

FLORIDA BUILDING CODE 2020 (7TH EDITION) SIGNIFICANT CHANGES - 2023-2025 FL BIENNIUM -

Main Category:	Ethics, Rules & Laws
Sub Category:	Building Codes
Course #:	RUL-125
Course Content:	28 pgs
PDH/CE Hours:	1

COURSE/EXAM PREVIEW (HIT BACK TO RETURN TO ENGINEERING-PDH.COM)

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COURSE DETAILS

This course is intended to meet the Florida Professional Engineering PDH requirements for an Advanced Building Code Course. This course covers the significant changes to the Florida Building Code, 7th Edition (2020). This course focuses on the Buildings code, Part1 & Part2, which covers chapters 1 through 6 of this code. Additional courses are available in our Florida Building Code library which covers the other chapters of this code. This course has been updated for the Florida Biennium of 2023-2025. This course provides 1 PDH/CEH.

COURSE OBJECTIVES

The objective of this educational course is to go over the significant changes and updates to the Florida Building Code. This course does not go over every single change and update to the code. Please reference the original code itself for all changes and updates. This course is meant to supplement the code and help the Florida engineer focus on important changes, but it is not a replacement for a working review and comprehensive knowledge of the code itself. The Florida Building Code can be viewed at www.floridabuilding.org. The 7th Edition of the Florida Building Code became effective on December 31, 2020. On December 31, 2023, the 2023 Florida Building Code, 8th edition, will go into effect, superseding this 2020 code version.

EXAM/COMPLETION CERTIFICATES

All completion exams are online. This includes home/self-paced course reviews as well as in-person & live video review sessions. Online exams are graded in real-time, and require a minimum score of 70%. Once a course is completed with a passing exam, the licensee will be presented with their completion certificate. We also keep a copy of all completion certificates indefinitely.

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- 1. Send an email to <u>instructor@engineering-pdh.com</u> Please be sure to include the course # in the subject field of the email so it can be routed to the correct instructor.
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RUL-125 EXAM PREVIEW

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Exam Preview:

- 1. A change was made in section 110 Inspections regarding required inspections. New to the 2020 code is the requirement that inspections of exterior wall coverings, veneers and ______ are now required.
 - a. Roof Sheathing
 - b. Sheathing Fasteners
 - c. Roof/wall dry-in
 - d. Soffit Coverings
- 2. Common path of Egress Travel defines that portion of exit access travel distance measured from the most remote point of each room, area or space to that point where the occupants have separate and distinct access to two exits or exit access doorways.
 - a. True
 - b. False
- 3. Existing Building defines a building erected prior to the date of adoption of the 1978 version of the Florida Building Code.
 - a. True
 - b. False
- 4. A sleeping unit is defined, in the 2020 version of this code, as a room or space in which people sleep, which can also include permanent provisions for living, eating, sleeping and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.
 - a. True
 - b. False

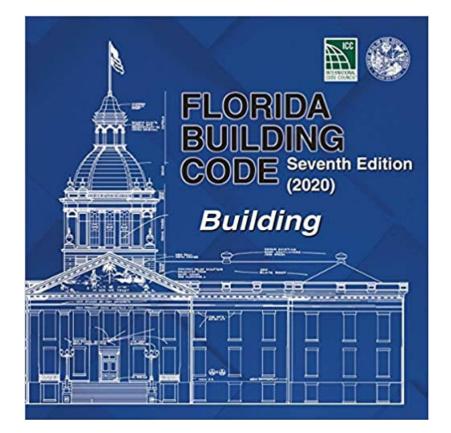
- 5. A change was made in section 302 Occupancy Classification & Use Designation regarding required Occupancy Classification. Occupancy classification is now clarified the formal designation of the primary purpose of the building, structure or portion thereof. Structures shall be classified into one or more of the occupancy groups listed in this section based on the nature of the hazards and risks to building occupants generally associated with the intended purpose of the building or structure.
 - a. True
 - b. False
- 6. A change was made in section 310 Residential Group R, regarding required Lodging Houses. Owner-occupied lodging houses with five or fewer guest rooms and _____ or fewer occupants shall be permitted to be constructed in accordance with the Florida Building Code, Residential.
 - a. 8
 - b. 10
 - c. 12
 - d. 15
- 7. A change was made in section 312 Utility & Miscellaneous Group U. Classification as a Group U occupancy is now appropriate for communication equipment structures that are less than _____ square feet in floor area.
 - a. 1,500
 - b. 1,750
 - **c.** 2,000
 - d. 2,500
- 8. A change was made in section 420 Groups I-1, R-1, R-2, R-3, R-4 regarding Assisted Living Housing Units. In Group I-1 occupancies, where a fire resistance corridor is provided, in areas where assisted living residents are housed, shared living spaces, group meeting or multipurpose therapeutic spaces open to the corridor, one criteria is that the open space is protected by an automatic fire detection system installed in accordance with Section 907.
 - a. True
 - b. False
- 9. A change was made in section 503 General Building Height & Area Limitations regarding Occupied Roofs. New to the 2020 code is the criteria that a roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506.
 - a. True
 - b. False

- 10. A change was made in section 602 Construction Classification regarding FRT wood in exterior walls. Fire-retardant-treated wood framing and sheathing complying with Section 2303.2 shall be permitted within exterior wall assemblies not less than 6 inches (152 mm) in thickness with a _____ rating or less.
 - a. 1-hour
 - b. 2-hour
 - c. 2.5-hour
 - d. 3-hour

Significant Changes to the 2020 Florida Building Code - Building 7th Editon –

Parts 1 & 2 (Chapters 1-6)

for Florida Professional Engineers



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Introduction

The State of Florida first mandated statewide building codes during the 1970s at the beginning of the modern construction boom. The first law required all municipalities and counties to adopt and enforce one of the four state-recognized model codes known as the "state minimum building codes." During the early 1990s a series of natural disasters, together with the increasing complexity of building construction regulation in vastly changed markets, led to a comprehensive review of the state building code system. The study revealed that building code adoption and enforcement was inconsistent throughout the state and those local codes thought to be the strongest proved inadequate when tested by major hurricane events. The consequences of the building codes system failure were devastation to lives and economies and a statewide property insurance crisis. The response was a reform of the state building construction regulatory system that placed emphasis on uniformity and accountability.

The 1998 Florida Legislature amended chapter 553, Florida Statutes, Building Construction Standards, to create a single state building code that is enforced by local governments. As of March 1, 2002, the Florida Building Code, which is developed and maintained by the Florida Building Commission, supersedes all local building codes. The Florida Building Code is updated every three years and may be amended in the interim in accordance with criteria set out in section 553.73, Florida Statutes.

The Florida Building Code is based on national model building codes and national consensus standards, in addition to Florida-specific provisions. The code incorporates all building construction-related regulations for public and private buildings in the State of Florida other than those specifically exempted by section 553.73, Florida Statutes. It has been harmonized with the Florida Fire Prevention Code, which is developed and maintained by the Department of Financial Services, Office of the State Fire Marshal, to establish unified and consistent standards.

The specific objective of this educational course is to go over the significant changes and updates to the Florida Building Code. This course does not go over every single change and update to the code. Please reference the original code itself for all changes and updates. This course is meant to supplement the code and help the Florida engineer focus on important changes, but it is not a replacement for a working review and comprehensive knowledge of the code itself. The Florida Building Code can be viewed at www.floridabuilding.org. The 7th Edition of the Florida Building Code became effective on December 31, 2020. On December 31, 2023, the 2023 Florida Building Code, 8th edition, will go into effect, superseding this 2020 code version.

Additional courses in our Florida Building Code Series can be found on our website at <u>this link</u>



Chapter 1 covers Scope & Administration Inspection & Chapter 2 covers Definitions.

CHAPTER 1 – SCOPE & ADMINISTRATION INSPECTION

SECTION 105 - PERMITS

105.5 ADDITIONAL OPTIONS FOR CLOSING A PERMIT

Pursuant to Section 553.79(15), Florida Statutes, a property owner, regardless of whether the property owner is the one listed on the application for the building permit, may close a building permit by complying with the following requirements:

- 1. The property owner may retain the original contractor listed on the permit or hire a different contractor appropriately licensed in this state to perform the work necessary to satisfy the conditions of the permit and to obtain any necessary inspection in order to close the permit. If a contractor other than the original contractor listed on the permit is hired by the property owner to close the permit, such contractor is not liable for any defects in the work performed by the original contractor and is only liable for the work that he or she performs.
- 2. The property owner may assume the role of an ownerbuilder, in accordance with Sections 489.103(7) and 489.503(6), Florida Statutes.
- 3. If a building permit is expired and its requirements have been substantially completed, as determined by the local enforcement agency, the permit may be closed without having to obtain a new building permit, and the work required to close the permit may be done pursuant to the building code in effect at the time the local enforcement agency received the application for the permit, unless the contractor has sought and received approval from the local enforcement agency for an alternative material, design or method of construction.
- 4. A local enforcement agency may close a building permit 6 years after the issuance of the permit, even in the absence of a final inspection, if the local enforcement agency determines that no apparent safety hazard exists.

For purposes of this section, the term "close" means that the requirements of the permit have been satisfied.

105.7 PLACEMENT OF PERMIT

The building permit or copy shall be kept on the site of the work until the completion of the project.

SECTION 107 - SUBMITTAL DOCUMENTS

107.2.5 EXTERIOR BALCONY & ELEVATED WALKING SURFACES

Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, snow or irrigation, and the structural framing is protected by an impervious moisture barrier, the construction documents shall include details for all elements of the impervious moisture barrier system. The construction documents shall include manufacturer's installation instructions.

SECTION 110 - INSPECTIONS

110.3 REQUIRED INSPECTIONS

Building

4. Exterior wall coverings. Shall at a minimum include the following building components in progress inspections:

•Exterior wall coverings and veneers •Soffit coverings

<u>110.3.6 WEATHER-EXPOSED BALCONY AND WALKING SURFACE</u> <u>WATERPROOFING</u>

Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, snow or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious-moisture-barrier system shall not be concealed until inspected and approved.

110.8 THRESHOLD BUILDING

110.8.1

During new construction or during repair or restoration projects in which the structural system or structural loading of a building is being modified, the enforcing agency shall require a special inspector to perform structural inspections on a threshold building pursuant to a structural inspection plan prepared by the engineer or architect of record. The structural inspection plan must be submitted to the enforcing agency prior to the issuance of a building permit for the construction of a threshold building. The purpose of the structural inspection plans is to provide specific inspection procedures and schedules so that the building can be adequately inspected for compliance with the permitted documents. The special inspector may not serve as a surrogate in carrying out the responsibilities of the building official, the architect, or the engineer of record. The contractor's contractual or statutory obligations are not relieved by any action of the special inspector.

CHAPTER 2 – DEFINITIONS

SECTION 202 – DEFINITIONS

ACCESSORY COMPONENTS. Components used in the installation of pedestals and pedestrian deck panels or pavers of the exterior elevated flooring system. Accessory components are made of either plastic, metal or other approved materials. Accessory components may be used to provide lateral bracing of the pedestals, to provide vertical support, for leveling the pedestal, to restrain the pedestrian deck panels or pavers to the top of the pedestal, or for other system requirements.

CHANGE OF OCCUPANCY. A change in the use of a building or a portion of a building which results in one of the following:

- 1. A change of occupancy classification.
- 2. A change from one group to another group within an occupancy classification.
- 3. Any change in use within a group for which there is a change in the application of the requirements of this code.

CHILDREN'S PLAY STRUCTURE. A structure composed of one or more components, where the user enters a play environment.

COMBINED PILE RAFT. A geotechnical composite construction that combines the bearing effect of both foundation elements, raft and piles, by taking into account interactions between the foundation elements and the subsoil.

COMMON PATH OF EGRESS TRAVEL. That portion of exit access travel distance measured from the most remote point of each room, area or space to that point where the occupants have separate and distinct access to two exits or exit access doorways.

CONVENTIONAL LIGHT-FRAME CONSTRUCTION. Construction whose primary structural elements are formed by a system of repetitive wood-framing members. See Chapter 23 for conventional light-frame construction provisions.

DELAYED ACTION CLOSER. Self-closing device that incorporates a delay prior to the initiation of closing. Delayed action closers are mechanical devices with an adjustable delay.

[BS] DRILLED SHAFT. A cast-in-place deep foundation element, also referred to as caisson, drilled pier and bored pile, constructed by drilling a hole (with or without permanent casing or drilling fluid) into soil or rock and filling it with fluid concrete after the drilling equipment is removed.

EXISTING BUILDING. A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

EXTERIOR ELEVATED FLOORING SYSTEM. An assembly installed over a roof assembly or other exterior supporting structure consisting of a walking surface of pedestrian deck panels or pavers mounted on pedestals using other accessory components, mechanical fasteners or adhesives as required by the manufacturer's installation instructions for attaching pedestrian deck panels or pavers to pedestals and other accessory components. Exterior elevated flooring systems may have pedestals attached to the roof or other supporting structure or pedestals installed independently of the roof or supporting structure with the restraint of the pavers at the perimeter and discontinuous edges. Exterior elevated flooring systems are not part of the roof assembly.

Attached systems. Attached systems are those where pedestals are attached to the roof or other supporting structure by mechanical fasteners, adhesives or both.

Independent systems. Independent systems are those where pedestals are not attached to the roof but rest on the roof or other supporting structure.

FENESTRATION. Products classified as either vertical fenestration or skylights and sloped glazing, installed in such a manner as to preserve the weather-resistant barrier of the wall or roof in which they are installed. Fenestration includes products with glass or other transparent or translucent materials.

FENESTRATION, VERTICAL. Windows that are fixed or movable, opaque doors, glazed doors, glazed block and combination opaque and glazed doors installed in a wall at less than 15 degrees from vertical.

[F] GAS DETECTION SYSTEM. A system or portion of a combination system that utilizes one or more stationary sensors to detect the presence of a specified gas at a specified concentration and initiate one or more responses required by this code, such as notifying a responsible person, activating an alarm signal, or activating or deactivating equipment. A self-contained gas detection and alarm device is not classified as a gas detection system.

OPEN-AIR ASSEMBLY SEATING. Seating served by means of egress that is not subject to smoke accumulation within or under a structure and is open to the atmosphere.

PEDESTAL. A fixed or adjustable-height support column composed of a support base, a vertical structural element and a load-bearing top cap surface.

PEDESTRIAN DECK PANELS OR PAVERS. Pedestrian deck panels or pavers for this section are manufactured from materials such as naturally durable wood, ceramic, stone or concrete suitable for exterior applications.

PLASTIC COMPOSITE. A generic designation that refers to wood/plastic composites, plastic lumber and similar materials.

SLEEPING UNIT. A single unit providing rooms or spaces for one or more persons, which can also include permanent provisions for living, eating, sleeping and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.

SMOKE-PROTECTED ASSEMBLY SEATING. Seating served by means of egress that is not subject to smoke accumulation within or under a structure for a specified design time by means of passive design or by mechanical ventilation.

SOFT CONTAINED PLAY EQUIPMENT STRUCTURE. A children's play structure containing one or more components where the user enters a play environment that utilizes pliable materials.

SWIMMING POOL. Any structure, basin, chamber or tank containing an artificial body of water for swimming, diving or recreational bathing located in a residential area serving four or fewer living units having a depth of 2 feet (610 mm) or more at any point as defined in Section 515.25, Florida Statutes, or the body of water is a public pool as defined in Section 514.011, Florida Statutes.

VAPOR PERMEABLE. The property of having a moisture vapor permeance rating of 5 perms ($2.9 \times 10-10$ kg/Pa × s × m2) or greater when tested in accordance with Procedure A or Procedure B of ASTM E96. A

vapor permeable material permits the passage of moisture vapor.

[BS] WIND-BORNE DEBRIS REGION. Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed, Vult, is 130 mph (58 m/s) or greater; or

2. In areas where the ultimate design wind speed, Vult, is 140 mph (63.6 m/s) or greater.

For Risk Category II buildings and other structures and Risk Category III buildings and other structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3(1). For Risk Category III health care facilities, the wind-borne debris region shall be based on Figure 1609.3(2). For Risk Category IV buildings and other structures, the wind-borne debris region shall be based on Figure 1609.3(3).

PART



Chapter 3 covers Use & Occupancy Classification, Chapter 4 covers Special Detailed Requirements Based on Occupancy & Use, Chapter 5 covers General Building Heights & Areas, & Chapter 6 covers Types of Construction.

CHAPTER 3 – USE & OCCUPANCY CLASSIFICATION

SECTION 301 - SCOPE

301.1 GENERAL

The provisions of this chapter shall control the classification of all buildings and structures as to occupancy and use. Different classifications of occupancy and use represent varying levels of hazard and risk to building occupants and adjacent properties.

SECTION 302 - OCCUPANCY CLASSIFICATION AND USE DESIGNATION

302.1 OCCUPANCY CLASSIFICATION

Occupancy classification is the formal designation of the primary purpose of the building, structure or portion thereof. Structures shall be classified into one or more of the occupancy groups listed in this section based on the nature of the hazards and risks to building occupants generally associated with the intended purpose of the building or structure. An area, room or space that is intended to be occupied at different times for different purposes shall comply with all applicable requirements associated with such potential multipurpose. Structures containing multiple occupancy groups shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically listed in this section such structure shall be classified in the occupancy it most nearly resembles based on the fire safety and relative hazard. Occupied roofs shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved, and shall comply with Section 503.1.4.

SECTION 307 - HIGH-HAZARD GROUP H

307.1.1 USES OTHER THAN GROUP H

9. Stationary storage battery systems installed in accordance with the Florida Fire Prevention Code.

- 10. Buildings and structures occupied for aerosol product storage shall be classified as Group S-1, provided that such buildings conform to the requirements of the Florida Fire Prevention Code.
- 16. Stationary fuel cell power systems installed in accordance with the Florida Fire Prevention Code.
- 17. Capacitor energy storage systems in accordance with the Florida Fire Prevention Code.

SECTION 310 - RESIDENTIAL GROUP R

310.5 RESIDENTIAL GROUP R-3

310.5.2 Lodging houses.

Owner-occupied lodging houses with five or fewer guest rooms and 10 or fewer occupants shall be

permitted to be constructed in accordance with the Florida Building Code, Residential.

SECTION 311 - STORAGE GROUP S

<u>311.2 MODERATE-HAZARD STORAGE, GROUP S-1</u>

Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

Aerosol products, Levels 2 and 3

SECTION 312 - UTILITY AND MISCELLANEOUS GROUP U

<u>312.1 GENERAL</u>

Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

Communication equipment structures with a gross floor area of less than 1,500 square feet (139 m2).

CHAPTER 4 – USE & OCCUPANCY CLASSIFICATION

SECTION 403 - HIGH-RISE BUILDINGS

403.4.8.3 STANDBY POWER LOADS

The following are classified as standby power loads:

- 1. Ventilation and automatic fire detection equipment for smokeproof enclosures.
- 2. Elevators.
- 3. Where elevators are provided in a high-rise building for accessible means of egress, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1009, 3007 or 3008, as applicable.

403.4.8.4 EMERGENCY POWER LOADS

The following are classified as emergency power loads:

7. Power and lighting for the fire command center required by Section 403.4.6.

SECTION 405 - UNDERGROUND BUILDINGS

405.4.2 SMOKE BARRIER PENETRATION

The compartments shall be separated from each other by a smoke barrier in accordance with Section 709. Penetrations between the two compartments shall be limited to plumbing and electrical piping and conduit that are firestopped in accordance with Section 714. Doorways shall be protected by fire door assemblies that comply with Section 716 and shall be automatic-closing by smoke detection in accordance with Section 716.5.9.4 and are installed in accordance with NFPA 105 and Section 716.5.3. Where provided, each compartment shall have an air supply and an exhaust system independent of the other compartments.

405.4.3 ELEVATORS

Where elevators are provided, each compartment shall have direct access to an elevator. Where an elevator serves more than one compartment, an elevator lobby shall be provided and shall be separated from each compartment by a smoke barrier in accordance with Section 709. Doorways in the smoke barrier shall be protected by fire door assemblies that comply with Section 716, shall comply with the smoke and draft control assembly requirements of Section 716.5.3 with the UL 1784 test conducted without an artificial bottom seal, and shall be automatic-closing by smoke detection in accordance with Section 716.5.9.4.

405.8.1 STANDBY POWER LOADS

The following loads are classified as standby power loads:

3. Elevators, as required in Section 3003.

SECTION 406 - MOTOR-VEHICLE-RELATED OCCUPANCIES

406.1 GENERAL (MOTOR-VEHICLE-RELATED OCCUPANCIES)

All motor-vehicle-related occupancies shall comply with Sections 406.1.1 through 406.1.9.3. Private garages and carports shall also comply with Section 406.3. Open public parking garages shall also comply with Sections 406.4 and 406.5. Enclosed public parking garages shall also comply with Sections 406.4 and 406.6. Motor fuel-dispensing facilities shall also comply with Section 406.7. Repair garages shall also comply with Section 406.8.

406.1.1 AUTOMATIC GARAGE DOOR & VEHICULAR GATES

Where provided, automatic garage door openers shall be listed and labeled in accordance with UL 325. Where provided, automatic vehicular gates shall comply with Section 3110.

406.1.2 CLEAR HEIGHT

The clear height of each floor level in vehicle and pedestrian traffic areas shall be not less than 7 feet (2134 mm). Canopies under which fuels are dispensed shall have a clear height in accordance with Section 406.7.2.

Exception: A lower clear height is permitted for a parking tier in mechanical-access open parking garages where approved by the building official.

406.1.3 ACCESSIBLE PARKING SPACES

Where parking is provided, accessible parking spaces shall be provided in accordance with Chapter 11.

406.1.4 FLOOR SURFACES

Floor surfaces shall be of concrete or similar approved noncombustible and nonabsorbent materials. The area of floor used for the parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway. The surface of vehicle fueling pads in motor fuel-dispensing facilities shall be in accordance with Section 406.7.1.

Exceptions:

- 1. Asphalt parking surfaces shall be permitted at ground level for public parking garages and private carports.
- 2. Floors of Group S-2 parking garages shall not be required to have a sloped surface.
- 3. Slip-resistant, nonabsorbent, interior floor finishes having a critical radiant flux not more than 0.45 W/cm2, as determined by ASTM E648 or NFPA 253, shall be permitted in repair garages.
- 406.1.5Sleeping rooms.
- Openings between a motor vehicle-related occupancy and a room used for sleeping purposes shall not be permitted.

406.1.6 FUEL DISPENSING

The dispensing of fuel shall only be permitted in motor fuel-dispensing facilities in accordance with Section 406.7.

406.1.7 ELECTRIC VEHICLE CHARGING STATIONS

Where provided, electric vehicle charging stations shall be installed in accordance with NFPA 70. Electric vehicle charging system equipment shall be listed and labeled in accordance with UL 2202. Electric vehicle supply equipment shall be listed and labeled in accordance with UL 2594. Accessibility to electric vehicle charging stations shall be provided in accordance with Chapter 11.

406.1.8 MIXED OCCUPANCIES AND SEPARATION

Mixed uses shall be allowed in the same building as public parking garages and repair garages in accordance with Section 508.1. Mixed uses in the same building as an open parking garage are subject to Sections 402.4.2.3, 406.5.11, 508.1, 510.3, 510.4 and 510.7.

406.1.9 EQUIPMENT AND APPLIANCES

Equipment and appliances shall be installed in accordance with Sections 406.1.9.1 through 406.1.9.3 and the Florida Building Code, Mechanical, Florida Building Code, Fuel Gas and NFPA 70.

406.1.9.1 ELEVATION OF IGNITION SOURCES

Equipment and appliances having an ignition source and located in hazardous locations and public garages, private garages, repair garages, automotive motor fuel-dispensing facilities and parking garages shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor surface on which the equipment or appliance rests. For the purpose of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate directly with a private garage through openings shall be considered to be part of the private garage.

Exception: Elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition resistant.

406.1.9.1.1 PARKING GARAGES

Connection of a parking garage with any room in which there is a fuelfired appliance shall be by means of a vestibule providing a two-doorway separation, except that a single door is permitted where the sources of ignition in the appliance are elevated in accordance with Section 406.1.9.1.

Exception: This section shall not apply to appliance installations complying with Section 406.1.9.2 or 406.1.9.3.

406.1.9.2 PUBLIC GARAGES

Appliances located in public garages, motor fuel-dispensing facilities, repair garages or other areas frequented by motor vehicles shall be installed not less than 8 feet (2438 mm) above the floor. Where motor vehicles are capable of passing under an appliance, the appliance shall be installed at the clearances required by the appliance manufacturer and not less than 1 foot (305 mm) higher than the tallest vehicle garage door opening.

Exception: The requirements of this section shall not apply where the appliances are protected from motor vehicle impact and installed in accordance with Section 406.1.9.1 and NFPA 30A.

406.1.9.3 PRIVATE GARAGES

Appliances located in private garages and carports shall be installed with a minimum clearance of 6 feet (1829 mm) above the floor.

Exception: The requirements of this section shall not apply where the appliances are protected from motor vehicle impact and installed in accordance with Section 406.1.9.1.

406.8.1 VENTILATION

Repair garages shall be mechanically ventilated in accordance with the Florida Building Code, Mechanical. The ventilation system shall be controlled at the entrance to the garage.

406.8.2 GAS DETECTION SYSTEM

Repair garages used for repair of vehicles fueled by nonodorized gases, including but not limited to hydrogen and nonodorized LNG, shall be provided with a gas detection system that complies with Section 916. The gas detection system shall be designed to detect leakage of nonodorized gaseous fuel. Where lubrication or chassis service pits are provided in garages used for repairing nonodorized LNG-fueled vehicles, gas sensors shall be provided in such pits.

406.8.2.1 SYSTEM ACTIVATION

Activation of a gas detection alarm shall result in all of the following:

- 1. Initiation of distinct audible and visual alarm signals in the repair garage, where the ventilation system is interlocked with gas detection.
- 2. Deactivation of all heating systems located in the repair garage.

3. Activation of the mechanical ventilation system, where the system is interlocked with gas detection.

406.8.2.2 FAILURE OF THE GAS DETECTION SYSTEM

Failure of the gas detection system shall automatically deactivate the heating system, activate the mechanical ventilation system where the system is interlocked with the gas detection system and cause a trouble signal to sound at an approved location.

SECTION 412 - AIRCRAFT-RELATED OCCUPANCIES

412.1 GENERAL (AIRCRAFT-RELATED OCCUPANCIES)

Aircraft-related occupancies shall comply with Sections 412.1 through 412.8 and the Florida Fire Prevention Code.

412.2 DEFINITIONS

The following terms are defined in Chapter 2: FIXED BASE OPERATOR (FBO). HELIPORT. HELISTOP. RESIDENTIAL AIRCRAFT HANGAR. TRANSIENT AIRCRAFT.

412.3 AIRPORT TRAFFIC CONTROL TOWERS

The provisions of Sections 412.3.1 through 412.3.8 shall apply to airport traffic control towers occupied only for the following uses:

- 1. Airport traffic control cab.
- 2. Electrical and mechanical equipment rooms.
- 3. Airport terminal radar and electronics rooms.
- 4. Office spaces incidental to the tower operation.
- 5. Lounges for employees, including sanitary facilities.

412.3.1 CONSTRUCTION

The construction of airport traffic control towers shall comply with the provisions of Sections 412.3.1.1 through 412.3.1.3.

412.3.1.1 TYPE OF CONSTRUCTION

Airport traffic control towers shall be constructed to comply with the height limitations of Table 412.3.1.1.

TYPE OF CONSTRUCTION	HEIGHT ^a (feet)		
IA	Unlimited		
IB	240		
IIA	100		
IIB	85		
IIIA	65		

412.3.1.2 STRUCTURAL INTEGRITY OF INTERIOR EXIT STAIRWAYS AND ELEVATOR HOISTWAY ENCLOSURES

Enclosures for interior exit stairways and elevator hoistway enclosures shall comply with Section 403.2.3 in airport traffic control towers where the control cab is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

412.3.1.3 SPRAYED FIRE-RESISTANT MATERIALS (SFRM)

The bond strength of the SFRM installed in airport traffic control towers shall be in accordance with Section 403.2.4 where the control cab is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

412.3.2 MEANS OF EGRESS AND EVACUATION

The means of egress in airport traffic control towers shall comply with Sections 412.3.2.1 through 412.3.2.3.

412.3.2.1 STAIRWAYS

Stairways in airport traffic control towers shall be in accordance with Section 1011. Exit stairways shall be smokeproof enclosures complying with one of the alternatives provided in Section 909.20.

Exception: Stairways in airport traffic control towers are not required to comply with Section 1011.12.

412.3.2.2 EXIT ACCESS

From observation levels, airport traffic control towers shall be permitted to have a single means of exit access for a distance of travel not greater than 100 feet (30 480 mm). Exit access stairways from the observation level need not be enclosed.

412.3.2.3 NUMBER OF EXITS

Not less than one exit stairway shall be permitted for airport traffic control towers of any height provided that the occupant load per floor is not greater than 15 and the area per floor does not exceed 1,500 square feet (140 m2).

412.3.2.3.1 INTERIOR FINISH

Where an airport traffic control tower is provided with only one exit stairway, interior wall and ceiling finishes shall be either Class A or Class B.

412.3.3 EMERGENCY SYSTEMS

The detection, alarm and emergency systems of airport traffic control towers shall comply with Sections 412.3.3.1 through 412.3.3.3.

412.3.3.1 AUTOMATIC SMOKE DETECTION SYSTEMS

Airport traffic control towers shall be provided with an automatic smoke detection system installed in accordance with Section 907.2.22.

412.3.3.2 FIRE COMMAND CENTER

A fire command center shall be provided in airport traffic control towers where the control cab is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access. The fire command center shall comply with Section 911.

Exceptions:

1. The fire command center shall be located in the airport control tower or an adjacent contiguous building

where building functions are interdependent.

- 2. The room shall be not less than 150 square feet (14 m2) in area with a minimum dimension of 10 feet (3048 mm).
- 3. The following features shall not be required in an airport traffic control tower fire command center.
 - 3.1. Emergency voice/alarm control unit.
 - 3.2. Public address system.
 - 3 3. Status indicators and controls for the air distributions centers.
 - 3.4. Generator supervision devices, manual start and transfer features.
 - 3.5. Elevator emergency or standby power switches where emergency or standby power is provided.

412.3.3.3 SMOKE REMOVAL

Smoke removal in airport traffic control towers shall be provided in accordance with Section 403.4.7.

412.3.4 AUTOMATIC SPRINKLER SYSTEM

Where an occupied floor is located more than 35 feet (10 668 mm) above the lowest level of fire department vehicle access, airport traffic control towers shall be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.

412.3.4.1 FIRE PUMP ROOM

Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour fire barriers constructed in accordance with Section 707 or 2-hour horizontal assemblies constructed in accordance with Section 711, or both.

Exception: Separation is not required for fire pumps physically separated in accordance with NFPA 20.

412.3.5 PROTECTION OF ELEVATOR WIRING AND CABLES

Cables serving elevators in airport traffic control towers shall be protected in accordance with Section 3007.8.1.

412.3.5.1 ELEVATORS FOR OCCUPANT EVACUATION

Where provided in addition to an exit stairway, occupant evacuation elevators shall be in accordance with Section 3008.

412.3.6 ACCESSIBILITY

Airport traffic control towers shall be accessible except as specified in the Florida Building Code, Accessibility.

412.4 AIRCRAFT HANGARS

Aircraft hangars shall be in accordance with Sections 412.4.1 through 412.4.6.

412.4.1 EXTERIOR WALLS

Exterior walls located less than 30 feet (9144 mm) from lot lines or a public way shall have a fire-resistance rating not less than 2 hours.

412.4.2 BASEMENTS

Where hangars have basements, floors over basements shall be of Type IA construction and shall be made tight against seepage of water, oil or vapors. There shall be no opening or communication between basements and the hangar. Access to basements shall be from outside only.

412.4.3 FLOOR SURFACE

Floors shall be graded and drained to prevent water or fuel from remaining on the floor. Floor drains shall discharge through an oil separator to the sewer or to an outside vented sump.

Exception: Aircraft hangars with individual lease spaces not exceeding 2,000 square feet (186 m2) each in which servicing, repairing or washing is not conducted and fuel is not dispensed shall have floors that are graded toward the door, but shall not require a separator.

412.4.4 HEATING EQUIPMENT

Heating equipment shall be placed in another room separated by 2-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. Entrance shall be from the outside or by means of a vestibule providing a two-doorway separation.

- Exceptions:
- 1.Unit heaters and vented infrared radiant heating equipment suspended not less than 10 feet (3048 mm) above the upper surface of wings or engine enclosures of the highest aircraft that are permitted to be housed in the hangar need not be located in a separate room provided they are mounted not less than 8 feet (2438 mm) above the floor in shops, offices and other sections of the hangar communicating with storage or service areas.
- 2.Entrance to the separated room shall be permitted by a single interior door provided the sources of ignition in the appliances are not less than 18 inches (457 mm) above the floor.

412.4.5 FINISHING

The process of "doping," involving use of a volatile flammable solvent, or of painting, shall be carried on in a separate detached building equipped with automatic fire-extinguishing equipment in accordance with Section 903.

412.4.6 FIRE SUPPRESSION

Aircraft hangars shall be provided with a fire suppression system designed in accordance with NFPA 409, based upon the classification for the hangar given in Table 412.4.6.

Exception: Where a fixed base operator has separate repair facilities on site, Group II hangars operated by a fixed base operator used for storage of transient aircraft only shall have a fire suppression system, but the system is exempt from foam requirements.

MAXIMUM SINGLE FIRE AREA (square feet)	TYPE OF CONSTRUCTION								
	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
≥ 40,001	Group I	Group I	Group I	Group I	Group I	Group I	Group I	Group I	Group
40,000	Group II	Group II	Group II	Group II	Group II	Group II	Group II	Group II	Group
30,000	Group III	Group II	Group						
20,000	Group III	Group III	Group II	Group					
15,000	Group III	Group III	Group III	Group II	Group III	Group II	Group III	Group II	Group
12,000	Group III	Group III	Group III	Group III	Group III	Group III	Group III	Group II	Group
8,000	Group III	Group III	Group III	Group III	Group III	Group III	Group III	Group III	Group
5,000	Group III	Group III	Group III	Group III	Group III	Group III	Group III	Group III	Group I

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m².

a. Aircraft hangars with a door height greater than 28 feet shall be provided with fire suppression for a Group I hangar regardless of maximum fire area.

b. Groups shall be as classified in accordance with NFPA 409.

c. Membrane structures complying with Section 3102 shall be classified as a Group IV hangar.

412.4.6.1 HAZARDOUS OPERATIONS

Any Group III aircraft hangar according to Table 412.4.6 that contains hazardous operations including, but not limited to, the following shall be provided with a Group I or II fire suppression system in accordance with NFPA 409 as applicable:

- 1. Doping.
- 2. Hot work including, but not limited to, welding, torch cutting and torch soldering.
- 3. Fuel transfer.
- 4. Fuel tank repair or maintenance not including defueled tanks in accordance with NFPA 409, inerted tanks or tanks that have never been fueled.
- 5. Spray finishing operations.
- 6. Total fuel capacity of all aircraft within the unsprinklered single fire area in excess of 1,600 gallons (6057 L).
- 7. Total fuel capacity of all aircraft within the maximum single fire area in excess of 7,500 gallons (28 390 L) for a hangar with an automatic sprinkler system in accordance with Section 903.3.1.1.

412.4.6.2 SEPARATION OF MAXIMUM SINGLE FIRE AREAS

Maximum single fire areas established in accordance with hangar classification and construction type in Table 412.4.6 shall be separated by 2-hour fire walls constructed in accordance with Section 706. In determining the maximum single fire area as set forth in Table 412.4.6, ancillary uses that are separated from aircraft servicing areas by a fire barrier of not less than 1 hour, constructed in accordance with Section 707, shall not be included in the area.

412.5 RESIDENTIAL AIRCRAFT HANGARS

Residential aircraft hangars shall comply with Sections 412.5.1 through 412.5.5.

412.5.1 FIRE SEPARATION

A hangar shall not be attached to a dwelling unless separated by a fire barrier having a fire-resistance rating of not less than 1 hour. Such separation shall be continuous from the foundation to the underside of the roof and unpierced except for doors leading to the dwelling unit. Doors into the dwelling unit shall be equipped with self-closing devices and conform to the requirements of Section 716 with a noncombustible raised sill not less than 4 inches (102 mm) in height. Openings from a hangar directly into a room used for sleeping purposes shall not be permitted.

412.5.2 EGRESS

A hangar shall provide two means of egress. One of the doors into the dwelling shall be considered as meeting only one of the two means of egress.

412.5.3 SMOKE ALARMS

Smoke alarms shall be provided within the hangar in accordance with Section 907.2.21.

412.5.4 INDEPENDENT SYSTEMS

Electrical, mechanical and plumbing drain, waste and vent (DWV) systems installed within the hangar shall be independent of the systems installed within the dwelling. Building sewer lines shall be permitted to be connected outside the structures.

Exception: Smoke detector wiring and feed for electrical subpanels in the hangar.

<u>412.5.5 HEIGHT AND AREA LIMITS</u>

Residential aircraft hangars shall be not greater than 2,000 square feet (186 m2) in area and 20 feet (6096 mm)

in building height.

412.6 AIRCRAFT PAINT HANGARS

Aircraft painting operations where flammable liquids are used in excess of the maximum allowable quantities per control area listed in Table 307.1(1) shall be conducted in an aircraft paint hangar that complies with the provisions of Sections 412.6.1 through 412.6.6.

412.6.1 OCCUPANCY GROUP

Aircraft paint hangars shall be classified as Group H-2. Aircraft paint hangars shall comply with the applicable requirements of this code and the Florida Fire Prevention Code for such occupancy.

412.6.2 CONSTRUCTION

The aircraft paint hangar shall be of Type I or II construction.

412.6.3 OPERATIONS

Only those flammable liquids necessary for painting operations shall be permitted in quantities less than the maximum allowable quantities per control area in Table 307.1(1). Spray equipment cleaning operations exceeding the maximum allowable quantities per control area in Table 307.1(1) shall be conducted in a liquid use, dispensing and mixing room.

412.6.4 STORAGE

Storage of flammable or combustible liquids exceeding the maximum allowable quantities per control area in Table 307.1(1) shall be in a liquid storage room.

412.6.5 FIRE SUPPRESSION

Aircraft paint hangars shall be provided with fire suppression as required by NFPA 409.

412.6.6 VENTILATION

Aircraft paint hangars shall be provided with ventilation as required in the Florida Building Code, Mechanical.

412.7 AIRCRAFT MANUFACTURING FACILITIES

HEIGHT (feet) ^b	MANUFACTURING AREA (sq. ft.) a					
	≥ 150,000	≥ 200,000	≥ 250,000	≥ 500,000	≥ 750,000	≥ 1,000,00
≥ 25	400	450	500	500	500	500
≥ 50	400	500	600	700	700	700
≥ 75	400	500	700	850	1,000	1,000
≥ 100	400	500	750	1,000	1,250	1,500

a. Contiguous floor area of the aircraft manufacturing facility having the indicated height.

b. Minimum height from finished floor to bottom of ceiling or roof slab or deck.

412.7.1 ANCILLARY AREAS

Rooms, areas and spaces ancillary to the primary manufacturing area shall be permitted to egress through

such area having a minimum height as indicated in Table 412.7. Exit access travel distance within the ancillary room, area or space shall not exceed that indicated in Table 1017.2 based on the occupancy classification of that ancillary area. Total exit access travel distance shall not exceed that indicated in Table 412.7.

412.8 HELIPORTS AND HELISTOPS

Heliports and helistops shall be permitted to be erected on buildings or other locations where they are constructed in accordance with Sections 412.8.1 through 412.8.5.

412.8.1 SIZE

The landing area for helicopters less than 3,500 pounds (1588 kg) shall be not less than 20 feet (6096 mm) in length and width. The landing area shall be surrounded on all sides by a clear area having a minimum average width at roof level of 15 feet (4572 mm) but with no width less than 5 feet (1524 mm).

412.8.2 DESIGN

Helicopter landing areas and the supports thereof on the roof of a building shall be noncombustible construction. Landing areas shall be designed to confine any flammable liquid spillage to the landing area itself and provisions shall be made to drain such spillage away from any exit or stairway serving the helicopter landing area or from a structure housing such exit or stairway. For structural design requirements, see Section 1607.6.

412.8.3 MEANS OF EGRESS

The means of egress from heliports and helistops shall comply with the provisions of Chapter 10. Landing areas located on buildings or structures shall have two or more means of egress. For landing areas less than 60 feet (18 288 mm) in length or less than 2,000 square feet (186 m2) in area, the second means of egress is permitted to be a fire escape, alternating tread device or ladder leading to the floor below.

412.8.4 ROOFTOP HELIPORTS AND HELISTOPS

Rooftop heliports and helistops shall comply with NFPA 418.

412.8.5 STANDPIPE SYSTEM

In buildings equipped with a standpipe system, the standpipe shall extend to the roof level in accordance with Section 905.3.6.

SECTION 415 - GROUPS H-1, H-2, H-3, H-4 AND H-5

415.5.4 EMERGENCY ALARM SYSTEMS

For groups H-1, H-2, H-3, H-4 AND H-5 - Emergency alarm systems required by Section 415.5.1 or 415.5.2 shall be provided with emergency or standby power in accordance with Section 2702.2.

415.11.7 GAS DETECTION SYSTEMS.

A gas detection system complying with Section 916 shall be provided for HPM gases where the physiological warning threshold level of the gas is at a higher level than the accepted permissible exposure limit (PEL) for the gas and for flammable gases in accordance with Sections 415.11.7.1 through 415.11.7.2.

415.11.7.1.1 FABRICATION AREAS.

A gas detection system shall be provided in fabrication areas where HPM gas is used in the fabrication area.

415.11.7.1.3 GAS CABINETS, EXH. ENCLOSURES & GAS ROOMS

A gas detection system shall be provided in gas cabinets and exhausted enclosures for HPM gas. A gas detection system shall be provided in gas rooms where HPM gases are not located in gas cabinets or exhausted enclosures.

SECTION 420 - GROUPS I-1, R-1, R-2, R-3 AND R-4

420.7 ASSISTED LIVING HOUSING UNITS

In Group I-1 occupancies, where a fire resistance corridor is provided, in areas where assisted living residents are housed, shared living spaces, group meeting or multipurpose therapeutic spaces open to the corridor shall be in accordance with all of the following criteria:

- 1. The walls and ceilings of the space are constructed as required for corridors.
- 2. The spaces are not occupied as resident sleeping rooms, treatment rooms, incidental uses in accordance with Section 509 or hazardous uses.
- 3. The open space is protected by an automatic fire detection system installed in accordance with Section 907.
- 4. In Group I-1, Condition 1, the corridors onto which the spaces open are protected by an automatic fire detection system installed in accordance with Section 907, or the spaces are equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
- 5. In Group I-1, Condition 2, the corridors onto which the spaces open, in the same smoke compartment, are protected by an automatic fire detection system installed in accordance with Section 907, or the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
- 6. The space is arranged so as not to obstruct access to the required exits.

SECTION 421 - HYDROGEN FUEL GAS ROOMS

421.6 GAS DETECTION SYSTEM

Hydrogen fuel gas rooms shall be provided with a gas detection system that complies with Sections 916 and 421.6.1 through 421.6.2.

421.6.1 SYSTEM ACTIVATION

Activation of a gas detection alarm shall result in both of the following:

- 1. Initiation of distinct audible and visible alarm signals both inside and outside of the hydrogen fuel gas room.
- 2. Automatic activation of the mechanical exhaust ventilation system.

421.6.2 FAILURE OF THE GAS DETECTION SYSTEM

Failure of the gas detection system shall automatically activate the mechanical exhaust ventilation system, stop hydrogen generation and cause a trouble signal to sound at an approved location.

SECTION 423 – STROM SHELTERS

423.1 GENERAL

In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance

with ICC 500. Buildings or structures that are also designated as emergency shelters shall also comply with Table 1604.5 as Risk Category IV structures.

SECTION 468 – SCHOOLS, COLLEGES & UNIVERSITIES

468.2.4 TRANSMISSION LINE RIGHT-OF-WAY

Buildings, play areas and common use areas shall not be located within a high-voltage power transmission line right-of-way.

468.3.5.11 URINALS

Trough urinals shall not be installed in any location.

468.3.5.12 HOT WATER

When hot water is supplied to handwash sinks or lavatories in toilet rooms, a mixing valve shall be installed to control the temperature, at the fixture, which shall not exceed 110°F (43°C) nor be less than 95°F (35°C).

468.3.6.7 TOILET ROOM VENTILATION

Toilet rooms shall be continuously ventilated during building occupancy.

Exception: Individual toilet rooms shall be ventilated continuously during building occupancy or ventilation shall turn on with the light switch and run for at least 10 minutes after the light has been turned off.

468.3.7.1 ILLUMINATION LEVEL IN CLASSROOMS & INSTRUCTIONAL SPACES

Illumination at the normal task level for the type of classroom/instruction space shall be designed to provide and maintain an average of 40 footcandles (400 lux).

CHAPTER 5 – GENERAL BUILDING HEIGHTS & AREAS

SECTION 503 - GENERAL BUILDING HEIGHT & AREA LIMITATIONS

503.1.4 OCCUPIED ROOFS

A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506.

Exceptions:

- 1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Section 907.5 is provided in the area of the occupied roof.
- 2.Assembly occupancies shall be permitted on roofs of open parking garages of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.

Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches (1220 mm) above the surface of the occupied roof.

Exception: Penthouses constructed in accordance with Section 1510.2 and towers, domes, spires and cupolas constructed in accordance with Section 1510.5.

CHAPTER 6 – TYPES OF CONSTRUCTION

SECTION 602 - CONSTRUCTION CLASSIFICATION

602.4 TYPE IV

Type IV construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid wood, laminated wood, heavy timber (HT) or structural composite lumber (SCL) without concealed spaces. The minimum dimensions for permitted materials including solid timber, glued-laminated timber, structural composite lumber (SCL) and cross-laminated timber and details of Type IV construction shall comply with the provisions of this section and Section 2304.11. Exterior walls complying with Section 602.4.1 or 602.4.2 shall be permitted. Interior walls and partitions not less than 1-hour fire-resistance rating or heavy timber complying with Section 2304.11.2.2 shall be permitted.

602.4.1 FIRE-RETARDANT-TREATED WOOD IN EXTERIOR WALLS

Fire-retardant-treated wood framing and sheathing complying with Section 2303.2 shall be permitted within exterior wall assemblies not less than 6 inches (152 mm) in thickness with a 2-hour rating or less.

602.4.2 CROSS-LAMINATED TIMBER IN EXTERIOR WALLS

Cross-laminated timber complying with Section 2303.1.4 shall be permitted within exterior wall assemblies not less than 6 inches (152 mm) in thickness with a 2-hour rating or less, provided the exterior surface of the cross-laminated timber is protected by one the following:

- 1. Fire-retardant-treated wood sheathing complying with Section 2303.2 and not less than 15/32 inch (12 mm) thick;
- 2. Gypsum board not less than 1/2 inch (12.7 mm) thick; or
- 3. A noncombustible material.

602.4.3 EXTERIOR STRUCTURAL MEMBERS

Where a horizontal separation of 20 feet (6096 mm) or more is provided, wood columns and arches conforming to heavy timber sizes complying with Section 2304.11 shall be permitted to be used externally.

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