RESIDENTIAL SWIMMING POOL INSTALLATION GUIDE

CITY OF STRONGSVILLE,OHIO

BUILDING DEPARTMENT

16099 FOLTZ PARKWAY

440-580-3105

GENERAL REQUIREMENTS

1. If you belong to a Homeowner's Association, check with them to discuss their Regulations prior to submitting plans to the Building Department.

2. All pools shall comply with Strongsville Codified Ordinances (SCO)1252.29 - Zoning Code and SCO 1458 - 2018 International Swimming Pool and Spa Code as adopted. These may be viewed online at www.strongsville.org under the Government Tab, City Council drop down—Codified Record Information.

3. Pools shall be located at least 15' from the rear yard property lines.

4. Pools may not be placed in any easement.

5. Inground Pools require a topographic map that details the existing and proposed elevations of the pool area. The new topographic map shall bear the seal of a Professional Surveyor.

6. Any change of grade for an above ground pool requires the approval of the Engineering Department.

7. The following information shall be submitted with the application:
   A. Two (2) copies of an overhead view of where the pool is placed on the property.
   B. One (1) copy of specifications for any of the following installed items—Pool, ladder, pump, filter, heater, electrical, auto-cover, in pool lighting.

GENERAL REQUIREMENTS

REQUIRED POOL INSPECTIONS

1) Electrical Underground - conduit in place, wiring may or may not be installed, prior to backfill.
2) Pool Gas supply- Prior to backfill.
3) Pool Bonding (metal parts, conductive pool shells, perimeter surfaces, electrical equipment, pool water)- Prior to backfill. This may be multiple inspections due to installation process.
4) Pool Concrete Deck Pre-pour.
5) Electrical Final– all devices in place, power on.
6) Heat Final– if equipped.
7) Building Final– Barrier Requirements - Any portion of an above pool that measures less than 48” from the top rail of the pool to grade requires a barrier to prevent accidental entry. Fenced yards require self-closing, self-latching devices on all gates. Spa and hot tubs equipped with a lockable safety cover and pools equipped with a powered safety cover complying with ASTM F1346 are not required to comply with ISPSC barrier requirements
8) Grading Final– if topography has been changed from original.

2013 Residential Code of Ohio 108.1 - “...It shall be the duty of the owner or the owner’s authorized representative (contractor) to cause the work to remain accessible and exposed for inspection purposes…”.

ELECTRICAL REQUIREMENTS

This is not an all inclusive list of the requirements of the 2014 National Electrical Code (NEC) Article 680 (Swimming Pools, Fountains and Similar Installations). However the following information is a basic overview of Article 680.

DEFINITIONS

PACKAGED SPA / HOT TUB - A factory fabricated unit consisting of water-circulating, heating and control equipment mounted on a common base, intended to operate a spa or hot tub. Equipment can include pumps, air blowers, heaters, light controls, sanitizer generators and so forth.

PERMANENTLY INSTALLED POOLS - Those that are constructed in the ground or partially in the ground, and all others capable of holding water in a depth greater than 42”, and all pools installed inside a building, regardless of water depth , whether or not served by electrical circuits of any nature.

STORABLE POOLS - Those that are constructed on or above the ground and are capable of holding water to a maximum depth of 42” or a pool with nonmetallic, molded polymeric walls or inflatable walls regardless of dimension.

ELECTRICAL REQUIREMENTS

1. Placement of pools shall maintain clearances from overhead conductors, communication cables and underground wiring. **NEC 680.8**

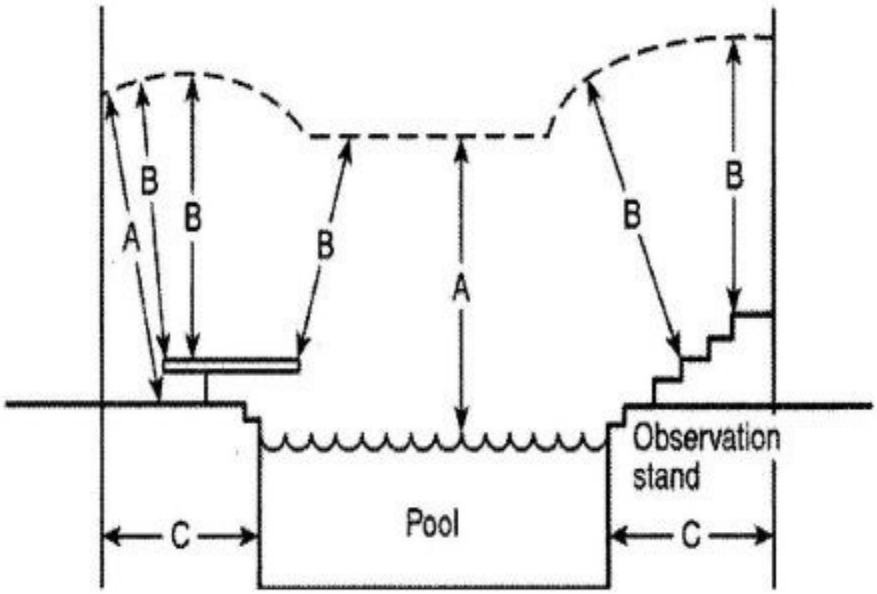

Figure 680.8(A) Clearances from Pool Structures

Table 680.8 Overhead Conductor Clearances

		Insulated Cables, 0–750 Volts to Ground, Supported on and Cabled Together with a Solidly Grounded Bare Messenger or Solidly Grounded Neutral Conductor		All Other Conductors Voltage to Ground			
				0 through 15 kV		Over 15 through 50 kV	
	Clearance Parameters	m	ft	m	ft	m	ft
A.	Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	6.9	22.5	7.5	25	8.0	27
B.	Clearance in any direction to the observation stand, tower, or diving platform	4.4	14.5	5.2	17	5.5	18
C.	Horizontal limit of clearance measured from inside wall of the pool	This limit shall extend to the outer edge of the structures listed in A and B of this table but not to less than 3 m (10 ft).					

ELECTRICAL REQUIREMENTS

2. WIRING METHODS - The branch circuits for pool associated motors / equipment shall be installed in ridged metal conduit, intermediate metal conduit, rigid polyvinyl chloride conduit (PVC), reinforced thermosetting resin conduit, or Type MC cable listed for the location.

3. UNDERGROUND WIRING METHODS - Compliance with **NEC 300.5** shall be required.

4. EQUIPMENT GROUNDING CONDUCTOR(S) - Any wiring method employed shall contain an **insulated copper equipment grounding conductor** sized in accordance with **NEC 250.122** but shall **not be smaller than 12AWG**.

5. RECEPTACLE OUTLETS - Shall comply with the following:

A. Required, Location - Where a permanently installed pool is installed, no fewer than one (1) 125volt, 15 or 20 ampere receptacle on a general purpose branch circuit shall be located not less than 6 ft. From, and not more than 20 ft. from, the inside wall of the pool. This receptacle shall not be located more than 6 ft.6 in. above the floor, platform or grade serving the pool. **NEC 680.22(A)(1)**

B. Circulation / Sanitation System - Receptacles that provide power for water pump or other loads directly related to the circulation / sanitation system shall be located at 10 ft. from the inside walls of the pool, or not less than 6 ft. from the inside walls of the pool if they meet all of the following conditions:

(1) Consist of single receptacles
(2) Are of the grounding type
(3) Have GFCI protection
NEC 680.22(A)(2)

ELECTRICAL REQUIREMENTS

RECEPTACLE OUTLETS CONTINUED

C. GFCI Protection - Outlets supply pool pump equipment connected to single phase 120 or 240 volt branch circuits whether cord or direct connected shall be provided with GFCI protection. **NEC 680.21(C)**
All 15 or 20 ampere single phase receptacles located within 20 ft. of the pool walls shall be provided with GFCI protection. **NEC 680.22(A)(4)**

6. POOL BONDING - The parts specified herein (Conductive pool shells, perimeter surfaces, metallic components, underwater lighting, metal fittings, electrical equipment and fixed metal parts) shall be bonded together using solid copper conductors, insulated covered, or bare not smaller than 8AWG or with rigid metal conduit of brass or other identified corrosion resistant metal. Connections to bonded parts shall be made in accordance with **NEC 250.8.** The 8 AWG bonding conductor shall not be required to be extended or attached to remote panelboards, service equipment or electrodes. **NEC 680.26(B)**

7. PERIMETER BONDING - The perimeter surface shall extend 3 ft. horizontally beyond the inside walls of the pool and shall include **unpaved surfaces** as well as poured concrete surfaces and other types of paving. Bonding to perimeter surfaces shall be provided and attached to pool reinforcing steel or copper conductor grid at a minimum of four (4) points uniformly spaced around the perimeter of the pool. **For non-conductive pool shells, bonding at four (4) points shall not be required. Bonding shall consist of an 8 AWG conductor installed 18”-24” horizontally from the inside walls of the pool, following the contour of the perimeter surface, 4” - 6” below sub-grade.**
THIS CONDUCTOR SHALL NOT BE CONCEALED PRIOR TO INSPECTION.

8. WATER BOND - An intentional bond of 9 sq.in. minimum of conductive material shall be installed in contact with the pool water. **NEC 680.26(C)**