feeder circuit supplying receptacles that provide shore power for boats.

All load calculations for the types of facilities covered by Article 555 are located in Article 220. Part VII of Article 220 contains demand factors that are permitted to be applied to receptacles supplying shore power to watercraft.

555.7 Transformers.

(A) General. Transformers and enclosures shall be identified for wet locations. The bottom of transformer enclosures shall not be located below the electrical datum plane.

(B) Replacements. Transformers and enclosures shall be identified for wet locations where replacements are made.

555.8 Marine Hoists, Railways, Cranes, and Monorails. Motors and controls for marine hoists, railways, cranes, and monorails shall not be located below the electrical datum plane. Where it is necessary to provide electric power to a mobile crane or hoist in the yard and a trailing cable is utilized, it shall be a listed portable power cable rated for the conditions of use and be provided with an outer jacket of distinctive color for safety.

555.10 Signage. Permanent safety signs shall be installed to give notice of electrical shock hazard risks to persons using or swimming near a docking facility, boatyard, or marina and shall comply with all of the following:

(1) The signage shall comply with 110.21(B)(1) and be of sufficient durability to withstand the environment.
(2) The signs shall be clearly visible from all approaches to a marina, docking facility, or boatyard facility.
(3) The signs shall state "WARNING — POTENTIAL SHOCK HAZARD — ELECTRICAL CURRENTS MAY BE PRESENT IN THE WATER."

Electrical shock drowning is only one of many hazards that exist in the water around marinas and boatyards. Part of an effective plan to reduce the number of incidents is a no swimming policy. Prohibiting recreational swimming in the immediate vicinity of boats and docks using ac electrical power will protect the public against the dangers associated with using electrical power in marinas and boatyards. The warnings provided by signage (see Exhibit 555.1), along with enforcement by marina and boatyard operators, can help promote changes in the behavior of those using facilities covered by Article 555 with the intended result being to save lives and prevent injuries that have occurred too frequently in bodies of water associated with public and private marinas and docking facilities.

555.11 Motor Fuel Dispensing Stations — Hazardous (Classified) Locations. Electrical wiring and equipment located at or serving motor fuel dispensing locations shall comply with Article 514 in addition to the requirements of this article.

EXHIBIT 555.1 An example of signage that includes the messaging required by 555.10.

See also

NFPA 303, *Fire Protection Standard for Marinas and Boatyards*

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*

555.12 Repair Facilities — Hazardous (Classified) Locations. Electrical wiring and equipment located at facilities for the repair of marine craft containing flammable or combustible liquids or gases shall comply with Article 511 in addition to the requirements of this article.

555.13 Bonding of Non-Current-Carrying Metal Parts. All metal parts in contact with the water, all metal piping, and all non-current-carrying metal parts that are likely to become energized and that are not connected to a branch circuit or feeder equipment grounding conductor, shall be connected to the grounding bus in the panelboard using solid copper conductors; insulated, covered, or bare; not smaller than 8 AWG. Connections to bonded parts shall be made in accordance with 250.8.

N **555.14 Equipotential Planes and Bonding of Equipotential Planes.** An equipotential plane shall be installed where required in this section to mitigate step and touch voltages at electrical equipment. The parts specified in this section shall be bonded together and to the electrical grounding system. The bonding conductor shall be solid copper conductors; insulated, covered, or bare; not smaller than 8 AWG.

N **(A) Areas Requiring Equipotential Planes.** Equipotential planes shall be installed adjacent to all outdoor service equipment or disconnecting means that control equipment in or on water where the following conditions exist:

(1) Where the system voltage exceeds 250 volts to ground
(2) Where the equipment is located within 3 m (10 ft) of the body of water