perpendicular grid pattern with tolerance of 100 mm (4 in.).

c. Securing. The below-grade grid shall be secured within or under the pool and deck media.

(D) Connections Where structural reinforcing steel or the walls of bolted or welded metal pool structures are used as an equipotential bonding grid for nonelectrical parts, the connections shall be made in accordance with 250.8.

As specified in 250.8 for the grounding and bonding connections required by Article 250, exothermic welding, pressure connectors and clamps specifically listed for the purpose, and other listed means are permitted as the method of connecting swimming pool bonding conductors to a common bonding grid. Connections in pool areas must be suitable for wet conditions and high levels of chlorine. High concentrations of chlorine in swimming pool water make the wet locations in the vicinity of swimming pool areas (including many pool pump rooms) a corrosive environment. The integrity of the bonding connections should be periodically inspected, particularly those bonding connections between the 8 AWG copper conductor and, for instance, an aluminum (or other dissimilar metal) ladder.

See Exhibit 680.15 for an illustration of two acceptable methods of making swimming pool bonding connections.

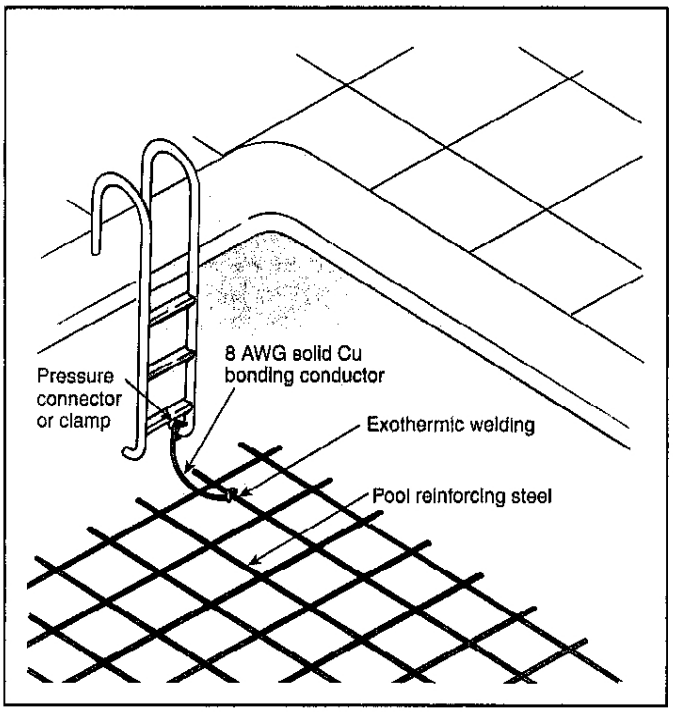

Exhibit 680.15 Bonding connections in a swimming pool.

(E) Pool Water Heaters For pool water heaters rated at more than 50 amperes and having specific instructions regarding bonding and grounding, only those parts designated to be bonded shall be bonded and only those parts designated to be grounded shall be grounded.

680.27 Specialized Pool Equipment

(A) Underwater Audio Equipment All underwater audio equipment shall be identified for the purpose.

(1) Speakers Each speaker shall be mounted in an approved metal forming shell, the front of which is enclosed by a captive metal screen, or equivalent, that is bonded to, and secured to, the forming shell by a positive locking device that ensures a low-resistance contact and requires a tool to open for installation or servicing of the speaker. The forming shell shall be installed in a recess in the wall or floor of the pool.

(2) Wiring Methods Rigid metal conduit or intermediate metal conduit of brass or other identified corrosion-resistant metal, liquidtight flexible nonmetallic conduit (LFNC-B), or rigid nonmetallic conduit shall extend from the forming shell to a listed junction box or other enclosure as provided in 680.24. Where rigid nonmetallic conduit or liquidtight flexible nonmetallic conduit is used, an 8 AWG insulated solid or stranded copper bonding jumper shall be installed in this conduit. The bonding jumper shall be terminated in the forming shell and the junction box. The termination of the 8 AWG bonding jumper in the forming shell shall be covered with, or encapsulated in, a listed potting compound to protect such connection from the possible deteriorating effect of pool water.

(3) Forming Shell and Metal Screen The forming shell and metal screen shall be of brass or other approved corrosion-resistant metal. All forming shells shall include provisions for terminating an 8 AWG copper conductor.

(B) Electrically Operated Pool Covers

(1) Motors and Controllers The electric motors, controllers, and wiring shall be located not less than 1.5 m (5 ft) from the inside wall of the pool unless separated from the pool by a wall, cover, or other permanent barrier. Electric motors installed below grade level shall be of the totally enclosed type. The device that controls the operation of the motor for an electrically operated pool cover shall be located such that the operator has full view of the pool.

FPN No. 1: For cabinets installed in damp and wet locations, see 312.2(A).

FPN No. 2: For switches or circuit breakers installed in wet locations, see 404.4.

FPN No. 3: For protection against liquids, see 430.11.

(2) Protection The electric motor and controller shall be connected to a circuit protected by a ground-fault circuit interrupter.