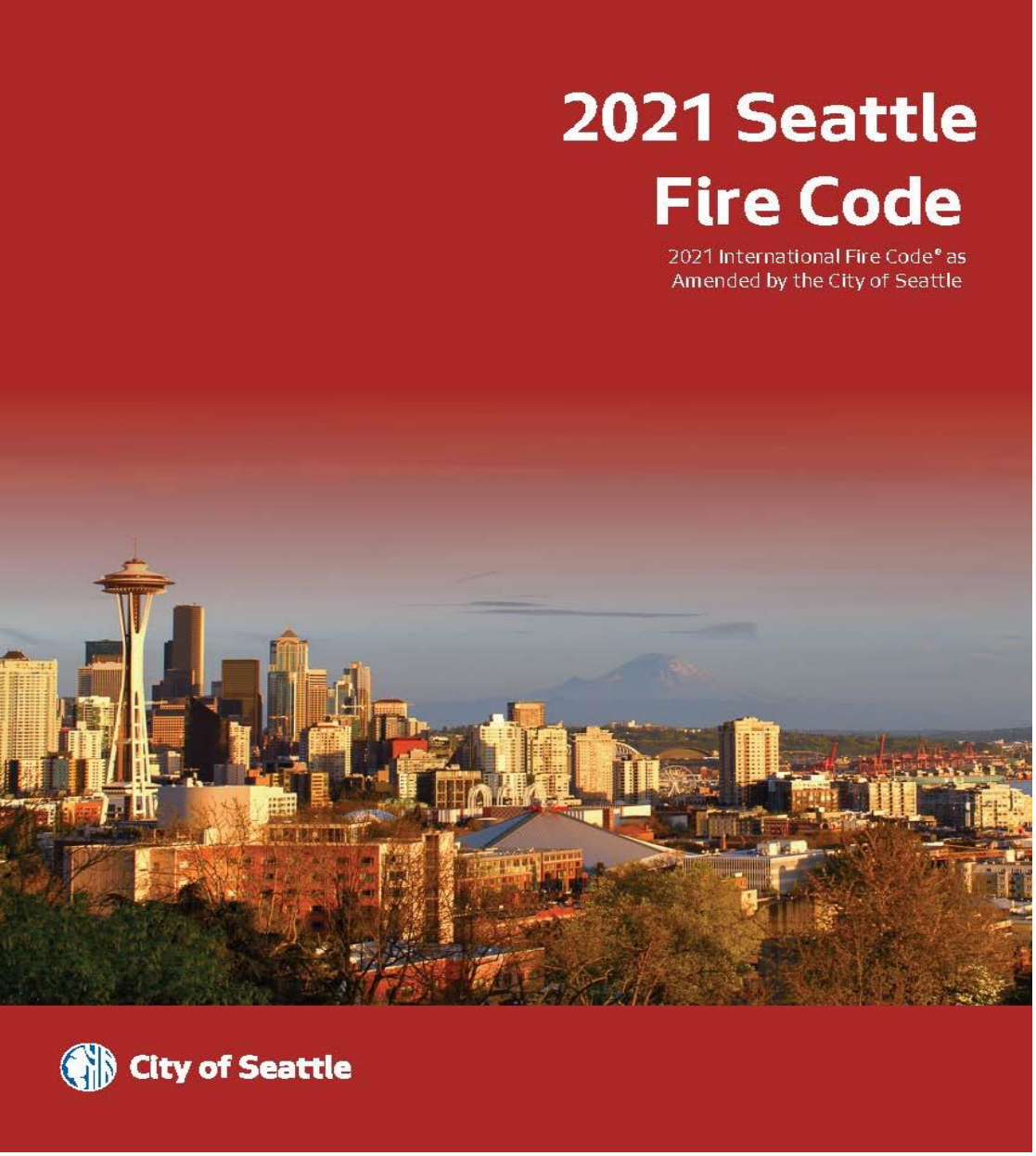
2021 Seattle Fire Code Changes-Overview

Fire Prevention Division

Date
09/19/2024

Seattle Fire Department

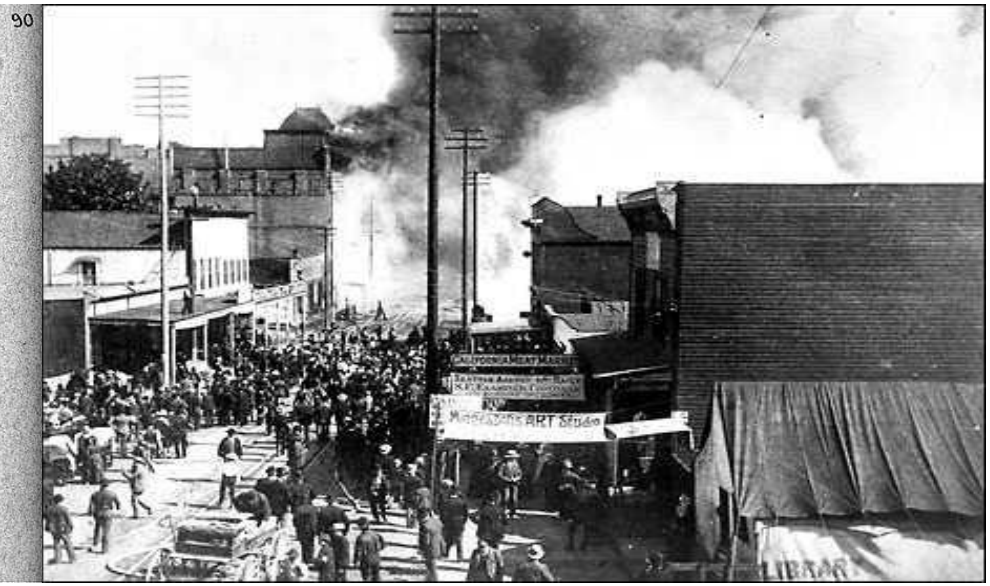
City of Seattle



- The anticipated effective date for the 2021 Seattle Codes, including the Seattle Fire Code, is no earlier than November 15, 2024. The WA State Codes went into effect March 15, 2024.

A look back..

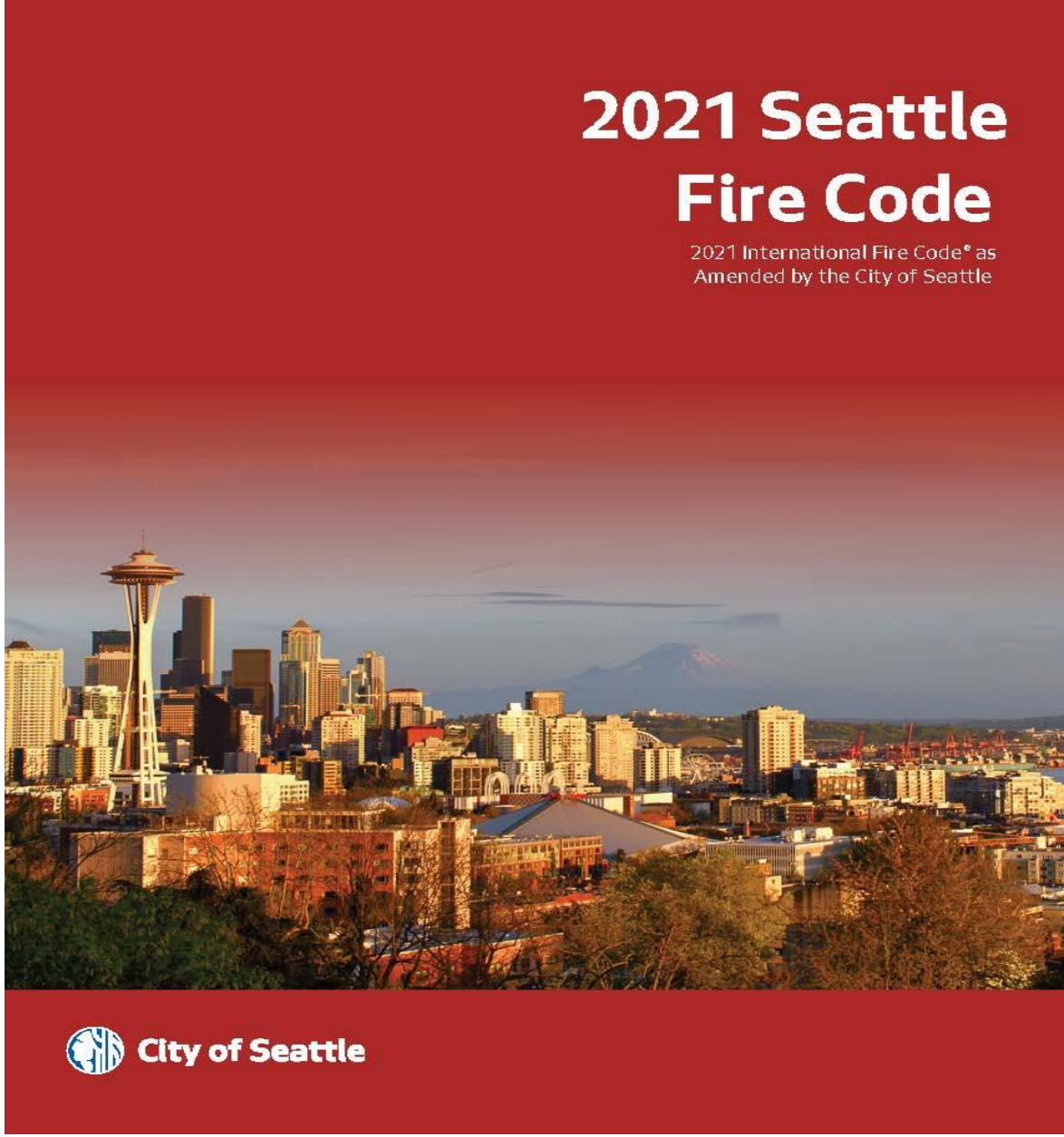
- First fire code ordinance in Seattle enacted in 1870.
- The Great Seattle Fire of 1889-turning point in Seattle's history.



2021 Seattle Construction Codes

2021 Seattle Building Code
2021 Seattle Residential Code
2021 Seattle Existing Building Code
2021 Seattle Fire Code
2021 Seattle Mechanical Code
2021 Seattle Energy Code
2021 Seattle Plumbing Code (enforced by Public Health King County)
2021 Seattle Fuel Gas Code (enforced by Public Health King County)

- Many technical changes were proposed as State code changes
- State and any local Seattle specific changes were reviewed by the Fire Code Advisory Board



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 2021 SFC

- Storage of Lithium-Ion Batteries
- Emergency Preparedness
- Clothes Dryer exhaust
- Existing High-Rise Buildings
- Electrical Energy Storage Systems
- High-Piled Storage

Storage of Lithium-Ion Batteries

- Lithium-Ion and lithium metal batteries can create challenging fire hazards
- The Washington State Fire Code has added a new section with requirements for the storage of Lithium-ion and Lithium metal batteries.
- The requirements are intended to cover all types of lithium-ion and lithium metal batteries (e.g., new, used, waste, refurbished), used batteries being collected for recycling or disposal, and batteries at recycling and disposal facilities.
- Batteries for micromobility devices (E-Bikes, Scooters,etc) will need to be listed and labeled per Underwriter's Laboratory Safety standards.

Emergency Preparedness:

- Washington State Fire Code has added a new section for the storage of batteries.
- Lithium-ion and lithium batteries have been a contributing factor in a growing number of fire incidents for several years, and they are being used in an ever-increasing number of products and applications.
- This new section requires a fire safety and evacuation plan to be prepared and maintained for occupancies involving battery related activities, and storage, handling, and use.

Clothes Dryer Exhaust Systems:

- National Fire Protection Association (NFPA)tracks fire incidents and causes in the United States. NFPA reports that between 2010 and 2014, over 14,500 fires occurred where the fire origin was a clothes dryer.
- The leading cause of dryer fires was lack of cleaning.
- This new section is added to require the maintenance of vent ducts, lint traps and filters to ensure these duct systems are maintained in a safe condition.

Existing High-Rise Buildings

- The International Fire Code has added a new section which will also be in the Washington State Fire Code for specific types of existing high-rise buildings that do not have a previously approved fire sprinkler system will need to develop a plan to install an approved automatic sprinkler system.
- SFD will need to conduct a comprehensive search to determine which buildings may meet this new requirement.
- Then SFD would notify the building owner.
- The building owner would then have 365 days after notice from SFD to develop a compliance schedule to install the system within 12 years.

Electrical Energy Storage Systems (ESS)

- Since the 2018 Seattle Fire Code adoption, a significant amount of evaluation and testing by private and government stakeholders has occurred to better address the hazards and exposures associated with various types of ESS installation, technologies, and operations.
- WA State enacted an emergency rule to their Fire Code adopting NFPA 855 and has approved additional off-cycle rules which provides the most up to date regulations on these types of systems.
- The 2021 SFC will incorporate the appropriate sections of NFPA 855 and off-cycle rules.

Fire Sprinkler Design for Lithium-ion Batteries

- Lithium-ion batteries will burn vigorously with a high heat release rate. Initial laboratory testing has indicated they will present a high-challenge fire in storage arrangements. Presently the fire code lacks guidance on the fire sprinkler protection levels necessary for the storage of this product.
- By classifying lithium-ion batteries as a high-hazard item, it now allows the storage height not to exceed 6 feet without the

Questions?

Ken Brouillette

Technical Code
Development Coordinator

Ken.Brouillette@seattle.gov

206-386-1455