

International Building Code

The *International Building Code*® (IBC®) continues to establish minimum regulations for building systems using prescriptive and performance-related provisions. It is founded on principles that make use of new materials and new building designs.



Scope

For every building or structure of any appurtenances connected or attached to such buildings or structures, the provisions of this code shall apply to the following:

- Alteration
- Construction
- Demolition
- Enlargement
- Equipment
- Location
- Maintenance
- Movement
- Removal
- Repair
- Replacement
- Use and occupancy

Content

- General Issues, Chapters 1-6, 12, 13, 27-34
- Fire Safety, Chapters 7-9, 14, 15, 26
- Means of Egress, Chapters 10-11
- Structural, Chapters 16-25

Intent

This code provides safety to the fire fighters and emergency responders during emergency operations and establishes the minimum requirements to safeguard the public health, safety and general welfare through the following:

- Adequate light and ventilation
- Energy conservation
- Means of egress facilities
- Safety to life and property from fire and other hazards attributed to the built environment
- Sanitation
- Stability
- Structural strength

Goal

Participants will be able to use this document to identify changes from the 2006 to the 2009 IBC, allowing them to apply these code requirements to design, plan review and/or inspection.

Administration			
Code Section		Section Title	Change
2009	2006		
107.1	107.1	Submittal documents	Changed numbers of sets of documents submitted at application increased to at least two (for consistency across the codes).

Definitions			
Code Section		Section Title	Change
2009	2006		
Chapter 2	Chapter 2	Definitions	Added High-rise definition. See Section 403. Added definition for Primary Structural Members and Secondary Members. This addition pulls the information from the footnotes of Table 601 that were deleted.

Use and Occupancy Classifications			
Code Section		Section Title	Change
2009	2006		
304.1	304.1	Business Group B	Added Ambulatory Health Care Facilities to Group B uses and differentiated from out-patient clinics. AHCF's are often called day surgery centers. A new set of standards for AHCF's was added in Section 422.
310.1	310.1	Residential Group R	Changed Transient "congregate living facilities" with 10 or fewer occupants can be constructed to Group R-3 specifications rather than R-1. This will effect the Bed and Breakfast industry.
			Added Live/Work Units as a Group R-2 occupancy. See Section 419.
311.2	311.2	Moderate-hazard storage, Group S-1	Clarified all aircraft hangars, other than residential aircraft hangars, are not considered an S-1 occupancy. This is a change from the 2006 code which allowed some to be S-1. See Section 412.

Knowledge Review

1. What Occupancy Group have ambulatory health care facilities been added to?

Special Detailed Requirements Based on Use and Occupancy

Code Section		Section Title	Change
2009	2009		
402.2	402.2	Definitions	Added definitions and standards to allow an "open mall" building to use the Section 402 standards. This allows a 'collection of buildings' to be considered a single open mall building.
402.10	402.10	Smoke control	Clarified open malls and two-level covered malls do not need smoke control.
403	403	High-rise buildings	<p>Revised to include changes resulting from post 9/11 terrorism studies. Standards were added for "super" high-rises— those over 420 feet.</p> <p>Changes for all high-rises:</p> <ol style="list-style-type: none"> 1. Fire pumps to be supplied by two different mains— 403.3.2 2. Bond strength for spray-applied fireproofing increased—403.2.4 3. Smoke removal system required—403.4.6 4. Exit enclosures to be separated at least 30 feet or one quarter of the diagonal—403.5.1 5. Luminous egress path markings required—403.5.5 6. Occupant self-evacuation elevators can be installed per Section 3008—406.2 <p>Changes for high-rises over 120 feet:</p> <ol style="list-style-type: none"> 1. A fire service access elevator required. These have enhanced protection and functional lobbies to allow use by fire fighters for firefighting and staging as well as assisting people in wheelchairs out of the fire zone—406.1 <p>Changes for high-rises over 420 feet:</p> <ol style="list-style-type: none"> 1. Sprinklers zones supplied by two risers—403.3.1 2. Reductions in fire-resistance rating not allowed—403.2.1.1 3. Shafts for stairs and elevators to be built to resist impacts—403.2.3 4. High bond strength for spray applied fireproofing—403.2.4 5. An additional stairway required—or elevators must meet new standard for occupant evacuation—403.5.4
406.1.5	406.1.5	Automatic garage door openers	Requires automatic door openers in private garages must meet-UL 325.
407.4.3	407.4.3	Horizontal assemblies	Adds that horizontal assemblies supporting smoke barriers must also resist the passage of smoke.
408.3	408.3	Means of egress	Added refinements to the egress standards to allow a more flexible approach to inmate and guard exiting and safety.
408.5	408.5	Protection of vertical openings	Added exemptions for penetration protections within housing units.
419	NEW	Live/Work Units	Details a mixture of uses, including residential, within the same "unit" without separation of unlike uses. Live/work units are 'artist lofts' and similar phrases.
422	NEW	Ambulatory Health Care Facilities	<p>Added new term (defined in Chapter 2)</p> <ul style="list-style-type: none"> • Still a Group B occupancy • Sprinklered • Smoke barriers dividing each facility • Egress from each smoke compartment fire alarm system required
423	NEW	Storm Shelters	Refers to new ICC 500 standard for storm shelters for hurricane- and tornado-prone areas.

✓ Knowledge Review

2. List five Changes that have been made to Section 403 for all high-rises

1. _____
2. _____
3. _____
4. _____
5. _____

3. List three changes for high-rises over 420 feet.

1. _____
2. _____
3. _____

Building Heights and Areas			
Code Section		Section Title	Change
2009	2008		
Chapter 5	Chapter 5	General Building Heights and Areas	Added refinements of terms for heights/areas in Sections 503, 504 and 506 and Table 503.
Table 503	Table 503	ALLOWABLE BUILDING HEIGHTS AND AREAS	Changed the allowable number of stories in Types IIB and IIIB were reduced for B, M and S occupancies.
506	506	Building Area Modifications	Clarified maximum allowable areas for single occupancy versus mixed occupancy buildings.
507.3.1	507.3.1	Mixed occupancy buildings with Groups A-1 and A-2	Clarified the allowance for A-1 and A-2 occupancies in unlimited area buildings.
508.2	508.2	Accessory occupancies	Clarified incidental use areas to be a subcategory of accessory occupancies that have mandatory separation and/or sprinkler protection requirements. Compliance with incidental use standards is no longer "optional", but must always be met. Parking and Storage are no longer incidental accessory uses. They are either accessory or a distinct occupancy unto themselves.
509.2	509.2	Horizontal building separation allowance	Revised and reformatted are the "pedestal" building standards. A significant change is to allow Group R occupancies in the lower building as well as Group S-2, and small A's, B and M.
509.8	509.8	Group B or M with Group S-2 open parking garage above	"Reverse pedestal" buildings, Group B and/or M on first story with Parking above were, also revised and reformatted.
509.9	NEW	Multiple buildings above or below Group S-2 parking garages	Clarified that under Sections 509.2, 509.3 and 509.8 multiple "buildings" above the separations on top of the same lower pedestal are allowed.

✓ Knowledge Review

4. In what occupancies have the allowable number of stories for Types IIB and IIIB construction been reduced?

Fire Safety

Code Section		Section Title	Change
2009	2008		
703.6	NEW	Marking and Identification	New requirements for identifying fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions with a mark indicating that openings need to be protected were added.
705.2	704.2	Projections	Adds a method to determine allowable exterior wall projections based on unprotected openings or the installation of an automatic sprinkler system. Also, provides for an allowance of unlimited projections for buildings that qualify for buildings on the same lot.
705.5	704.5	Fire-resistance ratings	Requires exterior walls to be rated from both sides when located with a fire-separation distance of less than or equal to 10 feet. This is an increase from the previous fire-separation distance of less than or equal to 5 feet.
706.8	705.8	Openings	Increases the allowable individual opening size in a fire wall from 120 to 156 square feet.
708.2	707.2	Shaft enclosure required	Adds two shaft enclosure exceptions: Elevator hoistways in open or enclosed parking garages that serve only the parking garage; mechanical exhaust or supply duct systems in open or enclosed parking garages when such duct systems are contained within and serve only the parking garage.
708.14.1	707.14.1	Elevator lobby	Adds requirements for doors, duct and air transfer openings through elevator lobby enclosure walls. Also adds an exception to the elevator lobby where the elevator serves only open parking garages in accordance with Section 406.3.
708.14.2.2	NEW	Rational analysis	For elevator hoistway pressurization systems, this section introduces a new requirement for a rational analysis including stack effect, temperature effect, wind effect, HVAC systems, climate and duration of operation requirements (Section 909.4).
708.14.2.7	NEW	Marking and identification	Introduces a new requirement for marking of detection and control systems for elevator hoistway pressurization systems.
708.14.2.8	NEW	Control diagrams	Introduces a new requirement for control diagrams for elevator hoistway pressurization systems.
708.14.2.9	NEW	Control panel	Introduces a new requirement for control panels for elevator hoistway pressurization systems.
708.14.2.10	NEW	System response time	Requires the system response time for elevator hoistway pressurization systems to meet the same requirements as for smoke control systems.
712.4	711.4	Continuity	Adds exceptions for the fire-resistance rating of construction supporting horizontal assemblies for buildings of Type IIB, IIIB and VB construction to be consistent with those currently recognized for other fire-resistance-rated assemblies.
713.4.1.1.2	712.4.1.1.2	Through-penetration firestop system	Clarifies the exception as being applicable to penetrations within a wall above or below the horizontal assembly.
713.4.1.2	712.4.1.2	Membrane penetrations	Adds an exception for penetrations of any size electrical box installed in accordance with its listing.
714.1	713.1	General	Adds an exception for fire-resistant joint systems in floors and ramps of enclosed parking garages.
714.4.1	NEW	Exterior curtain wall and nonfire-resistance rated floor assembly intersections	Adds requirements for the sealing of voids between an exterior curtain wall and nonfire-resistance rated floor assemblies.

Fire Safety			
Code Section		Section Title	Change
2009	2006		
704.13 and 704.13.1 through 704.13.5	NEW	Sprayed fire-resistant materials (SFRM)	New requirements addressing SFRM including fire-resistance rating, installation instructions, substrate condition and finished condition.
715.4.5	NEW	Fire door frames with transom lights and sidelights	New section addressing opening protective requirements for fire door frames with transom lights and sidelights.
Table 715.5	Table 715.5	FIRE WINDOW ASSEMBLY FIRE PROTECTION RATINGS	Adds requirements for window assembly ratings in ½-hour rated fire partitions.
715.5.3	NEW	Safety glazing	Adds language to clarify that requirements for safety glazing are in addition to the fire protected rated glazing requirements.
716.5.1.1	NEW	Horizontal exits	New requirement for smoke dampers at duct or air transfer openings in fire walls that serve as horizontal exits.
716.5.2.1	NEW	Horizontal exits	New requirement for smoke dampers at duct or air transfer openings in fire barriers that serve as horizontal exits.
716.5.3	716.5.3	Shaft enclosures	New exception added for fire dampers or fire/smoke dampers in kitchen and clothes dryer exhaust systems.
716.5.6	NEW	Exterior walls	New section with requirements specific to duct and air transfer openings through exterior walls that are required to have protected openings.
716.5.7	NEW	Smoke partitions	New section with requirements specific to the installation of smoke dampers in smoke partitions.
716.6.2.1	716.6.2.1	Ceiling radiation dampers	Adds new option for compliance of ceiling radiation dampers based on testing in accordance with ASTM E 119 or UL 263.
717.2.1.3	NEW	Loose-fill insulation material	Allows insulating foam sealants and caulk materials to be recognized as fireblocking materials when specifically tested in the form and manner intended for use.
Table 720.1(2)	Table 720.1(2)	RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS	Four new generic steel or wood-frame wall assemblies added for 1- and 2-hour fire-resistance-rated designs.

✓ Knowledge Review

5. In the 2009 code exterior walls will be required to be rated from both sides for what fire separation distance?

6. In the 2009 code, what is the maximum size of an opening in a fire wall?

Interior Finishes

Code Section		Section Title	Change
2009	2006		
802.12	NEW	High density polyethylene (HDPE)	New section requiring HDPE to be tested in accordance with NFPA 286 and to meet specific acceptance criteria.
803.1.4	NEW	Acceptance criteria for textile and expanded vinyl wall or ceiling coverings tested to ASTM E84 or UL 723	Adds new test standard (ASTM E2404) for the test specimen preparation and mounting when testing for flame spread index in accordance with ASTM E84 or UL 723.
803.13	NEW	Site-fabricated stretch systems	New section containing requirements for site-fabricated stretch systems use as interior wall or ceiling finish materials.
808.6	NEW	Interior floor-wall base	New section requiring Interior floor-wall base 6 inches or less in height to comply with the requirements for interior floor finish material.

Fire Protection Systems

Code Section		Section Title	Change
2009	2006		
903.2.3	903.2.2	Group E	The fire area threshold limit for the installation of an automatic sprinkler system was reduced from 20,000 square feet to 12,000 square feet which now treats the fire hazards associated with Group E occupancies equally with other occupancies with similar fuel loads and hazards such as Group F-1, S-1 and M occupancies. The requirement for the installation of an automatic sprinkler system at a lower threshold will allow design professionals to take advantage of IBC and IFC-permitted trade-ups and credits, which should reduce the cost per square foot of constructing Group E occupancies.
903.2.7	903.2.6	Group M	A new fourth sprinkler trigger condition has been added in the interest of making upholstered furniture retail and warehouse facilities safer for employees, customers and first responders. It will require sprinklers for Group M occupancies displaying and selling upholstered furniture and recognizes that, under certain circumstances, upholstered furniture will ignite and contribute significantly to the fuel load of a fire. The code change was submitted jointly by the American Home Furnishings Alliance (AHFA) and the National Home Furnishings Association (NHFA) because materials and constructions touted as more fire resistant have not proven to be so to the satisfaction of fire authorities. The U.S. Consumer Product Safety Commission (CPSC) has tested furniture with combustion modified polyurethane foam and found that such foam does not meaningfully improve fire performance when furniture is exposed to an open flame. Therefore, sprinklers are viewed as a reasonable mitigation strategy for these products.
903.2.10	903.2.9	Group S-2 enclosed parking garages	Revised to address an inconsistency in the IFC with respect to sprinkler thresholds for Group S-1 and S-2 occupancies. In the 2006 IFC Section 903.2.8 there are fire area size-based sprinkler thresholds established for S-1 occupancies. However, in Section 903.2.9 there was no square footage threshold for Group S-2 enclosed parking garages; they all required sprinklers regardless of square footage. Then, Section 903.2.9.1 brought back a square footage threshold for commercial parking garages. So in the 2006 IFC, the sprinkler requirements for S-2 enclosed parking garages were the most restrictive of the Group S occupancies, yet they are the least hazardous use. It appeared then, that a square footage threshold was "missing" in IFC Section 903.2.9, supported by the IFC Commentary which stated that it was not the intent for enclosed parking garage sprinkler requirements to be more restrictive than a repair garage. Accordingly, the revision establishes a sprinkler threshold for S-2 parking garages that is similar to S-1 occupancies.

Fire Protection Systems			
Code Section		Section Title	Change
2009	2006		
907	907	Fire Alarm and Detection Systems	A series of code changes revised and reformatted the arrangement of the fire alarm and detection system requirements in Section 907. When the 2000 IFC was published, Section 907 was made up from various requirements found in the legacy National, Standard and Uniform fire codes and, as a result, was one of the more difficult sections to apply because of the various inconsistencies and lack of clear provisions based on the occupancy classification of a building. The series of code changes streamlined the requirements for fire alarm and detection systems and provide greater consistency between the IFC and the 2007 edition of NFPA 72. Because of the rearrangement of the requirements for fire alarm and detection systems, a major improvement is that they now clearly stipulate when occupant notification is required. Previous code commentaries and formal interpretations have stated that the installation of alarm signaling devices was necessary for occupant notification; however, the IFC never directly stated this as a requirement.
913.2.1	NEW	Protection of fire pump rooms	A new section requires fire pumps to be located in a fire-resistive room separated using fire barriers or horizontal assemblies, or both, when the pump is located inside of a building or by using spatial separation (physical distance) when the fire pump is located outside of the building it serves.

✓ Knowledge Review

7. The maximum size of a fire area in an Occupancy E that can be without sprinklers has been reduced from what in 2006 to what in 2009?

Means of Egress

Code Section		Section Title	Change
2009	2006		
1002.1	1002.1	Definitions—Bleachers, Folding Telescopic Seating and Grandstands	Revised definition of "Bleachers," "Folding and telescopic seating" and "Grandstands"—The definitions were revised to clarify when ICC 300 is applicable (see Section 1028.1). ICC 300 is limited to items that are separated and independent structures that are not "building elements" (as defined in Chapter 7). ICC 300 is not intended to be utilized for single-row seating that is supported directly by the floor system.
1002.1	1002.1	Definitions—Exit Access Doorway	Added definition of "Exit access doorway"—Exit access doorways are an important element in the exit access portion of a means of egress, including arrangement, number, opening protection, separation and exit sign placement. The term is inclusive of specific points in the means of egress which may not include a "doorway" such as when an unenclosed exit access stairway is used in the egress path.
1002.1	1002.1	Definitions—Exit Discharge, Level of	Revised definition of "Exit discharge, level of"—The definition was revised to clarify that the level of exit discharge is a volume and not a horizontal plane; therefore, the level of exit discharge is the story where the occupants leave the building and proceed to the public way. This interpretation is consistent with NFPA 101.
1002.1	1002.1	Definitions—Flight	Added new definition for "flight"—The definition is needed to clarify that a flight of stairs is from one landing to another, so that a "stairway" may consist of one or more "flights" between stories, depending on the number of intermediate landings on that "stairway." This also clarifies that winders are treads and not landings.
1002.1	1002.1	Definitions—Photoluminescent and Self-Luminous	Added new definitions for "Photoluminescent" and "Self-Luminous"—The definitions were added to clarify that there are two different technologies that could be utilized to meet the new requirements for luminous egress path markings in new Section 1024.
1002.1	1002.1	Definitions—Suite	Added new definition for "Suite"—The definition clarifies what constitutes a suite in regard to the means of egress provisions in Sections 1014.2.2 through 1014.2.7
1003.5	1003.5	Elevation Change	The revision to the last sentence in this section clarifies that any change of elevation along exit access in a Group I-2 occupancy should be ramped. The intent is that locations where staff may be moving patients in beds, stretchers or gurneys should not include steps.
Table 1005.1	Table 1005.1	MINIMUM REQUIRED EGRESS WIDTH	The minimum required egress width is determined based upon the more restrictive of the calculated width and the component width. Calculation of the minimum required width, based upon the number of occupants served by the egress system, previously varied based upon whether or not the building was protected by an automatic fire extinguishing system. In all occupancies other than Groups H-1, H-2, H-3, H-4 and I-2, a factor of 0.2 inches of width per person was required for stairway travel and 0.15 inches per person was utilized for all other egress components. This was a reduction from the minimum required widths of 0.3 inches and 0.2 inches per person, respectively, mandated for nonsprinklered buildings. The 2006 Table 1005.1 has been deleted and the text in Section 1005.1 now reflects that all occupancies be regulated for calculated width in the same manner, regardless of the presence of an automatic sprinkler system.
1005.2 and 1005.3	1005.2	Encroachment Door hardware encroachment	Text was revised and added to clarify how encroachment into a corridor should be measured. The issues of trim, handrails and door hardware are specifically addressed.

Means of Egress

Code Section		Section Title	Change
2009	2006		
1007.3	1007.3	Stairways	In the 2006 edition, exit stairways considered part of an accessible means of egress were required to include an area of refuge incorporated within an enlarged floor-level landing, or as an alternative, were required to be accessed from an area of refuge or a horizontal exit. Exception 3, eliminating the requirement for areas of refuge provided the building is fully sprinklered, has been reinstated. The purpose of an area of refuge is to provide an area "where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation." The National Institute of Standards and Technology (NIST) in 1992 issued NISTIP 4770, "Staging Areas for Persons with Mobility Impairments." The primary conclusion of the report was that the operation of a properly designed sprinkler system eliminates the life threat to all occupants regardless of their individual abilities and can provide superior protection for persons with disabilities as compared to staging areas. It was deemed that the ability of a properly designed and operational automatic sprinkler system to control a fire at its point of origin and to limit production of toxic products to a level that is not life threatening to all occupants of the building, including persons with disabilities, eliminates the need for areas of refuge.
1007.4	1007.4	Elevators	Exceptions 2 and 4 are companion exceptions for elevators utilized as a portion of an accessible means of egress (see also Section 1007.3). In similar fashion, elevators need not be accessed from an area of refuge or horizontal exit where the buildings is sprinklered throughout or when the seating area is smoke protected. Exception 3 is an exception for the area of refuge when an elevator is not protected in a shaft enclosure, similar to the open stairway allowances.
1007.8, 1007.8.1, 1007.8.2	1007.6.3 1007.6.4	Two-way communication System Requirements Directions	Two-way communication systems are required in the area in front of each elevator bank. Exception 1 allows for the two-way communication system to be provided in areas of refuge. The system is intended to offer a means of communication to disabled individuals who need assistance during an emergency situation. Exception 2 exempts the requirement for a two-way communication system when people can self-evacuate using a ramp system. The two subsections provide specific requirements for the system and direction signage. The two subsections are also referenced for the two-way communication requirement in areas of refuge (Section 1007.6.3).
1007.9	1007.6.5	Signage	Visual and tactile (raised and Braille) signage must be provided at every area of refuge and exterior area for assisted rescue identifying the purpose of the space.
1007.10	1007.6.4	Directional signage	Signage indicating the location of all accessible means of egress must be provided at all nonaccessible means of egress, at all elevators and within areas of refuge.
1007.11	1007.6.4	Instructions	Instructions must be posted in all areas of refuge and exterior areas for rescue assistance regarding use of the area.
1008.1.2	1008.1.2	Door swing	A new Exception 9 allows manual horizontal sliding doors instead of swinging doors for means of egress from spaces with 10 or less occupants. This new exception addresses the typical horizontal sliding door that is operated manually, such as a "pocket" door or a sliding "patio" door. The allowance for such a door will provide greater design flexibility and efficiency, while at the same time maintaining an acceptable level of safety.
1008.1.9.4	1008.1.8.4	Bolt locks	In Exceptions 3 and 4, the allowance for the use of manually operated edge or surface-mounted bolts on the inactive leaf of a pair of doors has been extended to limited applications in Group B, F and S occupancies. Exception 5 is a similar allowance for an inactive leaf on a pair of doors to patient rooms in Group I-2. This will allow for movement of equipment without any hazard to the means of egress.

Means of Egress

Code Section		Section Title	Change
2009	2006		
1008.1.9.5.1	NEW	Closet and bathroom doors in Group R-4 occupancies	In small group homes, Group R-4, there is a concern about residents and possible entrapment issues. Closet doors that latch must be operable from the inside. Bathroom doors that can be locked from the inside must also be able to be unlocked from the outside by staff.
1008.1.9.6	NEW	Special locking arrangements in Group I-2	Delayed egress locks are permitted in limited areas in Group I-2 where the needs of the patients/residents may dictate additional security, such as dementia wards. There is a partial exception to some of the listed requirements in mental hospitals.
1008.1.9.8	NEW	Electromagnetically locked egress doors	In specific occupancies, doors in the means of egress are now permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch that interrupts the power supply to the electromagnetic lock and unlocks the door. The use of this type of locking system provides for a greater degree of security than that offered by other methods addressed in the code, including delayed egress locking systems and egress access control systems.
1008.1.9.9	NEW	Locking arrangements in correctional facilities	Correctional facilities include many different use areas for detainees, including cafeterias, work areas, educational areas, visiting areas, etc. This section allows for the level of security to be maintained throughout the facility as a whole.
1008.1.10	1008.1.9	Panic and fire exit hardware	This section was reorganized and divided into three sections. Panic hardware and fire exit hardware installed on means of egress doors must now be listed in accordance with UL 305, <i>Panic Hardware</i> .
1008.1.10.1	1008.1.9	Installation	See Section 1008.1.10.
1008.1.10.2	1008.1.9	Balanced door	See Section 1008.1.10.
1009.3	NEW	Walkline	Historically, the walkline was 12 inches from the side of the tread, and this was the point where the tread depth was measured. New language was added to clarify where the walkline would be calculated for wider treads.
1009.4.5	1009.3.3	Profile	Per Exception 2, in addition to Group I-3, in Group F, H and S occupancies, open risers are now permitted at stairways located in areas not open to the public. Per Exceptions 3 and 4, spiral stairways and alternating tread devices must be provided with open risers in order to be constructed safely and used efficiently.
1009.6.1	1009.5.1	Stairway walking surface	Exception 1 allows for treads and landings to be constructed of grates that do not allow the passage of a 1/2-inch sphere. This will be very beneficial in areas where the accumulation of water or snow on stair surfaces can be a safety hazard.
1009.12	1009.10	Handrails	Revisions to Exception 5 now allow, within dwelling units and sleeping units of Group R-2 and R-3 occupancies, that a handrail is now only required for stairs having four or more risers.
1009.14	NEW	Stairway to elevator equipment	Where access to a roof or rooftop penthouse is required in order to maintain elevator equipment, a stairway must be provided for access purposes.
1010.9.1	1010.9.1	Curb, rail, wall or barrier	The minimum required height of 4 inches for a curb used as edge protection at the side of ramps and ramp landings has been clarified.
1011.1	1011.1	Where required	In buildings with complicated means of egress systems, it is possible that egress travel within the exits may not be immediately apparent to the occupants. For this reason, exit signs must also be provided for those portions within exits, such as exit passageways, where such signs are necessary to provide clear egress direction for the occupants.
1011.4	1011.4	Internally illuminated exit signs	Internally illuminated exit signs, including electrically powered, self-luminous and photo luminescent signs, are now required to be listed and labeled per UL 924.

Means of Egress

Code Section		Section Title	Change
2009	2006		
1012.3	1012.3	Handrail graspability	Criteria have been provided for additional complying handrail shapes, identified as Type II handrails, which are permitted in selective residential applications. The handrail shape permitted in the 2006 IBC is now identified as Type I handrails.
1012.3.1	NEW	Type I	See Section 1012.3.
1012.3.2	NEW	Type II	See Section 1012.3.
1012.6	1012.5	Handrail extensions	Where handrails are not continuous between runs, the handrail extensions must extend in the same direction as the stair flight or ramp run. The extension is not useful if it bends around a corner at the top or bottom of the run.
1013.1	1013.1	Where required	When determining where a guard is required, the vertical distance from the walking surface to the grade or floor below is now based on the lowest point within a 36-inch radius measured horizontally from the edge of the open sided walking surface. This allows for sloped surfaces adjacent to the guard to be considered rather than just the point at the edge.
1013.1.1	NEW	Glazing	This new section provides requirements for when glazing is part of a guard system.
1013.2	1013.2	Height	Fixed seating adjacent to a guard is now considered a walking surface and the minimum height of the guard is to be measured from that surface rather than from the floor.
1013.3	1013.3	Opening limitations	The permitted maximum size of openings in the upper portion of guards has been reduced from 8 inches to 4 $\frac{3}{4}$ inches.
1014.2.2 through 1014.2.7	1014.2.2	Group I-2	This section has been revised to more clearly define what are the exiting requirements for suites that contain patient sleeping rooms and suites in areas other than patient sleeping rooms. Suites are separated from other portions of the building by smoke partitions.
1014.3	1014.3	Common path of egress travel	In Exception 4, the allowance for an extended common path of egress travel in Group R-2 occupancies is now also available where the building is protected throughout with an NFPA 13R automatic sprinkler system.
1015.1	1015.1	Exits or exit access doorways from spaces	The occupant load threshold at which a second means of egress is required from a Group R-2 occupancy has been increased from 11 to 21 where an automatic sprinkler system is provided. A final paragraph has been added to clarify mixed occupancy exit access requirements.
1015.1.1	1015.1.1	Three or more exits or exit access doorways	The information in Table 1019.1 for number of exits from a floor has been placed in this section for spaces.
1016.1	1016.1	Travel distance limitations	The open stairways permitted in 2006 IBC Section 1020.1, Exception 8 and 9 have been relocated in the 2009 IBC to Section 1016.1, Exception 3 and 4. The intent is that these open stairways be considered "exit access" elements so that it is clear that the travel distance measurement includes the travel down the stairway and to an exit door leading either to the outside or to an enclosed exit stairway. Correlative changes were also included in several other sections including 1007.3, 1021.1 and 1022.1.
Deleted	1016.2	Roof vent increase	The allowance for an increased travel distance in fully-sprinklered Group F-1 and S-1 occupancies that are provided with automatic smoke and heat vents has been eliminated.
1017	1014.4 through 1014.4.3.3	Aisles	The requirements for aisles have been relocated to their own section.

Means of Egress

Code Section		Section Title	Change
2009	2006		
1018.4	1017.3	Dead ends	Exception 2 has been amended so that in addition to Group B and F, the permissible length of a dead-end corridor is 50 feet in Group E, I-1, M, R-1, R-2, R-4, S and U occupancies when the building is provided throughout with an NFPA 13 automatic sprinkler system.
1019	1014.5 through 1014.5.2	Egress balconies	The requirements for egress balconies have been relocated to their own section.
1021.1	1019.1	Exits from stories	Exception 1 was added as correlation with the third stairway required in high-rise buildings of 420 feet or higher. Exceptions 2 and 3 were added as part of the correlation efforts between exit and exit access stairways as a component of a means of egress. The purpose of Exception 4 is to allow single exits from some dwelling units. The purpose of Exception 5 is to allow for spaces that have exits independent of the building exits.
1021.1.1	NEW	Exits maintained	The requirement for exits to be maintained until arrival at grade was relocated from 2006 IBC Section 1019.1 so that it was clear that the exceptions were not applicable to this portion of exit requirements.
1021.2	1019.2	Single exits	The allowance for single exit buildings has been clarified to address egress from individual stories within the buildings. The focus has shifted from single-exit buildings to single-exit stories within buildings. This allows the table to more logically address mixed occupancies.
Table 1021.2	Table 1019.2	STORIES WITH ONE EXIT	See 1021.2
1022.1	1022.1	Enclosures required	Consistent with the provisions for shaft enclosures, the fire-resistance rating of an exit enclosure cannot be less than the rating of the floor construction penetrated by the enclosure. It is clarified that the exit enclosure can discharge to either the outside of the building or an exit passageway. A new Exception 7 coordinates with Section 1028.5.1 for open stairways from balconies, galleries and press boxes. Previous Exceptions 8 and 9 were relocated to Section 1016.1 (see Section 1016.1).
1022.9.1	1020.7.1	Termination and extension	This revision allows smokeproof enclosures and pressurized stairways to terminate at an exit discharge or exit passageway similar to exit enclosures.
1024	NEW	Luminous egress path markings	Photoluminescent or self-luminous exit path markings are now required in exit enclosures and exit passageways of high-rise buildings in order to delineate the exit path.
1027.1	1024.1	General (Exit discharge)	The options of exit discharge through a lobby or through a vestibule (Exceptions 1 and 2) combined can only make up half of the exits. Previously, the exceptions could be taken individually and possibly be 100 percent of the exits. A new Exception 4 clarifies that horizontal exits do not have to discharge to the exterior of a building.
1028.1	1025.1	General (Assembly)	The revised text clarifies that the assembly seating criteria can also be used for assembly spaces that are classified as Group E occupancies. Correlating provisions occurred in Section 1010.2, 1014.3, 1028.2, 1028.3 and 1028.9.
1028.1.1	1025.1.1	Bleachers	See definitions for "Bleachers", "Grandstands" and "Folding and telescopic seating."
1028.4	1025.4	Foyers and lobbies	The physical barrier required to separate the waiting areas within lobbies of Group A-1 occupancies from the means of egress paths is no longer mandated.
1028.5	1025.5	Interior balcony, gallery and press box means of egress	The allowance for a single means of egress where serving a press box with an occupant load of 49 or less has been clarified.
1028.10	1025.10	Clear width of aisle accessways serving seating	The revised language clarifies how to measure aisle accessways for seats with folding tablet arms.

✓ Knowledge Review

8. New in the 2009 edition, what changes were made to calculation of minimum egress width with regard to automatic sprinklers?

9. Where must directional signage indicating the location of accessible means of egress be placed?

Code Section		Section Title	Change
2009	2006		
1103.2.3	1103.2.3	Employee work area	The maximum size of those employee work areas specifically exempted from all accessibility requirements has been increased from 150 square feet to 300 square feet.
1103.2.13	NEW	Live/work units	The accessibility requirements for live/work units will require the work and residential areas to be evaluated separately.
1106.5	1106.5	Van spaces	Where a required accessible van space is located within a private garage serving a Group R-2 or R-3 occupancy, the minimum vertical clearance need only be 7 feet above the garage floor.
Table 1107.6.1.1	Table 1107.6.1.1	ACCESSIBLE DWELLING UNITS AND SLEEPING UNITS	The required type of bathing facilities in Accessible dwelling units and sleeping units has been modified so that options will be offered when four or more Accessible units are required.
1108.2.3	NEW	Companion seats	Each wheelchair space must have an associated companion seat.
1108.2.5	1108.2.4	Designated aisle seats	Designated aisle seats must be located closest to the accessible route.
1108.4.1 through 1108.4.1.5	1108.4.1 NEW	Courtrooms	The general requirement for courtroom accessibility has been replaced with several provisions addressing elements specific to the judicial activities that occur.
1109.2.1 through 1109.2.1.7	1109.2.1 through 1109.2.1.7	Family or assisted-use toilet and bathing rooms	The "unisex" toilet room required in large assembly and mercantile occupancies is now identified as a "family or assisted-use" toilet room in order to distinguish it from other types of toilet rooms designated as "unisex."
1109.2.3	NEW	Sink	A lavatory with enhanced reach ranges is now required in a toilet room or bathing facility that is provided with six or more lavatories.

✓ Knowledge Review

10. What is the designation of the "unisex" toilet room in mercantile and large assembly occupancies?

Exterior Walls			
Code Section		Section Title	Change
2009	2006		
1402.1	1402.1	General	Adds new definitions for "Exterior Insulation and Finish System (EIFS)" and "Exterior Insulation and Finish System (EIFS) with drainage."
1405.3	NEW	Vapor retarders	New section establishing where Class I and II vapor retarders are required.
1405.3.1	NEW	Class III vapor retarders	New section establishing where Class III vapor retarders are permitted.
Table 1405.3.1	NEW	CLASS III VAPOR RETARDERS	New table establishing where Class III vapor retarders are permitted.
1405.3.2	NEW	Material vapor retarder class	New section requiring manufacturer's certified testing to establish the class of vapor retarder and prescribing minimum materials that are deemed to meet each class.
1408	NEW	Exterior Insulation and Finish Systems (EIFS)	New section containing requirements for EIFS, including performance characteristics, structural design, weather resistance, installation and special inspection.

Roof Assemblies and Rooftop Structures			
Code Section		Section Title	Change
2009	2006		
1502.1	1502.1	General	Provides new definitions for "Aggregate" and "Ballast."
1503.4.1	NEW	Secondary drainage required	Provides requirements for determining when secondary roof drainage is to be provided.
1503.4.2	NEW	Scuppers	Provides criteria for sizing and locating scuppers when scuppers are provided for secondary drainage
1505.2	1505.2	Class A roof assemblies	Provides an exception that prescribes additional types of materials and assemblies that can be classified as Class A roof assemblies.
1507.2.7.1	NEW	Wind resistance	Provides requirements for asphalt shingles to be tested for wind resistance and labeled with the applicable classification. Tables show classification requirements based on wind speed.
1507.4.4	1507.4.4	Attachment	Provides more prescriptive options for fastening metal roof panels to supporting construction.
1507.11.2	1507.11.2	Material	Provides another option (material standard) to qualify a modified bitumen roof covering.
1507.12.3	NEW	Ballasted thermoset low slope roofs	Provides installation requirements for ballasted thermoset low slope roofs.
1507.13.3	NEW	Ballasted thermoplastic low slope roofs	Provides installation requirements for ballasted thermoplastic low slope roofs.
1507.15.2	1507.15.2	Material standards	Provides another option (material standard) to qualify a liquid applied roof covering.
1507.16	NEW	Roof gardens and landscaped roofs	Requires roof gardens and landscaped roofs to meet the requirements of Chapter 15 and applicable portions of Chapter 16.
1509.2.2	NEW	Area limitation	Clarifies that penthouses do not contribute to building area or the number of stories of a building and that penthouses are not required to be included in the determination of a fire area.

Roof Assemblies and Rooftop Structures

Code Section		Section Title	Change
2009	2006		
1509.2.4	1509.2.1	Type of construction	Provides for the use of fire-retardant-treated wood for the construction of penthouse enclosures consistent with what is allowed currently for specific types of construction.

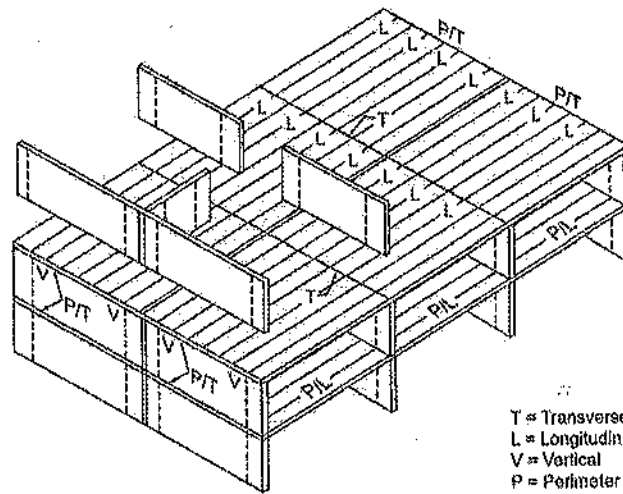
Structural Design

Code Section		Section Title	Change
2009	2006		
1603.1.6	NEW	Geotechnical information	Specifies the geotechnical information that must be included in the construction documents.
1604.8.2	1604.8.2	Walls	Clarifies the minimum anchorage loading for walls.
1604.8.3	1604.8.3	Decks	States the loading conditions that must be considered for cantilevered deck framing.
Table 1604.5	Table 1604.5	OCCUPANCY CATEGORY OF BUILDINGS AND OTHER STRUCTURES	Clarifications made to the descriptions for Occupancy Categories III and IV.
1605.1	1605.1	General	Clarifies the applicability of load combinations. References the overstrength load combinations of ASCE 7.
1605.1.1	NEW	Stability	Clarifies overall structural stability verification.
1605.3.1	1605.3.1	Basic load combinations	Exception 2: Flat roof line loads of 30 psf or less are not required to be combined with seismic loads in addition to snow loads.
1605.3.2	1605.3.2	Alternative basic load combinations	
Table 1607.1	Table 1607.1	MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L_o , AND MINIMUM CONCENTRATED LIVE LOADS	Live loads handled similarly for balconies and decks.
1607.9	1607.9	Reduction in live loads	Clarifies applicability of live load reduction to certain roof live loads.
Table 1607.9.1	Table 1607.9.1	LIVE LOAD ELEMENT FACTOR, K_{LL}	One-way slabs added to table.
1607.9.1.1	1607.9.1.4	One-way slabs	Clarifies that the width of the tributary area for one-way slabs for computing live load reduction does not exceed 1.5 times the slab.
1607.9.1.4	1607.9.1.3	Group A occupancies	No live load reductions are allowed for line loads of 100 psf in Group A occupancies.
1607.9.2	1607.9.2	Alternate floor live load reduction	Clarifies the supported floor area for live load reductions applicable to one-way slabs.
1607.11.2.1	1607.11.2.1	Flat, pitched and curved roofs	Applicability of lower roof live loads for structures such as greenhouses is clarified.
1607.11.2.2	1607.11.2.2	Special-purpose roofs	Restricts live load reductions for roof classified as Group A.
1609.1.1	1609.1.1	Determination of wind loads	Exception refers to ICC 600 for specific Group R occupancies. Adds exception for wind tunnel tests.

Structural Design

Code Section		Section Title	Change
2009	2006		
1609.1.1.2	NEW	Wind tunnel test limitations	Establishes minimum MWFRS and C&C wind pressures when using wind tunnel tests.
1609.1.2	1609.1.2	Protection of openings	Limits the wood structural panel option to specific Group R occupancies.
Table 1609.1.2	Table 1609.1.2	WIND-BORNE DEBRIS PROTECTION FASTENING SCHEDULE FOR WOOD STRUCTURAL PANELS	Clarifies the embedment length and anchor capacity required for the wood structural panel alternative.
1609.1.2.2	NEW	Garage doors	Clarifies impact resistance standard applicable to garage door opening protection.
1609.6	NEW	Alternate all-heights method	Provides a simplification of the ASCE 7 analytical wind load method.
1609.6.1	NEW	Scope	States the limitations on the alternative wind load procedure.
1609.6.3	NEW	Design equations	Provides the formula for calculating the design wind pressures when using the alternative procedure.
1609.6.4	NEW	Design procedure	Provides guidance on determining and applying the parameters that are used to calculate the design wind pressure under the alternative procedure.
Table 1609.6.2(1)	NEW	WIND VELOCITY PRESSURE (q_s) AT STANDARD HEIGHT OF 33 FEET	Tabulates the velocity pressures used in the design wind pressure formula of the alternative procedure.
Table 1609.6.2(2)	NEW	NET PRESSURE COEFFICIENTS, C_{NET}	Tabulates the net pressure coefficient that is used in the design wind pressure formula of the alternative procedure.
1610.1	1610.1	General	Clarifies when the full hydrostatic pressure of backfill must be used for foundation wall design.
FIGURE 1611.1	NEW	100-YEAR, 1-HOUR RAINFALL (INCHES) EASTERN UNITED STATES	Provides the rainfall intensity (from the IPC) that is required in computing rain loading on roofs.
1612.3.1	NEW	Design flood elevations	Clarifies the determination of design flood elevation when it is not specified on the flood hazard maps.
1612.3.2	NEW	Determination of impacts	Provides guidance in riverine flood hazard areas where the flood maps do not delineate floodways.
1612.4	1612.4	Design and construction	Direct reference is provided to the standard for flood load determination.
1613.6.3	NEW	Automatic sprinkler systems	Provides an alternative to ASCE that clarifies the sprinkler installation standard to satisfy the seismic load provisions.
1613.6.4	NEW	Autoclaved aerated concrete (AAC) masonry shear wall design coefficients and system limitations	Provides the seismic design parameters and limitations for AAC masonry shear wall systems.
1613.6.5	NEW	Seismic controls for elevators	Clarifies alternatives for elevator seismic switches.
1613.6.6	NEW	Steel plate shear wall height limits	Provides an alternative to permit increased height limits for special shear plate shear wall systems.
1613.6.7	NEW	Minimum distance for building separation	Provides an alternative requirement for separating adjacent buildings.

Structural Design			
Code Section		Section Title	Change
2009	2006		
1613.6.8	NEW	HVAC ductwork with $I_p=1.5$	Provides an alternative to exempt small ducts from seismic bracing.
1613.7.1	NEW	ASCE 7, Section 11.7.5	Provides a modification to the lower bound horizontal force in the reference standard provision for wall anchorage.
1614.1	NEW	General	Governs structural integrity for high-rise buildings that are classified Occupancy Category III or IV.
1614.2	NEW	Definitions	Clarifies the terms used to distinguish structure types for structural integrity
1614.3	NEW	Frame structures	Specifies the structural integrity requirements that apply to concrete frame and steel frame structures.
1614.4	NEW	Bearing wall structures	Specifies structural integrity requirements for concrete bearing wall structures and other bearing wall structures.
FIGURE 1614.4	NEW	LONGITUDINAL, PERIMETER, TRANSVERSE AND VERTICAL TIES	Illustrates the ties that are required in bearing wall structures to provide structural integrity.



T = Transverse
L = Longitudinal
V = Vertical
P = Perimeter

IBC Figure 1614.4
Longitudinal Perimeter, Transverse and Vertical Ties

✓ Knowledge Review

11. Is ICC 600 for all use groups or just residential?

12. What occupancy categories are affected by the structural integrity provisions?

Structural Tests and Special Inspections

Code Section		Section Title	Change
2009	2005		
1702.1	1702.1	General	Definitions have been added for "intumescent fire-resistant coatings" and "mastic fire-resistant coatings."
1703.1.1	1703.1.1	Independence	Requires an approved agency to be independent of the contractor.
1704.1	1704.1	General	Clarifies that the registered design professional may provide special inspection.
1704.1.2	1704.1.2	Report requirement	Clarifies the special inspection reporting requirements.
Table 1704.3	Table 1704.3	REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION	Clarification of the steel construction inspection is made by distinguishing between snug-tight joints and pretensioned and slip-critical joints as well as verifications of welding.
1704.3.1	1704.3.1	Welding	Welding inspections are clarified by referencing appropriate standards for structural steel, cold-formed steel and reinforcing steel.
1704.3.4	NEW	Cold-formed steel trusses spanning 60 feet or greater	Requires bracing verification for long span trusses.
Table 1704.4	Table 1704.4	REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION	Specifically requires inspection of cast-in-place bolts and post-installed anchors. Includes verification of masonry compressive strength. Also includes inspections of anchor bolts, prestressing tendons and anchorages.
Table 1704.5.1	Table 1704.5.1	LEVEL 1 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION	
Table 1704.5.3	Table 1704.5.3	LEVEL 2 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION	
1704.6.2	NEW	Metal-plate-connected wood trusses spanning 60 feet or greater	Requires bracing verification for long-span trusses.
1704.7	1704.7	Soils	Clarifies the minimum inspection requirements for compacted fill.
Table 1704.7	Table 1704.7	REQUIRED VERIFICATION AND INSPECTION OF SOILS	Clarifies the soil inspections by making terminology consistent with Chapter 18.
1704.8	1704.8	Driven deep foundations	Editorial revisions made for consistency with Chapter 18 terminology.
Table 1704.8	Table 1704.8	REQUIRED VERIFICATION AND INSPECTION OF DRIVEN DEEP FOUNDATION ELEMENTS	Clarifies inspections for deep foundations by making terminology consistent with Chapter 18.
1704.9	1704.9	Cast-in-place deep foundations	Editorial revisions made for consistency with Chapter 18 terminology.

Structural Tests and Special Inspections

Code Section		Section Title	Change
2009	2006		
Table 1704.9	Table 1704.9	REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS	Clarifies inspections for deep foundations by making terminology consistent with Chapter 18.
1704.10	1704.10	Helical pile foundations	Provides details of special inspections for helical pile installation.
1704.12	1704.10	Sprayed fire-resistant materials	Clarifies the timing of these special inspections.
1704.12.1	NEW	Physical and visual tests	Clarifies the specific properties to be tested and inspected.
1704.12.4	1704.10.3	Thickness	Clarifies the criteria for thickness acceptance.
1704.12.4.2.1	NEW	Cellular decks	Provides the method of thickness measurements of spray fire-resistant material at cellular decks.
1704.12.4.2.2	NEW	Fluted decks	Provides the method of measuring thickness of spray fire-resistant material at fluted decks.
1704.12.4.3.1	NEW	Beams and girders	Provides the method of measuring thickness of sprayed fire-resistant material applied to beams or girders.
1704.12.4.3.2	NEW	Joists and trusses	Provides the method of measuring thickness of sprayed fire-resistant material applied to joists or trusses.
1704.12.4.3.3	NEW	Wide-flanged columns	Provides the method of measuring thickness of sprayed fire-resistant material applied to wide-flanged columns.
1704.12.4.3.4	NEW	Hollow structural section and pipe columns	Provides the method of measuring thickness of sprayed fire-resistant material applied to tube or pipe columns.
1704.12.5	1704.10.4	Density	Clarifies the sampling of sprayed fire-resistant materials when verifying density.
1704.12.6.1	1704.10.5.1	Floor, roof and wall assemblies	Increases the frequency of samples taken for verifying bond strength.
1704.12.6.2	1704.10.5.2	Structural members	Increases the frequency of samples taken for verifying bond strength.
1704.12.6.3	NEW	Primer, paint and encapsulant bond tests	Provides guidance on bond strengths of primer, paint or encapsulants.
1704.14.1	1704.14.1	Water-resistive barrier coating	Requires special inspection of a water-resistive barrier coating.
1705.3	1705.3	Seismic resistance	Lists structures that are exempt from special inspections for seismic resistance.
1705.3.1	1705.3.1	Seismic-force-resisting systems	Clarifies what seismic-force-resisting systems require special inspections.
1706.1	NEW	Special inspections for wind requirements	Requires additional special inspections where basic wind speed is higher.
1706.2	NEW	Structural wood	Specifies the additional inspections of wind-force-resisting system constructed of wood.
1706.3	NEW	Cold-formed steel light-frame construction	Specifies the additional inspections of wind-force-resisting systems using cold-formed steel light-frame construction.
1706.4	NEW	Wind-resisting components	Requires special inspection of roof and wall cladding.

Structural Tests and Special Inspections			
Code Section		Section Title	Change
2009	2008		
1707.2	1707.2	Structural steel	Exceptions to the inspection requirements provide clarification for structural steel systems.
1707.4	1707.4	Cold-formed steel light-frame construction	Exception is added for cold-formed steel seismic-force-resisting systems that meet certain conditions.
1707.6	1707.6	Architectural components	Editorial changes made to the exceptions clarify their application.
1708.1	1708.2	Testing and qualification for seismic resistance	Testing of nonstructural components are clarified.
1708.2	1708.3	Concrete reinforcement	Clarifies the requirements for reinforcing steel that is used in resisting seismic forces.
1708.3	1708.4	Structural steel	Reference is made to the appropriate standard for testing of structural steel. Exceptions provide clarifications for applicability to structural steel systems.
1708.4	1708.5	Seismic certification of nonstructural components	Clarifies the requirements for seismic certification of designated seismic systems.
1709.1	1706.1	Contractor responsibility	Requires the contractor's acknowledgement of special inspections for wind and seismic resistance.
1710.1	1709.1	General	Requires a written submittal to the building official prior to commencing the structural observations.
1710.2	1709.2	Structural observations for seismic resistance	Clarifies the requirement based on the structure's height in terms of stories.
1715.5.2	1714.5.2	Exterior windows and door assemblies not provided for in Section 1715.5.1	References test standard that is appropriate for performance of garage doors.

✓ Knowledge Review

13. What span length triggers special inspection of truss bracing constructed of cold-framed steel or metal-plate-connected wood?

Soils and Foundations

Code Section		Section Title	Change
2009	2006		
1802.1	1808.1	Definitions	Added definitions to clarify the terms that are used throughout the chapter (e.g. "deep foundations" versus "shallow foundations").
1803.5.4	1802.2.3	Ground-water table	The intent of the exception is clarified to apply only to locating the ground-water table.
1803.5.5	1802.2.4	Deep foundations	Clarifies the required content of the geotechnical investigation where deep foundations are proposed.
1803.5.7	1803.1	Excavation near foundations	Investigation is required where proposed excavations would remove lateral support.
1803.5.8	1803.5	Compacted fill material	Clarifies the required content of the geotechnical investigation where shallow foundations bear on compacted fill.
1803.5.9	1803.6	Controlled low-strength material (CLSM)	Clarifies the required content of the geotechnical investigation where shallow foundations bear on controlled low-strength material.
1805.1.2.1	1807.1.2.1	Flood hazard areas	Clarifies the required ground level of underfloor spaces in flood hazard areas.
1806.1	1804.1	Load combinations	Clarifies the applicability of allowable stress increases when considering wind or earthquake loads.
1806.2	1804.2	Presumptive load-bearing values	Provides guidance where properties of supporting soil are in doubt.
1806.3	1804.3	Lateral load resistance	Clarifies use of the presumptive values in determining soil resistance to lateral loads.
1807.1	NEW	Foundation walls	Regulates the design of foundation walls.
1807.1.2	NEW	Unbalanced backfill height	Clarifies the determination of unbalanced backfill height.
1807.1.6	NEW	Prescriptive design of concrete and masonry foundation walls	Regulates the design of foundation walls.
1807.1.6.2.1	1805.5.5.1	Seismic requirements	Governs the prescriptive design of concrete foundation walls based on the seismic design category and refers to the appropriate provisions in Chapter 19.
1807.1.6.3	1805.5.2.2	Masonry foundation walls	Contains the requirements for the prescriptive design of masonry foundation walls.
1807.2.1	1806.1	General	Regulates the design of retaining walls.
1807.2.3	NEW	Safety factor	Clarifies the conditions that apply when verifying the stability of retaining walls.
1807.3	1805.7	Embedded posts and poles	Regulates the design of embedded posts and poles.
1808.1	NEW	General	Contains provisions that govern the design of foundations.
1808.3.1	1801.2.1	Seismic overturning	Clarifies the applicability of the reduced seismic overturning for foundation design.
1808.8.1	1805.4.2.1, 1810.1.1	Concrete or grout strength and mix proportioning	Specifies minimum concrete strengths for foundations and provides guidance on mix designs.

Soils and Foundations

Code Section		Section Title	Change
2009	2008		
Table 1808.8.1	NEW	MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE OR GROUT	Provides tabulation of required minimum concrete strength based on the type of foundation element.
1808.8.2	NEW	Concrete cover	Specifies concrete cover requirements for foundations as well as guidance on how cover is determined.
Table 1808.8.2	NEW	MINIMUM CONCRETE COVER	Provides tabulation of concrete cover based on the type of foundation element.
1808.8.3	1805.4.2.4	Placement of concrete	Requirements for placing concrete are clarified and guidance is provided for deep foundations.
1808.9	1812.7	Vertical masonry foundation elements	Clarifies the design provisions applicable to masonry foundation elements.
1809.7	NEW	Prescriptive footings for light-framed construction	Contains requirements for prescriptive footings of concrete or masonry.
1809.8	1805.4.2.3	Plain concrete footings	Clarifies that the minimum edge thickness for concrete footings also applies where placed on rock.
1809.13	1805.4.2.2	Footing seismic ties	Clarifies that the tie force is a function of the footing's design gravity load.
1810.1.3	NEW	Deep foundation elements classified as columns	Identifies the conditions that require deep foundation elements to be designed as columns.
1810.2.1	1808.2.9.1	Lateral support	Clarifies the soil conditions that provide sufficient lateral support for deep foundation elements.
1810.2.2	1808.2.5	Stability	Clarifies the configurations that allow the deep foundation elements to be considered braced.
1810.2.5	NEW	Group effects	Provides criteria to require the consideration of group effects.
1810.3.1.1	NEW	Design methods for concrete elements	Clarifies the applicability of design methods to concrete elements.
1810.3.1.2	NEW	Composite elements	Provides guidance on design of elements that consist of different materials or of different types that are spliced together.
1810.3.1.3	1808.2.8.8	Mislocation	Establishes a minimum offset for design purposes.
1810.3.1.5	NEW	Helical piles	Provides guidance on the design of helical piles.
1810.3.1.6	1810.5.1	Casings	Requires protection of steel casings that are used as reinforcement in the design of the element.
1810.3.2.1	1810.2.1	Concrete	Regulates aggregate size for concrete elements that are cast in a steel pipe.
1810.3.2.1.1	NEW	Seismic hooks	Based on seismic design category, requires ends of hoops, spirals and ties to terminate with seismic hooks.
Table 1810.3.2.6	NEW	ALLOWABLE STRESSES FOR MATERIALS USED IN DEEP FOUNDATION ELEMENTS	Tabulates allowable stresses based on the material as well as the type of element.

Soils and Foundations

Code Section		Section Title	Change
2009	2006		
1810.3.2.7	1810.5.2	Increased allowable compressive stress for cased cast-in-place elements	Allows higher allowable stress for permanent cased cast-in-place elements that satisfy the listed conditions.
1810.3.3.1.2	1808.2.8.3	Load tests	The conditions mandating load tests for deep foundation elements are clarified.
1810.3.3.1.5	1808.2.8.5	Uplift capacity of a single deep foundation element	Clarifies the maximum uplift capacity and provides guidance on the factor of safety for uplift capacity due to wind or seismic effects.
1810.3.3.1.6	1808.2.8.5	Uplift capacity of grouped deep foundation elements	Provides direction on determining the uplift capacity of grouped elements.
1810.3.3.1.9	NEW	Helical piles	Establishes the design capacity for or of helical piles.
1810.3.3.2	1808.2.9.2	Allowable lateral load	Provides direction on determining the lateral capacity of single or grouped elements.
1810.3.5.2	NEW	Cast-in-place or grouted-in-place	Regulates the minimum dimensions of deep foundation elements that are cast-in-place.
1810.3.5.2.3	NEW	Micropiles	Establishes the maximum diameter of a micropile.
1810.3.5.3.2	1809.3.4	Steel pipe and tubes	Regulates the minimum diameter and wall thickness of steel deep foundation elements.
1810.3.5.3.3	NEW	Helical piles	Provides guidance for the minimum dimensions of shaft and bearing plates in helical piles.
1810.3.6	1808.2.7	Splices	Clarifies the design forces for splices and establishes minimum strength requirements.
1810.3.6.1	NEW	Seismic Design Categories C through F	Establishes the minimum strength for splices in deep foundation elements of SDC C and higher structures.
1810.3.7	NEW	Top of element detailing at cutoffs	Provides guidance for the cutoff of reinforcement provided in the upper portion of deep foundation elements.
1810.3.8	1809.2.1	Precast concrete piles	Regulates longitudinal reinforcing as well as ties and spirals for precast nonprestressed and precast prestressed elements.
1810.3.9.1	NEW	Design cracking moment	Establishes the design cracking moment for cast-in-place elements.
1810.3.9.2	NEW	Required reinforcement	Specifies the conditions that require cast-in-place elements to be reinforced.
1810.3.9.3	1810.1.2	Placement of reinforcement	Governs the placement of reinforcement in cast-in-place elements.
1810.3.9.4	1812.3.9.4	Seismic reinforcement	Specifies the minimum longitudinal and transverse reinforcement for cast-in-place elements based on the seismic design category.
1810.3.9.6	1810.7.1	Socketed drilled shafts	Provides the options of reinforcement or structural steel cores in socketed drilled shafts.
1810.3.10.1	1810.8.1	Construction	Allows micropile reinforcing to transition from deformed bars to steel pipe reinforcing.
1810.3.10.4	1810.8.4.1	Seismic reinforcement	Clarifies the length steel casing required for SDC C structures.
1810.3.11.1	1808.2.23.1.1	Seismic Design Categories C through F	States the minimum requirements for connecting deep foundation elements to pile caps in SDC C and higher structures.

Soils and Foundations

Code Section		Section Title	Change
2009	2008		
1810.3.12	NEW	Grade beams	References the concrete design requirements for grade beams in structures that are SDC D or higher.
1810.3.13	1808.2.23.1	Seismic ties	Clarifies that the tie capacity is based on the design gravity load of the column.
1810.4.8	1810.3.3	Hollow-stem augered, cast-in-place elements	Regulates the withdrawal of hollow-stem augers.
1810.4.11	NEW	Helical piles	Provides guidance on the installation of helical piles.

Concrete

Code Section		Section Title	Change
2009	2008		
1904.2	NEW	Exposure categories and classes	Describes the exposure categories that are utilized to assign exposure classes in the referenced standard.
1904.3	1904.2.2	Concrete properties	Requires use of the concrete mixture requirements in the referenced standard based on the exposure classes.
1904.4	1904.2	Freezing and thawing exposures	Cites the provisions of the referenced standard that apply to concrete exposed to freezing and thawing in the presence of moisture or deicing chemicals.
1904.5	NEW	Alternative cementitious materials for sulfate exposure	Allows use of alternative concrete mixtures that are tested for sulfate resistance.
1907.7.5	NEW	Headed shear stud reinforcement	Adds reference to the standard provision that addresses concrete cover for headed shear studs.
1908.1.1	1908.1.3	ACI 318, Section 2.2	Provides a modification of the definition "special structural wall" to coordinate the concrete seismic provisions with ASCE 7.
1908.1.2	1908.1.4	ACI 318, Section 21.1.1	Clarifies where the plain concrete provisions of the building code are permitted. Also coordinates concrete seismic provisions with ASCE 7.
1908.1.9	1908.1.16	ACI 318, Section D.3.3	Exception avoids concrete anchor design requirement where nonstructural component anchorage is in accordance with ASCE 7. Exception avoids concrete anchor design requirement for wall anchors designed for ASCE 7 out-of-plane forces.
1908.10	NEW	ACI 318, Section D.4.2.2	Provides direction on determining the concrete breakout strength of anchors in tension or shear.
1915.5	1915.5	Fire-resistance-rating protection	Clarifies the criteria related to the structure's height.

Code Section		Section Title	Change
2009	2006		
2101.2.2	2101.2.2	Strength design	Provides a cross-reference to Chapter 16 limitations on design of AAC masonry seismic force systems.
2101.3	2101.3	Construction documents	Construction document items added for consistency with the masonry referenced standard.
2103.2	2103.2	Clay or shale masonry units	Exception includes alternative standard for determining fire-resistance ratings.
2103.8	2103.8	Mortar	Mortar requirements are provided by standard references.
2103.11	2103.11	Mortar for AAC masonry	Provides standard reference to the requirements for mortar used in AAC masonry.
2103.12	2103.12	Grout	Provides standard reference to provisions for grout.
2103.13	2103.13	Metal reinforcement and accessories	References the standard requirements for metal reinforcement and specifies minimum testing for unidentified reinforcement.
2104.1.2	2104.1.2	Placing mortar and units	Requirements for placing mortar and masonry units are provided by a reference to standard.
2104.1.3	2104.1.3	Installation of wall-ties	Reference standard provides the requirement for installation of wall ties.
2104.2	2104.2	Corbeled masonry	Reference is provided to the provisions in the standard that govern corbeled masonry.
2104.3	2104.3	Cold weather construction	Provisions of the referenced standard are cited for cold weather construction.
2104.4	2104.4	Hot weather construction	Provisions of the referenced standard are cited for hot weather construction.
2105.2.2.1.1	2105.2.2.1.1	Clay masonry	The scope of reference to standards for clay masonry units is clarified.
Table 2105.2.2.1.1	Table 2105.2.2.1.1	COMPRESSIVE STRENGTH OF CLAY MASONRY	Compressive strength of clay masonry utilizing type M or S mortar is updated.
2105.2.2.1.2	2105.2.2.1.2	Concrete masonry	The scope of reference to standards for concrete masonry units is clarified.
2106.1	2106.1	Seismic design requirements for masonry	Seismic design provisions for masonry are provided by reference to standard.
2107.4	2107.6	TMS 402/ACI 530/ASCE 5, Section 2.1.9.7, splices of reinforcement	Specifies the steel reinforcement material needed for welded splices.
2109.1	2109.1	General	Requires use of the referenced standard for empirical design of masonry.
2109.2	2109.2.3	Surface-bonded walls	This section governs the use of dry-stacked, surface-bonded walls.
2109.3	2109.8	Adobe construction	This section governs the empirical design of adobe construction.
2110.1	2110.1	General	Requires the use of the referenced standard for glass unit masonry construction.
2111.3	2111.3	Seismic reinforcing	Clarifies the applicability of seismic reinforcing for masonry fireplaces.
2111.4	2111.4	Seismic anchorage	Clarifies the applicability of seismic anchorage.
2111.8	2111.8	Smoke chamber walls	References material standard for lining material.

Masonry			
Code Section		Section Title	Change
2009	2006		
2113.3	2113.3	Seismic reinforcing	Clarifies the applicability of seismic reinforcing requirements to masonry chimneys.
2113.4	2113.4	Seismic anchorage	Clarifies the applicability of seismic anchorage requirements to masonry chimneys.

Steel			
Code Section		Section Title	Change
2009	2006		
2203.1	2203.1	Identification	Clarifies which standards govern the identification of structural steel and cold-formed steel.
2203.2	2203.2	Protection	Clarifies the standards that are applicable for the protection of steel construction.
2209.2.2	NEW	Noncomposite steel floor decks	Provides a referenced standard that is appropriate for noncomposite steel floor deck.
2209.9.2.2.1	NEW	ANSI/SDI-NC1.0 Section 2.4B1	Clarifies a provision in the referenced standard regarding the design of concrete slabs.
2209.2.3	NEW	Steel roof deck	Provides a referenced standard that is appropriate for steel roof deck.
2210.3.2	NEW	Truss design drawings	Refers to the requirement for truss design drawings in the referenced AISI standard. Clarifies that restraint or bracing details must be included.
2210.3.3	NEW	Deferred submittals	Excludes a provision in the referenced standard on deferred submittals.
2210.3.4	NEW	Trusses spanning 60 feet or greater	Requires design of temporary installation bracing on trusses having longer clear spans.
2210.3.5	NEW	Truss quality assurance	Clarifies when truss manufacturing quality assurance must be in accordance with Chapter 17.
2210.5	NEW	Floor and roof system design	Provides a referenced standard for the design of cold-formed steel floor and roof systems.
2210.6	2210.5	Lateral design	Clarifies the applicability of the referenced standard to "diagonal strap bracing" as well as "other in-plane lateral forces."
2210.7	2210.6	Prescriptive framing	Provides an increased height limit that is consistent with the referenced standard.

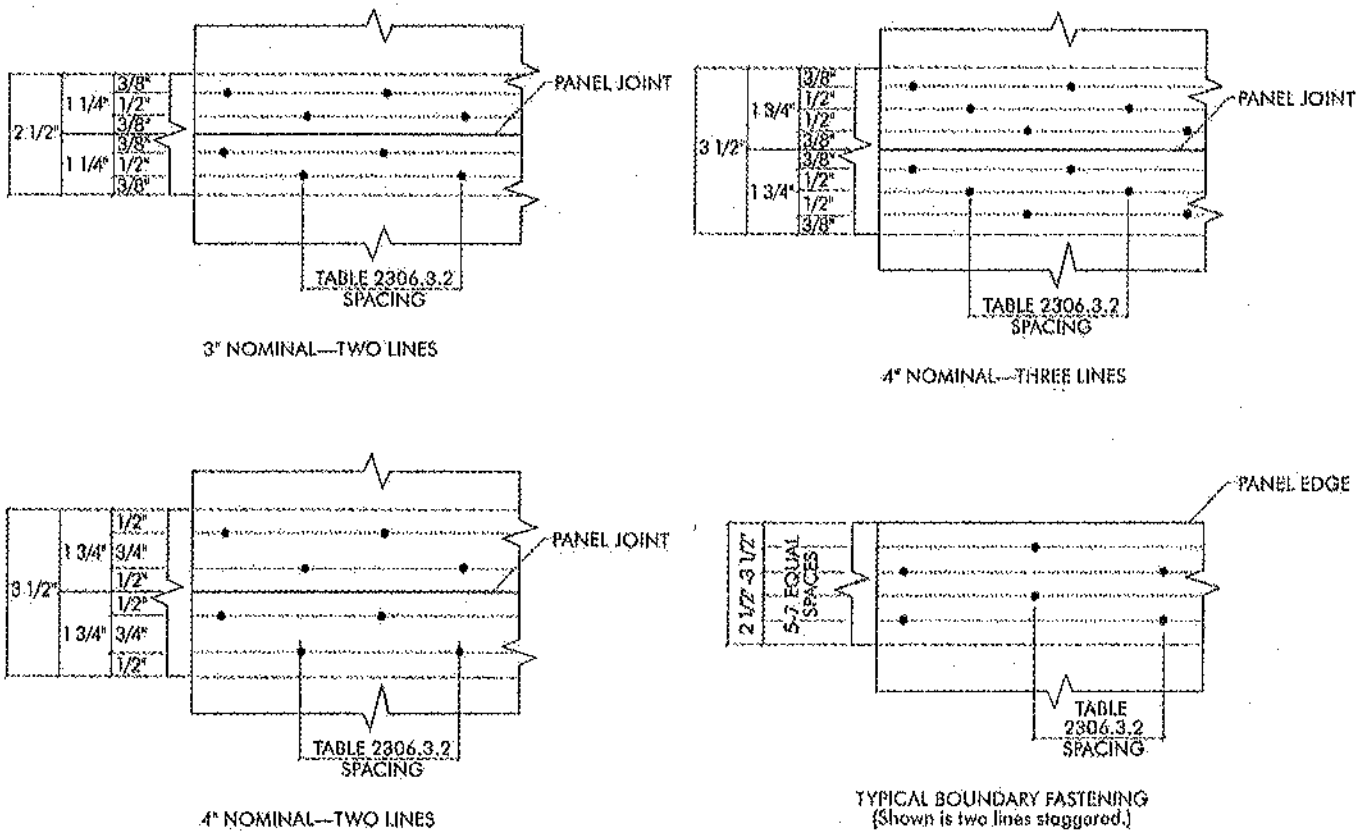
Wood			
Code Section		Section Title	Change
2009	2006		
2301.2	2301.2	General design requirements	Reference added to the standard for log structures.
2303.2	2303.2	Fire-retardant-treated wood	An alternative test standard has been included.
2303.2.1	NEW	Pressure process	Clarifies requirements for treatment of wood products by a pressure process.
2303.2.2	NEW	Other means during manufacture	Clarifies requirements for treatment of wood products by other means.
2303.2.3	NEW	Testing	Clarifies the testing requirements for wood products that are treated by other means.
2303.4.1.1	2303.4.1.2	Truss design drawings	Clarifies the loading criteria and other details that must be included on truss design drawings.
2303.4.1.2	2303.4.1.2	Permanent individual truss member restraint	Clarifies that project-specific bracing designs are permitted where performed by a registered design professional.
2303.4.1.3	NEW	Trusses spanning 60 feet or greater	Requires bracing design for trusses with large spans.
2303.4.7	2303.4.7	Truss quality assurance	Clarifies applicability of special inspectors to the manufacturing of wood trusses.
2304.6.1	2304.6.1	Wood structural panel sheathing	Provides guidance for wood structural panel resistance to wind loads.
Table 2304.6.1	NEW	MAXIMUM BASIC WIND SPEED (mph) (3-SECOND GUST) PERMITTED FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES	Indicates the resistance of wood structural panel cladding at various wind speeds and exposures.
2304.8	2304.8	Lumber decking	Editorial improvements have been made to the lumber decking provisions.
2304.9.5.1	2304.9.5	Fasteners and connectors for preservative-treated wood	Provides guidance for connectors used in exterior applications.
2304.9.5.2	2304.9.5	Fastenings for wood foundations	Requirements for fastening in wood foundations are provided by the referenced standard.
2304.9.5.3	2304.9.5	Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations	Provides direction on fasteners used in fire-retardant-treated wood in exterior or damp locations.
2304.9.5.4	NEW	Fasteners for fire-retardant-treated wood used in interior applications	Provides guidance for fasteners in fire-retardant-treated used in interior locations.
2304.11.2.6	2304.11.2.6	Wood siding	Provides guidance on the clearance needed at horizontal surfaces such as concrete steps and slabs.
2305.1	2305.1	General	Majority of lateral-force-resisting system requirements are replaced by reference to standard.

Wood

Code Section		Section Title	Change
2009	2006		
2306.1	2306.1	Allowable stress design	Allowable stress design provisions are provided by referenced standard.
Table 2306.2.1(1)	Table 2306.3.1	ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH, OR SOUTHERN PINE FOR WIND OR SEISMIC LOADING	Removed panel thicknesses that are no longer utilized and editorial improvements have been made to the footnotes.
Table 2306.2.1(2)	Table 2306.3.2	ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL BLOCKED DIAPHRAGMS UTILIZING MULTIPLE ROWS OF FASTENERS (HIGH LOAD DIAPHRAGMS) WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE FOR WIND OR SEISMIC LOADING	Illustration added to clarify the fastener spacing that is shown in the table. See illustration on next page.
Table 2306.3	Table 2306.4.1	ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE FOR WIND OR SEISMIC LOADING	Table footnotes revised to clarify panel thickness for grooved panels and conditions requiring staggered nailing.
Table 2306.6	Table 2306.4.4	ALLOWABLE SHEAR VALUES (plf) FOR WIND OR SEISMIC LOADING ON SHEAR WALLS OF FIBERBOARD SHEATHING BOARD CONSTRUCTION FOR TYPE V CONSTRUCTION ONLY	Allowable shear values are updated to reflect shear wall testing.
2308.2	2308.2	Limitations	Clarifications are made to the limitations that are based on the floor-to-floor height as well as the basic wind speed.
2308.3.2	2308.3.2	Braced wall line connections	Clarifies the connection requirements along braced wall lines.
2308.6	2308.6	Foundation plates or sills	Allows the use of approved foundation straps that provide an equivalent capacity.
2308.9.1	2308.9.1	Size, height and spacing	Clarifies the continuity of and required support for wall studs.
2308.9.3	2308.9.3	Bracing	Clarifies the minimum panel thickness for wood structural panel sheathing.

Wood

Code Section		Section Title	Change
2009	2006		
Table 2308.9.3(3)	Table 2308.9.3(3)	WOOD STRUCTURAL PANEL WALL SHEATHING	Removes panel thicknesses that are no longer used.
2308.11.2	2308.11.2	Concrete or masonry	Clarifies that stone veneer is regulated similarly to masonry veneer.
2308.12.2	2308.12.2	Concrete or masonry	Clarifies that stone veneer is regulated similarly to masonry veneer. Clarifies the bracing criteria that apply to allow two stories of veneer in buildings classified as Seismic Design Category B or C.
2308.12.8	2308.12.8	Sill plate anchorage	Allows the use of approved foundation straps that provide an equivalent capacity.
2308.12.9	2308.12.9	Sill plate anchorage in Seismic Design Category E	Allows the use of approved foundation straps that provide an equivalent capacity.



NOTE: SPACE PANEL END AND EDGE JOINT 1/8-INCH. REDUCE SPACING BETWEEN LINES OF NAILS AS NECESSARY TO MAINTAIN MINIMUM 3/8-INCH FASTENER EDGE MARGINS, MINIMUM SPACING BETWEEN LINES IS 3/8-INCH

Panel Nail Spacing in Table 2306.2.1(2)

Glass and Glazing

Code Section		Section Title	Change
2009	2006		
2406.2	NEW	Impact test	Gives impact test requirement for glazing in hazardous locations. An exception allows testing in accordance with ANSI Z97.1.
Table 2406.2(2)	NEW	MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING ANSI Z97.1	Provides the classification using ANSI Z97.1 testing where permitted by exception to Section 2406.2.
2407.1	2407.1	Materials	Recognizes ANSI Z97.1 test standard for glass used as handrail assembly or a guard section.
2407.1.2	2407.1.2	Support	An exception is included which allows an alternative where a top rail is undesirable.
2407.1.4	NEW	Glazing in wind-borne debris regions	In wind-borne debris regions requires laminated glass for exterior railing in-fill panels. Where top rail is supported by glass it must be impact resistant.
2409.1	2409.1	Glass in elevator hoistway enclosures	Provides requirements for glass in hoistway enclosures. Also regulates glass area in glass hoistway doors.
2409.2	NEW	Glass vision panels	Regulates glass in vision panels of elevator hoistway doors.
2409.3	NEW	Glass in elevator cars	Specifies types of glass required in elevator cars. Regulates the area of glass for glass elevator car doors.

Gypsum Board and Plaster

Code Section		Section Title	Change
2009	2006		
Table 2506.2	Table 2506.2	GYPSUM BOARD MATERIALS AND ACCESSORIES	Referenced standards have been added for "elastomeric joint sealants" and "glassmat gypsum panel."
2509.2	2509.2	Base for tile	Corrects the terminology for the materials that are used as a base for tile in tub and shower areas.
2512.1	2512.1	General	Clarifies that exterior plaster requires three coats of cement plaster over a gypsum board backing.

Plastic			
Code Section		Section Title	Change
2009	2006		
2602.1	2602.1	General	Adds new definitions of "Fiber reinforced polymer" and "Fiberglass reinforced polymer."
2605.3	NEW	Plastic siding	Clarifies that plastic siding products must also comply with the applicable provisions of Chapter 14.
2612	NEW	Fiber Reinforced Polymer and Fiberglass Reinforced Polymer	Adds new requirements for Fiber reinforced polymer and fiberglass reinforced polymer, including labeling and identification, interior finish and trim, light transmitting materials and exterior use.
2613	NEW	Reflective Plastic Core Insulation	Adds new regulations for reflective plastic core insulation, including identification, surface burning and heat release rate.

Plumbing Systems			
Code Section		Section Title	Change
2009	2006		
2902.1.2	2902.1.2	Family or assisted use toilet and bath	Unisex toilet rooms and bathrooms now called "family" or "assisted use" toilet and bath to clarify intent.

Elevators and Conveying Systems			
Code Section		Section Title	Change
2009	2006		
3007	3007	Fire Service Access Elevators	Standards for construction, lobbies, lighting, power, etc. required in high-rises over 120 feet.
3008	NEW	Occupant Evacuation Elevators	Occupant evacuation elevators are now allowed as part of an approved fire safety and evacuation plan. They can be substituted for the third stairway required in high-rises over 420 feet.

Special Considerations			
Code Section		Section Title	Change
2009	2006		
3109.5	3109.5	Suction entrapment avoidance	For swimming pools the "anti-entrapment" standards are taken out of code Section 3109.5 and sent to Standard APSP-7.
3110	NEW	Automatic Vehicular Gates	New Section 3110 added—Automatic Vehicular Gates—to meet standards ASTM F 2200 and UL 325.

Existing Buildings

Code Section		Section Title	Change
2009	2008		
3401.4	NEW	Alternative Code Compliance	States that jurisdictions can either use IBC Chapter 34 or IEBC.
3403, 3404, 3405	Chapter 34	Existing Buildings	Separated into sections for Additions, Alterations and Repairs to align with the organization of the IEBC.

 Knowledge Review

14. What standards are applicable to automatic vehicular gates?

15. In what buildings are fire service access elevators required?

16. What new standard is now applicable to suction entrapment avoidance in swimming pools?



Answers to Knowledge Review

1. Group B, Section 304.1
2. Section 403: Changes for all high-rises:
 1. Fire pumps to be supplied by two different mains—403.3.2
 2. Bond strength for spray-applied fireproofing increased—403.2.4
 3. Smoke removal system required—403.4.6
 4. Exit enclosures to be separated at least 30 feet—403.5.1
 5. Luminous egress path markings required—403.5.5
 6. Occupant self-evacuation elevators can be installed per Section 3008—406.2
3. Section 403: Changes for high-rises over 420 feet:
 1. Sprinklers zones supplied by two risers—403.3.1
 2. Reductions in fire-resistance rating not allowed—403.2.1.1
 3. Shafts for stairs and elevators to be built to resist impacts—403.2.3
 4. High bond strength for spray-applied fireproofing—403.2.4
 5. An additional stairway required—or elevators meet new standard for occupant self-evacuation—403.5.4
4. B, M and S, Table 503
5. 10 feet, Section 705.5
6. 156 square feet, Section 706.8
7. From 20,000 square feet to 12,000 square feet, Section 903.2.3
8. Automatic sprinkler systems have no impact on minimum egress width, Section 1005.1
9. At all nonaccessible means of egress, all elevators and within areas of refuge, Section 1007.10
10. "Family" or "assisted use", Section 1109.2.1 - 1109.2.1.7
11. Residential, Section 1609.1
12. Category III and IV, Section 1614.1
13. 60 feet or greater, Section 1704.3.4 and 1704.6.2

14. ASTM F 2200 and UL 325, Section 3110
15. High-rises over 120 feet in height, Section 3007
16. APSP-7, Section 3109.5



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