

Uniform Code Provisions for Rail Stations

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Uniform Code Provisions for Rail Stations

Chapter 1 Scope and Administration

Section 101 Title, Scope, and Intent

101.1 Title. This publication shall be known as the 2021 edition of the *Uniform Code Provisions for Rail Stations* and is hereinafter referenced to as “this publication.” This publication is incorporated by reference into 19 NYCRR Part 1228 and made part of the New York State Uniform Fire Prevention and Building Code (the “Uniform Code”).

101.2 Scope. The provisions of this publication shall apply to the construction, *alteration*, relocation, enlargement, replacement, *repair, equipment*, use and occupancy, location, maintenance, removal, and demolition of *rail stations* as defined in this publication.

101.3 Intent. The intent of this publication is to address the unique nature of *rail stations* by establishing the minimum requirements to provide a reasonable level of safety, public health, and general welfare for *rail stations*.

Section 102 Applicability

102.1 General. Where there is a conflict between provisions of this publication and referenced codes, standards, or other parts of the Uniform Code, the provisions of this publication shall apply, regardless of which provision is more specific or more restrictive. Where there is a conflict between the provisions of *NFPA 130* and other parts of the Uniform Code or its referenced standards, with the exception of this publication as noted above, the provisions of *NFPA 130* shall apply, regardless of which provision is more specific or more restrictive.

102.2 Applicability. The provisions in this publication are part of the Uniform Code and *rail stations* shall comply with all applicable provisions and requirements of the Uniform Code, as modified, where applicable, by this publication, and with the additional provisions and requirements set forth in this publication.

102.3 Referenced codes and standards. The codes and standards referenced in this publication shall be considered to be part of the requirements of this publication to the prescribed extent of each such reference and as further regulated in Section 102.1 and 102.3.1.

102.3.1 NFPA 130. For the purposes of applying *NFPA 130* as prescribed in this publication, *NFPA 130* shall be amended as noted in Sections 102.3.1.1 and 102.3.1.2.

102.3.1.1 Referenced Publications to NFPA 130. Wherever the below noted referenced publications outlined in Section 2.2 of *NFPA 130* are referenced in *NFPA 130*, the referenced publications shall be the referenced standard as incorporated by reference into the Uniform Code as follows:

NFPA 4 - Standard for Integrated Fire Protection and Life Safety System Testing

- as published by the National Fire Protection Association, published 2015
- NFPA 10 - Standard for Portable Fire Extinguishers as published by the National Fire Protection Association, published 2018
- NFPA 13 - Standard for Installation of Sprinkler Systems as published by the National Fire Protection Association, published 2016
- NFPA 14 - Standard for the Installation of Standpipe and Hose System as published by the National Fire Protection Association, published 2016
- NFPA 22 - Standard for Water Tanks for Private Fire Protection as published by the National Fire Protection Association, published 2018
- NFPA 25 - Standard for the Inspection, Testing and Maintenance of Water-based Fire Protection Systems as published by the National Fire Protection Association, published 2017
- NFPA 70 - National Electrical Code as published by the National Fire Protection Association, published 2017
- NFPA 72 - National Fire Alarm and Signaling Code as published by the National Fire Protection Association, published 2016
- NFPA 91 - Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists and Noncombustible Particulate Solids as published by the National Fire Protection Association, published 2015
- NFPA 110 - Standard for Emergency and Standby Power Systems as published by the National Fire Protection Association, published 2016
- NFPA 241 - Standard for Safeguarding Construction, Alteration and Demolition Operations as published by the National Fire Protection Association, published 2013
- NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source as published by the National Fire Protection Association, published 2015
- NFPA 262 - Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-handling Spaces as published by the National Fire Protection Association, published 2015
- NFPA 275 - Standard Method of Fire Tests for the Evaluation of Thermal Barriers as published by the National Fire Protection Association, published 2017
- NFPA 286 - Standard Methods of Fire Test for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth as published by the National Fire Protection Association, published 2015
- NFPA 703 - Standard for Fire Retardant-Wood and Fire-Retardant Coatings for Building Materials as published by the National Fire Protection Association, published 2018
- NFPA 1221 - Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems as published by the National Fire Protection Association, published 2016

102.3.1.2 Other Changes to NFPA 130. *NFPA 130* shall be deemed to be amended as noted in this section.

102.3.1.2.1 Definitions. For the purposes of applying *NFPA 130*, words and terms used but not defined in *NFPA 130* shall have the meanings as described in Chapter 2 of this publication.

102.3.1.2.2 Limited combustible material. Section 4.6.2 of *NFPA 130* shall be deemed to be deleted in its entirety.

102.3.1.2.3 Nonsystem occupancies. Section 5.1.3.2 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.1.3.2 Rail station connections to contiguous nonsystem occupancies, or where incidental occupancies are within the station, or where the station is integrated into a building used for nonsystem occupancy of which is for neither fixed guideway transit nor passenger rail, and where any of which have no clear separation between the station and the nonsystem occupancy, shall require special approved design considerations in determining how the connections take place, the building areas, and necessary separations and transitions.

102.3.1.2.4 Construction Type. Section 5.2.2 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.2.2 Construction Type.

5.2.2.1 Building construction type for stations shall be in accordance with Table 5.2.2.1 based on the station configuration.

5.2.2.2 Fire-resistance ratings of building elements and construction types shall conform to the requirements of Chapter 6 of the Building Code of New York State.

Table 5.2.2.1 – Minimum Building Construction Types for Rail Stations

Station Type	Construction Type
Rail station located entirely above grade plane	IIA
Rail station considered an open station ^a	IIB
Rail station not above grade plane	IB
Rail stations not above grade plane with occupant loads exceeding 1000	IA

^a At-grade stations, elevated stations, and open cut stations with roofs not supporting an overbuild or earth. Enclosed concession and tenant spaces that collectively do not exceed 10% of the station building area are permitted in open stations.

5.2.2.3 For rail stations that are not open stations for the entire building, the construction type shall be applied separately to those areas that are open and those areas that are not. At the transition between construction types, shared building elements shall be fire resistance rated to the more restrictive construction type provisions.

5.2.2.4 Back of house locations shall not exceed the allowable building area based on the construction type as outlined by Chapter 5 of the Building Code of New York State, based on the back of house area use groups.

102.3.1.2.5 Compartmentation. Sections 5.2.4.2 and 5.2.4.3 and Table 5.2.4.3 of *NFPA 130* shall be deemed to be amended in their entirety to read as follows:

5.2.4.2 Separation Between Public and Nonpublic Floor Areas. All public locations shall be fire separated from adjacent nonpublic areas. The back of house locations shall be separated from the public locations as required for separated uses in Table 508.4 of the Building Code of New York

State, but the separation shall not be less than 2 hours. Separations shall be constructed as fire barriers or horizontal assemblies in accordance with Section 707 or 711 of the Building Code of New York State, as applicable.

5.2.4.3 Ancillary spaces. Ancillary spaces shall be separated from the remainder of the building in accordance with Table 5.2.4.3. Separations shall be constructed as fire barriers or horizontal assemblies in accordance with Section 707 or 711 of the Building Code of New York State, as applicable.

TABLE 5.2.4.3 - Ancillary Spaces Fire Separations

Location	Rating
Incidental Uses	As stated in Section 509 of the Building Code of New York State
Power Substations	3 Hours
Electrical Control Rooms, Auxiliary Electrical Rooms, and Associated Battery Rooms	2 Hours
Trash Rooms	2 Hours
Train Control Rooms and Associated Battery Rooms	2 Hours
Separation of Ancillary Areas and the Trainway in Underwater Line Sections	3 hours
Separation of Ancillary Areas and the Trainway in Underground Line Sections	2 Hours
Fire Pump Rooms	2 Hours
Elevator Machine Rooms	2 Hours
Telecommunication Rooms	2 Hours

102.3.1.2.6 Interior Finishes. Section 5.2.5.4 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.2.5.4 Materials used as interior finish in open stations shall comply with the Building Code of New York State.

102.3.1.2.7 Combustible Furnishings and Contents. Section 5.2.7.1 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.2.7.1 Where combustible furnishings or contents not specifically addressed in this standard are proposed to be installed in a station, a fire hazard analysis shall be conducted to determine that the level of occupant fire safety is not adversely affected by the furnishings and contents. Such analysis shall be submitted to the building official for approval.

102.3.1.2.8 Means of Egress. Sections 5.3.1, 5.3.2, 5.3.8.5, 5.3.9, 5.3.11.1.1, and 5.3.11.1.2 of *NFPA 130* shall be deemed to be amended in their entirety to read as follows:

5.3.1 General.

5.3.1.1 The provisions for means of egress for a station shall comply with Chapter 10 of the Building Code of New York State, except as herein modified.

Exception: Compliance with Section 1029 of the Building Code of New York State for public locations shall not be required.

5.3.1.2 For a station, the design of the means of egress shall be based on an emergency condition requiring evacuation of the train(s) and station occupants to a point of safety.

5.3.1.3 Back of house locations are permitted to exit into the public locations and utilize the provisions within Section 5.3, provided the additional occupant load from such back of house areas is added to the occupant load of the public locations for sizing the means of egress.

5.3.1.4 Accessible means of egress shall be provided for as required by Section 1009.1 of the Building Code of New York State. In public locations, accessible means of egress shall be in place for all portions and levels of the building.

5.3.2 Occupant Load.

5.3.2.1 The occupant load for a station shall be based on the train load of trains simultaneously entering the station on all tracks in normal traffic direction plus the simultaneous entraining load awaiting trains.

1. The train load shall consider only one train at any one track.
2. The basis for calculating train and entraining loads shall be the peak period ridership figures as projected for the design of a new system or as updated for an operating system.
3. The occupant load shall be approved by the Building Official and shall be based upon projected growth.

5.3.2.2 For station(s) servicing areas such as civic centers, sports complexes, and convention centers, the peak ridership figures shall consider events that establish occupant loads not included in normal passenger loads.

5.3.2.3 At multilevel, multiline, or multiplatform stations, occupant loads shall be determined as follows:

1. The maximum occupant load for each platform shall be considered separately for the purpose of sizing the means of egress from that platform.
2. Simultaneous loads shall be considered for all egress routes passing through each level of that station.

5.3.2.4 Where an area within a station is intended for use by other than passengers or employees, the following parameters shall apply:

1. The occupant load for that area shall be determined in accordance with the provisions of Section 1004 of the Building Code of New York State as appropriate for the use.
2. The additional occupant load shall be included in determining the required egress from that area.
3. The additional occupant load shall be permitted to be omitted from the station occupant load where the area has independent means of egress of sufficient number and capacity.

5.3.2.5 Calculation of Platform Occupant Load. The platform occupant load for each platform in a station shall be the maximum peak period occupant load calculated according to the following:

1. The peak period occupant load for each platform shall be based on the simultaneous evacuation of the entraining load and the train load for that platform in the peak period.
2. The entraining load for each platform shall be the sum of the entraining loads for each track serving that platform.
3. The entraining load for each track shall be based on the entraining load per train headway factored to account for service disruptions and system reaction time.
4. Where a platform serves more than one line on one track, the calculation of entraining load shall consider the combined effect of accumulation for each of the lines served.
5. The train load for each platform shall be the sum of the train loads for each track serving that platform.
6. The train load for each track shall be based on the train load per train headway factored to account for service disruptions and system reaction time.
7. The maximum train load at each track shall be the maximum passenger capacity for the largest capacity train operating on that track during the peak period.

5.3.8.5 Turnstile-type fare barriers shall be permitted in accordance with Section 1010 of the Building Code of New York State and shall in the means of egress shall meet the following criteria

1. Dimensions shall be in accordance with the requirements of Section 1010 of the Building Code of New York State.
2. Turnstiles that drop away from the egress opening under the conditions listed in 5.3.8.2 or 5.3.8.3 shall be credited with a capacity of 50 p/min for egress calculations.
3. Turnstiles that revolve freely in the direction of egress under the conditions listed in 5.3.8.2 shall meet the following criteria:
 - a. Each unit shall be credited with a capacity of 25 p/min for egress calculations.
 - b. The turnstiles shall not account for more than 50 percent of the required egress capacity for each egress route.

5.3.9 Horizontal Exits. Horizontal exits compliant with Section 1010 of the Building Code of New York State shall be permitted for up to 100 percent of the number of exits and required egress capacity provided that not more than 50 percent of the number and required capacity is into a single building.

5.3.11.1 Illumination of the means of egress in stations, including escalators that are considered a means of egress, shall be in accordance with Section 1008 of the Building Code of New York State.

5.3.11.2 Means of egress, including escalators considered as means of egress, shall be provided with a system of emergency lighting in accordance with Section 1008 of the Building Code of New York State.

102.3.1.2.9 Fire Alarm Systems. Section 5.4.2 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.4.2 Fire Alarm Systems.

5.4.2.1 Enclosed stations and enclosed portions of open stations shall be protected by a fire alarm system designed, installed, and maintained in accordance with Section 907 of the Building Code of New York State.

5.4.2.2 Each station having fire alarm initiating devices shall be provided with a fire alarm annunciator panel at a location that is accessible to emergency response personnel in accordance with *NFPA 72*. Unless otherwise noted, all fire alarm components shall be controlled by a single fire alarm control panel in the rail station.

5.4.2.3 The location of the fire alarm annunciator panel shall be approved.

5.4.2.4 Annunciator panels shall announce by audible alarm the activation of any fire alarm initiating device in the station and visually display the location of the actuated device.

5.4.2.5 When activated, all indicator signals for fire alarms, smoke detection, valve switches, and waterflow shall be transmitted simultaneously to the local station and to the operations control center.

5.4.2.6 Separate zones shall be established on local station annunciator panels to monitor waterflow on sprinkler systems and supervise main control valves.

5.4.2.7 Automatic fire detection shall be provided in all ancillary spaces by the installation of listed combination fixed temperature and rate-of-rise heat detectors or listed smoke detectors except where protected by automatic sprinklers.

5.4.2.8 Manual pull boxes that activate the occupant notification system shall be provided throughout the building, including agents' and information booths, in accordance with Section 907 of the Building Code of New York State.

Exceptions:

1. Where approved by the fire code official, in agents' and information booths, manual pull stations may be replaced by an approved evacuation button that activates the occupant notification system.
2. In enclosed portions of open stations, the fire code official is authorized to approve alternate locations of manual pull stations.
3. Where approved by the fire code official, in public locations, manual pull stations are not required where a public access communications system installed in accordance with the following:
 - a. Travel distance to such points shall be no more than 200 feet and not more than 50 feet from the end of a train platform.
 - b. Such systems shall be connected to the transportation systems operations control center and, if provided, the rail station's agents' and information booth.

5.4.2.9 A smoke detection system that activates the occupant notification system shall be in back of house locations as required by the Building Code of New York State, based on the use group of each back of house location, and including incidental areas in Chapter 5 and un-sprinklered telecommunication rooms required in Section 903.2 of the Building Code of New York State.

5.4.2.10 The fire alarm system notification system shall be provided throughout the building according to this section and installed in accordance with Section 907.5 of the Building Code of New York State. Unless otherwise stated, all notification devices shall activate throughout the rail station upon any fire signal received at the fire alarm control panel.

5.4.2.10.1 Horn/strobes shall be provided in back of house locations in accordance with Section 907.5 of the Building Code of New York State.

5.4.2.10.2 An Emergency Voice/Alarm Communication System (EVACS) and strobes shall be provided in public locations in accordance with Section 907.5.2.2 of the Building Code of New York State and NFPA 72.

5.4.2.10.2.1 As an alternative to the audible requirements of an Emergency Voice/Alarm Communication System (EVACS), a public address system is permitted to be installed, when approved by the fire code official, in accordance with the following:

1. The public address system shall be connected to the fire alarm system to begin automatic notification within 30 seconds of receipt of a fire signal from an initiation device with automated messaging.
2. The public address system can be utilized by the station operator and the central control center.
3. The public address system is provided with emergency backup power that permits at least 2 hours of continuous, full-duty use. Battery systems used to provide emergency backup shall be calculated for full-duty loads at end-of-life battery capabilities.

5.4.2.11 The fire alarm system shall have the following capabilities:

1. The EVACS or public address system shall have prerecorded messages in accordance with NFPA 72 that automatically start within 30 seconds of receipt of a fire signal.
2. The agents' and information booth may have the ability to acknowledge a fire signal and delay the notification system activation for a maximum of 180 seconds.
3. When the operations control center (or designated location) has the capability, as determined by the fire Code Official, the following features shall be provided:
 - a. Receive notification of the fire signal and alter the train operations to minimize building occupants within the station.
 - b. Remotely activate the rail station notification system.

5.4.2.11.1 When the fire alarm is connected to an operations control center or other approved location by the fire code official, a pre-signal notification sequence is permitted within the public locations with the following requirements:

1. Activation of alarm is immediately transmitted to the operations control center and the agents' and information booth.

2. Notification devices for back of house locations shall immediately activate.

5.4.2.12 The fire alarm system shall be monitored by a listed central station or, when required by the fire code official, connected to the operations control center (or designated location).

102.3.1.2.10 Automatic Sprinkler Systems. Section 5.4.4 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.4.4 Automatic Fire Suppression Systems.

5.4.4.1 Automatic sprinkler systems shall be provided as required by Chapter 9 of the Building Code of New York State and the requirements of this section.

Exceptions:

1. Hydraulic elevator machine rooms shall not require sprinklers, provided elevator machine rooms are separated from adjacent spaces by with 2-hour fire-resistance-rated construction with opening protectives in compliance with Chapter 7 of the Building Code of New York State, and equipped with *listed* smoke or heat detectors connected to a fire alarm control panel that provides fire safety functions for the elevator controls.
2. Elevator pits in unheated areas.
3. Rail stations that do not meet the exterior opening requirements of Section 903.2.11.1 of the Building Code of New York State.
4. Public locations, regardless of open or underground.
5. Trainways.

5.4.4.1.1 Back of House Locations. Automatic sprinkler systems shall be provided in all back of house spaces when required by Chapter 9 of the Building Code of New York State, trash rooms over 100 square feet, storage areas over 200 square feet, and other areas with combustibles loading, except trainways.

5.4.4.1.2 Concession and Tenant Spaces. Automatic sprinkler systems shall be provided in all concession and tenant areas greater than 200 square feet or those spaces equipped with commercial cooking equipment.

5.4.4.1.3 Stairways and Escalators. Openings for open stairways and escalators in public areas are not required to be provided with tightly spaced sprinklers and draft curtains when the *rail station* meets the requirements of this section.

102.3.1.2.11 Standpipe Systems. Section 5.4.5 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

5.4.5 Standpipe and Hose Systems.

5.4.5.1 A Class I standpipe system shall be installed in rail stations in accordance with Section 905 of the Building Code of New York State. Dry standpipes are permitted for all, or portions of, rail stations when approved by the fire code official. Dry standpipe systems that are installed shall pass a hydrostatic pressure test of at least 300 psi in addition to the requirements of Section 905 of the Building Code of New York State.

102.3.1.2.12. Control and Communication System Application. Section 11.1.2 of *NFPA 130* shall be deemed to be amended in its entirety to read as follows:

11.1.2 Application. These systems include the following, where applicable:

1. Train control (signaling systems) as described in 7.2.5, 8.9.2.3, and in this chapter
2. Emergency communication systems as described in 6.4.2, 8.9.2.1, 8.9.2.2, 9.8.4, and Section 9.9
3. Traction power systems as described in 6.4.2, 7.2.4, 9.13.4, and 9.13.5
4. Supervisory control and data acquisition (SCADA) systems as they apply to fire emergencies

Section 103 Administration and Enforcement

103.1 Special Inspections. An *approved agency* performing special inspections in accordance with Chapter 17 of the *Building Code of New York State* is permitted to be hired directly by contractors on rail station projects when all of the following requirements are met:

1. Work is being completed as a design-build construction process,
2. The Authority Having Jurisdiction (AHJ) has a quality assurance procedure,
3. The *approved agency* reports directly to the AHJ,
4. The *approved agency* is required to provide reporting at regular intervals of all testing in accordance with the schedule in the quality assurance procedure, and
5. The AHJ retains the ability to perform inspections and audits of all special inspections.

103.2 Classification. The space utilized by the trainway within a *rail station* shall not have an occupancy classification and shall not be considered as part of the building area.

Chapter 2 Definitions

Section 201 General

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this publication, have the meanings shown in this chapter.

201.2 Terms defined in other codes and referenced standards. Where words and terms are not defined in this publication and are defined in Chapter 3 of *NFPA 130*, such terms shall have the meanings ascribed to them as in *NFPA 130*. All other words and terms shall be as defined in Chapter 2 of the *Building Code of New York State*.

Section 202 Definitions

BACK OF HOUSE LOCATIONS. Areas of a rail station that are intended for non-public occupancy and support the rail station and/or system operations.

AGENTS' AND INFORMATION BOOTH. A standalone enclosed area within the public location of a rail station that a transportation system employee provides information or transacts business to customers.

FARE BARRIER. An arrangement of turnstiles, gates, and similar components to restrict passage in one direction to only those that provide payment or are authorized to pass through the barrier.

HIGH ENTRY/ EXIT TURNSTILE (HEET). An existing *fare barrier* device that is similar to a revolving door and used to control both access to or exiting from a fare controlled space. A HEET is not collapsible in the direction of egress.

HIGH EXIT TURNSTILE (HXT). An existing *fare barrier* that is similar to a revolving door and is used to control exiting from a fare controlled space. A HXT is not collapsible in the direction of egress.

NFPA 130. The 2020 edition of the publication entitled “Standard for Fixed Guideway Transit and Passenger Rail Systems,” published by the National Fire Protection Association (publication date 2020), as currently incorporated by reference in Part 1228 of Title 19 of the Official Compilation of Codes, Rules and Regulations of the State Of New York, and as modified by this publication.

OPEN CUT STATION. A station where the platform is below grade plane but meets the definition of *open station platform*.

OPEN STATION PLATFORM. A station platform is considered open when it either has no roof over the guideway or has an open exterior perimeter of at least 50 percent and allows smoke and heat to dispense directly to the atmosphere.

OPEN STATION. A station is considered open when it either has no roof over the guideway or has an open exterior perimeter of at least 50 percent, and allows smoke and heat to dispense directly to the atmosphere.

PUBLIC ACCESS COMMUNICATION SYSTEMS. A two-way communication system where a building occupant can communicate with a central control center that has the ability to give emergency instructions and initiate an emergency response to the location.

PUBLIC LOCATIONS. Areas within a rail station intended for public occupancy.

RAIL STATION. A building or structure, or portion thereof, that is utilized for the boarding and/or disembarking of passengers from train equipment, including passenger rail and fixed guideway transit systems, and ancillary spaces to such activities. This includes *public locations, back of house locations,* and trainways within the bounds of the *rail station*. This shall not include shelter stops.

SHELTER STOP. A shelter stop is a location along a fixed guideway transit or passenger rail system for the loading and unloading of passengers that is located in a public way and is designed for unrestricted movement of passengers. A shelter stop can have a cover but no walls or barriers that would restrict passenger movement.

Chapter 3 Rail Stations

Section 301 Scope and Applicability

301.1 Scope. The provisions of this chapter shall govern the design and construction of new and existing *rail stations*.

301.2 Applicability. New *rail stations* shall be designed and constructed in accordance with Section 302 of this publication. Existing *rail stations* shall comply with Section 303 of this publication.

Section 302 New Rail Stations

302.1 General. New *rail stations* shall be designed and constructed in accordance with this section; the *Building Code of New York State*; and Chapters 2, 3, 4, 5, 7, 9, 10, 11, and 12 of *NFPA 130* as modified by this publication.

302.2 Rail Ties. When *approved* by the *building official*, rail ties shall be permitted to be made from combustible material.

302.3 Interface with other special use, occupancy, and hazards. Mixed occupancies that include a *rail station* shall meet Section 508 of the *Building Code of New York State*. In addition to Section 508, where *rail stations* are part of a nonseparated occupancy that includes an occupancy or use regulated by Chapter 4 of the *Building Code of New York State*, or Chapters 20 through 49 of the *Fire Code of New York State*, the most restrictive provisions of this publication and the provisions of the Uniform Code applicable to any one nonseparated occupancy or uses shall apply to the entire nonseparated occupancy area.

302.4 Plumbing Fixtures. Plumbing fixtures are not required to be provided for the public locations of a rail station, including family and/or assisted use toilet and bathing rooms. When no fixtures are provided, an *approved* means of cleaning the station shall be in place.

302.5 Escalators. In addition to meeting the requirements of the *Building Code of New York State*, escalators are permitted to be installed in accordance with the following:

302.5.1 Speed. Escalators are permitted to have a maximum speed of 120 feet per minute, provided that a minimum of 3 flat steps are provided at both landing areas of the escalator.

302.5.2 Variable Speed. Escalators are permitted to have sleep mode functionality, but cannot operate at less than 10 feet per minute and cannot change speeds at a rate greater than 1 foot per second.

Section 303 Existing Rail Stations

303.1 Scope. The *repair, alteration, change of occupancy, addition, or relocation* of existing *rail stations* shall comply with the *Existing Building Code of New York State* and this section or they may comply with the provisions of Section 302 of this publication for new *rail stations*.

303.2 All rehabilitation work. All *rehabilitation* work shall comply with this section, regardless of compliance method.

303.2.1. Means of Egress Components. Hatchways, ship's ladders, and intermediate handrails shall comply with this section.

303.2.1.1 Hatchways. The use of hatches is permitted in alterations and additions to access mechanical spaces for use by maintenance personnel only. The hatches shall be installed to meet the requirements of Sections 6.3.3.15 through 6.3.3.17 of *NFPA 130*.

303.2.1.2 Ship's Ladders. The use of ship's ladders is permitted for below grade mechanical spaces used by maintenance personnel that is accessed by a hatch. The ship's ladder shall be installed in accordance with Section 1011.15 of the *Building Code of New York State*.

303.2.1.3 Intermediate Handrails. Intermediate handrails are not required to be installed on existing stairways when all of the following conditions exist:

1. The stairway is protected from rain, snow, ice, and runoff.
2. The maximum stairway width is 8'-0", measured to the end of the risers.
3. The uniformity of the risers within the flight of stairs meets the requirements of the *Building Code of New York State*.

303.2.2 Seismic Evaluation. A seismic evaluation in accordance with Section 303.3 of the *Existing Building Code of New York State* is only required for *rail stations* that are undergoing an *addition*.

Exception: Additions that are less than 20% of the existing *building area* and that are solely for increasing accessibility to the *rail station*.

303.2.3 Plumbing. Plumbing fixtures in public locations shall be provided as required in this section.

303.2.3.1 Required Fixtures. Where plumbing fixtures do not currently exist in *rail stations*, no plumbing fixtures are required to be provided, including family and/or assisted use toilet and bathing rooms. When no fixtures are provided, an *approved* means of cleaning the station shall be in place.

303.2.3.2 Existing Fixtures. Where plumbing fixtures currently exist in *rail stations*, as *approved* by the *building official*, the number of plumbing fixtures is allowed to be reduced if needed in order to provide space for accessible toilet rooms in accordance with Section 1109.2.1 of the *Building Code of New York State*.

303.2.4 Mechanical. Additional permanent ventilation is not required to be provided when the *rehabilitation* work being completed is solely for the purpose of increasing accessibility to a *rail station*.

303.2.5 Elevators and Escalators

303.2.5.1 Elevator Hoistway. When an elevator is provided or added to a *rail station*, the entire elevator hoistway is not required to be enclosed by fire-resistance rated construction if all of the following items are met:

1. The elevator travels exclusively through public locations and *back of house locations*.
2. Any portion that passes through the *back of house locations* shall be a minimum of 2-hour fire-resistance rated construction.
3. The hoistway does not exceed 45 feet between the highest and lowest landing height.
4. A standpipe system is provided in accordance with Section 303.2.9.
5. A means of communicating with the operations control center is provided at each landing, except at street level.

303.2.5.2 Escalators. Escalators are permitted to be installed or rehabilitated in accordance with Section 302.5 of this publication.

303.2.6 Electrical. All newly installed wire and cable shall be in accordance with Chapter 12 of *NFPA 130*.

303.2.7 Fire Alarm. When the *Existing Building Code of New York State* requires a fire alarm in accordance with Section 907 of the *Building Code of New York State* as required for new construction, a fire alarm system and components shall be provided in those areas in accordance with Section 907 of the *Building Code of New York State*, and Sections 303.2.7.1 through 303.2.7.7.

303.2.7.1 Manual Pull Boxes. Manual pull boxes that activate the occupant notification system shall be provided, including *agents' and information booths*, in accordance with Section 907 of the *Building Code of New York State*.

Exceptions:

1. Where *approved* by the *fire life safety official*, in *agents' and information booths*, manual pull stations may be replaced by an *approved* evacuation button that activates the occupant notification system.
2. In enclosed portions of open stations, the *fire code official* is authorized to approve alternate locations of manual pull stations.
3. In *public locations*, manual pull stations are not required where a public address communications system installed in accordance with the following:
 - a. Travel distance to such *points* shall be no more than 200 feet and not more than 50 feet from the end of a train platform.
 - b. Such systems shall be connected to the transportation systems operations control center and, if provided, the *rail station's agents' and information booth*.

303.2.7.2 Smoke Detection.

303.2.7.2.1 Public Locations. Smoke detection is not required in *public locations*, unless otherwise required for elevators, escalators, mechanical equipment, or smoke control systems.

303.2.7.2.2 Back of House Locations. A smoke detection system shall be provided in the following locations when such locations are constructed or the egress from such locations is reconfigured:

1. Employee quarters
2. Locker rooms
3. Office space
4. New equipment and storage rooms
5. Mission critical spaces, such as towers and communications, signal relay, and tunnel lighting rooms
6. Any other *work area* in a *back of house location* that would require a smoke detection system by Section 907 of the *Building Code of New York State* for new construction.

303.2.7.3 Notification Systems. When fire alarm initiation devices are required that necessitate the installation of a fire alarm control panel, notification devices shall be provided in accordance with

Sections 303.2.7.3.1 through 303.2.7.3.2 and installed in accordance with Section 907.5 of the *Building Code of New York State*.

303.2.7.3.1 Back of House Locations. Horn/strobes shall be provided in *back of house locations* in accordance with Section 907.5 of the *Building Code of New York State*.

303.2.7.3.2 Public Locations. An *Emergency Voice/Alarm Communication System* (EVACS) and strobes shall be provided in *public locations* in accordance with Section 907.5.2.2 of the *Building Code of New York State* and NFPA 72.

303.2.7.3.2.1 Public Address System. As an alternative to the audible requirements of an *Emergency Voice/Alarm Communication System* (EVACS), a public address system is permitted to be installed, when *approved by the fire code official*, in accordance with the following:

1. The public address system shall be connected to the fire alarm system to begin automatic notification within 30 seconds of receipt of a fire signal from an initiation device with automated messaging.
2. The public address system can be utilized by the station operator and the central control center.
3. The public address system is provided with emergency backup power that permits at least 2 hours of continuous, full-duty use. Battery systems used to provide emergency backup shall be calculated for full-duty loads at end-of-life battery capabilities.

303.2.7.4 Fire Alarm Capabilities. The fire alarm system shall have the following capabilities:

1. The EVACS or public address system shall have prerecorded messages in accordance with NFPA 72 that automatically start within 30 seconds of receipt of a fire signal.
2. The *agents' and information booth* may have the ability to acknowledge a fire signal and delay the notification system activation for a maximum of 180 seconds.
3. When the operations control center (or designated location) has the capability, as determined by the *fire code official*, the following features shall be provided:
 - a. Receive notification of the fire signal and alter the train operations to minimize building occupants within the station.
 - b. Remotely activate the rail station notification system.

303.2.7.5 Pre-Signal. When the fire alarm is connected to an operations control center or other location *approved by the fire code official*, a pre-signal notification sequence is permitted within the *public locations* with the following requirements:

1. Activation of alarm is immediately transmitted to the operations control center and the *agents' and information booth*.
2. Notification devices for *back of house locations* shall immediately activate.

303.2.7.6 Monitoring. The fire alarm system shall be monitored by a listed central station or, when required by the *fire code official*, connected to the operations control center (or designated location).

303.2.7.7 Existing Systems. Where it is determined by the *fire code official* that the existing system cannot be expanded to meet the provisions of Section 303.3, a new fire alarm system shall be installed. All new and existing systems in the area shall be cross connected to activate all notification devices.

303.2.8 Automatic Sprinkler Systems. Automatic sprinkler systems shall be provided as required by Chapter 9 of the *Building Code of New York State* and Section 303.2.8.1.

Exceptions:

1. Hydraulic elevator machine rooms shall not require sprinklers, provided elevator machine rooms are separated from adjacent spaces by with 2-hour fire-resistance-rated construction with opening protectives in compliance with Chapter 7 of the *Building Code of New York State*, and equipped with *listed* smoke or heat detectors connected to a fire alarm control panel that provides fire safety functions for the elevator controls.
2. Elevator pits in unheated areas.
3. *Rail stations* that do not meet the exterior opening requirements of Section 903.2.11.1 of the *Building Code of New York State*.
4. *Public locations* in *open stations* of Type I or Type II construction
5. Trainways

303.2.8.1 Tenant and Concession Spaces. An automatic sprinkler system shall be provided in all concession and tenant areas being constructed or having a work area that is greater than 200 square feet, or those spaces are being equipped with commercial cooking equipment.

303.2.9 Standpipe System. When a standpipe is required by other sections of the *Existing Building Code of New York State*, a Class I standpipe system shall be installed in accordance with Section 905 of the *Building Code of New York State*. Dry standpipes are permitted for all, or portions of, *rail stations* when *approved* by the *fire code official*. Dry standpipe systems that are installed or altered shall pass a hydrostatic pressure test of at least 300 psi in addition to the requirements of Section 905 of the *Building Code of New York State*.

303.3 Additions. When an *addition* is provided to an existing *rail station*, the *addition* shall comply with the provisions of the *Existing Building Code of New York State* and Sections 303.3.1 through 303.3.2.

303.3.1 Accessibility Improvements. *Additions* solely for accessibility improvements shall comply with Sections 303.3.1.1 through 303.3.1.4 and the *Existing Building Code of New York State*.

303.3.1.1 Nonconformity. New stairways, ramps, elevators, elevator lobbies, and similar components which are added solely for the purpose of improving accessibility shall not cause a nonconformity with respect to *fire area* provisions unless they exceed 20% of the original *fire area*.

303.3.1.2 Building Area. When work is being completed that increases the floor area solely for improving accessibility in a rail station, such work shall be allowed to exceed the allowable *building area* if the added *building area* is less than 20% of the existing story area. The 20% shall not include the area of newly added stairways or ramps.

303.3.1.3 Authority. The *fire code official* has the authority to limit the coverage area of proposed notification devices in *rail stations* constructed in compliance with this section, when a fire event in the *work area* would not affect occupants of other sections of the *rail station*.

303.3.1.4 Accessible Entrance. When the work is adding elevators or ramps to provide or increase accessibility to *rail stations*, the number of accessible entrances is not required to meet the

requirements of Section 1105.1 of the *Building Code of New York State*, provided that the wayfinding signage is provided to properly identify accessible routes.

303.3.2 Automatic Sprinkler Systems. The installation of an automatic sprinkler system in *public locations* that are not within an open station is not required when all of the following conditions are met:

1. When a standpipe is provided in accordance with Section 303.2.9.
2. When the *rail station* is of Type I or Type II construction.
3. Automatic sprinkler systems shall be provided in accordance with Section 303.2.8.1.

303.4 Level 2 Alterations. Any alteration that meets the scope of a Level 2 alteration in Section 603.1 of the *Existing Building Code of New York State*, regardless of compliance method, shall meet the requirements of the *Existing Building Code of New York State* and Sections 303.4.1 through 303.4.4.

303.4.1 Vertical Openings. Existing vertical openings altered for stairways, ramps, elevators, and escalators that are open or unrated in *public locations*, are not required to be fire-resistance-rated when the *rail station* meets all of the following requirements:

1. A standpipe system is provided in accordance with Section 303.2.9.
2. The interior of the building meets the requirements of Sections 5.2.5, 5.2.6, and 5.2.7 of *NFPA 130*.

303.4.2 Automatic Sprinkler Systems. The installation of an automatic sprinkler system in *public locations* that are not within an *open station* is not required when all of the following conditions are met:

1. When the *rail station* is of Type I or Type II construction.
2. Automatic sprinkler systems shall be provided in accordance with Section 303.2.8.1.

303.4.3 Fire Alarm System. A fire alarm system shall be installed in accordance with Section 303.2.7 and Sections 303.4.3.1 through 303.4.3.4.

303.4.3.1 Escalators and Elevators. A *rail station* that has work involving the installation of escalators and elevators shall require a fire alarm system for the escalator or elevator equipment control.

303.4.3.2 Notification. Notification devices shall be installed throughout the altered space and, if the *rail station* has an existing fire alarm system with notification devices, connected to activate the existing notification system throughout the *rail station*.

303.4.3.3 Authority. The *fire code official* has the authority to limit the coverage area of proposed notification devices in *rail stations* constructed in compliance with this section when sufficient documentation is submitted to and *approved* by the *fire code official* documenting that a fire event in the *work area* would not affect occupants of other sections of the *rail station*.

303.4.3.4 Notification Devices. When a *rail station* undergoing Level 2 Alterations has an existing fire alarm system without *Emergency Voice/Alarm Communication System* (EVACS) in the *public locations*, horn/strobes are permitted to remain to notify the occupants of *public locations*.

303.5 Level 3 Alterations. Any alteration that meets the scope of a Level 3 alteration in Section 604.1 of the *Existing Building Code of New York State*, regardless of compliance method, shall meet the requirements the *Existing Building Code of New York State*, Section 303.5.1, and Section 303.5.2.

303.5.1 Accessible Entrance. When the work is adding elevators or ramps to provide accessibility to *rail stations*, the number of accessible entrances is not required to meet the requirements of Section 1105.1 of the *Building Code of New York State*, provided that wayfinding signage is provided to properly identify accessible routes.

303.5.2 Automatic Sprinkler Systems. The installation of an automatic sprinkler system in *public locations* that are not within an open station is not required when all of the following conditions are met:

1. When a standpipe is provided in accordance with Section 303.2.9.
2. When the *rail station* is of Type I or Type II construction.
3. Automatic sprinkler systems shall be provided in accordance with Section 303.2.8.1

Chapter 4 Additional Fire Safety Provisions Applicable to All Rail Stations

Section 401 Scope and Applicability

401.1 Scope. The provisions of this chapter shall be additional fire safety provisions for the design, construction, administration, operation, and maintenance of new and existing *rail stations*.

401.2 Applicability. All new and existing *rail stations* shall comply with the *Fire Code of New York State* and this chapter.

Section 402 Fire Extinguishers

402.1 Portable Fire Extinguishers. Portable fire extinguishers in *rail stations* shall be provided in accordance with Section 906 of the *Fire Code of New York State*.

Exception: Portable fire extinguishers are not required to be in the *public locations* of a *rail station*, unless required by the *fire code official*.

Section 403 Emergency Lighting

403.1 Power Source. In existing *rail stations*, approved alternative emergency power for means of egress illumination is allowed if all the following conditions are met:

1. Power to the primary means of egress illumination is provided with a minimum of two connections such that any one connection can illuminate the means of egress independently.
2. Emergency means of egress lighting is provided by the traction power system, where power is provided to the substation and is able to be energized by an off-site generator.

Section 404
Emergency Responder Radio Coverage

404.1 Existing Systems. Where *approved by the fire code official*, when an existing system is already in place to provide emergency responder coverage throughout a transportation system, the existing system may satisfy the requirements of Section 510 of the *Fire Code of New York State*.

Section 405
Means of Egress

405.1 Exit Signage. Existing exit signage may have the font altered and new exit signage may contain graphics to match a standardized graphics scheme that is approved by the *building official*. Signage shall be in compliance with ICC A117.1.

405.2 Fare Barriers. *Fare Barriers* serving an occupant load in excess of 300 are permitted to have swing gates that accommodate more than one turnstile. The swing gates must be sized to accommodate the occupant load for all turnstiles the swing gate is serving and shall be located on the same circulation path as the turnstiles.

405.3 Security Grilles. Security grilles are permitted to be installed at the public exits of a *rail station* when all of the following conditions are met:

1. Security grilles are secured in an open position during times the *rail station* is occupied by the public.
2. The building has a fire alarm system installed in accordance with Section 303.2.7.
3. Are not for regular use and only for station closures due to natural disasters, civil unrest, crowd control outside the rail station, or similar events.
4. The public exit obstructed by security grilles is not the only means of egress to the public way for employees.
5. Operating rules shall not permit the discharge of passengers at stations where any security grilles are being utilized to close public exits.

405.4 HEETs and HXTs. *High Entry/Exit Turnstiles (HEET)* and *High Exit turnstiles (HXT)* that have been previously approved for installation are permitted to remain. No new *HEETs* or *HXT* shall be permitted to be installed.

405.4.1 Swing Gates. All existing *HEET* and *HXT* fare arrays shall also have swing gates with panic bars. Delayed egress arrangements on the swing gates are permitted in accordance with the *Fire Code of New York State*.

405.4.2 Security Grilles. Security grilles are not permitted to be installed on exits being served by swing *HEETs* or *HXTs*.

405.4.3 Maintenance. In stations where *HEETs* or *HXTs* are installed, the trainway shall be cleaned bi-annually.

405.5 Posting. The *public locations* within a *rail station* are not required to have a maximum occupant load posted.

Section 406
Construction Requirements for Existing Buildings

406.1 Retroactive Requirements. The requirements of Chapter 11 of the *Fire Code of New York State* shall only apply when specifically referenced by the *Existing Building Code of New York State*.

Section 407
Emergency Plan

407.1 Emergency Plan. In addition to the requirements of Chapter 4 of the *Fire Code of New York State*, fire safety and evacuation plans for the transportation system (or systems) using the *rail station* shall include specific protocols for addressing the emergency evacuation of disabled occupants.