

# Village of Bartlett Pool Information



**No permit information will be accepted if the following items have not been completed/submitted:**

- 1) Building permit application completely filled out and signed.**
- 2) A plat of survey for the property with pool placement and underground or overhead utilities illustrated to scale. Include the distance from the property lines, utility lines and the house.**
- 3) A brochure of the pool you have purchased.**
- 4) A brochure of the pump motor to be installed. (Please insure the pump motor is third party evaluated to U.S. standards. [ UL 1081 ] )**
- 5) Property must have JULIE markings and exact pool layout markings must be in place for an onsite plan review by the Building Dept.**
- 6) Fees must be paid before the review will be conducted.**
- 7) No applications will be accepted if the proposed pool is located in a drainage, utility or tree easement.**

## CHAPTER 21. SWIMMING POOLS.

**NOTE:** EXCESS FILL OR SPOIL FROM EXCAVATING POOL SITE MUST BE REMOVED FROM THE PROPERTY. IF USED, MUST ACCOMPANY FILL PERMIT WITH TOPOGRAPHIC SURVEY.

**9-21-1 General Private Swimming Pool:** Any swimming pool and/or bathing pool which is used, or intended to be used, as a swimming pool in connection with a residential building and available only to the family of the household and his private guests shall be classified as a private residential swimming pool. Pools used for swimming or bathing shall be in conformity with the requirements of this Code, provided, however, these regulations shall not be applicable to any such pool less than twenty-four inches (24") deep or having a surface area less than two hundred fifty (250) square feet. This includes in-ground, aboveground, and on-ground swimming pools, hot tubs and spas.



**9-21-2** The following deletions, changes and modifications are made to IBC section 3109 and IRC Appendix G. Permits are required for all in-ground/above ground swimming pools, hot tubs and spas.

**9-21-3 Location:** No portion of a private residential swimming pool shall be located at a distance less than eight feet (8') from any side or rear property line and not closer than four feet (4') from the dwelling. No swimming pool shall be located within any public utility easement. No portion of a private residential swimming pool shall be located at a distance less than five feet (5') from any underground service wire nor shall it be located at a distance less than twenty-two feet (22') measured horizontally from any overhead service wire.

**9-21-4** Pumps, filters, and pool water disinfection equipment installations shall be located at a distance not less than eight feet (8') from any side property line. Swimming pools and appurtenant equipment shall be located to the rear of the residence only and shall not be permitted in the side yard between dwellings.

**9-21-5 Operation And Maintenance:** All swimming pools, and equipment used in their operation, shall be maintained in a clean and healthful condition during periods when they are open for use. No swimming pool shall be used, kept maintained or operated in the Village if such use, keeping, maintaining or operating shall be the occasion of any nuisance or shall be dangerous to life or detrimental to health.

**9-21-6 Recirculation Pools:** All swimming pools shall be of the recirculation type, in which circulation of the water is maintained through the swimming pool by

pumps, the water drawn from the swimming pool being clarified and disinfected before being returned to the pool.

- 9-21-7** **Barrier:** A fence, a wall, a building wall, the wall of an aboveground swimming pool or a combination thereof, which completely surrounds the swimming pool and obstructs access to the swimming pool is required.

The top of the barrier shall be at least 60 inches above grade measured on the side of the barrier, which faces away from the swimming pool.



**Power safety covers for all pools are not required.**

- 9-21-8** **Materials:** All in-ground swimming pool walls and floors shall be constructed of impervious material, which will provide a tight tank with white or light colored finish and easily cleaned surfaces. The floor or bottom surface of the swimming pool shall have a non-slip finish as smooth as possible.
- 9-21-9** **Structural Design:** The swimming pool structure shall be designed to withstand the water pressure from within and to resist the pressure of the earth when the swimming pool is empty, to a pressure of 2,200 pounds per square foot.
- 9-21-10** **Wall Slopes:** Two feet nine inches (2' 9") from the top, the wall slope shall not be more than one (1) unit horizontal in five (5) units vertical (1:5).
- 9-21-11** **Floor Slopes:** The slope of the floor on the shallow side of transition point shall not exceed one (1) unit vertical to seven (7) units horizontal (1:7). For public pools greater than 1,200 square feet, the slope of the floor on the shallow side of the transition point shall not exceed one (1) unit vertical to ten (10) units

horizontal (1:10). The transition point between shallow and deep water shall not be more than five feet (5') deep.

- 9-21-12 Surface Cleaning:** All swimming pools shall be provided with a recirculating skimming device or overflow gutters to remove scum and foreign matter from the surface of the water. Where skimmers are used there shall be at least one (1) skimming device for each one thousand (1,000) square feet of surface area or fraction thereof. Where overflow gutters are used, they shall be not less than three inches (3") deep, pitched to a slope of one (1) unit vertical to forty-eight (48) units horizontal (1:48) toward drains, and constructed so they are safe, cleanable and that matter entering the gutters will not be washed out by a sudden surge of entering water.
- 9-21-13 Walkways:** All public swimming pools shall have walkways not less than four feet (4') in width extending entirely around the pool. Curbs or sidewalks around any swimming pool shall have a slip-resistant surface for a width of not less than one foot (1') at the edge of the pool, and shall be so arranged as to prevent return of surface water to the pool.
- 9-21-14 Private Swimming Pool Walkways:** Walkways (deck) may not be located in, on, or above any drainage or utility easement.
- 9-21-15 Steps and Ladders:** One (1) or more means of egress shall be provided from the pool. Treads of steps or ladders shall have slip-resistant surfaces and handrails on both sides, except that handrails may be omitted when there are not more than four (4) steps or when they extend the full width of the side or end of the pool.
- 9-21-16 Water Supply:** All swimming pools shall be provided with a potable water supply, free of cross-connections with the pool or its equipment.
- 9-21-17 Water Treatment:** Private swimming pools shall be designed and installed so that there is a pool water turnover at least once every eighteen (18) hours. Filters shall not filter water at a rate in excess of five (5) gallons per minute per square foot of surface area. The pool owner shall be instructed in proper care and maintenance of the pool by the supplier or builder, including the use of high test calcium hypochlorite (dry chlorine) or sodium hypochlorite (liquid chlorine) or equally effective germicide and algacide and the importance of proper pH (alkalinity and acidity) control.
- 9-21-18 Recirculation System and Appurtenances:**
- A.** Swimming pool water recirculation system inlet shall be located so as to produce so far as possible uniform circulation of water throughout the pool without the existence of dead spots and to carry pool bottom deposits to the outlets, and shall discharge at a minimum depth of ten inches (10") below the pool overflow level. A minimum of one (1) recirculation system shall be provided for every six hundred fifteen (615) square feet of surface area of the pool.

**B.** Swimming pool recirculation systems shall consist of pumping equipment, hair and lint catcher filters, together with the necessary pipe connections to the pool inlets and outlets, facilities and pipe connections necessary for backwashing filters, and facilities and equipment for disinfecting the pool.

**C.** The pump used for backwashing filters shall have sufficient capacity to provide a filter backwash rate of at least twelve (12) gallons per minute per square foot of filter area.

**D.** A hair and lint catcher or strainer shall be installed on the suction side of the circulation pump to prevent hair, lint, and other extraneous matter from reaching the pump and filters. Hair and lint catcher shall be so designed that it can easily be dismantled for cleaning and inspection and shall be so located as to be easily accessible for cleaning. The design features shall be as follows: water passes through the strainer from the outside; the strainer is made of noncorrosive material; the width or diameter of strainer openings shall be not more than one-eighth inch (1/8"); the area of the strainer openings shall be at least five (5) times the cross-sectional area of the inlet pipe to the strainer.

**E.** In all swimming pools thirty feet (30') in width or less, water circulation system outlets shall be located so as to provide at least one (1) outlet at the deepest point in the pool. If the pool width is more than thirty feet (30'), multiple outlets shall be provided and spaced not more than thirty feet (30') apart, nor closer than four feet (4') to any wall. All pool drain outlets shall be equipped with gratings having an area of openings not less than four (4) times the cross-sectional area of the outlet pipe. The gratings shall be of such design so they cannot be readily removable by bathers and will not injure the bathers' fingers. One (1) outlet shall be provided for each eight hundred (800) square feet of surface area.

**9-21-19**

**Water Drainage:**

**A.** Swimming pool shall be equipped with facilities for completely emptying the pool and the discharge of the pool water to the storm sewer shall be at a rate not exceeding two hundred (200) gallons per minute. No direct connection shall be made to the storm sewer. No direct or indirect connection shall be made to the sanitary sewer system.

**B.** Water drained from the swimming pool shall not be discharged to the storm sewer system during periods of rain or storms. At no time shall the rate of drain water discharge exceed a flow of two hundred (200) gallons per minute. No direct or indirect connection shall be made to the sanitary sewer system.

C. The swimming pool and equipment shall be equipped to be completely emptied of water, and the discharged water shall be disposed of in an approved manner that will not create a nuisance to adjoining property.

D. Backwashing and Winterizing. When backwashing and/or winterizing a private home pool, the owner, operator and/or pool service provider of said pool shall discharge the water by either (i) a hose to the parkway grass before the public walk at a minimum distance of ten feet before the curb and gutter or (ii) a hose to the grass area approximately ten feet from an open storm structure located on the same property, if available. No direct connection to the storm sewer adjacent to the property, however, shall be allowed.

**9-21-20 Swimming Pool Safety Devices:**

A. Every person owning land on which there is situated a swimming pool, which contains twenty-four inches (24") or more of water in depth at any point, shall erect and maintain thereon an adequate enclosure either surrounding the property or pool area, sufficient to make such body of water inaccessible to small children. Such enclosure, including gates therein, must be not less than four feet (4') above the underlying ground. All gates must be self-latching with latches placed four feet (4') above the underlying ground and otherwise made inaccessible from the outside to small children. Openings in the barrier shall not allow a passage of a four inch (4") diameter sphere.

B. All metal fences, enclosures, or railings near or adjacent to any swimming pool which might become electrically alive as a result of contact with broken overhead conductors or from any other cause shall be effectively grounded.

C. Pumps, filters, and other mechanical and electrical equipment for swimming pools shall be enclosed in such a manner as to be inaccessible to children. Construction and drainage shall be such as to avoid the entrance and accumulation of water in the vicinity of electrical equipment.

D. All swimming pool accessories shall be designed, constructed, and installed so as not to be a safety hazard. Installations or structures for diving purposes shall be properly anchored to insure stability, and properly designed and located for maximum safety.

E. Diving boards: Minimum water depths and distances for diving hoppers for pools, based on board height above water, shall comply with Table 421.11(1) for public pools and Table 421.11(2) for private pools.

F. A spa or hot tub would be allowed to be constructed without a fence provided that an approved safety cover that locks is used.

**9-21-21**      **Operation and Maintenance:** All swimming pools shall be maintained in a clean and sanitary condition, and all equipment shall be maintained in a satisfactory operating condition during periods the pool is in use. No swimming pool shall be used, kept, maintained, or operated in the Village if such use, keeping, maintaining, or operating shall be the occasion of any nuisance or shall be dangerous to life or detrimental to health. A two-foot (2') fence attached to the top of the pool will be required for all above ground pools when a fence does not protect the yard. A barrier of 60 inches (60") shall apply to all above ground pools.

**9-21-22**      **Building Permit Required:** An in ground swimming pool or above ground pool, hot tub or spa shall not be constructed, installed, enlarged, or altered until plans have been submitted and a building permit has been obtained from the Building Department.

Building permits expire one (1) year from the date the permit is issued. However, if work has not started within six (6) months of the date of the permit, the building permit shall automatically become void.

**9-21-23**      **Drawings and Plans:**

**A.** All drawings and plans for the construction, installation, enlargement or alteration of any private residential swimming pool and appurtenances for which a permit is required shall first be presented to the Building Department for examination and approval as to proper location, construction, and use.

**B.** All plans and drawings shall be drawn to scale and shall accurately show dimensions and construction of the pool and appurtenances and properly established distances to lot lines, buildings, walks, fences and distance from overhead or underground service wires, as well as details of water supply system, drainage and water disposal systems, and all appurtenances pertaining to the swimming pool.

**9-21-24**      **Building Permit Fee:** The building permit fee for an in-ground pool, hot tub or spa shall be based on the cost of construction per section 9-3-10.

**9-21-25**      **Inspections Required:** The Building Inspector shall inspect the pool installation during its initial construction or installation and shall periodically inspect all swimming pools to determine whether or not the provisions of this code regarding health, sanitation, and safety applicable thereto are being complied with. Inspections during the initial construction or installation shall be requested in person or by telephone to the Building Department at least twenty-four (24) hours in advance.

**9-21-26**      **Contractor License Required:** It shall be unlawful to engage in the business of installing or constructing in ground or above ground swimming pools, or any pool

equipment or appurtenances, in the Village of Bartlett as a contractor without first having obtained a building contractor license.

A homeowner is not required to be licensed to install a pool or pool equipment on his or her own property.



**Left picture: Transformer for pool light must be hard wired to manufacture specifications.**

**Right Picture: Fully third party evaluated with a solid #8 bonding to ridged metal conduit through clamp and out to pool.**



Pool light must be hardwired. Check your pool light box for splice box and manufacturer's installation instructions. Note: You must obtain a 6 – 8" rigid electrical pipe nipple to go between the outlet box and splice box of the pool light.



The bond wire shall be a solid #8 copper wire coming from the pump motor to the rigid metal conduit picking up pool heater if applicable. The pool must also be picked up by the bond wire. Check upper and lower rings – if they are metal, they must be picked up by the solid #8 wire. This can be achieved by inserting solid-less lugs where screws hold uprights and rings into place.

**Revised May 2014**

# PERMANENTLY INSTALLED SWIMMING POOL CHECK LIST TO THE 2011 NEC

1.  Are there any underground conductor within 5' horizontally from the inside wall at the pool?  
680.10
2.  Are there any overhead Electrical Conductors in the area extending 10 ft. horizontally from the inside wall of the pool and 22.5' up from water level? 680.8
3.  Is the pump motor third party listed to U.S. standards with a label for a pool motor? (UL1081 is the standard) 110.3(B)
4.  Is the cord on the pump motor #12 wiring and no longer than 3' with a twist lock cord cap? 680.7
5.  Is the receptacle 6' from the inside pool wall? 680.22(A)(1)
6.  Is the receptacle a twist-lock and protected by GFCI? 680.5 This must be a GFCI breaker or GFCI face-less type outlet or GFCI outlet, rated for the h.p. at the pump. (GFCI outlets can only do up to 1 1/2 h.p. motors.)
7.  Is the cover for the receptacle an in-use cover? 406.9(B)(1)
8.  Is there a GFCI general purpose outlet on a general purpose circuit 10' from pool wall and not more than 20'? 680.22(A)(3)
9.  Is there a disconnecting switch located at least 6' from the inside wall of the pool? 9-9-7-B
10.  Is the raceway rigid heavy wall metal conduit, or rigid nonmetallic conduit (PVC) and listed for electrical use? 680.21(A)(1) 110.3 (b) (Note: There shall be no plumber's putty (pipe dope) or plumber's Teflon tape (white tape) on the ends of the metal type conduit.)
11.  Is the raceway buried to the correct depth? RMC 6 inches, and PVC 18inches from the top of the conduit to grade. 300.5 and Table 300.5
12.  There must be a minimum of a #12 green wire installed in the raceway. 680.21(A)(1) The wire must be green in color. 250.119
13.  The grounding conductor must pick up all junction boxes, light fixtures, pump motors, transformer enclosures, devices like switches, outlets, etc. 680.6
14.  Is there a grounding conductor between panel boards that are not part of the service equipment subpanels and that supply any electric equipment associates with the pool? 680.25(B) The wire shall be sized in accordance with table 250.122 and shall also be insulated and green in color.
15.  The bonding conductor must be a solid #8 copper wire. (Bare conductor is OK). This wire must pick up the pool frame (upper and lower ring if metal) water, pump motor, pool heater (if one) RMC piping, and any metallic part within 5' of the pool. 680.26(B)(1)(2)(3)(4)(5)(6) and (7)(C)
16.  Is the bonding conductor connection completed with a clamp which is of stainless steel, brass, or copper? (No zinc parts)
17.  Double insulated pump motors do not have to be bonded with the solid #8 but must have a #12 green wire to them. They shall have a #8 solid bonding wire in the vicinity of the pool pump motor for replacement motors.
18.  If RNC (PVC) is used with RNC PVC boxes, these items must be listed "electrical and sunlight" resistant. Support and expansion fitting may be needed. (Article 352 ) (No plumbing type pipes.)

# Electrical Pool information to the 2011 N.E.C. For Permanently installed pools

**Outdoor Spa or Hot tub 680.42**

Shall comply with provisions of permanently installed swimming pools part I and part II of article 680

1. Disconnecting means is required.
2. The grounding wire must be sized to 250.122
3. Liquid tight (seal tight) can only be used up to 6 ft. in length. 680.42(A)(1)

**Note #1**

Convenience receptacle GFCI Protected  
(There may be a receptacle on the house close enough) 680.22(A)(3)

**Note #1**

10' Minimum to 20' Maximum 680.22(A)(3)

**Note #1**

Disconnecting means must be a minimum of 6' from pool. 680.12, 430.102, 9-9-7-B (There may be a switch on the pump motor. Check your unit.)

Single, twist-lock grounding type receptacle GFCI protected. 6' from the inside wall of the pool And with in-use cover 406.9(B)(1) See note 2 about GFCI protected

6" minimum RMC 300.5  
18" minimum non-metal conduit (PVC)

Raceways must be of Rigid wall metal conduit, Rigid nonmetallic conduit (PVC) with a Green #12 insulated copper conductor. 680.21(A)(1)

**Grounding.** The following Equipment shall be grounded: (1) wet-niche and no-niche underwater lighting fixtures, (2) dry-niche underwater lighting fixtures, (3) all electric equipment located within 5ft of the inside wall of the pool, (4) all electric equipment associated with the recirculating system of the pool, (5) junction boxes, (6) transformer enclosures, (7) ground-fault circuit-interrupters, (8) panelboards that are not part of the service equipment and that supply any electric equipment associated with the pool. 680.6

**The equipment grounding conductor shall be sized in accordance with table 250.122 but not smaller than #12 AWG**

**This shall be a continuous green ground wire.**

**Note #1**

6' Minimum 680.22(A)(1)

If the pool has plastic standards an upper bond wire will be needed if upper ring is metal. The pool water shall be bonded. 680.26(C)

# 8 Solid bonding conductor 680.26(A)+(B)

Cord must be twist-lock with #12 copper conductor 3' long 680.7

Clamp must be stainless steel, brass or copper if RMC is used 680.26(B)(7)

For all non-double insulated pump motors a bond is required at the motor housing, the pool frame and all metal conduits

**Notes:**

#1: All boxes, covers & fittings are W.P. outdoor type & sunlight resistant.

#2: Self-contained unit circuit breaker type, receptacle type (example: face-less GFI outlets) or other approved devices connected to the twist-lock outlet 680.5 Keep in mind GFCI outlets can only protect up to 1.5 hp motors.

#3: All PVC must be of the electrical type and be listed. (Conduit must be gray in color)

#4: All pump motors shall be listed and labeled as per 110.3 (B) UL or equivalent by an approved testing agency to U.S. standards.

