EXHIBIT 100.4 The electrical equipment associated with pumps used to circulate water in this artificial pond is subject to the requirements of Article 682.

N **Block.** A square or portion of a city, town, or village enclosed by streets and including the alleys so enclosed, but not any street. (800) (CMP-16)

N **Boatyard.** A facility used for constructing, repairing, servicing, hauling from the water, storing (on land and in water), and launching of boats. [**303:**3.3.3] (555) (CMP-7)

N **Bodies of Water, Artificially Made. (Artificially Made Bodies of Water)** Bodies of water that have been constructed or modified to fit some decorative or commercial purpose such as, but not limited to, aeration ponds, fish farm ponds, storm retention basins, treatment ponds, and irrigation (channel) facilities. Water depths may vary seasonally or be controlled. (682) (CMP-17)

The term *artificially made bodies of water* includes all bodies of water that are not naturally created and that are not covered by the requirements of Article 680. The uses of artificially made bodies of water include decorative, agricultural, municipal infrastructure, and industrial. The decorative pond shown in Exhibit 100.4 is an example of an artificially made body of water because it was constructed and filled with water and did not occur naturally.

N **Bodies of Water, Natural. (Natural Bodies of Water)** Bodies of water such as lakes, streams, ponds, rivers, and other naturally occurring bodies of water, which may vary in depth throughout the year. (682) (CMP-17)

Bonded (Bonding). Connected to establish electrical continuity and conductivity. (CMP-5)

Bonding Conductor (Bonding Jumper). A conductor that ensures the required electrical conductivity between metal parts that are required to be electrically connected. (CMP-5)

Either of the two terms, *bonding conductor* or *bonding jumper*, may be used. The term *bonding jumper* is sometimes interpreted to mean a short conductor, although some bonding jumpers may be several feet in length. The primary purpose of a bonding conductor or jumper is to ensure electrical conductivity between two conductive bodies, such as between a metal box and a metal raceway. Bonding jumpers are particularly important where a box has either concentric- or eccentric-type knockouts. These knockouts can impair the electrical conductivity between metal parts and may actually introduce unnecessary impedance into the grounding path.

Exhibit 100.5 shows the difference between concentric- and eccentric-type knockouts and illustrates one method of applying bonding jumpers at these types of knockouts.

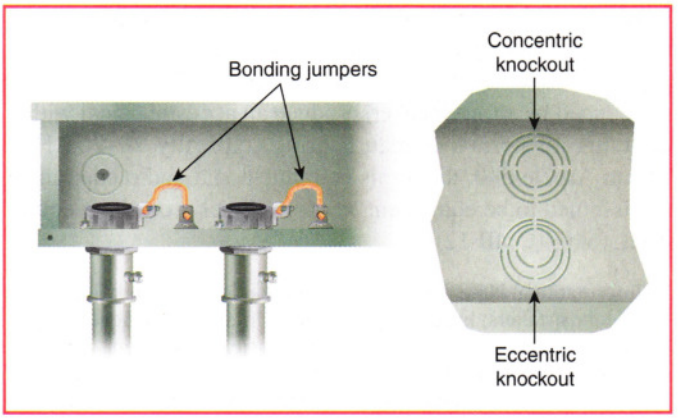

EXHIBIT 100.5 Bonding jumpers installed around concentric or eccentric knockouts.

See also

250.92(B) for bonding jumpers at service equipment

250.97 for bonding jumpers at equipment operating over 250 volts

250.98 for bonding jumpers at expansion fittings in metal raceways

Bonding Jumper, Equipment. (Equipment Bonding Jumper) The connection between two or more portions of the equipment grounding conductor. (CMP-5)

Equipment bonding jumpers ensure that an effective ground-fault current path is not compromised by an interruption in mechanical or electrical continuity. For example, conduits entering an open-bottom switchboard usually are not mechanically connected to the switchboard. Expansion fittings may not provide electrical continuity because they are loosely joined raceways. Bonding jumpers are necessary in order to provide electrical continuity.

Exhibit 100.6 shows an external bonding jumper around an expansion joint. Some expansion fittings for metal conduit have an internal bonding jumper that is integral to the fitting. Equipment bonding jumpers are also used to connect the grounding terminal of a receptacle to a metal box that in turn is grounded via an equipment grounding conductor (the raceway system).

Bonding Jumper, Main. (Main Bonding Jumper) The connection between the grounded circuit conductor and the equipment grounding conductor, or the supply-side bonding jumper, or both, at the service. (CMP-5)