Section 915.3 Carbon Monoxide Detection in Commercial Buildings.

(a) Introduction. This Section 915.3 covers the provision of carbon monoxide detection, and the application, installation, performance, and maintenance of carbon monoxide alarms and carbon monoxide detection systems, in new and existing commercial buildings.

(b) Definitions. In this Section 915.3, the following terms shall have the following meanings, unless a different meaning is clearly required by the context:

(1) APPROVED**.** The term "approved" means acceptable to the code enforcement official for the authority having jurisdiction.

(2) AUTHORITY HAVING JURISDICTION**.** The term "authority having jurisdiction" with respect to a commercial building means the governmental unit or agency responsible for enforcing the Uniform Code with respect to such commercial building.

(3) CARBON MONOXIDE SOURCE. The term "carbon monoxide source" means any appliance, equipment, device or system that may emit carbon monoxide (including, but not limited to fuel fired furnaces; fuel fired boilers; space heaters with pilot lights or open flames; kerosene heaters; wood stoves; fireplaces; and stoves, ovens, dryers, water heaters and refrigerators that use gas or liquid fuel), garages, and other motor vehicle related occupancies.

(4) CARBON MONOXIDE-PRODUCING HVAC SYSTEM. The term "carbon monoxide-producing HVAC system" means a system that uses ducts to provide heat, ventilation and/or air-conditioning to all or any part of a commercial building, provided that:

(i) such ducts run from a carbon monoxide source to the classroom(s) and/or detection zone(s) served by such system; and/or

(i) such system is supplied with recirculated or makeup air from a classroom or detection zone that contains a carbon monoxide source.

(5) CENTRAL LOCATION. The term "central location" means the point that, in the judgment of the authority having jurisdiction, maximizes:

(i) the detection of carbon monoxide;

(ii) the notification of occupants in normally occupied areas; and

(iii) the notification of occupants prior to entering normally unoccupied areas.

(6) CLASSROOM. The term "classroom" means a room or area that:

(i) is located in a school;

(ii) is a place where classes are taught; and

(iii) is occupied or capable of being occupied by six or more persons (including students and teachers) at any one time. For the purposes of this definition, the term "school" means any building used, in whole or in part, for educational purposes, including but not limited to a building classified, in whole or in part, as Educational Group E under Chapter 3 of the 2015 IBC. The term "school" includes public schools and private schools, including but not limited to religious schools. However, the term "school" does not include a school attended only by students above the 12th grade.

(7) COMMERCIAL BUILDING. The term "commercial building" means any new or existing building that is not a one-family dwelling, a two-family dwelling, or a building containing only townhouses.

(8) DETECTION ZONE**.** The term "detection zone" means a story of a commercial

building. However:
(i) if a story is arranged so that two or more separate carbon monoxide producing HVAC systems are used to serve separate portions of the story, each such portion of the story shall be deemed to be a separate detection zone;
(ii) if a story contains one or more classrooms, each classroom shall be deemed to be a separate detection zone and the portion, if any, of the story that is not a classroom shall be deemed to be a separate detection zone;
(iii) if a portion of a story is used as a garage, the portion used as a garage shall not be deemed to be a detection zone and the portion not used as a garage shall be deemed to be a detection zone; and
(iv) if an entire story is used as a garage, such story shall not be deemed to be a detection zone.
(9) EXISTING COMMERCIAL BUILDING. The term "existing commercial building" means a commercial building that was constructed prior to December 31, 2015. For the purposes of this definition, a commercial building shall be deemed to have been constructed prior to December 31, 2015, and shall be deemed to be an existing commercial building, if:
(i) the original construction of such commercial building was completed prior to December 31, 2015; or
(ii) the complete application for the building permit for the original construction of such commercial building was filed prior to December 31, 2015.
(10) NEW COMMERCIAL BUILDING**.** The term "new commercial building" means a commercial building that is not an existing commercial building.
(11) Terms defined elsewhere. Terms that:
(i) are used in this Section 915.3;
(ii) are not defined in this subdivision; and
(iii) are defined in the 2015 IBC, the 2015 IFC, the 2015 IRC or NFPA 720 shall have the meanings ascribed to those terms by the 2015 IBC, the 2015 IFC, the 2015 IRC or NFPA 720, as applicable.
(c) Commercial buildings required to have carbon monoxide detection.
(1) General rule. Carbon monoxide detection shall be provided in accordance with the provisions of this Section 915.3 in every commercial building that:
(i) contains any carbon monoxide source (including, but not limited to, any garage or any other motor-vehicle-related occupancy);
(ii) is attached to a garage; and/or
(iii) is attached to any other motor-vehicle-related occupancy.
These requirements shall apply without regard to whether such commercial building is an existing commercial building or a new commercial building and without regard to whether such commercial building shall or shall not have been offered for sale.
(2) Exceptions.
i. Carbon monoxide detection shall not be required under this Section 915.3 in a commercial building that is:
(A) classified, in its entirety, in Storage Group S or Utility and Miscellaneous Group U under Chapter 3 of the 2015 IBC; and

(B) occupied only occasionally and only for building or equipment maintenance.
ii. Carbon monoxide detection shall not be required under this Section 915.3 in a commercial building that is a “canopy” (as that term is defined in the 2015 IFC).
iii. Carbon monoxide detection shall not be required under this Section 915.3 in a commercial building during any period when each of the following conditions is satisfied: (A) no part of such commercial building is occupied; (B) each carbon monoxide source in such commercial building is removed or disabled in a manner that makes it incapable of producing carbon monoxide; (C) each exterior opening in such commercial building is boarded, locked, blocked or otherwise protected to prevent entry by unauthorized individuals; (D) no garage or other motor-vehicle-related occupancy in such commercial building or attached to such commercial building is in use; and (E) each garage or other motor-vehicle-related occupancy in such commercial building or attached to such commercial building is boarded, locked, blocked or otherwise protected to prevent entry by motor vehicles or by unauthorized individuals.

(d) Detection zones required to be provided with carbon monoxide detection.

(1) General rule. Where a commercial building is required by subdivision (c) of this Section 915.3 to have carbon monoxide detection, carbon monoxide detection shall be provided in each detection zone which is located in such commercial building and in which at least one of the following triggering conditions exists:
(i) Triggering Condition 1: The presence of any carbon monoxide source in a detection zone shall be a triggering condition for such detection zone.
(ii) Triggering Condition 2: The presence in a detection zone of a duct opening or other outlet from a carbon monoxide-producing HVAC system shall be a triggering condition for such detection zone. However, the presence in a detection zone of a duct opening or other outlet from a carbon monoxide producing HVAC system shall not be deemed to be a triggering condition for such detection zone if:
(A) carbon monoxide detection is provided in the first room or area served by each main duct leaving the carbon monoxide source in such carbon monoxide-producing HVAC system and
(B) the signals from the carbon monoxide detection equipment in the first room or area served by each such main duct are automatically transmitted to an approved location.
(iii) Triggering Condition 3: The presence of a garage or other motor-vehicle related occupancy in location that is adjacent to a detection zone shall be a triggering condition for such detection zone. The presence of an adjacent garage or other motor-vehicle-related occupancy shall be a triggering condition even if there are no openings, penetrations, or air transfer openings between the detection zone and the adjacent garage or other motor-vehicle-related occupancy. However, in the case of a detection zone that is not a classroom:
(A) the presence of an adjacent garage or other motor-vehicle-related

occupancy shall not be deemed to be a triggering condition for such detection zone if the garage or other motor-vehicle-related occupancy is attached to, but not located in, the commercial building in which such detection zone is located, and the attachment between the garage or other motor-vehicle-related occupancy and the commercial building is only through a covered walkway that is open (without sidewalls or drops) on 50 percent or more of its perimeter; and

(B) the presence of an adjacent garage shall not be deemed to be a triggering condition for such detection zone if the garage is attached to, but not located in, the commercial building in which the detection zone is located, and the garage is an open parking garage that complies with Section 406.5 of the 2015 IBC.

(2) Exceptions for detection zones that are not classrooms. Notwithstanding the existence of any one or more of the triggering conditions described in paragraph (1) of this subdivision in a detection zone that is not a classroom, carbon monoxide protection shall not be required to be provided in such detection zone if:

(i) such detection zone has ambient conditions that would, under normal conditions and with all required ventilation and exhaust systems installed and operating properly, activate the carbon monoxide detection devices that otherwise would be required in such detection zone under this Section 915.3, and an alternative safety plan for the commercial building in which such detection zone is located shall have been approved by the authority having jurisdiction and implemented; or

(ii) such detection zone is open (without sidewalls or drops) on 50 percent or more of its perimeter, and there is no occupiable area within such detection zone that is not open on 50 percent or more of its perimeter.

(e) Placement of carbon monoxide detection. Where a detection zone is required by subdivision (d) of this Section 915.3 to be provided with carbon monoxide detection, the carbon monoxide detection shall be placed as provided in this subdivision.

(1) Detection zones less than 10,000 square feet. Where carbon monoxide detection is required to be provided in a detection zone having an area less than 10,000 square feet, the carbon monoxide detection shall be placed in a central location within such detection zone.

(2) Detection zones 10,000 square feet or larger.

(i) General rule. Where carbon monoxide detection is required to be provided in a detection zone having an area 10,000 square feet or larger, carbon monoxide detection shall be placed in a central location within such detection zone and at such additional locations within such detection zone as may be necessary to assure that no point in the detection zone is more than 100 feet from carbon monoxide detection.

(ii) Exception. In the case of a detection zone having an area 10,000 square feet or larger that (A) contains one or more carbon monoxide sources, (B) is not served by a carbon monoxide-producing HVAC system, (C) is not adjacent to a garage or other motor-vehicle-related occupancy, and (D) is not a classroom, compliance with the following shall be an acceptable alternative

to compliance with Section 915.3(e)(2)(i): one carbon monoxide detection device shall be placed in a central location within such detection zone and, for each carbon monoxide source located in such detection zone, one additional carbon monoxide detection device shall be placed at one of the following locations: (1) in an approved location between such carbon monoxide source and the remainder of the detection zone or (2) on the ceiling of, or at another approved location in, the room containing such carbon monoxide source.

(f) Detection equipment. Carbon monoxide detection required by this Section 915.3 shall be provided by carbon monoxide alarms complying with subdivision (g) of this section or carbon monoxide detection systems complying with subdivision (h) of this section.

(g) Carbon monoxide alarms. Carbon monoxide alarms shall comply with this subdivision.

(1) Power source.

(i) General rule. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

(ii) Exceptions.

(A) Carbon monoxide alarms powered solely by a 10-year battery shall be permitted in (I) existing commercial buildings and (II) commercial buildings without commercial electric power.

(B) If a plug-in or cord-type carbon monoxide alarm, or a battery operated carbon monoxide alarm powered by a battery with a life of less than 10 years, was installed in a particular location in an existing commercial building at any time prior to June 27, 2015 for the purpose of complying with Section 610 of the 2010 Fire Code of New York State (or with any other carbon monoxide alarm requirement applicable to at the time of such installation) and if this Section 915.3 requires installation of carbon monoxide detection at such location, such previously installed carbon monoxide alarm may remain at such location, and shall be deemed to satisfy the requirements of this Section 915.3 regarding carbon monoxide detection at such location, provided that at the end of the useful life of such previously installed carbon monoxide alarm it shall be replaced with an alarm powered by a 10-year battery or by another carbon monoxide alarm or detector that satisfies the requirements of this Section 915.3.

(2) Listing. Carbon monoxide alarms shall be listed in accordance with UL 2034.

(3) Combination alarms.

(i) General rule. A combination carbon monoxide / smoke alarm shall not be deemed to satisfy the requirements of this Section 915.3.

(ii) Exception. If a combination carbon monoxide / smoke alarm was installed in a particular location in an existing commercial building at any time prior to June 27, 2015 for the purpose of complying with Section 610 of the 2010 Fire Code of New York State (or with any other carbon monoxide alarm

requirement applicable to at the time of such installation) and if this Section 915.3 requires installation of carbon monoxide detection at such location, such previously installed combination carbon monoxide / smoke alarm may remain at such location, and shall be deemed to satisfy the requirements of this Section 915.3 regarding carbon monoxide detection at such location, provided that at the end of the useful life of such previously installed combination carbon monoxide / smoke alarm it shall be replaced with an carbon monoxide alarm or detector that satisfies the requirements of this Section 915.3 and a separate smoke alarm that satisfies all applicable smoke alarm requirements.

(4) Interconnection. In new commercial buildings, where a carbon monoxide alarm is installed in a normally unoccupied detection zone, such carbon monoxide alarm shall be interconnected with a carbon monoxide alarm that is placed in an adjacent and normally occupied detection zone. An approved sign shall be place in an approved location in the proximity of each carbon monoxide alarm installed in a normally occupied detection zone that is interconnected to one or more carbon monoxide alarms installed in one or more normally unoccupied detection zones. Such sign shall identify and describe the location of each normally unoccupied detection zone that contains any such interconnected carbon monoxide alarm.

(5) Locations. Carbon monoxide alarms shall be installed in the locations specified in subdivisions (d) and (e) of this Section 915.3.

(6) Manufacturer's instructions. Carbon monoxide alarms shall be installed, operated, and maintained in accordance with the manufacturer's instructions. However, in the event of a conflict between the manufacturer's instructions and the provisions of this Section 915.3, the provisions of this Section 915.3 shall control. In particular, but not by way of limitation, in the event of a conflict between location requirements specified in the manufacturer's installation instructions and the location requirements specified in subdivisions (d) and (e) of this Section 915.3, the location requirements specified in subdivisions (d) and (e) of this Section 915.3 shall control.

(h) Carbon monoxide detection systems. Carbon monoxide detection systems shall comply with this subdivision.

(1) General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

(2) Locations. Carbon monoxide detectors (as that term is defined in NFPA 720) shall be installed in the locations specified in subdivisions (d) and (e) of this Section 915.3. In the event of a conflict between the carbon monoxide detector location requirements specified in subdivisions (d) and (e) of this Section 915.3 and the carbon monoxide detector location requirements specified in NFPA 720, the carbon monoxide detector location requirements specified in subdivisions (d) and (e) of this Section 915.3 shall control.

(2) Combination detectors. Combination carbon monoxide / smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors provided such combination detectors are listed in accordance with UL 2075 and UL 268.

(4) Notification appliances. Notification appliances (as that term is defined in NFPA

720) shall comply with NFPA 720. Notification appliances shall be provided in the locations specified in NFPA 720 or, in the alternative, in the locations specified in subdivisions (d) and (e) and paragraph (4) of subdivision (g) of this Section 915.3 as the required locations for carbon monoxide detection.
(5) Power source. The power source for carbon monoxide detection systems shall comply with NFPA 720.
(i) Additional requirement in Group E occupancies. In a new commercial building that:
(1) has an occupant load of 31 or more; and
(2) is classified, in whole or in part, as Educational Group E under Chapter 3 of the 2015 IBC, carbon monoxide alarm signals shall be automatically transmitted to an approved on-site location that is normally staffed by school personnel during normal school hours.
(j) Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced as soon as practicable.
(k) Connection of carbon monoxide detection systems to control units and offpremises signal transmission. Carbon monoxide detection systems shall be connected to control units and off-premises signal transmission in accordance with this subdivision.
(1) Carbon monoxide detection systems. All carbon monoxide detection systems installed in accordance with subdivision (h) of this Section 915.3 shall have offpremises signal transmission in accordance with NFPA 720.
(2) New commercial buildings. All carbon monoxide detection systems in new commercial buildings that are required by Section 903 or Section 907 of the 2015 IFC to have a fire alarm control panel installed shall have off-premises signal transmission in accordance with NFPA 720.
(3) Arrangement of carbon monoxide detection system circuits. The following requirements apply to all carbon monoxide detection systems, including carbon monoxide detection systems installed prior to the effective date of this Section 915.3 and carbon monoxide detection systems installed on or after the effective date of this Section 915.3.
(i) Signal. Carbon monoxide detection systems shall not activate a fire signal to a fire alarm control panel.
(ii) Fire alarm system notification. Carbon monoxide detection systems shall not activate any notification appliance that announces a fire alarm or any other alarm that is not distinctive from a fire notification as required by NFPA 72.
(iii) On-site notification. Where notification of carbon monoxide detection system is permitted to be transmitted to approved locations, at least one approved notification appliance shall be provided within every building that transmits a signal to an approved location.
(l) Other Uniform Code provisions relating to carbon monoxide detection.
(1) Other provisions of the Uniform Code in effect prior to the effective date of this Section 915.3, including but not necessarily limited to Section 915.2 of the 2015 IFC as amended by this Supplement, require carbon monoxide detection in certain buildings and structures. Nothing in this Section 915.3 shall be deemed to repeal,

override, modify or otherwise affect any such other provision. Any building that is or hereafter becomes subject to Section 915.2 of the 2015 IFC as amended by this Supplement must comply with Section 915.2 of the 2015 IFC as amended by this Supplement, as applicable.

(2) Mixed use buildings. Certain buildings that are subject to Section 915.2 of the 2015 IFC as amended by this Supplement are also "commercial buildings" (as defined in subdivision (b) of this Section 915.3) and are also subject to this Section 915.3. Such buildings are referred to in this Section 915.3 as "mixed use buildings." Such mixed used buildings include, but are not necessarily limited to:

(i) any new or existing building that contains townhouses and also contains any use or occupancy other than townhouses or other dwelling units;

(ii) any new or existing building owned as a condominium or cooperative that contains dwelling units and also contains any use or occupancy other than dwelling units; and

(iii) any new or existing building or structure that:

(A) is classified, in whole or in part, in Educational Group E, Institutional Group I, and/or Residential Group R under Chapter 3 of the 2015 IBC;

(B) contains one or more dwelling units, sleeping units or sleeping areas; and

(C) also contains any use or occupancy other than dwelling units, sleeping units or sleeping areas.

(3) Compliance in mixed use buildings. A mixed use building shall comply with the requirements of Section 915.2 of the 2015 IFC as amended by this Supplement, as applicable, and, in addition, shall comply with the requirements of this Section 915.3. However, this paragraph shall not be construed as requiring duplicative carbon monoxide detection, and if an area in a mixed use building is provided carbon monoxide detection in accordance with the requirements of Section 915.2 of the 2015 IFC as amended by this Supplement, as applicable, such area need not be provided with additional carbon monoxide protection under this Section 915.3.

(m) Interconnection in "mixed used buildings." In the case of a new "mixed use building" (as defined in subdivision (l) of this Section 915.3), the carbon monoxide detection required by this Section 915.3 shall be interconnected with the carbon monoxide detection required by Section 915.2 of the 2015 IFC as amended by this Supplement, as applicable.

(n) Effective date. This section shall take effect on June 27, 2015.

(o) Transition period. In this Section 915.3, the term "transition period" means the period between the effective date of this section (June 27, 2015) and June 27, 2016.

(1) Owners of existing commercial buildings are encouraged to install carbon monoxide detection that complies with the requirements of this Section 915.3 in their buildings as quickly as practicable.

(2) The owner of an existing commercial building shall not be deemed to be in violation of this Section 915.3 during the transition period if such owner provides to the authority having jurisdiction a written statement certifying that such owner is attempting in good faith to install carbon monoxide detection that complies with the requirements of this Section 915.3 in such owner's existing commercial

building as quickly as practicable.
(3) The owners of all existing commercial buildings shall be required to have carbon monoxide detection that complies with the requirements of this Section 915.3 fully installed and fully operational by the end of the transition period.

7.22. 2015 IFC Section 1031 (Maintenance of the means of egress).
Section 1031 of the 2015 IFC shall be deemed to be amended by the addition of Sections 1031.10, 1031.11, and 1031.12 to read as follows:

1031.10 Capacity of means of egress. The occupant load of buildings or portions of buildings shall not exceed the capacity of the means of egress from the buildings or portions thereof. Occupant load shall be calculated as provided in Section 1004.1. Capacity of the means of egress shall be calculated as provided in Sections 1005 and 1006.
1031.11 Posting of occupant load. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved, legible, permanent design and shall be maintained by the owner or authorized agent.

1031.12 Overcrowding. It shall be prohibited for buildings, or portions thereof, to be overcrowded. The building owner or authorized agent shall be responsible to ensure buildings, or portions thereof, are not overcrowded

7.23. 2015 IFC Section 1101 (General).

Section 1101 of the 2015 IFC shall be deemed to be amended in its entirety to read as follows:
1101.1 Scope. The provisions of this chapter shall apply to existing buildings and structures constructed prior to the adoption of this code. Sections 1103, 1105, and 1106 shall apply to existing buildings and structures undergoing construction and only to the extent as required by other sections of this code, the 2015 IEBC, or the 2015 IBC. Means of egress in existing buildings and structures shall comply with the minimum egress requirements of Section 1104.

7.24. 2015 IFC Section 1103 (Fire safety requirements for existing buildings).
Sections 1103.1.1 and 1103.2 of the 2015 IFC shall be deemed to be deleted.

7.25. 2015 IFC Section 1103.9 (Carbon monoxide alarms).
Section 1103.9 of the 2015 IFC shall be deemed to be amended to read as follows:
1103.9 Carbon monoxide alarms. Existing Group I-1, I-2, I-4 and R occupancies shall be equipped with carbon monoxide alarms in accordance with Section 915.