# **2014 NYC Construction Codes Overview**

The overview was presented at these locations:

April 09, 2014 @ AIA Queens Chapter, NYSSPE, Queens Chapter

April 21, 2014 @ AIA Brooklyn Chapter

April 30, 2014 @ NYSA

May 08, 2014 @ Staten Island Chapter, BIANY, NYSSPE, Queens Chapter

May 21, 2014 @ New York Chapter



# **2014 NYC Construction Codes Overview**

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### **Learning Objectives**

- 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 ensuring safe construction.
- Participants will review recent local law amendments to the New York City Building Code as they pertain to new safety enhancements in the use, occupancy, egress and accessibility design requirements.
- Participants will analyze recent local law amendments to the New York City
  Building Code as it pertains to enhanced fire-safety design requirements for highrise buildings, and updated structural design requirements for wind and seismic
  design of buildings.
- 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 newly-designated
  flood hazard areas.



### **2014 Codes Training Events**





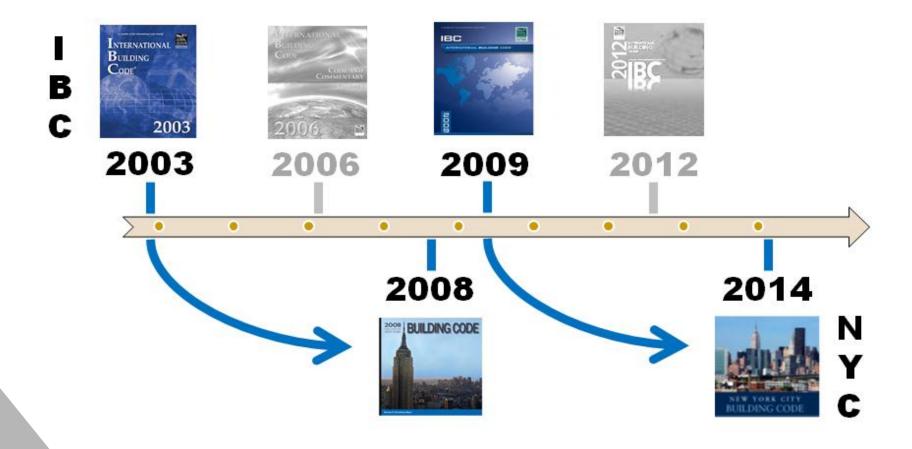
### **Construction Codes Revision**

#### **Benefits:**

- Updates Codes to national standards
- Incorporates latest technologies
- Allows new materials and methods of construction
- Maintains consistency with other jurisdictions



### **Construction Codes Revision**





### **2014 Codes Implementation**



9 MONTHS

December 2013

Council approval & Mayoral signing LL 141 of 2013

Implementation & Training

October 1, 2014
Effective date



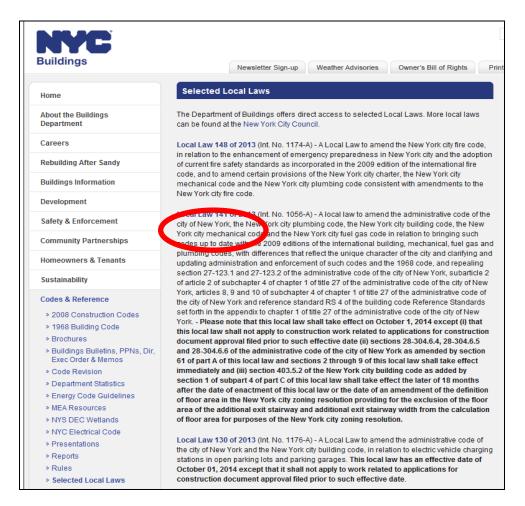
### **2014 Codes Implementation**

- Operational changes
- Forms, service notices, bulletins
- Rules
- Staff training
- Industry outreach
- Internet/Intranet/Publication



#### www.nyc.gov/buildings

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





[706.3.6] 707.3.8 [Separation of mixed]
Separated occupancies. Where the provisions of Section [508.3.3] 508.4 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] 508.4 based on the occupancies being separated.



[903.2.10.4 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 903.2.12.1.



903.2.11.11 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.



Other Local Laws becoming effective 10/1/2014:

•LL 79/13: Toilets/faucets to function without electricity

•LL 100/13: Increase flood resiliency

•LL 101/13: Increased wind standards

•LL 108/13: External hookups for I and R occupancies

•LL 110/13: Common area drinking water

•LL 130/13: Parking lots and garages/vehicle charging



Type of Work	Trigger	2008 Code	<b>2014</b> Code
NEW BUILDINGS	<ul> <li>Construction Documents submitted before October 1, 2014</li> <li>Architectural, Structural, &amp; Foundation Drawings Required</li> <li>Subsequent filings may be filed on or after October 1, 2014</li> </ul>	<b>√</b>	
	Construction Documents submitted on or after October 1, 2014		<b>√</b>



Type of Work	Trigger	2008 Code	<b>2014 Code</b>
ALTERATIONS	Construction Documents submitted before October 1, 2014	<b>√</b>	
TO EXISTING BUILDINGS	Construction Documents submitted on or after October 1, 2014		✓



Type of Chapter 33 Work	Trigger	2008 Code (BC 33)	2014 Code (BC 33)
Non-Site Safety Jobs: New Buildings, Alterations, and Partial Demolitions	Construction documents submitted before October 1, 2014	✓	
	Construction documents submitted on or after October 1, 2014		✓
Site Safety Jobs: New Buildings,	Site safety plan approved before October 1, 2014	✓	
Alterations, and Partial Demolitions	Site safety plan approved on or after October 1, 2014		✓



	Type of Chapter 33 Work	Trigger	2008 Code (BC 33)	2014 Code (BC 33)
Full Demolitions: (Non-Site Safety and Site Safety Jobs)	<b>Demolition permit</b> issued before <b>October 1, 2014</b>	✓		
	Cafaty Joha)	<b>Demolition permit</b> issued on or after <b>October 1, 2014</b>		✓



#### **Exceptions:**

**28-304.6.4 to 28-304.6.6** Elevator Inspections

Effective Immediately

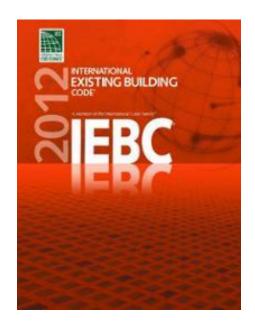
**BC 403.5.2** Additional Stair/Occupant Evacuation Elevators for nonresidential > 420 feet

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



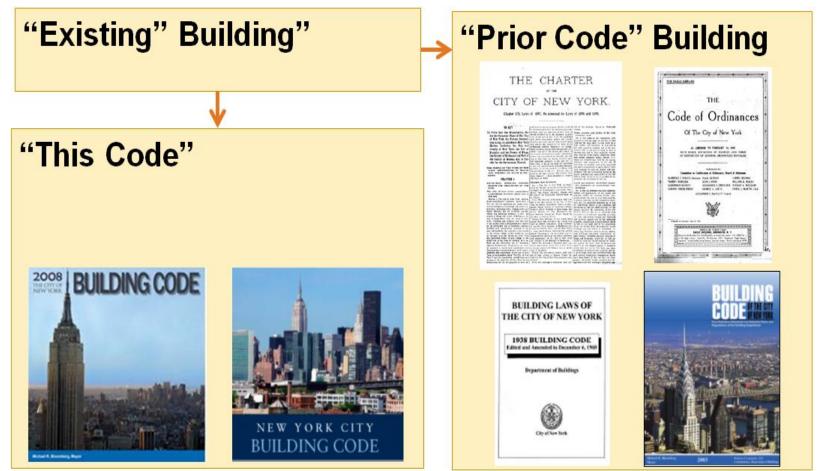
**Next project:** 

**NYC Existing Building Code** 



But until then . . . .

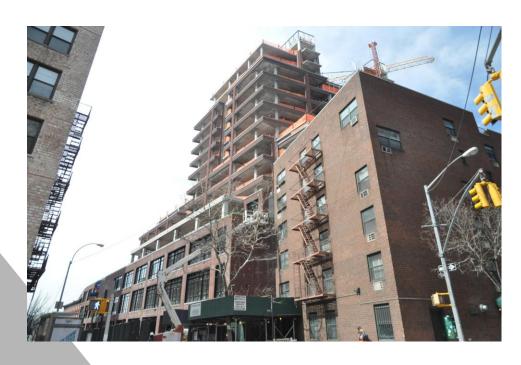






"BIG" Alterations (28-101.4.5)

Must follow 2014 Code









#### DEPARTMENT OF BUILDINGS

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Issuance #618

TECHNICAL
POLICY & PROCEDURE NOTICE #1/02

TO:

Distribution

FROM:

Ronny A. Livian,

Deputy Commissioner

DATE:

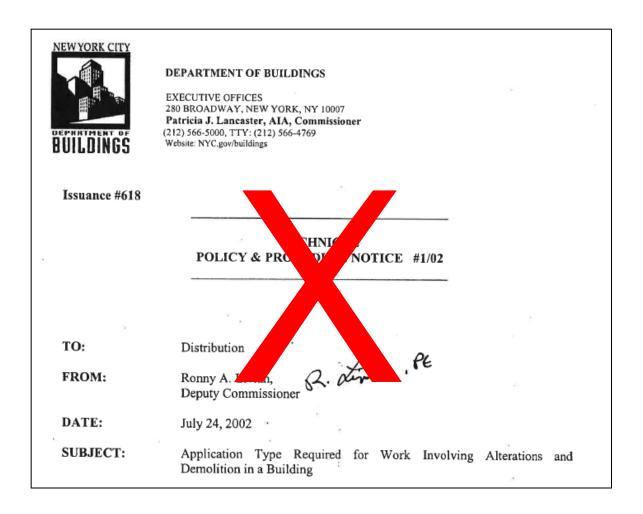
July 24, 2002 a

SUBJECT:

Application Type Required for Work Involving Alterations and

Demolition in a Building







§ 28-101.4.5 Work that increases existing floor surface area of a prior code building by more than 110 percent.

- •Entire building to comply with 2014 Construction Codes.
- Must be filed as NB
- Fees calculated as alteration



§ 28-101.4.5 Work that increases existing floor surface area of a prior code building by more than 110 percent.

•FLOOR SURFACE AREA. Floor surface area is the gross square foot area of all horizontal floor and roof surfaces, including roofs of bulkheads and superstructures, of a building or structure at any level, including cellar, attic and roof. (28-101.4.5.2)



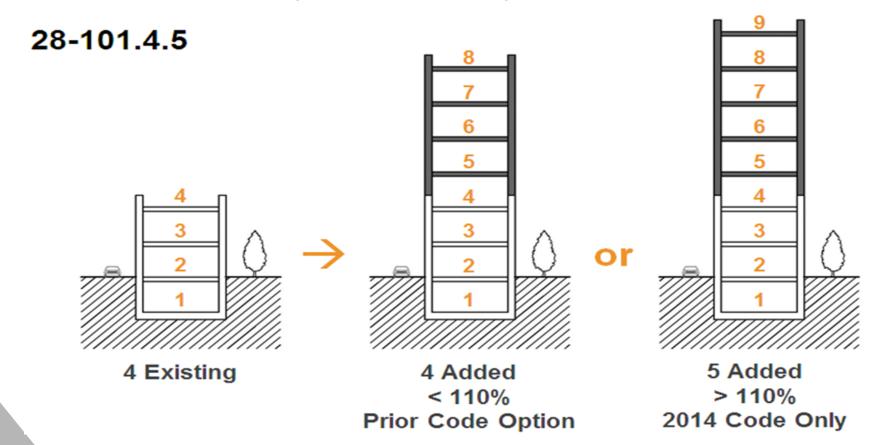
§ 28-101.4.5 Work that increases existing floor surface area of a prior code building by more than 110 percent.

#### **Exceptions: This is not "existing floor surface area":**

- 1) Square footage removed during course of work
- 2) Square footage previously installed, but signed off less than 12 months before submission of current application



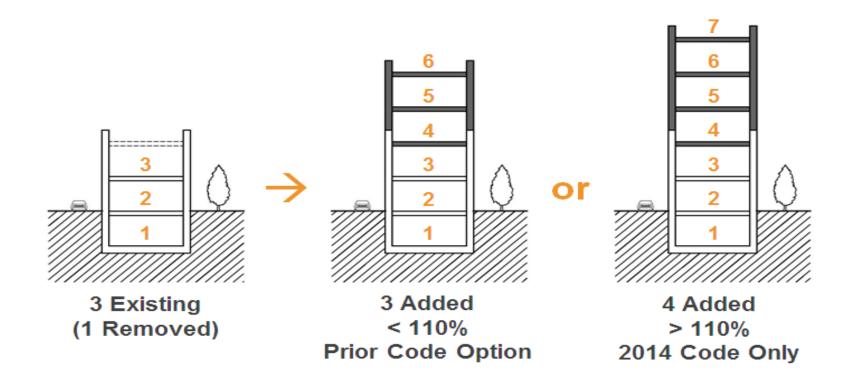
(§ 28-101.4.5)





(§ 28-101.4.5)

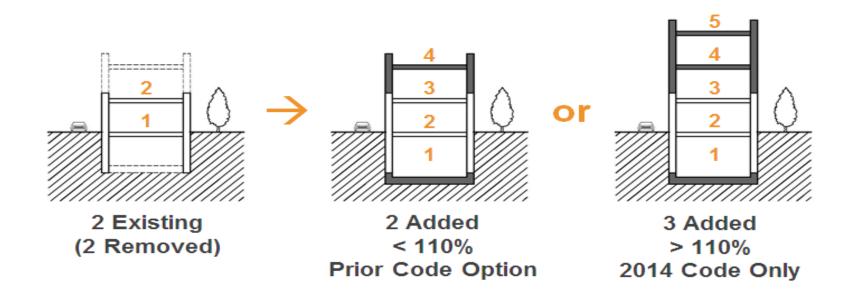
28-101.4.5





(§ 28-101.4.5)

28-101.4.5





(§ 28-101.4.5)





§ 28-101.4.5 Work that increases existing floor surface area of a prior code building by more than 110 percent.

- •Change of scope of work from under to over 110% must be refiled as NB before continuing removals (28-101.4.5.1)
- •Continuation provisions of Zoning Resolution for noncomplying bulk or nonconforming use (28-101.4.5.3)



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 2014 code for certain work, e.g.:

**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 2014 code for certain work, e.g.:

**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:

18 exceptions

These refer 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



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 by applicable provisions of those codes 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



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

**Exception 1: Mechanical, Fuel Gas, Plumbing** 

> Example MC 102.4

MC 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

MC 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

MC 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:

18 exceptions

These refer 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



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

**Exception 2: Fire Protection Systems** 

**2. Fire protection systems.** Alterations of buildings and changes of use or occupancy shall be governed by **chapter 9** of the New York city building code, **subject to special provisions for prior code buildings as set forth therein**.



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 alarm requirements for enlargements.



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

**Exception 3: Elevators, conveyors and amusement rides** 

**3. Elevators, conveyors and amusement rides.** The installation of and work on elevators, conveyors, and amusement rides shall be governed by **chapter 30** and **appendix K** of the New York city building code and the rules of the department, **subject to special provisions for prior code buildings as set forth therein.** 



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** 

**5. Accessibility.** Alterations, including minor alterations, of buildings and changes of use or occupancy, shall be governed by **chapter 11** of the New York city building code, **subject to special provisions for prior code buildings as set forth therein**.



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** 

**16. Structural.** The use of load resistance factor design (LRFD), calculation of live loads, and applicability of seismic and wind loads shall be **governed by special provisions for prior code buildings as set forth in section 1601.2** of the New York city building code.



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 > 120
   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

Update seismic requirements to ASCE 7-2010



Micropiles, Helical Piles

Updated flood zone requirements for coastal A-zones

Certain mechanical equipment cannot be dry-floodproofed



Require concrete formwork observations

Establish 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 ratings of structural members:

- "Primary Structural Frame"
- "Secondary Members"



Recategorize Limited Alteration Applications (28-101.5)

- •Category 1 limited to \$35,000/year
- •Category 2 no limit

Unused curb cuts must be removed



#### THANK YOU

**Questions?** 

www.nyc.gov/buildings

ConstructionCodes@buildings.nyc.gov

