

2018 Seattle Fire Code Changes-Overview

Fire Prevention Division

Date
02/09/2021

Seattle Fire
Department



City of Seattle

A look back..

- First fire code ordinance in Seattle enacted in 1870.
- The Great Seattle Fire of 1889-turning point in Seattle's history.



First Avenue north of Yesler Way. Jacob Furth (with tall hat) and Dr. T.T. Minor are two of the four men standing on the Yesler Way corner.



2018 Seattle Construction Codes

2018 Seattle Building Code

2018 Seattle Residential Code

2018 Seattle Existing Building Code

2018 Seattle Fire Code

2018 Seattle Mechanical Code

2018 Seattle Energy Code

2018 Seattle Plumbing Code (enforced by Public Health King County)

2018 Seattle Fuel Gas Code (enforced by Public Health King County)

2020 Seattle Boiler Code

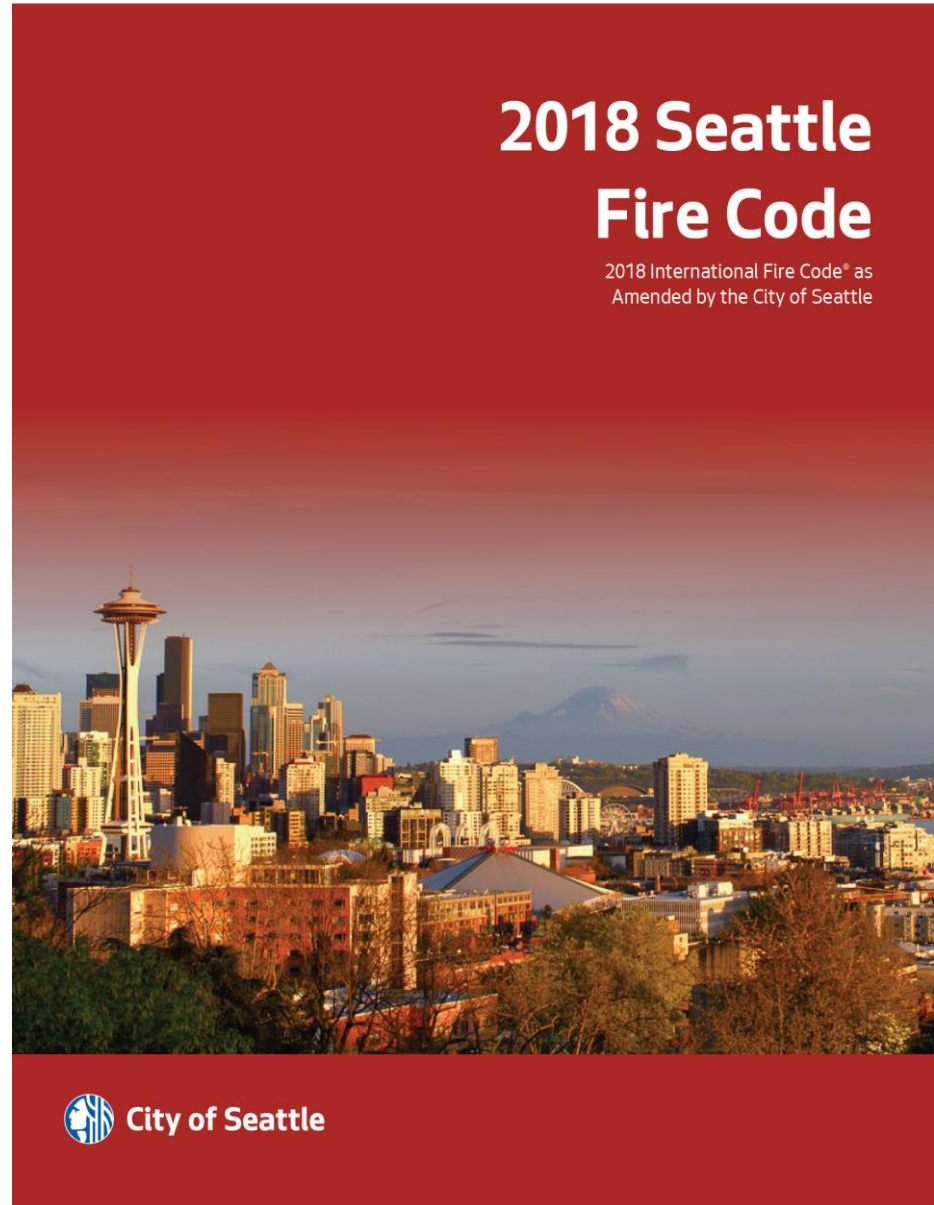
2020 Seattle Electrical Code

Seattle Fire Code Development

- Based on the “model code”
 - 2018 International Fire Code
 - Developed by national committees
 - Used throughout nation
- Washington State passes further statewide amendments
 - Work completed in 2020
 - In effect 2/1/2021
- Additional local amendments appropriate for Seattle
 - Developed during a three year process with SFD and the Seattle Fire Code Advisory Board

2018 Seattle Fire Code

2018 International Fire Code® as
Amended by the City of Seattle



Date
02/09/2021

Seattle Fire
Department

 City of Seattle

Fire Code Advisory Board

- Established by resolution in 1957.
- Advisory-decisions are not binding, but Fire Department and Elected Officials rely heavily on recommendations and expertise of this Board.
- 15 members: Architect, chemical engineer, mechanical engineer, BOMA, King Co Labor Council, major institutions, fire insurance industry, manufacturing and warehousing, marine industry, Port of Seattle, services industry, research labs, fire protection industry, and two public positions.

Significant Changes in 2018 SFC

- Format-Single column.
- Vehicle displays in buildings.
- Integrated testing
- Energy Systems
- Mobile Fueling Operations
- Townhouse Automatic Fire Sprinklers(SRC)

FIRE PROTECTION AND LIFE SAFETY SYSTEMS

User note:

About this chapter: Chapter 9 prescribes the minimum requirements for active fire protection equipment systems to perform the functions of detecting a fire, alerting the occupants or fire department of a fire emergency, mass notification, gas detection, controlling smoke and controlling or extinguishing the fire. Generally, the requirements are based on the occupancy, the height and the area of the building, because these are the factors that most affect fire-fighting capabilities and the relative hazard of a specific building or portion thereof. This chapter parallels and is substantially duplicated in Chapter 9 of the International Building Code®; however, this chapter also contains periodic testing criteria that are not contained in the International Building Code. In addition, the special fire protection system requirements based on use and occupancy found in Chapter 4 of the International Building Code are duplicated in this chapter as a user convenience.

SECTION 901 GENERAL

[S] 901.1 Scope. The provisions of this chapter shall specify where fire protection and life safety systems are required and shall apply to the design, installation, inspection, operation, testing and maintenance of all fire protection systems and life safety systems.

[S] 901.2 Construction documents. The fire code official shall have the authority to require construction documents and calculations for all fire protection and life safety systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection and life safety system. Construction documents for fire protection and life safety systems shall be submitted for review and approval prior to system installation.

[S] 901.2.1 Statement of compliance. Before requesting final or partial approval of the installation, where required by the fire code official, the installing contractor shall furnish a written statement to the fire code official that the subject fire protection and life safety system has been installed in accordance with approved plans and has been tested in accordance with the manufacturer's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.

901.3 Permits. Permits shall be required as set forth in Sections 105.6 and 105.7.

[S] 901.4 (Installation) Fire protection and life safety systems. (~~Fire protection systems shall be maintained in accordance with the original installation standards for that system. Required systems shall be extended, altered or augmented as necessary to maintain and continue protection where the building is altered, remodeled or added to. Alterations to fire protection systems shall be done in accordance with applicable standards.~~) Fire protection and life safety systems shall be installed, repaired, operated, and maintained in accordance with this code and the Seattle Building Code.

[S] 901.4.1 Required fire protection and life safety systems. Fire protection and life safety systems required by this code or the International Building Code shall be installed, repaired, operated, tested and maintained in accordance with this code. A fire protection and life safety system for which a design option, exception or reduction to the provisions of this code or the International Building Code has been granted shall be considered to be a required system.

[W][S] 901.4.2 Nonrequired fire protection and life safety systems. (~~A fire~~) Fire protection and life safety systems or portions thereof not required by this code or the International Building Code shall be allowed to be furnished for partial or complete protection provided that such installed system meets the applicable requirements of this code and the International Building Code. Such systems or portion of system shall be provided with signage stating "NON-REQUIRED SYSTEM." Signage shall be durable and permanent in nature, with contrasting color and background, and with lettering of not less than 1 inch in height. Location of such signage shall be approved.

[S] 901.4.3 Alterations in buildings and structures. For any alteration within a building or structure, the fire protection and life safety systems shall be extended, altered, or augmented to maintain and continue protection within the building or structure. Persons shall not remove or modify any fire protection or life safety system installed or maintained under the provisions of this code or the Seattle Building Code without approval by the fire code official.

(901.4.3) 901.4.4 Fire areas. Where buildings, or portions thereof, are divided into fire areas so as not to exceed the limits established for requiring a fire protection system in accordance with this chapter, such fire areas shall be separated by fire barriers constructed in accordance with Section 707 of the International Building Code or horizontal assemblies constructed in accordance with Section 711 of the International Building Code, or both, having a fire-resistance rating of not less than that determined in accordance with Section 707.3.10 of the International Building Code.

(901.4.4) 901.4.5 Additional fire protection systems. In occupancies of a hazardous nature, where special hazards exist in addition to the normal hazards of the occupancy, or where the fire code official determines that access for fire apparatus is unduly difficult, the fire code official shall have the authority to require additional safeguards and fire protection systems. (~~Such safeguards include, but shall not be limited to, the following: automatic fire detection systems, fire alarm systems,~~

Indoor Vehicle Displays

- The Seattle Fire Code allows the display of vehicles inside of buildings when several conditions are applied.
- One of those conditions was to disconnect the battery. This was problematic for gaseous-fueled vehicles such as hydrogen, LNG or CNG.
- These types of alternative fueled vehicles have built-in sensors to detect leaks or overpressure and these devices would be disabled if the batteries were disconnected.



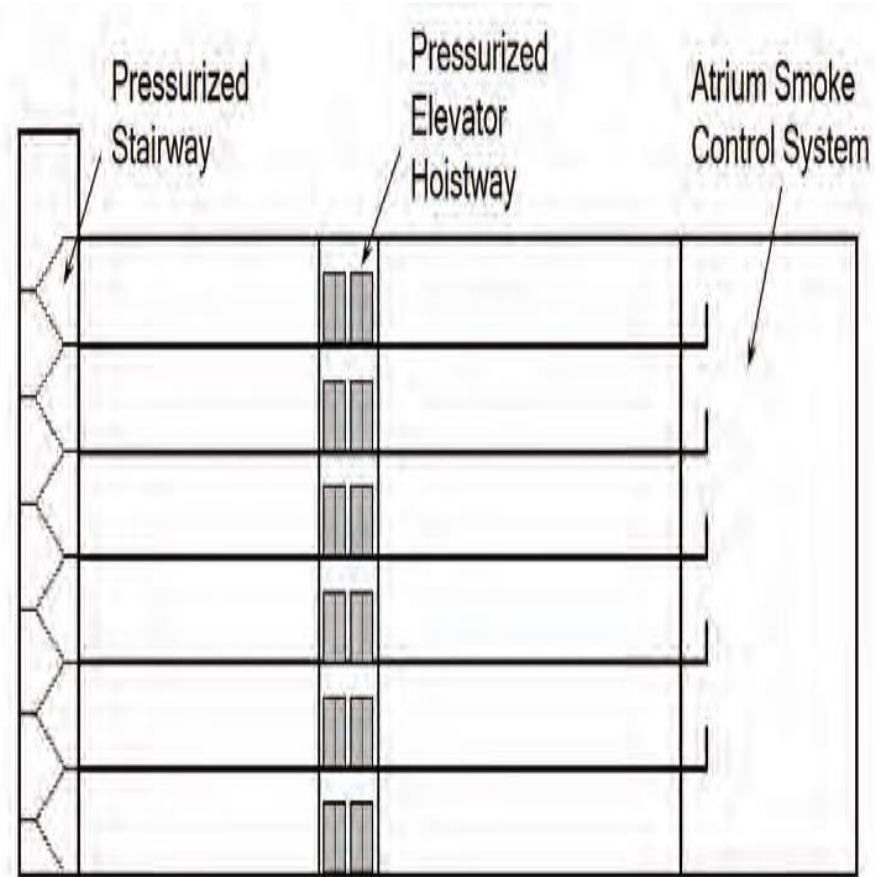
- The Seattle Fire Code now allows the Fire Code Official to determine which method of safeguarding is most appropriate for the vehicle is question. In some cases, it may be more appropriate to leave the batteries connected and the safety systems in operation.

Ceiling Clearance for Indoor Storage:

- New exceptions have been added which will now eliminate the need for clearance from the ceiling or sprinkler heads for storage along walls in buildings.
- Previously, storage along walls had to be maintained two feet or more below ceilings in non-sprinklered areas and 18 inches below sprinkler heads in sprinklered buildings.
- This will allow more flexibility for businesses to store materials.



Integrated testing



- The SFC now requires when two or more fire protection or life safety systems are interconnected in High-Rise buildings that an integrated test be performed at intervals not exceeding 10 years. (Starting in 2031)
- It is very important that these systems be maintained in the life of a building.
- They are often complex in design. A fire alarm system initiating a complex combination of door closures, damper operations, elevator captures, and fan activations in a high-rise building, is an example of an integration that can be highly complex and in most cases it involves the coordination of many different trades, control units and systems.
- This code revision is created to ensure that required testing of integrated features is accomplished and that buildings and their occupants are protected.

Energy Systems

- This new chapter has been added to the SFC to address all configurations of energy systems.
- The installation of large electrical energy storage systems into existing buildings poses significant hazards to occupants and emergency responders because of the nature of the technologies involved and the large amounts of energy being stored.
- These systems were largely unregulated by the 2015 editions of the Seattle Fire and Building codes, especially capacitors energy storage systems (CESS) which have the potential to be a significant energy storage source.
- The 2018 Seattle Fire Code now establishes basic protection requirements that were previous absent.



Mobile Fueling Operations

- A new industry, On-demand mobile fueling, now has prescriptive code requirements that did not exist in the 2015 Seattle Fire Code.
- The previous code edition did not allow tank vehicles to fuel gasoline passenger vehicles unless it was an emergency.
- The 2018 Seattle Fire Code now addresses this new industry and allows the fire code official to allow this activity under certain conditions.
- Fueling is not allowed on public streets, but it may be allowed in designated areas such as privately owned parking lots that meet certain requirements.



Townhouse Automatic Fire Sprinklers



- Already ordained as part of the 2018 Seattle Residential Code Requirement and supported by Seattle Fire Department
- WA State Requires Sprinklers in townhouses with 5 units or more.
- Seattle Residential Code will require in all **new** townhouse units
- Additional plan review and inspections for fire prevention staff

2018 Seattle Fire Code

2018 International Fire Code® as
Amended by the City of Seattle



City of Seattle

- Due to COVID-19, WA State delayed the adoption of the Fire Code from July 2020 to February 2021.
- Because of this delay, the effective date for the Seattle Fire Code is expected to be at the end of March, 2021.

Date
02/09/2021

Seattle Fire
Department



City of Seattle

Questions?

Ken Brouillette

Technical Code Program
Manager

Ken.Brouillette@seattle.gov

206-386-1455

