



SWIMMING POOL REQUIREMENTS



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PERMITS

A permit from the Inspection Department is required prior to putting up a permanent pool. A permit is required for permanent pools, such as the following:

- The pool is set into the ground, regardless of its size and/or depth.
- A deck is built around the pool.
- Permanent connections are made for the filter and/or heater.

Where electrical and/or plumbing work is required incidental to any pool construction, an electrical and/or plumbing permit shall be required.

LOCATION

- Swimming pools are not allowed to be located in the front yard or side yard abutting a street.
- Pools must be at least five feet from any lot lines, or setback the width of any easement, whichever is greater.
- Swimming pools are not allowed to be located closer than five feet from any wall, fence or other accessory structure.
- Pools must be at least 10 feet from the principal structure.

◇ Swimming pools must be located in relation to well and septic systems in accordance with the Wisconsin State Plumbing Code, Chapter ILHR 83 as follows:

- Approval of the location shall be obtained from the local county health Sanitarian.
- Fifteen feet from septic tank to edge of pool.
- Fifteen feet from edge of any drain field.
- Twenty-five feet from any well.



DRAINAGE

Swimming pool should be constructed so that water does not drain into any sanitary sewer or septic tank, nor to overflow upon or cause damage to any adjoining property. Provisions may be made for draining the contents of any swimming pool into a storm sewer, but such installation shall be subject to prior approval of the Plumbing Inspector.

LIGHTING

Lights shall be erected so as to eliminate direct rays and minimize reflected rays of light onto adjoining properties and roadways. Lighting installation shall be done in accordance with the State of Wisconsin Electrical Code.

HEALTH & SAFETY

Every swimming pool shall be maintained in such order that it will not create a hazard to the health, safety or general welfare of the residents of the City.

SAFEGUARDS

Pool owners must properly enclose and/or erect and maintain barriers around such swimming pool of such size and construction as will safeguard a child under 7 years of age so as to prevent such child from falling into such swimming pool. No such pool shall be regarded as being properly enclosed or employing proper barriers unless it complies with the following requirements:





ELECTRICAL CODE REQUIREMENTS

- Electrical: Separation from overhead and underground electrical wiring shall be in accordance with State of Wisconsin Electrical Code and/or local code. Required electrical wiring supplying all pools shall be installed in accordance with Article 680 of the National Electrical Code (see information below).

This summary covers most backyard permanent and non-permanent above-ground pools. It does not cover indoor or in-ground pools nor does it cover zoning requirements.

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All code references are from the 2011 National Electrical Code, as adopted and amended by the State of Wisconsin (SPS 316) and adopted by the City of Oak Creek.

**As always, call Diggers Hot Line
811 or 1-800-242-8511**

GENERAL REQUIREMENTS

- All receptacles must be at least six feet from the inside wall of the pool (NEC 680.22(3)).
- All receptacles within 20 feet of the pool shall have ground fault protection (NEC 680.22(A)(4)).
- Permanent lighting fixtures within 10 feet of the pool and cord connected lighting fixtures within 16 feet of the pool shall comply with NEC 680.22 (B) and 680.3.
- Switches, timers, etc., must be at least 5 feet from the pool (NEC 680.22(c)).

- In-ground swimming pools shall be enclosed by an approved barrier which shall consist of properly erected and maintained wall or fence at least 48 inches in height which entirely surrounds the swimming pool. Every such fence shall be constructed in accordance with the Building Code requirements of the City. Every such wall or fence shall be located not less than five (5) feet from the vertical wall enclosing the pool, and shall not provide at any point a space or separation in such wall or fence of more than four (4) inches. All gates or door openings or other means of access into such swimming pool shall be self-closing and self-latching and shall be at least 36 inches in height with latches placed in such a manner they can only be operated from the inside of the enclosure if they are less than 48 inches above the ground level, or shall employ such other safe means of securing access that such pool shall be inaccessible to a child under 7 years of age when such swimming pool is not in actual use or attended.
- Above-ground swimming pools shall be enclosed by an approved barrier as set forth in the paragraph above, or, shall consist of any adequate conforming structure of durable material of which the pool itself is constructed, provided such structure shall extend the vertical water enclosing, or relating deck structure of the swimming pool, more than 42 inches above the level of the ground immediately adjacent to the pool.
- Safety Devices. Every swimming pool which has a capacity for water exceeding four (4) feet in depth at any point, shall be equipped with a reasonable number of life preservers and/or other safety devices.

- Overhead wiring shall not be within 10 feet horizontally from the edge of the pool. The clearance in any direction of supply or service drops shall not be closer than 22 feet. It shall be measured from the water level edge of the water surface in any direction. This includes WE-Energies service, telephone, cable TV, etc (NEC 680.8)
- Underground wiring shall not be permitted under the pool or within the area extending five (5) feet horizontally from the inside wall of the pool unless the wiring is necessary to supply pool equipment. (NEC 680.10)
- All electrical equipment and materials must be approved by a recognized testing laboratory, used according to the manufacturers instructions and installed according to the State and National Electrical Code.

The NEC also regulates the use of underwater lighting, underwater audio equipment, pool heaters, electrically operated pool covers, ground fault interrupters and transformer used with pool lighting (See Article 680).

TYPICAL PERMANENT POOL

Definition: Constructed in the ground, on the ground or in a building in such a manner that it cannot be readily disassembled for storage (NEC 680.2) and are capable of holding water in a depth greater than 42”.

- The pump shall be labeled **“This pump is for use with permanent pools only. Do not use with storable pools.”**
- If 20 amps or less, it is permitted to be cord-connected. The cord shall not exceed 3 feet and shall have a copper grounding wire not smaller than #12, with a grounding and locking type plug (NEC 680.7, 680.21(A)(5), and 680.22(A)(1)).

- An outlet for the pump only may be located between 6 feet and 10 feet from the pool. It must be single, locking and a grounded receptacle with a cover that can be closed when the cord is plugged in and protected by a ground fault circuit interrupter (NEC 680.22(A)(1)(5)).
- The receptacle for the pump/filter motor shall have a #12 or larger insulated copper ground wire run to the panel. The underground conductors shall be in rigid conduit, intermediate metal conduit or non-metallic conduit (PVC) (NEC 680.21(A)(1)).
- The wiring from the dwelling or accessory structure to the pool shall be installed in rigid or intermediate metal conduit or non metallic rigid plastic conduit (PVC). Rigid and intermediate metal conduit shall be buried at depth of 6 inches below grade. Non metallic rigid plastic conduit shall be buried at a depth of 18 inches below grade. The installation of direct bury cable (UF wire) is prohibited. (NEC 680.10 (300.5)).
- The branch circuit wiring from the dwelling or accessory structure to the pool shall consist of separate insulated conductors (wires) of which one shall be green insulated (ground) wired (#12 minimum) (NEC 680.21)
- The branch circuit interior wiring for the pool in a dwelling or accessory structure from the service equipment or panel board to the exit of the structure may be installed in a conduit (provided a green insulated ground wire (#12 minimum) is installed) or Non-Metallic Sheathed Cable (NM Cable) provided the wire size is a #12 minimum size.
- All receptacles shall have in use covers.

- A 120V convenience receptacle shall be located between 6 feet and 20 feet from the pool and be ground fault protected (NEC 680.22(A)(3)) and not more than 6 feet 6 inches above the grade or platform servicing the pool.
- Metal parts of the pool, permanent metal ladders, metal parts of the water circulating system, including the pump motor and all fixed metal parts within 5 feet of the pool shall be bonded together with a #8 or larger solid copper wire (NEC 680.26(B)).

An electrical permit is required to install this wiring.

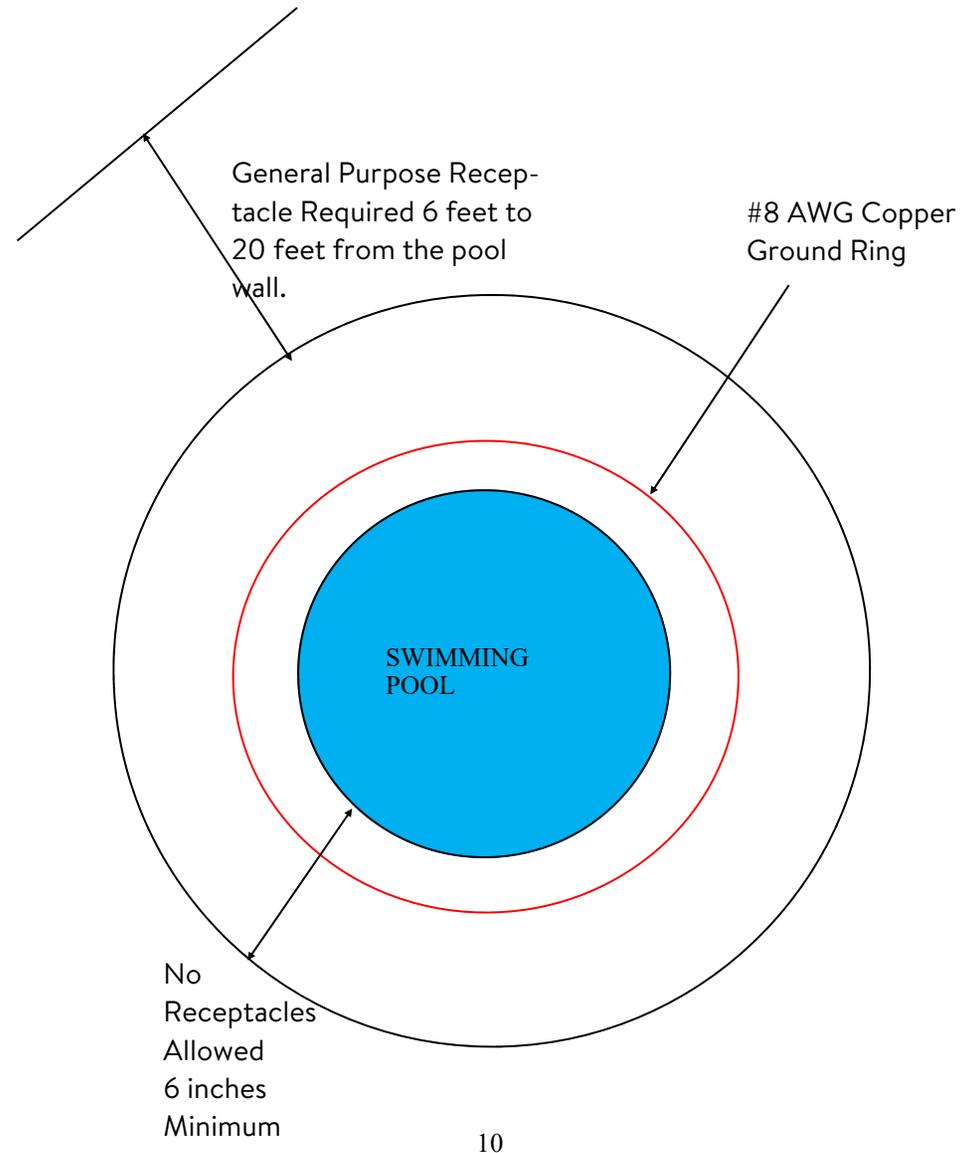
- All above or below grade permanent installed pools shall have equipotential bonding. This may be done by installing a #8 bare solid copper conductor around the perimeter of the pool in an area between 18 inches and 24 inches from the inside of the pool. It shall be installed at a depth of no less than 4 inches and not more than 6 inches below the surface grade. This shall be connected to bonding of the pool pump motor.
 - The perimeter bonding may also be re-bar or welded wire mesh installed in concrete or copper mesh installed directly in the ground (NEC 680.26).
- An intentional bond of a minimum conductive surface of 9 square inches shall be installed in contact with the pool water of above or below grade permanent installed pool. (Nec.680.26(C)).
- All 15 amps, 20 amps, 120 volts, and 250 volts non-locking receptacles shall be listed weather-resistant type.

DIAGRAM ON NEXT PAGE

Effective March 1, 2009



**ABOVE GROUND SWIMMING POOL
ELECTRICAL WIRING
DIAGRAM**



TYPICAL STORABLE (NON-PERMANENT) POOL

- ⇒ Maximum wall height of 42 inches
- ⇒ So constructed that it may be readily disassembled for storage and reassembled to its original integrity.
- ⇒ The pump shall be labeled **“This pump is for use with storable pools only. Do not use with permanently installed pools.”**

This pump will be double insulated or its equivalent, and its internal and inaccessible parts will be grounded (NEC 680.31).
- ⇒ All electrical equipment used with storable pools shall be protected by ground fault circuit interrupters.
- ⇒ Extension cords are not allowed. The cord that comes on the pump must be able to reach the ground fault protected receptacle with a cover that can be closed when the cord is plugged in.

An electrical permit is not required if no outlets are added.

PERMIT PROCEDURE

Please submit a building permit application and a plat of survey for your property showing the location of the swimming pool.

The swimming pool permit fee is \$50 plus a \$5 administrative fee. If an electrical permit is required that fee is an additional \$50 plus a \$5 administrative fee.

Please allow up to 2 weeks for processing of your permit application.

If you have any questions, please call the Building Inspector at 414-766-7041 between the hours of 8 to 10 a.m., and 1 to 2 p.m. Or the Electrical Inspector at 414-766-7040 between the hours of 8 to 10 a.m. and 1 to 2 p.m.

Once the pool is complete, please call 414-766-7000 for an inspection during the hours of 7:30 a.m. -4 p.m.

8040 S. 6th Street
Oak Creek, WI 53154

