


LaSalle & Washington, 1858

Modernizing Chicago's Construction Codes

1871

The Great Fire destroyed more than 15,000 buildings, killed more than 300, and left more than 100,000 homeless.



Modernizing Chicago's Construction Codes

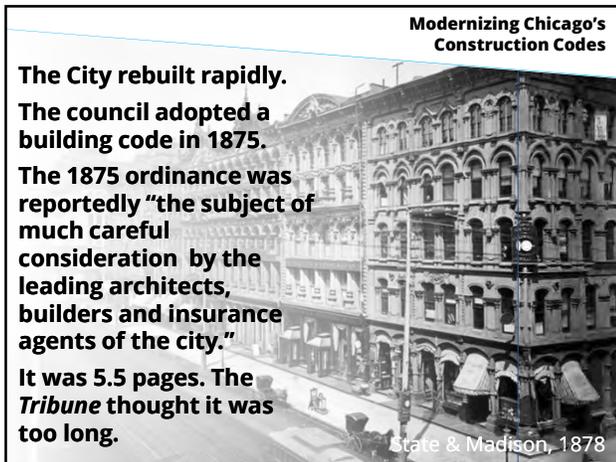
1871



State & Madison

Modernizing Chicago's Construction Codes

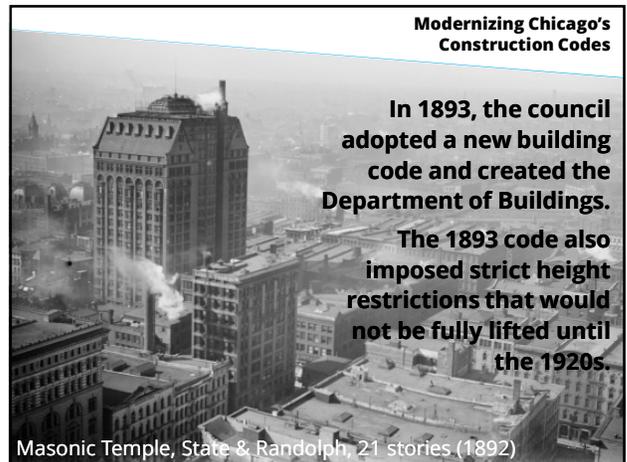
The City rebuilt rapidly. The council adopted a building code in 1875. The 1875 ordinance was reportedly "the subject of much careful consideration by the leading architects, builders and insurance agents of the city." It was 5.5 pages. The *Tribune* thought it was too long.



State & Madison, 1878

Modernizing Chicago's Construction Codes

In 1893, the council adopted a new building code and created the Department of Buildings. The 1893 code also imposed strict height restrictions that would not be fully lifted until the 1920s.



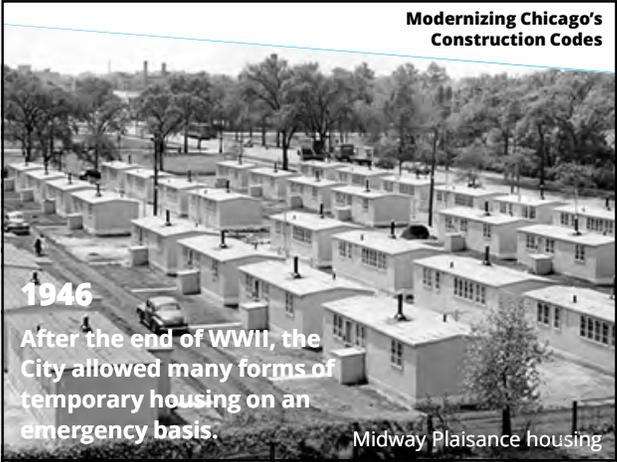
Masonic Temple, State & Randolph, 21 stories (1892)

Modernizing Chicago's Construction Codes



1903
The Iroquois Theater fire resulted in 602 deaths. All Chicago theaters remained closed for more than a month after the fire. The fire led to adoption of the first *comprehensive* building code in 1905.

Modernizing Chicago's Construction Codes



1946
After the end of WWII, the City allowed many forms of temporary housing on an emergency basis.
Midway Plaisance housing

Modernizing Chicago's Construction Codes



1946-49
From 1946-49, John O. Merrill, founding partner of SOM, oversaw the last comprehensive revision of the Chicago Building Code. One of the most controversial issues was whether to allow wallboard instead of plaster-and-lath.

Modernizing Chicago's Construction Codes



Over time, new requirements have been added in response to tragedies.
Our Lady of the Angels fire, 1958

Modernizing Chicago's Construction Codes



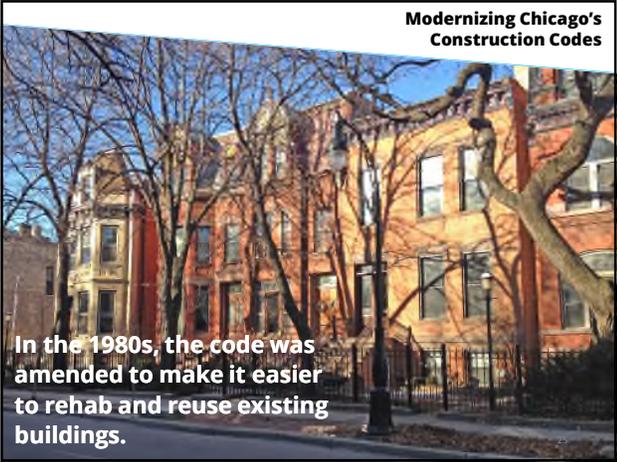
Over time, new requirements have been added in response to tragedies.
McCormick Place Fire, 1967

Modernizing Chicago's Construction Codes



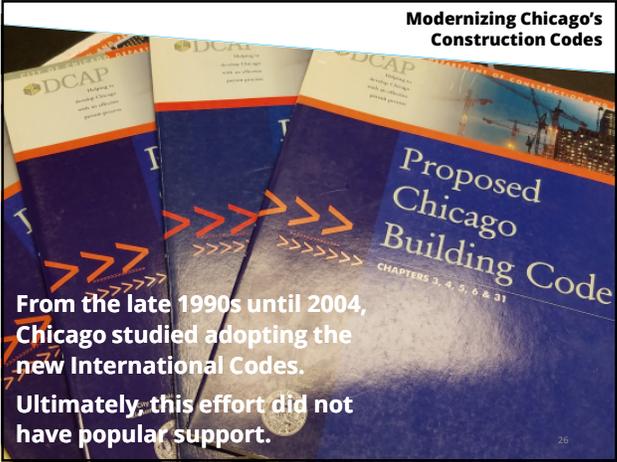
In the early 1970s, there were several high-rise fires in Chicago. The 1974 film, *The Towering Inferno*, helped to build popular support for enhanced high-rise safety requirements, which were adopted in 1975.

Modernizing Chicago's Construction Codes



In the 1980s, the code was amended to make it easier to rehab and reuse existing buildings.

Modernizing Chicago's Construction Codes



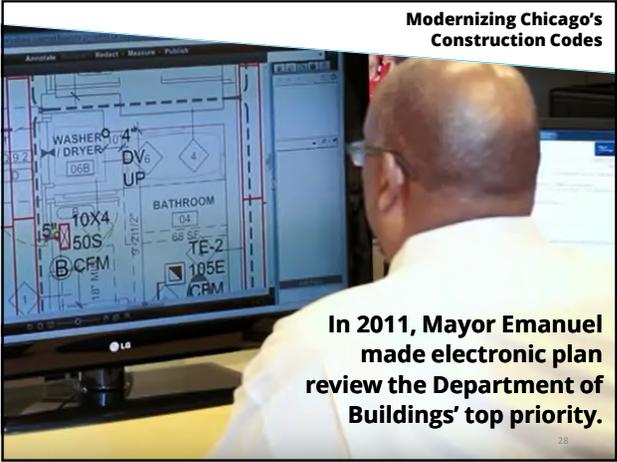
From the late 1990s until 2004, Chicago studied adopting the new International Codes. Ultimately, this effort did not have popular support.

Modernizing Chicago's Construction Codes



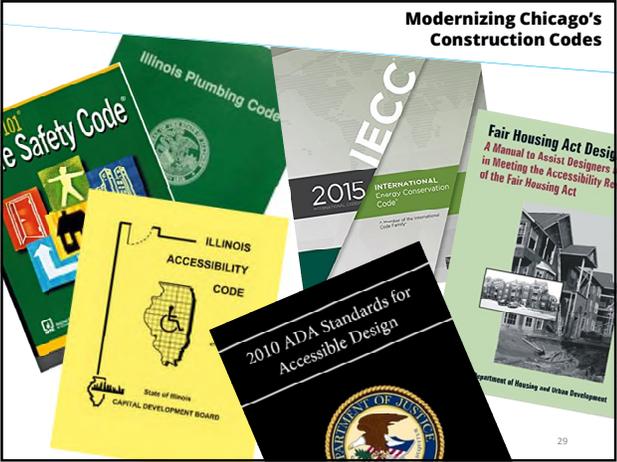
After the 2003 Cook County Administration Building Fire, Chicago committed to upgrading all pre-1975 high-rise buildings. That effort took more than 15 years and involved more than 1,000 buildings.

Modernizing Chicago's Construction Codes



In 2011, Mayor Emanuel made electronic plan review the Department of Buildings' top priority.

Modernizing Chicago's Construction Codes



Modernizing Chicago's Construction Codes

Phase 2a Process

- internal drafts
- review with experts and stakeholders
- ordinance introduction
- training and implementation

Modernizing Chicago's Construction Codes

Internal Drafts
(January - now)

2009-11 Working Group Drafts

ICC
INTERNATIONAL CODE COUNCIL

FIRE CHICAGO DEPT.

CITY OF CHICAGO
DEPARTMENT OF BUILDINGS

31

Modernizing Chicago's Construction Codes

Review with Experts and Stakeholders
(December - February)

Building Planning

Enclosure & Materials

Existing Buildings

Stakeholders Oversight

Fire Protection

Structural

Small Residential

32

Modernizing Chicago's Construction Codes

City Council
(March -)

- DOB and Law Department prepare ordinance
- ordinance is introduced at full council meeting
- referred to committee for hearing(s)
- if committee recommends favorable action, returns to full council for vote

33

Modernizing Chicago's Construction Codes

Training and Implementation
(6 months)

- Working with ICC to publish code books
- Training staff, consultants, and certified professionals
- Updating forms and IT systems
- Applicants will be allowed to choose new or old code for 6-9 month transition

34

Modernizing Chicago's Construction Codes

Anticipated Changes

- Adopt national standard system of occupancy/risk classification
- Adopt national standards for special features such as atriums and underground buildings
- Update requirements for high-rise buildings, consistent with post-9/11 NIST recommendations

35

Modernizing Chicago's Construction Codes

Anticipated Changes

- Adopt national standard classification system for types of construction (but less recognition for fire retardant treated wood in non-combustible construction types).
- Allow increased heights and areas of ordinary and protected frame construction in new buildings with fire protection systems.

36

Modernizing Chicago's Construction Codes

Anticipated Changes

- Increase requirements for sprinkler and alarm systems in new buildings
- Increase requirements for alarm systems (but not sprinklers) in rehab work
- Align with national standards for exiting requirements (retain Chicago exit signage)
- Recognize newer construction materials without specialized approval required

37

Modernizing Chicago's Construction Codes

Anticipated Changes

- Align more closely with national standards for exterior wall and roofing materials
- Align with national standards for structural design
- Expand requirements for use of third-party inspections during construction
- Adopt clearer requirements for construction site safety

38

Modernizing Chicago's Construction Codes

Anticipated Changes

- Provide greater flexibility for rehab work, consistent with *International Existing Building Code*
- Provide greater clarity on requirements which apply to change-of-use projects (warehouse to apartments)
- Restate property maintenance requirements in clearer language, consistent with new code

39

Modernizing Chicago's Construction Codes

Anticipated Similarities

- Wood-based construction will still be more limited than under pure model code
- Some stricter passive fire-resistance requirements will remain (4-hr fire walls)
- Chicago-specific requirements for Wrigleyville rooftops and shooting ranges, etc. are likely to remain
- Chicago will not require third exits in high-rise buildings or dedicated fire command rooms

40

Modernizing Chicago's Construction Codes

Anticipated Similarities

- In smaller residential buildings, 2 exits will still be required, and "egress windows" will not be
- Chicago requirements for exit signs will remain

41

Modernizing Chicago's Construction Codes

Next Stakeholder Oversight Meetings

- Wednesday, January 9, 2019 9:30 a.m.
- Wednesday, February 6, 2019 9:30 a.m.
- Wednesday, March 6, 2019 9:30 a.m.

(locations TBD)

42