



12F052 ADVANCED FLORIDA BUILDING CODE (MULTIPLE OCCUPANCY BUILDINGS)



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SEMINAR DESCRIPTION & LEARNING OBJECTIVES

Building codes must regulate the allowable heights and areas of buildings in order to provide for adequate life safety and property protection. The 2010 Florida Building Code (FBC) provides flexibility in how to address the regulation of building sizes, however, such flexibility also brings more complexity to the code. Buildings containing multiple occupancy groups create the most complicated scenarios. Seminar 12F052 is designed to help one better understand what different building height and area options are available and why they are structured the way they are.

- 1 Seminar 12F052 is designed to help ensure that participants:
Understand from discussion and handout material the different allowable height and area options available in the FBC;
- 2 Recognize from discussion and exercises some of the difficult issues that must be addressed when designing multiple occupancy buildings;
- 3 Determine from discussion and exercises why one would choose a particular allowable height and area option over another; and
- 4 Understand from discussion and exercises why a particular allowable height and area option may be mandated.

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TENTATIVE SEMINAR AGENDA*

- 7:00 AM Registration
- 8:00 AM Introduction;
ASET and RSET
- 8:30 AM Fire Risk – Single Occupancy
- 8:45 AM Fire Wall Separation
- 9:00 AM Separated Occupancies
- 9:15 AM Nonseparated Occupancies
- 9:30 AM Accessory Occupancies
- 9:45 AM Exercise
- 10:00 AM Evaluations

* Each class may vary from this schedule by minutes as a reflection of each individual class' needs.

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12/04/12
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REMINDERS

PLEASE SILENCE ALL CELL PHONES AND PAGERS

**DISCUSSION IS VERY IMPORTANT
IN THIS SEMINAR**

EMAIL ADDRESSES

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12/04/12
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2010 FLORIDA BUILDING CODE

The scope of the 2010 FBC covers many buildings and many aspects of building design.

101.2 Scope. The provisions of this code shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.



2010 FBC – Chapter 1 ¹

ASET



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ALLOWABLE HEIGHTS AND AREAS

What is the basis for the allowable heights and areas found in Chapter 5 of the code?



2010 FBC – Chapter 5 ⁵

ASET



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FIRE

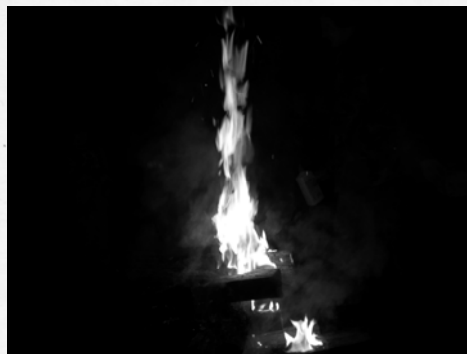
The definition of fire may change depending on the desired results of the one utilizing the definition (e.g., chemist, physicist, consumer, fire fighter, engineer, etc.). Noted professor of fire safety engineering at the University of Edinburgh, Dougal Drysdale states that, "As a process, fire can take many forms, all of which involve chemical reaction between combustible species and oxygen from the air."



PYROLYSIS

"Pyrolysis is the chemical decomposition of condensed substances by heating, that occurs spontaneously at high enough temperatures. The word is coined from the Greek-derived elements *pyro* (fire) and *lysis* (decomposition)."

- With a solid, visible flame is generated from the burning of gases (combustion) released by the solid, not from the burning of the solid itself.
- The flameless burning (e.g., embers) of wood represents the actual combustion of that solid.
- Pyrolysis occurs when solids reach a particular temperature threshold.



MECHANISMS OF HEAT TRANSFER

The three basic mechanisms of heat transfer are:

1. Conduction;
2. Convection; and
3. Radiation.

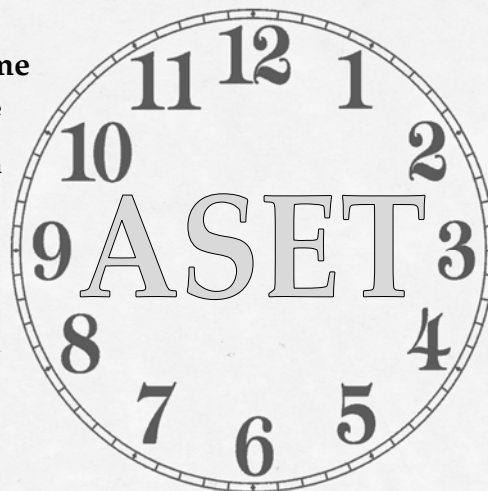
Fire Protection Handbook ¹¹

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HOW MUCH TIME DO THE OCCUPANTS HAVE TO EXIT?

Available Safe Escape Time

The Available Safe Escape Time is the time from when a fire initially occurs to the time when the building has become untenable for egress.



Fire Protection Handbook ¹³
2010 FBC - Chapter 10 ¹⁰

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HOW LONG WILL THE BUILDING BE SAFE?

The length of time that a building remains tenable for egress is based on:



1. The level of hazard associated with the building's use;
2. The fire resistance of the building's structure; and
3. The level of protection provided in the building's design and construction.

2010 FBC – Chapter 3, 6, 7, 8, & 9^{3, 6, 7, 8, 9}

ASET

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WHAT IS THE LEVEL OF HAZARD ASSOCIATED WITH THE BUILDING'S USE OR OCCUPANCY?

When assessing a building's hazard based on use one looks at:



1. The amount of combustible materials in the building;
2. The amount of explosive materials in the building; and
3. The amount of toxic materials in the building.

The actual hazard may be posed by the processes utilizing these materials rather than by the types or amounts of the materials. Chapter 3 uses hazard level to help differentiate amongst occupancy groups.



2010 FBC – Chapter 3³

ASET

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THE LEVEL OF HAZARD ASSOCIATED WITH COMBUSTIBLE CONTENTS

When looking for hazards associated with combustibles contents, one must consider:

1. That all buildings have combustibles materials within them;
2. The amount per square foot of fire loading present; and
3. The relative differences in fire loading amongst Chapter 3 occupancy groups.



2010 FBC – Chapter 3³

ASET



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OCCUPANCY GROUP FIRE LOADING

TABLE 10 - OCCUPANCIES – FIRE LOAD – FIRE SEVERITY¹⁶

OCCUPANCY	COMBUSTIBLES (psf)	FIRE SEVERITY (hours)
ASSEMBLY	5 to 10	1/2 to 1
BUSINESS	5 to 10	1/2 to 1
EDUCATIONAL	5 to 10	1/2 to 1
FACTORY-INDUSTRIAL		
LOW HAZARD	0 to 10	0 to 1
MODERATE HAZARD	10 to 25	1 to 3
HAZARDOUS	Variable	Variable
INSTITUTIONAL	5 to 10	1/2 to 1
MERCANTILE	10 to 20	1 to 2
RESIDENTIAL	5 to 10	1/2 to 1
STORAGE		
LOW HAZARD	0 to 10	0 to 1
MODERATE HAZARD	10 to 30	1 to 3

Chapter 3 – Use and Occupancy Classification, is based on fire loading and other use characteristics.

Fire Protection Through Modern Building Codes FPMBC
2010 FBC – Chapter 3³

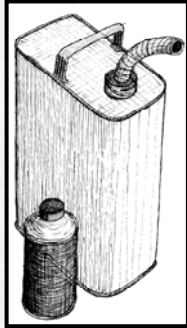
ASET



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AMOUNT OF EXPLOSIVE OR TOXIC CONTENTS

When looking for hazards associated with explosive or toxic contents, one must consider:



1. That many buildings have explosive and toxic materials within them;
2. The amount of materials that are of concern; and
3. The relative differences amongst occupancies.

Chapter 3 – Use and Occupancy Classification, is also based on explosive or toxic contents, as well as, other use characteristics.

2010 FBC – Chapter 3³

ASET

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HAZARD OF CONTENTS

Contents in a building are assigned to one of three categories:

1. Low-Hazard;
2. Moderate- or Ordinary-Hazard; or
3. High-Hazard.



Most of the Chapter 3 occupancy classifications are considered to be Moderate Hazard.

Fire Protection Handbook¹³
2010 FBC - Chapter 3³

ASET

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LOW-HAZARD CONTENTS

These buildings have the following characteristics:

1. They contain contents that are low in combustibility (no self-propagating fire can occur in them);
2. Their greatest hazard is from smoke or from an external fire source; and
3. They are not as common as moderate- or ordinary-hazard buildings.



A “tongue-in-cheek” description would be, “Buildings storing metal wrenches in metal containers on noncombustible shelves.”

Fire Protection Handbook¹³
2010 FBC – Chapter 3³

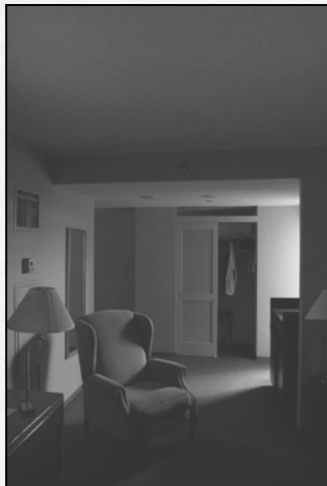
ASET



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MODERATE- OR ORDINARY-HAZARD CONTENTS

These buildings have the following characteristics:



1. They contain contents that will burn with moderate rapidity;
2. Their contents are capable of giving off a great amount of smoke; and
3. They are the most common buildings and are the basis for the “General” requirements of codes.

Lower and higher levels of hazard are addressed in codes, more or less, as exceptions to the rule. Most of the occupancy groups defined in Chapter 3 are moderate hazard occupancies.

Fire Protection Handbook¹³
2010 FBC – Chapter 3³

ASET



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HIGH-HAZARD CONTENTS

These buildings have the following characteristics:



1. They may contain contents that will burn rapidly and produce a large volume of smoke;
2. They may contain contents that are capable of exploding; and
3. They may contain contents that pose an extremely toxic risk in the nature of the contents or in the quantity of the contents.

The contents of a particular facility may involve risk in two or more of the above listed concerns. High-hazard occupancy groups are also not as common as moderate hazard occupancy groups.

Fire Protection Handbook ¹³
2010 FBC – Chapter 3 ³

ASET



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WHAT IS THE FIRE RESISTANCE OF THE BUILDING'S STRUCTURE?

The type of construction of a building is a means of expressing the relative fire resistance of a building. The building's ability to resist fire will be defined as a one of three conditions, a building that will:

1. Outlast the fire;
2. Collapse after a moderate period of time when exposed to a fire; or
3. Collapse after a short period of time when exposed to a fire.

Ultimately, the fire resistance of the building's structure will provide more information as to how much time is available to exit a building in an emergency.



2010 FBC – Chapter 6 ⁶

ASET



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WHAT IS THE LEVEL OF PROTECTION PROVIDED BY THE BUILDING'S DESIGN AND CONSTRUCTION?

Other than structural fire resistance, the level of protection provided by a building is based on:

1. The ability for vertical and horizontal assemblies to resist fire and smoke;
2. The protection of openings within vertical and horizontal assemblies;
3. The protection of interior finishes; and
4. The availability of fire protection systems.

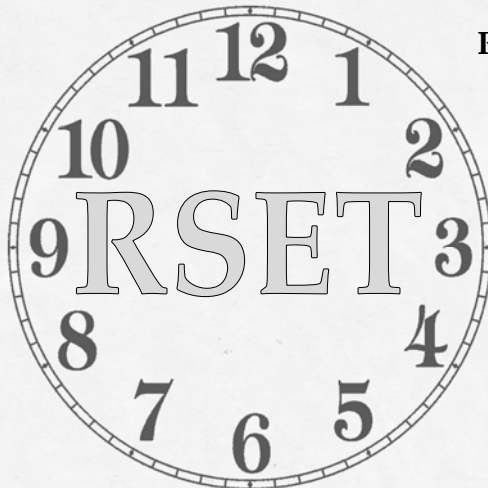


2010 FBC - Chapters 7, 8, 9^{7,8,9}

ASET

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HOW MUCH TIME IS REQUIRED FOR THE BUILDING OCCUPANTS TO EXIT?



Required Safe Escape Time

The RSET is the time that is required for occupants to reach a safe point out of the building, or for occupants to arrive in another part of the building that is safe in the case of those buildings where all of the occupants cannot leave. RSET is the basis for Chapter 10.

Fire Protection Handbook¹¹

2010 FBC - Chapter 10¹⁰

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MEANS OF EGRESS AND ASET

RSET < ASET

Required Safe Escape Time =
(Available Safe Escape Time + SAFETY MARGIN)



SFPE Handbook of Fire Protection Engineering¹⁵

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WHAT IS A MEANS OF EGRESS?



A means of egress is a designed system associated with a facility that serves the purpose of providing a safe route for a facility's occupants out of that facility or into a safer area of that facility when a fire or other emergency condition occurs.

As means of egress is about the preservation of life, we must recognize the nature of the human component that interacts with the built environment. An understanding of human behavior in a fire scenario is critical to proper egress design.

2010 FBC - Chapter 10¹⁰

RSET

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WHAT IS THE DEFINITION OF A MEANS OF EGRESS?

"A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a *public way*. A means of egress consists of three separate and distinct parts: the *exit access*, the *exit* and the *exit discharge*."



2010 FBC – Chapters 2 & 10^{2,10}

RSET

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WHAT ARE THE MEANS OF EGRESS DESIGN PARAMETERS?

The design of a means of egress is based upon:

1. An analysis of the hazards to occupants that are present in a building;
2. An evaluation of a building's total fire protection system; and
3. An analysis of the building's population characteristics.



Fire Protection Handbook¹³

2010 FBC – Chapters 3, 7, 8, 9, & 10^{3,7,8,9,10}

RSET

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AN ANALYSIS OF THE HAZARDS TO OCCUPANTS THAT ARE PRESENT IN THE BUILDING



The building hazards analysis would include:

1. Assessing the level of hazard presented by combustible materials;
2. Assessing the level of hazard presented by toxic materials; and
3. Assessing the level of hazard presented by processes within the building.

Such analysis would be based on the Chapter 3 occupancy groups in question.

Fire Protection Handbook ¹³
FBC Chapter 3 ³

RSET



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AN EVALUATION OF A BUILDING'S TOTAL FIRE PROTECTION SYSTEM

A total fire protection system evaluation would include an evaluation of the following:

1. Egress design and protection;
2. Availability of fire protection systems (automatic sprinklers, alarms, standpipes, exhaust systems, portable fire extinguishers, etc.);
3. Fire-resistance rated and smoke resistant assemblies;
4. Interior finishes; and
5. Any special concerns present due to the use of the facility.



2010 FBC -
Chapters 3, 4, 7, 8, 9, 10 ^{3, 4, 7, 8, 9, 10}

RSET



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AN ANALYSIS OF THE BUILDING'S POPULATION CHARACTERISTICS

The design of a means of egress for a building's occupants requires an understanding of the:

1. Reaction of the occupants in fire emergencies; and
2. The patterns of movement of those occupants.



REACTION OF BUILDING OCCUPANTS IN FIRE EMERGENCIES

The reactions of building occupants in a fire emergency affect the effectiveness of the exiting process. When designing for such an emergency, good egress design should prompt one to ask:

1. How do building occupants react psychologically; and
2. What physiological factors affect the reaction of building occupants?



FACTORS RELATING TO HUMAN BEHAVIOR DURING A FIRE

In NFPA's *Fire Protection Handbook*, John L. Bryan cites the following factors as determining an occupant's behavior in a fire:

1. The occupant's assumed role;
2. The occupant's previous experience;
3. The occupant's education;
4. The occupant's personality;
5. The perceived threat of the fire situation;
6. The physical characteristics and means of egress available within the structure; and
7. The reaction of others who are sharing the experience.



Fire Protection Handbook ¹²

RSET

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PATTERNS OF MOVEMENT OF BUILDING OCCUPANTS DURING A FIRE

The patterns of movement of a building's occupants effects how well the occupants are likely to exit in a fire emergency. To understand these patterns of movement one must understand:

1. The amount of space required for an individual;
2. How an individual moves through a building;
3. How people move together through a building, both in crowded conditions and in less crowded conditions; and
4. How differences in the physiological makeup of different building occupants can potentially affect the movement of the total building population.



Fire Protection Handbook ¹³
2010 FBC - Chapter 10 ¹⁰

RSET

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WHAT USE CHARACTERISTICS WILL INFLUENCE HOW QUICKLY ONE EXITS?

There are many human behavior characteristics that influence how quickly a building's occupants will exit in an emergency condition.

1. Is the space crowded?
2. Are the occupants familiar with the building?
3. Do any of the occupants sleep in the building?
4. Do any of the occupants require the assistance of others when exiting?

These human behavior characteristics are present in certain Chapter 3 occupancy groups and are addressed in many different areas of the code including Chapters 5 and 10.

Fire Protection Handbook ¹³
2010 FBC - Chapters 3 & 10 ^{3,10}

RSET



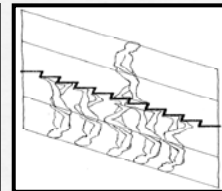
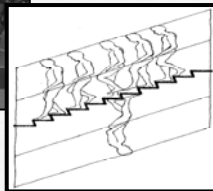
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AMOUNT OF SQUARE FEET PER OCCUPANT (POTENTIAL FOR PANIC)



When buildings are crowded:

- Crowd behavior can influence the success of the exiting process; and
- Can influence the occupants' perception of whether or not there is adequate time to egress.



2010 FBC - Chapter 10 ¹⁰

RSET

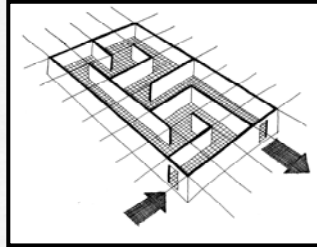


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FAMILIARITY WITH THE BUILDING OR STRUCTURE

When one is intimately familiar with a building, then exiting will occur more rapidly as that individual will be familiar with different paths and options.

- Are most of the occupants intimately familiar with the environment?
- Visitors tend to go out the way they came in.



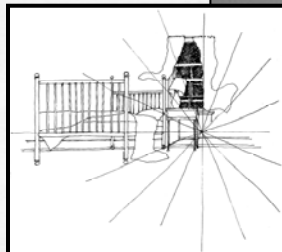
2010 FBC - Chapter 10¹⁰

RSET

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ALERTNESS OF OCCUPANTS

Sleeping occupants create a critical concern as it takes them additional time to wake-up and to develop some sense that an actual emergency exists.



2010 FBC - Chapter 10¹⁰

RSET

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MOBILITY OF OCCUPANTS

When the evacuation of an individual requires others to assist in that evacuation, precious exiting time is lost for all of the participants in that evacuation.

- Do any of the occupants need assistance in exiting from the building or in exiting to a safer area of the building?
- When might this category include individuals with disabilities that may require some egress assistance?



2010 FBC - Chapter 10¹⁰

RSET

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FIRE RISK

In summary, the concerns with fire risk in relation to time can be expressed with the following questions:



1. How much time is required for adequate egress;
2. How much time is available for egress;
3. How much property is subject to loss; and
4. How much time is available before property loss is too great?

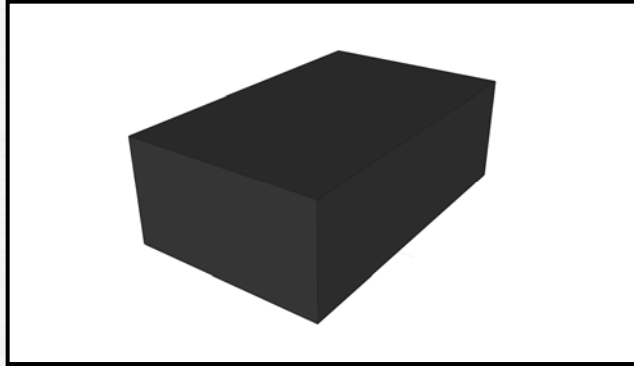


2010 FBC - Chapters 3 - 10^{3, 4, 5, 6, 7, 8, 9, 10}

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ALLOWABLE HEIGHTS AND AREAS BASED ON FIRE RISK

Each occupancy presents its own unique set of fire risk conditions that influence both ASET and RSET.



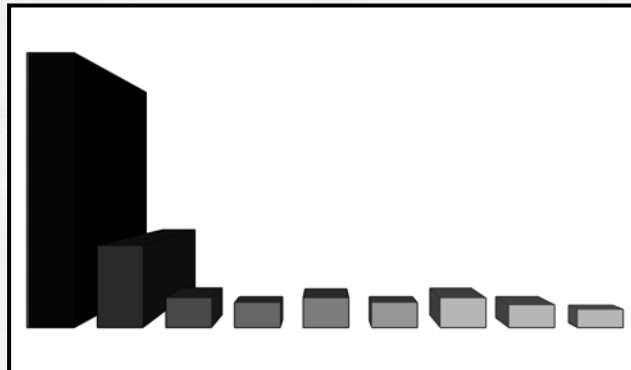
2010 FBC - 503.1 & Table 503⁵



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ALLOWABLE HEIGHTS AND AREAS BASED ON FIRE RISK FOR MULTIPLE OCCUPANCY BUILDINGS

The allowable height and area for multiple occupancy buildings is based on the overall risk presented by each occupancy group and the relationship of that risk with how the individual occupancy groups are combined.



2010 FBC - 503.1, 508.2, 508.3, 508.4⁵



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ALLOWABLE HEIGHT AND AREA FIRE RISK MANAGEMENT SCENARIOS IN THE FBC

FIRE RISK NEGATED (Fire Wall Separation)

- INDIVIDUAL OCCUPANCY ALLOWABLE HEIGHTS AND AREAS UNAFFECTED

FIRE RISK MAINTAINED (Separated Occupancies)

- INDIVIDUAL OCCUPANCY ALLOWABLE HEIGHTS UNAFFECTED
- COMBINED OCCUPANCY ALLOWABLE AREAS EQUATED TO SINGLE OCCUPANCY FIRE RISK

FIRE RISK INCREASED (Nonseparated Occupancies)

- TOTAL BUILDING ALLOWABLE HEIGHTS AND AREAS DECREASED
- FIRE PROTECTION INCREASED THROUGHOUT

FIRE RISK MARGINALLY INCREASED (Accessory Occupancies)

- TOTAL BUILDING ALLOWABLE HEIGHTS AND AREAS MAINTAINED BASED ON MAIN OCCUPANCY
- FIRE PROTECTION INCREASED THROUGHOUT

2010 FBC - 503.1, 508.2, 508.3, 508.4⁵

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FIRE RISK NEGATED – FIRE WALLS



PERFORMANCE

Fire walls stop the spread of fire from one building to another. Theoretically, they provide the same protection as provided by a great amount of open space between buildings.

2010 FBC - 503.1⁵

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FIRE WALLS IN A FIRE EMERGENCY CONDITION

OCCUPANCY TO OCCUPANCY RELATIONSHIP

The occupancy group exposed to fire does not affect the occupancy group on the non-fire side of the fire wall resulting in that unexposed occupancy group's maintaining:

1. Unlimited time for egress; and
2. Unlimited time for property protection.

AFFECT ON ALLOWABLE HEIGHT AND AREA

The allowable height and area of each occupancy group is based on its respective allowable height and area because a fire emergency in either one of the occupancy groups does not affect any of the other occupancy groups.

2010 FBC - 503.1⁵

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FAILURE OF IMPROPERLY DESIGNED FIRE WALL



2010 FBC - 503.1⁵

2010 FBC - 706⁷

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FIRE RISK MAINTAINED – SEPARATED OCCUPANCIES

PERFORMANCE

Occupancy separation controls the spread of fire from one occupancy to another by providing a fire barrier between the occupancies in question. Though the separation may eventually fail, the protection will remain in place for a predetermined amount of time.



2010 FBC - 508.4⁵

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SEPARATED OCCUPANCIES IN A FIRE EMERGENCY CONDITION

OCCUPANCY TO OCCUPANCY RELATIONSHIP

If a fire emergency occurs in one of the occupancies, the fire-resistance-rated separation between occupancies provides the non-fire side with:

1. Additional time for egress; and
2. Additional time for property protection.

AFFECT ON ALLOWABLE HEIGHT AND AREA

The allowable height of each occupancy is unchanged because of the extra time provided by the occupancy separation for the non-fire side occupancy.

The allowable area of each occupancy is based on the cumulative ratios of each occupancy's actual area divided by each occupancies allowable area with the sum of the ratios limited to one (1). When the sum of the ratios equals one (1), the total hazard will not exceed the hazard of any of the individual occupancies when they are individually constructed to their maximum allowable areas.

2010 FBC - 508.4⁵

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FIRE RISK INCREASED – NONSEPARATED OCCUPANCIES

PERFORMANCE

The provision of two or more occupancy groups adjacent to one another with no fire-resistance-rated construction between them creates a situation where the timing-related features of the building code are potentially compromised for one or more occupancies when a fire occurs in any one of them.



2010 FBC - 508.3⁵

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NONSEPARATED OCCUPANCIES IN A FIRE EMERGENCY CONDITION

OCCUPANCY TO OCCUPANCY RELATIONSHIP

If a fire emergency occurs in one of the occupancies, the other occupancies may experience:

1. Reduced time for egress; and
2. Reduced time for property protection.

AFFECT ON ALLOWABLE HEIGHT AND AREA

The allowable height and area of the building is based on the allowable height and area of which ever occupancy group represented in the building allows the least allowable height and area.

2010 FBC - 508.3⁵

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FIRE RISK INCREASE INSIGNIFICANT – ACCESSORY OCCUPANCIES

PERFORMANCE

Theoretically, occupancy groups that are different from a floor level's predominant occupancy group can be located adjacent to that major occupancy group without fire-resistance-rated separation between them and without significantly affecting the hazard level of that main occupancy group if the accessory occupancies occupy an area small enough to not significantly alter the level of hazard usually associated with mixing occupancy groups.



2010 FBC - 508.2.5

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ACCESSORY OCCUPANCIES IN A FIRE EMERGENCY CONDITION

OCCUPANCY TO OCCUPANCY RELATIONSHIP

If a fire emergency occurs in one of the occupancies, the other occupancies are not likely to experience:

1. Significantly reduced time for egress; nor
2. Experience significantly reduced time for property protection.

AFFECT ON ALLOWABLE HEIGHT AND AREA

The allowable height and area of the building is based on the allowable height and area of the main occupancy of the building, while ninety (90) percent of each floor level must be of that main occupancy.

2010 FBC - 508.2.5

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* NOTE: This Bibliography lists references for all of the slides in this seminar. Pages with a reference to a particular source contain information that is wholly or partially from that source. Many pages contain information, both from a referenced source and from the author of these slides.

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EXERCISE

WHAT IS THE LARGEST EACH OF THE FOLLOWING OCCUPANCIES COULD BE IN THE GIVEN SITUATIONS BELOW?

- 1** Group B, Multi-storied, Sprinklered of Type II Construction sharing 25% of its exterior wall with Group A-3, Multi-storied, Sprinklered of Type II Construction with a fire wall between them and no open perimeter.
- 2** Group B, Multi-storied, Sprinklered of Type II Construction constructed at 75% of its allowable area if standing alone mixed with a Group A-3, Multi-storied, Sprinklered of Type II Construction with occupancy separation between them and no open perimeter.
- 3** Group B, Multi-storied, Sprinklered of Type II Construction mixed with a Group A-3, Multi-storied, Sprinklered of Type II Construction with no occupancy separation between them and no open perimeter.
- 4** Group B, Multi-storied, Sprinklered of Type II Construction with Group A-3, Multi-storied, Sprinklered of Type II Construction occupying 10% of each of the first three floors with no occupancy separation between them and no open perimeter.

FBC



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**PLEASE DRIVE
SAFELY**

CONTINUING EDUCATION COURSE EVALUATION SUMMARY FORM

LICENSEE NAME (Optional): _____ **DATE:** _____

COURSE TITLE: Advanced Florida Building Code (Multiple Occupancy Buildings)

COURSE NUMBER: 12F052 (BCIS Number – 538.0)

COURSE LOCATION: _____ **STATE:** _____

PLEASE CHECK THE MOST APPROPRIATE RATING FOR EACH QUESTION.

Poor = 1, Fair = 2, Good = 3, Very Good = 4, Excellent = 5

	1	2	3	4	5	Total
A.) Overall I felt the course was:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.) Instructor(s) ability to communicate:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C.) Presentation techniques used:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D.) Support material - handouts, etc.: Respond only if applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E.) Course met personal expectations:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The degree to which I believe I can actually apply these techniques:

(Circle one) 20% 40% 60% 80% 100%

PLEASE CHECK THE MOST APPROPRIATE RESPONSE FOR EACH QUESTION:

	Adequate	Inadequate
Instructor's use of visual aids:	<input type="checkbox"/>	<input type="checkbox"/>
Facilities were:	<input type="checkbox"/>	<input type="checkbox"/>

COMMENT SECTION:

The best feature(s) of this class: _____

The worst feature(s) of this class: _____

Suggestions and/or comments: _____

This form must be filled out completely and returned to the Provider prior to the end of the course receipt of the Continuing Education Certificate.