

Florida Existing Building Code

2004

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Basic objectives and Approach

Basic objectives:

- Encourage Use and Re-Use while requiring reasonable safety requirements
- Predictability
- Consistency

Approach:

Upgrades are triggered by the type and extent of the work, instead of the expense of the work.

History and Background

- Model Building Codes, IBC, UBC, SBC
- Standard Existing Building Code.
- The NJ rehabilitation sub-code.
- Nationally Applicable Recommended Rehabilitation Provisions (NARRP)/Federal Government.

Baseline

- Life Safety Improvements
 - Upgrade fire protection
 - Enclose vertical openings
 - Replace unsafe interior finishes
 - Ensure adequate means of egress.
 - Improve accessibility.
 - Improve structural safety.

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Florida Building Code, Building

- **Chapter 1, Administration.**

Exception: Existing building undergoing repair, alteration or additions and change of occupancy shall comply with Chapter 34 of the this Code.

- **Chapter 34: Existing Structures.**

Defers to the 2004 Florida Existing Building Code.

History and Background

- Base Documents
 - * Philosophy and approach
 - NARRP
 - NJ
 - UCBC
 - * Technical provisions
 - IBC Chapter 34
 - I-Codes provisions on existing buildings

Florida Existing Building Code

- **Base Document:** The 2003 International Existing Building Code
- Replacement to Chapter 34 Existing Structures of the FBC.
- The FEBC was developed by the Commission's TACs.
- It was reviewed and revised for consistency with the FBC and FFPC.

Chapter 1 Administration

- **Scope:** repair, alteration, change of occupancy, addition, and relocation of existing buildings.
- **Compliance alternative:** Compliance with the FBCs and the FFPC.
- **Exception - Public educational facilities and state licensed facilities** must comply with Chapter 4, Special Occupancy.
- **Chapter 1, Florida Building Code, Building** must govern the administration and enforcement of this Code.

Chapter 2 Definitions

- **Existing building:** A building or structure or portion of a building or structure which has been previously legally occupied or used for its intended purpose.
- **Addition:** An extension or increase in floor area, number or stories, or height of a building or structure.
- **Alteration:** Any construction or renovation to an existing structure other than repair or addition. Alteration are classified as Level 1, Level 2, and Level 3.

Chapter 2 - Continue

- **Change of occupancy:** a change in the purpose or level of activity within a building that involves a change in application of the requirements of this Code.
- **Load-Bearing Element:** Any column, girder, beam, joist, truss, rafter, wall, floor or roof sheathing that supports any vertical load in addition to its own weight or any lateral load.

Chapter 2 - continue

- **Repair:** the **patching, restoration** and/or minor replacement of materials, elements, components, equipment and/or fixtures for the **purposes of maintaining** such materials, elements, components, equipment and/or fixtures on **good or sound condition**.
- **Value:** The estimated current replacement cost of the building in kind.

Chapter 2- Continue

- **Dangerous:**

Stress in member is more than $1\frac{1}{3}$ the nominal strength allowed;

Members likely to fail;

Member or element not anchored to resist $\frac{2}{3}$ of wind pressure;

The building or any portion is likely to collapse; or buckle.

Chapter 2 - Continue

- **Substantial Structural Damage:**
 - In any story, the vertical elements of the lateral-force-resisting system has suffered damage such that the lateral load-carrying capacity has been reduced by more than 20%.
 - The vertical load-carrying components supporting more than 30 percent of the structure's roof or roof area have suffered a reduction in vertical load-carrying capacity to below 75%.

Chapter 2- continue

- **Work Area:** That portion or portion of a building consisting of **all reconfigured elements, systems, or spaces as indicated** on the construction documents. Work area excludes other portions of the building where **incidental work entailed** by the intended work must be performed and portions of the building where **work not initially intended** by the owner is specifically required by this Code.

Chapter 3 Classification of Work

Repair

Alteration - Level 1, Level 2, Level 3

Change of Occupancy

Addition

Relocated Buildings

Historic Building

Level of Alteration

- Traditional – Alteration
- NARPA – Renovation
Alteration
Reconstruction
- IEBC – Alteration Level 1
Alteration Level 2
Alteration Level 3

Chapter 4 Repairs

Categories of Work

Repair (sec. 302.1):

Patching or restoration of materials, elements, equipment or fixtures for the purpose of maintaining such materials, elements, equipment, or fixtures in good or sound condition.

Note: Repair does not include reconfiguration of space

Chapter 4 Repairs

- **Permitted materials, s. 401.2:**
 - like materials is allowed as long as no hazard to life and health.
- **Conformance, s. 401.3:**
 - repair must not reduce level of safety existed before the repair was undertaken.
- **Flood hazard areas, s. 401.4:**
 - Structure seaward of a coastal construction line (see 3109 of the FBC, Building).
 - Flood plain construction. Defers to the local as per Title 44 CFR, Section 59 and 60.

Chapter 4 Repairs

Building Elements and Materials s. 403

- Glazing in hazardous locations. (s. 403.2):
 - replacement must comply with the safety glazing requirements of the FBC, Building.

Chapter 4 Repairs

- **Fire protection. s. 404:**
 - Repairs must maintain level of fire protection provided.
- **Mean of egress. s. 405:**
 - Repairs must maintains level of protection provided for the mean of egress.
- **Accessibility. s. 406:**
 - Repairs must be in accordance with Ch. 11 of the FBC, Building.

Chapter 4 Repairs

Structural s. 407

- **General (s.407.1):**
 - Non structural repairs the cost of which is less than or equal 25% of the replacement value of existing building may be made of the same materials.
 - Wind design as per codes in effect when the building was permitted.
 - Reduction in the structural strength is allowed, provided the capacity is not reduced below FBC, Buildings levels.

Repairs Chapter 4

Structural s. 407

- **Damaged buildings (s. 407.3):**
 - New structural frame members must be as per the FBC, Building.
- **Substantial structural damage (s. 407.4.2):**
 - Requires engineering evaluation for establishing the structural adequacy of the damaged building.
 - Requires 2nd engineering evaluation to demonstrate that the building, once repaired, complies with the wind provisions of the FBC, Building.

Repairs Chapter 4

Structural s. 407

- **Below substantial structural damage (407.3.3):**

Repairs are allowed to be made with the materials, methods, and strengths in existence prior to the damage, unless such existing conditions are dangerous as defined in Chapter 2.

Chapter 4 Repairs

Electrical s. 408 & Mechanical s. 409

- **Electrical - Material (s. 408.1):**
 - Repair of existing electrical wiring and equipment is allowed with like materials as per Ch. 27 of the FBC, Building.
- **Mechanical – General (s. 409.1):**
 - Repairs must comply with s. 301.11 of the FBC, Mechanical.
 - Defective materials or parts must be repaired or replaced in a manner so as to preserve the original approval or listing. (s. 301.11).

Chapter 4 Repairs

Plumbing s. 410

- **Materials (s. 410.1):**

- Prohibited materials (i.e. solder with more than .2% lead; tubular copper and brass trap with wall thickness less than .027 inch).
- Prohibited joints (i.e. Cement or concrete joints, mastic or hot-pour bituminous joints..etc.)
- Prohibited traps (i.e. traps that depend on moving parts to maintain the seal; Bell traps..etc.)

- **Plumbing fixture replacement (s. 410.2):**

- must as per the FBC, Plumbing with the **exception** of “Blowout-design water closets {(3.5 gallons) per flushing cycle}.

Chapter 5 Alteration – Level 1

Categories of work

- **Alteration - Level 1 (s. 303.1):**
 - Removal and replacement, or covering of existing materials, equipment, fixtures using new materials that serve the same purpose.
 - Alteration –Level 1 does not include reconfiguration of space.

Chapter 5 Alteration-Level 1

Building Elements and Materials s. 503

- **Interior finishes (s. 503.1):**
 - newly installed interior finish must comply with the flame spread requirements of the FBC, Building.
- **Carpeting (s. 503.2):**
 - New carpeting used as an interior floor finish must comply with the radiant flux as per the FBC, Building.
- **Materials and methods (s. 503.3):**
 - All new work must comply with the FBC, Building and the FFPC as applicable.

Chapter 5 Alteration-Level 1

Fire Protection, Mean of egress, Accessibility

- **Fire Protection (s. 504):**
 - All alteration must be done such that the current level of safety is maintained.
- **Mean of Egress (s. 505):**
 - All alteration must be done such that the current level of safety is maintained.
 - Door and window dimensions in residential dwellings and dwelling units. A maximum of 5 % reduction in the clear opening dimensions of replacement doors and windows is allowed.
- **Accessibility (s. 506):**
 - Must be in accordance with Ch. 11 of the FBC, Building.

Chapter 5 Alteration-Level 1

Structural 507

- **Non structural alteration (s. 507.2):**
 - Non-structural alteration the cost of which is less than or equal 25% of the replacement value of existing building may be made of the same materials.
- **Replacement of roofing or equipment (507.2.1):**
 - when results in additional dead load must comply with the vertical load of the FBC, Building.

Chapter 5 Alteration-Level 1

Structural 507

- **Roof diaphragm (s. 507.2.2):**
 - if roofing materials removed from more than 50% of the roof diaphragm (part of the MWFRS); the integrity of the roof must be evaluated and deficient connections must be upgraded.
- **Replacement of windows and doors (507.3):**
 - Must be as per Ch. 16 of the FBC, Building.
 - ***Opening protection exception:*** No protection required for one-and two-family dwellings constructed under codes other than the FBC, providing the replaced glazing does not exceed 25% of the aggregate area of the glazed openings.

Chapter 5 Alteration-Level 1

Electrical, Mechanical, and Plumbing

- **Electrical (s. 508):**
 - Residential R3. Existing wiring and equipment is allowed to be repaired or replaced with like materials.
- **Mechanical (s. 509):**
 - same as repairs.
- **Plumbing (s. 510):**
 - same as repairs.

Chapter 5 Alteration-Level 1

Re-roofing s. 511

- **General (s. 511.1):**
 - Recovering or replacing an existing roof covering must be as per Ch. 15 of the FBC, Building.
 - The structural roof components must be able to support the new roof covering and materials and equipment loads.
 - New roof covering must not be installed without first removing existing roof covering when (i.e. old roofing is water-soaked, when roof surface is gravel, when existing roof is slate or the like, when existing roof has two or more applications..etc.).

Chapter 5 Alteration- Level

Energy Conservation s. 512

- **Minimum requirements (s. 512.1):**

Alterations subject to this chapter must comply with the requirements of Chapter 13 of the Florida Building Code, Building.

Chapter 6 Alterations – Level 2

General

- **Alteration-Level 2 (s. 304.1):**
Reconfiguration of spaces, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of additional system.
 - Reconfiguration of spaces (i.e. removal and addition of walls that could alter paths of egress.
 - The addition or elimination of any door or window.
 - Reconfiguration or extension of any system or installation of new equipment such as HVAC, electrical, plumbing systems,..etc.

Chapter 6 Alterations – Level 2

General

- Requirements for improvements or upgrade outside the scope of work exist in this category.
- Full compliance with the Code for new construction is not required.
- Alteration-Level 2 apply where the work area is less than 50% of the aggregate area of the building.

Chapter 6 Alterations – Level 2

Supplemental Requirements

- *Apply where the work area exceeds 50% of the floor area on any floor. Ch. 6 provisions apply to the entire floor for the following:*
 - Shafts and floor openings.
 - Interior finish.
 - Fire suppression and detection.
 - Corridor openings.
 - Means of egress lighting and exist signs.

Chapter 6 Alteration-Level 2

General

- **Compliance (s. 601.3):**
 - All new construction must comply with the Florida Building Code with the exception of the following:
 - windows may be added without meeting light and ventilation requirements of the FBC.
 - minimum ceiling height in new habitable and occupiable spaces must be 7 feet.

Chapter 6 Alteration-Level 2

Vertical openings s. 603.2

- **Existing vertical openings (s. 603.2.1):**

All existing vertical openings within the work area connecting two or more floors must comply with FFPC. (Exception: One and two family dwelling and Group S).

- **Supplemental shaft and floor opening enclosure requirements (s. 603.2.2):**

where work area on any floor exceeds 50% of that floor area, all openings throughout the floor must be enclosed.

Chapter 6 Alteration-Level 2

Vertical openings s. 603.2

- **Supplemental stairway enclosure requirements (s. 603.2.3):**

where the work area on any floor exceeds 50% of that floor area, stairways that are part of the mean of egress serving the work area must be enclosed with smoke-tight construction on the highest work area floor and all floor below.

Chapter 6 Alteration-Level 2

Interior finish

- **Interior finish (s. 603.4):**

Interior finish of walls and ceilings in exits and corridors in any work area must comply with the FBC.

- **Supplemental interior finish requirements (s. 603.4.1):**

where the work area on any floor exceeds 50% of the floor area, s. 603.4 must apply to the interior finish in exits and corridors serving the work area throughout the floor.

Chapter 6 Alteration-Level 2

Guards s. 603.5

- Regardless of the work area, all floor areas more than 30 inches above a floor or grade below which where no guards exists or guards are in disrepair must have guards installed in accordance with the FBC, Building.

Chapter 6 Alteration-Level 2

Fire Protection s. 604

- **Scope (s. 604.1):**

Requirements limited to work areas unless supplemental requirements apply. Automatic suppression system must be installed in accordance with the FBC, Building.

- **Automatic sprinkler system (s. 604.2):**

Sprinkler requirements apply to the following:

- High-rise building as per s. 403 FBC.
- Windless stories where required by the FBC.
- Work areas that include exists and corridors shared by more than one tenant or serving an occupant load more than 30 and required to be sprinklerd under the FBC and FFPC.

Chapter 6 Alteration-Level 2

Fire Protection s. 604

- **Fire alarm and detection (s. 604.4):**
 - An approved fire alarm system must comply with the appropriate sections of the FFPC for existing building.
 - Smoke alarm must be in accordance with the FFPC and must be installed in work areas of groups R-1, R-2, R-3, R-4 and I-1.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Scope (s. 605.1):**

limited to work areas that include means of egress shared by more than one tenant and where Level 2 alteration are being performed.

- **Number of exits (s. 605.3):**

Must be as per the appropriate sec. of the FFPC.

- **Fire escape required (s. 605.3.1.2):**

Must be as per the appropriate sec. Of the FFPC.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Mezzanines (s. 605.3.2):**
Travel distance must be as per Ch. 10 of the FBC, Building.
- **Main entrance – Group A (s. 605.3.3):**
with an occupant load > 100 , there must be a main entrance serving as the main exit with a capacity of at least 50% of the total occupant load.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Two egress doorways required (s. 605.4.1):**

Two egress doors must be provided in work areas in accordance with the following:

- In all rooms and spaces within the work area with an occupant load exceeding 50 and a travel distance exceeding 75 feet.
- Patient rooms or suites in excess of 1,000 sq.ft. in I-2 occupancies.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Door swing (s. 605.4.2):**

All egress doors in the egress path within and from the work area serving an occupant load in excess of 50 must swing in the direction of the exit travel.

- **Door closing (s. 605.4.3):**

All doors in the work area opening onto an exit passageway at grade or an exit stair must be self-closing or automatically closed by approved methods.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Panic hardware (s. 605.4.4):**

Must be installed on doors within work areas and paths of egress from work areas in A occupancies with an occupant load in excess of 100.

- **Corridor doors (s. 605.5.1):**

Must be a minimum of 1³/₄ inch solid-core door or approved equivalent with approved closers. In dwelling units or sleeping units of occupancies of R-1, R-2 and I-1, a minimum of a 1 3/8 - inch solid-core wood door or equivalent can be used with approved closers.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Dead-end corridors (s. 605.6):**

Dead-end corridors in any work area must comply with s. 1016.3 of the FBC, Building.

- **Means-of –egress lighting (s. 605.7):**

Mean-of-egress lighting must comply with the FBC, Building.

Chapter 6 Alteration-Level 2

Mean of Egress s. 605

- **Handrails (s. 605.9):**

- All required exit stairs with three or more risers must be provided with at least one handrail.
- All exit stairways with a required width of more than 66 inches must have handrails on both sides.

Chapter 6 Alteration-Level 2

Means of Egress s. 605

- **Supplemental requirements (ss. 605.4.2.1, 605.4.3.1, 605.4.4.1, 605.5.4, 605.7.2, and 605.8.2):**
 - Requirements for door swing, panic hardware, corridor openings, means of egress lighting and exit signs are to extend throughout the entire floor area where the work area exceeds 50% of the floor area.
 - This requirement does not apply to means of egress within or serving only a tenant space that is entirely outside the work area.

Chapter 6 Alteration-Level 2

Accessibility s. 606

- **General (606.1):**

A building, facility, element that is altered must comply with Chapter 11 of the Florida Building Code, Building.

Chapter 6 Alteration-Level 2

Structural s. 607

- **General (sec. 607.1):**

Applies to installation of additional equipment that is structurally supported by the building or reconfiguration of space.

- **New structural members (sec. 607.3):**

Must comply with the FBC, Building.

Chapter 6 Alteration-Level 2

Structural s. 607

- **Existing structural members (sec. 607.4):**
 - Structural members supporting additional gravity loads must comply with the FBC, Building unless the stress is not increased by more than 5%.
 - Group R buildings with no more than five dwellings or sleeping units, the existing building and its alteration must comply with the conventional light-frame construction method in the FBC or the FRC.

Chapter 6 Alteration-Level 2

Electrical s. 608

- All new electrical equipment and wiring installed within a work area must comply with the materials and methods requirements of Ch. 27 of the FBC, Building.
- Electrical equipment and wiring installed in newly constructed partitions and ceiling must comply with Ch. 27 of the FBC, Building.

Chapter 6 Alteration-Level 2

Mechanical s. 609

- All alteration that involve the reconfiguration of spaces intended for occupancy and all spaces converted to habitable or occupiable space within a work area must be provided with natural or mechanical ventilation in accordance with the FBC, Mechanical.

Chapter 6 Alteration-Level 2

Plumbing s. 610

- If the occupant load of a story is increased by more than 20%, plumbing fixtures for the story must be provided based on the requirements of the FBC, Plumbing for the increased occupant load.

Chapter 7 Alterations-Level 3

General

- Level 3 Alteration is level 2 alterations where the work area exceeds 50% of the aggregate area of the building (total floors area).
- Work area is defined as that portion or portions of a building consisting of all reconfigured spaces, as indicated in the construction documents.

Chapter 7 Alterations-Level 3

General

- The work area excludes portions of the building in which work not initially intended by the owner is specifically required by the code.
- Triggers in this classification are work that potentially affects the building's fire protection systems, vertical openings, means of egress, accessibility and structural system.

Chapter 7 Alterations-Level 3

General s. 701

- **Compliance (sec. 701.2):**
 - In addition to the requirements identified in Ch. 7, all work must comply also with the **Level 1 and Level 2** alteration requirements in Ch. 5 and 6.
 - The requirements in Ch. 6 for building elements and materials, fire protection and means of egress must apply in all work areas regardless if they include exists and corridors shared by more than one tenant and regardless of occupant load.
 - If the reconfiguration of space affecting exits of shared egress is solely due to accessibility requirements, compliance with Ch. 7 is not required.

Chapter 7 Alterations-Level 3

Special Use and Occupancy s. 702

- **High-rise building (sec. 702.1):**
 - Floors served by a recirculating air or exhaust system with capacity $> 15,000 \text{ ft}^3/\text{min}$ must be equipped with an approved smoke and heat detection devices installed as per the FBC, Mechanical.
 - Where there is an elevator or elevators for public use, at least one elevator serving the work area must comply with the FFPC.

Chapter 7 Alterations-Level 3

Special Use and Occupancy s. 702

- **Boiler and furnace equipment rooms (sec. 702.2):**
 - Boiler and furnace equipment rooms adjacent to or within (i.e. dry nurseries, children's shelter facilities, Group I-2, ..etc.) must be enclosed by 1-hour fire-resistance-rated construction.

Chapter 7 Alterations-Level 3

Building Elements and Materials s. 703

- **Existing shafts and vertical openings (sec. 703.1):**
 - Existing stairways that are part of the means of egress must comply with the appropriate sections of the FFPC.
- **Separation required (sec. 703.2.1):**
 - In attached dwelling units of R-3 occupancies or townhouses, separation walls between dwelling units are required in accordance with the FBC, Building or FRC.

Chapter 7 Alterations-Level 3

Fire Protection S.704

- **Automatic sprinkler systems (sec. 704.1):**
 - Automatic sprinkler system must be provided in all work areas as per the FBC, Building.
- **Fire alarm and detection system (sec. 704.2):**
 - Fire alarm and detection systems must be provided throughout the building.

Chapter 7 Alterations-Level 3

Mean of Egress S.705

- **General (sec. 705.1):**
 - Except for exist signs and means of egress lighting, the provisions in s. 605 Level 2 alteration must apply.
- **Mean of egress lighting (sec. 705.2):**
 - Mean of egress from the highest work area floor to the floor of exit discharge must be provided with artificial lighting within the exit enclosure as per the FBC, Building.

Chapter 7 Alterations-Level 3

Structural S.707

- Structural alteration (sec. 707.5):
 - An engineering evaluation and analysis to establish the structural adequacy is required.
 - Where more than 30% of the total sum of floor and roof areas of the building or structure is proposed for alteration, the engineering evaluation must demonstrate that the altered building or structure complies with the FBC, Building for wind loading.

Chapter 7 Alterations-Level 3

Structural S.707

- **Limited structural alteration (s. 707.5.2):**
 - where not more than 30% of the total floor and roof areas of the building are involved in structural alteration within a 12 month period, the evaluation and analysis, must demonstrate that the altered building or structure complies with the loads applicable at the time the building was constructed.

Chapter 8 Change of Occupancy

General

- **Change of Occupancy.**

A change in the purpose or level of activity within a building that involves a change in application of the requirements of this Code. (Ch. 2).

- **Two types of change of occupancy:**

1. Change in occupancy classification.
2. Same classification.

Chapter 8 Change of Occupancy

General

- **Tables (812.4.1, 812.4.2, and 812.4.3) provide ranking of occupancies based on their relative hazard to the following:**
 1. Life safety and exists.
 2. Height and area.
 3. Exposure of exterior walls.

Chapter 8 Change of Occupancy

General

- Triggers in this Chapter is the change to a higher hazard classification and a change to in occupancy classification.
- Compliance with Ch. 12 is equivalent to Ch. 8.
- Change of use of a historic building must comply with Ch. 10.
- A certificate of occupancy is required to be issued for change of occupancy.

Chapter 8 Change of Occupancy General S. 801

- **Repair and alteration with no change of occupancy (sec. 801.1).**

Repair and alteration for change of occupancy that does not involve change in classification must be in accordance with Chs 5, 6 and 7 as applicable and ss. 802 and 807 through 811.

- **Repair and alteration with change of occupancy:**

Repair and alteration for change in occupancy classification must comply with Ch. 7, and ss. 802 through 806 and 812.

Chapter 8 Change of Occupancy

Special Occupancy s. 802

- This section addresses nine special use and occupancy categories (i.e. Covered mall buildings, Atriums..etc). Change to one of these occupancies would be required to meet the provisions of the FBC.

Chapter 8 Change of Occupancy

Structural s. 807

- **Gravity loads (sec. 807.1):**

If the change of occupancy results in higher uniform or concentrated loads, compliance with the FBC, Building is required.

- **Wind loads (sec. 807.2):**

If the change of occupancy results in higher wind load, compliance with the FBC, Building is required.

Chapter 8 Change of Occupancy

Electrical s. 808

- This section identify eleven special occupancies (i.e. commercial garages, aircraft hangers..etc.) that have unique hazards as they relate to electrical installation. Where change of occupancy is to one of these special occupancies, compliance with Ch. 27 of the FBC is required.

Chapter 8 Change of Occupancy

Mechanical s. 809

- **Mechanical requirements (sec. 809.1):**
Change to an existing building where the new occupancy is subjected to different kitchen exhaust or increased ventilation requirements, the new occupancy must comply with the FMC.

Chapter 8 Change of Occupancy

Plumbing s. 810

- **Increased demand (sec. 810.1):**

If the new occupancy is required to have increased or different plumbing fixture requirements or increased water supply requirements, the new occupancy must comply with the FPC.

Chapter 8 Change of Occupancy Change of Occupancy Classification s. 812

- **Compliance with Chapter 7 (sec. 812.1):**
Occupancy classification of an existing building is may be changed providing that the building meets all of the requirements of Ch. 7 for the new occupancy group and ss. 802 through 812.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Change of occupancy group without separation (sec. 812.1.1):**

Where a portion of an existing building is changed to a new occupancy group and that portion is not separated from the remainder of the building with a fire-rated wall/ceiling as required by the FBC, the entire building must comply with Ch. 7 for the most restrictive occupancy group in the building and the requirement of Ch. 8.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Fire and live safety (sec. 812.4):**

This section addresses four major fire and life safety areas:

- Mean of egress
- Height and area
- Exterior wall fire-resistance ratings
- Enclosure of vertical shafts

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Mean of egress, General (sec. 812.4.1):**
 - When change of occupancy classification is to a higher hazard category, mean of egress must comply with Ch. 10 of the FBC.
 - When change of occupancy classification is to an equal or lesser hazard, the existing elements of mean of egress must comply with s. 705 for the new occupancy. All new construction must comply with Ch. 10 of FBC.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Egress capacity (sec. 812.4.1.3):**
 - When change of occupancy classification is to a higher hazard category, the egress capacity must comply with Ch. 10 of the FBC.
 - When change of occupancy is to an equal or lesser hazard category, the existing capacity is acceptable.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Height and area (sec. 812.4.2):**
 - Change to a higher hazard category, height and areas of buildings must comply with Ch. 5 of the FBC for the new occupancy except for a one-story group E occupancy.
 - Change to an equal or lesser hazard category, the existing height and area is acceptable.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Fire barriers (sec. 812.4.2.4):**
 - Fire barriers in separated mixed use must comply with the FBC when changing the occupancy classification to a higher hazard category.
 - Existing wood lath, plaster or ½-inch gypsum is acceptable in lieu of a one-hour fire-resistance rating.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Exterior wall fire-resistance ratings (sec. 812.4.2.3):**
 - Change of occupancy to a higher hazard category: exterior walls must have a fire-resistance rating and exterior opening protectives as per the FBC, except for walls built at right angles to the property line.
 - Change of occupancy to an equal or lesser hazard: The existing rating of the exterior walls and openings is acceptable.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Opening protectives (sec. 812.4.3.3):**
 - Opening in exterior wall must as per the FBC, and the sum of the area of the openings must not exceed 50 percent of the total area in each story. (see section for exception)

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Enclosure of vertical shafts (sec. 812.4.4):**
 - Must meet atriums requirements as per the FBC or sec. 812.4.4.2 (stairways), 812.4.4.3 (other vertical shafts) and 812.4.4.4 (Openings).
 - When a change of occupancy is to higher hazard, the interior stairways must be enclosed per the FBC and all shafts must be enclosed per the FBC.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Change of occupancy group with separation (sec. 812.1.2):**

A portion of an existing building that is changed to a new occupancy group and that is separated from the remainder of the building, only the portion being changed must comply with all the requirements of Ch. 7 for new occupancy group and with Ch. 12.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Hazard category classifications (sec. 812.2):**

This section establishes the relative degree of hazard between the different occupancy types as seen in the following tables:

Table 812.4.1 – Life Safety and Exits

Table 812.4.2 – Heights and Areas

Table 812.4.3 – Exposure of Exterior Walls

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Change of occupancy classification to an equal or lesser hazard (sec. 812.2.1):**

Compliance with Ch.7 throughout the area where the change of classification occurs or with s. 812.3 is required.

- **Change of occupancy classification to a higher hazard (sec. 812.2.2):**

Compliance with Ch. 8 or Ch. 12 is required.

Chapter 8 Change of Occupancy

Change of Occupancy Classification s. 812

- **Change of occupancy classification to an equal or lesser hazard in all three hazard classifications (sec. 812.3):**

Even if the change of occupancy classification is to equal or lesser hazard in all three tables, certain requirements must be satisfied as stated in this section.

Chapter 9 Additions (Ch. 2 Definitions)

Addition:

An extension or increase in floor area, number or stories, or height of a building or structure.

Note: Additions are treated as they have been traditionally.

Chapter 9 Additions

General

- Additions are considered new construction and must comply with the construction requirements for new building
- Only the addition and not the existing building must comply with requirements for new construction.
- Does not extend to the existing buildings.

Chapter 9 Additions

Heights and Areas s. 902

- No addition must increase the height and area of an existing building beyond that allowed by the FBC, Building.
- Exception: closing of floor openings such as escalator openings is are not considered addition.
- **Fire Protection (sec. 902.3):** If existing fire areas are increased by an addition those areas must comply with Chapter 9 of the FBC.

Chapter 9 Additions

Structural S. 903

- **Compliance with the FBC, Building (sec. 903.2):** Addition must comply with the FBC, Building.
- **Additional gravity loads (sec. 903.2):**
Existing structural elements supporting additional gravity loads must comply with the FBC, Building.
Exception: stress is not increased by more than 5% or in Group R with no more than five dwelling units or sleeping units.

Chapter 9 Additions

Structural S. 903

- **Vertical addition (sec. 903.3.1):** Vertical additions that increase the vertical or lateral loads of any existing elements of the lateral-force-resisting system must comply with the FBC, Building.
- **Horizontal addition (sec. 903.3.2):** All lateral-force-resisting systems that are affected by horizontal additions that are structurally connected to the existing building must comply with the FBC, Building.

Chapter 9 Additions

Structural S. 903

- **Voluntary addition of structural elements to improve the lateral-force-resisting system (sec. 903.3.3):** Additions that are done voluntarily to improve the lateral-force-resisting system are only required to comply with the requirements in Section 707.7.
- **Flood hazard areas (sec. 903.5):** must comply with Ch. 31 of the FBC, Building.

Chapter 9 Additions

Smoke Alarms in Occupancy Groups R-3 and R-4

- **Smoke alarms in an addition (sec. 904.1):**
In the additions, hardwired, interconnected smoke alarms must be installed in accordance with the FBC or the FRC.
Smoke alarms in existing portions of a building (sec. 904.2): Smoke alarms are required in the existing building in accordance with the FBC or the IRC.

Chapter 9 Additions

Accessibility & Energy

- **Accessibility (sec. 905):**

Must comply with Chapter 11 of the FBC, Building.

- **Energy conservation (sec. 906):**

Must comply with Chapter 13 of the FBC, Building.

Chapter 10 Historic Buildings

- **Scope (sec. 1001.2):** covers repair, alteration, restoration, change of occupancy, addition and relocation of historic buildings.
- **Historic building (sec. 1002):** listed in the National Register of Historic Places, designated as historic property locally....etc.

Chapter 10 Historic Buildings

- **Standards and Guidelines for Rehabilitating Historic Buildings (sec. 1003):**

Goal and objectives:

To minimize damage to and loss of historic structures, their unique characteristics and their contents.

Chapter 10 Historic Buildings

Compliance (Sec. 1005): options

1. Prescriptive based provisions of this code.
2. Compliance alternative based provision of this code. (*Evaluation by Architect or engineer is required*)
3. Performance based provisions of the *NFPA 914 Code for Fire Protection of Historic Structures, Chapter 6, latest edition* along with a structural evaluation as specified in section 1201.4.1 of this code. (*Evaluation by architect or engineer is required*).

Chapter 10 Historic Buildings

Investigation and Evaluation S. 1006

- All alterations or change of occupancy are required to be investigated and evaluated.
- If the building is intended to substantiate compliance with Ch. 10, a written report must be prepared and filed with the building official by a Florida-registered architect or engineer.
- The report must be as per NFPA 914, Ch.4.

Chapter 11

Relocated or Moved Building

- Relocated buildings must comply with the requirements of the FBC or FRC, whichever is applicable, for location on the lot and foundation. (ss. 1102.1 and 1102.2)
- Repair, alteration, or change of occupancy must comply with the appropriate section of the this Code.

Chapter 11 Relocated or Moved Buildings

- **Moved residential buildings** or structures are not required to meet the FBC as long as the buildings are structurally sound and the occupancy classifications are not changed.
(s. 1112)
- **Relocated historic building** - foundations and structures must comply with the FBC.

Chapter 11 Relocated or Moved Buildings

- **Wind load** (sec. 1102.3):

Moved buildings other than residential must comply with the FBC.

Exceptions:

1. Structural elements whose stress is not increased by more than 5 percent and
2. Manufactured buildings.

Chapter 11 Relocated or Moved Buildings

- **Required inspection and repairs (sec. 1102.4):**

The Building official is authorized to inspect or require approved professional to inspect the moved building to determine the the structural components and connections have not sustained structural damage.

Chapter 12 Compliance Alternative

- Intended as an alternative to Chapters 4 through 10.
- Recognizes a numerical evaluation system of the pre-existing conditions of an existing building related to fire safety, means of egress and general safety and allows for the improvement of specific individual components of buildings in order to reach a favorable score.

Chapter 12 Compliance Alternative

- Scope: permit compliance with this Chapter without requiring repair, alteration, addition and change of occupancy to comply fully with Chapters 4 through 10.
- The building owner must cause the existing building to be investigated and evaluated by a registered architect or engineer. (structural analysis)
- The evaluation must consists of three categories: fire safety, means of egress and general safety.

Chapter 12 Compliance Alternative

- Fire safety: includes structural fire resistance, automatic fire detection, fire alarm, and fire suppression system.
- Mean of egress: includes configuration, characteristics and support features for mean of egress for the facility.
- General safety: includes fire safety parameters and the mean of egress parameters.

Chapter 12 Compliance Alternative Evaluation is for 19 categories

- 1. Building height
- 2. Building area
- 3. Compartmentation
- 4. Tenant and dwelling unit separation
- 5. Corridor walls
- 6. Vertical openings
- 7. HVAC systems
- 8. Automatic fire detection system
- 9. Fire alarm systems
- 10. Smoke control
- 11. Means of egress capacity
- 12. Dead ends
- 13. Maximum exit access travel distance

Chapter 12 Compliance Alternative Evaluation is for 19 categories (continue)

- 14. Elevator control
- 15. Means of egress emergency lighting
- 16. Mixed occupancies
- 17. Automatic sprinklers
- 18. Standpipes
- 19. Incidental use area protection

Chapter 12 Compliance Alternative

- **Applicability (sec. 1201.2):**

Ch. 12 does not apply to Group H or I.

- **Investigation and evaluation (sec. 1201.4):**

Structural evaluation for determining the structural adequacy of the structural system is required. The existing building is required to support the minimum load required by Chapter 16 of the FBC, Building.

Chapter 12 Compliance Alternative

- **Evaluation (sec. 1201.5):**

The evaluation is comprised of three categories:

1. **Fire safety:** this include structural fire resistance, automatic fire detection, fire alarm, and fire suppression system features.

Chapter 12 Compliance Alternative

- **Evaluation (sec. 1201.5): (continue)**
 2. Means of egress – this category includes the configuration, characteristics and support of the means of egress.
 3. General safety – this category includes both the fire safety and means of egress parameters.

Chapter 12 Compliance Alternative Evaluation process (sec. 1201.6)

- Tables and equations are provided in the Chapter to allow the determination of the appropriate data and score for each building parameters listed in the compliance table. Table 12101.8 provides for the mandatory safety scores.
- The evaluation process is required to be followed in its entirety. All 19 areas are required to be evaluated.

Chapter 12 Compliance Alternative Evaluation process (sec. 1201.6)

- (The actual building score for each category) – (the mandatory safety score for each category) = Zero or more /the building is in compliance with the code.
- Where the final score for any category is less than zero, the building is not in compliance with the requirements of this chapter.