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2014 Construction Codes
An Overview



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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.





This presentation will inform the professional community of the changes made to the NYC Construction Codes as part of the NYC Department of Buildings Code Revision process and by other local laws passed by City council in the wake of Hurricane Sandy, collectively known as the 2014 NYC Construction Codes.



Participants will examine local law amendments to chapter one of Title 28 the New York City Construction Codes and understand how they regulate the design of new buildings and alterations to existing buildings thereby facilitating safe construction.

Participants will analyze recent local law amendments to the New York City Building Code as it pertains to enhanced fire-safety design requirements for high-rise buildings, and updated structural design requirements for wind and seismic design of buildings.



Learning Objectives Continued

Participants will analyze recent local law amendments to the New York City Building Code Appendix G as it pertains to the most recent flood-resistant design requirements for safe construction in flood zones, including newlydesignated flood hazard areas.

Participants will review recent local law amendments to the New York City Mechanical, Plumbing and Fuel Gas Codes as they pertain to the design of building systems for enhanced safety including enhanced wind design requirements for louvers and rooftop equipment to prevent structural failure during high wind events.



2014 Codes Training Events

Buildinas



New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

Construction Codes Development Cycles

Background:

Outdated Building Code – 1968 September 11th, 2001 – World Trade Center November 2002 Mayoral Commission April 2003 Recommendations: ICC Codes Stakeholder inclusion Consensus adoption process Periodic revision

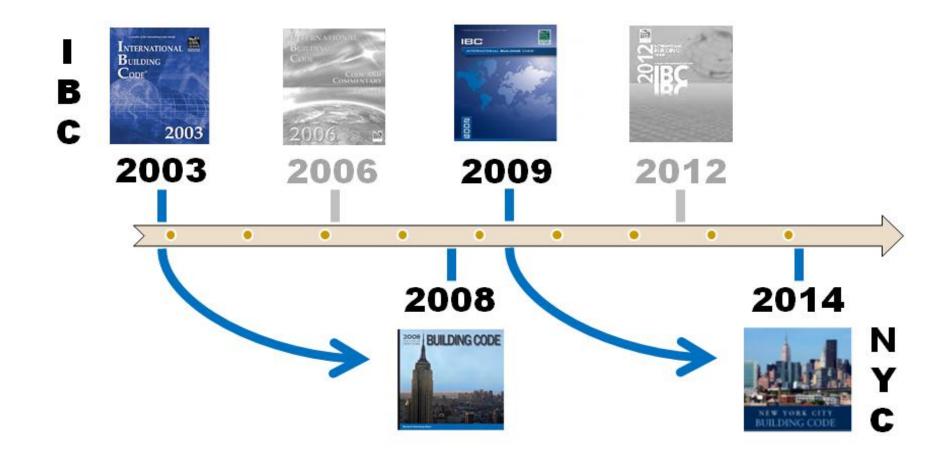


Benefits:

Update Codes to national standards Incorporate latest technologies Allow new materials and methods of construction Maintain consistency with other jurisdictions



Construction Codes Development Cycles





2014 Codes Implementation



New Effective Date for the 2014 NYC Construction Codes: December 31, 2014



2014 Codes Implementation

Operational changes

Forms, service notices, bulletins

Rules

Staff training

Industry outreach

Internet/Intranet/Publication



Accessing the 2014 Codes

www.nyc.gov/buildings

Codes & Reference

- Selected Local Laws
 - LL 141/13
 LL 41/12 (PC)





[706.3.6] <u>707.3.8</u> [Separation of mixed] <u>Separated</u> occupancies.

Where the provisions of Section [508.3.3] <u>508.4</u> are applicable, the fire barrier separating mixed occupancies shall have a fire-resistance rating of not less than that indicated in Section [508.3.3] <u>508.4</u> based on the occupancies being separated.



[9] 3.2.10.4 Steel-plated and vault-like occupancies. An automatic sprinkler system shall be installed throughout all steel-plated or similarly reinforced or secured vault-like occupancies regardless of area.

- - -

903.2.12 Other hazards.

Automatic sprinkler protection shall be provided for the hazards indicated in Sections 903.2.12.1 and 903.2.12.2.]



903.2.11.11 Steel-plated and vault-like occupancies.

<u>An automatic sprinkler system shall be installed</u> <u>throughout all steel-plated or similarly reinforced or</u> <u>secured vault-like occupancies regardless of area.</u>



Other Local Laws becoming effective 10/1/2014:

- LL 79/14: Toilets/faucets to function without electricity
- LL 100/14: Increase flood resiliency
- LL 101/14: Increased wind standards
- LL 108/13: External hookups for I and R occupancies
- LL 110/14: Common area drinking water
- LL 130/14: Parking lots and garages/vehicle charging



2014 Codes Effective Dates

Type of Work	Trigger	2008 Codes	2014 Codes
NEW BUILDINGS	 Construction documents submitted before October 1, 2014 Architectural, Structural, & Foundation Drawings Required Subsequent filings may be filed on or after October 1, 2014 	✓	
	Construction documents submitted on or after October 1, 2014		\checkmark



Type of Work	Trigger	2008 Codes	2014 Codes
ALTERATIONS TO EXISTING BUILDINGS	Construction documents submitted before October 1, 2014	~	
	Construction documents submitted on or after October 1, 2014		~



Type of Chapter 33 Work	Trigger	2008 Codes (BC 33)	2014 Codes (BC 33)
Non-Site Safety Jobs New Buildings, Alterations and Partial Demolitions	Construction documents submitted <i>before</i> October 1, 2014	\checkmark	
	Construction documents submitted on or after October 1, 2014		\checkmark
Site Safety Jobs New Buildings, Alterations and Partial Demolitions	Site safety plan approved before October 1, 2014	\checkmark	
	Site safety plan approved on or after October 1, 2014		\checkmark



Type of Chapter 33 Work	Trigger	2008 Codes (BC 33)	2014 Codes (BC 33)
Full Demolitions: (Non-Site Safety and Site Safety Jobs)	Demolition permit issued <i>before</i> October 1, 2014	\checkmark	
	Demolition permit issued <i>on or after</i> October 1, 2014		\checkmark



Exceptions:

28-304.6.4 to 28-304.6.6 Elevator Inspections Effective immediately

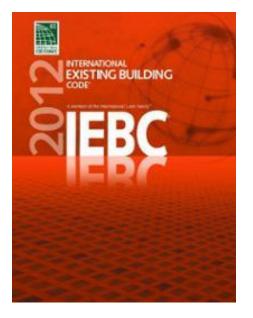
BC 403.5.2 Additional Stair/Occupant Evacuation Elevators for nonresidential > 420 feet

Effective June 30, 2015, or upon zoning change, whichever is later



Next project:

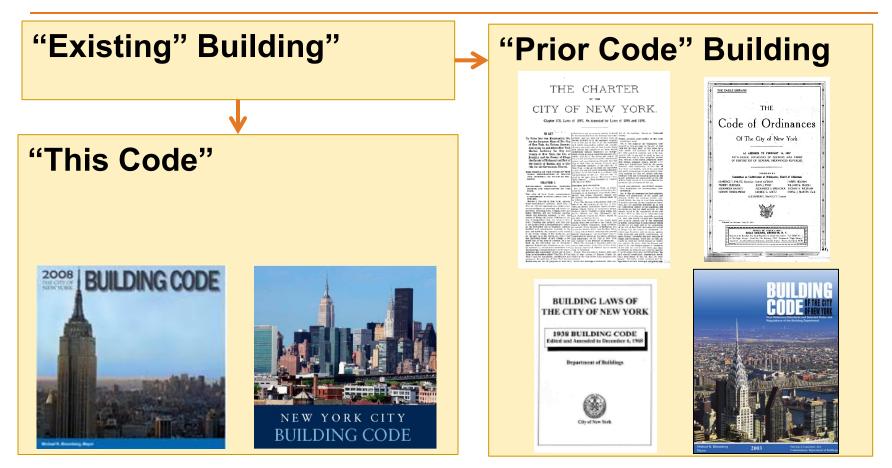
NYC Existing Building Code



But until then . . .

New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

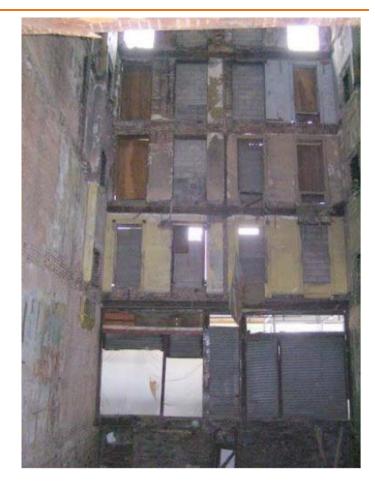




New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

"BIG" Alterations (28-101.4.5) Must follow 2014 Code



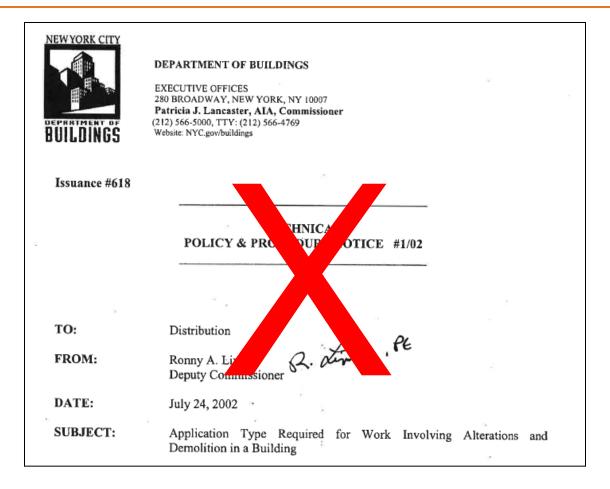


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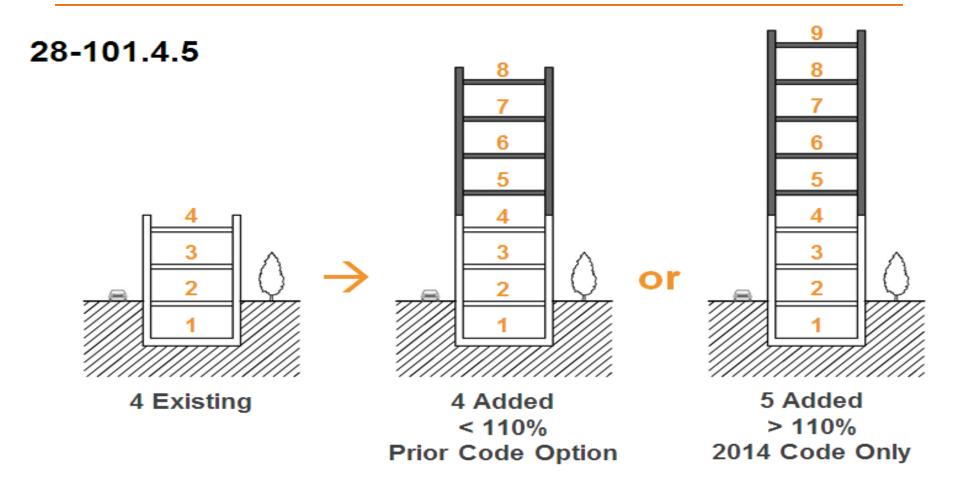


NEW YORK CITY FOR A CITY DEFENSION OF BUILDINGS Issuance #618	DEPARTMENT OF BUILDINGS EXECUTIVE OFFICES 280 BROADWAY, NEW YORK, NY 10007 Patricia J. Lancaster, AIA, Commissioner (212) 566-5000, TTY: (212) 566-4769 Website: NYC.gov/buildings
ť	TECHNICAL POLICY & PROCEDURE NOTICE #1/02
	* x
TO:	Distribution
FROM:	Ronny A. Livian, Deputy Commissioner Q. dimedia PE
DATE:	July 24, 2002
SUBJECT:	Application Type Required for Work Involving Alterations and Demolition in a Building



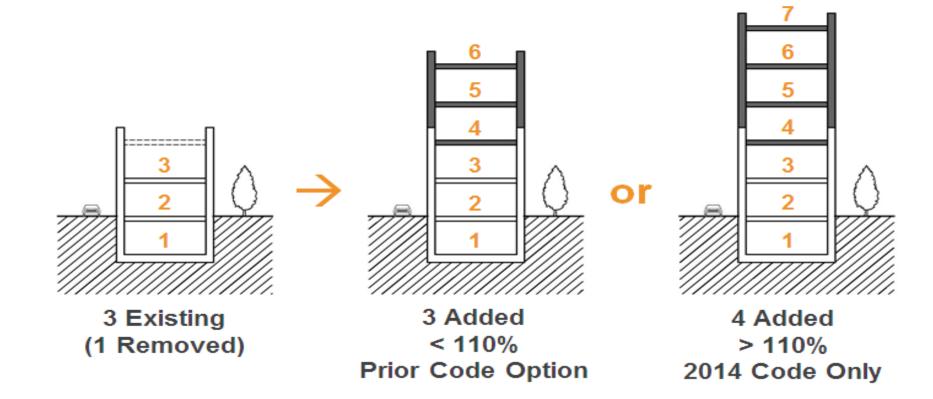






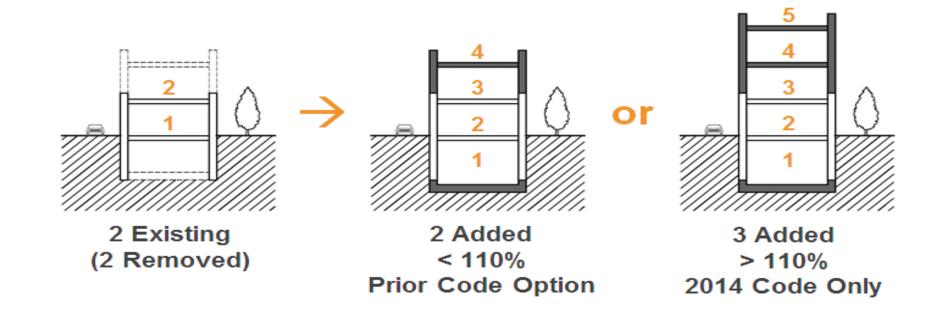
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28-101.4.5



New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

28-101.4.5



New Effective Date for the 2014 NYC Construction Codes: December 31, 2014



New Effective Date for the 2014 NYC Construction Codes: December 31, 2014



28-101.4.3 - Optional use of Prior Codes:

1968 Building Code 1938 Building Code

Subject to 18 exceptions



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

- 1. Fuel gas, plumbing and mechanical work
- 2. Fire protection systems
- 3. Elevators, conveyors and amusement rides
- 4. Safety during construction operations



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

- 5. Accessibility
- 6. Encroachments into the public right of way
- 7. Administration and enforcement
- 8. Special Inspections



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

- 9. Materials
- 10. Security grilles
- 11. Energy efficiency
- 12. Roof coverings and replacements:
 - Re-roofing
 - Cool roofs
 - Green roofs



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

- 13. Handrails
- 14. Guards
- 15. Areas of special flood hazard
- 16. Structural



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

- 17. Emergency and standby power
- 18. Parking garages and open parking lots (LL 130/2013)



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

Most exceptions require new code for certain work. Example:

4. Safety during construction operations.

Safety of public and property during construction operations including demolition shall be governed by chapter 33 of the New York City Building Code.



28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

Most exceptions require new code for certain work. Another example:

14. Guards.

Where the alteration or repair of a building involves the addition or replacement of guards, such guards shall comply with sections 1013 and 1607.7 of the New York City Building Code.



28-101.4.3 – Optional use of 1968 (1938) Codes:

These exception refer you to "Special Provisions for Prior Code Buildings":

Exception 1:	Plumbing	PC	102.4
	Fuel Gas	FGC	102.4
	Mechanical	MC	102.4
Exception 2:	Fire Protection	BC	901
Exception 3:	Elevators	BC	3001
Exception 5:	Accessibility	BC	1101
Exception 16	: Structural	BC	1601

New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

2014 BUILD SAFE | LIVE SAFE CONFERENCE

28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 1: Mechanical, Fuel Gas, Plumbing

1. Fuel gas, plumbing and mechanical work.

The installation of and work on all appliances, equipment and systems regulated by the New York city fuel gas code, the New York city plumbing code and the New York city mechanical code shall be governed <u>by applicable</u> <u>provisions of those codes</u> relating to new and existing installations.



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 1: Mechanical, Fuel Gas, Plumbing

"applicable provisions" of those codes:

Mechanical:	MC	102.4
Fuel Gas:	FGC	102.4
Plumbing:	PC	102.4

New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

2014 BUILD SAFE | LIVE SAFE CONFERENCE

28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 1: Mechanical, Fuel Gas, Plumbing

> Example MC 102.4

102.4 Additions, alterations or repairs.

Additions, alterations, renovations or repairs to a mechanical system shall conform to requirements for a new mechanical system without requiring the existing mechanical system to comply with all of the requirements of this code. Additions, alterations or repairs shall not cause an existing mechanical system to become unsafe, hazardous or overloaded.



28-101.4.3 – Optional use of 1968 (1938) Codes:

- **Exception 1: Mechanical, Fuel Gas, Plumbing**
- > Example MC 102.4

102.4.1 Minor additions, alterations, renovations and repairs.

Minor additions, alterations, renovations and repairs to existing mechanical systems shall meet the provisions for new construction, unless such work is done in the same manner and arrangement as was in the existing system, is not hazardous and is approved.



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 1: Mechanical, Fuel Gas, Plumbing > Example MC 102.4

102.4.2 Special provisions for prior code buildings. In addition to the requirements of Sections 102.4 and 102.4.1, the provisions of Sections 102.4.2.1 through 102.4.2.6 shall apply to prior code buildings.



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 1: Mechanical, Fuel Gas, Plumbing

- > Example MC 102.4
- For prior Code buildings:
- MC 102.4.2.1 Fire and smoke dampers
- MC 102.4.2.2 Guards and access to roofs and elevated structures
- MC 102.4.2.3 Vibration isolation for cooling towers
- MC 102.4.2.4 Noncombustible fill for cooling towers



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 1: Mechanical, Fuel Gas, Plumbing

"applicable provisions" of those codes:

Mechanical:	MC	102.4
Fuel Gas:	FGC	102.4
Plumbing:	PC	102.4

New Effective Date for the 2014 NYC Construction Codes: December 31, 2014

2014 BUILD SAFE | LIVE SAFE CONFERENCE

28-101.4.3 – Optional use of 1968 (1938) Codes: 18 exceptions

Exception 2:	Fire Protection	BC	901
Exception 3:	Elevators	BC	3001
Exception 5:	Accessibility	BC	1101
Exception 16:	Structural	BC	1601

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2014 BUILD SAFE | LIVE SAFE CONFERENCE

28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 2: Fire protection systems

BC 901.9 Special Provisions for Prior Code Buildings

Example:

901.9.3 Sprinkler and fire alarms requirements for enlargements.



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 3: Elevators

BC 3001.11 Special Provisions for Prior Code Buildings

Example: 3001.11.1 New elevators in existing shafts.



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 5: Accessibility

BC 1101.3 Special Provisions for Prior Code Buildings

Example: 1101.3.1 Accessibility requirements for changes of occupancy.



28-101.4.3 – Optional use of 1968 (1938) Codes: Exception 16: Structural

BC 1601.2 Special Provisions for Prior Code Buildings

Example: 1601.2 Seismic requirements for alterations.



National Institute of Standards and Technology (NIST) WTC Report Recommendations

Exit stairs further apart in buildings > 75 feet

Protected fire service access elevators (FSAE) for buildings > 125 feet

Redundant sprinkler risers > 300 feet

Additional stair or occupant evacuation elevator for nonresidential buildings > 420 feet



Wind and snow load requirements for temporary structures (tents, scaffolds, cranes, etc.)

Prohibition on ballasted roofs

Updated seismic requirements to ASCE 7-2010



Micropiles, Helical Piles

Updated flood zone requirements for coastal A-zones

Certain mechanical equipment cannot be dry-floodproofed



Required concrete formwork observations

Certification required for adhesive anchor installation

Establishes safety requirements for ambulatory surgery facilities



Allows reinstallation of cornices in landmark districts without DOT approval

Balcony projections over sidewalk clarified with respect to railings

Marquees explicitly allowed for schools, office buildings



Increases safety for high-pressure gas piping installations

Eliminates redundant smoke detector installations in ductwork

Harmonizes Building Code with DEP requirements for external mechanical equipment

Legally required standby power (natural gas) – LL 111/13



Cantilevered buildings must have fire analysis

Tweaks to fire rating of structural members: "Primary Structural Frame" "Secondary Members"



Re-categorize Limited Alteration Applications: Category 1 – limited to \$35,000/year Category 2 – no limit

Unused curb cuts must be removed





This concludes the American Institute of Architects Continuing Education Systems Course.

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