
APPENDIX B

NEW YORK CITY BUILDING CODE & NIST RECOMMENDATIONS

The NIST report of 2005 on the World Trade Center Towers made 30 specific recommendations regarding building standards, codes, and practices, as well as the technical aspects of evacuation and emergency response. Cities around the nation, however, model their municipal building codes on the International Building Code (IBC), which is produced and updated from time to time by the International Code Council. The following table summarizes the extent to which the recommendations of the NIST report of 2005 have been incorporated into the 2009 edition of the IBC and the New York City Building Code, effective July 1, 2008.

NIST Recommendation	International Building Code	NYC Building Code
1 Structural/progressive collapse	Not yet adopted	Already adopted [key element analysis: BC 1626; continuity and ties; BC 1917, 2114, 2213].
2 Wind tunnel testing for tall structures	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
3 Sway limits for wind and earthquakes	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.

NIST Recommendation	International Building Code	NYC Building Code
4 Evaluating current fire-rating and construction classification	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
5 Revise testing and fire-rating national standard	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
6 Increase bond strength and testing for spray fire-proofing materials	Partly adopted [increased bond strength by a factor of 3 over prior requirements in buildings 75 ft. to 420 ft. and by a factor of 7 in buildings more than 420 ft.].	Not yet adopted IBC adopted items to be reviewed in the next code cycle.
7 “Structural frame” approach to fire-resistance ratings	Already adopted	Already adopted
8 Structural performance assuming an uncontrolled fire to burnout	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
9 Performance-based standards as an alternative to current prescriptive design methods	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
10 Development of new fire-resistant coating materials	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
11 Fire evaluation of high-performance structural materials expected in building fires	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
12 Redundancy of active fire-protection systems	Already adopted [redundancy of sprinkler system in buildings over 420 feet in height].	Not yet adopted To be reviewed in the next code cycle.

NIST Recommendation	International Building Code	NYC Building Code
13 Improvement in fire alarm and communication systems	Partly adopted [increasing the size of the fire command station].	Not yet adopted IBC adopted items to be reviewed in the next code cycle.
14 Improving fire/emergency control panels	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
15 Off-site transmission and storage of information for emergency responders	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
16 Evacuation and Emergency preparedness training	Not applicable	Not applicable
17 Egress capacity increase to accommodate full building evacuation	Partly adopted [(a) additional exit stairway for buildings more than 420 feet in height; (b) use of elevators as a means of egress; (c) increase of 50 percent in the width of exit stairways for buildings with floor areas exceeding 15,000 sq. ft.].	Not yet adopted IBC adopted items to be reviewed in the next code cycle.
18 Remoteness of exits; integrity/survivability of exits; and signage/guidance of egress systems	Partly adopted [(a) additional exit stairway for buildings more than 420 feet in height; (b) exit stairs measured from walls of enclosure and not the door to enclosure for buildings over 75 feet; (c) hardened stairways and elevators shafts (all buildings over 420 ft. and some buildings between 75 ft. and 420 ft.); (d) luminous egress path markings for buildings over 75 feet; (e) other various egress signage enhancements].	Partly adopted [(a) hardened stairways and elevators shafts (all buildings over 75 ft.); (b) luminous egress path markings for buildings over 75 feet]. Other items to be reviewed in the next code cycle.

NIST Recommendation	International Building Code	NYC Building Code
19 Communication and coordination of emergency information	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
20 Evaluation of evacuation technologies	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
21 Structurally hardened fire service elevators	Partly adopted [(a) a minimum of one fire service access elevator for buildings over 120 feet in height; (b) improved lighting for emergency hoistway; (c) protection of hoistway equipment from water intrusion].	Not yet adopted IBC adopted items to be reviewed in the next code cycle.
22 Emergency communications standards and testing	Partly adopted [emergency responder radio coverage].	Not yet adopted IBC adopted items to be reviewed in the next code cycle.
23 Emergency responder situational awareness enhancement	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.
24 Command and Control Systems for building emergencies	Partly adopted [increasing the size of the fire command station].	Not yet adopted IBC adopted items to be reviewed in the next code cycle.
25 Application of local building code requirements to governmental and quasi-governmental entities	Not applicable	Not applicable
26 Aggressive enforcement of codes with regard to sprinklers and egress	Not applicable	NYC already aggressively enforces building code.
27 Building document retention	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.

NIST Recommendation	International Building Code	NYC Building Code
28 Role of the “Design Professional in Responsible Charge” for complex designs	Not yet adopted	NYC does not have the concept of a “Design Professional in Responsible Charge.” Concept of a “Design Professional in Responsible Charge” be reviewed in the next code cycle.
29 Continuing education requirements	Not applicable	Not applicable
30 Development of fire analysis tools	Not yet adopted	Not yet adopted To be reviewed after a national standard is completed and available for review.