

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-661-5880**

Swimming Pool Equipotential Bonding Grid

Code: 2008 Electrical Code
Section: 680.26 (B)(2)

Date: July 1, 2009

Question:

What is the requirement for an equipotential bonding grid around swimming pools?

Answer:

This question references a change from the 2005 Electrical Code with revisions in the 2008 Electrical Code requiring that an equipotential bonding grid be established around the perimeter of the pool. Equipotential bonding grids and their use are not new to the Code, yet are new to Article 680. There is no change in the requirements for bonding metallic components of the pool under previous Code language. This new Section adds to those requirements by installing an equipotential bonding grid under the paved walking surfaces extending outward to a minimum of 3 feet and encompassing the top edge of the pool wall following the contour of that edge, still meeting the concept that all metallic sections or parts of the pool be bonded together to eliminate differences of "potential" between any metal components of the pool or surrounding conductive surfaces.

In addition, an equipotential bonding grid is required whether a paved surface is installed or not, and applies to any permanent pool, inground or aboveground. This "grid" is manufactured by applying crisscrossed rebar, or minimum number 8 steel wire mesh, or a copper grid system comprised of minimum number 8 copper conductor installed in a uniformly spaced perpendicular grid pattern, placed between the earth and the concrete or within the concrete, with no insulating material separating the earth and concrete, **or a single #8 bare copper conductor installed between 18 to 24 inches from the edge of the pool. This change in 2008, in Section 680.26(B)(2), would allow a single #8 bare copper conductor to be installed within the area 18 inches from the edge of the pool, out to 24 inches.** The purpose is to assure a grounding plane by which stray voltage might have a more effective path to earth.