**Supplement to the 8th Edition (2023) Florida Building Code, Building.**

**Note 1**: Throughout the document, change International Building Code to Florida Building Code, Building; Energy Conservation Code tothe Florida Building Code, Energy Conservation; change the International Existing Building Code to Florida Building Code, Existing Building; change the International Fire code to Florida Fire Prevention Code; change International Fuel Gas Code to Florida Building Code, Fuel Gas; change the International Mechanical Code to Florida Building Code, Mechanical; change the International Plumbing Code to Florida Building Code, Plumbing; change the International Residential Code to Florida Building Code, Residential.

**CHAPTER 1 SCOPE AND ADMINISTRATION**

***Revise section 102.2*** **as follows:**

**102.2 Building.** The provisions of the *Florida Building Code* shall apply to the construction, erection, alteration, modification, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every public and private building, structure or facility or floating residential structure, or any appurtenances connected or attached to such buildings, structures or facilities. Additions, alterations, repairs and changes of use or occupancy group in all buildings and structures shall comply with the provisions provided in the *Florida Building Code, Existing Building*. The followingbuildings, structures and facilities are exempt from the *Florida Building Code* as provided by law, and any further exemptions shall be as determined by the legislature and provided by law:

1. – (k) No change

(l) A drone port as defined in s. 330.41(2).

**(Code language for consistency with HB 327 – bill effective date – July 1, 2023)**

**Revise to read as follows:**

**104.11 Alternative materials, design and methods of construction and equipment.**

The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed alternative meets all of the following:

* 1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code,
  2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code as it pertains to the following:
     1. Quality.
     2. Strength.
     3. Effectiveness.
     4. *Fire resistance*.
     5. Durability.
     6. Safety.

Where the alternative material, design or method of construction is not approved, the*building official* shall respond in writing, stating the reasons why the alternative was not approved.

**Exception:** Performance-based alternative materials, designs or methods of construction and equipment complying with the *ICC Performance Code*. This exception shall not apply to alternative structural materials or to alternative structural designs.

**(CA10580 / ADM35-22 AM)**

Revise 105.3.4 to read as follows:

**105.3.4** ~~A building permit for a single-family residential dwelling must be issued within 30 working days of application therefor unless unusual circumstances require a longer time for processing the application or unless the permit application fails to satisfy the~~ *~~Florida Building Code~~* ~~or the enforcing agency’s laws or ordinances.~~

**Building permit application to local government.**

**105.3.4.1** (a) A local government must approve, approve with conditions, or deny a building permit application after receipt of a completed and sufficient application within the following timeframes, unless the applicant waives such timeframes in writing:

1. Within 30 business days after receiving a complete and sufficient application, for an applicant using a local government plans reviewer to obtain the following building permits if the structure is less than 7,500 square feet: residential units, including a single-family residential unit or a single-family residential dwelling, accessory structure, alarm, electrical, irrigation, landscaping, mechanical, plumbing, or roofing.

2. Within 60 business days after receiving a complete and sufficient application, for an applicant using a local government plans reviewer to obtain the following building permits if the structure is 7,500 square feet or more: residential units, including a single-family residential unit or a single-family residential dwelling, accessory structure, alarm, electrical, irrigation, landscaping, mechanical, plumbing, or roofing.

3. Within 60 business days after receiving a complete and sufficient application, for an applicant using a local government plans reviewer to obtain the following building permits: signs or nonresidential buildings that are less than 25,000 square feet.

4. Within 60 business days after receiving a complete and sufficient application, for an applicant using a local government plans reviewer to obtain the following building permits: multifamily residential, not exceeding 50 units; site-plan approvals and subdivision plats not requiring public hearing or public notice; and lot grading and site alteration.

5. Within 12 business days after receiving a complete and sufficient application, for an applicant using a master building permit consistent with s. 553.794 to obtain a site-specific building permit.

6. Within 10 business days after receiving a complete and sufficient application, for an applicant for a single-family residential dwelling applied for by a contractor licensed in this state on behalf of a property owner who participates in a Community Development Block Grant-Disaster Recovery program administered by the Department of Commerce, unless the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances. However, the local government may not require the waiver of the timeframes in this section as a condition precedent to reviewing an applicant's building permit application.

**105.3.4.2** A local government must meet the timeframes set forth in this section for reviewing building permit applications unless the timeframes set by local ordinance are more stringent than those prescribed in this section.

**105.3.4.3** After an applicant submits an application to the local government, the local government must provide written notice to the applicant within 5 business days after receipt of the application advising the applicant what information, if any, is needed to deem or determine that the application is properly completed in compliance with the filing requirements published by the local government. If the local government does not provide timely written notice that the applicant has not submitted the properly completed application, the application is automatically deemed or determined to be properly completed and accepted.

**105.3.4.4** A local government shall maintain on its website a policy containing procedures and expectations for expedited processing of those building permits and development orders required by law to be expedited.

**105.3.4.5** If a local government fails to meet a deadline under this subsection, it must reduce the building permit fee by 10 percent for each business day that it fails to meet the deadline, unless the parties agree in writing to a reasonable extension of time, the delay is caused by the applicant, or the delay is attributable to a force majeure or other extraordinary circumstances. Each 10-percent reduction shall be based on the original amount of the building permit fee, unless the parties agree to an extension of time.

**105.3.4.6** A local enforcement agency does not have to reduce the building permit fee if it provides written notice to the applicant by e-mail or United States Postal Service within the respective timeframes in paragraph (a) which specifically states the reasons the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances. The written notice must also state that the applicant has 10 business days after receiving the written notice to submit revisions to correct the permit application and that failure to correct the application within 10 business days will result in a denial of the application.

**105.3.4.7** If the applicant submits revisions within 10 business days after receiving the written notice, the local enforcement agency has 10 business days after receiving such revisions to approve or deny the building permit unless the applicant agrees to a longer period in writing. If the local enforcement agency fails to issue or deny the building permit within 10 business days after receiving the revisions, it must reduce the building permit fee by 20 percent for each business day that it fails to meet the deadline unless the applicant agrees to a longer period in writing.

**(Code language for consistency with HB 267 – bill effective date – January 1, 2025)**

***Revise section 105.3.1.2 (Item 4)* to read as follows:**

4. Any specialized mechanical, electrical, or plumbing document for any new building or addition which includes a medical gas, oxygen, steam, vacuum, toxic air filtration, halon, or fire detection and alarm system which costs more than $5,000.

Exception:

Simplified permitting processes ~~process for fire alarm system projects~~. —

(1) As used in this section, the term:

(a) "Component" means valves, fire sprinklers, escutcheons, hangers, compressors, or any other item deemed acceptable by the local enforcing agency. For purposes of this paragraph, a valve does not include pressure-regulating, pressure-reducing, or pressure-control valves.

(b)~~(a)~~ "Contractor" means a person who:

1. Is qualified to engage in the business of electrical or alarm system contracting pursuant to a certificate or registration issued by the department under part II of chapter 489, Florida Statutes; or

2. Is qualified to engage in the business of fire protection system contracting pursuant to a license or certificate issued by the State Fire Marshal.

(c)~~(b)~~ "Fire alarm system project" means a fire alarm system alteration of a total of or fewer initiating devices and notification devices, or the installation or replacement of a fire communicator connected to an existing fire alarm control panel in an existing commercial, residential, apartment, cooperative, or condominium building.

(d) "Fire sprinkler system project" means a fire protection system alteration of a total of 20 or fewer fire sprinklers in which the sprinklers are of the same K-factor and located in spaces where there is no change of hazard classification or increased system coverage area, or the installation or replacement of an equivalent fire sprinkler system component in an existing commercial, residential, apartment, cooperative, or condominium building. For purposes of this paragraph, a component is equivalent if the component has the same or better characteristics, including electrical, hydraulic, pressure losses, and required listings and spacing as the component being replaced.

(2)(a) A local enforcement agency may require a contractor, as a condition of obtaining a permit for a fire alarm system project or fire sprinkler system project, to submit a completed application and payment.

(b) A local enforcement agency may not require a contractor to submit plans or specifications as a condition of obtaining a permit for a fire alarm system project or fire sprinkler system project.

(3) A local enforcement agency must issue a permit for a fire alarm system project or fire sprinkler system project in person or electronically.

(4) A local enforcement agency must require at least one inspection of a fire alarm system project or fire sprinkler system project to ensure compliance with applicable codes and standards. If a fire alarm system project or fire sprinkler system project fails an inspection, the contractor must take corrective action as necessary to pass inspection.

(5)(a) For a fire alarm system project, a contractor must keep a copy of the plans and specifications at the ~~a~~ fire alarm system project worksite and make such plans and specifications available to the inspector at each inspection.

(b) For a fire sprinkler system project to alter an existing fire protection system, a contractor must keep a copy of the plans and specifications at the fire sprinkler system project worksite and make such plans and specifications available to the inspector at each inspection.

(c) For a fire sprinkler system project to install or replace a component, a contractor must keep a copy of the manufacturer's installation instructions and any pertinent testing instructions needed to certify or accept the component at the fire sprinkler system project worksite and make such documents available to the inspector at each inspection.

***Revise section 105.3.1.2*** **to read as follows:**

**105.3.1.2.** No permit may be issued for any building construction, erection, alteration, modification, repair, or addition unless the applicant for such permit provides to the enforcing agency which issues the permit any of the following documents which apply to the construction for which the permit is to be issued and which shall be prepared by or under the direction of an engineer registered under Chapter 471, *Florida Statutes*:

1. Plumbing documents for any new building or addition which requires a plumbing system with more than 250 fixture units or which costs more than $125,000.

2. Fire sprinkler documents for any new building or addition which includes a fire sprinkler system which contains 50 or more sprinkler heads. Personnel as authorized by chapter 633 *Florida Statutes*, may design a new fire sprinkler system of 49 or fewer heads; may design the alteration of an existing fire sprinkler system if the alteration consists of the relocation, addition or deletion of 49 heads or fewer, notwithstanding the size of the existing fire sprinkler system; or may design the alteration of an existing fire sprinkler system if the alteration consists of the relocation or deletion of 249 or fewer sprinklers and the addition of up to 49 sprinklers, as long as the cumulative total number of fire sprinklers being added, relocated, or deleted does not exceed 249, notwithstanding the size of the existing fire sprinkler system, if there is no change of occupancy of the affected areas, as defined in this Code and the Florida Fire Prevention Code, and there is no change in the water demand as defined in NFPA 13, “Standard for the Installation of Sprinkler Systems,” and if the occupancy hazard classification as defined in NFPA 13 is reduced or remains the same as a result of the alteration.

**(Code language for consistency with HB 89 – bill effective date – July 1, 2023)**

***Add new section 105.4.1.5* to read as follows:**

**105.4.1.5** After the local enforcing agency issues a permit, the local enforcing agency may not make or require any substantive changes to the plans or specifications except changes required for compliance with the Florida Building Code, the Florida Fire Prevention Code, or the Life Safety Code, or local amendments thereto. If a local enforcing agency makes or requires substantive changes to the plans or specifications after a permit is issued, the local enforcing agency must identify the specific plan features that do not comply with the applicable codes, identify the specific code chapters and sections upon which the finding is based, and provide the information to the permitholder in writing.

***Add new section 107.7* to read as follows:**

**107.7** If the local building code administrator or inspector finds that the plans are not in compliance with the Florida Building Code, the local building code administrator or inspector shall identify the specific plan features that do not comply with the applicable codes, identify the specific code chapters and sections upon which the finding is based, and provide this information to the local enforcing agency. If the building code administrator, plans examiner, or inspector requests another local enforcing agency employee or a person contracted by the local enforcing agency to review the plans and that employee or person identifies specific plan features that do not comply with the applicable codes, the building code administrator, plans examiner, or inspector must provide this information to the local enforcing agency. The local enforcing agency shall provide this information to the permit applicant.

**(Code language for consistency with SB 154 – bill effective date – Upon becoming a law)**

Revise Section 107.3.5 Minimum plan review criteria for buildings, Commercial building, Building (Item 3) as follows:

**Minimum plan review criteria for buildings.**

3. Minimum type of construction shall be deter-mined (see ~~Table 504.3a~~ Section 503).

F-FBC-B – Ch.1 – Errata #1

**105.17 Streamlined low-voltage alarm system installation permitting.**

Revise section 105.17(3) to read as follows:

(3) A low-voltage electric fence must meet all of the following requirements to be permitted as a low-voltage alarm system project and no further permit shall be required for the low-voltage alarm system project other than as provided in this section:

(a) The electric charge produced by the fence upon contact must not exceed energizer characteristics set forth in paragraph 22.108 and depicted in Figure 102 of International Electrotechnical Commission Standard No. 60335-2-76, Current Edition.

(b) A nonelectric fence or wall must completely enclose the outside perimeter of the low-voltage electric fence. The low-voltage electric fence must ~~may~~ be ~~up to~~ 2 feet higher than the perimeter nonelectric fence or wall.

(c) The low-voltage electric fence must be identified using warning signs attached to the fence at intervals of not more than 60 feet.

(d) A ~~The~~ low-voltage electric fence is allowed ~~shall not be installed~~ in any ~~an~~ area unless the area is zoned exclusively for single-family or multifamily residential use. An area is not considered to be zoned exclusively for single-family or multifamily residential use if the area is within more than one zoning category.

(e) The low-voltage electric fence shall not enclose the portions of a property which are used for residential purposes.

Revise section 105.17(10) to read as follows:

(10) A municipality, county, district, or other entity of local government may not adopt or maintain in effect any ordinance or rule regarding a low-voltage alarm system project that provides additional requirements beyond those set out in this section for the installation or maintenance of a low-voltage alarm system project or that is otherwise ~~is~~ inconsistent with this section.

**SECTION 107 SUBMITTAL DOCUMENTS**

Add a new section 107.1.1 to read as follows:

**107.1.1 Replacement of windows, doors, or garage doors.** Sealed drawings by a design professional are not required for the replacement of windows, doors, or garage doors in an existing one-family or two-family dwelling or townhouse if all of the following conditions are met:

1. The replacement windows, doors, or garage doors are installed in accordance with the manufacturer's instructions for the appropriate wind zone.

2. The replacement windows, doors, or garage doors meet the design pressure requirements in the most recent version of the Florida Building Code, Residential.

3. A copy of the manufacturer's instructions is submitted with the permit application in a printed or digital format.

4. The replacement windows, doors, or garage doors are the same size and are installed in the same opening as the existing windows, doors, or garage doors.

**(Code language for consistency with HB 267 – bill effective date – January 1, 2025)**

Revise as follows:

SECTION 108

**TEMPORARY STRUCTURES****~~AND USES~~, EQUIPMENT AND SYSTEMS**

Revise to read as follows:

**[A] 108.1 General.** The *building official* is authorized to issue a *permit* for temporary structures ~~and temporary uses~~, equipment or systems. Such *permits* shall be limited as to time of service, but shall not be permitted for more than 180 days. The *building official* is authorized to grant extensions for demonstrated cause. Structures designed to comply with Section 3103.5 shall not be in service for a period of more than 1-year unless an extension of time is granted.

**[A] 108.2 Conformance.** Temporary structures ~~and uses~~ shall comply with the requirements in Section 3103.

**[A] 108.3 Temporary****~~power~~** **service utilities.** The *building official* is authorized to give permission to temporarily supply service utilities in accordance with Section 112. ~~and use power in part of an electric installation before such installation has been fully completed and the final~~ ~~certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for~~ ~~temporary lighting, heat or power in NFPA 70.~~

**[A] 108.4 Termination of approval.** The *building official* is authorized to terminate such *permit* for a temporary structure, equipment, or ~~use~~  system and to order the ~~temporary structure or use~~ same to be discontinued.

**(CA10583 / ADM41-22 Part I AS)/ (R11175 / S116-22)**

Revise as follows:

**[A] 109.3 Building Permit valuations.** The applicant for a *permit* shall provide an estimated *~~permit~~* value of the work for which the permit is being issued at time of application. *~~Permit~~* ~~valuations shall reflect~~ Such estimated valuations shall include the total value of work, including materials and labor, for which the *permit* is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. ~~If~~ Where, in the opinion of the *building official*, the valuation is underestimated ~~on the application~~, the *permit* shall be denied, unless the applicant can show detailed estimates ~~to meet the approval of~~ acceptable to the *building official*. ~~Final building~~ *~~permit~~* ~~valuation shall be set~~ ~~by the~~ *~~building official~~*~~.~~ The building official shall have the authority to adjust the final valuation for permit fees.

**(CA10584 / ADM43-22 Part I AS)**

Revise as follows:

**[A] 110.3.5 Lath,****~~gypsum board~~ and gypsum panel product inspection.** Lath~~,~~ *~~gypsum board~~* and *gypsum panel product* inspections shall be made after lathing~~,~~ *~~gypsum board~~* and *gypsum panel products*, interior and exterior, are in place, but before any plastering is applied or *~~gypsum board~~* ~~and~~ *gypsum panel product* joints and fasteners are taped and finished.

**Exception:** *Gypsum ~~board~~* ~~and~~ *~~gypsum~~ panel products* that are not part of a fire-resistance-rated assembly or a shear assembly.

**(R11137 / S58-22 Part I)**

Delete section 110.9 and relocate to Chapter 18 of the FBC – Existing Buildingas follows**:**

**~~110.9 Mandatory structural inspections for condominium and cooperative buildings.~~**

**~~110.9.1 General.~~** ~~The Legislature finds that maintaining the structural integrity of a building throughout the life of the building is of paramount importance in order to ensure that buildings are structurally sound so as to not pose a threat to the public health, safety, or welfare. As such, the Legislature finds that the imposition of a statewide structural inspection program for aging condominium and cooperative buildings in this state is necessary to ensure that such buildings are safe for continued use.~~

**~~110.9.2 As used in this section, the terms:~~**

~~(a) “Milestone inspection” means a structural inspection of a building, including an inspection of load-bearing elements and the primary structural members and primary structural systems as those terms are defined in s. 627.706, by an architect licensed under chapter 481 or engineer licensed under chapter 471 authorized to practice in this state for the purposes of attesting to the life safety and adequacy of the structural components of the building and, to the extent reasonably possible, determining the general structural condition of the building as it affects the safety of such building, including a determination of any necessary maintenance, repair, or replacement of any structural component of the building. The purpose of such inspection is not to determine if the condition of an existing building is in compliance with the Florida Building Code or the firesafety code. The milestone inspection services may be provided by a team of professionals with an architect or engineer acting as a registered design professional in responsible charge with all work and reports signed and sealed by the appropriate qualified team member.~~

~~(b) “Substantial structural deterioration” means substantial structural distress or substantial structural weakness that negatively affects a building’s general structural condition and integrity. The term does not include surface imperfections such as cracks, distortion, sagging, deflections, misalignment, signs of leakage, or peeling of finishes unless the licensed engineer or architect performing the phase one or phase two inspection determines that such surface imperfections are a sign of substantial structural deterioration.~~

**~~110.9.3~~**~~(a) An owner or owners of a building that is three stories or more in height as determined by the Florida Building Code and that is subject, in whole or in part, to the condominium or cooperative form of ownership as a residential condominium under chapter 718 or a residential cooperative under chapter 719 must have a milestone inspection performed by December 31 of the year in which the building reaches 30 years of age, based on the date the certificate of occupancy for the building was issued, and every 10 years thereafter. If a building reached 30 years of age before July 1, 2022, the building’s initial milestone inspection must be performed before December 31, 2024. If a building reaches 30 years of age on or after July 1, 2022, and before December 31, 2024, the building’s initial milestone inspection must be performed before December 31, 2025. If the date of issuance for the certificate of occupancy is not available, the date of issuance of the building’s certificate of occupancy shall be the date of occupancy evidenced in any record of the local building official.~~

~~(b) The local enforcement agency may determine that local circumstances, including environmental conditions such as proximity to salt water as defined in s. 379.101, require that a milestone inspection must be performed by December 31 of the year in which the building reaches 25 years of age, based on the date the certificate of occupancy for the building was issued, and every 10 years thereafter.~~

~~(c) The local enforcement agency may extend the date by which a building’s initial milestone inspection must be completed upon a showing of good cause by the owner or owners of the building that the inspection cannot be timely completed if the owner or owners have entered into a contract with an architect or engineer to perform the milestone inspection and the inspection cannot reasonably be completed before the deadline or other circumstance to justify an extension.~~

~~(d) The local enforcement agency may accept an inspection report prepared by a licensed engineer or architect for a structural integrity and condition inspection of a building performed before July 1, 2022, if the inspection and report substantially comply with the requirements of this section. Notwithstanding when such inspection was completed, the condominium or cooperative association must comply with the unit owner notice requirements in Section 110.9.9. The inspection for which an inspection report is accepted by the local enforcement agency under this paragraph is deemed a milestone inspection for the applicable requirements in chapters 718 and 719. If a previous inspection and report is accepted by the local enforcement agency under this paragraph, the deadline for the building’s subsequent 10-year milestone inspection is based on the date of the accepted previous inspection.~~

**~~110.9.4~~**~~The milestone inspection report must be arranged by a condominium or cooperative association and any owner of any portion of the building which is not subject to the condominium or cooperative form of ownership. The condominium association or cooperative association and any owner of any portion of the building which is not subject to the condominium or cooperative form of ownership are each responsible for ensuring compliance with the requirements of this section. The condominium association or cooperative association is responsible for all costs associated with the milestone inspection attributable to the portions of a building which the association is responsible to maintain under the governing documents of the association. This section does not apply to a single-family, two-family, or three-family dwelling with three or fewer habitable stories above ground.~~

**~~110.9.5~~**~~Upon determining that a building must have a milestone inspection, the local enforcement agency must provide written notice of such required inspection to the condominium association or cooperative association and any owner of any portion of the building which is not subject to the condominium or cooperative form of ownership, as applicable, by certified mail, return receipt requested. The condominium or cooperative association must notify the unit owners of the required milestone inspection within 14 days after receipt of the written notice from the local enforcement agency and provide the date that the milestone inspection must be completed. Such notice may be given by electronic submission to unit owners who consent to receive notice by electronic submission or by posting on the association’s website.~~

**~~110.9.6~~** ~~Phase one of the milestone inspection must be completed within 180 days after the owner or owners of the building receive the written notice under Section 110.9.5 For purposes of this section, completion of phase one of the milestone inspection means the licensed engineer or architect who performed the phase one inspection submitted the inspection report by e-mail, United States Postal Service, or commercial delivery service to the local enforcement agency.~~

**~~110.9.7~~** ~~A milestone inspection consists of two phases:~~

**~~110.9.7.1.~~** ~~For phase one of the milestone inspection, a licensed architect or engineer authorized to practice in this state shall perform a visual examination of habitable and nonhabitable areas of a building, including the major structural components of a building, and provide a qualitative assessment of the structural conditions of the building. If the architect or engineer finds no signs of substantial structural deterioration to any building components under visual examination, phase two of the inspection, as provided in Section 110.9.7.2, is not required. An architect or engineer who completes a phase one milestone inspection shall prepare and submit an inspection report pursuant to Section 110.9.8.~~

**~~110.9.7.2~~**~~A phase two of the milestone inspection must be performed if any substantial structural deterioration is identified during phase one. A phase two inspection may involve destructive or nondestructive testing at the inspector’s direction. The inspection may be as extensive or as limited as necessary to fully assess areas of structural distress in order to confirm that the building is structurally sound and safe for its intended use and to recommend a program for fully assessing and repairing distressed and damaged portions of the building. When determining testing locations, the inspector must give preference to locations that are the least disruptive and most easily repairable while still being representative of the structure. If a phase two inspection is required, within 180 days after submitting a phase one inspection report the architect or engineer performing the phase two inspection must submit a phase two progress report to the local enforcement agency with a timeline for completion of the phase two inspection. An inspector who completes a phase two milestone inspection shall prepare and submit an inspection report pursuant to subsection 110.9.8.~~

**~~110.9.8~~**~~Upon completion of a phase one or phase two milestone inspection, the architect or engineer who performed the inspection must submit a sealed copy of the inspection report with a separate summary of, at minimum, the material findings and recommendations in the inspection report to the condominium association or cooperative association, to any other owner of any portion of the building which is not subject to the condominium or cooperative form of ownership, and to the building official of the local government which has jurisdiction. The inspection report must, at a minimum, meet all of the following criteria:~~

~~(a) Bear the seal and signature, or the electronic signature, of the licensed engineer or architect who performed the inspection.~~

~~(b) Indicate the manner and type of inspection forming the basis for the inspection report.~~

~~(c) Identify any substantial structural deterioration, within a reasonable professional probability based on the scope of the inspection, describe the extent of such deterioration, and identify any recommended repairs for such deterioration.~~

~~(d) State whether unsafe or dangerous conditions, as those terms are defined in the Florida Building Code, were observed.~~

~~(e) Recommend any remedial or preventive repair for any items that are damaged but are not substantial structural deterioration.~~

~~(f) Identify and describe any items requiring further inspection.~~

**~~110.9.9~~**~~Within 45 days after receiving the applicable inspection report, the condominium or cooperative association must distribute a copy of the inspector-prepared summary of the inspection report to each condominium unit owner or cooperative unit owner, regardless of the findings or recommendations in the report, by United States mail or personal delivery at the mailing address, property address, or any other address of the owner provided to fulfill the association’s notice requirements under chapter 718 or chapter 719, as applicable, and by electronic transmission to the e-mail address or facsimile number provided to fulfill the association’s notice requirements to unit owners who previously consented to receive notice by electronic transmission; must post a copy of the inspector prepared summary in a conspicuous place on the condominium or cooperative property; and must publish the full report and inspector-prepared summary on the association’s website, if the association is required to have a website.~~

**~~110.9.10~~**~~. A local enforcement agency may prescribe timelines and penalties with respect to compliance with this section.~~

**~~110.9.11~~**~~A board of county commissioners or municipal governing body may adopt an ordinance requiring that a condominium or cooperative association and any other owner that is subject to this section schedule or commence repairs for substantial structural deterioration within a specified timeframe after the local enforcement agency receives a phase two inspection report; however, such repairs must be commenced within 365 days after receiving such report. If an owner of the building fails to submit proof to the local enforcement agency that repairs have been scheduled or have commenced for substantial structural deterioration identified in a phase two inspection report within the required timeframe, the local enforcement agency must review and determine if the building is unsafe for human occupancy.~~

**Supplement 3 – Glitch**

**CHAPTER 2 DEFINITIONS**

Revise as follows:

**[BS] BUILDING-INTEGRATED PHOTOVOLTAIC (BIPV) ~~PRODUCT~~ SYSTEM.** A building ~~product~~ system that incorporates *photovoltaic modules* and functions as ~~a~~ an integral part ~~component~~ of the building envelope, such as *roof assemblies* and *roof coverings*, *exterior wall envelopes* and *exterior wall coverings*, and *fenestration*.

**(R11113 / S18-22 AS)**

[F] FLAMMABLE GAS.

A material that is a gas at 68°F (20°C) or less at 14.7 pounds per square inch atmosphere (psia) (101 kPa) of pressure [a material that has a *boiling point* of 68°F (20°C) or less at 14.7 psia (101 kPa)], ~~which also meets one of the following~~ subdivided as follows:

1. ~~Is~~ Category 1A.

1. A gas which is ignitable at 14.7 psia (101 kPa) when in a mixture of 13 percent or less by volume with airh. as

2. A gas with a flammable range at 14.7 psia (101 kPa) with air of at least 12 percent, regardless of the lower limitunless data shows compliance with Category 1B.

2. Category 1B.

A gas which meets the flammability criteria for Category 1A, is not pyrophoric or chemically unstable, and meets one or more of the following:

1. A lower flammability limit of more than 6% by volume in air; or

2. A fundamental burning velocity of less than 3.9 in/s (10 cm/s).

The limits specified shall be determined at 14.7 psi (101 kPa) of pressure and a temperature of 68°F (20°C) in accordance with ASTM E681.

Where not otherwise specified, the term "flammable gas" includes both Category 1A and 1B.

**(F10702 / F3-21 AS)**

**AUTOMATIC SPRINKLER SYSTEM.**

An automatic sprinkler system is an integrated network of piping and fire sprinklers designed in accordance with fire protection standards. ~~An~~ *~~automatic sprinkler system~~*~~, for fire protection purposes, is an integrated system of underground and overhead piping designed in~~ ~~accordance with fire protection engineering standards. The system includes a suitable water supply. The portion of the system above the~~ ~~ground is a network of specially sized or hydraulically designed piping installed in a structure or area, generally overhead, and to which~~ *~~automatic~~* ~~sprinklers are connected in a systematic pattern. The system is usually activated by heat from a fire and discharges water over~~ ~~the~~ *~~fire area~~*~~.~~

**(F10701 / F1-21 AMPC1)**

*Add new definition as follows:*

**PUBLIC-OCCUPANCY TEMPORARY STRUCTURE.** Any building or structure erected for a period of one year or less that serves an assembly occupancy or other public use.

**SERVICE LIFE.** The period of time that a structure serves its intended purpose. For temporary structures, this shall be the cumulative time of service for sequential temporary events which may occur in multiple locations. For *public-occupancy temporary structures* this is assumed to be a minimum of 10 years.

**TEMPORARY EVENT.**

A single use during the service life of a*public-occupancy temporary structure* at a given location which includes its installation, inspection, use and occupancy, and dismantling.

**TEMPORARY STRUCTURE.** Any building or structure erected for a period of 180 days or less to support *temporary events. Tempo*rary structures include a range of structure types (*public-occupancy temporary structures*, temporary *special event structures*, tents, umbrella and other membrane structures, *relocatable buildings, temporary bleachers, etc.)* for a range of purposes (storage, equipment protection,

dining, workspace, assembly, etc.).

**(R11175 / S116-22 AMPC4)**

**[BG] DWELLING UNIT, EFFICIENCY.** A *dwelling unit* where all permanent provisions for living, sleeping, eating and cooking are contained in a single room.

**(S11058 / G171-21)**

**Add new definition as follows:**

**INSULATED METAL PANEL (IMP).** A factory manufactured panel consisting of metal facings and an insulation core intended for use as a system forming an exterior wall, an exterior wall covering, a roof covering, or roof assembly of a building.

**(S10900 / FS149-21 Part I)**

**[BG] AMBULATORY CARE FACILITY**

**.**

Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to persons who are rendered incapable of self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable.

**(P10927 / G3-21 Part III AS)**

**[BG] CUSTODIAL CARE.** Describes persons who receive assistance ~~Assistance~~ with day-to-day living tasks; such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living. *Custodial care* includes persons receiving care who have the ability to respond to emergency situations and may receive *limited verbal or physical assistance*. These care recipients

may evacuate at a slower rate and/or who have mental and psychiatric complications.

**[BG] INCAPABLE OF SELF-PRESERVATION.** Describes persons ~~Persons~~ who, because of age, physical limitations, mental limitations, chemical dependency or medical treatment, cannot respond as an individual to an emergency situation.

**Add new definition as follows:**

**LIMITED VERBAL OR PHYSICAL ASSISTANCE**

Persons who, because of age, physical limitations, cognitive limitations, treatment or chemical dependency, and may not independently recognize, respond or evacuate without limited verbal or physical assistance during an emergency situation. Verbal assistance includes prompting, giving and repeating instructions. Physical assistance includes assistance with transfers to walking aids or mobility devices and assistance with egress.

**LIMITED VERBAL OR PHYSICAL ASSISTANCE.** Describes persons who, because of age, physical limitations, cognitive limitations, treatment or chemical dependency, and may not independently recognize, respond or evacuate without limited verbal or physical assistance during an emergency situation. Limited verbal assistance includes prompting, giving and repeating instructions. Limited physical assistance includes assistance with transfers to walking aids or mobility devices and assistance with egress.

**(F10940 / G5-21 AM)**

Add a new definition as follows:

**OVERHEAD DOOR STOP**

Door hardware mounted at the top of the door and ~~/ or~~ to the door frame which limits

the swing of the door in the opening.

**(S10962 / G23-21 AM)**

**TYPE X**

**.** A type of gypsum panel product with special core additives to increase the fire resistance as specified by the applicable standards listed in Table 2506.2. (see the definition of 'Gypsum panel product')

**(F10942 / G5-22 Part I AS)**

**[BF] FIRE PROTECTION RATING.** The period of time that an opening protective prevents or retards the passage of excessive flames ~~will~~ ~~maintain the ability~~ to confine a fire as determined by tests specified in Section 716. Ratings are stated in hours or minutes.

**[BF] FIRE RESISTANCE.** That property of materials or their assemblies that prevents or retards the passage of excessive heat, hot gases or flames under conditions of use

**(F10946 / G8-21 AS)**

**SPRINKLER EXPRESS RISER**

**.**

A vertical pipe used to supply water to sprinkler systems in a multiple story building.

**VERTICAL WATER SUPPLY ZONE**

**.**

A vertical fire protection zone within the standpipe system or group of floors supplied by a single sprinkler express riser in a high-rise building established by pressure limitations based on the design.

**(F11002 / G57-21 AS)**

Add new definition as follows:

**COMPUTER ROOM**

**.**

A room or portions of a *building* used primarily to house *information technology equipment* (ITE) and serving an ITE load less than or equal to10 kW or 20 W/ft2 (215 W/m2) or less of conditioned floor area.

**DATA CENTER**

**.**

A room or *building*, or portions thereof, used primarily to house *information technology equipment* (ITE) and serving a total ITE load greater than 10 kW and 20 W/ft2 (215 W/m2) of conditioned floor area.

**INFORMATION TECHNOLOGY EQUIPMENT (ITE)**

**.**

Computers, data storage, servers, and network communication equipment.

**INFORMATION TECHNOLOGY EQUIPMENT FACILITIES (ITEF)**

**.**

*Data centers* and *computer rooms* used primarily to house *information technology equipment*

**(F11023 / G99-21 Part I AS)**

**[BS] GYPSUM BOARD.**

A type of gypsum panel product consisting of a noncombustible core primarily of gypsum with paper surfacing.

~~The generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper~~ ~~surfacing.~~

**[BS] GYPSUM PANEL PRODUCT.** The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2 and Table 2507.2, and Chapter 35. *~~Gypsum board~~* ~~and~~ *~~glass mat gypsum panels~~* ~~are examples of~~ *~~gypsum panel products~~*~~.~~

**[BS] GYPSUM SHEATHING.** *Gypsum panel products* specifically manufactured with enhanced water resistance for use as a substrate for exterior surface materials.

**[BS] GYPSUM WALLBOARD.** A *gypsum board* used primarily as an interior surfacing for building structures.

**(S10917 / G1-22 Part I AS)**

**METAL BUILDING SYSTEM.**

An integrated set of fabricated components and assemblies that form a complete or partial building shell that is designed by the manufacturer. This system typically includes but is not limited to primary framing comprised of built-up structural steel members, secondary members that are cold-formed steel or open-web steel joists, a metal panel roof system and exterior wall cladding. The system is manufactured in a manner that permits plant and/or field inspection prior to assembly or erection.

**(S11247 / S197-22 AM)**

**SMOKE PROTECTIVE CURTAIN ASSEMBLY FOR HOISTWAY**

**.**

An automatic closing smoke and draft control curtain assembly.

**(SP11067 / G185-21 AS)**

**PHOTOVOLTAIC (PV) PANEL SYSTEM, GROUND-MOUNTED.**

**.**

An independent photovoltaic (PV) panel system without useable space underneath, installed directly on the ground.

**PHOTOVOLTAIC (PV) SUPPORT STRUCTURE, ELEVATED.**

**.**

An independent photovoltaic (PV) panel support structure designed with useable space underneath with minimum clear height of 7 feet 6 inches (2286 mm), intended for secondary use such as providing shade or parking of motor vehicles.

**(S11073 / G193-21 AS)**

**OCCUPIABLE ROOF.** An exterior space on a roof that is designed for human occupancy, other than maintenance or repair, and which is equipped with a means of egress system meeting the requirements of this code.

**(F10961 / G20-21 Part II AM)**

Revise definition for “Wind-Borne Debris Region” as follows:

~~WINDBORNE DEBRIS REGION. Areas within hurricane-prone regions located:~~

~~1. Within 1 mile (1.61 km) of the mean high-water line where an Exposure D condition exists upwind at the waterline and 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 Fig-ure 1609.3(2). For Risk Category IV buildings and other structures, the wind-borne debris region shall be based on Figure 1609.3(3).~~

**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).

Supplement 2 – Annual Amendment

**CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION**

Revise as follows:

**[F] 307.1 High-hazard Group H.** High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or *health hazard* in quantities in excess of those allowed in *control areas* complying with Section 414, based on the maximum allowable quantity limits for *control areas* set forth in Tables 307.1(1) and 307.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this section, the requirements of Section 415 and the *International Fire Code*. *Hazardous materials* stored, or used on top of roofs or canopies, shall be classified as ~~outdoor~~ rooftop storage or use and shall comply with the *Inte Florida Fire Prevention Code*.

**(F10793 / F197-21 AS)**

Revise as follows:

TABLE 307.1(1) MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL**HAZARDa, j, m, n, p**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **CLASS** | **GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED** | **STORAGEb** | | | **USE-CLOSED SYSTEMSb** | | | **USE-OPEN SYSTEMSb** | |
| **Solid pounds(cubic**  **feet)** | **Liquid gallons (pounds)** | **Gas (cubic feet at NTP)** | **Solid pounds(cubic**  **feet)** | **Liquid gallons (pounds)** | **Gas (cubic feet at NTP)** | **Solid pounds(cubic**  **feet)** | **Liquid gallons (pounds)** |
| Combustible dust | NA | H-2 | SeeNote q | NA | NA | See Note q | NA | NA | See Note q | NA |
| Combustible fiberq | Loose | H-3 | (100) | NA | NA | (100) | NA | NA | (20) | NA |
| Baledo | (1,000) | (1,000) | (200) |
| Combustible liquidc, i | II | H-2 or H-3 | NA | 120d, e | NA | NA | 120d | NA | NA | 30d |
| IIIA | H-2 or H-3 | 330d, e | 330d | 80d |
| IIIB | NA | 13,200e, f | 13,200f | 3,300f |
| Cryogenic flammable | NA | H-2 | NA | 45d | NA | NA | 45d | NA | NA | 10d |
| Cryogenic inert | NA | NA | NA | NA | NL | NA | NA | NL | NA | NA |
| Cryogenic oxidizing | NA | H-3 | NA | 45d | NA | NA | 45d | NA | NA | 10d |
| Explosives | Division  1.1 | H-1 | 1e, g | (1)e, g | NA | 0.25g | (0.25)g | NA | 0.25g | (0.25)g |
| Division  1.2 | H-1 | 1e, g | (1)e, g | 0.25g | (0.25)g | 0.25g | (0.25)g |
| Division  1.3 | H-1 or H-2 | 5e, g | (5)e, g | 1g | (1)g | 1g | (1)g |
| Division  1.4 | H-3 | 50e, g | (50)e, g | 50g | (50)g | NA | NA |
| Division  1.4G | H-3 | 125e, l | NA | NA | NA | NA | NA |
| Division  1.5 | H-1 | 1e, g | (1)e, g | 0.25g | (0.25)g | 0.25g | (0.25)g |
| Division  1.6 | H-1 | 1e, g | NA | NA | NA | NA | NA |
| Flammable gas | Gaseous | H-2 | NA | NA | 1,000d,e | NA | NA | 1,000d,e | NA | NA |
| Liquefied | (150)d,e | NA | (150)d,e | NA |
| Flammable liquidc | IA | H-2 or H-3 | NA | 30d, e | NA | NA | 30d | NA | NA | 10d |
| IB and  IC | 120d, e | 120d | 30d |
| Flammable liquid,  combination (IA, IB, IC) | NA | H-2 or H-3 | NA | 120d, e, h | NA | NA | 120d, h | NA | NA | 30d, h |
| Flammable solid | NA | H-3 | 125d, e | NA | NA | 125d | NA | NA | 25d | NA |
| Inert gas | Gaseous | NA | NA | NA | NL | NA | NA | NL | NA | NA |
| Liquefied | NA | NA | NA | NL | NA | NA | NL | NA | NA |
| Organic peroxide | UD | H-1 | 1e, g | (1)e, g | NA | 0.25g | (0.25)g | NA | 0.25g | (0.25)g |
| I | H-2 | 5d, e | (5)d, e | 1d | (1)d | 1d | (1)d |
| II | H-3 | 50d, e | (50)d, e | 50d | (50)d | 10d | (10)d |
| III | H-3 | 125d, e | (125)d, e | 125d | (125)d | 25d | (25)d |
| IV | NA | NL | NL | NL | NL | NL | NL |
| V | NA | NL | NL | NL | NL | NL | NL |
| Oxidizer | 4 | H-1 | 1g | (1)e, g | NA | 0.25g | (0.25)g | NA | 0.25g | (0.25)g |
| 3k | H-2 or H-3 | 10d, e | (10)d, e | 2d | (2)d | 2d | (2)d |
| 2 | H-3 | 250d, e | (250)d, e | 250d | (250)d | 50d | (50)d |
| 1 | NA | 4,000e, f | (4,000)e, f | 4,000f | (4,000)f | 1,000f | (1,000)f |
| Oxidizing gas | Gaseous | H-3 | NA | NA | 1,500d,e | NA | NA | 1,500d,e | NA | NA |
| Liquefied | (150)d, e | NA | (150)d,e | NA |
| Pyrophoric | NA | H-2 | 4e, g | (4)e, g | 50e, g | 1g | (1)g | 10e, g | 0 | 0 |
| Unstable (reactive) | 4 | H-1 | 1e, g | (1)e, g | 10e, g | 0.25g | (0.25)g | 2e, g | 0.25g | (0.25)g |
| 3 | H-1 or H-2 | 5d, e | (5)d, e | 50d, e | 1d | (1)d | 10d, e | 1d | (1)d |
|  | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **CLASS** | **GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED** | **STORAGE** | | | **USE-CLOSED SYSTEMS** | | | **USE-OPEN SYSTEMS** | |
| **Solid pounds(cubic**  **feet)** | **Liquid gallons (pounds)** | **Gas (cubic feet at NTP)** | **Solid pounds(cubic**  **feet)** | **Liquid gallons (pounds)** | **Gas (cubic feet at NTP)** | **Solid pounds(cubic**  **feet)** | **Liquid gallons (pounds)** |
|  | 2 | H-3 | 50d, e | (50)d, e | 750d, e | 50d | (50)d | 750d, e | 10d | (10)d |
| 1 | NA | NL | NL | NL | NL | NL | NL | NL | NL |
| Water reactive | 3 | H-2 | 5d, e | (5)d, e | NA | 5d | (5)d | NA | 1d | (1)d |
| 2 | H-3 | 50d, e | (50)d, e | 50d | (50)d | 10d | (10)d |
| 1 | NA | NL | NL | NL | NL | NL | NL |

For SI: 1 cubic foot = 0.028 m3, 1 pound = 0.454 kg, 1 gallon = 3.785 L. NL = Not Limited; NA = Not Applicable; UD = Unclassified Detonable.

a. For use of control areas, see Section 414.2.

b. The aggregate quantity in use and storage shall not exceed themaximum allowable quantity ~~specified~~ for storage. , including applicable increases.

c. The quantities of alcoholic beverages in retail and wholesale sales occupancies shall not be limited provided the liquids are packaged in individual containers not exceeding 1.3 gallons. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs or consumer products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.

d. Maximum allowable quantities shall be increased 100 percent in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where Note e also applies, the increase for both notes shall be applied accumulatively.

e. Maximum allowable quantities shall be increased 100 percent when stored in approved storage cabinets, day boxes, gas cabinets, gas rooms or exhausted enclosures or in listed safety cans in accordance with Section 5003.9.10 of the International Fire Code. Where Note d also applies, the increase for both notes shall be applied accumulatively.

f. Quantities shall not be limited in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

g. Allowed only in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

h. Containing not more than the maximum allowable quantity per control area of Class IA, IB or IC flammable liquids.

i. The maximum allowable quantity shall not apply to fuel oil storage complying with Section 605.4.2 of the International Fire Code.

j. Quantities in parentheses indicate quantity units in parentheses at the head of each column.

k. A maximum quantity of 220 pounds of solid or 22 gallons of liquid Class 3 oxidizers is allowed when such materials are necessary for maintenance purposes, operation or sanitation of equipment when the storage containers and the manner of storage are approved.

l. Net weight of the pyrotechnic composition of the fireworks. Where the net weight of the pyrotechnic composition of the fireworks is not known, 25 percent of the gross weight of the fireworks, including packaging, shall be used.

m. For gallons of liquids, divide the amount in pounds by 10 in accordance with Section 5003.1.2 of the International Fire Code.

n. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 414.2.5, see Tables 414.2.5(1) and 414.2.5(2).

o. Densely packed baled cotton that complies with the packing requirements of ISO 8115 shall not be included in this material class.p. The following shall not be included in determining the maximum allowable quantities:

1. Liquid or gaseous fuel in fuel tanks on vehicles.

2. Liquid or gaseous fuel in fuel tanks on motorized equipment operated in accordance with the*International Fire Code*.

3. Gaseous fuels in piping systems and fixed appliances regulated by the*International Fuel Gas Code*.

4. Liquid fuels in piping systems and fixed appliances regulated by the*International Mechanical Code*.

5. Alcohol-based hand rubs classified as Class I or II liquids in dispensers that are installed in accordance with Sections 5705.5 and 5705.5.1 of the International Fire Code. The location of the alcohol-based hand rub (ABHR) dispensers shall be provided in the construction documents.

q. Where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3.

TABLE 307.1(2) MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A HEALTH

**HAZARDa, c, f, h, i**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **STORAGEb** | | | **USE-CLOSED SYSTEMSb** | | | **USE-OPEN SYSTEMSb** | |
| **Solid poundsd,**  **e** | **Liquid gallons (pounds)d,**  **e** | **Gas cubic feet at NTP (pounds)d** | **Solid poundsd** | **Liquid gallons (pounds)d** | **Gas cubic feet at NTP (pounds)d** | **Solid poundsd** | **Liquid gallons (pounds)d** |
| Corrosives | 5,000 | 500 | Gaseous 810e | 5,000 | 500 | Gaseous 810e | 1,000 | 100 |
| Liquefied (150) | Liquefied (150) |
| Highly  Toxic | 10 | (10) | Gaseous 20g | 10 | (10) | Gaseous 20g | 3 | (3) |
| Liquefied (4)g | Liquefied (4)g |
| Toxic | 500 | (500) | Gaseous 810e | 500 | (500) | Gaseous 810e | 125 | (125) |
| Liquefied (150)e | Liquefied (150)e |

For SI: 1 cubic foot = 0.028 m3, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

a. For use of control areas, see Section 414.2.

b. The aggregate quantity in use and storage shall not exceed the maximum allowable quantity ~~specified~~ for storage. , including applicable increases.

c. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs or consumer products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.

d. Maximum allowable quantities shall be increased 100 percent in buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Where Note e also applies, the increase for both notes shall be applied accumulatively.

e. Maximum allowable quantities shall be increased 100 percent where stored in approved storage cabinets, gas cabinets or exhausted enclosures as specified in the *International Fire Code*. Where Note d also applies, the increase for both notes shall be applied accumulatively.

f. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 414.2.5, see Tables 414.2.5(1) and 414.2.5(2).

g. Allowed only where stored in approved exhausted gas cabinets or exhausted enclosures as specified in the*International Fire Code*.

h. Quantities in parentheses indicate quantity units in parentheses at the head of each column.

i. For gallons of liquids, divide the amount in pounds by 10 in accordance with Section 5003.1.2 of the International Fire Code.

**(F10790 / F191-21 AS)**

Revise as follows:

**304.1 Business Group B.** Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

 Airport traffic control towers

 *Ambulatory care facilities*

 Animal hospitals, kennels and pounds  Banks

 Barber and beauty shops  Car wash

 Civic administration

 *Clinic, outpatient*

 Dry cleaning and laundries: pick-up and delivery stations and self-service

 Educational occupancies for students above the 12th grade including *higher education laboratories*

Electronic data ~~processing~~ entry



 Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2,500 square feet (232 m2) in area

 Laboratories: testing and research

 Lithium-ion or lithium metal battery testing, research and development  Motor vehicle showrooms

 Post offices  Print shops

 Professional services (architects, attorneys, dentists, physicians, engineers, etc.)  Radio and television stations

 Telephone exchanges

Training and skill development not in a school or academic program (this shall include, but not be limited to, tutoring centers, martial arts studios, gymnastics and similar uses regardless of the ages served, and where not classified as a Group A occupancy)



**306.2 Moderate-hazard factory industrial, Group F-1.** Factory industrial uses that are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

 Aircraft (manufacturing, not to include repair)  Appliances

 Athletic equipment

 Automobiles and other motor vehicles  Bakeries

 Beverages: over 16-percent alcohol content  Bicycles

 Boats

 Brooms or brushes  Business machines

 Cameras and photo equipment  Canvas or similar fabric

 Carpets and rugs (includes cleaning)  Clothing

 Construction and agricultural machinery  Disinfectants

 Dry cleaning and dyeing  Electric generation plants  Electronics

 Energy storage systems (ESS) in dedicated use buildings

 Energy storage systems (ESS) and equipment containing lithium-ion or lithium metal batteries  Engines (including rebuilding)

 Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities more than 2,500 square feet (232 m2) in area

 Furniture

 Hemp products  Jute products

 Laundries

 Leather products

 Lithium-ion batteries  Machinery

 Metals

 Millwork (sash and door)

 Motion pictures and television filming (without spectators)  Musical instruments

 Optical goods

 Paper mills or products  Photographic film

 Plastic products

 Printing or publishing  Recreational vehicles  Refuse incineration

 Shoes

 Soaps and detergents  Textiles

 Tobacco  Trailers

 Upholstering

 Vehicles powered by lithium-ion or lithium metal batteries  Water/sewer treatment facilities

 Wood; distillation

 Woodworking (cabinet)

**311.2 Moderate-hazard storage, Group S-1.** 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

 Aircraft hangar (storage and repair)  Bags: cloth, burlap and paper

 Bamboos and rattan  Baskets

 Belting: canvas and leather

 Beverages over 16-percent alcohol content

 Books and paper in rolls or packs  Boots and shoes

 Buttons, including cloth covered, pearl or bone  Cardboard and cardboard boxes

 Clothing, woolen wearing apparel  Cordage

 Dry boat storage (indoor)  Furniture

 Furs

 Glues, mucilage, pastes and size  Grains

 Horns and combs, other than celluloid  Leather

 Linoleum

 Lithium-ion or lithium Metal batteries  Lumber

 Motor vehicle *repair garages* complying with the maximum allowable quantities of*hazardous materials* specified in Table 307.1(1) (see Section 406.8)

 Photo engravings  Resilient flooring

 *Self-service storage facility* (mini-storage)  Silks

 Soaps  Sugar

 Tires, bulk storage of

 Tobacco, cigars, cigarettes and snuff  Upholstery and mattresses

 Vehicle repair garages for vehicles powered by lithium-ion or lithium metal batteries  Wax candles

**(F10964 / G32-21 AS)/ (F10967 / G33-21 AS)**

Revise as follows:

**[F] 307.3.1 Occupancies containing explosives not classified as H-1.** The following occupancies containing *explosive* materials shall be classified as follows:

1. Division 1.3 *explosive* materials that are used and maintained in a form where either confinement or configuration will not elevate the hazard from a mass fire to mass *explosion* hazard shall be allowed in H-2 occupancies.

2. Division 1.4 explosive materials shall be allowed in H-3 occupancies.

~~2~~3. Articles, including articles packaged for shipment, that are not regulated as a Division 1.4*explosive* under Bureau of Alcohol, Tobacco, Firearms and Explosives regulations, or unpackaged articles used in process operations that do not propagate a detonation or deflagration between articles shall be allowed in H-3 occupancies.

**(F10969 / G40-21 AMPC1)**

Revise as follows:

**[F] 307.4 High-hazard Group H-2.** Buildings and structures containing materials that pose a deflagration hazard or a hazard from accelerated burning shall be classified as Group H-2. Such materials shall include, but not be limited to, the following:

Class I, II or IIIA *flammable or combustible liquids* that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103.4 kPa).

*Combustible dusts* where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3.

*Cryogenic fluids*, flammable. Category 1A*Flammable gases.*

Category 1B *Flammable gases* having a burning velocity greater than 3.9 inches per second (10 cm/s).

*Organic peroxides*, Class I.

*Oxidizers*, Class 3, that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103 kPa).

*Pyrophoric*liquids, solids and gases, nondetonable. *Unstable (reactive) materials*, Class 3, nondetonable. *Water-reactive materials*, Class 3.

**[F] 307.5 High-hazard Group H-3.** Buildings and structures containing materials that readily support combustion or that pose a*physical hazard* shall be classified as Group H-3. Such materials shall include, but not be limited to, the following:

Class I, II or IIIA *flammable or combustible liquids* that are used or stored in normally closed containers or systems pressurized at 15 pounds per square inch gauge (103.4 kPa) or less

*Combustible fibers*, other than densely packed*baled cotton*, where manufactured, generated or used in such a manner that the concentration and conditions create a fire or *explosion* hazard based on information prepared in accordance with Section 414.1.3 Consumer *fireworks*, 1.4G (Class C, Common)

*Cryogenic fluids*, oxidizing

Category 1B *flammable gases* having a burning velocity of 3.9 inches per second (10 cm/s) or less

*Flammable solids*

*Organic peroxides*, Class II and III

*Oxidizers,* Class 2

*Oxidizers*, Class 3, that are used or stored in normally closed containers or systems pressurized at 15 pounds per square inch gauge (103 kPa) or less

*Oxidizing gases*

*Unstable (reactive) materials*, Class 2

*Water-reactive materials*, Class 2

**(F10970 / G41-21 AS)**

**CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE**

**SECTION 402**

**COVERED MALL AND OPEN MALL BUILDINGS**

**Revise as follows:**

**402.8.5 Distance to exits.** Within each individual tenant space in a *covered* or *open mall building*, the distance of travel from any point to an *exit* or entrance to the *mall* shall be not greater than 200 feet (60 960 mm).

The distance of travel from any point within a *mall* of a *covered mall building* to an *exit* shall be not greater than 200 feet (60 960 mm). The maximum distance of travel from any point within an *open mall* to an *exit* or to the perimeter line of the *open mall building* shall be not greater than 200 feet (60 960 mm).

**(F11001 / G52-21 AS)**

**SECTION 403 HIGH-RISE BUILDINGS**

**Revise as follows:**

**[F] 403.3.1 Number of sprinkler risers and system design.** ~~Each sprinkler system zone in buildings that are more than 420 feet (128 m)~~ in *building height* shall be supplied by not fewer than two risers. Each riser shall supply sprinklers on alternate floors. If more than two ~~risers are provided for a zone, sprinklers on adjacent floors shall not be supplied from the same riser.~~ The number of sprinkler risers and design shall comply with Section 403.3.1.1 or 403.3.1.2 based on building height.

**403.3.1.1 Buildings 420 feet (36.5 m) or less in height.** In buildings 420 feet (36.5 m) or less in height, sprinkler systems shall be supplied by a single standpipe or *sprinkler express riser* within each *vertical water supply zone*.

**403.3.1.2 Buildings over 420 feet (128 m) in height.** In buildings over 420 feet (128 m) in height, a minimum of two standpipes or *sprinkler express risers* shall supply *automatic sprinkler systems* within each *vertical water supply zone*. Each standpipe or *sprinkler express riser*

shall supply *automatic sprinkler systems* on alternating floors within the *vertical water supply* zone such that two adjacent floors are not supplied from the same riser.

**[F] ~~403.3.1.1~~ 403.3.1.3 Riser location.** Standpipes or ~~Sprinkler~~ *sprinkler express risers* shall be placed in *interior exit stairways* and *ramps*

that are remotely located in accordance with Section 1007.1.

**(F11002 / G57-21 AS)**

Revise as follows:

**[BS] 403.2.3 Structural integrity of interior exit stairways and elevator hoistway enclosures.** For *high-rise buildings of Risk Category* III or IV in accordance with Section 1604.5, and for all buildings that are more than 420 feet (128 m) in *building height*, enclosures for *interior exit stairways* and elevator hoistway enclosures shall comply with Sections 403.2.3.1 through ~~403.2.3.4~~403.2.3.3.

**Delete without substitution:**

**~~[BS] 403.2.3.1 Wall assembly materials—soft body impact~~.** ~~The panels making up the enclosures for~~ *~~interior exit stairways~~* ~~and elevator~~ ~~hoistway enclosures shall meet or exceed Soft Body Impact Classification Level 2 as measured by the test method described in ASTM~~ ~~C1629/C1629M.~~

**Revise as follows:**

**[BS] ~~403.2.3.2~~ 403.2.3.1 Wall assembly materials~~—hard body impact~~.** ~~The panels making up the enclosures for~~ *~~interior exit stairways~~* ~~and elevator hoistway enclosures that are not exposed to the interior of the enclosures for~~ *~~interior exit stairways~~* ~~or elevator hoistway~~ ~~enclosure~~ Where an interior exit stairway enclosure or an elevator hoistway enclosure is constructed as an interior wall of the building, the panels applied to the exterior of the enclosure shall be in accordance with one of the following:

1. The wall assembly shall incorporate not fewer than two layers of impact-resistant panels, each of which meets or exceeds Soft Body Impact Classification Level 2 and Hard Body Impact Classification Level 2 as measured by the test method described in ASTM C1629/C1629M.

2. The wall assembly shall incorporate not fewer than one layer of impact-resistant panels that meet or exceed Soft Body Impact Classification Level 2 and Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.

3. The wall assembly incorporates multiple layers of any material, tested in tandem, that meets or exceeds Soft Body Impact Classification Level 2 and Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.

**[BS] ~~403.2.3.3~~ 403.2.3.2 Concrete and masonry walls.** Concrete or masonry walls shall be deemed to satisfy the requirements of ~~Sections~~ Section 403.2.3.1 ~~and 403.2.3.2~~.

**[BS] ~~403.2.3.4~~ 403.2.3.3 Other wall assemblies.** Any other wall assembly that provides impact resistance equivalent to that required by Section~~s~~ 403.2.3.1 for Soft Body Impact Classification Level 2 and ~~403.2.3.2~~ for Hard Body Impact Classification Level 3, as measured by

the test method described in ASTM C1629/C1629M, shall be permitted.

**(S10944 / G7-22 AS)**

Add a new section:

**403.2.3.4 Glass walls.** Glass walls complying with the safety glazing impact requirements of CPSC 16 CFR 1201, Cat. II or ANSI Z97.1, Class A shall be deemed to satisfy the requirements of Sections 403.2.3.1 and 403.2.3.2.

**(S10948 / G8-22 AM)**

Revise as follows:

**[F] 403.4.7 Smoke removal.** To facilitate smoke removal in post-fire salvage and overhaul operations, buildings and structures shall be equipped with natural or mechanical *ventilation* for removal of products of combustion in accordance with one of the following:

1. Easily identifiable, manually operable windows or panels shall be distributed around the perimeter of each floor at not more than 50- foot (15 240 mm) intervals. The area of operable windows or panels shall be not less than 40 square feet (3.7 m2) per 50 linear feet (15 240 mm) of perimeter.

**Exceptions:**

1. In Group R-1 occupancies, each *dwelling unit, sleeping unit* or suite having an *exterior wall* shall be permitted to be provided with 2 square feet (0.19 m2) of venting area in lieu of the area specified in Item 1.

2. Windows shall be permitted to be fixed provided that glazing can be cleared by fire fighters.

2. Mechanical air-handling equipment providing one exhaust air change every 15 minutes for the area involved. Return and exhaust air shall be moved directly to the outside without recirculation to other portions of the building.

3. Any other *approved* design that will produce equivalent results.

**(F10995 / G44-21 Part II AS)**

**SECTION 404 ATRIUMS**

**Revise as follows:**

**404.10 Exit stairways in an atrium.** Where an *atrium* contains an *interior exit stairway* all the following shall be met:

1. The entry to the *exit stairway* is the edge of the closest riser of the *exit stairway.*

2. The entry of the *exit stairway* shall have access from a minimum of two directions.

3. The distance between the entry to an *exit stairway* in an *atrium* and the entrance to a minimum of one *exit stairway* enclosed in accordance with Section 1023.2 shall comply with the separation required by Section 1007.1.1.

4. *Exit access* travel distance shall be measured to the closest riser of the *exit stairway*.

5. Not more than 50 percent of the *exit stairways* shall be located in the same *atrium*.

6. The discharge from the exit stairway at the level of exit discharge shall comply with Section 1028.1.

**(F11007 / G63-21 AS)**

**Revise as follows:**

**404.6 Enclosure of atriums.** *Atrium* spaces shall be separated from adjacent spaces by a 1-hour*fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 711, or both.

**Exceptions:**

1. A *fire barrier* is not required where a glass wall forming a *smoke partition* is provided. The glass wall shall comply with all of the following:

1.1. *Automatic* sprinklers are provided along both sides of the separation wall and doors, or on the room side only if there is not a walkway on the *atrium* side. The sprinklers shall be located between 4 inches and 12 inches (102 mm and 305 mm) away from the glass and at intervals along the glass not greater than 6 feet (1829 mm). The sprinkler system shall be designed so that the entire surface of the glass is wet upon activation of the sprinkler system without obstruction;

1.2. The glass wall shall be installed in a gasketed frame in a manner that the framing system deflects without breaking (loading) the glass before the sprinkler system operates; and

1.3. Where glass doors are provided in the glass wall, they shall be either *self-closing* or automatic-closing.

2. A *fire barrier* is not required where a glass-block wall assembly complying with Section 2110 and having a3/4-hour *fire protection rating* is provided.

3. A *fire barrier* is not required between the *atrium* and the adjoining spaces of up to three floors of the *atrium* provided that such spaces are accounted for in the design of the smoke control system.

4. In other than Group I-2, and Group I-1, Condition 2, a~~A~~ *fire barrier* is not required between the *atrium* and the adjoining spaces where the *atrium* is not required to be provided with a smoke control system.

5. In Group I-2 and Group I-1, Condition 2, a fire barrier is not required between the atrium and the adjoining spaces, other than care recipient sleeping or treatment rooms, for up to three stories of the atrium provided that such spaces are accounted for in the design of the smoke control system and are not providing access to care recipient sleeping or treatment rooms.

~~5.~~6. A *horizontal assembly* is not required between the *atrium* and openings for escalators complying with Section 712.1.3.

~~6.~~7. A *horizontal assembly* is not required between the *atrium* and openings for *exit access stairways* and *ramps* complying with Item 4 of Section 1019.3.

**(F11006 / G62-21 AS)**

**SECTION 407 GROUP I-2**

**Revise as follows:**

**407.4.4 Group I-2 care suites.** *Care suites* in Group I-2 shall comply with Sections 407.4.4.1 through~~407.4.4.4~~ 407.4.4.5 and either Section ~~407.4.4.5~~ 407.4.4.6 or ~~407.4.4.6~~ 407.4.4.7.

**407.4.4.3 Access to corridor.** Every *care suite* shall have a door leading directly to an *exit access corridor* or *horizontal exit*. Movement from habitable rooms within a *care suite* shall not require more than 100 feet (30 480 mm) of travel within the *care suite* to a door leading to the *exit access corridor* or *horizontal exit*. Where a *care suite* is required to have more than one *exit access* door by Section 407.4.4.5.2 or 407.4.4.6.2, the additional door shall lead directly to an *exit access corridor*, *exit* or an adjacent suite.

**Add new text as follows:**

**407.4.4.4 Circulation paths within a care suite.** The circulation paths ~~circulating space~~ within a care suite providing the access to ~~the door~~ doors required in Section 407.4.4.3 shall have a minimum width of 36 inches (914 mm) and shall not be required to meet the requirements for a corridor or an aisle.

**Revise as follows:**

**~~407.4.4.4~~ 407.4.4.5 Doors within care suites.** Doors in *care suites* serving habitable rooms shall be permitted to comply with one of the following:

1. Manually operated horizontal sliding doors permitted in accordance with Exception 9 to Section 1010.1.2.

2. *Power-operated doors* permitted in accordance with Section 1010.1.2, Exception 7.

3. *Means of egress* doors complying with Section 1010.

**(F11009 / G71-21 AM)**

**SECTION 410**

**STAGES, PLATFORMS AND TECHNICAL PRODUCTION AREAS**

**Revise as follows:**

**410.3.4 Proscenium wall.** Where the *stage* height is greater than 50 feet (15 240 mm), all portions of the *stage* shall be completely separated from the seating area by a *proscenium wall* with not less than a 2-hour *fire-resistance rating* extending continuously from the foundation to the roof.

**Exception:** Where a stage is located in a building of Type I construction, the proscenium wall is permitted to extend continuously from a minimum 2-hour fire-resistance-rated floor slab of the space containing the stage to the roof or a minimum 2-hour fire-resistance-rated floor deck above.

**(F11011 / G79-21 AS)**

**SECTION 410**

**STAGES, PLATFORMS AND TECHNICAL PRODUCTION AREAS**

**Revise as follows:**

**410.5.1 Separation from stage.** The *stage* shall be separated from dressing rooms, scene docks, property rooms, workshops, storerooms and compartments ~~appurtenant~~ contiguous to the *stage* and other parts of the building by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. The *fire-resistance rating* shall be not less than 2 hours for *stage* heights greater than 50 feet (15 240 mm) and not less than 1 hour for *stage* heights of 50 feet (15 240 mm) or less.

**410.5.2 Separation from each other.** Dressing rooms, scene docks, property rooms, workshops, storerooms and compartments ~~appurtenant~~ contiguous to the *stage* shall be separated from each other by not less than 1-hour*fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.

**(F11012 / G82-21 AS)**

**Revise as follows:**

**[F] 410.7 Automatic sprinkler system.** *Stages* shall be equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1. Sprinklers shall be installed under the roof and gridiron and under all catwalks and galleries over the *stage*. Sprinklers shall be installed in dressing rooms, performer lounges, shops and storerooms accessory to such *stages*.

**Exceptions:**

1. Sprinklers are not required under *stage* areas less than 4 feet (1219 mm) in clear height that are utilized exclusively for storage of tables and chairs, provided that the concealed space is separated from the adjacent spaces by Type X *gypsum board* not less than 5/8-inch (15.9 mm) in thickness.

2. Sprinklers are not required for *stages* 1,000 square feet (93 m2) or less in area and 50 feet (15 240 mm) or less in height where curtains, scenery or other combustible hangings are not retractable vertically. Combustible hangings shall be limited to a single main curtain, borders, legs and a single backdrop.

3. Sprinklers are not required within portable orchestra enclosures on *stages*.

4. Sprinklers are not required under catwalks and galleries where they are permitted to be omitted in accordance with Section 903.3.1.1

**(F11013 / G84-21 AMPC1)**

**SECTION 410**

**STAGES, PLATFORMS AND TECHNICAL PRODUCTION AREAS**

**Delete without substitution:**

**~~[F] 410.8 Standpipes~~.** *~~Standpipe systems~~* ~~shall be provided in accordance with Section 905~~.

**(F11014 / G85-21 AS)**

*Revise as follows:*

**TABLE 415.11.1.1.1 QUANTITY LIMITS FOR HAZARDOUS MATERIALS IN A SINGLE FABRICATION AREA IN GROUP H-5a**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **HAZARD CATEGORY** | | **SOLIDS (pounds per square foot)** | **LIQUIDS (gallons per square foot)** | **GAS (cubic feet @ NTP/square foot)** |
| **PHYSICAL-HAZARD MATERIALS** | | | | |
| Combustible dust | | Note b | Not Applicable | Not Applicable |
| Combustible fiber | Loose | Note b | Not Applicable | Not Applicable |
| Baled | Notes b and c |
| Combustible liquid | II | Not Applicable | ~~0.01~~ 0.02 | Not Applicable |
| IIIA | ~~0.02~~ 0.04 |
| IIIB | Not Limited |
| Combination Class | I, II and IIIA | ~~0.04~~ 0.08 |
| Cryogenic gas | Flammable | Not Applicable | Not Applicable | Note d |
| Oxidizing | ~~1.25~~ 2.5 |
| Explosives | | Note b | Note b | Note b |
| Flammable gas | Gaseous | Not Applicable | Not Applicable | Note d |
| Liquefied | Note d |
| Flammable liquid | IA | Not Applicable | ~~0.0025~~ 0.005 | Not Applicable |
| IB | ~~0.025~~ 0.05 |
| IC | ~~0.025~~ 0.05 |
| Combination Class | IA, IB and IC | ~~0.025~~ 0.05 |
| Combination Class | I, II and IIIA | ~~0.04~~ 0.08 |
| Flammable solid | | ~~0.001~~ 0.002 | Not Applicable | Not Applicable |
| Organic peroxide | Unclassified detonable | Note b | ~~Not Applicable~~ Note b | Not Applicable |
| Class I | Note b | Note b |
| Class II | ~~0.025~~ 0.05 | 0.0025 |
| Class III | ~~0.1~~ 0.2 | .02 |
| Class IV | Not Limited | Not Limited |
|  | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **HAZARD** | **CATEGORY** | **SOLIDS (pounds per square foot)** | **LIQUIDS (gallons per square foot)** | **GAS (cubic feet @ NTP/square foot)** |
|  | Class V | Not Limited | Not Limited |  |
| Oxidizing gas | Gaseous | Not Applicable | Not Applicable | 1.25 2.5 |
| Liquefied | 1.25 2.5 |
| Combination of gaseous and liquefied | | 1.25 2.5 |
| Oxidizer | Class 4 | Note b | Note b | Not Applicable |
| Class 3 | 0.003 0.006 | 0.03 0.06 |
| Class 2 | 0.003 0.006 | 0.03 0.06 |
| Class 1 | 0.003 0.006 | 0.03 0.06 |
| Combination Class | 1, 2, 3 | 0.003 0.006 | 0.03 0.06 |
| Pyrophoric materials | | 0.01 Note b | 0.00125 0.0025 | Notes d and e |
| Unstable (reactive) | Class 4 | Note b | Note b | Note b |
| Class 3 | 0.025 0.05 | 0.0025 0.005 | Note b |
| Class 2 | 0.1 0.2 | 0.01 0.02 | Note b |
| Class 1 | Not Limited | Not Limited | Not Limited |
| Water reactive | Class 3 | 0.01 0.02f | 0.00125 0.0025 | Not Applicable |
| Class 2 | 0.25 0.5 | 0.025 0.05 |
| Class 1 | Not Limited | Not Limited |
| **HEALTH-HAZARD MATERIALS** | | | | |
| Corrosives | | Not Limited | Not Limited | Not Limited |
| Highly toxic | | Not Limited | Not Limited | Note d |
| Toxics | | Not Limited | Not Limited | Note d |

###### Revise as follows:

**TABLE 414.2.5(1) MAXIMUM ALLOWABLE QUANTITY PER INDOOR AND OUTDOOR CONTROL AREA IN GROUP M AND S OCCUPANCIES OF NONFLAMMABLE SOLIDS AND NONFLAMMABLE AND NONCOMBUSTIBLE LIQUIDSd, e, f**

|  |  |  |  |
| --- | --- | --- | --- |
| **CONDITION** | | **MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA** | |
| **Materiala** | **Class** | **Solids (pounds)** | **Liquids (gallons)** |
| **A. Health-hazard materials—nonflammable and noncombustible solids and liquids** | | | |
| 1. Corrosivesb, c | Not Applicable | 9,750 | 975 |
| 2. Highly toxics | Not Applicable | 20b, c | 2b, c |
| 3. Toxicsb, c | Not Applicable | 1,000k | 100 |
| **B. Physical-hazard materials—nonflammable and noncombustible solids and liquids** | | | |
| 1. Oxidizersb, c | 4 | Not Allowed | Not Allowed |
| 3 | ~~1,350~~ 1,500g | ~~115~~ 150 |
| 2 | 2,250h | 225 |
| 1 | 18,000i, j | 1,800i, j |
| 2. Unstable (reactives)b, c | 4 | Not Allowed | Not Allowed |
| 3 | 550 | 55 |
| 2 | 1,150 | 115 |
| 1 | Not Limited | Not Limited |
| 3. Water reactives | 3b, c | 550 | 55 |
| 2b, c | 1,150 | 115 |
| 1 | Not Limited | Not Limited |

**(F10792 / F196-21 AS)/(F10788 / F162-21 AS)**

Revise as follows:

**[F] TABLE 414.5.1 EXPLOSION CONTROL REQUIREMENTSa, h**

|  |  |  |  |
| --- | --- | --- | --- |
| **MATERIAL** | **CLASS** | **EXPLOSION CONTROL METHODS** | |
| **Barricade construction** | **Explosion (deflagration) venting or explosion (deflagration) prevention systemsb** |
| **HAZARD CATEGORY** |  | | |
| Combustible dustsc | — | Not Required | Required |
| Cryogenic flammables | — | Not Required | Required |
| Explosives | Division 1.1 | Required | Not Required |
| Division 1.2 | Required | Not Required |
| Division 1.3 | Not Required | Required |
| Division 1.4 | Not Required | Required |
| Division 1.5 | Required | Not Required |
| Division 1.6 | Required | Not Required |
| Flammable gas | Gaseous | Not Required | Requiredk |
| Liquefied | Not Required | Requiredk |
| Flammable liquid | IAd | Not Required | Required |
| IBe | Not Required | Required |
| Organic peroxides | U | Required | Not Permitted |
| I | Required | Not Permitted |
| Oxidizer liquids and solids | 4 | Required | Not Permitted |
| Pyrophoric gas | — | Not Required | Required |
| Unstable (reactive) | 4 | Required | Not Permitted |
| 3 Detonable | Required | Not Permitted |
| 3 Nondetonable | Not Required | Required |
| Water-reactive liquids and solids | 3 | Not Required | Required |
| 2g | Not Required | Required |
| **SPECIAL USES** |  | | |
| Acetylene generator rooms | — | Not Required | Required |
| Electrochemical energy storage systemi | — | Not Required | Required |
| Energy storage systemi | — | Not Required | Required |
| Grain processing | — | Not Required | Required |
| Liquefied petroleum gas-distribution facilities | — | Not Required | Required |
| Where explosion hazards existf | Detonation | Required | Not Permitted |
| Deflagration | Not Required | Required |

a. - i – No change

k Not required for Category 1B Flammable Gases having a burning velocity not exceeding 3.9 in/s (10 cm/s).

**(F10797 / F98-21 AS)**

**[F] TABLE 414.5.1 EXPLOSION CONTROL REQUIREMENTSa, h**

|  |  |  |  |
| --- | --- | --- | --- |
| **MATERIAL** | **CLASS** | **EXPLOSION CONTROL METHODS** | |
| **Barricade construction** | **Explosion (deflagration) venting or explosion (deflagration) prevention systemsb** |
| **HAZARD CATEGORY** |  | | |
| Combustible dustsc | — | Not Required | Required |
| Cryogenic flammables | — | Not Required | Required |
| Explosives | Division 1.1 | Required | Not Required |
| Division 1.2 | Required | Not Required |
| Division 1.3 | Not Required | Required |
| Division 1.4j | Not Required | Required |
| Division 1.5 | Required | Not Required |
| Division 1.6 | Required | Not Required |
| Flammable gas | Gaseous | Not Required | Required |
| Liquefied | Not Required | Required |
| Flammable liquid | IAd | Not Required | Required |
| IBe | Not Required | Required |
| Organic peroxides | U | Required | Not Permitted |
| I | Required | Not Permitted |
| Oxidizer liquids and solids | 4 | Required | Not Permitted |
| Pyrophoric gas | — | Not Required | Required |
| Unstable (reactive) | 4 | Required | Not Permitted |
| 3 Detonable | Required | Not Permitted |
| 3 Nondetonable | Not Required | Required |
| Water-reactive liquids and solids | 3 | Not Required | Required |
| 2g | Not Required | Required |
| **SPECIAL USES** |  | | |
| Acetylene generator rooms | — | Not Required | Required |
| Electrochemical energy storage systemi | — | Not Required | Required |
| Energy storage systemi | — | Not Required | Required |
| Grain processing | — | Not Required | Required |
| Liquefied petroleum gas-distribution facilities | — | Not Required | Required |
| Where explosion hazards existf | Detonation | Required | Not Permitted |
| Deflagration | Not Required | Required |

a. - i No change

j. Does not apply to consumer fireworks, 1.4G.

**[F] TABLE 415.6.5 DETACHED BUILDING REQUIRED**

|  |  |  |  |
| --- | --- | --- | --- |
| **A DETACHED BUILDING IS REQUIRED WHERE THE QUANTITY OF MATERIAL EXCEEDS THAT SPECIFIED HEREIN** | | | |
| **Material** | **Class** | **Solids and Liquids (tons)a, b** | **Gases (cubic feet)a, b** |
| Explosives | Division 1.1 | Maximum Allowable Quantity | Not Applicable |
| Division 1.2 | Maximum Allowable Quantity |
| Division 1.3 | Maximum Allowable Quantity |
| Division 1.4e | Maximum Allowable Quantity |
| Division 1.4c, e | 1 |
| Division 1.5 | Maximum Allowable Quantity |
| Division 1.6 | Maximum Allowable Quantity |
| Oxidizers | Class 4 | Maximum Allowable Quantity | Maximum Allowable Quantity |
| Unstable (reactives) detonable | Class 3 or 4 | Maximum Allowable Quantity | Maximum Allowable Quantity |
| Oxidizer, liquids and solids | Class 3 | 1,200 | Not Applicable |
| Class 2 | 2,000 | Not Applicable |
| Organic peroxides | Detonable | Maximum Allowable Quantity | Not Applicable |
| Class I | Maximum Allowable Quantity | Not Applicable |
| Class II | 25 | Not Applicable |
| Class III | 50 | Not Applicable |
| Unstable (reactives) nondetonable | Class 3 | 1 | 2,000 |
| Class 2 | 25 | 10,000 |
| Water reactives | Class 3 | 1 | Not Applicable |
| Class 2 | 25 | Not Applicable |
| Pyrophoric gasesd | Not Applicable | Not Applicable | 2,000 |

For SI: 1 ton = 906 kg, 1 cubic foot = 0.02832 m3, 1 pound = 0.454 kg.

a. - d No change

e. Does not apply to consumer fireworks, 1.4G.

**(F11018 / G93-21 AS)**

**SECTION 410**

**STAGES, PLATFORMS AND TECHNICAL PRODUCTION AREAS**

**Revise as follows:**

**410.3.1.1 Stage height and area.** Stage areas shall be measured to include the entire performance area and adjacent backstage and support areas not separated from the performance area by fire-resistance-rated construction. *Stage* height shall be measured from the lowest point on the *stage* floor to the highest point of the underside of the roof or floor deck above the *stage*.

**(F11010 / G76-21 AS)**

**[F] 415.11 Group H-5.** In addition to the requirements set forth elsewhere in this code, Group H-5 shall comply with the provisions of Sections 415.11.1 through 415.11.12 and the *Florida Fire Prevention Code*.

**Delete without substitution:**

**~~[F] 415.11.1.1.2 Hazardous production materials~~.** ~~The maximum quantities of hazardous production materials (HPM) stored in a single~~

*~~fabrication area~~* ~~shall not exceed the maximum allowable quantities per~~ *~~control area~~* ~~established by Table 307.1(1) and Table 307.1(2)~~.

**(F11017 / G91-21 AS)**

**[F] 415.11.7.4 Installations in corridors and above other occupancies.** The installation of HPM piping and tubing within the space defined by the walls of corridors and the floor or roof above, or in concealed spaces above other occupancies, shall be in accordance with Sections 415.11.7.1 through 415.11.7.3 and the following conditions:

1. Automatic sprinklers shall be installed within the space unless the space is less than 6 inches (152 mm) in the least dimension.

2. *Ventilation* not less than six air changes per hour shall be provided. The space shall not be used to convey air from any other area.

3. Where the piping or tubing is used to transport HPM liquids, a receptor shall be installed below such piping or tubing. The receptor shall be designed to collect any discharge or leakage and drain it to an *approved* location. The 1-hour enclosure shall not be used as part of the receptor.

4. HPM supply piping and tubing and nonmetallic waste lines shall be separated from the corridor and from occupancies other than Group H-5 by *fire barriers* or by an approved method or assembly that has a*fire-resistance rating* of not less than 1 hour. Access openings into the enclosure shall be protected by approved fire-protection-rated assemblies.

5. ~~Readily accessible manua~~l Ready access to manual or automatic remotely activated fail-safe emergency shutoff valves shall be installed on piping and tubing other than waste lines at the following locations:

5.1. At branch connections into the *fabrication area*.

5.2. At entries into *corridors*.

**Exception:** Transverse crossings of the *corridors* by supply piping that is enclosed within a ferrous pipe or tube for the width of the

*corridor* need not comply with Items 1 through 5.

**(F10918 / G1-21 Part II AS)**

**423.3 Critical emergency operations.** In areas where the shelter design wind speed for tornados in accordance with Figure 304.2(1) of ICC 500 is 250 mph, 911 call stations, emergency operation centers and fire, rescue, ambulance and police stations shall comply with Table 1604.5 as a *Risk Category* IV structure and shall be provided with a *storm shelter* constructed in accordance with ICC 500.

**Add new text as follows:**

**423.3.1 Required Occupant Capacity.** The required occupant capacity of the storm shelter shall include all of the critical emergency operations on the site and shall be the total occupant load of offices and number of beds.

**Exceptions:**

1. Where approved by the building official, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by occupant load calculation, shall be permitted to be used in the determination of the required design occupant capacity for the storm shelter.

2. Where a new building is being added on an existing site, and where the new building is not of sufficient size to accommodate the required occupant capacity of the storm shelter for all of the buildings on the site, the storm shelter shall at a minimum accommodate the required occupant capacity of the new building.

3. Where approved by the building official, the required occupant capacity of the shelter shall be permitted to be reduced by the occupant capacity of any existing storm shelters on the site.

**(S11021 / G96-21 AM)**

**423.3 Critical emergency operations.** In areas where the shelter design wind speed for tornados in accordance with Figure 304.2(1) of ICC 500 is 250 mph, 911 call stations, emergency operation centers and fire, rescue, ambulance and police stations shall comply with Table 1604.5 as a *Risk Category* IV structure and shall be provided with a *storm shelter* constructed in accordance with ICC 500.

**Add new text as follows:**

**423.3.2 Location.** Storm shelters shall be located within the building they serve or shall be located where the maximum distance of travel from not fewer than one exterior door of each building to a door of the shelter serving that building does not exceed 1,000 feet (305 m), unless otherwise approved.

**(S11020 / G95-21 AM)**

SECTION 451 AMBULATORY SURGICAL CENTERS

Revise Section 451.3.16 to read as follows:

**451.3.16** As required by *The Guidelines*, a waste anesthetic gas disposal (WAGD) system, in accordance with NFPA 99, Health Care Facilities Code, shall be provided in operating rooms where nitrous oxide and/or inhalation ~~anesthsia~~ anesthesia gas is intended to be administered.

SP-FBC-B – Ch.4 – Errata #1

SECTION 453 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES

Revise Section 453.16.1 to read as follows:

**453.16.1 Standards.** Educational and ancillary facilities shall be provided with toilets, hand washing facilities, and drinking fountains for all occupants, in ratios and accessible as required by the Florida Building Code, Florida law, and federal requirements.

**~~Exception:~~** ~~Unisex toilets shall not be provided in addition to group toilets in assembly occupancies.~~

Revise Section 453.22.5.3.1 to read as follows:

**453.22.5.3.1** Full-service school clinics shall include one accessible toilet room for males and one for females or at least two accessible single-user unisex toilet rooms, complete with water closet, lavatory, accessories, and shower. Additional toilets may be required for a full-service school clinic depending on occupant load and program.

SECTION 468 SCHOOLS, COLLEGES AND UNIVERSITIES

Revise Section 468.3.4 to read as follows:

**468.3.4 Changing facilities.**

**468.3.4.1 Diaper changing stations.** A diaper changing station shall be located in or adjacent to any classroom where children wearing diapers are in attendance. A hand washing lavatory shall be provided within the changing station area. Access shall be provided to the lavatory without opening doors or touching a handle.

**468.3.4.2 Unisex changing facilities.** Accessible single-user unisex dressing rooms, as described in section 803, FBC, Accessibility, and Section 553.865, Florida Statutes may be utilized in place of accessible male and accessible female dressing rooms.

Revise Section 468.3.5 to read as follows:

**468.3.5 Plumbing.**

**468.3.5.1 Standards.** Educational and ancillary facilities shall be provided with toilets, hand washing facilities, and drinking fountains for all occupants, in ratios and accessible as required by the Florida Building Code, Florida law, and federal requirements.

**Exceptions:**

1. A single unisex toilet room is allowed where provided in child care, pre-kindergarten through grade 3 and ESE classrooms.
2. Accessible single-user unisex toilet rooms may be utilized in place of male and female toilet rooms for students or staff.

SP-FBC-B – Ch.4 – Glitch #1

SECTION 454 SWIMMING POOLS AND BATHING PLACES (PUBLIC AND PRIVATE)

Revise Section 454.1.6.1to read as follows:

**454.1.6.1 Sanitary facilities.**

Restrooms shall include a water closet, a diaper change table, a ~~urinal~~ and a lavatory. Diaper changing tables are not required at restrooms where all pools served are restricted to adult use only. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water’s edge of each pool served by the facilities.

SW-FBC-B – Ch.4 – Glitch #1

Revise Section 454.1.2.6 (Exception 3) to read as follows:

**454.1.2.6 Obstructions**

3. A sun shelf may be installed in pool areas with no more than 4 feet (1219 mm) of water depth,

or less, except where the entire sun shelf transitions to steps, where the depth at the bottom

of the steps can exceed 4 feet (1219 mm~~). A sun shelf must have the same markings at the~~

~~edge as a bench.~~ A sun shelf shall not protrude into the diving bowl. A sun shelf must additionally comply with Section 454.1.2.8.

SW-FBC-B – Ch.4 – Glitch #2

Revise Section 454.1.2.3.5 (Item 8) to read as follows:

8. If the pool includes a sun shelf, “WARNING: DROP OFF AT SUN SHELF EDGE

IS \_\_\_ FEET \_\_\_\_ INCHES DEEP” in 4-inch (102 mm) letters. Not required where sun shelves

transition to steps.

Revise Section 454.1.2.3.5 (Item 10) to read as follows:

10. ~~By January 1, 2022, all pools shall add:~~ “POOL MAXIMUM DEPTH: \_\_\_ FEET,”

in 2-inch (51 mm) letters ~~with the previously listed pool rules.~~

SW-FBC-B – Ch.4 – Errata #1

Revise Section 454.1.2.3.5 (Item 10) to read as follows:

10. By January 1, 2022, all pools shall add: “POOL MAXIMUM DEPTH: \_\_\_ FEET \_\_\_\_ INCHES” in 2-inch (51 mm) letters with the previously

listed pool rules.

SW-FBC-B – Ch.4 – Glitch #4

Revise Section 454.1.9.6.6 to read as follows:

**454.1.9.6.6**

The recirculation-filtration system shall be of a minimum of one turnover every 2 hours in the area of the pool that is 18” (457 mm) to 3 feet (914 mm) deep ~~or less~~. In the remainder of the pool where the depth is greater than 3 feet (914 mm), the system shall have a maximum 6-hour turnover rate. The design plans submitted by the applicant shall provide the volume of water in the pool area of 0” to 18” (457 mm) depth, the volume of 18” (457mm) to 3 feet (914 mm) depth, ~~and less,~~ the volume of water in the pool area greater than 3 feet (914 mm) in depth and the total volume in the pool for determination of minimum circulation flow. The volume calculations shall provide verification that the correct volume of water is used to determine the minimum flow at the 1-hour, 2-hour and the 6-hour flow requirements.

SW-FBC-B – Ch.4 – Glitch #6

Revise Section 454.1.6.5.16.6 to read as follows:

**454.1.6.5.16.6** Ultraviolet (UV) light disinfectant equipment may be used subject to the conditions of this paragraph and manufacturer’s specifications. UV is encouraged to be used to eliminate or reduce chlorine-resistant pathogens, especially the protozoan cryptosporidium.

3. UV equipment shall be certified for secondary or ~~supplemential~~ supplemental disinfection per

NSF 50–2020.

SW-FBC-B – Ch.4 – Errata #2

Revise Section 454.1.6.16.2 as follows:

**454.1.6.5.16.2 Hypohalogenation and electrolytic chlorine generators. ….** The solution reservoirs shall be manufactured to accommodate corrosive and ~~oxidizering~~ oxidizing liquid chemicals.

SW-FBC-B – Ch.4 – Errata #3

Revise Section 454.1.9.7.3.4 to read as follows:

**454.1.9.7.3.4  Non-applicable requirements.**

The following code provisions do not apply to resistance exercise pool: Sections 454.1.1.1, 454.1.2.2.3.1, 454.1.2.6 and 454.1.2.2.4.

Add Section 454.1.9.9.8 to read as follows:

**454.1.9.9.8** A swim-up bar may include obstructions intended for seating. Any structure intended for seating in the pool shall have a minimum of 2 inch (51 mm) horizontal and 2 inch (51 mm) vertical markings in contrasting color on every edge, and be structurally rigid, impervious, non-toxic, smooth, and slip resistant. The corner intersections which protude or angle into the pool water shall be rounded with a minimum of 2 inch (51 mm) radius. Edges of such obstructions shall not overhang into the water.

SW-FBC-B - Ch. 4 – Errata #4

Revise Sections 454.2.6.1, 454.2.6.3 and 454.2.6.6 to read as follows:

**454.2.6.1 Conformance standard.** Design, construction and workmanship shall be in conformity with the requirements of ANSI/APSP/ICC 3, ANSI/APSP/ICC 4, ANSI/APSP/ICC 5, ANSI/APSP/ICC 6, and ANSI/ ~~APSP~~ PHTA/ICC 7.

**454.2.6.3 Water velocity.** Pool piping shall be designed so the water velocity will not exceed 10 feet per second (mm/s) for pressure piping and 8 feet per second (mm/s) for suction piping, except that the water velocity shall not exceed 8 feet per second (3048 mm/s) in copper tubing. Main suction outlet velocity must comply with ANSI/~~APSP~~ PHTA /ICC 7.

**454.2.6.6** Entrapment protection for suction outlets shall be installed in accordance with requirements of ANSI/~~APSP~~ PHTA /ICC 7.

Supplement 4 – Errata

**CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS**

**506.3 Frontage increase.** Every building shall adjoin or have access to a *public way* to receive an area factor increase based on frontage. Area factor increase shall be determined in accordance with Sections 506.3.1 through 506.3.3.

**506.3.1 Minimum percentage of perimeter.** To qualify for an area factor increase based on frontage, a building shall have not less than 25 percent of its perimeter on a *public way* or open space. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved *fire lane*.

**Revise as follows:**

**506.3.2 Minimum frontage distance.** To qualify for an area factor increase based on frontage, the *public way* or open space adjacent to the building perimeter shall have a minimum distance *(W)* of 20 feet (6096 mm) measured at right angles from the building face to any of the following:

1. The closest interior lot line.

2. The entire width of a street, alley or *public way.*

3. The exterior face of an adjacent building on the same property.

The frontage increase shall be based on the smallest *public way* or open space that is 20 feet (6096 mm) or greater, and the percentage of building perimeter having a minimum 20 feet (6096 mm) *public way* or open space.

~~all public ways or open spaces that are 20 feet~~ ~~(6096 mm) or greater are required to be used to determine the frontage increase.~~

**506.3.3 Amount of increase.** The area factor increase based on frontage shall be determined in accordance with Table 506.3.3.

**Revise as follows:**

**TABLE 506.3.3 FRONTAGE INCREASE FACTORa**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PERCENTAGE OF BUILDING PERIMETER** | **OPEN SPACE (feet)** | | | |
| **0 to less than 20** | **20 to less than 25** | **25 to less than 30** | **30 or greater** |
| 0 to less than 25 | 0 | 0 | 0 | 0 |
| 25 to less than 50 | 0 | 0.17 | 0.21 | 0.25 |
| 50 to less than 75 | 0 | 0.33 | 0.42 | 0.50 |
| 75 to 100 | 0 | 0.50 | 0.63 | 0.75 |

a. Interpolation is permitted.

**506.3.3.1 Section 507 buildings.** Where a building meets the requirements of Section 507, as applicable, except for compliance with the minimum 60-foot (18 288 mm) *public way* or *yard* requirement, the area factor increase based on frontage shall be determined in accordance with Table 506.3.3.1. The frontage increase shall be based on the smallest public way or open space that is 30 feet (9144 mm)

or greater, and the percentage of building perimeter having a minimum 30 feet (9144 mm) public way or open space.

**TABLE 506.3.3.1 SECTION 507 BUILDINGSa**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PERCENTAGE OF BUILDING PERIMETER** | **OPEN SPACE (feet)** | | | | | |
| **30 to less than 35** | **35 to less than 40** | **40 to less than 45** | **45 to less than 50** | **50 to less than 55** | **55 to less than 60 or greater** |
| 0 to less than 25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to less than 50 | 0.29 | 0.33 | 0.38 | 0.42 | 0.46 | 0.50 |
| 50 to less than 75 | 0.58 | 0.67 | 0.75 | 0.83 | 0.92 | 1.00 |
| 75 to 100 | 0.88 | 1.00 | 1.13 | 1.25 | 1.38 | 1.50 |

a. Interpolation is permitted.

**(F11034 / G116-21 AMPC1)**

**507.3 Nonsprinklered, one-story buildings.** The area of a Group F-2 or S-2 building not more than one*story* above *grade plane* of any *construction type,* in height shall not be limited where the building is surrounded and adjoined by*public ways* or *yards* not less than 60 feet (18 288 mm) in width.

**(F11035 / G117-21 AS)**

**508.5 Live/work units .** ~~A~~ *~~l~~Live/work units* shall comply with one of the following;

1. For a live/work unit located in a building constructed in accordance with this code, both the residential and non-residential portions of the live/work unit shall comply with Sections 508.5 through 508.5.11.

2. For a live/work unit located in a building constructed in accordance with the International Residential Code, the non-residential portion of the live/work unit shall comply with Sections 508.5.1 through 508.5.11, and the residential portion of the live/work unit shall be constructed in accordance with the International Residential Code and Section 508.5.7.

**Exception:** *Dwelling or sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* are permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.

**508.5.1 Limitations.** The following shall apply to live/work areas:

1. The *live/work unit* is permitted to be not greater than 3,000 square feet (279 m2) in area.

2. The nonresidential area is permitted to be not more than 50 percent of the area of each *live/work unit*.

3. The nonresidential area function shall be limited to the first or main floor only of the *live/work unit*.

4. Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

**508.5.2 Occupancies.** *Live/work units* shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the *live/work unit* where the *live/work unit* is in compliance with Section 508.5. Nonresidential uses that would otherwise be classified as either a Group H or S occupancy shall not be permitted in a *live/work unit*.

**Exception:** Storage shall be permitted in the *live/work unit* provided that the aggregate area of storage in the nonresidential portion of the *live/work unit* shall be limited to 10 percent of the space dedicated to nonresidential activities.

**508.5.3 Means of egress.** Except as modified by this section, the *means of egress* components for a *live/work unit* shall be designed in accordance with Chapter 10 for the function served.

**508.5.4 Egress capacity.** The egress capacity for each element of the *live/work unit* shall be based on the *occupant load* for the function served in accordance with Table 1004.5.

**508.5.5 Spiral stairways.** *Spiral stairways* that conform to the requirements of Section 1011.10 shall be permitted.

**Revise as follows:**

**508.5.6 Vertical openings.** Floor openings between floor levels of a *live/work unit* ~~are~~ shall be permitted without enclosure.

**[F] 508.5.7 Fire protection.** The *live/work unit* shall be provided with a monitored*fire alarm* system where required by Section 907.2.9 and an *automatic sprinkler system* in accordance with Section 903.2.8.

**508.5.8 Structural.** Floors within a *live/work unit* shall be designed for the *live loads* in Table 1607.1, based on the function within the space.

**508.5.9 Accessibility.** *Accessibility* shall be designed in accordance with Chapter 11 for the function served.

**508.5.10 Ventilation.** The applicable *ventilation* requirements of the *International Mechanical Code* shall apply to each area within the

*live/work unit* for the function within that space.

**508.5.11 Plumbing facilities.** The nonresidential area of the *live/work unit* shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential area of the *live/work unit* is required to be accessible by Section 1108.6.2.1, the plumbing fixtures specified by Chapter 29 shall be accessible.

**(F11038 / G125-21 AMPC2)**

**508.5.1 Limitations.** The following shall apply to live/work areas:

1. The *live/work unit* is permitted to be not greater than 3,000 square feet (279 m2) in area.

2. The nonresidential area is permitted to be not more than 50 percent of the area of each*live/work unit*.

3. The nonresidential area function shall be limited to the first or main floor only of the*live/work unit*.

4. ~~Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time~~.

**(F11040 / G127-21 AS)**

**[F] 508.5.7 Fire protection.** ~~The~~ *~~live~~ Live/work ~~unit~~ units* in buildingconstructed in accordance with this code shall ~~comply with be provided with a~~ ~~monitored~~ *~~fire alarm~~* ~~system where required by Section 907.2.9 and~~ be provided with all of the following:

1. An *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 ~~903.2.8~~.

2. *Smoke alarms* in accordance with Section 907.2.11.

3. Where required by Section 907.2.9.1, a manual *fire alarm system*.

*Live/work units* in buildings constructed in accordance with the  *Florida Building Code, Residential* shall be provided with an *automatic sprinkler system* and *smoke alarms*. The *automatic sprinkler system* shall comply with *Florida Building Code, Residential* Section P2904, and *smoke alarms* shall comply with *Florida Building Code, Residential* Section 314.

**(F11039 / G126-21 Part II AM)x**

**SECTION 509 INCIDENTAL USES**

Revise as follows:

**509.1 General.** Incidental uses located within single occupancy or mixed occupancy buildings shall comply with the provisions of this section. Incidental uses are ancillary functions associated with a given occupancy that generally pose a greater level of risk to that occupancy and are limited to those uses specified in Table 509.1.

**Exception:** Incidental uses within and serving a *dwelling unit* are not required to comply with this section.

**Revise as follows:**

**TABLE 509.1 INCIDENTAL USES**

|  |  |
| --- | --- |
| **ROOM OR AREA** | **SEPARATION AND/OR PROTECTION** |
| Furnace room where any piece of equipment is over 400,000 Btu per hour input | 1 hour or provide automatic sprinkler system |
| Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower | 1 hour or provide automatic sprinkler system |
| Refrigerant machinery room | 1 hour or provide automatic sprinkler system |
| Hydrogen fuel gas rooms, not classified as Group H | 1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R  occupancies. |
| Incinerator rooms | 2 hours and provide automatic sprinkler system |
| Paint shops, not classified as Group H, located in occupancies other than Group F | 2 hours; or 1 hour and provide automatic sprinkler system |
| In Group E occupancies, laboratories and vocational shops not classified as Group H | 1 hour or provide automatic sprinkler system |
| In Group I-2 occupancies, laboratories not classified as Group H | 1 hour and provide automatic sprinkler system |
| In *ambulatory care facilities*, laboratories not classified as Group H | 1 hour or provide automatic sprinkler system |
| Laundry rooms over 100 square feet | 1 hour or provide automatic sprinkler system |
| In Group I-2, laundry rooms over 100 square feet | 1 hour and provide automatic sprinkler system |
| Group I-3 cells and Group I-2 patient rooms equipped with padded surfaces | 1 hour and provide automatic sprinkler system |
| In Group I-2, physical plant maintenance shops | 1 hour and provide automatic sprinkler system |
| In ambulatory care facilities or Group I-2 occupancies, waste and linen collection rooms with containers that have an  aggregate volume of 10 8.67 cubic feet or greater | 1 hour and provide automatic sprinkler system |
| In other than ambulatory care facilities and Group I-2 occupancies, waste and linen collection rooms over 100 square  feet | 1 hour or provide automatic sprinkler system |
| In ambulatory care facilities or Group I-2 occupancies, storage rooms greater than100 50 square feet | 1 hour and provide automatic sprinkler system |
| Electrical installations and transformers | See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NFPA 70 for  protection and separation requirements. |

For SI: 1 square foot = 0.0929 m2, 1 pound per square inch (psi) = 6.9 kPa, 1 British thermal unit (Btu) per hour = 0.293 watts, 1 horsepower = 746 watts, 1 gallon = 3.785 L, 1 cubic foot = 0.0283 m3.

**(F11041 / G128-21 AS)**

**CHAPTER 6 TYPES OF CONSTRUCTION**

Revise as follows:

**602.5 Exterior structural members.** Where a ~~horizontal~~ *fire separation* *distance* 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.

**(F11050 / G151-21 AS)**

**603.1 Allowable materials.** Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

1. *Fire-retardant-treated wood* complying with Section 2303.2 shall be permitted in:

No change to the remaining text.

2. - 10 No change

11. Partitions dividing portions of stores, offices or similar places occupied by one tenant only and that do not establish a *corridor* serving an *occupant load* of 30 or more shall be permitted to be constructed of *fire-retardant-treated* wood complying with Section 2303.2, 1-hour fire-resistance-rated construction or of wood panels or similar light construction up to 6 feet (1829 mm) in height.

12. – 26 No change.

**(F11051 / G153-21 AS)**

**603.1 Allowable materials.** Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

1 - 26 No change

27. Vapor Retarders as required by Section 1404.3

**(F11052 / G156-21 AS)**

**603.1.2 Piping and plumbing fixtures.** The use of combustible piping materials and plumbing fixtures shall be permitted where installed in accordance with the limitations of the *Florida Building Code, Mechanical* and the *Florida Building Code, Plumbing*.

**(F11053 / G175-21 AS)**

**603.1 Allowable materials.** Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

1 – 7 No change

8. *Trim* installed in accordance with Section 806.6 ~~806~~.

9 – 26 No change

**(F10916 / FS160-21 AS)**

**CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES**

Revise as follows:

704.6.1 Secondary attachments to structural members

Where primary and secondary structural steel members require fire protection, ~~secondary steel attachments to those structural members~~any additional structural steel members having direct connection to the primary structural frame or secondary structural members shall be protected with the same fire-resistive material and thickness as required for the structural member. The protection shall extend away from the structural member a distance of not less than 12 inches (305 mm), or shall be applied to the entire length where the attachment is less than 12 inches (305 mm) long. Where an attachment is hollow and the ends are open, the fire-resistive material and thickness shall be applied to both exterior and interior of the hollow steel attachment

**(F10809 / FS11-21 AM)**

Revise as follows:

**TABLE 705.5 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCEa, d, g**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **FIRE SEPARATION DISTANCE = X (feet)** | **TYPE OF CONSTRUCTION** | **OCCUPANCY GROUP He** | **OCCUPANCY GROUP F-1, M, S-1f** | **OCCUPANCY GROUP A, B, E, F-2, I, Ri, S-2, Uh** |
| X < 5b | All | 3 | 2 | 1 |
| 5 ≤ X < 10 | IA, IVA | 3 | 2 | 1 |
| Others | 2 | 1 | 1 |
| 10 ≤ X < 30 | IA, IB, IVA, IVB | 2 | 1 | 1c |
| IIB, VB | 1 | 0 | 0 |
| Others | 1 | 1 | 1c |
| X ≥ 30 | All | 0 | 0 | 0 |

For SI: 1 foot = 304.8 mm.

A – f - No change

g. Where ~~Table 705.8~~ Section 705.8.1 permits nonbearing exterior walls with unlimited area of unprotected openings, the required fire- resistance rating for the exterior walls is 0 hours.

H – i - No change

**(F10813 / FS16-21 AS)**

Add new text as follows:

**705.6 Continuity.** The fire-resistance rating of exterior walls shall extend from the top of the foundation or floor/ceiling assembly below to one of the following:

1. The underside of the floor or roof sheathing, deck or slab above.

2. The underside of a floor/ceiling or roof/ceiling assembly having a fire-resistance rating equal to or greater than the exterior wall and the fire separation distance is greater than 10 feet.

Parapets shall be provided as required by Section 705.11.

Revise as follows:

**~~705.6~~ 705.7 Structural stability.** *~~Exterior walls~~* ~~shall extend to the height required by Section 705.11~~. Interior structural elements that brace the *exterior wall* but that are not located within the plane of the *exterior wall* shall have the minimum *fire-resistance rating* required in Table 601 for that structural element. Structural elements that brace the *exterior wall* but are located outside of the *exterior wall* or within the plane of the *exterior wal*l shall have the minimum *fire-resistance rating* required in Table 601 and Table 705.5 for the *exterior wall.*

**705.11.1 Parapet construction .** Required ~~Parapets~~ parapets shall have the same *fire-resistance rating* as that required for the supporting wall, and on any side adjacent to a roof surface, shall have noncombustible faces for the uppermost 18 inches (457 mm), including counterflashing and coping materials. The height of the parapet shall be not less than 30 inches (762 mm) above the point where the roof surface and the wall intersect. Where the roof slopes toward a parapet at a slope greater than 2 units vertical in 12 units horizontal (16.7- percent slope), the parapet shall extend to the same height as any portion of the roof within a *fire separation distance* where protection of wall openings is required, but the height shall be not less than 30 inches (762 mm).

**(F10814 / FS18-21 AMPC1)**

**705.6.1 Floor Assemblies in Type III Construction.**  In Type III construction where a floor assembly supports gravity loads from an exterior wall, the fire-resistance rating of the portion of the floor assembly that supports the exterior wall shall not be less than the fire-resistance rating required for the exterior wall in Table 601. The fire-resistance rating provided by the portion of the floor assembly supporting and within the plane of the exterior wall shall be permitted to include the contribution of the ceiling membrane when considering exposure to fire from the inside. Where a floor assembly supports gravity loads from an exterior wall, the building elements of the floor construction within the plane of the exterior wall, including but not limited to, rim joists, rim boards, and blocking, shall be in accordance with the requirements for interior building elements of Type III Construction.

**(F10815 / FS19-21 AMPC1)**

TABLE 705.8 MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION

|  |  |  |
| --- | --- | --- |
| **FIRE SEPARATION DISTANCE (feet)** | **DEGREE OF OPENING PROTECTION** | **ALLOWABLE AREAa** |
| 0 to less than 3b, c, k | Unprotected, Nonsprinklered (UP, NS) | Not Permittedk |
| Unprotected, Sprinklered (UP, S)i | Not Permittedk |
| Protected (P) | Not Permittedk |
| 3 to less than 5d, e | Unprotected, Nonsprinklered (UP, NS) | Not Permitted |
| Unprotected, Sprinklered (UP, S)i | 15% |
| Protected (P) | 15% |
| 5 to less than 10e, f, j | Unprotected, Nonsprinklered (UP, NS) | 10%h |
| Unprotected, Sprinklered (UP, S)i | 25% |
| Protected (P) | 25% |
| 10 to less than 15e, f, g, j | Unprotected, Nonsprinklered (UP, NS) | 15%h |
| Unprotected, Sprinklered (UP, S)i | 45% |
| Protected (P) | 45% |
| 15 to less than 20f, g, j | Unprotected, Nonsprinklered (UP, NS) | 25% |
| Unprotected, Sprinklered (UP, S)i | 75% |
| Protected (P) | 75% |
| 20 to less than 25f, g, j | Unprotected, Nonsprinklered (UP, NS) | 45% |
| Unprotected, Sprinklered (UP, S)i | No Limit |
| Protected (P) | No Limit |
| 25 to less than 30f, g, j | Unprotected, Nonsprinklered (UP, NS) | 70% |
| Unprotected, Sprinklered (UP, S)i | No Limit |
| Protected (P) | No Limit |
| 30 or greater | Unprotected, Nonsprinklered (UP, NS) | No Limit |
| Unprotected, Sprinklered (UP, S)i | No Limit |
| Protected (P) | No Limit |

For SI: 1 foot = 304.8 mm.

UP, NS = Unprotected openings in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

UP, S = Unprotected openings in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. P = Openings protected with an opening protective assembly in accordance with Section 705.8.2.

A – f – No change

g. The area of openings in an open parking ~~structure~~ *garage* in accordance with Section 406.5with a fire separation distance of 10 feet or greater shall not be limited.

H – k – No change

**(F10816 / FS21-21 AM)**

Add new text as follows:

**706.1.2** Deemed to comply. Fire walls designed and constructed in accordance with NFPA 221 shall be deemed to comply with this section, subject to the limitations of Section 102.4. The required fire-resistance rating shall be determined by Section 706.4.

Revise as follows:

**706.2 Structural stability.** *Fire walls* shall be designed and constructed to allow collapse of the structure on either side without collapse of the wall under fire conditions. *~~Fire walls~~* ~~designed and constructed in accordance with NFPA 221 shall be deemed to comply with this~~ ~~section.~~

**Exception:** In *Seismic Design Categories* D through F, where double *fire walls* are used in accordance with NFPA 221, floor and roof sheathing not exceeding 3/4 inch (19.05 mm) thickness shall be permitted to be continuous through the wall assemblies of*light frame construction*.

**(F10817 / FS29-21 AMPC1, 2)**

**706.6 Vertical continuity.** *Fire walls* shall extend from the foundation to a termination point not less than 30 inches (762 mm) above both adjacent roofs.

Exceptions:

1. No change

2. Two-hour fire-resistance-rated walls shall be permitted to terminate at the underside of the roof sheathing, deck or slab, provided that all of the following requirements are met:

2.1 – 2.3 - No change

3 – 6 No change

**(F10818 / FS35-21 AS)**

**707.5 Continuity.** *Fire barriers* shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such *fire barriers* shall be continuous through concealed space, such as the space above a suspended ceiling. *Joints* and voids at intersections shall comply with Sections 707.8 and 707.9

Exceptions:

1 – 2 - No change

3. An *exit passageway* enclosure required by Section 1024.3 that does not extend to the underside of the floor or roof sheathing, slab or deck above shall be enclosed at the top with construction of the same *fire-resistance rating* as required for the *exit passageway*.

**(F10819 / FS38-21 AS)**

**707.6 Openings.** Openings in a *fire barrier* shall be protected in accordance with Section 716. Openings shall be limited to a maximum aggregate width of 25 percent of the length of the wall, and the maximum area of any single opening shall not exceed 156 square feet (15 m2). Openings in enclosures for *shafts ~~exit access stairways~~* ~~and~~ *~~ramps~~*, *interior exit stairways* and *ramps* and *exit passageways* shall also comply with Sections 713.7 ~~1019~~, 1023.4 and 1024.5, respectively.

Exceptions:

1 – 5 – No change

6.Openings providing entrance to an elevator car shall not be limited to 156 square feet (15 m2) or an aggregate width of 25 percent of the length of the wall where the opening protective is a fire door assembly in a fire barrier that is an elevator hoistway enclosure.

7.Openings shall not be limited to an aggregate width of 25 percent of the length of the wall where opening serves a *shaft enclosure* in accordance with Section 713.

8.Openings shall not be limited to an aggregate width of 25 percent of the length of the wall where opening serves a chute access room in accordance with Section 713.13.3 or a chute discharge room in accordance with Section 713.13.4.

**707.7 Penetrations.** Penetrations of *fire barriers* shall comply with Section 714.

Revise as follows:

**707.7.1 Prohibited penetrations.** Penetrations into enclosures for *shafts ~~exit access stairways~~* ~~and~~ *~~ramps~~*, *interior exit stairways* and

*ramps*, and *exit passageways* shall be allowed only where permitted by Sections 713.8.1 ~~1019~~, 1023.5 and 1024.6, respectively.

**(F10820 / FS40-21 AS)/ (F10821 / FS41-21 AS)/ (F10822 / FS42-21 AS)**

**707.8 Joints**. *Joints* made in or between *fire barriers*, and *joints* made at the intersection of *fire barriers* with the underside

of a fire- resistance-rated floor or roof sheathing, slab or deck above, and ~~the exterior vertical wall intersection~~ with other fire-resistance-

rated wall assemblies ~~intersection~~ shall comply with Section 715.

**(F10823 / FS43-21 AS)**

**707.9 Voids at intersections.** The voids created at the intersection of a *fire barrier* and a nonfire-resistance-rated *roof assembly* or a nonfire-resistance-rated *exterior wall* assembly shall ~~be filled. An~~ *~~approved~~* ~~material or system shall be used to fill the void, and shall be~~ ~~securely installed in or on the intersection for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate~~ ~~expected building movements and to retard the passage of fire and hot gases.~~ comply with Section 715.

*Add new text as follows*:

**715.6 Fire barrier/nonfire-resistance-rated roof assembly intersections.** Voids created at the intersection of a fire barrier and the underside of a nonfire-resistance-rated roof sheathing, slab or deck above shall be filled by an approved material or system to retard the passage of fire and hot gases.

**715.7 Exterior wall/vertical fire barrier intersections.**

Voids created at the intersection of nonfire-resistance-rated exterior wall assemblies and vertical *fire barriers* shall be filled with an *approved* material or system to retard the interior spread of fire and hot gases.

**(F10824 / FS44-21 AM)**

**Add new text as follows:**

**708.4.1 Fire partition walls enclosing elevator lobbies.** Fire partition walls used to enclose elevator lobbies in accordance with Section 3006.3 (elevator hoistway protection), shall form an effective enclosure that terminates at a fire barrier or fire partition having a level of fire- resistance-rating not less than 1 hour, or an outside wall.

**Revise as follows:**

**709.4.2 Smoke-barrier walls enclosing areas of refuge or elevator lobbies.** *Smoke-barrier* walls used to enclose *areas of refuge* in accordance with Section 1009, or to enclose elevator lobbies in accordance with Section 405.4.3, 3007.6.2, or 3008.6.2, shall form an effective membrane enclosure that terminates at a *fire barrier* wall having a level of *fire ~~protection~~ resistance rating* not less than 1 hour, another *smoke barrier* wall or an outside wall. A smoke and draft control door assembly as specified in Section 716.5.3.1 shall not be required at each elevator hoistway door ~~opening~~ where protected by an elevator lobby, at each exit door opening into a protected lobbyor at each exit doorway between an *area of refuge* and the exit enclosure.

**~~708.4.1 Fire partition walls enclosing elevator lobbies.~~** ~~Fire partition walls used to enclose elevator lobbies in accordance with Section 3006.3 (elevator hoistway protection), shall form an effective enclosure that terminates at a fire barrier or fire partition having a level of fire- resistance-rating not less than 1 hour, or an outside wall.~~ Does not exist in code.

**710.4.1 Smoke partition walls enclosing elevator lobbies.** Smoke partition walls used to enclose elevator lobbies in accordance

with Section 3006.3 shall form an enclosure that terminates at a fire barrier having a level of fire-resistance-rating not less than 1 hour, another smoke partition or an outside wall.

**(F11066 / G183-21 Part II AM)**

**709.5 Openings.** Openings in a *smoke barrier* shall be protected in accordance with Section 716.

**Exceptions:**

1. In Group I-1, Condition 2, Group I-2 and *ambulatory care facilities*, where a pair of opposite-swinging doors are installed across a corridor in accordance with Section 709.5.1, the doors shall not be required to be protected in accordance with Section 716.

The doors shall be close fitting within operational tolerances, and shall not have a center mullion or undercuts in excess of 3/4 inch (19.1 mm), louvers or grilles. The doors shall have head and jamb stops, and astragals or rabbets at meeting edges. ~~Where~~ ~~permitted by the door manufacturer’s listing, positive-latching devices are not required.~~ Positive latching devices are not required. Factory-applied or field-applied protective plates are not required to be labeled.

2. In Group I-1, Condition 2, Group I-2 and *ambulatory care facilities*, special purpose horizontal sliding, accordion or folding doors installed in accordance with Section 1010.3.3 and protected in accordance with Section 716.

**(F10832 / FS48-21 AM)**

**713.8 Penetrations.** Penetrations in a *shaft enclosure* shall be protected in accordance with Section 714 as required for*fire barriers*

or *horizontal assemblies* or both. Structural elements, such as beams or joists, where protected in accordance with Section 714 shall be permitted to penetrate a *shaft enclosure.*

**(F10910 / FS154-21 AS)**

**715.6 Exterior ~~curtain~~ wall/vertical fire barrier intersections.** Voids created at the intersection of nonfire-resistance-rated exterior ~~curtain~~ wall assemblies and vertical *fire barriers* shall be filled with an approved material or system to retard the interior spread of fire and hot gases.

**(F10844 / FS76-21 AS)**

**709.5 Openings.** Openings in a *smoke barrier* shall be protected in accordance with Section 716.

Exceptions:

1. In Group I-1, Condition 2, Group I-2 and *ambulatory care facilities*, where a pair of opposite-swinging doors are installed across a corridor in accordance with Section 709.5.1, the doors shall not be required to be protected in accordance with Section 716.

The doors shall be close fitting within operational tolerances, and shall not have a center mullion or undercuts in excess of 3/4 inch (19.1 mm), louvers or grilles. The doors shall have head and jamb stops, and astragals or rabbets at meeting edges. ~~Where~~ ~~permitted by the door manufacturer’s listing, positive-latching devices are not required.~~ Positive latching devices are not required, Factory-applied or field-applied protective plates are not required to be labeled.

2. No change

**(F10832 / FS48-21 AM)**

**710.4 Continuity.** *Smoke partitions* shall extend from the top of the foundation or floor below to the underside of the floor or roof sheathing, deck or slab above or to the underside of the ceiling above where the ceiling membrane is constructed to limit the transfer of smoke.

**Exception:** In Group I-2, a lay-in ceiling system shall be considered capable of limiting the transfer of smoke where the ceiling tiles that weigh a minimum of one pound per square foot and where the HVAC system is fully ducted in accordance with Section 603 of the *Florida Building Code, Mechanical.*

**(F10833 / FS49-21 AS)**

**712.1.3.2 Automatic shutters.** Protection of the vertical opening by approved shutters at every penetrated floor shall be permitted in accordance with ~~this section.~~all of the following:

1. The ~~shutters~~ shutter shall be of noncombustible construction and have a fire-resistance rating of not less than 1.5 hours.

2. The shutter shall ~~be so constructed as to~~ close immediately upon the actuation of a smoke detector installed in accordance with Section ~~907.3.1 and~~ 907.3.

3. The shutter shall completely ~~shut~~ close off the ~~well~~ vertical opening.

4. Escalators shall cease operation when the shutter begins to close.

5. The shutter shall operate at a speed of not more than 30 feet per minute (152.4 mm/s)~~and.~~

6. The shutter shall be equipped with a~~sensitive~~ sensing leading edge to ~~arrest its progress~~ stop closure where in contact with any obstacle, and ~~to~~ continue ~~its progress on release therefrom~~ to close when the obstacle is cleared.

**(F10835 / FS53-21 AS)**

**713.13.4 Chute discharge room.** Table 509.1Waste, recycling or linen chutes shall discharge into an enclosed room separated by *fire barriers* with a *fire-resistance rating* not less than the required fire rating of the *shaft enclosure* and constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. Openings into the discharge room from the remainder of the building shall be protected by opening protectives having a *fire protection rating* ~~equal to~~ based on the ~~protection required for~~ fire rating of the *shaft enclosure* in accordance with Tables 716.1(2) and 716.1(3). Doors shall be self- or automatic-closing upon the detection of smoke in accordance with Section 716.2.6.6. Waste chutes shall not terminate in an incinerator room. Waste and linen rooms that are not provided with chutes need only comply with Table 509.1.

**(F10837 / FS57-21 AS)**

**713.14 Elevator, dumbwaiter and other hoistways.** ~~Elevator, dumbwaiter and other hoistway enclosures shall be constructed in~~ ~~accordance with Sections 712 and~~ A hoistway for elevators, dumbwaiters and other vertical devices shall comply with Section 712. Where the hoistway is required to be enclosed, it shall be constructed as a shaft enclosure in accordance with Section 713, and Chapter 30.

**(SP11063 / G180-21 AS)**

**714.5.1.2 Through-penetration firestop system.** *Through penetrations* shall be protected by an *approved through-penetration firestop system* installed and tested in accordance with ASTM E814 or UL 1479, with a minimum positive pressure differential of 0.01 inch of water (2.49 Pa). The system shall have an *F rating*/*T rating* of not less than 1 hour but not less than the required rating of the floor penetrated.

Exceptions:

1 – 3 – No change

4. Penetrations in a single concrete floor by steel, ferrous or copper conduits, pipes, tubes or vents with a maximum 6-inch (152 mm) nominal diameter do not require a T rating. These penetrating items shall not be limited to the penetration of a single concrete floor, provided the area of the opening through each floor does not exceed 144 square inches (92,900 mm2).

**(F10840 / FS66-21 AS)**

**715.2 Installation.** Systems or materials protecting joints and voids shall be installed in accordance with 715.2.1 and 715.2.2S~~. ystems or~~ ~~materials protecting~~ *~~joints~~* ~~and voids shall be securely installed in accordance with the manufacturer’s installation instructions in or on the~~ *~~joint~~* ~~or void for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements~~ ~~and to resist the passage of fire and hot gases.~~ *~~Fire-resistant joint systems~~* ~~or systems used to protect voids at exterior curtain walls and~~ ~~fire-resistance-rated floor intersections shall also be installed in accordance with the listing criteria.~~

Add new text as follows:

**715.2.1 List system installation.** Listed *fire-resistant joint systems* and perimeter fire containment systems shall be securely installed in accordance with the manufacturer’s installation instructions and the listing criteria in or on the joint or void for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to resist the passage of fire and hot gases.

**715.2.2 Approved materials installation.** Approved materials protecting voids shall be securely installed in accordance with the manufacturer’s installation instructions in or on the void for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to resist the passage of fire and hot gases.

**(F10842 / FS70-21 AS)/ (F10841 / FS68-21 AS)**

**715.6 Exterior ~~curtain~~ wall/vertical fire barrier intersections.** Voids created at the intersection of nonfire-resistance-rated exterior ~~curtain~~ wall assemblies and vertical *fire barriers* shall be filled with an approved material or system to retard the interior spread of fire and hot gases.

**(F10844 / FS76-21 AS)**

* 1. **Alternative methods for determining fire protection ratings.** The application of any of the alternative methods listed in this section shall be based on the fire exposure and acceptance criteria specified in NFPA 252, NFPA 257 or UL 9. The required *~~fire resistance~~fire protection rating* of an opening protective shall be permitted to be established by any of the following methods or procedures:
     + 1. Designs documented in *approved* sources.
       2. ~~Calculations performed in an~~ *~~approved~~* ~~manner.~~
       3. Engineering analysis based on a comparison of opening protective designs having *fire protection ratings* as determined by the test procedures set forth in NFPA 252, NFPA 257 or UL 9.
       4. Alternative protection methods as allowed by Section 104.11.

**(F10845/FS79-21 AS)/ (F10846 / FS80-21 AS)/ (F11660 / FS79-21 AS)**

**716.5.9 Door closing.** *Fire doors* shall be latching and self- or automatic-closing in accordance with this section.

Exceptions:

1. - No change

2.The elevator car doors and the associated elevator hoistway ~~enclosure~~ doors at the floor level designated for recall in accordance with Section 3003.2 shall be permitted to remain open during Phase I emergency recall operation.

3. Fire doors required solely for compliance with ICC 500 shall not be required to be self-closing or automatic-closing.

**(F10848 / FS85-21 AS)/ (SP11063 / G180-21 AS)**

**717.2.4 ​ Mechanical, electrical and plumbing controls.** Mechanical, electrical and plumbing controls shall not be installed in air duct systems.

**Exception:** Controls shall be permitted to be installed in air duct systems only if the wiring is directly associated with the air distribution system. The wiring shall comply with the requirements of Section 602 of the *Florida Building Code, Mechanical* and be as short as practicable.

**717.2.4.1 Controls not permitted to be installed through dampers.** Mechanical, electrical and plumbing controls shall not be installed through fire dampers, smoke dampers, combination fire/smoke dampers or ceiling radiation dampers unless otherwise permitted by the manufacturer and the listing.

**(F10849 / FS88-21 AM**)

**717.6.1 Through penetrations.**

~~In occupancies other than Groups I-2 and I-3, a~~A duct constructed of approved materials in accordance with the *Florida Building Code, Mechanical* that penetrates a fire-resistance-rated floor/ceiling assembly that connects not more than two *stories* is permitted without *shaft enclosure* protection, provided that a *listed fire damper* is installed at the floor line or the duct is protected in accordance with Section 714.5. For air transfer openings, see Section 712.1.9.

**Exception:** In occupancies other than Group I-2 and I-3, a~~A~~ duct is permitted to penetrate three floors or less without a*fire damper* at each floor, provided that such duct meets all of the following requirements:

Items 1 – 5 – No change

**(F10850 / FS91-21 AM)**

**718.2.1 Fireblocking materials.** *Fireblocking* shall consist of the following materials:

Items 1- 9 – No change

10. One thickness of 19/32-inch (15.1 mm) fire-retardant-treated wood structural panel complying with Section 2303.2.

**(F10852 / FS96-21 AS)**

**TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONSa, o, p**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACEb (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
| 1. Brick of clay or shale | 1-1.1 | Solid brick of clay or shale.c | 6 | 4.9 | 3.8 | 2.7 |
| 1-1.2 | Hollow brick, not filled. | 5.0 | 4.3 | 3.4 | 2.3 |
| 1-1.3 | Hollow brick unit wall, grout or filled with perlite vermiculite or expanded shale aggregate. | 6.6 | 5.5 | 4.4 | 3.0 |
| 1-2.1 | 4" nominal thick units not less than 75 percent solid backed with a hat-shaped metal furring channel3/4" thick formed from 0.021" sheet metal attached to  the brick wall on 24" centers with approved fasteners, and 1/2" Type X gypsum wallboard attached to the metal furring strips with 1"-long Type S screws  spaced 8" on center. | — | — | 5d | — |
| 2. Combination of clay brick and load- bearing hollow  clay tile | 2-1.1 | 4" solid brick and 4" tile (not less than 40 percent solid). | — | 8 | — | — |
| 2-1.2 | 4" solid brick and 8" tile (not less than 40 percent solid). | 12 | — | — | — |
| 3. Concrete masonry units | 3-1.1f, g | Expanded slag or pumice. | 4.7 | 4.0 | 3.2 | 2.1 |
| 3-1.2f, g | Expanded clay, shale or slate. | 5.1 | 4.4 | 3.6 | 2.6 |
| 3-1.3f | Limestone, cinders or air-cooled slag. | 5.9 | 5.0 | 4.0 | 2.7 |
| 3-1.4f, g | Calcareous or siliceous gravel. | 6.2 | 5.3 | 4.2 | 2.8 |
| 4. Solid concreteh, i | 4-1.1 | Siliceous aggregate concrete. | 7.0 | 6.2 | 5.0 | 3.5 |
| Carbonate aggregate concrete. | 6.6 | 5.7 | 4.6 | 3.2 |
| Sand-lightweight concrete. | 5.4 | 4.6 | 3.8 | 2.7 |
| Lightweight concrete. | 5.1 | 4.4 | 3.6 | 2.5 |
| 5. Glazed or unglazed facing tile, nonload- bearing | 5-1.1 | One 2" unit cored 15 percent maximum and one 4" unit cored 25 percent maximum with3/4" mortar-filled collar joint. Unit positions reversed in alternate  courses. | — | 63/8 | — | — |
| 5-1.2 | One 2" unit cored 15 percent maximum and one 4" unit cored 40 percent maximum with3/4" mortar-filled collar joint. Unit positions side with 3/4" gypsum  plaster. Two wythes tied together every fourth course with No. 22 gage corrugated metal ties. | — | 63/4 | — | — |
| 5-1.3 | One unit with three cells in wall thickness, cored 29 percent maximum. | — | — | 6 | — |
| 5-1.4 | One 2" unit cored 22 percent maximum and one 4" unit cored 41 percent maximum with1/4" mortar-filled collar joint. Two wythes tied together every third  course with 0.030"(No. 22 galvanized sheet steel gage) corrugated metal ties. | — | — | 6 | — |
| 5-1.5 | One 4" unit cored 25 percent maximum with 3/4" gypsum plaster on one side. | — | — | 43/4 | — |
| 5-1.6 | One 4" unit with two cells in wall thickness, cored 22 percent maximum. | — | — | — | 4 |
| 5-1.7 | One 4" unit cored 30 percent maximum with 3/4" vermiculite gypsum plaster on one side. | — | — | 41/2 | — |
| 5-1.8 | One 4" unit cored 39 percent maximum with 3/4" gypsum plaster on one side. | — | — | — | 41/2 |
| 6. Solid gypsum plaster | 6-1.1 | 3/4" by 0.055" (No. 16 carbon sheet steel gage) vertical cold-rolled channels, 16" on center with 2.6-pound flat metal lath applied to one face and tied with  0.049" (No. 18 B.W. gage) wire at 6" spacing. Gypsum plaster each side mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 2d |
| 6-1.2 | 3/4" by 0.05" (No. 16 carbon sheet steel gage) cold-rolled channels 16" on center with metal lath applied to one face and tied with 0.049" (No. 18 B.W.  gage) wire at 6" spacing. Perlite or vermiculite gypsum plaster each side. For three-coat work, the plaster mix for the second coat shall not exceed 100  pounds of gypsum to 21/2 cubic feet of aggregate for the 1-hour system. | — | — | 21/ d  2 | 2d |
| 6-1.3 | 3/4" by 0.055" (No. 16 carbon sheet steel gage) vertical cold-rolled channels, 16" on center with3/8" gypsum lath applied to one face and attached with  sheet metal clips. Gypsum plaster each side mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 2d |
| 6-2.1 | Studless with 1/2" full-length plain gypsum lath and gypsum plaster each side. Plaster mixed 1:1 for scratch coat and 1:2 for brown coat, by weight,  gypsum to sand aggregate. | — | — | — | 2d |
| 6-2.2 | Studless with 1/2" full-length plain gypsum lath and perlite or vermiculite gypsum plaste*r* each side. | — | — | 21/ d  2 | 2d |
| 6-2.3 | Studless partition with 3/8" rib metal lath installed vertically adjacent edges tied 6" on center with No. 18 gage wire ties, gypsum plaster each side mixed 1:2  by weight, gypsum to sand aggregate. | — | — | — | 2d |
|  | | | | | |

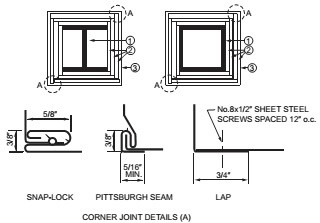
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| --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
| 7. Solid perlite and Portland  cement | 7-1.1 | Perlite mixed in the ratio of 3 cubic feet to 100 pounds of Portland cement and machine applied to stud side of 1/2" mesh by 0.058-inch (No. 17 B.W.  gage) paper-backed woven wire fabric lath wire-tied to 4"-deep steel trussed wirej studs 16" on center. Wire ties of 0.049" (No. 18 B.W. gage) galvanized steel wire 6" on center vertically. | — | — | 31/ d  8 | — |
| 8. Solid neat wood fibered  gypsum plaster | 8-1.1 | 3/4" by 0.055-inch (No. 16 carbon sheet steel gage) cold-rolled channels, 12" on center with 2.5-pound flat metal lath applied to one face and tied with  0.049" (No. 18 B.W.gage) wire at 6" spacing. Neat gypsum plaster applied each side. | — | — | 2d | — |
| 9. Solid wallboard  partition | 9-1.1 | One full-length layer 1/2" Type X gypsum wallboarde laminated to each side of 1" full-length V-edge gypsum coreboard with approved laminating  compound. Vertical joints of face layer and coreboard staggered not less than 3". | — | — | 2d | — |
| 10. Hollow (studless) gypsum wallboard partition | 10-1.1 | One full-length layer of 5/8" Type X gypsum wallboarde attached to both sides of wood or metal top and bottom runners laminated to each side of 1" × 6"  full-length gypsum coreboard ribs spaced 2" on center with approved laminating compound. Ribs centered at vertical joints of face plies and joints staggered 24" in opposing faces. Ribs ~~may~~ shall be permitted to be recessed 6" from the top and bottom. | — | — | — | 21/ d  4 |
| 10-1.2 | 1" regular gypsum V-edge full-length backing board attached to both sides of wood or metal top and bottom runners with nails or 15/8" drywall screws at  24" on center. Minimum width of runners 15/8". Face layer of 1/2" regular full-length gypsum wallboard laminated to outer faces of backing board with  approved laminating compound. | — | — | 45/ d  8 | — |
| 11.  Noncombustible studs—interior partition with plaster each side | 11-1.1 | 31/4" × 0.044" (No. 18 carbon sheet steel gage) steel studs spaced 24" on center.5/8" gypsum plaster on metal lath each side mixed 1:2 by weight,  gypsum to sand aggregate. | — | — | — | 43/ d  4 |
| 11-1.2 | 33/8" × 0.055" (No. 16 carbon sheet steel gage) approved nailablek studs spaced 24" on center. 5/8" neat gypsum wood-fibered plaster each side over 3/8"  rib metal lath nailed to studs with 6d common nails, 8" on center. Nails driven 11/4" and bent over. | — | — | 55/8 | — |
| 11-1.3 | 4" × 0.044" (No. 18 carbon sheet steel gage) channel-shaped steel studs at 16" on center. On each side approved resilient clips pressed onto stud flange at 16" vertical spacing, 1/4" pencil rods snapped into or wire tied onto outer loop of clips, metal lath wire-tied to pencil rods at 6" intervals, 1" perlite gypsum plaster, each side. | — | 75/ d  8 | — | — |
| 11-1.4 | 21/2" × 0.044" (No. 18 carbon sheet steel gage) steel studs spaced 16" on center. Wood fibered gypsum plaster mixed 1:1 by weight gypsum to sand  aggregate applied on 3/4-pound metal lath wire tied to studs, each side. 3/4" plaster applied over each face, including finish coat. | — | — | 41/ d  4 | — |
| 12. Wood studs  —interior partition with plaster each side | 12-1.1l,  m | 2" × 4" wood studs 16" on center with5/8" gypsum plaster on metal lath. Lath attached by 4d common nails bent over or No. 14 gage by 11/4" by 3/4"  crown width staples spaced 6" on center. Plaster mixed 1:11/2 for scratch coat and 1:3 for brown coat, by weight, gypsum to sand aggregate. | — | — | — | 51/8 |
| 12-1.2l | 2" × 4" wood studs 16" on center with metal lath and7/8" neat wood-fibered gypsum plaster each side. Lath attached by 6d common nails, 7" on center.  Nails driven 11/4" and bent over. | — | — | 51/ d  2 | — |
| 12-1.3l | 2" × 4" wood studs 16" on center with3/8" perforated or plain gypsum lath and1/2" gypsum plaster each side. Lath nailed with 11/8" by No. 13 gage by  19/64" head plasterboard blued nails, 4" on center. Plaster mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 51/4 |
| 12-1.4l | 2" × 4" wood studs 16" on center with3/8" Type X gypsum lath and 1/2" gypsum plaster each side. Lath nailed with 11/8" by No. 13 gage by19/64" head  plasterboard blued nails, 5" on center. Plaster mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 51/4 |
| 13.  Noncombustible studs—interior partition with gypsum wallboard each side | 13-1.1 | 0.018" (No. 25 carbon sheet steel gage) channel-shaped studs 24" on center with one full-length layer of5/8" Type X gypsum wallboarde applied vertically  attached with 1"-long No. 6 dry wall screws to each stud. Screws are 8" on center around the perimeter and 12" on center on the intermediate stud. Where applied horizontally, the Type X gypsum wallboard shall be attached to 35/8" studs and the horizontal joints shall be staggered with those on the opposite side. Screws for the horizontal application shall be 8" on center at vertical edges and 12" on center at intermediate studs. | — | — | — | 27/ d  8 |
| 13-1.2 | 0.018" (No. 25 carbon sheet steel gage) channel-shaped studs 25" on center with two full-length layers of1/2" Type X gypsum wallboarde applied vertically  each side. First layer attached with 1"-long, No. 6 drywall screws, 8" on center around the perimeter and 12" on center on the intermediate stud. Second layer applied with vertical joints offset one stud space from first layer using 15/8" long, No. 6 drywall screws spaced 9" on center along vertical joints, 12" on center at intermediate studs and 24" on center along top and bottom runners. | — | — | 35/ d  8 | — |
| 13-1.3 | 0.055" (No. 16 carbon sheet steel gage) approved nailable metal studse 24" on center with full-length 5/8" Type X gypsum wallboarde applied vertically and  nailed 7" on center with 6d cement-coated common nails. Approved metal fastener grips used with nails at vertical butt joints along studs. | — | — | — | 47/8 |
| 14. Wood studs  —interior partition with gypsum wallboard each side | 14-1.1h,  m | 2" × 4" wood studs 16" on center with two layers of3/8" regular gypsum wallboarde each side, 4d coolern or wallboardn nails at 8" on center first layer, 5d  coolern or wallboardn nails at 8" on center second layer with laminating compound between layers, joints staggered. First layer applied full length vertically, second layer applied horizontally or vertically. | — | — | — | 5 |
| 14-1.2l,  m | 2" × 4" wood studs 16" on center with two layers1/2" regular gypsum wallboarde applied vertically or horizontally each sidek, joints staggered. Nail base  layer with 5d coolern or wallboardn nails at 8" on center face layer with 8d coolenr or wallboardn nails at 8" on center. | — | — | — | 51/2 |
| 14-1.3l,  m | 2" × 4" wood studs 24" on center with5/8" Type X gypsum wallboarde applied vertically or horizontally nailed with 6d coolern or wallboardn nails at 7" on  center with end joints on nailing members. Stagger joints each side. | — | — | — | 43/4 |
| 14-1.4l | 2" × 4" fire-retardant-treated wood studs spaced 24" on center with one layer of5/8" Type X gypsum wallboarde applied with face paper grain (long  dimension) parallel to studs. Wallboard attached with 6d coolern or wallboardn nails at 7" on center. | — | — | — | 43/ d  4 |
| 14-1.5l,  m | 2" × 4" wood studs 16" on center with two layers5/8" Type X gypsum wallboarde each side. Base layers applied vertically and nailed with 6d coolenr or  wallboardn nails at 9" on center. Face layer applied vertically or horizontally and nailed with 8d coolenr or wallboardn nails at 7" on center. For nail-adhesive application, base layers are nailed 6" on center. Face layers applied with coating of approved wallboard adhesive and nailed 12" on center. | — | — | 6 | — |
| 14-1.6l | 2" × 3" fire-retardant-treated wood studs spaced 24" on center with one layer of5/8" Type X gypsum wallboarde applied with face paper grain (long  dimension) at right angles to studs. Wallboard attached with 6d cement-coated box nails spaced 7" on center. | — | — | — | 35/ d  8 |
| 15. Exterior or interior walls | 15-1.1l,  m | Exterior surface with 3/4" drop siding over 1/2" gypsum sheathing on 2" × 4" wood studs at 16" on center, interior surface treatment as required for 1-hour-  rated exterior or interior 2" × 4" wood stud partitions. Gypsum sheathing nailed with 13/4" by No.11 gage by7/16" head galvanized nails at 8" on center.  Siding nailed with 7d galvanized smooth box nails. | — | — | — | Varies |
| 15-1.2l,  m | 2" × 4" wood studs 16" on center with metal lath and3/4" cement plaster on each side. Lath attached with 6d common nails 7" on center driven to 1"  minimum penetration and bent over. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by volume, cement to sand. | — | — | — | 53/8 |
| 15-1.3l,  m | 2" × 4" wood studs 16" on center with7/8" cement plaster (measured from the face of studs) on the exterior surface with interior surface treatment as  required for interior wood stud partitions in this table. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by volume, cement to sand. | — | — | — | Varies |
| 15-1.4 | 35/8" No. 16 gage noncombustible studs 16" on center with7/8" cement plaster (measured from the face of the studs) on the exterior surface with interior  surface treatment as required for interior, nonbearing, noncombustible stud partitions in this table. Plaster mix 1:4 for scratch coat and 1:5 for brown coat,  by volume, cement to sand. | — | — | — | Variesd |
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| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
|  | 15-1.5m | 21/4" × 33/4" clay face brick with cored holes over 1/2" gypsum sheathing on exterior surface of 2" × 4" wood studs at 16" on center and two layers5/8" Type  X gypsum wallboarde on interior surface. Sheathing placed horizontally or vertically with vertical joints over studs nailed 6" on center with 31/4" × No. 11 gage by 7/16" head galvanized nails. Inner layer of wallboard placed horizontally or vertically and nailed 8" on center with 6d coolenr or wallboardn nails. Outer layer of wallboard placed horizontally or vertically and nailed 8" on center with 8d coolern or wallboardn nails. Joints staggered with vertical joints  over studs. Outer layer joints taped and finished with compound. Nail heads covered with joint compound. 0.035 inch (No. 20 galvanized sheet gage)  corrugated galvanized steel wall ties 3/4" by 65/8" attached to each stud with two 8d coolern or wallboardn nails every sixth course of bricks. | — | — | 10 | — |
| 15-1.6l,  m | 2" × 6" fire-retardant-treated wood studs 16" on center. Interior face has two layers of5/8" Type X gypsum with the base layer placed vertically and  attached with 6d box nails 12"on center. The face layer is placed horizontally and attached with 8d box nails 8" on center at joints and 12" on center elsewhere. The exterior face has a base layer of 5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints and 12" on center elsewhere. An approved building paper is next applied, followed by self-furred exterior lath attached with 21/2", No. 12 gage galvanized roofing nails with a 3/8" diameter head and spaced 6" on center along each stud. Cement plaster consisting of a1/2" brown coat is then applied. The scratch coat is mixed in  the proportion of 1:3 by weight, cement to sand with 10 pounds of hydrated lime and 3 pounds of approved additives or admixtures per sack of cement.  The brown coat is mixed in the proportion of 1:4 by weight, cement to sand with the same amounts of hydrated lime and approved additives or admixtures used in the scratch coat. | — | — | 81/4 | — |
| 15-1.7l,  m | 2" × 6" wood studs 16" on center. The exterior face has a layer of5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints  and 12" on center elsewhere. An approved building paper is next applied, followed by 1" by No. 18 gage self-furred exterior lath attached with 8d by 21/2"- long galvanized roofing nails spaced 6" on center along each stud. Cement plaster consisting of a 1/2" scratch coat, a bonding agent and a1/2" brown coat  and a finish coat is then applied. The scratch coat is mixed in the proportion of 1:3 by weight, cement to sand with 10 pounds of hydrated lime and 3 pounds of approved additives or admixtures per sack of cement. The brown coat is mixed in the proportion of 1:4 by weight, cement to sand with the same  amounts of hydrated lime and approved additives or admixtures used in the scratch coat. The interior is covered with 3/8" gypsum lath with 1" hexagonal  mesh of 0.035 inch (No. 20 B.W. gage) woven wire lath furred out 5/16" and 1" perlite or vermiculite gypsum plaster. Lath nailed with 11/8" by No. 13 gage by 19/64" head plasterboard glued nails spaced 5" on center. Mesh attached by 13/4" by No. 12 gage by3/8" head nails with 3/8" furrings, spaced 8" on  center. The plaster mix shall not exceed 100 pounds of gypsum to 21/2 cubic feet of aggregate. | — | — | 83/8 | — |
| 15-1.8l,  m | 2" × 6" wood studs 16" on center. The exterior face has a layer of5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints  and 12" on center elsewhere. An approved building paper is next applied, followed by 11/2" by No. 17 gage self-furred exterior lath attached with 8d by 21/2"-long galvanized roofing nails spaced 6" on center along each stud. Cement plaster consisting of a1/2" scratch coat and a 1/2" brown coat is then  applied. The plaster ~~may~~ shall be permitted to be placed by machine. The scratch coat is mixed in the proportion of 1:4 by weight, plastic cement to sand. The brown coat is mixed in the proportion of 1:5 by weight, plastic cement to sand. The interior is covered with 3/8" gypsum lath with 1" hexagonal mesh of No. 20-gage woven wire lath furred out 5/16" and 1" perlite or vermiculite gypsum plaster. Lath nailed with 11/8" by No. 13 gage by19/64" head plasterboard glued nails spaced 5" on center. Mesh attached by 13/4" by No.12 gage by3/8" head nails with 3/8" furrings, spaced 8" on center. The plaster mix shallnot exceed 100 pounds of gypsum to 21/2 cubic feet of aggregate. | — | — | 83/8 | — |
| 15-1.9 | 4" No. 18 gage, nonload-bearing metal studs, 16" on center, with 1" Portland cement lime plaster (measured from the back side of the3/4-pound expanded  metal lath) on the exterior surface. Interior surface to be covered with 1" of gypsum plaster on 3/4-pound expanded metal lath proportioned by weight—1:2 for scratch coat, 1:3 for brown, gypsum to sand. Lath on one side of the partition fastened to 1/4" diameter pencil rods supported by No. 20 gage metal  clips, located 16" on center vertically, on each stud. 3" thick mineral fiber insulating batts friction fitted between the studs. | — | — | 61/ d  2 | — |
| 15-1.10 | Steel studs 0.060" thick, 4" deep or 6" at 16" or 24" centers, with1/2" glass fiber-reinforced concrete (GFRC) on the exterior surface. GFRC is attached with  flex anchors at 24" on center, with 5" leg welded to studs with two 1/2"-long flare-bevel welds, and 4" foot attached to the GFRC skin with5/8"-thick GFRC bonding pads that extend 21/2" beyond the flex anchor foot on both sides. Interior surface to have two layers of1/2" Type X gypsum wallboard.e The first layer of wallboard to be attached with 1"-long Type S buglehead screws spaced 24" on center and the second layer is attached with 15/8"-long Type S screws spaced at 12" on center. Cavity is to be filled with 5" of 4 pcf (nominal) mineral fiber batts. GFRC has 11/2" returns packed with mineral fiber and  caulked on the exterior. | — | — | 61/2 | — |
| 15-1.11 | Steel studs 0.060" thick, 4" deep or 6" at 16" or 24" centers, respectively, with1/2" glass fiber-reinforced concrete (GFRC) on the exterior surface. GFRC is  attached with flex anchors at 24" on center, with 5" leg welded to studs with two 1/2"-long flare-bevel welds, and 4" foot attached to the GFRC skin with5/8"- thick GFRC bonding pads that extend 21/2" beyond the flex anchor foot on both sides. Interior surface to have one layerof5/8" Type X gypsum wallboarde, attached with 11/4"-long Type S buglehead screws spaced 12" on center. Cavity is to be filled with 5" of 4 pcf (nominal) mineral fiber batts. GFRC has 11/2"  returns packed with mineral fiber and caulked on the exterior. | — | — | — | 61/8 |
| 15-1.12 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide,  applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 12" on center. Cavity to be filled with  51/2" mineral wool insulation. | — | — | — | 63/4 |
| 15-1.13 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide,  applied vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws, spaced 12" on center. R-19 mineral fiber insulation  installed in stud cavity. | — | — | — | 63/4 |
| 15-1.14 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide,  applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 7" on center. | — | — | — | 63/4 |
| 15-1.15 q | 2" × 4" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard and sheathing,  respectively, 4′ wide, applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 12" on center.  Cavity to be filled with 31/2" mineral wool insulation. | — | — | — | 43/4 |
| 15-1.16 q | 2" × 6" wood studs at 24" centers with double top plates, single bottom plate; interior and exterior side covered with two layers o5f /8" Type X gypsum  wallboard, 4′ wide, applied horizontally with vertical joints over studs. Base layer fastened with 21/4" Type S drywall screws, spaced 24" on center and face  layer fastened with Type S drywall screws, spaced 8" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with  joint compound. Cavity to be filled with 51/2" mineral wool insulation. | — | — | 8 | — |
| 15-2.1d | 35/8" No. 16 gage steel studs at 24" on center or 2" × 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long  No. 6 drywall screws at 6" on center and covered with minimum 3/4" thick Portland cement plaster. Thin veneer brick units of clay or shale complying with  C1157/C1157M—2017, Grade TBS or better, installed in running bond in accordance with Section 1404.10. Combined total thickness of the Portland cement plaster, mortar and thin veneer brick units shall be not less than 13/4". Interior side covered with one layer of5/8"-thick Type X gypsum wallboard attached to studs with 1" long No. 6 drywall screws at 12" on center. | — | — | — | 6 |
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| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
|  | 15-2.2d | 35/8" No. 16 gage steel studs at 24" on center or 2" × 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long  No. 6 drywall screws at 6" on center and covered with minimum 3/4" thick Portland cement plaster. Thin veneer brick units of clay or shale complying with  C1157/C1157M—2017, Grade TBS or better, installed in running bond in accordance with Section 1404.10. Combined total thickness of the Portland cement plaster, mortar and thin veneer brick units shall be not less than 2". Interior side covered with two layers of 5/8"-thick Type X gypsum wallboard. Bottom layer attached to studs with 1"-long No. 6 drywall screws at 24" on center. Top layer attached to studs with 15/8"-long No. 6 drywall screws at 12"  on center. | — | — | 67/8 | — |
| 15-2.3d | 35/8" No. 16 gage steel studs at 16" on center or 2" × 4" wood studs at 16" on center. Where metal lath is used, attach to the exterior side of studs with  minimum 1"-long No. 6 drywall screws at 6" on center. Brick units of clay or shale not less than 25/8" thick complying with C270—14a installed in accordance with Section 1404.6 with a minimum 1" airspace. Interior side covered with one layer of 5/8"-thick Type X gypsum wallboard attached to studs  with 1"-long No. 6 drywall screws at 12" on center. | — | — | — | 77/8 |
| 15-2.4d | 35/8" No. 16 gage steel studs at 16" on center or 2" × 4" wood studs at 16" on center. Where metal lath is used, attach to the exterior side of studs with  minimum 1"-long No. 6 drywall screws at 6" on center. Brick units of clay or shale not less than 25/8" thick complying with C270—14a installed in accordance with Section 1404.6 with a minimum 1" airspace. Interior side covered with two layers of 5/8"-thick Type X gypsum wallboard. Bottom layer  attached to studs with 1"-long No. 6 drywall screws at 24" on center. Top layer attached to studs with 15/8"-long No. 6 drywall screws at 12" on center. | — | — | 81/2 | — |
| 16. Exterior  walls rated for fire resistance from the inside only in accordance with Section 705.5. | 16-1.1q | 2" × 4" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with5/8" Type X gypsum wallboard, 4' wide, applied  horizontally unblocked, and fastened with 21/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound. Exterior covered with 3/8" wood structural panels, applied vertically, horizontal joints blocked and fastened with 6d common nails (bright)—12" on center in the field, and 6" on center panel edges. Cavity to be filled with 31/2" mineral wool insulation.  Rating established for exposure from interior side only. | — | — | — | 41/2 |
| 16-1.2q | 2" × 6" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with5/8" Type X gypsum wallboard, 4' wide, applied  horizontally or vertically with vertical joints over studs and fastened with 21/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound, exterior side covered with 7/16" wood structural panels fastened with 6d common nails (bright) spaced 12" on center in the field and 6" on center along the panel edges. Cavity to be filled with 51/2" mineral wool insulation. Rating  established from the gypsum-covered side only. | — | — | — | 69/16 |
| 16-1.3q | 2" × 6" wood studs at 16" centers with double top plates, single bottom plates; interior side covered with5/8" Type X gypsum wallboard, 4'wide, applied  vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws spaced 7" on center. Joints to be covered with tape and joint compound. Exterior covered with 3/8" wood structural panels, applied vertically with edges over framing or blocking and fastened with 6d common  nails (bright) at 12" on center in the field and 6" on center on panel edges. R-19 mineral fiber insulation installed in stud cavity. Rating established from the  gypsum-covered side only. | — | — | — | 61/2 |

For SI: 1 inch = 25.4 mm, 1 square inch = 645.2 mm2, 1 cubic foot = 0.0283 m3.

No change to the footnotes



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

1. Structural steel column, either wide flange or tubular shapes.

2. Type X gypsum board or gypsum panel products in accordance with ASTM C1177, C1178, C1278, C1396 or C1658. The total thickness of gypsum board or gypsum panel products calculated as *h* in Section 722.5.1.2 shall be applied vertically to an individual column using one of the following methods:

1. As a single layer without horizontal joints.

2. As multiple layers with horizontal joints not permitted in any layer.

3. As multiple layers with horizontal joints staggered not less than 12 inches vertically between layers and not less than 8 feet vertically in any single layer. The total required thickness of gypsum board or gypsum panel products shall be determined on the basis of the specified fire-resistance rating and the weight-to-heated-perimeter ratio (W/D) of the column. For fire-resistance ratings of 2 hours or less, one of the required layers of gypsum board or gypsum panel product ~~may~~ shall be permitted to be applied to the exterior of the sheet steel column covers with 1-inch long Type S screws spaced 1 inch from the wallboard edge and 8 inches on center. For such installations, 0.0149-inch minimum thickness galvanized steel corner beads with 11/2-inch legs shall be attached to the wallboard with Type S screws spaced 12 inches on center.

3. No change

**FIGURE 722.5.1(2) GYPSUM-PROTECTED STRUCTURAL STEEL COLUMNS WITH SHEET STEEL COLUMN COVERS**

**(F10853 / FS97-21 AS)**

**TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONSa, o, p**

**Portions of table not shown remain unchanged.**

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| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACEb (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
| 15. Exterior or interior walls | 15-1.1l,  m | Exterior surface with 3/4" drop siding over 1/2" gypsum sheathing on 2" × 4" wood studs at 16" on center, interior surface treatment as required for 1-hour-rated  exterior or interior 2" × 4" wood stud partitions. Gypsum sheathing nailed with 13/4" by No.11 gage by7/16" head galvanized nails at 8" on center. Siding  nailed with 7d galvanized smooth box nails. | — | — | — | Varies |
| 15-1.2l,  m | 2" × 4" wood studs 16" on center with metal lath and3/4" cement plaster on each side. Lath attached with 6d common nails 7" on center driven to 1" minimum  penetration and bent over. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by volume, cement to sand. | — | — | — | 53/8 |
| 15-1.3l,  m | 2" × 4" wood studs 16" on center with7/8" cement plaster (measured from the face of studs) on the exterior surface with interior surface treatment as required  for interior wood stud partitions in this table. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by volume, cement to sand. | — | — | — | Varies |
| 15-1.4 | 35/8" No. 16 gage noncombustible studs 16" on center with7/8" cement plaster (measured from the face of the studs) on the exterior surface with interior  surface treatment as required for interior, nonbearing, noncombustible stud partitions in this table. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by  volume, cement to sand. | — | — | — | Variesd |
| 15-1.5m | 21/4" × 33/4" clay face brick with cored holes over 1/2" gypsum sheathing on exterior surface of 2" × 4" wood studs at 16" on center and two layers5/8" Type X  gypsum wallboarde on interior surface. Sheathing placed horizontally or vertically with vertical joints over studs nailed 6" on center with 31/4" × No. 11 gage by 7/16" head galvanized nails. Inner layer of wallboard placed horizontally or vertically and nailed 8" on center with 6d coolenr or wallboardn nails. Outer layer of wallboard placed horizontally or vertically and nailed 8" on center with 8d coolern or wallboardn nails. Joints staggered with vertical joints over studs. Outer  layer joints taped and finished with compound. Nail heads covered with joint compound. 0.035 inch (No. 20 galvanized sheet gage) corrugated galvanized  steel wall ties 3/4" by 65/8" attached to each stud with two 8d coolern or wallboardn nails every sixth course of bricks. | — | — | 10 | — |
| 15-1.6l,  m | 2" × 6" fire-retardant-treated wood studs 16" on center. Interior face has two layers of5/8" Type X gypsum with the base layer placed vertically and attached  with 6d box nails 12"on center. The face layer is placed horizontally and attached with 8d box nails 8" on center at joints and 12" on center elsewhere. The exterior face has a base layer of 5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints and 12" on center elsewhere. An approved building paper is next applied, followed by self-furred exterior lath attached with 21/2", No. 12 gage galvanized roofing nails with a3/8" diameter head and spaced 6" on center along each stud. Cement plaster consisting of a 1/2" brown coat is then applied. The scratch coat is mixed in the proportion of 1:3 by  weight, cement to sand with 10 pounds of hydrated lime and 3 pounds of approved additives or admixtures per sack of cement. The brown coat is mixed in the  proportion of 1:4 by weight, cement to sand with the same amounts of hydrated lime and approved additives or admixtures used in the scratch coat. | — | — | 81/4 | — |
| 15-1.7l,  m | 2" × 6" wood studs 16" on center. The exterior face has a layer of5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints and  12" on center elsewhere. An approved building paper is next applied, followed by 1" by No. 18 gage self-furred exterior lath attached with 8d by 21/2"-long galvanized roofing nails spaced 6" on center along each stud. Cement plaster consisting of a 1/2" scratch coat, a bonding agent and a1/2" brown coat and a  finish coat is then applied. The scratch coat is mixed in the proportion of 1:3 by weight, cement to sand with 10 pounds of hydrated lime and 3 pounds of approved additives or admixtures per sack of cement. The brown coat is mixed in the proportion of 1:4 by weight, cement to sand with the same amounts of  hydrated lime and approved additives or admixtures used in the scratch coat. The interior is covered with 3/8" gypsum lath with 1" hexagonal mesh of 0.035  inch (No. 20 B.W. gage) woven wire lath furred out 5/16" and 1" perlite or vermiculite gypsum plaster. Lath nailed with 11/8" by No. 13 gage by19/64" head plasterboard glued nails spaced 5" on center. Mesh attached by 13/4" by No. 12 gage by3/8" head nails with 3/8" furrings, spaced 8" on center. The plaster  mix shall not exceed 100 pounds of gypsum to 21/2 cubic feet of aggregate. | — | — | 83/8 | — |
| 15-1.8l,  m | 2" × 6" wood studs 16" on center. The exterior face has a layer of5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints and  12" on center elsewhere. An approved building paper is next applied, followed by 11/2" by No. 17 gage self-furred exterior lath attached with 8d by 21/2"-long galvanized roofing nails spaced 6" on center along each stud. Cement plaster consisting of a 1/2" scratch coat and a 1/2" brown coat is then applied. The  plaster may be placed by machine. The scratch coat is mixed in the proportion of 1:4 by weight, plastic cement to sand. The brown coat is mixed in the proportion of 1:5 by weight, plastic cement to sand. The interior is covered with 3/8" gypsum lath with 1" hexagonal mesh of No. 20-gage woven wire lath furred out 5/16" and 1" perlite or vermiculite gypsum plaster. Lath nailed with 11/8" by No. 13 gage by19/64" head plasterboard glued nails spaced 5" on center. Mesh attached by 13/4" by No.12 gage by3/8" head nails with 3/8" furrings, spaced 8" on center. The plaster mix shallnot exceed 100 pounds of  gypsum to 21/2 cubic feet of aggregate. | — | — | 83/8 | — |
| 15-1.9 | 4" No. 18 gage, nonload-bearing metal studs, 16" on center, with 1" Portland cement lime plaster (measured from the back side of the3/4-pound expanded  metal lath) on the exterior surface. Interior surface to be covered with 1" of gypsum plaster on 3/4-pound expanded metal lath proportioned by weight—1:2 for scratch coat, 1:3 for brown, gypsum to sand. Lath on one side of the partition fastened to 1/4" diameter pencil rods supported by No. 20 gage metal clips,  located 16" on center vertically, on each stud. 3" thick mineral fiber insulating batts friction fitted between the studs. | — | — | 61/ d  2 | — |
| 15-1.10 | Steel studs 0.060" thick, 4" deep or 6" at 16" or 24" centers, with1/2" glass fiber-reinforced concrete (GFRC) on the exterior surface. GFRC is attached with  flex anchors at 24" on center, with 5" leg welded to studs with two 1/2"-long flare-bevel welds, and 4" foot attached to the GFRC skin with5/8"-thick GFRC bonding pads that extend 21/2" beyond the flex anchor foot on both sides. Interior surface to have two layers of1/2" Type X gypsum wallboard.e The first  layer of wallboard to be attached with 1"-long Type S buglehead screws spaced 24" on center and the second layer is attached with 15/8"-long Type S screws  spaced at 12" on center. Cavity is to be filled with 5" of 4 pcf (nominal) mineral fiber batts. GFRC has 11/2" returns packed with mineral fiber and caulked on  the exterior. | — | — | 61/2 | — |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
|  | 15-1.11 | Steel studs 0.060" thick, 4" deep or 6" at 16" or 24" centers, respectively, with1/2" glass fiber-reinforced concrete (GFRC) on the exterior surface. GFRC is  attached with flex anchors at 24" on center, with 5" leg welded to studs with two 1/2"-long flare-bevel welds, and 4" foot attached to the GFRC skin with5/8"- thick GFRC bonding pads that extend 21/2" beyond the flex anchor foot on both sides. Interior surface to have one layerof5/8" Type X gypsum wallboarde, attached with 11/4"-long Type S buglehead screws spaced 12" on center. Cavity is to be filled with 5" of 4 pcf (nominal) mineral fiber batts. GFRC has 11/2"  returns packed with mineral fiber and caulked on the exterior. | — | — | — | 61/8 |
| 15-1.12 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide, applied  horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 12" on center. Cavity to be filled with 51/2"  mineral wool insulation. | — | — | — | 63/4 |
| 15-1.13 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide, applied  vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws, spaced 12" on center. R-19 mineral fiber insulation installed in  stud cavity. | — | — | — | 63/4 |
| 15-1.14 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide, applied  horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 7" on center. | — | — | — | 63/4 |
| 15-1.15 q | 2" × 4" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard and sheathing,  respectively, 4′ wide, applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 12" on center.  Cavity to be filled with 31/2" mineral wool insulation. | — | — | — | 43/4 |
| 15-1.16 q | 2" × 6" wood studs at 24" centers with double top plates, single bottom plate; interior and exterior side covered with two layers o5f /8" Type X gypsum  wallboard, 4′ wide, applied horizontally with vertical joints over studs. Base layer fastened with 21/4" Type S drywall screws, spaced 24" on center and face  layer fastened with Type S drywall screws, spaced 8" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with  joint compound. Cavity to be filled with 51/2" mineral wool insulation. | — | — | 8 | — |
| 15-2.1d | 35/8" No. 16 gage steel studs at 24" on center or 2" × 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long No.  6 drywall screws at 6" on center and covered with minimum 3/4" thick Portland cement plaster. Thin veneer brick units of clay or shale complying with  C1157/C1157M—2017, Grade TBS or better, installed in running bond in accordance with Section 1404.10. Combined total thickness of the Portland cement plaster, mortar and thin veneer brick units shall be not less than 13/4". Interior side covered with one layer of5/8"-thick Type X gypsum wallboard attached to studs with 1" long No. 6 drywall screws at 12" on center. | — | — | — | 6 |
| 15-2.2d | 35/8" No. 16 gage steel studs at 24" on center or 2" × 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long No.  6 drywall screws at 6" on center and covered with minimum 3/4" thick Portland cement plaster. Thin veneer brick units of clay or shale complying with  C1157/C1157M—2017, Grade TBS or better, installed in running bond in accordance with Section 1404.10. Combined total thickness of the Portland cement plaster, mortar and thin veneer brick units shall be not less than 2". Interior side covered with two layers of 5/8"-thick Type X gypsum wallboard. Bottom layer  attached to studs with 1"-long No. 6 drywall screws at 24" on center. Top layer attached to studs with 15/8"-long No. 6 drywall screws at 12" on center. | — | — | 67/8 | — |
| 15-2.3d | 35/8" No. 16 gage steel studs at 16" on center or 2" × 4" wood studs at 16" on center. Where metal lath is used, attach to the exterior side of studs with  minimum 1"-long No. 6 drywall screws at 6" on center. Brick units of clay or shale not less than 25/8" thick complying with C270—14a installed in accordance with Section 1404.6 with a minimum 1" airspace. Interior side covered with one layer of 5/8"-thick Type X gypsum wallboard attached to studs with 1"-long No.  6 drywall screws at 12" on center. | — | — | — | 77/8 |
| 15-2.4d | 35/8" No. 16 gage steel studs at 16" on center or 2" × 4" wood studs at 16" on center. Where metal lath is used, attach to the exterior side of studs with  minimum 1"-long No. 6 drywall screws at 6" on center. Brick units of clay or shale not less than 25/8" thick complying with C270—14a installed in accordance with Section 1404.6 with a minimum 1" airspace. Interior side covered with two layers of 5/8"-thick Type X gypsum wallboard. Bottom layer attached to studs  with 1"-long No. 6 drywall screws at 24" on center. Top layer attached to studs with 15/8"-long No. 6 drywall screws at 12" on center. | — | — | 81/2 | — |
| 16. Exterior  walls rated for fire resistance from the inside only in accordance with Section 705.5. | 16-1.1q | 2" × 4" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with5/8" Type X gypsum wallboard, 4' wide, applied  horizontally unblocked, and fastened with 21/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound. Exterior covered with 3/8" wood structural panels, applied vertically, horizontal joints blocked and fastened with 6d common nails (bright)—12" on center in the field, and 6" on center panel edges. Cavity to be filled with 31/2" mineral wool insulation. Rating established for  exposure from interior side only. | — | — | — | 41/2 |
| 16-1.2q | 2" × 6" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with5/8" Type X gypsum wallboard, 4' wide, applied  horizontally or vertically with vertical joints over studs and fastened with 21/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound, exterior side covered with 7/16" wood structural panels fastened with 6d common nails (bright) spaced 12" on center in the field and 6" on center along the panel edges. Cavity to be filled with 51/2" mineral wool insulation. Rating  established from the gypsum-covered side only. | — | — | — | 69/16 |
| 16-1.3q | 2" × 6" wood studs at 16" centers with double top plates, single bottom plates; interior side covered with5/8" Type X gypsum wallboard, 4'wide, applied  vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws spaced 7" on center. Joints to be covered with tape and joint compound. Exterior covered with 3/8" wood structural panels, applied vertically with edges over framing or blocking and fastened with 6d common nails  (bright) at 12" on center in the field and 6" on center on panel edges. R-19 mineral fiber insulation installed in stud cavity. Rating established from the gypsum-  covered side only. | — | — | — | 61/2 |

For SI: 1 inch = 25.4 mm, 1 square inch = 645.2 mm2, 1 cubic foot = 0.0283 m3.

A – P – No change

q. ~~The design stress of studs shall be equal to a maximum of 100 percent of the~~ ~~allowable~~ *~~F′~~c* ~~calculated in accordance with Section 2306~~. The ~~st~~uds in this assembly can be designed without fire-related capacity reductions.

**(F10858 / FS99-21 AM)**

**Revise as follows:**

**TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONSa, o, p**

**Portions of table not shown remain unchanged.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACEb (inches)** | | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** | |
| 16. Exterior walls rated for fire resistance from the inside only in accordance with  Section 705.5. | 16-1.4q | 2" × 6" wood studs at 24" centers with double top plates, single bottom plates; interior side covered with5/8" Type X gypsum wallboard, 4' wide,  applied vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws spaced 7" on center. Joints covered with tape and joint compound. Exterior covered with 15/32" wood structural panels, applied vertically with edges over framing or blocking and fastened with 6d  common nails (bright) at 12" on center in the field and 6" on center on panel edges. R-19 fiberglass insulation installed in stud cavity. Rating  established from the gypsum-covered side only. | — | — | — | 619/32 | |
|  |  |

For SI: 1 inch = 25.4 mm, 1 square inch = 645.2 mm2, 1 cubic foot = 0.0283 m3.

Footnotes – No change

**(F10857 / FS98-21 AS)**

TABLE 722.2.1.4(1) MULTIPLYING FACTOR FOR FINISHES ON NONFIRE-EXPOSED SIDE OFCAST-IN-PLACE OR PRECAST CONCRETE WALL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TYPE OF FINISH APPLIED** | **TYPE OF AGGREGATE USED IN CONCRETE OR CONCRETE MASONRY** | | | |
| **TO CONCRETE OR CONCRETE MASONRY**  **WALL** | **Concrete: siliceous or carbonate concrete masonry: siliceous or**  **carbonate; solid claybrick** | **Concrete: sand-lightweight concrete masonry: clay tile; hollow clay brick; concrete masonry**  **units of expanded shale and < 20% sand** | **Concrete: lightweight concrete masonry: concrete masonry units of expanded shale, expanded clay,**  **expanded slag, or pumice < 20% sand** | **Concrete masonry: concrete masonry units of expanded slag,**  **expanded clay, or pumice** |
| Portland cement-sand plaster | 1.00 | 0.75a | 0.75a | 0.50a |
| Gypsum-sand plaster | 1.25 | 1.00 | 1.00 | 1.00 |
| Gypsum-vermiculite or perlite  plaster | 1.75 | 1.50 | 1.25 | 1.25 |
| Gypsum wallboard | 3.00 | 2.25 | 2.25 | 2.25 |

For SI: 1 inch = 25.4 mm.

a. For Portland cement-sand plaster 5/8 inch or less in thickness and applied directly to the concrete or concrete masonry on the nonfire-exposed side of the wall, the multiplying factor shall be 1.00.

TABLE 722.2.1.4(2) TIME ASSIGNED TO FINISH MATERIALS ON FIRE-EXPOSED SIDE OF WALL~~a~~

|  |  |
| --- | --- |
| **FINISH DESCRIPTION** | **TIMEb (minutes)** |
| Gypsum wallboard |  |
| 3/8 inch | 10 |
| 1/2 inch | 15 |
| 5/8 inch | 20 |
| 2 layers of 3/8 inch | 25 |
| 1 layer of 3/8 inch, 1 layer of 1/2 inch | 35 |
| 2 layers of 1/2 inch | 40 |
| Type X gypsum wallboard |  |
| 1/2 inch | 25 |
| 5/8 inch | 40 |
| Portland cement-sand plaster applied directly to concrete masonry | See Note ac |
| Portland cement-sand plaster on metal lath |  |
| 3/4 inch | 20 |
| 7/8 inch | 25 |
| 1 inch | 30 |
| Gypsum sand plaster on 3/8-inch gypsum lath |  |

|  |  |
| --- | --- |
| **FINISH DESCRIPTION** | **TIME (minutes)** |
| 1/2 inch | 35 |
| 5/8 inch | 40 |
| 3/4 inch | 50 |
| Gypsum sand plaster on metal lath |  |
| 3/4 inch | 50 |
| 7/8 inch | 60 |
| 1 inch | 80 |

For SI: 1 inch = 25.4 mm.

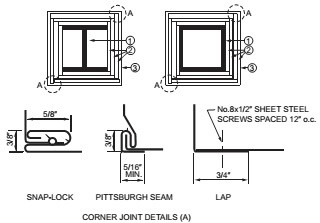
a. This table applies to precast concrete, cast-in-place concrete, or masonry walls.

b. The time assigned is not a finish rating.

~~a~~c. The actual thickness of Portland cement-sand plaster, provided that it is5/8 inch or less in thickness, shall be permitted to be included in determining the equivalent thickness of the masonry for use in Table 722.3.2.

**(F10860 / FS102-21 AMPC1)**

Revise as follows:



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

1. Structural steel column, either wide flange or tubular shapes.

2. Type X ~~gypsum board or~~ gypsum panel products in accordance with ASTM C1177, C1178, C1278, C1396 or C1658. The total thickness of ~~gypsum board or~~ gypsum panel products calculated as *h* in Section 722.5.1.2 shall be applied vertically to an individual column using one of the following methods:

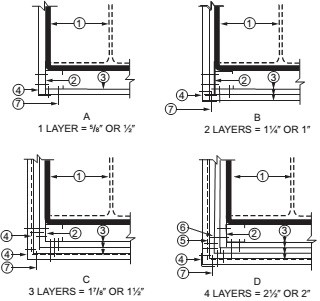
1. As a single layer without horizontal joints.

2. As multiple layers with horizontal joints not permitted in any layer.

3. As multiple layers with horizontal joints staggered not less than 12 inches vertically between layers and not less than 8 feet vertically in any single layer. The total required thickness of ~~gypsum board or~~ gypsum panel products shall be determined on the basis of the specified fire-resistance rating and the weight-to-heated-perimeter ratio (W/D) of the column. For fire-resistance ratings of 2 hours or less, one of the required layers of ~~gypsum board or~~ gypsum panel product may be applied to the exterior of the sheet steel column covers with 1-inch long Type S screws spaced 1 inch from the wallboard edge and 8 inches on center. For such installations, 0.0149-inch minimum thickness galvanized steel corner beads with 11/2-inch legs shall be attached to the wallboard with Type S screws spaced 12 inches on center.

3. For fire-resistance ratings of 3 hours or less, the column covers shall be fabricated from 0.0239-inch minimum thickness galvanized or stainless steel. For 4-hour fire-resistance ratings, the column covers shall be fabricated from 0.0239-inch minimum thickness stainless steel. The column covers shall be erected with the Snap Lock or Pittsburgh joint details. For fire-resistance ratings of 2 hours or less, column covers fabricated from 0.0269-inch minimum thickness galvanized or stainless steel shall be permitted to be erected with lap joints. The lap joints shall be permitted to be located anywhere around the perimeter of the column cover. The lap joints shall be secured with 1/2-inch-long No. 8 sheet metal screws spaced 12 inches on center. The column covers shall be provided with a minimum expansion clearance of 1/8 inch per linear foot between the ends of the cover and any restraining construction.

FIGURE 722.5.1(2) GYPSUM-PROTECTED STRUCTURAL STEEL COLUMNS WITH SHEET STEEL COLUMN COVERS



For SI: 1 inch = 25.4 mm, 1 foot = -305 mm.

1. Structural steel column, either wide flange or tubular shapes.

2. 15/8-inch deep studs fabricated from 0.0179-inch minimum thickness galvanized steel with 15/16 or 17/16-inch legs. The length of the steel studs shall be 1/2 inch less than the height of the assembly.

3. Type X ~~gypsum board or~~ gypsum panel products in accordance with ASTM C1177, C1178, C1278, C1396 or C1658. The total thickness of ~~gypsum board or~~ gypsum panel products calculated as *h* in Section 722.5.1.2 shall be applied vertically to an individual column using one of the following methods:

1. As a single layer without horizontal joints.

2. As multiple layers with horizontal joints not permitted in any layer.

3. As multiple layers with horizontal joints staggered not less than 12 inches vertically between layers and not less than 8 feet vertically in any single layer. The total required thickness of ~~gypsum board or~~ gypsum panel products shall be determined on the basis of the specified fire-resistance rating and the weight-to-heated-perimeter ratio (W/D) of the column.

4. Galvanized 0.0149-inch minimum thickness steel corner beads with 11/2- inch legs attached to the ~~gypsum board or~~ gypsum panel products with 1-inch-long Type S screws spaced 12 inches on center.

5. No. 18 SWG steel tie wires spaced 24 inches on center.

6. Sheet metal angles with 2-inch legs fabricated from 0.0221-inch minimum thickness galvanized steel.

7. Type S screws, 1 inch long, shall be used for attaching the first layer of~~gypsum board or~~ gypsum panel product to the steel studs and the third layer to the sheet metal angles at 24 inches on center. Type S screws 13/4 inches long shall be used for attaching the second layer of ~~gypsum board or~~ gypsum panel product to the steel studs and the fourth layer to the sheet metal angles at 12 inches on center. Type S screws 21/4 inches long shall be used for attaching the third layer of~~gypsum board or~~ gypsum panel product to the steel studs at 12 inches on center.

FIGURE 722.5.1(3) GYPSUM-PROTECTED STRUCTURAL STEEL COLUMNS WITH STEEL STUD/SCREW ATTACHMENT SYSTEM

**722.5.1.2.1Attachment.** The *~~gypsum board~~* ~~or~~ *gypsum panel products* shall be supported as illustrated in either Figure 722.5.1(2) for *fire- resistance ratings* of 4 hours or less, or Figure 722.5.1(3) for *fire-resistance ratings* of 3 hours or less.

**(F10861 / FS103-21 AS)**

Revise as follows:

**TABLE 722.6.2(3) MEMBRANEa ON EXTERIOR FACE OF WOOD STUD WALLS**

|  |  |  |
| --- | --- | --- |
| **SHEATHING** | **PAPER** | **EXTERIOR FINISH** |
| 5/8-inch T & G lumber  5/16-inch exterior glue *wood structural panel*  1/2-inch gypsum wallboard 5/8-inch gypsum wallboard  1/2-inch fiberboard | Sheathing paper | Lumber siding  Wood shingles and shakes  1/4-inch *fiber-cement* lap, panel or shingle siding 1/4-inch *wood structural panels*-exterior type  1/4-inch hardboard |
|  |  | Insulated Vinyl Siding |
|  |  | Metal siding |
|  |  | Polypropylene Siding |
|  |  | Stucco on metal lath |
|  |  | Masonry veneer |
|  |  | Vinyl siding |
| None | — | 3/8-inch exterior-grade *wood structural panels* |

For SI: 1 inch = 25.4 mm.

a. Any combination of sheathing, paper and exterior finish is permitted.

**(F10863 / FS105-21 AS)**

Revise as follows:

**TABLE 722.6.2(5) TIME ASSIGNED FOR ADDITIONAL PROTECTION**

|  |  |
| --- | --- |
| **DESCRIPTION OF ADDITIONAL PROTECTION** | **FIRE RESISTANCE**  **(minutes)** |
| Add to the fire-resistance rating of wood stud walls if the spaces between the studs are completely filled with glass fiberor mineral wool batts weighing not less than 2 pounds per cubic foot (0.6 pound per square foot of wall surface) or rockwool or slag material wool batts weighing not less than 3.3 pounds per cubic foot (1 pound per square foot of wall surface)o, r cellulose insulation  having a nominal density not less than 2.6 pounds per cubic foot. | 15 |

For SI: 1 pound/cubic foot = 16.0185 kg/m3.

**(F10864 / FS106-21 AS)**

**Revise as follows:**

**TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONSa, o, p**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACEb (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
| 1. Brick of clay or shale | 1-1.1 | Solid brick of clay or shale.c | 6 | 4.9 | 3.8 | 2.7 |
| 1-1.2 | Hollow brick, not filled. | 5.0 | 4.3 | 3.4 | 2.3 |
| 1-1.3 | Hollow brick unit wall, grout or filled with perlite vermiculite or expanded shale aggregate. | 6.6 | 5.5 | 4.4 | 3.0 |
| 1-2.1 | 4" nominal thick units not less than 75 percent solid backed with a hat-shaped metal furring channel3/4" thick formed from 0.021" sheet metal attached to  the brick wall on 24" centers with approved fasteners, and 1/2" Type X gypsum wallboard attached to the metal furring strips with 1"-long Type S screws  spaced 8" on center. | — | — | 5d | — |
| 2. Combination of clay brick and load- bearing hollow  clay tile | 2-1.1 | 4" solid brick and 4" tile (not less than 40 percent solid). | — | 8 | — | — |
| 2-1.2 | 4" solid brick and 8" tile (not less than 40 percent solid). | 12 | — | — | — |
| 3. Concrete masonry units | 3-1.1f, g | Expanded slag or pumice. | 4.7 | 4.0 | 3.2 | 2.1 |
| 3-1.2f, g | Expanded clay, shale or slate. | 5.1 | 4.4 | 3.6 | 2.6 |
| 3-1.3f | Limestone, cinders or air-cooled slag. | 5.9 | 5.0 | 4.0 | 2.7 |
| 3-1.4f, g | Calcareous or siliceous gravel. | 6.2 | 5.3 | 4.2 | 2.8 |
| 4. Solid concreteh, i | 4-1.1 | Siliceous aggregate concrete. | 7.0 | 6.2 | 5.0 | 3.5 |
| Carbonate aggregate concrete. | 6.6 | 5.7 | 4.6 | 3.2 |
| Sand-lightweight concrete. | 5.4 | 4.6 | 3.8 | 2.7 |
| Lightweight concrete. | 5.1 | 4.4 | 3.6 | 2.5 |
| 5. Glazed or unglazed facing tile, nonload- bearing | 5-1.1 | One 2" unit cored 15 percent maximum and one 4" unit cored 25 percent maximum with3/4" mortar-filled collar joint. Unit positions reversed in alternate  courses. | — | 63/8 | — | — |
| 5-1.2 | One 2" unit cored 15 percent maximum and one 4" unit cored 40 percent maximum with3/4" mortar-filled collar joint. Unit positions side with 3/4" gypsum  plaster. Two wythes tied together every fourth course with No. 22 gage corrugated metal ties. | — | 63/4 | — | — |
| 5-1.3 | One unit with three cells in wall thickness, cored 29 percent maximum. | — | — | 6 | — |
| 5-1.4 | One 2" unit cored 22 percent maximum and one 4" unit cored 41 percent maximum with1/4" mortar-filled collar joint. Two wythes tied together every third  course with 0.030"(No. 22 galvanized sheet steel gage) corrugated metal ties. | — | — | 6 | — |
| 5-1.5 | One 4" unit cored 25 percent maximum with 3/4" gypsum plaster on one side. | — | — | 43/4 | — |
| 5-1.6 | One 4" unit with two cells in wall thickness, cored 22 percent maximum. | — | — | — | 4 |
| 5-1.7 | One 4" unit cored 30 percent maximum with 3/4" vermiculite gypsum plaster on one side. | — | — | 41/2 | — |
| 5-1.8 | One 4" unit cored 39 percent maximum with 3/4" gypsum plaster on one side. | — | — | — | 41/2 |
| 6. Solid gypsum plaster | 6-1.1 | 3/4" by 0.055" (No. 16 carbon sheet steel gage) vertical cold-rolled channels, 16" on center with 2.6-pound flat metal lath applied to one face and tied with  0.049" (No. 18 B.W. gage) wire at 6" spacing. Gypsum plaster each side mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 2d |
| 6-1.2 | 3/4" by 0.05" (No. 16 carbon sheet steel gage) cold-rolled channels 16" on center with metal lath applied to one face and tied with 0.049" (No. 18 B.W.  gage) wire at 6" spacing. Perlite or vermiculite gypsum plaster each side. For three-coat work, the plaster mix for the second coat shall not exceed 100  pounds of gypsum to 21/2 cubic feet of aggregate for the 1-hour system. | — | — | 21/ d  2 | 2d |
| 6-1.3 | 3/4" by 0.055" (No. 16 carbon sheet steel gage) vertical cold-rolled channels, 16" on center with3/8" gypsum lath applied to one face and attached with  sheet metal clips. Gypsum plaster each side mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 2d |
| 6-2.1 | Studless with 1/2" full-length plain gypsum lath and gypsum plaster each side. Plaster mixed 1:1 for scratch coat and 1:2 for brown coat, by weight,  gypsum to sand aggregate. | — | — | — | 2d |
| 6-2.2 | Studless with 1/2" full-length plain gypsum lath and perlite or vermiculite gypsum plaste*r* each side. | — | — | 21/ d  2 | 2d |
| 6-2.3 | Studless partition with 3/8" rib metal lath installed vertically adjacent edges tied 6" on center with No. 18 gage wire ties, gypsum plaster each side mixed 1:2  by weight, gypsum to sand aggregate. | — | — | — | 2d |
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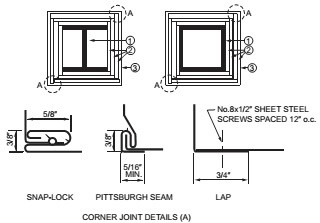
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| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
| 7. Solid perlite and Portland  cement | 7-1.1 | Perlite mixed in the ratio of 3 cubic feet to 100 pounds of Portland cement and machine applied to stud side of 1/2" mesh by 0.058-inch (No. 17 B.W.  gage) paper-backed woven wire fabric lath wire-tied to 4"-deep steel trussed wirej studs 16" on center. Wire ties of 0.049" (No. 18 B.W. gage) galvanized steel wire 6" on center vertically. | — | — | 31/ d  8 | — |
| 8. Solid neat wood fibered  gypsum plaster | 8-1.1 | 3/4" by 0.055-inch (No. 16 carbon sheet steel gage) cold-rolled channels, 12" on center with 2.5-pound flat metal lath applied to one face and tied with  0.049" (No. 18 B.W.gage) wire at 6" spacing. Neat gypsum plaster applied each side. | — | — | 2d | — |
| 9. Solid wallboard  partition | 9-1.1 | One full-length layer 1/2" Type X gypsum wallboarde laminated to each side of 1" full-length V-edge gypsum coreboard with approved laminating  compound. Vertical joints of face layer and coreboard staggered not less than 3". | — | — | 2d | — |
| 10. Hollow (studless) gypsum wallboard partition | 10-1.1 | One full-length layer of 5/8" Type X gypsum wallboarde attached to both sides of wood or metal top and bottom runners laminated to each side of 1" × 6"  full-length gypsum coreboard ribs spaced 2" on center with approved laminating compound. Ribs centered at vertical joints of face plies and joints staggered 24" in opposing faces. Ribs ~~may~~ shall be permitted to be recessed 6" from the top and bottom. | — | — | — | 21/ d  4 |
| 10-1.2 | 1" regular gypsum V-edge full-length backing board attached to both sides of wood or metal top and bottom runners with nails or 15/8" drywall screws at  24" on center. Minimum width of runners 15/8". Face layer of 1/2" regular full-length gypsum wallboard laminated to outer faces of backing board with  approved laminating compound. | — | — | 45/ d  8 | — |
| 11.  Noncombustible studs—interior partition with plaster each side | 11-1.1 | 31/4" × 0.044" (No. 18 carbon sheet steel gage) steel studs spaced 24" on center.5/8" gypsum plaster on metal lath each side mixed 1:2 by weight,  gypsum to sand aggregate. | — | — | — | 43/ d  4 |
| 11-1.2 | 33/8" × 0.055" (No. 16 carbon sheet steel gage) approved nailablek studs spaced 24" on center. 5/8" neat gypsum wood-fibered plaster each side over 3/8"  rib metal lath nailed to studs with 6d common nails, 8" on center. Nails driven 11/4" and bent over. | — | — | 55/8 | — |
| 11-1.3 | 4" × 0.044" (No. 18 carbon sheet steel gage) channel-shaped steel studs at 16" on center. On each side approved resilient clips pressed onto stud flange at 16" vertical spacing, 1/4" pencil rods snapped into or wire tied onto outer loop of clips, metal lath wire-tied to pencil rods at 6" intervals, 1" perlite gypsum plaster, each side. | — | 75/ d  8 | — | — |
| 11-1.4 | 21/2" × 0.044" (No. 18 carbon sheet steel gage) steel studs spaced 16" on center. Wood fibered gypsum plaster mixed 1:1 by weight gypsum to sand  aggregate applied on 3/4-pound metal lath wire tied to studs, each side. 3/4" plaster applied over each face, including finish coat. | — | — | 41/ d  4 | — |
| 12. Wood studs  —interior partition with plaster each side | 12-1.1l,  m | 2" × 4" wood studs 16" on center with5/8" gypsum plaster on metal lath. Lath attached by 4d common nails bent over or No. 14 gage by 11/4" by 3/4"  crown width staples spaced 6" on center. Plaster mixed 1:11/2 for scratch coat and 1:3 for brown coat, by weight, gypsum to sand aggregate. | — | — | — | 51/8 |
| 12-1.2l | 2" × 4" wood studs 16" on center with metal lath and7/8" neat wood-fibered gypsum plaster each side. Lath attached by 6d common nails, 7" on center.  Nails driven 11/4" and bent over. | — | — | 51/ d  2 | — |
| 12-1.3l | 2" × 4" wood studs 16" on center with3/8" perforated or plain gypsum lath and1/2" gypsum plaster each side. Lath nailed with 11/8" by No. 13 gage by  19/64" head plasterboard blued nails, 4" on center. Plaster mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 51/4 |
| 12-1.4l | 2" × 4" wood studs 16" on center with3/8" Type X gypsum lath and 1/2" gypsum plaster each side. Lath nailed with 11/8" by No. 13 gage by19/64" head  plasterboard blued nails, 5" on center. Plaster mixed 1:2 by weight, gypsum to sand aggregate. | — | — | — | 51/4 |
| 13.  Noncombustible studs—interior partition with gypsum wallboard each side | 13-1.1 | 0.018" (No. 25 carbon sheet steel gage) channel-shaped studs 24" on center with one full-length layer of5/8" Type X gypsum wallboarde applied vertically  attached with 1"-long No. 6 dry wall screws to each stud. Screws are 8" on center around the perimeter and 12" on center on the intermediate stud. Where applied horizontally, the Type X gypsum wallboard shall be attached to 35/8" studs and the horizontal joints shall be staggered with those on the opposite side. Screws for the horizontal application shall be 8" on center at vertical edges and 12" on center at intermediate studs. | — | — | — | 27/ d  8 |
| 13-1.2 | 0.018" (No. 25 carbon sheet steel gage) channel-shaped studs 25" on center with two full-length layers of1/2" Type X gypsum wallboarde applied vertically  each side. First layer attached with 1"-long, No. 6 drywall screws, 8" on center around the perimeter and 12" on center on the intermediate stud. Second layer applied with vertical joints offset one stud space from first layer using 15/8" long, No. 6 drywall screws spaced 9" on center along vertical joints, 12" on center at intermediate studs and 24" on center along top and bottom runners. | — | — | 35/ d  8 | — |
| 13-1.3 | 0.055" (No. 16 carbon sheet steel gage) approved nailable metal studse 24" on center with full-length 5/8" Type X gypsum wallboarde applied vertically and  nailed 7" on center with 6d cement-coated common nails. Approved metal fastener grips used with nails at vertical butt joints along studs. | — | — | — | 47/8 |
| 14. Wood studs  —interior partition with gypsum wallboard each side | 14-1.1h,  m | 2" × 4" wood studs 16" on center with two layers of3/8" regular gypsum wallboarde each side, 4d coolern or wallboardn nails at 8" on center first layer, 5d  coolern or wallboardn nails at 8" on center second layer with laminating compound between layers, joints staggered. First layer applied full length vertically, second layer applied horizontally or vertically. | — | — | — | 5 |
| 14-1.2l,  m | 2" × 4" wood studs 16" on center with two layers1/2" regular gypsum wallboarde applied vertically or horizontally each sidek, joints staggered. Nail base  layer with 5d coolern or wallboardn nails at 8" on center face layer with 8d coolenr or wallboardn nails at 8" on center. | — | — | — | 51/2 |
| 14-1.3l,  m | 2" × 4" wood studs 24" on center with5/8" Type X gypsum wallboarde applied vertically or horizontally nailed with 6d coolern or wallboardn nails at 7" on  center with end joints on nailing members. Stagger joints each side. | — | — | — | 43/4 |
| 14-1.4l | 2" × 4" fire-retardant-treated wood studs spaced 24" on center with one layer of5/8" Type X gypsum wallboarde applied with face paper grain (long  dimension) parallel to studs. Wallboard attached with 6d coolern or wallboardn nails at 7" on center. | — | — | — | 43/ d  4 |
| 14-1.5l,  m | 2" × 4" wood studs 16" on center with two layers5/8" Type X gypsum wallboarde each side. Base layers applied vertically and nailed with 6d coolenr or  wallboardn nails at 9" on center. Face layer applied vertically or horizontally and nailed with 8d coolenr or wallboardn nails at 7" on center. For nail-adhesive application, base layers are nailed 6" on center. Face layers applied with coating of approved wallboard adhesive and nailed 12" on center. | — | — | 6 | — |
| 14-1.6l | 2" × 3" fire-retardant-treated wood studs spaced 24" on center with one layer of5/8" Type X gypsum wallboarde applied with face paper grain (long  dimension) at right angles to studs. Wallboard attached with 6d cement-coated box nails spaced 7" on center. | — | — | — | 35/ d  8 |
| 15. Exterior or interior walls | 15-1.1l,  m | Exterior surface with 3/4" drop siding over 1/2" gypsum sheathing on 2" × 4" wood studs at 16" on center, interior surface treatment as required for 1-hour-  rated exterior or interior 2" × 4" wood stud partitions. Gypsum sheathing nailed with 13/4" by No.11 gage by7/16" head galvanized nails at 8" on center.  Siding nailed with 7d galvanized smooth box nails. | — | — | — | Varies |
| 15-1.2l,  m | 2" × 4" wood studs 16" on center with metal lath and3/4" cement plaster on each side. Lath attached with 6d common nails 7" on center driven to 1"  minimum penetration and bent over. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by volume, cement to sand. | — | — | — | 53/8 |
| 15-1.3l,  m | 2" × 4" wood studs 16" on center with7/8" cement plaster (measured from the face of studs) on the exterior surface with interior surface treatment as  required for interior wood stud partitions in this table. Plaster mix 1:4 for scratch coat and 1:5 for brown coat, by volume, cement to sand. | — | — | — | Varies |
| 15-1.4 | 35/8" No. 16 gage noncombustible studs 16" on center with7/8" cement plaster (measured from the face of the studs) on the exterior surface with interior  surface treatment as required for interior, nonbearing, noncombustible stud partitions in this table. Plaster mix 1:4 for scratch coat and 1:5 for brown coat,  by volume, cement to sand. | — | — | — | Variesd |
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| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
|  | 15-1.5m | 21/4" × 33/4" clay face brick with cored holes over 1/2" gypsum sheathing on exterior surface of 2" × 4" wood studs at 16" on center and two layers5/8" Type  X gypsum wallboarde on interior surface. Sheathing placed horizontally or vertically with vertical joints over studs nailed 6" on center with 31/4" × No. 11 gage by 7/16" head galvanized nails. Inner layer of wallboard placed horizontally or vertically and nailed 8" on center with 6d coolenr or wallboardn nails. Outer layer of wallboard placed horizontally or vertically and nailed 8" on center with 8d coolern or wallboardn nails. Joints staggered with vertical joints  over studs. Outer layer joints taped and finished with compound. Nail heads covered with joint compound. 0.035 inch (No. 20 galvanized sheet gage)  corrugated galvanized steel wall ties 3/4" by 65/8" attached to each stud with two 8d coolern or wallboardn nails every sixth course of bricks. | — | — | 10 | — |
| 15-1.6l,  m | 2" × 6" fire-retardant-treated wood studs 16" on center. Interior face has two layers of5/8" Type X gypsum with the base layer placed vertically and  attached with 6d box nails 12"on center. The face layer is placed horizontally and attached with 8d box nails 8" on center at joints and 12" on center elsewhere. The exterior face has a base layer of 5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints and 12" on center elsewhere. An approved building paper is next applied, followed by self-furred exterior lath attached with 21/2", No. 12 gage galvanized roofing nails with a 3/8" diameter head and spaced 6" on center along each stud. Cement plaster consisting of a1/2" brown coat is then applied. The scratch coat is mixed in  the proportion of 1:3 by weight, cement to sand with 10 pounds of hydrated lime and 3 pounds of approved additives or admixtures per sack of cement.  The brown coat is mixed in the proportion of 1:4 by weight, cement to sand with the same amounts of hydrated lime and approved additives or admixtures used in the scratch coat. | — | — | 81/4 | — |
| 15-1.7l,  m | 2" × 6" wood studs 16" on center. The exterior face has a layer of5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints  and 12" on center elsewhere. An approved building paper is next applied, followed by 1" by No. 18 gage self-furred exterior lath attached with 8d by 21/2"- long galvanized roofing nails spaced 6" on center along each stud. Cement plaster consisting of a 1/2" scratch coat, a bonding agent and a1/2" brown coat  and a finish coat is then applied. The scratch coat is mixed in the proportion of 1:3 by weight, cement to sand with 10 pounds of hydrated lime and 3 pounds of approved additives or admixtures per sack of cement. The brown coat is mixed in the proportion of 1:4 by weight, cement to sand with the same  amounts of hydrated lime and approved additives or admixtures used in the scratch coat. The interior is covered with 3/8" gypsum lath with 1" hexagonal  mesh of 0.035 inch (No. 20 B.W. gage) woven wire lath furred out 5/16" and 1" perlite or vermiculite gypsum plaster. Lath nailed with 11/8" by No. 13 gage by 19/64" head plasterboard glued nails spaced 5" on center. Mesh attached by 13/4" by No. 12 gage by3/8" head nails with 3/8" furrings, spaced 8" on  center. The plaster mix shall not exceed 100 pounds of gypsum to 21/2 cubic feet of aggregate. | — | — | 83/8 | — |
| 15-1.8l,  m | 2" × 6" wood studs 16" on center. The exterior face has a layer of5/8" Type X gypsum sheathing placed vertically with 6d box nails 8" on center at joints  and 12" on center elsewhere. An approved building paper is next applied, followed by 11/2" by No. 17 gage self-furred exterior lath attached with 8d by 21/2"-long galvanized roofing nails spaced 6" on center along each stud. Cement plaster consisting of a1/2" scratch coat and a 1/2" brown coat is then  applied. The plaster ~~may~~ shall be permitted to be placed by machine. The scratch coat is mixed in the proportion of 1:4 by weight, plastic cement to sand. The brown coat is mixed in the proportion of 1:5 by weight, plastic cement to sand. The interior is covered with 3/8" gypsum lath with 1" hexagonal mesh of No. 20-gage woven wire lath furred out 5/16" and 1" perlite or vermiculite gypsum plaster. Lath nailed with 11/8" by No. 13 gage by19/64" head plasterboard glued nails spaced 5" on center. Mesh attached by 13/4" by No.12 gage by3/8" head nails with 3/8" furrings, spaced 8" on center. The plaster mix shallnot exceed 100 pounds of gypsum to 21/2 cubic feet of aggregate. | — | — | 83/8 | — |
| 15-1.9 | 4" No. 18 gage, nonload-bearing metal studs, 16" on center, with 1" Portland cement lime plaster (measured from the back side of the3/4-pound expanded  metal lath) on the exterior surface. Interior surface to be covered with 1" of gypsum plaster on 3/4-pound expanded metal lath proportioned by weight—1:2 for scratch coat, 1:3 for brown, gypsum to sand. Lath on one side of the partition fastened to 1/4" diameter pencil rods supported by No. 20 gage metal  clips, located 16" on center vertically, on each stud. 3" thick mineral fiber insulating batts friction fitted between the studs. | — | — | 61/ d  2 | — |
| 15-1.10 | Steel studs 0.060" thick, 4" deep or 6" at 16" or 24" centers, with1/2" glass fiber-reinforced concrete (GFRC) on the exterior surface. GFRC is attached with  flex anchors at 24" on center, with 5" leg welded to studs with two 1/2"-long flare-bevel welds, and 4" foot attached to the GFRC skin with5/8"-thick GFRC bonding pads that extend 21/2" beyond the flex anchor foot on both sides. Interior surface to have two layers of1/2" Type X gypsum wallboard.e The first layer of wallboard to be attached with 1"-long Type S buglehead screws spaced 24" on center and the second layer is attached with 15/8"-long Type S screws spaced at 12" on center. Cavity is to be filled with 5" of 4 pcf (nominal) mineral fiber batts. GFRC has 11/2" returns packed with mineral fiber and  caulked on the exterior. | — | — | 61/2 | — |
| 15-1.11 | Steel studs 0.060" thick, 4" deep or 6" at 16" or 24" centers, respectively, with1/2" glass fiber-reinforced concrete (GFRC) on the exterior surface. GFRC is  attached with flex anchors at 24" on center, with 5" leg welded to studs with two 1/2"-long flare-bevel welds, and 4" foot attached to the GFRC skin with5/8"- thick GFRC bonding pads that extend 21/2" beyond the flex anchor foot on both sides. Interior surface to have one layerof5/8" Type X gypsum wallboarde, attached with 11/4"-long Type S buglehead screws spaced 12" on center. Cavity is to be filled with 5" of 4 pcf (nominal) mineral fiber batts. GFRC has 11/2"  returns packed with mineral fiber and caulked on the exterior. | — | — | — | 61/8 |
| 15-1.12 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide,  applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 12" on center. Cavity to be filled with  51/2" mineral wool insulation. | — | — | — | 63/4 |
| 15-1.13 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide,  applied vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws, spaced 12" on center. R-19 mineral fiber insulation  installed in stud cavity. | — | — | — | 63/4 |
| 15-1.14 q | 2" × 6" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard, 4′ wide,  applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 7" on center. | — | — | — | 63/4 |
| 15-1.15 q | 2" × 4" wood studs at 16" with double top plates, single bottom plate; interior and exterior sides covered with5/8" Type X gypsum wallboard and sheathing,  respectively, 4′ wide, applied horizontally or vertically with vertical joints over studs, and fastened with 21/4" Type S drywall screws, spaced 12" on center.  Cavity to be filled with 31/2" mineral wool insulation. | — | — | — | 43/4 |
| 15-1.16 q | 2" × 6" wood studs at 24" centers with double top plates, single bottom plate; interior and exterior side covered with two layers o5f /8" Type X gypsum  wallboard, 4′ wide, applied horizontally with vertical joints over studs. Base layer fastened with 21/4" Type S drywall screws, spaced 24" on center and face  layer fastened with Type S drywall screws, spaced 8" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with  joint compound. Cavity to be filled with 51/2" mineral wool insulation. | — | — | 8 | — |
| 15-2.1d | 35/8" No. 16 gage steel studs at 24" on center or 2" × 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long  No. 6 drywall screws at 6" on center and covered with minimum 3/4" thick Portland cement plaster. Thin veneer brick units of clay or shale complying with  C1157/C1157M—2017, Grade TBS or better, installed in running bond in accordance with Section 1404.10. Combined total thickness of the Portland cement plaster, mortar and thin veneer brick units shall be not less than 13/4". Interior side covered with one layer of5/8"-thick Type X gypsum wallboard attached to studs with 1" long No. 6 drywall screws at 12" on center. | — | — | — | 6 |
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| **MATERIAL** | **ITEM NUMBER** | **CONSTRUCTION** | **MINIMUM FINISHED THICKNESS FACE-TO-**  **FACE (inches)** | | | |
| **4**  **hours** | **3**  **hours** | **2**  **hours** | **1 hour** |
|  | 15-2.2d | 35/8" No. 16 gage steel studs at 24" on center or 2" × 4" wood studs at 24" on center. Metal lath attached to the exterior side of studs with minimum 1" long  No. 6 drywall screws at 6" on center and covered with minimum 3/4" thick Portland cement plaster. Thin veneer brick units of clay or shale complying with  C1157/C1157M—2017, Grade TBS or better, installed in running bond in accordance with Section 1404.10. Combined total thickness of the Portland cement plaster, mortar and thin veneer brick units shall be not less than 2". Interior side covered with two layers of 5/8"-thick Type X gypsum wallboard. Bottom layer attached to studs with 1"-long No. 6 drywall screws at 24" on center. Top layer attached to studs with 15/8"-long No. 6 drywall screws at 12"  on center. | — | — | 67/8 | — |
| 15-2.3d | 35/8" No. 16 gage steel studs at 16" on center or 2" × 4" wood studs at 16" on center. Where metal lath is used, attach to the exterior side of studs with  minimum 1"-long No. 6 drywall screws at 6" on center. Brick units of clay or shale not less than 25/8" thick complying with C270—14a installed in accordance with Section 1404.6 with a minimum 1" airspace. Interior side covered with one layer of 5/8"-thick Type X gypsum wallboard attached to studs  with 1"-long No. 6 drywall screws at 12" on center. | — | — | — | 77/8 |
| 15-2.4d | 35/8" No. 16 gage steel studs at 16" on center or 2" × 4" wood studs at 16" on center. Where metal lath is used, attach to the exterior side of studs with  minimum 1"-long No. 6 drywall screws at 6" on center. Brick units of clay or shale not less than 25/8" thick complying with C270—14a installed in accordance with Section 1404.6 with a minimum 1" airspace. Interior side covered with two layers of 5/8"-thick Type X gypsum wallboard. Bottom layer  attached to studs with 1"-long No. 6 drywall screws at 24" on center. Top layer attached to studs with 15/8"-long No. 6 drywall screws at 12" on center. | — | — | 81/2 | — |
| 16. Exterior  walls rated for fire resistance from the inside only in accordance with Section 705.5. | 16-1.1q | 2" × 4" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with5/8" Type X gypsum wallboard, 4' wide, applied  horizontally unblocked, and fastened with 21/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound. Exterior covered with 3/8" wood structural panels, applied vertically, horizontal joints blocked and fastened with 6d common nails (bright)—12" on center in the field, and 6" on center panel edges. Cavity to be filled with 31/2" mineral wool insulation.  Rating established for exposure from interior side only. | — | — | — | 41/2 |
| 16-1.2q | 2" × 6" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with5/8" Type X gypsum wallboard, 4' wide, applied  horizontally or vertically with vertical joints over studs and fastened with 21/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound, exterior side covered with 7/16" wood structural panels fastened with 6d common nails (bright) spaced 12" on center in the field and 6" on center along the panel edges. Cavity to be filled with 51/2" mineral wool insulation. Rating  established from the gypsum-covered side only. | — | — | — | 69/16 |
| 16-1.3q | 2" × 6" wood studs at 16" centers with double top plates, single bottom plates; interior side covered with5/8" Type X gypsum wallboard, 4'wide, applied  vertically with all joints over framing or blocking and fastened with 21/4" Type S drywall screws spaced 7" on center. Joints to be covered with tape and joint compound. Exterior covered with 3/8" wood structural panels, applied vertically with edges over framing or blocking and fastened with 6d common  nails (bright) at 12" on center in the field and 6" on center on panel edges. R-19 mineral fiber insulation installed in stud cavity. Rating established from the  gypsum-covered side only. | — | — | — | 61/2 |

For SI: 1 inch = 25.4 mm, 1 square inch = 645.2 mm2, 1 cubic foot = 0.0283 m3.

Footnotes – No change



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

1. Structural steel column, either wide flange or tubular shapes.

2. Type X gypsum board or gypsum panel products in accordance with ASTM C1177, C1178, C1278, C1396 or C1658. The total thickness of gypsum board or gypsum panel products calculated as *h* in Section 722.5.1.2 shall be applied vertically to an individual column using one of the following methods:

1. As a single layer without horizontal joints.

2. As multiple layers with horizontal joints not permitted in any layer.

3. As multiple layers with horizontal joints staggered not less than 12 inches vertically between layers and not less than 8 feet vertically in any single layer. The total required thickness of gypsum board or gypsum panel products shall be determined on the basis of the specified fire-resistance rating and the weight-to-heated-perimeter ratio (W/D) of the column. For fire-resistance ratings of 2 hours or less, one of the required layers of gypsum board or gypsum panel product ~~may~~ shall be permitted to be applied to the exterior of the sheet steel column covers with 1-inch long Type S screws spaced 1 inch from the wallboard edge and 8 inches on center. For such installations, 0.0149-inch minimum thickness galvanized steel corner beads with 11/2-inch legs shall be attached to the wallboard with Type S screws spaced 12 inches on center.

3. No change

**FIGURE 722.5.1(2) GYPSUM-PROTECTED STRUCTURAL STEEL COLUMNS WITH SHEET STEEL COLUMN COVERS**

**(F11661 / FS97-21 Part I AS)**

**TABLE 722.6.2(1) TIME ASSIGNED TO WALLBOARD MEMBRANES ON WOOD FRAMEa, b, c, d ,****~~e~~**

|  |  |
| --- | --- |
| **DESCRIPTION OF FINISH** | **TIMEfe(minutes)** |
| 3/8-inch wood structural panel bonded with exterior glue | 5 |
| 15/32-inch wood structural panel bonded with exterior glue | 10 |
| 19/32-inch wood structural panel bonded with exterior glue | 15 |
| 3/8-inch gypsum wallboard | 10 |
| 1/2-inch gypsum wallboard | 15 |
| 5/8-inch gypsum wallboard | 30 |
| 1/2-inch Type X gypsum wallboard | 25 |
| 5/8-inch Type X gypsum wallboard | 40 |
| Double 3/8-inch gypsum wallboard | 25 |
| 1/2-inch + 3/8-inch gypsum wallboard | 35 |
| Double 1/2-inch gypsum wallboard | 40 |

For SI: 1 inch = 25.4 mm.

a. These values apply only where membranes are installed on framing members that are spaced 16 inches o.c. or less.

b. Gypsum wallboard installed over framing or furring shall be installed so that all edges are supported, except5/8-inch Type X gypsum wallboard shall be permitted to be installed horizontally with the horizontal joints staggered 24 inches each side and unsupported but finished.

c. On wood frame floor/ceiling or roof/ceiling assemblies, gypsum board shall be installed with the long dimension perpendicular to framing members and shall have all joints finished.

d. The membrane on the unexposed side shall not be included in determining the fire resistance of the assembly. Where dissimilar membranes are used on a wall assembly, the calculation shall be made from the least fire-resistant (weaker) side.

e. *~~Fire-resistance ratings~~* ~~calculated for assemblies using this table shall be limited to not more than one hour.~~

e. ~~f.~~ The time assigned is not a finished rating.

**(F10862 / FS104-21 AMPC1)**

**CHAPTER 8 INTERIOR FINISHES AND DECORATIVE MATERIALS**

**803.13 Interior finish requirements based on group.**

*Interior wall and ceiling finish* shall have a classification such that the flame spread index and smoke developed index values are not higher than those corresponding to the classification ~~not greater than tha~~t specified in Table 803.13 for the group and location

designated. *Interior wall and ceiling finish* materials tested in accordance with NFPA 286 and meeting the acceptance criteria of Section 803.1.1.1, shall be permitted to be used where a Class A classification in accordance with ASTM E84 or UL 723 is required.

**(F10911 / FS155-21 AM)**

**Delete without substitution:**

**~~[F] 806.5 Foam plastic~~.** ~~Foam plastic used as~~ *~~trim~~* ~~in any occupancy shall comply with Section 2604.2~~.

**Revise as follows:**

**[F] ~~806.6~~ 806.5 Pyroxylin plastic.** Imitation leather or other material consisting of or coated with a pyroxylin or similarly hazardous base shall not be used in Group A occupancies.

**[F] ~~806.7~~ 806.6 Interior trim.** Material, other than foam plastic used as interior *trim*, shall have a minimum Class C *flame spread* and *smoke- developed index* when tested in accordance with ASTM E84 or UL 723, as described in Section 803.1.1. Combustible *trim*, excluding handrails and guardrails, shall not exceed 10 percent of the specific wall or ceiling area to which it is attached.

**Add new text as follows:**

**806.6.1 Foam plastic.** Foam plastic used as interior trim in any occupancy shall comply with Section 2604.2.

**Revise as follows:**

**[F] ~~806.8~~ 806.7 Interior floor-wall base.** *Interior floor-wall base* that is 6 inches (152 mm) or less in height shall be tested in accordance with Section 804.2 and shall be not less than Class II. Where a Class I floor finish is required, the floor-wall base shall be Class I.

**Exception:** Interior *trim* materials that comply with Section 806.7.

**[F] ~~806.9~~ 806.8 Combustible lockers.** Where lockers constructed of combustible materials are used, the lockers shall be considered to be

*interior finish* and shall comply with Section 803.

**Exception:** Lockers constructed entirely of wood and noncombustible materials shall be permitted to be used wherever *interior finish*

materials are required to meet a Class C classification in accordance with Section 803.1.1.

**(F10916 / FS160-21 AS)**

**CHAPTER 9 FIRE PROTECTION SYSTEMS**

**SECTION 903 AUTOMATIC SPRINKLER SYSTEMS**

**[F] 903.1 General.** *Automatic sprinkler systems* shall comply with this section.

Revise as follows:

**[F] 903.2 Where required.** Approved *automatic sprinkler systems* in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12.

**Exception:** Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries not required to have an automatic sprinkler system in accordance with the *Florida Fire Prevention Code* for energy storage systems and standby engines, provided that those spaces or areas are equipped throughout with an *automatic smoke detection system* in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour*fire barriers* constructed in accordance with Section 707 or not less than 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.

**(F10725 / F62-21 AM)**

Revise as follows:

**903.2.1.6 Assembly occupancies on roofs.** Where an ~~occupied~~ occupiable roof has an assembly occupancy with an *occupant load* exceeding 100 for Group A-2 and 300 for other Group A occupancies, all floors between the ~~occupied~~ occupiable roof and the *level of exit discharge* shall be equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.

**Exception:** Open parking garages of Type I or Type II construction.

**(F10961 / G20-21 Part II AM)**

Delete without substitution:

**~~[F] 903.2.8.3 Group R-4, Condition 2~~.** ~~An~~ *~~automatic sprinkler system~~* ~~installed in accordance with Section 903.3.1.2 shall be permitted in~~ ~~Group R-4, Condition 2 occupancies.~~

**(F10728 / F67-21 AS)**

Revise as follows:

**[F] 903.3.1.1.1 Exempt locations.** Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an *approved* automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from a room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.

~~1. A room where the application of water, or flame and water, constitutes a serious life or fire hazard~~.

~~2.~~ 1. A room or space where sprinklers are considered undesirable because of the nature of the contentsand constitutes a serious life or fire hazard, where *approved* by the fire code official.

~~3.~~ 2. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a *fire-resistance rating* of not less than 2 hours.

~~4.~~ 3. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.

~~5.~~ 4. Fire service access elevator machine rooms and machinery spaces.

~~6.~~ 5. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008.

**(F10730 / F70-21 AS)**

**903.4 Sprinkler system supervision and alarms.**

*Automatic sprinkler system* supervision and alarms shall comply with Sections 903.4.1 through 903.4.3.

**[F] ~~903.4~~ 903.4,1 Electronic supervision ~~Sprinkler system supervision and alarms~~ .** Valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures, and waterflow switches on all sprinkler systems shall be electrically supervised by a *listed* fire alarm control unit.

Exceptions:

1. *Automatic sprinkler systems* protecting one- and two-family *dwellings*.

2. Limited area sprinkler systems in accordance with Section 903.3.8, provided that backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position unless supplying an occupancy required to be equipped with a fire alarm system, in which case the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

3 – 7 – No change

**[F] ~~903.4.1~~ 903.4.2 Monitoring.** Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* supervising station or, where *approved* by the fire code official, shall sound an audible signal at a *constantly attended location*.

**~~Exception:~~** ~~Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open~~ ~~position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised~~ ~~by a tamper switch installed in accordance with NFPA 72 and separately annunciated.~~

**[F] ~~903.4.2~~ 903.4.3 Alarms .** An *approved* audible and visual sprinkler waterflow alarm device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler waterflow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a water flow switch is required by Section 903.4.1 to be electrically supervised, such sprinkler waterflow alarm devices shall be powered by a fire alarm control unit or, where provided, a fire alarm system. Where a fire alarm system is provided installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.

**Exception:** *Automatic sprinkler systems* protecting one- and two-family dwellings.

**[F] ~~903.4.3~~ 903.3.9 High-rise building floor ~~Floor~~ control valves .** *Approved* supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings.

**(F10736 / F73-21 AMPC1)**

**[F] 904.12.1 Manual system operation.** A manual actuation device shall be located at or near a *means of egress* from the cooking area not less than 10 feet (3048 mm) and not more than 20 feet (6096 mm) from the kitchen exhaust system. The manual actuation device shall be installed not more than 48 inches (1200 mm) or less than 42 inches (1067 mm) above the floor and shall clearly identify the hazard protected. The manual actuation shall require a maximum force of 40 pounds (178 N) and a maximum movement of 14 inches (356 mm) to actuate the fire suppression system.

Exceptions:

1. *Automatic sprinkler systems* shall not be required to be equipped with manual actuation means

2. Where locating the manual actuation device between 10 feet (3048 mm) to 20 feet (6096 mm) from the cooking area is not feasible, the fire code official is permitted to accept a location at or near a means of egress from the cooking area, where the manual actuation device is unobstructed and in view from the means of egress.

**(F10743 / F77-21 AS)**

**[F] 905.4 Location of Class I standpipe hose connections.** Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required *interior exit stairway* or *exterior exit stairway*, a hose connection shall be provided for each story above and below *grade plane*. Hose connections shall be located at the main floor landing unless otherwise *approved* by the fire code official. **Exception:** A single hose connection shall be permitted to be installed in the open corridor or open breezeway between open *stairs* that are not greater than 75 feet (22 860 mm) apart.

2. On each side of the wall adjacent to the exit opening of a *horizontal exit*.

**Exception:** Where floor areas adjacent to a *horizontal exit* are reachable from an *interior exit stairway* or *exterior exit stairway* hose connection by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the *horizontal exit*.

3. In every *exit passageway*, at the entrance from the *exit passageway* to other areas of a building.

**Exception:** Where floor areas adjacent to an *exit passageway* are reachable from an *interior exit stairway* or *exterior exit stairway* hose connection by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the *exit passageway* to other areas of the building.

4 – 6 – No change

**(F10753 / F81-21 AS)**

**[F] 905.5.1 Groups A-1 and A-2.** In Group A-1 and A-2 occupancies with occupant loads of more than 1,000, hose connections shall be located on each side of any stage, on each side of the rear of the auditorium, and on each side of the balcony ~~and on each tier of dressing~~ ~~rooms~~.

**(F10754 / F83-21 AS)**

**SECTION 907**

**FIRE ALARM AND DETECTION SYSTEMS**

**[F] 907.1 General.** This section covers the application, installation, performance and maintenance of fire alarm systems and their components.

**[F] 907.2.2 Group B.** A manual fire alarm system, which activates the occupant notification system in accordance with Section 907.5, shall be installed in Group B occupancies where one of the following conditions exists:

1. The combined Group B *occupant load* of all floors is 500 or more.

2. The Group B *occupant load* is more than 100 persons above or below the lowest *level of exit discharge*.

3. The *fire area* contains an *ambulatory care facility*.

**Exception:** Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

Add new text as follows:

**[F] 907.2.2.2 Laboratories; research and development or testing.** A fire alarm system activated by an air sampling-type smoke detection system or a radiant energy-sensing detection system shall be installed throughout the entire fire area utilized for the research and development or testing of lithium-ion or lithium metal batteries.

**[F] 907.2.4 Group F.** A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group F occupancies where both of the following conditions exist:

1. The Group F occupancy is two or more *stories* in height.

2. The Group F occupancy has a combined *occupant load* of 500 or more above or below the lowest *level of exit discharge*.

**Exception:** Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

Add new text as follows:

**[F] 907.2.4.1 Manufacturing involving, lithium-ion or lithium metal batteries.** A fire alarm system activated by an air sampling-type smoke detection system or a radiant energy-sensing detection system shall be installed throughout the entire fire area where lithium-ion or lithium metal batteries are manufactured; and where the manufacturer of vehicles, energy storage systems or equipment containing lithium-ion or lithium metal batteries when the batteries are installed as part of the manufacturing process.

**[F] 907.2.7 Group M.** A fire alarm system shall be in a Group M occupancy as required by the following sections:

Revise as follows:

**[F] 907.2.7.1 ~~907.2.7 Group M~~ Occupant load.** A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group M occupancies where one of the following conditions exists:

1. The combined Group M *occupant load* of all floors is 500 or more persons.

2. The Group M *occupant load* is more than 100 persons above or below the lowest *level of exit discharge*.

Exceptions:

1. A manual fire alarm system is not required in *covered or open mall buildings* complying with Section 402.

2. Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will automatically activate throughout the notification zones upon sprinkler water flow.

**[F] 907.2.7.1.1 ~~907.2.7.1~~ Occupant notification.** During times that the building is occupied, the initiation of a signal from a manual fire alarm box or from a waterflow switch shall not be required to activate the alarm notification appliances when an *alarm signal* is activated at a *constantly attended location* from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.5.2.2.

Add new text as follows:

**[F] 907.2.7.2 Storage of lithium-ion or lithium metal batteries.** A fire alarm system activated by an air sampling-type smoke detection system or a radiant energy-sensing detection system shall be installed in a room or space within a Group M occupancy where required for the storage of lithium-ion or lithium metal batteries by Section 321.

**[F] 907.2.25 Group S.** A fire alarm system shall be in a Group S occupancy as required by the following sections:

Revise as follows:

**[F] 907.2.25.1 ~~907.2.25 Group S~~ Public- and self-storage occupancies.** A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group S public- and self-storage occupancies three stories or greater in height for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

**Exception:** Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

Add new text as follows:

**[F] 907.2.25.2 Storage of lithium-ion or lithium metal batteries.** A fire alarm system activated by an air sampling-type smoke detection system or a radiant energy-sensing detection system shall be installed throughout the entire fire area where required for the storage of lithium-ion batteries or lithium metal batteries in accordance with the Florida Fire Prevention Code.

**(F10759 / F88-21 AS)**

**[F] 907.2.11 Single- and multiple-station smoke alarms.** *Listed* single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 907.2.11.1 through 907.2.11.7, ~~and~~ NFPA 72 and the manufacturer's instructions.

**[F] 907.2.11.3 Installation near cooking appliances.** Smoke alarms shall ~~not~~ be installed a minimum of 10 ft. (3.0 m) horizontally from a permanently installed cooking appliance~~. in the following locations unless this would prevent placement of a smoke alarm in a location required by Section 907.2.11.1 or 907.2.11.2:~~

**Exception:** Smoke alarms shall be permitted to be installed a minimum of 6 ft. (1.8 m) horizontally from a permanently installed cooking appliance where necessary to comply with Section 907.2.11.1 or 907.2.11.2.

~~1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking~~ ~~appliance.~~

~~2. Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a~~ ~~permanently installed cooking appliance.~~

~~3. Photoelectric smoke alarms shall not be installed less than 6 feet (1829 mm) horizontally from a permanently installed cooking~~ ~~appliance.~~

**(F10794 / F89-21 AM)**

**[F] 907.5.2.1.3 Audible alarm signal frequency in Group R-1, ~~and~~ R-2 and I-1 sleeping rooms.** Audible alarm signal frequency in Group R-1, ~~and~~ R-2 and I-1 occupancies shall be in accordance with Sections 907.5.2.1.3.1 and 907.5.2.1.3.2.

**[F] 907.5.2.1.3.1 Fire alarm system audible signal.** In sleeping rooms of Group R-1, ~~and~~ R-2, and I-1 occupancies, the audible alarm signal activated by a fire alarm system shall be a 520-Hz low-frequency signal complying with NFPA 72.

**[F] 907.5.2.1.3.2 Smoke alarm signal in sleeping rooms.** In sleeping rooms of Group R-1, ~~and~~ R-2, and I-1 occupancies that are required by Section 907.2.8 or 907.2.9 to have a fire alarm system, the audible *alarm signal* activated by single- or multiple-station smoke alarms in the *dwelling unit* or *sleeping unit* shall be a 520-Hz signal complying with NFPA 72. Where a sleeping room smoke alarm is unable to produce a 520-Hz signal, the 520-Hz *alarm signal* shall be provided by a *listed* notification appliance or a smoke detector with an integral 520-Hz sounder.

**(F10795 / F92-21 AS)**

**[F] 909.18.3 Dampers.** *Dampers* shall be tested for function in their installed condition in accordance with NFPA 80 and NFPA 105.

**(F10796 / F96-21 AS)**

**909.20.6.4 Smoke Detection.** The fan system shall be equipped with a smoke detector that will automatically shut down the fan system when smoke is detected within the system.

**(F10867 / FS115-21 AS)**

**909.21 Elevator hoistway pressurization alternative.** Where elevator hoistway pressurization is provided in lieu of required enclosed elevator lobbies, the pressurization system shall comply with Sections 909.21.1 through 909.21.11. The design shall consider the interaction effects of the operation of multiple smoke control systems for all design scenarios in accordance with Section 909.4.7. All components/systems associated with the means of mitigating adverse interaction shall comply with the applicable Sections of 909.

**(F10868 / FS116-21 AS)**

**909.21.6 Activation of pressurization system.** The elevator pressurization system shall be activated upon activation of ~~either the building~~ ~~fire alarm system or~~ the elevator lobby smoke detectors. ~~Where both a building fire alarm system and elevator lobby smoke detectors are~~ ~~present, each shall be independently capable of activating the pressurization system.~~

**(F10869 / FS118-21 AS)**

**[F] 910.2.1 Group F-1 or S-1.** Smoke and heat vents installed in accordance with Section 910.3 or a mechanical smoke removal system installed in accordance with Section 910.4 shall be installed in buildings and portions thereof used as a Group F-1 or S-1 occupancy having more than 50,000 square feet (4645 m2) of ~~undivided~~ area undivided by draft curtains 4 feet (1.8 m) or greater in depth or walls constructed in accordance with Sections 706, 707, 708, 709, or 710. In occupied portions of a building equipped throughout with an*automatic sprinkler system* in accordance with Section 903.3.1.1 where the upper surface of the *story* is not a roof assembly, a mechanical smoke removal system in accordance with Section 910.4 shall be installed.

**Exception:** Group S-1 aircraft repair hangars.

**(F10870 / FS119-21 AS)**

**[F] 911.1.6 Required features.** The fire command center shall comply with NFPA 72 and shall contain all of the following features:

1 – 17 – No change

18. Elevator emergency or standby power selector switch(es), ~~where emergency or standby power is provided~~ in accordance with ASME A17.1/CSA B44

**(F10722 / F31-21 AS)**

**[F] 914.1.1 Exterior access to shaftways.** Outside openings ~~accessible~~ with access to the fire department and that open directly on a hoistway or shaftway communicating between two or more floors in a building shall be plainly marked with the word “SHAFTWAY” in red letters not less than 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible from the outside of the building.

**(F10918 / G1-21 Part II AS)**

**CHAPTER 10 MEANS OF EGRESS**

**1004.8 Concentrated business use areas.** The *occupant load* factor for concentrated business use shall be applied to telephone call centers, trading floors, electronic data entry ~~processing~~ centers and similar business use areas with a higher density of occupants than would normally be expected in a typical business occupancy environment. Where approved by the *building official*, the *occupant load* for concentrated business use areas shall be the actual *occupant load*, but not less than one occupant per 50 square feet (4.65 m2) of gross **occupiable floor space.**

**(F10967 / G33-21 AS)**

Revise as follows:

**1006.2.2.2 Refrigeration machinery rooms.** Machinery rooms larger than 1,000 square feet (93 m2) shall have not less than two *exits* or exit access doorways. Where two *exit access doorways* are required, one such doorway is permitted to be served by a fixed ladder or an *alternating tread device*. *Exit access doorways* shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of the room.

Exit access travel distance shall be determined as specified in Section 1017.1, but all portions of a refrigeration machinery room shall be within 150 feet (45 720 mm) of an exit or exit access doorway where such rooms are not protected by an approved automatic sprinkler system. Egress is allowed through adjoining refrigeration machinery rooms or adjoining refrigerated rooms or spaces.

~~All portions of machinery rooms shall be within 150 feet (45 720 mm) of an~~*~~exit~~* ~~or~~ *~~exit access doorway~~*~~. An increase in~~ *~~exit access~~* ~~travel~~ ~~distance is permitted in accordance with Section 1017.1.~~

*Exit* and *exit access doorways* shall swing in the direction of egress travel and shall be equipped with *panic hardware*, regardless of the *occupant load* served. Exit and *exit access doorways* shall be tight fitting and *self-closing*.

1006.2.2.3 Refrigerated rooms or spaces.

Rooms or spaces having a floor area larger than 1,000 square feet (93 m2), containing a refrigerant evaporator and maintained at a temperature below 68°F (20°C), shall have access to not less than two *exits* or *exit access doorways*.

*Exit access* travel distance shall be determined as specified in Section1017.1. ~~1017.1 but al~~lAll portions of a refrigerated room or space shall be within 150 feet (45 720 mm) of an *exit* or *exit access doorway* leading to a nonrefrigerated area where such rooms are not protected by an *approved automatic sprinkler system*. ~~Egress is allowed through adjoining refrigerated rooms or spaces~~.

**Exception:** Where using refrigerants in quantities limited to the amounts based on the volume set forth in the *Florida Building Code, Mechanical*.

Egress is allowed through adjoining refrigerated rooms or spaces.

**(F10587 / E15-21 AMPC1)**

**1006.3.2 Egress based on occupant load.** Each *story* and occupied roof shall have the minimum number of separate and distinct *exits*, or access to *exits*, as specified in Table 1006.3.2. A single *exit* or access to a single *exit* shall be permitted in accordance with Section 1006.3.3. The required number of *exits*, or *exit access stairways* or *ramps* providing access to *exits*, from any *story* or occupied roof shall be maintained until arrival at the *exit discharge* or a *public way*.

**Revise as follows:**

TABLE 1006.3.2 MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY OR OCCUPIED ROOF

|  |  |
| --- | --- |
| **OCCUPANT LOAD PER STORY OR OCCUPIED ROOF** | **MINIMUM NUMBER OF EXITS OR ACCESS TO EXITSFROM PER STORY OR OCCUPIED ROOF** |
| 1-500 | 2 |
| 501-1,000 | 3 |
| More than 1,000 | 4 |

**1006.3.2 Single exits.** A single *exit* or access to a single *exit* shall be permitted from any *story* or occupied roof where one of the following conditions exists:

1. The *occupant load*, number of *dwelling units* and exit access travel distance do not exceed the values in Table 1006.3.3(1) or 1006.3.3(2).

2. Rooms, areas and spaces complying with Section 1006.2.1 with *exits* that discharge directly to the exterior at the *level of exit discharge*, are permitted to have one *exit* or access to a single *exit*.

3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit* or access to a single *exit*.

4. Group R-3 and R-4 occupancies shall be permitted to have one *exit* or access to a single *exit*.

5. Individual single-story or multistory *dwelling units* shall be permitted to have a single *exit* or access to a single *exit* from the *dwelling unit* provided that both of the following criteria are met:

5.1 The *dwelling unit* complies with Section 1006.2.1 as a space with one *means of egress*.

5.2 Either the exit from the *dwelling unit* discharges directly to the exterior at the *level of exit discharge*, or the *exit access* outside the *dwelling unit’s* entrance door provides access to not less than two *approved* independent *exits*.

**Revise as follows:**

TABLE 1006.3.3(1) STORIES AND OCCUPIED ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

|  |  |  |  |
| --- | --- | --- | --- |
| **STORY OR OCCUPIED ROOF** | **OCCUPANCY** | **MAXIMUM NUMBER OF DWELLING**  **UNITS** | **MAXIMUM EXIT ACCESS TRAVEL**  **DISTANCE** |
| Basement, first, second or third story above grade planeand occupied roofs over the first or second story  above grade plane | R-2a, b, c | 4 dwelling units | 125 feet |
| Fourth story above grade plane and higher | NP | NA | NA |

For SI: 1 foot = 304.8 mm. NP = Not Permitted.

NA = Not Applicable.

A. buildings classified as Group R-2 equipped throughout with an *a*utomatic sprinkler system in accordance with Section 903.3.1.1 or

903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1030.

B. This table is used for Group R-2 occupancies consisting of dwelling units. For Group R-2 occupancies consisting of sleeping units, use Table 1006.3.3(2).

C. This table is for occupied roofs accessed through and serving individual dwelling units in Group R-2 occupancies. For Group R-2 occupancies with occupied roofs that are not access through and serving individual units, use Table 1006.3.3(2).

TABLE 1006.3.3(2) STORIES AND OCCUPIED ROOFS WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

|  |  |  |  |
| --- | --- | --- | --- |
| **STORY AND OCCUPIED ROOF** | **OCCUPANCY** | **MAXIMUM OCCUPANT LOAD PER STORY AND**  **OCCUPIED ROOF** | **MAXIMUM EXIT ACCESS TRAVEL**  **DISTANCE (feet)** |
| First story above or below grade plane and occupied roofs over the first story above grade plane | A, Bb, E, Fb, M, U | 49 | 75 |
| H-2, H-3 | 3 | 25 |
| H-4, H-5, I, R-1, R-  2a, c | 10 | 75 |
| Sb, d | 29 | 75 |
| Second story above grade plane | B, F, M, Sd | 29 | 75 |
| Third story above grade plane and higher | NP | NA | NA |

For SI: 1 foot = 304.8

NP = Not Permitted

NA = Not Applicable.

1. Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or

903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1030.

1. Group B, F and S occupancies in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section

903.3.1.1 or on the roof of such buildings shall have a maximum *exit access* travel distance of 100 feet.

1. This table is used for Group R-2 occupancies consisting of *sleeping units.* For Group R-2 occupancies consisting of *dwelling units*, use Table 1006.3.3(1).
2. The length of *exit access* travel distance in a Group S-2 *open parking garage* shall be not more than 100 feet.

**(F10590 / E21-21 AS)**

**SECTION 1008**

**MEANS OF EGRESS ILLUMINATION**

Revise as follows:

**1008.1 Means of egress illumination.** Illumination shall be provided in the *means of egress* in accordance with Section 1008.2.~~Under~~ ~~emergency power~~ In the event of power supply failure, *means of egress* illumination shall comply with Section 1008.3.

**1008.2 Illumination required.** The *means of egress* serving a room or space shall be illuminated at all times that the room or space is occupied.

Exceptions:

1. Occupancies in Group U.

2. *Aisle accessways* in Group A.

3. *Dwelling units* and *sleeping units* in Groups R-1, R-2 and R-3.

4. *Sleeping units* of Group I occupancies.

**1008.2.1 Illumination level under normal power.** The *means of egress* illumination level shall be not less than 1 footcandle (11 lux) at the walking surface. Along *exit access stairways*, exit stairways and at their required landings, the illumination level shall not be less than 10 footcandles (108 lux) at the walking surface when the *stairway* is in use.

**Exception:** For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances by one of the following methods provided that the required illumination is automatically restored upon activation of a premises’ *fire alarm system*:

1. Externally illuminated walking surfaces shall be permitted to be illuminated to not less than 0.2 footcandle (2.15 lux).

2. Steps, landings and the sides of *ramps* shall be permitted to be marked with *self-luminous* materials in accordance with Sections 1025.2.1, 1025.2.2 and 1025.2.4 by systems *listed* in accordance with UL 1994.

**1008.2.2 Group I-2.** In Group I-2 occupancies where two or more *exits* are required, on the exterior landings required by Section 1010.1.5, means of egress illumination levels for the exit discharge shall be provided such that failure of a single lamp in a luminaire shall not reduce the illumination level on that landing to less than 1 footcandle (11 lux).

**1008.2.3 Exit discharge.** Illumination shall be provided along the path of travel for the exit discharge from each exit to the *public way*.

**Exception:** Illumination shall not be required where the path of the exit discharge meets both of the following requirements:

1. The path of exit discharge is illuminated from the exit to a safe dispersal area complying with Section 1028.5.

2. A dispersal area shall be illuminated to a level not less than 1 footcandle (11 lux) at the walking surface.

Revise as follows:

**~~1008.3~~ 1008.2.4 ~~Emergency power~~ Power for illumination.** The power supply for *means of egress* illumination shall normally be provided by the premises’ electrical supply.

**~~1008.3.1 1008.3 General Illumination required with the emergency electrical system.~~** ~~In the event of power supply failure in rooms and spaces that require two or more~~ *~~exits~~* ~~or access to exits, an emergency electrical system shall automatically illuminate all of the following areas:~~

~~1.~~ *~~Aisles~~*~~.~~

~~2.~~ *~~Corridors~~*~~.~~

~~3.~~ *~~Exit access stairways~~* ~~and~~ *~~ramps~~*~~.~~

**1008.3 Illumination required by an emergency electrical system.** An emergency electrical system shall be provided to automatically illuminate the following areas in the event of a power supply failure:

1. In rooms or spaces that require two or more exits or access to exits:

1.1. Aisles.

1.2. Corridors.

1.3. Exit access stairways and ramps.

2. In buildings that require two or more exits or access to exits:

2.1. Interior exit access stairways and ramps.

2.2. Interior and exterior exit stairways and ramps.

2.3. Exit passageways

2.4. Vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.2.

2.5. Exterior landings as required by Section 1010.1.5 for exit doorways that lead directly to the exit discharge.

3. In other rooms and spaces:

3.1. Electrical equipment rooms.

3.2. Fire command centers.

3.3. Fire pump rooms.

3.4. Generator rooms.

3.5. Public restrooms with an area greater than 300 square feet (27.87 m2).

**~~1008.3.2 1008.3.1 Buildings.~~** ~~In the event of power supply failure in buildings that require two or more~~ *~~exits~~* ~~or access to exits, an emergency electrical system shall automatically illuminate all of the following areas:~~

~~1.~~ *~~Interior exit access stairways~~* ~~and~~ *~~ramps~~*~~.~~

~~2.~~ *~~Interior~~* ~~and~~ *~~exterior exit stairways~~* ~~and~~ *~~ramps~~*~~.~~

~~3.~~ *~~Exit passageways~~*~~.~~

~~4. Vestibules and areas on the level of discharge used for~~ *~~exit discharge~~* ~~in accordance with Section 1028.2.~~

~~5. Exterior landings as required by Section 1010.1.5 for~~ *~~exit doorways~~* ~~that lead directly to the~~ *~~exit discharge~~*~~.~~

**~~1008.3.3 1008.3.2 Rooms and spaces.~~** ~~In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:~~

~~1. Electrical equipment rooms.~~

~~2. Fire command centers.~~

~~3. Fire pump rooms.~~

~~4. Generator rooms.~~

~~5. Public restrooms with an area greater than 300 square feet (27.87 m~~~~2~~~~).~~

**~~1008.3.4~~ 1008.3.1 Duration.** The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702.

**~~1008.3.5~~ 1008.3.2 Illumination level under emergency power.** Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 footcandle (11 lux) and a minimum at any point of 0.1 footcandle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 footcandle (6 lux) average and a minimum at any point of 0.06 footcandle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. In Group I-2 occupancies, failure of a single lamp in a luminaire shall not reduce the illumination level to less than 0.2 footcandle (2.2 lux).

**(F10591 / E24-21 AMPC1)**

**1008.2 Illumination required.** The *means of egress* serving a room or space shall be illuminated at all times that the room or space is occupied.

Exceptions:

1. Occupancies in Group U.

2. Self-service storage units 400 ft2 (37.16 m2) or less in area and accessed directly from the exterior of the building.

3.~~2.~~ *Aisle accessways* in Group A.

4.~~3.~~ *Dwelling units* and *sleeping units* in Groups R-1, R-2 and R-3.

5.~~4.~~ *Sleeping units* of Group I occupancies.

**(F10592 / E25-21 AMPC1)**

###### Revise as follows:

**1010.1.1 Size of doors.** The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the frame stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear opening width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a minimum clear opening width of 32 inches (813 mm). In Group I-2, doors serving as means of egress doors where used for the movement of beds shall provide a minimum clear opening width of 411 /2 inches (1054 mm). The minimum clear height of door openings shall be not less than 80 inches (2032 mm).

**Exceptions:**

1. In Group R-2 and R-3 dwelling and sleeping units that are not required to be an Accessible unit, the minimum width shall not apply to door openings that are not part of the required means of egress.

2. In Group I-3, door openings to resident sleeping units that are not required to be an Accessible unit shall have a minimum clear opening width of 28 inches (711 mm).

3. Door openings to storage closets less than 10 square feet (0.93 m2 ) in area shall not be limited by the minimum clear opening width.

4. ~~The maximum width of door leaves in revolving doors that comply with Section 1010.3.1 shall not be limited.~~

5. ~~The maximum width of door leaves in power operated doors that comply with Section 1010.3.2 shall not be limited.~~

6. Door openings within a dwelling unit or sleeping unit shall have a minimum clear opening height of 78 inches (1981 mm).

7. In dwelling and sleeping units that are not required to be Accessible units, exterior door openings other than the required exit door shall have a minimum clear opening height of 76 inches (1930 mm).

8. In Group I-1, R-2, R-3 and R-4 occupancies, in dwelling and sleeping units that are not required to be Accessible units, the minimum clear opening widths shall not apply to interior egress doors.

9. Door openings required to be accessible intended for user passage shall have a minimum clear opening width of 31.75 inches (806 mm).

10. Buildings that are 400 square feet (37 m2 ) or less and that are intended for use in conjunction with one- and two-family residences are not subject to the door height and width requirements of this code.

11~~. Doors to walk-in freezers and coolers less than 1,000 square feet (93 m2 ) in area shall have a maximum width of 60 inches (1524 mm) nominal.~~

12. The minimum clear opening width shall not apply to doors for nonaccessible showers or sauna compartments.

13. The minimum clear opening width shall not apply to the doors for nonaccessible toilet stalls.

**1010.4 Gates.** Gates serving the *means of egress* system shall comply with the requirements of this section. Gates used as a component in a *means of egress* shall conform to the applicable requirements for doors.

**~~Exception:~~** ~~Horizontal sliding or swinging gates exceeding the 4-foot (1219 mm) maximum leaf width limitation are permitted in fences~~ ~~and walls surrounding a stadium.~~

**(F10600 / E39-21 AS)**

Revise Section 1010.2.14 to read as follows:

**1010.2.14 Controlled egress doors in Groups I-1 and I-2.** Electric locking systems, including electro-mechanical locking systems and electromagnetic locking systems, shall be permitted to be locked in the means of egress in Group I-1 or I-2 occupancies where the clinical needs of persons receiving care require their containment. Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an *automatic sprinkler*

*system* in accordance with Section 903.3.1.1 or an *approved automatic smoke* ~~or~~ *~~heat~~ detection system* installed in accordance with Section 907, provided that the doors are installed

and operate in accordance with all of the following:

No change to the remaining text.

F-FBC-B-Ch.10 – Errata #3

Add new text as follows:

**1010.2.17 Monitored or recorded egress, and access control systems .** Where electrical systems that monitor or record egress activity are incorporated, or where the door has an access control system, the locking system on the egress side of the door shall comply with Section 1010.2.11, 1010.2.12, 1010.2.13, 1010.2.14 or 1010.2.15 or shall be readily openable from the egress side without the use of a key or special knowledge or effort.

**(F10609 / E49-21 AMPC1)**

Revise as follows:

**1010.2.11 Door hardware release of electrically locked egress doors.**

Revise item 6 to read as follows:

6. The locking system units electro-mechanical or electromagnetic locking device shall be *listed* in accordance with either UL 294 or UL 1034.

**1010.2.12 Sensor release of electrically locked egress doors.**

Revise item 7 to read as follows:

7. The ~~door locking system units~~ electro-mechanical or electromagnetic locking device shall be *listed* in accordance with either UL 294 or UL 1034.

**1010.2.13.1 Delayed egress locking system.**

Revise item 8 to read as follows:

8. The ~~delayed egress locking system units~~electro-mechanical or electromagnetic locking device shall be *listed* in accordance with either UL 294 or UL 1034.

**1010.2.14 Controlled egress doors in Groups I-1 and I-2.**

Revise item 8 to read as follows:

8. The ~~door locking system units~~ electro-mechanical or electromagnetic locking device shall be *listed* in accordance with either UL 294 or UL 1034.

Exceptions:

1. Items 1 through 4 shall not apply to doors to areas occupied by persons who, because of clinical needs, require restraint or containment as part of the function of a psychiatric or cognitive treatment area.

2. Items 1 through 4 shall not apply to doors to areas where a *listed* egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 *hospital*.

Add new standard(s) as follows:

UL LLC

**UL**

333 Pfingsten Road

Northbrook, IL 60062 UL 1034-2011 Burglary-Resistant Electric Locking Mechanisms – with revisions through June 2020

**(F10636 / E52-21 AS)**

Already in the code

**(F10637 / E56-21 AM)**

**Here**

**1010.2.7 Stairway doors.** Interior *stairway* means of egress doors shall be openable from both sides without the use of a key or special knowledge or effort.

Exceptions:

1 – 2 – No change

3. *Stairway* exit doors are permitted to be locked from the side opposite the egress side, provided that they are openable from the egress side and capable of being unlocked simultaneously without unlatching when ~~upon~~ any of the following conditions occur:

3.1. Shall be capable of being unlocked individually or simultaneously upon a ~~A~~ signal from the fire command center, if present, or a signal by emergency personnel from a single location inside the main entrance to the building.

3.2. Shall unlock simultaneously upon activation of a fire alarm signal when a fire alarm system is present in an area served by the stairway.

3.3 Shal unlock upon failure of the power supply to the electric lock or the locking system.

4 – 5 – No change

**(F10607 / E47-21 AM)**

Revise Section 1010.5.1.1 to read as follows:

**1010.5.1.1 Clear width.** Reserved~~Where located as part of an~~ *~~accessible route~~*~~, turnstiles shall have not less than 36 inches (914 mm) clear at and below a height of 34 inches (864 mm), not less than 32 inches (813 mm) clear width between 34 inches (864 mm) and 80 inches (2032 mm) and shall consist of a mechanism other than a revolving device.~~

F/AC-FBC-B-Ch.10 – Errata #1

F/AC-FBC-B-Ch.10 – Errata #2

Revise as follows:

**1011.3 Headroom.** *Stairways* shall have a headroom clearance of not less than 80 inches (2032 mm) measured vertically from a line connecting ~~the edge of~~ the *nosings*. Such headroom shall be continuous above the *stairway* to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the *stairway* and landing.

Exceptions:

1. *Spiral stairways* complying with Section 1011.10 are permitted a 78-inch (1981 mm) headroom clearance.

2. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual *dwelling units* in Group R-2 occupancies; where the *nosings* of treads at the side of a *flight* extend under the edge of a floor opening through which the *stair* passes, the floor opening shall be allowed to project horizontally into the required headroom not more than 43/4 inches (121 mm).

**1011.5.5.1 Nosing projection ~~size.~~** ~~The leading edge (~~*~~nosings~~*~~) of~~ treadsnosings shall project not more than 11/4 inches (32 mm) beyond the tread below.

**1011.5.5.2 Nosing projection uniformity.** *Nosing* projections ~~of the leading edges~~ shall be of uniform size, including the projections of the *~~nosing’s~~* ~~leading edge~~ nosings of the floor or landing at the top of a *flight*.

**1014.2 Height.** *Handrail* height, measured above *~~stair~~* ~~tread~~ the *nosings* of flights of stairs or finish surface of *ramp* slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). *Handrail* height of *alternating tread devices* and ships ladders, measured above ~~tread~~ the *nosings*, shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

Exceptions:

1. Where *handrail* fittings or bendings are used to provide continuous transition between flights, the fittings or bendings shall be permitted to exceed the maximum height.

2. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are associated with a Group R-3 occupancy or associated with individual *dwelling units* in Group R-2 occupancies; where *handrail* fittings or bendings are used to provide continuous transition between flights, transition at *winder* treads, transition from *handrail* to guard, or where used at the start of a *flight*, the *handrail* height at the fittings or bendings shall be permitted to exceed the maximum height.

3. *Handrails* on top of a *guard* where permitted along stepped *aisles* and ramped *aisles* in accordance with Section 1029.16.

**1015.3 Height.** Required *guards* shall be not less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces.

2. On *stairways* and stepped *aisles*, from the line connecting the leading edges of the tread *nosings*.

3. On *ramps* and ramped *aisles*, from the *ramp* surface at the guard.

Exceptions:

1. For occupancies in Group R-3 not more than three stories above grade in height and within individual *welling units* in occupancies in Group R-2 not more than three stories above grade in height with separate *means of egress*, required *guards* shall be not less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces.

2. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, *guards* on the open sides of *stairs* shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the nosings ~~leading~~ ~~edges of the treads~~.

3. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, where the top of the*guard* serves as a *handrail* on the open sides of *stairs*, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the nosings leading edges of the treads.

4. The *guard* height in assembly seating areas shall comply with Section 1039.17 as applicable.

5. Along *alternating tread devices* and ships ladders, *guards* where the top rail serves as a *handrail* shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from a line connecting the leading edge of the treads~~device tread~~ *~~nosing~~*.

6. In Group F occupancies where *exit access stairways* serve fewer than three stories and such*stairways* are not open to the public, and where the top of the *guard* also serves as a *handrail*, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the nosings ~~leading edges of the treads~~.

**1014.2 Height.** *Handrail* height, measured ~~above~~ from a line connecting the *nosings* of flights of stairs or finish surface of *ramp* slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). *Handrail* height of *alternating tread devices* and ships ladders, measured ~~above~~ from a line connecting the *nosings*, shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

Exceptions:

1. Where *handrail* fittings or bendings are used to provide continuous transition between flights, the fittings or bendings shall be permitted to exceed the maximum height.

2. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are associated with a Group R-3 occupancy or associated with individual *dwelling units* in Group R-2 occupancies; where *handrail* fittings or bendings are used to provide continuous transition between flights, transition at *winder* treads, transition from *handrail* to guard, or where used at the start of a *flight*, the *handrail* height at the fittings or bendings shall be permitted to exceed the maximum height.

3. *Handrails* on top of a *guard* where permitted along stepped *aisles* and ramped *aisles* in accordance with Section 1030.16.

**(F10639 / E59-21 AM)**

Revise as follows:

**1011.5.2 Riser height and tread depth.** *Stair* riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. The riser height shall be measured vertically between the *nosings* of adjacent treads or between the *stairway* landing and the adjacent tread. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread’s *nosing*. *Winder* treads shall have a minimum tread depth of 11 inches (279 mm) between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline and a minimum tread depth of 10 inches (254 mm) within the clear width of the stair.

Exceptions:

1. *Spiral stairways* in accordance with Section 1011.10.

2. *Stairways* connecting stepped *aisles* to cross *aisles* or concourses shall be permitted to use the riser/tread dimension in Section 1030.14.2.

3. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies not required by Chapter 11 to be Accessible or Type A dwelling or sleeping units; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual *dwelling units* in Group R-2 occupancies; the maximum riser height shall be 73/4 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum *winder* tread depth at the walkline shall be 10 inches (254 mm); and the minimum *winder* tread depth shall be 6 inches (152 mm). A*nosing* projection not less than 3/4 inch (19.1 mm) but not more than 11/4 inches (32 mm) shall be provided on *stairways* with solid risers where the tread depth is less than 11 inches (279 mm).

4. See Section 503.1 of the International Existing Building Code for the replacement of existing *stairways*.

5. In Group I-3 facilities, *stairways* providing access to guard towers, observation stations and control rooms, not more than 250 square feet (23 m2) in area, shall be permitted to have a maximum riser height of 8 inches (203 mm) and a minimum tread depth of 9 inches (229 mm).

**(F10642 / E60-21 AS)**

Revise as follows:

**1011.5.4.1 Nonuniform height risers.** Where the bottom or top riser adjoins a sloping *public way*, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of *stair* width. The *nosings* ~~or leading edges of treads~~ at such nonuniform height risers shall have a distinctive marking stripe, different from any other *nosing* marking provided on the *stair flight*. The distinctive marking stripe shall be visible in descent of the*stair* ~~and shall have a~~ ~~slip-resistant surface~~. Marking stripes shall have a width of not less than 1 inch (25 mm) but not more than 2 inches (51 mm).

**(F10643 / E62-21 AS)**

Revise as follows:

**1011.5.5.1 Nosing projection size.** The leading edge (*nosings*) of treads shall project not more than 11/4 inches (32 mm) beyond the tread below.

**Exception:** When solid risers are not required, the nosing projection is permitted to exceed the maximum projection.

**(F10646 / E64-21 AM)**

**1013.2 Low-level exit signs in Group R-1.** Where exit signs are required in Group R-1 occupancies by Section 1013.1, additional low- level exit signs shall be provided in all areas serving guest rooms in Group R-1 occupancies and shall comply with Section 1013.5.

The bottom of the sign shall be not less than 10 inches (254 mm) nor more than 18 inches (455 mm) above the floor level. The sign shall be flush mounted to the door or wall. Where mounted on the wall, the edge of the sign shall be within 4 inches (102 mm) of the door frame on the latch side.

**Exception:** Low-level exit signs are not required in Group R-1 occupancies when the building is equipped throughout with an automatic sprinkler system installed in accordance with Sections 903.3.1.1 or 903.3.1.2

**(F10648 / E69-21 AM)**

Revise as follows:

**1013.5 Internally illuminated exit signs.** Electrically powered, *self-luminous* and *photoluminescent* exit signs shall be *listed* and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer’s instructions and Chapter 27. Exit signs shall be illuminated at all times. Exit signs shall be easily discernable and legible at all times.

Add new text as follows:

**1013.5.1 Photoluminescent exit signs .** Photoluminescent exit signs shall be provided with an illumination source to charge the exit sign in accordance with the manufacturers instructions.

**(F10649 / E71-21 AMPC1)**

Add new text as follows:

**1014.10 Lateral location.** Handrails located outward from the edge of the walking surface of flights of stairways, ramps, stepped aisles and ramped aisles shall be located within 6 inches (152.4 mm) measured horizontally from the edge of the walking surface. Handrails projecting into the width of the walking surface shall comply with Section 1014.8.

**(F10650 / E73-21 AS)**

Revise as follows:

**1014.4 Continuity.** *Handrail* gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. *~~Handrails~~* ~~within~~Within a *dwelling unit ~~units~~,* that is not an Accessible unit or Type A unit,~~are permitted~~ the continuity of handrail gripping surfaces is allowed to be interrupted by a newel post at a turn or landing.

2. Within a *dwelling unit*, the use of a volute, turnout, starting easing or starting newel is allowed over the lowest tread.

3. Handrail brackets or balusters attached to the bottom surface of the *handrail* that do not project horizontally beyond the sides of the *handrail* within 11/2 inches (38 mm) of the bottom of the *handrail* shall not be considered obstructions. For each 1/2 inch (12.7 mm) of additional *handrail* perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 11/2 inches (38 mm) shall be permitted to be reduced by 1/8 inch (3.2 mm).

4. Where *handrails* are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of the*handrail* gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper *guards*.

5. *Handrails* serving stepped *aisles* or ramped *aisles* are permitted to be discontinuous in accordance with Section 1030.16.1.

**(F10651 / E74-21 AM)**

Revise as follows:

**1014.6 Handrail extensions .** *Handrails* shall return to a wall, *guard* or the walking surface or shall be continuous to the *handrail* of an adjacent *flight of stairs* or *ramp* run. Where *handrails* are not continuous between flights, the *handrails* shall extend horizontally not less than 12 inches (305 mm) beyond the top ~~riser~~ landing nosing and continue to slope for the depth of one tread beyond the bottom ~~riser~~tread nosing. At *ramps* where *handrails* are not continuous between runs, the *handrails* shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of *ramp* runs. The extensions of *handrails* shall be in the same direction of the flights of *stairs* at *stairways* and the *ramp* runs at *ramps* and shall extend the required minimum length before any change in direction or decrease in the clearance required by Section 1014.4 or 1014.7.

**Exceptions:**

1. *Handrails* within a *dwelling unit* that is not required to be *accessible* need extend only from the top riser to the bottom riser.

2. *Handrails* serving *aisles* in rooms or spaces used for assembly purposes are permitted to comply with the *handrail* extensions in accordance with Section 1030.16.

3. *Handrails* for *alternating tread devices* and ships ladders are permitted to terminate at a location vertically above the top and bottom risers. *Handrails* for *alternating tread devices* are not required to be continuous between flights or to extend beyond the top or bottom **risers.**

**(F10652 / E76-21 AMPC1)**

Revise as follows:

**1014.7 Clearance.** Clear space between a *handrail* and a wall or other surface shall be not less than 11/2 inches (38 mm). A *handrail* and a wall or other surface adjacent to the *handrail* shall be free of any sharp or abrasive elements.

**Exceptions:**

1. A decrease in the clearance due to the curvature or angle of handrail returns shall be allowed.

2. Mounting flanges, no more than 1/2" (12.7 mm) thick at the returned ends of handrails shall be allowed.

**(F10653 / E77-21 AS)**

Revise as follows:

**1015.3 Height.** Required *guards* shall be not less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces.

2. On *stairways* and stepped *aisles*, from the line connecting the leading edges of the tread *nosings*.

3. On *ramps* and ramped *aisles*, from the *ramp* surface at the guard.

**Exceptions:**

1. For occupancies in Group R-3 not more than three stories above grade in height and within individual *dwelling units* in occupancies in Group R-2 not more than three stories above grade in height with separate *means of egress*, required *guards* shall be not less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces.

2. For occupancies in Group R-2 and R-3, within the interior conditioned space in of individual dwelling units, where the open-sided walking surface is located not more than 25 feet (7.62 meters) measured vertically to the floor or walking surface below, required guards shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surface.

~~2.~~3. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, *guards* on the open sides of *stairs* shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.

~~3.~~4. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, where the top of the*guard* serves as a *handrail* on the open sides of *stairs*, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

~~4.~~5. The *guard* height in assembly seating areas shall comply with Section 1030.17 as applicable.

~~5.~~6. Along *alternating tread devices* and ships ladders, *guards* where the top rail serves as a *handrail* shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread *nosing*.

~~6.~~7. In Group F occupancies where *exit access stairways* serve fewer than three stories and such *stairways* are not open to the public, and where the top of the *guard* also serves as a *handrail*, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

**(F10654 / E82-21 AMPC1)**

Revise as follows:

**1015.8 Window openings.** Windows in Group R-2 and R-3 buildings including *dwelling units*, where the bottom of the clear opening of an operable window is located less than 36 inches (914 mm) above the finished floor and more than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, shall comply with ~~one of~~ the following:

1. Where the bottom of the clear opening of the window is located more than 72 inches (1829 mm) and less than 75 feet (22 860 mm) above the finished grade or other surface below on the exterior of the building, the window shall comply with one of the following: ~~Operable windows where the top of the sill of the opening is located more than 75 feet (22 860 mm) above the finished grade or~~ ~~other surface below and that are provided with window fall prevention devices that comply with ASTM F2006.~~

1.1.~~2.~~ Operable windows where the openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position, provided the opening is not required for emergency escape or rescue.

1.2.~~3.~~ Operable windows where the openings are provided with window fall prevention devices that comply with ASTM F2090.

1.3.~~4.~~ Operable windows where the openings ~~that~~ are provided with window opening control devices that comply with ~~Section~~ ~~1015.8.1~~ ASTM F2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section1031.3.1 for emergency escape rescue openings.

2. Where the bottom of the clear opening of the window is located 75 feet (22 860 mm) or more above from the finished grade or other surface below on the exterior of the building, the window shall comply with one of the following:

2.1. Operable windows where the openings are provided with window fall prevention devices that comply with ASTM F2090.

2.2. Operable windows where the openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position.

2.3. Window fall prevention devices that comply with ASTM F2006.

Delete without substitution:

~~1015.8.1 Window opening control devices. Window opening control devices shall comply with F2090—17. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1031.3~~

**(F10655 / E83-21 AS)**

Revise as follows:

**1016.2 Egress through intervening spaces.** Egress through intervening spaces shall comply with this section.

1. *Exit access* through an enclosed elevator lobby is permitted. Where access to two or more exits or exit access doorways is required in Section 1006.2.1, access to not less than one of the required *exits* shall be provided without travel through the enclosed elevator lobbies required by Section 3006. Where the path of *exit access* travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the *exit* unless direct access to an *exit* is required by other sections of this code.

2. In other than Group H occupancies, egress from a room or space is allowed to pass through adjoining or intervening rooms or areas provided that such adjoining rooms or areas and the area served are accessory to one or the other and provide a discernible path of egress travel to an exit. ~~Egress from a room or space shall not pass through adjoining or intervening rooms or~~ ~~areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H~~ ~~occupancy and provide a discernible path of egress travel to an exit.~~

**~~Exception:~~** *~~Means of egress~~* ~~are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F~~ ~~occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.~~

3. In Group H occupancies, egress from a room or space is allowed to pass through adjoining or intervening rooms or areas provided that such adjoining rooms or areas are the same or lesser hazard occupancy group and provide a discernible path of egress travel to an exit.

~~3.~~4. An *exit access* shall not pass through a room that can be locked to prevent egress.

Exception: An electrically locked exit access door providing egress from an elevator lobby shall be permitted in accordance with Section 1010.2.16.

~~4.~~5. *Means of egress* from *dwelling units* or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.

~~5.~~6. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

Exceptions:

1. *Means of egress* are not prohibited through a kitchen area serving adjoining rooms constituting part of the same *dwelling unit* or *sleeping unit*.

2. *Means of egress* are not prohibited through stockrooms in Group M occupancies where all of the following are met:

2.1. The stock is of the same hazard classification as that found in the main retail area.

2.2. Not more than 50 percent of the*exit access* is through the stockroom.

2.3. The stockroom is not subject to locking from the egress side.

2.4. There is a demarcated, minimum 44-inch-wide (1118 mm) *aisle* defined by full- or partial-height fixed walls or similar construction that will maintain the required width and lead directly from the retail area to the exit without obstructions.

**(F10656 / E85-21 AS)**

**1015.2 Where required.** *Guards* shall be located along open-sided walking surfaces, including *mezzanines*, equipment platforms, *aisles*, *stairs*, *ramps* and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. *Guards* shall be provided at the perimeter of the occupied portions of an occupied roof. *Guards* shall be adequate in strength and attachment in accordance with Section 1607.9.

**Exceptions:** *Guards* are not required for the following locations:

1. On the loading side of loading docks or piers.

2. On the audience side of *stages* and raised *platforms*, including *stairs* leading up to the *stage* and raised *platforms*.

3. On raised *stage* and *platform* floor areas, such as runways, *ramps* and side *stages* used for entertainment or presentations.

4. At vertical openings in the performance area of *stages* and *platforms*.

5. At elevated walking surfaces appurtenant to *stages* and *platforms* for access to and utilization of special lighting or equipment.

6. Along vehicle service pits not accessible to the public.

7. In assembly seating areas at cross *aisles* in accordance with Section 1029.17.2.

8. On the loading side of station platforms on fixed guideway transit or passenger rail systems.

9. Portions of an occupied roof located less than 30 inches measured vertically to adjacent unoccupied roof areas where approved guards are present at the perimeter of the roof.

10. At portions of an occupied roof where an *approved* barrier is provided.

**(F11032 / G106-21 Part II AMPC1)**

**1015.8 Window openings.** Windows in Group R-2 and R-3 buildings including *dwelling units*, where the bottom of the clear opening of an operable window is located less than 36 inches (914 mm) above the finished floor and more than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, shall comply with ~~one of~~ the following:

1. Where the bottom of the clear opening of the window is located more than 72 inches (1829 mm) and less than 75 feet (22 860 mm) above the finished grade or other surface below on the exterior of the building, the window shall comply with one of the following: ~~Operable windows where the top of the sill of the opening is located more than 75 feet (22 860 mm) above the finished grade or~~ ~~other surface below and that are provided with window fall prevention devices that comply with ASTM F2006.~~

1.1.~~2.~~ Operable windows where the openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position, provided the opening is not required for emergency escape or rescue.

1.2.~~3.~~ Operable windows where the openings are provided with window fall prevention devices that comply with ASTM F2090.

1.3.~~4.~~ Operable windows where the openings ~~that~~ are provided with window opening control devices that comply with ~~Section~~ ~~1015.8.1~~ ASTM F2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section1031.3.1 for emergency escape rescue openings.

2. Where the bottom of the clear opening of the window is located 75 feet (22 860 mm) or more above from the finished grade or other surface below on the exterior of the building, the window shall comply with one of the following:

2.1. Operable windows where the openings are provided with window fall prevention devices that comply with ASTM F2090.

2.2. Operable windows where the openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position.

2.3. Window fall prevention devices that comply with ASTM F2006.

**Delete without substitution:**

**~~1015.8.1 Window opening control devices~~.** ~~Window opening control devices shall comply with F2090—17. The window opening control~~ ~~device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area~~ ~~of the window unit to less than the area required by Section 1031.3.1.~~

**(F10655 / E83-21 AS)**

Revise as follows:

**1019.3 Occupancies other than Groups I-2 and I-3.** In other than Group I-2 and I-3 occupancies, floor openings containing*exit access stairways* or *ramps* shall be enclosed with a shaft enclosure constructed in accordance with Section 713.

Exceptions:

1. *Exit access stairways* and *ramps* within a two-story opening complying with Section 712.1.9. ~~that serve or atmospherically~~ ~~communicate between only two adjacent stories. Such interconnected stories shall not be open to other stories.~~

2 – 8 – No change

**(F10658 / E88-21 AS)**

Revise as follows:

**1023.7 Interior exit stairway and ramp exterior walls.** *Exterior walls* of the *interior exit stairway* or *ramp* shall comply with the requirements of Section 705 for *exterior walls*. Where nonrated walls or unprotected openings enclose the exterior of the *stairway* or *ramps* and the walls or openings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), building construction within 10 feet of the exterior walls of the interior exit stairway or ramp shall comply with Section 1023.7.1 and 1023.7.2. ~~the building~~ *~~exterior~~ ~~walls~~* ~~within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a~~*~~fire-resistance rating~~* ~~of not less than 1~~ ~~hour. Openings within such~~ *~~exterior~~* ~~walls shall be protected by opening protectives having a~~ *~~fire protection rating~~* ~~of not less than~~ 3/4 hour. ~~This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the topmost landing of the~~ *~~stairway~~* ~~or~~ *~~ramp~~*~~, or~~ ~~to the roof line, whichever is lower.~~

Add new text as follows:

**1023.7.1 Building exterior walls.** Building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening in an ~~exterior~~ interior exit stairway or ramp shall have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the topmost landing of the stairway or ramp, or to the roof line, whichever is lower.

**1023.7.2 Roof assemblies.** Where the interior exit stairway or ramp extends above an adjacent roof of the same building, the adjacent roof assembly shall have a fire resistance rating of not less than 1 hour and openings shall be protected by opening protectives having a fire protection rating of not less than ¾ hour. The fire resistance rating and opening protection shall extend horizontally a minimum of 10 feet (3048 mm) from the exterior wall of the stairway or ramp, or to the perimeter of the ~~lower~~ adjacent roof, whichever is less.

**Exceptions:**

1. The roof assembly need not be rated and openings in the roof need not be protected where they are adjacent to the *penthouse* of the stairway or ramp, unless otherwise required by this code.

2. The adjacent roof assembly need not be rated and adjacent openings in the roof need not be protected where the exterior wall of the stairway or ramp has a fire-resistance rating of 1 hour and openings are protected by opening protectives having a fire protection rating of not less than 3/4 hours, extending a minimum of 10 feet (3048 mm) above the roof.

**(F10660 / E97-21 AMPC1)**

**1020.9.5 Dead-end aisles.** Each end of an *aisle* shall be continuous to a cross *aisle*, foyer, doorway, vomitory, concourse or *stairway* in accordance with Section 1029.9.7 having access to an *exit*.

###### Exceptions:

1. Dead-end *aisles* shall be not greater than 20 feet (6096 mm) in length.
2. Dead-end *aisles* longer than 16 rows are permitted where seats beyond the 16th row dead-end *aisle* are not more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.
3. Dead-end aisles serving fewer than 50 seats shall be permitted in accordance with Section 1029.8.

~~3.~~4. For *smoke-protected* or *open-air assembly seating*, the dead-end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.

~~4.~~5. For *smoke-protected* or *open-air assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead- end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

**1027.2 Use in a means of egress.** *Exterior exit stairways* shall not be used as an element of a required *means of egress* for Group I-2 occupancies. For occupancies in other than Group I-2, *exterior exit stairways* and *ramps* shall ~~be permitted~~ not be used as an element of a required *means of egress* for buildings ~~not~~ exceeding six stories above grade plane or that are high-rise buildings.

**(F10661 / E100-21 AMPC1)/E110-21**

**1029.9.5 Dead-end aisles.** Each end of an *aisle* shall be continuous to a cross *aisle*, foyer, doorway, vomitory, concourse or *stairway* in accordance with Section 1030.9.7 having access to an *exit*.

###### Exceptions:

1. Dead-end *aisles* shall be not greater than 20 feet (6096 mm) in length.
2. Dead-end *aisles* longer than ~~16 rows~~ 20 feet (6096 mm) are permitted where seats beyond the ~~16th row~~ 20 feet (6096 mm) dead-end *aisle* are not more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.
3. For *smoke-protected* or *open-air assembly seating*, the dead-end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.
4. For *smoke-protected* or *open-air assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead- end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

**( F11655 /E109-21 AS)**

**SECTION 1031 EGRESS COURTS**

**1031.3 Construction and openings.** Where an *egress court* serving a building or portion thereof is less than 10 feet (3048 mm) in width, the *egress court* walls shall have not less than 1-hour *fire-resistance-rated* construction for a distance of 10 feet (3048 mm) above the floor of the *egress court*. Openings within such walls shall be protected by opening protectives having a *fire protection rating* of not less than 3/4 hour.

Exceptions:

1. *Egress courts* serving an *occupant load* of less than 10.

2. *Egress courts* serving Group R-3.

3. Egress courts, located at *grade,* which provide direct and unobstructed access to a *public way* through two or more independent paths. The minimum width provided along each path shall be based on the required width or the required capacity, whichever is greater, and shall be maintained along each path.

**(F10662 / E105-21 AMPC1)**

**CHAPTER 11 ACCESSIBILITY**

No change

**CHAPTER 12 INTERIOR ENVIRONMENT**

**1203.3 Unvented attic and unvented enclosed rafter assemblies.** No change to this paragraph.

1 – 4 – No change

5. Insulation shall comply with either Item 5.1 or 5.2, and additionally Item 5.3.

5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.

5.1.1. Where only *air-impermeable insulation* is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with Item 5.1.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the ~~R-values~~ R-value percentages in Table 1203.3 for condensation control.

5.1.3. Where both air-impermeable and air-permeable insulation are provided, the *air-impermeable insulation* shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the ~~R-values~~ R-value percentages in Table 1203.3 for condensation control. The *air-permeable insulation* shall be installed directly under the *air-impermeable insulation*.

5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

5.2. In Climate Zones 1, 2 and 3, air-permeable insulation installed in unvented attics shall meet the following requirements:

5.2.1. A vapor diffusion port shall be installed not more than 12 inches (305 mm) from the highest point of the roof, measured vertically from the highest point of the roof to the lower edge of the port.

5.2.2. The port area shall be greater than or equal to1/600 1/150 of the ceiling area. Where there are multiple ports in the attic, the sum of the port areas shall be greater than or equal to the area requirement.

5.2.3. The vapor-permeable membrane in the vapor diffusion port shall have a vapor permeance rating of greater than or equal to 20 perms when tested in accordance with Procedure A of ASTM E96.

5.2.4. The vapor diffusion port shall serve as an air barrier between the attic and the exterior of the building.

5.2.5. The vapor diffusion port shall protect the attic against the entrance of rain and snow.

5.2.6. Framing members and blocking shall not block the free flow of water vapor to the port. Not less than a 2-inch (50 mm) space shall be provided between any blocking and the roof sheathing. Air-permeable insulation shall be permitted within that space.

5.2.7. The roof slope shall be greater than or equal to 3 units vertical in 12 units horizontal (3:12).

5.2.8. Where only air-permeable insulation is used, it shall be installed directly below the structural roof sheathing, on top the attic floor, or on top of the ceiling.

5.2.9. Where only air-permeable insulation is used and is installed directly below the structural roof sheathing, air shall be supplied at a flow rate greater than or equal to 50 cubic feet per minute (23.6 L/s) per 1,000 square feet (93 m2) of ceiling.

5.3. No change

**Exceptions:**

1. Section 1203.3 does not apply to special use structures or enclosures such as swimming pool enclosures, data processing centers, hospitals or art galleries.

2. Section 1203.3 does not apply to enclosures in Climate Zones 5 through 8 that are humidified beyond 35 percent during the three coldest months.

**TABLE 1203.3 INSULATION FOR CONDENSATION CONTROL**

|  |  |
| --- | --- |
| **CLIMATE ZONE** | **MINIMUM *R*-VALUE OF AIR-IMPERMEABLE INSULATION EXPRESSED AS A PERCENTAGE OF TOTAL R-VALUEa** |
| 2B and 3B tile roof only | 0 (none required) |
| 1, 2A, 2B, 3A, 3B, 3C | R-5 10% |
| 4C | R-10 20% |
| 4A, 4B | R-1530% |
| 5 | R-2040% |
| 6 | R-2550% |
| 7 | R-3060% |
| 8 | R-3570% |

a. Contributes to, but does not supersede, thermal resistance requirements for attic and roof assemblies in Section C402.2.1 of the *Florida Building Code, Energy Conservation*.

**(R11055 / G159-21 AS)/ (S11056 / G160-21 AS)**

**1207.2 Airborne sound.** Walls, partitions and floor-ceiling assemblies separating *dwelling units* and *sleeping units* from each other or from public or service areas shall have a sound transmission class of not less than 50 where tested in accordance with ASTM E90, or have a Normalized Noise Isolation Class (NNIC) rating of not less than 45 if field tested, in accordance with ASTM E336 for airborne

noise. Alternatively, the sound transmission class of walls, partitions and floor-ceiling assemblies shall be established by engineering analysis based on a comparison of walls, partitions and floor-ceiling assemblies having sound transmission class ratings as determined by the test procedures set forth in ASTM E90. Engineering analysis shall be performed by a *registered design professional*. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to entrance doors; however, such doors shall be tight fitting to the frame and sill.

**1207.3 Structure-borne sound.** Floor-ceiling assemblies between *dwelling units* and *sleeping units* or between a *dwelling unit* or *sleeping unit* and a public or service area within the structure shall have an impact insulation class rating of not less than 50 where tested in accordance with ASTM E492, or have a Normalized Impact Sound Rating (NISR) of not less than 45 if field tested in accordance

with ASTM E1007. Alternatively, the impact insulation class of floor-ceiling assemblies shall be established by engineering analysis based on a comparison of floor-ceiling assemblies having impact insulation class ratings as determined by the test procedures in ASTM E492. Engineering analysis shall be performed by a *registered design professional*.

**(S11057 / G169-21 AS)**

**1208.3 Dwelling unit size.** Dwelling units shall have a minimum of 190 square feet (17.7 m2) of habitable space.

**Revise as follows:**

**1208.4 ~~1208.3~~ Room area.** Every *dwelling unit* shall have not less than one room that shall have not less than 120 square feet (11.2 m2) of *net floor area*. *Sleeping units* and other habitable rooms of a *dwelling unit* shall have a *net floor area* of not less than 70 square feet (6.5 m2).

**Exception:** Kitchens are not required to be of a minimum floor area.

**1208.5 ~~1208.4~~ Efficiency dwelling units.** *Efficiency dwelling units* shall conform to the requirements of the code except as modified herein:

1. The ~~unit~~ unit's habitable space shall ~~have a living room of not less than 190 square feet (17.7 m~~2~~) of floor area~~ comply with Sections 1208.1 through 1208.4.

2 – 4 – No change

**(S11058 / G171-21 AS)**

**[P] 1210.2.2 Walls and partitions.** Walls and partitions within 2 feet (610 mm) of service sinks, urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of not less than 4 feet (1219 mm) above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

**Exception:** This section does not apply to the following buildings and spaces:

1. Dwelling units and *sleeping units*.

2. Toilet rooms that are not ~~accessible to the~~ for use by the general public and that have not more than one water closet.

Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

**(P10920 / G1-21 Part IV AMPC1)**

**CHAPTER 13 ENERGY EFFICIENCY**

No change

**CHAPTER 14 EXTERIOR WALLS**

Add new text as follows:

**1403.5 Vertical and lateral flame propagation. .** Exterior walls on buildings of Type I, II, III and IV construction that are greater than 40 feet (12,192 mm) in height above grade plane and contain a combustible exterior wall covering, combustible insulation, or a combustible water-resistive barrier shall comply with Sections 1403.5.1 through 1403.5.5, as applicable. Where compliance with NFPA 285 and associated acceptance criteria is required in Sections 1403.5.1 through 1403.5.5, the exterior wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.

**1403.5.1 Combustible Water resistive barrier.** Exterior walls containing a combustible water-resistive barrier shall comply with Section 1403.6.

**1403.5.2 Metal Composite Materials (MCM).** Exterior walls containing MCM systems shall comply with Section 1407.

**1403.5.3 Exterior insulation and finish system (EIFS).** Exterior walls of any height above grade plane containing EIFS shall comply with Section 1407.

**1403.5.4 High-pressure decorative exterior-grade compact laminate (HPL) system. .** Exterior walls containing an HPL system shall comply with Section 1409.

**1403.5.5 Foam Plastic Insulation.** Exterior walls of any height above grade plane containing foam plastic insulation shall comply with Section 2603.5.

Revise as follows:

**~~1403.5~~ 1403.6 Water-resistive barriers.** No change to the text.

**[BS] ~~1403.6~~1403.7 Flood resistance.** No change to the text.

**[BS] ~~1403.7~~1403.8 Flood resistance for coastal high-hazard areas and coastal A zones.** No change to the text.

(F10872 / FS122-21) The following does not correlate directly with the 2023 FBC

1403.5Vertical and lateral flame propagation. .

Exterior walls on buildings of Type I, II, III and IV construction that~~are greater than 40 feet (12,192 mm) in height above grade plane and~~ contain a combustible exterior wall covering, combustible insulation, or a combustible water-resistive barrier shall comply with Sections

1402.5.1 through 1402.5.5, as applicable. Where compliance with NFPA 285 and associated acceptance criteria is required in Sections 1402.5.1 through 1402.5.5, the exterior wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.

1402.5.1Combustible Water resistive barrier.

Exterior walls containing a combustible water-resistive barrier shall comply with Section 1402.6.

1402.5.2 Metal Composite Materials (MCM)..

Exterior walls containing MCM systems shall comply with Section 1406.

1402.5.3 Exterior insulation and finish system (EIFS)..

Exterior walls ~~of any height above grade plane~~ containing EIFS shall comply with Section 1407.

1402.5.4 High-pressure decorative exterior-grade compact laminate (HPL) system.. Exterior walls containing an HPL system shall comply with Section 1408.

1402.5.5 Foam Plastic Insulation.

Exterior walls ~~of any height above grade plane~~ containing foam plastic insulation shall comply with Section ~~2603.5~~ 2603.

**(F10872 / FS122-21 AM)**

Add new text as follows:

**1403.9 Vertical and lateral flame propagation compliance methods.** When exterior wall assemblies are required in this Chapter to be tested for vertical and lateral flame propagation in accordance with, and comply with the acceptance criteria of NFPA 285, compliance with the requirements shall be established by any of the following:

1. An exterior wall assembly tested in accordance with and meeting the acceptance criteria of NFPA 285.

2. An exterior wall assembly design listed by an approved agency for compliance with NFPA 285.

3. An approved analysis based on an assembly or condition tested in accordance with and meeting the acceptance criteria of NFPA 285.

**(F10873 / FS124-21 AMPC1)**

**1403.10 Exterior wall veneers manufactured using combustible adhesives.** Exterior wall assemblies on buildings of Type I, II, III or IV construction that are greater than 40 feet (12,192 mm) in height above grade plane and contain an exterior wall veneer manufactured using a combustible adhesive to laminate a metal core with noncombustible facing materials shall be tested in accordance with, and comply with, the acceptance criteria of NFPA 285, with the adhesive level at the maximum application rate intended for use. Combustibility shall be determined in accordance with Section 703.3.

**(F10874 / FS125-21 AMPC1)**

**1404.2 Water-resistive barrier.** Not fewer than one layer of *water-resistive barrier* material shall be attached to the studs or sheathing, with flashing as described in Section 1405.4, in such a manner as to provide a continuous *water-resistive barrier* behind the exterior wall *veneer*. The intersection between the *water-resistive barrier* materials and fenestration openings shall be flashed and assembled in accordance with the fenestration manufacturer’s installation instructions, or other *approved* methods for applications not addressed by the fenestration manufacturer’s instructions. The *water-resistive barrier* material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section 1403.2.

*Water-resistive barriers* shall comply with one of the following:

1. No. 15 felt complying with ASTM D226, Type 1.

2. ASTM E2556, Type I or II.

3. Foam plastic insulating sheathing *water-resistive barrier* systems complying with Section 1403.2 and installed in accordance with manufacturer's installation instructions.

4. ~~3.~~ ASTM E331 in accordance with Section 1403.2.

5. ~~4.~~ Other approved materials installed in accordance with the manufacturer's installation instructions.

No.15 asphalt felt and *water-resistive barriers* complying with ASTM E2556 shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm), and where joints occur, shall be lapped not less than 6 inches (152 mm).

**(F10875 / FS126-21 AM)/ (S11657 / FS128-21 AS)**

**~~1404.8 Plastics~~.** ~~Plastic panel, apron or spandrel walls as defined in this code shall not be limited in thickness, provided that such plastics~~ ~~and their assemblies conform to the requirements of Chapter 26 and are constructed of~~ *~~approved~~* ~~weather-resistant materials of adequate~~ ~~strength to resist the wind~~ *~~loads~~* ~~for cladding specified in Chapter 16~~.

**(S10876 / FS130-21 AS)**

**1404.9 Vinyl siding.** Vinyl siding shall be certified and labeled as conforming to the requirements of ASTM D3679 by an *approved* ~~quality~~ ~~control~~ agency.

**1404.12 Polypropylene siding.** Polypropylene siding shall be certified and labeled as conforming to the requirements of ASTM D7254 by an approved ~~quality control~~ agency. In addition, polypropylene siding shall conform to the fire separation distance requirements of Section 1404.12.1 or 1404.12.2. Polypropylene siding shall be installed in accordance with the requirements of Section 1405.18 and in accordance with the manufacturer’s instructions. Polypropylene siding shall be secured to the building so as to provide weather protection for the exterior walls of the building

**1404.10 Fiber-cement siding.** *Fiber-cement siding* shall conform to the requirements of ASTM C1186, Type A (or ISO 8336, Category A), and shall be so identified on labeling listing an *approved* ~~quality control~~ agency.

**(S10912 / FS156-21 AM)**

**TABLE 1405.3.1 CONTINUOUS INSULATION WITH CLASS II VAPOR RETARDER**

**Portions of table not shown remain unchanged.**

PERMITTED CONDITIONSa

CLIMATE ZONE

~~a. In addition to the vapor retarder, spray foam with a maximum permeance of 1.5 perms at the installed thickness, applied to the interior~~ ~~cavity side of wood structural panels, fiberboard, insulating sheathing or gypsum is deemed to comply with the continuous insulation~~ ~~requirement only for the moisture control purposes of this table where the spray foam~~ *~~R~~*~~-value plus any continuous insulation~~ *~~R~~*~~-value~~ ~~provided equals or exceeds the specified continuous insulation~~ *~~R~~*~~-value.~~

**1405.3.2.1 Spray foam plastic insulation for moi~~o~~sture control with Class II and III vapor retarders.** For purposes of compliance with

~~Table~~ Tables 1405.3(3) and 1405.3.1, spray foam with a maximum permeance of 1.5 perms at the installed thickness applied to the interior ~~cavity~~ side of wood structural panels, fiberboard, *insulating sheathing* or gypsum shall be deemed to meet the continuous insulation moisture control requirement ~~where the~~ in accordance with one of the following conditions:

1. The spray foam R-value meets or exceeds the specified continuous insulation R-value.

2. The combined R-value of the spray foam and continuous insulation is equal to or greater than the specified continuous insulation R- value.

**Delete without substitution:**

**~~1405.3.2.1.1 Hybrid insulation for moisture control with Class III vapor retarders~~.** ~~For the purposes of compliance with Table 1405.3(3),~~ ~~the combined~~ *~~R~~*~~-values of spray foam plastic insulation and continuous insulation shall be permitted to be counted toward the continuous~~ *~~R~~*~~-~~ ~~value requirement.~~

**(S10893 / FS142-21 AS)**

Add new text as follows:

**1404.16 Fiber-mat reinforced cementitious backer units.** Fiber-mat reinforced cementitious backer units used as an exterior substrate for the application of exterior finish materials shall comply with ASTM C1325.

**TABLE 1405.2 MINIMUM THICKNESS OF WEATHER COVERINGS**

**Portions of table not shown remain unchanged.**

|  |  |
| --- | --- |
| **COVERING TYPE** | **MINIMUM THICKNESS (inches)** |
| Fiber-mat reinforced cementitious backer units | 0.5 |

**Add new text as follows:**

**1405.19 Fiber-mat reinforced cementitious backer units.** Fiber-mat reinforced cementitious backer units shall be permitted on exterior walls.

**1405.19.1 Installation.** Installation of fiber-mat reinforced cementitious backer units used as an exterior substrate for the application of exterior finish materials shall be in accordance with backer unit manufacturer's installation instructions. Panels shall be installed using corrosion-resistant fasteners. Finish materials shall be installed in accordance with approved finish material manufacturer's instructions.

**(S11658 / FS133-21 AS)**

**[BS] 1405.14 Vinyl siding** **and Insulated Vinyl Siding.** *Vinyl siding* and *insulated vinyl siding* conforming to the requirements of this section and complying with ASTM D3679 and ASTM D7793, respectively, shall be permitted on *exterior walls* where the design wind pressure determined in accordance with Section 1609 does not exceed 30 pounds per square foot (1.44 kN/m2). Where the design wind pressure exceeds 30 pounds per square foot (1.44 kN/m2), tests or calculations indicating compliance with Chapter 16 shall be submitted. ~~Vinyl siding siding shall be secured to the building so as to provide weather protection for the~~ *~~exterior walls~~* ~~of the building.~~

**(S10802 / FS4-22 AS)/**(**S10803 / FS5-22 AS)**

**1405.3 Vapor retarders.** Vapor retarder materials shall be classified in accordance with Table 1405.3(1). A vapor retarder shall be provided on the interior side of frame walls in accordance with Tables 1405.3(2) and 1405.3(3), or an approved design using accepted engineering practice for hygrothermal analysis. Vapor retarders shall be installed in accordance with 1405.3.4. The appropriate climate zone shall be selected in accordance with Chapter 3 of the *Florida Building Code, Energy Conservation*.

**1405.3.1 Class I and II vapor retarders.** Where a Class I or II vapor retarder is used in combination with foam plastic insulating sheathing installed as continuous insulation on the exterior side of frame walls, the continuous insulation shall comply with Table 1405.3.1 and the Class I or II vapor retarder shall have a vapor permeance greater than 1 perm when measured by ASTM E96 water method (Procedure B). Use of a Class I interior vapor retarder in frame walls with a Class I vapor retarder on the exterior side shall require an approved design.

###### **Exceptions:** No change

TABLE 1405.3.1 CONTINUOUS INSULATION WITH CLASS I OR II VAPOR RETARDER

Portions of table not shown remain unchanged.

Add new text as follows:

**1405.3.4 Vapor Retarder Installation.**

Vapor retarders shall be installed in accordance with the manufacturer’s instructions or an approved design. Where a vapor retarder also

functions as a component of a continuous air barrier, the vapor retarder shall be installed as an air barrier in accordance with the *Florida Building Code, Energy Conservation*.

**(S10879 / FS135-21 AM)/(S10880 / FS136-21 AS)**

**[BS] 1405.6 Anchored masonry veneer.** Anchored masonry veneer shall comply with the provisions of Sections 1405.6, 1405.7, 1405.8 and 1405.9 and Sections ~~12.1~~ 13.1 and ~~12.2~~ 13.2 of TMS 402.

**[BS] 1405.6.1 Tolerances.** *Anchored masonry veneers* in accordance with Chapter 14 are not required to meet the tolerances in Article 3.3 ~~F1G~~ of TMS 602.

**[BS]1404.6.1 Tolerances.** *Anchored masonry veneers* in accordance with Chapter 14 are not required to meet the tolerances in Article 3.3 ~~F1~~G.1 of TMS 602.

###### Revise as follows:

**[BS] 1405.10 Adhered masonry veneer.** *Adhered masonry veneer* shall comply with the applicable requirements in this section and Sections ~~12.1~~13.1 and ~~12.3~~13.2 of TMS 402.

**(S10801 / FS3-22 AM)**

Revise section 1410.7.2 to read as follows:

# ~~1410.7.2 Fascia installation where the design wind pressure exceeds 30 psf. Where the design wind pressure is greater than 30 pounds per square foot (1.44 kPa), aluminum fascia shall be attached with one a finish nail [1~~~~1~~~~/~~~~4~~ ~~inches by 0.57 inch by 0.177 inch head diameter (32 mm × 14.5 mm × 4.5 mm)] in the return leg spaced a maximum of 16 inches (406 mm) on center. The fascia shall be inserted under the drip edge with not less than half the height of the drip edge or 1.0 inch (25 mm), whichever is greater, of the fascia material covered by the drip edge. And one of the following additional attachments:~~

1. ~~One finish nail shall be centered in the face of the fascia from each end of the fascia material section located no more than 1 inch (25mm) below the drip edge.~~
2. ~~Top edge of the fascia is secured using utility trim installed beneath the drip edge with snap locks punched into the fascia spaced not more than 6 inches (152 mm) on center, or~~
3. ~~An approved adhesive applied to the inside of the fascia cover or onto the exterior face of the subfascia framing member. Where the design wind pressure is greater than 30 pounds per square foot(1.44kPA), aluminum fascia shall be installed using one aluminum nail with a minimum0.057-inch (1.5 mm) shank, 0.177-inch (4.5 mm) head, and 1 1/4” (32 mm) length finish nails, installed no more than 1-inch (25.5 mm) below the drip edge, and one finish nail at the return leg of the of the fascia within 3” (76 mm) of each end and a with a maximum spacing between fasteners of 24 inches (610 mm), and the fascia shall be inserted under the drip edge with at least 1-inch (26 mm) of fascia material covered by the drip edge. As an alternative, the top edge of the fascia is permitted to be secured using utility trim installed beneath the drip edge with snap locks punched into the fascia spaced no more than 6 inches on center.~~

**1407.1Fascia installation where the design wind pressure is 30 psf or less.**Where the design wind pressure is 30 pounds per square foot (1.44 kPA) or less, aluminum fascia shall be attached as follows:

1. Finish nails shall be provided in the return leg (11/4″ × 0.057″ × 0.177″ head diameter) spaced a maximum of 24 inches (610 mm) on center, and

2. The fascia shall be inserted under the drip edge with not less than half the height of the drip edge or 1.0 inch (25 mm), whichever is greater, of the fascia material covered by the drip edge. One finish nail shall be centered in the face of the fascia from each end of the fascia material section located no more than 1 inch below the drip edge.

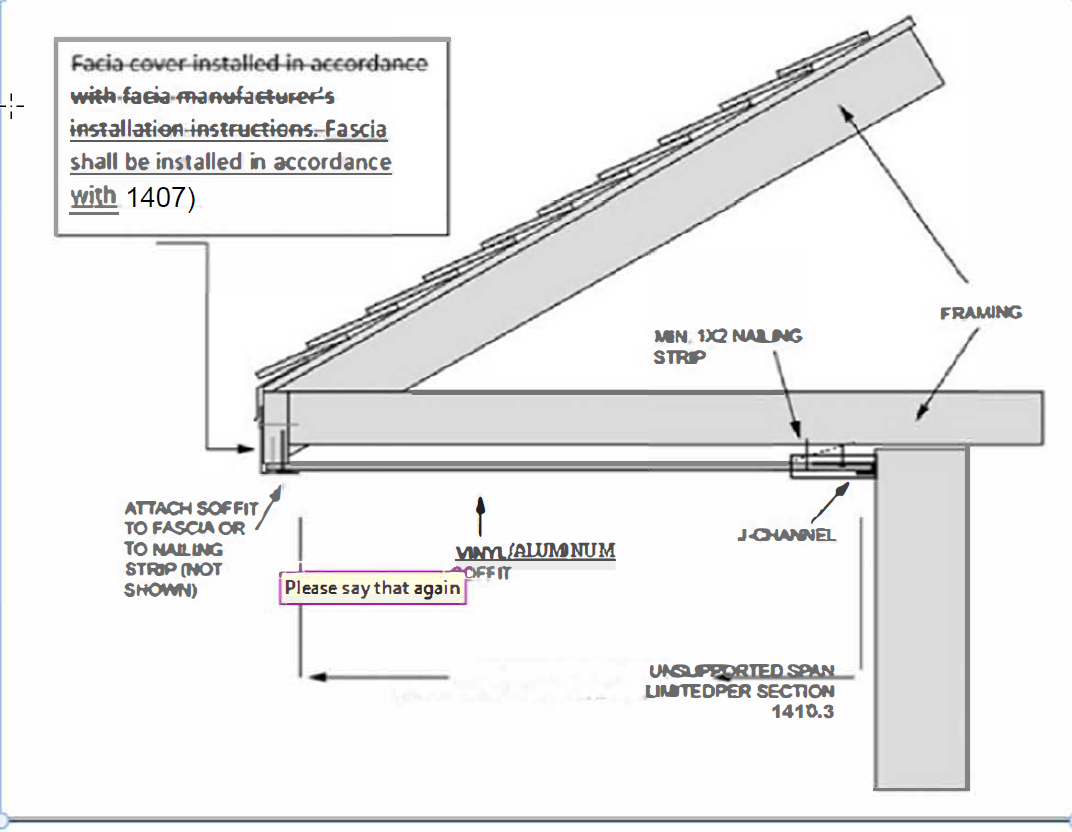
~~Where the design wind pressure is 60 pounds per square foot (2.88 kPA) or less, aluminum fascia shall be attached in accordance with~~ [~~Section R704.3.2.1~~](https://codes.iccsafe.org/lookup/FLRC2023P1_Pt03_Ch07_SecR704.3.2.1/3260%22) ~~or~~ [~~Section R704.3.2.2~~](https://codes.iccsafe.org/lookup/FLRC2023P1_Pt03_Ch07_SecR704.3.2.2/3260%22)~~.~~

1407.2 Where the design wind pressure is greater than 30 pounds per square foot (1.44 kPa), aluminum fascia shall be attached with one a finish nail [11/4 inches by 0.57 inch by 0.177 inch head diameter (32 mm × 14.5 mm × 4.5 mm)] in the return leg spaced a maximum of 16 inches (406 mm) on center. The fascia shall be inserted under the drip edge with not less than half the height of the drip edge or 1.0 inch (25 mm), whichever is greater, of the fascia material covered by the drip edge. And one of the following additional attachments:

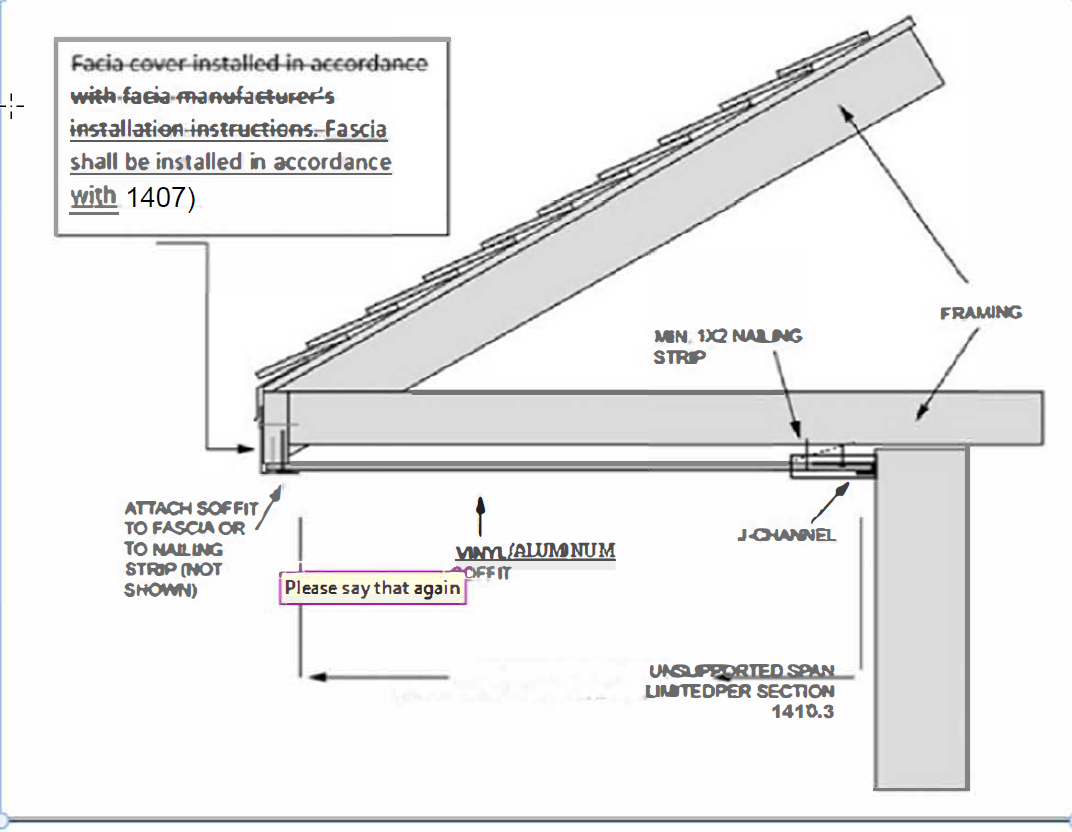
1. One finish nail shall be centered in the face of the fascia from each end of the fascia material section located no more than 1 inch (25mm) below the drip edge.

2. Top edge of the fascia is secured using utility trim installed beneath the drip edge with snap locks punched into the fascia spaced not more than 6 inches (152 mm) on center, or

3. An approved adhesive applied to the inside of the fascia cover or onto the exterior face of the subfascia framing member.



**FIGURE 1410.2(1) TYPICAL SINGLE-SPAN VINYL OR ALUMINUM SOFFIT PANEL SUPPORT**



**FGURE 1410.3(1) TYPICAL DOUBLE-SPAN VINYL OR ALUMINUM SOFFIT PANEL SUPPORT**

S - FBC-B/R - Ch. 14/7 – Glitch #1

**1408.6 ~~Special inspections~~**~~. Reserved.~~ **Exterior walls of buildings of any height.** Exterior wall assemblies containing an EIFS *exterior wall covering* shall comply with Section 2603.5.

**(S10898 / FS146-21 AMPC1)**

Revise 1410.3 as follows:

**1410.3 Vinyl and aluminum soffit panels.** Vinyl and aluminum soffit panels shall comply with Section 1410.2 and shall be installed using fasteners specified by the manufacturer and shall be fastened at both ends to a supporting component such as a nailing strip, fascia or subfascia component in accordance with Figure 1410.3~~.1~~(1). Where the unsupported span of soffit panels is greater than 12 inches (406 mm), intermediate nailing strips shall be provided in accordance

with Figure 1410.3~~.1~~(2) unless a larger span is permitted in accordance with the manufacturer’s product approval specification and limitations of use. Vinyl and aluminum soffit panels shall be installed in accordance with the manufacturer’s product approval specification and limitations

of use. Fasteners shall be corrosion resistant. Fascias shall comply with Section 1410.7 and the

manufacturer’s product approval specification and limitations of use. In the HVHZ, vinyl and aluminum soffit panels shall also comply with TAS 202 and TAS 203.

S-FBC-B – Ch. 14 – Errata #1

**SECTION 1412 INSULATED METAL PANEL (IMP)**

**1412.1 General.** The provisions of this section shall govern the materials, construction, and quality of insulated metal panels (IMP) for use as exterior walls and exterior wall coverings in addition to other applicable requirements of Chapters 14 and 16.

**14012.2 Structural design.** Structural design of IMP systems shall be in accordance with this section.

**14012.2.1. IMP systems used as exterior walls.** IMP systems used as exterior wall shall be designed and constructed to resist design loads in accordance with applicable provisions of Chapter 16.

**14012.2.2. IMP systems used as exterior wall coverings.** IMP systems used as exterior wall covering systems shall be designed and constructed to resist wind loads as required by Section 1609.

**14012.2.3 Approval.** Results of approved tests or engineering analysis shall be submitted to the building official to verify compliance with the applicable requirements of Chapter 16.

**14012.3. Weather resistance.** IMP systems shall comply with Section 1403 and shall be designed and constructed to resist wind and rain in accordance with this section and the manufacturer’s installation instructions.

**14012.4. Durability.** IMP systems shall be constructed of approved materials that maintain the performance characteristics required in section 1403 for the duration of use.

**14012.5 Fire-resistance rating.** Evidence of the required fire resistance rating of IMPs systems shall be in accordance with this section.

**14012.5.1. IMP used as exterior walls.** In all types of construction where IMP systems are used as exterior walls required to have a fire resistance rating in accordance with Section 705, evidence shall be submitted to the building official that the wall achieves the required fire- resistance rating.

**14012.5.2. IMP used as exterior wall coverings.** IMP used as exterior wall coverings. In all types of construction where IMP systems are used as exterior wall coverings on exterior walls required to have a fire resistance rating in accordance with section 705, evidence shall be submitted to the building official that the required fire-resistance rating is maintained.

**Exception:** IMP systems not containing combustible insulation, which are installed on the outer surface of a fire-resistance rated exterior wall in a manner such that the attachments do not penetrate to the entire exterior wall assembly, shall not be required to comply with this section.

**14012.6. IMP with noncombustible core insulation.** IMP with noncombustible core insulation shall comply with Sections 14012.1 through 14012.5. Combustibility shall be determined in accordance with Section 703.3.

**14012.7. IMP Systems with combustible core insulation.** IMP systems with combustible core insulation shall comply with Sections 14012.1 through 14012.5 and this section. Combustibility shall be determined in accordance with Section 703.3.

**14012.7.1. Surface-burning characteristics.** Unless otherwise specified in this section, the combustible core shall have a flame spread index of 75 or less and a smoke developed index of 450 or less when tested in the maximum thickness intended for use, but not to exceed 4 inches (102 mm), in accordance with ASTM E84 or UL 723. For thickness greater than 4 inches (102 mm) the combustible core shall have a flame spread index of 75 or less and a smoke developed index of 450 or less at 4 inches (102 mm) thickness and the IMP approved based on testing in accordance with 14012.7.2.2 at the maximum IMP thickness intended for use.

**14012.7.1.1. Foam plastic core.** For IMP having a core insulation composed of foam plastic, the insulation core shall comply with Section 2603.3.

**14012.7.2. Thermal Barrier.** Unless otherwise specified in this section, IMP with combustible core shall be separated from the interior of a building by an approved thermal barrier consisting of 1/2 -inch (12.7 mm) gypsum wallboard or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275.

**14012.7.2.1. Foam plastic core.** For IMP having a foam plastic core, use with the thermal barrier prescribed in Section 14012.7.2 shall be in accordance with Section 2603.4 unless special approval is obtained on the basis of Section 2603.9.

**14012.7.2.2 Special approval.** The thermal barrier specified Section 14012.7.2 is not required where IMP is specifically approved based on tests conducted in accordance with, but not limited to, NFPA 286 (with the acceptance criteria of Section 803.1.1.1), FM 4880 or UL 1715. Such testing shall be performed with the IMP in a configuration related to the actual end-use and at the maximum thickness intended for use, and shall include seams, factory joints and other typical details used sealants intended for use.

**14012.7.3 Type I, II, III, and IV construction.** Where used as exterior walls or as exterior wall coverings on buildings of Type I, II, III, and IV construction, IMP systems shall comply with this section as follows:

1. IMP having a foam plastic core shall comply with Section 2603.5.

2. IMP having combustible core other than foam plastic shall comply with Sections 14012.7.3.1 through 14012.7.3.4.

**14012.7.3.1. Surface-burning characteristics.** The combustible core shall have a flame spread index of 25 or less and a smoke developed index of 450 or less when tested in the maximum thickness intended for use, but not to exceed 4 inches (102 mm), in accordance with ASTM E84 or UL 723. For thickness greater than 4 inches (102 mm) the combustible core shall have a flame spread index of 75 or less and a smoke developed index of 450 or less at 4 inches (102 mm) thickness and the IMP approved based on testing in accordance with 14012.7.2.2 at the maximum IMP thickness intended for use.

**14012.7.3.2. Thermal barrier.** IMP shall be separated from the interior of a building by an approved thermal barrier in accordance with Section 14012.7.2.

**14012.7.3.3. Vertical and lateral flame propagation.** IMP installations greater than 40 feet (12,192 mm) in height above grade plane shall be tested in accordance with and comply with the acceptance criteria of NFPA 285. Such testing shall be performed on the exterior wall assembly and with the IMP in the maximum thickness intended for use.

**14012.7.3.4. Ignition.** IMP installations shall not exhibit sustained flaming where tested in accordance with NFPA 268. Where a material is intended to be installed in more than one thickness, tests of the minimum and maximum thickness intended for use shall be performed.

**Exception:** Assemblies protected on the outside with one of the following:

1. A thermal barrier complying with Section 14012.7.2.

2. A minimum 1-inch (25 mm) thickness of concrete or masonry.

3. Glass-fiber-reinforced concrete panels of a minimum thickness of 3/8 inch (9.5 mm).

4. Metal-faced panels having minimum 0.019-inch-thick (0.48 mm) aluminum or 0.016-inch-thick (0.41 mm) corrosion-resistant steel outer facings.

5. A minimum 7/8-inch (22.2 mm) thickness of stucco complying with Section 2510.

6. A minimum 1/4-inch (6.4 mm) thickness of fiber-cement lap, panel or shingle siding complying with Section 1405.16 and Section 1405.16.1 or 1405.16.2.

**14012.8. Type V construction.** IMP shall be permitted for use in Type V construction.

**14012.9. Labeling.** Unless otherwise specified, the edge or face of each IMP or package shall bear the label of an approved agency.

The label shall contain the manufacturer’s or distributor’s identification, model number, serial number or definitive information describing the product or materials’ performance characteristics and approved agency’s identification.

**14012.9.1. Foam plastic core.** IMP having a foam plastic core shall be labeled in accordance with Section 2603.2 and 2603.5.6, as applicable.

**(S10900 / FS149-21 Part I AS)**

**Add new text as follows:**

**SECTION 1413**

**BIPV SYSTEMS FOR EXTERIOR WALL COVERINGS AND FENESTRATION**

**1413.1 Listing required.** In addition to complying with other provisions of this code, BIPV systems used as exterior wall coverings or fenestration shall be listed and labeled in accordance with UL 1703 or both UL 61730-1 and UL 61730-2.

**(S10904 / FS150-21 AS)**

**CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES**

**1504.1 Wind resistance of roofs.** *Roof decks* and *roof coverings* shall be designed ~~for wind~~ *~~loads~~* in accordance with ~~Chapter 16 and~~ Section~~s 1504.2, 1504.3 , 1504.4 and 1504.5~~ 1504.

**(R11100 / S6-22 AM)**

**1504.4.4 Slate shingles.** Slate shingles shall be tested in accordance with ASTM D3161. Slate packaging shall bear a label indicating compliance with ASTM D3161 and the required classification in Table 1507.2.7.1.

**(R11102 / S7-22 AS)**

**[BF] 1505.8 Building-integrated photovoltaic (BIPV) ~~products~~ systems.** *Building-integrated photovoltaic ~~products~~* systems installed as the roof covering shall be tested, *listed* and *labeled* for fire classification in accordance with Section 1505.1.

**(R11113 / S18-22 AS)**

**[BG] 1510.2.2 Area limitation.** The aggregate area of *penthouses* and other enclosed *rooftop structures* shall not exceed one-third the area of the supporting roof deck. Such *penthouses* and other enclosed *rooftop structures* shall not be required to be included in determining the *~~building area~~* ~~or number of stories~~ *building height*, number of *stories* or *building area* as regulated by Section 503.1. The area of such *penthouses* shall not be included in determining the *fire area* specified in Section 901.7.

**(R11099 / S6-21 AS)**

**[BG] 1510.2.4 Type of construction.** Penthouses shall be constructed ~~with~~ ~~walls, floors and roofs~~ of *building element* materials as required for the type of construction of the building ~~on which such penthouses are buil~~t. Penthouse *exterior walls* and roof construction shall have a *fire- resistance rating* as required for the type of construction of the building. Supporting construction of such *exterior walls* and roof construction shall have a *fire-resistance rating* not less than required for the *exterior wall* or roof supported.

**Exceptions:** No change

**(R11101 / S7-21 AS)**

**1511.4 Roof recovering.** Where the application of a new *roof covering* over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with *gypsum panel products ~~board~~*, mineral fiber, glass fiber or other *approved* materials securely fastened in place.

**(R11137 / S58-22 Part I AS)**

**CHAPTER 16 STRUCTURAL DESIGN**

**TABLE 1604.5 RISK CATEGORY OF BUILDINGS AND OTHER STRUCTURES**

Revise as follows:

|  |  |
| --- | --- |
| **RISK CATEGORY** | **NATURE OF OCCUPANCY** |
| **I** | Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to:    Agricultural facilities.  Certain temporary facilities.  Minor storage facilities.  Screen enclosures.  Ground-mounted photovoltaic (PV) panel systems. |
| **II** | Buildings and other structures except those listed in Risk Categories I, III and IV. |
| III | Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but  not limited to:  Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.  Buildings and other structures containing one or more public assembly spaces each having an occupant load greater than 300 and a cumulative occupant load of these public assembly spaces of greater than 2,500.  Buildings and other structures containing Group E or Group I-4 occupancies or combination thereof, with an occupant load greater than 250.  Buildings and other structures containing educational occupancies for students above the 12th grade with an occupant load greater than 500.  Group I-2 occupancies with an occupant load of 50 or more resident care recipients but not having surgery or emergency treatment facilities.  Group I-3 occupancies.  Any other occupancy with an occupant load greater than 5,000.a  Power-generating stations with individual power units rated 75MWAC (megawatts, alternating current) or greater, water treatment facilities for potable water, wastewater treatment facilities and other public utility facilities not included in Risk Category IV.  Buildings and other structures not included in Risk Category IV containing quantities of toxic or explosive materials that:  Exceed maximum allowable quantities per control area as given in Table 307.1(1) or 307.1(2) or per  outdoor control area in accordance with the Florida Fire Prevention Code; and  Are sufficient to pose a threat to the public if released.b |
| IV | Buildings and other structures designated as essential facilities and buildings where loss of function represents a substantial hazard to occupants or users, including but not limited to:  Group I-2 occupancies having surgery or emergency treatment facilities  Group I-3 occupancies other than Condition 1.  Fire, rescue, ambulance and police stations and emergency vehicle garages.  Designated earthquake, hurricane or other emergency shelters.  Designated emergency preparedness, communications and operations centers and other facilities required for emergency response.  Public utility facilities providing power generation, potable water treatment, or wastewater treatment.  Power-generating stations and other public utility facilities required as emergency backup facilities for *Risk Category* IV structures.  Buildings and other structures containing quantities of highly toxic materials that:  Exceed maximum allowable quantities per control area as given in Table 307.1(2) or per outdoor control  area in accordance with the Florida Fire Prevention Code; and  Are sufficient to pose a threat to the public if released.b  Aviation control towers, air traffic control centers and emergency aircraft hangars.  Buildings and other structures having critical national defense functions.  Water storage facilities and pump structures required to maintain water pressure for fire suppression |

1. For purposes of occupant load calculation, occupancies required by Table 1004.5 to use gross floor area calculations shall be permitted to use net floor areas to determine the total occupant load. The floor area for vehicular drive aisles shall be permitted to be excluded in the determination of net floor area in parking garages.
2. No change

**(S11147 / S75-22 AS)/ (S11145 / S72-22 AS)/(S11148 / S76-22)/(S11148 / S76-22 AM)/ (S11149 / S79-22 AMPC1)**

**1604.5.1 Multiple occupancies.** Where a building or structure is occupied by two or more occupancies not included in the same *risk category*, it shall be assigned the classification of the highest *risk category* corresponding to the various occupancies. Where buildings or structures have two or more portions that are structurally separated, each portion shall be separately classified. Where a separated portion of a building or structure provides required access to, required egress from or shares life safety components *life safety systems, designated seismic systems, emergency power systems,* or emergency and egress lighting systems with another portion having a higher *risk category*, or provides required electrical, communications, mechanical, plumbing, or conveying support to another portion assigned to Risk Category IV, both portions shall be assigned to the higher *risk category*.

**Exception:** Where a *storm shelter* designed and constructed in accordance with ICC 500 is provided in a building, structure or portion thereof normally occupied for other purposes, the *risk category* for the normal occupancy of the building shall apply unless the *storm shelter* is a designated emergency shelter in accordance with Table 1604.5.

**(S11150 / S80-22 AS)**

**Revise as follows:**

**1606.1 General.** *~~Dead loads~~* ~~are those~~ *~~loads~~* ~~defined in Chapter 2 of this code.~~ *~~Dead loads~~* ~~shall be considered to be permanent loads~~. Buildings, structures, and parts thereof shall be designed to resist the effects of *dead loads*.

**Revise as follows:**

**1607.1 General.** *~~Live loads~~* ~~are those loads defined in Chapter 2 of this code~~ B.uildings, structures, and parts thereof shall be designed to resist the effects of *live loads*.

**(S11153 / S84-22 AS)**

**Add new text as follows:**

**1604.5.2 Photovoltaic (PV) panel systems.** *Photovoltaic (PV) panel systems* and *elevated PV support structures* shall be assigned a *risk category* as follows:

1. *Ground-mounted PV panel systems* serving Group R-3 buildings shall be assigned as *Risk Category* I.

2. *Ground-mounted PV panel systems* other than those described in items 1 and 5 shall be assigned as *Risk Category* II.

3. *Elevated PV support structures* other than those described in Items 4, 5, and 6 shall be assigned as *Risk Category* II.

4. Rooftop-mounted *PV panel systems* and *elevated PV support structures* installed on top of buildings shall be assigned a *risk category* that is the same as the *risk category* of the building on which they are mounted.

5. *PV panel systems* and *elevated PV support structures* paired with *energy storage systems (ESS)* and serving as a dedicated, stand- alone source of backup power for *Risk Category* IV buildings shall be assigned as *Risk Category* IV.

6. *Elevated PV support structures* where the usable space underneath is used for parking of emergency vehicles shall be assigned as *Risk Category* IV.

**(S11151 / S81-22 AMPC4)**

**TABLE 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L0, AND MINIMUM CONCENTRATED LIVE LOADS**

**Portions of table not shown remain unchanged.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OCCUPANCY OR USE** | | | **UNIFORM (psf)** | **CONCENTRATED (pounds)** | **ALSO SEE SECTION** |
| 3. | Armories and drill rooms | | 150ab | — | — |
| 4. | Assembly areas | Fixed seats (fastened to floor) | 60a | — | — |
| Follow spot, projections and control rooms | 50 |
| Lobbies | 100a |
| Movable seats | 100a |
| Stage floors | 150ab |
| Platforms (assembly) | 100a |
| Bleachers, folding and telescopic seating and grandstands | 100a (See Section 1607.19) |
| Stadiums and arenas with fixed seats (fastened to the floor) | 60a (See Section 1607.19) |
| Other assembly areas | 100a |  |  |
| 25. | Recreational uses | Bowling alleys, poolrooms and similar uses | 75a | — | — |
| Dance halls and ballrooms | 100a |
| Gymnasiums | 100a |
| Theater projection, control, and follow spot rooms | 50 |
| Ice skating rinks | 250b |
| Roller skating rinks | 100a |  |  |

**(S11155 / S86-22 AS)**

**TABLE 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L0, AND MINIMUM CONCENTRATED LIVE LOADS**

**Portions of table not shown remain unchanged.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OCCUPANCY OR USE** | | | **UNIFORM (psf)** | **CONCENTRATED (pounds)** | **ALSO SEE SECTION** |
| 15. | Garages and vehicle floors | Passenger vehicles only garages | 40c | See Section 1607.7 | — |
| Trucks and buses | See Section 1607.8 | |
| Fire trucks and emergency vehicles | See Section 1607.8 | |
| Forklifts and movable equipment | See Section 1607.8 | |

**(S11156 / S87-22 AS)**

**TABLE 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L0, AND MINIMUM CONCENTRATED LIVE LOADS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OCCUPANCY OR USE** | | | **UNIFORM (psf)** | **CONCENTRATED**  **(pounds)** | **ALSO SEE SECTION** |
| 26. | Residential | One- and two-family dwellings: | | — | Section 1607.22 |
| Uninhabitable attics without storage | 10 |
| Uninhabitable attics with storage | 20 |
| Habitable attics and sleeping areas | 30 |
| Canopies, including marquees | 20 |
| All other areas | 40 |
| Hotels and multifamily dwellings: | |
| Private rooms and corridors serving them | 40 |
| Public rooms~~a and corridors serving them~~ | 100a |  |  |
| Corridors serving public rooms | 100 |  |  |
| 27. | Roofs | Ordinary flat, pitched, and curved roofs (that are not occupiable) | 20 | — | Section 1607.15.2 |
| Roof areas used for assembly purposes | 100a | — |
| Roof areas used for occupancies other than assembly | Same as occupancy served | — |
| Vegetative and landscaped roofs: | | — |
| Roof areas not intended for occupancy | 20 | — |
| Roof areas used for assembly purposes | 100a | — |
| Roof areas used for ~~other~~ occupancies other than assembly | Same as occupancy served | — |
| Awnings and canopies: | | — |
| Fabric construction supported by a skeleton structure | 5a | — |
| All other construction, except one- and two-family dwellings | 20 | — |
| Primary roof members exposed to a work floor: | |  |
| Single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs over manufacturing, storage warehouses, and repair garages | — | 2,000 |
| All other primary roof members | — | 300 |
| All roof surfaces subject to maintenance workers | — | 300 |

**(S11157 / S88-22 AS)**

**Revise as follows:**

**TABLE 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L0, AND MINIMUM CONCENTRATED LIVE LOADS**

**Portions of table not shown remain unchanged.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OCCUPANCY OR USE** | | | **UNIFORM (psf)** | **CONCENTRATED (pounds)** | **ALSO SEE SECTION** |
| 24. | Penal institutions | Cell blocks | 40 | — | — |
| Corridors | 100 |
| 25. | Public Restrooms |  | Same as live load for area served but not required to exceed 60 psf | — | — |

**(S11158 / S89-22 AS)**

**1607.11.1.2 Heavy live loads.** *Live loads* that exceed 100 psf (4.79 kN/m2) shall not be reduced.

**Exceptions:**

1. The *live loads* for members supporting two or more floors are permitted to be reduced by a maximum of 20 percent, but the reduced *live load* shall be not less than *L* as calculated in Section 1607.11.1.

2. For uses other than storage, where *approved*, additional *live load* reductions shall be permitted where shown by the *registered design professional* that a rational approach has been used and that such reductions are warranted.

**1607.11.1.2 Passenger vehicle garages.** The *live loads* shall not be reduced in passenger vehicle garages.

**Exception:** The *live loads* for members supporting two or more floors are permitted to be reduced by a maximum of 20 percent, but the reduced *live load* ~~be~~ shall be not less than *L* as calculated in Section 1607.11.1.

**(S11168 / S105-22 AS)**

**1607.11.2 Alternative uniform live load reduction.** As an alternative to Section 1607.11.1 and subject to the limitations of Table 1607.1, uniformly distributed *live loads* are permitted to be reduced in accordance with the following provisions. Such reductions shall apply to slab systems, beams, girders, columns, piers, walls and foundations.

1. For *live loads* not exceeding 100 psf (4.79 kN/m2), the design *live load* for structural members supporting 150 square feet (13.94 m2) or more is permitted to be reduced in accordance with Equation 16-8.

R = 0.08(A - 150) (Equation 16-8) For SI: R = 0.861(A - 13.94)

where:

*A* = Area of floor supported by the member, square feet (m2).

*R* = Reduction in percent.

Such reduction shall not exceed the smallest of:

1.1 40 percent for members supporting one floor.

1.2 60 percent for members supporting two or more floors.

1.3 *R* as determined by the following equation: R = 23.1(1 + D/Lo) (Equation 16-9)

where:

*D* = *Dead load* per square foot (m2) of area supported.

*Lo* = Unreduced *live load* per square foot (m2) of area supported.

2. A reduction shall not be permitted where the *live load* exceeds 100 psf (4.79 kN/m2) except that the design *live load* for members supporting two or more floors is permitted to be reduced by not greater than 20 percent.

**Exception:** For uses other than storage, where *approved*, additional *live load* reductions shall be permitted where shown by the

*registered design professional* that a rational approach has been used and that such reductions are warranted.

3. A reduction shall not be permitted in passenger vehicle parking garages except that the *live loads* for members supporting two or more floors are permitted to be reduced by not greater than 20 percent.

4. For one-way slabs, the area, *A*, for use in Equation 16-8 shall not exceed the product of the slab span and a width normal to the span of 0.5 times the slab span.

~~1. A reduction shall not be permitted where the~~ *~~live load~~* ~~exceeds 100 psf (4.79 kN/m~~2~~) except that the design~~ *~~live load~~* ~~for members~~ ~~supporting two or more floors is permitted to be reduced by not greater than 20 percent.~~

**~~Exception:~~** ~~For uses other than storage, where~~*~~approved~~*~~, additional~~ *~~live load~~* ~~reductions shall be permitted where shown by the~~

*~~registered design professional~~* ~~that a rational approach has been used and that such reductions are warranted~~.

~~2. A reduction shall not be permitted in passenger vehicle parking garages except that the~~*~~live loads~~* ~~for members supporting two or~~ ~~more floors are permitted to be reduced by not greater than 20 percent.~~

~~3. For~~ *~~live loads~~* ~~not exceeding 100 psf (4.79 kN/m~~2~~), the design~~ *~~live load~~* ~~for any structural member supporting 150 square feet (13.94~~ ~~m~~2~~) or more is permitted to be reduced in accordance with Equation 16-~~8

~~4. For one-way slabs, the area,~~ *~~A~~*~~, for use in Equation 16-8 shall not exceed the product of the slab span and a width normal to the~~ ~~span of 0.5 times the slab span.~~

~~R = 0.08(A -~~

~~150)~~

~~For SI:~~ *~~R~~* ~~= 0.861(~~*~~A~~* ~~– 13.94)~~

~~Such reduction shall not exceed the smallest of~~:

~~1. 40 percent for members supporting one floor~~.

**~~(Equation 16-~~**

**~~8)~~**

~~2. 60 percent for members supporting two or more floors~~.

~~3.~~ *~~R~~* ~~as determined by the following equation:~~

~~R = 23.1(1 + D/L~~o)

~~where:~~

*~~A~~* ~~= Area of floor supported by the member, square feet (m~~2~~).~~

*~~D~~* ~~=~~ *~~Dead load~~* ~~per square foot (m~~2~~) of area supported.~~

*~~L~~o* = Unreduced *live load* per square foot (m2~~) of area supported.~~

*~~R~~* ~~= Reduction in percent~~.

**~~(Equation 16-~~**

**~~9)~~**

**(S11169 / S106-22 AS)**

**1607.13.2 Reduction in uniform roof live loads.** The minimum uniformly distributed *live loads* of roofs, *marquees* and *canopies ~~marquees~~*, *Lo*, in Table 1607.1 are permitted to be reduced in accordance with Section 1607.13.2.1.

**(S11170 / S109-22 AM)**

**~~1607.13.3 Awnings and canopies~~.** *~~Awnings~~* ~~and canopies shall be designed for uniform~~ *~~live loads~~* ~~as required in Table 1607.1 as well as~~ ~~for snow~~ *~~loads~~* ~~and wind~~ *~~loads~~* ~~as specified in Sections 1608 and 1609~~.

**(S11171 / S110-22 AS)**

**1607.13.4.3 ~~Photovoltaic panels installed on~~ Elevated PV support structures with open grid ~~roof structures~~ framing.** ~~Structures~~ *Elevated PV support structures* with open grid framing and without a *roof deck* or sheathing ~~supporting~~ *~~photovoltaic panel systems~~* shall be designed to support the uniform and concentrated *roof live loads* specified in Section 1607.14.4.1, except that the uniform *roof live load* shall be permitted to be reduced to 12 psf (0.57 kN/m2).

**(S11172 / S112-22 AS)**

**1607.13.4.4 Ground-mounted photovoltaic (PV) panel systems or modules installed as an independent structure.** Ground-mounted photovoltaic (PV) panel systems ~~that are independent structures and do not have accessible/occupied space underneath~~ are not required to accommodate a roof ~~photovoltaic~~ *live load*. Other *loads* and combinations in accordance with Section 1605 shall be accommodated.

**(S11173 / S113-22 AM)**

**1607.14 Crane loads.** The crane *live load* shall be the rated capacity of the crane. Design *loads* for the runway beams, including connections and support brackets, of moving bridge cranes and monorail cranes shall be in accordance with Section 4.9 of ASCE 7.include ~~the maximum wheel~~ *~~loads~~* ~~of the crane and the vertical impact, lateral and longitudinal forces induced by the moving crane~~.

**Delete without substitution:**

**~~1607.14.1 Maximum wheel load~~.** ~~The maximum wheel~~ *~~loads~~* ~~shall be the wheel~~ *~~loads~~* ~~produced by the weight of the bridge, as applicable,~~ ~~plus the sum of the rated capacity and the weight of the trolley with the trolley positioned on its runway at the location where the resulting~~ *load effect* is maximum.

**~~1607.14.2 Vertical impact force~~.** ~~The maximum wheel~~ *~~loads~~* ~~of the crane shall be increased by the following percentages to account for the~~ ~~effects of vertical impact or vibration:~~

|  |  |
| --- | --- |
| Monorail cranes (powered) | 25 percent |
| Cab-operated or remotely operated bridge cranes (powered) | 25 percent |
| Pendant-operated bridge cranes (powered) | 10 percent |
| Bridge cranes or monorail cranes with hand-geared bridge, trolley and hoist | 0 percent |

**~~1607.14.3 Lateral force~~.** ~~The lateral force on crane runway beams with electrically powered trolleys shall be calculated as 20 percent of the~~ ~~sum of the rated capacity of the crane and the weight of the hoist and trolley. The lateral force shall be assumed to act horizontally at the~~ ~~traction surface of a runway beam, in either direction perpendicular to the beam, and shall be distributed with due regard to the latera~~l ~~stiffness of the runway beam and supporting structure.~~

**~~1607.14.4 Longitudinal force~~.** ~~The longitudinal force on crane runway beams, except for bridge cranes with hand-geared bridges, shall be~~ ~~calculated as 10 percent of the maximum wheel~~ *~~loads~~* ~~of the crane. The longitudinal force shall be assumed to act horizontally at the~~ ~~traction surface of a runway beam, in either direction parallel to the beam.~~

**(S11174 / S114-22 AS)**

**~~1607.16~~ 1607.10 Fixed ladders.** Fixed ladders with rungs shall be designed to resist a single concentrated *load* of 300 pounds (1.33 kN) in accordance with Section 4.5.4 of ASCE 7. Where rails of fixed ladders extend above a floor or platform at the top of the ladder, each side rail extension shall be designed to resist a single concentrated *load* of 100 pounds (0.445 kN) in accordance with Section 4.5.4 of ASCE 7. Ship's ladders shall be designed to resist the *stair loads* given in Table 1607.1.

**~~1607.9.3~~ 1607.11 Vehicle barriers.** *Vehicle barriers* for passenger vehicles shall be designed to resist a concentrated *load* of 6,000 pounds (26.70 kN) in accordance with Section 4.5.3 of ASCE 7. Garages accommodating trucks and buses shall be designed in accordance with an *approved* method that contains provisions for traffic railings.

**~~1607.10~~1607.12 Impact loads.** The *live loads* specified in Sections 1607.3 through ~~1607.10~~1607.11 shall be assumed to include adequate allowance for ordinary impact conditions. Provisions shall be made in the structural design for uses and loads that involve unusual vibration and impact forces.

**(S11167 / S103-22 AS) Note** - Keep as is. Do not re-number sections as noted in this proposal.

**1607.5 Partition loads.** In office buildings and in other buildings where partition locations are subject to change, provisions for partition weight shall be made, whether or not partitions are shown on the construction documents~~, unless the specified~~ *~~live load~~* ~~is 80 psf (3.83~~ ~~kN/m~~2~~) or greater~~. The partition *load* shall be not less than a ~~uniformly distributed~~ *live load* of 15 psf (0.72 kN/m2) and shall not be reduced per Section 1607.10.

**Exception:** A partition *live load* is not required where the minimum specified *live load* is 80 psf (3.83 kN/m2) or greater.

**(S11160 / S94-22 AS)**

**1607.6 Helipads.** Landing areas designed for a design basis helicopter with maximum take-off weight of 3,000 pounds (13.35 kN) shall be identified with a 3,000-pound (13.34 kN) weight limitation. The landing area weight limitation shall be indicated by the numeral “3” (kips) located in the bottom right corner of the landing area as viewed from the primary approach path. The indication for the landing area weight limitation shall be a minimum 5 feet (1524 mm) in height.

~~Helipads shall be designed for the following~~ *~~live loads~~*~~:~~

~~1. A uniform~~ *~~live load~~*~~,~~ *~~L~~*~~, as specified in Items 1.1 and 1.2. This~~*~~load~~* ~~shall not be reduced.~~

~~1.1. 40 psf (1.92 kN/m~~2~~) where the design basis helicopter has a maximum take-off weight of 3,000 pounds (13.35 kN) or less~~.

~~1.2. 60 psf (2.87 kN/m~~2~~) where the design basis helicopter has a maximum take-off weight greater than 3,000 pounds (13.35 kN~~).

~~2. A single concentrated~~ *~~live load~~*~~,~~ *~~L~~*~~, of 3,000 pounds (13.35 kN) applied over an area of 4.5 inches by 4.5 inches (114 mm by 114~~ ~~mm) and located so as to produce the maximum~~ *~~load effects~~* ~~on the structural elements under consideration. The concentrated~~ *~~load~~* is not required to act concurrently with other uniform or concentrated *live loads*.

~~3. Two single concentrated~~ *~~live loads~~*~~,~~ *~~L~~*~~, 8 feet (2438 mm) apart applied on the landing pad (representing the helicopter’s two main~~ landing gear, whether skid type or wheeled type), each having a magnitude of 0.75 times the maximum take-off weight of the ~~helicopter, and located so as to produce the maximum~~ *~~load effects~~* ~~on the structural elements under consideration. The~~ ~~concentrated loads shall be applied over an area of 8 inches by 8 inches (203 mm by 203 mm) and are not required to act~~ ~~concurrently with other uniform or concentrated~~ *~~live loads~~*~~.~~

~~Landing areas designed for a design basis helicopter with maximum take-off weight of 3,000 pounds (13.35 kN) shall be identified with a~~ ~~3,000-pound (13.34 kN) weight limitation. The landing area weight limitation shall be indicated by the numeral “3” (kips) located in the~~ ~~bottom right corner of the landing area as viewed from the primary approach path. The indication for the landing area weight limitation shal~~l ~~be a minimum 5 feet (1524 mm) in height.~~

**Add new text as follows:**

**1607.6.1 Concentrated loads.** Helipads shall be designed for the following concentrated *live loads*:

1. A single concentrated *live load*, *L*, of 3,000 pounds (13.35 kN) applied over an area of 4.5 inches by 4.5 inches (114 mm by 114 mm) and located so as to produce the maximum *load effects* on the structural elements under consideration. The concentrated *load* is not required to act concurrently with other uniform or concentrated *live loads*.

2. Two single concentrated *live loads*, *L*, 8 feet (2438 mm) apart applied on the landing pad (representing the helicopter’s two main landing gear, whether skid type or wheeled type), each having a magnitude of 0.75 times the maximum take-off weight of the helicopter, and located so as to produce the maximum *load effects* on the structural elements under consideration. The concentrated loads shall be applied over an area of 8 inches by 8 inches (203 mm by 203 mm) and are not required to act concurrently with other uniform or concentrated *live loads*.

**Revise as follows:**

**TABLE 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L0, AND MINIMUM CONCENTRATED LIVE LOADS**

**Portions of table not shown remain unchanged.**

**TABLE 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L0, AND MINIMUM CONCENTRATED LIVE LOADS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OCCUPANCY OR USE** | | | **UNIFORM (psf)** | **CONCENTRATED (pounds)** | **ALSO SEE SECTION** |
| 16. | Handrails, guards and grab bars | | See Section 1607.9 | | — |
| 17. | Helipads | Helicopter takeoff weight 3,000 lb (13.35 kN) or less | 40a | See Section 1607.6.1 | Section 1607.6 |
| Helicopter takeoff weight more than 3,000 lb (13.35 kN) | 60a | See Section 1607.6.1 | Section 1607.6 |

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm2,

1 square foot = 0.0929 m2,

1 pound per square foot = 0.0479 kN/m2, 1 pound = 0.004448 kN, 1 pound per cubic foot = 16 kg/m3.

a. Live load reduction is not permitted.

b – c – no change

**(S11154 / S85-22 AMPC1)/ (S11161 / S95-22 AS)**

**1607.7 Passenger vehicle garages.** Floors in garages ~~or~~and portions of a building used for the storage of motor vehicles shall be designed for the uniformly distributed *live loads* indicated in Table 1607.1 or the following concentrated *load*:

1. For garages restricted to passenger vehicles accommodating not more than nine passengers, 3,000 pounds (13.35 kN) acting on an area of 4.5 inches by 4.5 inches (114 mm by 114 mm).

2. For mechanical parking structures without slab or deck that are used for storing passenger vehicles only, 2,250 pounds (10 kN) per wheel.

**(S11162 / S97-22 AS)**

**Revise as follows:**

**1607.8.2 Fire truck and emergency vehicles.** Where a structure or portions of a structure are accessed ~~and loaded~~ by fire department ~~access~~ vehicles and other similar emergency vehicles, those portions of the structure subject to such *loads* shall be designed for the greater of the following *loads*:

1. The actual operational *loads*, including outrigger reactions and contact areas of the vehicles as stipulated and*approved* by the

*building official*.

2. The live loading specified in Section 1607.8.1.

Emergency vehicle loads need not be assumed to act concurrently with other uniform *live loads*.

**(S11163 / S98-22 AS)**

**1607.9.1 Handrails and guards.** *Handrails* and *guards* shall be designed to resist a linear *load* of 50 pounds per linear foot (plf) (0.73 kN/m) in accordance with Section 4.5.1.1 of ASCE 7. Glass *handrail* assemblies and *guards* shall comply with Section 2407.

**Exceptions:**

1. For one- and two-family dwellings, only the single concentrated *load* required by Section 1607.9.1.1 shall be applied.

2. In Group I-3, F, H and S occupancies, for areas that are not accessible to the general public and that have an *occupant load* less than 50, the minimum *load* shall be 20 pounds per foot (0.29 kN/m).

3. For roofs not intended for occupancy, only the single concentrated *load* required by Section 1607.9.1.1 shall be applied.

**(S11165 / S100-22 AS)**

**1607.9 Loads on handrails, guards, grab bars and seats.** *Handrails* and *guards* shall be designed and constructed for the structural loading conditions set forth in Section 1607.9.1. Grab bars, shower seats and accessible benches shall be designed and constructed for the structural loading conditions set forth in Section 1607.9.2.

Revise as follows:

**1607.9.1~~.1 Concentrated load~~ Handrails and guards.** *Handrails* and *guards* shall be designed to resist a concentrated *load* of 200 pounds (0.89 kN) in accordance with Section 4.5.1 of ASCE 7. Glass handrail assemblies and guards shall comply with Section 2407.

**1607.9.1.1 ~~Handrails and guards~~ Uniform Load.** *Handrails* and *guards* shall be designed to resist a linear *load* of 50 pounds per linear foot (plf) (0.73 kN/m) in accordance with Section 4.5.1.1 of ASCE 7. ~~Glass~~ *~~handrail~~* ~~assemblies and~~ *~~guards~~* ~~shall comply with Section 2407~~. This load need not be assumed to act concurrently with the concentrated load specified in Section 1607.9.1

**Exceptions:**

1. For one- and two-family dwellings, only the single concentrated *load* required by Section 1607.9.1~~.1~~ shall be applied.

2. In Group I-3, F, H and S occupancies, for areas that are not accessible to the general public and that have an *occupant load* less than 50, the minimum *load* shall be 20 pounds per foot (0.29 kN/m).

**(S11166 / S101-22 AS)**

**Revise as follows:**

**1609.1.1 Determination of wind loads.** No change to this paragraph.

**Exceptions:**

1 – 8 – No change

9. *Temporary structures* complying with Section 3103.5.1.4.

No change to the remaining text.

**(R11175 / S116-22)**

**Delete without substitution:**

**~~1609.1.2.2 Application of ASTM E1996~~.** ~~The text of Section 6.2.2 of ASTM E1996 shall be substituted as follows~~:

~~6.2.2 Unless otherwise specified, select the wind zone based on the basic design~~*~~wind speed~~*~~,~~ *~~V~~*~~, as follows:~~

~~6.2.2.1~~ *~~Wind Zone 1~~*~~—130 mph ≤ basic design~~ *~~wind speed~~*~~,~~ *~~V~~* ~~< 140 mph.~~

~~6.2.2.2~~ *~~Wind Zone 2~~*~~—140 mph ≤ basic design~~ *~~wind speed~~*~~,~~ *~~V~~* ~~< 150 mph at greater than one mile (1.6 km) from the coastline. The coastline~~ ~~shall be measured from the mean high water mark.~~

~~6.2.2.3~~ *~~Wind Zone 3~~*~~—150 mph (67 m/s) ≤ basic design~~ *~~wind speed~~*~~,~~ *~~V~~* ~~≤ 160 mph (72 m/s), or 140 mph (63 m/s) ≤ basic design~~*~~wind~~ ~~speed~~*~~,~~ *~~V~~* ~~≤ 160 mph (72 m/s) and within one mile (1.6 km) of the coastline. The coastline shall be measured from the mean high water~~ ~~mark.~~

~~6.2.2.4~~ *~~Wind Zone 4~~*~~— basic design~~ *~~wind speed~~*~~,~~ *~~V~~* ~~> 160 mph (72 m/s)~~.

**Revise as follows:**

**~~1609.1.2.3~~ 1609.1.2.2 Garage doors.** Garage door glazed opening protection for windborne debris shall meet the requirements of an *approved*

impact-resisting standard or ANSI/DASMA 115.

**(S11177 / S119-22 Part I AS)**

**Revise as follows:**

**1610.1 Lateral pressures.** ~~Foundation walls and retaining walls~~ Structures below grade shall be designed to resist lateral soil *loads* from adjacent soil. Soil *loads* specified in Table 1610.1 shall be used as the minimum design lateral soil *loads* unless determined otherwise by a geotechnical investigation in accordance with Section 1803. Foundation walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure. ~~Retaining walls~~ Walls that are free to move and rotate at the top, such as retaining walls, shall be permitted to be designed for active pressure.

Where applicable, lateral ~~Lateral~~ pressure from fixed or moving surcharge *loads* shall be added to the lateral soil *load*. Lateral pressure shall be increased if expansive soils are present at the site. Foundation walls shall be designed to support the weight of the full hydrostatic pressure of undrained backfill unless a drainage system is installed in accordance with Sections 1805.4.2 and 1805.4.3.

**Exception:** Foundation walls extending not more than 8 feet (2438 mm) below grade and laterally supported at the top by flexible

*diaphragms* shall be permitted to be designed for active pressure.

**(S11182 / S123-22 AS)**

**1612.3.1 Design and construction.** The design and construction of buildings and structures located in*flood hazard areas*, including *coastal high hazard areas* and *coastal A zones*, shall be in accordance with Chapter 5 of ASCE 7 and ASCE 24.

**Exception:** *Temporary structures* complying with Section 3103.5.1.5.

**1615.1 General.** The design and construction of *Risk Category* III and IV buildings and structures located in the*Tsunami Design Zones*

defined in the *Tsunami Design Geodatabase* shall be in accordance with Chapter 6 of ASCE 7, except as modified by this code.

**Exception:** *Temporary structures* complying with Section ~~3103.5.1.8~~3103.5.1.6.

**(R11175 / S116-22 AMPC4)** This mod does not correlate directly with the 2023 FBC.

**Revise as follows:**

**1614.1 General.** *Ice-sensitive structures* shall be designed for atmospheric ice *loads* in accordance with Chapter 10 of ASCE 7. *Public- occupancy temporary structures* shall comply with Section 3103.7.3.

**Exception:** *Temporary structures* complying with Section 3103.5.1.5.

**(R11175 / S116-22)**

**CHAPTER 17 SPECIAL INSPECTIONS AND TESTS**

**No change**

**CHAPTER 18 SOILS AND FOUNDATIONS**

**1803.5.1 Classification.** Soil materials shall be classified in accordance with ASTM D2487.Rock shall be classified in accordance with ASTM D5878.

**(S11197 / S148-22 AS)**

**1803.5.2 Questionable soil and rock.** Where the classification, strength, moisture sensitivity or compressibility of the soil or rock is in doubt or where a load-bearing value superior to that specified in this code is claimed, the *building official* shall be permitted to require that a geotechnical investigation be conducted.

**(S11200 / S149-22 AS)**

**1803.5.3 Expansive soil.** In areas likely to have expansive soil, the *building official* shall require soil tests to determine where such soils do exist.

Soils meeting all four of the following provisions shall be considered to be expansive, except that tests to show compliance with Items 1, 2 and 3 shall not be required if the test prescribed in Item 4 is conducted:

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D4318

2. More than 10 percent of the soil particles pass a No.200 sieve (75 µm), determined in accordance with ASTM~~D422~~D6913.

3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM~~D422~~D6913.

4. Expansion index greater than 20, determined in accordance with ASTM D4829.

**(S11201 / S151-22 AS)**

**1803.5.4 ~~Ground-water table~~ Groundwater.** A ~~subsurface soil~~ geotechnical investigation shall be performed to determine ~~whether~~ if:

1. ~~the existing ground-water table~~ Groundwater is above or within 5 feet (1524 mm) below the elevation of the *lowest floor* level where such floor is located below the finished ground level adjacent to the foundation; and

2. the groundwater depth will affect the design and construction of buildings and structures.

**~~Exception:~~** ~~A subsurface soil investigation to determine the location of the ground-water table shall not be required where waterproofing~~ is provided in accordance with Section 1805.

**(S11202 / S152-22 AS)**

**1803.5.6 Rock strata.** Where ~~subsurface explorations at the project site indicate variations in the structure of rock on which~~ foundations are to be constructed on or in rock, ~~a sufficient number of borings shall be drilled to sufficient depths to~~ the geotechnical investigation shall assess ~~the~~ variations in rock strata depth, competency, ~~of the rock~~ and its load-bearing capacity.

**(S11203 / S153-22 AS)**

**1806.2 Presumptive load-bearing values.** The load-bearing values used in design for supporting soil sand rock near the surface shall not exceed the values specified in Table 1806.2 unless data to substantiate the use of higher values are submitted and *approved*. Where the *building official* has reason to doubt the classification, strength or compressibility of the soil or rock, the requirements of Section 1803.5.2 shall be satisfied.

Presumptive load-bearing values shall apply to materials with similar physical and engineering characteristics ~~and dispositions~~. Mud, organic silt, and organic clays (OL, OH), peat (Pt) ~~or unprepared~~ and undocumented fill shall not be assumed to have a presumptive load-bearing capacity unless data to substantiate the use of such a value are submitted.

**Exception:** A presumptive load-bearing capacity shall be permitted to be used where the *building official* deems the load-bearing capacity ~~of mud, organic silt or unprepared fil~~l is adequate for the support of lightweight or temporary structures.

**(S11204 / S155-22 AM)**

**1807.2.5 Guards.** *Guards* shall be provided at retaining walls in accordance with Sections 1807.2.5.1 through

1807.2.5.3.

**Exception:** Guards are not required at retaining walls not accessible to the public.

**1807.2.5.1 Where required.** At retaining walls located within 36 inches (914mm) of walking surfaces, a guard shall be required

between the walking surface and the open side of the retaining wall where the walking surface is located more than 30 inches

(762 mm) measured vertically to the surface or grade below at any point within 36 inches (914mm) horizontally to the edge of

the open side. Guards shall comply with Section 1607.9

**1807.2.5.2 Height.** Required *guards* at retaining walls shall comply with the height requirements of section 1015.3.

**1807.2.5.3 Opening limitations.** Required *guards* shall comply with the opening limitations of Section 1015.4.

**(S11205 / S157-22 AM)**

**1807.3 Embedded posts and poles.** Designs to resist both axial and lateral *loads* employing posts or poles as columns embedded in earth or in concrete footings in earth shall be in accordance with Sections 1807.3.1 through 1807.3 or in accordance with ASABE EP 486.3.

**(S11206 / S158-22 AS)**

**1807.3.2.2 Constrained.** The following formula shall be used to determine the depth of embedment required to resist lateral *loads* where lateral constraint is provided at the ground surface, such as by a rigid floor or slab-on-ground ~~pavement~~.

 (Equation 18-2)

or

 (Equation 18-3)

where:

*Mg* = Moment in the post at grade, in foot-pounds (kN-m).

*S* 3 = Allowable lateral soil-bearing pressure as set forth in Section 1806.2 based on a depth equal to the depth of embedment in pounds per square foot (kPa).

**(S11207 / S160-22 AM)**

**1809.6 Location of footings.** Footings on granular soil shall be so located that the line drawn between the lower edges of ~~adjoining~~ adjacent footings shall not have a slope steeper than 30 degrees (0.52 rad) with the horizontal, unless the material supporting the higher footing is braced or retained or otherwise laterally supported in an *approved* manner or a greater slope has been properly established by engineering analysis.

**(S11209 / S163-22 AS)**

**1810.2.2 Stability.** *Deep foundation* elements shall be braced to provide lateral stability in all directions. Three or more elements connected by a rigid cap shall be considered to be braced, provided that the elements are located in radial directions from the centroid of the group not less than 60 degrees (1 rad) apart. A two-element group in a rigid cap shall be considered to be braced along the axis connecting the two elements. Methods used to brace *deep foundation* elements shall be subject to the approval of the *building official*.

*Deep foundation* elements supporting walls shall be placed alternately in lines spaced not less than 1 foot (305 mm) apart and located symmetrically under the center of gravity of the wall load carried, unless effective measures are taken to provide for eccentricity and lateral forces, or the foundation elements are adequately braced to provide for lateral stability.

**Exceptions:**

1. Isolated cast-in-place *deep foundation* elements without lateral bracing shall be permitted where the least horizontal dimension is not less than 2 feet (610 mm), adequate lateral support in accordance with Section 1810.2.1 is provided for the entire height and analysis demonstrates that the element can support the required loads, including mislocations required by Section 1810.3.1.3, with neither harmful distortion nor instability in the structure ~~the height does not exceed 12 times the least horizontal~~ ~~dimension~~.

2. A single row of *deep foundation* elements without lateral bracing is permitted for one- and two-family dwellings and lightweight construction not exceeding two *stories above grade plane* or 35 feet (10 668 mm) in*building height*, provided that the centers of the elements are located within the width of the supported wall.

**(S11213 / S166-22 AS)**

**1810.3.2.8 Justification of higher allowable stresses.** Use of allowable stresses ~~greater than those specified in Section~~ in Table 1810.3.2.6 that must be justified in accordance with this section shall be permitted where supporting data justifying such higher stresses is ~~filed with~~ submitted to and *approved* by the *building official*. Such substantiating data shall include the following:

1. A geotechnical investigation in accordance with Section 1803.

2. Load tests in accordance with Section 1810.3.3.1.2, regardless of the load supported by the element.

The design and installation of the deep foundation elements shall be under the direct supervision of a *registered design professional* knowledgeable in the field of soil mechanics and deep foundations who shall submit a report to the *building official* stating that the elements as installed satisfy the design criteria.

**(S11215 / S167-22 AS)**

**1810.3.3.2 Allowable lateral load.** Where required by the design, the lateral load capacity of a single *deep foundation* element or a group thereof shall be determined by an *approved* method of analysis or by lateral load tests to not less than twice the proposed design working *load*. The resulting allowable lateral *load* shall not be more than one-half of the *load* that produces a gross lateral movement of 1 inch (25 mm) at the lower of the top of the foundation element and the ground surface, unless it can be shown that the predicted lateral movement shall cause neither harmful distortion of, nor instability in, the structure, nor cause any element to be loaded beyond its capacity. Group effects shall be evaluated where required by Section 1810.2.5.

**(S11217 / S168-22 AMPC1)**

**1810.3.9.2 Required reinforcement.** Where subject to uplift or where the required moment strength determined using the load combinations of ASCE 7, Section 2.3 exceeds the design cracking moment determined in accordance with Section 1810.3.9.1, cast-in- place deep foundations not enclosed by a structural steel pipe or tube shall be reinforced. Where reinforcement is required, it shall be in compliance with Chapter 20 of ACI 318.

**(S11220 / S170-22 AS)**

**1810.4.5 Vibratory driving.** Vibratory drivers shall only be used to install *deep foundation* elements where the element load capacity is verified by load tests in accordance with Section 1810.3.3.1.2. ~~The installation of production elements shall be controlled according to~~ ~~power consumption, rate of penetration or other~~ *~~approved~~* ~~means that ensure element capacities equal or exceed those of the test~~ ~~elements.~~

**Exceptions:**

1. The pile installation is completed by driving with an impact hammer in accordance with Section 1810.3.3.1.1.

2. The pile is to be used only for lateral resistance.

The installation of production elements shall be controlled according to power consumption, rate of penetration or other*approved* means that ensure element capacities equal or exceed those of the test elements.

**(S11221 / S172-22 AS)**

**CHAPTER 19 CONCRETE**

**1901.2 Plain and reinforced concrete.** Structural concrete shall be designed and constructed in accordance with the requirements of this chapter and ACI 318 as amended in Section 1905 of this code. ~~Except for the provisions of Sections 1904 and 1907, the design and~~ ~~construction of slabs on grade shall not be governed by this chapter unless they transmit vertical~~ *~~loads~~* ~~or lateral forces from other parts of~~ ~~the structure to the soil.~~

**SECTION 1907**

**~~MINIMUM SLAB PROVISIONS~~ SLABS-ON-GROUND**

**Add new text as follows:**

**1907.1 Structural slabs-on-ground.** Structural concrete slabs-on-ground shall comply with all applicable provisions of this Chapter. Slabs-on-ground shall be considered structural concrete where required by ACI 318 or where designed to: ~~one of the following:~~

1. Transmit vertical loads or ~~resist~~ lateral forces from other parts of the structure to the soil~~.~~ or

2. Transmit vertical loads or ~~resist~~ lateral forces from other parts of the structure to foundations.

**1907.2 Non-structural slabs on ground.** Non-structural slabs-on-ground shall only be required to comply with Sections 1904.2, 1907.3, and 1907.4. Portions of the non-structural slabs on ground used to resist uplift forces or overturning shall be designed in accordance with accepted engineering practice throughout the entire portion designated as dead load to resist uplift forces or overturning.

**1907.3 Thickness.** The thickness of concrete floor slabs supported directly on the ground shall be not less than 3½ inches (89 mm).

**Revise as follows:**

**~~1907.1~~ 1907.4 ~~General~~ Vapor retarder.** ~~The thickness of concrete floor slabs supported directly on the ground shall be not less than~~ 31/2 inches (89 mm). A 6-mil (0.006 inch; 0.15 mm) polyethylene vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the base course or subgrade and the concrete floor slab, or other *approved* equivalent methods or materials shall be used to retard vapor transmission through the floor slab.

**Exception:** A vapor retarder is not required:

1. For detached structures accessory to occupancies in Group R-3, such as garages, utility buildings or other unheated facilities.

2. For unheated storage rooms having an area of less than 70 square feet (6.5 m2) and carports attached to occupancies in Group R-3.

3. For buildings of other occupancies where migration of moisture through the slab from below will not be detrimental to the intended occupancy of the building.

4. For driveways, walks, patios and other flatwork that will not be enclosed at a later date.

5. Where *approved* based on local site conditions.

**(S11222 / S173-22 AMPC1)**

**(S11223 / S174-22 AMPC1)** Seismic

**CHAPTER 20 ALUMINUM**

No Change

**CHAPTER 21 MASONRY**

**2103.1 Masonry units.** Concrete *masonry units*, clay or shale *masonry units*, stone *masonry units*, *glass unit masonry* and *AAC masonry* units shall comply with Article 2.3 of TMS 602. Architectural *cast stone* shall conform to ~~ASTM C1364 and~~ TMS 504. ~~Adhered manufactured~~ ~~stone masonry~~ *~~veneer~~* ~~units shall conform to ASTM C1670~~.

**Exception:** *Structural clay tile* for nonstructural use in fireproofing of structural members and in wall furring shall not be required to meet the compressive strength specifications. The *fire-resistance rating* shall be determined in accordance with ASTM E119 or UL 263 and shall comply with the requirements of Table 705.5.

**(S11248 / S198-22 AS)**

**2103.2.4 Mortar for adhered masonry veneer.** *Mortar* for use with *adhered masonry veneer* shall conform to Section 13.3 of TMS 402. ~~ASTM C270 for Type N or S, or shall comply with ANSI A118.4 for latex-modified Portland cement~~ *~~mortar~~*~~.~~

**(S11234 / S182-22 AS)**

**CHAPTER 22 STEEL**

**2207.2 Design.** The *registered design professional* shall indicate on the *construction documents* the *steel joist* and *steel joist* girder designations from the specifications listed in Section 2207.1; and shall indicate the requirements for joist and joist girder design, layout, end supports, anchorage, bridging design that differs from the SJI specifications listed in Section 2207.1, bridging termination connections and bearing connection design to resist uplift and lateral *loads*. These documents shall indicate special requirements as follows:

1. Special *loads* including:

1.1. Concentrated *loads*.

1.2. Nonuniform *loads*.

1.3. Net uplift *loads*.

1.4. Axial *loads*.

1.5. End moments.

1.6. Connection forces.

2. Special considerations including:

2.1. Profiles for joist and joist girder configurations that differ from those defined by the SJI specifications listed in Section 2207.1.

2.2. Oversized or other nonstandard web openings.

2.3. Extended ends.

3. ~~Live and total~~ *~~load~~* ~~deflection~~ Deflection criteria for joists and joist girder configurations that differ from those defined by the SJI specifications listed in Section 2207.1.

**2207.4 Steel joist drawings.** *Steel joist* placement plans shall be provided to show the *steel joist* products as specified on the *approved construction documents* and are to be utilized for field installation in accordance with specific project requirements as stated in Section 2207.2. *Steel joist* placement plans shall include, at a minimum, the following:

1. Listing of applicable *loads* as stated in Section 2207.2 and used in the design of the *steel joists* and joist girders as specified in the

*approved construction documents*.

2. Profiles for joist and joist girder configurations that differ from those defined by the SJI specifications listed in Section 2207.1.

3. Connection requirements for:

3.1. Joist supports.

3.2. Joist girder supports.

3.3. Field splices.

3.4. Bridging attachments.

4. ~~Live and total~~ *~~load~~* ~~deflection~~ Deflection criteria for joists and joist girder configurations that differ from those defined by the SJI specifications listed in Section 2207.1.

5. Size, location and connections for bridging.

6. Joist headers.

*Steel joist* placement plans do not require the seal and signature of the joist manufacturer’s *registered design professional*.

**(S11241 / S189-22 AS)**

**2212**

**STAIRS, LADDERS AND GUARDING FOR STEEL STORAGE RACKS AND INDUSTRIAL STEEL WORK PLATFORMS**

**2212.1 General.** The design and installation of stairs, ladders and guarding serving steel storage racks and industrial steel work platforms used in material handling structures shall be in accordance with ANSI/MH 32.1.

###### Add new standard(s) as follows:

Material Handling Institute 8720 Red Oak Blvd. Suite 201

**MHI**

Charlotte, NC 28217

ANSI/MH 32.1-2018 Stairs, Ladders and Open-Edge Guards for Use with Material Handling Structures

**(S11244 /S102-22 AMPC1)X**

**2210.1.1 Steel decks.** The design and construction of cold-formed steel floor and roof decks and composite slabs of concrete and steel deck shall be in accordance with ~~this section~~ SDI-SD.

**Delete without substitution:**

**~~2210.1.1.1 Noncomposite steel floor decks~~.** ~~Noncomposite steel floor decks shall be permitted to be designed and constructed in~~ ~~accordance with ANSI/SDI-NC1.0.~~

**~~2210.1.1.2 Steel roof deck~~.** ~~Steel~~ *~~roof decks~~* ~~shall be permitted to be designed and constructed in accordance with ANSI/SDI-RD1.0~~.

**~~2210.1.1.3 Composite slabs on steel decks~~.** ~~Composite slabs of concrete and steel deck shall be permitted to be designed and~~ ~~constructed in accordance with SDI-C.~~

**(S11245 / S194-22 AS)**

**2210.3 Cutting and notching.** The cutting and notching of holes in cold-formed steel framing members shall be in accordance with AISI S240 for structural members and AISI S220 for nonstructural members.

**(S11246 / S196-22 AM) (P11086/ S196-22 AM)**

**~~SECTION 2213 RESERVED~~**

**SECTION 2213**

**Metal Building Systems**

**2213.1 General.** The design, fabrication and erection of a metal building system shall be in accordance with the provisions of this section.

**2213.1.1 Design.** The design of metal building systems shall be in accordance with Sections 2213.1.1.1 through 2213.1.1.4, as applicable.

**2213.1.1.1 Structural Steel.** The design, fabrication and erection of structural steel shall be in accordance with Section 2205.

**2213.1.1.2 Cold-Formed Steel.** The design of cold-formed carbon and low-alloy steel structural members shall be in accordance with Section 2210.

**2213.1.1.3 Steel Joists.** The design of steel joists shall be in accordance with Section 2207.

**2213.1.1.4 Steel Cable.** The design, fabrication and erection including related connections of steel cables shall be in accordance with Section 2208.

**(S11247 / S197-22 AM)**

**2210.4 Industrial Boltless Steel Shelving.** The design, testing and utilization of industrial boltless steel shelving shall be in accordance with ANSI/MH 28.2.

**(S11242 / S191-22 AM)**

**22010.5 Industrial steel work platforms.** The design, testing and utilization of industrial steel work platforms shall be in accordance with ANSI/MH 28.3.

**(S11244 / S193-22)**

**CHAPTER 23 WOOD**

**2301.3 ~~Nominal Sizes~~ Dimensions.** For the purposes of this chapter, where dimensions of lumber are specified, they shall be deemed to be nominal dimensions unless specifically designated as actual dimensions (see Section 2304.2). Where dimensions of *cross-laminated timber* thickness are specified, they shall be deemed to be actual dimensions.

**2304.11.3.1 Cross-laminated timber floors.** *Cross-laminated timber* shall be not less than 4 inches (102 mm) in ~~actua~~l thickness. *Cross- laminated timber* shall be continuous from support to support and mechanically fastened to one another. *Cross-laminated timber* shall be permitted to be connected to walls without a shrinkage gap providing swelling or shrinking is considered in the design. Corbelling of masonry walls under the floor shall be permitted to be used.

**2304.11.4.1 Cross-laminated timber roofs.** *Cross-laminated timber* roofs shall be not less than 3 inches (76 mm) ~~nominal~~ in thickness and shall be continuous from support to support and mechanically fastened to one another.

**(S11249 / S199-22 AS)**

**2303.2.5 ~~Strength adjustments~~ Design values.** Design values for ~~untreated lumber and~~ *~~wood structural panels,~~ fire-retardant-treated wood*, including connection design values, shall be subject to all adjustments applicable to untreated wood as specified in this chapter and shall be further adjusted to account for the effects of the fire-retardant treatment. ~~Section 2303.1, shall be adjusted for~~ *~~fire-retardant-treated~~ ~~wood~~*~~.~~ Adjustments to design values for the effects of the fire-retardant treatment shall be based on an *approved* method of investigation that takes into consideration ~~the effects of~~ the anticipated temperature and humidity to which the *fire-retardant-treated wood* will be subjected, the type of treatment and the redrying procedures. Adjustments to flexural design values for fire-retardant-treated plywood shall be determined in accordance with Section 2303.2.5.1. Adjustments to flexural, tension, compression and shear design values for fire- retardant-treated lumber shall be determined in accordance with Section 2303.2.5.2.

**2303.2.5.1 ~~Wood structural panels~~ Fire-retardant-treated plywood.** The effect of treatment and ~~the method of~~ redrying after treatment, and any treatment-based effects due to exposure to high temperatures and high humidities on the flexure properties of fire-retardant-treated softwood plywood shall be determined in accordance with ASTM D5516. The test data developed ~~by~~ in accordance with ASTM D5516 shall be used to develop treatment adjustment factors~~, maximum~~ *~~loads~~* ~~and spans, or both, for untreated plywood design values~~ in accordance with ASTM D6305. Each manufacturer shall publish the allowable maximum *loads* and spans for service as floor and roof sheathing for its treatment based on the adjusted design values and taking into account the climatological location.

**2303.2.5.2 Fire-retardant-treated lumber.** For each species of wood that is treated, the effect~~s~~ of ~~the~~ treatment~~, the method o~~f and redrying after treatment and any treatment-based effects due to exposure to high temperatures and high humidities on the allowable design properties of fire-retardant-treated lumber shall be determined in accordance with ASTM D5664. The test data developed ~~by~~ in accordance with ASTM D5664 shall be used to develop ~~modification~~ treatment adjustment factors for use at or near room temperature and at elevated temperatures and humidity in accordance with ASTM D6841. Each manufacturer shall publish the ~~modification~~ treatment adjustment factors for service at maximum temperatures of not less than 80°F (27°C) and for roof framing. The roof framing modification factors shall take into consideration the climatological location.

**(S11252 / S202-22 AS)**

**2303.1 General.** Structural sawn lumber; end-jointed lumber; *prefabricated wood I-joists*; *structural glued-laminated timber*; *cross-laminated timber*; *wood structural panels*; fiberboard sheathing (where used structurally); *hardboard* siding (where used structurally); *particleboard*; *preservative-treated wood*; structural log members; *structural composite lumber*; round timber poles and piles; *fire-retardant-treated wood*; hardwood plywood; wood trusses; joist hangers; nails; and staples shall conform to the applicable provisions of this section.

**2303.1.4 ~~Structural glued cross~~ Cross-laminated timber.** Cross-laminated timbers shall be manufactured and identified in accordance with ANSI/APA PRG 320.

**(S11250 / S200-22 AS)**

**2303.2 Fire-retardant-treated wood.** *Fire-retardant-treated wood* is any wood product that, when impregnated with chemicals by a pressure process or other means during manufacture, shall have, when tested in accordance with ASTM E84 or UL 723, a *listed flame spread index* of 25 or less. ~~Additionally, the~~ The ASTM E84 or UL 723 test shall be continued for~~a~~ an additional 20-minute period and the flame front shall not progress more than 101/2 feet (3200 mm) beyond the centerline of the burners at any time during the test.

**Add new text as follows:**

**2303.2.1 Alternate fire testing.** ~~A~~ Fire-retardant-treated wood is also any wood product that, when impregnated with chemicals by a pressure process or other means during manufacture, shall have ~~which~~, when tested in accordance with ~~to~~ ASTM E2768, ~~has~~ a listed

flame spread index of 25 or less and where the flame front does not progress more than 10.5 feet (3200 mm) beyond the centerline of the burners at any time during the test.

**(F11251 / S201-22 AM)**

**2303.2.5 Strength adjustments.** Design values for untreated lumber, and *wood structural panels*, as specified in Section 2303.1, shall be adjusted for *fire-retardant-treated wood*. Adjustments to design values shall be based on an *approved* method of investigation that takes

into consideration the effects of the anticipated temperature and humidity to which the *fire-retardant-treated wood* will be subjected, the type of treatment and redrying procedures. Design values and treatment adjustment factors for fire-retardant-treated laminated veneer lumber shall be determined in accordance with 2303.2.5.3.

**Add new text as follows:**

**2303.2.5.3 Fire-retardant-treated laminated veneer lumber.** The effect of treatment and redrying after treatment and any treatment- based effects due to exposure to high temperatures and high humidities on the allowable design properties of fire-retardant-treated laminated veneer lumber shall be determined in accordance with ASTM D8223. Each manufacturer shall publish reference design values and treatment-based design value adjustment factors in accordance with ASTM D8223, taking into account the climatological location.

**(S11254 / S203-22 AS)**

**~~2308.6~~ 2301.4 Cutting, notching and boring of dimensional wood framing.** The provisions of this section shall only apply to dimensional

wood framing and shall not include engineered wood products, heavy timber or prefabricated/manufactured wood assemblies.

**~~2308.6.1~~** **2301.4.1 Floor joists, roof rafters and ceiling joists.** Notches on framing ends shall not exceed one-fourth the member depth.

Notches in the top or bottom of the member shall not exceed one-sixth the depth and shall not be located in the middle third of

the span. A notch not more than one-third of the depth is permitted in the top of a rafter or ceiling joist not further from the face of

the support than the depth of the member. Holes bored in members shall not be within 2 inches (51 mm) of the top or bottom of

the member and the diameter of any such hole shall not exceed one-third the depth of the member. Where the member is

notched, the hole shall not be closer than 2 inches (51 mm) to the notch.

**~~2308.6.1.1~~ 2301.4.1.1 Ceiling joists.** Where ceiling joists also serve as floor joists, they shall be considered floor joists within this section.

**~~2308.6.2~~ 2301.4.2 Wall studs.** In exterior walls and bearing partitions, a wood stud shall not be cut or notched in excess of 25 percent of its

depth. In nonbearing partitions that do not support loads other than the weight of the partition, a stud shall not be cut or notched

in excess of 40 percent of its depth.

**~~2308.6.3~~ 2301.4.3 Bored holes.** The diameter of bored holes in wood studs shall not exceed 40 percent of the stud depth. The diameter of

bored holes in wood studs shall not exceed 60 percent of the stud depth in nonbearing partitions. The diameter of bored holes in

wood studs shall not exceed 60 percent of the stud depth in any wall where each stud is doubled, provided that not more than

two such successive doubled studs are so bored. The edge of the bored hole shall not be closer than 5/8 inch (15.9 mm) to the edge

of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

**~~2308.6.4~~ 2301.4.4 Limitations.** In designated lateral force-resisting system assemblies designed in accordance with this code and greater

than three *stories* in height ~~or in~~ *~~Seismic Design Categories~~* ~~C, D, E and F~~, the cutting, notching and boring of wall studs shall be as

prescribed by the *registered design professional*. In *structures* designed in accordance with the *Florida Building Code, Residential* , modification of wall studs shall comply with the *Florida Building Code Residentia*.

**(P11086 / S196-22 AM)/ (P11087 / S224-22 AS)**

**TABLE 2304.10.1 FASTENING SCHEDULE**

**Portions of table not shown remain unchanged.**

|  |  |  |  |
| --- | --- | --- | --- |
| **DESCRIPTION OF BUILDING**  **ELEMENTS** | **NUMBER AND TYPE OF FASTENERg** | **SPACING AND LOCATION** | |
| **Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framinga** | | | |
|  | | **Edges**  **(inches)** | **Intermediate supports**  **(inches)** |
| 30. 3/8″ – 1/2″ | 6d common or deformed (2″ × 0.113″); or  23/8″ × 0.113″ nail (subfloor and wall) | 6 | 12 |
| 8d common or deformed (21/2″ × 0.131″× 0.281″ head) nail (roof); or  RSRS-01 (23/8″ × 0.113″ × 0.281″ head) nail (roof)d | 6e | 6e |
| 13/4″ 16 gage staple, 7/16″ crown (subfloor and wall) | 4 | 8 |
| 23/8″ × 0.113″× 0.266″ head nail (roof) | 3f | 3f |
| 13/4″ 16 gage staple, 7/16″ crown (roof) | 3f | 3f |
| 31. 19/32″ – 3/4″ | 8d common (21/2″ × 0.131″); or  deformed (2″ × 0.113″) (subfloor and wall) | 6 | 12 |
| 8d common or deformed (21/2″ × 0.131″ × 0.281″ head) nail (roof); or RSRS-01 (23/8″ × 0.113″ × 0.281″ head) nail  (roof)d | 6e | 6e |
| 23/8″ × 0.113″× 0.266*″* head nail; or  2″ 16 gage staple, 7/16″ crown | 4 | 8 |

For SI: 1 inch = 25.4 mm.

a – c – No change

d. RSRS~~-01~~ is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

e. Tabulated fastener requirements apply where the ultimate design wind speed is less than 140 mph. For wood structural panel roof sheathing attached to gable-end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate design wind speed is greater than 130 mph in Exposure B or greater than 110 mph in Exposure C. Spacing exceeding 6 inches on center at intermediate supports shall be permitted where the fastening is designed per the AWC NDS. Where the specific gravity of the wood species used for roof framing is greater than or equal to 0.35 but less than 0.42 in accordance with AWC NDS, fastening of roof sheathing shall be with RSRS-03 (2-1/2″× 0.131″× 0.281″head) nails unless alternative fastening is designed in accordance with AWC NDS. Where the specific gravity of the wood species used for roof framing is less than 0.35, fastening of the roof sheathing shall be designed in accordance with AWC NDS.

f. Fastening is only permitted where the ultimate design wind speed is less than or equal to 110 mphand where fastening is to wood framing of a species with specific gravity greater than or equal to 0.42 in accordance with AWC NDS.

g. No change

**(S11260 / S213-22 AS)**

**TABLE 2304.10.1 FASTENING SCHEDULE**

**Portions of table not shown remain unchanged.**

|  |  |  |  |
| --- | --- | --- | --- |
| **DESCRIPTION OF BUILDING ELEMENTS** | **NUMBER AND TYPE OF FASTENERg** | **SPACING AND LOCATION** | |
| **Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framinga** | | | |
|  | | **Edges (inches)** | **Intermediate supports (inches)** |
| 31. 19/32″ – 3/4″ | 8d common (21/2″ × 0.131″); or  deformed (2″ × 0.113″) (subfloor and wall) | 6 | 12 |
| 8d common or deformed (21/2″ × 0.131″ × 0.281″ head) (roof) or RSRS-01 (23/8″ × 0.113″) nail (roof)d | 6e | 6e |
| 23/8″ × 0.113″× 0.266*″* head nail; or  2″ 16 gage staple, 7/16″ crown (subfloor and wall) | 4 | 8 |

**(S11261 / S214-22 AS)**

**2304.10.6 Fasteners and connectors in contact with preservative-treated and fire-retardant-treated wood.** Fasteners, including nuts and washers, and connectors in contact with *preservative-treated* and *fire-retardant-treated wood* shall be in accordance with Sections 2304.10.6.1 through 2304.10.6.4. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A153. The coating weight for zinc-coated nails shall be in accordance with ASTM A153, Class D or ASTM A641 Class 3S [1 oz/ft² (305 g/m2)]. Stainless steel driven fasteners shall be in accordance with the material requirements of ASTM F1667.

**(S11262 / S215-22 AM)**

**2304.11.1.1 Columns.** Minimum dimensions of columns shall be in accordance with Table 2304.11. Columns shall be ~~continuous or~~ ~~superimposed throughout all stories and~~ connected in an *approved* manner. Columns shall be continuous or aligned vertically from floor to floor in all stories of Type IV-HT construction. Girders and beams at column connections shall be closely fitted around columns and adjoining ends shall be cross tied to each other, or intertied by caps or ties, to transfer horizontal *loads* across joints. Wood bolsters shall not be placed on tops of columns unless the columns support roof *loads* only. Where traditional heavy timber detailing is used, connections shall be by means of reinforced concrete or metal caps with brackets, by properly designed steel or iron caps, with pintles and base plates, by timber splice plates affixed to the columns by metal connectors housed within the contact faces, or by other *approved* methods.

**(S11263 / S217-21 AM)**

**TABLE 2304.6.1 MAXIMUM ALLOWABLE STRESS DESIGN WIND SPEED, Vasd PERMITTED FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURESa, b, c**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MINIMUM NAIL** | | **MINIMUM WOOD STRUCTURAL PANEL SPAN RATING** | **MINIMUM NOMINAL PANEL**  **THICKNESS (inches)** | **MAXIMUM WALL STUD**  **SPACING (inches)** | **PANEL NAIL SPACING** | | **MAXIMUM ALLOWABLE STRESS DESIGN**  **WIND SPEED, *Vasd* d (MPH)** | | |
| **Size** | **Penetration (inches)** | **Edges (inches**  **o.c.)** | **Field (inches**  **o.c.)** | **Wind exposure category** | | |
| **B** | **C** | **D** |
| 6d common (2.0"  × 0.113") | 1.5 | 24/0 | 3/8 | 16 | 6 | 12e | 110 | 90 | 85 |
| 24/16 | 7/16 | 16 | 6 | 12e | 110 | 100 | 90 |
| 6e | 150 | 125 | 110 |
| 8d common (2.5"  × 0.131") | 1.75 | 24/16 | 7/16 | 16 | 6 | 12e | 130 | 110 | 105 |
| 6e | 150 | 125 | 110 |
| 24 | 6 | 12e | 110 | 90 | 85 |
| 6e | 110 | 90 | 85 |

For SI: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

a – d – No change

e. Where the specific gravity of the wood species used for wall framing is greater than or equal to 0.35 but less than 0.42 in accordance with AWC NDS, nail spacing in the field of the panel shall be multiplied by 0.67. Where the specific gravity of the wood species used for wall framing is less than 0.35, fastening of the wall sheathing shall be designed in accordance with AWC NDS.

**(S11256 / S207-22 AS)**

**TABLE 2304.8(2) SHEATHING LUMBER, MINIMUM GRADE REQUIREMENTS: BOARD GRADE**

|  |  |  |
| --- | --- | --- |
| **SOLID FLOOR OR ROOF SHEATHING** | **SPACED ROOF SHEATHING** | **GRADING RULES** |
| Utility | Standard | NLGA, PLIB/WCLIB, or WWPA |
| 4 common or utility | 3 common or standard | NLGA, PLIB/WCLIB, WWPA, NSLB or NELMA |
| No. 3 | No. 2 | SPIB |
| Merchantable | Construction common | RIS |

**(S11257 / S209-22 AS)**

**2305.1 General.** Structures using wood~~-frame~~ *shear walls* or wood-~~frame~~ *diaphragms* to resist wind ~~or other latera~~l *loads* shall be designed and constructed in accordance with AWC SDPWS and the applicable provisions of Sections 2305, 2306 and 2307.

**Add new text as follows:**

**2305.1.2 Permanent load duration.** Permanent loads are associated with permanent load durationin accordance with the ANSI/AWC NDS. For wood shear walls and wood diaphragms designed to resist lateral loads of permanent load duration only and that are not in combination with wind or seismic lateral loads, the design unit shear capacities shall be taken as the AWC SDPWS nominal unit shear capacities, multiplied by 0.2 for use with *Allowable Stress Design* in Section 2306 and 0.3 for use with *Load and Resistance Factor Design* in Section 2307.

**(S11265 / S218-22 AM)**

**2306.1.3 Preservative-treated wood allowable stresses ~~stress adjustments~~.** The allowable unit stresses for *preservative-treated wood* conforming to AWPA U1 need not be adjusted for treatment, but are subject to other adjustments. Load duration factors greater than 1.6 shall not be used in the structural design of *preservative-treated wood* members.

~~The allowable unit stresses for fire-retardant-treated wood, including fastener values, shall be developed from an approved method of~~ investigation that considers the effects of anticipated temperature and humidity to which the fire-retardant-treated wood will be subjected, ~~the type of treatment and the redrying process. Other adjustments are applicable except that the impact load duration shall not apply.~~

**Add new text as follows:**

**2306.1.4 Fire-retardant-treated wood allowable stresses..** The allowable unit stresses for *fire-retardant-treated wood*, including connection design values, shall be developed in accordance with the provisions of Section 2303.2.5. Load duration factors greater than 1.6 shall not be used in the structural design of *fire-retardant-treated wood* members.

**(S11271 / S220-22 AM)**

**CHAPTER 24 GLASS AND GLAZING**

**2406.1 Human impact loads.** All glass in ~~Individual~~ glazed areas, including glass mirrors, single panes of glass laminated glass and all panes in multi-pane glass assemblies in hazardous locations as defined in Section 2406.4 shall comply with Sections 2406.1.1 through 2406.1.4.

**Exception:** Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.

**(S11278 / S229-22 AM)**

**2406.5 Fire department access panels.** Fire department glass access panels shall be of tempered glass. For multi-panel glass assemblies insulating glass units, all panes shall be tempered glass.

**(S11280 / S232-22 AS)**

**2407.1.1 Loads.** Glass *handrails* and guards and their support systems shall be designed to withstand the *loads* specified in Section 1607.9. Calculated stresses in glass elements of *handrails* and *guards* due to these loads shall be limited to a maximum of 3,000 psi (20.7 MPa) for heat strengthened glass and 6,000 psi (41.4 MPa) for fully tempered glass. ~~Glass~~ *~~handrails~~* ~~and~~ *~~guards~~* ~~shall be designed using a~~ ~~factor of safety of four.~~

**(S11282 / S235-22 AM)**

**2409.1 Glass walkways.** Glass installed as a part of a floor/ceiling assembly as a walking surface and constructed with laminated glass shall comply with ASTM E2751 or with the *load* requirements specified in Chapter 16 under the provisions of Section 104.11. Such assemblies shall comply with the *fire-resistance rating* and marking requirements of this code where applicable.

**(S11281 / S234-22 AS)**

**CHAPTER 25 GYPSUM BOARD, GYPSUM PANEL PRODUCTS AND PLASTER**

**TABLE 2508.1 INSTALLATION OF GYPSUM CONSTRUCTION**

|  |  |
| --- | --- |
| **MATERIAL** | **STANDARD** |
| Gypsum board and gypsum panel products | GA 216; ASTM C840 |
| Gypsum sheathing and gypsum panel products | ASTM C1280; GA-253 |
| Gypsum veneer base | ASTM C844 |
| Interior lathing and furring | ASTM C841 |
| Steel framing for gypsum board and gypsum panel products | ASTM C754; C1007 |

**2508.2 Limitations.** *Gypsum wallboard* or *gypsum plaster* shall not be used in any exterior surface where such gypsum construction will be exposed directly to the weather. *Gypsum wallboard* shall not be used where there will be direct exposure to water or continuous high humidity conditions. *Gypsum sheathing* shall be installed on exterior surfaces in accordance with ASTM C1280or GA-253.

**(S11283 / S239-22 AS)**

**2510.6 Water-resistive barriers.** *Water-resistive barriers* shall be installed as required in Section 1404.2 and~~, where applied over wood-based sheathing,~~ shall comply with Section 2510.6.1 or 2510.6.2.

**Exception:** Sections 2510.6.1 and 2510.6.2 shall not apply to construction where accumulation, condensation or freezing of moisture will not damage the materials.

**(S11284 / S240-22 Part I AM)**

**CHAPTER 26 PLASTIC**

**[BS] TABLE 2603.13.1 CLADDING MINIMUM FASTENING REQUIREMENTS FOR DIRECT ATTACHMENT OVER FOAM PLASTIC SHEATHING TO SUPPORT CLADDING WEIGHTa**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CLADDING FASTENER THROUGH FOAM SHEATHING INTO:** | **CLADDING FASTENER TYPE AND MINIMUM SIZEbc** | **CLADDING FASTENER VERTICAL SPACING (INCHES)** | **MAXIMUM THICKNESS OF FOAM SHEATHINGcd (INCHES)** | | | | | | | |
| **16″ o.c. fastener horizontal**  **spacing** | | | | **24″ o.c. fastener horizontal**  **spacing** | | | |
| **Cladding weight:** | | | | **Cladding weight:** | | | |
| **3 psf** | **11 psf** | **18 psf** | **25 psf** | **3 psf** | **11 psf** | **18 psf** | **25 psf** |
| Wood Framing (minimum 11/4- inch penetration) b | 0.113" diameter nail | 6 | 2.00 | 1.45 | 0.75 | DR | 2.00 | 0.85 | DR | DR |
| 8 | 2.00 | 1.00 | DR | DR | 2.00 | 0.55 | DR | DR |
| 12 | 2.00 | 0.55 | DR | DR | 1.85 | DR | DR | DR |
| 0.120" diameter nail | 6 | 3.00 | 1.70 | 0.90 | 0.55 | 3.00 | 1.05 | 0.50 | DR |
| 8 | 3.00 | 1.20 | 0.60 | DR | 3.00 | 0.70 | DR | DR |
| 12 | 3.00 | 0.70 | DR | DR | 2.15 | DR | DR | DR |
| 0.131" diameter nail | 6 | 4.00 | 2.15 | 1.20 | 0.75 | 4.00 | 1.35 | 0.70 | DR |
| 8 | 4.00 | 1.55 | 0.80 | DR | 4.00 | 0.90 | DR | DR |
| 12 | 4.00 | 0.90 | DR | DR | 2.70 | 0.50 | DR | DR |
| 0.162" diameter nail | 6 | 4.00 | 3.55 | 2.05 | 1.40 | 4.00 | 2.25 | 1.25 | 0.80 |
| 8 | 4.00 | 2.55 | 1.45 | 0.95 | 4.00 | 1.60 | 0.85 | 0.50 |
| 12 | 4.00 | 1.60 | 0.85 | 0.50 | 4.00 | 0.95 | DR | DR |

For SI: 1 inch = 25.4 mm, 1 pound per square foot (psf) = 0.0479 kPa. DR = Design Required, o.c. = on center.

a. Wood framing shall be spruce-pine-fir or any wood species with a specific gravity of 0.42 or greater in accordance with ANSI/AWC NDS.

b. The thickness of wood structural panels complying with the specific gravity requirement of Note a shall be permitted to be included in satisfying the minimum penetration into framing.

~~b.~~c. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths.

~~c.~~d. Foam sheathing shall have a minimum compressive strength of 15 psi in accordance with ASTM C587 or ASTM C1289.

[BS] TABLE 2603.13.2 FURRING MINIMUM FASTENING REQUIREMENTS FOR APPLICATION OVER FOAM PLASTIC SHEATHING TO SUPPORT CLADDING WEIGHTa, b

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FURRING MATERIAL** | **FRAMING MEMBER** | **FASTENER TYPE AND MINIMUM SIZE** | **MINIMUM PENETRATION INTO WALL FRAMING (INCHES)c** | **FASTENER SPACING IN FURRING (INCHES)** | **MAXIMUM THICKNESS OF FOAM SHEATHING**  **de (INCHES)** | | | | | | | |
| **16″ o.c. furringef** | | | | **24″ o.c. furringef** | | | |
| **Siding weight:** | | | | **Siding weight:** | | | |
| **3**  **psf** | **11**  **psf** | **18**  **psf** | **25**  **psf** | **3**  **psf** | **11 psf** | **18 psf** | **25 psf** |
| Minimum 1x Wood Furringcd | Minimum 2x  Wood Stud | 0.131" diameter nail | 11/4 | 8 | 4.00 | 2.45 | 1.45 | 0.95 | 4.00 | 1.60 | 0.85 | DR |
| 12 | 4.00 | 1.60 | 0.85 | DR | 4.00 | 0.95 | DR | DR |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FURRING MATERIAL** | **FRAMING MEMBER** | **FASTENER TYPE AND MINIMUM SIZE** | **MINIMUM PENETRATION INTO WALL FRAMING (INCHES)** | **FASTENER SPACING IN FURRING (INCHES)** | **MAXIMUM THICKNESS OF FOAM SHEATHING**  **(INCHES)** | | | | | | | |
| **16″ o.c. furring** | | | | **24″ o.c. furring** | | | |
| **Siding weight:** | | | | **Siding weight:** | | | |
| **3**  **psf** | **11**  **psf** | **18**  **psf** | **25**  **psf** | **3**  **psf** | **11 psf** | **18 psf** | **25 psf** |
|  |  |  |  | 16 | 4.00 | 1.10 | DR | DR | 3.05 | 0.60 | DR | DR |
| 0.162" diameter nail | 11/4 | 8 | 4.00 | 4.00 | 2.45 | 1.60 | 4.00 | 2.75 | 1.45 | 0.85 |
| 12 | 4.00 | 2.75 | 1.45 | 0.85 | 4.00 | 1.65 | 0.75 | DR |
| 16 | 4.00 | 1.90 | 0.95 | DR | 4.00 | 1.05 | DR | DR |
| No. 10 wood screw | 1 | 12 | 4.00 | 2.30 | 1.20 | 0.70 | 4.00 | 1.40 | 0.60 | DR |
| 16 | 4.00 | 1.65 | 0.75 | DR | 4.00 | 0.90 | DR | DR |
| 24 | 4.00 | 0.90 | DR | DR | 2.85 | DR | DR | DR |
| 1/4" lag screw | 11/2 | 12 | 4.00 | 2.65 | 1.50 | 0.90 | 4.00 | 1.65 | 0.80 | DR |
| 16 | 4.00 | 1.95 | 0.95 | 0.50 | 4.00 | 1.10 | DR | DR |
| 24 | 4.00 | 1.10 | DR | DR | 3.25 | 0.50 | DR | DR |

For SI: 1 inch = 25.4 mm, 1 pound per square foot (psf) = 0.0479 kPa, 1 pound per square inch = 0.00689 MPa. DR = Design Required, o.c. = on center.

a. Wood framing and furring shall be spruce-pine-fir or any wood species with a specific gravity of 0.42 or greater in accordance with ANSI/AWC NDS.

b. Nail fasteners shall comply with ASTM F1667, except nail length shall be permitted to exceed ASTM F1667 standard lengths.

c. The thickness of wood structural panels complying with the specific gravity requirements of Note a shall be permitted to be included in satisfying the minimum required penetration into framing.

~~c.~~d. Where the required cladding fastener penetration into wood material exceeds3/4 inch and is not more than 11/2 inches, a minimum 2-inch nominal wood furring or an approved design shall be used.

~~d.~~e. Foam sheathing shall have a minimum compressive strength of 15 psi in accordance with ASTM C587 or ASTM C1289.

~~e.~~f. Furring shall be spaced not greater than 24 inches on center in a vertical or horizontal orientation. In a vertical orientation, furring shall be located over wall studs and attached with the required fastener spacing. In a horizontal orientation, the indicated 8-inch and 12-inch fastener spacing in furring shall be achieved by use of two fasteners into studs at 16 inches and 24 inches on center, respectively.

**(S10812 / FS12-22 AS)/ (S11656 / FS12-22 AS)**

**Revise as follows:**

**2603.1.2 Insulating Sheathing.** Foam plastic materials used as *insulating sheathing* shall comply with the provisions of Section 2603 and the material standards in Table 2603.1.

**TABLE 2603.1 MATERIAL STANDARDS FOR FOAM PLASTIC INSULATING SHEATHING**

|  |  |
| --- | --- |
| Expanded Polystyrene (EPS) | ASTM C578 |
| Extruded Polystyrene (XPS) | ASTM C578 |
| Polyisocyanurate | ASTM C1289 |

**(S10908 / FS152-21 AS)**

**2603.4 Thermal barrier.** Except as provided for in Sections 2603.4.1 and 2603.9, foam plastic shall be separated from the interior of a building by an approved thermal barrier of 1/2-inch (12.7 mm) *gypsum wallboard*, *mass timber* or heavy timber in accordance with Section 2304.11 ~~602.4~~ or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275. Combustible concealed spaces shall comply with Section 718.

**(F11036 / G122-21 Part II AS)**

**2603.4.1.15 Separately controlled climate structures.** In nonsprinklered buildings of Group U, foam plastic having a thickness that does not exceed 4 inches (102 mm) and a maximum flame spread index of 75 is permitted in separately controlled climate structures where the aggregate floor area does not exceed 400 square feet (37 m2) and the foam plastic is covered by a metal facing not less than 0.032-inch-thick (0.81 mm) aluminum or corrosion-resistant steel having a minimum base metal thickness of 0.016 inch (0.41mm). A thickness of up to 10 inches (254 mm) is permitted where protected by a thermal barrier.

**(F10909 / FS153-21 AM)**

**2603.4.1.4 Exterior walls, one-story buildings.** ~~For one-~~*~~story~~* ~~buildings, foam plastic having a~~ *~~flame spread index~~* ~~of 25 or less, and a~~ *~~smoke-developed index~~* ~~of not more than 450, shall be permitted without thermal barriers in or on~~ *~~exterior walls~~* ~~in a thickness not more~~ ~~than 4 inches (102 mm) where the foam plastic is covered by a thickness of not less than 0.032-inch-thick (0.81 mm) aluminum or~~

~~corrosion-resistant steel having a base metal thickness of 0.0160 inch (0.41 mm) and the building is equipped throughout with an~~ *~~automatic~~ ~~sprinkler system~~* ~~in accordance with Section 903.3.1.1~~. For *exterior walls* of one-story buildings constructed of *insulated metal panels (IMP)* with *foam plastic insulation* cores, the thermal barrier is not required when all of the following apply:

1. The *foam plastic insulation* thickness is not more than 4 inches (102 mm)

2. The *foam plastic insulation* core has a flame spread index of 25 or less and a smoke developed index of 450 or less.

3. The *foam plastic insulation* is covered by a thickness of not less than 0.032-inch-thick (0.81 mm) aluminum or corrosion-resistant steel having a base metal thickness of 0.0160 inch (0.41 mm).

4. The building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

**(F10902 / FS149-21 Part II AS)**

###### Revise as follows:

**2603.9 Special approval.** Foam plastic shall not be required to comply with the requirements of Section 2603.4 or those of Section 2603.6 where specifically approved based on one of the following large-scale tests. ~~such as, but not limited to~~,

1. NFPA 286 ~~(with~~ using the acceptance criteria of Section 803.1.1.1)
2. FM 4880
3. UL 1040
4. UL 1715

Such testing shall be ~~related to the actual end-use configuration and be~~ performed on the finished manufactured foam plastic assembly in the maximum thickness intended for use. Foam plastics that are used as *interior finish* on the basis of these ~~special~~ tests shall also conform to the *flame spread* and smoke-developed requirements of Chapter 8. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

**(F10724/F60-21 Part II)**

**CHAPTER 27 ELECTRICAL**

No change

**CHAPTER 28 MECHANICAL SYSTEMS**

No change

**CHAPTER 29 PLUMBING SYSTEMS**

**[P] 2902.1.1 Fixture calculations.** To determine the *occupant load* of each sex, the total *occupant load* shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the *occupant load* of each sex in accordance with Table 2902.1. Fractional numbers resulting from applying the fixture ratios of Table 2902.1 shall be rounded up to the next whole number. For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then

rounded up to the next whole number.

**Exceptions:**

1. No change.

2. Where multi-user facilities are designed to serve all genders, the minimum fixture count shall be calculated 100 percent, based on total occupant load. In such multi-user user facilities, each fixture type shall be in accordance with ~~ICC A117.1~~ *Florida Building Code, Accessibility*, and each urinal that is provided shall be located in a stall.

3. No change.

P-FBC-P- CH.4 – Errata #1

**CHAPTER 30 ELEVATORS AND CONVEYING SYSTEMS**

**Revise as follows:**

**3002.1 Hoistway ~~enclosure~~ protection.** ~~Elevator, dumbwaiter and other hoistway enclosures shall be~~ *~~shaft enclosures~~* ~~complying with~~ ~~Sections 712 and 713.~~ A hoistway for elevators, dumbwaiters and other vertical access devices shall be comply with Sections 712 and 713. Where the hoistway is required to be enclosed it shall be constructed as a shaft enclosure in accordance with Section 713.

**3002.1.1 Opening protectives.** Openings in fire-resistant rated hoistway enclosures shall be protected as required in Chapter 7.

**Exception:** The elevator car doors and the associated elevator hoistway ~~enclosure~~ doors at the floor level designated for recall in accordance with Section 3003.2 shall be permitted to remain open during Phase I Emergency Recall Operation.

**3002.1.2 Hardware.** Hardware on ~~opening protectives~~ elevator hoistway doors shall be of an *approved* type installed as tested, except that *approved* interlocks, mechanical locks and electric contacts, door and gate electric contacts and door-operating mechanisms shall be exempt from the fire test requirements.

**3002.2 Number of elevator cars in a hoistway.** Where four or more elevator cars serve all or the same portion of a building, the elevators shall be located in not fewer than two separate fire-resistance rated hoistways. Not more than four elevator cars shall be located in any single fire-resistance rated hoistway enclosure.

**3002.6 Prohibited doors or other devices.** Doors or other devices, other than ~~hoistway doors and~~ the elevator car door and the associated elevator hoistway doors, shall be prohibited at the point of access to an elevator car unless such doors or other devices are readily openable from inside the car ~~side~~ without a key, tool, special knowledge or effort.

**(SP11063 / G180-21 AS)**

**SECTION 3006**

**ELEVATOR LOBBIES AND HOISTWAY ~~OPENING~~ DOOR PROTECTION**

**3006.1 General.** ~~Elevator hoistway openings and enclosed~~ Enclosed elevator lobbies and elevator hoistway door protection shall be provided in accordance with the following:

1. Where elevator hoistway door ~~opening~~ protection is required by Section 3006.2, such protection shall be provided in accordance with Section 3006.3.

2. Where enclosed elevator lobbies are required for underground buildings, such lobbies shall comply with Section 405.4.3.

3. Where an *area of refuge* is required and an enclosed elevator lobby is provided to serve as an *area of refuge*, the enclosed elevator lobby shall comply with the *Florida Building Code, Accessibility.*.

4. Where fire service access elevators are provided, enclosed elevator lobbies shall comply with Section 3007.6.

5. Where occupant evacuation elevators are provided, enclosed elevator lobbies shall comply with Section 3008.6.

**3006.2 Elevator hoistway door ~~Hoistway opening~~ protection required.** Elevator hoistway ~~door openings~~ doors shall be protected in accordance with Section 3006.3 where an elevator hoistway connects more than three *stories*, is required to be enclosed within a *shaft enclosure* in accordance with Section 712.1.1 and any of the following conditions apply:

1. The building is not protected throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.

2. The building contains a Group I-1, Condition 2 occupancy.

3. The building contains a Group I-2 occupancy.

4. The building contains a Group I-3 occupancy.

5. The building is a high rise and the elevator hoistway is more than 75 feet (22 860 mm) in height. The height of the hoistway shall be measured from the *lowest floor* to the highest floor of the floors served by the hoistway.

**Exceptions:**

1. Protection of elevator hoistway ~~door openings~~ doors are is not required where the elevator serves only *open parking garages* in accordance with Section 406.5.

2. Protection of elevator hoistway ~~door openings~~ doors are is not required at the level(s) of exit discharge, provided that the level(s) of exit discharge is equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

3. ~~Enclosed elevator lobbies and protection~~ Protection of elevator hoistway ~~door openings~~ doors are not required on levels where the elevator hoistway door opens to the exterior.

**(SP11063 / G180-21 AS)**

**SECTION 3006**

**ELEVATOR LOBBIES AND HOISTWAY ~~OPENING~~ DOOR PROTECTION**

**3006.3 ~~Hoistway opening~~ Elevator hoistway door protection.** Where Section 3006.2 requires protection of the elevator hoistway ~~door~~ ~~opening~~ doors, the protection shall be provided by one of the following:

1. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway*~~shaft enclosure~~* doors from each floor ~~by~~ with *fire partitions* in accordance with Section 708. In addition, doors protecting openings in the~~elevator lobby enclosure walls~~ fire partitions shall comply with Section 716.2.2.1 ~~as required for~~ *~~corridor~~* ~~walls~~. Penetrations of the ~~enclosed elevator lobby~~ fire partitions by ducts and air transfer openings shall be protected as required for*corridors* in accordance with Section 717.5.4.1.

1. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway *~~shaft enclosure~~* doors from each floor ~~by~~ with *smoke partitions* in accordance with Section 710 ~~where the building is equipped throughout with an~~*~~automatic sprinkler~~ ~~system~~* ~~installed in accordance with Section 903.3.1.1 or 903.3.1.2~~. In addition, doors protecting openings in the*smoke partitions* shall comply with Sections 710.5.2.2, 710.5.2.3 and 716.2.6.1. Penetrations of the ~~enclosed elevator lobby~~ smoke partitions by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.
2. Additional doors or other devices shall be provided at each elevator hoistway door ~~opening~~ in accordance with Section 3002.6. Such doors or other devices shall comply with the smoke and draft control door assembly requirements in Section 716.5.3.1 when tested in accordance with UL 1784 without an artificial bottom seal.

4 – 5 – No change

**SECTION 3007**

**FIRE SERVICE ACCESS ELEVATOR**

**Revise as follows:**

**3007.6.2 Elevator lobby ~~Lobby~~ enclosure separation.** The fire service access elevator lobby shall be ~~enclosed~~ separated from each floor with a *smoke barrier* in accordance with Section 709 ~~having a~~ *~~fire-resistance rating~~* ~~of not less than 1 hou~~r, except that lobby doorways shall comply with Section 3007.6.3.

**Exception:** ~~Enclosed fire~~ Fire service access elevator lobbies are not required to be separated at the levels of exit discharge.

**3007.6.3 ~~Lobby~~ Elevator lobby doorways.** Other than doors to ~~the hoistway,~~ elevator control room or elevator control space, each door ~~doorway to an enclosed fire service access elevator lobby~~ in the smoke barrier shall be provided with a 3/4-hour *fire door assembly*

complying with Section 716. ~~The~~ Such *fire door assembly* shall comply with the smoke and draft control door assembly requirements of Section 716.5.3.1 and be tested in accordance with UL 1784 without an artificial bottom seal.

**SECTION 3008**

**OCCUPANT EVACUATION ELEVATORS**

**Revise as follows:**

**3008.6.1 Access to interior exit stairway or ramp.** The occupant evacuation elevator lobby shall have *direct access* from the enclosed elevator lobby to an *interior exit stairway or ramp*.

**Exceptions:**

1. Access to an *interior exit stairway or ramp* shall be permitted to be through a protected path of travel that has a level of fire protection not less than the elevator lobby enclosure. The protected path shall be separated from the enclosed elevator lobby through an opening protected by a smoke and draft control assembly in accordance Section ~~716.5.3~~ 716.2.2.1.1.

2. Elevators that only service an *open parking garage* and the elevator lobby of the building shall not be required to provide *direct access*.

**3008.6.2 Elevator lobby ~~Lobby~~ enclosure separation.** The occupant evacuation elevator lobby shall be ~~enclosed~~ separated from each floor with a *smoke barrier* in accordance with Section 709 ~~having a~~ *~~fire-resistance rating~~* ~~of not less than 1 hou~~r, except that lobby doorways shall comply with Section 3008.6.3.

**Exception:** ~~Enclosed occupant~~ Occupant evacuation elevator lobbies are not required to be separated at the levels of exit discharge.

**3008.6.3 Elevator lobby ~~Lobby~~ doorways.** Other than the doors to ~~the hoistway,~~ elevator machine rooms, machinery spaces, control rooms and control spaces ~~within the lobby enclosure~~ in the *smoke barrier*, each doorway to an occupant evacuation elevator lobby shall be provided with a 3/4-hour *fire door assembly* complying with Section 716. ~~The~~ Such *fire door assembly* shall comply with the smoke and draft control assembly requirements of Section 716.5.3.1 and be tested in accordance with UL 1784 without an artificial bottom seal.

**3008.6.3.1 Vision panel.** A vision panel shall be installed in each *fire door assembly* ~~protecting the lobby doorway~~ in the smoke barrier. The vision panel shall consist of fire-protection-rated glazing, shall comply with the requirements of Section 716 and shall be located to furnish clear vision of the occupant evacuation elevator lobby.

**3008.6.3.2 Door closing.** Each *fire door assembly* ~~protecting the lobby doorway~~ in the smoke barrier shall be automatic-closing upon receipt of any fire alarm signal from the *emergency voice/alarm communication system* serving the building.

**(SP11065 / G183-21 Part I AM)/ (SP11063 / G180-21 AS)**

**3006.4 Means of egress.** Elevator lobbies shall be provided with not less than one *means of egress* complying with Chapter 10 and other provisions in this code. Egress through an enclosed elevator lobby shall be permitted in accordance with Item 1 of Section 1016.2.

Electrically locked exit access doors providing egress from elevator lobbies shall be permitted in accordance with Section 1010.2.16.

**(F10637 / E56-21 AM)** Already exists in the 2023 FBC.

**3006.3 Hoistway opening protection.** Where Section 3006.2 requires protection of the elevator hoistway door opening, the protection shall be provided by one of the following:

1. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway*shaft enclosure* doors from each floor by *fire partitions* in accordance with Section 708. In addition, doors protecting openings in the elevator lobby enclosure walls shall comply with Section 716.2.2.1 as required for *corridor* walls. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.

2. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway *shaft enclosure* doors from each floor by *smoke partitions* in accordance with Section 710 where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. In addition, doors protecting openings in the *smoke partitions* shall comply with Sections 710.5.2.2, 710.5.2.3 and 716.2.6.1. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.

3. Additional doors shall be provided at each elevator hoistway door opening in accordance with Section 3002.6. Such ~~door~~ doors shall comply with the smoke and draft control door assembly requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal.

4. The elevator hoistway shall be pressurized in accordance with Section 909.21.

5. A *smoke protective curtain assembly for hoistways* shall be provided at each elevator hoistway door opening in accordance with Section 3002.6. Such curtain assemblies shall comply with the smoke and draft control requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal. Such curtain assemblies shall be equipped with a control unit listed to UL 864. Such curtain assemblies shall comply with section 2.11.6.3 of ASME A17.1/CSA B44. Installation and maintenance shall be in accordance with NFPA 105

**(SP11067 / G185-21 AS)** Already exists in the 2023 FBC.

**CHAPTER 31 SPECIAL CONSTRUCTION**

**3103.1 General.** The provisions of Sections 3103.1 through ~~3103.4~~ 3103.5 shall apply to structures erected for a period of less than 180 days. *Special event structures*, tents, umbrella structures and other membrane structures erected for a period of less than 180 days shall also comply with the *International Fire Code*. Those erected for a longer period of time shall comply with applicable sections of this code.

**Add new text as follows:**

**3103.5 Bleachers.** Temporary bleachers, grandstands and folding and telescopic seating, that are not building elements, shall comply with ICC 300.

**(F11070 / G189-21 AS)**

**3105.3 Design and construction.** *Awnings* and *canopies* shall be designed and constructed to withstand wind or other lateral *loads* and *live loads* as required by Chapter 16 with due allowance for shape, open construction and similar features that relieve the pressures or loads. Structural members shall be protected to prevent deterioration. *Awnings* shall have frames of noncombustible material, *fire-retardant- treated wood*, or heavy timber complying with Section 2304.11, or 1-hour construction ~~with combustible or noncombustible covers~~ and shall be either fixed, retractable, folding or collapsible.

**(F11071 / G191-21 AMPC1)**

**Revise as follows:**

**3103.1 General.** The provisions of Sections 3103.1 through ~~3103.4~~ 3103.7 shall apply to structures erected for a period of less than 180 days. Temporary *special event structures*, tents, umbrella structures and other membrane structures erected for a period of less than 180days shall also comply with the *Florida Fire Prevention Code*. ~~Those~~ *Temporary structures* erected for a longer period of time and *public- occupancy temporary structures* shall comply with applicable sections of this code.

**Exceptions:**

1. *Public-occupancy temporary structures* complying with Section 3103.1.1 shall be permitted to remain in service for 180 days or more but not more than 1 year where approved by the *Building Official*.

2. *Public-occupancy temporary structures* erected within the confines of an existing structure are not required to comply with Section 3103.5.

**Add new text as follows:**

**3103.1.1 Extended period of service time.** *Public-occupancy temporary structures* shall be permitted to remain in service for 180 days or more without complying with requirements in this code for new buildings or structures where extensions for up to 1 year are granted by the *Building Official* in accordance with Section 108.1 and where the following conditions are satisfied:

1. Additional inspections as determined by the *Building Official* shall be performed by a qualified person to verify that site conditions and the approved installation comply with the conditions of approval at the time of final inspection.

2. A qualified person shall perform follow up inspections after initial occupancy at intervals not exceeding 180 days to verify the site conditions and the installation conform to the approved site conditions and installation requirements. Inspection records shall be kept and shall be made available for verification by the Building Official.

3. An examination shall be performed by a registered design professional to determine the adequacy of the *temporary structure* to resist the structural loads required in Section 3103.5.

4. Relocation of the *public-occupancy temporary ~~structures~~ structure* shall require a new ~~approval by the~~ *~~Building Official~~* permit application.

5. The use or occupancy approved at the time of final inspection shall remain unchanged.

6. A request for an extension is submitted to the building official. The request shall include records of the inspections and examination in Items 1 and 3 above.

**Revise as follows:**

**~~3103.1.1~~ 3103.1.2 Conformance.** Temporary structures and uses shall conform to the structural strength, fire safety, *means of egress*, accessibility, light, *ventilation* and sanitary requirements of this code as necessary to ensure public health, safety and general welfare.

**~~3103.1.2~~ 3103.1.3 Permit required.** Temporary structures that cover an area greater than 120 square feet (11.16 m2), including connecting areas or spaces with a common *means of egress* or entrance that are used or intended to be used for the gathering together of 10 or more persons, shall not be erected, operated or maintained for any purpose without obtaining a *permit* from the *building official*.

**Add new text as follows:**

3103.5 Structural requirements. Temporary structures shall comply with the structural requirements of this code. Public-occupancy temporary structures shall be designed and erected to comply with the structural requirements of this code and Sections 3103.5.1 through 3103.5.4.

Exception: Where approved, live loads less than those prescribed by Table 1607.1 shall be permitted provided that a registered design professional demonstrates that a rational approach has been used and that such reductions are warranted.

Temporary non-building structures ancillary to public assemblies or special event structures whose structural failure or collapse would endanger assembled public shall be assigned a risk category corresponding to the risk category of the public assembly. For the purposes of establishing an occupant load for the assembled public endangered by structural failure or collapse, the applicable occupant load determination in Section 1004.5 or 1004.6 shall be applied over the assembly area within a radius equal to 1.5 times the height of the temporary non-building structure

**3103.5.1 Structural loads.** *Public-occupancy temporary structures* shall be designed in accordance with Chapter 16, except as modified by Sections 3103.5.1.1 through 3103.5.1.6.

**3103.5.1.1 Snow. Reserved.**

**3103.5.1.2 Wind loads.** The design wind load on public-occupancy temporary structures shall be permitted to be modified in accordance with the wind load reduction factors in Table 3103.5.1.2.

Exceptions:

1. Design wind loads for public-occupancy temporary structures that implement controlled occupancy procedures per Section 3103.8 shall be permitted to be modified using a wind load reduction factor of 0.65.

2. For public-occupancy temporary structures erected in a hurricane-prone region outside of hurricane season, the basic wind speed, V, shall be permitted to be set as follows, depending on risk category:

2.1. Risk Category II: 115 mph.

2.2. Risk Category III: 120 mph.

2.3. Risk Category IV: 125 mph

**3103.5.1.3 Flood loads.** Public-occupancy temporary structures need not be designed for flood loads specified in Section 1612. Controlled occupancy procedures in accordance with Section 3103.8 shall be implemented.

**3103.5.1.4 Seismic loads. Reserved.**

**3103.5.1.5 Ice loads.** Ice loads on public-occupancy temporary structures shall be permitted to be determined with a maximum nominal thickness of 0.5 inch (13 mm), for all risk categories. Where the public-occupancy temporary structure is not subject to ice loads or not constructed and occupied during times when ice is to be expected, ice loads need not be considered, provided that where the period of time when the public-occupancy temporary structure is in service shifts to include times when ice is to be expected, one of the following conditions is met:

1. The design is reviewed and modified, as appropriate, to account for ice loads.

2. Controlled occupancy procedures in accordance with Section 3103.8 are implemented.

**3103.5.1.6 Tsunami.** Reserved

**3103.5.2 Foundations**. Public-occupancy temporary structures shall be permitted to be supported on the ground with temporary foundations where approved by the building official. Consideration shall be given for the impacts of differential settlement where foundations do not extend below the ground or where foundations are supported on compressible materials. The presumptive load-bearing value for public-occupancy temporary structures supported on a pavement, slab on grade or on other collapsible or controlled low-strength substrate soils such as beach sand or grass shall be assumed not to exceed 1,000 pounds per square foot (47.88 kPa) unless determined through testing and evaluation by a registered design professional. The presumptive load-bearing values listed in Table 1806.2 shall be permitted to be used for other supporting soil conditions.

**TABLE 3103.5.2 REDUCTION FACTORS FOR WIND LOADS FOR PUBLIC-OCCUPANCY TEMPORARY STRUCTURES**

|  |  |  |
| --- | --- | --- |
|  | **Service Life** | |
| Risk Category | ≤ 10 yr | >10 yr |
| II | 0.8 | 1.0 |
| III | 0.9 | 1.0 |
| IV | 1.0 | 1.0 |

**3103.5.3 Installation and maintenance inspections.** A qualified person shall inspect public-occupancy temporary structures that are assembled using transportable and reusable materials. Components shall be inspected when purchased or acquired and at least once per year. The inspection shall evaluate individual components, and the fully assembled structure, to determine suitability for use based on the requirements in ESTA ANSI E1.21. Inspection records shall be kept and shall be made available for verification by the building official. Additionally, public-occupancy temporary structures shall be inspected at regular intervals when in service to ensure that the structure continues to perform as designed and initially erected.

**3103.5.4 Durability.** Reusable components used in the erection and the installation of *public-occupancy temporary structures* shall be manufactured of durable materials necessary to withstand environmental conditions at the service location. Components damaged during transportation or installation and due to the effects of weathering shall be replaced or repaired.

**3103.5 Serviceability.** The effects of structural loads or conditions shall not adversely affect the serviceability or performance of the *public- occupancy temporary structure*.

**3103.6 Controlled occupancy procedures.** Where controlled occupancy procedures are required to be implemented for *public-occupancy temporary structures* in Section 3103.5.1, the procedures shall comply with this section and in accordance with ANSI ES1.7. An operations management plan in accordance with ANSI E1.21 shall be submitted to the *Building Official* for approval as a part of the permit documents. In addition, the operations management plan shall include an emergency action plan that documents the following information, where applicable:

1. Surfaces on which snow or ice accumulates shall be monitored before and during occupancy of the public-occupancy temporary structure. Any loads in excess of the design snow or ice load shall be removed prior to its occupancy, or the public- occupancy temporary structure shall be vacated in the event that either the design snow or ice load is exceeded during its occupancy.

2. Wind speeds associated with the design wind loads shall be monitored before and during occupancy of the public-

occupancy temporary structure. The public-occupancy temporary structure shall be vacated in the event that the design wind speed is expected to be exceeded during its occupancy.

3. Criteria for initiating occupant evacuation procedures for flood and tsunami events.

4. Occupant evacuation procedures shall be specified for each environmental hazard where the occupant management plan specifies the public-occupancy temporary structure is to be evacuated.

5. Procedures for anchoring or removal of the public-occupancy temporary structure, or other additional measures or procedures to be implemented to mitigate hazards in snow, wind, flood, ice, or tsunami events.

**(R11175 / S116-22 AMPC1,2,3,4)**

**3111.3.5 Elevated photovoltaic (PV) support structures.** *Elevated PV support structures* shall comply with either 3111.3.5.1 or 3111.3.5.2.F

**Exception**: *Elevated PV support structures* that are installed over agricultural use.

**3111.3.5.1 PV panels installed over open-grid framing or non-combustible deck.** *Elevated PV support structures* with PV panels installed over open-grid framing or over a noncombustible deck shall have PV panels tested, *listed*, and *labeled* with a fire type rating in accordance with UL 1703 or with both UL 61730-1 and UL 61730-2. Photovoltaic panels marked “not fire rated” shall not be installed on *elevated PV support structures*.

**3111.3.5.2 PV panels installed over a roof assembly.** *Elevated PV support structures* with a PV panel system installed over a roof assembly shall have a fire classification in accordance with Section 1505.9.

**Revise as follows:**

**~~3111.3.5~~ 3111.3.6 Ground-mounted photovoltaic (PV) panel systems.** Ground-mounted photovoltaic panel systems shall be designed and installed in accordance with Chapter 16 and the *International Fire Code*.

**~~3111.3.5.1~~ 3111.3.6.1 Fire separation distances.** Ground-mounted photovoltaic panel systems shall be subject to the *fire separation distance* requirements determined by the local jurisdiction.

**(S11073 / G193-21 AS)**

Revise Section 3115.4.3 to read as follows:

**3115.4.3 Pedestals.** Where analysis of pedestals is not consistent with codified material design procedures, testing for axial load capacity shall be performed in accordance with CISCA Recommended Test Procedures for Access Floors, ~~2016,~~ Section 5 achieving a load capacity

three (3) times the axial load capacity designated in the specifications.

S-FBC-B – Ch. 31 – Glitch #2

**CHAPTER 32 ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY**

No Change

**CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION**

**SECTION 3301 GENERAL**

**Revise as follows:**

**3301.1 Scope.** The provisions of this chapter shall govern safety during construction and the protection of adjacent public and private properties. Fire safety during construction shall also comply with the applicable provisions of the *Florida Fire Prevention Code*.

**3301.2 Storage and placement of construction equipment and materials.** Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or adjoining property for the duration of the construction project.

**[BS] 3301.3 ~~3301.2.1~~ Roof ~~Structural and construction~~ loads.** Structural roof components shall be capable of supporting the roof- covering system and the material and equipment *loads* that will be encountered during installation of the system. (Not in the 2023 FBC)

**3301.4 ~~3302.1~~ Maintenance of exits, existing structural elements, fire protection devices and sanitary safeguards~~Alterations,~~ ~~repairs and additions~~.** Required *exits*, existing structural elements, fire protection devices and sanitary safeguards shall be maintained at all times during *alterations*, *repairs* or *additions* to any building or structure.

**Exceptions:**

1. Where such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.

2. Maintenance of such elements and devices is not required where the existing building is not occupied.

**3301.5 ~~3302.2~~ Removal of waste materials~~Manner of removal~~.** Waste materials shall be removed in a manner that prevents injury or damage to persons, adjoining properties and public rights-of-way.

**Delete without substitution:**

**~~3302.3 Fire safety during construction~~.** ~~Fire safety during construction shall comply with the applicable requirements of this code and the~~ ~~applicable provisions of Chapter 33 of the International Fire Code.~~

**Revise as follows:**

**SECTION 3302**

**OWNER'S RESPONSIBILITY FOR FIRE PROTECTION~~CONSTRUCTIONSAFEGUARDS~~**

**Add new text as follows:**

**3302.1 Site Safety Plan.** The owner or owner’s authorized agent shall be responsible for the development, implementation and maintenance of an approved, written site safety plan establishing a fire prevention program at the project site applicable throughout all phases of the construction, repair, alteration or demolition work. The plan shall be submitted and approved before a building permit is issued, Any changes to the plan shall address the requirements of this chapter and other applicable portions of the International Fire Code, the duties of staff, and staff training requirements. The plan shall be submitted for approval in accordance with the *International Fire Code.*

**3302.1.1 Components of site safety plans.** Site safety plans shall include the following as applicable:

1. Name and contact information of site safety director.

2. Documentation of the training of the site safety director and fire watch personnel.

3. Procedures for reporting emergencies.

4. Fire department vehicle access routes.

5. Location of fire protection equipment, including portable fire extinguishers, standpipes, fire department connections and fire hydrants.

6. Smoking and cooking policies, designated areas to be used where approved, and signage locations in accordance with the

*Florida Fire Prevention Code*.

7. Location and safety considerations for temporary heating equipment.

8. Hot work permit plan.

9. Plans for control of combustible waste material.

10. Locations and methods for storage and use of flammable and combustible liquids and other hazardous materials.

11. Provisions for site security and, where required, for a fire watch.

12. Changes that affect this plan.

13. Other site-specific information required by the *International Fire Code*.

**3302.2 Site safety director.** The owner shall designate a person to be the site safety director. The site safety director shall be responsible for ensuring compliance with the site safety plan. The site safety director shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter. Where guard service is provided in accordance with the *Florida Fire Prevention Code*, the site safety director shall be responsible for the guard service.

**3302.3 Daily fire safety inspection.** The site safety director shall be responsible for completion of a daily fire safety inspection at the project site. Each day, all building and outdoor areas shall be inspected to ensure compliance with the inspection list in this section. The results of each inspection shall be documented and maintained on-site until a certificate of occupancy has been issued. Documentation shall be immediately available on-site inspection and review.

1. Any contractors entering the site to perform hot work each day have been instructed in the hot work safety requirements in the

*Florida Fire Prevention Code*, and hot work is performed only in areas approved by the site safety director.

2. Temporary heating equipment is maintained away from combustible materials in accordance with the equipment manufacturer's instructions.

3. Combustible debris, rubbish and waste material is removed from the building in areas where work is not being performed.

4. Temporary wiring does not have exposed conductors.

5. Flammable liquids and other hazardous materials are stored in locations that have been approved by the site safety director when not involved in work that is being performed.

6. Fire apparatus access roads required by the *International Fire Code* are maintained clear of obstructions that reduce the width of the usable roadway to less than 20 feet (6096 mm).

7. Fire hydrants are clearly visible from access roads and are not obstructed.

8. The location of fire department connections to standpipe and in-service sprinkler systems are clearly identifiable from the access road and such connections are not obstructed.

9. Standpipe systems are in service and continuous to the highest work floor, as specified in Section 3311.

10. Portable fire extinguishers are available in locations required by Sections 3309 and for roofing operations in accordance with the

*Florida Fire Prevention Code*.

11. Where a fire watch is required, fire watch records complying with the International Fire Code are up-to-date.

**3302.3.1 Violations.** Failure to properly conduct, document and maintain documentation required by this section shall constitute an unlawful act in accordance with Section 114.1 and shall result in the issuance of a notice of violation to the site safety director in accordance with Section 114.2. Upon the third offense, the Building Official is authorized to issue a stop work order in accordance with Section 115, and work shall not resume until satisfactory assurances of future compliance have been presented to and approved by the Building Official.

**(F11090 / G199-21 Part I AS)**

**3301.2 Storage and placement.** Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or ~~adjoining~~ adjacent property for the duration of the construction project.

**3302.2 Manner of removal.** Waste materials shall be removed in a manner that prevents injury or damage to persons, ~~adjoining~~ adjacent properties and public rights-of-way.

**3303.5 Water accumulation.** Provision shall be made to prevent the accumulation of water or damage to any foundations on the premises or ~~the adjoining~~on adjacent property.

**SECTION 3307**

**PROTECTION OF ~~ADJOINING~~ADJACENT PROPERTY**

**[BS] 3307.1 Protection required.** ~~Adjoining~~ Adjacent public and private property shall be protected from damage during construction, remodeling and demolition work. Protection shall be provided for footings, foundations, party walls, chimneys, skylights and roofs.

Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the *owners* of ~~adjoining~~ adjacent ~~buildings~~ property advising them that the excavation is to be made and that the ~~adjoining~~ adjacent ~~buildings~~ property should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

**(S10950 / G9-22 AS)/ (S10952 / G11-22 AS)**

**[BS] 3307.2 Excavation retention systems.** Where a retention system is used to provide support of an excavation for protection of adjacent property or *structures*, the system shall conform to the requirements in Sections 3307.2.1 through 3307.2.3.

**[BS] 3307.2.2 Excavation retention system monitoring.** The retention system design shall include requirements for monitoring of the system and adjacent property or *structures* for horizontal and vertical movement.

**(S10952 / G11-22 AS)**

Add new section 3303.8 to read as follows:

**3303.8 Resiliency and Safe Structures**.

**3303.8.1 Definitions.** As used in this section, the term:

**Coastal construction control line.** Means the boundary established under s. 161.053.

**Law.** Means any statute, ordinance, rule, regulation, policy, resolution, code enforcement order, agreement, or other governmental act.

**Local government.** Means a municipality, county, special district, or any other political subdivision of the state.

**Nonconforming structure.** Means a structure or building that does not conform to the base flood elevation requirements for new construction issued by the National Flood Insurance Program for the applicable flood zone.

**Replacement structure.** Means a new structure or building built on a property where a structure or building was demolished or will be demolished in accordance with this section.

**3303.8.2 Qualifying structures and buildings.**

(a) Subject to paragraph (b), this section applies to any structure or building on a property in which all or a portion of such property is seaward of the coastal construction control line and the structure or building is:

1. A nonconforming structure;

2. A structure or building determined to be unsafe by a local building official; or

3. A structure or building ordered to be demolished by a local government that has proper jurisdiction.

(b) This section does not apply to any of the following structures or buildings:

1. A structure or building individually listed in the National Register of Historic Places.
2. A single-family home.
3. A contributing structure or building within a historic district which was listed in the National Register of Historic Places before January 1, 2000.

4. A structure or building located on a barrier island in a municipality with a population of less than 10,000 according to the most recent decennial census and which has at least six city blocks that are not located in zones V, VE, AO, or AE, as identified in the Flood Insurance Rate Map issued by the Federal Emergency Management Agency.

**3303.8.3 Restrictions on demolition prohibited.** A local government may not prohibit, restrict, or prevent the demolition of any structure or building identified in paragraph 3303.8.2(a) for any reason other than public safety. A local government may only administratively review an application for a demolition permit sought under this section for compliance with the Florida Building Code, the Florida Fire Prevention Code, and the Life Safety Code, or local amendments thereto, and any regulation applicable to a similarly situated parcel. The local government may not impose additional local land development regulations or public hearings on an applicant for a permit under this section.

**3303.8.4 Restrictions on redevelopment prohibited.** A local government shall authorize replacement structures for qualifying buildings identified in paragraph 3303.8.2(a) to be developed to the maximum height and overall building size authorized by local development regulations for a similarly situated parcel within the same zoning district. A local government may not do any of the following:

(a) Limit, for any reason, the development potential of replacement structures below the maximum development potential allowed by local development regulations for a similarly situated parcel within the same zoning district.

(b) Require replication of a demolished structure.

(c) Require the preservation of any elements of a demolished structure.

(d) Impose additional regulatory or building requirements on replacement structures which would not otherwise be applicable to a similarly situated vacant parcel located in the same zoning district.

(e) Impose additional public hearings or administrative processes that would not otherwise be applicable to a similarly situated vacant parcel within the same zoning district.

**3303.8.5 Development applications.** Development applications submitted for replacement structures for qualifying buildings identified in paragraph 3303.8.2(a) must be processed in accordance with the process outlined in local land development regulations including any required public hearings in front of the local historic board. However, a local government may not impose additional public hearings or administrative processes that would not otherwise be applicable to a similarly situated vacant parcel within the same zoning district.

**3303.8.6 Application and construction.** This section applies retroactively to any law adopted contrary to this section or its intent and must be liberally construed to effectuate its intent. This section does not apply to or affect s. 553.79(26), Florida Statutes.

**3303.8.7 Preemption.** A local government may not adopt or enforce a law that in any way limits the demolition of a structure identified in paragraph (3)(a) or that limits the development of a replacement structure in violation of subsection (5). A local government may not penalize an owner or a developer of a replacement structure for a demolition pursuant to this section or otherwise enact laws that defeat the intent of this section. Any local government law contrary to this section is void.

**(Code language for consistency with HB 267 – bill effective date – July 1, 2025)**

**CHAPTER 34 RESERVED**

**No change**

**CHAPTER 35 REFERENCED STANDARDS**

**See also the attached**

Revise reference standard as follows:

D6878/D6878M—21 Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing . . . . . . . . . . . . . . . . . .1507.~~13~~12.2

R-FBC-B - Ch. 35 – Errata #1

ASTM D5665/D5665M-~~17~~99a (2021) Standard Test Method for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength Properties of Fire-Retardant-Treated Lumber . . . . . . 2303.2.5.2

R-FBC-B - Ch. 35 – Errata #2

ANSI/AISC 360-~~16~~22 Specification for Structural Steel Buildings

**:**

S-FBC-B – Ch. 35 – Glitch #3

2001—~~20~~ 18 Standard on Clean Agent Fire Extinguishing Systems . . . . . . . . .. . . . . . . . . 904.10

F-FBC- B-Ch. 35 – Errata #4

**Add new standard(s) as follows:**

American National Standards Institute 25 West 43rd Street, Fourth Floo

**ANSI**

New York, NY 10036 E1.21-2013 Entertainment Technology: Temporary Structures Used for Technical Production of Outdoor

Entertainment Event

ES1.7-2021 Event Safety Requirements - Weather Preparednes

(R11175 / S116-22)

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11153 / S84-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11155 / S86-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11156 / S87-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11157 / S88-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11158 / S89-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11168 / S105-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11171 / S110-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

(**S11174 / S114-22 AS)**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11167 / S103-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11160 / S94-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11154 / S85-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11162 / S97-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11163 / S98-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11165 / S100-22 AS)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11182 / S123-22)**

**Add new standard(s) as follows:**

American Society of Civil Engineers Structural Engineering Institute

**ASCE/SEI**

1801 Alexander Bell Drive

Reston, VA 20191

7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

**(S11182 / S123-22)**

ASTM International 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428

**ASTM**

D5878-19 Standard Guides for Using Rock-Mass Classification Systems for Engineering Purpose

**(S11197 / S148-22 AS)**

**Add new standard(s) as follows:**

ASTM International 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428

**ASTM**

D6913/D6913M-17 Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

**(S11201 / S151-22 AS)**

**Add new standard(s) as follows:**

American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48331-3439

**ACI**

CODE 440-22 Structural Concrete Buildings Reinforced Internally with Fiber Reinforced Polymer (FRP) Bars – Code Requirements

ASTM International 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428

**ASTM**

D7957/D7957M-17 Standard Specification for Solid Round Glass Fiber Reinforced Polymer Bars for Concrete Reinforcement

**(S11223 / S174-22)**

American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48331-3439

**ACI**

CODE 440.11-22 Structural Concrete Buildings Reinforced Internally with Fiber Reinforced Polymer (FRP) Bars – Code Requirements

**(S11223 / S174-22 AMPC1)**

**TMS**

The Masonry Society 105 South Sunset Street, Suite Q Longmont, CO 80501-6172

**TMS**

402-22 Building Code Requirements for Masonry Structures

**(S11234 / S182-22 AS)**

**MHI**

Material Handling Institute 8720 Red Oak Blvd. Suite 201

Charlotte, NC 28217

ANSI/MH 28.2-2022 Design, Testing and Utilization of Industrial Boltless Steel Shelving

**(S11242 / S191-22)**

**MHI**

Material Handling Institute 8720 Red Oak Blvd. Suite 201

Charlotte, NC 28217

ANSI/MH 28.3-22 Design, Testing and Utilization of Industrial Steel Work Platforms

**(S11244 / S193-22)**

**Delete and substitute as follows:**

**SDI**

Steel Deck Institute 2661 Clearview Road #3 Allison Park, PA 15101

**SDI**

~~SDI NC—2017~~ ~~Standard for Noncomposite Steel Floor Deck~~

SDI SD-2022 Standard for Steel Deck

**Delete without substitution:**

**SDI**

Steel Deck Institute 2661 Clearview Road #3 Allison Park, PA 15101

**SDI**

~~SDI RD—2017~~ ~~Standard for Steel Roof Deck~~

~~SDI-C—2017~~ ~~Standard for Composite Steel Floor Deck—Slabs~~

**(S11245 / S194-22 AS)**

**ASTM**

ASTM International 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428

**ASTM**

E2768 -11(2018) Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)

**(F11251 / S201-22)**

**ASTM**

**ASTM**

ASTM International 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428

**ASTM**

D8223-19 Standard Practice for Evaluation of Fire-Retardant Treated Laminated Veneer Lumber

**(S11254 / S203-22 AS)**

**ASTM**

ASTM International 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428

**ASTM**

A641/A641M-19 Specification for Zinc-coated (Galvanized) Carbon Steel Wire

**(S11262 / S215-22)**

**GA**

Gypsum Association 962 Wayne Avenue, Suite 620 Silver Spring, MD 20910

**GA**

GA-253-2021 Application of Gypsum Sheathing

**(S11283 / S239-22 AS)**

**CHAPTER 36 FLORIDA FIRE PREVENTION CODE**

No change

**Appendix P Sleeping Lofts**

APPENDIX P SLEEPING LOFTS

**SECTION P101 GENERAL .**

**P101.1 General .** Where provided in Group R occupancies ,sleeping lofts shall comply with the provisions of this code, except as modified by this appendix. Sleeping lofts constructed in compliance with this appendix shall be considered a portion of the story below. Such sleeping lofts shall not contribute to either the building area or number of stories as regulated by Section 503.1. The sleeping loft floor area shall be included in determining the fire area.

The following sleeping lofts are exempt from compliance with this appendix:

1. Sleeping lofts with a maximum depth of less than 3 feet (914 mm).

2. Sleeping lofts with a floor area of less than 35 square feet (3.3 m2).

3. Sleeping lofts not provided with a permanent means of egress.

**P101.2 Sleeping loft limitations .** Sleeping lofts shall comply with the following:

1. The sleeping loft floor area shall be less than 70 square feet (6.5 m2).

2. The sleeping loft ceiling height shall not exceed 7 feet (2134 mm) for more than one half of the sleeping loft floor area.

The provisions of this appendix shall not apply to sleeping lofts that do not comply with Items 1 and 2.

**P101.3 Sleeping loft ceiling height .** The clear height below the sleeping loft floor construction shall not be less than 7 feet (2134 mm). The ceiling height above the finished floor of the sleeping loft shall not be less than 3 feet (914 mm). Portions of the sleeping loft with a sloped ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not contribute to the sleeping loft floor area.

**P101.4 Sleeping loft area .** The aggregate area of all sleeping lofts and mezzanines within a room shall comply with Section 505.2.1.

**Exception:** The area of a single sleeping loft shall not be greater than two-thirds of the area of the room in which it is located, provided that no other sleeping lofts or mezzanines are open to the room in which the sleeping loft is located.

**SECTION P102 DEFINITIONS .**

**P102.1 General .** The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

**SLEEPING LOFT.** A space on an intermediate level or levels between the floor and ceiling of a Group R occupancy dwelling or sleeping unit, open on one or more sides to the room in which the sleeping loft is located.

**SECTION P103 MEANS OF EGRESS .**

**P103.1 General .** Where a permanent means of egress is provided for sleeping lofts, the means of egress shall comply with Chapter 10 of this code, as modified by Sections P103.2 through P103.6.

**P103.2 Ceiling height at sleeping loft means of egress .** A minimum ceiling height of 3 feet (914 mm) shall be provided for the entire width of the means of egress from the sleeping loft.

**P103.3 Stairways .** Stairways providing egress from sleeping lofts shall be permitted to comply with Sections P103.3.1 through P103.3.3.

**P103.3.1 Width .** Stairways providing egress from a sleeping loft shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The width below the handrail shall be not less than 20 inches (508 mm).

**P103.3.2 Treads and risers .** Risers for stairs providing egress from a sleeping loft shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas:

1. The tread depth shall be 20 inches (508 mm) minus four-thirds of the riser height.

2. The riser height shall be 15 inches (381 mm) minus three-fourths of the tread depth.

**P103.3.3 Landings .** Landings at stairways providing egress from sleeping lofts shall comply with Section 1011.6, except that the depth of landings in the direction of travel shall be not less than 24 inches (508 mm).

**P103.4 Alternating tread devices .** Alternating tread devices shall be permitted as a means of egress from sleeping lofts, where the sleeping loft floor is no more than 10 feet (3048 mm) above the floor of the room to which it is open. Handrails and treads of such alternating tread devices shall comply with Section 1011.14.

**P103.5 Ship's ladders .** Ship’s ladders shall be permitted as a means of egress from sleeping lofts where the sleeping loft floor is no more than 10 feet (3048 mm) above the floor of the room to which it is open. Handrails and treads of such ship’s ladders shall comply with Section 1011.15.

**P103.6 Ladders .** Ladders shall be permitted as a means of egress from sleeping lofts where the sleeping loft floor is no more than 10 feet (3048 mm) above the floor of the room to which it is open. Such ladders shall comply with Sections P103.6.1 and P103.6.2.

**P103.6.1 Size and capacity .** Ladders providing egress from sleeping lofts shall have a rung width of not less than 12 inches (305 mm), and 10-inch (254 mm) to 14-inch (356 mm) spacing between rungs. Ladders shall be capable of supporting a 300-pound (136 kg) load on any rung. Rung spacing shall be uniform within 3/8 inch (9.5 mm).

**P103.6.2 Incline .** Ladders shall be inclined at 70 to 80 degrees from horizontal.

**SECTION P104 GUARDS .**

**P104.1 General .** Guards complying with Section 1015 of this code shall be provided at the open sides of sleeping lofts.

**Exception:** The guard height at sleeping lofts shall be permitted to be 36 inches (914 mm) where the ceiling height of the sleeping loft is 42 inches (1067 mm) or less.

**SECTION P105 SMOKE ALARMS .**

**P105.1 General .** Listed single- or multiple-station smoke alarms complying with UL 217 shall be installed in all sleeping lofts.

**(F11033 / G112-21 Part I AMCP2)**