



Electrical Requirements for Pools based on the 2017 NEC

Storable pools:

- All requirements of **NEC 680 Part III** apply. The following 5 key items **are required** to obtain a pool permit without an electrical permit. If one or more listed conditions are not met see “permanent pool” section below.

Key Items:

- Capable of holding water to a maximum depth of 42”. (check manufacturer requirements/specs)
- The storable pool shall be constructed of non-metallic materials.
- If pool is equipped with a pump the electric motor shall be listed and identified for use with “storable pools.”
- The motor must have a factory installed cord with GFCI protection built-in within 12” of the plug end.
- At least one 120 volt 15amp or 20amp GFCI protected receptacle shall be located within 20 feet of the pump motor. All other receptacles located within 20 feet of the water’s edge shall be GFCI protected.

Permanent pools:

- All requirements of **NEC 680** apply. All pools in this category require an electrical permit from a licensed electrical contractor.

Key Items:

- Pumps and motors shall be listed and identified for use with “permanent pools.”
- Motors may be hard wired or cord connected. If cords are used they may not be longer than 3 feet in length. **NEC 680.8**
- Equipment grounding conductors shall be insulated and made of copper. **NEC 680.21(A)(1)**
- All equipment grounding conductors shall be sized in accordance with NEC 250.122 but in no case shall be smaller than 12AWG. **NEC 680.21(A)(1)**
- Disconnecting means must be readily accessible. Unless separated by a permanent barrier the disconnecting means shall not be located within 5 feet from the inside edge of the pool and must remain within sight of the equipment served. **NEC 680.13**
- At least one general purpose receptacle must be located NOT LESS THAN 6 feet and NOT MORE THAN 20 feet from the water’s edge. It MUST NOT be on the same circuit as the pool pump circuit. **NEC 680.22(A)(1)**

- All 125 volt 15 amp or 20 amp receptacles located within 20 feet of the inside walls of the pool must be GFCI protected. **NEC 680.22(A)(4)**

NEC 680.26 Equipotential Bonding for Permanent Pools Key Items:

- Bonding conductors shall be solid copper not smaller than 8AWG. **NEC 680.26(B)**
- Connections to be buried shall be identified for use. (i.e. concrete encased/direct burial)
- Bonding conductors are not required to extend to panel boards or service. **NEC 680.26(B)**
- All fixed metal parts, regardless if it is associated with the pool or not, shall be bonded if it is located within 5 feet horizontally from the inside wall of the pool. All metallic pool parts shall be bonded. This includes, but is not limited to pool pump motors, pool heaters, underwater lighting, placeholders for stairs, diving boards and pool cover parts. **NEC 680.26(B)(1-7)**
- Perimeter bonding shall be installed 18" to 24" from the inside wall of the pool and secured 4" to 6" under the surface. Conductive pools require 4 equal points of attachment to the bonding conductor. Non-conductive pools require 1 point of attachment to the bonding conductor. A "non-conductive" pool may have a metallic shell with a vinyl or composite liner. Unless such liner exists the pool would be considered conductive. **NEC 680.26(B)(2)**
- Where no bonded parts are in direct contact with the water a means shall be made to make at least 9 in.² to be in contact with pool water. (i.e. a brass nipple with an approved ground clamp) **NEC 680.26(C)**

Clearances

- Overhead conductors must be at least 22.5' measured vertically to the water level, edge of water surface, base of diving platform or permanently anchored raft. A horizontal clearance of at least 10' must be maintained from the inside wall of the pool. **NEC table 680.9(A)**
- No pool may be installed over underground conductors. Contact the utility company if pool location is closer than 5' horizontally from underground utility conductors.