CHAPTER 46

WATERFRONT STRUCTURES FIRE PROTECTION

Note: Chapter 46 is entirely Seattle amendments to the *International Fire Code* and is not underlined.

SECTION 4601 GENERAL

4601.1 Scope. Piers, wharves, floats and marinas shall be in accordance with this chapter and other requirements of this code.

Exception: Approved designated facilities and shipyards in accordance with Administrative Rule 26.02.04, *Designated Hot Work Facilities and Shipyards.*

4601.1.1 Conflicts. Where there is a conflict between this code and an ordinance or rule, this chapter shall govern unless the ordinance or rule establishes more stringent fire and life safety requirements.

4601.2 Signage. At the shore end of piers, wharves and floats conspicuous signage shall be located indicating the address and, for those structures that are designed to support vehicles, the weight limit. Numbers and letters shall be easily legible and have high contrast with the color of the sign background. Numbers and letters shall not be less than 5 inches (127 mm) in height.

4601.2.1 Labeling electrical disconnects. Electrical transformers, control panels and breaker panels shall be readily accessible, clearly labeled and indicate the areas they service (see also Section 605).

4601.3 Fire extinguishers. One portable fire extinguisher having a minimum rating of 2A 20-BC shall be provided within 75 feet (22 860 mm) of all portions of piers, wharves and floats, or at each required hose station. Additional fire extinguishers, suitable for the hazards involved, shall be provided and maintained in accordance with Section 906 and NFPA 10.

4601.4 Emergency plan. Owners of piers, wharves, floats and marinas shall prepare an emergency plan for the facility. The plan shall include procedures for fire department notification, fire evacuation and include location of portable fire extinguishers and hose cabinets; sprinkler and standpipe system control valves; fire department connections and electrical disconnects.

Point of Information

For examples of emergency plans, see information bulletins located at www.seattle.gov/fire titled *Emergency Procedures for Public Occupancies and Fire Evacuation Planning.*

SECTION 4602 DEFINITIONS

4602.1 Limited application. For the purposes of this chapter, certain terms are defined as follows:

COVERED BOAT MOORAGE. A pier or system of floating or fixed accessways to which vessels on water may be secured, 50 percent or more of which is covered by a roof.

DESIGNATED HOT WORK FACILITY. Those piers, designated by the fire code official, and by virtue of their construction, location, fire protection, emergency vehicle access and fire hydrant availability, that are suitable to permit certain repairs to vessels.

FLOAT. A floating structure normally used as a point of transfer for passengers and goods, or both, for mooring purposes.

MARINA. Any portion of the ocean or inland water, either naturally or artificially protected, for the mooring, servicing or safety of vessels and shall include artificially protected works, the public or private lands ashore and structures or facilities provided within the enclosed body of water and ashore for the mooring or servicing of vessels or the servicing of their crews or passengers.

PIER. A structure, usually of greater length than width, of timber, stone, concrete or other material, having a deck and projecting from the shore into waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SHIPYARD. A pier, wharf, or series of piers and related onshore facilities, designated by the fire code official, which by virtue of the pier construction, location, emergency vehicle access, fire protection, hydrant availability and on-site safety personnel in accordance with Seattle Fire Department Administrative Rule 26.02.02, *Designated Hot Work Facilities and Shipyards,* is suitable to permit repairs, including major conversions, on marine vessels of any length.

SUBSTRUCTURE. That portion of the construction below and including the deck immediately above the water.

SUPERSTRUCTURE. That portion of construction above the deck.

Exception: Covered boat moorage.

VESSEL. Watercraft of any type, other than seaplanes on the water, used or capable of being used as a means of transportation.

WHARF OR QUAY. A structure of timber, stone, concrete or other material having a platform built along and parallel to waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SECTION 4603 PLANS AND APPROVALS

4603.1 Plans. Plans for pier, wharf, float and marina fire protection shall be approved prior to installation. The work shall be subject to final inspection and approval after installation.

SECTION 4604
ACCESS AND WATER SUPPLY

4604.1 Fire department access. Fire department apparatus access lanes, not less than 20 feet (6096 mm) wide and capable of supporting a 50,000-pound (22 700 kg) vehicle or 24,000 pounds (10 896 kg) per axle (HS20 loading), shall be provided and so located as to provide fire department apparatus access to within 50-feet (15 240 mm) travel distance to the shore end of all piers, wharves and floats.

4604.2 Fire hydrants. At least two fire hydrants shall be provided. One hydrant shall be located within 500 feet (152 400 mm) of the closest point of fire department apparatus access to the shore end of the marina piers, wharves or floats, or to the fire department connection (FDC) for those piers, wharves or floats that are equipped with standpipes. The second fire hydrant shall be located within 1,000 feet (304 800 mm) of the closest point of fire department apparatus access to the shore end of the marina piers, wharves, or floats, or to the FDC for those piers, wharves or floats that are equipped with standpipes.

All required hydrants shall be capable of delivering not less that 1,000 gallons per minute (gpm) (63 L/s) at a minimum residual pressure of 20 pounds per square inch (psi) (138 kPa) each.

Exception: The requirements for fire hydrants may be modified when alternate arrangements are approved by the fire code official.

SECTION 4605
FIRE PROTECTION EQUIPMENT

4605.1 Standpipe systems. Class III standpipe systems in accordance with NFPA 14 shall be provided for piers, wharves, and floats where the hose lay distance from the fire apparatus to the most remote accessible portion of the pier, wharf or float exceeds 150 feet (45 720 mm). Piping shall be 6 inches (152 mm) minimum, with 4-inch (102 mm) minimum piping acceptable for the last 100 feet (30 480 mm). Approved plastic pipe may be used when installed underwater, or other approved method of protection from fire is provided. Note: Separate Class I and Class II standpipes may be installed in lieu of the combined Class III type standpipe system.

4605.1.1 Hose stations. Hose stations on required standpipes shall be provided at spacing not to exceed 100 feet (30 480 mm) with the first hose station located as close as practicable to the land end of the pier. Each hose station shall have 100 feet (30 480 mm) of $1^1/_2$-inch (38 mm) hose mounted on a reel or rack and enclosed within an approved cabinet. A valved $2^1/_2$-inch (64 mm) fire department hose outlet shall be provided at each hose station. Outlet caps shall have a $^1/_8$-inch (3.2 mm) predrilled hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal. Listed equipment shall be used. Hose stations shall be labeled "FIRE HOSE–EMERGENCY USE ONLY."

4605.1.2 Freeze protection. Standpipe systems shall be maintained dry when subject to freezing temperatures, and always from November 1 through March 31. The $1^1/_2$-inch (38 mm) hose stations shall be tagged out-of-service when the system is drained. The main water supply control valve shall be readily accessible and clearly labeled so that the system may be quickly restored to full service during periods when the system is drained down.

Exception: Other methods of freeze protection may be provided when approved by the fire code official, such as listed freeze valves.

4605.2 Automatic sprinkler systems.

4605.2.1 Covered boat moorage. Automatic sprinklers shall be provided for covered boat moorage exceeding 500 square feet (46 m^2) in projected roof area per pier, wharf or float. Ref: NFPA 303

The sprinkler system shall be designed and installed in accordance with NFPA 13 for Extra Hazard Group 2 occupancy.

If sprinklers are required by this chapter, they shall be extended to any structure on the pier, wharf or float exceeding 500 square feet (46 m^2) in projected roof area.

4605.2.2 Substructure. Automatic sprinklers shall be installed under the substructure of every new waterfront structure in accordance with NFPA 307 and as specified in Chapter 9.

Exceptions:

1. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m^2) supporting no superstructures.
2. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m^2) supporting superstructures not required to be provided with an approved automatic sprinkler system as specified in *Seattle Building Code,* Section 421.9.3.
3. Noncombustible substructures with or without superstructures.
4. Substructures, over other than tidal water, where sprinkler heads cannot be installed with a minimum clearance of 4 feet (1219 mm) above mean high water.
5. Substructures resulting from walkways or finger piers which do not exceed l0 feet (3048 mm) in width.

4605.2.3 Superstructure. Automatic sprinklers shall be provided in superstructures as specified in Chapter 9.

Exceptions:

1. Outside of the fire district, an automatic sprinkler system shall not be required in superstructures which are less than 8,000 square feet (743.2 m^2) in floor area or in individual superstructures less than 8,000 square feet (743.2 m^2) in floor area when separated by a substructure of a width not less than 16 feet (4877 mm) and a substructure draft stop constructed as specified in *Seattle Building Code*, Section 421.5.2.
2. An automatic sprinkler system shall not be required in one-story superstructures which do not

exceed 1,000 square feet (93 m^2) in floor area or 20 feet (6096 mm) in height.

3. An automatic sprinkler system shall not be required in Group R, Division 1 and 2 occupancies or Group B office buildings of Type IA construction, provided no one assembly room exceeds 1,000 square feet (93 m^2) in floor area and the entire substructure is of Type IA construction, unless otherwise required by *Seattle Building Code*, Section 403.

4605.2.4 Monitoring. Sprinkler systems shall be monitored by an approved central station service.

4605.3 Fire department connections. Standpipe and sprinkler systems shall be equipped with not less than a two-way $2^1/_2$-inch (64 mm) fire department connection (FDC), which shall be readily visible and located at the fire department apparatus access (see also Section 4604.2, Fire hydrants).

4605.4 Marina fire protection confidence testing. Standpipe and sprinkler systems shall be inspected and tested at least annually. Reports of inspections and tests shall be submitted to the Seattle Fire Department Confidence Testing Unit in accordance with Administrative Rule 9.02.04, *Confidence Test Requirements for Life Safety Systems*. Maintenance and periodic testing are the owner's responsibility, or the responsibility of such other person as may be designated, and are separate from fire department inspections. The person, firm or corporation performing such work shall have a certificate from the fire department. See Administrative Rule 9.01.04, *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*.