



Nashville Fire Department

Review of BL2008-350

Proposed Amendments to the International Fire Code, NFPA Life Safety Code and other Standards

2/10/09

Section A

Proposed Amendments to the 2006 International Fire Code

- (1) We propose to adopt the following appendixes in the 2006 International Fire Code
- Appendix B
 - Appendix D
 - Appendix F

This will establish requirements for access, water supply and hazard marking of buildings.

- (2) IFC Appendix B
- IFC B104.2 Area Separation

Add the following exception

Exception: Condominium townhouse units separated with approved two hour fire rated construction are allowed to be considered as separate structures unless there are eight (8) or more units connected. They are then to be considered as one fire-flow calculation area and subject to the fire-flow requirements of IFC appendix B or subdivide the building with approved four (4) hour fire walls.

This allows a developer to build a townhouse condominium complex up to seven (7) units (with the proper separation) and have the fire-flow calculation area equal the size of one unit. When you have a building with eight (8) units or more it would be considered a single building and the total square footage of all of the units combined would be used for the fire-flow calculation area. The building could be subdivided with a four (4) hour fire wall to have no more than seven units per section and still use one unit as the fire-flow calculation area.

- **IFC B105.1 Fire-Flow Requirements for Buildings One and Two Family Dwellings.**

Propose to add the following exception No. 2

Exception No. 2: New one and two family dwellings constructed less than 3,600 sq. ft. on infill lots as defined by this code shall be allowed if they have a fire hydrant within 500' of all parts of the home (measured by way of hard surface road) that flows at least 750 gpm @ 20 psi. residual pressure. Homes with a fire hydrant that meets the distances required above that have less than 750 gpm but no less than 500 gpm with 20 psi residual pressure can be acceptable as long as there is a secondary fire hydrant within 1,000 feet of the home that flows no less than 1,000 gpm. @ 20 psi residual pressure. All other one and two family dwellings constructed on infill lots as defined by this code must meet the fire-flow requirements of the (ISO) Insurance Service Organization.

This permit will construction of new one and two family dwellings on lots in existing subdivisions without upgrading the water infrastructure as long as flow meets the provisions of the above or ISO requirements. It will not, however, eliminate sprinklering requirements if the required flow is not met.

(3) IFC 105.6 Required operational permits

- **Delete and replace with the following.**

Required operational permits. The fire code official is authorized to issue operational permits for the operations set forth in Sections 105.6.1 through 105.6.47.

This will allow us to add one additional operational permit so we can add the next amendment.

(4) IFC 105.6.47 Special Event Permit

- **Add the following new section**

IFC 105.6.47 Special Event Permit. As deemed necessary by the fire code official when a Fire Watch is required to assure life safety during an event.

This will allow us to recover some overtime expense for fire department a fire watch required for special events which is the current standard.

(5) IFC 108.1 Board of appeals established.

- **Add the following to the end of the existing paragraph.**

The Board of Appeals created and empowered to act on all appeals under this Metropolitan Fire Prevention Code shall be the Metropolitan Board of Fire and Building Code Appeals (Board) as established and provided for in the Metropolitan Code of Laws, Chapter 2.80 and Section 16.08.010. The Board shall hear all appeals for variances in or interpretations of this Metropolitan Fire Prevention Code by the Fire Marshal of the Metropolitan Government. When acting under this Metropolitan Fire Prevention Code, the Board shall transmit its decisions to the Fire Marshal.

This is to bring the board in line with the building code appeals process which is the current standard.

(6) IFC 202 Definitions.

○ **Add the following definitions.**

- **Bed and Breakfast Homestay.** A private home, inn or other unique residential facility located in a structure of historical significance as defined in Tennessee Code Annotated Section 68-14-503 (3), offering bed and breakfast accommodations and one (1) daily meal and having less than four (4) guest rooms furnished for pay, with guest staying not more than fourteen (14) days, and where the innkeeper resides on the premises or property, or immediately adjacent to it. Guest rooms shall be established and maintained distinct and separate from the innkeeper's quarters.

This adds the definition for bed and breakfast homestays as defined by the State of Tennessee. These occupancies must be inspected as a single family dwelling which is the current standard.

- **Infill Lots.** A lot in an established one and two family home subdivision that has existing water mains, fire hydrants, streets, etc. with existing homes constructed. This lot was not sold or built upon during the initial phase of construction or the original home was demolished to make way for new construction.

This will set the definition parameters for the exception to fire-flow requirements.

(7) IFC 307.1.1 Prohibited Open Burning

○ **Add the following to the end of the paragraph.**

The fire code official shall determine when the conditions are acceptable to allow open and recreational burning.

This gives a clear authority to the fire official to ban or allow burning which is the current standard.

(8) IFC 901.7.3.1 Fire Alarm and Fire Detection System status tags.

○ **Add new section 901.7.3.1**

901.7.3.1 Fire alarm and fire detection systems upon testing shall have displayed at the main fire alarm panel location a compliance tag/sticker. This tag/sticker shall bear the fire alarm contractor's name and phone number and a space for an inspection date. A green tag/sticker shall indicate that the alarm system has no deficiencies. A red tag/sticker shall indicate any fire alarm system with deficiencies, including trouble signals. The red tag/sticker shall remain in place until repairs are completed.

This continues a program started with previous adoptions of the code. It is the current standard.

(9) IFC 903.7 Installation, alterations and repairs.

○ **Add new section 903.7**

IFC 903.7 Installation, alterations and repairs of automatic fire sprinkler systems (including backflow prevention devices) shall be performed by a State of Tennessee licensed Fire Sprinkler contractor.

This keeps us in line with the state which is the current standard.

(10) IFC 1020.1 Enclosure of vertical exit shafts exception #5

- **Delete**

This would requires all parking structures to have enclosed exit stairs. This is not a new requirement, all current parking structures have enclosed exit stairs.

(11) IFC 1024.1 Discharge of exits exception #3

- **Delete**

The deletion of this exception would not allow the discharge from exit stairs to go through parking garages. This is not a new requirement, all parking garages are in current compliance

(12) IFC 1027.16 Fire Escape Stairs (section 1027.16.1 through 1027.16.7)

- **Delete in it's entirety**

This section of the code allows fire escape stairs as 50 % of the allowable exits. We have not allowed these types of exits in this jurisdiction for years and would like to keep that uniform. This is not a new standard.

(13) IFC 1027.17 Corridors exception #3

- **Delete**

Exception #3 allows schools with half of their required exits discharging to the outside from classrooms to have unrated corridors with operable transoms. Deleting this would require existing corridors to be smoke resistant with closed transoms which are the current standard. The deletion would lessen fire protection standards for schools. All schools are in current compliance with the existing standard

(14) IFC 1908.3 Size of piles (hogged material, wood chips, fines and fines associated with lumber facilities).

- **Delete exception to 1908.3 and substitute the following.**

1908.3 Exception: The fire code official is authorized to allow the pile size to be increased when additional fire protection is provided in accordance with chapter 9. The increase shall be based upon the capabilities of the system installed. Combustible waste materials such as bark, sawdust, chips, and other debris shall not be permitted to accumulate in a quantity or location that constitutes an undue fire hazard as determined by the fire code official.

This allows the fire code official to control pile size when the location and surroundings make it unsafe, which is the current standard

(15) IFC 2204.3. Un-attended self-service motor fuel dispensing facilities

- **Delete in its entirety and substitute the following.**

IFC 2204.3 Un-attended self-service motor fuel dispensing facilities. Unattended self-service motor fuel dispensing facilities when allowed by the fire code official, shall comply with Sections 2204.3.1 through 2204.3.7

This would allow us to continue our policy on allowing only fleet services to be unattended fuel dispensing. Service stations would not be allowed to leave their fuel pumps on after hours unless the customer was someone with a fleet service card. It takes away the possibility of teenagers with their parent's credit cards driving off leaving the pump spilling fuel on the ground. This is the current standard.

(16) IFC 2205.6 Warning Signs

- **Add the following.** The words **WARNING, No Smoking and Stop Motor** shall be at least four inches in height with a stroke width of one inch. They shall be in a contrasting color that is acceptable to the Fire Code Official.

We propose to add a section that will specify sizes of the warning signs for fuel dispensing pump locations which is the current standard.

(17) IFC 3904.1.2 Distance from detached storage buildings to exposures.

- **Delete in its entirety and substitute with the following.**
IFC 3904.1.2 Distance from detached storage buildings to exposures. In addition to the requirements of the International Building Code, detached storage buildings shall be located in accordance with table 70.3.4.8.1(a) of the 2006 edition of the NFPA 1 Uniform Fire Code

Organic peroxides are a very hazardous substance. The distances in the IFC are half what's required from NFPA standards. Deleting this section maintains the current standard.

(18) IFC 3904.1.7 Storage arrangement (organic peroxide)

- **Delete the table referred by this section and substitute with table 70.3.4.9.5 of the 2006 edition of the NFPA 1 Uniform Fire Code.**

Organic peroxides are a very hazardous substance. The sizes in the IFC allow storage piles to be larger than what's required from NFPA standards. Deleting this section maintains the current standard.

(19) IFC 102 Applicability

- **Add a section 102.10 Existing buildings**
IFC 102.10 Existing Buildings existing buildings shall comply with the 2006 edition of the NFPA Life Safety Code.
- **Amend IFC 102.1 by adding a # 5 that states that new construction shall also meet the new construction standards in the 2006 edition of the NFPA Life Safety Code**

We currently use the Life Safety Code for new and existing construction and have for many years. This is not a new requirement. This addition simply incorporates the Life Safety Code into the IFC and allow us to apply the Life Safety Code in addition to what's printed in the IFC.

Section B

Proposed Amendments to the 2006 Life Safety Code

*Note: Pursuant to item #19 in Section A of this document, the NFPA Life Safety Code is incorporated into the International Fire Code and is amended within this section. All of these amendments with the exception of items # 9 (Highrise) and (11) Nightclubs **are existing in the current code and do not create new requirements**, but must be re-adopted because we are changing fire codes.*

We propose to delete 10.64.015 of the Metro Code of Laws and substitute the following:

10.64.015 Amendments to the 2006 NFPA 101 Life Safety Code

The following amendments, deletions, or additions to the 2006 NFPA Life Safety Code are adopted by reference, as fully as though copied into such Fire Code, and thereby made a part of the Metropolitan Fire Prevention Code.

- (1) Section 3-3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the following new subsection 3.3.168.16

3.3.168.16 Bed and Breakfast Homestay. A private home, inn or other unique residential facility located in a structure of historical significance as defined in Tennessee Code Annotated Section 68-14-503(3), offering bed and breakfast accommodations and one (1) daily meal and having less than four (4) guest rooms furnished for pay, with guest staying not more than fourteen (14) days, and where the innkeeper resides on the premises or property, or immediately adjacent to it. Guest rooms shall be established and maintained distinct and separate from the innkeeper's quarters.

- (2) Section 3.3.239* of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting subsection 3.3.239* and substituting the following:

3.3.239 **Street Floor** – A story or floor level accessible from the street or from the outside of a building at ground level, with the floor level at the main entrance located not more than three risers above or below ground level and arranged and utilized to qualify as the main floor or level of exit discharge.

- (3) Section 7.1.3.2 of the 2006 Edition of the NFPA 101 Life Safety Code, , is hereby amended by deleting subsection 7.1.3.2.1(2) item (c) in its entirety.

This allows us to maintain a 2 hour fire resistance rating for hotel exit stairwells over 4 floors.

- (4) Section 7.2.2.4.5 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the new subsections 7.2.2.4.5.2(4) and 7.2.2.4.5.2(5):

7.2.2.4.5.2 (4) New guards on open or glazed sides of stairs and ramps shall be permitted to be 38 inches high. Guards exceeding 38 inches high shall have a handrail located not less than 34 inches or more than 38 inches above the leading edge of a tread.

7.2.2.4.5.2 (5) The top element of a guard at the inside open or unenclosed edge of any intermediate stairway landing where the stairs reverse directions may be at the same height as the stairway handrails when the horizontal distance between the stair flights is 1 ft or less and then a continuous handrail as specified in 7.2.2.4.2 and 7.2.2.4.3 is provided.

- (5) Section 7.7.1 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the following new subsection 7.7.1.5:

7.7.1.5 Exit termination that requires easement agreements from the other property owners, to insure access to public ways, shall be “permanent easements”, protecting all future owners and occupants. Permanent easements can be voided in the future when exit termination from structures is in accordance with NFPA 7.7.1* exit termination requirements.

- (6) Section 8.2.1.3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting subsection 8.2.1.3(1) and substituting the following:

8.2.1.3(1) Separate buildings, if a 4-hour or greater vertically-aligned fire wall in accordance with NFPA 221, Standard for Fire Walls and Fire Barrier Walls, exists between the portions of the building.

Exception: The requirements of 8.2.1.3(1) shall not apply to previously approved separations between buildings.

- (7) Section 9.6.3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting subsections 9.6.3.2.1* and 9.6.3.2.3* in their entirety.

This gives the fire code official the authority to require smoke detectors in elevator hoistways, equipment rooms and lobbies to sound the building fire alarm. It also allows smoke detectors on door hold open devices to sound the building fire alarm.

- (8) Section 9.7.2 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the following new subsection 9.7.2.1.1:

9.7.2.1.1 Fire Pumps used in fire protection shall have the following signals transmitted to an approved Central Station Alarm Monitoring Service or an approved proprietary Service:

Electric Fire Pumps

1. Fire Pump Run
2. Phase Reversal
3. Power Failure
4. Main Water Flow

Diesel Fire Pumps

1. Fire Pump Run
2. Low Batteries
3. Failure to Start
4. Main Water Flow

- (9) Section 11.8 of the 2006 Edition of NFPA 101 Life Safety Code is hereby amended by deleting Section 11.8.2.1 and adding the following:

11.8.2.1 High-rise buildings shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7 immediately; or by April 1, 2012 if such high-rise has a Fire Watch program as defined in 3.3.91 and is equipped with a standpipe and hose system installed in accordance with NFPA 14, Standard for the Installation of Standpipe and Hose Systems. A sprinkler control valve and a waterflow device shall be provided for each floor.

Note: This time frame is less than 12 years given by the 2006 NFPA Fire Code but gives more time than the January 3, 2007 deadline that was set by the Council when it passed the previous Fire Code ordinance BL2007-1390.

(10) Section 11.8 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the following new subsection 11.8.6:

11.8.6 Operating Features – A written Emergency Evacuation Plan approved by the Authority Having Jurisdiction shall be provided in the Fire Control Room. In existing buildings that do not have a fire control room the plan shall be accessible at the buildings Fire Alarm annunciator panel.

(11) Section 13.3.5.1 of the 2006 edition of the NFPA 101 Life Safety Code, is hereby amended by deleting the first paragraph and substituting the following:

13.3.5.1 Where the occupant load exceeds 100, the following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1 (1). These occupancies must be in compliance with this requirement within (3) three years from the date of notice:

NOTE: (New) This allows club owners additional time for compliance and should help get them past the present economy situation.

(12) Section 14.1.4.2 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 14.1.4.2 in its entirety and substituting the following:

Section 14.1.4.2 Education occupancies shall include part-day preschools, kindergartens and other levels in schools whose purpose is primarily grade school education, even though the children who attend such classes are of preschool age.

(13) Section 14.3.6 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the following new subsection 14.3.6(6):

14.3.6(6) In buildings protected throughout by an approved automatic sprinkler system, classroom doors shall not require self-closing devices.

(14) Section 15.1.4.2 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 15.1.4.2 in its entirety and substituting the following:

Section 15.1.4.2 Education occupancies shall include part-day preschools, kindergartens and other levels in schools whose purpose is primarily grade school education, even though the children who attend such classes are of preschool age.

(15) Section 15.3.1.3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting subsection in its entirety.

This requires all stairways to be enclosed or separated so we can keep smoke from traveling freely to the floor above.

(16) Section 15.3.6 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding the following new subsection 15.3.6(6):

15.3.6(6) In buildings protected throughout by an approved automatic sprinkler system, classroom doors shall not require self-closing devices.

(17) Section 16.2.2.1 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 16.2.2.1 and substituting the following:

16.2.2.1 Components of means of egress shall be limited to the types described in 16.2.2.2 through 16.2.2.7.

(18) Section 17.2.2.1 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 17.2.2.1 and substituting the following:

17.2.2.1 Components of means of egress shall be limited to the types described in 17.2.2.2 through 17.2.2.7.

(19) Section 28.2.2.1.2 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 28.2.2.1.2. in its entirety

This keeps the stairwell ratings uniform throughout.

(20) Section 28.3.1.1.3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 28.3.1.1.3 in its entirety.

This keeps the stairwell ratings uniform throughout.

(21) Section 29.2.2.1.2 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 29.2.2.1.2 in its entirety.

This keeps the stairwell ratings uniform throughout.

(22) Section 30.3.4.5.1 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 30.3.4.5.1 in its entirety and substituting the following:

Section 30.3.4.5.1* Approved single-station smoke alarms shall be installed in accordance with 9.6.2.9 inside every sleeping area, hallway/corridor, living rooms and on all levels of the dwelling unit, including basements.

(23) Section 30.3.4.5.2 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting the subsection 30.3.4.5.2 in its entirety.

This keeps the standard from being redundant with the above amendment.

(24) Section 30.3.5 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by adding an exception to subsection 30.3.5.4:

Section 30.3.5.4. exception: In buildings classified as a high rise by this code, sprinklers will be required in all rooms including closets and bathrooms regardless of size.

(25) Section 32.2.3.5.3.2 of the 2006 NFPA Life safety Code is hereby amended by deleting it in its entirety and substituting the following:

Section 32.2.3.5.3.2 An automatic sprinkler system with a 30-minute water supply, and complying with the following requirement and with NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, shall be permitted for facilities that have 8 or fewer residents.

(1) All habitable areas and closets shall be sprinklered.

(26) Section 33.2.3.5.2.1 of the 2006 NFPA Life Safety Code is hereby amended by deleting it in its entirety and substituting the following:

33.2.3.5.2.1* In prompt evacuation capability facilities, the following requirements shall be met:

(1) An automatic sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, shall be permitted for all facilities with 8 or fewer residents. All facilities with more than 8 residents shall be protected throughout with an automatic sprinkler system to comply with NFPA 13 or NFPA 13R.

(2) Automatic sprinklers in NFPA 13D and NFPA 13R systems shall not be required in closets not exceeding 24 ft² (2.2 m²) and in bathrooms not exceeding 55 ft² (5.1 m²), provided that such spaces are finished with lath and plaster or materials providing a 15-minute thermal barrier.

(27) Section 33.3.3.5.2 of the 2006 NFPA Life Safety Code which is a part of the National Fire Code is hereby amended by deleting it in its entirety and substituting the following:

33.3.3.5.2 High-Rise Buildings. All high-rise buildings shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with NFPA 13 and other provisions as required by this code. Such systems shall initiate the fire alarm system in accordance with Section 9.6.

(28) Section 33.3.3.5.3 of the 2006 NFPA Life Safety Code which is a part of the National Fire Code is hereby amended by deleting it in its entirety:

This allows the fire code official to require sprinkler protection in clothes closets and bathrooms for Residential Board and care facilities.

(29) Section 36.3.2.3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting subsections 36.3.2.3(1) and 36.3.2.3(2) in their entirety.

This deletes the use of outdoor cooking equipment and portable equipment not connected to a flue in new mercantile occupancies.

(30) Section 37.3.2.3 of the 2006 Edition of the NFPA 101 Life Safety Code is hereby amended by deleting subsections 37.3.2.3(1) and 37.3.2.3(2) in their entirety.

This deletes the use of outdoor cooking equipment and portable equipment not connected to a flue in existing mercantile occupancies.

Section C

Proposed Amendments to Miscellaneous NFPA Codes and Standards Which are Incorporated in the Life Safety Code

We propose to retain the amendments to the Metro Code of Laws, 10.64.017, that apply to the miscellaneous NFPA Codes and Standards which are incorporated within the Life Safety Code that becomes apart of the International Fire Code with exception of the following:

Note: These amendments will save building owners money as fewer hose outlets would be needed and less building protection will be required around fire pumps not subject to explosion hazard.

- (1) 10.64.017 Section G. Section 7.3 of the 2003 Edition of NFPA 14 Standard for the Installation of Standpipe and Hose Systems is hereby amended by adding the following new section:

7.3.2.4 Class I and Class III systems shall be provided with 2 ½ inch by 1 ½ inch reducer hose stations.

This will bring the standpipes in line with Nashville Fire dept. OPG's and fire ground operations.

- (2) 10.64.017 Section H. section 5.12.1.1 of the 2003 Edition of NFPA 20 Standard for the Installation of Stationary Pumps for Fire Protection, is hereby amended by deleting the subsection 5.12.1.1 and substituting the following:

5.12.1.1 Fire Pump enclosures shall be two (2) hour fire rated reinforced concrete or concrete block.

Exception: When it has been proven that a explosion hazard does not exist fire pump enclosures can be of any two (2) hour fire rated construction.

This will allow a less expensive type of protection when there is no explosion hazard.