



Clarifications and Interpretations

Consistency and fairness in the interpretation and application of the Building Code is paramount in maintaining the confidence of the development/design/construction community in the efficiency and integrity of the permit process. Citizens who may only apply for one permit must also view the permit process as evenhanded and rational. It is essential to the continued acceptance of the permit process and the resulting safety of the citizens of Chicago that all plans and applications are judged by the same standards.

The following paragraphs are Department of Buildings' clarifications and interpretations of certain sections of the Building Code. These sections have come to require further explanation in order to resolve confusion over when and how they are intended to be applied.

Please bear in mind that each project is unique, and may include elements that make the guidelines presented here inapplicable. In such cases, and as a general rule, the Municipal Code is the primary authority, and in case of any inconsistency between the Code and these guidelines, the Code should be followed.

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1. BUILDING CONSTRUCTION TYPE

1.1 Wood Framing into Masonry Walls (3 hr. and 4 hr. Fire Rated) – Sections 3(13-64-020) and 7(15-8-010)

Questions have arisen regarding the acceptable method of framing wood floor members – solid joists and trusses – into load bearing masonry walls in townhouse buildings. These walls typically are required to provide a three-hour separation between units or three-hour protection in exterior walls. Similar questions have also arisen regarding wood framing into masonry walls which are required to have a four-hour rating.

Condition A- Framing members In-line

A three-hour fire separation can be provided between the ends of wood joists or trusses if the common bearing wall is expanded slag or pumice, of at least 10” nominal (9-5/8” actual) thickness, the joists bear on the wall at least 3” on each side, and 4” nominal (3-5/8” actual) separation is provided between the ends. The space between the ends shall be filled with 3-5/8” thick expanded slag or pumice* masonry units and the space around the joist or truss ends shall be slushed with mortar.

A four-hour separation can be provided similarly if the wall thickness is increased to 12” nominal (11-5/8” actual) and the separation between joist ends is at least 4-3/4”.

Condition B- Framing members Staggered

A three-hour separation can be provided in an 8" (7-5/8" actual) expanded slag or pumice* masonry wall if the separation between ends of joists or trusses measured diagonally provides 4" actual separation between ends and the intervening space is treated as described in Condition A.

A four-hour separation can be provided when the minimum distance between joist ends is 4-3/4" actual.

* Expanded slag or pumice as used above refers to aggregate type used in the concrete masonry unit.

1.2 Framing into Walls – Section 6(13-60-100)

This memorandum is to clarify how floors and roofs are framed into walls. The walls can be constructed of masonry, steel stud or wood stud. There has been confusion about what method is acceptable.

The recessing of floor/roof framing members into walls has always been a common construction practice. Fire cuts of floor framing members are provided to prevent a structural collapse. Floor/roof framing of member roofs, supported by only a metal hanger or a ledger board, is much more of a hazard than recessing a floor into a wall. Ledger boards and hangers have no fire rating.

Therefore, it shall be acceptable to recess a floor or a roof framing member into an interior or exterior wall.

The above section 1.1 regarding wood framing into three hour town home demising walls and four hour building separation walls of masonry construction shall still be considered valid.

1.3 Use of Combustibles in Type III Construction Roof Assemblies – Section 7(15-12-030)

Code Section 7(15-12-030) "Use of Combustibles" was revised on May 17, 2000, in conjunction with other code sections to allow the use of Exterior Insulation finishing Systems (EIFS) on buildings. The intention of this revision was to allow this combustible insulation on the exterior walls of buildings of construction Types I, II & III. Previously, per Chapter 13-60, exterior walls of those construction types were required to be constructed entirely of noncombustible materials with the applicable fire ratings.

The revision of Code Section 7(15-12-030) was intended to require only the structural components to be noncombustible and fire rated. EIFS is not a structural component so it was not required to be noncombustible. It was not intended to change the requirements of Chapter 13-60 to now require a noncombustible roof assembly in Type III

construction. Type III construction has always been allowed to have a combustible roof assembly with an applicable fire rating when required. Therefore, buildings of Type III construction are NOT required to have noncombustible roof assemblies.

1.4 Type III-B Construction, One-Hour Floor System – Section 6(13-60-100)

In Type III-B construction, the required one hour fire rating of the beams and the columns can be attained by simply enclosing or boxing the columns and beams with a minimum two layers of 5/8 inches thick Type X gypsum board. Beams that are completely enclosed within a one hour listed floor assembly are acceptable.

When insulation within a one-hour floor system is added for the sound/acoustical purposes or to separate an unheated space, an additional 5/8 inches thick Type X gypsum board shall be added to the listed floor/ceiling assembly. This is because there is not a specific UL assembly indicating a floor with insulation. Therefore, an additional layer of Type X gypsum board is accepted.

1.5 Wood Frame Balcony – Section 7(15-8-322)

An unprotected wood frame balcony shall be permitted on buildings of construction Types III and IV. They must conform to the requirements of the Section 7(15-8-322). The Code Section 7(15-8-310) shall not be applicable to building construction Types III and IV.

1.6 Fire Limits, Prohibited Construction Types – Section 5(13-116-020)

The prohibition of Type II and Type IV construction shall be limited to the dense downtown business district area bounded by Roosevelt Street (1200) on the South, Division Street (1200) on the North, Lake Michigan on the East, and Halsted Street (800) on the West. This ruling shall apply to all new additions and new construction projects only.

All exceptions using any of the above construction types must be approved by a supervisor of the plan examiners on a case by case basis.

1.7 Private garage, one per Building – Section 4(13-96-250)

The code allows an attached private garage to be of a maximum 800 sq ft in size (600 sq ft for frame construction) on the grade or lower level of a building. Only one private attached garage is permitted per building, except in townhomes, rowhouses or in a similar condition where a dwelling unit occupies a portion of a building from the top to the bottom. The occupancy classification shall be a Class H-3 garage once this limit is exceeded.

Each building that is separated by a four (4) hour building separation wall as defined by the Section 7(15-8-010) shall be permitted to have one private garage.

1.8 Mixed construction types – Section 6(13-60-010)

When two or more types of constructions occur in the same building, the entire building shall be classified by the lowest construction type that occurs in the building. Whereas, the Type I, Fire Resistive Construction being the best construction type and Type IV, Combustible Frame Construction being the lowest construction type among the listed construction types in the Section 6(13-60-010). (For example, if the original construction was III-B and an IV-A addition is constructed as permitted per CBC, the entire building would then be viewed as Type IV-A construction.)

Frame porches that are permitted to be attached to an ordinary construction type building, in accordance with the Section 7(15-8-320), shall not be considered as constituting mixed construction type.

1.9 Use of Combustible Material for the Enclosure of the Space Heating Equipment Rooms in Types III & IV Constructions – Sections 7(15-8-210) and 7(15-8-220)

In buildings of types III and IV construction, the use of wood is permitted for the interior framing of the walls, floors and ceilings in accordance with the Sections 6(13-60-060), 6(13-60-070) and 7(15-8-260)(c). Therefore, wood framing or wood studs shall be permitted for the enclosure of space heating equipment rooms located in the buildings of types III and IV construction. The hourly fire rating shall be in accordance with the Sections 7(15-8-210) and 7(15-8-220).

2. EXITS

2.1 Definition of Travel Distance – Section 10(13-160-120)

Per Section 10(13-160-120), travel distance is defined as the distance from a point in a floor of a building to a vertical exit, a horizontal exit or an outside exit measured along the line of travel.

Travel distance is measured to the nearest exit. The travel distance numbers, as established in Section 10(13-160-140), are applied to the nearest exit and not to all required exits.

The code does not set limits for travel distance to a secondary exit. This interpretation is consistent with the Life Safety Code NFPA 101.

2.2 Maximum Travel Distance, Permitted Increase – Section 10(13-160-150)

The last sentence of the code Section 10(13-160-150) states that ‘If travel distance is increased pursuant to this Section, an increase in exit capacity under Section 10(13-160-210)(d) shall not be permitted’. This restriction applies only to part ‘b’ of the section.

2.3 Direction in Line of Travel – Section 10(13-160-090)

Section 10(13-160-090) requires that vertical exits in institutional and assembly units to be arranged as to discharge occupants at grade level in direction of travel to the outside. The code does not define direction of travel. So it was determined many years ago that a single 90 degree turn from the stair enclosure would be acceptable. This single turn has been acceptable for many years and many buildings have been built in this manner.

This memo is intended to clarify any misunderstanding there may be in reference to Section 10(13-060-090).

2.4 Power Operated Sliding Doors – Section 10(13-160-250)

Per code section 10(13-160-250), exit doors must swing in the direction of exit travel unless it is one of the listed exceptions. Power operated sliding doors that break away into swing doors comply with this code section.

Power operated sliding doors shall break away to the full open position to provide instant egress at any point in the door's movement.

For exterior power operated sliding doors which are required to swing out to the exterior, the operating slider is not required to be on the exterior face of the assembly. Code section 10(13-160-250) does not make this requirement.

If the operating slider is on the exterior face of the door assembly, the operation track could have a build up of snow, ice and dirt. This would prevent the doors from sliding properly and thus, affect its break-away capability.

Power operated sliding doors which break away at any point in the door's movement shall be acceptable. The operating slider is not required to be on the exterior face of the assembly.

2.4.1 Sliding exit doors – Section 10(13-160-250)

Sliding doors are permitted within a dwelling unit such as for the bedroom, bathroom, closet, etc. The required exit for a dwelling unit can also be of sliding type when the unit entry door is an exterior door or where fire rating is not required for the unit entry door.

The primary entrance to a tenant space within a multi-tenant office or mercantile occupancy building that is used as a showroom or for sales, is permitted to be a sliding door when the clear entrance opening is at least 44 inches wide. A note shall be added on plans that are submitted for approval that the "sliding doors shall remain open during occupancy".

A sliding door is permitted from a room or space used as an individual office with an occupancy load of 10 persons or less or a maximum of 300 sf.

2.5 Electro-Magnetic Locks on Egress Doors – Section 10(13-160-269)

Section 10(13-160-269) of the Municipal Code of Chicago allows the use of electro-magnetic locking devices on the egress doors of certain types of occupancies. This code section is addressing the delayed egress type of electromagnetic lock.

Access control on egress doors via a non-delay type electro-magnetic lock, also known as “Mag-Lock”, can be installed in buildings of the occupancies listed in Section 10(13-160-269). Plans must be submitted to the Department of Construction Permits for the installation of Electro-Magnetic Locks and obtain all the required permits before any installation begins.

All installations of Electro-Magnetic Locks without delayed egress must meet the following requirements:

- 1) All Electro-Magnetic Locking Devices within a building shall unlock immediately upon the actuation of the building Fire Detection System or the building Automatic Sprinkler System.
- 2) All Electro-Magnetic Locking Devices within a building shall unlock immediately upon a trouble signal or abnormal condition in any supervisory circuit of the building, Fire Detection System or Automatic Sprinkler System rendering the system partially or completely inoperative. All Electro-Magnetic Locking Devices shall remain unlocked until the Fire Detection System or the Automatic Sprinkler System is restored to normal operation.
- 3) All Electro-Magnetic Locking Devices shall unlock immediately upon loss of electrical power to any devices that controls the lock/unlock status of the Electro-Magnetic Lock.
- 4) The Mag-Lock shall unlock immediately upon the loss of normal electrical power to the building and shall remain unlocked until normal building power is restored. Mag-Locks are not permitted to have a secondary power supply or to have battery backup. The controlling devices for the Mag-locks are permitted to have backup power. (for example the Fire Detection System)
- 5) The following devices are required on the egress side of the door:
 - 5.1 A UL listed motion detector, or a UL listed Lock, or a UL listed Panic Device with a built in switch to allow egress at any time.
 - 5.2 And, an emergency pneumatic bypass push button switch located within 5 feet of the door opening, and in plain view, 42” above the finished floor. This switch should be clearly marked “Push to Exit” and must interrupt power to the Mag-

Lock bypassing all other releasing or controlling devices for a minimum of 30 seconds, allowing a person enough time to push the button and proceed through the door.

Electrified dead bolts or magnetic shear locks are not permitted and are not addressed in this section. The installation of Electro-Magnetic Locks shall also be subject to a final inspection and field test.

2.6 Residential Duplex Units, Exits – 10(13-160-050)

In a corridor type residential building, except from the basement, 1st and 2nd floor units complying with the Section 10(13-160-050)(d), access to the common exit corridor must be provided from both levels of the duplex unit.

When two exits are required from each level of a duplex unit, the private interior stairs shall be considered as one of the required exits from the upper level of the duplex provided access to two building stairs are provided from the lower level of the duplex unit. Therefore, access to only one building/common stairs will be required from the upper level of the duplex unit.

In multiple Dwellings, when only one exit stair is provided for the basement, 1st or 2nd floor space in accordance with the Section 10(13-160-050)(d), this one exit stair shall be dedicated for one residential unit and shall not be shared by other residential units, unless the shared stairway is open to the outside atmosphere.

Unless otherwise listed as one of the exceptions, traveling up the stairs from any floor that is above the grade level shall not be permitted for exiting.

2.7.1 Basement Level, One Exit – Section 10(13-160-050)

One exit shall be permitted from any basement level having an area not exceeding 2,000 square feet and used either for storage purposes or to house equipment used in the operation of a building such as pumps, boilers or furnaces, with only incidental human occupancy.

2.7.2 Basement Level, One Exit - Section 10(13-160-050)

A basement area of less than 800 sf within a duplex dwelling unit or as a self-contained dwelling unit may have a single exit of a private interior stair to the upper level of a duplex or to an exit at grade level.

2.8 Roof Deck, Exits – Section 10(13-160-050)

Except for the roof deck no higher than the roof of a single story building (including a private garage), all roof decks must have access to two exit stairs. Private roof decks shall be identified on plans as private for a residential unit and can utilize the private stairs from the residential unit below as one of the required exit stairs. The second exit can be the common building stairs that extends to the roof deck level.

When private roof deck (used exclusively by one residential unit) is located at the same level or story as the enclosed residential unit, only the enclosed portion of the residential unit, excluding the roof deck, is required to comply with the exiting requirements of the Section 10(13-160-050). In other words, a roof deck directly off of an enclosed space is not required to have 2 exits, but the enclosed space may require 2 exits per section 10(13-160-050).

2.9.1 Exterior Stairway Serving Second Floor of a Single Family Residence – Section 3(13-64-090)

The code section 10(13-160-050)(o)(2) accepts an exterior stairway serving the second floor of a single-family residence, as part of the required exits from the third floor. The code section 10(13-160-050)(c) requires a second exit from the second floor of single-family residence with an area over 1500 sf. Furthermore, the addition of a second exit intrinsically improves the safety of a building and an exterior stair has the advantage of moving the occupants immediately outside of the building. Therefore, an exterior stairway serving the second floor of a single-family unit shall be permitted.

2.9.2 Stairway Serving the Roof Deck – Sections 10(13-160-040)(d) and 10(13-160-330)(a)(4)

Given that a roof deck is not enclosed space, the requirement of an enclosed stair to such a roof level per section 10(13-160-040)(d) is not applicable. Section 10(13-160-330)(a)(4) requiring non-combustible stairs for buildings of four stories or more is not applicable either. Only the height of the enclosed floor space or the number of stories shall be the factor for the enforcement of the above mentioned sections.

However, the vertical distance from grade to the roof deck level served by an exterior stairway shall not exceed 45 feet.

The roof deck level shall not be considered as enclosed space even when it is served by the enclosed stairways or elevators and the enclosed stair/ elevator lobby does not exceed 5 feet in width. This ruling is consistent with the meaning of Section 5(13-48-020)(d). This interpretation does not apply to Wrigley Field Rooftop Clubs as specified by the Section 5(13-48-020)(e).

2.9.3 Access to a Public-Way from the Rear Exit for Single Family Units & Multiple Dwelling Units– Section 4(13-96-280) and 10(13-160-070)

The rear exit of a single-family unit or of a multiple dwelling unit building shall have access to a street or public way by means of an unobstructed open path. That path shall not be less than 36 inches wide. A minimum 44 inches wide access (path) to a street or public way is required for the multiple dwelling unit buildings where the width of the rear exit stairway is required to be minimum 44 inches in accordance with the Section 10(13-160-220)(b).

2.10 Stair Railings and Guardrails – Section 33(13- 124-320)

Per Section 33(13-124-320), guards shall be required at every point of danger including at all edges of every floor, balcony, mezzanine or other space used or intended for human occupancy which is at a height of more than 2’-0” above the floor, ground or pavement directly below.

Questions have arisen whether guardrails set at 42” are required at the stairs in addition to the 34” – 38” handrails set.

Only the handrail set is required inside a typical enclosed stairs and the handrails need not be extended to 42” to meet the guardrail requirements. Guardrails are only required at the stair landings when the stairs are open or when the stair landings are unusually larger inside an enclosed stairs.

2.11 Stairway Landings – Section 10(13-160-310)(b)

The width of landings shall not be less than the width of stairways they serve. Every landing shall have a minimum dimension measured in the direction of travel equal to the width of the stairway in accordance with the Section 10(13-160-210)(e).

The application of Section 10(13-160-310)(b) that permits the length of a landing in the direction of travel to be 48 inches maximum shall be applied only to a stairway that has a straight run. This ruling shall apply to new construction only and not to stairways in existing buildings.

2.12 Exits in Existing Buildings – Chapter 13-160.

Every existing building shall have not less than the minimum number of required exits, as prescribed in Section 10(13-160-050).

In existing buildings, the required interior or exterior stairways (except fire escapes) that are minimum 36 inches wide shall be permitted under the following conditions:

1. The occupancy served by the stairway is not an Institution Use.
2. The space or floor served by the stairway has an occupancy count that does not necessitate the stairway to be wider than 36 inches. The occupancy count shall be based on actual space provided and determined by dividing by the numbers which are provided in Sections 3(13-56-310) and 3(13-56-320).

3. If the stairway is the original building stairway or the stairway was built with approved building permit drawings.
4. When the change of occupancy of an existing building or building floor served by stairway did not result in two or more hazard index numbers higher than its present occupancy class, as defined in Section 34(13-200-170).

Existing stairways must be reconstructed to provide a minimum 44 inches in width when the stairways do not meet any one of the above listed conditions.

2.13 Alterations 34(13-200-330) Exit Requirements - Assembly & Institution Occupancies

Section 34(13-196-010) requires buildings to comply with the applicable provisions of the code at the time of its construction or at the time of its alteration. An **alteration** is defined in section 2(13-4-010) as “any change in the occupancy classification or any change or modification of construction or space arrangement in any existing building. . .”

The entire assembly unit or institution unit space must conform to all new construction requirements of Chapter 10(13-160) regarding number, width, location, access to, and enclosure when one of the following occurs:

- 1) The occupancy of an existing building or portion thereof is changed to an assembly unit or an institution unit.
- 2) An existing assembly unit or an institution unit undergoes an architectural and/or a structural renovation or alteration which involves 50% or more of the square footage of the institutional or assembly space.

Existing fire escapes may be permitted where such exits now serve the existing building. A supervisor of plan examiners, prior to the plan submission, must review any situation in which bringing the existing life safety features of the building up to the current code requirements is unreasonable or a hardship.

2.14 Minimum number of exits from the second floor of a single-family residence - Section 10(13-160-050)(c)

In single-family dwelling and townhouse units two exits are required from the second floor if the area of that floor is over 1500 square feet. Given that sprinklers are allowed to be substituted for the second exit from the third floor of single family and townhouse units per section 10(13-160-050)(m), sprinklers can also be substituted for the second exit from the second floor. This will be limited to floors with area up to 2000 s.f.

3. FIRE RESISTIVE CONSTRUCTION & ENCLOSURES

3.1 Skylights and Sloped Glazing – Section 7(15-8-520)

The use of laminated glass roof panel in atria and skylights has been approved in many installations. Tempered glass has not been approved since it fragments and falls when a concentrated (impact) load is applied.

Therefore, only wire glass or laminated safety glass shall be specified for all skylights and sloped glazing applications. Tempered glass may be used in double glazed installations only with wire glass or laminated safety glass as the lower layer.

3.2 Protection of Openings per Code Section 7(15-8-110)

Building inspections have recently shown that many existing buildings do not comply with Section 7(15-8-110). Any building plan which is reviewed must show compliance with the Section 7(15-8-110).

Section 7(15-8-110) requires fire rated windows for buildings on interior lot lines, near fire escapes and other locations. All design professionals must be aware of situations when fire rated windows are required per Section 7(15-8-110).

3.3 Size of fire Rated Windows – Section 7(15-12-160)

Sections 7(15-12-160) through 7(15-12-250) address all of the requirements needed for fire rated windows. Depending on the type of window being used, Sections 7(15-12-210) and 7(15-12-220) give the maximum size restrictions for that specific type of window.

However, Section 7(15-12-240)(b) also allows windows of other sizes to be used, provided that these windows meet all of the required test standards that the code requires.

Therefore, fire rated windows of any size can be used provided that the actual window being used meets all of the required test standards. These test standards are stated in Sections 7(15-12-170) through 7(15-12-200).

Without special testing, the use of fixed wire glass vision panels is permitted in one hour fire rated interior walls, provided each pane does not exceed 1,296 square inches in area having a maximum dimension of four feet, six inches and is installed in a 16 gauge steel frame. Wire glass when used for the exterior wall opening protection shall not exceed 720 square inches per piece and shall be in a 16 gauge steel frame.

3.4 Fire Rated Windows and the Energy Code – Section 7(15-8-110)

Fire rated windows are required by code to protect openings in buildings per code section 7(15-8-110). These windows provide a 45 minute fire rating which includes a hose stream test. These windows can be required along interior lot lines or near fire escapes,

exterior stairs and other locations. Fire rated windows protect the building's exposure from fire, and also protect the building's occupants and firefighters when using a fire escape during a fire incident.

It is agreed that, whenever the Municipal Code requires fire rated windows to be installed, this life safety requirement must be met. The new Energy Code **will not** supersede this requirement. The requirements of the energy code will need to be met in other ways.

3.5 Lintels, Fire Protection – Section 6(13-60-140)

The bottom flange of the lintel over the exterior wall window opening need not be fire protected regardless of the exterior wall opening size.

3.6 Enclosure of Pipe Shafts and Ducts – Section 7(15-8-160)

Per Section 7(15-8-160), when pipes and ducts pass through floor openings less than nine square feet in area, no fire rated enclosure is required regardless of the construction type of the building. All that is required is that the openings between the floor and the pipes or ducts be filled with noncombustible materials.

On building plan reviews, only a general note stating compliance with this code section will be required. A detailed drawing is not needed, nor is it required by code. This shall be for any pipe, flue or duct passing through a floor opening which is less than nine square feet in area.

3.7 Enclosure of Heating Plants & Boilers 7(15-8-200)

Section 7(15-8-200) clarifies when a fire rated enclosure is not required for heating plants and boilers. Steam boilers have a pressure rating exceeding 15 psi. They are not included in this section, but instead are covered under section 7(13-8-210). Heating plants with pressure rating less than 15 psi can be viewed as forced air furnaces.

The enclosure of furnaces or boilers shall not be required for one story business, mercantile, industrial or storage **units** having a floor area not exceeding 3000 sq. ft. This section refers to the size of the **unit or tenant space** and not to the building size. Therefore, a storage occupancy that only occupies any one story of a building (this could be a multi-story building) and with a tenant area not exceeding a 3000 sq. ft. is not required to have a fire rated enclosure around its furnace. This shall be the same for a business, mercantile, or industrial occupancy that meets this unit size requirement.

3.8 Stairwell Enclosure, Nonessential Openings – Section 7(15-8-180)

Code Section 7(15-8-180) does not prohibit the penetration of electrical conduit into the stair enclosure. These conduits can be used to power the lighting within the stairwell or the building fire alarm system. The conduits that penetrate the stair enclosure shall be fire stopped properly with a non-combustible material.

However, the HVAC air ducts are not permitted to cut through a stairwell enclosure, with or without duct openings within the stairwell.

3.9 Convenient Stairway Enclosures – Section 7(15-8-140)

The following stairway enclosure requirements apply to the convenient stairways that serve the floor levels that are occupied by one tenant or the floor levels served are under control of one management or ownership:

One-hour enclosure is required for the stairways that serve any two or three floors of a building and two hour enclosure is required when four or more levels are served. The one hour stairway enclosure walls can have fixed wired glass vision panels, provided each light does not exceed 1,296 square inches in area having a maximum dimension of four feet, six inches and is installed in a 16 gauge steel frame. One and two hours fixed ceramic glass is also permitted in one and two hours stairway enclosures. The dimensions allowed are strictly by manufactures specifications.

When serving only two floors, a complete stairway enclosure is required only on one level, upper or lower, with one-hour walls and 1½ hour self-closing ‘B’ label door. A note is required on the plans that the stair door is not permitted to be held open. Enclosure on both levels is required when stair doors are held open by magnetic door hold open devices and smoke detectors are installed in accordance with the Section 7(15-8-180)(c).

Except in Residential and Institutional occupancies, the enclosure of a stairway serving only the second floor from the ground floor is not required in buildings of Fire Resistive Construction (Type 1 construction).

Compliance with the High Rise Chapter 13-76 and installation of atrium smoke control system is required if stairway enclosure is not provided for non-required stairways.

3.9.1 Convenient Stairways, No enclosure required – Section 7(15-8-140)(b)

Stairway enclosure shall not be required for the stairway serving any two floors in buildings of Type I-A, I-B, and I-C construction with the following conditions:

1. The entire building is protected by an automatic sprinkler system.
2. The open stairway is not used as a required exit, except where permitted by the Section 7(15-8-140)(b)&(c).
3. The occupancy of the floors served by the open stairway is not Hazardous Use, Multiple Dwellings, or Institutional Use.
4. All shafts within 100 feet horizontal distance from the unenclosed stairway

opening, on both levels, have minimum one (1) hour enclosure, except the shafts for pipes and ducts passing from one floor to the other as per section 7(15-8-160).

This ruling is based on the fact that Section 7(15-8-140)(b) allows stairway between two floors, between the ground floor and the second floor, without any enclosure, and with the life safety features and restrictions in place, it can be any two floors of the building.

3.10 Atrium – Section 4(13-76-100)(4)

Atriums are permitted in fire resistive buildings that comply with the entire Chapter 13-76 (High Rise Code) as well as an Atrium Smoke Control System meeting national standard requirements (BOCA 1990) as follows: Not less than six air changes per hour shall be exhausted from an atrium with a volume of less than 600,000 cubic feet, and not less than four air changes when the volume is more than 600,000 cubic feet. The minimum exhaust is 40,000 cfm.

The Following information shall be provided on plans:

1. The total area and the total volume open to the atrium.
2. The opening sizes with the cfm and direction of flow (exhaust/ supply).
3. The supply openings are sized for 50% of the exhaust capacity.
4. The exhaust shall be at the top of the atrium and the intake at the bottom.
5. Smoke detectors are to be located at the ceiling of the atrium and at the perimeter of the atrium on each floor within 15 feet.
6. The atrium smoke control system must activate by any of the following: the activation of sprinkler system, or smoke detectors in atrium area, or the manual switch at fire alarm panel.

4. HEIGHT AND AREA LIMITATIONS

4.1 Parking Garages in Residential Buildings – Section 5(13-48-030)

Parking garages which are intended for use in residential buildings by building occupants and their guests shall be allowed in buildings of any construction type regardless of the height of the building. The building, however, must meet the height and area restrictions for a residential use of the intended construction type per Chapter 13-48.

Section 5(13-48-100) shall not be applied to the garage portion of the building. The garage must be utilized exclusively by the building occupants and their guests. In other words, the garage cannot be for commercial use.

This shall be allowed per the authority given to the building and fire commissioners in section 3(13-56-250). The garage shall be viewed as an auxiliary use to the building. A garage is an indispensable use to the residential building. Most residential buildings

could not be built without a garage. The mixed occupancy separations per table 3(13-56-280) of four hours shall still be applicable.

The auxiliary use area restriction shall not be applicable since this is an indispensable use to the building. This shall be per the judgement of both the building and the fire commissioners.

This decision is rendered to clarify for all parties an interpretation that is already in place and that has been followed by inspectors and examiners for a number of years.

This is not a new interpretation, but it is intended to clarify any recent misinterpretation of sections 5(13-48-100) and 3(13-56-250).

4.2 Retail Occupancy in Residential Buildings – Section 5(13-48-030)

Retail occupancy shall be permitted on the ground floor of residential buildings of all construction types except in buildings of Type IV, frame construction.

The Zoning code mandates commercial space on the ground floor in many areas of the city. To facilitate construction of new residential buildings, the ground floor retail and commercial occupancy has been viewed as an auxiliary use to the residential building.

Section 5(13-48-100) shall not be applied to the ground floor retail space. The building, however, must meet the height and area restrictions for a residential use of the intended construction type per Chapter 13-48.

4.3 Depth of Basement, Existing Buildings – Section 5(13-48-020)(d)

The code section 5(13-48-020)(d) was amended on 10-02-1995 requiring the basement levels to be more than 4 feet below grade. The intention of this change was to require only the new construction projects or new building additions to have deeper basements. It was not intended to be applied to the basement levels of existing buildings

The following shall be regarded as a basement, not a story, in all existing buildings built before 10-02-1995 that are not increasing the number of stories.

:

- 1) The floor level shall be at least one foot below grade.
- 2) The ceiling height of the level shall not be more than seven feet above grade.

The number of stories shall be taken as the actual number of stories above grade in accordance with the Section 5(13-48-020)(d). The code requirements for the mezzanine floors and enclosed monitor spaces shall remain unchanged for all existing and new buildings. This will not apply to any addition to a pre-10-02-1995 building.

The intention of this interpretation is to not inadvertently require buildings originally intended as two story building into 3 three stories (or three stories to four) when there is no other impact to the exiting conditions.

5. OCCUPANCY CONTENT

5.1 Health Clubs & Fitness Centers Policy – Section 3(13-56-300)

This establishes values for assembly uses which are not specified in Table 13-56-310(b) to calculate **occupancy**.

In fitness centers and health clubs, the occupancy content for running tracks or for exercise areas primarily occupied by fixed equipment shall be calculated at 40 square feet per person (gross). Recreation areas (i.e., for aerobics, yoga, etc.) shall to be calculated at 20 sq. ft. per person, and locker rooms shall be calculated at 6 sq. ft. per person, net area (not including the floor area covered by lockers). Swimming pools shall be calculated at 15 sq. ft. per person, which is consistent with 77 IL. ADM. Code 820, the Illinois Swimming Pool and Bathing Beach Code, Section 820.200 (b), and pool deck areas shall be calculated at a rate of 50 square feet per person (gross). In accordance with Section 3(13-84-410), an occupancy sign shall be obtained and posted in each space, stating the maximum number of persons, which may occupy that area.

5.2 Residential Roof Decks, Occupancy Content – Section 3(13-56-300)

The floor area per person ratio to be used for residential roof decks is 20 sq. ft. per person, per Section 3(13-56-310). This is for residential roof decks, which are to be used only by the residents of the building.

Architects have tried to use the floor area per person ratio of 125 sq. ft. per person for these residential roof decks. This approach has not been acceptable.

Section 3(13-56-300) lists the floor area per person ratio to use for different occupancies for rooms or spaces IN A BUILDING. The Code does not list what ratio to use for a space, which is not in a building. The closest listed occupancy in Section 3(13-56-300) would be “recreation room”. Therefore, 20 sq. ft. per person will be used to determine occupancy for residential roof decks.

5.3 Occupancy Content, Floor Area Per Person – Section 3(13-56-310)

The occupancy content shall be based on the actual use of the room or space. It shall be determined by the dividing of the net floor area by the floor area per person established in Sections 3(13-56-310) and 3(13-56-320). The following numbers are provided to clarify the content of the table provided in the section 3(13-56-310):

1. Seating areas with chairs and tables -----	15 sq ft per person
2. Standing areas, dance floors -----	6 sq ft per person
3. Conference rooms, lecture halls, classrooms -----	20 sq ft per person
4. Kitchen, food preparation areas -----	100 sq ft per person
5. Gymnasiums, Prayer halls with no seating, auditoriums without fixed seats, Recreation rooms -----	20 sq ft per person
6. Roof Decks -----	20 sq ft per person
7. Day care space with children under 2 years of age --	55 sq ft per person
8. Day care space with children 2 years and older -----	35 sq ft per person

6. SCHOOL CORRIDORS

6.1 Bathroom Doors in School Corridors – Section 3(13-84-050)(c)

Section 3(13-80-030) requires all rooms in an institutional occupancy to be separated from the exit corridor by 1-hour fire-rated walls and fire rated doors.

There is no such code section for school/assembly occupancies requiring all rooms to be separated from the exit corridor.

School administrators are very concerned about the security threat to students that a door to a bathroom may present. School personnel require the visual advantage that a clear opening provides. Also, there is not much of a fire load in a bathroom as compared to a school classroom; hence the need for a door on a bathroom is not as apparent as it would be for a classroom.

Therefore, in order to work with the security concerns of school administrations, and since the code is not clearly requiring this separation, doors will not be required from bathrooms to the corridors in schools.

7. REHABILITATION CODE

7.1 Change of Occupancy – Section 34(13-200-200)

When the occupancy of an existing building or portion thereof is so changed resulting in an occupancy class two or more hazard index numbers higher than its present occupancy class, as defined in Section 34(13-200-170), the entire building shall meet the requirements of Municipal Code of Chicago for new construction.

7.2 Light and Ventilation Requirements, Existing Buildings – 34(13-200-380)

All existing residential buildings that were built or converted before the year 1957 can receive the required natural light and ventilation from the window openings that are minimum two feet six inches (2'-6") from the interior lot line. This ruling applies to all existing conditions where the footprint or the ground floor size of the buildings remains unchanged. Minimum three (3) feet set back from the interior lot line of the wall containing the windows is required for all new ground floor additions.

The maximum building height is 36'-0".

This interpretation does not apply to buildings changing occupancy .

7.3 Assembly Occupancy, Classification – Sections 3(13-56-080) & 3(13-56-090)

The occupancy content of the entire space including all rooms and/or floors that are under one management or ownership shall be summed up together for the determination of small or large assembly unit.

This interpretation does not apply to the Wrigleyville rooftop clubs.

8. FIRE ALARM SYSTEM

8.1 Visual and Audible Fire Alarm Devices – Section 9(15-16-1280)

Installation Height Policy: Section 9(15-16-1280) requires that the audible fire alarm be installed at 96” from the finished floor. MOPD requires that the Visual fire alarm be installed at a height of 80” or 6” from the ceiling per Illinois Accessibility Code, Appendix D Bulletin # 2 – Visual Alarms, Mounting: Provisions contained require mounting.

Per agreement with DCAP, Fire, and MOPD, the Visual Alarm (strobe) can also be installed at 96” above the finished floor, thus enabling the installation of a single combination visual and audible device. In areas where the ceiling height does not allow for 96” mounting height, the combination device shall be mounted 6” below the ceiling plane. As a result of this agreement there will no longer be a requirement to install and wire two separate devices and electrical back boxes at each location.

8.2 Remote Power Supply Control Unit -- Fire Alarm System

Remote power supplies or the power boosters can be utilized to expand the power capability of a fire alarm control panel for notification appliance circuits (NAC). The NAC remote power supply units shall be UL listed and shall meet all the installation requirements of NFPA-72 and Article 760 of the Chicago Municipal Code.

The NAC power supply shall be monitored and activated from the addressable fire alarm loop, and shall not be activated from the notification appliance output of the fire alarm panel. They shall also comply with the following requirements:

1. The NAC power supply control unit shall be connected and controlled on a class "A" addressable fire alarm system loop.
2. The NAC power supply control unit shall contain self-diagnosing circuitry to alert the fire control panel when a fault or trouble condition occurs.
3. The power control unit's output circuits can be class "B" with an end of line resistor or Class "A" loop out and back to the unit.

This new policy of NAC power supply acceptance shall apply to the existing as well as new fire alarm systems. The fire alarm systems can now be expanded without excessive cost to the building owners.

8.3 Combined Detection and Voice Communication – Section 4(13-76-030)

The voice communication circuits and the fire detection circuits of a High Rise Fire Alarm System can share the same conduit or approved raceway, and also utilize common control equipment and power supplies.

This ruling conforms with the requirements of the Article 760 of the Chicago Electrical Code. It facilitates the common use of the conduit system and eliminates the current requirement of redundant conduits and power supplies for voice communication and fire detection.

The maximum 40% conduit fill requirements per Section 18-27-760.82, and the two hour enclosure requirement of the voice communication risers per Section 13-76-080(f) are still required.

9 SPRINKLER SYSTEM

9.1 Buildings Equipped with An Automatic Sprinkler System – Section 9(15-16-350)

In order for any existing or new building to be considered fully protected by an automatic sprinkler system, all rooms or areas of the building must have sprinklers. However, Section 9(15-16-350) allows the omission of sprinklers in certain rooms or areas of a building where the application of water to the contents in the room or area may cause hazard. The following is a list of these locations:

1. Rooms or vaults dedicated for electrical transformers, CECO vaults.
2. Dedicated main building switchboard rooms.
3. Generator rooms, supplying electrical power to the building.
4. Dedicated electrical closets or rooms where voltage exceeds 600 volts.
5. Elevator machine rooms.
6. Elevator shafts. (Sprinklers are required at bottom of the elevator pit for all newly installed sprinkler systems.)
7. Freezers under 200 sq ft in area.
8. Rooms containing chemicals that may cause serious life or fire hazard upon the application of water.

When a building is protected by a required standard or high rise fire alarm system, the above elevator machine and electrical rooms or areas shall be protected by an appropriate detection.

Note that the electrical code section 18-27-110.26(f)(1)(c) requires higher temperature sprinkler heads in electrical closets and distribution rooms that are required to have sprinklers and are not included on the above list.

9.2 Materials and Installation Standards for Retrofit Fire Protection Systems – Sections 34(13-196-205) and 34(13-196-207)

On December 15, 2004, the city codes were changed to require most pre-1975 high-rise buildings to be retrofitted with automatic sprinklers. Landmark and non-transient residential high-rise buildings were excluded from this requirement. Instead, a life safety evaluation will be required to be performed on these buildings.

Code section 34(13-196-207) lists materials and installation standards that existing pre-1975 high-rise buildings can use to retrofit the building with sprinklers. This code section can be used for any pre-1975 high-rise building that decides to retrofit the building with automatic sprinklers. This code section can be applied if the building is not required by code to retrofit with automatic sprinklers.

9.3 Automatic Sprinkler System Required in Basement Areas of Night Clubs or

Restaurant – Section 3(13-84-331)

Every existing and new building occupied as a nightclub or a restaurant with an occupancy count of more than 100 persons located in the basement shall be equipped with an approved automatic sprinkler system. The sprinkler system can be limited only to the basement level. The occupancy count shall be in accordance with the Section 3(13-56-300).

If the occupant load of the basement level is 100 persons or less, then a sprinkler system per this section is not required in the basement level.

END