

CHAPTER 36

MARINAS

SECTION 3601 SCOPE

3601.1 Scope. Marina facilities shall be in accordance with this chapter.

Exceptions:

1. Approved designated hot work facilities and shipyards in accordance with the Administrative Rule 26.02.09, Designated Hot Work Facilities and Shipyards and any future revisions of this rule adopted by the fire code official.
2. Private, noncommercial docking facilities constructed or occupied for the use of the owners or residents of the associated single-family dwelling.
3. Marina facilities that include buildings and operations not directly associated with recreational boat moorage such as repair buildings, assembly operations, residential buildings, retail buildings, etc., in accordance with Seattle Building Code Section 425.
4. Floating homes in accordance with Seattle Residential Code.
5. Approved Marine Terminals in accordance with Administrative Rule 27.01.09, Marine Terminals, and any future revisions of this rule adopted by the fire code official.

3601.2 Plans and approvals. Plans for marina fire protection facilities shall be *approved* prior to installation. The work shall be subject to final inspection and approval after installation.

SECTION 3602 DEFINITIONS

3602.1 Definitions. The following terms are defined in Chapter 2:

BERTH.

BOAT.

COVERED BOAT MOORAGE.

DESIGNATED HOT WORK FACILITY.

FLOAT.

MARINA.

MARINE TERMINAL.

PIER.

SLIP.

((VESSEL.))

WHARF.

SECTION 3603 GENERAL PRECAUTIONS

3603.1 Combustible debris. Combustible debris and rubbish shall not be deposited or accumulated on land beneath marina structures, piers or wharves.

3603.2 Sources of ignition. Open-flame devices used for lighting or decoration on the exterior of a ((vessel)) boat, float, pier or wharf shall be *approved*.

3603.3 Flammable or combustible liquid spills. Spills of flammable or *combustible liquids* at or upon the water shall be reported immediately to the fire department or jurisdictional authorities.

3603.4 Rubbish containers. Metal containers with tight-fitting or self-closing lids shall be provided for the temporary storage of combustible trash or rubbish.

3603.5 Electrical equipment. Electrical equipment shall be installed and used in accordance with its listing, Section 605 of this code and Chapter 5 of NFPA 303 as required for wet, damp and hazardous locations.

3603.5.1 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.

3603.6 Berthing and storage. Berthing and storage shall be in accordance with Chapter 7 of NFPA 303.

3603.7 Signage ((Slip identification)). At the shore end of piers, wharves and floats conspicuous signage shall be located indicating the address of the piers, wharves and floats and, for those structures that are designed to support vehicles, the weight limit the structure can support. 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. Slips and mooring spaces shall be individually identified by an approved numeric or alphabetic designator. Space designators shall be posted at the space. Signs indicating the space designators located on finger piers and floats shall be posted at the base of all piers, finger piers, floats and finger floats.

3603.8 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 and fire evacuation, and shall include the location of portable fire extinguishers and hose cabinets, sprinkler and standpipe system control valves, fire department connections and electrical disconnects.

3603.8 Point of Information

Emergency plan assistance can be found in Seattle Fire Department Client Assistance Memo 5072, located at:

<http://www.seattle.gov/fire/FMO/firecode/cam/5072CAM%20MarinaPlans.pdf>

SECTION 3604 FIRE PROTECTION EQUIPMENT

3604.1 General. ~~Piers, marinas ((and)) wharves ((with facilities for mooring or servicing five or more vessels,)) and marine motor fuel-dispensing facilities shall be equipped with fire protection ((equipment)) features in accordance with Sections 3604.2 through 3604.6.~~

3604.2 Standpipes. ~~((Marinas and boatyards shall be equipped throughout with standpipe systems in accordance with NFPA 303. Systems shall be provided with hose connections located such that no point on the marina pier or float system exceeds 150 feet (15 240 mm) from a standpipe hose connection.)) A manual Class I standpipe system in accordance with NFPA 14, or Class III standpipe system in accordance with NFPA 14, if approved by the *fire code official*, shall be provided for *piers, wharves and floats* if 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).~~

Approved plastic pipe may be used if installed underwater, or if another approved method of protection from fire is provided.

The standpipe piping shall be a minimum of 4 inches (102 mm), sized to provide a minimum of 500 gpm (365 L/s) at 130 psi (896 kPa) at the most remote hose connection, with a simultaneous flow of 500 gpm (31.5 L/s) at the third most remote hose connection on the same pier while maintaining a maximum system pressure of 175 psi (1206 kPa).

3604.2.1 Hose connections. Hose connection stations on required standpipes shall be provided at the water end of the *pier, wharf or float*, and along the entire length of the *pier, wharf or float* at spacing not to exceed 150 feet (45 720 mm) and as close as practical to the land end. Each hose connection shall consist of a valved 2½-inch (64 mm) fire department hose outlet. Outlet caps shall have a pre-drilled ¼-inch (3.2 mm) 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.

Exception: The hose connection at the land end of the *pier, wharf or float* may be omitted when a hose connection is located within 150 feet (45 720 mm) of the fire apparatus access road.

3604.2.((1))2 Identification of standpipe outlets. Standpipe hose connection locations shall be clearly identified by a flag or other *approved* means designed to be readily visible from the pier accessing the float system.

3604.3 Access and water supply. ~~((Piers and wharves shall be provided with fire apparatus access roads and water supply systems with on-site fire hydrants when required by the *fire code official*. Such roads and water systems shall be provided and maintained in accordance with Sections 503 and 507.)) Fire department apparatus access lanes, not less than 20 feet wide (6096 mm) 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-foot (15 240 mm) travel distance to the shore end of all *piers,*~~

wharves and floats. The apparatus access lane shall meet the requirements of Appendix D.

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 1000 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 than 1000 gpm (63 L/s) at a minimum residual pressure of 20 psi (138 kPa) each.

3604.4 Portable fire extinguishers. One portable fire extinguisher ~~((of the ordinary (moderate) hazard type))~~ having a minimum rating of 2A 20-BC, shall be provided ~~((at each required standpipe hose connection))~~ within 75 feet (22 860 mm) of all portions of *piers, wharves and floats*. If applicable, ~~((A))~~ additional portable fire extinguishers, suitable for the hazards involved, shall be provided and maintained in accordance with Section 906 and NFPA 10.

3604.5 Communications. A telephone not requiring a coin to operate or other *approved*, clearly identified means to notify the fire department shall be provided on the site in a location *approved* by the *fire code official*. The street address of the marina and emergency telephone number(s) shall be displayed prominently on a sign at the telephone.

3604.6 Emergency operations staging areas. Space shall be provided on all float systems for the staging of emergency equipment. Emergency operation staging areas shall provide a minimum of 4 feet wide by 10 feet long (1219 mm by 3048 mm) clear area exclusive of walkways and shall be located at each standpipe hose connection. Emergency operation staging areas shall be provided with a curb or barrier having a minimum height of 4 inches (102 mm) and maximum space between the bottom edge and the surface of the staging area of 2 inches (51 mm) on the outboard sides of the staging area.

An *approved* sign reading FIRE EQUIPMENT STAGING AREA—KEEP CLEAR shall be provided at each staging area.

3604.7 Automatic sprinkler systems. An approved automatic sprinkler system shall be installed for covered boat moorage in accordance with Section 3604.7.1.

3604.7.1 Covered boat moorage. Automatic sprinklers shall be provided for covered boat moorage exceeding 5,000 square feet (465 m²) in projected roof area per *pier, wharf or float*. 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 for covered boat moorage, the sprinklers shall be extended to any structure on the *pier, wharf or float* exceeding 500 square feet (46.5 m²) in projected roof area. For the purposes of this chapter, the projected roof area means the footprint of the roof.

3604.7.2 Monitoring. Sprinkler systems shall be monitored in accordance with Section 903.4.1.

3604.8 Fire department connections. Standpipe and sprinkler systems shall be equipped with not less than a two-way $2\frac{1}{2}$ -inch (64 mm) fire department connection (FDC), which shall be readily visible and located at the fire department apparatus access.

3604.9 Smoke and heat vents: Approved automatic smoke and heat vents shall be provided in covered boat moorage areas exceeding 2,500 square feet (232 m²) in area, excluding roof overhangs.

Exception: Smoke and heat vents are not required in areas protected by automatic sprinklers.

3604.9.1 Design and installation. Where smoke and heat vents are required, they shall be installed near the roof peak, evenly distributed and arranged so that at least one vent is over each covered berth. The effective vent area shall be calculated using a ratio of one square foot of vent to every fifteen square feet of covered berth area (1:15). Each vent shall provide a minimum opening size of 4 feet by 4 feet.

3604.9.1.1 Automatic Operation. Smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (56°C) and 220°F (122°C) above ambient.

Exception: Gravity-operated drop out vents in accordance with Section 3604.9.1.2.

3604.9.1.2 Gravity-operated drop out vents. Gravity operated dropout vents shall fully open within 5 minutes after the vent cavity is exposed to a simulated fire represented by a time-temperature gradient that reaches an air temperature of 500°F (260°C) within 5 minutes.

3604.10 Draft curtains. Draft curtains shall be provided in covered boat moorage areas exceeding 2,500 square feet (232 m²) in area, excluding roof overhangs.

Exception: Draft curtains are not required in areas protected by automatic sprinklers.

3604.10.1 Draft curtain construction. Draft curtains shall be constructed of sheet metal, gypsum board or other approved materials that provide equivalent performance to resist the passage of smoke. Joints and connections shall be smoke tight.

3604.10.2 Draft curtain location and depth. The maximum area protected by draft curtains shall not exceed 2,000 square feet (186 m²) or two slips or berths, whichever is smaller. Draft curtains shall not extend past the piling line. Draft curtains shall have a minimum depth of 2 feet (609 mm) below the lower edge of the roof and shall not extend closer than 8 feet (2438 mm) to the walking surface on the pier.

SECTION 3605

MARINE MOTOR FUEL-DISPENSING FACILITIES

3605.1 Fuel dispensing. Marine motor fuel-dispensing facilities shall be in accordance with Chapter 23.

