

IFC Significant Changes from the 2009 to the 2015 Edition

Tier 1

- Several medical care definitions were created and revised in Chapter 2 of the 2012 IBC, as well as through the occupancy descriptions, and those have been repeated in the 2012 IFC. These terms were created to help users of the code know how to assign an occupancy and determine which code requirements are applicable based on how the patient is cared for.
- 2012 section 317 introduces new requirements for roof gardens and landscaped roofs. This becomes important because the increase of these in the City can affect fire fighter ability to move around the roof and conduct operations as well as make sure that dead vegetation is properly maintained or removed. This needs to be compared with the DFC amendments in section 806.6 where it is prohibited.
- 2012 section 508.1.5 now requires a building information card for any building with a fire command center. Any high-rise or building with smoke protected seating has a fire command center. As a result of the World Trade Center study, it was determined that a quick concise Building Information Card (BIC) was necessary to provide critical information about the systems and locations of the systems within large complicated buildings in order to speed up fire personnel response.
- 2012 section 510.1 now houses the information on emergency responder radio coverage that was previously only in Appendix J. It is now in the body of the code and required for all new buildings. The appendix had it in both new and existing buildings which occasionally caused conflicts with other systems. A new exception in the new section provides for that inevitability. (2011 DFC requires some work in existing buildings. DFC covers more of this in section 915).
- 2012 section 605.11 introduces solar photovoltaic power systems into the IFC, and the 2015 edition clarifies and coordinates it with the IBC and the NEC and adds ground mounted array requirements. Among the many new requirements in the 2012 are access paths on roofs around solar arrays. Note that these new requirements do not apply to IRC structures like they do to R-3 occupancies. Solar arrays present many hazards to Fire Fighters due to the panels generating current during daylight and they can't be shut off.
- 2015 section 903.2.1.6 adds a requirement for sprinklers on levels between the roof and the exit discharge where an occupied roof has high assembly loads.
- 2015 section 904.13 now allows residential cooking facilities in Group I-2 nursing homes with certain precautions and requirements for their safety.
- 2015 Chapter 10 has been completely rewritten in the IBC and the new IFC matches that, with many familiar sections now being contained in new and unfamiliar places. In general, previous sections 1015 and 1021 were moved near the front in order to provide a logical and sequential order of thought such as: 1004, determine the occupant load; 1005, establish the exit width; 1006, establish the number of exits; 1007, address how to arrange them. This pushes the other sections that they replaced back further.

- 2015 section 1010.1.9.8 clarifies the confusing language of delayed egress, electromagnetic locks and introduces “sensor release of electrically locked” egress doors and adds I-1 to the provisions. Several of these neighboring sections have undergone changes that hope to clarify application that for years has been confusing. Currently, DFC uses Appendix L to deal with these systems.
- 2012 section 1011.2 now requires low level exit signs again in Group R-1 buildings, similar to the requirements of years ago. This helps not only occupants, but also Firemen who arrive when there is already smoke in the building.

Tier 2

- 2012 section 503.4.1 now prohibits traffic calming devices on fire apparatus access roads unless approved by the fire code official. This will result in the need for greater communication between fire staff and public works staff.
- 2012 section 506.1 and 607 require elevator key boxes to be provided, and require standard elevator keys that can be used in multiple elevators regardless of manufacturer. All elevator key types in the jurisdiction will now be uniform. This speeds up Fire Dept access and creates consistency. (This may cover most or all of 2011 DFC section 506.3).
- 2015 section 604.2.6 now includes additional requirements for emergency and standby power systems in Group I-2 Occupancies. The change makes a direct requirement to follow NFPA 99 when considering essential electrical systems like CMS has required. This will ensure it is being followed.
- 2015 section 609.2 modifies the requirement for when a Type 1 Kitchen hood is required, and makes it consistent with the IMC. When it is proven that grease emissions are low enough, a simple Type II hood would be allowed, and no fire extinguishing system would be required.
- 2012 section 610 is a new section regarding kitchen cooking oil storage. Many kitchens are now recapturing cooking oil to save costs. The inherent dangers of large quantities of oil near electricity and flame require safety provisions.
- 2012 section 803.5.2 adds new requirements for new textile wall and ceiling coverings. These requirements match those of the DFC amendments section 803.5.1 so those may no longer be needed.
- 2012 section 901.9 adds a new requirement that a fire code official must be notified when an alarm monitoring service is either terminated or changed. This will require staff to keep a record of such notifications, and determine if they have staff time to keep track of this information and subsequent follow-ups.
- 2012 section 903.2.4, 903.2.7, 903.2.9 modifies and relaxes the furniture storage protection provisions that arrived in the 2009 code. Those were difficult to enforce and now allow small stores to provide upholstered furniture and mattresses without sprinklers.
- 2012 section 903.2.11.1.3 modifies the requirement for basements such that any basement that has interior obstructions must be sprinkled. This could be difficult to enforce since any partition under 5' 9" does not need a permit. Therefore, the placement of a bookshelf or a urinal partition could be interpreted that a sprinkler system is required.
- 2015 section 903.2.1.7 now clarifies that if multiple group A occupancies exist that don't require sprinklers based on individual occupant loads, yet they use the same exit system, the occupant loads using the same exit system must be combined to determine if sprinklers are required.
- 2012 section 904.1.1 and 906.3 now require that personnel who perform maintenance on portable fire extinguishers or alternative fire-extinguishing systems (such as hoods and spray booths) must be certified by the jurisdiction or other approved organization. The jurisdiction may have to consider what certifications they will require, and if they will have staff to keep records of that.

- 2015 section 903.3.1.1.1 introduces the concept of machine room-less elevator control areas and how those are to be protected. This newer technology has not been specified before but is seen in many buildings.
- 2015 section 904.2 and 904.11 add in the increasingly common use of Automatic Water Mist Systems and how those are to be regulated.
- 2012 section 906.1 requires more portable fire extinguishers (PFE's) in some commercial occupancies, and allows fewer PFE's in common areas of apartment/condo buildings if one is placed in each of the units. (Consideration needs to be given to whether those PFE's in the units will stay there like they would in the common areas, but alternatively if those in the common areas are getting vandalized or are too big for elderly to operate. This new section needs to be compared with the current DFC amendment to section 906.1 allowing them outside the units).
- 2012 section 907.2.1.2 adds new requirements for mass emergency notification to be captioned in assembly spaces seating 15,000 or more, in keeping with the wording of the IBC.
- 2015 section 907.2.3 changes the threshold for a manual fire alarm system from 30 to 50 to allow small schools and day-care facilities to be exempt since the risk is small and there is close visual/audible contact. (Current DFC amendments should be compared here).
- 2012 section 907.2.3 modified requirements for a voice/alarm communication system from 50 students down to 30 (for lock-down purposes). Depending on interpretation, this may affect mobile classroom buildings at this new lower level.
- 2012 section 908.7 now requires carbon monoxide alarms for Group R and I occupancies with fuel burning appliances or attached garages in new and existing buildings. This is very similar to DFC amendment to 908.7 and it could be altered or deleted. 2015 edition now relocates these to section 915 since they are not an emergency alarm, and rewrites it, adding the requirement to classrooms in Group E. The retroactive aspect doesn't apply to the Group E.
- 2015 section 909.4.7 has added the requirement to have multiple smoke control system designs evaluated for how they will work together. This reduces the inevitability that the systems are discovered to be incompatible by the inspector at final inspection. This seems to be covered by DFC amendment in section 909.2 where it mentions the design of a system or systems.
- 2015 section 910 on smoke and heat vents has been extensively rewritten based on studies of roof venting. Details of where they are required and how to calculate the sizes are now included. DFC used to be word for word equal to the 2012 code wording in 910.4.4, but it now differs by deletion of the wording regarding the location of the controls. (2015 section is 910.4.6).
- 2015 section 1011.16 adds the ability to use ladders as a means of egress in certain special needs and locations and explains how to construct them.
- 2015 section 1020.2 allows certain corridors in the I-2 to be exempt from the 96" width requirement if not being used for stretchers. This may involve some judgment as to how the corridors will be used in certain places, but now will agree with NFPA 101 section 18.2.3.4 as part of a desire to coordinate the codes.

- 2015 section 1023.3.1 now allows a vertical exit enclosure to be connected to a passageway without the connecting door previously required. This door served no purpose anyway, and was another obstruction to fire fighting efforts.
- 2015 section 1103.4.1 requires existing I-2 and I-3's with vertical openings through 2 or more stories between floors to meet certain retroactive protection requirements.
- 2012 section 1103.8.1 adds I-1 to the retroactive requirement for smoke alarms in existing Group R occupancies.
- 2015 section 1105 introduces a new requirement that existing I-2 occupancies must reach a minimum fire and life safety level described there, aligning these facilities with similar requirements by CMS.
- 2015 section 3103.9.1 now requires tents and membrane structures over one story to meet the structural design requirements of the IBC.
- 2015 section 3105 adds requirements for temporary stage canopies that have suffered serious collapses in recent years in North America. See DFC section 2404.20.3
- 2012 Table 5003.1.1(1) takes the guess work out of combustible dusts, and requires a professional evaluation of it to be given to the Fire Dept. This has historically been a judgment call that can be outside of the specific background of the fire code official.
- 2012 section 5003.12 now allows outdoor control areas for hazardous storage to be built closer to lot lines streets and public ways with certain protections.
- 2012 section 6109.15 now provides regulations for design, operation and maintenance of LP cylinder exchange stations that are accessible to the public.

Tier 3

- 2012 section 307.1.1 now prohibits open burning when circumstances make it hazardous, not just when someone finds it offensive.
- 2015 section 312.3 now provides performance criteria for vehicle barriers instead of prescriptive design that was missing an impact velocity.
- 2015 sections 315.6 and 605.12 now give Firefighters specific wording to require removal of old wiring in plenums and any storage there that might cause more fuel load or cause a ceiling to collapse due to weight.
- 2015 section 403 has moved all the emergency preparedness requirements from 404 and 408 into one place for easier access to all of it in one place. The change was not intended to be technical, only an editorial location change for ease of use.
- 2015 section 604.1 has added specific requirements on Emergency and Standby Power Systems that were previously located in the IBC. This criteria is now all in one spot, and is more readily available to Fire Staff here than it was in Chapter 27 of the IBC.

- 2012 section 604.5 now requires building owners to conduct a test of the emergency lighting equipment at regular intervals, and submit the test results to the Fire Dept. upon request.
- 2015 section 609.3.3.2 now adds a cleaning standard for kitchen exhaust hoods, and requires a hood with any spot check showing over an 1/8" of grease to be cleaned and a record of cleaning kept on the hood.
- 2015 section 611 adds new requirements on how to deal with Hyperbaric facilities (usually found in hospitals).
- 2015 sections 903.3.1.2.2, 1027.6 and 1104.22 now clarify that open ended corridors (breezeways) must be protected when part of a 13R sprinkler system.
- 2015 section 903.3.8 adjusts requirements for limited area sprinkler systems from 20 heads to 6, and prevents multiple such systems. (Some jurisdictions allow small 20 head system changes to be accepted without a full plan review, and it could be considered if this needs to change to 6 heads similarly).
- 2012 section 907.2.6.1.1 now allows fire alarm and detection systems and wireless smoke alarms to be installed in buildings regulated by the IFC and the IRC.
- 2015 section 907.2.11.3 and 907.2.11.4 now require placement of smoke alarms to be at least 3' from a bathroom door, and specific distances from cooking appliances based on the type of alarm.
- 2015 section 913.2.2 has added protection of the electrical circuit supplying power to Fire Pumps by including a UL standard that will add fire resistivity to the cables.
- 2015 section 1017.2.2 increases travel distance in certain F-1 and S-1 occupancies to 400' providing there are other safety factors involved.
- 2015 section 1018.3 and 1018.5 coordinates access aisles with corridor requirements rather than being based only on the occupant load of the room served.
- 2012 Chapter 11 is the new location for the existing building chapter, and provides one location for all retroactive requirements.
- 2012 section 1104.16.5.1 adds a new requirement that fire escape stairs must be inspected by a registered design professional every 5 years and a report submitted to the Fire Dept. See DFC section 4607.1.5 (i).
- 2012 section 2108.2 allows dry cleaning plants using Class III-A or Class III-B combustible liquids in non-sprinklered buildings when certain safety precautions are made.
- 2012 section 2305.1 revises several tank requirements regarding 100% bio-diesel motor vehicle fuel.
- 2015 section 2307.4 introduces new requirements for LP gas dispensing by the public.
- 2015 section 3206.4.1 relocates the requirements and modifies the standards and rules regarding plastic pallets.
- 2012 section 3208.3.1 now requires racking of certain commodities to have devices that protect the flue spaces from being compromised by overloading

the racks. This helps the coverage by the sprinkler system to be more effective.

- 2015 section 3306.2 adds safety requirements for flammable gas piping and an NFPA standard to govern their cleaning and purging. There have been several deaths from improper cleaning and purging.
- 2015 section 3510 introduces how hot work on flammable and combustible liquid storage tanks shall be carried out.
- 2015 section 5307 adds regulations for large carbon dioxide systems used in beverage dispensing. Large refrigerated systems can create a life safety hazard resulting in oxygen being replaced in a room, thus the need for this regulation.
- 2015 section 5808 provides new requirements for the onset of hydrogen fuel gas rooms on the market. The requirements are related to the new definition in chapter 2 of a gaseous hydrogen system.
- 2012 section 6104.3.1 no longer allows LP gas containers on the roof of buildings like NFPA 58 allows.
- 2012 Appendix J is an optional new chapter that offers a method of presenting building information to emergency responders using a standardized Maltese Cross format. Basic information regarding the building fire protection systems is available there for responders to review prior to commencing an attack.
- 2015 Appendix K is an optional new chapter to handle existing Ambulatory Care Facilities. It contains retroactive requirements for those existing facilities in response to the many recent changes in the 2012 edition regarding health care occupancies.
- 2015 Appendix L is an optional new chapter that considers criteria when providing fire fighter air replenishment systems for fire fighters in buildings as they fight fires. It does not say when it is required, only how to do it if it IS required.
- 2015 Appendix M is an optional new chapter that if adopted, requires all existing high-rises to be retroactively outfitted with a fire sprinkler system within a 12 year time frame.