

Above Ground Swimming Pools

Swimming pools, hot tubs, and spas capable of holding 24" or more of water require permits, inspections, and compliance with code provisions summarized below. [PA UCC 403.62.(c)(5)]



1. Pool Motors.

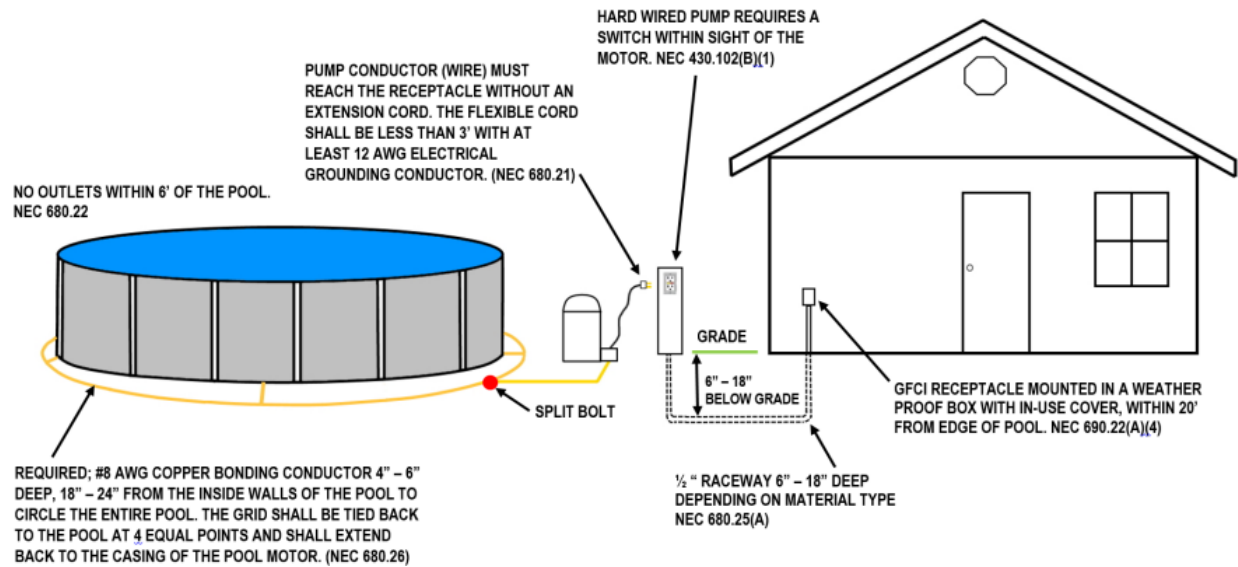
- a. Feed wiring for the pool motor must be MC cable, RMC, IMC, or RNC. An insulated copper equipment grounding conductor no smaller than 12 AWG is required. [IRC 4205.5]
- b. Metal conduit must be corrosion resistant and suitable for the location.
- c. UF cable is prohibited for motor branch circuits.
- d. A 20A GFCI circuit breaker is required and must serve the motor only. [IRC 4203.1.4]
- e. The motor receptacle must be in a weatherproof device box and have an in-use cover. Twist-lock and push-in receptacles are permitted.
- f. The motor receptacle must be 6' to 10' from the pool. [IRC 4203.1.1]
- g. Motor cord must be no longer than 3' and have a grounding plug. [IRC 4202.3 #1]
- h. A timer must be installed to control the pool pump. [IECC R403.10]

2. General Purpose Receptacle for Pool

- a. A 125 volt 15- or 20-amp receptacle supplied by a general-purpose branch circuit must be installed 6' to 20' from the inside wall of a pool, outdoor spa, or hot tub. [IRC 4203.1.3]
- b. The general use receptacle must be GFI protected and have a weatherproof cover. [IRC 4203.1.4]

3. Bonding

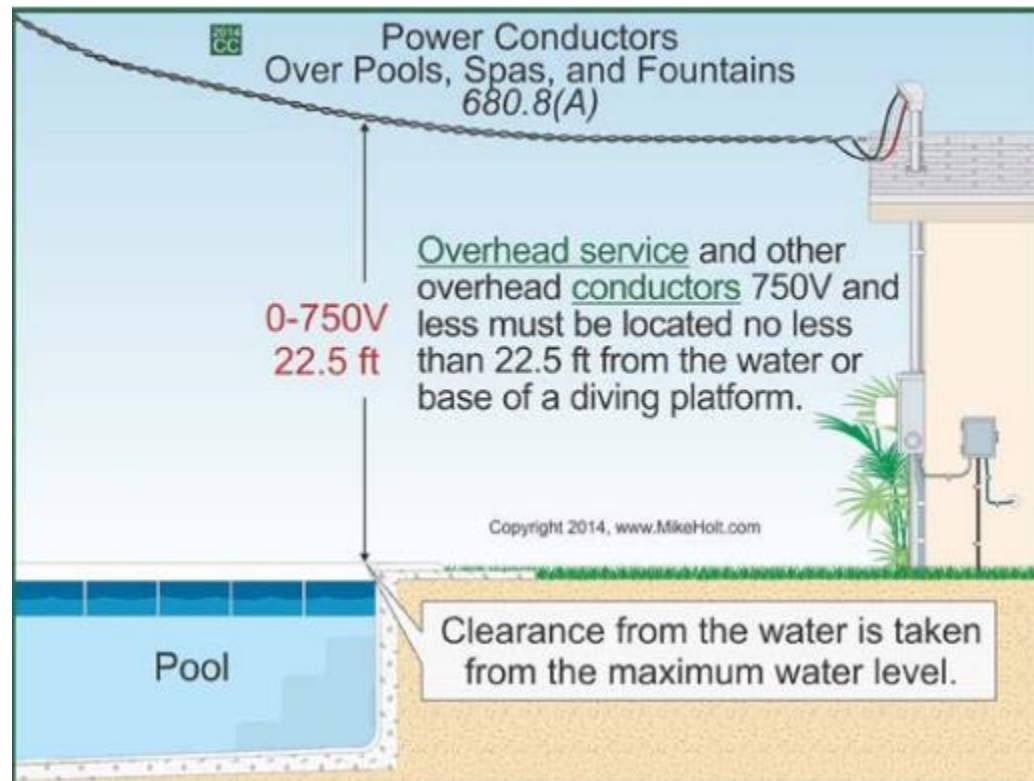
- a. The purpose of bonding is to ensure that, in the event of an electrical malfunction, that electrical current will dissipate safely to reduce shock and electrocution hazards.
- b. Additionally, if none of the bonded parts are in contact with the pool water, the pool water must be bonded with a 9 square inch metallic component constantly underwater. IRC 4204.3
- c. Hot tubs and spas must be bonded in accordance with IRC 4204.4 to 4204.5.



Summary Image of Items 1-3

4. Pool Location.

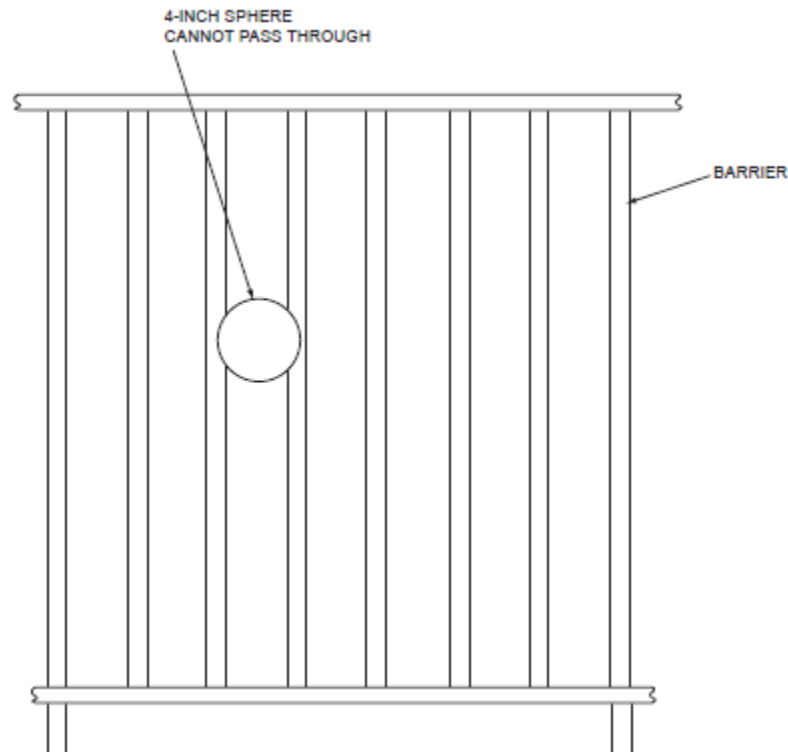
- a. Overhead electric wires must be 22.5' above the pool's water surface and 10' horizontally from the pool. [NEC 680.9(A)]



- b. Glazing (glass) within 5' horizontally of a pool, hot tub, or spa in which the bottom edge of the glass is less than 60" above the walking surface must be safety glass or tempered glass. [IRC 308.4.5]

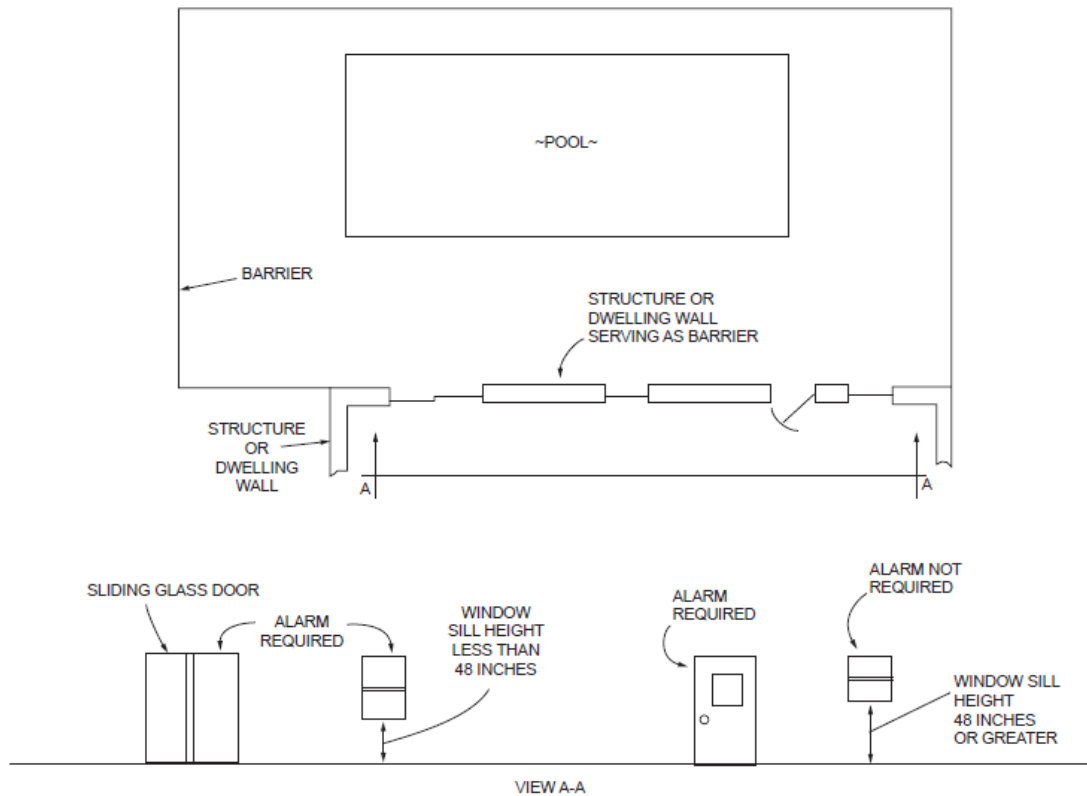
5. **Barrier**

- a. A pool, hot tub, or spa must be surrounded by a 4' high barrier to prevent children from accessing the pool and drowning. The barrier can be comprised of many different parts.
- b. The pool wall itself can be a barrier if the pool wall is 48" above grade at all points around the pool. [ISPSC 305.2.1 #1]
- c. A mounted barrier can be installed on top of the pool structure. Openings in the mounted barrier or railing cannot be larger than 4" wide. [ISPSC 305.2.2]



- d. Ladders or steps must be secured, locked, or removed when not in use. [ISPSC 305.5 #3]
- e. If permanent steps are installed to access an above-ground pool, an outward-swinging lockable gate 48" high must be installed at the bottom of the steps. [ISPSC 305.3]
- f. A fence can be used as a barrier. Fences with vertical members must be spaced no more than 4" apart and horizontal crossmembers no more than 45" apart. The fence must be at least 48" high. [ISPSC 305.2.1 #1]
- g. Diagonal lattice type openings must be no more than 1-3/4". The fence with diagonal lattices must be at least 48" high. [ISPSC 305.2.8]
- h. Chain link fence openings must be no more than 2-1/4". The chain link fence must be at least 48" high. [ISPSC 305.2.7]
- i. Gates must open outward, be self-closing and latching, and be lockable. The lock release must either be 54" above grade or be on the inside (pool side) of the gate at least 3" below the top of the gate. [ISPSC 305.3.3]

- j. If the dwelling serves as part of the barrier, alarms must be installed in the locations shown in the following image. Alarms must be listed per UL 2017. [ISPSC 305.4 #1]



- k. Maintain a clear zone of 36" around the pool wall to prevent climbing into the pool. [ISPSC 305.2.9]
 - l. **Spas or hot tubs** with a lockable safety cover complying with ASTM F1346 are deemed to comply with all barrier requirements. [ISPSC 305.1]
- 6. Storable Swimming Pools**
- a. Swimming pools stored when not in use with a maximum water depth of 42" constructed of nonmetallic materials must follow IRC 4207.