2024 IBC SIGNIFICANT CHANGES			
SECTION	**CHANGE**	**LANGUAGE**	**IMPACT and ANALYSIS**
105.2 item 2 Fences Not Exempt	Modification	**105.2 Work exempt from permit.** Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following: Building: 2. Fences, other than swimming pool barriers, not over 7 feet (2134 mm) high.	Minimal impact Removes exception where minimal height fences used as barriers were exempt from permitting.
202 Definition	Clarification	**SECTION 202** DEFINITIONS LIMITED VERBAL OR PHYSICAL ASSISTANCE. Describes persons who, because of age, physical limitations, cognitive limitations, treatment or chemical dependency, may not independently recognize, respond or evacuate without limited verbal or physical assistance during an emergency situation.	Minimal impact Identifies a clearer definition of limited abilities for higher hazards

		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.	
304.1 Group B Occupancies	Clarification	**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: - Electronic data processing entry - Lithium-ion or lithium metal battery testing - Research and development	Minimal impact Allows for B occupancy
306 Group F Occupancy	Modification	**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: - Beverages: over 16 percent 20 percent alcohol content	Medium impact Changes thresholds for factory and moderate hazards when storage of liquids (alcohol) is in question

		- Energy storage systems (ESS) and equipment containing lithium-ion or lithium metal batteries - Lithium-ion batteries - Vehicles powered by lithium-ion or lithium metal batteries (No changes to other listed items.) **306.3 Low-hazard factory industrial, Group F-2.** Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials that during finishing, packing or processing do not involve a significant fire hazard shall be classified as Group F-2 occupancies and shall include, but not be limited to, the following: - Beverages: up to and including 16 percent 20 percent alcohol content	
Table 509.1	Modification	Storage rooms and waste and linen collection rooms considered as incidental use areas in ambulatory care facilities must now be provided with both automatic sprinkler protection and separation from the remainderof the building with minimum one-hour fire barriers and/or horizontal assemblies.	Medium impact Changes how linen rooms and incidental areas are treated in relation to the needs of the entire floor or area

706.1.2 **706.2 Deemed comply FW**	Modification	**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. **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.	Medium impact Allows for construction following NFPA guidelines to meet intent of fire walls
707.8 Fire Barrier Joints	Clarification	**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	High impact Changes fire rating installation for vertical and horizontal joints

		floor or roof sheathing, slab or deck above, and the exterior vertical wall intersection with other fire-resistance-rated wall assemblies shall comply with Section 715.	
710.4 Cont. of smoke barriers I2	Modification	**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 weigh not less than 1 pound per square foot (4.882 kg/m2) and where the HVAC system is fully ducted in accordance with Section 603 of the International Mechanical Code.	High impact Allows for drop ceiling in certain areas to act as smoke blocking
903.2 903.3.1.1.3 Sprinklers for batteries	Modification	**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	High impact Addresses concerns with banks of batteries and their uses in buildings

		exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries not required to have an automatic sprinkler system by Section 1207 of the International Fire 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. **903.3.1.1 NFPA 13 sprinkler systems.** Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be in-stalled throughout in accordance with NFPA 13 except as provided in Sections 903.3.1.1.1 and through 903.3.1.1.23. **903.3.1.1.3 Lithium-ion or lithium metal batteries.** Where automatic	

		sprinkler systems are required by this code for areas containing lithium-ion or lithium metal batteries, the design of the system shall be based upon a series of fire tests. Such tests shall be conducted or witnessed and reported by an ap-proved testing laboratory involving test scenarios that address the range of variables associated with the intended arrangement of the hazards to be protected.	
903.2 Sprinklers based on occupancy type--Batteries	Modification	**903.2.2 Group B.** An automatic sprinkler system shall be provided for Group B occupancies as required in Sections 903.2.2.1 and 903.2.2.2. **903.2.2 903.2.2.1 Ambulatory care facilities.** (No changes to code text.) **903.2.2.2 Laboratories involving testing, research and development.** An automatic sprinkler system shall be installed throughout the fire areas utilized for the research and development or testing of lithium-ion or lithium metal batteries. **903.2.4 Group F-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1	High impact Addressing the need for sprinklers in occupancies having battery or ess storage

		occupancy where one of the following conditions exists: (No changes to Conditions 1 through 3.) 4. A Group F-1 occupancy is used to manufacture lithium-ion or lithium metal batteries. 5. A Group F-1 occupancy is used to manufacture vehicles, energy storage systems or equipment containing lithium-ion or lithium metal batteries where the batteries are installed as part of the manufacturing process. **903.2.7 Group M.** An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists: (No changes to Conditions 1 through 3.) **903.2.7.3 Lithium-ion or lithium metal battery storage**. An automatic sprinkler system shall be provided in a room or space within a Group M occupancy where required for the storage of lithium-ion or lithium metal batteries by Section 320 of the International Fire Code or Chapter 32 of the International Fire Code.	

		903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists: (No changes to Conditions 1 through 4.)	
907.2 Alarm and Detection	modification	**907.2 Where required—new buildings and structures.** (No changes to code text. Subheadings are shown for context.) **907.2.2 Group B.** (No changes to code text.) **907.2.2.2 Laboratories involving 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. **907.2.4 Group F.** (No changes to code text.) **907.2.4.1 Manufacturing involving lithium-ion or lithium metal batteries.** A	High impact Requires additional detection in certain instances and where certain battery types are utilized

		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 manufacture of vehicles, energy storage systems or equipment containing lithium-ion or lithium metal batteries occurs when the batteries are installed as part of the manufacturing process. **907.2.7 Group M.** Fire alarm systems shall be required in Group M occupancies in accordance with Sections 907.2.7.1 and 907.2.7.2. **907.2.7 907.2.7.1 Group M Occupant load.** (No changes to code text.) **907.2.7.1 907.2.7.1.1 Occupant notifcation.** (No changes to code text.) **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-sensingdetection 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 320 of the International Fire Code. **907.2.10 Group S.** A fire alarm system shall be installed in a Group S occupancy as required by Sections 907.2.10.1 and 907.2.10.2. **907.2.10 907.2.10.1 Group S Public- and self-storage occupancies.** (No changes to code text.) **907.2.10.2 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 by Section 320 of the International Fire Code.	
907.2.11 Smoke alarms near appliances	Modification	**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.	High impact Requires additional hardwired and reliable alarms near permanently installed cooking appliances

		907.2.11.3 Installation near cooking appliances. Smoke alarms shall not be installed not less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance. in the following locations unless this would pre-vent 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 not less than 6 feet (1829 mm) 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 in-stalled less than 10 feet (3048 mm) horizontally from a permanently in-stalled cooking appliance. 3. Photoelectric smoke alarms shall not be installed less than 6 feet (1829 mm)	

		horizontally from a permanently installed cooking appliance.	
907.5.2.1.3 Audibal Alarm Signal Frequency	Modification	**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. **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. **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	High impact Requires frequency sounders in certain occupancies

		listed notification appliance or a smoke detector with an integral 520- Hz sounder.	
915 Carbon Monoxide Detection	Modification	**915.1 General.** Carbon monoxide (CO) detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6. Carbon monoxide detection shall be installed in existing buildings in accordance with Chapter 11 of the International Fire Code. Exception: Carbon monoxide detection is not required in Group S, Group F and Group U occupancies that are not normally occupied. **915.1.1 Where required.** Carbon monoxide detection shall be installed provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the following conditions in Sections 915.1.2 through 915.1.6 exist. 1. In buildings that contain a CO source. 2. In buildings that contain or are supplied by a CO-producing forced-air	High impact Enhances protections for CO producing items in buildings

		furnace. 2. In buildings with attached private garages. 4. In buildings that have a CO-producing vehicle that is used within the building. **(Sections 915.1.2 through 915.1.6 were deleted in their entirety.)** **915.2 Locations.** Where required by Section 915.1.1, carbon Carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through 915.2.3. **915.2.1 Dwelling units.** Carbon monoxide detection shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance CO source is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom. **915.2.2 Sleeping units.** Carbon monoxide detection shall be installed in sleeping units.	

		Exception: Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area in the immediate vicinity of the sleeping unit where the sleeping unit or its attached bathroom does not contain a fuel-burning appliance CO source and is not served by a CO-producing forced-air furnace. **915.2.3 Group E occupancies**. Carbon A carbon monoxide system that uses carbon monoxide detectors shall be installed in classrooms in Group E occupancies.Carbon Alarm signals from carbon monoxide detectors alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel. (No change to existing exception.) **915.2.4 CO-producing forced-air furnace.** Carbon monoxide detection complying with Item 2 of Section 915.1.1 shall be installed in all enclosed rooms and spaces served by a fuel-burning, forced-air furnace. Exceptions: 1. Where a carbon monoxide detector is	

		provided in the first room or space served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location. 2. Dwelling units that comply with Section 915.2.1. **915.2.5 Private garages.** Carbon monoxide detection complying with Item 3 of Section 915.1.1 shall be installed within enclosed occupiable rooms or spaces that are contiguous to the attached private garage. Exceptions: 1. In buildings without communicating openings between the private ga-rage and the building. 2. In rooms or spaces located more than one story above or below a private garage. 3. Where the private garage connects to the building through an open-ended corridor. 4. An open parking garage complying with Section 406.5 or an enclosed parking	

		garage complying with Section 406.6 shall not be considered a private garage. 5. Dwelling units that comply with Section 915.2.1. **915.2.6 All other occupancies.** For locations other than those specified in Sections 915.2.1 through 915.2.5, carbon monoxide detectors shall be installed on the ceiling of enclosed rooms or spaces containing CO-producing devices or served by a CO source forced-air furnace. Exception: Where environmental conditions prohibit the installation of a carbon monoxide detector in an enclosed room or space, carbon monoxide detectors shall be installed in an approved enclosed location contiguous to the room or space that contains a CO source. **915.3 Carbon monoxide detection.** Carbon monoxide detection re-quired by Sections 915.1 through 915.2.3 shall be provided by carbon monoxide alarms complying with Section 915.4 or carbon monoxide detection systems complying with Section 915.5.	

		915.3.1 Alarm limitations. Carbon monoxide alarms shall only be installed in dwelling units and in sleeping units. They shall not be installed in locations where the code requires carbon monoxide detectors to be used. **915.3.2 Fire alarm system required.** New buildings that are required by Section 907.2 to have a fire alarm system and by Section 915.2 to have carbon monoxide detectors shall be connected to the fire alarm system in accordance with NFPA 72. **915.3.3 Fire alarm systems not required.** In new buildings that are not required by Section 907.2 to have a fire alarm system, carbon monoxide detection shall be provided by one of the following: 1. Carbon monoxide detectors connected to an approved carbon monoxide detection system in accordance with NFPA 72. 2. Carbon monoxide detectors connected to an approved combination system in accordance with NFPA 72. 3. Carbon monoxide detectors connected to an approved fire alarm system	

		in accordance with NFPA 72. 4. Where approved by the fire code official, carbon monoxide alarms maintained in accordance with the manufacturer's instructions. **915.3.4 Installation**. Carbon monoxide detection shall be installed in accordance with NFPA 72 and the manufacturer's instructions. **(No changes to 915.4, 915.4.1 or 915.4.2. Section 915.4.3 was deleted.)** **915.4.4 915.4.3 Combination alarms.** (No changes to code text.) **915.4.4 Interconnection.** Where more than one carbon monoxide alarm is required to be installed, carbon monoxide alarms shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.	

		915.5 Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 915.5.1 through 915.5.3. **915.5.1 General.** Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075. 915.5.2 Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 915.2. These locations supersede the locations specified in NFPA 72 720. **915.5.3 Combination detectors.** Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided that they are listed in accor-dance with UL 268 and UL 2075.	
1013.5.1 Photolumin. Exit sign	Clarification	**1013.5.1 Photoluminescent exit signs.** Photo-lumine-scent exit signs shall be provided with an illumination source to	High impact Will require special means to charge per specifications/5ft candle dedicated light in darker

		charge the exit sign in accordance with the manufacturer's instructions.	areas or occupancies must be installed to charge light
1107.2 EV charging	Modification	**1107.2 Electrical vehicle charging stations.** Electrical vehicle charging stations shall comply with Sections 1107.2.1 and 1107.2.2. Exceptions: 1. Electrical vehicle charging stations provided to serve Group R-2, R-3 and R-4 occupancies are not required to comply with this section. 2. Electric vehicle charging stations used exclusively by buses, trucks, other delivery vehicles, law enforcement vehicles and motor pools are not required to comply with this section.	Low impact Accessibility standards for larger vehicle chargers
1208 Dwelling unit size	Modification	**1208.3 Dwelling unit size.** Dwelling units shall have a minimum of 190 square feet (17.7 m2) of habitable space. **1208.3 1208.4 Room area.** Every dwelling unit shall have not less than one room that shall have not less than 120 square feet	Low impact Changes dimensions of IBC related dwelling rooms

		(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. **1208.4 1208.5 Efficiency dwelling units.** Efficiency dwelling units shall conform to the requirements of the code except as modified herein: 1. The unit shall have a living room of not less than 190 square feet (17.7 m2) of floor area. The unit's habitable space shall comply with Sections 1208.1 through 1208.4.	
2210 Metal buildings	Addition	**SECTION 202** **DEFINITIONS** **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	High impact Creates definition and provisions for metal buildings

		exterior wall cladding. The system is manufactured in a manner that permits plant and/or field inspection prior to assembly or erection. **SECTION 2210** **METAL BUILDING SYSTEMS** **2210.1 General.** The design, fabrication and erection of a metal building system shall be in accordance with the provisions of this section. **2210.1.1 Design.** The design of metal building systems shall be in accordance with Sections 2210.1.1.1 through 2210.1.1.4, as applicable. **2210.1.1.1 Structural steel.** The design, fabrication and erection of structural steel shall be in accordance with Section 2202. **2210.1.1.2 Cold-formed steel.** The design of cold-formed carbon and low-alloy steel structural members shall be in accordance with Section 2204. **2210.1.1.3 Steel joists.** The design of steel joists shall be in accordance with Section 2207.	

		2210.1.1.4 Steel cable. The design, fabrication and erection of steel cables, including related connections, shall be in accordance with Section 2214. **2210.2 Seismic design.** Where required, the seismic design, fabrication and erection of the structural steel seismic force-resisting system shall be in accordance with Section 2202.2.1 or 2202.2.2, as applicable.	
3101 Temporary Structures	Modification	**SECTION 202** **DEFINITIONS** **PUBLIC-OCCUPANCY TEMPORARY STRUCTURE**. Any building or structure erected for a period of 1 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.	High impact Creates more concise criteria for temporary structure use, construction, and occupancies

		TEMPORARY EVENT. A single use during the service life of a public-occupancy temporary structure at a given location that 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. Temporary structures include a range of structure types (public-occupancy temporary structures, temporary special event structures, tents, umbrellas and other membrane structures, re-locatable buildings, temporary bleachers, etc.) for a range of purposes (storage, equipment protection, dining, workspace, assembly, etc.). **3103.1 General.** The provisions of Sections 3103.1 through 3103.4 3103.8 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 180 days shall also comply with the International Fire 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 within the confines of an existing structure are not required to comply with Section 3103.6. **3103.1.1 Extended period of service time.** Public-occupancy temporary structures shall be permitted to remain in service for 180 days or more with-out 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 3103.6. 4. Relocation of the public-occupancy temporary structure shall require a new 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. **3103.1.1 3103.1.2 Conformance.** (No changes to code text.) **3103.1.2 3103.1.3 Permit required.** (No changes to code text.) **(No changes to Sections 3103.2 through 3103.4.)** **3103.5 Bleachers.** Temporary bleachers, grandstands and folding and telescopic seating that are not building elements shall comply with ICC 300. **3103.6 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 3103.6.1 through 3103.6.4. Exception: Where approved, live loads less than those prescribed by Table 1607.1 shall be permitted provided a registered design professional who demonstrates	

		that a rational approach has been used and that such reductions are warranted. Temporary non-building structures ancillary to public assemblies or special events, 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. **3103.6.1 Structural loads.** Public-occupancy temporary structures shall be designed in accordance with Chapter 16, except as modified by Sections 3103.6.1.1 through 3103.6.1.6 **3103.6.1.1 Snow loads.** Snow loads on public-occupancy temporary structures shall be determined in accordance with Section 1608. The ground snow loads, pg, in Section 1608 shall be modified according to Table 3103.6.1.1.	

		Exception: Ground snow loads, pg, for public-occupancy temporary structures that employ controlled occupancy procedures per Section 3103.8 shall be permitted to be modified using a ground snow load reduction factor of 0.65 instead of the ground snow load reduction factors in Table 3103.6.1.1.Where the public-occupancy temporary structure is not subject to snow loads or not constructed and occupied during times when snow is to be expected, snow 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 snow is to be expected, one of the following conditions is met: 1. The design is reviewed and modified, as appropriate, to account for snow loads. 2. Controlled occupancy procedures in accordance with Section 3103.8 are implemented. **TABLE 3103.6.1.1 Reduction Factors for Ground Snow Loads for Public-Occupancy Temporary Structures**	

		Risk Category **Service Life** **≤ 10 yr > 10 yr** **II 0.7 1.0** **III 0.8 1.0** **IV 1.0 1.0** **3103.6.1.2 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 3103.6.1.2. **3103.6.2 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. **3103.6.3 Installation and maintenance inspections.** A qualified person shall inspect public-occupancy temporary structures that are assembled us-ing transportable and reusable materials. Components shall be inspected when purchased or acquired 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 de-signed and initially erected. **3103.6.4 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 or due to the effects of weathering shall be replaced or repaired. **3103.7 Serviceability.** The effects of structural loads or conditions shall not adversely affect the serviceability or performance of the public-occupancy temporary structure. **3103.8 Controlled occupancy procedures.** Where controlled occupancy procedures are required to be implemented for public-occupancy temporary structures in Section 3103.6.1, the procedures shall comply with this section and 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.	
3111.3.5 Elevated Pv Structure	Addition	**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. Exception: Elevated PV support structures that are installed over agricultural uses. **3111.3.5.1 Photovoltaic (PV) panels installed over open-grid framing**	High impact New definition and provisions for photovotaic systems

		or a noncombustible 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 Photovoltaic (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. **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.	

		SECTION 202 **DEFINITIONS** **PHOTOVOLTAIC (PV) PANEL SYSTEM, GROUND MOUNTED**. An independent photovoltaic (PV) panel system without useable space underneath, in-stalled directly on the ground. **PHOTOVOLTAIC (PV) SUPPORT STRUCTURE, ELEVATED.** An independent photovoltaic (PV) panel support structure designed with usable space underneath with a minimum clear height of 7 feet 6 inches (2286 mm), intended for secondary use such as providing shade or parking of motor vehicles.	
Appendix P Sleeping Lofts	addition	**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.	High impact Approves adoptable standards for sleeping lofts in certain instances

		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 be not less than 7 feet (2134 mm). The ceiling height above the finished floor of the sleeping loft shall be	

		not 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 term shall, for the purposes of this appendix,have the meaning 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 (610 mm). **P103.4 Alternating tread devices.** Alternating tread devices shall be per-mittedas a means of egress from sleeping lofts, where the sleeping loft floor is not 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. lofts where the sleeping loft floor is not 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 (1.22 to 1.4 rad) 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.	